

# IDRA

## DESALINATION & REUSE

### HANDBOOK

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2023-2024



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# IDRA DESALINATION & REUSE HANDBOOK

2023 - 2024

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**WATER DESALINATION REPORT**

# Water Sources for the Future



**Shannon McCarthy,  
Secretary General of the International Desalination and Reuse Association**

Ms. McCarthy has over 30 years of experience working internationally and specifically with the Middle East and North Africa region on water sustainability, research, and the application of non-conventional water resource technologies. She has served the International Desalination Association as First Vice President, Chair of the Foundation and Public Outreach Committee, member of the Operations Committee, Constitution and Bylaws Committee, and champion for establishing the IDA Sustainable Water Resources Foundation. In 2017, she was appointed Secretary General, an officer on the Board of Directors acting as Executive Director.

In 2023, IDA celebrates 50 years as an advocate and connection point for the global desalination and water reuse community. With over 2 billion people today lacking access to clean drinking water and an expected increase in water demand of more than 50 percent by 2050, desalination and reuse are essential technical solutions for supporting the sustainability and security of water for drinking, agricultural, and industrial needs in arid, drought-prone communities, especially coastal communities. As part of an integrated water resources management strategy, desalination and reuse can help preserve freshwater sources and support water security.

Over the last 50 years, countries across the Arabian Peninsula and North Africa have come to depend heavily on desalinated water, and no other region on earth desalinates so much water. The MENA region accounts for over 60 percent of the world's total desalination capacity. For years, rulers from Saudi Arabia, the United Arab Emirates, Bahrain, Kuwait, Oman, and Qatar have secured clean drinking, agricultural, and industrial water for their people through desalination systems that transform seawater into a steady supply of fresh water. Australia, Chile, and Spain are good examples of countries outside the MENA region where desalination offsets water needs. At the same time, Israel, Singapore, and the United States use desalination and a significant amount of water reuse. Other water-stressed countries, including countries in North Africa and island nations, have tapped the oceans. Even in the American Southwest, officials and urban planners are increasingly looking to desalination and reuse as partial solutions for cities whose water supplies are under pressure due to years of drought and the effects of climate change.

As the 17 UN Sustainable Development Goals can only be achieved by ensuring sustainable water management and supply, IDA is an active advocate to the UN that

unconventional water resources, specifically desalination and reuse, are crucial tools in the fight against water scarcity caused by climate change.

Our members continue to innovate and bring solutions to the world. We are honored to work alongside them to promote these solutions and help secure water for all, as the civic advantages and societal rewards of desalination and water reuse are clear. With the world's drinking and agricultural water supply at risk and so much industrial water and wastewater going untreated, these processes offer practical and functional solutions for water security. Collectively, we must continually push innovation and drive new technology to offset climate change's inevitable environmental effects.

I am grateful to our esteemed publishing partner, Mr. Christopher Gasson from Global Water Intelligence, for his exceptional leadership in diligently covering the sector and supporting the IDA throughout the years. I also thank the dedicated GWI team for their hard work creating the IDA Handbook.

IDA is in the process of rebranding the association as the International Desalination and Reuse Association (IDRA), and we are pleased to launch this handbook under this new name.

Sincerely,

*Shannon McCarthy*

Hosted by the Abu Dhabi Department of Energy



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Addressing Water Scarcity

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# Foreword

The IDRA Desalination & Reuse Handbook is designed to connect decision makers facing water scarcity with the leading desalination, reuse solutions providers. As the successor to the IDA Desalination Yearbook, this publication demonstrates the range of available solutions to water scarcity, covering desalination and wastewater reuse. By highlighting the complementary solutions, the Handbook aims to provide decision makers with information to inform a holistic strategy for water security. In addition to market analysis, commentary, and profiles of desalination and reuse around the world, the IDRA Desalination & Reuse Handbook contains two inventories of plants and projects:

- The 36th GWI/IDRA Worldwide Desalting Inventory found on pp. 32–36 covers desalination plants contracted between 2022 and 2023. The Inventory is collected on an annual basis by Global Water Intelligence (GWI) and aims to be a comprehensive dataset of every desalination plant with a capacity greater than 500 m<sup>3</sup>/d.
- The GWI Water Reuse Inventory found on pp. 37–39 covers water reuse plants contracted since 2019, with a capacity of 5,000 m<sup>3</sup>/d or greater and using tertiary or more advanced treatment technology.

The IDRA Desalination & Reuse Handbook is published by Global Water Intelligence and the International Desalination and Reuse Association in partnership with the Global Water Leaders Group, a non-profit organisation which facilitates communication and knowledge-sharing between utilities. Readers are encouraged to contact Hugo Birch at [hugo.birch@globalwaterintel.com](mailto:hugo.birch@globalwaterintel.com) for more information if they would like to know more about a case or profile featured in this book. Global Water Leaders Group is the publishing and events partner of GWI.

The primary units of measurement used in the IDRA Desalination & Reuse Handbook are the cubic metre and (for smaller quantities) the litre, measured on a per day basis. A cubic metre of water is one thousand litres, and weighs one metric ton. Other units of measurement used in the desalination and water reuse industry include gallons and acre-feet in the USA, and imperial gallons in many Middle Eastern countries. These units are most commonly expressed on a per day basis, but in some cases a per year basis is used. The following set of conversions is included for the reader's convenience.

1 cubic metre (m <sup>3</sup> )	=	264.2 US gallons or 1,000 litres
1 imperial gallon	=	1.2 US gallons, or 4.55 litres
1 acre-foot	=	325,900 US gallons, or 1,233.6 m <sup>3</sup>
1 megalitre	=	1,000 cubic metres
1 gigalitre	=	1,000,000 cubic metres
1 MIGD	=	4,546 m <sup>3</sup> /d
1 MGD	=	3,785 m <sup>3</sup> /d
1 MGD	=	1,120 AFY (acre-feet/yr)
1 kilometre	=	0.621 miles or 1,000 m
1 metre	=	3.280 feet or 1.094 yards

All calculations are based on 365 1/4 days per calendar year. Wherever possible, monetary values are given in their original value with a conversion into US dollars using exchange rates valid as of 31<sup>st</sup> August 2023.

This report was written and edited by Hugo Birch and Millie Gall.

The Reference Directory was compiled by Hatim Amin, Shaokun Chang, Edgar Karara, Oyin Oyefeso, and Santosh Shah.

The advertisements were collected by Kirsty Hewitt, Luca Tiriolo, Edgar Karara, Oyin Oyefeso, and Santosh Shah.

Layout and production by Shaun Hazell, Amelie Robert, Hollie Sidaway, Edgar Karara, Oyin Oyefeso, and Hatim Amin.

Proofing by Georgia Bottomley, Jasmine Chater, Louis de la Pasture, Malin Hedlund, and Charlie Walker.

The information in this Handbook is based on feedback from companies taking part in GWI's annual survey and is vital for accurate and insightful market analysis. International Desalination and Reuse Association (IDRA) members are encouraged to send references to [hugo.birch@globalwaterintel.com](mailto:hugo.birch@globalwaterintel.com).

Published by Media Analytics Ltd.,  
Suite C, Kingsmead House,  
Oxpens Road,  
Oxford, OX1 1XX,  
United Kingdom  
Tel: +44 1865 204208; Fax: +44 1865 204209  
[subscriptions@globalwaterintel.com](mailto:subscriptions@globalwaterintel.com)

IDRA Desalination & Reuse Handbook 2023-2024  
ISBN: 978-1-907467-68-4

While every effort has been made to ensure the accuracy of the information in this publication, neither Global Water Intelligence, Media Analytics Ltd nor any contributors accept liability for any errors or oversights.

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# Contents

<b>Executive Summary</b>	<b>2</b>
Market profiles	2
Inventories and resources	2
Global capacity	3
Seawater & brackish water desalination key numbers	4
Reuse key numbers	5
<b>Seawater &amp; Brackish Water Desalination</b>	<b>6</b>
<b>Municipal Water Reuse Market Profile</b>	<b>17</b>
<b>Featured Desalination &amp; Reuse Projects</b>	<b>26</b>
Earthquake Relief RO Plant, Turkey	26
Pharmaceutical Wastewater MLD Plant, Singapore	27
Parañaque NEW WATER Treatment Plant	28
<b>Featured Technologies</b>	<b>30</b>
PX Q400 Energy Recovery Device (Energy Recovery Inc.)	30
Batch RO (Salinity Solutions)	31
Wave-powered RO (Oneka Water Technologies)	31
<b>New Desalination Plants Contracted 2022-2023</b>	<b>32</b>
<b>Selected Reuse Plants Contracted 2019-2023</b>	<b>37</b>
<b>Chemical Treatment &amp; Remineralisation</b>	<b>40</b>
American Water Chemicals, Inc.	40
ASCO Carbon Dioxide Ltd.	40
Avista Technologies, Inc.	40
DrinTec	40
Genesys International Ltd.	41
Italmatch Chemicals S.p.A.	41
KEIKEN Engineering	42
King Lee Technologies	42
Lhoist Group	44
Linde PLC	44
Omya International AG	45
Organo	45
PWT	45
Solenis	45
SS Gas Lab Asia	46
TOMCO <sub>2</sub> Systems	48
Unique Solutions for Chemical Industries	48
<b>Developers &amp; Plant Suppliers</b>	<b>49</b>
Abengoa (now Coxabengoa)	49
Absun Zolal	49
Acciona Agua	49
Ace Water Treatment Co. Ltd	50
ACS (Actividades de Construcción y Servicios)	51
Actia Iniciativas	51
ACWA Power (Arabian Company for Water & Power Development)	51
ACWA Services Ltd.	52

Adionics (Advanced Ionic Solutions)	52
Advanced Watertek Pty Ltd	52
Aerex Industries	52
AES Arabia Ltd.	53
AGC Engineering Co. Ltd.	56
Aguas Pacificos	56
Al Ansari Trading Enterprise LLC	56
Al Arrab Contracting Co	56
Al Kafaah LLC	56
Al Kawther Industries	57
Alfa Laval Process Technology	57
Almar Water Solutions	57
Anguil Environmental Systems	58
Aqua Engineering GmbH	58
Aqua y Sistemas	58
Aqualia	59
Aquamatch Turkiye	60
Aquarion AG	62
AquaSwiss AG	62
Aquatec-Maxcon	62
Aquatech International Corporation	62
AquaTreat Group	65
Arvind Envisol	65
Bahwan Engineering Group	65
Balaji Industrial and Agricultural Castings	65
Bauer International	65
Beijing Enterprises Water Group	65
Beijing OriginWater Technology Co., Ltd.	66
Beijing Urban Construction Group Co., Ltd	66
Beijing Woteer Water Engineering Co., Ltd.	66
Beijing Xindayu Hydro-Engineering	68
Beijing Xingang Yonghao Water Engineering	68
Belhsa Projects	68
BESIX	68
BGR Energy System India Ltd	68
Bharat Heavy Electricals Limited	68
Biwater	69
Bluewater Bio	70
Bonna Tunisie	70
Boustead Salcon Water Solutions Pte Ltd	70
BS Water & Energy	70
Cadagua	71
Canaragua, S.A.	71
Cannon Artes	71
Caramondani Desalination Plants Ltd.	71
Carso Infraestructura	71
Chiyoda Corporation	72
Chriwa Wasseraufbereitungstechnik GmbH	72
Clearsource	72
Comercializadora Panamericana S.A.	72

**IDRA**  
**DESALINATION & REUSE**  
**HANDBOOK**

Consolidated Water Co. Ltd.	72	Ionic Solutions Ltd.	95
Coway Co., Ltd.	72	Itochu Corporation	95
Desalia	73	Jacobs	95
Desalination Company of Trinidad and Tobago Limited	73	JGC Corporation	95
DIALOG	73	JOCA	95
Doosan Enerbility	74	John Holland	96
Downer Group	74	Keppel Infrastructure Holdings	96
Drace Infraestructuras	74	Keppel Seghers	96
DuPont Water Solutions (DesaliTec)	75	KII/Suns River	96
Ecocivil	76	Kirton Engineering Limited	96
Economy	76	Kobelco Eco-Solutions	96
Ecopreneur	77	Kolon Engineering	97
Electromur	77	Kyowakiden Industry Co., Ltd.	97
EMCO Group	77	L&T Ltd	97
ENGIE	77	Laing O'Rourke	97
Enviro Control Pvt. Ltd	78	Lantania	98
Enviro Water Minerals	78	Logisticon Water Treatment	98
Essel Infra Projects	78	MAK Industrial Water Solutions	98
Evides Industriewater	78	Malakoff International Ltd	99
Fabest Co.	78	Marafiq	99
Fan Niroo Co.	78	Marubeni Corporation	99
Farazab Co.	79	Mascara Renewable Water	99
Ferrovial	79	MBR Technologies	99
Fisia Italimpianti	79	McWong Environmental Technology Corp., Ltd.	99
Fluence Corporation	79	MEGA A.S.	100
Geo Miller	85	Mego Construcciones	100
GES (Global Environmental Solutions Ltd.)	85	Membrane SRL	100
GRC Quantity Surveyors	85	Metito	101
Greentech Environmental Co. Ltd.	85	Midwater	104
Grupo SETA, S.L.	86	Mitsubishi Corporation	105
GS Inima Environment, S.A.	86	Mitsubishi Heavy Industries, Ltd.	105
H2O Innovation	87	Mitsui & Co.	105
H2Oil & Gas Ltd	89	Mojan	105
Haji Abdullah Alireza & Co., Ltd.	89	Morganti	105
Hangzhou Water Treatment Technology Development		Much More Water	105
Center Co., Ltd	89	Nafasi Water	105
Harn R/O Systems Inc	91	Nasr Isfahan Co.	106
Hassan Allam	92	Nesma Water & Energy	106
Heartland Water Technologies	92	New Water Corporation Ltd.	106
Heshmat Roud Co.	92	Nomura Micro Science	106
Hidrocaex, S.L.	92	Novatron	107
Hitachi Zosen Corporation	92	NVCo	107
HNB Engineers	93	Obras y Servicios Copasa	107
Hyosung Goodsprings	93	Oneka Technologies	107
Hyrec	93	Orascom Construction Industries	107
IDE Technologies Ltd.	93	Organo	108
IMED	94	OSEPSA	108
Indwa	94	Osmo Sistemi	108
Inmeva Infraestructuras S.L.	94	Osmoflo	109
International Hydro Systems	94	Pall Corporation	110
Ion Exchange Ltd.	94	Pan India	110

Paramount Ltd.	110
Passavant Energy & Environment	110
Pavasal	111
Poseidon Resources Corporation	111
Poten Enviro	111
Power Generation Engineering Services Co. (PGESCo)	111
PowerChina	111
ProMinent	112
Proserve	112
Protecnico SRL	112
Proxa	112
PT Beta Pramesti Asia	113
Pure Aqua, Inc.	113
Purifics Water	114
QUA Group	114
Rawafid Industrial	114
Reggiane Cranes and Plants	115
Ridgewood Egypt for Infrastructure Projects, Ltd.	115
Sacyr Water	115
SafBon Water Technology	116
Salt Separation Services Ltd	117
Samsung Engineering Co., Ltd.	117
Sasakura Engineering Co Ltd	117
Satocan	118
SAWACO Water Desalination	118
Sazeh Sazan Co.	120
Scinor Membrane Technology	120
Sembcorp Industries Ltd.	120
SEPCO III	120
SETE Energy Saudia for Industrial Projects Ltd.	120
Seven Seas Water Corporation	121
Shanghai Electric Power Generation Group	121
Shanghai SafBon Water Service	122
SIDEM (Société Internationale de Désalémentation)	122
Singapore Technologies Marine Ltd	123
Six Construct Ltd.	123
SMP Infrastructure	123
Socamex (Urbaser)	123
Sogex Oman Co. LLC	123
South Raadab Engineering Company	124
Sparkle Clean Tech Pvt. Ltd.	124
SubSea Infrastructure Ltd.	124
SUEZ	124
Suido Kiko Middle East	126
Sumitomo Corporation	126
Sundt Construction Inc	126
Sychem	127
TAM Environmental	128
Tech Universal Arabia	128
Techhouse	129
Tecnicas Reunidas, S.A.	129
Tecnologia Efectiva (AMBBIO)	129
Tecton Engineering and Construction Company	130
Tedaguá	130
Telecsco	132
Temak SA	132
Tetra Tech, Inc.	133
Thermal Purification Technologies	133
Thermax Limited	134
Thiess Contractors Pty Ltd	134
Trevi Systems Inc.	134
Trility Pty. Ltd.	134
Tritech Water Technologies Pte Ltd	134
Triveni Engineering and Industries Ltd.	135
Trunz Water Systems AG	135
TSG Water Resources	135
Tuniber	136
UCOP Construcciones	136
UES Holdings Pte	136
UGL engineering	136
UNIHA Wasser Technologie GmbH	136
Utico FZC	137
VA Tech Wabag	137
Veolia Water Technologies	138
Vias y Construcciones	139
Vicel Group	139
VIGAflow	139
Vishvaraj Infrastructure	141
Voltas	141
W.J. Towell & Co. (L.L.C.)	141
Water Engineering & Management Services (Pvt.) Ltd.	141
Water from Innovation WFI Group	142
Water Group Ltd. Oy	142
Water Standard Company	143
Waterna Hellas	143
Waterleau	144
WesTech Engineering, Inc.	144
Wetico	145
Wigen Water Technologies	146
WOG Group	146
Wood Plc	146
Zarzuela, S.A. Empresa Constructora	147
Zhonghe Seawater Desalination Engineering Co., Ltd	147
Zhongshan Environmental Protection Industry Development Co., Ltd.	147
<b>Electrical Equipment</b>	<b>148</b>
ABB Group	148
Adsyst	148
Emerson	148
Hach	148
Rockwell	149
Rotork	149

**IDRA**  
**DESALINATION & REUSE**  
**HANDBOOK**

Schneider Electric SA	152	Kiewit Corporation	169
Siemens AG	152	Lahmeyer International Gmbh	170
WEG	154	Leed Engineering and Construction	170
Yokogawa Electric Corp.	154	Mitsubishi Corporation	170
<b>Engineers</b>	<b>156</b>	Mitsui & Co.	170
360 Environmental	156	MNS Engineers, Inc.	170
ACWA Services Ltd.	156	Montgomery Watson Harza Inc (MWH)	170
Adams Robinson Enterprise, Inc.	156	Mott MacDonald	171
ADAN Technical & Economic Services Ltd.	156	Moya Bushnak	171
AECOM Technology Corporation	156	Murugappa Group	171
Ahrens Associate	157	Myers & Sons	171
Alden Research Laboratory, LLC (A Verdantas Company)	157	Nomura Micro Science	172
Archer Western Contractors	157	OrangeBoat LLC	172
Auburn Constructors	157	Pacific Advanced Civil Engineering, Inc. (PACE)	172
AYESA Group	157	PERC Water Corporation	172
BESIX	158	Rah Shahr International Group	172
Black & Veatch	158	RJ Industries	173
Brown & Caldwell	160	Scinor Membrane Technology	173
BRW Construction Group	160	Shapoorji Pallonji	173
Canadian Environmental Alternatives Ltd.	160	Shimmick Construction	173
Caribbean Water Treatment Ltd.	160	Southern Champion Construction	173
Carollo Engineers, Inc.	160	Stantec	173
CDM Smith	160	Sychem	173
CERAFILTEC	161	Tetra Tech, Inc.	174
CeraMem	161	The Institute of Seawater Desalination & Multipurpose Utilization, SOA (Tianjin)	174
Clough	162	Typsa Group	174
Consulting Engineering Co.	162	W.M. Lyles Co.	175
Coway Co., Ltd.	163	Water & Wastewater Consulting Engineers Company	175
Cushman Contracting Corp.	163	Waterleau	175
Deltas	163	Welsbach Electric Corp	175
Department of Environment, Land, and Planning	163	Western Summit Constructors, Inc.	175
Ecoagua Ingenieros	164	WS Atkins	176
Energoprojekt Entel	164	<b>Pipes, Valves &amp; Fittings</b>	<b>178</b>
Estruagua	164	AGRU Kunststofftechnik Gesellschaft m.b.H.	178
Fichtner GmbH	164	Aliaxis	178
Florida Design Contractors, Inc.	165	Arflu, S.A.	180
Ganden	165	AUMA	180
Geoscience Support Services, Incorporated	166	BIKAR, Juntas y Compensadores, S.L.	181
GHD Group	166	Castflow Valves, S.L.	181
GKW Consult	166	Chemical Process Piping Pvt Ltd	182
H2O Innovation	166	EBRO ARMATUREN Gebr. Bröer GmbH	183
H2Oil & Gas Ltd	166	Future Pipe Industries LLC	183
Harn R/O Systems Inc	167	GCER	184
Hatch Ltd.	167	Georg Fischer Piping System Ltd.	184
Hitachi Zosen Corporation	167	H. BUTTING GmbH & Co. KG	184
HSL Constructor Pte Ltd	167	iNPIPE PRODUCTS	186
Hyrec	168	Piedmont Pacific Corporation	186
ILF Consulting Engineers	168	Protesa	188
Integrated Water Services	168	Rotork	188
Jacobs	169	SAFI Valves	190
JF Shea	169		

Sapa Precision Tubing Lichtervelde	191
SIMONA AG	191
Special Piping Materials	191
TALIS	191
TECVAL, S.L.	192
Victaulic Company	193
<b>Pumps, ERDs &amp; Pressure Vessels</b>	<b>195</b>
ANDRITZ	195
BEL Group Limited	196
Danfoss A/S	198
Düchting Pumpen	200
Energy Recovery, Inc.	201
Flowserve	203
Fluid Equipment Development Company (FEDCO)	204
Grundfos	206
Harbin ROPV Industrial Co., Ltd.	207
Ingeteam	209
ISOBARIX	209
Kirton Engineering Limited	209
Met-Pro Global Pump Solutions	209
Protec Arisawa	210
Sulzer Ltd.	211
Torishima Pump Manufacturing Co., Ltd.	213
<b>RO/NF Membranes</b>	<b>216</b>
Beijing OriginWater Technology Co., Ltd.	216
DuPont Water Solutions	216
GESSNER	218
Hangzhou Water Treatment Technology Development Center Co., Ltd	218
Hydranautics - A Nitto Group Company	220
LG Water Solutions (LG Chem)	221
Mann+Hummel Water & Fluid Solutions	223
Pall Corporation	223
RM Nanotech	223
Scinor Membrane Technology	223
Toyobo MC Corporation	224
Toray Industries, Inc.	224
Veolia Water Technologies and Solutions	235
Vontron Technology Co., Ltd.	237
<b>Suspended Solids Removal, Desalination Pretreatment &amp; Disinfection</b>	<b>239</b>
Ak-Kim	239
Amiad Water Systems Ltd.	239
ANDRITZ	240
Aqua Techniek B.V.	241
Arvia	241
Asahi Kasei Corporation	241
Beijing OriginWater Technology Co., Ltd.	242
Berghof Membrane Technology GmbH	242
Cadar	242
Calgon Carbon Corporation	242
Cembrane	242
CERAFILTEC	243
CeraMem	243
DeNora Water Technologies	243
Dimasa Group	244
Doosan Enpure Ltd.	244
Dryden Aqua	244
DuPont Water Solutions	244
Enaqua	246
Entegris	246
ESCO International Ltd	247
EVERS Water Technology and Anthracite Refining	247
Evoqua Water Technologies	248
Filtralite / Saint-Gobain	248
Fluytec S.A.	248
GESSNER	250
GCER	250
Hangzhou Creflux Membrane Technology	251
Hangzhou Water Treatment Technology Development Center Co., Ltd	251
Harmsco Filtration Products	251
Hydranautics - A Nitto Group Company	251
ItN Nanovation	252
KEIKEN Engineering	252
KWI International	252
Mann+Hummel Water & Fluid Solutions	253
Meidensha Corporation	253
Mitsubishi Chemical Corporation	253
Nanostone	253
Nijhuis Industries	254
Pall Corporation	254
Passavant-Geiger GmbH	255
Pentair X-Flow	255
Piedmont Pacific Corporation	255
Poltank	256
Scinor Membrane Technology	256
Scinor Water America	257
Shanghai SafBon Water Service	257
Statiflo International Ltd.	257
Taprogge GmbH	257
Techfil	257
Tecnoquimica Exterior	258
Toray Industries, Inc.	258
Trojan Technologies	260
Xylem Inc.	260

# Executive Summary

## Market profiles

### Seawater and brackish water desalination

The seawater and brackish water desalination markets are now well into their post-COVID recovery period, with 4.4 million m<sup>3</sup>/d of new capacity awarded in 2022, and 2023 set to be even larger. Worsening water scarcity, expanding populations, growing industrial centres, and replacement of aging thermal desalination installations remain the key drivers of new capacity.

Desalination is also seeing growing serious interest from national decision makers as an important part of their countries' long-term supply mixes. This interest is reflected in new, large-scale building programmes in countries such as Egypt, China, and Morocco, which, together with activity in the traditionally key markets of the GCC region, are expected to drive the desalination sector to new heights in the next five years. The GCC remains the leading market for seawater desalination by a significant margin, with mega projects (>250,000 m<sup>3</sup>/d) in the region accounting for more than a third of all new capacity awarded in 2022. Meanwhile, extensive activity in historically smaller markets outside the GCC such as Algeria has led to yet more mega projects in the past year. Seawater desalination remains limited in North America but brackish water desalination is growing steadily.

Desalination plant sizes are continuing to grow ever-larger with mega projects comprising the majority of new capacity awarded in 2022-23, driven by increasing water demand and economies of scale.

### Wastewater reuse

Although not reaching the heights of 2021, 2022 was another strong year for the wastewater reuse market, with 12 million m<sup>3</sup>/d of new capacity contracted. Water scarcity, urban population growth and demand from water-hungry industrial and agricultural users are the main drivers, motivating increasingly strict regulations around freshwater withdrawals and ambitious government targets for reuse.

Recent capacity has been concentrated in Asia Pacific and MENA, which account for 59% and 20%, respectively, of globally installed capacity over the past decade. This trend is set to continue, with the leading markets in both regions investing heavily in reuse. Industry primarily drives demand in Asia Pacific, while agriculture is by far the dominant consumer across the MENA region. Meanwhile, uptake of potable reuse, which makes up a small but significant portion of total capacity, is accelerating, particularly in North America, Sub-Saharan Africa and Asia Pacific. Tertiary treatment remains the largest technology segment, but triple barrier has seen the fastest growth.

## Inventories and resources

### Featured desalination and reuse projects

Each year the IDRA/GWI Handbook includes profiles on a selection of recently commissioned desalination and wastewater reuse projects that have marked a step forward for the industry in the past year. With tables of technical specifications included, the four profiles listed in this publication are an invaluable reference tool for anyone looking to keep up with the industry's latest developments and successes.

### Featured desalination technologies

This Handbook also includes profiles of selected recent innovations in the field of desalination technology. These range from system configurations to energy recovery devices and represent the continuing pursuit of new efficiencies and optimisation in the desalination market.

### Desalination and water reuse inventories

This publication includes two exclusive inventories: the 36<sup>th</sup> Worldwide Desalting Inventory and the GWI Reuse Inventory. The former includes almost 200 seawater and brackish water desalination projects contracted worldwide in 2022-23. The latter features almost 150 projects contracted since 2019 with a capacity in excess of 5,000 m<sup>3</sup>/d which have been selected for this publication. Both the desalination and reuse inventories are available to GWI DesalData subscribers. These inventories form the fundamental basis for the data and market analysis presented in the desalination and reuse market profiles.

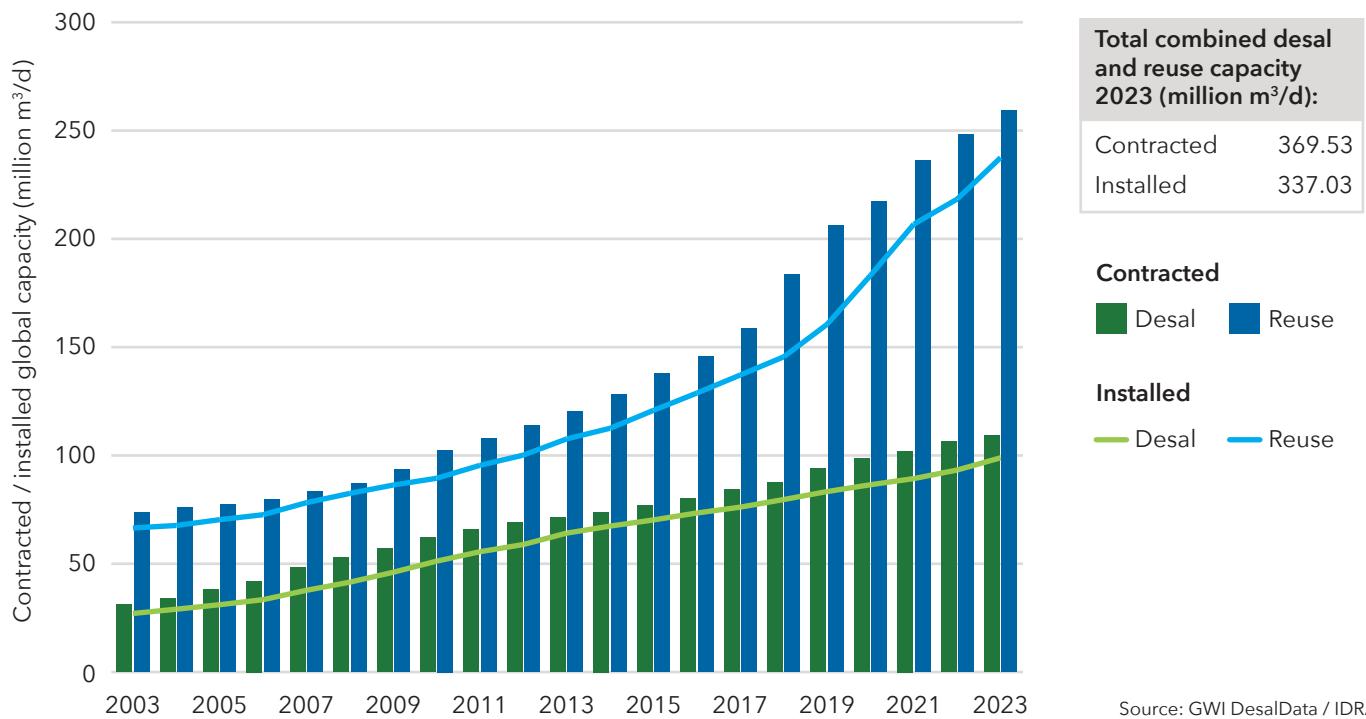
### Reference directories

This Handbook contains a set of eight directories which categorise players in the fields of desalination and wastewater reuse by company expertise, aiding you in finding your next client, partner, or supplier. Each entry includes desalination and wastewater reuse project references which have been collected from the company. Listed details include the role the company played in the project, the project name, the country in which the project is located, award date, capacity, and technology. These listings give an at-a-glance summary of a company's track record and areas of activity, along with contact details and office locations. It is worth noting that some project references are confidential and so cannot be directly published within these directories. However, the capacities of these projects are included in the market data found in the market profiles.

Visit [www.globalwatersecurity.org](http://www.globalwatersecurity.org) to view our company listings online.

## Global capacity

Global cumulative contracted and installed capacity by year, 2003-2023

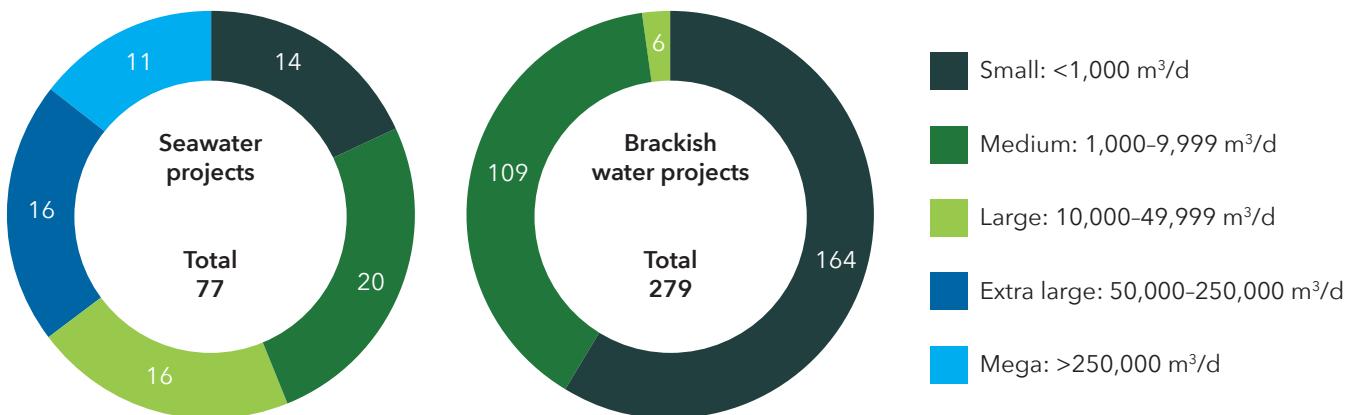


NB: 2023 figures are forecasted end-of-year.

Year	Global desalination capacity (million m <sup>3</sup> /d)		Global reuse capacity (million m <sup>3</sup> /d)	
	Contracted	Installed	Contracted	Installed
2023	109.22	98.93	259.33	237.51
2022	106.50	93.28	248.20	218.38
2021	102.08	89.33	236.35	206.77
2020	98.67	86.49	218.10	183.11
2019	93.96	83.33	206.18	160.53
2018	87.32	79.66	183.67	145.52
2017	84.31	76.14	158.80	137.15
2016	80.24	73.44	145.81	128.82
2015	76.73	70.24	137.64	120.83
2014	73.90	67.39	128.20	112.56
2013	71.48	64.15	120.49	107.66
2012	68.94	58.89	113.90	100.16
2011	66.00	55.56	107.76	95.45
2010	61.96	51.20	102.54	89.46
2009	56.86	46.08	93.60	86.34
2008	52.70	41.50	87.10	82.49
2007	48.43	37.74	83.25	78.21
2006	42.02	33.42	79.47	72.64
2005	38.24	31.10	77.50	70.35
2004	33.88	29.02	75.91	67.67
2003	31.32	27.05	73.75	66.53

## Seawater & brackish water desalination key numbers

Number of desal plants reported awarded worldwide, 2022-2023



Source: GWI DesalData / IDRA

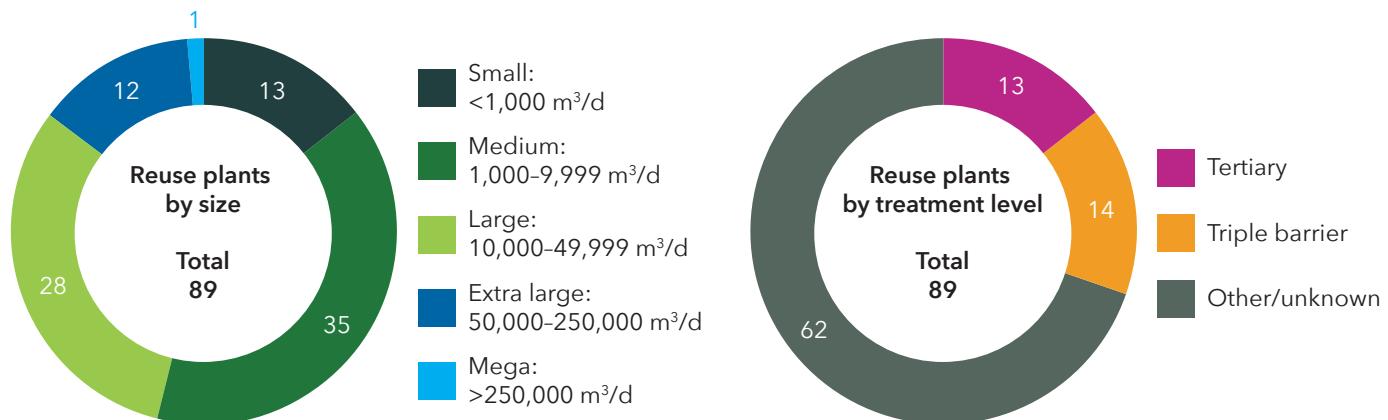
## Top 20 largest desal projects worldwide

Recently awarded 2022-2023  
Technology: SWRO MSF MED

Country	Plant	Capacity (m³/d)	Award date	Online date	Supplier	Status
Saudi Arabia	Jubail 2 Replacement SWRO	1,000,000	2022	2025	Metito	Construction
United Arab Emirates	Taweelah IWP	909,000	2019	2022	Abengoa (now Coxabengoa)	Construction
Saudi Arabia	Shoaiba 3	880,000	2005	2009	Doosan Enerbility	Online
Saudi Arabia	Al Jubail	800,000	2007	2010	Veolia Sidem (Societe Internationale De Dessalement d'Eau de Mer)	Online
Saudi Arabia	Ras Al-Khair (MSF)	728,000	2010	2016	Doosan Enerbility	Online
United Arab Emirates	Umm al Quwain IWP	681,818	2019	2022	Veolia Sidem	Construction
Israel	Soreq 2	670,000	2020	2023	IDE Technologies Ltd.	Construction
United Arab Emirates	Jebel Ali M Station	636,440	2007	2013	Fisia Italimpianti	Online
Saudi Arabia	Khobar 2 replacement SWRO	630,000	2019	2022	Acciona Agua	Construction
Israel	Soreq	624,000	2010	2013	IDE Technologies Ltd., Hutchison Water Limited	Online
Saudi Arabia	Rabigh 4 IWP	600,000	2023	2026	Wetico	Construction
Saudi Arabia	Shoaiba 3 Conversion Project	600,000	2022	2025	Doosan Enerbility	Construction
Saudi Arabia	Rabigh 3 IWP	600,000	2019	2022	Abengoa (now Coxabengoa)	Online
Saudi Arabia	Jubail 3a IWP	600,000	2020	2022	Abengoa (now Coxabengoa), Lantania	Construction
Saudi Arabia	Shoaiba 5 (SWCC)	600,000	2020	2023	Advanced Water Technology	Construction
Saudi Arabia	Jubail 3b IWP	570,000	2021	2023	Acciona Agua	Construction
Saudi Arabia	Yanbu 3	550,070	2012	2017	Doosan Enerbility	Online
United Arab Emirates	Mirfa 2 IWP	545,520	2023	2026	Veolia Sidem	Construction
Algeria	Magtaa	500,000	2009	2014	Hyflux	Online
Kuwait	Az Zour North 1 IWPP	490,970	2014	2016	Veolia Sidem	Online

## Reuse key numbers

### Number of reuse plants reported awarded worldwide, 2022-2023



Source: GWI DesalData / IDRA

### Top 20 largest reuse projects worldwide

Recently awarded 2022-2023

Treatment level: ● Secondary ● Tertiary ● Triple barrier

Country	Plant	Capacity (m³/d)	Award date	Online date	Primary reuse sector	Status
Egypt	Al Hammam WWTP	● 7,500,000	2021	2026	Agricultural irrigation	Construction
Egypt	Bahr al-Baqar WWTP	● 5,000,000	2019	2021	Agricultural irrigation	Online
Mexico	Atotonilco WWTP	● 2,000,000	2010	2015	Agricultural irrigation	Online
Egypt	Abu Rawash WWTP	● 1,600,000	2015	2021	Agricultural irrigation	Online
Egypt	Al Mahsama WWTP	● 1,000,000	2018	2019	Agricultural irrigation	Online
China	Beijing Gaobeidian WRP	● 1,000,000 ○ 1,000,000	1990 Phase 1 1994 Phase 2 2014 Reuse	1993 Phase 1 1999 Phase 2 2016 Reuse	Industry	Online
U.S.A.	EchoWater Sacramento Regional WWTP	● 821,345	2018	2022	Agricultural irrigation	Construction
United Arab Emirates	Jebel Ali STP	● 675,000	2007 Phase 1 2016 Phase 2	2010 Phase 1 2019 Phase 2	Landscape irrigation	Online
China	Beijing Xiaohongmen Reclaimed Water Plant	● 600,000	2002	2005	Agricultural irrigation	Online
Kuwait	Sulaibiya Wastewater Treatment and Reclamation Plant	● 600,000 ○ 600,000	2002 Phase 1 2015 Phase 2	2004 Phase 1 2019 Phase 2	Agricultural irrigation	Online
U.S.A.	Orange County Groundwater Replenishment (GWR) System	● 522,450 ○ 522,450	2004 Phase 1 2012 Phase 2 2019 Phase 3	2008 Phase 1 2015 Phase 2 2022 Phase 3	Groundwater recharge	Online
Kuwait	Umm al Hayman WWTP	● 500,000	2020	2023	Urban non-potable use	Construction
Syria	Adra WWTP	● 485,000	1994	1997	Agricultural irrigation	Online
U.S.A.	Steven M. Clouse Water Recycling Center	● 473,175	1984	1987	Agricultural irrigation	Online
U.S.A.	San Jose/Santa Clara Water Pollution Control Plant	● 416,395 ○ 416,395	1956, 1998 (water reclamation) 1950	1998 (water reclamation) 2008 Phase 1	Landscape irrigation	Online
Jordan	As-Samra WWTP	● 365,000	2003 Phase 1 2012 Phase 2	2008 Phase 1 2015 Phase 2	Agricultural irrigation	Online
Italy	Milano San Rocco WWTP	● 345,600	2002	2004	Agricultural irrigation	Online
Australia	Eastern Treatment Plant	● 330,000	2010	2012	Agricultural irrigation	Online
Israel	Shafdan Region Water Reclamation Project	● 328,767	1974	1977	Agricultural irrigation	Online
India	Coronation Pillar WWTP	● 318,220	2018	2022	Indirect potable reuse	Construction

# Seawater & Brackish Water Desalination

## Summary

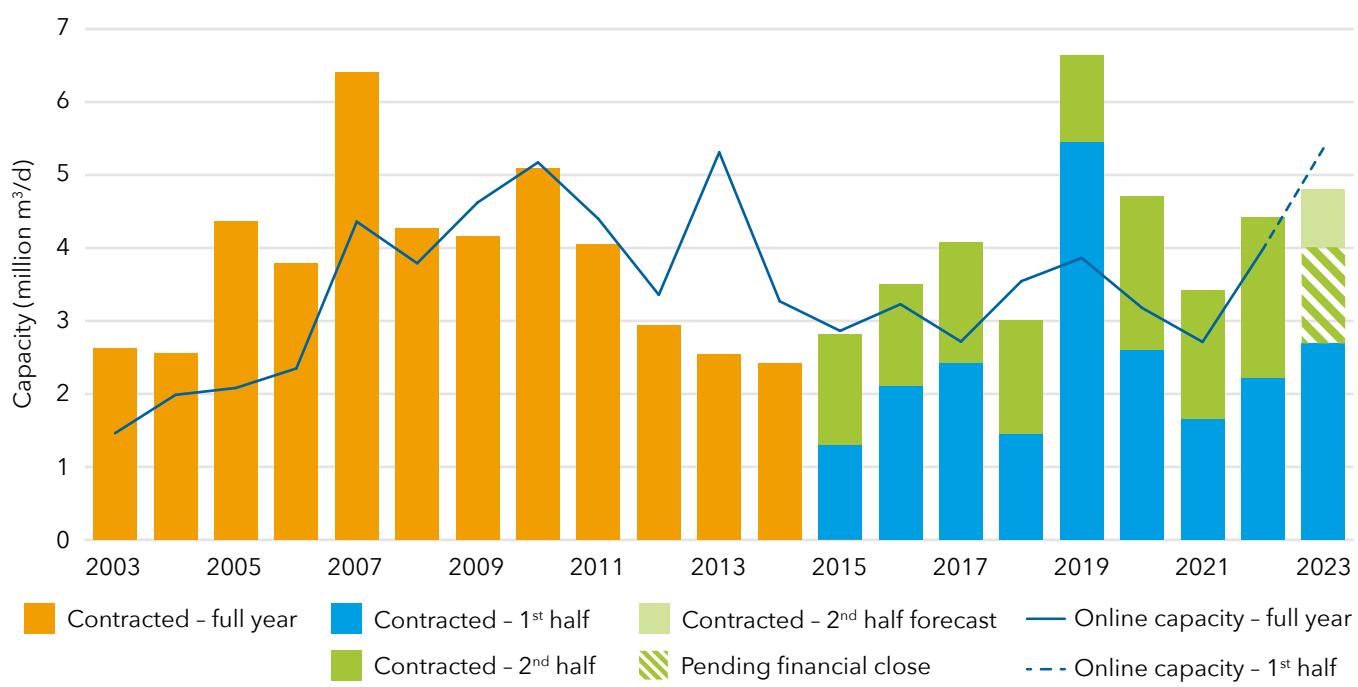
In the wake of the COVID-19 pandemic, the desalination market is now well into its recovery period, with project markets bouncing back from the supply chain issues and price increases that plagued development in 2021. The effect of this has been a significant uptick in the volume of newly awarded seawater and brackish water desalination capacity in 2022, amounting to 4.4 million m<sup>3</sup>/d, compared to just 3.3 million m<sup>3</sup>/d in 2021. 2023 is set to surpass this with 2.7 million m<sup>3</sup>/d awarded in the first half of the year, for a forecast end-of-year figure of 4.8 million m<sup>3</sup>/d.

Although the new capacity figures for 2022 and 2023 (forecasted) are the sixth and fourth highest respectively since the turn of the millennium, the numbers represent a marked downward revision of pre-COVID forecasts, reflecting the reality of a more long-term slowdown in project procurement. Even as supply chains recover, some projects remain on hold with little indication of resumption in the near future, while for active projects, the price of engineering, procurement, and construction (EPC) work has increased by up to a third. The result of this is a leaner project pipeline than expected pre-pandemic and higher capital expenditure per cubic metre of capacity at projects that do progress.

The overall cost of desalinated water at independent water projects (IWPs) has remained low despite higher EPC capital costs. Crucial to this have been low-cost energy, long contract tenors, and increasing economies of scale. Dubai's retendered Hassyan exemplifies this well, with low-cost renewably generated electricity, a long 35-year offtake agreement, and a capacity exceeding 800,000 m<sup>3</sup>/d all contributing to a record-breaking levelised cost of water (LCOW) of just \$0.3675/m<sup>3</sup>. By contrast, Abu Dhabi's smaller 545,520 m<sup>3</sup>/d Mirfa 2 IWP, with more expensive energy and a shorter 30-year offtake agreement, saw a significantly higher winning bid price of \$0.48/m<sup>3</sup>.

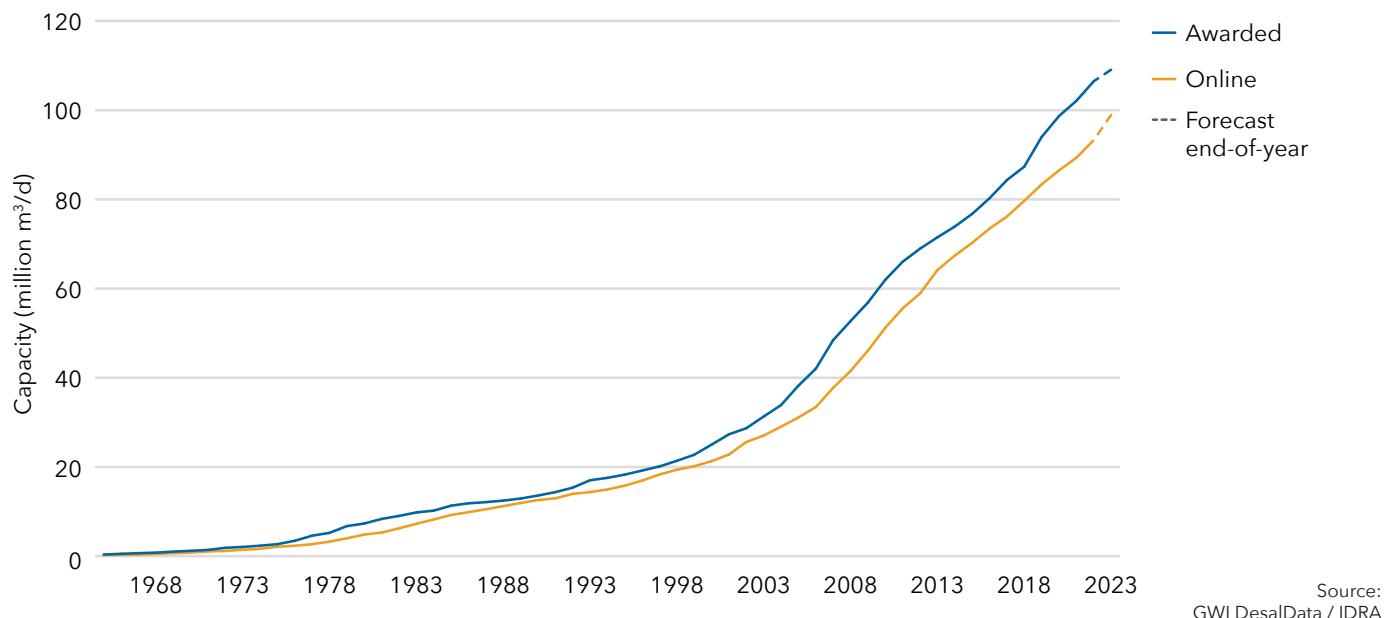
Plant sizes are continuing to grow ever larger with mega projects (>250,000 m<sup>3</sup>/d) comprising the majority of new capacity awarded in 2022–2023. The Gulf Cooperation Council (GCC) region remains the key regional market for this kind of activity, with mega projects in the region accounting for 39% of all new capacity awarded in 2022. This is reflected in company rankings with large-scale seawater desalination projects continuing to be predominantly developed and supplied by a small number of companies experienced in the GCC project markets.

## Incremental contracted and online desalination capacity by year, since 2003

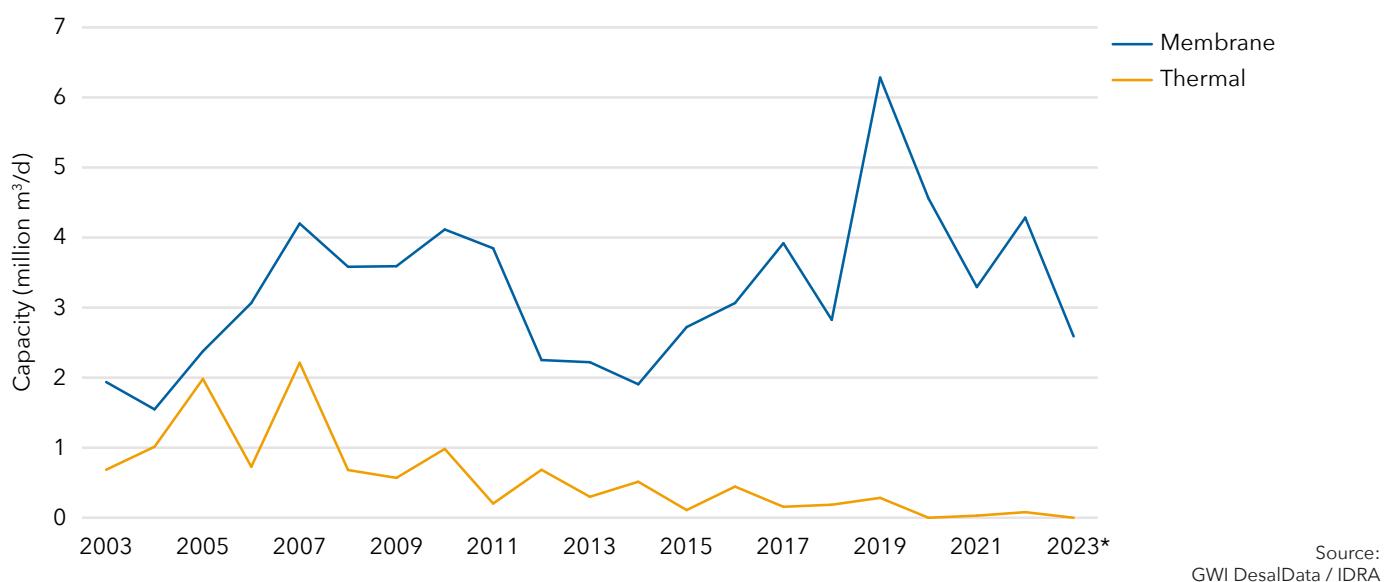


Source:  
GWI DesalData / IDRA

## Cumulative contracted and online desalination capacity, since 1968



## Additional contracted desalination capacity by technology, 2003-2023



NB: Desalination market profile charts include seawater and brackish water desalination only. All 2023 data values (asterisked) are for first half of year only unless otherwise stated.

Extensive new building programmes in historically smaller markets outside the GCC, such as Algeria, have led to the award of still more mega projects, comprising an additional 19% of 2022's yearly total. Further building programmes in China (2.4 million m<sup>3</sup>/d) and Egypt (3 million m<sup>3</sup>/d by 2025 and 10 million m<sup>3</sup>/d by 2050) are set to drive significant investment in coming years as decision makers move to make desalination a more integral element of their long-term water security strategies.

On the developer side, ACWA Power and ENGIE retain their dominance over new mega projects in the Gulf, whilst among plant suppliers, Metito and Wetico take the top spots for 2022–2023, each securing large-scale project contracts in Saudi Arabia and Algeria, with Metito also picking up the contract for India's largest seawater desalination project. Meanwhile, Veolia has strengthened its position in 2022–2023, completing the acquisition of Suez's Water Technologies & Solutions (WTS) business, and Doosan Enerbility has kept momentum from its return to the mega project markets to pick up another large contract in Saudi Arabia.

## By region

### GCC

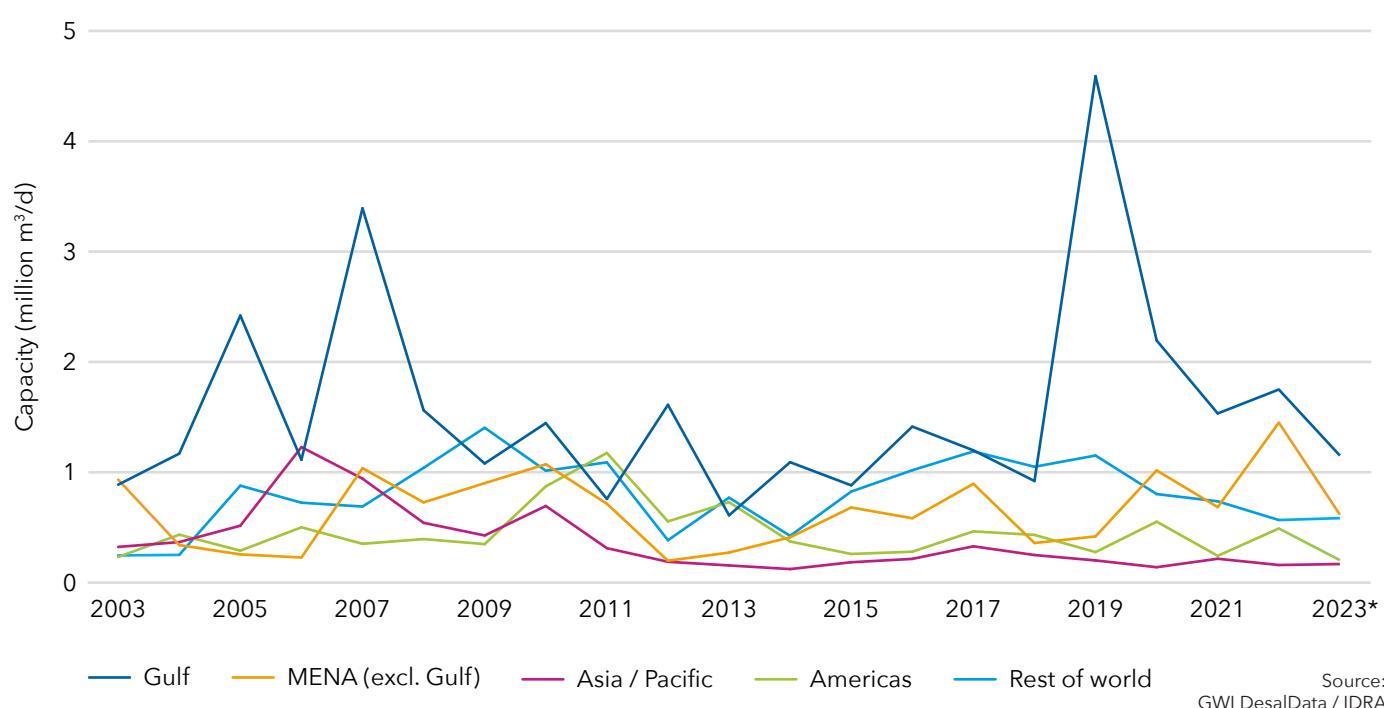
For seawater desalination, the key markets remain the member states of the GCC region, particularly Saudi Arabia, and the United Arab Emirates. In total, projects from these countries accounted for 2.49 million m<sup>3</sup>/d in 2022, 57% of the global total. The majority of this figure comprises mega projects in Saudi Arabia which alone accounted for 1.6 million m<sup>3</sup>/d across two projects: the Jubail 2 Replacement (1 million m<sup>3</sup>/d) and Shoaiba 3 Replacement (600,000 m<sup>3</sup>/d) SWRO plants. Behind these projects are three key drivers: ever-increasing demand for potable water in the face of worsening climate change and expanding populations, a lack of readily available freshwater, and the replacement of outdated and operationally costly thermal desalination installations with more cost-effective membrane-based plants. These drivers are most pronounced in Saudi Arabia which has both the largest population of the GCC states and largest existing base of thermal desal capacity, the latter of which is the key driver behind the country's two mega projects awarded in 2022.

Similarly, in the UAE, mega projects dominate new capacity with one mega project already fully awarded in 2023 (Mirfa 2 IWP, 545,200 m<sup>3</sup>/d) and another, to be the second largest in the UAE, expected to reach financial close by the end of the year (Hassyan IWP, 818,280 m<sup>3</sup>/d). The Hassyan project is in its second iteration after a previous tendering process stalled in 2022, with the original water purchase agreement (WPA) being cancelled. The initial WPA was signed in 2021 at what would have been a record-low price of just \$0.28/m<sup>3</sup>. The new, higher price of \$0.3675/m<sup>3</sup> will still be the new global record but the additional \$0.09/m<sup>3</sup> more realistically reflects the costs of producing desalinated water in a post-COVID world.

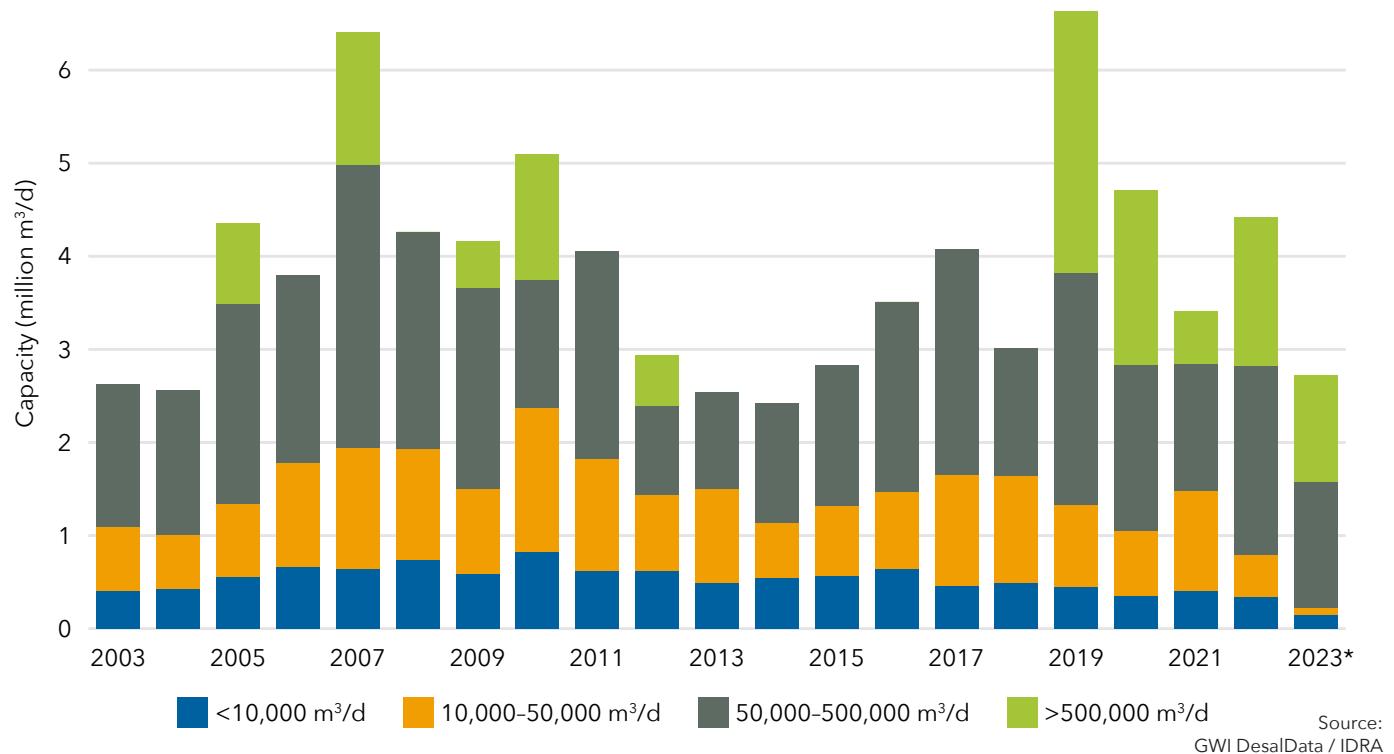
Other GCC markets (Bahrain, Kuwait, Oman, and Qatar) have seen limited activity in 2022-2023 with only small-scale project awards. However, several large-scale mega projects remain in the pipeline for these countries, most notably in Kuwait (Az-Zour North stage 2/3 IWPP) and Qatar (Facility E and New Qatar IWPPs). These projects are expected to see award within the next five years and together represent 1.45 million m<sup>3</sup>/d of new capacity for the GCC region.

Overall, economies of scale and ever-increasing demand are driving desalination plants in the GCC to become even larger than ever before. The mean size of the 27 large-scale plants (>50,000 m<sup>3</sup>/d) awarded in the last five years in the GCC is 390,000 m<sup>3</sup>/d, an average 132% higher than that of the 29 large-scale plants awarded in the preceding five-year period (168,000 m<sup>3</sup>/d), and 108% higher than the average from the past fifteen years (188,000 m<sup>3</sup>/d). As desalination becomes an ever more integral component of long-term water security in the region and globally, and stakeholders seek to reduce the cost of desalinated water still further, projects exceeding 500,000 m<sup>3</sup>/d are only expected to become more common.

### Annual contracted desalination capacity by region, 2003-2023



## Contracted desalination capacity by plant size, 2003-2023



### Rest of MENA

In the wider MENA region, the breakout market for the past year has been Algeria, which saw a significant volume of new capacity awarded in 2022–2023 with five 300,000 m<sup>3</sup>/d mega seawater desalination projects (Béjaïa, Cap Blanc, Cap Djinet, El Tarf, and Fouka). These projects represent a 51% increase over the country's entire previously installed capacity base and reflect a shift to focus on desalination as a serious solution to the country's worsening water scarcity. Furthermore, with the contract winners being new to the Algerian desalination market, these projects mark a fresh new era for desalination in Algeria and a clean break from the troubled past of plants like Magtaa.

Elsewhere, Egypt's sovereign wealth fund (TSFE) has kicked off the tendering process for its expansive desalination building programme. Currently, various consortia have been prequalified to bid for projects within the various size bands. In total, the programme comprises 21 projects which will provide 3 million m<sup>3</sup>/d of new production capacity by 2025, increasing to 10 million m<sup>3</sup>/d by 2050. The programme, which is being procured using private finance under the build-operate (BOO) or build-operate-transfer (BOT) models, represents a new direction for the Egyptian desalination market, which has historically been characterised by the engineering, procurement and construction (EPC) and design-build-operate (DBO) models. If the programme is successful, privately financed models are expected to become the norm in Egyptian desalination. The majority of the projects are expected to utilise renewable energy sources through the grid. TSFE initiated the prequalification process in 2022, with the RFP for the first package, 3–4 plants in the Matrouh region, now expected to be released in February 2024 after delays pushed the timeline back by several months.

Meanwhile, in Morocco, bids have been received for the first 548,000 m<sup>3</sup>/d phase of the Casablanca mega project (total capacity: 822,000 m<sup>3</sup>/d). The bids submitted came in at \$0.46/m<sup>3</sup> and \$0.60/m<sup>3</sup> and an award is expected in 2024, with the second phase due for completion by 2030. The project will be one of the largest outside the GCC and will be followed by a further three mega projects (Nador, 685,000 m<sup>3</sup>/d, New Jorf Lasfar, 548,000 m<sup>3</sup>/d, and Safi, 411,000 m<sup>3</sup>/d), reflecting a new focus on desalination as a long-term component of the country's supply mix.

Outside North Africa, in Jordan, the 685,000 m<sup>3</sup>/d Aqaba-Amman Water Desalination and Conveyance Project (AAWDCP) is expected to see bid submissions opened at the end of 2023 ahead of an award in 2024. Meanwhile, in Israel, the 274,000 m<sup>3</sup>/d Birkat Miriam SWRO project (formerly Western Galilee) was awarded to IDE Technologies in November 2022 but is still pending financial close. Further desalination projects are expected in the long term but the immediate pipeline remains small. The conflict in Gaza is not expected to significantly affect Israel's existing plans for further desalination but has put plans on hold for a 150,000 m<sup>3</sup>/d seawater desalination plant within Gaza itself.

## North America

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In North America, the US is by far the largest market for desalination projects, mostly treating brackish water or wastewater. These projects comprise almost all North American desalination capacity awarded in 2022–23, with no major seawater desalination plants being awarded. Most desalination projects awarded in the US in 2022–2023 are small-scale, treating less than 10,000 m<sup>3</sup>/d, with a small number of larger exceptions (LA Advanced Water Purification Facility, 57,450 m<sup>3</sup>/d and San Bernardino Clean Water Factory, CA, Phase 1, 18,925 m<sup>3</sup>/d). Texas' 11,355 m<sup>3</sup>/d Alice BWRO project, which began construction in October 2023, is the state's first public-private-partnership (PPP) for an RO plant and is expected to begin producing water in the first half of 2024.

Seawater desalination activity in the US remains limited to Texas and California, with a small number of projects in the pipeline over the next five years (Ingleside, 132,475 m<sup>3</sup>/d, Brazosport, 189,250 m<sup>3</sup>/d, Monterey Peninsula, 24,224 m<sup>3</sup>/d, Corpus Christi, 75,700 m<sup>3</sup>/d, and Doheny, 56,775 m<sup>3</sup>/d). In Texas, Corpus Christi has historically been the site of two competing ideas of where to build a seawater desalination project, one proposed by the city and one by the port. However, in March 2023, the competing bodies agreed to cooperate in their approach to meeting potential water shortages and to work together on a single desalination project. Public opposition remains a challenge for the project's development but the unified approach is expected to give the project the drive it needs. Meanwhile, in California, permitting remains the primary obstacle to new seawater desalination projects. However, there is still hope for new projects with the Doheny SWRO receiving its Coastal Development Permit (CDP) in 2022 and entering prequalification in September 2023.

## East Asia / Pacific

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The desalination market in East Asia / Pacific in 2022–2023 has continued to be shaped by growing industrial demand, with the seven largest projects awarded in the last year in the region all serving industrial end users. Combined with worsening water scarcity across the region, this demand is driving desalination to be more seriously considered by decision makers as a long-term water supply solution.

In China, the largest national market in East Asia / Pacific, a large-scale building programme was announced in 2022 which will see national desalination capacity expanded by 2.37 million m<sup>3</sup>/d across 18 large-scale projects (mean size: 132,000 m<sup>3</sup>/d). These projects represent a 37% increase over China's existing 6.32 million m<sup>3</sup>/d installed seawater and brackish water desalination capacity base. One of the first of these projects to be awarded was won by Suez in early 2023 (Yantai Wanhua Chemical Industry RO, 100,000 m<sup>3</sup>/d). However, with Chinese project developers looking to keep the supply chain localised to China in the pursuit of lower costs, opportunities for international players to break into this expansive programme may be limited.

Elsewhere in the region, Taiwan approved a new water tariff in February 2023 that raises fees for large water consumers during the dry season and is expected to drive uptake of alternative water sources such as desalination. Two large-scale projects are currently planned in the country, passing environmental impact assessments in July 2022 and currently undergoing feasibility studies. The projects are expected to be tendered in 2024, with construction expected to be complete by 2028, and will serve end users in the cities of Hsinchu (100,000 m<sup>3</sup>/d) and Tainan (200,000 m<sup>3</sup>/d) on Taiwan's populous west coast. Meanwhile, in Australia, the ongoing El Niño event may lead to drier conditions and potentially drought, driving further demand for desalination. Several large-scale desalination plants are already under consideration, in South Australia (Northern Water Supply Project, 260,000 m<sup>3</sup>/d), New South Wales (Sydney Desal Expansion, 250,000 m<sup>3</sup>/d), and Western Australia (Alkimos Desalination Plant, 150,000 m<sup>3</sup>/d). The South Australia and Sydney projects are currently at the planning stage while for Alkimos, a partner is expected to be in place by Q1 2024.

Plant sizes are typically smaller in East Asia / Pacific than in the Middle East, with only four plants exceeding the 250,000 m<sup>3</sup>/d mark, in Australia and Singapore. New projects are typically much smaller than this, with only one project in the last five years exceeding 150,000 m<sup>3</sup>/d.

## Southern Asia

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The Indian desalination market has begun to recover after slowing almost to a halt during the COVID pandemic. 2022–2023 saw almost half a million m<sup>3</sup>/d of new capacity awarded, compared to just 170,000 m<sup>3</sup>/d in 2021–2022. However, the bulk of the 2022–2023 figure comprises a single plant: the 400,000 m<sup>3</sup>/d Chennai Perur desalination plant in Tamil Nadu, the country's largest seawater desalination plant. The project was originally intended to be awarded in 2021 but experienced repeated delays throughout the pandemic, only reaching award in March 2023. Elsewhere in India, four SWRO projects in Gujarat that were awarded in 2019 under the hybrid annuity model have still not reached financial close four years later, casting a shadow over the future of hybrid-annuity-based desalination in India.

## Latin America & Caribbean

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Activity in the Latin America / Caribbean region has taken off again quickly in the wake of the COVID pandemic. Compared to just 97,000 m<sup>3</sup>/d of capacity awarded in 2021, 2022 saw more than 475,000 m<sup>3</sup>/d of new projects contracted with a further 215,000 m<sup>3</sup>/d in the first half of 2023. The 2022 figure represents the third highest all-time yearly figure for the region, reflecting the importance of desalination as a pillar of the region's long-term supply mix.

Chile remains the key market for desalination projects in Latin America, accounting for 195,000 m<sup>3</sup>/d of the 2022 regional total, and three of the region's five large-scale (>50,000 m<sup>3</sup>/d) projects awarded in 2022. The key driver behind this is demand from the country's substantial mining industry, which is given lower priority in the abstraction of the country's limited freshwater resources, in favour of municipal end users.

Elsewhere in the region, Brazil saw the award of a large project at Fortaleza in 2022 but the market otherwise remains characterised by smaller-scale projects, while in Mexico, the previously defunct 378,500 m<sup>3</sup>/d Rosarito SWRO project has seen new life with a retender expected in the first half of 2024.

## Europe / Central Asia

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Desalination in Europe and Central Asia is limited, with just 104,000 m<sup>3</sup>/d awarded in 2022, and 83,000 m<sup>3</sup>/d in the first half of 2023. However, in May 2023, the government of Spain, the largest national market in Europe, announced €1.02 billion for the expansion of the country's desalination capabilities. Short-term plans include capacity expansions at the Aguilas (210,000 m<sup>3</sup>/d), Torrevieja (240,000 m<sup>3</sup>/d), and Valdelentisco (140,000 m<sup>3</sup>/d) seawater desalination plants. The expansions are expected to add 27,000 m<sup>3</sup>/d, 120,000 m<sup>3</sup>/d, and 50,000 m<sup>3</sup>/d of new capacity, respectively. Meanwhile, in Azerbaijan, a new 600,000 m<sup>3</sup>/d SWRO plant has been proposed by Azersu JSC, the country's national utility, to supply potable water in the country's Absheron-Khizi Economic Region. The project is currently at an early stage, with a feasibility study underway, but will be the country's first large-scale desalination project.

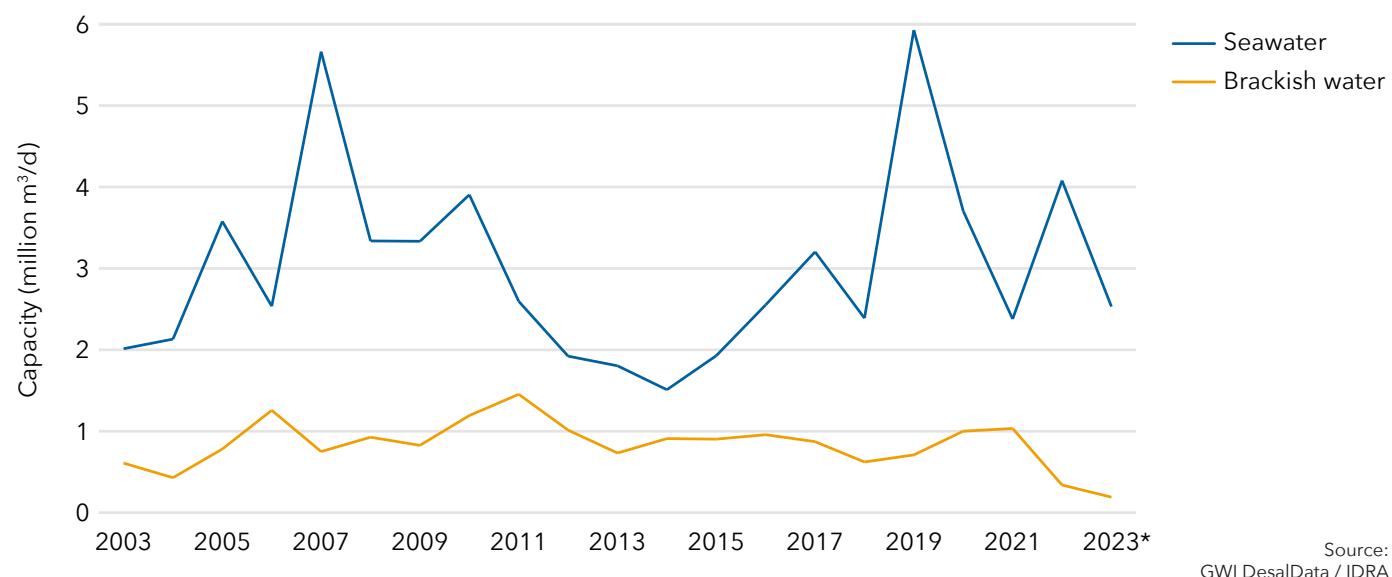
## Sub-Saharan Africa

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Following the award of Senegal's 50,000 m<sup>3</sup>/d Mamelles seawater desalination project in January 2022, the market in Sub-Saharan Africa has seen limited activity. Kenya's desalination plans remain on hold in the wake of the COVID pandemic, with no progress on the 130,000 m<sup>3</sup>/d Mombasa desalination plants since 2020. Elsewhere, countries such as South Africa and Namibia continue to prioritise wastewater reuse, and Senegal's upcoming mega project remains at the design stage with little movement since October 2022. The market has some promising opportunities but, for 2022–2023, desalination in Sub-Saharan Africa has not been a top priority among decision makers.

## Annual contracted desalination capacity by feedwater type, 2003–2023

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Source:  
GWI DesalData / IDRA

## Brackish water desalination

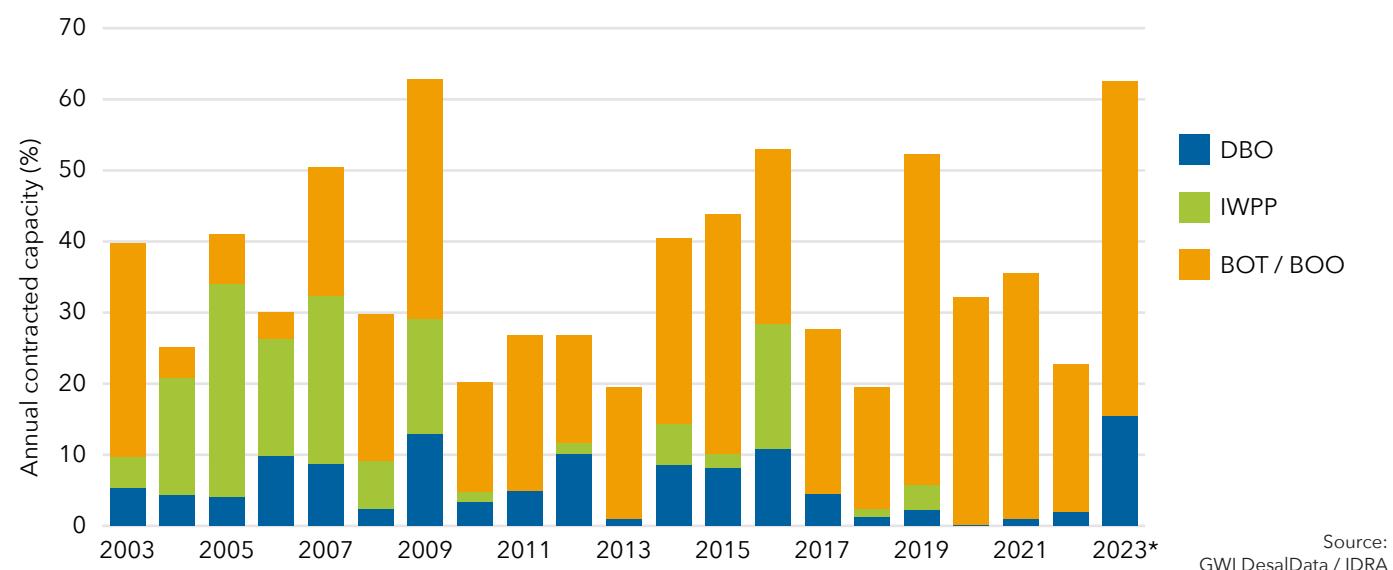
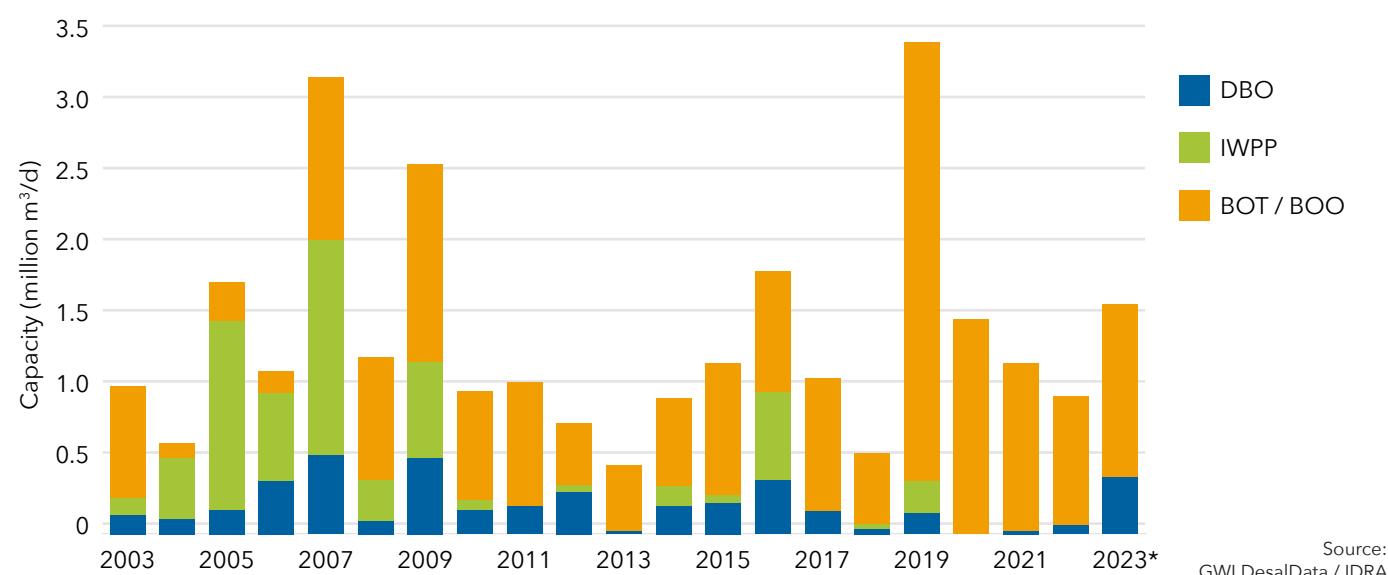
Brackish water desalination capacity in 2022 was significantly lower than seawater desalination. This is largely the result of brackish water projects being much smaller, with the largest brackish water desalination project awarded in 2022–2023 being just 40,000 m<sup>3</sup>/d (Roy Hill, Australia) and the mean plant size being 2,150 m<sup>3</sup>/d. Overall, 2022 has been a smaller year for brackish water desalination than 2021 with 470,000 m<sup>3</sup>/d of new capacity awarded vs more than 1 million in 2021.

The US remains the largest national market for brackish water desal, with total contracted capacity exceeding 7.5 million m<sup>3</sup>/d. However, the majority (80%) of capacity in the US was awarded more than a decade ago. Instead, China is the fastest growing market, having contracted 2 million m<sup>3</sup>/d of new capacity in the last decade, an increase of 152% over the pre-2014 figure, compared to an increase of 1.5 million m<sup>3</sup>/d in the US over the same period. This rapid growth in China stems primarily from mid-size installations serving industrial end users. However, brackish water desalination remains China's third choice for unconventional water resourcing, behind wastewater reuse and seawater desalination.

## Private sector involvement

2022 saw a lower percentage of large-scale projects awarded using private finance than in preceding years, with just 21% of new capacity awarded using the build-own-operate (BOO), build-operate-transfer (BOT), and build-own-operate-transfer (BOOT) models, compared to 35% in 2021 and 32% in 2020. However, a third of all capacity awarded in 2022 under the alternative engineering, procurement, and construction (EPC) model was accounted for by a single project: the 1 million m<sup>3</sup>/d Jubail 2 Replacement Plant in Saudi Arabia.

### Annual contracted desalination capacity with private sector involvement, 2003–2023



The GCC remains the largest market for desalination independent water projects (IWPs) but private finance is becoming more prevalent outside the GCC too, with project pipelines in Egypt and Morocco expected to be procured under public-private-partnership (PPP) models, markets historically largely characterised by the EPC and design-build-operate (DBO) models. DBO projects are less common, with just 632,000 m<sup>3</sup>/d of capacity awarded under the DBO model in the past five years, 400,000 m<sup>3</sup>/d of which comes from a single project, the Chennai Perur plant in India which was awarded in 2023.

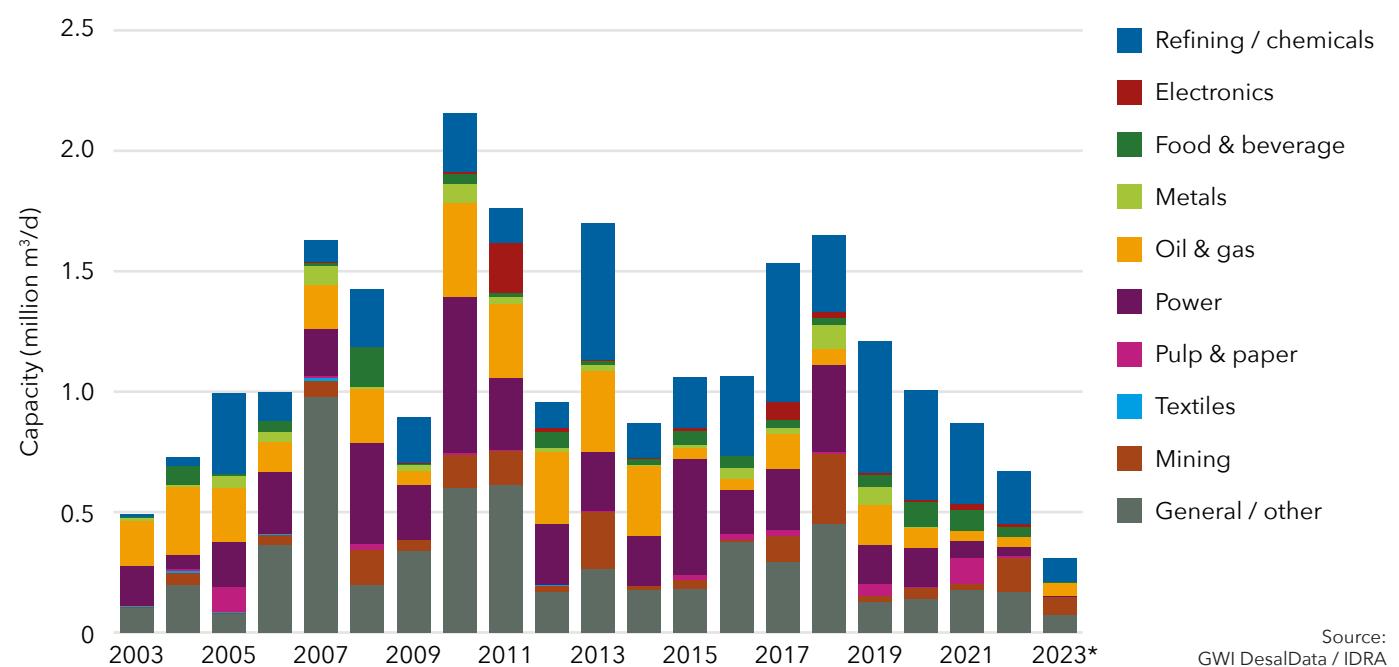
Elsewhere in India, the hybrid annuity model has so far not successfully been applied to desalination projects, proving difficult to implement outside the wastewater sector. The first desalination projects to utilise hybrid annuity were awarded by Gujarat Water Infrastructure Limited (GWIL) at the end of 2019, but have been unable to reach financial close, with delays attributed to the challenges of implementing the procurement model, rather than the COVID pandemic. For the moment, most upcoming desalination projects are expected to still be procured as EPC+O&M or DBO contracts.

The price of water from desalination IWPs has continued to decrease in recent years but has generally plateaued since the outbreak of the COVID pandemic as supply chain disruptions and longer decision-making timelines drove up overall project costs. The original tender of Dubai's Hassyan IWP was set to break the \$0.30/m<sup>3</sup> mark with a water purchase agreement (WPA) signed at just \$0.28/m<sup>3</sup> in 2021 but the project was unable to reach financial close at such a revolutionary price in the challenging financial conditions of the pandemic. However, the retendered project is still expected to set a new record-low levelised cost of water (LCOW) when it reaches financial close later in 2023, with the low bid from ACWA Power coming in at just \$0.3675/m<sup>3</sup>. This will surpass the previous record figure of \$0.405/m<sup>3</sup> set by IDE Technologies at the Soreq 2 IWP in Israel in 2020, but also reflects the higher capital costs of desalination post-COVID which have seen EPC prices rise by a third.

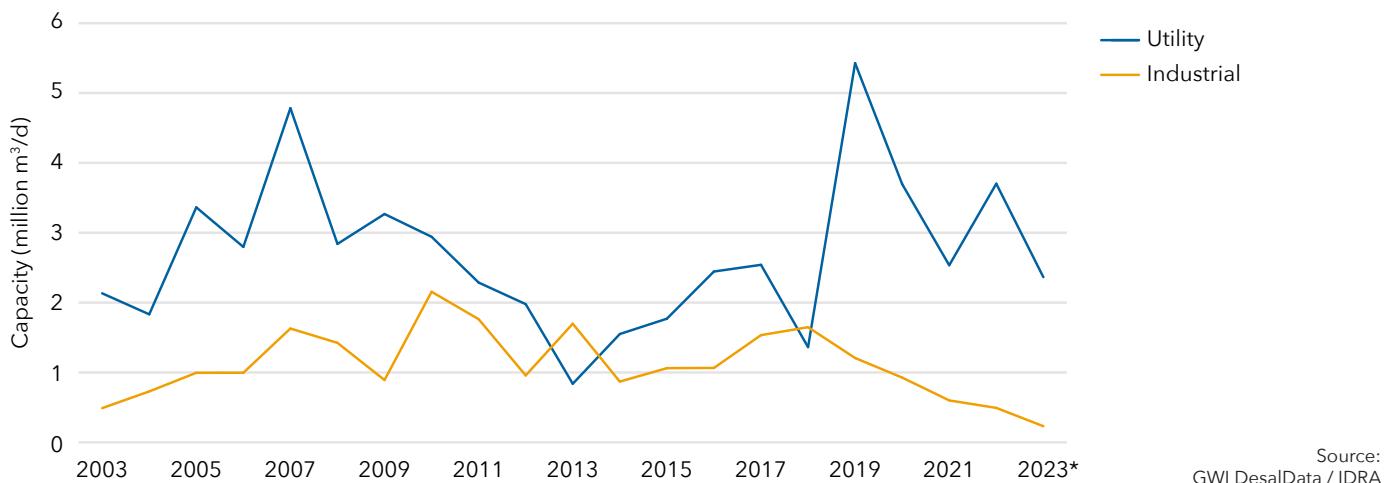
## Industrial desalination

Industrial demand for desalination was led in 2022–2023 by refining / chemicals and mining. These sectors accounted for half of all industrial desalination capacity awarded in the last year with activity centred on the two key regions of East Asia / Pacific (refining & chemicals) and Latin America / Caribbean (mining). At the national level, the dominant markets within these regions are China, with its rapid industrial growth, and Chile, where the country's massive mining sector is required to seek unconventional water resources to meet its demand. All large-scale (>50,000 m<sup>3</sup>/d) industrial plants, bar one, from 2022–2023 were awarded in these two countries (Yantai Wanhua Chemical Industry RO, 100,000 m<sup>3</sup>/d); Doña Ines de Collahuasi Mining RO, Chile, 90,720 m<sup>3</sup>/d; Shandong Yulong Petrochemical RO, China, 80,000 m<sup>3</sup>/d; Shandong Yulong Petrochemical MED, China, 80,000 m<sup>3</sup>/d; CODELCO SADDN Mining RO, Chile, 72,576 m<sup>3</sup>/d; and Ningbo Petrochemical RO, China, 58,080 m<sup>3</sup>/d).

### Annual contracted desalination capacity by industry, 2003–2023



## Annual contracted desalination capacity by user, 2003-2023



Source:  
GWI DesalData / IDRA

## Plant suppliers

Of the capacity awarded over the last two years, the majority has been won by a small number of engineering, procurement, and construction (EPC) contractors. This is largely due to the dominance of massive mega projects in the GCC which creates a winner-takes-all dynamic and means that companies focussed in the GCC market pull out a significant lead over those primarily active in other regions. However, it is also the result of a more fundamental shortage of companies willing to take on the risks of building massive desalination projects with low profit margins. This problem has become only more pronounced in recent years as EPC contractors have been forced to handle the extensive supply chain issues brought about by the COVID pandemic. Furthermore, the race to drive down the levelised cost of desalinated water has meant EPC margins have been cut down still further. Nevertheless, there is still a strong core of EPC contractors willing to navigate these challenges and take on the work of building some of the water industry's largest projects.

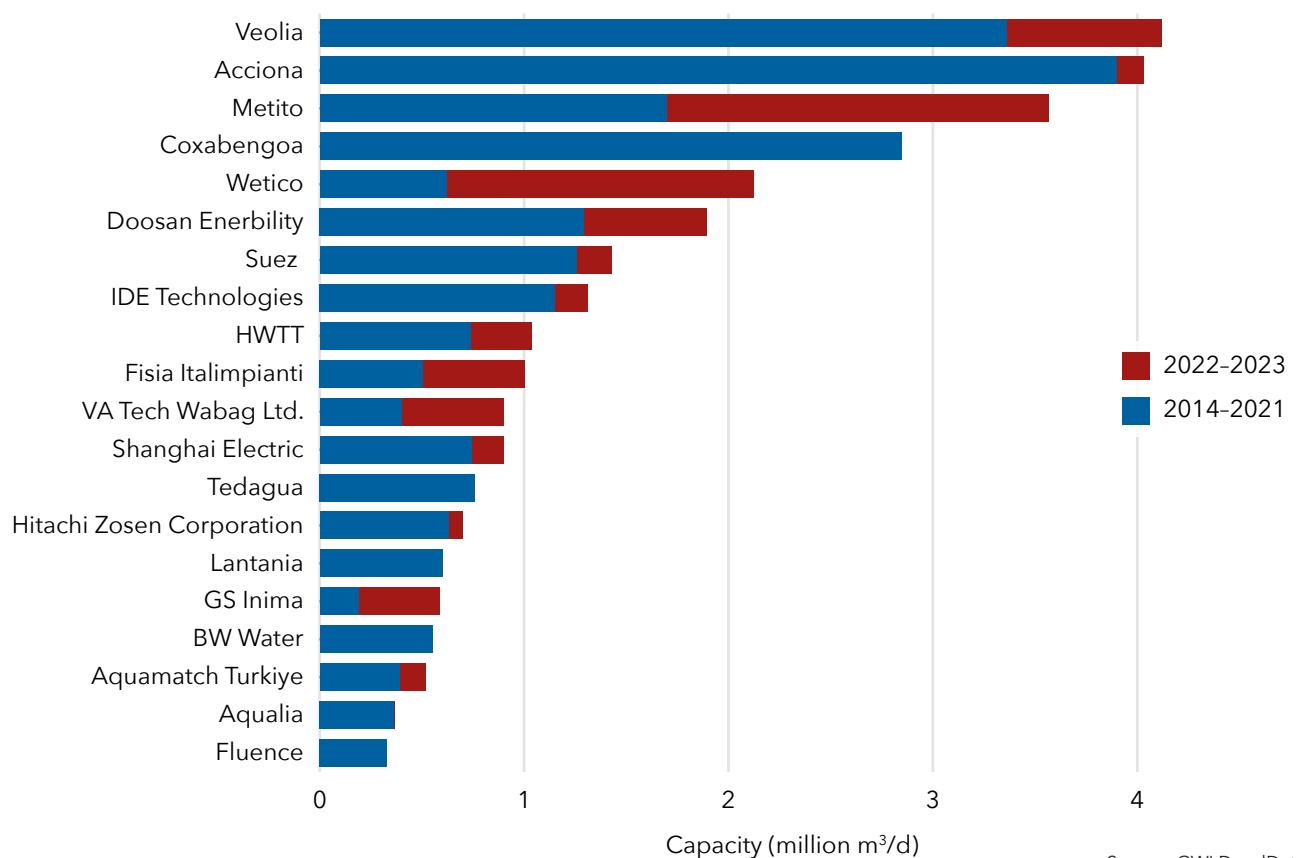
Metito takes the top spot for desalination capacity won in the last two years. Critical to this was the EPC contract for the world's largest membrane desalination plant at Jubail in Saudi Arabia, alone accounting for 1 million m³/d. Further large-scale wins were obtained in Algeria with the 300,000m³/d Fouka SWRO and in India with the 400,000m³/d Chennai Perur plant. A controlling stake in Metito was acquired in late 2023 by Abu-Dhabi-based investment conglomerate Alpha Dhabi which bought out a 62.2% holding from Mitsubishi Corp, Mitsubishi Heavy Industries, and Gulf Capital.

Meanwhile, Wetico burst back onto the scene in style at the end of 2022, winning its largest contracts ever with two 300,000m³/d projects in Algeria. In 2023, the company has kept its momentum from this success, picking up additional contracts for another 300,000m³/d project in Algeria and the 600,000m³/d Rabigh 4 IWP in Saudi Arabia.

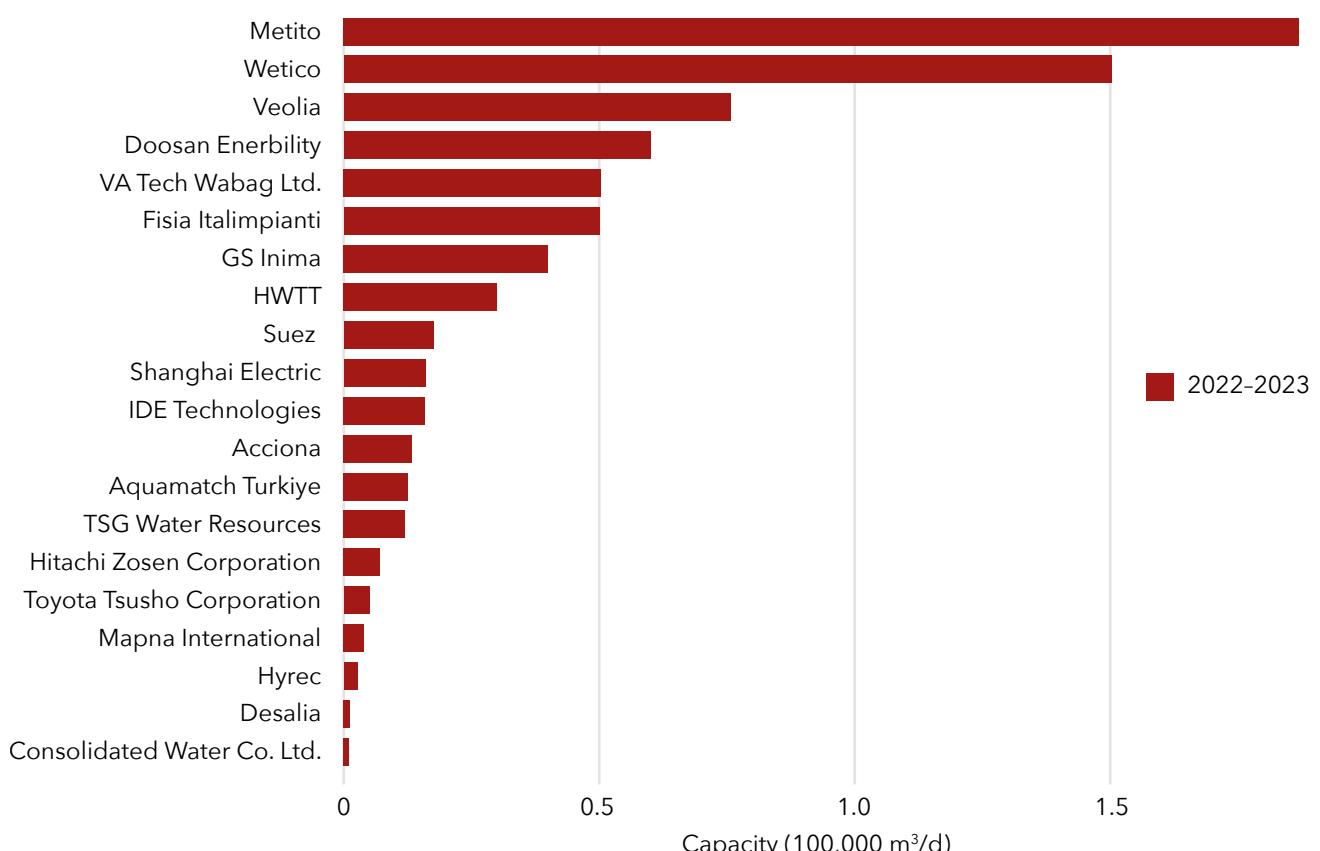
Veolia too saw success in 2023 as it picked up the EPC contract for Abu Dhabi's 545,520m³/d Mirfa 2 IWP. The company also further strengthened its capabilities through the acquisition of Suez's Water Technologies & Solutions (WTS) business. This adds a large array of smaller-scale brackish water projects to the company's existing strong large-scale seawater desalination capability through Sidem.

Doosan Enerbility (formerly Doosan Heavy) has continued to build on its 2021 return to the mega project market after a four-year absence, winning the contract to supply the 600,000m³/d project which will replace the existing Shoaiba 3 MSF plant in Saudi Arabia, itself originally delivered by Doosan.

Previous ranking headliner Abengoa was acquired in 2023 by Spain-based renewables company Cox Energy, following protracted financial difficulties. The company has now rebranded as Coxabengoa and is looking to reestablish itself in the desalination project markets, both in EPC work and concessions.

**Top 20 plant suppliers by awarded desalination capacity, 2014-2023**

Source: GWI DesalData / IDRA

**Top 20 plant suppliers by awarded desalination capacity, 2022-2023**

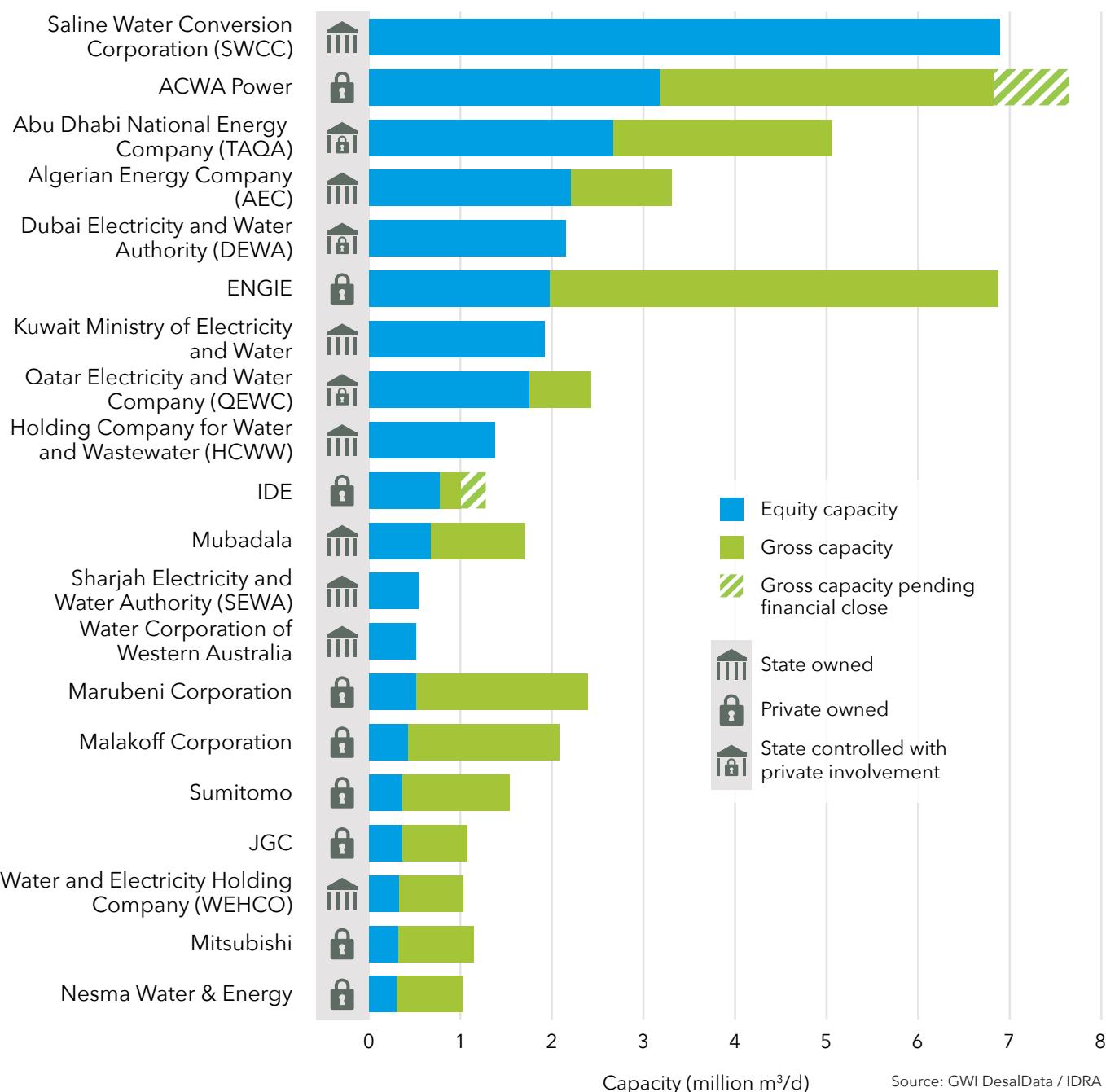
Source: GWI DesalData / IDRA

## Plant equity holders and developers

Gulf mega-projects remain key to overall equity rankings, with Saudi Arabia's state-owned Saline Water Conversion Corporation (SWCC) topping the list on the back of its extensive catalogue of EPC-model desalination mega projects. Although Saudi Arabia's water sector plan includes the transfer of SWCC's desalination portfolio to the country's sovereign wealth fund (PIF), SWCC is expected to retain ownership over its asset inventory in the near future.

Meanwhile, the growth of public private partnerships (PPPs) in recent years has resulted in substantial increases among the privately owned entities on this list. On the private developer side, ACWA Power and ENGIE remain the clear leaders for both equity capacity and gross capacity due to their long-term ability to successfully navigate the notoriously competitive GCC desalination project markets. In the case of the recently tendered Hassyan IWP in Dubai, ACWA Power and ENGIE were the only two entities to submit bids to develop what will be one of the UAE's largest desalination plants. Hassyan is expected to reach financial close before the end of 2023 and will add an additional 818,280 m<sup>3</sup>/d to ACWA Power's total. Elsewhere, IDE retains dominance over projects in Israel, with the 274,000 m<sup>3</sup>/d Birkat Miriam IWP (also known as Western Galilee) currently pending financial close.

### Top desalination developers by contracted desalination capacity



# Municipal Water Reuse Market Profile

## Summary

The reuse market has continued to grow at a steady rate in 2022–2023 as increasing water scarcity, regulatory requirements and population growth in urban centres drive up demand for unconventional water sources. Nearly 12 million m<sup>3</sup>/d of additional capacity was contracted in 2022, which represents a similar figure to 2021 if discounting the 7.5 million m<sup>3</sup>/d Al Hammam plant awarded in that year.

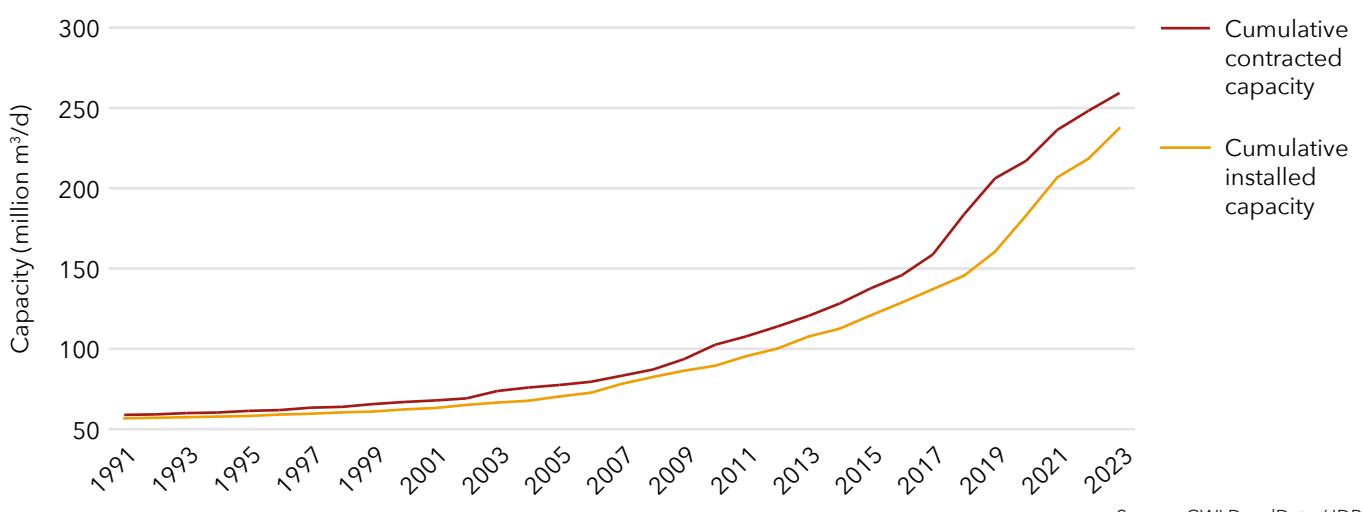
Due to its lower cost, reuse presents an attractive alternative to desalination, and has continued to grow at a faster pace, increasing by 115% since 2013 compared to 53% for desalination. However, many countries experiencing water scarcity, particularly in Sub-Saharan Africa and Latin America, have low wastewater collection and treatment rates and are therefore unable to implement reuse at scale. Conversely, many countries that do have the requisite centralised collection and treatment infrastructure in place do not experience the same pressures on freshwater supply. That being said, with extreme climate conditions increasing worldwide, reuse is likely to become a more desirable option even in regions that have traditionally relied on abundant natural freshwater resources.

Asia Pacific, North America and MENA remain the largest markets for reuse by some margin, accounting for 45%, 22% and 19% of total installed capacity, respectively. The Asia Pacific and MENA regions have seen the fastest growth over the past decade, accounting for 59% and 20% of installed capacity since 2013, with North America's share dropping to 8%. This growth has been driven primarily by China, still by far the largest market in terms of both installed and new capacity, and Egypt, where the award of several colossal plants has seen contracted capacity more than quadruple since 2018. Meanwhile, the Gulf is set for a period of heavy investment in reuse, with Kuwait building out its existing base and both Saudi Arabia and the UAE setting ambitious reuse targets. Western Europe is also likely to be an area of growth, albeit more modest, following widespread drought and the introduction of EU-wide agricultural reuse regulations in 2023.

There are clear regional trends in terms of applications for reused wastewater. Agriculture is by far the dominant source of demand throughout the MENA region, as well as in Europe. Industry is the leading source of demand in Asia Pacific. Potable reuse, meanwhile, is on the rise, particularly in North America and in parts of Sub-Saharan Africa and Asia-Pacific, although it remains prohibited in many countries, and negative public perception is a significant barrier to uptake. 2023 has been a particularly successful year for direct potable reuse (DPR): Colorado became the first US state to promulgate a state-wide DPR rule, with others soon to follow; while the Philippines became the first country in the Asia-Pacific to implement DPR. The US, South Africa, Namibia and the Philippines all have DPR projects in the pipeline.

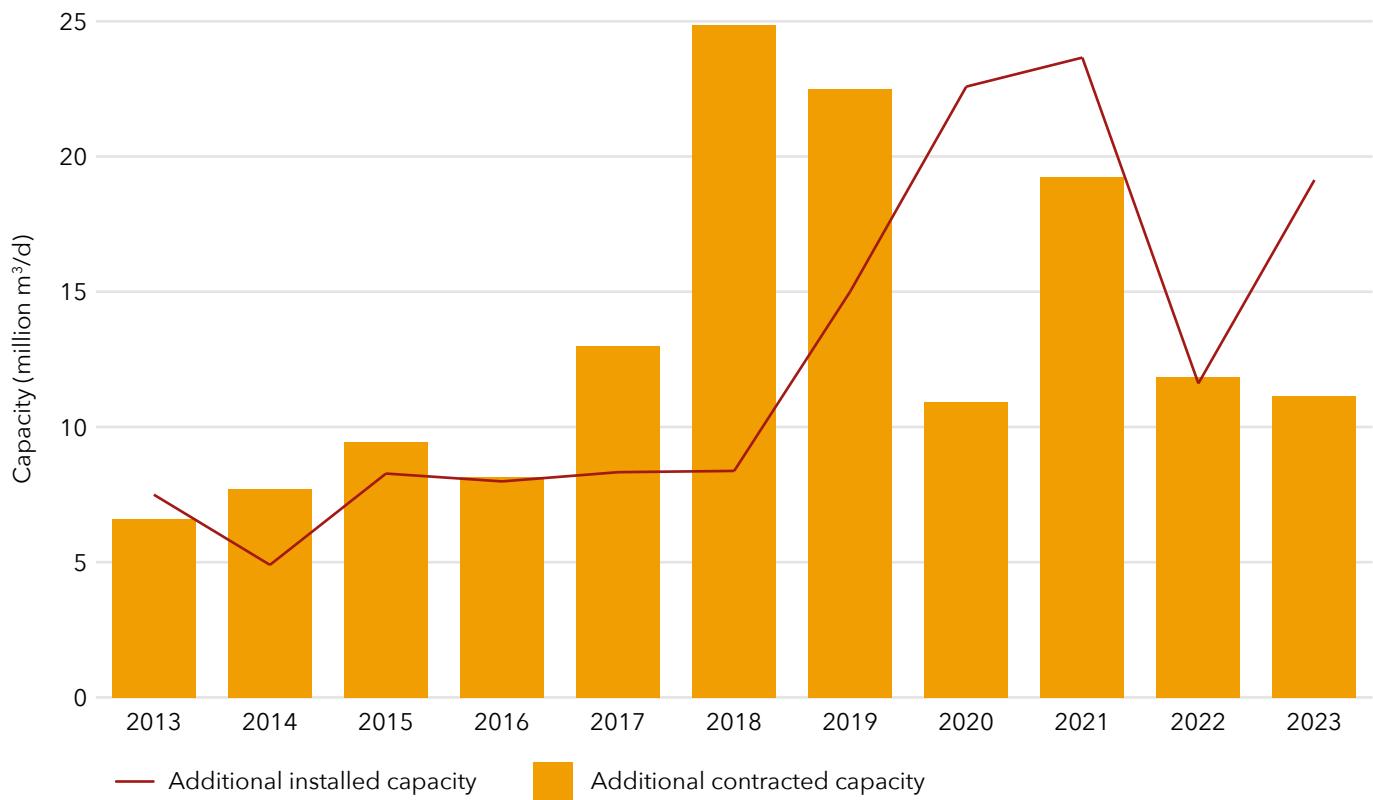
The growth of potable reuse, along with demand for high-quality treated wastewater from industry and agriculture, is driving continued growth of both tertiary and triple barrier capacity, which now account for 43% and 18% of the global total, respectively.

## Cumulative contracted and installed reuse capacity by year, 1991–2023



Source: GWI DesalData / IDRA

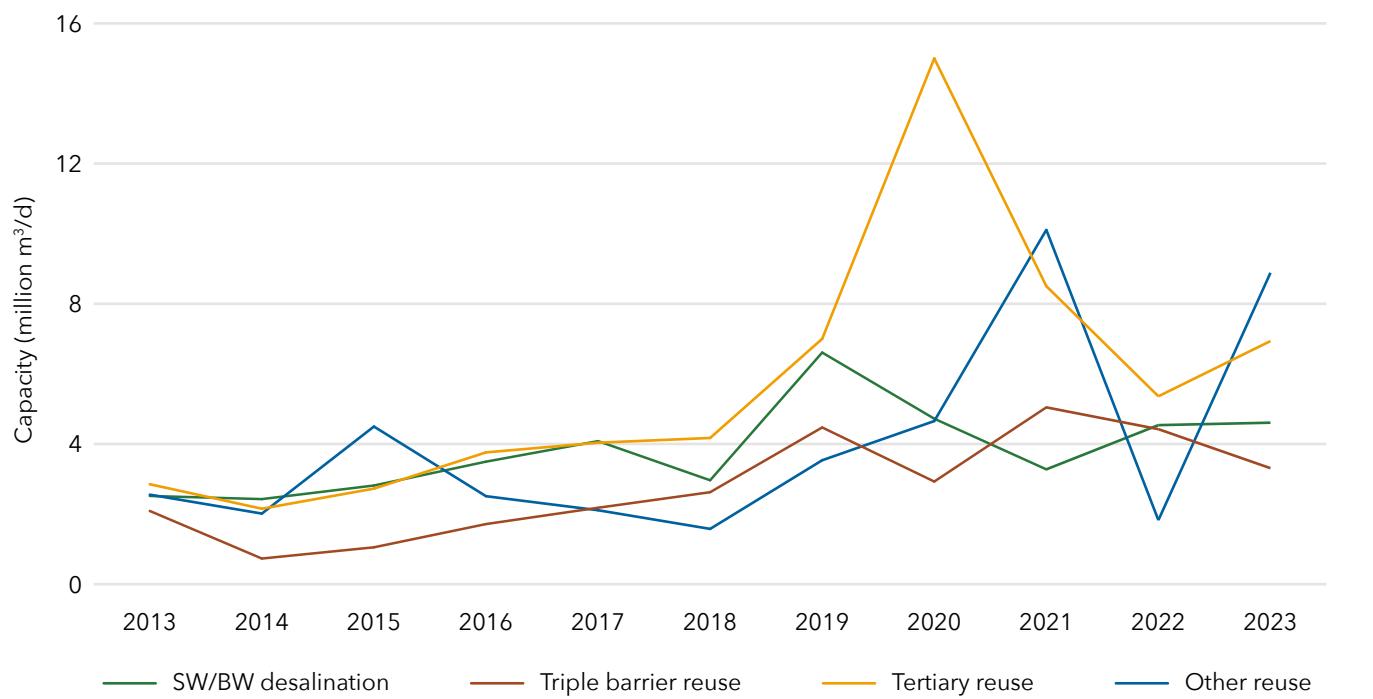
### Annual contracted and installed reuse capacity by year, 2013-2023



Source: GWI DesalData / IDRA

NB: Municipal water reuse market profile chart data for 2023 is forecasted end-of-year figure.

### Annual contracted desalination and reuse capacity by technology, 2013-2023



Source: GWI DesalData / IDRA

See p.22 for treatment technology definitions

## GWI water reuse market data

Historical data for the reuse market is based on the GWI DesalData project inventory, which includes utility wastewater treatment plants where at least some of the treated water is subsequently used for beneficial purposes. This data was previously published in GWI's Municipal Water Reuse Markets 2010 report and updated for the 2020 Desalination & Water Reuse report. To build this inventory, we have used the most comprehensive sources of data available.

For reuse projects that use a desalination technology (e.g. reverse osmosis), we have used the GWI/IDRA Worldwide Desalting Inventory, which is compiled from project references submitted by developers, engineering, procurement, and construction (EPC) contractors, equipment suppliers, and consultants. The inventory aims to be a complete record of every desalination plant with a capacity greater than 500 m<sup>3</sup>/d. The latest edition of this data is featured in the desalination market profile section of this publication.

The timeliest information comes from reuse projects included in GWI's Project Tracker, which covers projects of interest to major international players and those that are privately financed. For certain countries, we have cross-checked this data with external databases of reuse projects, and national level databases of treatment plants that indicate whether a particular plant treats water for reuse. To check the coverage in this inventory, we have collected aggregated data describing total reuse capacity and volumes of wastewater reused in each country. Where there were significant gaps in coverage, we have made assumptions to estimate the total volume of reuse capacity in the country. Reuse capacity figures for mainland China are based on data published by the Ministry of Housing and Urban-Rural Development (MOHURD), in the absence of project-level data.

## Activity by region

### Asia Pacific

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Demand from the industrial sector, motivated by increasingly strict regulations and water scarcity, is a key driver of reuse across the Asia Pacific region, accounting for almost half of installed capacity. China's reuse market, by far the world's largest in terms of installed capacity, continues to grow at pace, with 6 million m<sup>3</sup>/d added in 2022, well on the way to the 15 million m<sup>3</sup>/d of new capacity by 2025 targeted in the country's 14th five-year plan of 2021. The plan required water-scarce regions to raise the reuse rate to 25% by 2025, rising to 35% in urban areas such as Beijing, Tianjin and Hebei. However, these targets have been surpassed by more ambitious ones specified in regional plans released in 2022: Beijing set a target of 70% by 2035, while Tianjin and Hebei are targeting 50% and 45%, respectively, by 2025.

Industrial demand has also traditionally driven reuse in the region's second largest market, India. For example, state-level regulations require large industrial consumers near wastewater treatment plants to make use of any suitable effluent produced. However, other applications for treated wastewater are gaining traction, and the new National Framework for Safe Reuse released in November 2022 is expected to drive wider uptake. In particular, there has been recent interest in potable reuse with pilots underway for indirect potable reuse in Chennai, and direct potable reuse in Mumbai.

Meanwhile, Taiwan has accelerated its municipal-to-industrial reuse programme, with the latest project, the 105,000 m<sup>3</sup>/d Futian plant, awarded in July 2023. In particular, the thriving semiconductor industry is presenting a significant source of demand – in October 2023 a tender was issued for a 70,000 m<sup>3</sup>/d plant in Nanzih that will supply a semiconductor fab among other industrial customers. Moreover, to encourage wider uptake of reuse among industrial users, which has previously been held back by the higher cost of treated wastewater compared to conventional sources, the government has approved an additional water tariff for large water consumers, to be implemented in November 2023. Malaysia's national wastewater group, IWK, is also leaning on municipal-to-industrial reuse, having signed a Memorandum of Understanding in 2023 to explore the possibility of implementing reuse in the Penang region. It is also in talks with the government to create policies that will encourage industrial reuse.

Another key market in the region is Singapore, where reuse is the most important of the 'Four National Taps'. Potable-grade treated wastewater, branded NEWater, is used for industry and, in times of shortage, indirect potable reuse (IPR), with 585 million m<sup>3</sup>/year currently treated by four large-scale water reclamation plants. A fifth, the 800,000 m<sup>3</sup>/d Tuas Water Reclamation Plant, is currently under procurement. Meanwhile, the Philippines has become the first country in the region to implement direct potable reuse (DPR): Manila concessionaire Maynilad's Parañaque NEW WATER plant received its permanent operating permit in June 2023 after a year-long monitoring process to ensure compliance with drinking water standards. Maynilad plans to further increase its DPR capacity, first by tripling the capacity of the Parañaque plant to 30,000 m<sup>3</sup>/d, with the tendering process for the expansion due to begin early in 2024.

## MENA

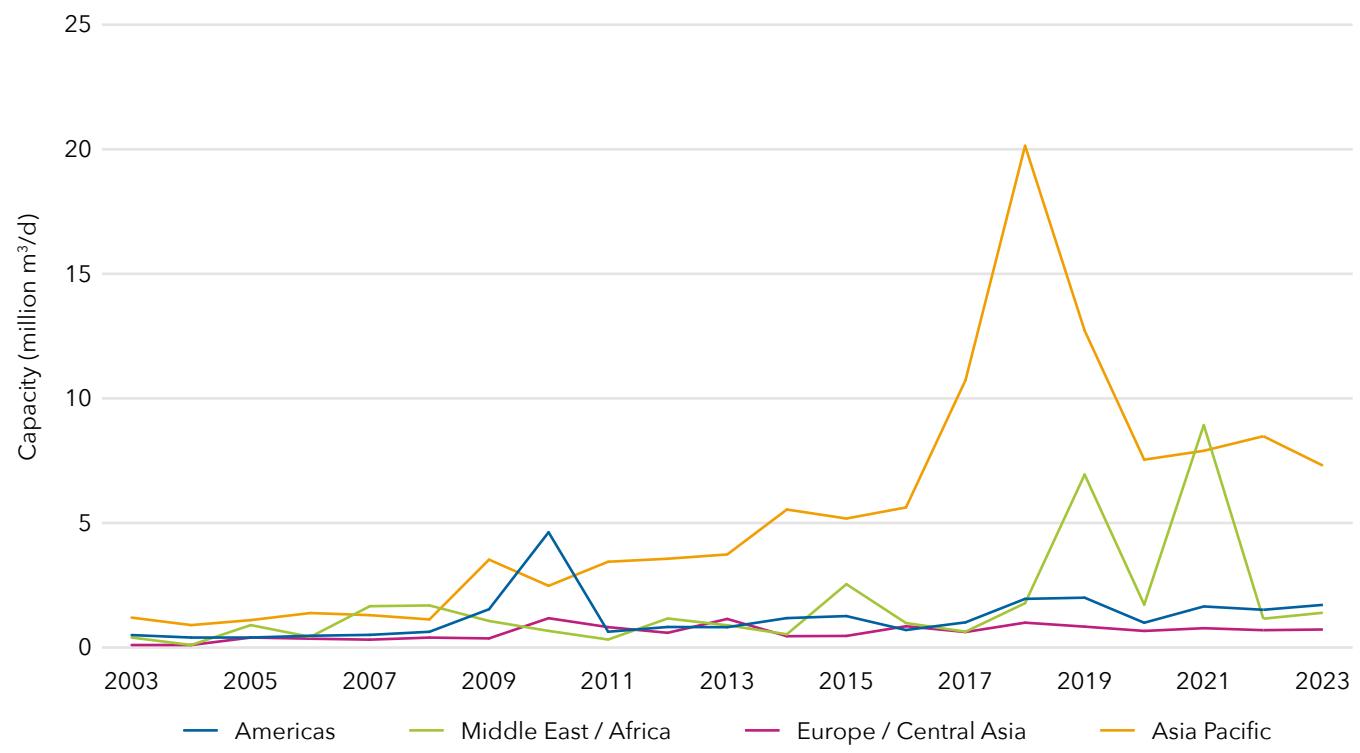
Agricultural irrigation far outstrips other applications for treated wastewater throughout the MENA region. In Israel, one of the world's most developed markets for reuse, all wastewater is required to be treated to tertiary level standards suitable for unrestricted irrigation under quality regulations introduced in 2010. However, with upgrades now substantially complete, and with around 90% of treated wastewater already being reused, the past few years have seen limited new capacity and there are no large projects on the horizon.

Egypt, on the other hand, has quadrupled its contracted reuse capacity in the last five years, and now leads the region in terms of installed and contracted capacity. The steep increase is largely due to three colossal treatment plants treating agricultural runoff for reuse in agriculture, of which the most recent, the 7.5 million m<sup>3</sup>/d Al Hammam plant awarded in 2021, will be the world's largest reuse plant when commissioned. The immediate focus of current investment in Egypt, however, is increasing wastewater treatment coverage, with a strong pipeline of large-scale wastewater treatment plants that do not yet have a defined reuse element.

Elsewhere in the region, several Gulf states are investing heavily in reuse. Saudi Arabia has the largest installed base in the GCC, and sustained investment is expected in the coming decade as the Kingdom aims to meet ambitious targets: the Saudi Irrigation Organization (SIO), which was handed responsibility for developing reuse in the Kingdom in 2022, aims to reach 70% reuse by 2030, double the Vision 2030 target of 35%. The pipeline of large-scale Independent Sewage Treatment Plants (ISTPs), of which four more are expected to be tendered in 2024, will support the increased reuse of treated wastewater. 2022-23 also saw the award of the first three of five long-term sewage treatment plant O&M packages, which include bringing the treated wastewater up to a standard suitable for reuse.

Kuwait also has a significant installed base of reuse capacity serving agriculture and industry, including the 500,000 m<sup>3</sup>/d Al-Hayman project awarded in 2020, which is the world's largest privately financed wastewater treatment plant. However, a 1 million m<sup>3</sup>/d project at North Kabd announced in 2022 could be set to surpass it. The project is still in its infancy, but is likely to be procured as a BOT, with the treated wastewater to be reused for agriculture and industry. Meanwhile, bids were submitted in 2020 for the 400,000 m<sup>3</sup>/d Al Mutla'a wastewater treatment plant, which is being procured as a DBO, but is yet to be awarded. In the UAE, October 2023 saw bids submitted for Abu Dhabi's 700,000 m<sup>3</sup>/d Al Wathba water polishing plant, which will produce treated wastewater suitable for unrestricted irrigation. Heavy investment in wastewater infrastructure is also planned in Dubai over the next decade, and an ambitious target was announced in 2023 to reuse 100% of treated wastewater by 2030.

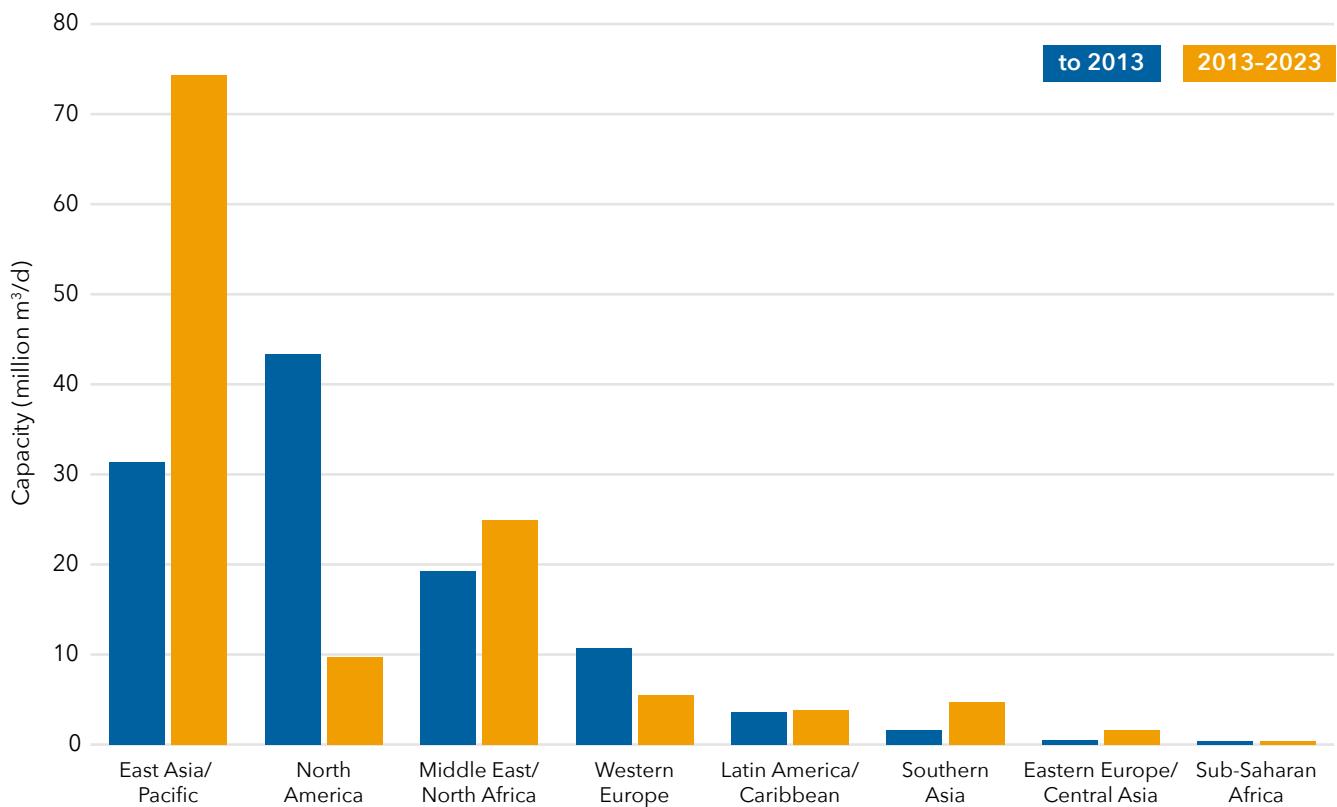
### Additional contracted reuse capacity by region, 2003-2023



Capacity figures for mainland China are based on data published by MOHURD

Source: GWI DesalData / IDRA

## Installed reuse capacity by region to 2023



Capacity figures for mainland China are based on data published by MOHURD

Source: GWI DesalData / IDRA

### North America

While agricultural and landscape irrigation and industrial reuse still represent a large portion of installed capacity in the US, potable reuse and aquifer recharge are the key growth areas in terms of new capacity. In California alone, home to the world's largest indirect potable reuse (IPR) project (the 492,000 m<sup>3</sup>/d Orange County Groundwater Replenishment System), at least a dozen potable reuse projects are at various stages of planning and procurement. The 18,925 m<sup>3</sup>/d San Bernardino Clean Water Factory IPR was awarded in 2023, as was the demo facility for the planned 314,155 m<sup>3</sup>/d Pure Water San Diego program. Meanwhile, in Virginia, procurement is underway for a large-scale aquifer recharge project known as SWIFT, which will treat 454,200 m<sup>3</sup>/d of wastewater from seven wastewater treatment plants for reinjection into the Potomac aquifer.

There is also growing interest in direct potable reuse (DPR) in a number of states, including Texas, Arizona, Florida, Colorado, California and Maryland. The planned Pure Water Southern California project would be the world's largest DPR facility to date, at 94,625 m<sup>3</sup>/d (in addition to 340,650 m<sup>3</sup>/d IPR), rising to 227,100 m<sup>3</sup>/d in Phase 2. The project's environmental impact report is due to be carried out in 2024. Meanwhile, construction is due to begin in late 2023 on Texas' 40,000 m<sup>3</sup>/d El Paso DPR project. As DPR gathers pace across the US, regulations are beginning to catch up. In October 2022, Colorado became the first state to publish a state-wide DPR rule, but it will not be the last, with regulations also being developed in several other states. It is expected that these regulations will drive further uptake of DPR.

Several sources of funding and investment are available to reuse projects in the US. In addition to Water Infrastructure Finance and Innovation Act (WIFIA) loans, in July 2023 the Department of the Interior announced a large-scale water recycling programme with \$180 million of initial funding under the Bipartisan Infrastructure Law. The majority of projects benefiting from funding will be in California and southern states.

### Europe and Central Asia

Spain remains the dominant market for reuse in Europe with over 7 million m<sup>3</sup>/d of capacity installed, and steady increases year on year, mostly serving agricultural users. In May 2023, the government announced €224 million of funding for reuse projects as part of its long-term strategy to combat water scarcity, while Catalunya is also planning €120 million of investment to double its reuse capacity.

Reuse has traditionally been less prevalent in the rest of Western Europe, but in March 2023 the French government released a new national plan to combat drought, which included ambitious targets for reuse: 1000 new reuse projects are planned, which would lift the rate of reuse of treated wastewater from 1% to 10% by 2027. The EU's new agricultural reuse regulation, which came into force in June 2023, is also expected to drive further uptake of reuse. Several northern countries where water supply is secure opted out, but in countries like Greece and Italy where current regulations are overly complex, the new regulation should significantly facilitate reuse.

Elsewhere in Europe and Central Asia, reuse is much less common, with a lack of adequate wastewater treatment acting as a restraint. However, Turkey does represent a significant market. It achieved its goal of reusing 5% of treated wastewater in the first half of 2023, and aims to increase this to 15% by 2030.

### Sub-Saharan Africa

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Namibia has pioneered direct potable reuse (DPR) since the 1960s and is continuing to build new capacity, with the latest project, the 20,000 m<sup>3</sup>/d Gammams DPR (often referred to as DPR2), planned to treat wastewater from two existing wastewater treatment plants. Design and procurement details are expected to be finalised by the end of 2023.

However, neighbouring South Africa has the stronger potable reuse pipeline – a planned 20,000 m<sup>3</sup>/d DPR unit at an existing plant in Durban is on hold following flood damage, but the Faure New Water Scheme, which will comprise up to 200,000 m<sup>3</sup>/d of direct and indirect potable reuse capacity, is progressing, with detailed design completed in 2023 and commissioning planned for 2028. Industrial reuse is also on the rise in South Africa, and reuse schemes are likely to receive significant investment after the Development Bank of Southern Africa's National Reuse Programme was boosted by \$235 million of funding from the Green Climate fund, announced in July 2023.

Meanwhile, in Botswana, assessment of bids for the 50,000 m<sup>3</sup>/d Glen Valley water reclamation plant is still ongoing, amidst allegations of corruption against the client. Reuse is limited elsewhere in Sub-Saharan Africa, with a lack of wastewater collection and treatment being a restricting factor.

### Latin America

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In Chile, where municipal reuse has in the past been hindered by disputes between treatment plant owners and downstream agricultural users over the ownership of treated wastewater, the 77,760 m<sup>3</sup>/d Antofagasta reuse project (initial capacity 25,920 m<sup>3</sup>/d) has been re-tendered, with bid submission scheduled by the end of 2023. The project is being procured under a build-operate-transfer (BOT) contract, and the client is working to secure off-take agreements, likely with the mining industry, to mitigate demand risk. The project could pave the way for other plants in coastal cities where wastewater is currently discharged to the sea after primary treatment.

Elsewhere in the region, demand for reuse also comes mainly from the industrial sector. In Mexico, four projects with a combined capacity of 40,000 m<sup>3</sup>/d near the Hondo River are expected to be tendered in 2024, after an environmental impact assessment was successfully completed in 2023. The projects will be procured as 20-year BOTs with industrial customers as off-takers. Meanwhile, in Peru, expanding wastewater treatment coverage is the primary focus of Proinversion's public-private partnership (PPP) pipeline, but some projects may also include an element of reuse for agricultural irrigation. In Brazil, where reuse is hindered by the country's low rate of wastewater treatment, a 17,280 m<sup>3</sup>/d project planned by the utility Cesan has secured an off-take agreement with steel-maker Arcelor Mittal, and procurement is expected to begin in 2024.

### Capacity by technology and treatment level

GWI's reuse technology breakdown includes three categories: 'Triple barrier', 'Tertiary', and 'Other'. Triple barrier reuse encompasses the use of membrane-based treatment technologies to produce high-quality water, typically for potable or process applications. A triple barrier treatment train generally includes a combination of microfiltration/ultrafiltration (MF/UF) with reverse osmosis (RO) but also includes wastewater solely treated with MF/UF. Tertiary treatment includes sand or media filtration, membrane bioreactors (MBRs), or secondary treatment with disinfection. Lastly, 'Other' includes installations where the treatment level is secondary or lower.

Tertiary treatment remains the largest technology segment for wastewater reuse, accounting for 105 million m<sup>3</sup>/d of capacity, a 13% increase on 2021, and 43% of the currently installed global total. This high figure continues to be driven by a combination of new-build projects and upgrades to existing facilities. In both cases, activity is motivated primarily by demand for high-quality treated wastewater in agricultural and industrial applications.

Triple barrier treatment is less common than tertiary due to the higher costs associated with the more stringent treatment level, accounting for 18% of the global total. However, it is seeing rapid growth in new capacity as rising municipal needs and worsening water scarcity continue to drive demand for highly treated wastewater. These are similar drivers to those behind the growth of the desalination market and have led to 4.4 million m<sup>3</sup>/d of triple barrier reuse capacity being awarded in 2022. This marks an increase of 12% over all previously installed triple barrier capacity, a similar increase to that seen in recent years (2021: 10%, 2020: 8.1%, 2018: 13.4%, 2017: 8%). Capacity is concentrated mostly in China, the US, India, and Australia. Growing interest in potable reuse and new regulations around the removal of per- and polyfluoroalkyl substances (PFAS) are likely to drive further demand for triple barrier treatment.

## Global distribution of installed tertiary and triple barrier reuse capacity, 2013-2023

### Triple barrier

Global distribution of installed triple barrier reuse, 2013-2023 (m<sup>3</sup>/d million)



### Tertiary

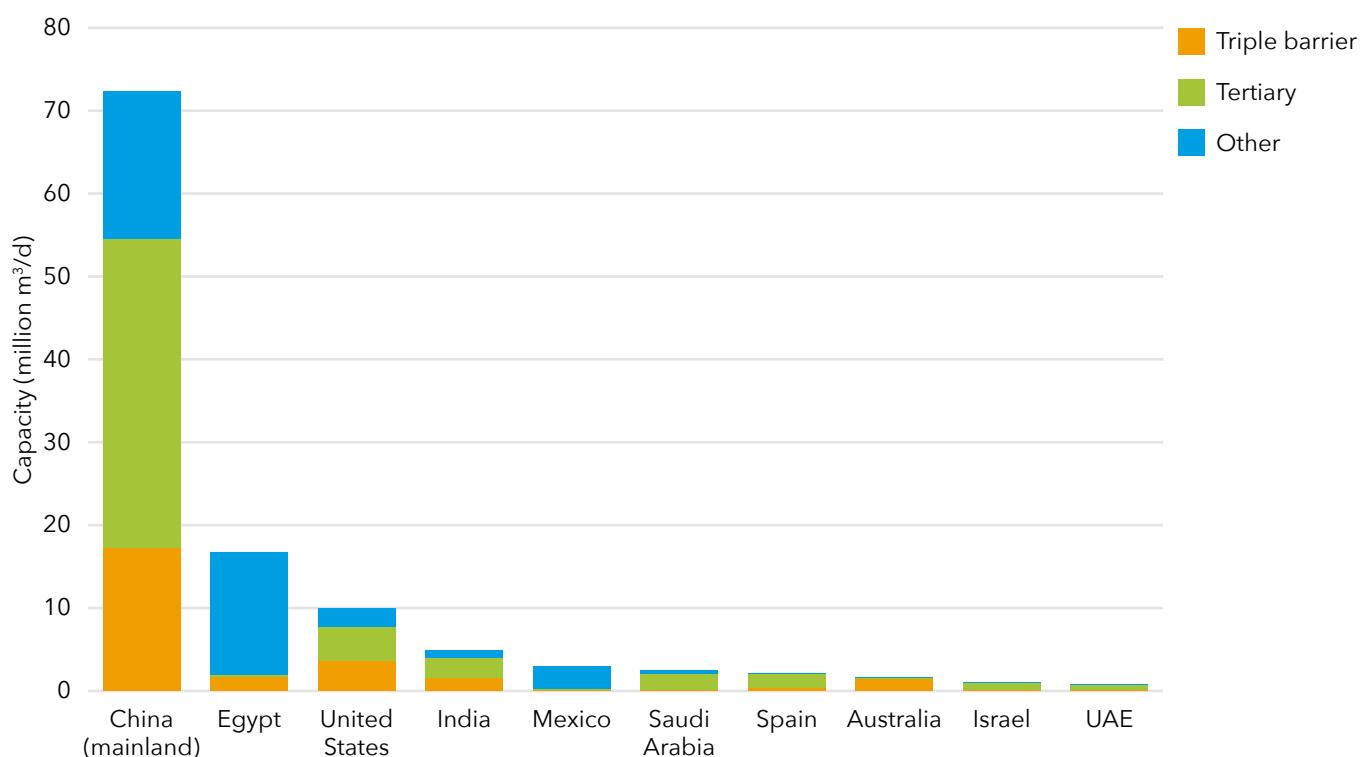
Global distribution of installed tertiary reuse, 2013-2023 (m<sup>3</sup>/d million)



Capacity figures for mainland China are based on data published by MOHURD

Source: GWI DesalData / IDRA

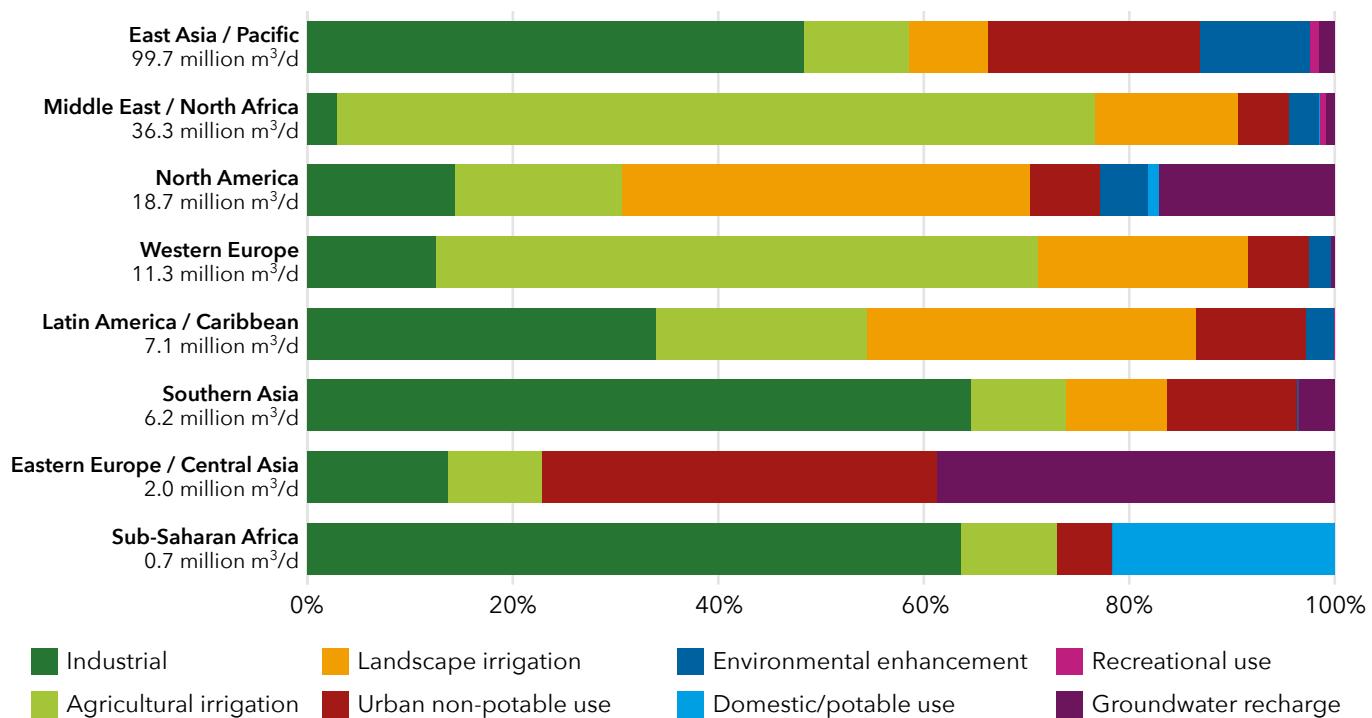
## Installed capacity by country and technology level, 2013-2023



Capacity figures for mainland China are based on data published by MOHURD

Source: GWI DesalData / IDRA

## Installed capacity by water reuse application, 1991–2023



Capacity figures for mainland China are based on data published by MOHURD

Source: GWI DesalData / IDRA

## Capacity by application

### Industry

The industrial sector continues to present a key source of demand for reuse worldwide, representing a third of total installed capacity and 37% of additional capacity in 2022. It is particularly prevalent in the Asia Pacific region, with China alone accounting for 67% of industrial capacity. Ever more stringent regulations requiring industrial consumers to limit freshwater withdrawals and wastewater discharge remain a key driver of industrial demand in China and across the region. Certain countries in Africa such as Morocco and South Africa are also leaning towards industrial reuse, while Latin America's nascent reuse sector is also likely to be driven by industrial demand.

### Agriculture

As the largest water-consumer worldwide, agriculture is a key candidate for reuse in water-scarce areas. Agricultural applications dominate wastewater reuse across the MENA region, where they account for three quarters of all capacity. Agriculture is also the leading source of demand for reuse in Europe, a trend that is likely to be bolstered by the introduction of a new EU-wide agricultural reuse regulation in 2023, and represents a significant portion of capacity in almost all regions. The largest reuse projects in the world, Egypt's Al Hammam and Bahr Al-Baqr projects, fall into the agricultural category. The high cost of desalination is often prohibitive for low-value agriculture, making reuse an attractive alternative, and there is increasing demand from agriculture for tertiary-treated wastewater.

### Potable reuse

Both indirect and direct potable reuse are attracting growing interest and investment, particularly in North America and Sub-Saharan Africa. The USA is home to the world's largest indirect potable reuse (IPR) projects, and is set to also boast the world's largest direct potable reuse (DPR) scheme (Pure Water Southern California). A large number of both IPR and DPR schemes are in the pipeline, particularly in water-scarce states. Potable reuse, particularly DPR, is also gaining traction in Sub-Saharan Africa, with South Africa following the example of neighbouring Namibia in exploring direct potable reuse. Potable reuse is less prevalent in Asia-Pacific, but Singapore has pioneered IPR in the region, and in 2023 the Philippines became the first country in the region to implement DPR.

While existing and emergent potable reuse regulations should act as a driver of further uptake in the US and elsewhere, regulation also acts as a key barrier to potable reuse, with many countries, especially in the MENA region, prohibiting it altogether. DPR, in particular, is also hindered by negative public perception.

### **Urban non-potable reuse**

Urban non-potable reuse – which encompasses reuse of treated wastewater in municipal networks for non-potable applications such as air conditioning systems, toilet flushing, and street cleaning – accounts for 16% of all reuse capacity over the past decade, mostly concentrated in the Asia-Pacific region. It includes both reuse of municipal wastewater and greywater reuse, and has the advantages of presenting a source of demand close to sources of supply and requiring less stringent treatment standards than potable reuse. However, it can require an independent distribution system, such as a purple pipe system.

### **Groundwater recharge**

The replenishment of depleted groundwater with treated wastewater represents a significant source of demand for reuse in the North American market, accounting for 19% of the regional total over the last decade. Projects are classified as groundwater recharge rather than indirect potable reuse when there is no immediate plan to withdraw the augmented groundwater for potable purposes.

### **Landscape irrigation**

Landscape irrigation includes all non-agricultural irrigation, including watering of golf courses, parks and gardens. It has the advantage of presenting a source of demand close to municipal wastewater treatment plants, and requiring generally lower treatment standards than irrigation of food crops, industrial or potable applications. It accounts for a significant proportion of installed capacity in North America and in the GCC.

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### **Key reuse projects involving private finance**

Private finance is less established in wastewater reuse than in desalination. A variety of factors combine to make it difficult for wastewater treatment to produce bankable projects, from variability in raw water quality, to the difficulty of securing long-term purchase agreements with commercial or industrial offtakers, to the expense of constructing conveyance infrastructure to deliver treated sewage effluent (TSE) to end users. As a result, no two contract structures are the same, with many occupying a middle ground, where the burden of raising finance is transferred to a contractor, but the risks of long-term ownership of wastewater infrastructure remain with the client. In some cases developers are willing to fund treatment of conveyance infrastructure upgrades to enable the purchase of TSE from a municipality.

Country	Project name	Year	Contract type	Developer
Taiwan	Shuinan reuse project	2023	BTO	AUO Envirotech
India	Ghaziabad TTP	2022	15-year hybrid annuity contract	VA Tech Wabag
Kuwait	Umm al Hayman WWTP	2020	25-year BOT	WTE Wassertechnik/International Financial Advisors KPSC
India	Jamnagar STP rehabilitation	2020	15-year BOT	Shaurashtra Enviro Projects
Taiwan	Linhai reuse project	2018	15-year BTO	CTCI Corp./Continental Holdings
Australia	Springvale Mount Piper Power Station WTP	2017	15-year DBOT	Veolia Water Australia
China	Jiaxing Chengdong reuse project	2016	30-year BOT	Beijing Origin/North China Municipal Engineering Design & Research
Taiwan	Fengshanxi WWTP	2016	17-year BTO	CTCI Corp./Hsin Dar Corp.
Singapore	Changi NEWater Plant II	2015	25-year DBOO	BEWG-UES NEWater JV
U.S.A.	Polk Power Station, Florida	2015	30-year water supply agreement	Tampa Electric Company
United Arab Emirates	Wathba 2 and Al Hamah WWTPS	2008	25-year BOT	Veolia/Besix

Source: GWI

# Featured Desalination & Reuse Projects



Images supplied by: Osmoflo

Osmoflo, in conjunction with its shareholder Hitachi Zosen, has donated three containerised water treatment plants to Turkey to provide relief to thousands of displaced people without access to safe drinking water as a result of the earthquake that hit Syria and Turkey in February 2023.

Through discussions and collaborations with Hitachi Zosen, former employee Mert Incanc Emir and local water authorities Malatya Water and Ankara Water, Osmoflo was able to finalise the logistics of the transportation of the assets, designed to deal with two different types of feedwater, that will provide over 600 m<sup>3</sup>/d of potable water to the affected area. The shipment also includes a 700 m<sup>3</sup>/d membrane pretreatment unit. The units require minimal site operator involvement with plant production controlled via storage tank level switch.

Challenges throughout this venture included the logistics of delivering and commissioning the containers during a period of emergency. Now that the containers have arrived and are in place, commissioning will be completed imminently to aid those in need.

The project is not the first emergency desalination project to be supplied by Osmoflo and follows the deployment of a 7,000 m<sup>3</sup>/d containerised emergency seawater reverse osmosis (SWRO) system in Thailand in 2020.

Plant name	Turkey Earthquake Relief RO Plant
Plant location	Malatya, Turkey
Production capacity	Seawater (SW): 10 m <sup>3</sup> /d Brackish water (BW): 600 m <sup>3</sup> /d
Startup date	Still awaiting comissioning
Feedwater TDS	SW: <40,000 mg/L BW: <5,000 mg/L
Operating SDI	SW: <5 / BW: <3
Operating pH	4-10
Operating temperature	SW: 20-35°C / BW: 10-35°C
Desal system description	SW10-1 Sea Water Desalination Plant with Integrated CIP and UF PreFiltration System
Pretreatment system	MF700
Number of MF/UF trains	2 - MF700 + MF150 (Part of SW10)
Number of RO trains	2 - SW10-1 + BW600-4
RO recovery	SW: 40% / BW: 80%
RO energy consumption	Install Only - SW10-1 installed load 11kW / BW600-4 installed load 48.12kW
Project delivery method	Units delivered via containerised shipments (x3 20 foot and x1 40 foot)
Plant supplier	Osmoflo
RO membrane supplier	Osmoflo SW: GE / BW: DuPont
High pressure pump supplier	Osmoflo SW: Danfoss / BW: Grundfos
Control system supplier	Allen Bradley





A 300 m<sup>3</sup>/d Carrier Gas Extraction (CGE) minimum liquid discharge (MLD) facility serving a global pharmaceutical and biotech company's antibiotics manufacturing plant in Singapore.

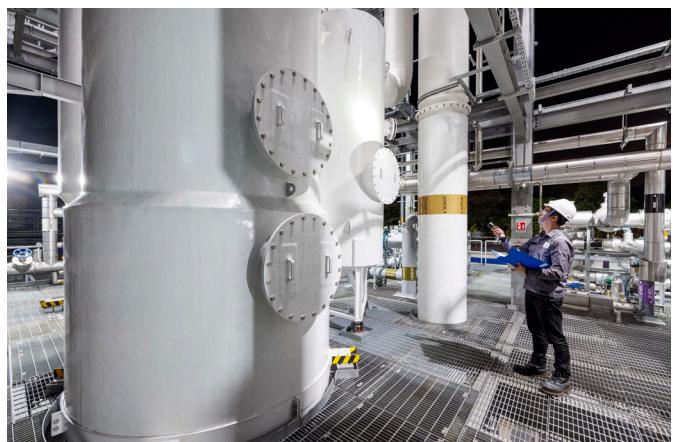
The manufacturing plant produces wastewaters containing organic solvents and unrecovered amoxicillin products, which were restricting overall manufacturing yields and waste disposal. This presented a challenge for the project team to identify a compact process solution that could sustainably treat high COD, TDS, and chlorides feedwater, within the extremely limited available footprint.

The solution selected was a bespoke version of Gradiant's CGE technology followed by an Agitated Thin Film Dryer (ATFD). The CGE process is responsible for initially concentrating the feed, which is then fed to the ATFD to form a solids cake with >80% purity. The CGE system is housed in two 32-meter towers in order to accommodate the existing facility's very limited footprint.

The CGE technology has been proven to help other clients achieve 20x brine concentration and the project delivery team deployed bench-scale lab testing to demonstrate the technology to the client.

The use of CGE/ATFD technology led to overall disposal volumes being reduced by over 98% while retaining cost efficiency.

<b>Plant name</b>	Pharmaceutical Wastewater MLD Plant, Singapore
<b>Plant location</b>	Singapore
<b>Production capacity</b>	300 m <sup>3</sup> /d
<b>Startup date</b>	June 2022
<b>Feedwater source</b>	Wastewater from Medicine Production
<b>Feedwater TDS</b>	13,000 mg/L
<b>Intake type, location</b>	Process Effluent Tank
<b>System description</b>	Carrier Gas Extraction (CGE), Agitated Thin Film Dryer (ATFD): 2 x 50% CGE and 100% ATFD
<b>Pretreatment system</b>	pH adjustment + Auto-backwash Filter
<b>System recovery</b>	98%
<b>Product water TDS</b>	< 500 mg/L
<b>Overall energy consumption</b>	12.5 kWh/m <sup>3</sup>
<b>Project delivery method</b>	Design-Build
<b>Plant supplier</b>	Gradiant
<b>End user</b>	Anonymous global pharmaceuticals company
<b>System footprint</b>	450 m <sup>2</sup>





A 10,000 m<sup>3</sup>/d direct potable reuse (DPR) facility located in Parañaque City. It is the first operational DPR facility not only in the Philippines but in the whole of Asia.

The Parañaque NEW WATER Treatment Plant (PNWTP) is Maynilad's first implementation of its "potable water reuse" project, which converts the treated effluent from its Sewage Treatment Plants into potable water supply called "NEW WATER" that meets the Philippine National Standards for Drinking Water—one of the more stringent drinking water standards in the world.

The product water from the PNWTP is fed into the distribution system where it is blended with the standard drinking water produced by Maynilad's La Mesa Treatment Plants. This blended supply is then conveyed to Barangays San Dionisio and San Isidro in Parañaque City, benefitting some 38,700 customers.

This facility is a testament to Maynilad's efforts to close the loop between water supply and wastewater disposal, promoting a shift to a circular economy that ensures better use of finite resources.

The plant was constructed by Power4All with Inge supplying the ultrafiltration (UF), and Toray supplying the reverse osmosis (RO) systems which operates at an overall 75%-80% recovery rate. The UF filtrate goes to a UF filtrate tank and is supplied by feed pumps to the RO train.

The project followed a very tight schedule; construction started in early 2022 and piped-in distribution commenced towards the end of the same year. Nevertheless, timelines were still met through close coordination among the different Maynilad divisions, as well as with stakeholders from the local government, national agencies, and with its regulators.

<b>Plant name</b>	Parañaque NEW WATER Treatment Plant
<b>Plant location</b>	Parañaque City, Philippines
<b>Production capacity</b>	10,000 m <sup>3</sup> /d
<b>Startup date</b>	October 26, 2022
<b>Feedwater source</b>	Tertiary municipal effluent
<b>Feedwater TDS</b>	300-600 mg/L
<b>Feedwater temperature</b>	25-30°C
<b>Intake type, location</b>	Effluent tank
<b>Desal system description</b>	Two stages RO system with high pressure pump, chemical cleaning, and CIP system
<b>Pretreatment system</b>	Pre-chlorination Pressure media filter
<b>Number of MF/UF trains</b>	3 UF
<b>Number of RO trains</b>	14 (10 1st stage and 4 2nd stage)
<b>RO recovery</b>	75-80%
<b>Primary reuse sector</b>	Direct potable reuse
<b>Outfall location</b>	Malabon Creek
<b>Product water TDS</b>	100-200 mg/L
<b>Overall energy consumption</b>	6000-7000 kWh/day
<b>Project delivery method</b>	Design-Build
<b>Plant supplier</b>	Power4All - ODIS
<b>RO membrane supplier</b>	Toray
<b>High pressure pump supplier</b>	Grundfos
<b>Control system supplier</b>	Allen Bradley (PLC)/ Odis (SCADA)
<b>End user</b>	Parañaque City
<b>Water price</b>	0.17 USD/m <sup>3</sup>
<b>System footprint</b>	1,445 m <sup>2</sup>



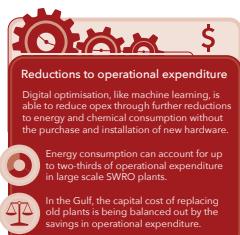
# Digital desalination

How digital technologies can evolve the desalination sector

FEDCO SIEMENS

## The benefits of digitalisation

Key message: Digital technologies allow for more efficient use of existing desalination technologies and bring down the cost of desalting water

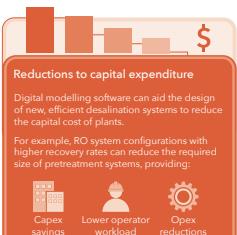


### Reductions to operational expenditure

Digital optimisation, like machine learning, is able to reduce opex through further reductions to energy and chemical consumption without the purchase and installation of new hardware.

Energy consumption can account for up to two-thirds of operational expenditure in large scale SWRO plants.

In the Gulf, the capital cost of replacing old plants is being balanced out by the savings in operational expenditure.



### Reductions to capital expenditure

Digital modelling software can aid the design of new, efficient desalination systems to reduce the capital cost of plants.

For example, RO system configurations with higher recovery rates can reduce the required size of pretreatment systems, providing:

- Capex savings
- Lower operator workload
- Opex reductions



### Meeting future global water demand

As population growth and water scarcity continue to become ever more pressing issues, the reductions provided by digitalisation to the cost of desalinating water will help with meeting future freshwater demand.



“Digitalisation is the best way to increase efficiency and reduce costs. It allows us to reduce required inputs like energy and chemicals to produce the same amount of water. At the same time, we are going to reduce the environmental footprint of our plants.

Julio de Rosa, Middle East Development Director, Alfonso Automatized Electric



“In order to meet future freshwater demand a reduction in the average cost of desalinated water is needed. Emerging technologies such as plug and play and autonomous remote operation will enable Alfonso Automatized Electric

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## How can digital desalination affect process design?

Key message: Digital modelling software offers value for those designing new desalination systems

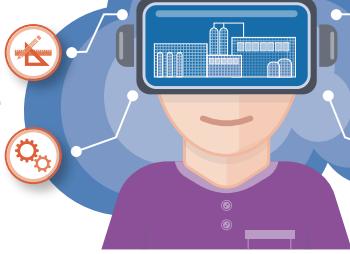
Digital modelling allows for greater experimentation in process design and for easy simulation of new configurations. By using digital modelling tools, approaches like multi-stage RO systems can be digitally tested in different set-ups to determine the most effective solution, helping desalters achieve higher recovery rates and lower energy consumption from existing desalination technology.

VR technologies can help engineering teams design their plants. The approach allows engineers to digitally walk around a plant while designing it, allowing them to more easily conceptualise and optimise plant design.

### CHALLENGES

Designing new configurations: New high-recovery RO configurations are a focal area for reducing the costs of desalting water. However, current tools for modelling membranes and hydraulics are often separate, making it harder to simulate a new system configuration in its entirety.

Greasing the gears of plant construction: Operational efficiency is commonly the main focus for improving desalination. However, reducing plant capex and ensuring it runs as planned from day one is also important.



“We strive for design simplicity. If you start with complexity, reality will double it. You need a simple, thought out, and proven initial design. Computerisation is essential for that because we can model designs before implementing them, optimise efficiency, and have good synergy with hydraulic equipment.”

Eli Oklejs, President, FEDCO

### SOLUTIONS

Integrated modelling tools: An integrated suite of modelling software that covers the entire RO system, from membranes to hydraulics, allows complete digital testing of new RO systems to find and optimise the best configuration.

Visualising plant problems: VR tools can help engineers visualise and optimise the plant they are working on, before ground is even broken. This helps reduce on-site presence, prototyping costs, and design faults in the final design to ensure the plant runs as planned.

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12

Explore digitalisation in the desalination sector and how it can help solve the sector's challenges

Access the white paper for:

- The current state of digitalisation in the desalination sector
- The benefits of digitalisation and process optimisation
- The market and growth opportunities for digitalising desalination

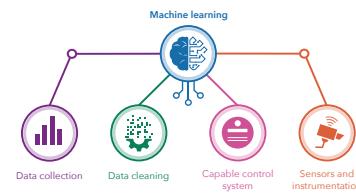
## Groundwork for digital technologies

Key message: Applying digital technologies like machine learning requires groundwork on the data side

Before applying digital technologies to desalination, there is groundwork that needs to be in place to enable maximum effect. In order to effectively digitalise a desalination plant, one must first have a strong basis of reliable data, provided by a strong network of calibrated sensors and processed by a capable control system. If the original data is not reliable, the software trained on it will not be either.

“We’re talking a lot about AI but what we’ve found is the main problem is the instruments. We’ve found that some use the wrong method, are in the wrong location, or measure in the wrong range. We call this uncertainty of data and get out what you put in.”

Thomas Altmann, EVP Innovation & New Technology, ACWA Power



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7

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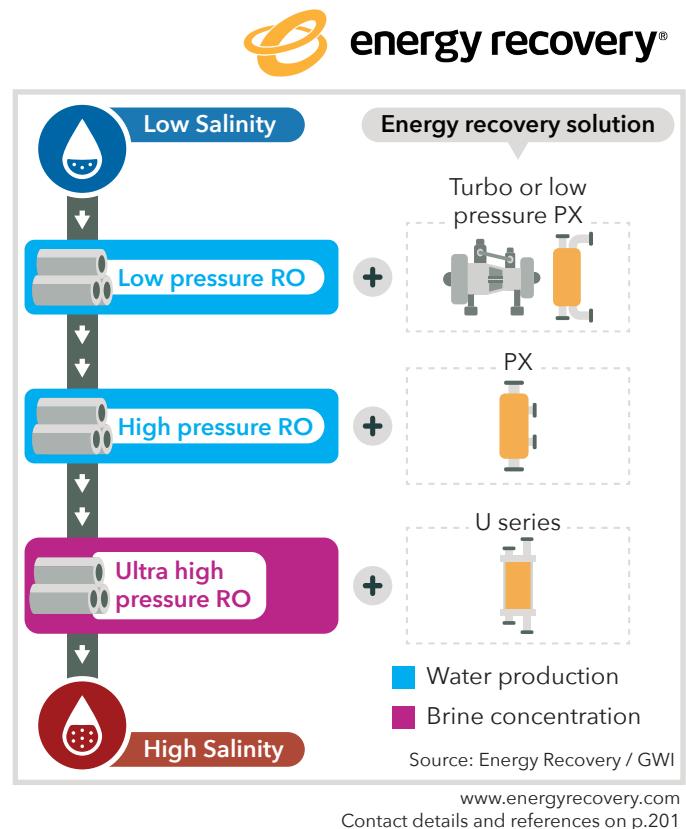
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DESALINATION  
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# Featured Technologies

## PX Q400 Energy Recovery Device (Energy Recovery Inc.)

The PX Q400 is the next evolution of Energy Recovery Inc's Pressure Exchanger (PX) energy recovery device (ERD) for seawater reverse osmosis (SWRO) desalination and wastewater facilities. Each PX Q400 has an individual capacity of 400 gallons per minute (gpm) with less than 3% volumetric mixing, making it the highest capacity and highest performing PX yet. Made with corrosion-proof ceramic and designed with only one moving part, the PX Q400 supports a 25-year design life with no scheduled maintenance, minimising life-cycle costs and maximising uptime.

Energy recovery devices such as the PX Q400 are designed to help small and large-size desalination and water treatment plants around the world to optimise their operations and significantly reduce energy usage. Energy Recovery's full suite of PX solutions enables these advantages to be leveraged across a range of RO processes, from low and high pressure water production to ultra-high pressure brine concentration applications.



Source: Energy Recovery / GWI  
www.energyrecovery.com  
Contact details and references on p.201

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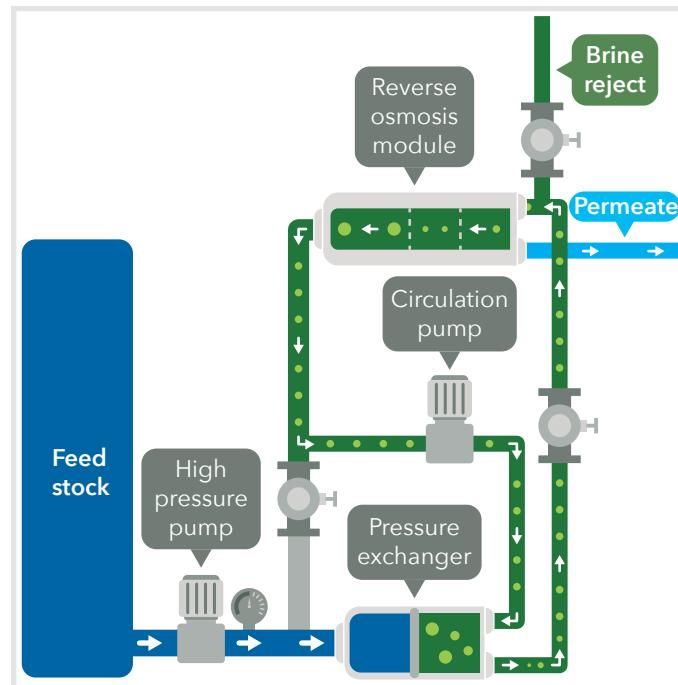
visit [ultrapuremicro.com](http://ultrapuremicro.com)

## Batch RO (Salinity Solutions)

Salinity Solutions' batch reverse osmosis (RO) technology innovates on the RO process by treating water in cycles. The process features two modes. First is a pressurisation step, during which feedwater is desalinated by the RO membranes and concentrate recirculated for retreatment until desired conditions are met. Second is a purge-and-refill step, in which the system is flushed of brine from the previous batch and refilled for the next pressurisation cycle. Salinity Solutions' patented pressure exchange process dramatically reduces the average pressure in the system and therefore the energy consumption.

Operating in this way allows the process to reach higher than normal recovery rates (up to 98%) while maintaining high efficiency. In practice, this means the process uses 50% less energy and creates 80% less waste than conventional RO. The system is also more compact than traditional systems.

Salinity Solutions aims to partner with water treatment companies to achieve rapid adoption in a range of applications, from municipal wastewater treatment to high-value mineral extraction, agriculture and manufacturing.



Source: Salinity Solutions / GWI

[www.salinitysolutions.co.uk](http://www.salinitysolutions.co.uk)

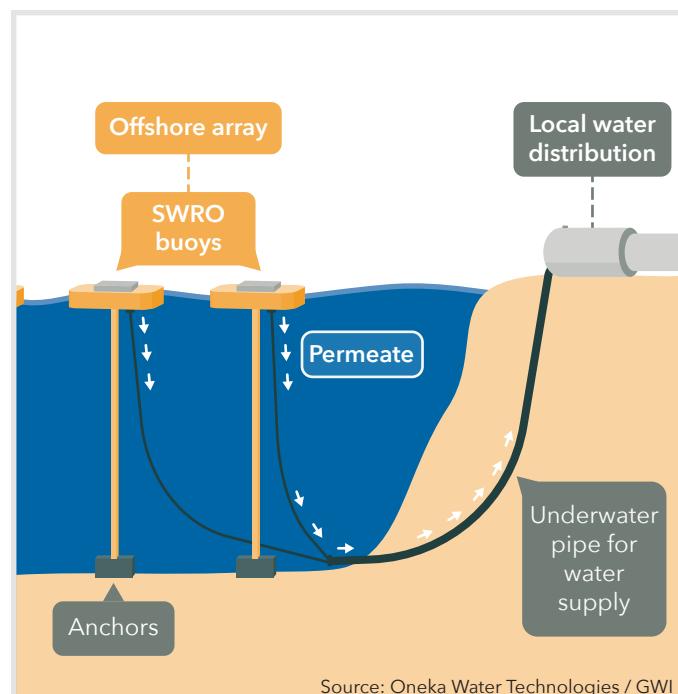
Contact details: [sales@salinitysolutions.co.uk](mailto:sales@salinitysolutions.co.uk) / 01216 636 536

## Wave-powered RO (Oneka Water Technologies)

Oneka Technologies' wave-powered reverse osmosis (RO) system innovates on the RO process by utilising the energy of the ocean's waves to drive desalination. Across an array of anchored buoys, the oscillating motion of waves is harnessed to perform the functions traditionally requiring energy-intensive pumps. As the system sinks into a wave trough, seawater is drawn into the intake and pretreatment filters. As the system rises, the wave energy pressurises the feed which is then passed along to a pressure and flow optimisation system and finally the RO membranes. Brine is passed back through the pressure and flow optimisation system before being discharged while permeate is sent to shore through a submerged pipeline.

Due to the intake and pressurisation steps requiring no electricity, the system can efficiently operate at low recovery (~25%), producing a brine just 30% higher in salinity than ambient seawater. Combined with the distributed nature of the buoys which ensures effective diffusion, no change in salinity can be detected within 2–3 metres of each system.

The wave-powered RO system is modular and scalable, has no electricity requirements, and operates with no chemicals, while having a negligible impact on marine life.



Source: Oneka Water Technologies / GWI

[www.onekawater.com](http://www.onekawater.com)

Contact details and references on p.107

# New Desalination Plants Contracted 2022-2023

A listing of new desalination plants contracted between 2022 and 2023, drawn from the IDRA/GWI Worldwide Desalting Inventory and GWI DesalData.

*Technologies: ED = Electrodialysis; EDR = Electrodialysis reversal; IX = Ion exchange; RO = Reverse osmosis; MED = Multi-effect distillation; MSF = Multi-stage flash; NF = Nanofiltration; NF/SR = Nanofiltration/Sulphate Removal; VC = Vapour compression*

Country	Plant name/location	Feedwater	Technology	Capacity (m³/d)	Plant supplier(s)	Award date
Algeria	Béjaïa SWRO	Seawater	RO	300,000	Wetico	2022
Algeria	Cap Blanc SWRO	Seawater	RO	300,000	Hangzhou Water Treatment Technology Development Center Co., Ltd	2022
Algeria	Cap Djinet SWRO	Seawater	RO	300,000	Wetico	2023
Algeria	Corso SWRO	Seawater	RO	80,000	Metito	2022
Algeria	El Tarf SWRO	Seawater	RO	300,000	Wetico	2022
Algeria	Fouka SWRO	Seawater	RO	300,000	Metito	2023
Argentina	Brine Oxidation for Eramine Sudamericana S.A.	Brine or concentrated seawater	ED	41,760	Fluence Corporation	2022
Argentina	Reverse Osmosis for Frio Industrias Argentinas S.A.	River water or low concentrated saline water	RO	360	Fluence Corporation	2022
Argentina	Reverse Osmosis for MARIO NEJAMKIN	Unknown	RO	90	Fluence Corporation	2022
Argentina	Reverse Osmosis for MS Patagonia / Cerro Vanguardia	Unknown	RO	240	Fluence Corporation	2022
Australia	Iberdrola Bolivar PS Demin WTP	Brackish water or inland water	RO	540	Osmoflo Pty Ltd	2022
Australia	IGO Nova Mine WTP	Seawater	RO	900	Osmoflo Pty Ltd	2022
Australia	Kwinana PS Rehab Project	Brackish water or inland water	RO	1,290	Osmoflo Pty Ltd	2022
Australia	Nyrstar Pt Pirie STP Upgrade	Wastewater	RO	70	Osmoflo Pty Ltd	2022
Australia	Roma Hub Brine Conc WTP	Seawater	RO	1,600	Osmoflo Pty Ltd	2022
Australia	Roy Hill UF-SWRO	Brackish water or inland water	RO	40,000	Osmoflo Pty Ltd, Aerison	2022
Australia	Snapper Point PS Demin Plant	Brackish water or inland water	RO	720	Osmoflo Pty Ltd	2022
Australia	Tomato Farm WTP	Brackish water or inland water	RO	1,600	Osmoflo Pty Ltd	2022
Austria	Drinking Water Plant	Brackish water or inland water	RO	7,680		2022
Azerbaijan	Coca Cola Azerbaijan	Brackish water or inland water	RO	960	Aquamatch Turkiye	2022
Bangladesh	Akij Food	Brackish water or inland water	RO	3,696	Aquamatch Turkiye	2023
Bangladesh	Akis Food	Brackish water or inland water	RO	1,728	Aquamatch Turkiye	2023
Brazil	Fortaleza SWRO	Seawater	RO	86,400	IDE Technologies Ltd.	2022
British Virgin Islands	British Virgin Islands SWRO Desalination Plant	Seawater	RO	120,000	TSG Water Resources	2023
Cayman Islands	Red Gate SWRO	Seawater	RO	10,000	Consolidated Water Co. Ltd.	2022
Chile	Antofagasta desalination plant	Seawater	RO	54,777	Empresa Constructora Belfi S.A.	2022
Chile	CODELCO SADDN	Seawater	RO	72,576	IDE Technologies Ltd.	2023
Chile	Doña Ines de Collahuasi Seawater Desalination Plant	Seawater	RO	90,720	Acciona Agua	2022
Chile	Planta Desaladora Norte (PDN) Expansion	Seawater	RO	50,000	Empresa Constructora Belfi S.A.	2022
China	Chemical Plant	Wastewater	RO	20,000		2022
China	Chemical Plant	Wastewater	RO	8,600		2022
China	Chemical Plant	Wastewater	RO	6,500		2022

# NEW DESALINATION PLANTS CONTRACTED 2022-2023

Country	Plant name/location	Feedwater	Technology	Capacity (m³/d)	Plant supplier(s)	Award date
China	Desalination project of a petrochemical enterprise	Seawater	RO	58,080		2023
China	Dezhou chemical enterprise desalination project	Brine or concentrated seawater	RO	6,720	Hangzhou Water Treatment Technology Development Center Co., Ltd	2023
China	Dongying Port Seawater Desalination Project	Seawater	RO	50,000		2022
China	Huizhou Pinghai power plant project	Seawater		12,000		2022
China	Jining sodium sulphate recovery project for perfume company	Wastewater	RO	7,700	Hangzhou Water Treatment Technology Development Center Co., Ltd	2022
China	Ningbo Seawater Desalination System	Seawater	RO	12,000		2022
China	Shandong Xinhecheng Chemical Water Treatment System	Brackish water or inland water	RO	9,600	Hangzhou Water Treatment Technology Development Center Co., Ltd	2022
China	Shandong Xinhecheng Chemical Water Treatment System	Brackish water or inland water	RO	4,800	Hangzhou Water Treatment Technology Development Center Co., Ltd	2022
China	Shandong Yulong Petrochemical Seawater Desalination (MED)	Seawater	MED	80,000	Shanghai Electric	2022
China	Shandong Yulong Petrochemical Seawater Desalination (RO)	Seawater	RO	80,000	Shanghai Electric	2022
China	Food And Beverage Plant	Pure water or tap water	RO	3,000		2022
China	Food And Beverage Plant	Pure water or tap water	RO	2,000		2022
China	Tianjing drilling platform seawater desalination	Seawater	RO	6,480	Hangzhou Water Treatment Technology Development Center Co., Ltd	2023
China	Xinte Energy Huaidong Industrial Park Demineralization Project	Brackish water or inland water	RO	5,232	Hangzhou Water Treatment Technology Development Center Co., Ltd	2022
China	Xinte Energy Huaidong Industrial Park Demineralization Project	Brackish water or inland water	RO	3,840	Hangzhou Water Treatment Technology Development Center Co., Ltd	2022
China	Yulong Refining and chemical integration Phase 1 (MED)	Seawater	MED	80,000	Shanghai Electric Power Generation Group	2022
China	Yulong Refining and chemical integration Phase 1 (RO)	Seawater	RO	80,000	Shanghai Electric Power Generation Group	2022
China	Zhejiang Zheneng Zhoushan Coal Power Plant Seawater Desalination Phase 2	Seawater	RO	30,000		2022
China	Zhonghao Chenguang Organic Fluorine Material Project Deionized Water Station	Brackish water or inland water	RO	3,600		2022
China	Zhonghao Chenguang Organic Fluorine Material Project Deionized Water Station	Brackish water or inland water	RO	2,520		2022
China	Zijin Mining Wastewater ZLD and Resource Recycling Project	Wastewater	RO	20,000	Greentech Environmental Co. Ltd.	2022
Democratic Republic of the Congo	Congo Act	Brackish water or inland water	RO	300	Aquamatch Turkiye	2023
Egypt	Egyptian Fertilizer Company	Seawater	RO	25,000	Metito	2022
Egypt	El Hammam Utilities BWRO Plant	Brackish water or inland water	RO	115	Metito	2022
Egypt	NABQ SWRO	Seawater	RO	12,000	Desalia	2023
Egypt	Niroflex UF/BWRO for EGAT Steel Factory	Brackish water or inland water		9600	Fluence Corporation	2022
Egypt	Suez Oil Processing Company	Seawater	RO	30,000		2022
France	Auxerre LPRO Drinking Water Treatment Plant	River water or low concentrated saline water	RO	33,600	Suez	2023
Georgia	Argo Brewery	Brackish water or inland water	RO	1,560	Aquamatch Turkiye	2022
Germany	Process Plant	Brackish water or inland water	RO	5,400		2022

**IDRA**  
**DESALINATION & REUSE**  
**HANDBOOK**

Country	Plant name/location	Feedwater	Technology	Capacity (m³/d)	Plant supplier(s)	Award date
Ghana	Iffco	Brackish water or inland water	RO	360	Aquamatch Turkiye	2022
Ghana	Lesfarm Food	Brackish water or inland water	RO	1,440	Aquamatch Turkiye	2023
Greece	Mykonos SWRO	Seawater	RO	3,000	Mesogeos	2022
Greece	Santorini Desal Expansion	Seawater	RO	5,000	Ermon S.A.	2022
India	Aurobindo Group	Seawater	RO	31,250	Thermax	2022
India	Chennai 4 (Perur)	Seawater	RO	400,000	Metito , VA Tech Wabag Ltd.	2023
India	Gujarat Heavy Chemicals Limited	Seawater	RO	10,000	Thermax	2022
India	Hindalco Aluminum ZLD		RO	70	Aquatech International Corporation	2022
India	Indian Rayon	Seawater	RO	12,000	Thermax	2022
India	Jamnagar Refinery SWRO	Seawater	RO	53,000	VA Tech Wabag Ltd.	2022
India	Meramandali, Angul - Steel ZLD Project	Wastewater	RO	6,240	Aquatech International Corporation	2022
India	Shirwal ETP-Recycle- ZLD Revamp Project		RO	132	Aquatech International Corporation	2022
Indonesia	Hyrec Brine Mining Facility	Seawater	RO	27,120	Hyrec	2022
Indonesia	Manyar Smelter	Seawater	RO	34,500	Metito	2022
Indonesia	Seawater desalination project of a paper company	Seawater	RO	50,000		2022
Iran	Bandar Lengeh SWRO	Seawater	RO	9500	Omran Sazan Mahab Co.	2022
Iran	Mokran Ab Niroo SWRO	Seawater	RO	40,000	Mapna International	2022
Iraq	Baghdad Soft Drinks	Brackish water or inland water	RO	720	Aquamatch Turkiye	2023
Iraq	Basrah Refinery Demin WTP		RO	9,700	Osmoflo Pty Ltd	2022
Iraq	Erbil Combined Cycle Power Plant	Brackish water or inland water	RO	3,840	Aquamatch Turkiye	2022
Iraq	Muataz Kareem	Brackish water or inland water	RO	600	Aquamatch Turkiye	2023
Iraq	Zaki Juice	Brackish water or inland water	RO	2,160	Aquamatch Turkiye	2023
Israel	Prefabricated SWRO Plant	Seawater	RO	200,000		2022
Italy	Hd 8 Am	Brackish water or inland water	RO	250	Osmo Sistemi	2022
Italy	Osmo 48 Am	Brackish water or inland water	RO	1,350	Osmo Sistemi	2022
Kazakhstan	Coca Cola Shymkent	Brackish water or inland water	RO	3,600	Aquamatch Turkiye	2023
Kazakhstan	Expansion of Caspiy Desalination SWRO Plant	Seawater	RO	26,600	Metito	2022
Kiribati	McKenzie SWRO Phase 1	Seawater	RO	2,500	Osmoflo Pty Ltd, Reeves Envico	2022
Kiribati	Temakin/Betio SWRO	Seawater	RO	3,500	Osmoflo Pty Ltd, Reeves Envico	2022
Mexico	Cabo San Lucas expansion	Seawater	RO	21,600	Acciona Agua, La Peninsular Compañía Constructora	2022
Mexico	Water production, (RO+Demi) for 4 Combined Cycles	Wastewater	RO	50,000		2022
Morocco	Dakhla SWRO	Seawater	RO	101,000	Fisia Italimpianti	2022
Morocco	El Jadida Containerised SWRO Plant	Seawater	RO	30,000		2022
Morocco	Osmo 12 Am	Brackish water or inland water	RO	400	Osmo Sistemi	2022
Morocco	Safi Containerised SWRO Plant	Seawater	RO	30,000		2022
Oman	Al Kahel Seawater Desalination System	Seawater	RO	200	State Grid International Development Ltd.	2022
Oman	Barka 5 IWP	Seawater	RO	100,000	Fisia Italimpianti, GS Inima Environment, S.A.	2022
Oman	Oman Sugar Refinery	Seawater	RO	3,600	Aquamatch Turkiye	2023
Pakistan	AlKaram Textile	Brackish water or inland water	RO	2,280	Aquamatch Turkiye	2022

## NEW DESALINATION PLANTS CONTRACTED 2022-2023

Country	Plant name/location	Feedwater	Technology	Capacity (m³/d)	Plant supplier(s)	Award date
Pakistan	Coca Cola Lahore	Brackish water or inland water	Unknown	1,632	Aquamatch Turkiye	2022
Pakistan	Gulbahar Group	Brackish water or inland water	RO	1,680	Aquamatch Turkiye	2022
Pakistan	HBWRO Package 1	Brackish water or inland water	RO	500	Osmoflo Pty Ltd	2022
Pakistan	HBWRO Package 2	Brackish water or inland water	RO	500	Osmoflo Pty Ltd	2022
Pakistan	Interloop FSD	Brackish water or inland water	RO	960	Aquamatch Turkiye	2022
Pakistan	NBC Gujranwala	Brackish water or inland water	RO	2,698	Aquamatch Turkiye	2022
Pakistan	PBL Site Karachi	Brackish water or inland water	RO	4,824	Aquamatch Turkiye	2022
Peru	Shougang Hierro Peru Seawater Desalination expansion project	Seawater	RO	22,464		2022
Saudi Arabia	Jubail 2 Replacement Plant	Seawater	RO	1,000,000	Metito	2022
Saudi Arabia	King Abdullah Economic City	Seawater	RO	15,000	Metito	2022
Saudi Arabia	Ma'aden	Seawater	RO	6,000	Suido Kiko Middle East	2022
Saudi Arabia	Neom Satco Village BWRO Plant	Brackish water or inland water	RO	250	Metito	2022
Saudi Arabia	Provide Reverse Osmosis (R.O.) Unit at SSPP with Installation	Seawater	RO	2,000	Wetico	2022
Saudi Arabia	Rabigh 4 IWP	Seawater	RO	600,000	Wetico, Power China	2023
Saudi Arabia	Riyadh Development Authority BWRO Plant	Brackish water or inland water	RO	120	Wetico	2022
Saudi Arabia	Shoaiba 3 Conversion Project	Seawater	RO	600,000	Doosan Heavy Industries & Construction Co., Ltd.	2022
Saudi Arabia	Temporary Desal Plant	Seawater	RO	21,000	Osmoflo Pty Ltd	2022
Saudi Arabia	Yamamah Palace Brackish Water Reverse Osmosis	Brackish water or inland water	RO	460	Wetico	2022
Senegal	Mamelles phase 1	Seawater	RO	50,000	VA Tech Wabag , Toyota Tsusho Corporation, Eiffage	2022
Sierra Leone	Liberty Investment	Brackish water or inland water	RO	960	Aquamatch Turkiye	2023
South Africa	Gauteng Wastewater RO Brine Concentration System	Wastewater	RO	10,000	Proxa	2022
South Africa	Growthpoint V&A SWRO	Seawater	RO	5,000	Proxa	2022
South Africa	Mpumalanga mine effluent treatment plant	Wastewater	RO	15,000	Proxa	2022
Spain	Fonsalía SWRO expansion, Tenerife	Seawater	RO	5,250	Aqualia	2023
Turkey	Akkuyu Nuclear Power Plant Mobile	Brackish water or inland water	RO	480	Aquamatch Turkiye	2022
Turkey	Aksa Group Isis Otel	Seawater	RO	1,008	Aquamatch Turkiye	2022
Turkey	Ankutsan	Brackish water or inland water	RO	480	Aquamatch Turkiye	2022
Turkey	Bak Bayburt	Brackish water or inland water	RO	14,928	Aquamatch Turkiye	2023
Turkey	Besa Hilton Hotel	Seawater	RO	280	Aquamatch Turkiye	2023
Turkey	Coca Cola Isparta	Brackish water or inland water	RO	3,600	Aquamatch Turkiye	2023
Turkey	Diler Steel	Brackish water or inland water	RO	1,320	Aquamatch Turkiye	2023
Turkey	Eczacibasi - Ipek Paper Mill	Brackish water or inland water	RO	1,440	Aquamatch Turkiye	2022
Turkey	Eren Energy	Seawater	RO	4,900	Aquamatch Turkiye	2023
Turkey	Gemkom	Brackish water or inland water	RO	1,800	Aquamatch Turkiye	2022
Turkey	Gurteks Fiber	Brackish water or inland water	RO	1,224	Aquamatch Turkiye	2022
Turkey	Habaş	Seawater	RO	11,520	Aquamatch Turkiye	2022
Turkey	Id Bodrum	Seawater	RO	180	Aquamatch Turkiye	2022
Turkey	Izocam	Brackish water or inland water	RO	211	Aquamatch Turkiye	2022

**IDRA**  
**DESALINATION & REUSE**  
**HANDBOOK**

Country	Plant name/location	Feedwater	Technology	Capacity (m³/d)	Plant supplier(s)	Award date
Turkey	Kestel Polymer	Brackish water or inland water	RO	2,904	Aquamatch Turkiye	2022
Turkey	Kipas Paper	Brackish water or inland water	RO	17,117	Aquamatch Turkiye	2022
Turkey	Kipas Paper	Brackish water or inland water	RO	2,400	Aquamatch Turkiye	2023
Turkey	Kipaş Paper Mill	Brackish water or inland water	RO	2,976	Aquamatch Turkiye	2022
Turkey	Kivanc Textile	Brackish water or inland water	RO	1,080	Aquamatch Turkiye	2022
Turkey	Koruma Klor	Brackish water or inland water	RO	312	Aquamatch Turkiye	2022
Turkey	Oyak	Brackish water or inland water	RO	360	Aquamatch Turkiye	2023
Turkey	Rb Karesi	Brackish water or inland water	RO	4,800	Aquamatch Turkiye	2023
Turkey	Rixos Bodrum	Seawater	RO	408	Aquamatch Turkiye	2023
Turkey	Sakarya Paper	Brackish water or inland water	RO	240	Aquamatch Turkiye	2023
Turkey	Tezcanlar Acid	Brackish water or inland water	RO	1,920	Aquamatch Turkiye	2023
Turkey	The One	Seawater	RO	300	Aquamatch Turkiye	2022
Turkey	The One 2	Seawater	RO	450	Aquamatch Turkiye	2023
Turkey	Thor Hotel	Seawater	RO	200	Aquamatch Turkiye	2023
United Arab Emirates	Al Hadi Beverages	Brackish water or inland water	RO	1,440	Aquamatch Turkiye	2022
United Arab Emirates	Coca Cola Al Ahlia Gulf Line	Brackish water or inland water	RO	1,776	Aquamatch Turkiye	2023
United Arab Emirates	Fujairah Fresh Water Production Co. Phase 2 SWRO Plant	Seawater	RO	3,500	Metito	2022
United Arab Emirates	Mirfa 2 IWP	Seawater	RO	545,520	Veolia Sidem (Societe Internationale De Dessalement d'Eau de Mer)	2023
United States	Brazosport BWRO pilot plant	Brackish water or inland water	RO	545		2022
United States	Hadnot Point WTP Replacement	Brackish water or inland water	RO	30,283	Biwater	2023
United States	Kalaeloa Seawater Desalination Project, HI	Seawater	RO	6,435	PERC Water Corporation, Consolidated Water	2022
United States	St. Lucie County BWRO, FL (BWRO 1)	Brackish water or inland water	RO	7,570	Wharton-Smith, Inc.	2023
United States	St. Lucie County BWRO, FL (BWRO 2)	Brackish water or inland water	RO	7,570	Wharton-Smith, Inc.	2023
United States	Texas River Water RO	River water or low concentrated saline water	RO	9,464	H2O Innovation	2022
Uzbekistan	Coca Cola Samarkant	Brackish water or inland water	RO	4,320	Aquamatch Turkiye	2023
Uzbekistan	Coca Cola Uzbekistan	Brackish water or inland water	RO	2,592	Aquamatch Turkiye	2022
Uzbekistan	ODAS Ozbekistan	Brackish water or inland water	RO	1,920	Aquamatch Turkiye	2022

# Selected Reuse Plants Contracted 2019-2023

A listing of new reuse plants contracted between 2019 and 2023 with a capacity greater than 5,000 m<sup>3</sup>/d. The plant list is drawn from the IDRA/GWI Worldwide Desalting Inventory, GWI DesalData, and the GWI Water Reuse Inventory.

Country	Plant name	Treatment level	Capacity (m <sup>3</sup> /d)	Primary reuse sector	Award date
Algeria	Hassi Messaoud New Refinery	Other	21,500	Industrial	2019
Algeria	Sidi Abdella SUD WWTP	Other	32,000	Other/unknown	2021
Argentina	CO2 Stripping for Eramine Sudamericana S.A.	Other	43,113	Industrial	2022
Australia	SWA Mining Barrel B1 & B3	Other	9,600	Industrial	2022
Bahrain	Arwaj Island	Other	5,000	Other/unknown	2023
Belgium	UPI Power & Infrastructures Units	Other	150,000	Industrial	2019
Cambodia	SV Project PS3	Tertiary	6,100	Other/unknown	2019
Canada	Tertiary UF for Lakeshore Wastewater Co (Innisfil)	Triple barrier	67,000	Environmental enhancement	2020
Chile	Industrial Mining Facility	Other	76,800	Industrial	2021
Chile	Industrial Mining Facility	Other	72,000	Industrial	2021
China	Baoding Yindingzhuang Sewage Treatment Plant	Other	315,000	Environmental enhancement	2020
China	Baoyi thermal power plant reclaimed water transformation project	Triple barrier	11,500	Industrial	2022
China	Fengtai Hexi Reclaimed Water Plant Phase II	Tertiary	50,000	Urban non-potable use	2019
China	Gaocheng southern part new-built sewage treatment plant project	Other	55,000	Industrial	2022
China	Guangxi Huayi Chlor Alkali Chemical Co., Ltd	Other	18,000	Industrial	2021
China	Guizhou Kailin Fertilizer Yangshuihe Project	Triple barrier	15,120	Industrial	2020
China	Guodian Shenyang Thermal Power Chemical Water Upgrading	Triple barrier	13,680	Industrial	2020
China	Hebei Taihang Iron and Steel Group	Triple barrier	19,968	Industrial	2020
China	Huaneng Zhengning coal power coal mine wastewater advanced treatment project	Triple barrier	39,000	Industrial	2022
China	Hubei Sanning Chemical Co., LTD. WWTP	Triple barrier	45,600	Industrial	2022
China	Huizhou Pinghai power plant project	Triple barrier	12,000	Industrial	2022
China	Jincheng Wastewater Expansion Project (Phase 1)	Tertiary	35,000	Landscape irrigation	2022
China	Jincheng Wastewater Expansion Project (Phase 2)	Tertiary	120,000	Landscape irrigation	2022
China	Lianyungang Reuse project	Triple barrier	100,000	Industrial	2023
China	Municipal Wastewater Reuse Plant	Triple barrier	325,000	Other/unknown	2021
China	Municipal Wastewater Reuse Plant	Triple barrier	11,200	Other/unknown	2021
China	Petro-China Lanzhou Petrochemical Company	Triple barrier	13,249	Industrial	2020
China	Shihezi sewage treatment system project	Triple barrier	10,080	Other/unknown	2022
China	Source leakage sewage treatment project, Jiaoyishan Phosphogypsum storage yard, Guizhou Crach-Guiyang Phosphorus Fertilizer Co., Ltd	Triple barrier	20,400	Industrial	2019
China	Tangshan Nanpu Economic and Technological Development Zone WWTP Upgrading BOT Project	Triple barrier	100,000	Urban non-potable use	2019
China	Tisco NO.3 membrane workshop water reuse system project	Triple barrier	25,200	Other/unknown	2022
China	TISCO Shanxi Taigang Stainless Steel	Triple barrier	17,556	Industrial	2020
China	Wanhua Chemical new material condensate and desalted water station project	Triple barrier	21,600	Industrial	2022
China	Xiaojihuan coal mining wastewater reuse	Triple barrier	34,848	Industrial	2019
China	Xinlianxin Fertilizer Reclaimed Water Project	Triple barrier	19,152	Industrial	2019
China	Xintian Coal Chemical biochemical workshop replacement project	Triple barrier	30,720	Industrial	2022
China	Yan'an Yaodian Sewage Ultrafiltration System	Other	50,000	Other/unknown	2021
Egypt	6th of October	Other	25,000	Other/unknown	2022
Egypt	Abu Qurkas Sewage Treatment Plant	Other	15,000	Other/unknown	2021
Egypt	Al Galalah Sewage Treatment Plant	Other	10,000	Other/unknown	2021
Egypt	Al Hammam WWTP	Tertiary	7,500,000	Agricultural irrigation	2021
Egypt	Al Nekaidy STP	Other	10,000	Urban non-potable use	2019

**IDRA**  
**DESALINATION & REUSE**  
**HANDBOOK**

Country	Plant name	Treatment level	Capacity (m³/d)	Primary reuse sector	Award date
Egypt	Bahr al-Baqar WWTP	Tertiary	5,600,000	Agricultural irrigation	2019
Egypt	Barmasha WWTP	Other	20,000	Other/unknown	2021
Egypt	Ebrash & Kafr Ebrash Villages WWTP	Other	10,000	Other/unknown	2022
Egypt	El Kayan UF Reuse Plant	Triple barrier	100,000	Agricultural irrigation	2020
Egypt	El Mansoura Sewage Treatment Plant	Other	8,000	Other/unknown	2020
Egypt	El Mansoura Sewage Treatment Plant	Other	7,000	Other/unknown	2020
Egypt	Fowa Kafr El Sheikh	Other	10,000	Other/unknown	2020
Egypt	Kafr El Waslin Sewage Treatment Plant	Other	25,000	Other/unknown	2021
Egypt	Kahk WWTP	Other	7,500	Other/unknown	2022
Egypt	Madinaty WWTP and Reclamation Plant Phase II	Other	40,000	Agricultural irrigation	2019
Egypt	Manshiet Abbas	Other	12,000	Other/unknown	2020
Egypt	Manshiyet El Horreya WWTP-EGP	Other	30,000	Landscape irrigation	2019
Egypt	Manshiyet El Horreya WWTP-EUR	Other	30,000	Other/unknown	2019
Egypt	New El Alamein STP	Other	90,000	Urban non-potable use	2019
Egypt	Qantra West	Other	10,000	Other/unknown	2022
Egypt	Shama Village	Other	10,000	Other/unknown	2022
Egypt	Snita El Rafaeen STP	Tertiary	12,000	Other/unknown	2020
Egypt	Sobk El Ahd Village	Other	10,000	Other/unknown	2022
Egypt	Talya Village	Other	10,000	Other/unknown	2022
Egypt	Tanouf	Other	20,000	Other/unknown	2022
Egypt	Youssef Al Seddk WWTP	Other	5,000	Other/unknown	2022
India	Patiala District STPs & ETP	Other	43,500	Industrial	2020
India	Pimpri Chinchwad STPs	Tertiary	32,000	Urban non-potable use	2022
India	Thane tertiary treatment plant	Tertiary	5,000	Industrial	2019
India	Airoli WWTP	Tertiary	20,000	Industrial	2019
India	Bangalore K&C Valley WWTP upgrade	Tertiary	248,000	Groundwater recharge	2022
India	Bhiwadi CETP upgrade	Other	6,000	Other/unknown	2021
India	Diu STP	Other	7,000	Agricultural irrigation	2022
India	Ghaziabad TTP	Tertiary	40,000	Industrial	2022
India	Greater Visakhapatnam reuse	Other	63,000	Industrial	2021
India	Hisar STP	Tertiary	15,000	Landscape irrigation	2020
India	India Industrial Petrochemical Facility	Other	78,240	Industrial	2021
India	India Industrial Refinery Facility	Other	78,240	Industrial	2021
India	Indore STP	Other	35,000	Urban non-potable use	2022
India	Indore wastewater concession (IMC)	Other	100,000	Agricultural irrigation	2021
India	Jajmau Tannery Effluent Treatment Association (JTETA) CETP	Other	20,000	Industrial	2023
India	Jalandhar STP and TTP	Tertiary	10,000	Landscape irrigation	2020
India	Jamnagar STP rehab	Other	70,000	Urban non-potable use	2020
India	K&C VALLEY Sewage Treatment Plant	Other	248,000	Groundwater recharge	2022
India	Kopar Khairane WWTP	Tertiary	20,000	Industrial	2019
India	Kota STP	Other	30,000	Agricultural irrigation	2021
India	Kundli CETP upgrade	Other	6,000	Landscape irrigation	2020
India	Ramagundam STP	Other	17,000	Urban non-potable use	2022
India	SAS Nagar/AERO City STP and TTP	Tertiary	15,000	Landscape irrigation	2021
India	Shahdol STP	Other	17,000	Other/unknown	2022
India	Textile Effluent Treatment Plant	Tertiary	10,000	Other/unknown	2022
India	Visakhapatnam WWTP	Triple barrier	46,000	Industrial	2019
India	Wazirabad recycled water plant rehab	Other	50,000	Urban non-potable use	2019
India	Worli Wastewater Treatment Facility	Other	250,000	Urban non-potable use	2022
Israel	Ma'ayan Zvi	Tertiary	10,500	Domestic/potable use	2019
Jordan	Rehab of Irbid WWTP	Other	13,000	Other/unknown	2021
Jordan	Rehab of Wadi al Arab WWTP	Other	27,000	Other/unknown	2021
Kazakhstan	Koskhetau Project	Other	30,000	Other/unknown	2022
Kuwait	Umm al Hayman WWTP	Tertiary	500,000	Urban non-potable use	2020
Mongolia	Ulaanbaatar wastewater reuse plant	Tertiary	50,000	Other/Unknown	2022

## SELECTED REUSE PLANTS CONTRACTED 2019-2023

Country	Plant name	Treatment level	Capacity (m³/d)	Primary reuse sector	Award date
Morocco	Boukhalef STP	Other	32,000	Other/unknown	2019
Nigeria	Nigeria Industrial Fertilizer Facility	Other	70,608	Industrial	2022
Paraguay	Rio Paraguay	Other	168,000	Industrial	2023
Poland	Police	Triple barrier	17,654	Industrial	2019
Qatar	Al Wakra Al Wukair	Tertiary	150,000	Other/unknown	2022
Qatar	Baladna	Other	6,000	Other/unknown	2020
Qatar	Barwa Housing WWTP	Other	27,200	Other/unknown	2021
Qatar	Barwa's Family Housing Sewage Treatment Plant	Other	15,337	Other/unknown	2021
Qatar	Barwa's Labor Accomodation Sewage Treatment Plant	Other	7,644	Other/unknown	2021
Qatar	Camp North Field Expansion WWTP	Other	15,700	Industrial	2021
Qatar	Ras Laffan Petrochemicals Project	Other	8,700	Industrial	2022
Saudi Arabia	Dammam WWTP	Tertiary	208,000	Landscape irrigation	2020
Saudi Arabia	Madinah WWTP and Reuse Plant	Tertiary	200,000	Other/unknown	2021
Saudi Arabia	Mowah Water Company	Triple barrier	20,000	Urban non-potable use	2019
Saudi Arabia	Sedra Site	Other	60,000	Other/unknown	2022
Saudi Arabia	Zuluf Water Treatment Plant	Other	185,000	Industrial	2023
Serbia	Zrenjanin Sewage Treatment Plant	Other	25,000	Other/unknown	2020
Spain	Monte Reverón WWTP, Tenerife	Other	24,000	Agricultural irrigation	2021
Spain	Boadilla del Monte WWTP, Improvements and Wastewater Pumping Station	Other	75,000	Other/unknown	2020
Spain	Guardamar del Segura WWTP	Tertiary	11,000	Agricultural irrigation	2023
Spain	Tenerife Oeste (Guía de Isora) reuse	Tertiary	11,955	Agricultural irrigation	2021
Spain	Torrent WWTP rehabilitation	Tertiary	18,000	Agricultural irrigation	2023
Spain	Villena WWTP	Tertiary	22,200	Urban non-potable use	2019
Tanzania	Mbezi Beach	Other	16,000	Other/unknown	2023
Thailand	Deisel Euro V Project	Other	8,640	Industrial	2022
Tunisia	Moknine 2	Other	5,000	Environmental enhancement	2020
Turkey	Socar Mecury Project	Other	30,000	Industrial	2019
United Arab Emirates	5 X NIROBOX-SW-XL	Triple barrier	5,000	Other/unknown	2019
United Arab Emirates	Aljada Sewage Treatment Plant	Other	16,500	Other/unknown	2020
United States	Carson Regional Water Recycling Facility (CRWRF) Expansion	Triple barrier	29,825	Industrial	2021
United States	Elsinore WRF expansion, CA	Other	15,140	Urban non-potable use	2020
United States	LA Advanced Water Purification Facility	Triple barrier	57,450	Groundwater recharge	2023
United States	Morro Bay WWTP, CA	Triple barrier	10,409	Groundwater recharge	2020
United States	North City Pure Water Facility	Triple barrier	128,690	Urban non-potable use	2021
United States	North Hollywood Central Treatment Facility	Tertiary	244,540	Groundwater recharge	2019
United States	North San Diego reuse, CA	Tertiary	11,355	Groundwater recharge	2020
United States	Oceanside IPR, CA	Triple barrier	17,033	Urban non-potable use	2020
United States	Post Falls Water Reclamation Facility, ID upgrade	Triple barrier	29,526	Urban non-potable use	2020
United States	San Bernardino Clean Water Factory, CA, Phase 1	Triple barrier	18,925	Groundwater recharge	2023
United States	San Luis Obispo WRRF upgrade, CA	Tertiary	19,303	Urban non-potable use	2019
United States	San Mateo direct potable reuse, CA	Tertiary	79,485	Domestic/potable use	2020
United States	Santa Margarita Conjunctive Use Project, CA	Triple barrier	27,252	Other/unknown	2019
United States	St. Lucie County BWRO, FL (WRF)	Other	7,570	Domestic/potable use	2023
United States	Tujunga Well Field	Tertiary	489,450	Groundwater recharge	2019
United States	Weatherford reuse project, TX	Tertiary	7,570	Domestic/potable use	2020
Uzbekistan	Namangan WWTP	Other	100,000	Other/unknown	2021

# Chemical Treatment & Remineralisation

Selected references since 2012 for chemical suppliers in the desalination and reuse industry, including desalination post-treatment equipment.

## Legend

 Desalination  Wastewater reuse

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### SELECTED REFERENCES

#### Equipment Supplier: Antiscalant

Texas, United States 2019, 45,425 m<sup>3</sup>/d RO  
Baja California, Mexico 2018, 215,767 m<sup>3</sup>/d RO  
Peru 2018, 4,800 m<sup>3</sup>/d RO  
Santa Cruz Province, Argentina 2018, 3,000 m<sup>3</sup>/d RO  
California, United States 2017, 23,848 m<sup>3</sup>/d RO  
California, United States 2017, 20,441 m<sup>3</sup>/d RO  
California, United States 2014, 378,540 m<sup>3</sup>/d RO  
Florida, United States 2014, 90,850 m<sup>3</sup>/d RO  
California, United States 2014, 30,283 m<sup>3</sup>/d RO  
Florida, United States 2013, 115,455 m<sup>3</sup>/d RO  
California, United States 2013, 83,657 m<sup>3</sup>/d RO  
Antofagasta, Chile 2012, 25,930 m<sup>3</sup>/d RO

Ain al Sokhna, Egypt 2018, 164,000 m<sup>3</sup>/d RO  
Shuaibah 3 , Saudi Arabia 2018, 150,000 m<sup>3</sup>/d RO  
Al Hoceima, Morocco 2018, 100,000 m<sup>3</sup>/d RO  
Jazan, Saudi Arabia 2018, 80,000 m<sup>3</sup>/d RO  
Al Dur, Bahrain 2017, 218,000 m<sup>3</sup>/d RO  
El Galalah, Egypt 2017, 150,000 m<sup>3</sup>/d RO  
UTE, Tunisia 2017, 50,000 m<sup>3</sup>/d Other / Unknown  
Al Yosr, Egypt 2015, 80,000 m<sup>3</sup>/d RO  
Matrouh Seawater RO Desalination Plant, Bagoush - Matrouh, Egypt 2013, 24,000 m<sup>3</sup>/d RO

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### SELECTED REFERENCES

#### Equipment Supplier: Chemicals

Abu Dhabi, United Arab Emirates 2020, 68,720 m<sup>3</sup>/d MSF

## ASCO Carbon Dioxide Ltd.



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### SELECTED REFERENCES

#### Equipment Supplier: CO<sub>2</sub>

Rabigh, Saudi Arabia 2021, 16,000 m<sup>3</sup>/d RO  
Taweelah, Abu Dhabi, United Arab Emirates 2020, 380,000 m<sup>3</sup>/d RO  
Umm Al Houl, Qatar 2019, 284,000 m<sup>3</sup>/d RO  
Metito El Arish, Egypt 2019, 100,000 m<sup>3</sup>/d RO  
Metito Layoune, Morocco 2019, 100,000 m<sup>3</sup>/d RO  
Va Tech Wabag India, Project SONEDE Zarat SWRO, Tunisia 2019, 50,000 m<sup>3</sup>/d RO  
Shuaibah 2, Saudi Arabia 2018, 250,000 m<sup>3</sup>/d RO  
Al Dabaa, Egypt 2018, 164,000 m<sup>3</sup>/d RO

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### SELECTED REFERENCES

#### Equipment Supplier: Post-treatment (Remineralisation)

SFAX SWRO Plant 200 MLD, Sfax, Tunisia 2023, 200,000 m<sup>3</sup>/d RO  
150 MLD Sea water Desalination Plant, Nemmeli, India 2023, 150,375 m<sup>3</sup>/d RO  
Antofagasta, fase 2 planta desaladora norte SWRO, Antofagasta, Chile 2023, 54,778 m<sup>3</sup>/d RO  
ETAP Besos SWRO, Barcelona, Spain 2023, 31,968 m<sup>3</sup>/d RO  
Shuqaiq phase 1 SWRO, Shuqaiq, KSA 2022, 400,000 m<sup>3</sup>/d RO  
24 MLD Sea Water Desalination Plant for Tanajib IPP, Tanajib, KSA 2022, 26,256 m<sup>3</sup>/d RO

Mantoverde SWRO, Mantoverde, Chile 2022, 21,427 m<sup>3</sup>/d RO  
 MISCP, Oman 2022, 15,000 m<sup>3</sup>/d RO

Puerto Naos SWRO, Puerto Naos, Spain 2022, 12,000 m<sup>3</sup>/d RO  
 WS14 Kangaroo Island, Kangaroo Island, Australia 2022, 2,808 m<sup>3</sup>/d RO

Puerto rico SWRO, Puerto rico, Spain 2021, 6,500 m<sup>3</sup>/d RO  
 Tenerife, Spain 2021, 700 m<sup>3</sup>/d RO

Al Jubail SWRO desalination plant phase 2, Al Jubail, KSA 2020, 405,000 m<sup>3</sup>/d RO

Pafos Desalination plant, Pafos, Cyprus 2020, 15,600 m<sup>3</sup>/d RO  
 ETAP Mas Blau, Barcelona, Spain 2020, 7,200 m<sup>3</sup>/d RO

Syros, Greece 2020, 5,000 m<sup>3</sup>/d RO

Fuerteventura, Spain 2020, 3,000 m<sup>3</sup>/d RO

Shuqaiq 3 IWP, Shuqaiq, KSA 2019, 450,000 m<sup>3</sup>/d RO

Spence Growth options SWRO, Mejillones, Chile 2019, 86,830 m<sup>3</sup>/d RO

Provisur SWRO, Lima, Peru 2019, 37,700 m<sup>3</sup>/d RO

Djibouti 2019, 22,630 m<sup>3</sup>/d RO

Durban, South Africa 2019, 6,240 m<sup>3</sup>/d RO

Quebrada Blanca Fase 2, Tarapáca, Chile 2019, 3,600 m<sup>3</sup>/d RO

Fuerteventura, Spain 2019, 3,000 m<sup>3</sup>/d RO

Durban, South Africa 2019, 2,000 m<sup>3</sup>/d RO

Emboodhoo Lagoon, Maldives 2019, 1,500 m<sup>3</sup>/d RO

Taltal, Chile 2019, 950 m<sup>3</sup>/d RO

Tenerife, Spain 2019, 720 m<sup>3</sup>/d RO

Lanzarote, Spain 2019, 600 m<sup>3</sup>/d RO

Gotland, Sweden 2018, 7,500 m<sup>3</sup>/d RO

ETAP Sagnier, Barcelona, Spain 2018, 3,600 m<sup>3</sup>/d RO

La Aldea de San Nicolás, Spain 2018, 2,700 m<sup>3</sup>/d RO

Fonsalía SWRO, Fonsalía, Spain 2017, 14,000 m<sup>3</sup>/d RO

La Caleta SWRO, La Caleta, Spain 2017, 10,000 m<sup>3</sup>/d RO

Maldives Airport, Maldives 2017, 1,600 m<sup>3</sup>/d RO

Ras Abu Fontas 3, Doha, Qatar 2016, 164,800 m<sup>3</sup>/d RO

Maspalomas II, Maspalomas, Spain 2016, 19,500 m<sup>3</sup>/d RO

JAZAN IGCC PROJECT, Jazan, KSA 2016, 6,000 m<sup>3</sup>/d RO

Granadilla SWRO, Granadilla, Spain 2015, 14,000 m<sup>3</sup>/d RO

Janubio SWRO, Janubio, Spain 2015, 11,800 m<sup>3</sup>/d RO

Jeddah, KSA 2015, 1,440 m<sup>3</sup>/d RO

Masdar Institute, Abu Dhabi 2015, 1,080 m<sup>3</sup>/d RO

Mekorot's Desalination Plant, Ashdod, Israel 2014, 384,000 m<sup>3</sup>/d RO

Adeje SWRO, Adeje, Spain 2014, 30,000 m<sup>3</sup>/d RO

Telde SWRO, Telde, Spain 2013, 16,000 m<sup>3</sup>/d RO

Maspalomas II, Maspalomas, Spain 2012, 12,000 m<sup>3</sup>/d RO

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### SELECTED REFERENCES

#### Consultant and Equipment Supplier: Chemicals

Arica Desalination Plant, Lluta Valley, Chile, 18,000 m<sup>3</sup>/d RO

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### SELECTED REFERENCES

#### Equipment Supplier: Chemicals

Al Khobar, Saudi Arabia 2019, 630,000 m<sup>3</sup>/d RO

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Dubai, United Arab Emirates 2018, 181,840 m<sup>3</sup>/d RO  
Umm Al Houl, Qatar 2016, 347,770 m<sup>3</sup>/d MSF  
Hurghada, Egypt 2015, 80,000 m<sup>3</sup>/d RO  
Az Zour, Kuwait 2014, 486,400 m<sup>3</sup>/d MED  
Ras Abu, Qatar 2013, 163,656 m<sup>3</sup>/d MSF  
Yanbu, Saudi Arabia 2012, 550,070 m<sup>3</sup>/d MSF  
Dubai, United Arab Emirates, 2,136,620 m<sup>3</sup>/d MSF  
Dubai, United Arab Emirates, 727,374 m<sup>3</sup>/d MSF  
Dubai, United Arab Emirates, 650,090 m<sup>3</sup>/d MSF  
Jubail, Saudi Arabia, 472,794 m<sup>3</sup>/d MSF  
Doha West, Kuwait, 392,400 m<sup>3</sup>/d MSF  
Dubai, United Arab Emirates, 381,871 m<sup>3</sup>/d MSF  
Adelaide, Australia, 300,000 m<sup>3</sup>/d RO  
Ras Laffan, Qatar, 286,400 m<sup>3</sup>/d MSF  
Al Khobar, Saudi Arabia, 280,000 m<sup>3</sup>/d MSF  
Al Khobar, Saudi Arabia, 267,000 m<sup>3</sup>/d MSF  
Az Zour, Kuwait, 261,855 m<sup>3</sup>/d MSF  
Tianjin, China, 240,000 m<sup>3</sup>/d RO  
Muscat, Oman, 180,000 m<sup>3</sup>/d RO  
Dubai, United Arab Emirates, 136,000 m<sup>3</sup>/d MSF  
Abu Dhabi, United Arab Emirates, 130,000 m<sup>3</sup>/d RO  
Muscat, Oman, 130,000 m<sup>3</sup>/d RO  
Singapore, 113,000 m<sup>3</sup>/d RO  
Amman, Jordan, 110,000 m<sup>3</sup>/d RO  
Shoaiba, Saudi Arabia, 100,000 m<sup>3</sup>/d MED  
Tamil Nadu, India, 100,000 m<sup>3</sup>/d RO  
Ras Abu, Qatar, 90,000 m<sup>3</sup>/d MSF  
Abu Dhabi, United Arab Emirates, 73,800 m<sup>3</sup>/d MSF  
Yanbu, Saudi Arabia, 70,000 m<sup>3</sup>/d MED  
Varius, Oman, 70,000 m<sup>3</sup>/d RO  
Abu Nayan, Saudi Arabia, 67,500 m<sup>3</sup>/d RO  
Surat, India, 60,000 m<sup>3</sup>/d RO  
Maagan Michael, Israel, 50,000 m<sup>3</sup>/d RO  
Tobruk II, Libya, 40,000 m<sup>3</sup>/d MED  
Zuara III, Libya, 40,000 m<sup>3</sup>/d MED  
Abutaraba, Libya, 40,000 m<sup>3</sup>/d MED  
Derna, Libya, 40,000 m<sup>3</sup>/d MED  
Zuara Extension, Libya, 40,000 m<sup>3</sup>/d MED  
Matrouh, Egypt, 35,000 m<sup>3</sup>/d RO

## Water Management

Carlsbad, United States of America 2012, 204,412 m<sup>3</sup>/d RO  
Jebel Ali, United Arab Emirates, 2,136,620 m<sup>3</sup>/d MSF  
Shuaiba, Saudi Arabia, 454,000 m<sup>3</sup>/d MSF  
Al Khobar, Saudi Arabia, 432,580 m<sup>3</sup>/d MSF  
Yanbu, Saudi Arabia, 321,625 m<sup>3</sup>/d MSF  
Dhekelia, Cyprus, 60,000 m<sup>3</sup>/d RO  
Caramondani Desalination Plant, Cyprus, 40,000 m<sup>3</sup>/d RO  
Mt. Pleasant Waterworks, United States, 26,495 m<sup>3</sup>/d  
Variable Salinity Plant, Singapore, 13,600 m<sup>3</sup>/d  
PUB Bedok NeWater Demo Plant, Singapore, 10,000 m<sup>3</sup>/d  
DOW 16" Membrane Pilot Study WWRP, Singapore, 2,400 m<sup>3</sup>/d  
RO  
Grahamtek EMF membrane Pilot Plant, Singapore, 1,800 m<sup>3</sup>/d

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## SELECTED REFERENCES

### Equipment Supplier: Polyelectrolyte Dosing System

The Umm Al Houl desalination plant, Qatar 2015, 284,000 m<sup>3</sup>/d RO

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## SELECTED REFERENCES

### Membrane Process Chemicals and Process Design

Florida, United States 2020, 19,639 m<sup>3</sup>/d RO  
Missouri, United States 2019, 24,548 m<sup>3</sup>/d RO  
Missouri, United States 2019, 10,910 m<sup>3</sup>/d RO  
Missouri, United States 2019, 9,092 m<sup>3</sup>/d RO  
California, United States 2018, 67,282 m<sup>3</sup>/d RO  
China 2016, 160,000 m<sup>3</sup>/d RO  
U.S.A., United States 2016, 40,000 m<sup>3</sup>/d RO  
Saudi Arabia 2016, 40,000 m<sup>3</sup>/d RO  
Canada 2016, 40,000 m<sup>3</sup>/d RO  
South America 2014, 60,000 m<sup>3</sup>/d RO  
Egypt 2016, 24,000 m<sup>3</sup>/d RO  
India 2016, 8,000 m<sup>3</sup>/d RO  
Pakistan 2016, 8,000 m<sup>3</sup>/d RO  
China 2015, 160,000 m<sup>3</sup>/d RO  
Egypt 2014, 40,000 m<sup>3</sup>/d RO  
Pakistan 2014, 40,000 m<sup>3</sup>/d RO  
Colorado, United States 2014, 24,000 m<sup>3</sup>/d RO  
Southeast Asia 2014, 12,000 m<sup>3</sup>/d RO  
United Arab Emirates 2014, 20,000 m<sup>3</sup>/d RO  
Arizona, United States 2014, 16,000 m<sup>3</sup>/d RO  
Canada 2014, 16,000 m<sup>3</sup>/d RO  
Mexico 2014, 10,000 m<sup>3</sup>/d RO  
California, United States 2014, 8,400 m<sup>3</sup>/d RO  
India 2014, 8,000 m<sup>3</sup>/d RO  
Africa 2014, 4,000 m<sup>3</sup>/d RO  
Florida, United States 2014, 8,000 m<sup>3</sup>/d RO  
Bahrain 2014, 8,000 m<sup>3</sup>/d RO  
Arizona, United States 2013, 72,000 m<sup>3</sup>/d RO  
California, United States 2013, 42,000 m<sup>3</sup>/d RO



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China 2013, 38,000 m<sup>3</sup>/d RO  
Colorado, United States 2013, 26,000 m<sup>3</sup>/d RO  
Egypt 2013, 19,000 m<sup>3</sup>/d RO  
Virginia, United States 2013, 15,000 m<sup>3</sup>/d RO  
California, United States 2012, 224,000 m<sup>3</sup>/d RO  
California, United States 2012, 84,000 m<sup>3</sup>/d RO  
India 2012, 80,000 m<sup>3</sup>/d RO  
Arizona, United States 2012, 80,000 m<sup>3</sup>/d RO  
Arizona, United States 2012, 76,000 m<sup>3</sup>/d RO  
Colorado, United States 2012, 72,000 m<sup>3</sup>/d RO  
Central and South American RO Facility, Central and South America 2012, 52,000 m<sup>3</sup>/d RO  
Florida, United States 2012, 60,000 m<sup>3</sup>/d RO  
China 2012, 48,000 m<sup>3</sup>/d RO  
United Arab Emirates 2012, 48,000 m<sup>3</sup>/d RO  
Egypt 2012, 40,000 m<sup>3</sup>/d RO  
South America 2012, 40,000 m<sup>3</sup>/d RO  
Southeast Asia 2012, 40,000 m<sup>3</sup>/d RO  
South Korea 2012, 40,000 m<sup>3</sup>/d RO  
China 2012, 40,000 m<sup>3</sup>/d RO  
Colorado, United States 2012, 30,000 m<sup>3</sup>/d RO  
India/Pakistan, India 2012, 24,000 m<sup>3</sup>/d RO  
United Arab Emirates 2012, 20,000 m<sup>3</sup>/d RO  
Indonesia 2012, 20,000 m<sup>3</sup>/d RO  
Mexico 2012, 20,000 m<sup>3</sup>/d RO  
Canada 2012, 20,000 m<sup>3</sup>/d RO  
Saudi Arabia 2012, 12,000 m<sup>3</sup>/d RO  
Bahrain 2012, 4,000 m<sup>3</sup>/d RO  
Southeast Asia 2012, 20,000 m<sup>3</sup>/d RO

## Piloting Membrane Process Chemicals and Process Design/Support

North City, San Diego, CA, United States, 113,562 m<sup>3</sup>/d RO

## Equipment Supplier: Lime (Post-treatment)

Fountain Valley RO Project Retrofit, California, United States 2019, 100.0 MGD RO

## Linde PLC



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## SELECTED REFERENCES

### Equipment Supplier: Chemicals

Quebrada Blanca Phase 2, Quebrada Blanca Hipógenos, Tarapacá, Chile 2021, 112,000 m<sup>3</sup>/d RO  
Guaymas Desalination Plant, Guaymas, Sonora, Mexico 2020, 18,000 m<sup>3</sup>/d RO  
San Antonio Water Desalination Plant, San Antonio, Texas, U.S.A., 113,400 m<sup>3</sup>/d RO  
Cap Djinet Desalination Plant, Cap Djinet, Eastern Algeria, Algeria, 100,000 m<sup>3</sup>/d RO  
WEB Aruba, Aruba, 34,000 m<sup>3</sup>/d RO  
Aqualectra Mundo Nobo, Curaçao, 22,200 m<sup>3</sup>/d RO  
Aqualectra St. Barbara, Curaçao, 18,100 m<sup>3</sup>/d RO  
Aqualia, Mexico, 17,280 m<sup>3</sup>/d RO  
WEB Bonaire, Bonaire, Sint Eustatius and Saba, 7,200 m<sup>3</sup>/d RO  
Jaffna Desalination Plant, Jaffna, Northern Province, Sri Lanka 2022, 24,000 m<sup>3</sup>/d RO  
Tseung Kwang O Desalination plant, Tseung Kwang O, Hong Kong 2021, 135,000 m<sup>3</sup>/d RO  
Jurong Island Desalination Plant Number 5, Singapore 2019, 137,000 m<sup>3</sup>/d RO  
Barka 4 IWP, Oman 2016, 281,000 m<sup>3</sup>/d RO  
Tuas Desalination Plant, Singapore 2016, 136,000 m<sup>3</sup>/d RO  
Aguas Antofagasta, Chile, 2,160 m<sup>3</sup>/d RO  
Riyadh, Saudi Arabia 2016, 20,000 m<sup>3</sup>/d RO  
Tuas South Desalination Plant, Singapore 2012, 318,500 m<sup>3</sup>/d RO

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## SELECTED REFERENCES

### Equipment Supplier: Chemicals

United States 2023, 492,100 m<sup>3</sup>/d RO  
United States 2023, 378,540 m<sup>3</sup>/d RO  
United States 2023, 257,400 m<sup>3</sup>/d RO  
Singapore 2023, 140,000 m<sup>3</sup>/d RO  
United States 2023, 75,700 m<sup>3</sup>/d RO  
Sweden 2023, 3,000 m<sup>3</sup>/d RO  
GWRS, Orange County Water District, United States, 130 MGD RO  
Fresno-Clovis Regional Wastewater Reclamation Facility, City of Fresno, United States, 68 MGD RO  
Edward C. Little Water Recycling Facility, West Basin Municipal Water District, United States, 20 MGD RO  
Oxnard Advanced Water Purification Facility, City of Oxnard, United States, 13 MGD RO

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[www.omya.com/water\\_treatment](http://www.omya.com/water_treatment)[www.omya.com/oarp](http://www.omya.com/oarp)**SELECTED REFERENCES****Equipment Supplier: Chemicals and Chemical Feed Systems**

RO project, Switzerland, RO

**Technology Provider: Remineralisation**

Hondog Desalination Plant, Gozo, Malta 2019, 9,000 m³/d Other / Unknown

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<https://www.organo.co.jp/english>[www.organo.co.jp/english/products/#chemical](http://www.organo.co.jp/english/products/#chemical)**SELECTED REFERENCES****Equipment Supplier: Chemicals**

Kagoshima, Japan, 5,400 m³/d RO

Vietnam, 4,848 m³/d RO

Tomari Nuclear Power Station, Hokkaido, Japan, 4,140 m³/d RO

Cilegon, Indonesia, 3,500 m³/d RO

Malaysia, 746 m³/d RO

Indonesia, 500 m³/d RO

Bintuni, Indonesia 2018, 1,500 m³/d RO

Vietnam 2017, 4,140 m³/d RO

Kagoshima, Japan 2017, 500 m³/d RO

Taiwan 2016, 30,000 m³/d RO

Cilegon, Banten, Indonesia 2016, 5,400 m³/d RO

Cilegon, Banten, Indonesia 2016, 4,848 m³/d RO

Indonesia 2016, 4,800 m³/d RO

Malaysia 2016, 1,440 m³/d RO

Kansai, Japan 2016, 1,200 m³/d RO

Kyushu, Japan 2016, 900 m³/d RO

Chubu, Japan 2015, 20,000 m³/d RO

Taiwan 2015, 16,000 m³/d RO

Taiwan 2015, 5,800 m³/d RO

Chugoku, Japan 2015, 3,800 m³/d ED

**PWT**[www.pwtchemicals.com](http://www.pwtchemicals.com)**SELECTED REFERENCES****Equipment Supplier: Chemicals**

Philippines, 150,000 m³/d RO

China, 100,000 m³/d RO

China, 99,924 m³/d RO

China, 48,070 m³/d RO

United Arab Emirates, 45,420 m³/d RO

India, 40,000 m³/d RO

United States, 37,850 m³/d RO

Thailand, 24,000 m³/d RO

China, 21,575 m³/d RO

United States, 15,140 m³/d RO

United States, 14,762 m³/d RO

United Arab Emirates, 14,000 m³/d RO

Mexico, 11,520 m³/d RO

Thailand, 10,400 m³/d RO

Thailand, 5,000 m³/d RO

Mexico, 3,983 m³/d RO

Egypt, 3,407 m³/d RO

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[https://solenis.com/en](http://https://solenis.com/en)**SELECTED REFERENCES****Equipment Supplier: Chemicals**

Ghubra Power and Water, Al Ghubrah, Oman 2012, 190,909 m³/d MSF

Marafiq Jubail IWPP, Al Jubail, Saudi Arabia 2007, 800,000 m³/d MED

Ministry of Electricity and Water, Kuwait, 1,880,909 m³/d MSF

Qatar Electricity and Water Company, (QEWC) , Qatar, 900,000 m³/d MSF

ITM Umm Al Nar, Abu Dhabi, United Arab Emirates, 730,000 m³/d MSF

Homs Power and Water Station, Libya, 410,000 m³/d MSF

GECOL Homs Power and Water Station, Libya, 410,000 m³/d MSF

Ras Lanuf Oil Company (RASCO), Libya, 410,000 m³/d MSF

Hidd Power Company, Bahrain, 272,000 m³/d MED

General Desalination Company Libya (All Plants), Libya, 190,000 m³/d MED

Sohar Power and Desalination Plant, Oman, 163,363 m³/d MSF

Hidd Power Company, Bahrain, 140,000 m³/d MSF

Sitra Power and Water Station, Bahrain, 113,000 m³/d MSF

Aluminium Bahrain, Bahrain, 41,000 m³/d MED

Libya Iron and Steel Company, Libya, 31,000 m³/d MSF

UCDEM St. Barthelemy, French West Indies, France, 9,000 m³/d MED

Tripoli West Power Station, Libya, 9,000 m³/d MED

Hawar Power Station, MEW, Bahrain, 2,300 m³/d MED

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GAS LAB is a globally recognized expert for smarter, safer and greener CO<sub>2</sub> technology solutions for the desalination industry. The CIS® range of advanced CO<sub>2</sub> dosing systems offer superior conversion efficiencies, while being inexpensive to own and easy to maintain. GAS LAB serves the complete CO<sub>2</sub> spectrum for water treatment facilities - from on-site generation and carbon capture to storage and injection.

GAS LAB offers Carbonic acid Injection Systems (CISx®) designed for high efficiency pH control without the use of expensive CO<sub>2</sub> absorbers. CISx® offers a distinct liquid-liquid reaction, resulting in reduced consumption of pH sensitive pre and post treatment chemicals while avoiding downstream issues with gas bubbles.

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Possessing over 60 years of proven technical experience with application-oriented solutions in over 25 countries, GAS LAB has successfully delivered more than 500 systems worldwide, ranging in size and complexity. GAS LAB's in-house manufacturing capabilities for pressure vessels, heat exchangers, boilers and columns ensure tighter quality control, reduced delivery time, cost compatibility along with high availability. GAS LAB's manufacturing unit regularly produces vessels compliant with ASME 'U' Designator, CE Mark and for various challenging industry standards such as oil and gas.

Focused on producing industry specific research, GAS LAB's R&D center enjoys technical collaborations with leading engineering institutes of Europe and Asia.

GAS LAB's innovative Carbon Capture Utilisation and Storage (CCUS) solutions are helping desalination plant owners achieve net zero emissions while reducing operational costs and securing upstream supply chains.

### SELECTED REFERENCES

#### CO<sub>2</sub> Generation System

- Jubail 3A IWP, Saudi Arabia 2021, 60,000 m<sup>3</sup>/d RO
- ADNOC Waste Heat Recovery Project Ruwais, United Arab Emirates 202, 62,400 m<sup>3</sup>/d MED
- Barka - 1 Phase 2 SWRO Project, Barka, Oman 2016, 56,800 m<sup>3</sup>/d RO

#### CO<sub>2</sub> Storage with Carbonic Injection System (CISx®)

- RIL Jamnagar, Gujarat, India 2023, 2,000 m<sup>3</sup>/d RO
- Jubail 3B IWP, Al Jubail, Saudi Arabia 2022, 57,000 m<sup>3</sup>/d RO
- Adani Ports and SEZ, Gujarat, India 2022, 33,000 m<sup>3</sup>/d RO
- NFE Ras Laffan, Ras Laffan, Qatar 2022, 283,000 m<sup>3</sup>/d RO
- Red Sea Utility Assets and Infrastructure and Projects, Saudi Arabia 2022, 45,000 m<sup>3</sup>/d RO
- Salalah IWP, Oman 202, 114,000 m<sup>3</sup>/d RO
- ADNOC Waste Heat Recovery Project Ruwais, United Arab Emirates 202, 62,400 m<sup>3</sup>/d MED
- MRPL Sea Water Desalination Project, India 202, 3,000 m<sup>3</sup>/d RO
- NTPCL Vallur Thermal Power Project, India 2018, 2,000 m<sup>3</sup>/d RO

#### CO<sub>2</sub> Storage with CO<sub>2</sub> Gas Injection System (CISe®)

- Jubail 2 IWP, Al Jubail, Saudi Arabia 2023, 1,00,000 m<sup>3</sup>/d RO
- Collahuasi IDAM, Puerto Pachte, Chile 2023, 9,720 m<sup>3</sup>/d RO
- Barka 5 IWP, Barka, Oman 2022, 10,000 m<sup>3</sup>/d RO
- Jubail 3A IWP, Saudi Arabia 2021, 60,000 m<sup>3</sup>/d RO
- SWCC Al Khobar -1 SWRO Plant, Saudi Arabia 202, 21,000 m<sup>3</sup>/d RO
- MRPL Sea Water Desalination Project, India 202, 3,000 m<sup>3</sup>/d RO
- Sewage Treatment Plant Akshardham Temple, India 2017, 4,540 m<sup>3</sup>/d
- Barka - 1 Phase 2 SWRO Project, Barka, Oman 2016, 56,800 m<sup>3</sup>/d RO
- Nemmeli Seawater Desalination Plant, India 2012, 10,000 m<sup>3</sup>/d RO

The above references are specifically for major desalination plants, for detailed references, kindly contact us at:

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# SUSTAINABLE DESALINATION

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## CARBON CAPTURE FOR IWPPs

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- Use waste CO<sub>2</sub> for remineralization
- Reduce per m<sup>3</sup> cost of desalinated water
- Secure your upstream supply chain
- Support your NET-ZERO goals

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[www.TOMCOsystems.com](http://www.TOMCOsystems.com)

### SELECTED REFERENCES

#### Supplier: CO<sub>2</sub> Dosing

Balikpapan Refinery Plant, Balikpapan, East Kalimantan, Indonesia, 1,800 m<sup>3</sup>/d Other / Unknown

#### Supplier: Remineralisation (CO<sub>2</sub> - Acidified)

El Tor, Egypt 2017, 30,000 m<sup>3</sup>/d RO

Qurayyat IWP , Oman 2016, 200,000 m<sup>3</sup>/d RO

Rabab Harweel Integrated Project (RHIP), Harweel, Oman 2016, 927 m<sup>3</sup>/d RO

Yanbu, Saudi Arabia 2015, 30,000 m<sup>3</sup>/d RO

Charles Meyer SWRO Plant , Santa Barbra, California, United States 2015, 10,475 m<sup>3</sup>/d RO

Ma'aden Wa'ad Al-Shamal, Wa'ad Al-Shamal, Saudi Arabia 2015, Other / Unknown

Masdar Renewable Energy, Abu Dhabi, United Arab Emirates 2015, RO

Masdar renewable energy, Abu Dhabi, United Arab Emirates 2015, RO

Minera Escondida, Antofagasto, Chile 2014, 216,000 m<sup>3</sup>/d RO

Central Java Power, Pemalang, Central Java, Indonesia 2014, Other / Unknown

Sadara Chemical , Jubail, Saudi Arabia 2013, 178,560 m<sup>3</sup>/d RO

Ma'aden, Al Khafji, Saudi Arabia 2013, Other / Unknown

Ghalilah, United Arab Emirates 2012, 68,140 m<sup>3</sup>/d RO

Paraguaná, Venezuela 2012, RO

Ras Al-Khair Power and Desalination Plant 2, Ras Al-Khair, Eastern province, Saudi Arabia 2022, 750,000 m<sup>3</sup>/d MSF

Al Khafji Water Desalination plant (SWCC) Plant 3, Al Khobar, Eastern province, Saudi Arabia 2022, 540,000 m<sup>3</sup>/d MSF

Al Shuqaiq Power and Desalination Plant, Al Shuqaiq, Makkah, Saudi Arabia 2022, 450,000 m<sup>3</sup>/d RO

Al Khafji Water Desalination plant (SWCC) Plant 2, Al Khafji, Eastern province, Saudi Arabia 2022, 75,000 m<sup>3</sup>/d MED

Mega Water Company RO Plants, Cairo, Egypt 2022, 70,000 m<sup>3</sup>/d RO

Al Lith Water Desalination plant (SWCC) Plant 2, Al Lith, Makkah, Saudi Arabia 2022, 45,200 m<sup>3</sup>/d RO

Al Jazeerah Environmenetal Co. (JEKO) Plant 2, Dammam, Eastern province, Saudi Arabia 2022, 40,000 m<sup>3</sup>/d RO

ADNOC Refining, Abu Dhabi, Ruwais, United Arab Emirates 2022, 15,000 m<sup>3</sup>/d MSF

Al Lith Water Desalination plant (SWCC) Plant 1, Al Lith, Makkah, Saudi Arabia 2022, 9,000 m<sup>3</sup>/d MED

Jubail Water Desalination plant (SWCC), Jubail, Eastern province, Saudi Arabia 2021, 933,632 m<sup>3</sup>/d MSF

Shuaibah Water & Electricity plant-3 (SWEC/NOMAC), Shuaibah, Makkah, Saudi Arabia 2021, 880,000 m<sup>3</sup>/d MSF

Sinai Holding Company RO Plants, Sinai, Egypt 2021, 150,000 m<sup>3</sup>/d RO

AL FATAH Water and Power (RAWAFID), Jubail, Eastern province, Saudi Arabia 2021, 75,000 m<sup>3</sup>/d RO

Intec Hassan Allam RO plants, Sharm El Sheikh, Sinai, Egypt 2021, 30,000 m<sup>3</sup>/d RO

Kharafi National company for Emar Plant, Marasi, Alamin, Egypt 2021, 20,000 m<sup>3</sup>/d RO

Jubail Water Desalination plant (SWCC), Jubail, Eastern province, Saudi Arabia 2020, 933,632 m<sup>3</sup>/d MSF

Shuaibah Water & Electricity plant-3 (SWEC/NOMAC), Shuaibah, Makkah, Saudi Arabia 2020, 880,000 m<sup>3</sup>/d MSF

Layyah Power Station (SEWA), Sharjah, United Arab Emirates 2020, 223,339 m<sup>3</sup>/d MSF

Al Jazeerah Environmenetal Co. (JEKO) Plant 3, Dammam, Eastern province, Saudi Arabia 2020, 45,000 m<sup>3</sup>/d RO

Al Jazeerah Environmenetal Co. (JEKO), Dammam, Eastern province, Saudi Arabia 2020, 30,000 m<sup>3</sup>/d RO

Saline Water Conversion Corporation (SWCC) Satellite Plants, Rabbigh, Makkeh, Saudi Arabia 2020, 18,000 m<sup>3</sup>/d MED

Layyah Power Station (SEWA), Sharjah, United Arab Emirates 2019, 223,339 m<sup>3</sup>/d MSF

Jeddah Water & Electricity plant-3 (SWEC/NOMAC), Jeddah, Makkah, Saudi Arabia 2019, 190,555 m<sup>3</sup>/d MSF

Sidem Saudi Co., Jubail, Eastern province, Saudi Arabia 2019, 182,907 m<sup>3</sup>/d RO

Al-Waha Water Treatment, Jubail, Eastern province, Saudi Arabia 2019, 22,000 m<sup>3</sup>/d RO

Mowah water company, Jeddah, Makkah, Saudi Arabia 2019, 20,000 m<sup>3</sup>/d RO

Al Jazeerah Environmenetal Co. (JEKO) Plant 1, Jeddah, Makkah, Saudi Arabia 2019, 10,000 m<sup>3</sup>/d RO

Al Melaihi Water Treatment, Jubail, Eastern province, Saudi Arabia 2019, 6,000 m<sup>3</sup>/d RO

Jeddah Water & Electricity plant-3 (SWEC/NOMAC), Jeddah, Makkah, Saudi Arabia 2018, 190,555 m<sup>3</sup>/d MSF

Jubail Water Desalination plant (SWCC), Jubail, Eastern province, Saudi Arabia 2017, 933,632 m<sup>3</sup>/d MSF

Jeddah Water & Electricity plant-3 (SWEC/NOMAC), Jeddah, Makkah, Saudi Arabia 2017, 190,555 m<sup>3</sup>/d MSF

Shuaibah Water & Electricity plant-3 (SWEC/NOMAC), Shuaibah, Makkah, Saudi Arabia 2016, 880,000 m<sup>3</sup>/d MSF

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### SELECTED REFERENCES

#### Equipment Supplier : Chemicals

Fujairah Asia Power Company, Fujairah, United Arab Emirates 2023, 455,000 m<sup>3</sup>/d MED

Ras Al-Khair Power and Desalination Plant 1, Ras Al-Khair, Eastern province, Saudi Arabia 2023, 400,000 m<sup>3</sup>/d RO

Metito biocide supplying plants, Jeddah, Makkah, Saudi Arabia 2023, 75,000 m<sup>3</sup>/d RO

SEC (Wettico), Jeddah, Makkah, Saudi Arabia 2023, 68,200 m<sup>3</sup>/d MED

Al Khafji Water Desalination plant (SWCC) Plant 1, Al Khafji, Eastern province, Saudi Arabia 2023, 60,000 m<sup>3</sup>/d RO

City Water Company RO Plants, Sharqia, Egypt 2023, 12,000 m<sup>3</sup>/d RO

Jeddah, Makkah, Saudi Arabia 2023, 400 m<sup>3</sup>/d RO

# Developers & Plant Suppliers

Selected references since 2012 from desalination and reuse developers and plant suppliers, including EPC contractors and systems integrators/OEMs.

## Legend



Desalination



Wastewater reuse

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\*Coxabengoa as of October 2023



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### SELECTED REFERENCES

#### EPC Contractor

Jubail 3A Desalination Plant, Saudi Arabia 2020, 600,000 m<sup>3</sup>/d RO  
 Taweeleah IWP Desalination Plant, Abu Dhabi, United Arab Emirates 2019, 909,000 m<sup>3</sup>/d RO  
 Rabigh 3 IWP Desalination Plant, Saudi Arabia 2019, 600,000 m<sup>3</sup>/d RO  
 SWRO Plant for Emirates Global Aluminium Complex, Jebel Ali, United Arab Emirates 2019, 41,000 m<sup>3</sup>/d RO  
 Salalah 3 IWP Desalination Plant, Oman 2018, 114,000 m<sup>3</sup>/d RO  
 Agadir Desalination Plant, Morocco 2017, 275,000 m<sup>3</sup>/d RO  
 Shoaiba 3 Expansion 2 IWP, Saudi Arabia 2017, 250,000 m<sup>3</sup>/d RO  
 Sousse Phase 1, Tunisia 2017, 50,000 m<sup>3</sup>/d RO  
 Durango, Mexico 2017, 1,700 m<sup>3</sup>/d RO  
 Yopal, Colombia 2015, 67,392 m<sup>3</sup>/d RO  
 Al Khafji, Saudi Arabia 2015, 60,000 m<sup>3</sup>/d RO  
 Madrid I, Cundinama, Colombia 2015, 14,170 m<sup>3</sup>/d RO  
 Norte III Combined Cycle Plant, Chihuahua, Mexico 2015, 1,300 m<sup>3</sup>/d RO  
 Atacama Solar Thermal Plant, Atacama, Chile 2015, 270 m<sup>3</sup>/d RO  
 Norte III Combined Cycle Plant, Chihuahua, Mexico 2015, 18 m<sup>3</sup>/d RO  
 Atacama Solar Thermal Plant, Atacama, Chile 2015, 12 m<sup>3</sup>/d RO  
 Ténès, Algeria 2014, 200,000 m<sup>3</sup>/d RO  
 Agadir, Morocco 2014, 100,000 m<sup>3</sup>/d RO  
 Ratnapura, Sri Lanka 2014, 13,000 m<sup>3</sup>/d RO  
 AES Angamos, Mejillones, Chile 2014, 4,800 m<sup>3</sup>/d RO  
 Masdar Renewable Energy I, Abu Dhabi, United Arab Emirates 2014, 1,080 m<sup>3</sup>/d RO  
 Carty Combined Cycle Plant, Oregon, United States 2014, 490 m<sup>3</sup>/d RO  
 Montes del Plata, Punta Pereira, Uruguay 2013, 25,000 m<sup>3</sup>/d RO  
 Barka 1 IWPP Expansion, Oman 2012, 45,460 m<sup>3</sup>/d RO

#### Developer/Co-developer and EPC Contractor

Water Treatment Plant Accra, Nungua, Accra, Ghana 2012, 60,000 m<sup>3</sup>/d RO

## Absun Zolal



[www.absunwater.com](http://www.absunwater.com)

### SELECTED REFERENCES

#### Plant Supplier

Mobarakeh Steel Co., Esfahan, Iran, 18,000 m<sup>3</sup>/d RO  
 Sarmad Steel, Yazd, Iran, 10,000 m<sup>3</sup>/d RO  
 Abadan Petrochemical, Bandar Abbas, Iran, 4,800 m<sup>3</sup>/d Other / Unknown

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### SELECTED REFERENCES

#### Design, Construction and Operation

DWTP Laguna Lake, Muntinlupa, Philippines 2020, 150,000 m<sup>3</sup>/d RO  
 SWRO Tseung Kwan O, Hong Kong 2019, 135,000 m<sup>3</sup>/d RO

#### Developer/Co-developer

The mining company Compañía Minera Doña Inés de Collahuasi (CMIC), Collahuasi's Patache Port, Tarapacá region of Chile, Chile 2022, 90,720 m<sup>3</sup>/d RO  
 Madinah-3, Al Madinah Al Munawwarah, Saudi Arabia 2021, 200,000 m<sup>3</sup>/d  
 Buraydah-2, Buraydah, Saudi Arabia 2021, 150,000 m<sup>3</sup>/d  
 Tabuk-2, Tabuk, Saudi Arabia 2021, 90,000 m<sup>3</sup>/d  
 Los Cabos, Mexico 2021, 21,600 m<sup>3</sup>/d RO

#### Equipment Supplier

Ras Abu Fontas A2, Ras Abu Fontas, Qatar 2015, 164,000 m<sup>3</sup>/d RO

#### O&M Contractor

Burgos, Spain 2022, 156,000 m<sup>3</sup>/d  
 300 WWTP, Sardinia, Italy 2021, 330,000 m<sup>3</sup>/d Other / Unknown  
 Oropesa SWRO, Oropesa de Mar, Spain 2021, 48,700 m<sup>3</sup>/d RO  
 Desalination for new refinery, Talara, Peru 2021, 20,563 m<sup>3</sup>/d RO

# IDRA

## DESALINATION & REUSE HANDBOOK

### Plant Supplier (Desal)

Muskiz, Biscay, Spain 2021, 4,600 m<sup>3</sup>/d  
Los Merinos, Guayaquil, Ecuador 2021  
Shuqaiq SWRO 1, Saudi Arabia 2020, 400,000 m<sup>3</sup>/d RO  
Al Khobar II SWRO, Khobar, Saudi Arabia 2019, 630,000 m<sup>3</sup>/d RO  
SWRO Al Khobar II, Khobar, Saudi Arabia 2019, 630,000 m<sup>3</sup>/d RO  
Shuqaiq III SWRO, Al Shuqaiq, Saudi Arabia 2019, 450,000 m<sup>3</sup>/d RO  
SWRO Shuqaiq III, Al Shuqaiq, Saudi Arabia 2019, 450,000 m<sup>3</sup>/d RO  
Jebel Ali Power and Desalination station complex (JAPS), Dubai, United Arab Emirates 2018, 181,840 m<sup>3</sup>/d RO  
Práceres, Pontevedra, Spain, 51,840 m<sup>3</sup>/d

Japan 2019, 150 m<sup>3</sup>/d RO  
Japan 2019, 100 m<sup>3</sup>/d RO  
Japan 2018, 240 m<sup>3</sup>/d RO

Hawaii, United States 2018, 200 m<sup>3</sup>/d RO

Qatar 2018, 180 m<sup>3</sup>/d RO

Japan 2017, 500 m<sup>3</sup>/d RO

Japan 2017, 312 m<sup>3</sup>/d RO

Fiji 2017, 300 m<sup>3</sup>/d RO

Japan 2017, 300 m<sup>3</sup>/d RO

Japan 2017, 220 m<sup>3</sup>/d RO

Fiji 2017, 220 m<sup>3</sup>/d RO

Japan 2017, 100 m<sup>3</sup>/d RO

Fiji 2017, 100 m<sup>3</sup>/d RO

Japan 2016, 400 m<sup>3</sup>/d RO

Japan 2016, 288 m<sup>3</sup>/d RO

Japan 2016, 240 m<sup>3</sup>/d RO

French Polynesia 2016, 150 m<sup>3</sup>/d RO

Fiji 2016, 100 m<sup>3</sup>/d RO

Palau 2016, 100 m<sup>3</sup>/d RO

Japan 2016, 100 m<sup>3</sup>/d RO

Philippines 2015, 750 m<sup>3</sup>/d RO

Sri Lanka 2015, 350 m<sup>3</sup>/d RO

United States Minor Outlying Islands 2015, 240 m<sup>3</sup>/d RO

Abu Dhabi, United Arab Emirates 2014, 1,000 m<sup>3</sup>/d RO

Japan 2013, 300 m<sup>3</sup>/d RO

Colombo, Sri Lanka 2013, 200 m<sup>3</sup>/d RO

Nadi, Fiji 2013, 130 m<sup>3</sup>/d RO

Mie, Japan 2013, 120 m<sup>3</sup>/d RO

Miyagi, Japan 2013, 100 m<sup>3</sup>/d RO

Nadi, Fiji 2013, 100 m<sup>3</sup>/d RO

Hawaii, United States 2012, 120 m<sup>3</sup>/d RO

Power Plant Project, Fukushima, Japan 2012, 100 m<sup>3</sup>/d RO

Nadi, Fiji 2012, 100 m<sup>3</sup>/d RO

Desalination Project, Shizuoka, Japan 2011, 200 m<sup>3</sup>/d RO

LNG Project, Algeria 2010, 1,000 m<sup>3</sup>/d RO

LNG Project, Southeast Asia, Papua New Guinea 2010, 500 m<sup>3</sup>/d

Other / Unknown

Japan, 500 m<sup>3</sup>/d RO

Maldives, 500 m<sup>3</sup>/d RO

Djibouti, 336 m<sup>3</sup>/d RO

Japan, 250 m<sup>3</sup>/d RO

Fiji, 210 m<sup>3</sup>/d RO

### Plant Supplier and Operator (Desal)

TKO, Hong Kong 2020, 135,000 m<sup>3</sup>/d RO  
Umm Al Houl Extension , Doha, Qatar 2019, 272,760 m<sup>3</sup>/d RO  
Al-Khobar 1, Saudi Arabia 2018, 210,000 m<sup>3</sup>/d RO  
Putatan 2, Manila, Philippines 2016, 150,000 m<sup>3</sup>/d RO  
Ras Abu Fontas A3, Al Wakrah, Ras Abu Fontas, Qatar 2015, 163,656 m<sup>3</sup>/d RO  
Isla de Sal, Cabo Verde 2014, 5,000 m<sup>3</sup>/d RO  
Sao Vicente, Cabo Verde 2014, 5,000 m<sup>3</sup>/d RO  
Fujairah 1, Fujairah, United Arab Emirates 2012, 137,000 m<sup>3</sup>/d RO  
SWRO-4 (Al-Jubail), Eastern Providence, Saudi Arabia 2012, 100,000 m<sup>3</sup>/d RO

### Plant Supplier, Owner and Operator

Al Jubail 3B, Saudi Arabia 2021, 570,000 m<sup>3</sup>/d RO

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#### Plant Supplier (Desal)

Kagawa, Japan 2022, 1,000 m<sup>3</sup>/d RO  
Kagoshima, Japan 2022, 480 m<sup>3</sup>/d RO  
Shimane, Japan 2022, 440 m<sup>3</sup>/d RO  
Osaka, Japan 2022, 300 m<sup>3</sup>/d RO  
Ibaraki, Japan 2022, 240 m<sup>3</sup>/d RO  
Palawan, Philippines 2022, 100 m<sup>3</sup>/d RO  
Male, Maldives 2022, 100 m<sup>3</sup>/d RO  
Japan 2019, 630 m<sup>3</sup>/d RO  
Antigua and Barbuda 2019, 400 m<sup>3</sup>/d RO  
Northern Mariana Islands 2019, 250 m<sup>3</sup>/d RO  
Japan 2019, 200 m<sup>3</sup>/d RO

## ACS (Actividades de Construcción y Servicios)



[www.grupoacs.com](http://www.grupoacs.com)

### SELECTED REFERENCES

#### EPC Contractor

- Ras Al Khaimah, United Arab Emirates 2016, 100,000 m<sup>3</sup>/d RO
- Villapérez WWTP - Expansion, Asturias, Spain 2013, 400,000 m<sup>3</sup>/d Tertiary treatment
- Viveros de la Villa WWTP - Expansion, Madrid, Spain 2013, 120,000 m<sup>3</sup>/d Tertiary treatment
- Estiviel WWTP, Toledo, Spain 2012, 70,000 m<sup>3</sup>/d Tertiary treatment
- Alguazas WWTP, Alguazas, Spain 2012, 15,000 m<sup>3</sup>/d Filtration, UV disinfection

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### SELECTED REFERENCES

#### Plant Supplier (Reuse)

- Borriol WWTP, Castellón , Borriol, Spain 2014, Tertiary treatment

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### SELECTED REFERENCES

#### Developer/Co-developer

Shuaibah 3 IWP, Western Saudi Arabia, Red Sea, Saudi Arabia 2022, 600,000 m<sup>3</sup>/d RO

Rabigh 4 IWP, Rabigh, Western Saudi Arabia, Red Sea, Saudi Arabia 2022, 600,000 m<sup>3</sup>/d RO

The Red Sea Project, North of Jeddah, Western Saudi Arabia, Red Sea, Saudi Arabia 2021, 33,000 m<sup>3</sup>/d RO

Umm Al Quwain IWP, United Arab Emirates 2020, 681,900 m<sup>3</sup>/d RO

Jubail 3a IWP, Saudi Arabia 2020, 600,000 m<sup>3</sup>/d RO

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Taweelah IWP, United Arab Emirates 2019, 909,218 m<sup>3</sup>/d RO  
Rabigh 3 IWP, Saudi Arabia 2019, 600,000 m<sup>3</sup>/d RO  
Al-Dur 2 IWPP, Bahrain 2019, 227,000 m<sup>3</sup>/d RO  
Salalah IWP, Salalah, Arabian Sea, Saudi Arabia 2018, 113,650 m<sup>3</sup>/d RO  
Shuaibah 3 Exp 2 IWP, Saudi Arabia 2017, 250,000 m<sup>3</sup>/d RO  
Salalah IWP, Dhofar, Oman 2017, 113,650 m<sup>3</sup>/d RO  
Hassyan Power Plant (DEMIN), United Arab Emirates 2016, 10,000 m<sup>3</sup>/d RO  
Sohar 3 Power Plant (DEMIN), Oman 2016, 9,000 m<sup>3</sup>/d RO  
Rabigh IWSPP Expansion, Saudi Arabia 2015, 96,000 m<sup>3</sup>/d RO  
Barka 1 Exp 2 IWP, Oman 2015, 56,826 m<sup>3</sup>/d RO  
Petrorabigh IWSPP Phase 2, Saudi Arabia 2015, 54,000 m<sup>3</sup>/d RO  
Rabigh 2 Power Plant (DEMIN), Saudi Arabia 2014, 8,000 m<sup>3</sup>/d RO  
Barka 1 Exp 1 IWP, Oman 2012, 45,460 m<sup>3</sup>/d RO

## EPC Contractor, Through Local Joint Venture Sasakura Middle East Company

Shoaiba, Saudi Arabia 2015, 91,200 m<sup>3</sup>/d MED

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### SELECTED REFERENCES

#### Contractor

Princess Noura University for Women (PNUFW), Riyadh, Saudi Arabia 2012, 7,000 m<sup>3</sup>/d RO  
Brackish Water RO Plant, Princess Noura University for Women, Riyadh, Saudi Arabia 2011, 13,000 m<sup>3</sup>/d RO  
Golden Sands, Oman 2011, 850 m<sup>3</sup>/d RO

#### Plant Supplier (Desal)

15 plants, each 50-300 m<sup>3</sup>/d, Static Company, Maldives, RO

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### SELECTED REFERENCES

#### Equipment Design, Flionex Supply, Start-up and Operation

Selective NaCl extraction Demonstration Unit, Martigues, France 2017, 50 m<sup>3</sup>/d Other / Unknown

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### SELECTED REFERENCES

#### EPC Contractor

United Arab Emirates 2013, 1,200 m<sup>3</sup>/d RO

## Aerex Industries

[www.aerexglobal.com](http://www.aerexglobal.com)

### SELECTED REFERENCES

#### General Contractor and Membrane System Provider

Windsor Bahamas, Grand Cayman, Cayman Islands 2018, 11,300 m<sup>3</sup>/d RO

#### Membrane System Provider

Seminole - Brighton, Okeechobee, Florida, United States 2018, 7,500 m<sup>3</sup>/d RO

Governors Harbour III-1, Grand Cayman, Cayman Islands 2018, 3,700 m<sup>3</sup>/d RO

Vero Beach, Florida, United States 2017, 9,400 m<sup>3</sup>/d RO  
 Village of Tequesta, Florida, United States 2015, 4,500 m<sup>3</sup>/d RO  
 Governors Harbour II-2, Grand Cayman, Cayman Islands 2015, 3,700 m<sup>3</sup>/d RO  
 Seminole - Big Cypress, Clewiston, Florida, United States 2015, 3,000 m<sup>3</sup>/d RO  
 Davie, Florida, United States 2014, 30,200 m<sup>3</sup>/d RO  
 Myakkahatchee Creek, North Port, Florida, United States 2014, 5,600 m<sup>3</sup>/d Other / Unknown  
 Seacoast Utility Authority, Palm Beach Gardens, Florida, United States 2012, 111,600 m<sup>3</sup>/d NF

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Over the past 25 years AES ARABIA LTD. has developed a reputation as high quality solutions providers for a diversified range of water treatment applications and Oil and Gas Filtration system. This included the execution of prestigious projects with highly demanding clients ranging from zero liquid discharge utilizing Ultra High Lime process and Brine Concentration, Produced Water Treatment for re-injection in oil-field applications, treatment of highly brackish water with high H<sub>2</sub>S content and high fouling potential, steel mill oily water reclamation and reuse, Ultra Pure water, Leachate wastewater treatment, and high efficiency seawater desalination as well as containerized and mobile units for remote areas.

AES has also consistently consolidated its position and market share in the booming Oil & Gas sector in the Middle East and established strong presence in more Gulf and MENA markets such as Sudan, UAE, Oman and Iraq.

With vast experience in the field, and continued success in various markets, AES is now also offering water treatment plants on a DBO and BOT basis to cater for the growing needs of public and private sector clients. For existing plants, AES offers operation & maintenance, plant optimization, troubleshooting and repair services.

In brief, AES is a world class solutions provider with a dynamic and most experienced team on board, offering high quality desalination systems employing the latest technologies to meet the ever increasing challenges of the industry

## SELECTED REFERENCES

### Equipment Supplier: Desalination System

Golden Chicken Farms Co. For Agricultural & Animal Production, Musiqa, Saudi Arabia 2023, 302 m<sup>3</sup>/d RO  
 5D Al-Dammam Business Park, Dammam, Saudi Arabia 2023, 300 m<sup>3</sup>/d RO  
 Hussain Al Ali Private Villa, Al Hasa, Saudi Arabia 2023, 15 m<sup>3</sup>/d RO  
 Pp12, Dhurma, Saudi Arabia 2022, 1,286 m<sup>3</sup>/d RO  
 Pmu Campus, Khobar, Saudi Arabia 2022, 912 m<sup>3</sup>/d RO  
 Abdullah Abdullatif Ahmed Alfozan Private Resort, Azizia, Saudi Arabia 2022, 700 m<sup>3</sup>/d RO  
 Ohud General Hospital, Madinah, Saudi Arabia 2022, 500 m<sup>3</sup>/d RO  
 Alain Poultry Farm, Qarya Olya, Saudi Arabia 2022, 499 m<sup>3</sup>/d RO  
 Saudi Factor For Chlorines And Alkalies, Riyadh, Saudi Arabia 2022, 389 m<sup>3</sup>/d RO  
 Saudi Airlines Catering Jeddah Unit, Jeddah, Saudi Arabia 2022, 312 m<sup>3</sup>/d RO  
 King Faisal Air Academy, Majmah, Saudi Arabia 2022, 250 m<sup>3</sup>/d RO  
 King Faisal Specialist Hospital, Riyadh, Saudi Arabia 2022, 174 m<sup>3</sup>/d RO  
 Future Harvest - Sudair Factory, Sudair, Saudi Arabia 2022, 168 m<sup>3</sup>/d RO  
 Mouwasat Hospital, Riyadh, Saudi Arabia 2022, 120 m<sup>3</sup>/d RO  
 Abdullah Abdullatif Ahmed Alfozan Private Villa, Khobar, Saudi Arabia 2022, 80 m<sup>3</sup>/d RO  
 My Clinic, Riyadh, Saudi Arabia 2022, 30 m<sup>3</sup>/d RO  
 Durrat Alriyadh RO, Riyadh, Saudi Arabia 2021, 4,517 m<sup>3</sup>/d RO  
 Kingdom Resort Ro Plant, Riyadh, Saudi Arabia 2021, 2,208 m<sup>3</sup>/d RO  
 Kingdom Resort Ro Plant, Riyadh, Saudi Arabia 2021, 2,208 m<sup>3</sup>/d RO  
 Radwa Chicken Factory, Jeddah, Saudi Arabia 2021, 756 m<sup>3</sup>/d RO  
 Golden Chicken New Shaqra Farm, Shaqra, Saudi Arabia 2020, 2,613 m<sup>3</sup>/d RO  
 New Shaqra Farm Barakah # 5, Shaqra, Saudi Arabia 2020, 502 m<sup>3</sup>/d RO  
 Hawiyah-Unayzah Gas Reservoir Storage (Hugrs), Hawiyah-Unayzah, Saudi Arabia 2020, 208 m<sup>3</sup>/d RO  
 Rehabilitation Of Electromechanical Equipment Of Ro Plant Sec-Jpp, Jizan, Saudi Arabia 2020, 60 m<sup>3</sup>/d RO  
 Sihat Boys Intermediate School (Sbis), SIHAT, Saudi Arabia 2020, 3 m<sup>3</sup>/d RO  
 Al Nahdi Warehouse Project, SAFWA, Saudi Arabia 2020, 3 m<sup>3</sup>/d RO  
 Rahima Girls Elementary School (Rges), RAHIMAH, Saudi Arabia 2020, 3 m<sup>3</sup>/d RO  
 Kingdom Resort Ro Plant, Riyadh, Saudi Arabia 2019, 70 m<sup>3</sup>/d RO  
 King Fahad Hospital, Jeddah, Saudi Arabia 2016, 36 m<sup>3</sup>/d RO  
 Construction Of Second Male Technical College, Al Hasa, Saudi Arabia 2015, 151 m<sup>3</sup>/d RO  
 Secondary Industrial Institute, Hail, Saudi Arabia 2015, 151 m<sup>3</sup>/d RO

### O&M Contractor

O&M For Durrat Alriyadh Ro, Riyadh, Saudi Arabia 2022, 4,499 m<sup>3</sup>/d RO  
 Barka Projects (B2, B4 & B5), Shaqra, Saudi Arabia 2022, 499 m<sup>3</sup>/d RO  
 O&M For Durrat Alriyadh Ro, Riyadh, Saudi Arabia 2020, 4,517 m<sup>3</sup>/d RO

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Kingdom Resort Ro Plant, Riyadh, Saudi Arabia 2020, 2,208 m<sup>3</sup>/d RO  
Kingdom Resort Ro Plant, Riyadh, Saudi Arabia 2020, 1,003 m<sup>3</sup>/d RO  
Dallah Hospital - Namar, Riyadh, Saudi Arabia 2020, 803 m<sup>3</sup>/d RO  
Kingdom Resort Ro Plant, Riyadh, Saudi Arabia 2020, 125 m<sup>3</sup>/d RO  
Kingdom Resort Ro Plant, Riyadh, Saudi Arabia 2020, 70 m<sup>3</sup>/d RO  
Durrat Alriyadh RO, Riyadh, Saudi Arabia 2019, 4,517 m<sup>3</sup>/d RO  
Kingdom Resort Ro Plant, Riyadh, Saudi Arabia 2019, 1,003 m<sup>3</sup>/d RO  
Qarian Villa Compound, Al Khobar, Saudi Arabia 2019, 152 m<sup>3</sup>/d RO  
Kingdom Resort Ro Plant, Riyadh, Saudi Arabia 2019, 125 m<sup>3</sup>/d RO

**Plant Supplier (Desal)**

Radwa Chicken Factory, Jeddah, Saudi Arabia 2021, 756 m<sup>3</sup>/d RO  
Arc Labor Camp, Safaniah, Saudi Arabia 2021, 462 m<sup>3</sup>/d RO  
Akh Tower, Dammam, Saudi Arabia 2021, 241 m<sup>3</sup>/d RO  
Jareed Hotel, Riyadh, Saudi Arabia 2021, 100 m<sup>3</sup>/d RO  
Abu Ali Fish Hatchery, Jubail, Saudi Arabia 2021, 100 m<sup>3</sup>/d RO  
Mr. Sami Al Angari Private Residence Project, Riyadh, Saudi Arabia 2021, 55 m<sup>3</sup>/d RO  
Almurjan Medical Center, Jeddah, Saudi Arabia 2021, 7 m<sup>3</sup>/d RO  
Upgrade of RO Plant at Al Enmaa Food Factory, Jeddah, Saudi Arabia 2020, 7,239 m<sup>3</sup>/d RO  
Hawiyah-Unazyzah Gas Reservoir Storage (HUGRS), Hawiyah-Unazyzah, Saudi Arabia 2020, 907 m<sup>3</sup>/d RO  
Al Mousa General Hospital, Alhasa, Saudi Arabia 2020, 551 m<sup>3</sup>/d RO  
New Shaqra Farm Barakah # 5, Shaqra, Riyadh Province, Saudi Arabia 2020, 502 m<sup>3</sup>/d RO  
New Facilities Projects and Shelters Upgrade (NFS) at KAAIB, Dahrana, Saudi Arabia 2020, 501 m<sup>3</sup>/d RO  
ADC Basuan Breeder Farm, Al-Kharj, Saudi Arabia 2020, 301 m<sup>3</sup>/d RO  
Samtah General Hospital, Jizan, Saudi Arabia 2020, 250 m<sup>3</sup>/d RO  
F-15 Fleet Modernization Program, RSAF Kaab Air Warfare Center, Dhahran, Saudi Arabia 2020, 180 m<sup>3</sup>/d RO  
Skaka Solar Power Plant, Jouf, Saudi Arabia 2020, 167 m<sup>3</sup>/d RO  
Farm Breeder Project, Hail, Saudi Arabia 2020, 152 m<sup>3</sup>/d RO  
Shaqra Labor Camp, Shaqra, Riyadh Province, Saudi Arabia 2020, 120 m<sup>3</sup>/d RO  
Rehabilitation of Electromechanical Equipment of RO Plant SEC-JPP, Jizan, Saudi Arabia 2020, 120 m<sup>3</sup>/d RO  
South Ghawar TCF Camp, South Ghawar, Saudi Arabia 2020, 90 m<sup>3</sup>/d RO  
Saudi Chemical Rimah Facility, Rimah, Saudi Arabia 2020, 60 m<sup>3</sup>/d RO  
Janadriah Turf Track, Riyadh, Saudi Arabia 2020, 50 m<sup>3</sup>/d RO  
Almousa General Hospital, Al Hasa, Al-Ahsa, Saudi Arabia 2020, 25 m<sup>3</sup>/d RO  
Sihat Boys Intermediate School (SBIS), Sihat, Saudi Arabia 2020, 3 m<sup>3</sup>/d RO  
Al Nahdi Warehouse Project, Safwa, Saudi Arabia 2020, 3 m<sup>3</sup>/d RO  
Rahima Girls Elementary School (RGES), Rahimah, Saudi Arabia 2020, 3 m<sup>3</sup>/d RO  
Kingdom Resort RO Plant, Riyadh, Saudi Arabia 2019, 2,208 m<sup>3</sup>/d RO  
Dallah Hospital - Namar, Riyadh, Saudi Arabia 2019, 803 m<sup>3</sup>/d RO  
Hilton Hotel Causeway, Khobar, Saudi Arabia 2019, 505 m<sup>3</sup>/d RO  
300 Bed Central Hospital - Khamis Mushayt, Khamis Mushayt, Saudi Arabia 2019, 468 m<sup>3</sup>/d RO  
RO Plant for Ajdan Rise - Parcel A1, Khobar, Saudi Arabia 2019, 363 m<sup>3</sup>/d RO

Mekhwah Hospital RO, Mekhwah-Al Baha, Saudi Arabia 2019, 246 m<sup>3</sup>/d RO  
300 Bed Buraidah General Hospital, Buraidah, Saudi Arabia 2019, 235 m<sup>3</sup>/d RO  
Qarian Villa Compound, Khobar, Saudi Arabia 2019, 152 m<sup>3</sup>/d RO  
Farm Breeder Project, Hail, Saudi Arabia 2019, 152 m<sup>3</sup>/d RO  
Reebal Steel Factory, Dammam, Saudi Arabia 2019, 100 m<sup>3</sup>/d RO  
Hatchery Project, Hail, Saudi Arabia 2019, 49 m<sup>3</sup>/d RO  
Technical College for Girls, Jazan, Saudi Arabia 2019, 15 m<sup>3</sup>/d RO  
Jazan Economic City, Jazan, Saudi Arabia 2018, 81,655 m<sup>3</sup>/d RO  
Jazan Economic City, Jizan, Saudi Arabia 2018, 73,507 m<sup>3</sup>/d RO  
Al Rashid Farm, Dammam, Saudi Arabia 2018, 2,066 m<sup>3</sup>/d RO  
Marjan Temporary Camp Facilities - Tanajib Gas Plant, Tanajib, Saudi Arabia 2018, 975 m<sup>3</sup>/d RO  
Private Farm for Abdul Latif Al Saleh Al Shaik, Dalim, Saudi Arabia 2018, 802 m<sup>3</sup>/d RO  
Upgrade of Berkfeld RO Plant No. 3 HPP at Al Safi Dairy Plant, Al Kharj, Saudi Arabia 2018, 750 m<sup>3</sup>/d RO  
Technical Institute for Naval Studies, Dammam, Saudi Arabia 2018, 501 m<sup>3</sup>/d RO  
Al-Mohamadia Compound, Khobar, Saudi Arabia 2018, 301 m<sup>3</sup>/d RO  
Housing Project Of Hafer Al-Batin General Hospital, Nairyah, Saudi Arabia 2018, 301 m<sup>3</sup>/d RO  
Al Rashid Polystyrene New Factory, Dammam, Saudi Arabia 2018, 300 m<sup>3</sup>/d RO  
Al Falak Compound 2, Al Khobar, Saudi Arabia 2018, 300 m<sup>3</sup>/d RO  
Taazeez Tower, Dammam, Saudi Arabia 2018, 240 m<sup>3</sup>/d RO  
TVTC Housing Project, Zulfi, Saudi Arabia 2018, 151 m<sup>3</sup>/d RO  
Centro Hotel at Rotana Center, Al Khobar, Saudi Arabia 2018, 150 m<sup>3</sup>/d RO  
Water Treatment Chemical Plant, Dammam, Saudi Arabia 2018, 120 m<sup>3</sup>/d RO  
Abdullah Al-Osais Villa, Dhahran, Saudi Arabia 2018, 50 m<sup>3</sup>/d RO  
Nada Dairy Factory, Al-Hasa, Saudi Arabia 2017, 6,246 m<sup>3</sup>/d RO  
Al Fanar Labor Camp, Riyadh, Saudi Arabia 2017, 2,000 m<sup>3</sup>/d RO  
Mawten Hilton Double Tree & Garden Inn, Riyadh, Saudi Arabia 2017, 1,000 m<sup>3</sup>/d RO  
NCC Labor Camp Project, Jubail, Saudi Arabia 2017, 910 m<sup>3</sup>/d RO  
Qanbar Steetley Ready Mix Concrete Factory, Al-Hasa, Saudi Arabia 2017, 803 m<sup>3</sup>/d RO  
300 Bed Arar Central Hospital Project – MOH, Arar, Saudi Arabia 2017, 400 m<sup>3</sup>/d RO  
King Abdul Aziz Arabia Horse Center, Riyadh, Saudi Arabia 2017, 300 m<sup>3</sup>/d RO  
Prince Mohd Bin Fahd General Hospital, Qatif, Saudi Arabia 2017, 250 m<sup>3</sup>/d RO  
Three Bees Building, Khobar, Saudi Arabia 2017, 220 m<sup>3</sup>/d RO  
Equestrian Club, Riyadh, Saudi Arabia 2017, 200 m<sup>3</sup>/d RO  
Montagate Factory, Riyadh, Saudi Arabia 2017, 121 m<sup>3</sup>/d RO  
SRD Hotel, Riyadh, Saudi Arabia 2017, 80 m<sup>3</sup>/d RO  
Champion Technologies New Factory, Dammam, Saudi Arabia 2017, 70 m<sup>3</sup>/d RO  
King Abdul Aziz Bridge Port, Dammam, Saudi Arabia 2017, 51 m<sup>3</sup>/d RO  
Saudi Food & Drug Authority-Riyadh, Riyadh, Saudi Arabia 2017, 50 m<sup>3</sup>/d RO  
Anfas Medical Care Hospital, Riyadh, Saudi Arabia 2017, 30 m<sup>3</sup>/d RO  
Sheikh Beach House, Khobar, Saudi Arabia 2016, 1,000 m<sup>3</sup>/d RO  
Dallah Healthcare Complex - Namar, Riyadh, Saudi Arabia 2016, 802 m<sup>3</sup>/d RO  
KFU (King Faisal University) Technical Hospital, Al-Hasa, Saudi Arabia 2016, 725 m<sup>3</sup>/d RO  
Jazan Site Camp 1, Jazan, Saudi Arabia 2016, 700 m<sup>3</sup>/d RO  
Jazan IGCC Site, Jazan, Saudi Arabia 2016, 700 m<sup>3</sup>/d RO

Al Darb Hospital, Jazan, Saudi Arabia 2016, 650 m<sup>3</sup>/d RO  
 Jazan Site Camp, Jazan, Saudi Arabia 2016, 350 m<sup>3</sup>/d RO  
 Jazan IGCC Site, Jazan, Saudi Arabia 2016, 350 m<sup>3</sup>/d RO  
 Rijal Almaa Hospital, Rijal Almaa - Abha, Saudi Arabia 2016, 330 m<sup>3</sup>/d RO  
 Zahran Al Janoub Hospital, Zahran Al Janoub, Saudi Arabia 2016, 330 m<sup>3</sup>/d RO  
 Centro Hotel at Rotana Center, Khobar, Saudi Arabia 2016, 316 m<sup>3</sup>/d RO  
 Beach Sea Complex, Khobar, Saudi Arabia 2016, 300 m<sup>3</sup>/d RO  
 King Fahd University For Petroleum & Minerals (KFUPM), Khobar, Saudi Arabia 2016, 257 m<sup>3</sup>/d RO  
 mam Abdulrahman Bin Faisal Hospital for National Guard, Khobar, Saudi Arabia 2016, 200 m<sup>3</sup>/d RO  
 Novotel Hotel, Jazan, Saudi Arabia 2016, 152 m<sup>3</sup>/d RO  
 Al Turki Residential Project, Khobar, Saudi Arabia 2016, 50 m<sup>3</sup>/d RO  
 King Fahad Hospital, Jeddah, Saudi Arabia 2016, 30 m<sup>3</sup>/d RO  
 Malawi Mosque, Makkah, Saudi Arabia 2016, 25 m<sup>3</sup>/d RO  
 Jadeedah Araar Border Port, Arar, Saudi Arabia 2015, 6,187 m<sup>3</sup>/d RO  
 Saudi Ceramics Company, Riyadh, Saudi Arabia 2016, 150 m<sup>3</sup>/d RO  
 Centro Olaya Hotel by Rotana , Riyadh, Saudi Arabia 2016, 129 m<sup>3</sup>/d RO  
 Saudi Catering Company, Riyadh, Saudi Arabia 2016, 100 m<sup>3</sup>/d RO  
 Al Safi Dairy, Al Kharj, Saudi Arabia 2015, 3,006 m<sup>3</sup>/d RO  
 Jadeedah Araar Border Port, Arar, Saudi Arabia 2015, 2,880 m<sup>3</sup>/d RO  
 Takween Plastic Factory, AlHasa, Saudi Arabia 2015, 1,514 m<sup>3</sup>/d RO  
 Ar Ruqai Border Port, Ar Ruqai, Saudi Arabia 2015, 1,060 m<sup>3</sup>/d RO  
 Housing Units for Armed Forces - Phase 2, Dhahran, Saudi Arabia 2015, 1,041 m<sup>3</sup>/d RO  
 Housing Units for Armed Forces - Phase 2, Al Hasa, Saudi Arabia 2015, 825 m<sup>3</sup>/d RO  
 RRO Plant for MPD Camp, Manifa, Saudi Arabia 2015, 549 m<sup>3</sup>/d RO  
 Al Qunfudhah General Hospital, Al Qunfudhah, Saudi Arabia 2015, 454 m<sup>3</sup>/d RO  
 Al Enmaa Food Company, Jeddah, Saudi Arabia 2015, 401 m<sup>3</sup>/d RO  
 Athieb Village, Khobar, Saudi Arabia 2015, 303 m<sup>3</sup>/d RO  
 Sinsina Labor Camp, Jubail, Saudi Arabia 2015, 301 m<sup>3</sup>/d RO  
 Holiday Inn Half Moon, Khobar, Saudi Arabia 2015, 251 m<sup>3</sup>/d RO  
 Irish Dairy Cheese Factory, Al Kharj, Saudi Arabia 2015, 250 m<sup>3</sup>/d RO  
 Medical Center - Armed Forces Hospital, Jazan, Saudi Arabia 2015, 201 m<sup>3</sup>/d RO  
 Abdulah Fouad Family Complex, Dammam, Saudi Arabia 2015, 201 m<sup>3</sup>/d RO  
 Construction Of Second Male Technical College, Al-Hasa, Saudi Arabia 2015, 151 m<sup>3</sup>/d RO  
 Secondary Industrial Institute, Hail, Saudi Arabia 2015, 151 m<sup>3</sup>/d RO  
 Madinah Apartment Project - Al Rashid Mall, Madinah, Saudi Arabia 2015, 140 m<sup>3</sup>/d RO  
 Al Rajhi Bank Head Quarter, Riyadh, Saudi Arabia 2015, 39 m<sup>3</sup>/d RO  
 Nasser S Al Hajri Villa, Khobar, Saudi Arabia 2015, 15 m<sup>3</sup>/d RO  
 Jazan Integrated Gasification combined Cycle - Utilities & Common Area Pkg#5, Jizan, Jazan, Saudi Arabia 2014, 66,688 m<sup>3</sup>/d RO  
 Jazan Integrated Gasification combined Cycle - Utilities & Common Area Pkg#5, Jazan, Saudi Arabia 2014, 36,000 m<sup>3</sup>/d RO  
 Jazan Integrated Gasification combined Cycle - Utilities & Common Area Pkg#5, Jazan, Saudi Arabia 2014, 18,019 m<sup>3</sup>/d RO  
 Jazan Integrated Gasification combined Cycle - Utilities & Common Area Pkg#5, Jazan, Saudi Arabia 2014, 16,807 m<sup>3</sup>/d RO

Jazan Integrated Gasification combined Cycle - Utilities & Common Area Pkg#5, Jazan, Saudi Arabia 2014, 13,200 m<sup>3</sup>/d RO  
 eddah South Power Project (JSPP), Jeddah, Saudi Arabia 2014, 7,920 m<sup>3</sup>/d RO  
 Ras Tanura Refinery - Aramco, Rastanura, Saudi Arabia 2014, 2,000 m<sup>3</sup>/d RO  
 Wasit Gas Plant, Khursaniyah, Saudi Arabia 2014, 2,000 m<sup>3</sup>/d RO  
 Prince Mohammad Bin Fahad University Staff Housing Project, Khobar, Saudi Arabia 2014, 1,758 m<sup>3</sup>/d RO  
 Nesma Labor Camp, Jazan, Saudi Arabia 2014, 1,325 m<sup>3</sup>/d RO  
 Jazan Integrated Gasification combined Cycle - Utilities & Common Area Pkg#5, Jazan, Saudi Arabia 2014, 1,211 m<sup>3</sup>/d RO  
 iyadh Power Plant (PP12), Riyadh, Saudi Arabia 2014, 1,200 m<sup>3</sup>/d RO  
 JTamimi Labor camp, Hawiyah, Saudi Arabia 2014, 1,000 m<sup>3</sup>/d RO  
 300 Bed Hospital - MOH, Sakakah, Saudi Arabia 2014, 470 m<sup>3</sup>/d RO  
 Renovation of King Khalid Hospital, Al Kharj, Saudi Arabia 2014, 450 m<sup>3</sup>/d RO  
 Shooting Range Project (SRP Phase III) - Officers Housing, Abha, Saudi Arabia 2014, 401 m<sup>3</sup>/d RO  
 Al Fozan Beach House, Khobar, Saudi Arabia 2014, 200 m<sup>3</sup>/d RO  
 Qassim University Hospital, Al Qassim, Saudi Arabia 2014, 110 m<sup>3</sup>/d RO  
 Rafha Medical Tower 100 Beds, Rafha, Saudi Arabia 2014, 100 m<sup>3</sup>/d RO  
 Princess Nora University - Hospital Area Building , Riyadh, Saudi Arabia 2014, 100 m<sup>3</sup>/d RO  
 50 Bed Al Mahani Hospital, Taif, Saudi Arabia 2014, 100 m<sup>3</sup>/d RO  
 Al Mana General Hospital - Parking Building, Dammam, Saudi Arabia 2014, 81 m<sup>3</sup>/d RO  
 Armed Forces Hospital - Kidney Dialysis Building, Wadi Al Dawasir, Saudi Arabia 2014, 72 m<sup>3</sup>/d RO  
 Princess Nora University - Research Area Building, Riyadh, Saudi Arabia 2014, 64 m<sup>3</sup>/d RO  
 Princess Nora University - Research Area Building 1, Riyadh, Saudi Arabia 2014, 64 m<sup>3</sup>/d RO  
 Princess Nora University - Research Area Building, Riyadh, Saudi Arabia 2014, 60 m<sup>3</sup>/d RO  
 Princess Nora University - Hospital Area Building, Riyadh, Saudi Arabia 2014, 60 m<sup>3</sup>/d RO  
 rincess Nora University - Research Area Building, Riyadh, Saudi Arabia 2014, 60 m<sup>3</sup>/d RO  
 Al Fozan Villa, Khobar, Saudi Arabia 2014, 50 m<sup>3</sup>/d RO  
 Kabbani Sweets Factory, Dammam, Saudi Arabia 2014, 20 m<sup>3</sup>/d RO  
 Kabbani Sweets Factory, Jeddah, Saudi Arabia 2014, 20 m<sup>3</sup>/d RO  
 King Abdullah University for Science & Technology ( KAUST) Research Park, Jeddah, Saudi Arabia 2013, 10,000 m<sup>3</sup>/d RO  
 Shaybah NGL Recovery & Utilties Package 2 - (WTP-RO), Shaybah, Saudi Arabia 2013, 3,408 m<sup>3</sup>/d RO  
 Durrat Al Riyad Touristic & Residential City, Riyadh, Saudi Arabia 2013, 2,000 m<sup>3</sup>/d RO  
 Al Marai Co. Central Processing Plant, Al Kharj, Saudi Arabia 2013, 1,575 m<sup>3</sup>/d RO  
 Sadara Projects Chemical I, Jubail, Saudi Arabia 2013, 1,500 m<sup>3</sup>/d RO  
 Petrokemya ABS Project, Al Kharj, Saudi Arabia 2013, 1,300 m<sup>3</sup>/d RO  
 Kingdom of Resort Expansion Work, Riyadh, Saudi Arabia 2013, 1,000 m<sup>3</sup>/d RO  
 Al Marai Co. CPP - Water Reuse Project, Al Kharj, Saudi Arabia 2012, 3,000 m<sup>3</sup>/d RO  
 Habshan Sulphur Granulation Plant Project, Habshan- Abu Dhabi, United Arab Emirates 2012, 1,900 m<sup>3</sup>/d RO  
 500 Beds Jeddah Hospital, Jeddah, Saudi Arabia 2012, 1,000 m<sup>3</sup>/d RO

# IDRA DESALINATION & REUSE HANDBOOK

Tanajib Sea Water RO Plant Expansion, Manifa, Saudi Arabia 2011, 27,350 m<sup>3</sup>/d RO  
Durrat Al Bahrain Resort, Bahrain 2011, 4,000 m<sup>3</sup>/d RO  
King Abdullah Park, Riyadh, Saudi Arabia 2011, 2,000 m<sup>3</sup>/d RO  
Ras Al Khair Power Plant, Ras As Zawr, Saudi Arabia 2011, 1,200 m<sup>3</sup>/d RO  
Al Kawthar Gas Processing Plant, Al Kawthar, Oman 2010, 500 m<sup>3</sup>/d RO

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### SELECTED REFERENCES

#### Plant Supplier

China 2016, 3,100 m<sup>3</sup>/d ED  
Israel 2016, 1,000 m<sup>3</sup>/d ED  
Japan 2016, 6 m<sup>3</sup>/d ED  
Japan 2015, 160 m<sup>3</sup>/d ED  
Japan 2015, 40 m<sup>3</sup>/d ED  
Japan 2014, 30 m<sup>3</sup>/d ED

## Aguas Pacificos



[www.aguaspacifico.cl](http://www.aguaspacifico.cl)

### SELECTED REFERENCES

#### Developer

Quintero, Chile 2018, 86,400 m<sup>3</sup>/d RO

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[alansarioman.com](http://alansarioman.com)

### SELECTED REFERENCES

#### EPC Contractor

Al Amerat WWTP , Muscat, Oman 2014, 18,000 m<sup>3</sup>/d MBR

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[www.arrab.com.sa](http://www.arrab.com.sa)

### SELECTED REFERENCES

#### EPC Contractor

Al Heet/Al Kharj Road WWTP - Phase 3, Riyadh, Saudi Arabia 2012, 200,000 m<sup>3</sup>/d Other / Unknown

## Al Kafaah LLC



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[www.alkafaah.tk](http://www.alkafaah.tk)

### SELECTED REFERENCES

#### Plant Supplier

Jawhrat Project, Kuwait City, Kuwait, 2,082 m<sup>3</sup>/d RO  
Ajman Palace Hotel, Ajman, United Arab Emirates, 1,514 m<sup>3</sup>/d UV  
Camp Accommodation Facility – Ruweis Refinery, Ruweis, United Arab Emirates, 1,363 m<sup>3</sup>/d RO  
Commission for Public Infrastructure, Port Louis, Mauritius, 1,003 m<sup>3</sup>/d RO  
Yas Mall, Abu Dhabi, Yas Island, United Arab Emirates, 757 m<sup>3</sup>/d Other / Unknown  
Safaniya / Khafji Crude Desalting Facility, Dharan, Saudi Arabia, 416 m<sup>3</sup>/d RO  
Al Yasat Island, Abu Dhabi, United Arab Emirates, 379 m<sup>3</sup>/d RO  
Al Qarnain Island, Abu Dhabi, United Arab Emirates, 303 m<sup>3</sup>/d RO  
US Embassy Complex, Kabul, Afghanistan, 246 m<sup>3</sup>/d RO  
Private Farm & Greenhouse, Al Ain, United Arab Emirates, 227 m<sup>3</sup>/d RO  
Sweihan Agriculture, Abu Dhabi, United Arab Emirates, 189 m<sup>3</sup>/d RO

Fujairah Group, Fujairah, Abu Hail, United Arab Emirates, 132 m<sup>3</sup>/d RO

Ras Al Khaimah Agriculture, Ras Al Khaimah, United Arab Emirates, 95 m<sup>3</sup>/d RO

Oil Rig Al Khobar, Al Khobar, Saudi Arabia, 95 m<sup>3</sup>/d RO

Angola Housing Project, Luanda, Angola, 76 m<sup>3</sup>/d RO

Al Saeedi Private Farm, Abu Dhabi, Khatem, United Arab Emirates, 76 m<sup>3</sup>/d RO

Al Rashid Farm, Sharjah, United Arab Emirates, 76 m<sup>3</sup>/d RO

Al Qubaisi Farm, Abu Dhabi, Al Khazna, United Arab Emirates, 76 m<sup>3</sup>/d RO

China Embassy Complex, Mogadishu, Somalia, 45 m<sup>3</sup>/d RO

The Lakes - Private Villa, Dubai, Lakes Jumeirah, United Arab Emirates, 38 m<sup>3</sup>/d RO

Private Farm, Sharjah, United Arab Emirates, 38 m<sup>3</sup>/d RO

Sheikh Suhail Bin Maktoum Al Maktoum - Majlis, Dubai, Rashidiya, United Arab Emirates, 19 m<sup>3</sup>/d RO

Somalia Camp, Bosaso, Somalia, 19 m<sup>3</sup>/d RO  
 Cargo Vessel SN63, Sharjah, United Arab Emirates, 5 m<sup>3</sup>/d RO

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### SELECTED REFERENCES

#### EPC Contractor

Dammam 2nd Industrial City, Saudi Arabia 2013, 15,000 m<sup>3</sup>/d RO

## Alfa Laval Process Technology



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[www.alfalaval.com](http://www.alfalaval.com)

### SELECTED REFERENCES

#### Equipment Supplier

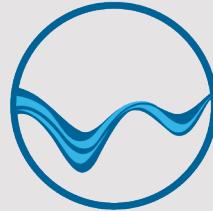
Sundrop Farms Solar Desalination, Port Paterson, Australia 2016, 1,000 m<sup>3</sup>/d MED  
 Hirgigo Power Plant, Massawa, Eritrea 2016, 528 m<sup>3</sup>/d MED  
 Genkai Nuclear Power Plant, Genkai, Japan 2012, 800 m<sup>3</sup>/d VC  
 Electrawinds, Oostende, Belgium 2012, 650 m<sup>3</sup>/d MED  
 Baja California Sur, Mexico 2012, 240 m<sup>3</sup>/d VC

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We continuously look for new water-related businesses to contribute to a more sustainable future. In addition, we invest in technology and resources that help create more resilient businesses and societies, in line with the Sustainable Development Goals of Agenda 2030. Almar Water Solutions also looks to the future, searching for the latest trends. In the short term, we will provide services in areas such as water to energy, renewable energy, and green hydrogen.

### SELECTED REFERENCES

#### Developer and O&M Contractor

Shuqaiq 3 Desalination Plant, Shuqaiq, Saudi Arabia 2019, 450,000 m<sup>3</sup>/d RO

#### O&M Contractor

Goldfields, Copiapó, Chile 2023, 650 m<sup>3</sup>/d Other / Unknown  
 Yamana, Antofagasta, Chile 2023, 365 m<sup>3</sup>/d Other / Unknown  
 Codelco DMH, Calama, Chile 2022, 86 m<sup>3</sup>/d Other / Unknown  
 Salares Norte, Antofagasta, Chile 2020, 1,000 m<sup>3</sup>/d Other / Unknown  
 Taqueral, Santiago, Chile 2020, 220 m<sup>3</sup>/d Other / Unknown  
 Mantos Blancos Mining, Antofagasta, Chile 2020, RO

# IDRA

## DESALINATION & REUSE HANDBOOK

Watts, Linares, Chile 2019, 2,050 m<sup>3</sup>/d Other / Unknown  
Codelco Chuquicamata, Chile 2019, 300 m<sup>3</sup>/d Other / Unknown  
Codelco Andina, Los Andes, Chile 2016, 723 m<sup>3</sup>/d Other / Unknown  
Codelco Andina, Los Andes, Chile 2016, 723 m<sup>3</sup>/d Other / Unknown  
Teniente, Rancagua, Chile 2014, 2,965 m<sup>3</sup>/d Other / Unknown  
Ariztia Arica, Arica, Chile 2014, 2,400 m<sup>3</sup>/d Other / Unknown  
BASF, Concón, Chile 2014, 150 m<sup>3</sup>/d Other / Unknown  
Antucoya Mining, Antofagasta, Chile 2012, 2,930 m<sup>3</sup>/d RO  
Novaustral, Punta Arenas, Chile 2012, 840 m<sup>3</sup>/d Other / Unknown  
Centinela Mining, Antofagasta, Chile 2011, 2,765 m<sup>3</sup>/d RO  
Sal Punta Lobos SPL, Iquique, Chile 2008, 33 m<sup>3</sup>/d Other / Unknown  
Aeropuerto Nuevo Pudahuel, Santiago, Chile 2001, 3,650 m<sup>3</sup>/d RO  
Ridgewood Desalination Plants, Egypt, 112,590 m<sup>3</sup>/d RO

### Plant Owner

Muharraq Sewage Treatment Plant, Muharraq, Bahrain 2011, 100,000 m<sup>3</sup>/d Tertiary treatment

## Anguil Environmental Systems



[anguil.com](http://anguil.com)

### SELECTED REFERENCES

#### Bench Study

Newark, Ohio, United States 2021, 50,400 gpd Other / Unknown  
Mundelein, Illinois, United States 2021, 28,800 gpd Other / Unknown  
Menlo, Georgia, United States 2020, 288,000 gpd Other / Unknown  
Aurora, Illinois, United States 2019, 5,000.0 gpd Other / Unknown  
Coon Rapids, Minnesota, United States 2019, 200.0 gpd

#### Equipment Supplier

Monroe, North Carolina, United States 2019, 30,000.0 gpd Other / Unknown  
Pilot, Aurora, Illinois, United States 2019, 2,800.0 gpd Other / Unknown  
West Chicago, Illinois, United States 2018, 57,600.0 gpd RO

#### Rental Equipment Supplier

Leonardo, New Jersey, United States 2019, 20,000.0 gpd Other / Unknown

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### SELECTED REFERENCES

#### EPC Contractor

Southern Tunisia, Tunisia 2012, 36,200 m<sup>3</sup>/d RO  
Kebili, Tunisia 2012, 6,000 m<sup>3</sup>/d RO  
Kebili, Tunisia 2012, 4,000 m<sup>3</sup>/d RO

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### SELECTED REFERENCES

#### EPC Contractor

Exportquilsa, Duran, Ecuador 2023, 600 m<sup>3</sup>/d RO  
Santa Priscila San Pablo, Santa Elena, Ecuador 2023, 300 m<sup>3</sup>/d RO  
Aguas Machala, Machala, Ecuador 2022, 2,160 m<sup>3</sup>/d RO  
Smi Duran 2022, 860 m<sup>3</sup>/d RO  
Gisis, Duran, Ecuador 2022, 650 m<sup>3</sup>/d RO  
Biogemar, Santa Elena, Ecuador 2022, 500 m<sup>3</sup>/d RO  
Logist Ferdera, Duran, Ecuador 2022, 400 m<sup>3</sup>/d RO  
Santa Priscila, Chanduy, Ecuador 2022, 300 m<sup>3</sup>/d RO  
Haid Feed, Duran, Ecuador 2022, 280 m<sup>3</sup>/d RO  
Pecksambientes, Quito, Ecuador 2022, 240 m<sup>3</sup>/d RO  
Refristore, Duran, Ecuador 2022, 200 m<sup>3</sup>/d RO  
Produmar, Duran, Ecuador 2022, 100 m<sup>3</sup>/d RO  
La Vienesa, Duran, Ecuador 2022, 50 m<sup>3</sup>/d RO  
Durancity Bromelia, Duran, Ecuador 2021, 650 m<sup>3</sup>/d RO  
Durancity Amaranto, Duran, Ecuador 2021, 650 m<sup>3</sup>/d RO  
Conservas Isabel Ecuatoriana, Manta, Ecuador 2021, 300 m<sup>3</sup>/d RO  
Santa Priscila, Mar Blavo Santa Elenna, Ecuador 2021, 300 m<sup>3</sup>/d RO

Ecuahielo, Duran, Ecuador 2021, 200 m<sup>3</sup>/d RO

Gisis, Duran, Ecuador 2020, 650 m<sup>3</sup>/d RO

Falab, Santa Elena, Ecuador 2020, 500 m<sup>3</sup>/d RO

Biogemar, Santa Elena, Ecuador 2020, 350 m<sup>3</sup>/d RO

La Vienesa, Duran, Ecuador 2019, 50 m<sup>3</sup>/d RO

Liris, Bucay, Ecuador 2019, 40 m<sup>3</sup>/d RO

Medicorsa, Quito, Ecuador 2019, 10 m<sup>3</sup>/d RO

Exportquilsa, Duran, Ecuador 2018, 300 m<sup>3</sup>/d RO

Logist Ferdera, Duran, Ecuador 2018, 240 m<sup>3</sup>/d RO

**Equipment Supplier**

Falab S.A., Santa Elena, Ecuador 2019, 500 m<sup>3</sup>/d RO  
 Empacreći S.A., Duran, Guayas, Ecuador 2019, 500 m<sup>3</sup>/d RO  
 Biogemar S.A., Santa Elena, Ecuador 2019, 480 m<sup>3</sup>/d Other / Unknown  
 Biogemar S.A., Santa Elena, Ecuador 2019, 360 m<sup>3</sup>/d RO  
 Macrobio S.A., Santa Elena, Ecuador 2019, 360 m<sup>3</sup>/d Other / Unknown  
 Ecuahielo S.A., Duran, Guayas, Ecuador 2019, 200 m<sup>3</sup>/d RO  
 Tesalia, Milagro, Guayas, Ecuador 2019, 200 m<sup>3</sup>/d RO  
 Galapesca S.A., Guayaquil, Guayas, Ecuador 2019, 150 m<sup>3</sup>/d RO  
 La Fabril S.A., Manta, Manabí, Ecuador 2019, 60 m<sup>3</sup>/d RO  
 Agua Oro, Machala, El Oro, Ecuador 2019, 60 m<sup>3</sup>/d RO  
 Produples, Manta, Manabí, Ecuador 2019, 36 m<sup>3</sup>/d RO  
 Nutreco, Duran, Guayas, Ecuador 2018, 1,300 m<sup>3</sup>/d RO

**O&M Contractor**

Arca Continental, Guayaquil, Ecuador 2018, 708 m<sup>3</sup>/d RO  
 Duran City, Ecuador 2018, 650 m<sup>3</sup>/d RO  
 GISIS, Duran, Ecuador 2018, 650 m<sup>3</sup>/d RO  
 Tesalia, Milagro, Ecuador 2018, 333 m<sup>3</sup>/d RO  
 Logistic Ferdera, Duran, Ecuador 2018, 250 m<sup>3</sup>/d RO  
 Export Quilsa, Duran, Ecuador 2018, 250 m<sup>3</sup>/d RO  
 Arca Continental, Guayaquil, Ecuador 2017, 654 m<sup>3</sup>/d RO  
 Arca Continental, Santo Domingo, Ecuador 2017, 436 m<sup>3</sup>/d RO  
 Logistic Ferdera, Duran, Ecuador 2017, 250 m<sup>3</sup>/d RO  
 Ginsberg Pharma, Quito, Ecuador 2017, 120 m<sup>3</sup>/d RO  
 Mall Del Pacifico, Manta, Ecuador 2017, 80 m<sup>3</sup>/d RO  
 Mall Del Pacifico, Manta, Ecuador 2017, RO  
 Logistic Ferrera, Duran, Ecuador 2017, RO  
 Coca Cola, Santo Domingo, Ecuador 2017, RO  
 Liris, Guayaquil, Ecuador 2017, Other / Unknown  
 Aqua Sani, Manta, Ecuador 2017, RO  
 Villa Hermosa, Duran, Ecuador 2016, 400 m<sup>3</sup>/d RO  
 Propemar, Manta, Ecuador 2016, 100 m<sup>3</sup>/d RO  
 Propemar, Duran, Ecuador 2016, 100 m<sup>3</sup>/d RO  
 Agua Lay, Manta, Ecuador 2016, 36 m<sup>3</sup>/d RO  
 Beautik, Duran, Ecuador 2016, 36 m<sup>3</sup>/d RO  
 Agua Activa, Chone, Ecuador 2016, 24 m<sup>3</sup>/d RO  
 Fundacion Buen Samaritano, Portoviejo, Ecuador 2016, 24 m<sup>3</sup>/d RO  
 Agua Lay, Manta, Ecuador 2016, 24 m<sup>3</sup>/d RO  
 Quimica Ariston Pharma, Quito, Ecuador 2016, 12 m<sup>3</sup>/d RO  
 Municipio Santa Ana, Ecuador 2016, 12 m<sup>3</sup>/d RO  
 Famagua, Pedro Carbo, Ecuador 2016, 12 m<sup>3</sup>/d RO  
 Ramon Dueñas, Chone, Ecuador 2016, 12 m<sup>3</sup>/d RO  
 Ginsberg, Quito, Ecuador 2016, EDI  
 Ginsberg, Quito, Ecuador 2016, RO  
 Ariston, Quito, Ecuador 2016, RO  
 Ecuador, Duran 2015, 200 m<sup>3</sup>/d RO  
 Ecuador, Daule 2015, 170 m<sup>3</sup>/d RO  
 Esmeraldas, Ecuador 2015, 72 m<sup>3</sup>/d RO  
 Ciauto Car Assembly, Ambato, Ecuador 2015, 60 m<sup>3</sup>/d RO  
 Electrocables, Guayaquil, Ecuador 2015, 50 m<sup>3</sup>/d RO  
 Ecuador, Machala 2015, 36 m<sup>3</sup>/d RO  
 Andelas, Ambato, Ecuador 2015, 24 m<sup>3</sup>/d RO  
 Duran City, Ecuador 2014, 630 m<sup>3</sup>/d RO

Santa Elena, Puerto Cayo, Ecuador 2014, 200 m<sup>3</sup>/d RO

Duralum, Duran, Ecuador 2014, 87 m<sup>3</sup>/d RO  
 Ecuador, Duran 2014, 72 m<sup>3</sup>/d RO  
 La Fabril, Manta, Ecuador 2014, 72 m<sup>3</sup>/d RO  
 Scalpy Cosmetics, Duran, Ecuador 2014, 48 m<sup>3</sup>/d RO  
 Salinas, Ecuador 2014, 36 m<sup>3</sup>/d RO  
 Quito, Ecuador 2014, 36 m<sup>3</sup>/d RO  
 Agua Aqua, Manta, Chone, Ecuador 2014, 24 m<sup>3</sup>/d RO  
 Agricola El Naranjo S.A., Canoa, Ecuador 2014, 15 m<sup>3</sup>/d RO  
 Montecristi Golf Club, Montecristi, Ecuador 2014, 12 m<sup>3</sup>/d RO  
 Gondi S.A., Manta, Ecuador 2013, 200 m<sup>3</sup>/d RO  
 La Fabril S.A., Manta, Ecuador 2013, 120 m<sup>3</sup>/d RO  
 Agua Bonty, Yaguachi, Ecuador 2013, 72 m<sup>3</sup>/d RO  
 Agroaves, Duran, Pedernales, Ecuador 2013, 48 m<sup>3</sup>/d RO  
 Agua Tropical, Manta, Ambato, Ecuador 2013, 24 m<sup>3</sup>/d RO  
 EuroFish S.A., Manta, Ecuador 2012, 600 m<sup>3</sup>/d RO  
 Galapesca S.A., Guayaquil, Ecuador 2012, 600 m<sup>3</sup>/d RO  
 OceanFish S.A., Manta, Ecuador 2012, 200 m<sup>3</sup>/d RO

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**SELECTED REFERENCES****Plant Supplier (Desal)**

Mar de Alborán, Almería, Spain 2021, 54,000 m<sup>3</sup>/d RO  
 Empalme-Guaymas SWRO desalination plant, Sonora, Mexico 2018, 18,000 m<sup>3</sup>/d RO  
 El Alamein, Egypt 2016, 150,000.0 m<sup>3</sup>/d RO  
 Cap Djinet, Algeria, 100,000 m<sup>3</sup>/d RO  
 El Alamein , Egypt 2016, 150,000.0 m<sup>3</sup>/d RO  
 Djerba, Tunisia 2014, 50,000 m<sup>3</sup>/d RO  
 Sierra Gorda (Extendable to 12,000 m<sup>3</sup>/d), II Region, Chile 2014, 9,000 m<sup>3</sup>/d RO  
 Roque Prieto, Gran Canaria, Spain, 5,000 m<sup>3</sup>/d RO  
 Tordera I, Girona, Spain, 28,800 m<sup>3</sup>/d RO  
 La Caleta, Tenerife, Spain, 10,000 m<sup>3</sup>/d RO  
 Bajo Almanzora, Almería, Spain, 60,000 m<sup>3</sup>/d RO  
 SA Pobla, Mallorca, Spain, 3,000 m<sup>3</sup>/d RO  
 Abaran, Murcia, Spain, 1,080 m<sup>3</sup>/d RO  
 Tarragona I, Spain, 3,550 m<sup>3</sup>/d RO  
 Haria, Lanzarote, Spain, 200 m<sup>3</sup>/d RO  
 Mostaganem, Algeria, 200,000 m<sup>3</sup>/d RO  
 Pedro Muñoz, Ciudad Real, Spain, 1,600 m<sup>3</sup>/d NF  
 Repsol Quimica, Tarragona, Spain, 1,440 m<sup>3</sup>/d RO  
 San Antonio, Ibiza, Spain, 17,500 m<sup>3</sup>/d RO  
 Corralejo, Fuerteventura, Spain, 1,500 m<sup>3</sup>/d RO  
 Grand Tarajal, Fuerteventura, Spain, 1,500 m<sup>3</sup>/d RO  
 Gando, Gran Canaria, Spain, 1,000 m<sup>3</sup>/d RO

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## DESALINATION & REUSE HANDBOOK

Arrecife, Lanzarote, Spain, 5,000 m<sup>3</sup>/d RO  
Fuerteventura III, Canary Islands, Spain, 4,000 m<sup>3</sup>/d RO  
Racons-Denia, Alicante, Spain, 16,200 m<sup>3</sup>/d RO  
Algodor, Toledo, Spain, 62,208 m<sup>3</sup>/d RO  
Tordera II, Blanes, Spain, 62,000 m<sup>3</sup>/d RO  
Candelaria, III Region, Chile, 45,000 m<sup>3</sup>/d RO  
Adeje-Arona, Tenerife, Spain, 22,000 m<sup>3</sup>/d RO  
Campo de Calatrava, Spain, 19,440 m<sup>3</sup>/d RO  
San Antonio: Extension & Upgrade, Spain, 18,000 m<sup>3</sup>/d RO  
Santa Eulalia, Ibiza, Spain, 15,000 m<sup>3</sup>/d RO  
Ibiza, Spain, 12,500 m<sup>3</sup>/d RO  
Janubio, Lanzarote, Spain, 10,500 m<sup>3</sup>/d RO  
Huechun, Chile, 8,640 m<sup>3</sup>/d NF  
Campo de Calatrava , Spain, 19,440 m<sup>3</sup>/d RO  
La Solana, Ciudad Real, Spain, 7,152 m<sup>3</sup>/d RO  
CEPSA, Tenerife, Spain, 2,880 m<sup>3</sup>/d RO  
La Ranilla, Sevilla, Spain, 2,000 m<sup>3</sup>/d RO  
Llanos del Caudillo, Ciudad Real, Spain, 408 m<sup>3</sup>/d RO  
La Solana , Ciudad Real, Spain, 7,152 m<sup>3</sup>/d RO

### Plant Supplier (Reuse)

Quart de Benager Extention WWTP Tertiary Treatment, Valencia, Spain, 31,129 m<sup>3</sup>/d Tertiary treatment  
La China WWTP Tertiary Treatment, Madrid, Spain, 25,498 m<sup>3</sup>/d Tertiary treatment  
Alcobendas Extention WWTP Tertiary Treatment, Alcobendas, Spain, 16,372 m<sup>3</sup>/d Tertiary treatment  
Baix Llobregat WWTP Tertiary Treatment, Spain, 14,400 m<sup>3</sup>/d Tertiary treatment  
Orihuela-Molins WWTP Tertiary Treatment, Orihuela, Spain, 12,960 m<sup>3</sup>/d Tertiary treatment  
Islas Canarias WWTP Tertiary Treatment, Canary Islands, Spain, 9,900 m<sup>3</sup>/d Tertiary treatment  
Bahía de Alcudia WWTP Tertiary Treatment, Mallorca, Spain, 8,500 m<sup>3</sup>/d Tertiary treatment  
Cala d'Or WWTP Tertiary Treatment, Mallorca, Spain, 4,320 m<sup>3</sup>/d Tertiary treatment

### O&M Contractor

King Abdulaziz International Airport Desalination Plant, Jeddah, Saudi Arabia 2020, 42,500 m<sup>3</sup>/d RO

Coca Cola Samarkant, Samarkant, Uzbekistan 2023, 4,320 m<sup>3</sup>/d RO  
Akij Food, Habigonj, Bangladesh 2023, 3,696 m<sup>3</sup>/d RO  
Oman Sugar Refinery, Muscat, Oman 2023, 3,600 m<sup>3</sup>/d RO  
Coca Cola Shymkent, Shymkent, Kazakhstan 2023, 3,600 m<sup>3</sup>/d RO  
Coca Cola Isparta, Isparta, Turkey 2023, 3,600 m<sup>3</sup>/d RO  
Kipas Paper, Kahramanmaraş, Turkey 2023, 2,400 m<sup>3</sup>/d RO  
Zaki Juice, Baghdad, Iraq 2023, 2,160 m<sup>3</sup>/d RO  
Tezcanlar Acid, Adana, Turkey 2023, 1,920 m<sup>3</sup>/d RO  
Coca Cola Al Ahlia Gulf Line, Al Ain, United Arab Emirates 2023, 1,776 m<sup>3</sup>/d RO  
Akis Food, Dhamrai, Bangladesh 2023, 1,728 m<sup>3</sup>/d RO  
Lesfam Food, Ghana 2023, 1,440 m<sup>3</sup>/d RO  
Diler Steel, Kocaeli, Turkey 2023, 1,320 m<sup>3</sup>/d RO  
Liberty Investment, Sierra Leone 2023, 960 m<sup>3</sup>/d RO  
Baghdad Soft Drinks, Baghdad, Iraq 2023, 720 m<sup>3</sup>/d RO  
Muataz Kareem, Baghdad, Iraq 2023, 600 m<sup>3</sup>/d RO  
The One 2, Bodrum, Turkey 2023, 450 m<sup>3</sup>/d RO  
Rixos Bodrum, Bodrum, Turkey 2023, 408 m<sup>3</sup>/d RO  
Oyak, Hatay, Turkey 2023, 360 m<sup>3</sup>/d RO  
Congo Act, DRC 2023, 300 m<sup>3</sup>/d RO  
Besa Hilton Hotel, Bodrum, Turkey 2023, 280 m<sup>3</sup>/d RO  
Sakarya Paper, Sakarya, Turkey 2023, 240 m<sup>3</sup>/d RO  
Thor Hotel, Bodrum, Turkey 2023, 200 m<sup>3</sup>/d RO  
Kipas Paper, Söke, Turkey 2022, 17,117 m<sup>3</sup>/d RO  
Habaş, Izmir, Turkey 2022, 11,520 m<sup>3</sup>/d RO  
Aqua Unique, Lierskogen, Norway 2022, 5,760 m<sup>3</sup>/d  
PBL Site Karachi, Karachi, Pakistan 2022, 4,824 m<sup>3</sup>/d RO  
GWE - Nigeria, Nigeria 2022, 4,080 m<sup>3</sup>/d  
Erbil Combined Cycle Power Plant, Erbil, Iraq 2022, 3,840 m<sup>3</sup>/d RO  
Inyange Rwanda, Kigali, Rwanda 2022, 3,600 m<sup>3</sup>/d  
Kipa Paper Mill, Kahramanmaraş, Turkey 2022, 2,976 m<sup>3</sup>/d RO  
Kestel Polymer, Bursa, Turkey 2022, 2,904 m<sup>3</sup>/d RO  
NBC Gujranwala, Gujranwala, Pakistan 2022, 2,698 m<sup>3</sup>/d RO  
GEBKIM, Kocaeli, Turkey 2022, 2,640 m<sup>3</sup>/d  
CocaCola Uzbekistan, Tashkent, Uzbekistan 2022, 2,592 m<sup>3</sup>/d RO  
CocaCola Bangladesh, Dhaka, Bangladesh 2022, 2,400 m<sup>3</sup>/d  
AlKaram Textile, Karachi, Pakistan 2022, 2,280 m<sup>3</sup>/d RO  
ODAS Uzbekistan, Uzbekistan 2022, 1,920 m<sup>3</sup>/d RO  
Gemkom, Adana, Turkey 2022, 1,800 m<sup>3</sup>/d RO  
Akdeniz Chemson, Izmir, Turkey 2022, 1,800 m<sup>3</sup>/d  
Gulbahar Group, Karaci, Pakistan 2022, 1,680 m<sup>3</sup>/d RO  
CocaCola Lahore, Lahore, Pakistan 2022, 1,632 m<sup>3</sup>/d Other / Unknown  
Argo Brewery, Tiflis, Georgia 2022, 1,560 m<sup>3</sup>/d RO  
Al Hadi Beverages, Al Hadi, United Arab Emirates 2022, 1,440 m<sup>3</sup>/d RO  
Eczacibasi - Ipek Paper Mill, Istanbul, Turkey 2022, 1,440 m<sup>3</sup>/d RO  
Gurteks Fiber, Gaziantep, Turkey 2022, 1,224 m<sup>3</sup>/d RO  
FORD Otosan, Kocaeli, Turkey 2022, 1,200 m<sup>3</sup>/d RO  
Kivanc Textile, Adana, Turkey 2022, 1,080 m<sup>3</sup>/d RO  
Aksa Group Isis Otel, Mugla, Turkey 2022, 1,008 m<sup>3</sup>/d RO  
CocaCola Azerbaijan, Baku, Azerbaijan 2022, 960 m<sup>3</sup>/d RO  
Interloop FSD, Lahore, Pakistan 2022, 960 m<sup>3</sup>/d RO  
Ankutsan, Adana, Turkey 2022, 480 m<sup>3</sup>/d RO  
Akkuyu Nuclear Power Plant Mobile, Mersin, Turkey 2022, 480 m<sup>3</sup>/d RO  
Iffco, Ghana 2022, 360 m<sup>3</sup>/d RO  
Koruma Klor, Hatay, Turkey 2022, 312 m<sup>3</sup>/d RO

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### SELECTED REFERENCES

#### Plant Supplier (Desal)

Bak Bayburt, Bayburt, Turkey 2023, 14,928 m<sup>3</sup>/d RO  
Sorfert, Algeria 2023, 5,328 m<sup>3</sup>/d  
Eren Energy, Zonguldak, Turkey 2023, 4,900 m<sup>3</sup>/d RO  
Rb Karesi, Turkey 2023, 4,800 m<sup>3</sup>/d RO

The One, Bodrum, Turkey 2022, 300 m<sup>3</sup>/d RO  
 Izocam, Adana, Turkey 2022, 211 m<sup>3</sup>/d RO  
 Id Bodrum, Bodrum, Turkey 2022, 180 m<sup>3</sup>/d RO  
 Bodrum Ada, Bodrum, Turkey 2022, 30 m<sup>3</sup>/d RO  
 Maven, Jakarta, Indonesia 2021, 27,120 m<sup>3</sup>/d RO  
 TOSAB, Bursa, Turkey 2021, 17,004 m<sup>3</sup>/d  
 Hyrec Maven 2, Jakarta, Indonesia 2021, 15,000 m<sup>3</sup>/d Other / Unknown  
 Akkuyu - Nuclear Power Plant, Mersin, Turkey 2021, 9,900 m<sup>3</sup>/d RO  
 Kivanc Paper Mill, Adana, Turkey 2021, 8,900 m<sup>3</sup>/d RO  
 Global Water Energy, Nigeria 2021, 4,872 m<sup>3</sup>/d  
 Limak Kuwait Airport, Sharg, Kuwait 2021, 4,032 m<sup>3</sup>/d  
 Seamax, Duhok, Iraq 2021, 3,840 m<sup>3</sup>/d  
 Atlas Denim, Adana, Turkey 2021, 3,840 m<sup>3</sup>/d  
 Sembol Construction - Aktau Hotel, Istanbul, Turkey 2021, 3,000 m<sup>3</sup>/d RO  
 CocaCola Islamabad, Islamabad, Pakistan 2021, 3,000 m<sup>3</sup>/d RO  
 Mersin Organized Industrial Site, Mersin, Turkey 2021, 2,760 m<sup>3</sup>/d  
 Starwood, Bursa, Turkey 2021, 2,496 m<sup>3</sup>/d RO  
 Sisecam Lukavac, Lukavac, Bosnia and Herzegovina 2021, 2,400 m<sup>3</sup>/d RO  
 Akinal Sentetik, Gaziantep, Turkey 2021, 2,400 m<sup>3</sup>/d RO  
 CocaCola Uzbekistan, Tashkent, Uzbekistan 2021, 2,040 m<sup>3</sup>/d RO  
 Kardemir, Karabük, Turkey 2021, 1,920 m<sup>3</sup>/d RO  
 Mesa Golkoy, Mugla, Turkey 2021, 1,780 m<sup>3</sup>/d RO  
 Mesa Golkoy, Mugla, Turkey 2021, 1,780 m<sup>3</sup>/d RO  
 TEZKIM, Adana, Turkey 2021, 1,728 m<sup>3</sup>/d RO  
 Sukkur Beverages, Sindh, Pakistan 2021, 1,440 m<sup>3</sup>/d RO  
 Cahan General Trading, Dubai, United Arab Emirates 2021, 1,320 m<sup>3</sup>/d RO  
 Style Textile Pakistan, Lahore, Pakistan 2021, 1,200 m<sup>3</sup>/d RO  
 Fazal Rehman Fabrics, Multan, Pakistan 2021, 1,200 m<sup>3</sup>/d RO  
 Assan Foods, Balikesir, Turkey 2021, 1,200 m<sup>3</sup>/d RO  
 Feroze1888, Karachi, Pakistan 2021, 1,080 m<sup>3</sup>/d  
 Mecon Akkuyu NPP, Mersin, Turkey 2021, 1,080 m<sup>3</sup>/d RO  
 Akkuyu Sipahili Camp, Mersin, Turkey 2021, 1,008 m<sup>3</sup>/d RO  
 AIKbous Yemen, AL Hudaydah, Yemen 2021, 960 m<sup>3</sup>/d RO  
 Sarıkız, Manisa, Turkey 2021, 960 m<sup>3</sup>/d RO  
 IPS Libya, Libya 2021, 840 m<sup>3</sup>/d RO  
 Mecon Akkuyu NPP, Mersin, Turkey 2021, 504 m<sup>3</sup>/d RO  
 Mecon Akkuyu NPP, Mersin, Turkey 2021, 480 m<sup>3</sup>/d MBR  
 Sea Water Plant, Indonesia 2020, 21,150 m<sup>3</sup>/d RO  
 Desalination Plant for Third Phase Expansion of Southern Gaza Desalination Plant (SGDP), Palestine 2020, 16,000 m<sup>3</sup>/d RO  
 Sembol Construction, Kazakhstan 2020, 4,000 m<sup>3</sup>/d RO  
 Soda Sanayi, Turkey 2020, 3,000 m<sup>3</sup>/d RO  
 Sorfert Chemical, Algeria 2020, 2,400 m<sup>3</sup>/d RO  
 Kaplankaya Hotel, Turkey 2020, 1,140 m<sup>3</sup>/d RO  
 Abu Al-Khaseeb/Emhellah Desalination Plant, Basra, Iraq 2019, 72,000 m<sup>3</sup>/d RO  
 Basrah State Company for Iron & Steel, Basrah, Iraq 2019, 5,250 m<sup>3</sup>/d RO  
 Toyota Industries, Pakistan 2019, 1,500 m<sup>3</sup>/d RO  
 Desalination Plant for Second Phase Expansion of Southern Gaza Desalination Plant (SGDP), Gaza, Palestine 2018, 10,000 m<sup>3</sup>/d RO  
 Habas Steel Mill, Aliaga, Turkey 2018, 9,600 m<sup>3</sup>/d RO  
 Erdemir Steel, Zonguldak, Turkey 2018, 5,000 m<sup>3</sup>/d RO  
 Bahrain Airport, Muharraq, Bahrain 2018, 4,320 m<sup>3</sup>/d RO  
 National Foods Company, United Arab Emirates 2018, 2,880 m<sup>3</sup>/d RO

National Refinery Limited, Karachi, Pakistan 2018, 2,000 m<sup>3</sup>/d RO  
 Al Reef Sugar Refinery, Jezan, Saudi Arabia 2018, 1,750 m<sup>3</sup>/d RO  
 Bahrain International Airport, Bahrain 2018, 1,100 m<sup>3</sup>/d RO  
 NEF Bodrum Project, Bodrum, Turkey 2018, 400 m<sup>3</sup>/d RO  
 Eren Energy, Zonguldak, Turkey 2016, 11,520 m<sup>3</sup>/d RO  
 Kuwait Fund, Gaza, Palestine 2016, 10,200 m<sup>3</sup>/d RO  
 Titanic Hotel, Bodrum, Turkey 2016, 800 m<sup>3</sup>/d RO  
 DNM Textile, Egypt 2016, 650 m<sup>3</sup>/d RO  
 Emrah Hotel, Mugla, Turkey 2016, 600 m<sup>3</sup>/d RO  
 Teos Hiddenbay Hotel, Izmir, Turkey 2016, 500 m<sup>3</sup>/d RO  
 Astas Hotel, Mugla, Turkey 2016, 270 m<sup>3</sup>/d RO  
 UNICEF, Gaza, Palestine 2015, 6,000 m<sup>3</sup>/d RO  
 Kaya Artemis, Bafra, Cyprus 2015, 750 m<sup>3</sup>/d RO  
 Palmwings Hotel, Izmir, Turkey 2015, 610 m<sup>3</sup>/d RO  
 Aksa, Yalova Province, Turkey 2014, 11,568 m<sup>3</sup>/d RO  
 Titanic Hotel, Bodrum, Turkey 2014, 800 m<sup>3</sup>/d RO  
 Özyer Grup Artev, Bodrum, Turkey 2014, 750 m<sup>3</sup>/d RO  
 Sealight Hotel, Kuşadası, Turkey 2014, 500 m<sup>3</sup>/d RO  
 Sealight Amara Hotel, Kuşadası, Turkey 2014, 500 m<sup>3</sup>/d RO  
 Cactus Hotel, Bodrum, Turkey 2014, 280 m<sup>3</sup>/d RO  
 Caressa Hotel, Bodrum, Turkey 2014, 280 m<sup>3</sup>/d RO  
 Biryaz Hotel, Bodrum, Turkey 2014, 280 m<sup>3</sup>/d RO  
 Awaza Hotel, Turkmenistan 2014, 250 m<sup>3</sup>/d RO  
 Porto Beach Alacati Hotel, Bodrum, Turkey 2014, 150 m<sup>3</sup>/d RO  
 Kuşadası Hilton Hotel, Kuşadası, Turkey 2014, 140 m<sup>3</sup>/d RO  
 Atlas Energy Thermal Power Plant, Iskenderun, Turkey 2013, 12,000 m<sup>3</sup>/d RO  
 Al-saddar Gas Turbine Power Plant Demineralisation, Baghdad, Iraq 2012, 5,760 m<sup>3</sup>/d RO  
 Erbil Combined Cycle Power Plant Demineralisation, Erbil, Iraq 2012, 2,400 m<sup>3</sup>/d RO  
 Astaş Bodrum Hotel & Villa, Bodrum, Turkey 2012, 1,600 m<sup>3</sup>/d RO  
 Acarsoy Power Plant, Denizli, Turkey 2012, 600 m<sup>3</sup>/d RO  
 Merit Afrodit Hotel, Cyprus 2012, 490 m<sup>3</sup>/d RO  
 Buyukhanli Kardesler Hotel, Bodrum, Turkey 2012, 280 m<sup>3</sup>/d RO  
 Suhan Hotel, Cappadoccia, Turkey 2012, 140 m<sup>3</sup>/d RO  
 Ayasandra Hotel, Bodrum, Turkey 2012, 140 m<sup>3</sup>/d RO  
 Sirene Yalikavak Hotel, Bodrum, Turkey 2012, 140 m<sup>3</sup>/d RO  
 Tekfen Muhendislik Demineralization System, Samsun, Turkey 2012, 110 m<sup>3</sup>/d ED  
 Nuh' Un Gemisi Hotel, Bafra Turizm Bolgesi, Cyprus 2012, 32 m<sup>3</sup>/d RO  
 İCDAŞ Steel Mill Phase II, Çanakkale-Biga, Turkey, 12,000 m<sup>3</sup>/d RO  
 Diler Steel Mill–Gebze Phase II, Gebze, Turkey, 3,800 m<sup>3</sup>/d RO  
 Diler Steel Mill, Gebze, Turkey, 3,600 m<sup>3</sup>/d RO  
 Enka Power Aliaga, Izmir-Aliaga, Turkey, 1,800 m<sup>3</sup>/d RO

#### Plant Supplier (Reuse)

New Power Plant, Turkey 2020, 30,750 m<sup>3</sup>/d RO  
 Modern Karton, Turkey 2020, 3,500 m<sup>3</sup>/d RO  
 Kipas Paper Mill, Turkey 2019, 36,000 m<sup>3</sup>/d RO  
 Kazan Soda, Turkey 2019, 14,400 m<sup>3</sup>/d Other / Unknown  
 Kepez Power Plant, Turkey 2019, 8,650 m<sup>3</sup>/d RO  
 Engro Foods, Pakistan 2019, 2,400 m<sup>3</sup>/d RO  
 Sheikoo Sugar, Pakistan 2019, 2,160 m<sup>3</sup>/d RO  
 Ak Gida Foods, Turkey 2019, 1,440 m<sup>3</sup>/d RO  
 University of Kuwait, Kuwait 2018, 7,200 m<sup>3</sup>/d RO  
 Eti Maden, Turkey 2018, 1,440 m<sup>3</sup>/d RO

# IDRA DESALINATION & REUSE HANDBOOK

Naveena Steel Mill, Pakistan 2018, 1,400 m<sup>3</sup>/d RO  
Icçdasş Steel Mill, Turkey 2017, 5,040 m<sup>3</sup>/d RO  
Haleeb Foods, Pakistan 2017, 2,400 m<sup>3</sup>/d RO  
Odas Power Plant, Turkey 2016, 1,775 m<sup>3</sup>/d RO

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### SELECTED REFERENCES

#### Plant Supplier

Giza, Ain Sukhna, Egypt 2013, 2,400 m<sup>3</sup>/d RO  
Gissi, Chieti, Italy 2007, 456 m<sup>3</sup>/d RO

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### SELECTED REFERENCES

#### EPC and O&M Contractor

West Kuwait Produced Water Treatment & Zero Liquid Discharge (ZLD) Plant, West Kuwait, Kuwait 2015, Other / Unknown  
EGPC Desal Plant, Red Sea Coast, Egypt 2014, 1,650 m<sup>3</sup>/d RO  
Khiran Desal Plant, Al Khiran, Oman 2014, 600 m<sup>3</sup>/d RO  
Qurayyat Desal Plant, Quarayyat, Oman 2013, 3,600 m<sup>3</sup>/d RO  
Al Gharamah Desal Plant, Saudi Arabia 2013, 1,700 m<sup>3</sup>/d RO

#### EPC Contractor

Sulaibya Zero Liquid Discharge (ZLD) Plant, Sulaibya, Kuwait 2013, Other / Unknown  
Turkmenbashi Refinery Complex, Turkmenbashi, Turkmenistan 2012, 4,500 m<sup>3</sup>/d Other / Unknown

#### EPC, O&M, and Water Sale on a BOO Basis

Aseeiah Desal Plant, Aseeiah, Oman 2015, 10,000 m<sup>3</sup>/d RO  
Qurayyat Desal Plant, Qurayyat, Oman 2015, 8,000 m<sup>3</sup>/d RO

#### O&M Contractor

ESPACE Desal Plant, Saudi Arabia 2013, 700.0 RO

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### SELECTED REFERENCES

#### Design and Installation

Castlemaine Perkins Water Recycling Plant, Brisbane, Queensland, Australia, 20,000 m<sup>3</sup>/d RO  
Smith's Wastewater Treatment Plant, Tingalpa, Queensland, Australia, 13,000 m<sup>3</sup>/d RO

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### SELECTED REFERENCES

#### Plant Supplier

Design-Build Tertiary Treatment Reverse Osmosis, Hosur, Tamilnadu, India 2023, 3,669 GPM RO  
Effluent Treatment and Common Facilities for Solar Integrated Solar PV, Jamnagar, Gujarat, India 2023, 3,258 GPM RO  
China Coal Jiuxin Coking WWT Project, Lingshi County, Shanxi, China 2023, 440 GPM RO  
RO - AVMD Facility, Kurkumbh, Maharashtra, India 2023, 28 GPM RO  
33 MLD SWRO Plant for Kutch Copper Limited, Mundra, Gujarat, India 2022, 14,772 GPM RO  
Newman Power Station CTBD, El Paso, Texas, United States 2022, 910 GPM RO  
Rental Fleet Asset, Canonsburg, Pennsylvania, U.S.A. 2022, 800 GPM RO  
Orion SAGD Facility Phase 2D, Cold Lake, Alberta, Canada 2022, 515 GPM RO  
Bartlett Soybean WWT, Cherryvale, Kansas, United States 2022, 200 GPM RO  
220KLD ETP Recycle system (Filtration UF-RO 1 & 2 system) and ZLD system (MVRE), Sanaswadi, Maharashtra, India 2022, 40 GPM RO  
Shirwal ETP-Recycle- ZLD Revamp Project, Khandala, Maharashtra, India 2022, 25 GPM RO  
TVS Srichakra 92 KLD ETP Plant, Madurai, Tamilnadu, India 2022, 17 GPM RO

World Energy Paramount SMR Demin, Paramount, California, United States 2021, 6,864 m<sup>3</sup>/d

B&V Cascade Power Project RWT, Alberta, Canada 2021, 2,000 m<sup>3</sup>/d RO  
Cascade Power Project RWT, Yellowhead County, Alberta, Canada 2021, 501 GPM RO

Renewable Energy Wastewater Treatment System, Geismar, Louisiana, United States 2021, 410 m<sup>3</sup>/d MBR

Evaporation and Crystallization Plant for LiCl Brine, Argentina 2021, 396 GPM Other / Unknown

- Taiwan Penghu Qimei 900 CMD Desalination Plant, Qimei Island, Penghu, Taiwan 2021, 177 GPM RO
- Balikpapan Water Treatment Plant, Balikpapan, Indonesia 2020, 100,000 m<sup>3</sup>/d RO
- Tuke Phase II (Methanol), Inner Mongolia Autonomous Region, China 2020, 5,000 m<sup>3</sup>/d RO
- Mine Water Desalination Project, St-Honore-de-Chicoutimi, Quebec, Canada 2020, 1,000 m<sup>3</sup>/d RO
- HMLE-CPU (DFCU) Package, Bhatinda, Punjab, India 2020, 806 GPM Other / Unknown
- Mine Water Desalination Project, St-Honore-de-Chicoutimi, Quebec, Canada 2020, 528 GPM RO
- CTBD Reuse Project Ningbo Plant Formosa Plastic, Ningbo, China 2020, 500 m<sup>3</sup>/d RO
- Seawater Reverse Osmosis Package (SWRO), Los Pelambres, Chile 2019, 141,200 GPM RO
- 70 MLD Desalination Project, Bhavnagar, Ghogha, Gujarat, India 2019, 70,000 m<sup>3</sup>/d RO
- Bechtel Seawater Reverse Osmosis Package, Los Pelambres, Chile 2019, 35,000 m<sup>3</sup>/d RO
- 30 MLD Desalination Projec, Sutrapada, Sutrapadi, Gujarat, India 2019, 30,000 m<sup>3</sup>/d RO
- Mandvi, Gujarat, India 2019, 18,345 GPM RO
- Bhavnagar, Gujarat, India 2019, 12,842 GPM RO
- Dwarka, Gujarat, India 2019, 12,842 GPM RO
- Wolf Lake RO, Bonnyville, Alberta, Canada 2019, 9,354 GPM RO
- Sutrapada, Gujarat, India 2019, 5,504 GPM RO
- South Louisiana Methanol Plant 1 (Advanced Water Treatment & Condensate Polishing), St. James Parish, Louisiana, United States 2019, 3,024 m<sup>3</sup>/d RO
- Sabine Pass Liquefaction SPL 4, Cameron, Louisiana, U.S.A. 2019, 2,068 GPM RO
- CRM ETP Recycle Plant at KPO, Jaipur, Odisha, India 2019, 2,025 GPM Other / Unknown
- Shady Hills CTBD ZLD & Demin System / RCWTCS EPC Contract, Spring Hill, Florida, United States 2019, 960 m<sup>3</sup>/d RO
- Huntington Station, Wastewater Redirect Project, Huntington, Utah, U.S.A. 2019, 256 GPM RO
- Sea Water Desalination & Post RO-DM Plant Phase II Expansion, Bhavnagar, Gujarat, India 2018, 10,277 m<sup>3</sup>/d RO
- Hugh L Spurlock CCR/ELG Compliance Project, Maysville, Kentucky, United States 2018, 2,184 m<sup>3</sup>/d ZLD
- Ford Louisville Assembly Plant, Louisville, Kentucky, United States 2018, 1,728 m<sup>3</sup>/d RO
- Fulcrum Sierra Biorefinery, McCarren, Nevada, United States 2018, 772 m<sup>3</sup>/d RO
- Ford Reverse Osmosis Trailer - II, Louisville, Kentucky, United States 2018, 300 GPM RO
- Jiangsu Huadian Phase II Extension Project, Jurong City, Jiangsu, China 2018, 66 GPM Other / Unknown
- Ford Kansas City Assembly Plant (KCAP): Ford Reverse Osmosis Trailer - I, Claycomo, Missouri, United States 2017, 1,728 m<sup>3</sup>/d RO
- Buritica Phase I Gold Mine Water Treatment Plant, Buritica, Colombia 2017, 1,200 m<sup>3</sup>/d RO
- Buritica Phase II Gold Mine Water Treatment Plant, Buritica, Colombia 2017, 1,200 m<sup>3</sup>/d RO
- PDO Expansion Project / BioProduct Evaporator System, London, Tennessee, U.S.A. 2017, 400 GPM Other / Unknown
- Cricket Valley Energy Center / Wastewater Treatment, Town of Dover, New York, U.S.A. 2017, 272 GPM RO
- Wastewater Reuse Project / Phase I, Baotou City Autonomous Region, Mongolia 2016, 55,504 GPM RO
- Port Said, Egypt 2016, 8,640 m<sup>3</sup>/d RO
- Lower Fars Heavy Oil Development Program Phase-I (60 MBOPD), Kuwait 2016, 7,484 GPM RO
- Yibal Sultante, Oman 2016, 6,000 m<sup>3</sup>/d RO
- Yibal Khuff, Yibal, Oman 2016, 1,102 GPM RO
- Majnoon Oil Field Development, Hawizeeh Marshes, Iraq 2016, 1,004 GPM RO
- Greenville County Power Station - Cycle Make-up Water Treatment System, Emporia, Virginia, U.S.A. 2016, 954 GPM RO
- Kuwait 2016, 480 m<sup>3</sup>/d RO
- Swift Current, Saskatchewan, Canada 2016, 272 m<sup>3</sup>/d RO
- Chinook Station, Swift Current, Saskatchewan, Canada 2016, 100 GPM RO
- Shenhua Ningxia Coal to Chemical Project, Ningxia, Ningxia Province, China 2015, 55,200 m<sup>3</sup>/d Other / Unknown
- Inner Mongolia Baotou Tuyou Qi Gejia, Baotou City, Inner Mongolia, China 2015, 30,000 m<sup>3</sup>/d Other / Unknown
- Seawater Desalination & Post RO-DM Plant, Bhavnagar, India 2015, 16,000 m<sup>3</sup>/d RO
- Seawater Desalination & Post RO-DM Plant, Bhavnagar, India 2015, 15,000 m<sup>3</sup>/d RO
- Shenhua Xinjiang Coal 4M Tons/Year Indirect Coal Liquefaction Project/Shenhua Ningxia Wastewater ZLD, Yinchuan City, Ningxia Hui Autonomous Region, China 2015, 10,100 GPM RO
- Seawater Desalination & Post RO-DM Plant, Bhavnagar, India 2015, 8,554 GPM RO
- Inner Mongolia Huineng, Ordos City, Inner Mongolia Antonomous Region, China 2015, 6,120 m<sup>3</sup>/d Other / Unknown
- Sabine Pass III Liquefaction Project, Cameron Parish, Louisiana, U.S.A. 2015, 3,102 GPM RO
- High TDS Wastewater Concentration Project, Ordos City, Inner Mongolia Autonomous Region, Mongolia 2015, 1,122 GPM RO
- Valley Energy, Middletown, New York, U.S.A. 2015, 500 GPM RO
- Corpus Christi, Texas, United States 2015, 432 m<sup>3</sup>/d RO
- Corpus Christi Liquefaction Project, Corpus Christi, Texas, U.S.A. 2015, 260 GPM RO
- Sohar Refinery , Sohar, Oman 2014, 16,056 m<sup>3</sup>/d MED
- Dhanbad, Jharkhand, India 2014, 10,800 m<sup>3</sup>/d RO
- Abu Dhabi, United Arab Emirates 2014, 8,280 m<sup>3</sup>/d RO
- New Plymouth, Idaho, United States 2014, 7,080 m<sup>3</sup>/d RO
- Tata Maithon, Dhanbad, Jharkhand, India 2014, 1,980 GPM RO
- Satah Al Razboot Field Development-EPC Package 4 (SARB), Abu Dhabi, United Arab Emirates 2014, 1,680 GPM RO
- Langley Gulch Power Plant, New Plymouth, Idaho, U.S.A. 2014, 1,300 GPM RO.
- Puente Alto, Chile 2014, 216 m<sup>3</sup>/d RO
- Healy Nox Retrofit, Healy, Alaska, U.S.A. 2014, 160 GPM ZLD
- Puente Alto Co-Generation Plant, Puerto Alto, Chile 2014, 88 GPM RO
- Showa Denko Scrubber Blowdown Treatment Unit 2, Ridgeville, South Carolina, United States 2014, 8 GPM Other / Unknown
- Mukhaizna Facilities Development, Oman 2013, 186,522 m<sup>3</sup>/d Other / Unknown
- Reliance Industries Ltd., Jamanagar, Gujarat, India 2013, 173,328 m<sup>3</sup>/d Other / Unknown
- SWRO Plant from Federal Electricity and Water Agency (FEWA), Ghalilah, Ras Al Khaimah, United Arab Emirates 2013, 68,100 m<sup>3</sup>/d RO
- Maithon Power Limited, Dhanbad, Jharkha, India 2013, 10,800 m<sup>3</sup>/d RO
- Equate Waste Water Recycle Plant, Kuwait 2013, 4,800 m<sup>3</sup>/d RO
- Hinduja HNPCL, Pavalavasa Village, Vishakhapatnam, Andhra Pradesh, India 2013, 2,292 GPM RO
- Pengrowth Lindbergh SAGD Facility, Alberta, Canada 2013, 1,816 GPM Other / Unknown
- Refinery ETP Expansion - Phase II, Jamnagar, Gujarat, India 2013, 1,540 GPM RO
- Sabine Pass II Liquefaction Project, Cameron Parish, Louisiana, United States 2013, 1,420 GPM RO
- Hangingstone Expansion Project, Phase 1, Fort McMurray, Alberta, Canada 2013, 590 GPM Other / Unknown
- Shenhua Xinjiang Coal-based New Materials Project, Urumqi City, Xinjiang Uygur Autonomous Region, China 2013, 308 GPM RO
- Pepsi Oakland Reject Recovery, Oakland, California, U.S.A. 2013, 60 GPM RO

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## DESALINATION & REUSE HANDBOOK

Bloomingdale Nitrate Reduction, Town of Bloomingdale, Montezuma, Indiana, U.S.A. 2013, 40 GPM RO

Showa Denko Scrubber Blowdown Treatment, Ridgeville, South Carolina, United States 2013, 8 GPM Other / Unknown

Sadara Project (RTIP), Al Jubail, Saudi Arabia 2012, 184,272 m<sup>3</sup>/d Other / Unknown

Wastewater Treatment Plant for OPAL, Dahej, Gujarat, India 2012, 26,328 m<sup>3</sup>/d RO

Covington PRG Facility, California, United States 2012, 13,104 m<sup>3</sup>/d Other / Unknown

CEPL MUTIARA Thermal Power Project, Tuticorin, Tamil Nadu, India 2012, 12,960 m<sup>3</sup>/d RO

Expansion & Modernisation of International Terminal, Mumbai International Airport, Maharashtra, India 2012, 10,008 m<sup>3</sup>/d RO

KAIA Desalination Project, Jeddah, Saudi Arabia 2012, 8,200 m<sup>3</sup>/d RO

ETHYDCO - ENPPII / Alexandria Ethylene Manufacturing Plant, Alexandria, Egypt 2012, 4,466 GPM RO

Genesis Solar, California, United States 2012, 3,168 m<sup>3</sup>/d RO

Baja Mining Sulfuric Acid Plant, Santa Rosalia, Mexico 2012, 2,784 m<sup>3</sup>/d RO

Portsmouth Waste to Energy, Virginia, United States 2012, 1,368 m<sup>3</sup>/d RO

WAC Softeners for Harmon Valley South Plant, Alberta, Canada 2012, 1,008 m<sup>3</sup>/d Other / Unknown

Chinacoal Group Ordos Tuke Chemical Fertilizer Project / Concentrated Wastewater Reuse and ZLD System, Tuke Town, Ordos City, Inner Mongolia Autonomous Region, China 2012, 880 GPM RO

NRG Energy Center, Pennsylvania, United States 2012, 552 m<sup>3</sup>/d RO

Horsehead, Mooreseboro, North Carolina, United States 2012, 500 GPM RO

Nikiski Cogeneration Plant, Nikiski, Alaska, United States 2012, 336 m<sup>3</sup>/d RO

Fossil Fuel Energy Co-Op Power, Gantt, Alabama, United States 2012, 336 m<sup>3</sup>/d RO

Wheelabrator, Portsmouth, Virginia, United States 2012, 250 GPM RO

ETHYDCO - Toyo / Alexandria Ethylene Manufacturing Plant, Alexandria, Egypt 2012, 110 GPM Other / Unknown

Power South Energy Cooperative, Gantt, Alabama, U.S. Virgin Islands 2012, 60 GPM RO

Covanta Durham York Energy Centre, Courtice, Ontario, Canada 2012, 32 GPM RO

### System Supplier (ZLD)

Oxy iP5, Direct Air Capture (DAC-i), Penwell, Texas, United States 2023, 1,100 GPM Other / Unknown

HIL HKD Smelter Plant - ZLD, Sambalpur, Odisha, India 2023, 18 GPM Other / Unknown

Meramandali, Angul - Steel ZLD Project, Dhenkanal, Odisha, India 2022, 6,240 m<sup>3</sup>/d RO

Zero Effluent Discharge (ZED) Project, India 2022, 1,145 GPM RO

Zero Liquid Discharge (ZLD) Implementation for 1-4 Site, Doha, Mesaieed, Qatar 2022, 566 GPM Other / Unknown

Huizhou Daya Bay Power Plant WW ZLD Project, Huizhou Daya Bay, Guangdong, China 2022, 123 GPM Other / Unknown

Hindalco Aluminum ZLD, Raigad, Maharashtra, India 2022, 70 m<sup>3</sup>/d RO

ETP ZLD for Pithampur Capsule Plant, Mundra, Gujarat, India 2022, 44 GPM MBR

ETP ZLD for Aurangabad Capsule Plant, Aurangabad, Maharashtra, India 2022, 41 GPM MBR

HIL 70 KLD DMF-UF-RO-MVR (ZLD), Raigad, Maharashtra, India 2022, 13 GPM RO

Freeport Indonesia ZLD / Manyar Smelter Project, Java, Indonesia 2021, 2,880 m<sup>3</sup>/d

JSW Steel Vijaynagar Works RO-ZLD, Karnataka, India 2020, 12,500 m<sup>3</sup>/d RO

Vijaynagar Works Coke-Ovens RO-ZLD, Vijayanagar, Karnataka, India 2020, 1,871 GPM MBR

FCCC BA and ZLD System, California, United States 2020, 200 GPM RO

Power Plant WW ZLD Project, Maoming City, Guangdong, China 2020, 70 GPM RO

BA and ZLD System, Apple Valley, California, United States 2020, 57 GPM RO

Qianwan Power Plant ZLD Project, Shenzhen, Guangdong Province, China 2020, 25 m<sup>3</sup>/d RO

Dariba ZLD, Dariba, Rajasthan, India 2019, 587 GPM RO

HZL Dariba ZLD, Dariba, Rajasthan, India 2019, 587 GPM RO

Dahanu ETP-Recycle-ZLD Project, Dahanu, Maharashtra, India 2019, 64 GPM RO

KOWEPO Taean FGD ZLD Project/Taeon Thermal Power Plant Project Unit #1~8, United States 2018, 1,440 m<sup>3</sup>/d ZLD

ZLD - Hindustan Zinc Limited Chanderiya, Chanderiya, Rajasthan, India 2018, 336 m<sup>3</sup>/d RO

Hazira ZLD Project, Gujarat, India 2018, 83 m<sup>3</sup>/d ZLD

Mundra ZLD Project, Gujarat, India 2018, 15 GPM VC

Bodega, Colombia 2017, 4,704 m<sup>3</sup>/d RO

Dover, New York, United States 2017, 1,488 m<sup>3</sup>/d RO

Hawizeh Marshes, Iraq 2016, 4,632 m<sup>3</sup>/d ZLD

Emporia, Virginia, United States 2016, 3,504 m<sup>3</sup>/d RO

TCI Sanmar ZLD Debottlenecking Project / ZLD-2 Chemical Plant Expansion, Port Said, Egypt 2016, 1,584 GPM RO

Ethydc Petrochemical complex, Alexandria, Egypt 2016, 600 m<sup>3</sup>/d ZLD

Pune, Maharashtra, India 2016, 600 m<sup>3</sup>/d RO

ANRPC Zero Liquid Discharge Industrial Wastewater Treatment Plant, Alexandria, Egypt 2016, 220 GPM RO

Manjari SEZ, STP, ETP, Recovery, ZLD, Pune, Maharashtra, India 2016, 183 GPM RO

Alexandria, Egypt 2016, 141 m<sup>3</sup>/d RO

Middle Town, New York, United States 2015, 9,600 m<sup>3</sup>/d RO

Cameron Parish, Louisiana, United States 2015, 5,640 m<sup>3</sup>/d RO

Stonewall Energy, Leesburg, Virginia, United States 2015, 2,736 m<sup>3</sup>/d VC

Tuke Mining Water ZLD System, Tuke Town, Ordos City, Inner Mongolia Autonomous Region, China 2015, 1,760 GPM RO

Gansu Honghui ZLD Coal-based Utilization Green Field Project, Jiayuguan City, Gansu, China 2015, 35 GPM Other / Unknown

Sabine Pass Liquefaction Project, Cameron Parish, Louisiana, United States 2014, 40,850 m<sup>3</sup>/d ZLD

Lindbergh SAGD Facility, Alberta, Canada 2014, 10,519 m<sup>3</sup>/d Thermal

Petrochemical & Refining, Rabigh, Saudi Arabia 2014, 10,080 m<sup>3</sup>/d ZLD

Plant Daniel, Escatawpa, Mississippi, United States 2014, 8,448 m<sup>3</sup>/d ZLD

Petrochemical & Refining, Rabigh, Saudi Arabia 2014, 315 m<sup>3</sup>/d ZLD

Ridgeville, South Carolina, United States 2014, 43 m<sup>3</sup>/d ZLD

Channel Energy Center Expansion, Houston, Texas, United States 2013, 20,784 m<sup>3</sup>/d ZLD

Plainfield Renewable Energy Power Plant, Plainfield, Connecticut, United States 2013, 3,816 m<sup>3</sup>/d ZLD

Zinc Recycle, Mooreseboro, North Carolina, United States 2013, 2,736 m<sup>3</sup>/d ZLD

Shenhua Xinjiang Coal-based New Materials Project, Urumqi City, Xinjiang Uygur Autonomous Region, China 2013, 1,650 GPM Other / Unknown

Concentrated Wastewater Reuse and ZLD System, Hulun Buir City, Mongolia 2013, 440 GPM RO

York Energy Centre, Courtice, Ontario, Canada 2013, 192 m<sup>3</sup>/d ZLD

Buckey Florida Treatment, Perry, Florida, United States 2012, 816 m<sup>3</sup>/d ZLD

Merrimack Station Unit 1 & 2, Bow, New Hampshire, United States  
2012, 403 m<sup>3</sup>/d Thermal

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### SELECTED REFERENCES

#### Plant Supplier (Desal)

Hadalat Borehole equipped with Containerized RO Desalination Plant, Ruwaished, Jordan 2016, 1,367 m<sup>3</sup>/d RO

KEMAPCO site, Aqaba, Jordan 2015, 13,680 m<sup>3</sup>/d RO

Thahret Rameh Desalination Plant - Modification of Al Karameh Dam -BOT Project, Jordan Valley, Jordan 2015, 2,400 m<sup>3</sup>/d RO  
Al Alali UF Plant, Fuahais, Jordan 2015, 600 m<sup>3</sup>/d

#### O&M Contractor

Byrain Ultra Filtration Water Treatment Plant, Zarqa, Jordan 2014, 2,640 m<sup>3</sup>/d

Al Modawarah Desalination Plant, Modawarah, Jordan 2014, 1,200 m<sup>3</sup>/d RO

## Arvind Envisol



[www.arvindenvisol.com](http://www.arvindenvisol.com)

### SELECTED REFERENCES

#### EPC and O&M Contractor

Greenfield Project: 8 MLD Sewage to Process Water Plant, Ahmedabad, Gujarat, India 2018, 8,000 m<sup>3</sup>/d MBR

## Bahwan Engineering Group



[www.bahwanengineering.com](http://www.bahwanengineering.com)

### SELECTED REFERENCES

#### Developer, through Bahwan Holding United Infrastructure Development Company

Oman 2017, 80,000 m<sup>3</sup>/d RO

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#### EPC and O&M Contractor

Sivagangai WWTP, Tamil Nadu, India 2013, 4,920 m<sup>3</sup>/d

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### SELECTED REFERENCES

#### EPC Contractor

Tampico, Mexico 2013, 4,750 m<sup>3</sup>/d Other/Unknown

Monterrey, Mexico 2012, 6,000 m<sup>3</sup>/d RO

## Beijing Enterprises Water Group



[www.bewg.net](http://www.bewg.net)

### SELECTED REFERENCES

#### Developer

Hebei, China 2013, 50,000 m<sup>3</sup>/d RO

#### Developer, Part of Joint Venture BESIN-UEN

Changi, Singapore 2015, 228,000 m<sup>3</sup>/d RO

#### Project Developer

Fengtai Hexi Reclaimed Water Plant Phase II, Beijing, China 2019, 50,000 m<sup>3</sup>/d MBR

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### SELECTED REFERENCES

#### Technology Provider

Foshan Luyuan Industrial Wastewater Treatment Project, Foshan, China 2023, 35,714 m<sup>3</sup>/d NF

Zhoushan Desal Project, Zhejiang, China 2022, 100,000 m<sup>3</sup>/d RO

Xinjiang Qinghua Energy Group Industrial ZLD Project, Xinjinag, China 2022, 30,000 m<sup>3</sup>/d RO

Huaining Economic Development Zone Reuse Project, Qingdao, China 2022, 15,000 m<sup>3</sup>/d RO

Inner Mongolia Yili Chemical Industry Sewage Treatment Project, Inner Mongolia, China 2022, 2,000 m<sup>3</sup>/d RO

#### Developer and Membrane Supplier

Changping District Water Reuse PPP, Beijing, China 2017, 200,000 m<sup>3</sup>/d MBR

Taoziwan Wastewater treatment plant (supply for Wanhua industrial park), Yantai City, Shandong Province, China 2017, 150,000 m<sup>3</sup>/d RO

Princess Mansion Wastewater Advanced Treatment Project, Hohhot City, Inner Mongolia, China 2017, 50,000 m<sup>3</sup>/d RO

#### EPC Contractor

Lubei Industrial Park Desal Project (Phase 2), Dongying, China 2023, 50,000 m<sup>3</sup>/d RO

Weibei Industrial Park Wanzi Drinking Water Project, Xian, China 2022, 40,000 m<sup>3</sup>/d NF

Pinghe Town Water Supply Upgrade Project, Zhangzhou, Fujian Province, China 2016, 40,000 m<sup>3</sup>/d NF

Water Supply Upgrade Project, Yangquan, Shanxi Province, China 2014, 35,000 m<sup>3</sup>/d NF

Xinmin No. 2 WWTP Reuse Project, Shenyang, China, 50,000 m<sup>3</sup>/d MBR

Dangshan County Economic Development Zone Industrial Sewage Treatment Plant (Phase II) Project, Anhui, China, 30,000 m<sup>3</sup>/d MBR

#### EPC and O&M Contractor

Lubei High-tech Development Zone Seawater Desalination Project, Binzhou, Shandong Province, China 2017, 100,000 m<sup>3</sup>/d RO

Dongjiakou Economic Zone Seawater Desalination Project, Qingdao, Shandong Province, China 2016, 100,000 m<sup>3</sup>/d RO

Weibei Industrial Park Wanzi WWTP, Xi'an, Shanxi Province, China 2016, 100,000 m<sup>3</sup>/d NF

#### Equipment Supplier: Desalination System

Pakistan Gwadar Desalination Project, Gwadar, Pakistan 2022, 5,000 m<sup>3</sup>/d RO

#### O&M Contractor

Xiaoyueyuan Wastewater Reuse Project, Beijing, China, 6,000 m<sup>3</sup>/d MBR

Garden Expo Park Reuse Project, Beijing, China, 3,100 m<sup>3</sup>/d Other / Unknown

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#### Plant Supplier (Reuse)

Huaifang Water Recycling Plant, Beijing , China 2014, 200,000 m<sup>3</sup>/d MBR

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### SELECTED REFERENCES

#### Plant Supplier (Desal)

Yongji, China 2014, 6,264 m<sup>3</sup>/d RO

Changxing, China 2014, 600 m<sup>3</sup>/d FO

Xingtai, China 2013, 3,840 m<sup>3</sup>/d RO

Yitai, China 2012, 7,200 m<sup>3</sup>/d RO

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#### Plant Supplier (Reuse)

Beijing Shunyi Yangzhen WWTP, Shunyi, Beijing, China 2013, 3,000 m<sup>3</sup>/d

Jebel Ali STP - Phase 2, Dubai, United Arab Emirates 2016, 375,000 m<sup>3</sup>/d UV

Doha Industrial Area WWTP - Expansion, Doha, Qatar 2014, 30,000 m<sup>3</sup>/d SBR

ISTP2 - Wathba II WWTP, Abu Dhabi, United Arab Emirates 2012, 300,000 m<sup>3</sup>/d Tertiary treatment

ISTP2 - Al Hamah WWTP, Al-Ain, Abu Dhabi, United Arab Emirates 2012, 130,000 m<sup>3</sup>/d Tertiary treatment

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<http://www.xingangyonghao.com>

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Beijing Fengtai Qinglonghu WRP, China 2014, 10,000

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#### Plant Supplier

Kodungaiyur, Chennai, Tamil Nadu, India 2016, 45,000 m<sup>3</sup>/d RO  
Water Treatment Plant Package for 3 x 800 MW Krishnapatnam APPDCL Project, Andhra Pradesh, India, 55,000 m<sup>3</sup>/d

Tertiary Treatment Reverse Osmosis Plant (TTRO), Tamil Nadu, India, 45,000 m<sup>3</sup>/d RO

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#### Plant Supplier (Reuse)

Madina Al Shamaliya STP, Bahrain 2015, 40,000 m<sup>3</sup>/d

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#### Plant Supplier (Desal)

TANGEDCO, Udangudi, Tamil Nadu, India 2018, 45,744 m<sup>3</sup>/d  
Other / Unknown

TANGEDCO, Udangudi, Tamil Nadu, India 2018, 16,000 m<sup>3</sup>/d RO

TANGEDCO, Udangudi, Tamil Nadu, India 2018, 1,728 m<sup>3</sup>/d RO

NTECL Vallur, Tamil Nadu, Vallur, India 2017, 57,600 m<sup>3</sup>/d

BIFPCL, Rampal, Bangladesh, Maitree, Bangladesh 2017, 43,320 m<sup>3</sup>/d Other / Unknown

BIFPCL, Rampal, Bangladesh, Maitree, Bangladesh 2017, 17,616 m<sup>3</sup>/d RO

NTECL, Vallur-3x500MW TPS, Tamil Nadu, India 2017, 2,400 m<sup>3</sup>/d EDI

Kilwa Energy-370 MW CCPP, Kilwa, Tanzania 2017, 2,160 m<sup>3</sup>/d RO

Kilwa Energy-370 MW CCPP, Kilwa, Tanzania 2017, 1,776 m<sup>3</sup>/d RO

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### SELECTED REFERENCES

#### EPC Contractor

SWRO Plant (DEWA) in Jebel Ali Power Station, Dubai, United Arab Emirates 2018, 182,000 m<sup>3</sup>/d RO

SWRO Plant (DEWA) in Jebel Ali Power Plant & Desalination Complex, Dubai, Jebel Ali, United Arab Emirates 2017, 182,000 m<sup>3</sup>/d RO

Kilwa Energy-370 MW CCPP, Kilwa, Tanzania 2017, 528 m<sup>3</sup>/d RO  
 Kilwa Energy-370 MW CCPP, Kilwa, Tanzania 2017, 432 m<sup>3</sup>/d RO  
 BIFPCL, Maitree, Khulna, Bangladesh 2016, 18,912 m<sup>3</sup>/d RO  
 BIFPCL, Maitree, Khulna, Bangladesh 2016, 1,776 m<sup>3</sup>/d RO  
 BHEL, Trichy, Tamil Nadu, India 2015, 2,000 m<sup>3</sup>/d RO  
 KPCL, Yelahanka, Karnataka, India 2015, 1,056 m<sup>3</sup>/d UF  
 KPCL, Yelahanka, Karnataka, India 2015, 840 m<sup>3</sup>/d RO  
 KPCL, Yelahanka, Karnataka, India 2015, 320 m<sup>3</sup>/d RO  
 Ennore 2x660 MW TPS, Tamil Nadu, India 2014, 38,400 m<sup>3</sup>/d RO  
 Ennore 2x660 MW TPS, Tamil Nadu, India 2014, 13,440 m<sup>3</sup>/d RO  
 BHEL, Hyderabad, Telangana, India 2014, 8,000 m<sup>3</sup>/d MBR  
 Ennore 2x660 MW TPS, Tamil Nadu, India 2014, 2,880 m<sup>3</sup>/d RO  
 KPCL, Yelahanka 370 MW CCPP, Karnataka, India 2014, 480 m<sup>3</sup>/d RO  
 OPaL, Dahej, Dahej, Gujarat, India 2013, 96,000 m<sup>3</sup>/d UF  
 HNPCL, Vizag, Visakhapatnam, Andhra, India 2011, 2,976 m<sup>3</sup>/d RO  
 PPCL, Pragati-II, Bamnauli, New Delhi, India 2010, 840 m<sup>3</sup>/d RO  
 PPCL, Pragati-II, Bamnauli, New Delhi, India 2010, 744 m<sup>3</sup>/d RO  
 North Chennai (2x600MW), North Chennai, India, 6,432 m<sup>3</sup>/d UF  
 GSPC Pipavav, Gujarat, India, 5,376 m<sup>3</sup>/d RO  
 North Chennai (2x600MW), North Chennai, India, 4,800 m<sup>3</sup>/d RO  
 KPCL, Bellary-2, Karnataka, India, 2,280 m<sup>3</sup>/d RO  
 PPCL, Pragathi III (2x750MW), Bawana, New Delhi, India, 1,920 m<sup>3</sup>/d MBR  
 KPCL, Bellary-2, Karnataka, India, 1,824 m<sup>3</sup>/d RO  
 PPCL, Pragathi III (2x750MW), Bawana, New Delhi, India, 1,344 m<sup>3</sup>/d RO  
 PPCL, Pragathi III (2x750MW), Bawana, New Delhi, India, 1,224 m<sup>3</sup>/d RO  
 GSPC Pipavav, Gujarat, India, 792 m<sup>3</sup>/d RO

#### Plant Supplier (Reuse)

WBDCL Sagardighi, West Bengal, Sagardighi, India 2018, 6,144 m<sup>3</sup>/d  
 WBDCL Sagardighi, West Bengal, Sagardighi, India 2018, 4,290 m<sup>3</sup>/d RO  
 BIFPCL, Rampal, Bangladesh, Maitree, Bangladesh 2017, 3,200 m<sup>3</sup>/d RO

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#### SELECTED REFERENCES

#### Plant Supplier (Desal)

Hadnot Point WTP Replacement, Jacksonville, North Carolina, United States 2023, 8.0 MGD RO  
 Sandow Epcor Facility, Lexington, Texas, United States 2021, 8,928 MGD RO

Brackish Water Desalination Plant, City of Antioch, California, United States 2021, 6.0 MGD RO  
 Southwest WTP, North Port, Florida, United States 2020, 18,927 m<sup>3</sup>/d RO  
 Foothill Water Treatment Plant, City of Beverly Hills, California, United States 2020, 1,16496 MGD RO  
 GWRS Phase III, California, United States 2019, 113,500 m<sup>3</sup>/d RO  
 Santa Margarita Conjunctive Use Project, California, United States 2019, 27,252 m<sup>3</sup>/d RO  
 Perris II Desalter, Menifee, California, United States 2019, 20,440 m<sup>3</sup>/d RO  
 Goodyear Water Treatment Plant, Goodyear, Arizona, United States 2018, 13,630 m<sup>3</sup>/d RO  
 Walkersville Water Treatment Plant, Walkersville, Maryland, United States 2018, 5,300 m<sup>3</sup>/d RO  
 Daytona Beach Reuse Demo, Daytona, Florida, United States 2018, 757 m<sup>3</sup>/d RO  
 Cherry Point Marine Corps Air Station Water Treatment Plant, Cherry Point, North Carolina, United States 2017, 25,549 m<sup>3</sup>/d RO  
 Robert W. Goldsworthy Desalter, Torrance, California, United States 2016, 17,412 m<sup>3</sup>/d RO  
 Chino I Desalter Expansion, Chino, California, United States 2016, 6,813 m<sup>3</sup>/d RO  
 San Antonio Desalination Plant, Elmendorf, Texas, United States 2015, 37,854 m<sup>3</sup>/d RO  
 Penn State University Water Treatment Plant, University Park, Pennsylvania, United States 2015, 12,870 m<sup>3</sup>/d RO  
 Chino II Desalter Concentrate Reduction Facility, Jurupa Valley, CA, United States 2013, 15,140 m<sup>3</sup>/d RO  
 Dixon Water Treatment Plant, Holly Ridge, NC, United States 2013, 11,355 m<sup>3</sup>/d RO  
 Color Removal WTP, Costa Mesa, CA, United States 2012, 32,554 m<sup>3</sup>/d NF  
 Seminole Brighton WTP, Brighton, FL, United States 2012, 6,056 m<sup>3</sup>/d RO  
 Springtree WTP, Sunrise, FL, United States 2012, 5,678 m<sup>3</sup>/d RO  
 Pinellas County WTE WTP, St. Petersburg, FL, United States 2011, 7,570 m<sup>3</sup>/d RO  
 Hollywood WTP (Train A), Hollywood, FL, United States 2011, 7,570 m<sup>3</sup>/d RO  
 Village of Tequesta WTP, FL, United States 2011, 4,542 m<sup>3</sup>/d RO  
 Six SWRO plants, South Province, Maldives 2011, 3,000 m<sup>3</sup>/d RO  
 Arcadia WTP, Santa Monica, CA, United States 2010, 35,150 m<sup>3</sup>/d RO  
 City of Dania Beach, FL, United States 2010, 18,925 m<sup>3</sup>/d NF  
 Port Hueneme, Oxnard, CA, United States 2010, 15,140 m<sup>3</sup>/d NF  
 Paraquita Bay, Tortola, British Virgin Islands 2010, 10,477 m<sup>3</sup>/d RO  
 Buwayb, Saudi Arabia, 59,000 m<sup>3</sup>/d RO  
 14 Plants for Oil and Gas Platforms, 29,342 m<sup>3</sup>/d RO  
 Basra, Iraq, 5,760 m<sup>3</sup>/d RO  
 Dagenham, United Kingdom, 5,000 m<sup>3</sup>/d RO  
 Basra, Iraq, 4,320 m<sup>3</sup>/d RO  
 Basra, Iraq, 2,880 m<sup>3</sup>/d RO  
 Backies, United Kingdom, 2,200 m<sup>3</sup>/d RO  
 Bonar Bridge, United Kingdom, 1,100 m<sup>3</sup>/d RO  
 16 x 50 m<sup>3</sup>/d for Type 23 Frigate Royal Navy, 800 m<sup>3</sup>/d RO  
 Broadford, United Kingdom, 705 m<sup>3</sup>/d RO  
 Teangue, United Kingdom, 350 m<sup>3</sup>/d RO  
 Cruise Liner, 250 m<sup>3</sup>/d RO  
 Bracadale, United Kingdom, 230 m<sup>3</sup>/d RO  
 BBC, British Overseas Territory, Saint Helena, 80 m<sup>3</sup>/d RO

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## Plant Supplier (Reuse)

East County Advanced Water Purification, Santee, California, United States 2022, 13.7 MGD RO  
New Kermit H. Lewin Reverse Osmosis Facility, Key West, Florida, United States 2021, 4.0 MGD RO  
North City Pure Water Facility, San Diego, California, United States 2020, 38.85696 MGD RO  
Valencia Advanced Water Treatment, Valencia, California, United States 2018, 33,160 m<sup>3</sup>/d NF  
San Francisco Westside Recycled Water Treatment Facility, San Francisco, California, United States 2017, 19,862 m<sup>3</sup>/d RO  
Westside Recycled Water Project, California, United States 2017, 6,056 m<sup>3</sup>/d RO  
DTS Westside Regional Water Reclamation Facility, Daytona Beach, Florida, United States 2017, 1,000 m<sup>3</sup>/d RO  
Groundwater Reliability Improvement Program Advanced Water Treatment Facility, Pico Rivera, California, United States 2016, 56,024 m<sup>3</sup>/d RO  
Altamonte Springs AWT Ultrafiltration Demonstration, Altamonte, California, United States 2016, 1,000 m<sup>3</sup>/d UF  
Padre Dam Advanced Water Purification Facility, Santee, CA, United States 2016, 70 m<sup>3</sup>/d RO  
Robert W. Goldsworthy Desalter Expansion, Torrance, California, United States 2015, 9,462 m<sup>3</sup>/d RO  
Padre Dam Advanced Water Purification Facility, Santee, CA, United States 2014, 40 m<sup>3</sup>/d RO

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### SELECTED REFERENCES

#### EPC Contractor and Technology Supplier

Tubili WPCC - Phase 2, Bahrain 2018, 100,000 m<sup>3</sup>/d Other / Unknown  
Tubili WPCC - Phase 1, Bahrain 2013, 100,000 m<sup>3</sup>/d Other / Unknown

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#### Plant Supplier (Reuse)

Menzel Bouzefla WWTP - Rehabilitation/Expansion, Nabeul, Tunisia 2013

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### SELECTED REFERENCES

#### EPC Contractor

Central Java Coal Fired Power Plant, Indonesia 2014, 10,000 m<sup>3</sup>/d RO  
Al Wathba Enhanced Treated Sewage Effluent Treatment Plant United Arab Emirates, Abu Dhabi, United Arab Emirates, 27,700 m<sup>3</sup>/d UF

## BS Water & Energy



[bswaterenergy.com](http://bswaterenergy.com)

### SELECTED REFERENCES

#### Desalination Equipment Supplier

SWRO Desalination Plant- Marseilia Beach 4 North Coast, Marseilia, Egypt 2015, 1,500 m<sup>3</sup>/d RO  
Renovation of the SWRO Desalination Plant at Blue Bay – Red Sea, El Sokhna, Egypt 2015, 750 m<sup>3</sup>/d RO  
BWRO Desalination Plant at Marseilia Alam El Roum, Egypt 2015, 500 m<sup>3</sup>/d RO  
SWRO Desalination Plant- Marseilia Beach 2 North Coast, Marseilia, Egypt 2015, 500 m<sup>3</sup>/d RO  
Nice 4 Village - SWRO Desalination Plant, Egypt 2015, 500 m<sup>3</sup>/d RO  
Seawater Desalination Plant, El-hayah Ras Sedr village, Egypt 2013, 1,500 m<sup>3</sup>/d RO  
Renovation of the SWRO Desalination Plant at Gorgonia Beach, Marsa Alam, Egypt, 600 m<sup>3</sup>/d RO  
Seawater Desalination Plant, Jumeirah Bay Village, Egypt, 500 m<sup>3</sup>/d RO

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**SELECTED REFERENCES****Engineering and Construction**Valle de Güímar WWTP, Tenerife, Spain 2017, 7,000 m<sup>3</sup>/d Tertiary treatment**Canaragua, S.A.**

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**SELECTED REFERENCES****Plant Supplier (Reuse)**Adeje Arona WWTP - Expansion Phase 2, Tenerife, Arona, Islas Canarias, Spain 2012, 8,000 m<sup>3</sup>/d Tertiary treatment**Cannon Artes**

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**SELECTED REFERENCES****Engineering, Procurement, Shop Construction, Supervision of Erection, Commissioning, Start-up**

Suez Oil Processing Company, Suez, Egypt 2022, 30,000 m<sup>3</sup>/d RO  
 Wastewater treatment & recovery, Singapore 2019, 4,320 m<sup>3</sup>/d MBR  
 Wastewater treatment & recovery, Romania 2019, 3,240 m<sup>3</sup>/d MBR  
 No 3 Seawater Desalination & Potabilization, Algeria 2019, 150 m<sup>3</sup>/d RO  
 Seawater Desalination & Potabilization, Oman 2019, 100 m<sup>3</sup>/d RO  
 Wastewater recovery, Italy 2018, 720 m<sup>3</sup>/d MBR  
 Wastewater treatment & recovery, Denmark 2018, 530 m<sup>3</sup>/d RO  
 Wastewater recovery, Italy 2016, 2,160 m<sup>3</sup>/d RO  
 Desalination, Demineralization, Condensate Polishing, Turkmenistan 2015, 10,800 m<sup>3</sup>/d RO  
 Refinery Effluent Treatment Plant, Turkmenbashi, Turkmenistan 2014, 26,880 m<sup>3</sup>/d RO

**Engineering, Supply and Commissioning (Excluding Civil Work)**WWTP, Caivano, Salerno, Italy 2017, 240 m<sup>3</sup>/d MBRWater and Wastewater Treatment package, Garabogaz, Turkmenistan 2015, 1,200 m<sup>3</sup>/d ROWWTP, Battipaglia, Salerno, Italy 2015, 480 m<sup>3</sup>/d MBR**Caramondani Desalination Plants Ltd.**

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www.osmosistemi.it

**SELECTED REFERENCES****Design, Construction, Installation, Commissioning, Start-up, Operation**Paphos Desalination Plant, Paphos, Cyprus 2018, 15,000 m<sup>3</sup>/d RO**Design, Supply, Installation, Commissioning, Operation**Kouklia Desalination Plant, Paphos, Kouklia, Cyprus 2019, 15,000 m<sup>3</sup>/d RO**Developer and EPC Contractor**Paphos SWRO, Cyprus 2018, 15,000 m<sup>3</sup>/d RO**Carso Infraestructura**

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**SELECTED REFERENCES****Developer**El Caracol WWTP, Mexico City, Mexico 2012, 345,600 m<sup>3</sup>/d

## Chiyoda Corporation



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[www.chiyoda-corp.com](http://www.chiyoda-corp.com)

### SELECTED REFERENCES

#### EP Contractor

Modon DIC-1 Wastewater Reclamation Plant, Dammam, KSA, Saudi Arabia 2012, 3,500 m<sup>3</sup>/d RO

## Chriwa Wasseranwendungstechnik GmbH



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### SELECTED REFERENCES

#### Plant Supplier (Desal)

Malambo, Colombia 2012, 5,616 m<sup>3</sup>/d RO

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### SELECTED REFERENCES

#### Plant Supplier (Desal)

Tripoli, Libya, 5,000 m<sup>3</sup>/d Other / Unknown

#### Plant Supplier (Reuse)

Tishreen Power station, Damascus, Syria, 1,000 m<sup>3</sup>/d Other / Unknown

Damascus, Syria, 1,000 m<sup>3</sup>/d Other / Unknown

Damascus, Syria, 100 m<sup>3</sup>/d RO

## Comercializadora Panamericana S.A.



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### SELECTED REFERENCES

#### Plant Supplier

Ribeira WWTP, Galicia, Spain 2014, 8,000 m<sup>3</sup>/d Tertiary treatment  
Ourense WWTP, Galicia, Galicia, Spain 2013, 60,000 m<sup>3</sup>/d Tertiary treatment

## Consolidated Water Co. Ltd.



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### SELECTED REFERENCES

#### Plant Supplier (Desal)

Windsor Field, Nassau, Bahamas 2018, 10,911 m<sup>3</sup>/d RO  
Sawangan, Bali, Indonesia 2013, 3,000 m<sup>3</sup>/d RO

#### Design, Build, Finance, Operate, Maintain

Governor's Harbour III, Grand Cayman, Cayman Islands 2019, 3,875 m<sup>3</sup>/d RO

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### SELECTED REFERENCES

#### EP Contractor

Busan Nambu Sewage Treatment Plant, South Korea 2017, 72,000 m<sup>3</sup>/d MBR

Yogin Sewage Treatment Plant, South Korea 2017, 56,000 m<sup>3</sup>/d MBR

Namyangju Gigum Sewage Treatment Plant, South Korea 2017, 28,000 m<sup>3</sup>/d MBR

Goyang-Si Samsong Sewage Treatment Plant, South Korea 2017, 16,000 m<sup>3</sup>/d MBR

Ulsan KPIC ONE Wastewater Treatment System, South Korea 2017, 1,800 m<sup>3</sup>/d MBR

Pohang Sewer Reuse System, South Korea 2014, 100,000 m<sup>3</sup>/d RO

Hanam Sewage Treatment Plant, South Korea 2014, 32,000 m<sup>3</sup>/d MBR

Samsung LCD Sewage Treatment Plant #7-1, South Korea 2014, 16,500 m<sup>3</sup>/d MBR  
 Yeongwol Water Treatment NF Process, Gangwon, South Korea 2014, 8,000 m<sup>3</sup>/d NF  
 Samsung Fine Chemical Water Treatment #2, South Korea 2013, 29,000 m<sup>3</sup>/d RO  
 Samcheok Mapeyng Water Treatment NF Process, South Korea 2013, 20,000 m<sup>3</sup>/d NF  
 Asan Dogo Sewage Treatment Plant, South Korea 2013, 5,200 m<sup>3</sup>/d MBR  
 Samsung Fine Chemical Water Treatment #1-5, South Korea 2013, 5,000 m<sup>3</sup>/d RO  
 SK Hynix Wastewater Treatment System, South Korea 2013, 3,000 m<sup>3</sup>/d MBR  
 Samsung Fine Chemical Water Treatment #1-75, South Korea 2013, 2,000 m<sup>3</sup>/d RO  
 Gyeongju Sewage Treatment Plant, South Korea 2013, 1,600 m<sup>3</sup>/d MBR  
 Samsung Onyang Pretreatment Demineralization System, South Korea 2012, 9,800 m<sup>3</sup>/d MF/UF  
 Samsung Electronics Industrial Water System, South Korea 2012, 5,000 m<sup>3</sup>/d MF/UF

#### EP Contractor and O&M Contractor

Incheon Reuse Project, South Korea 2014, 100,000 m<sup>3</sup>/d RO

#### EPC Contractor

Pocheon BTO Reuse Project, South Korea 2016, 22,000 m<sup>3</sup>/d RO  
 Poseung Biomass Power Plant Water Treatment System, South Korea 2016, 1,920 m<sup>3</sup>/d RO  
 Jangmoon Combined Cycle Power Plant Water Treatment System, South Korea 2014, 45,840 m<sup>3</sup>/d RO  
 Taean Thermal Power Complex 9, 10, Water Treatment System, South Korea 2013, 9,600 m<sup>3</sup>/d RO  
 Yeongdong Thermal Power Plant 2 Demineralization System, South Korea 2012, 480 m<sup>3</sup>/d RO

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#### SELECTED REFERENCES

##### Developer

Majis 3MLD Plant, Sohar, Sohar, Oman 2013, 3,200 m<sup>3</sup>/d RO

##### EPC Contractor

NCIC55, Egypt 2023, 1,000 m<sup>3</sup>/d RO  
 El Kayan UF, New Cairo, Egypt 2020, 100,000 m<sup>3</sup>/d UF  
 Four Seasons BRWO, Sharm El-Sheikh, Egypt 2019, 7,500 m<sup>3</sup>/d RO  
 Four Seasons MBR, Sharm El-Sheikh, Egypt 2019, 1,500 m<sup>3</sup>/d MBR  
 Marsa Matrouh Expansion, Marsa Matrouh, Egypt 2014, 24,000 m<sup>3</sup>/d RO

Armament Authority. Ministry of Defence (8 Units), Egypt 2013, 6,000 m<sup>3</sup>/d RO  
 Cairo, Egypt 2013, 1,500 m<sup>3</sup>/d RO  
 El Salam, Egypt 2013, 700 m<sup>3</sup>/d RO  
 Arco Sur, Cartagena, Spain 2012, 30,000 m<sup>3</sup>/d

#### EPC Contractor and O&M Contractor

NABQ SWRO, Sharm El-Sheikh, Egypt 2023, 12,000 m<sup>3</sup>/d RO  
 East Matrouh SWRO Plant, Marsa Matrouh, Egypt 2021, 65,000 m<sup>3</sup>/d RO  
 NCIC Ain Sokhna phase 4, Ain Sokhna, Egypt 2021, 32,000 m<sup>3</sup>/d RO  
 Ras Sedr SWRO plant, Ras Sedr, Egypt 2021, 30,000 m<sup>3</sup>/d RO  
 Taba SWRO Plant, Taba, Egypt 2021, 10,000 m<sup>3</sup>/d RO  
 Ain Sokhna phase 2, Ain Sokhna, Egypt 2018, 100,000 m<sup>3</sup>/d RO  
 Ain Sokhna phase 3, Ain Sokhna, Egypt 2018, 70,000 m<sup>3</sup>/d RO  
 Abu Zenima, Egypt 2018, 20,000 m<sup>3</sup>/d RO  
 Dahab SWRO plant, Dahab, Egypt 2018, 15,000 m<sup>3</sup>/d RO  
 NCIC Ain Sokhna phase 1, Ain Sokhna, Egypt 2016, 32,000 m<sup>3</sup>/d RO  
 Remelah I & II, Matrouh, Marsa Matrouh, Egypt 2014, 48,000 m<sup>3</sup>/d RO

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##### Plant Supplier (Desal) and Operator

Desalination Plant, Point Lisas , Trinidad and Tobago 2012, 272,520 m<sup>3</sup>/d RO

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Lions Gate Secondary WWTP, Vancouver, Canada 2017, 102,000 m<sup>3</sup>/d

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### SELECTED REFERENCES

#### EPC Contractor

Shuaibah 3 IWP, Saudi Arabia 2022, 600,000 m<sup>3</sup>/d RO  
Yanbu Phase 4, Saudi Arabia 2021, 450,000 m<sup>3</sup>/d RO  
SC Bluepower FGD WW ZLD, South Korea 2019, 864 m<sup>3</sup>/d RO  
Shin-Seocheon Power Plant FGD WW ZLD, South Korea 2019, 648 m<sup>3</sup>/d RO  
Shoiba Phase 4, Saudi Arabia 2017, 400,000 m<sup>3</sup>/d RO  
Younghheung Power Plant FGD WW ZLD, South Korea 2017, 1,248 m<sup>3</sup>/d RO  
Yanbu Ph. 3, Yanbu, Saudi Arabia 2016, 550,070 m<sup>3</sup>/d MSF  
Doha SWRO Desalination Plant Ph.1, Kuwait City, Kuwait 2016, 227,100 m<sup>3</sup>/d RO  
Youngdong Power Plant FGD WW ZLD, South Korea 2016, 120 m<sup>3</sup>/d RO  
Al Ansab WWTP - Expansion, \N, Oman 2015, 32,000 m<sup>3</sup>/d MBR  
Jeddah Ph. 3, Saudi Arabia 2013, 240,030 m<sup>3</sup>/d RO

#### Design Engineer and Equipment Supplier

Minera Escondida Water Supply Expansion Project, Antofagasta, Chile 2017, 72,000 m<sup>3</sup>/d RO

#### EP Contractor

BAPCO Med, Bahrain 2018, 67,782 m<sup>3</sup>/d MED  
Song Hau 1 Power Plant FGD WW ZLD, Vietnam 2018, 312 m<sup>3</sup>/d RO  
Obra -C Power Plant FGD WW ZLD, India 2018, 288 m<sup>3</sup>/d RO  
Escondida Water Supply, Antofagasta, Chile 2013, 220,000 m<sup>3</sup>/d RO

#### EPC Contractor and O&M Contractor

Younghheung Power Plant FGD WW ZLD Demonstration, South Korea 2015, 100 m<sup>3</sup>/d RO  
Busan Gijang, Busan, South Korea 2014, 45,460 m<sup>3</sup>/d RO  
Changwon ZLD Demonstration, South Korea 2014, 120 m<sup>3</sup>/d RO

#### EPC Contractor, O&M Contractor and Developer

Sharqiyah IWP, Oman 2017, 80,000 m<sup>3</sup>/d RO

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### SELECTED REFERENCES

#### Plant Supplier (Reuse)

Muswellbrook reuse plant, NSW, Australia 2016, 3,775 m<sup>3</sup>/d Other / Unknown

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### SELECTED REFERENCES

#### Plant Supplier (Reuse)

El Chaparral WWTP - Expansion, Madrid, Spain 2015, 6,000 m<sup>3</sup>/d Tertiary treatment

Santa Eulària WWTP - Expansion, Ibiza, Spain 2015, Tertiary treatment

Villapérez WWTP - Expansion, Asturias, Spain 2013, 400,000 m<sup>3</sup>/d Tertiary treatment

Estiviel WWTP, Toledo, Spain 2012, 70,000 m<sup>3</sup>/d Tertiary treatment

Algete II WWTP, Spain 2012, 19,000 m<sup>3</sup>/d Tertiary treatment

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### SELECTED REFERENCES

#### Equipment Supplier

North Carolina, United States 2021, 1,668 m<sup>3</sup>/d RO  
 Texas, United States 2021, 1,439 m<sup>3</sup>/d RO  
 Mexico 2021, 1,090 m<sup>3</sup>/d RO  
 Germany 2021, 27 m<sup>3</sup>/d RO  
 Malaysia 2020, 16,352 m<sup>3</sup>/d RO  
 Peru 2020, 11,447 m<sup>3</sup>/d RO  
 Colorado, United States 2020, 3,815 m<sup>3</sup>/d RO  
 Florida, United States 2020, 2,616 m<sup>3</sup>/d RO  
 Illinois, United States 2020, 2,180 m<sup>3</sup>/d RO  
 Australia 2020, 1,989 m<sup>3</sup>/d RO  
 Nebraska, United States 2020, 1,635 m<sup>3</sup>/d RO  
 New Hampshire, United States 2020, 1,471 m<sup>3</sup>/d RO  
 Iraq 2020, 1,362 m<sup>3</sup>/d RO  
 Mexico 2020, 1,362 m<sup>3</sup>/d RO  
 New Jersey, United States 2020, 1,253 m<sup>3</sup>/d RO  
 Guatemala, Guatemala 2020, 1,090 m<sup>3</sup>/d RO  
 Georgia, United States 2020, 1,035 m<sup>3</sup>/d RO  
 Pennsylvania, United States 2020, 981 m<sup>3</sup>/d RO  
 Pennsylvania, United States 2020, 817 m<sup>3</sup>/d RO  
 Florida, United States 2020, 763 m<sup>3</sup>/d RO  
 Illinois, United States 2020, 681 m<sup>3</sup>/d RO  
 Honduras 2020, 681 m<sup>3</sup>/d RO  
 New Mexico, United States 2020, 545 m<sup>3</sup>/d RO  
 United Kingdom 2020, 381 m<sup>3</sup>/d RO  
 Colombia 2020, 381 m<sup>3</sup>/d RO  
 Maryland, United States 2020, 272 m<sup>3</sup>/d RO  
 Georgia, United States 2020, 272 m<sup>3</sup>/d RO  
 Texas, United States 2020, 272 m<sup>3</sup>/d RO  
 Minnesota, United States 2020, 109 m<sup>3</sup>/d RO  
 Illinois, United States 2020, 81 m<sup>3</sup>/d RO  
 California, United States 2020, 81 m<sup>3</sup>/d RO  
 California, United States 2020, 54 m<sup>3</sup>/d RO  
 California, United States 2019, 6,541 m<sup>3</sup>/d RO  
 Mexico 2019, 4,905 m<sup>3</sup>/d RO  
 India 2019, 3,815 m<sup>3</sup>/d RO  
 Peru 2019, 3,270 m<sup>3</sup>/d RO  
 California, United States 2019, 2,725 m<sup>3</sup>/d RO  
 Peru 2019, 2,044 m<sup>3</sup>/d RO  
 Arizona, United States 2019, 1,744 m<sup>3</sup>/d RO  
 Mississippi, United States 2019, 1,635 m<sup>3</sup>/d RO  
 Illinois, United States 2019, 1,635 m<sup>3</sup>/d RO  
 California, United States 2019, 1,635 m<sup>3</sup>/d RO  
 Tennessee, United States 2019, 1,362 m<sup>3</sup>/d RO  
 Chicago, United States 2019, 1,362 m<sup>3</sup>/d RO

Illinois, United States 2019, 1,362 m<sup>3</sup>/d RO  
 Iowa, United States 2019, 1,090 m<sup>3</sup>/d RO  
 Massachusetts, United States 2019, 899 m<sup>3</sup>/d RO  
 Massachusetts, United States 2019, 817 m<sup>3</sup>/d RO  
 Ireland 2019, 763 m<sup>3</sup>/d RO  
 Pennsylvania, United States 2019, 545 m<sup>3</sup>/d RO  
 Florida, United States 2019, 327 m<sup>3</sup>/d RO  
 India 2019, 272 m<sup>3</sup>/d RO  
 Virginia, United States 2019, 272 m<sup>3</sup>/d RO  
 Alabama, United States 2019, 54 m<sup>3</sup>/d RO  
 Ireland 2019, 0 m<sup>3</sup>/d RO  
 Alabama, United States 2019, 0 m<sup>3</sup>/d RO  
 Georgia, United States 2019, 0 m<sup>3</sup>/d RO  
 Michigan, United States 2019, 0 m<sup>3</sup>/d RO  
 Mexico 2019, 0 m<sup>3</sup>/d RO  
 Florida, United States 2019, 0 m<sup>3</sup>/d RO  
 Peru 2018, 6,541 m<sup>3</sup>/d RO  
 Canada 2018, 4,905 m<sup>3</sup>/d RO  
 Egypt 2018, 4,197 m<sup>3</sup>/d RO  
 Virginia, United States 2018, 2,725 m<sup>3</sup>/d RO  
 Texas, United States 2018, 2,452 m<sup>3</sup>/d RO  
 Malaysia 2018, 2,398 m<sup>3</sup>/d RO  
 Finland 2018, 1,635 m<sup>3</sup>/d RO  
 India 2018, 1,635 m<sup>3</sup>/d RO  
 New York, United States 2018, 1,635 m<sup>3</sup>/d RO  
 Iowa, United States 2018, 1,362 m<sup>3</sup>/d RO  
 California, United States 2018, 817 m<sup>3</sup>/d RO  
 Namibia 2018, 545 m<sup>3</sup>/d RO  
 Calgary, Canada 2018, 408 m<sup>3</sup>/d RO  
 New Jersey, United States 2018, 272 m<sup>3</sup>/d RO  
 Illinois, United States 2018, 272 m<sup>3</sup>/d RO  
 Switzerland 2018, 0 m<sup>3</sup>/d RO  
 Missouri, United States 2018, 0 m<sup>3</sup>/d RO  
 Puerto Rico 2018, 0 m<sup>3</sup>/d RO  
 Ohio, United States 2017, 19,623 m<sup>3</sup>/d RO  
 Illinois, United States 2017, 4,088 m<sup>3</sup>/d RO  
 Australia 2017, 3,597 m<sup>3</sup>/d RO  
 Mexico 2017, 2,452 m<sup>3</sup>/d RO  
 Malaysia 2017, 2,398 m<sup>3</sup>/d RO  
 Arizona, United States 2017, 1,907 m<sup>3</sup>/d RO  
 Texas, United States 2017, 1,635 m<sup>3</sup>/d RO  
 Mexico 2017, 1,635 m<sup>3</sup>/d RO  
 Kansas, United States 2017, 1,090 m<sup>3</sup>/d RO  
 Netherlands 2017, 1,090 m<sup>3</sup>/d RO  
 California, United States 2017, 1,090 m<sup>3</sup>/d RO  
 Florida, United States 2017, 817 m<sup>3</sup>/d RO  
 New York, United States 2017, 817 m<sup>3</sup>/d RO  
 California, United States 2017, 545 m<sup>3</sup>/d RO  
 Minnesota, United States 2017, 545 m<sup>3</sup>/d RO  
 California, United States 2017, 545 m<sup>3</sup>/d RO  
 Illinois, United States 2017, 545 m<sup>3</sup>/d RO  
 North Carolina, United States 2017, 545 m<sup>3</sup>/d RO  
 California, United States 2017, 294 m<sup>3</sup>/d RO  
 Chile 2017, 272 m<sup>3</sup>/d RO  
 Louisiana, United States 2017, 272 m<sup>3</sup>/d RO  
 Italy 2017, 81 m<sup>3</sup>/d RO

# IDRA

## DESALINATION & REUSE HANDBOOK

- India 2017, 54 m<sup>3</sup>/d RO  
Michigan, United States 2017, 0 m<sup>3</sup>/d RO  
North Dakota, United States 2017, 0 m<sup>3</sup>/d RO  
India 2017, 0 m<sup>3</sup>/d RO  
Illinois, United States 2016, 6,541 m<sup>3</sup>/d RO  
Nevada, United States 2016, 4,360 m<sup>3</sup>/d RO  
Illinois, United States 2016, 2,452 m<sup>3</sup>/d RO  
Brazil 2016, 1,817 m<sup>3</sup>/d RO  
Peru 2016, 1,771 m<sup>3</sup>/d RO  
Pakistan 2016, 1,635 m<sup>3</sup>/d RO  
Mexico 2016, 1,090 m<sup>3</sup>/d RO  
Turkey 2016, 1,090 m<sup>3</sup>/d RO  
California, United States 2016, 817 m<sup>3</sup>/d RO  
Arizona, United States 2016, 817 m<sup>3</sup>/d RO  
Indiana, United States 2016, 817 m<sup>3</sup>/d RO  
Mexico 2016, 545 m<sup>3</sup>/d RO  
California, United States 2016, 545 m<sup>3</sup>/d RO  
Australia 2016, 545 m<sup>3</sup>/d RO  
Bolivia 2016, 545 m<sup>3</sup>/d RO  
Israel 2016, 545 m<sup>3</sup>/d RO  
Nigeria 2016, 0 m<sup>3</sup>/d RO  
Agriculture, IL, United States 2015, 4,900 m<sup>3</sup>/d RO  
Beer Brewery, Tanzania 2015, 3,270 m<sup>3</sup>/d RO  
Auto Manufacturer, CA, United States 2015, 545 m<sup>3</sup>/d RO  
Power Supplier, CA, United States 2015, 273 m<sup>3</sup>/d RO  
Agriculture, TX, United States 2015, 273 m<sup>3</sup>/d RO  
Cosmetics Manufacturer, Mexico City, Mexico 2015, 273 m<sup>3</sup>/d RO  
Agriculture, CA, United States 2015, 82 m<sup>3</sup>/d RO  
University, TX, United States 2015, 82 m<sup>3</sup>/d RO  
Brewery, South Africa 2015, 68 m<sup>3</sup>/d RO  
Chemicals, China 2015, 9 m<sup>3</sup>/d RO  
China 2015, 4 m<sup>3</sup>/d RO  
F&B Manufacturer, United States 2015, RO  
Mobile RO, United States 2014, 4,900 m<sup>3</sup>/d RO  
Pulp and Paper Manufacturer, United States 2014, 2,180 m<sup>3</sup>/d RO  
Food & Beverage Manufacturer, United States 2014, 1,680 m<sup>3</sup>/d RO  
Pulp and Paper Manufacturer, Mexico 2014, 1,089 m<sup>3</sup>/d RO  
Major OEM, United States 2014, 552 m<sup>3</sup>/d RO  
Food & Beverage Manufacturer, Mexico 2014, 408 m<sup>3</sup>/d RO  
Mid American Steel, OK, United States 2014, 240 m<sup>3</sup>/d RO  
Food & Beverage Manufacturer, Tajikistan 2014, 100 m<sup>3</sup>/d RO  
Food & Beverage Manufacturer, Kazakhstan 2014, 100 m<sup>3</sup>/d RO  
Large Municipal Water Treatment, United States 2014, 100 m<sup>3</sup>/d RO  
Food & Beverage Manufacturer, United States 2014, 100 m<sup>3</sup>/d RO  
Raanana Municipal, Israel 2013, 2,400 m<sup>3</sup>/d RO  
Desalitech agricultural customer, United States 2013, 1,640 m<sup>3</sup>/d RO  
Desalitech industrial customer, Israel 2013, 1,500 m<sup>3</sup>/d RO  
Kittansett Golf Club, MA, United States 2013, 550 m<sup>3</sup>/d RO  
Desalitech industrial customer, Israel 2013, 250 m<sup>3</sup>/d RO  
Desalitech industrial customer, India 2013, 200 m<sup>3</sup>/d RO  
YWT - cooling towers & boilers, Israel 2013, 192 m<sup>3</sup>/d RO  
Kind Love, CO, United States 2013, 100 m<sup>3</sup>/d RO  
Caribbean Retrofit Demo 2012, 700 m<sup>3</sup>/d RO  
Dead Sea -EPT, Israel 2012, 600 m<sup>3</sup>/d RO  
Layne Christensen, United States 2012, 336 m<sup>3</sup>/d RO  
SGP Demo, Singapore 2012, 192 m<sup>3</sup>/d RO  
Ma'agan Michael, Israel 2011, 1,500 m<sup>3</sup>/d RO  
Palmachim, Israel 2010, 250 m<sup>3</sup>/d RO  
ADM 2, United States, 6,541 m<sup>3</sup>/d RO  
ADM 3, United States, 550 m<sup>3</sup>/d RO  
Steel Mill, OK, United States, 270 m<sup>3</sup>/d RO  
Agriculture Company, OH, United States, 204 m<sup>3</sup>/d RO  
ADM 1, United States, 160 m<sup>3</sup>/d RO  
Agriculture , IN, United States, 82 m<sup>3</sup>/d RO  
Demo Unit, OH, United States, 82 m<sup>3</sup>/d  
Pulp and Paper, Lima, Peru, 74 m<sup>3</sup>/d RO  
CA, USA, NM, United States, 68 m<sup>3</sup>/d RO  
Brewery, GA, United States, 36 m<sup>3</sup>/d RO  
Auto Manufacturing, CA, United States, 23 m<sup>3</sup>/d RO  
TX, United States, 17 m<sup>3</sup>/d RO  
Power Generation, CA, United States, 12 m<sup>3</sup>/d RO  
CA, United States, 11 m<sup>3</sup>/d RO  
Agriculture Company, CA, United States, 7 m<sup>3</sup>/d RO  
Agriculture, CA, United States, 4 m<sup>3</sup>/d RO  
Municipal Reuse, CA, United States, 4 m<sup>3</sup>/d RO  
UTEP, United States, 4 m<sup>3</sup>/d RO  
Agriculture Company, United States, 4 m<sup>3</sup>/d RO  
Multiple Locations, RO  
Massachusetts, USA, Massachusetts, United States, 0 m<sup>3</sup>/d RO

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### SELECTED REFERENCES

#### Plant Supplier (Reuse)

Alguazas WWTP, Spain 2012, 15,000 m<sup>3</sup>/d UV

## Economy



[www.economy.com/en](http://www.economy.com/en)

### SELECTED REFERENCES

#### Technology Provider

Songsan Green City Wastewater Treatment Plant, Songsan, South Korea, 84,000 m<sup>3</sup>/d

Incheon City Chungla Kongchon Water Reclamation Plant, Incheon, South Korea, 65,000 m<sup>3</sup>/d

Incheon City Yongjong Songsan Water Reclamation Plant, Incheon, South Korea, 30,000 m<sup>3</sup>/d

Okchon Wastewater Treatment Plant, Okcheon, South Korea, 18,000 m<sup>3</sup>/d

Cheonan Wastewater Treatment Plant (Phase 2), Cheonan-si, South Korea, 70,000 m<sup>3</sup>/d

Asan New-city Wastewater Treatment Plant, Asan-si, South Korea, 45,000 m<sup>3</sup>/d  
 Hwanggujicheon Wastewater Treatment Plant, Suwon-si, South Korea, 45,000 m<sup>3</sup>/d  
 EcoDeltaCity Wastewater Treatment Plant, Busan-si, South Korea, 45,000 m<sup>3</sup>/d  
 Bomok Wastewater Treatment Plant, Seogwipo-si, South Korea, 30,000 m<sup>3</sup>/d

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**SELECTED REFERENCES****Plant Supplier**

Coca Cola Andina - Santiago, Santiago, Quilicura, Chile 2023, 3,578 m<sup>3</sup>/d MBR  
 Reciclar, Santiago, Lampa, Chile 2022, 216 m<sup>3</sup>/d MBR  
 Carozzi MBR - Nos Santiago, Santiago, Nos, Chile 2020, 1,300 m<sup>3</sup>/d MBR  
 SQM, Antofagasta, Chile 2020, 406 m<sup>3</sup>/d  
 SQM brine recovery, Antofagasta, Chile 2019, 356 m<sup>3</sup>/d RO  
 Quellaveco Salveani Camp - RO Plant, Moquegua, Peru 2019, 336 m<sup>3</sup>/d RO  
 SQM WWTP Reuse, Antofagasta, Chile 2019, 70 m<sup>3</sup>/d UF  
 Effluent Plant, Port Coloso, Chile 2018, 6,912.0 UF  
 Process & Potable Water Plant, Quellaveco, Peru 2018, 1,440 m<sup>3</sup>/d RO  
 Quellaveco Mine Cooling Water System & Papujune Camp - RO Plant, Moquegua, Peru 2018, 1,030 m<sup>3</sup>/d RO  
 Solid-Liquid Separation Plant, CODELCO, Potrerillos, Chile 2018, 204 m<sup>3</sup>/d Other / Unknown  
 Quellaveco Mine Area Campsite - RO Plant, Moquegua, Peru 2018, 84 m<sup>3</sup>/d RO  
 El Toro II, Alto Hospicio, Iquique, Chile 2017, 1,800 m<sup>3</sup>/d NF  
 ECSA MBR, Santiago, Chile 2017, 600 m<sup>3</sup>/d MBR  
 El Carmelo, Chile 2016, 64,800 m<sup>3</sup>/d Other / Unknown  
 Solid-Liquid Separation Plant, Angloamerican, Chagres, Chile 2015, 168.0 Other / Unknown  
 Colun Planta verde, La Union, Los Lagos, Chile 2014, 24 m<sup>3</sup>/d RO  
 Las Bambas, Peru 2012, 240 m<sup>3</sup>/d RO

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Alguazas WWTP, Alguazas, Spain 2012, 15,000 m<sup>3</sup>/d UV

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**SELECTED REFERENCES****EPC Contractor**

Reggane Nord Development GTE Service Water and Demineralized Water & De-oxygenation Package, Reggane, Algeria 2017, 343 m<sup>3</sup>/d RO

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**SELECTED REFERENCES****Developer**

Dakhla, Morocco 2018, 74,845 m<sup>3</sup>/d RO

Barka, Oman 2015, 281,000 m<sup>3</sup>/d RO

Mirfa, United Arab Emirates 2014, 140,000 m<sup>3</sup>/d RO

**EPC Contractor**

China 2016, 12,432 m<sup>3</sup>/d RO

Qatar 2015, 15,000 m<sup>3</sup>/d RO

## Enviro Control Pvt. Ltd



[www.envirowater.in](http://www.envirowater.in)

### SELECTED REFERENCES

#### EPC Contractor

- Bamroli reuse project, Dindoli, India 2012, 40,000 m<sup>3</sup>/d RO
- Surat industrial STP upgrade, Surat, India 2017, 101,000 m<sup>3</sup>/d Tertiary treatment
- Bamroli reuse project expansion, Bamroli, India 2017, 35,000 m<sup>3</sup>/d RO

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### SELECTED REFERENCES

#### Technology Provider: Full Recovery Desalination

- El Paso Seawater Full Recovery Desalination® project, El Paso, Texas, U.S.A. 2015, 2.4 MGD RO

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#### Developer

- Gujarat, India 2018, 100,000 m<sup>3</sup>/d RO

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### SELECTED REFERENCES

#### Plant Owner

- DeCo, Hoek, Zeeland, Netherlands 2019, 8,400 m<sup>3</sup>/d RO
- Demin Water Plant Botlek, Rotterdam, Zuid Holland, Netherlands, 38,400 m<sup>3</sup>/d RO
- Dow Benelux, Terneuzen, Netherlands, 25,200 m<sup>3</sup>/d RO
- Demin Water Plant Baanhoek, Dordrecht, Netherlands, 3,600 m<sup>3</sup>/d RO
- DWP Maasvlakte, Rotterdam, Zuid Holland, Netherlands, 19,200 m<sup>3</sup>/d RO
- DWP BASF, Antwerp, Belgium, 14,400 m<sup>3</sup>/d RO
- DWP Pergen, Rotterdam, Zuid Holland, Netherlands, 14,400 m<sup>3</sup>/d RO
- MBR Terneuzen, Terneuzen, Zeeland, Netherlands, 12,000 m<sup>3</sup>/d MBR
- MRO13, MRO14, Hoek, Zeeland, Netherlands, 4,800 m<sup>3</sup>/d RO
- PWP Amsterdam, Amsterdam, North Holland, Netherlands, 3,840 m<sup>3</sup>/d RO

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### SELECTED REFERENCES

#### Plant Supplier (Reuse)

- Zanjan WWTP - Expansion, Zanjan, Zanjan Province, Iran 2015, 40,000 m<sup>3</sup>/d

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### SELECTED REFERENCES

#### EPC Contractor

- Asaloyeh, Asaluyeh, Bushehr Province, Iran 2017, 7,500 m<sup>3</sup>/d MED

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Zanjan WWTP - Expansion, Zanjan, Zanjan Province, Iran 2015, 40,000 m<sup>3</sup>/d

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Valle de Güímar WWTP, Tenerife, Spain 2017, 7,000 m<sup>3</sup>/d Tertiary treatment

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Zuluf Water Treatment Plant, Saudi Arabia 2023, 185,000 m<sup>3</sup>/d  
 Rio Paraguay, Paraguay 2023, 168,000 m<sup>3</sup>/d  
 Salalah IWP, Oman 2021, 120,000 m<sup>3</sup>/d RO  
 Ghubrah 3 IWP, Oman 2020, 300,000 m<sup>3</sup>/d RO  
 Barka 5 IWP, Oman 2020, 100,000 m<sup>3</sup>/d RO  
 Riachuelo System Lot II- Pre-Treatment Plant, Buenos Aires, Argentina 2019, 2,332,800 m<sup>3</sup>/d Other / Unknown  
 Yenikapi Waste Water Treatment Plant, Istanbul, Turkey 2018, 450,000 m<sup>3</sup>/d  
 Shoaiba 3 Expansion II, Saudi Arabia 2018, 250,000 m<sup>3</sup>/d RO  
 Salalah RO Desalination Plant, Oman 2018, 114,000 m<sup>3</sup>/d RO

Shuaibah, Saudi Arabia 2017, 250,000 m<sup>3</sup>/d RO  
 Mirfa IWPP, United Arab Emirates 2014, 238,640 m<sup>3</sup>/d MSF  
 Salalah, Oman 2017, 113,600 m<sup>3</sup>/d RO  
 Atakoy Waste Water Treatment Plant, Istanbul, Turkey 2016, 260,000 m<sup>3</sup>/d  
 Jebel Ali M1, M2, M3, Dubai, United Arab Emirates 2012, 636,452 m<sup>3</sup>/d MSF

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Argentina 2023, 4,464 m<sup>3</sup>/d RO  
 Argentina 2023, 1,113 m<sup>3</sup>/d RO  
 Argentina 2023, 600 m<sup>3</sup>/d RO  
 Argentina 2023, 576 m<sup>3</sup>/d RO  
 Argentina 2023, 432 m<sup>3</sup>/d RO  
 Argentina 2023, 360 m<sup>3</sup>/d RO  
 Argentina 2023, 240 m<sup>3</sup>/d RO  
 CO<sub>2</sub> Stripping for Eramine Sudamericana S.A., Argentina 2022, 43,113 m<sup>3</sup>/d Other / Unknown  
 Brine Oxidation for Eramine Sudamericana S.A., Argentina 2022, 41,760 m<sup>3</sup>/d ED  
 Niroflex UF/BWRO for EGAT Steel Factory, Egypt 2022, 9,600 m<sup>3</sup>/d  
 Argentina 2022, 2,640 m<sup>3</sup>/d RO  
 Ultrafiltration for BRF SEROPÉDICA, Brazil 2022, 1,000 m<sup>3</sup>/d  
 Brazil 2022, 999 m<sup>3</sup>/d  
 Argentina 2022, 720 m<sup>3</sup>/d RO  
 Reverse Osmosis for Frio Industrias Argentinas S.A., Argentina 2022, 360 m<sup>3</sup>/d RO  
 Argentina 2022, 360 m<sup>3</sup>/d RO  
 Ultrafiltration for MS Patagonia / Cerro Vanguardia, Argentina 2022, 343 m<sup>3</sup>/d  
 Reverse Osmosis for MS Patagonia / Cerro Vanguardia, Argentina 2022, 240 m<sup>3</sup>/d RO  
 Brazil 2022, 94 m<sup>3</sup>/d RO  
 Reverse Osmosis for MARIO NEJAMKIN, Argentina 2022, 90 m<sup>3</sup>/d RO  
 Argentina 2022, 90 m<sup>3</sup>/d RO  
 DAF for IWSI + Egyptian Ministry of Housing, Egypt 2021, 40,000 m<sup>3</sup>/d Other / Unknown  
 Ultrafiltration for SEARA SMO, Brazil 2021, 3,600 m<sup>3</sup>/d  
 Brazil 2021, 3,600 m<sup>3</sup>/d  
 Ion Exchange WTP for Minera Exar, Argentina 2021, 2,592 m<sup>3</sup>/d Other / Unknown  
 Niroflex UF for Vinhar Construction, Philippines 2021, 1,500 m<sup>3</sup>/d  
 1 x NIROBOX SW-XL, Anguilla 2021, 1,000 m<sup>3</sup>/d RO  
 1 x NIROBOX SW-XL, Barbados 2021, 1,000 m<sup>3</sup>/d RO  
 1 x NIROBOX SW-XL, Saint Lucia 2021, 1,000 m<sup>3</sup>/d RO  
 Reverse Osmosis for BRF CONCÓRDIA, Brazil 2021, 960 m<sup>3</sup>/d RO  
 Ion Exchange for Ghezan Hnos, Argentina 2021, 206 m<sup>3</sup>/d Other / Unknown

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- Multimedia Filter for L&A Ingenieria, Argentina 2021, 48 m<sup>3</sup>/d  
Ion Exchange for Organización Asesora Industrial, Argentina 2021, 36 m<sup>3</sup>/d Other / Unknown  
Ion Exchange for Ecolab Argentina, Argentina 2021, 24 m<sup>3</sup>/d Other / Unknown  
Ozonization System for Laboratorio Drag Pharma, Chile 2021, 24 m<sup>3</sup>/d Other / Unknown  
SWRO for Compesa, Brazil 2020, 1,728 m<sup>3</sup>/d RO  
Ion Exchange for VASA, Argentina 2020, 1,056 m<sup>3</sup>/d Other / Unknown  
2 x Niroflex MF for Community Water and Sanitation Agency/Ghana, Endwa-Aponsie-Brofoyedur-Akonfodi, Ghana 2020, 960 m<sup>3</sup>/d  
Reverse Osmosis for IVESS, Argentina 2020, 864 m<sup>3</sup>/d RO  
Ozonization System for Aguas SRL, Argentina 2020, 840 m<sup>3</sup>/d Other / Unknown  
Niroflex MF for Community Water and Sanitation Agency/Ghana, Asamankese-Achiase, Ghana 2020, 720 m<sup>3</sup>/d  
Niroflex MF for Community Water and Sanitation Agency/Ghana, Assin Praso (Manso-Jameso Nkwanta), Ghana 2020, 600 m<sup>3</sup>/d  
AKPH SUBIN (61), Efiefieso-Subin-Ameyaw-Akwaboso, Ghana 2020, 600 m<sup>3</sup>/d  
SUPH SUBIN (62), Efiefieso-Subin-Ameyaw-Akwaboso, Ghana 2020, 600 m<sup>3</sup>/d  
Niroflex MF for Community Water and Sanitation Agency/Ghana, Mankrando, Ghana 2020, 480 m<sup>3</sup>/d  
Ozonization System for Fischetti SRL, Argentina 2020, 480 m<sup>3</sup>/d Other / Unknown  
Activated Carbon Filter for Río Cordillerano, Argentina 2020, 144 m<sup>3</sup>/d Other / Unknown  
Ozonization System for Roemmers, Argentina 2020, 144 m<sup>3</sup>/d Other / Unknown  
GAC+2 Stage BWRO for OF OZ, Israel 2020, 132 m<sup>3</sup>/d RO  
Ion Exchange for Ghezan Hnos, Argentina 2020, 120 m<sup>3</sup>/d Other / Unknown  
Ion Exchange for Gerdau, Brazil 2019, 3,360 m<sup>3</sup>/d Other / Unknown  
Activated Carbon Filter for Fía SA, Argentina 2020, 60 m<sup>3</sup>/d  
Ion Exchange for Ghezan Hnos, Argentina 2020, 60 m<sup>3</sup>/d Other / Unknown  
Ion Exchange for Ghezan Hnos, Argentina 2020, 60 m<sup>3</sup>/d Other / Unknown  
Ion Exchange for Ghezan Hnos, Argentina 2020, 42 m<sup>3</sup>/d Other / Unknown  
Ozonization System for Molino Cañuelas, Argentina 2020, 36 m<sup>3</sup>/d Other / Unknown  
Ozonization System for Roemmers, Argentina 2020, 24 m<sup>3</sup>/d Other / Unknown  
Ion Exchange for Eramine Sudamericana S.A., Argentina 2019, 9,768 m<sup>3</sup>/d Other / Unknown  
Activated Carbon Filter WTP for DVS Construcciones SA, Argentina 2019, 6,240 m<sup>3</sup>/d  
Mixed Beds WTP for DVS Construcciones SA, Argentina 2019, 6,240 m<sup>3</sup>/d Other / Unknown  
5 X NIROBOX-SW-XL, Abu Dhabi, United Arab Emirates 2019, 5,000 m<sup>3</sup>/d  
Ultrafiltration for CSP, Brazil 2019, 4,800 m<sup>3</sup>/d  
Self-cleaning Disc Filter or Evonik, Brazil 2019, 3,600 m<sup>3</sup>/d Other / Unknown  
Softener for CPKELCO, Brazil 2019, 840 m<sup>3</sup>/d Other / Unknown  
Ultraviolet for Coca-Cola Femsa, Argentina 2019, 600 m<sup>3</sup>/d Other / Unknown  
Ozone Generator for Roemmers, Argentina 2019, 288 m<sup>3</sup>/d Other / Unknown  
Ultrafiltration WTP for Agua Potable de Jujuy, Argentina 2019, 144 m<sup>3</sup>/d  
Ozonization System WTP for Agua Potable de Jujuy, Argentina 2019, 144 m<sup>3</sup>/d Other / Unknown  
Contact Tank for Emprenor SRL, Argentina 2019, 96 m<sup>3</sup>/d Other / Unknown  
Ozonization System for Atina Comercial, Argentina 2019, 36 m<sup>3</sup>/d Other / Unknown  
Reverse Osmosis for Bemis Argentina SAU, Argentina 2019, 24 m<sup>3</sup>/d RO  
Nirobox units, Egypt 2018, 12,000 12 RO  
Multimedia Filters WTP for Aguas Bonaerenses S.A., Argentina 2018, 3,240 m<sup>3</sup>/d  
Ultraviolet WTP for Aguas Bonaerenses S.A., Argentina 2018, 3,240 m<sup>3</sup>/d Other / Unknown  
BWRO for Fuentes Renovables de Energía S.A., Argentina 2018, 3,216 m<sup>3</sup>/d RO  
Ultraviolet for Compañía Salus S.A., Uruguay 2018, 2,880 m<sup>3</sup>/d Other / Unknown  
Ultrafiltration WTP for Genelba Plus, Argentina 2018, 2,652 m<sup>3</sup>/d  
Activated Carbon Filter WTP for Alimentos de Soja - ADES, Argentina 2018, 2,400 m<sup>3</sup>/d  
Ultrafiltration WTP for Alimentos de Soja - ADES, Argentina 2018, 2,400 m<sup>3</sup>/d  
Ultrafiltration WTP for Alimentos de Soja - ADES, Argentina 2018, 2,090 m<sup>3</sup>/d  
Retrofitting UF/RO for Solar, Brazil 2018, 1,968 m<sup>3</sup>/d  
Ion Exchange WTP for Alimentos de Soja - ADES, Argentina 2018, 1,680 m<sup>3</sup>/d Other / Unknown  
Ultrafiltration WTP for Fuentes Renovables de Energía S.A., Argentina 2018, 1,488 m<sup>3</sup>/d  
Ozonization System for FEMSA (Planta Alcorta), Argentina 2018, 1,440 m<sup>3</sup>/d Other / Unknown  
Self-Cleaning Disc Filter for Nestlé, Brazil 2018, 1,440 m<sup>3</sup>/d Other / Unknown  
Ion Exchange for La Campagnola, Argentina 2018, 1,200 m<sup>3</sup>/d Other / Unknown  
Reverse Osmosis for CCA Necochea, Argentina 2018, 720 m<sup>3</sup>/d RO  
Desmineralization for Nestlé, Brazil 2018, 720 m<sup>3</sup>/d Other / Unknown  
Activated Carbon Filter for Nestlé, Brazil 2018, 720 m<sup>3</sup>/d  
Activated Carbon Filter for Nestlé, Brazil 2018, 624 m<sup>3</sup>/d  
Ultraviolet for Coca Cola de Argentina, Argentina 2018, 600 m<sup>3</sup>/d Other / Unknown  
Activated Carbon Filter for Ball, Brazil 2018, 480 m<sup>3</sup>/d  
Ultraviolet for laboratorio Bernabó, Argentina 2018, 480 m<sup>3</sup>/d Other / Unknown  
Ultrafiltration WTP for BASF, Argentina 2018, 294 m<sup>3</sup>/d  
Ultrafiltration for Minera San Cristobal SA, Bolivia 2018, 278 m<sup>3</sup>/d  
EDI WTP for Fuentes Renovables de Energía S.A., Argentina 2018, 240 m<sup>3</sup>/d ED  
Reverse Osmosis for Mina Coimolache, Peru 2018, 240 m<sup>3</sup>/d RO  
Multimedia Filters for Coca Cola de Argentina, Argentina 2018, 192 m<sup>3</sup>/d  
Reverse Osmosis DP for Lestar Química, Argentina 2018, 192 m<sup>3</sup>/d RO  
EDI WTP for Genelba Plus, Argentina 2018, 144 m<sup>3</sup>/d ED  
Ultraviolet for Genelba Plus, Argentina 2018, 144 m<sup>3</sup>/d Other / Unknown  
Reverse Osmosis DP WTP for BASF, Argentina 2018, 120 m<sup>3</sup>/d RO  
Ion Exchange for Lican Paraguay S.A., Argentina 2018, 96 m<sup>3</sup>/d Other / Unknown

- Activated Carbon Filter for Pemahue, Argentina 2018, 84 m<sup>3</sup>/d  
 Activated Carbon Filter for Jesús Loyola, Argentina 2018, 83 m<sup>3</sup>/d  
 Multimedia Filters WTP for Alimentos de Soja - ADES, Argentina 2018, 74 m<sup>3</sup>/d  
 Ozonization System for Hielo Polarito, Argentina 2018, 48 m<sup>3</sup>/d  
 Other / Unknown  
 Ion Exchange for La Yungere, Argentina 2018, 48 m<sup>3</sup>/d Other / Unknown  
 Activated Carbon Filter for Borneo Cerveza Artesanal, Argentina 2018, 45 m<sup>3</sup>/d  
 Activated Carbon Filter for Química Mar del Plata SA, Argentina 2018, 31 m<sup>3</sup>/d  
 Ultrafiltration WTP for Chongón, Ecuador 2017, 51,840 m<sup>3</sup>/d  
 5 X NIROBOX SW-XL, Mauritania 2017, 5,000 m<sup>3</sup>/d  
 Reverse Osmosis for Minera del Altiplano, Salta, Argentina 2017, 3,000 m<sup>3</sup>/d RO  
 Ultrafiltration WTP for Interagua LTDA, Guayaquil, Ecuador 2017, 2,880 m<sup>3</sup>/d  
 Reverse Osmosis for Aguas Bonaerenses, Buenos Aires, Argentina 2017, 2,400 m<sup>3</sup>/d RO  
 Reverse Osmosis WTP or Gandules, Sullana, Peru 2017, 2,400 m<sup>3</sup>/d RO  
 DP Reverse Osmosis for Central Térmica Barker, Barker, Argentina 2017, 2,294 m<sup>3</sup>/d RO  
 DP Reverse Osmosis for Central Térmica Villa María, Córdoba, Argentina 2017, 2,294 m<sup>3</sup>/d RO  
 EDI for Central Térmica Villa María, Córdoba, Argentina 2017, 2,179 m<sup>3</sup>/d ED  
 2 X NIROBOX SW-XL, Mexico 2017, 2,000 m<sup>3</sup>/d RO  
 Reverse Osmosis for Central Térmica Renova, Santa Fe, Argentina 2017, 1,776 m<sup>3</sup>/d RO  
 EDI for Central Térmica Renova, Sante Fe, Argentina 2017, 1,680 m<sup>3</sup>/d ED  
 Reverse Osmosis for Ingenio Bella Vista, Tucumán, Argentina 2017, 1,440 m<sup>3</sup>/d RO  
 Ozonation System WTP or Nutreco Alimentos, Buenos Aires, Argentina 2017, 1,104 m<sup>3</sup>/d Other / Unknown  
 Reverse Osmosis for Embotelladoras Chilenas Unidas SA, Santiago de Chile, Chile 2017, 960 m<sup>3</sup>/d RO  
 Reverse Osmosis for Jaureguy SAICyA, Buenos Aires, Argentina 2017, 960 m<sup>3</sup>/d RO  
 DP Reverse Osmosis for Genneia, Bragado, Argentina 2017, 840 m<sup>3</sup>/d RO  
 EDI for Genneia, Bragado, Argentina 2017, 840 m<sup>3</sup>/d ED  
 Italy, Rocafuerte 2017, 216 m<sup>3</sup>/d RO  
 EcoBox WTP for Minera La Arena, Huamachuco, Peru 2017, 185 m<sup>3</sup>/d Other / Unknown  
 DP Reverse Osmosis WTP for Basf Argentina, Santa Fe, Argentina 2017, 120 m<sup>3</sup>/d RO  
 DP Reverse Osmosis WTP for Minera Exar, Jujuy, Argentina 2017, 120 m<sup>3</sup>/d RO  
 Reverse Osmosis for Intel, Israel 2016, 6,000 m<sup>3</sup>/d RO  
 Ultraviolet for Danisco Argentina S.A., Córdoba, Argentina 2016, 4,800 m<sup>3</sup>/d Other / Unknown  
 Multimedia Filters for Aguas Bonaerenses S.A. Planta Lincoln, Buenos Aires, Argentina 2016, 3,432 m<sup>3</sup>/d  
 Reverse Osmosis for Aguas Bonaerenses S.A. Planta Lincoln, Buenos Aires, Argentina 2016, 2,400 m<sup>3</sup>/d RO  
 Reverse Osmosis for ARCOR SAIC, Córdoba, Argentina 2016, 2,160 m<sup>3</sup>/d RO  
 Wastewater Treatment Plant for Cervecería y Maltería Quilmes, Zarate, Argentina 2016, 1,200 m<sup>3</sup>/d  
 DP Reverse Osmosis for Bina Pharma, Buenos Aires, Argentina 2016, 120 m<sup>3</sup>/d RO  
 Filtration Media for Ewy Walter, Buenos Aires, Argentina 2016  
 UF, BWRO for PDVSA, Venezuela 2015, 200,000 m<sup>3</sup>/d  
 Ultrafiltration for PBB Polisur S.A., Buenos Aires, Argentina 2015, 180,000 m<sup>3</sup>/d
- Ultraviolet for Reginald Lee S.A., Buenos Aires, Argentina 2015, 8,400 m<sup>3</sup>/d Other / Unknown  
 Ultraviolet for EMBOL S.A., Santa Cruz de la Sierra, Bolivia 2015, 3,840 m<sup>3</sup>/d Other / Unknown  
 Ozonation System for Montevideo Refrescos, Montevideo, Uruguay 2015, 1,488 m<sup>3</sup>/d Other / Unknown  
 Ultrafiltration for Meranol SACI, Buenos Aires, Argentina 2015, 1,212 m<sup>3</sup>/d  
 BWRO for Multinational Force & Observers, Egypt 2015, 1,200 m<sup>3</sup>/d RO  
 Reverse Osmosis for Tenerife Inversiones, Lima, Peru 2015, 1,200 m<sup>3</sup>/d RO  
 Reverse Osmosis for Meranol SACI, Buenos Aires, Argentina 2015, 840 m<sup>3</sup>/d RO  
 Ultrafiltration for Saint Gobain, Rio de Janeiro, Argentina 2015, 360 m<sup>3</sup>/d  
 Reverse Osmosis for EMBOL S.A., La Paz, Bolivia 2015, 240 m<sup>3</sup>/d RO  
 Ultrafiltration for Sherwim Williams, Sumaré, Argentina 2015, 120 m<sup>3</sup>/d  
 Ultrafiltration for Rassini RNA, Sao Paulo, Argentina 2015, 67 m<sup>3</sup>/d  
 Reverse Osmosis for Sherwim Williams, Sumaré, Argentina 2015, 62 m<sup>3</sup>/d RO  
 Ultrafiltration for Reginald Lee S.A., Buenos Aires, Argentina 2014, 3,840 m<sup>3</sup>/d  
 Activated Carbon Filter for Reginald Lee S.A., Buenos Aires, Argentina 2014, 2,400 m<sup>3</sup>/d  
 Ozonation System for Embotelladoras Chilenas Unidas, Santiago, Chile 2014, 2,040 m<sup>3</sup>/d  
 35 X Mobile Units - Filtration for Angola Border Police, Angola 2014, 1,680 m<sup>3</sup>/d  
 MMF + BWRO for PIM (Pool Equipment Inventory), Alabama, United States 2014, 1,440 m<sup>3</sup>/d  
 Ozonation System for Spal Industria Brasileira de Bebidas, Itabirito, Argentina 2014, 1,200 m<sup>3</sup>/d  
 Guinea, Senegal, Nigeria, Burkina Faso, Togo Mobile Units, Guinea 2014, 1,104 m<sup>3</sup>/d RO  
 Multimedia Filters for Generación Frias S.A., Santiago del Estero, Argentina 2014, 1,104 m<sup>3</sup>/d  
 Ultrafiltration for Embotelladoras Chilenas Unidas, Santiago, Chile 2014, 960 m<sup>3</sup>/d  
 Disc Filtration, UF, 2 Pass RO for P.I.M, Alabama, United States 2014, 720 m<sup>3</sup>/d  
 Arsenic Removal for Generación Frias S.A., Santiago del Estero, Argentina 2014, 600 m<sup>3</sup>/d  
 MMF + AC + AS + BWRO for Milubar, Akko, Israel 2014, 240 m<sup>3</sup>/d  
 Arsenic Removal for EMBOL S.A, Río Seco, Bolivia 2013, 2,400 m<sup>3</sup>/d Other / Unknown  
 Ozone Generator for Eco de los Andes (Nestlé), Mendoza, Argentina 2013, 960 m<sup>3</sup>/d Other / Unknown  
 DAF + UF + SWRO for Azenco-Azerbaijan, Azerbaijan 2013, 600 m<sup>3</sup>/d  
 SWRO for Bangladesh - Police Mobile, Bangladesh 2013, 480 m<sup>3</sup>/d RO  
 MMF + BWRO + EDI for Nesher Ramla, Ramle, Israel 2013, 312 m<sup>3</sup>/d  
 5 x Mobile Units - RO for Bangdesh Border Police, Bangladesh 2013, 240 m<sup>3</sup>/d RO  
 Ultrafiltration for Hospital Sirio Libanes, São Paulo, Argentina 2013, 240 m<sup>3</sup>/d  
 BWRO for Ytung-Pardes Hana, Pardes Hana, Israel 2013, 192 m<sup>3</sup>/d RO  
 SWRO for EDT - Cyprus, Cyprus, Greece 2013, 150 m<sup>3</sup>/d RO  
 Ultrafiltration for Odebrecht, São Paulo, Argentina 2013, 120 m<sup>3</sup>/d  
 2 Pass RO + EDI for Arauco Pulp & Paper, Chile 2012, 3,984 m<sup>3</sup>/d RO  
 Clarifier + MF + UF + BWRO + EDI for Termos Sierra, Colombia 2012, 1,080 m<sup>3</sup>/d  
 Reverse Osmosis for La Jolla, Asia, Peru 2012, 864 m<sup>3</sup>/d RO

# IDRA

## DESALINATION & REUSE HANDBOOK

Reverse Osmosis for Cerro Vanguardia, Puerto San Julián, Argentina 2012, 720 m<sup>3</sup>/d RO  
Reverse Osmosis for Ady Resources Limited, Jujuy, Argentina 2012, 432 m<sup>3</sup>/d RO  
Reverse Osmosis for Aji No Moto, Callao, Peru 2012, 360 m<sup>3</sup>/d RO  
Reverse Osmosis for Conarco Argentina, Buenos Aires, Argentina 2012, 240 m<sup>3</sup>/d RO  
Reverse Osmosis for Ansaldi, Santa Fe, Argentina 2012, 120 m<sup>3</sup>/d RO  
Reverse Osmosis for Shopping Amapá, Macapá, Brazil 2012, 110 m<sup>3</sup>/d RO  
Ultrafiltration for Renault Argentina S.A., Córdoba, Argentina 2012, 84 m<sup>3</sup>/d

### Plant Supplier

São Miguel do Oeste, Brazil 2021, 3,600 m<sup>3</sup>/d Other / Unknown  
Taichung Desalination WWTP, Taiwan 2021, 3,000 m<sup>3</sup>/d RO  
Matadero Central (MACESA), Nicaragua 2021, 2,640 m<sup>3</sup>/d RO  
Fernandez Hnos, Argentina 2021, 54 m<sup>3</sup>/d RO  
Productos Pampeanos SRL, Argentina 2021, 36 m<sup>3</sup>/d RO  
Ecolab Argentina, Argentina 2021, 24 m<sup>3</sup>/d RO  
Maninver SRL, Argentina 2021, 24 m<sup>3</sup>/d RO  
Compañía Industrial Frutihortícola, Argentina 2021, 19 m<sup>3</sup>/d RO  
IWSI + Egyptian Ministry of Housing, Egypt 2020, 12,000 m<sup>3</sup>/d RO  
South Sinai Co./ Sharm El Sheikh, Egypt 2020, 12,000 m<sup>3</sup>/d RO  
Ataqqa Power plant, Egypt 2020, 4,500 m<sup>3</sup>/d RO  
Al Nour Bottling, Egypt 2020, 1,200 m<sup>3</sup>/d RO  
Tetrapack, Argentina 2020, 1,200 m<sup>3</sup>/d RO  
Confidential, Egypt 2020, 1,000 m<sup>3</sup>/d RO  
Taba Hotel, Egypt 2020, 1,000 m<sup>3</sup>/d RO  
Community Water and Sanitation Agency/Ghana, Ghana 2020, 960 m<sup>3</sup>/d RO  
IVESS, Argentina 2020, 864 m<sup>3</sup>/d RO  
Sky link ltd, Ghana 2020, 840 m<sup>3</sup>/d RO  
Minera las Bambas, Peru 2020, 600 m<sup>3</sup>/d RO  
Nouwebaa Hotel, Egypt 2020, 500 m<sup>3</sup>/d RO  
Negev, Israel 2020, 480 m<sup>3</sup>/d RO  
Pampa Energía, Argentina 2020, 384 m<sup>3</sup>/d RO  
TECHINT / Eneva, Brazil 2020, 336 m<sup>3</sup>/d RO  
VASA, Argentina 2020, 324 m<sup>3</sup>/d RO  
Cartocor, Argentina 2020, 264 m<sup>3</sup>/d RO  
Compesa, Brazil 2020, 72 m<sup>3</sup>/d RO  
IVESS, Argentina 2020, 36 m<sup>3</sup>/d RO  
South Africa 2020, 24 m<sup>3</sup>/d RO  
Select Energy, United States 2020, 15 m<sup>3</sup>/d RO  
Mario Nejamkin, Argentina 2020, 12 m<sup>3</sup>/d RO  
Química Garvey, Argentina 2020, 12 m<sup>3</sup>/d RO  
Campos de Frutilla SRL, Argentina 2020, 6 m<sup>3</sup>/d RO  
Failde Iván, Argentina 2020, 6 m<sup>3</sup>/d RO  
IVESS, Argentina 2020, 6 m<sup>3</sup>/d RO  
Universidad del Chaco Austral, Argentina 2020, 6 m<sup>3</sup>/d RO  
Federal Government of Ivory Coast, Abidjan, Côte d'Ivoire 2019, 150,000 m<sup>3</sup>/d RO  
IWSI + Egyptian Ministry of Housing, Egypt 2019, 40,000 m<sup>3</sup>/d RO  
State Water Commission of Baja California, Mexico, Mexico 2019, 22,000 m<sup>3</sup>/d RO  
Brazil 2019, 12,000 m<sup>3</sup>/d Other / Unknown

Argentina 2019, 11,088 m<sup>3</sup>/d RO  
Ma'ayan Zvi, Israel 2019, 10,500 m<sup>3</sup>/d MABR  
Wastewater Treatment Plant, Lima, Peru 2019, 9,600 m<sup>3</sup>/d RO  
Brazil 2019, 6,960 m<sup>3</sup>/d RO  
SV Project PS3, Cambodia 2019, 6,100 m<sup>3</sup>/d MABR  
Marina 1, Egypt 2019, 5,000 m<sup>3</sup>/d RO  
Marina 2, Egypt 2019, 5,000 m<sup>3</sup>/d RO  
Paracas, Peru 2019, 5,000 m<sup>3</sup>/d RO  
Middle East RO, Middle East 2019, 5,000 m<sup>3</sup>/d RO  
SV Project-PS1, Cambodia 2019, 4,500 m<sup>3</sup>/d MABR  
SV Project-PS2, Cambodia 2019, 4,500 m<sup>3</sup>/d MABR  
G&F, Taiwan 2019, 4,000 m<sup>3</sup>/d RO  
Brazil 2019, 3,240 m<sup>3</sup>/d RO  
Brazil 2019, 3,240 m<sup>3</sup>/d RO  
Bimini, Bahamas 2019, 3,000 m<sup>3</sup>/d RO  
Liaoning Panjin, China 2019, 3,000 m<sup>3</sup>/d MABR  
Colbeck, Jamaica 2019, 2,580 m<sup>3</sup>/d MABR  
Brazil 2019, 2,400 m<sup>3</sup>/d RO  
Argentina 2019, 2,400 m<sup>3</sup>/d RO  
Buenos Aires, Argentina 2019, 2,268 m<sup>3</sup>/d RO  
Argentina 2019, 2,112 m<sup>3</sup>/d RO  
Marbella, Egypt 2019, 2,000 m<sup>3</sup>/d RO  
Berazategui, Argentina 2019, 1,730 m<sup>3</sup>/d RO  
Argentina 2019, 1,548 m<sup>3</sup>/d RO  
Haiphong 1, Vietnam 2019, 1,500 m<sup>3</sup>/d RO  
Haiphong 2, Vietnam 2019, 1,500 m<sup>3</sup>/d RO  
Perth 2, Jamaica 2019, 1,400 m<sup>3</sup>/d MABR  
G&F, Taiwan 2019, 1,200 m<sup>3</sup>/d RO  
Paraguay 2019, 1,200 m<sup>3</sup>/d RO  
Nangan and Dong Islands, Taiwan 2019, 1,200 m<sup>3</sup>/d RO  
Siping, China 2019, 1,200 m<sup>3</sup>/d MABR  
Mianzhu, China 2019, 1,200 m<sup>3</sup>/d MABR  
Wuzhi, China 2019, 1,200 m<sup>3</sup>/d MABR  
New Mexico, United States 2019, 1,130 m<sup>3</sup>/d RO  
Project for Hotel & Resort, Antigua and Barbuda 2019, 1,000 m<sup>3</sup>/d RO  
Cebu, Philippines 2019, 1,000 m<sup>3</sup>/d RO  
Power Plant, Puerto Rico 2019, 1,000 m<sup>3</sup>/d RO  
Zhenfeng, China 2019, 1,000 m<sup>3</sup>/d MABR  
Zhengfeng Baiceng Town, China 2019, 1,000 m<sup>3</sup>/d MABR  
Panjing WWTP, China 2019, 1,000 m<sup>3</sup>/d MABR  
Arsi University, Ethiopia 2019, 1,000 m<sup>3</sup>/d MABR  
Argentina 2019, 912 m<sup>3</sup>/d RO  
Xie Lin Gang, Yiyang, Hunan, China 2019, 800 m<sup>3</sup>/d MABR  
Montevideo, Uruguay 2019, 792 m<sup>3</sup>/d RO  
Brazil 2019, 768 m<sup>3</sup>/d RO  
Argentina 2019, 768 m<sup>3</sup>/d Other / Unknown  
Argentina 2019, 720 m<sup>3</sup>/d RO  
Friendship, Jamaica 2019, 670 m<sup>3</sup>/d MABR  
Lin'An Zhejiang, China 2019, 600 m<sup>3</sup>/d MABR  
Huoqiu County 10, China 2019, 600 m<sup>3</sup>/d MABR  
Huoqiu County 11, China 2019, 600 m<sup>3</sup>/d MABR  
Huoqiu County 12, China 2019, 600 m<sup>3</sup>/d MABR  
Huoqiu County 13, China 2019, 600 m<sup>3</sup>/d MABR  
Huoqiu County 14, China 2019, 600 m<sup>3</sup>/d MABR  
Huoqiu County 15, China 2019, 600 m<sup>3</sup>/d MABR  
Project for Hotel & Resort, Philippines 2019, 500 m<sup>3</sup>/d RO  
Baoding Jinxianhe, China 2019, 500 m<sup>3</sup>/d MABR

- Huoqiu County 1, China 2019, 500 m<sup>3</sup>/d MABR  
 Huoqiu County 2, China 2019, 500 m<sup>3</sup>/d MABR  
 Huoqiu County 3, China 2019, 500 m<sup>3</sup>/d MABR  
 Huoqiu County 4, China 2019, 500 m<sup>3</sup>/d MABR  
 Huoqiu County 5, China 2019, 500 m<sup>3</sup>/d MABR  
 Huoqiu County 6, China 2019, 500 m<sup>3</sup>/d MABR  
 Huoqiu County 7, China 2019, 500 m<sup>3</sup>/d MABR  
 Huoqiu County 8, China 2019, 500 m<sup>3</sup>/d MABR  
 Huoqiu County 9, China 2019, 500 m<sup>3</sup>/d MABR  
 Beijing Railway, China 2019, 500 m<sup>3</sup>/d MABR  
 Brazil 2019, 480 m<sup>3</sup>/d RO  
 Zenity Shucheng, China 2019, 450 m<sup>3</sup>/d MABR  
 Sta Rosa Laguna, Philippines 2019, 400 m<sup>3</sup>/d MABR  
 Westgrove, Philippines 2019, 400 m<sup>3</sup>/d MABR  
 Alviera, Porac Pampanga, Philippines 2019, 400 m<sup>3</sup>/d MABR  
 Santa Rosa Laguna, Philippines 2019, 400 m<sup>3</sup>/d MABR  
 Buenos Aires, Argentina 2019, 324 m<sup>3</sup>/d RO  
 Mekelle University, Tigray, Ethiopia 2019, 320 m<sup>3</sup>/d MABR  
 Yanlan Xiong County, China 2019, 310 m<sup>3</sup>/d MABR  
 Luoyang, China 2019, 300 m<sup>3</sup>/d MABR  
 Rio de Janeiro, Brazil 2019, 288 m<sup>3</sup>/d RO  
 Medellin, Colombia 2019, 288 m<sup>3</sup>/d RO  
 Sorocaba, Brazil 2019, 240 m<sup>3</sup>/d RO  
 Lima, Peru 2019, 240 m<sup>3</sup>/d RO  
 Argentina 2019, 240 m<sup>3</sup>/d RO  
 Lio Palawan, Philippines 2019, 200 m<sup>3</sup>/d MABR  
 Sicogon, Iloilo, Philippines 2019, 200 m<sup>3</sup>/d MABR  
 Ningxia Helan, China 2019, 200 m<sup>3</sup>/d MABR  
 Hubei Highway 44, China 2019, 200 m<sup>3</sup>/d MABR  
 Hubei Highway 45, China 2019, 200 m<sup>3</sup>/d MABR  
 Hubei Highway 46, China 2019, 200 m<sup>3</sup>/d MABR  
 Hubei Highway 47, China 2019, 200 m<sup>3</sup>/d MABR  
 Hubei Highway 48, China 2019, 200 m<sup>3</sup>/d MABR  
 Hubei Highway 49, China 2019, 200 m<sup>3</sup>/d MABR  
 Hubei Highway 50, China 2019, 200 m<sup>3</sup>/d MABR  
 Hubei Highway 51, China 2019, 200 m<sup>3</sup>/d MABR  
 Hubei Highway 52, China 2019, 200 m<sup>3</sup>/d MABR  
 Hubei Highway 53, China 2019, 200 m<sup>3</sup>/d MABR  
 Hubei Highway 54, China 2019, 200 m<sup>3</sup>/d MABR  
 Hubei Highway 55, China 2019, 200 m<sup>3</sup>/d MABR  
 Hubei Highway 56, China 2019, 200 m<sup>3</sup>/d MABR  
 Hubei Highway 57, China 2019, 200 m<sup>3</sup>/d MABR  
 Hubei Highway 58, China 2019, 200 m<sup>3</sup>/d MABR  
 Hubei Highway 59, China 2019, 200 m<sup>3</sup>/d MABR  
 Hubei Highway 60, China 2019, 200 m<sup>3</sup>/d MABR  
 Hubei Highway 61, China 2019, 200 m<sup>3</sup>/d MABR  
 Hubei Highway 62, China 2019, 200 m<sup>3</sup>/d MABR  
 Hubei Highway 63, China 2019, 200 m<sup>3</sup>/d MABR  
 Hubei Highway 64, China 2019, 200 m<sup>3</sup>/d MABR  
 Hubei Highway 65, China 2019, 200 m<sup>3</sup>/d MABR  
 Hubei Highway 66, China 2019, 200 m<sup>3</sup>/d MABR  
 Hubei Highway 67, China 2019, 200 m<sup>3</sup>/d MABR  
 Bolivia 2019, 194 m<sup>3</sup>/d RO  
 Buenos Aires, Argentina 2019, 192 m<sup>3</sup>/d RO  
 Minneapolis, United States 2019, 192 m<sup>3</sup>/d RO  
 Argentina 2019, 192 m<sup>3</sup>/d RO  
 Marinelli SA, Argentina 2019, 192 m<sup>3</sup>/d RO  
 Argentina 2019, 192 m<sup>3</sup>/d RO  
 REPI Housing Development, Ethiopia 2019, 185 m<sup>3</sup>/d MABR  
 Argentina 2019, 168 m<sup>3</sup>/d RO  
 Brazil 2019, 168 m<sup>3</sup>/d RO  
 Argentina 2019, 168 m<sup>3</sup>/d RO  
 Buenos Aires, Argentina 2019, 161 m<sup>3</sup>/d RO  
 Argentina 2019, 144 m<sup>3</sup>/d RO  
 Argentina 2019, 144 m<sup>3</sup>/d RO  
 Ambev, Brazil 2019, 135 m<sup>3</sup>/d RO  
 LNG Worksit, Texas, United States 2019, 125 m<sup>3</sup>/d MABR  
 Argentina 2019, 120 m<sup>3</sup>/d RO  
 Brazil 2019, 120 m<sup>3</sup>/d RO  
 Posorja, Ecuador 2019, 120 m<sup>3</sup>/d MABR  
 Rosario, Argentina 2019, 120 m<sup>3</sup>/d RO  
 Hubei Highway 37, China 2019, 100 m<sup>3</sup>/d MABR  
 Hubei Highway 38, China 2019, 100 m<sup>3</sup>/d MABR  
 Hubei Highway 39, China 2019, 100 m<sup>3</sup>/d MABR  
 Hubei Highway 40, China 2019, 100 m<sup>3</sup>/d MABR  
 Hubei Highway 41, China 2019, 100 m<sup>3</sup>/d MABR  
 Hubei Highway 42, China 2019, 100 m<sup>3</sup>/d MABR  
 Hubei Highway 43, China 2019, 100 m<sup>3</sup>/d MABR  
 Argentina 2019, 90 m<sup>3</sup>/d RO  
 Tonglu Meirong, China 2019, 80 m<sup>3</sup>/d MABR  
 Kingston, Jamaica 2019, 80 m<sup>3</sup>/d MABR  
 One Thousand Trails, United States 2019, 70 m<sup>3</sup>/d MABR  
 Pilar, Argentina 2019, 60 m<sup>3</sup>/d MABR  
 Argentina 2019, 54 m<sup>3</sup>/d RO  
 Argentina 2019, 54 m<sup>3</sup>/d RO  
 Argentina 2019, 54 m<sup>3</sup>/d RO  
 Hangzhou Hongyu, China 2019, 50 m<sup>3</sup>/d MABR  
 Argentina 2019, 48 m<sup>3</sup>/d RO  
 Inner Mongolia, China 2019, 35 m<sup>3</sup>/d MABR  
 Wuwei County, China 2019, 30 m<sup>3</sup>/d MABR  
 Argentina 2019, 24 m<sup>3</sup>/d RO  
 San Luis, Argentina 2019, 24 m<sup>3</sup>/d RO  
 Argentina 2019, 24 m<sup>3</sup>/d RO  
 Argentina 2019, 24 m<sup>3</sup>/d RO  
 Chivilvoy, Argentina 2019, 24 m<sup>3</sup>/d RO  
 Liaoning Antu, China 2019, 20 m<sup>3</sup>/d MABR  
 Beijing Highway, China 2019, 20 m<sup>3</sup>/d MABR  
 Hubei Highway 36, China 2019, 20 m<sup>3</sup>/d MABR  
 Argentina 2019, 18 m<sup>3</sup>/d RO  
 Hubei Highway 1, China 2019, 15 m<sup>3</sup>/d MABR  
 Hubei Highway 2, China 2019, 15 m<sup>3</sup>/d MABR  
 Hubei Highway 3, China 2019, 15 m<sup>3</sup>/d MABR  
 Hubei Highway 4, China 2019, 15 m<sup>3</sup>/d MABR  
 Hubei Highway 5, China 2019, 15 m<sup>3</sup>/d MABR  
 Hubei Highway 6, China 2019, 15 m<sup>3</sup>/d MABR  
 Hubei Highway 7, China 2019, 15 m<sup>3</sup>/d MABR  
 Hubei Highway 8, China 2019, 15 m<sup>3</sup>/d MABR  
 Hubei Highway 9, China 2019, 15 m<sup>3</sup>/d MABR  
 Hubei Highway 10, China 2019, 15 m<sup>3</sup>/d MABR  
 Hubei Highway 11, China 2019, 15 m<sup>3</sup>/d MABR  
 Hubei Highway 12, China 2019, 15 m<sup>3</sup>/d MABR  
 Hubei Highway 13, China 2019, 15 m<sup>3</sup>/d MABR  
 Hubei Highway 14, China 2019, 15 m<sup>3</sup>/d MABR  
 Hubei Highway 15, China 2019, 15 m<sup>3</sup>/d MABR

**IDRA**  
**DESALINATION & REUSE**  
**HANDBOOK**

Hubei Highway 16, China 2019, 15 m<sup>3</sup>/d MABR  
Hubei Highway 17, China 2019, 15 m<sup>3</sup>/d MABR  
Hubei Highway 18, China 2019, 15 m<sup>3</sup>/d MABR  
Hubei Highway 19, China 2019, 15 m<sup>3</sup>/d MABR  
Hubei Highway 20, China 2019, 15 m<sup>3</sup>/d MABR  
Hubei Highway 21, China 2019, 15 m<sup>3</sup>/d MABR  
Hubei Highway 22, China 2019, 15 m<sup>3</sup>/d MABR  
Hubei Highway 23, China 2019, 15 m<sup>3</sup>/d MABR  
Hubei Highway 24, China 2019, 15 m<sup>3</sup>/d MABR  
Hubei Highway 25, China 2019, 15 m<sup>3</sup>/d MABR  
Hubei Highway 26, China 2019, 15 m<sup>3</sup>/d MABR  
Hubei Highway 27, China 2019, 15 m<sup>3</sup>/d MABR  
Hubei Highway 28, China 2019, 15 m<sup>3</sup>/d MABR  
Hubei Highway 29, China 2019, 15 m<sup>3</sup>/d MABR  
Hubei Highway 30, China 2019, 15 m<sup>3</sup>/d MABR  
Hubei Highway 31, China 2019, 15 m<sup>3</sup>/d MABR  
Hubei Highway 32, China 2019, 15 m<sup>3</sup>/d MABR  
Hubei Highway 33, China 2019, 15 m<sup>3</sup>/d MABR  
Hubei Highway 34, China 2019, 15 m<sup>3</sup>/d MABR  
Hubei Highway 35, China 2019, 15 m<sup>3</sup>/d MABR  
Mar del Plata, Argentina 2019, 12 m<sup>3</sup>/d RO  
Argentina 2019, 12 m<sup>3</sup>/d RO  
Mar de Plata, Argentina 2019, 12 m<sup>3</sup>/d RO  
Argentina 2019, 12 m<sup>3</sup>/d RO  
Buenos Aires, Argentina 2019, 12 m<sup>3</sup>/d RO  
Buenos Aires, Argentina 2019, 12 m<sup>3</sup>/d RO  
Buenos Aires, Argentina 2019, 7 m<sup>3</sup>/d RO  
Pergamino, Argentina 2019, 6 m<sup>3</sup>/d RO  
Argentina 2019, 6 m<sup>3</sup>/d RO  
Santiago, Chile 2019, 6 m<sup>3</sup>/d RO  
Genelba Plus, Argentina 2018, 13,608 m<sup>3</sup>/d RO  
Philippines 2018, 1,000 m<sup>3</sup>/d RO  
Philippines, Cebu 2018, 500 m<sup>3</sup>/d RO  
Manila, Philippines 2018, 400 m<sup>3</sup>/d MBR  
Sanofi, Brazil 2018, 192 m<sup>3</sup>/d RO  
Mining, Peru 2018, 187 m<sup>3</sup>/d RO  
Hefei, Hefei Province, China 2018, 40 m<sup>3</sup>/d Tertiary treatment  
Island of Mayotte (Petite Terre), Mayotte 2017, 3,000 m<sup>3</sup>/d RO  
Quzhou, Zhejiang Province China, China 2017, 40 m<sup>3</sup>/d Tertiary treatment  
San Quintin, Mexico 2016, 21,600 m<sup>3</sup>/d RO  
Richards Bay, South Africa 2016, 10,000 m<sup>3</sup>/d RO  
South Africa 2016, 10,000 m<sup>3</sup>/d RO  
Isla de Cedros, Mexico 2016, 400 m<sup>3</sup>/d RO  
Bordeaux, Saint Thomas, U.S. Virgin Islands 2016, 100 m<sup>3</sup>/d Tertiary treatment  
Mozambique 2016, 50 m<sup>3</sup>/d RO  
Vietnam 2016, 30 m<sup>3</sup>/d RO  
Municipalidad de Caleta Olivia, Santa Cruz, Argentina 2015, 12,000 m<sup>3</sup>/d RO  
Kiryat Gat, Israel 2015, 5,040 m<sup>3</sup>/d RO  
STX, Chile 2015, 2,400 m<sup>3</sup>/d RO  
Arca Tucumán, Tucumán, Argentina 2015, 1,680 m<sup>3</sup>/d RO  
Guanacaste, Costa Rica 2015, 1,500 m<sup>3</sup>/d RO  
Municipalidad de Puerto Deseado, Santa Cruz, Argentina 2015, 1,500 m<sup>3</sup>/d RO  
Ivess Jaureguy, Buenos Aires, Argentina 2015, 960 m<sup>3</sup>/d RO  
Aguas Danone de Argentina, Buenos Aires, Argentina 2015, 768 m<sup>3</sup>/d RO  
Administración SAO, Santa Cruz de la Sierra, Bolivia 2015, 720 m<sup>3</sup>/d RO  
Massalin Particulares, Buenos Aires, Argentina 2015, 720 m<sup>3</sup>/d RO  
Ivess Jumillano, Buenos Aires, Argentina 2015, 720 m<sup>3</sup>/d RO  
Generación Frias S.A., Santiago del Estero, Argentina 2015, 600 m<sup>3</sup>/d RO  
Camelot Brasil, Fortaleza, Brazil 2015, 600 m<sup>3</sup>/d RO  
Embotelladoras Chilenas Unidas, Santiago, Chile 2015, 480 m<sup>3</sup>/d RO  
Ivess Rosmino y CIA, Buenos Aires, Argentina 2015, 480 m<sup>3</sup>/d RO  
Braun Medical S.A., Buenos Aires, Argentina 2015, 288 m<sup>3</sup>/d RO  
Sancor La Carlota, Santa Fe, Argentina 2015, 268 m<sup>3</sup>/d RO  
Pepsico - Dilexis Plant, San Juan, Argentina 2015, 264 m<sup>3</sup>/d RO  
PIM (Pooled Equipment Inventory Co.), United States 2015, 240 m<sup>3</sup>/d RO  
Petroquímica de Cuyo, Buenos Aires, Argentina 2015, 192 m<sup>3</sup>/d RO  
Nestlé Magdalena, Buenos Aires, Argentina 2015, 192 m<sup>3</sup>/d RO  
Cementos Pacasmayo, Piura, Peru 2015, 192 m<sup>3</sup>/d RO  
Establecimiento Las Marias, Corrientes, Argentina 2015, 144 m<sup>3</sup>/d RO  
Laboratorio Arboreto, Juiz de fora, Brazil 2015, 120 m<sup>3</sup>/d RO  
Cisper, Sao Paulo, Brazil 2015, 120 m<sup>3</sup>/d RO Basf, Santa Fe, Argentina 2015, 108 m<sup>3</sup>/d RO  
Rizobacter Argentina S.A., Buenos Aires, Argentina 2015, 96 m<sup>3</sup>/d RO  
Dead Sea Works, Dead Sea, Israel 2014, 6,000 m<sup>3</sup>/d RO  
Mobile unit, Memphis, TN, United States 2014, 5,450 m<sup>3</sup>/d RO  
Solar, Fortaleza, Brazil 2014, 3,600 m<sup>3</sup>/d RO  
Solar, Fortaleza, Brazil 2014, 3,600 m<sup>3</sup>/d RO  
Reginald Lee S.A., Buenos Aires, Argentina 2014, 2,400 m<sup>3</sup>/d RO  
Fideicomiso Funes City, Santa Fe, Argentina 2014, 1,200 m<sup>3</sup>/d RO  
Shimal II, Azerbaijan 2014, 1,200 m<sup>3</sup>/d RO  
Fideicomiso Funes City, Santa Fe, Argentina 2014, 1,200 m<sup>3</sup>/d RO  
ROWPU, Maryland, United States 2014, 1,000 m<sup>3</sup>/d RO  
Reginald Lee S.A., Buenos Aires, Argentina 2014, 600 m<sup>3</sup>/d Other / Unknown  
Gramadal, Huarmey, Peru 2014, 576 m<sup>3</sup>/d RO  
Estancias del Lago, Durazno, Uruguay 2014, 336 m<sup>3</sup>/d RO  
Clariant, Rio de Janeiro, Brazil 2014, 324 m<sup>3</sup>/d RO  
Interfarma, Buenos Aires, Argentina 2014, 216 m<sup>3</sup>/d NF  
Guardian do Brasil Vidros Planos Ltda., São Paulo, Brazil 2014, 211 m<sup>3</sup>/d EDI  
Bunge Campana, Buenos Aires, Argentina 2014, 192 m<sup>3</sup>/d RO  
Guardian do Brasil Vidros Planos Ltda., São Paulo, Brazil 2014, 192 m<sup>3</sup>/d RO  
Obras Sanitarias, Buenos Aires, Argentina 2014, 192 m<sup>3</sup>/d RO  
Guardian do Brasil Vidros Planos Ltda., São Paulo, Brazil 2014, 192 m<sup>3</sup>/d RO  
Bunge Campana, Buenos Aires, Argentina 2014, 192 m<sup>3</sup>/d RO  
Embotelladora Puyehue, Puyehue, Chile 2014, 120 m<sup>3</sup>/d RO  
Pri-Chen, Kfar Kara, Israel 2014, 96 m<sup>3</sup>/d RO  
LDC Citrus, Bebedouro, Brazil 2013, 1,728 m<sup>3</sup>/d RO  
Cementos Pacasmayo SAA, Piura, Peru 2013, 1,200 m<sup>3</sup>/d RO  
Petrobrás, Puerto San Martín, Argentina 2013, 960 m<sup>3</sup>/d RO  
Inca Tops, Arequipa, Peru 2013, 624 m<sup>3</sup>/d RO  
MFO North Camp, North Sinai, Egypt 2013, 600 m<sup>3</sup>/d RO  
CCU, Temuco, Chile 2013, 600 m<sup>3</sup>/d RO  
Nestlé, Lima, Peru 2013, 432 m<sup>3</sup>/d RO  
Constructora de Cuyo, Mendoza, Argentina 2013, 360 m<sup>3</sup>/d RO  
Guaracachi S.A., Santa Cruz, Bolivia 2013, 240 m<sup>3</sup>/d EDI  
Larnaca port, Larnaca, Cyprus 2013, 150 m<sup>3</sup>/d RO  
GoldCorp, Perito Moreno, Argentina 2013, 120 m<sup>3</sup>/d RO  
Vista Club, Angola 2013, 96 m<sup>3</sup>/d RO

Sience & Tech. park, Sheyang, China 2013, 30 m<sup>3</sup>/d RO  
 Pacific Rubiales Energy, Colombia 2012, 80,000 m<sup>3</sup>/d RO  
 Granos Bolivia, Santa Cruz, Bolivia 2012, 840 m<sup>3</sup>/d RO  
 Israel Aircraft Industries, Israel 2012, 750 m<sup>3</sup>/d RO  
 Rio Lluta, Chile 2012, 720 m<sup>3</sup>/d RO  
 Peugeot, Brazil 2012, 672 m<sup>3</sup>/d RO  
 Aguas Danone de Argentina, Mendoza, Argentina 2012, 600 m<sup>3</sup>/d RO  
 Israel Electricity Corporation, Israel 2012, 600 m<sup>3</sup>/d RO  
 Bunge, San Gerónimo, Argentina 2012, 480 m<sup>3</sup>/d RO  
 Nestlé, Gran Buenos Aires, Argentina 2012, 288 m<sup>3</sup>/d RO  
 Mitrelli, Angola 2012, 288 m<sup>3</sup>/d RO  
 Guaracachi S.A., Santa Cruz, Bolivia 2012, 264 m<sup>3</sup>/d RO  
 San Cristobal, Bolivia 2012, 240 m<sup>3</sup>/d RO  
 Salta Refrescos, Salta, Argentina 2012, 216 m<sup>3</sup>/d RO  
 Holcim, Latacunga, Ecuador 2012, 144 m<sup>3</sup>/d RO  
 Condominio Paso Chico, Lurín, Lima, Peru 2012, 124 m<sup>3</sup>/d RO  
 Shamba Wells, Kenya 2012, 120 m<sup>3</sup>/d RO  
 Daunia, Australia 2012, 48 m<sup>3</sup>/d RO  
 Nahariya Hospital, Israel 2012, 36 m<sup>3</sup>/d RO  
 Townsville, Australia 2012, 36 m<sup>3</sup>/d RO

## Geo Miller

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[www.geomiller.com](http://www.geomiller.com)

### SELECTED REFERENCES

#### Plant Supplier (Reuse)

Bundi STP, Bundi, Rajasthan, India 2016, 8,000 m<sup>3</sup>/d

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[www.ges.co.il](http://www.ges.co.il)

### SELECTED REFERENCES

#### Plant Supplier (Reuse)

Akko WWTP - Upgrade, \N, Israel 2012, 19,600 m<sup>3</sup>/d Tertiary treatment

## GRC Quantity Surveyors

Australia +61 7 3878 6222  
[www.grcqs.com/people](http://www.grcqs.com/people)

### SELECTED REFERENCES

#### Plant Supplier (Reuse)

Australia Pacific LNG Water Treatment Facility, Brisbane, Australia 2012, 80,000 m<sup>3</sup>/d RO

## Greentech Environmental Co. Ltd.

[www.greentechenv.com](http://www.greentechenv.com)

### SELECTED REFERENCES

#### Systems Integrator

Jincheng Wastewater Expansion Project (Phase 2), Jincheng, China 2022, 120,000 m<sup>3</sup>/d MBR  
 Jincheng Wastewater Expansion Project (Phase 1), Jincheng, China 2022, 35,000 m<sup>3</sup>/d MBR  
 Zijin Mining Wastewater ZLD and Resource Recycling Project, Urad Rear Banner, China 2022, 20,000 m<sup>3</sup>/d RO  
 Lihuayi Weiyuan Chemical Wastewater Reuse Project, Dongying, China 2022, 2,000 m<sup>3</sup>/d RO



# IDRA

## DESALINATION & REUSE HANDBOOK

### Equipment Contractor

Tangshan Nanpu Economic and Technological Development Zone WWTP Upgrading BOT Project, Hebei Province, China 2019, 100,000 m<sup>3</sup>/d UF

Zhang Jia Gang No. 3 Drinking Water Plant Expansion Project, Hebei Province, China 2019, 100,000 m<sup>3</sup>/d NF

Shizuishan No. 5 Drinking Water Plant Project Upgrade, Ningxia Province, China 2019, 27,000 m<sup>3</sup>/d RO

Shandong Rongcheng Bahe RO Advanced Treatment Plant Project, Shandong Province, China 2019, 15,000 m<sup>3</sup>/d RO

Bailonggang WWTP Project Upgrade, Shanghai, China 2019, 5,000 m<sup>3</sup>/d RO

Wuxi Xincheng Water Plant 2 Wastewater Reuse Project, Jiangsu Province, China 2018, 170,000 m<sup>3</sup>/d UF

Zhongning Nor WWTP Upgrading Project, Ningxia, China 2018, 30,000 m<sup>3</sup>/d MBR

Huabei Xulou Drinking Plant and Ancillary Piping Project, Weifang, Shandong Province, China 2018, 21,500 m<sup>3</sup>/d NF

### Plant Supplier

Hengling WWTP Phase I Upgrade Project, Shenzhen, Guangdong Province, China 2018, 200,000 m<sup>3</sup>/d UF

Weifang Industrial Park WWTP Upgrade Project, Weifang, Shandong Province, China 2018, 15,000 m<sup>3</sup>/d UF

Taizhou Jiaojiang Wastewater Reuse Project Phase II, Taizhou, Zhejiang Province, China 2016, 38,000 m<sup>3</sup>/d UF

Yuhuan Wastewater Reuse Project, Yuhuan, Zhejiang Province, China 2016, 20,000 m<sup>3</sup>/d UF

Zhongwei Zero Liquid Discharge Project, Zhongwei, Ningxia, China 2016, 13,500 m<sup>3</sup>/d RO

Fuxin Wastewater Reuse Project, Fuxin, Liaoning Province, China 2015, 42,500 m<sup>3</sup>/d RO

Iran steel plant Reuse Water Treatment, Kerman, Iran 2015, 15,000 m<sup>3</sup>/d RO

Beijing Daoxianghu Wastewater Reuse project, Beijing, China 2014, 80,000 m<sup>3</sup>/d UF

Taizhou Jiaojiang Wastewater Reuse Project, Taizhou, Zhejiang Province, China 2014, 18,000 m<sup>3</sup>/d RO

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### SELECTED REFERENCES

#### EPC Contractor

Nicaragua, 2015, 3,500 m<sup>3</sup>/d RO

Managua, Nicaragua 2014, 2,800 m<sup>3</sup>/d RO

### GS Inima Environment, S.A.



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### SELECTED REFERENCES

#### EPC Contractor

Boadilla del Monte WWTP, Improvements and Wastewater Pumping Station, Madrid, Spain 2020, 75,000 m<sup>3</sup>/d Other / Unknown

SWRO de Atacama, Atacama, Chile 2020, 38,880 m<sup>3</sup>/d RO

SWRO Djerba, Djerba, Tunisia 2019, 50,000 m<sup>3</sup>/d RO

Ain M'Lia WWTP, Wilaya de Oum el Bouaghi, Algeria 2018, 16,820 m<sup>3</sup>/d Other / Unknown

EDAR de Tenés, Tenés, Algeria 2018, 8,500 m<sup>3</sup>/d Other / Unknown

Lagares WWTP Vigo, Expansion and Upgrading, Vigo, Spain 2017, 230,688 m<sup>3</sup>/d Other / Unknown

IDAM de Atacama, Chile 2017, 38,880 m<sup>3</sup>/d RO

Ensenada SWRO, Ensenada, Baja California, Mexico 2017, 21,600 m<sup>3</sup>/d RO

El Franco WWTP - 2nd stage, Madrid, Spain 2017, 6,924 m<sup>3</sup>/d Other / Unknown

Radomiro Tomic, Chile 2015, 72,600 m<sup>3</sup>/d RO

D'Jerba, Tunisia 2014, 50,000 m<sup>3</sup>/d RO

Sao José Dos Campos WWTP, Sao Paolo, Sao Paolo, Brazil 2014, 34,927 m<sup>3</sup>/d Other / Unknown

EDAR Segovia, Segovia, Spain 2013, 41,274 m<sup>3</sup>/d Other / Unknown

Campos de Jordao WWTP, Sao Paolo, Brazil 2013, 18,438 m<sup>3</sup>/d Other / Unknown

Ensenada, Baja California, Mexico 2012, 21,600 m<sup>3</sup>/d RO

Hialeah, Miami Dade, FL, United States 2010, 40,000 m<sup>3</sup>/d RO

Estación Depuradora de Aguas Residuales de Algeciras, Algeciras, Spain, 51,000 m<sup>3</sup>/d UV

Estación Depuradora de Aguas Residuales de Rejas, Madrid, Spain, 17,280 m<sup>3</sup>/d UV

#### General Contractor

Albufera Sur WWTP, Valencia, Spain 2022, 20,173 Other / Unknown

Crevillente WWTP, Valencia, Spain 2022, 9,000 Other / Unknown

Alicante Lote 2 WWTPs, Valencia, Spain 2022, 5,500 Other / Unknown

Crispijana WWTP, Vitoria, Spain 2021, 185,000 Other / Unknown

Cuenca del Guadalquivir WWTP, Sevilla, Spain 2021, 125,000 Other / Unknown

Aznalcázar WWTP, Sevilla, Spain 2021, 125,000 Other / Unknown

Castilleja WWTP, Sevilla, Spain 2021, 125,000 Other / Unknown

SWRO Daesan, Daesan, South Korea 2021, 100,000 m<sup>3</sup>/d RO

Krinpan WWTP, La Rioja, Spain 2021, 4,200 Other / Unknown

Casablanca WWTP, La Rioja, Spain 2021, 4,200 Other / Unknown

Lloret de Mar WWTP, Girona, Spain 2019, 33,000 m<sup>3</sup>/d Other / Unknown

Aranjuez WWTP, Madrid, Spain 2018, 21,000 m<sup>3</sup>/d Other / Unknown

Numancia WWTP, Numancia, Spain 2018, 15,000 Other / Unknown

Seseña WWTP, Seseña, Spain 2017, 6,682 Other / Unknown

Lagares WWTP, Lagares, Spain 2016, 230,668 m<sup>3</sup>/d Other / Unknown

Segovia WWTP, Segovia, Spain 2016, 41,274 m<sup>3</sup>/d Other / Unknown  
 Aznalcollar WWTP & Main Sewer, Sevilla, Spain 2016, 3,228 m<sup>3</sup>/d Other / Unknown  
 Aranjuez WWTP, Aranjuez, Spain 2015, 21,000 Other / Unknown  
 San José Dos Campos WWTP, Sao Paulo, Brazil 2012, 12,795 m<sup>3</sup>/d Other / Unknown  
 Font de la Pedra WWTP, Spain, 15,000 m<sup>3</sup>/d Other / Unknown  
 Crevillente WWTP, Valencia, Spain, 9,000 m<sup>3</sup>/d Other / Unknown  
 Roquetas WWTP, Spain, 38,880 Other / Unknown  
 IDAM Palmas, Las Palmas, Spain, 35,000 m<sup>3</sup>/d MED  
 Lanzarote IV, Lanzarote, Spain, 20,000 m<sup>3</sup>/d RO  
 El Tablero WWTP, Spain, 12,000 Other / Unknown  
 Tenés WWTP, Tenes, Algeria, 8,500 Other / Unknown  
 El Franco WWTP, Oviedo, Spain, 6,924 m<sup>3</sup>/d Other / Unknown  
 Ponte da Bahia WWTP, Portugal, 6,834 Other / Unknown

#### **General Contractor and Operator**

Aquapolo, Sao Paulo, Brazil 2019, 56,160 Other / Unknown  
 SWRO Atacama, Copiapo, Chile 2017, 103,680 m<sup>3</sup>/d RO  
 SWRO Marbella, Marbella, Spain 2014, 55,000 m<sup>3</sup>/d RO  
 Triunfo, Porto Alegre, Brazil 2013, 144,029 Other / Unknown  
 Mogi Mirim WWTP, Sao Paulo, Brazil, 25,920 m<sup>3</sup>/d Other / Unknown

#### **General Contractor, Operator and Developer**

Ghubrah III IWP, Muscat, Oman 2020, 300,000 m<sup>3</sup>/d RO  
 Barka V IWP, Oman 2020, 100,000 m<sup>3</sup>/d RO  
 SWRO Los Cabos, Los Cabos, Mexico 2017, 20,736 m<sup>3</sup>/d RO  
 SWRO Ensenada, Esenada, Mexico 2014, 21,600 m<sup>3</sup>/d RO  
 BWRO Taunton River, Bosotn, United States, 37,854 m<sup>3</sup>/d RO

#### **Operator**

Arroyo de la Miel WWTP, Malaga, Spain, 40,000 m<sup>3</sup>/d Other / Unknown  
 Pilar de la Horadada WWTP, Spain, 18,500 m<sup>3</sup>/d Other / Unknown

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#### **SELECTED REFERENCES**

##### **Desalination Equipment Supplier**

Confidential Client, Kentucky, United States 2023, 140.0 gpm RO  
 Confidential Client, Iowa, United States 2022, 440.0 gpm RO  
 Confidential Client, Nebraska, United States 2022, 260.0 gpm RO  
 Confidential Client, Texas, United States 2022, 2.5 MGD RO  
 Confidential Client, Nebraska, United States 2022, 1.87 MGD RO

Confidential Client, Kansas, United States 2022, 1.4 MGD NF  
 Confidential Client, New York, United States 2022, 1.08 MGD RO  
 Confidential Client, Austin, TX, United States 2022, 0.225 MGD UF  
 Confidential Client, Texas, United States 2022, 0.225 MGD UF  
 Confidential Client, San Diego, CA, United States 2021, 40 MGD UF  
 Confidential Client, Escondido, CA, United States 2021, 2 MGD UF  
 Confidential Client, California, United States 2018, 6,056 m<sup>3</sup>/d RO  
 Tate Monroe, Ohio, United States 2018, 3,785 m<sup>3</sup>/d RO  
 Confidential Client, Texas, United States 2018, 2,914 m<sup>3</sup>/d RO  
 Confidential Client, Iowa, United States 2018, 2,725 m<sup>3</sup>/d UF  
 Pouch Cove WTP, Newfoundland, Canada 2018, 2,649 m<sup>3</sup>/d Other / Unknown  
 Confidential Client, North Carolina, United States 2018, 2,498 m<sup>3</sup>/d RO  
 Confidential Client, Arizona, United States 2018, 2,271 m<sup>3</sup>/d RO  
 Confidential Client, Indiana, United States 2018, 2,157 m<sup>3</sup>/d RO  
 Pouch Cove WTP, Newfoundland, Canada 2018, 1,892 m<sup>3</sup>/d RO  
 Confidential Client, New-Brunswick, Canada 2018, 1,892 m<sup>3</sup>/d RO  
 Confidential Client, South Dakota, United States 2018, 1,514 m<sup>3</sup>/d RO  
 Confidential Client, Arkansas, United States 2018, 1,514 m<sup>3</sup>/d RO  
 Kuujjuaq, Quebec, Canada 2018, 1,514 m<sup>3</sup>/d Other / Unknown  
 Kuujjuaq, Quebec, Canada 2018, 1,135 m<sup>3</sup>/d RO  
 Cobden WWTP Upgrades, Ontario, Canada 2018, 1,000 m<sup>3</sup>/d MBR  
 Confidential Client, Georgia, United States 2018, 946 m<sup>3</sup>/d RO  
 Saint-Gabriel-de-Rimouski, Quebec, Canada 2018, 560 m<sup>3</sup>/d NF  
 Meyer Ranch MBR, Texas, United States 2018, 378 m<sup>3</sup>/d MBR  
 Confidential Client, North Carolina, United States 2018, 302 m<sup>3</sup>/d MBR  
 Confidential Client, North Carolina, United States 2018, 189 m<sup>3</sup>/d RO  
 Confidential Client, New York, United States 2018, 177 m<sup>3</sup>/d MBR  
 Granbury Water Treatment Plant, Texas, United States 2018, 113 m<sup>3</sup>/d RO  
 Confidential Client, Indiana, United States 2018, 25 m<sup>3</sup>/d RO  
 City of Austin DCP Building WWTP, Texas, United States 2018, 18 m<sup>3</sup>/d MBR  
 Las Virgenes UF/RO Demo Plant, California, United States 2018, 3 m<sup>3</sup>/d RO  
 Valencia LACSD UF-NF Pilot Unit, California, United States 2018, 1 m<sup>3</sup>/d RO  
 Confidential Client, Quebec, Canada 2018, 0 m<sup>3</sup>/d RO  
 Confidential Client, Alberta, Canada 2018, 0 m<sup>3</sup>/d RO  
 Equilibrium Repsol - Trailer, Alberta, Canada 2018, 0 m<sup>3</sup>/d RO  
 WEAS Engineering / Andersons Clymers, Indiana, United States 2018, UF  
 Moss Point VFD and Plant upgrades, Mississippi, United States 2018, RO  
 San Diego IPR, California, United States 2017, 151,400 m<sup>3</sup>/d UF  
 Confidential Client, Oregon, United States 2017, 6,548 m<sup>3</sup>/d UF  
 Confidential Client, Alberta, Canada 2018, 0 m<sup>3</sup>/d RO  
 Equilibrium Repsol - Trailer, Alberta, Canada 2018, 0 m<sup>3</sup>/d RO  
 WEAS Engineering / Andersons Clymers, Indiana, United States 2018, UF  
 Moss Point VFD and Plant upgrades, Mississippi, United States 2018, RO  
 San Diego IPR, California, United States 2017, 151,400 m<sup>3</sup>/d UF  
 Confidential Client, Oregon, United States 2017, 6,548 m<sup>3</sup>/d UF  
 City of Beaumont, California, United States 2017, 6,245 m<sup>3</sup>/d RO  
 Bonita Springs Utilities, Inc., Bonita Springs, Florida, United States 2017, 5,678.0 m<sup>3</sup>/day RO  
 Confidential Client, Virginia, United States 2017, 2,649 m<sup>3</sup>/d MBR

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Confidential Client, Virginia, United States 2017, 2,649 m<sup>3</sup>/d RO  
Confidential Client, Idaho, United States 2017, 378 m<sup>3</sup>/d UF  
Confidential Client, New York, United States 2017, 378 m<sup>3</sup>/d UF  
Confidential Client, New York, United States 2017, 227 m<sup>3</sup>/d MBR  
Hamlin Beach, New York, United States 2017, 113 m<sup>3</sup>/d MBR  
University of Iowa, Iowa city, Iowa, United States 2016, 9,463.0 m<sup>3</sup>/day RO  
Cinco Municipal Utility District Plant #1, Katy, Texas, United States 2016, 7,570.0 m<sup>3</sup>/day RO  
Frontier Water Systems, San Francisco Bay Area, California, United States 2016, 5,678.0 m<sup>3</sup>/day RO  
Disraeli, Quebec, Canada 2016, 1,772.0 m<sup>3</sup>/day NF  
Barrow Utilities and Electric Co-Op, Barrow, Alaska, United States 2016, 1,136.0 m<sup>3</sup>/day RO  
Sherburn WTP, Sherburn, Texas, United States 2016, 946.0 m<sup>3</sup>/day RO  
Slate Falls Nation WTP, Slate Falls, Ontario, Canada 2016, 379.0 m<sup>3</sup>/day NF  
Hydro Quebec - La Romaine, La Romaine, Quebec, Canada 2016, 53 m<sup>3</sup>/d NF  
Monterey, California, United States 2015, 42,396 m<sup>3</sup>/d RO  
Cambria, California, United States 2015, 3,218 m<sup>3</sup>/d RO  
Municipalité de Chambord, Chambord, Quebec, Canada 2015, 1,552 m<sup>3</sup>/d NF  
John D'or, Alberta, Canada 2015, 1,136 m<sup>3</sup>/d NF  
Boyer River, Alberta, Canada 2015, 530 m<sup>3</sup>/d NF  
Meander River, Alberta, Canada 2015, 530 m<sup>3</sup>/d NF  
Abilene - Possum Kingdom, Abilene, Texas, United States 2014, 16,656 m<sup>3</sup>/d RO  
Hamby-Abilene, Abilene, Texas, United States 2014, 15,899 m<sup>3</sup>/d RO  
Craven County, North Carolina, United States 2014, 7,571 m<sup>3</sup>/d RO  
Abilene - Hargesheimer, Tuscola, Texas, United States 2014, 5,678 m<sup>3</sup>/d RO  
Lower Valley, Grand Cayman, Cayman Islands 2014, 4,353 m<sup>3</sup>/d RO  
Everglades City, Florida, United States 2014, 1,892 m<sup>3</sup>/d RO  
Liberty, Iowa, United States 2014, 1,325 m<sup>3</sup>/d RO  
Fort Irwin, California, United States 2014, 916 m<sup>3</sup>/d NF  
Eastman, Quebec, Canada 2014, 768 m<sup>3</sup>/d NF  
Eastman, Quebec, Canada 2014, 757 m<sup>3</sup>/d RO  
Stornoway Mine, Northern Quebec, Quebec, Canada 2014, 492 m<sup>3</sup>/d RO  
Jack River, Jack River School, Manitoba, Canada 2014, 189 m<sup>3</sup>/d NF  
Supra-Ledoux-Haiti, Haiti 2014, 151 m<sup>3</sup>/d RO  
Fort Irwin, California, United States 2014, 76 m<sup>3</sup>/d RO  
Freeport-Indonesia, Freeport, Indonesia 2014, 49 m<sup>3</sup>/d RO  
Long Beach, CA, Long Beach, CA, United States 2013, 16,843 m<sup>3</sup>/d RO  
Calimesa, CA, Calimesa, CA, United States 2013, 8,970 m<sup>3</sup>/d RO  
J.R. Simplot, Caldwell, Idaho, United States 2013, 5,451 m<sup>3</sup>/d RO  
Cadwell, ID, Cadwell, ID, United States 2013, 5,450 m<sup>3</sup>/d RO  
Saint-Tite, QC, Saint-Tite, QC, Canada 2013, 4,905 m<sup>3</sup>/d NF  
Calgary, AB, Calgary, AB, Canada 2013, 3,815 m<sup>3</sup>/d NF  
Port Cartier, QC, Port Cartier, QC, Canada 2013, 3,785 m<sup>3</sup>/d NF  
Emmetsberg, Iowa, United States 2013, 3,270 m<sup>3</sup>/d RO  
Waterville, Quebec, Canada 2013, 2,990 m<sup>3</sup>/d RO  
Dunes, Florida, United States 2013, 2,725 m<sup>3</sup>/d RO  
Hillsboro, ND, Hillsboro, ND, United States 2013, 1,855 m<sup>3</sup>/d NF  
Spencerville, OH, Spencerville, OH, United States 2013, 1,843 m<sup>3</sup>/d NF  
Pomona, CA, Pomona, CA, United States 2013, 1,351 m<sup>3</sup>/d RO  
Calgary, AB, Calgary, AB, Canada 2013, 1,185 m<sup>3</sup>/d RO  
Minnesota, United States 2013, 870 m<sup>3</sup>/d RO  
Swan Lake, MB, Swan Lake, MB, Canada 2013, 829 m<sup>3</sup>/d NF  
Calypso, Ontario, Canada 2013, 817 m<sup>3</sup>/d RO  
Pike, Alberta, Canada 2013, 574 m<sup>3</sup>/d RO  
Conklin, AB, Conklin, AB, Canada 2013, 352 m<sup>3</sup>/d NF  
La Macaza, Quebec, Canada 2013, 341 m<sup>3</sup>/d NF  
La Macaza, Quebec, Canada 2013, 341 m<sup>3</sup>/d NF  
Fort McMurray AB, Fort McMurray , AB, Canada 2013, 220 m<sup>3</sup>/d RO  
West Jefferson, NC, West Jefferson, NC, United States 2013, 163 m<sup>3</sup>/d RO  
Laval, QC, Laval, QC, Canada 2013, 11 m<sup>3</sup>/d RO  
Mannington Power Plant, WV, United States 2012, 18,531 m<sup>3</sup>/d RO  
Linton, ND, Linton, ND, United States 2012, 11,226 m<sup>3</sup>/d NF  
City of Hillsboro, Hillsboro, ND, United States 2012, 3,706 m<sup>3</sup>/d RO  
West Olive Power Plant, MI, United States 2012, 2,180 m<sup>3</sup>/d RO  
Quebec, Canada 2012, 1,703 m<sup>3</sup>/d NF  
Cal Poma, California, United States 2012, 1,351 m<sup>3</sup>/d RO  
Quebec, Canada 2012, 1,226 m<sup>3</sup>/d NF  
Calgary, AB, Canada 2012, 1,008 m<sup>3</sup>/d RO  
Swan Lake, Minnesota, United States 2012, 828 m<sup>3</sup>/d NF  
Quebec, Canada 2012, 818 m<sup>3</sup>/d NF  
Quebec, Canada 2012, 791 m<sup>3</sup>/d NF  
University of Illinois, IL, United States 2012, 545 m<sup>3</sup>/d RO  
Pointe-Lebel, Quebec, Canada 2012, 163 m<sup>3</sup>/d NF  
Pointe-Lebel, Quebec, Canada 2012, 162 m<sup>3</sup>/d NF  
Quebec, Canada 2012, 83 m<sup>3</sup>/d NF  
Quebec, Canada 2012, 26 m<sup>3</sup>/d RO  
Port Cartier, Quebec, Canada 2012, 11 m<sup>3</sup>/d RO  
City of Oxnard, CA, United States 2011, 23,656 m<sup>3</sup>/d RO  
Tertiary UF for Lakeshore Wastewater Co (Innisfil), Ontario, Canada, 67,000 m<sup>3</sup>/d UF  
Pearland UF WTP, Texas, United States, 46,370 m<sup>3</sup>/d UF  
Sweetwater RO expansion, San Diego, California, United States, 37,854 m<sup>3</sup>/d RO  
Marietta WTP, Ohio, United States, 13,638 m<sup>3</sup>/d RO  
Kronos Varennes RO System, Quebec City, Canada, 9,120 m<sup>3</sup>/d NF  
Santa Monica - Civic Center, California, United States, 5,455 m<sup>3</sup>/d RO  
Carmel Area Water District, Carmel, California, United States, 4,542 m<sup>3</sup>/d RO  
Quincy WWTP RO, Quincy, Washington, United States, 3,785 m<sup>3</sup>/d RO  
City of Santa Monica SWIP (SMURRF) - RO, California, United States, 2,091 m<sup>3</sup>/d RO  
Charles Town, West Virginia, United States, 1,364 m<sup>3</sup>/d MBR  
Morro Bay RO System, California, United States, 645.0 gpm RO  
ETS Intermitten Aeration Upgrade, New Jersey, United States, 546 m<sup>3</sup>/d MBR  
Elevate Textiles UF RO, Mexico, 375.0 gpm RO  
Lavaltrie Rest Stop MBR, Quebec City, Canada, 114 m<sup>3</sup>/d MBR  
Quebec, Canada, 87 m<sup>3</sup>/d NF  
Meliadine Mine MBRs WWTP Expansion, Quebec City, Canada, 83 m<sup>3</sup>/d MBR  
Saint Cyrille De Wendover, Quebec City, Canada, 34 m<sup>3</sup>/d NF  
Quebec, Canada, 26 m<sup>3</sup>/d NF  
Tillman Reuse BWRO Pilot, Los Angeles, California, United States, 19 m<sup>3</sup>/d RO  
Rio Tinto - Sorel Tracy #1, Quebec, Canada, 10.0 MGD Other / Unknown  
Petit Rocher, New Brunswick, Canada, 0.53527 MGD Other / Unknown

PPPP - Alexandria RO #2, Indiana, United States, 0.25936 MGD  
Other / Unknown

PPPP - Leipsic, Ohio, United States, 0.25936 MGD Other /  
Unknown

PPPP - Alexandria RO #3, Indiana, United States, 0.100864 MGD  
Other / Unknown

Virentia, Quebec, Canada, 0.01 MGD UF

Innisfil - Tertiary, Ontario, Canada, 0.0 MGD UF

JBS Foods, Kentucky, United States, 0.0 MGD Other / Unknown

Rio Tinto - Sorel Tracy #2, Quebec, Canada, 0.0 MGD Other /  
Unknown

## Pilot

Confidential Client, Ontario, Canada 2018, 0 m³/d RO

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## SELECTED REFERENCES

### Equipment Supplier

Sepia/Carioca FPSO, Brazil 2018, 3,200 m³/d RO

Neft Badra, Iraq 2018, 960 m³/d Other / Unknown

SK310 B15 Development, Offshore, Malaysia 2016, 164 m³/d Other / Unknown

FPSO Marlim 1/Anita Garibaldi MV-33, Offshore, Brazil 2020,  
3,200 m³/d RO

FPSO Buzios V/Almirante Barroso MV-32, Offshore, Brazil 2019,  
3,200 m³/d RO

FPSO Anita Garibaldi MV-33, Offshore, Brazil, 3,200 m³/d RO

## Haji Abdullah Alireza & Co., Ltd.



[www.alireza.com](http://www.alireza.com)

## SELECTED REFERENCES

### BOOT Developer

King Abdulaziz International SWRO Desalination Plant, Jeddah,  
Saudi Arabia, 50,000 m³/d RO

Rabigh Multi Effect Desalination and Remineralization Plant,  
Rabigh, Saudi Arabia, 10,000 m³/d MED

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## SELECTED REFERENCES

### Equipment Supplier: Desalination System

Desalination project of a petrochemical enterprise, Ningbo, Zhejiang, China 2023, 58,080 m³/d RO

Desalination Project of a chemical enterprise, Dezhou, Shandong, China 2023, 6,720 m³/d RO

Seawater desalination units of a drilling platform, Tianjing, China 2023, 6,480 m³/d RO

Desalination Project of a steel enterprise, Anshan, Liaoning, China 2023, 3,600 m³/d RO

Desalination Project of a chemical enterprise, Jiujiang, Jiangxi, China 2023, 3,600 m³/d RO

Seawater desalination project, Yantai, Shandong, China 2023, 3,000 m³/d RO

Reclaimed Water Reuse Project of a chemical enterprise, Dezhou, Shandong, China 2023, 2,880 m³/d RO

Seawater desalination project of municipality, Oran, Algeria 2022, 300,000 m³/d RO

Seawater desalination project of a paper company, Tarakan, Indonesia 2022, 50,000 m³/d RO

Desalination project of a thermal power plant, Datong, Shanxi, China 2022, 2,400 m³/d RO

Desalination Project of chemical industry, Taixing, Jiangsu, China 2022, 552 m³/d RO

### EPC Contractor

Russia Methanol Project Desalination Station Station Project, Russia 2020, 13,680 m³/d Other / Unknown

Bluestar Adisseo Phase II Desalination Project, Nanjing, Jiangsu, China 2020, 2,400 m³/d RO

Zhejiang Petrochemical Acid Water Treatment System, Zhoushan, Zhejiang, China 2020, 1,200 m³/d Other / Unknown

Zhoushan Baisha Island Seawater Desalination Project, Zhoushan, Zhejiang, China 2020, 500 m³/d RO

Zhejiang Petrochemical Phase II Desalination Project, Zhoushan, Zhejiang, China 2019, 150,000 m³/d RO

Jiangxi Nanshi Lithium New Material Co., Ltd. Fine Filtration Lithium Carbonate Production Supporting System, China 2018, 1,000 m³/d RO

East Pole Island Desalination Project, China 2018, 150 m³/d RO  
Zhoushan, China 2017, 80,000 m³/d RO

GNPD, Mariveles, Philippines 2017, 15,000 m³/d RO

Hub, Pakistan 2017, 7,200 m³/d RO

Shengsi, China 2017, 2,000 m³/d RO

Djibouti, Republic of Djibouti 2017, 100 m³/d RO

Binhai, China 2016, 47,400 m³/d RO

Venezuela 2016, 10,000 m³/d RO

Zhejiang, Daishan, China 2016, 5,000 m³/d RO

Zhejiang, China 2016, 3,600 m³/d RO

Tajikistan 2016, 500 m³/d RO

Daniela, Chad 2016, 480 m³/d RO

Pakistan 2016, 480 m³/d RO

Woody Power Plant , Woody , Vietnam 2015, 14,400 m³/d RO

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Duyen Hai, Vietnam 2015, 6,720 m<sup>3</sup>/d RO

Iran 2014, 150,000 m<sup>3</sup>/d RO

Banten, Indonesia 2013, 6,096 m<sup>3</sup>/d RO

Dumai, Indonesia 2013, 3,120 m<sup>3</sup>/d RO

Yanpet, Saudi Arabia 2013, 3,000 m<sup>3</sup>/d RO

Pudingbatu, Philippines 2013, 2,520 m<sup>3</sup>/d RO

Dongtou Luxi Island Seawater Desalination Plant (Phase 1), Wenzhou, Zhejiang, China 2013, 2,500 m<sup>3</sup>/d RO

The membrane system for ecological environment management and river remediation of Dongshengmiao mining area in Urad Back Banner County of Inner Mongolia, Urad Back Banner County, Inner Mongolia, China 2012, 12,000 m<sup>3</sup>/d Other / Unknown

Textile Wastewater Reuse (Phase 1), Shengzhou City, Zhejiang, China, 50,000 m<sup>3</sup>/d RO

Textile Wastewater Reuse (Phase 2), Shengzhou City, Zhejiang, China, 50,000 m<sup>3</sup>/d RO

Taizhou Number 2 Power Plant Auxiliary Seawater Desalination, Zhejiang, China, 18,000 m<sup>3</sup>/d RO

Hongshan Thermal Power Plant Desalination Project Phase 2, Quanzhou, Fujian, China, 15,600 m<sup>3</sup>/d RO

Wastewater treatment and ZLD project, Inner Mongolia, China, 3,600 m<sup>3</sup>/d ZLD

**EPC Contractor, Membrane and Pretreatment Supplier**

Ningbo Seawater Desalination System, Ningbo, Zhejiang, China 2022, 12,000 m<sup>3</sup>/d RO

Shandong Xinhecheng Chemical Water Treatment System, Weifang, Shandong, China 2022, 9,600 m<sup>3</sup>/d RO

Xinte Energy Huadong Industrial Park Demineralization Project, Hami, Xinjiang, China 2022, 5,232 m<sup>3</sup>/d RO

Shandong Xinhecheng Chemical Water Treatment System, Weifang, Shandong, China 2022, 4,800 m<sup>3</sup>/d RO

Xinte Energy Huadong Industrial Park Demineralization Project, Hami, Xinjiang, China 2022, 3,840 m<sup>3</sup>/d RO

Zhonghao Chenguang Organic Fluorine Material Project Deionized Water Station, Zigong, Sichuan, China 2022, 3,600 m<sup>3</sup>/d RO

Zhonghao Chenguang Organic Fluorine Material Project Deionized Water Station, Zigong, Sichuan, China 2022, 2,520 m<sup>3</sup>/d RO

Yan'an Yaodian Sewage Ultrafiltration System, Yan'an, Shaanxi, China 2021, 50,000 m<sup>3</sup>/d Other / Unknown

Jiatong Reclaimed Water Reuse EPC Project, Nantong, Jiangsu, China 2021, 43,200 m<sup>3</sup>/d RO

Binhai Thermal Power Plant, Shaoxing, China 2021, 19,200 m<sup>3</sup>/d RO  
m<sup>3</sup>/d RO

Xinjiang Guanghui Wastewater Capacity Expansion and Emission Reduction Project, Xinjiang, China 2021, 8,952 m<sup>3</sup>/d RO

Zhejiang Jiaming Wastewater Reuse Project, Shengzhou, Zhejiang, China 2021, 5,000 m<sup>3</sup>/d RO

Taizhou Power Plant Demineralized Water Expansion and Reconstruction EPC Project, Taizhou, Zhejiang, China 2021, 3,600 m<sup>3</sup>/d RO

Ningbo Seawater Desalination System, Ningbo, Zhejiang, China 2021, 500 m<sup>3</sup>/d RO

Baoding Yindingzhuang Sewage Treatment Plant, Baoding, Hebei, China 2020, 315,000 m<sup>3</sup>/d Other / Unknown

Yongjia Hongze Boiler Make-up Water Project, Wenzhou, Zhejiang, China 2020, 6,240 m<sup>3</sup>/d RO

Russia Methanol Project Seawater Desalination Station Project, Russia 2020, 5,184 m<sup>3</sup>/d RO

Shanxi Jinmei Tianyuan Chemical Co., Ltd. Wastewater Zero Discharge Technical Reform Project, Jincheng, Shanxi, China 2020, 3,600 m<sup>3</sup>/d RO

Zhenjiang New Sodium Acid Wastewater Comprehensive Utilization Project, Zhenjiang, Jiangsu, China 2020, 250 m<sup>3</sup>/d RO

Ammonium Nitrate Process Condensate Purification Device Project, Indonesia 2020, 144 m<sup>3</sup>/d ED

Yantai Juli Wastewater Resources Project, Shandong, China 2019, 5,280 m<sup>3</sup>/d RO

Lianjiang Nuclear Power Project, Guangzhou, China 2021, 9,600 Shandong Dongyue Fluorine Silicate Chemical Plant Area Drainage Resource Recycling Project, China 2019, 2,500 m<sup>3</sup>/d RO

Nantong Xingchen Cycle Sewage and Recycling Equipment Project, China 2019, 960 m<sup>3</sup>/d RO

East Pole Island Seawater Desalination, Zhoushan, Zhejiang, China 2019, 300 m<sup>3</sup>/d RO

Hangzhou Meitang Technology Co., Ltd. RO Pure Water System, China 2019, 240 m<sup>3</sup>/d RO

Subtropical water desalination (phase I) drought emergency project, Yuhuan, Zhejiang, China 2018, 30,000 m<sup>3</sup>/d RO

Jinling group wastewater zero discharge and salt recycling project, Dongying City, Shandong, China 2018, 20,000 m<sup>3</sup>/d RO

Indonesian Gorontalo Raw Water Pretreatment and Potable Water Chlorination System, Indonesia 2018, 8,016 m<sup>3</sup>/d RO

Heilongjiang NHU Biotech Co.,Ltd Boiler Make-up Water Treatment System, China 2018, 5,760 m<sup>3</sup>/d RO

Baosteel Chemical Meishan Branch Coking Wastewater Treatment and Reuse Project RO System, China 2018, 4,800 m<sup>3</sup>/d RO

Heilongjiang NHU Biotech Co.,Ltd 909 workshop Deionized Water System, China 2018, 4,320 m<sup>3</sup>/d RO

Indonesian Gorontalo sea water desalination system, Indonesia 2018, 4,320 m<sup>3</sup>/d RO

Pakistan Gadar Seawater desalination, Pakistan 2018, 3,500 m<sup>3</sup>/d RO

Printing and Dyeing Wastewater Membrane Method Advanced Treatment and Reuse Project 2018, 2,400 m<sup>3</sup>/d RO

Jiangxi Nanshi Lithium New Material Co., Ltd. Printing and Dyeing Wastewater Membrane Method Advanced Treatment and Reuse Project, China 2018, 2,400 m<sup>3</sup>/d RO

Expansion of 14400 Line of 4L Line Water Treatment Project of Dongyue Fluorine Silicone material Co.ltd thermal power plant waste waterzero liquid discharge project, Zibo, Shandong, China 2018, 6,500 m<sup>3</sup>/d RO

Nongfu Spring Linjiang Project, China 2018, 1,560 m<sup>3</sup>/d RO

Iraq Rumaila Combined Cycle Power Plant Project, Iraq 2018, 1,440 m<sup>3</sup>/d RO

Heilongjiang NHU Biotech Co.,Ltd 903 workshop RO Water System, China 2018, 1,200 m<sup>3</sup>/d RO

Indonesia Kalimantan coal-fired power plant project, Indonesia 2018, 1,200 m<sup>3</sup>/d Other / Unknown

Anhui Hanrui New Material Co., Ltd. RO Water Treatment System, China 2018, 1,080 m<sup>3</sup>/d RO

Boiler water treatment system, Ghazipur, Bengal, India 2018, 336 m<sup>3</sup>/d RO

Foshan City Sanshui District Datang Wastewater Treatment Company Brine seperation and reuse pilot project, Foshan City, Guandong, China, 4,800 m<sup>3</sup>/d Other / Unknown

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**SELECTED REFERENCES****Equipment Supplier: Desalination System**

Babcock Ranch R/O Water Treatment Plant, Fort Myers, FL, United States 2021, 500,000 gpd RO  
 H2GO Water Treatment Plant, Brunswick, NC, United States 2021, 216,000 gpd RO  
 Dare County North Carolina NRO Treatment Plant, Dare County, NC, United States 2020, 1,300,000 gpd RO  
 City of Williamsburg, IA Water Treatment Plant, Williamsburg, IA, United States 2020, 1,008,000 gpd RO  
 City of Sanborn, IA Water Treatment Plant, Sanborn, IA, United States 2020, 702,720 gpd RO  
 New Carthage Water Treatment Plant, Carthage, IL, United States 2020, 460,800 gpd RO  
 Iowa Lakes Regional Water, Spencer, IA, United States 2019, 619,200 gpd RO  
 City of Dunedin, FL Water Treatment Plant, City of Dunedin, FL, United States 2018, 6,400,000 gpd RO  
 City of Punta Gorda Shell Creek Water Treatment Plant, Punta Gorda, FL, United States 2018, 4,000,000 gpd RO  
 City of Grimes, IA R/O Water Treatment Plant, Grimes, IA, United States 2018, 2,000,000 gpd RO  
 Langley Gulch Water Treatment Plant, New Plymouth, ID, United States 2018, 1,944,000 gpd RO  
 Village of Wellington Water Treatment Plant, Wellington, FL, United States 2018, 1,800,000 gpd RO  
 City of Adel, IA Water Treatment Plant, Adel, IA, United States 2018, 1,080,000 gpd RO  
 Lake Panorama Association Water Treatment Plant, Panora, IA, United States 2018, 979,200 gpd RO  
 City of Hayward, CA Membrane Treatment System, Hayward, CA, United States 2018, 662,000 gpd  
 Norwood Water Treatment Plant, Miami, FL, United States 2017, 23,000,000 gpd NF  
 City of Fort Dodge, IA Water Treatment Plant, Fort Dodge, IA, United States 2017, 12,000,000 gpd RO  
 Sherman, Texas, United States 2017, 37,850 m<sup>3</sup>/d RO  
 Miramar East Water Treatment Plant, Miramar, FL, United States 2016, 6,000,000 gpd NF  
 City of Spring Valley, IL, Spring Valley, IL, United States 2016, 2,233,360 gpd NF  
 Washington Water Treatment Plant, Washington, IA, United States 2016, 1,762,560 gpd RO  
 City of West Jefferson, OH Water Treatment Plant, West Jefferson, OH, United States 2016, 668,160 gpd RO  
 Lee County Green Meadows WTP, Lee County, Florida, United States 2016, 28,388 m<sup>3</sup>/d RO  
 Skyco WTP, Dare County, North Carolina, United States 2016, 11,393 m<sup>3</sup>/d RO  
 Gasparilla Island Water Assoc., Boca Grande, Florida, United States 2016, 3,596 m<sup>3</sup>/d RO  
 City of Grimes WTP, Train 2, Grimes, Iowa, United States 2016, 3,104 m<sup>3</sup>/d RO  
 City of West Liberty WTP, West Liberty, Iowa, United States 2016, 2,422 m<sup>3</sup>/d RO  
 Lee County Green Meadows Water Treatment Plant, Lee County, FL, United States 2015, 7,500,000 gpd RO

North Liberty Water Treatment Plant, North Liberty, IA, United States 2015, 3,024,000 gpd NF  
 Skyco Water Treatment Plant, Dare County, NC, United States 2015, 3,011,040 gpd NF  
 Pella, IA Water Treatment Plant, Pella, IA, United States 2015, 2,160,000 gpd RO  
 Signal Hill Water Treatment Plant, Signal Hill, CA, United States 2015, 1,693,440 gpd NF  
 Edisto Beach Water Treatment Plant, Edisto Beach, SC, United States 2015, 1,382,400 gpd RO  
 Gasparilla Island Water Association, Boca Grande, FL, United States 2015, 950,400 gpd RO  
 City of West Liberty, IA Water Treatment Plant, West Liberty, IA, United States 2015, 648,000 gpd RO  
 NCR WTP, Naples, Florida, United States 2015, 45,420 m<sup>3</sup>/d RO  
 City of Pella WTP, Pella, Iowa, United States 2015, 8,176 m<sup>3</sup>/d RO  
 North Jensen WWTP, Martin County, Florida, United States 2015, 7,570 m<sup>3</sup>/d RO  
 Signal Hill WTP, Signal Hill, California, United States 2015, 6,397 m<sup>3</sup>/d RO  
 City of Grimes WTP, Train 1, Grimes, Iowa, United States 2015, 3,104 m<sup>3</sup>/d RO  
 Babcock Ranch Water System, Babcock Ranch, Florida, United States 2015, 946 m<sup>3</sup>/d RO  
 City of Yankton Water Treatment Plant, Yankton, SD, United States 2014, 6,599,520 gpd RO  
 Tarpon Springs Water Treatment Plant, Tarpon Springs, FL, United States 2014, 6,402,240 gpd RO  
 City of Hills, IA R/O Water Treatment Plant, Hills, IA, United States 2014, 316,800 gpd RO  
 Rule, TX Water Treatment Plant, Rule, TX, United States 2014, 86,400 gpd RO  
 Key Colony Beach R/O System, Key Colony Beach, FL, United States 2013, 100,000 gpd RO  
 Tarpon Springs WTP, Tarpon Springs, Florida, United States 2013, 24,224 m<sup>3</sup>/d RO  
 City of Venice WTP, Venice, Florida, United States 2013, 16,654 m<sup>3</sup>/d RO  
 Bermuda Water Works, Bermuda 2013, 2,271 m<sup>3</sup>/d RO  
 PWWSD #26, Strong City, Kansas, United States 2013, 1,779 m<sup>3</sup>/d RO  
 Clearwater R/O Plant, Clearwater, FL, United States 2012, 3,000,000 gpd RO  
 City of Labelle Water Treatment Facility, Labelle, FL, United States 2012, 1,500,000 gpd RO  
 Southern Outer Banks Water Treatment Plant, Corolla, NC, United States 2012, 750,000 gpd RO  
 Bermuda Waterworks Limited, Bermuda, United States 2012, 600,000 gpd RO  
 Public Wholesale Water Supply District #26, Strong City, KS, United States 2012, 475,000 gpd RO  
 Hills Municipal Water, Hills, Iowa, United States 2012, 1,173 m<sup>3</sup>/d RO  
 North County Regional WTP Upgrades, Naples, Florida, United States 2017, 45,425 m<sup>3</sup>/d RO  
 Green Meadows Water Treatment Plant, Lee County, Florida, United States 2018, 28,391 m<sup>3</sup>/d RO  
 City of Yankton WTP Improvements, Yankton, South Dakota, United States 2018, 24,982 m<sup>3</sup>/d RO  
 Jordan Valley Water District: West Jordan, Utah, West Jordan, Utah, United States 2012, 22,712 m<sup>3</sup>/d RO  
 North Liberty Water Treatment Plant, North Liberty, Iowa, United States 2018, 11,447 m<sup>3</sup>/d RO  
 Clearwater R/O Plant #1 Expansion, Clearwater, Florida, United States 2014, 11,355 m<sup>3</sup>/d RO  
 Pasquotank County: Elizabeth City, North Carolina, Elizabeth City, North Carolina, United States 2012, 7,571 m<sup>3</sup>/d RO  
 Washington WTP, Washington, Iowa, United States 2018, 6,672 m<sup>3</sup>/d RO

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City of Labelle WTP, Labelle, Florida, United States 2014, 5,678 m<sup>3</sup>/d RO  
Southern Outer Banks WTP, Corolla, North Carolina, United States 2014, 2,839 m<sup>3</sup>/d RO  
Douglas County RWD #3, Tecumseh, Kansas, United States 2014, 2,347 m<sup>3</sup>/d RO  
Tyrell County: Columbia, North Carolina, Columbia, North Carolina, United States 2012, 1,635 m<sup>3</sup>/d RO  
Town of Jupiter, Jupiter, Florida, United States 2015, 1,211 m<sup>3</sup>/d RO  
Saint Lucie Mobile Village, Indiantown, Florida, United States 2013, 568 m<sup>3</sup>/d RO  
Key Colony Beach WTP, Key Colony Beach, Florida, United States 2013, 379 m<sup>3</sup>/d RO  
Freeport, Grand Bahama Island, 2014, 327 m<sup>3</sup>/d RO  
City of Rule WTP, Rule, Texas, United States 2015, 303 m<sup>3</sup>/d RO

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### SELECTED REFERENCES

#### EPC Contractor

Abou Oueqal Potable Water Purification Plant, Cairo, Nasr City, Egypt 2017, 500,000 m<sup>3</sup>/d

## Heartland Water Technologies



[www.heartlandtech.com](http://www.heartlandtech.com)

### SELECTED REFERENCES

#### Brine Concentration

USA Generating Station, United States, 189 m<sup>3</sup>/d  
Waste Management King George #3, United States, 151 m<sup>3</sup>/d  
Seneca Resources Cherry Flats, Philadelphia, United States, 114 m<sup>3</sup>/d  
Waste Management King George #1, United States, 114 m<sup>3</sup>/d  
Waste Management King George #2, United States, 114 m<sup>3</sup>/d  
Brunner Landfill, United States, 91 m<sup>3</sup>/d  
Waste Management Turnkey Landfill, New Hampshire, United States, 76 m<sup>3</sup>/d  
Waste Management Phoenix Resources Landfill, Pennsylvania, United States, 45 m<sup>3</sup>/d  
Kenai Peninsula Borough Central Peninsula Landfill, Alaska, United States, 45 m<sup>3</sup>/d  
Southern Company Plant Bowen, Georgia, United States, 4 m<sup>3</sup>/d  
First Energy Harrison Plant- EPRI, West Virginia, United States, 4 m<sup>3</sup>/d

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### SELECTED REFERENCES

#### Plant Supplier (Reuse)

Azad Shahr WWTP, Azadshahr, Golestan Province, Iran 2012, 9,000 m<sup>3</sup>/d

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Cuellar WWTP - Expansion, Segovia, Spain 2015, 2,000 m<sup>3</sup>/d  
Tertiary (Unknown)

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#### Plant Supplier (Desal)

Costa Group, Guyra, New South Wales, Australia 2019, 1,200 m<sup>3</sup>/d  
UF  
Hamilton Island WTP, Hamilton Island, Queensland, Australia 2019, 1,000 m<sup>3</sup>/d RO  
Tenterfield Shire Council, Tenterfield, New South Wales, Australia 2019, 600 m<sup>3</sup>/d RO  
Qatar 2016, 347,770 m<sup>3</sup>/day MSF  
Qatar 2016, 272,760 m<sup>3</sup>/day RO  
Ras Abu Fontas A2, Qatar 2013, 164,000.0 m<sup>3</sup>/day MSF  
Taiwan 2013, 2,200.0 m<sup>3</sup>/day MED  
Bourke & Walgett WTPs, Bourke & Walgett, New South Wales, Australia, 2,250 m<sup>3</sup>/d RO  
APR Energy WTP, Jacksonville, Florida, United States, 1,440 m<sup>3</sup>/d RO  
Japan Desalination Plant, Japan, 370.0 m<sup>3</sup>/day RO

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[www.hnbc.in](http://www.hnbc.in)**SELECTED REFERENCES****EPC and O&M Contractor**Gulbarga STP, Gulbarga, Karnataka, India 2014, 40,000 m<sup>3</sup>/d SBR**Technology and Equipment Supplier**Salt Plant Project, Jakarta, Indonesia 2019, 25,000 m<sup>3</sup>/d Other / UnknownKSA Containerized Pilot Plant, Umlujj, Saudi Arabia 2019, 286 m<sup>3</sup>/d Other / UnknownKISR Pilot Plant, Salmiya, Kuwait 2019, 23 m<sup>3</sup>/d FOSalt Plant Project, Jakarta, Indonesia, 25,000 m<sup>3</sup>/d Other / Unknown**Technology Provider**Marvel Desalination and Salt Production Plant, Cilegon, Serang, Banten Province, Indonesia 2021, 24,000 m<sup>3</sup>/d RO**Hyosung Goodsprings**

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[www.hsgoodsprings.com](http://www.hsgoodsprings.com)**SELECTED REFERENCES****Engineering, Procurement, Installation and Commissioning**Dongducheon CCPP, Dongducheon, South Korea 2012, 7,900 m<sup>3</sup>/d HybridTakoradi II CCPP, Ghana 2012, 2,600 m<sup>3</sup>/d HybridDongducheon CCPP, Dongducheon, South Korea 2012, 1,680 m<sup>3</sup>/d Hybrid**IDE Technologies Ltd.**

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[www.ide-tech.com](http://www.ide-tech.com)**SELECTED REFERENCES****Plant Supplier (Desal)**

Prospect Lake City Water Center, Fort Lauderdale, U.S.A. 2023, 50 MGD NF

Aconcagua, Quintero, Chile 2022, 86,400 m<sup>3</sup>/d ROSADDN (CodeLco), 14 Km south to Tocopilla, Chile 2022, 72,576 m<sup>3</sup>/d ROWestern Galilee, Northwest Israel, Israel 2022, 100 million m<sup>3</sup>/yr ROSorek B, Israel 2020, 672,000 m<sup>3</sup>/d ROQuebrada Blanca, Teck, Chile 2020, 102,360 m<sup>3</sup>/d ROCherokee RO Plant, Cherokee Metropolitan District, Colorado, United States 2020, 7,500 m<sup>3</sup>/d ROPublic Utilities Board, Jurong Island, Singapore 2019, 137,000 m<sup>3</sup>/d ROFormosa Petrochemical, Mai-Liao, Taiwan 2019, 105,000 m<sup>3</sup>/d ROAfikev Maim, Emek Hayarden, Israel 2019, 6,750 m<sup>3</sup>/d ROOTEKO, Taman, Russia 2018, 11,000 m<sup>3</sup>/d ROAfikev Maim, Emek Hayarden, Israel 2018, 6,750 m<sup>3</sup>/d ROReliance, Jamnagar, Gujarat, India 2017, 168,000 m<sup>3</sup>/d ROCity of Santa Barbara, Santa Barbara, United States 2017, 10,560 m<sup>3</sup>/d ROBomo Environment Engineering, China 2017, 5,000 m<sup>3</sup>/d VCCorporacion Electrica National, Tocoa, Vargas State, Venezuela 2017, 3,600 m<sup>3</sup>/d MEDMinera Panama, Punta Rincon, Panama 2016, 1,920 m<sup>3</sup>/d VCSan Diego County Water Authority, Carlsbad, California, United States 2015, 204,412 m<sup>3</sup>/d ROGuacolda Energia, Huasco, Chile 2015, 3,360 m<sup>3</sup>/d VCBlack Fox, Tocopilla, Chile 2015, 985 m<sup>3</sup>/d VCAES Norgener, Tocopilla, Chile 2014, 1,200 m<sup>3</sup>/d VCKoh Tao Water, Koh Tao, Thailand 2014, 1,000 m<sup>3</sup>/d ROState of Israel, Sorek, Israel 2013, 624,000 m<sup>3</sup>/d ROTianjin SDIC, Tianjin, China 2013, 100,000 m<sup>3</sup>/d MEDReliance, Jamnagar, Gujarat, India 2013, 72,000 m<sup>3</sup>/d MED**Hyrec**

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[www.hyrec.co](http://www.hyrec.co)**SELECTED REFERENCES****Pilot Study**Containerized Pilot Plant in Turkey, Urla, Izmir, Turkey, 286 m<sup>3</sup>/d Other / Unknown**Research and Development Project**Containerized Salt Production Pilot Plant, Jakarta, Indonesia 2019, 96 m<sup>3</sup>/d Other / UnknownContainerized Pilot Plant, Izmir, Turkey, 258 m<sup>3</sup>/d Other / Unknown

# IDRA

## DESALINATION & REUSE HANDBOOK

State of Tamil Nadu, Chennai, Tamil Nadu, India 2012,  
100,000 m<sup>3</sup>/d RO

Electricity Authority of Cyprus, Vasilikos, Cyprus 2012,  
60,000 m<sup>3</sup>/d RO

Essar, Gujarat, India 2012, 48,000 m<sup>3</sup>/d MED

Teck, Quebrada Blanca, Chile, 102,360 m<sup>3</sup>/d RO

### Plant Supplier (Reuse)

Chennai Metropolitan Water Supply and Sewerage Board,  
Koyambedu, India 2019, 45,000 m<sup>3</sup>/d RO

Central Coast Blue, Pismo Beach, California, United States 2018,  
163 m<sup>3</sup>/d RO

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#### Plant Supplier (Reuse)

La Granja de San Ildefonso WWTP - Upgrade, San Ildefonso, Spain  
2015, Tertiary treatment

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#### Plant Supplier (Reuse)

Menzel Bouzefla WWTP - Rehabilitation/Expansion, \N, Tunisia  
2013

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### SELECTED REFERENCES

#### EPC Contractor

Adnan, Jeddah, Saudi Arabia 2014, 4,400 m<sup>3</sup>/d RO  
Sharm El Sheikh, Egypt 2013, 1,100 m<sup>3</sup>/d RO

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#### Developer

MANA (Mallapur & Nacharam) CETP, Telangana, India 2012,  
8,000 m<sup>3</sup>/d

## Ion Exchange Ltd.



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### SELECTED REFERENCES

#### EPC Contractor

GHCL Ltd, Veraval, India 2016, 4,800 m<sup>3</sup>/d RO  
GHCL Ltd, Veraval, India 2012, 2,400 m<sup>3</sup>/d RO

**Ionic Solutions Ltd.**

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[www.ionicsolutions.ca](http://www.ionicsolutions.ca)**SELECTED REFERENCES****Replacement**

Ionic Solutions Ltd. 1, Calgary, Alberta, Canada, 1,000 m<sup>3</sup>/d EDR  
 Ionic Solutions Ltd. 3, Calgary, Alberta, Canada, 1,000 m<sup>3</sup>/d EDR  
 Ionic Solutions Ltd. 4, Calgary, Alberta, Canada, 1,000 m<sup>3</sup>/d EDR

**Retrofit**

Ionic Solutions Ltd. 2, Calgary, Alberta, Canada, 2,000 m<sup>3</sup>/d EDR

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[www.itochu.co.jp](http://www.itochu.co.jp)**SELECTED REFERENCES****Developer**

Barka, Oman 2015, 281,000 m<sup>3</sup>/d RO

**EPC Contractor, through Local Joint Venture Arabian Company and Sasakura for Water & Power (APS)**

Shoaiba, Saudi Arabia 2015, 91,200 m<sup>3</sup>/d MED

**Jacobs**

📍 United States of America



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[www.jacobs.com](http://www.jacobs.com)**SELECTED REFERENCES****EPC Contractor**

Al Hamra Water Company Desalination Plant, Ras Al Khaimah, United Arab Emirates 2020, 100,000 m<sup>3</sup>/d RO  
 BSU RO WTP Expansion, Bonita Springs, FL, United States 2017, 56,775 m<sup>3</sup>/d RO  
 Camp Pendleton Northern Advanced Water Treatment Plant, Oceanside, CA, United States 2015, 25,100 m<sup>3</sup>/d RO  
 Beenyup Advanced Water Recycling Plant, Australia 2016, 74,712 m<sup>3</sup>/d RO  
 G. Robert House Jr WWTP, Suffolk, VA, United States, 64,345 m<sup>3</sup>/d EDR  
 Luggage Point Advanced Water Treatment Plant, QLD, Australia, 10,030 m<sup>3</sup>/d RO

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**EPC Contractor, through Local Joint Venture Arabian Company and Sasakura for Water & Power (APS)**

Shoaiba, Saudi Arabia 2015, 91,200 m<sup>3</sup>/d MED

**JGC Corporation**[www.jgc.com/en](http://www.jgc.com/en)**SELECTED REFERENCES****Developer**

Oman 2017, 80,000 m<sup>3</sup>/d RO

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Buenos Aires WWTP, Tenerife, Tenerife, Canary Islands, Spain 2018, 30,000 m<sup>3</sup>/d MBR

## John Holland



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[www.johnholland.com.au](http://www.johnholland.com.au)

### SELECTED REFERENCES

#### EPC and O&M Contractor

Parkes Shire WWTP, New South Wales, Australia 2015, Activated sludge (Extended Aeration)

## Keppel Infrastructure Holdings



[www.kepinfra.com/en](http://www.kepinfra.com/en)

### SELECTED REFERENCES

#### Developer

Singapore 2017, 136,380 m<sup>3</sup>/d RO

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### SELECTED REFERENCES

#### EPC Contractor

Keppel Marina East Desalination Plant, Singapore 2017, 137,000 m<sup>3</sup>/d RO

Keppel Seghers Ulu Pandan NEWater Plant - 3rd Stage RO Expansion Project, Singapore 2016, 14,800 m<sup>3</sup>/d RO

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### SELECTED REFERENCES

#### Solar Desalination Technology

Technology License, El Paso, TX, United States Minor Outlying Islands 2015, RO

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### SELECTED REFERENCES

#### EPC Contractor

Gibraltar 2017, 5,200 m<sup>3</sup>/d RO

#### RO System Supplier

Containerised RO Plant Nigeria, Port Harcourt, Nigeria, 2,400 m<sup>3</sup>/d RO

Sea Water Reverse Osmosis System, St Marys Island, Isles of Scilly, United Kingdom, 400 m<sup>3</sup>/d RO

## Kobelco Eco-Solutions



[www.kobelco-eco.co.jp](http://www.kobelco-eco.co.jp)

### SELECTED REFERENCES

#### EPC Contractor

MODON DIC-1 Wastewater Reclamation Plant, Dammam Industrial City-1, Saudi Arabia 2012, 3,500 m<sup>3</sup>/d DAF/RO

**Kolon Engineering**[www.koloneengineering.com](http://www.koloneengineering.com)**SELECTED REFERENCES****EP Contractor**

KNPC CFP WWT, Kuwait, 11,520 m<sup>3</sup>/d  
 Karbala Refinery Project WT & WWT, Iraq, 3,000 m<sup>3</sup>/d

**EPC Contractor**

SADARA C/T Sidestream Filter, Jubail, Saudi Arabia 2013, 178,650 m<sup>3</sup>/d Other / Unknown  
 RPLC Deep Conversion WWT, Puerto de La Cruz, Venezuela 2013, 24,000 m<sup>3</sup>/d RO  
 Samsung Electronics WWT, Hwaseong, South Korea, 84,000 m<sup>3</sup>/d  
 SK Hynix M12 WWT, Cheongju, South Korea, 60,000 m<sup>3</sup>/d MBR  
 NSRP Complex Water Treatment, Thanh Hoa, Vietnam, 51,600 m<sup>3</sup>/d RO  
 Gimcheon Cogeneration WT WWT, Gimcheon, South Korea, 10,440 m<sup>3</sup>/d  
 Lotte Chemical P2 WWT, Yeosu, South Korea, 6,400 m<sup>3</sup>/d DAF  
 Sejong City Group Energy Service Water Treatment, South Korea, 4,800 m<sup>3</sup>/d  
 Jijel & Biskra CCPP WT WWT, Jijel & Biskra, Algeria, 3,600 m<sup>3</sup>/d RO  
 Goyang Samsong WT WWT, Goyang, South Korea, 3,600 m<sup>3</sup>/d  
 KumHo Polymers YEP Wastewater Treatment System, South Korea, 3,600 m<sup>3</sup>/d  
 Yeosu Oil Tank Terminal WT/ WWT, South Korea, 1,080 m<sup>3</sup>/d  
 Hyundai Green Power Plant Water & Wastewater Treatment System, South Korea, 960 m<sup>3</sup>/d  
 Suwon Homaesil Mass Energy Plant Water & Wastewater Treatment System, South Korea, 840 m<sup>3</sup>/d  
 SM200 Phase 1 WT WWT, Southern Mindanao, Philippines, 720 m<sup>3</sup>/d RO

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[www.kyowa-kk.co.jp](http://www.kyowa-kk.co.jp)**SELECTED REFERENCES****EPC Contractor**

Nagasaki, Kyushu, Japan 2021, 6,000 m<sup>3</sup>/d  
 Okinawa Hateruma Island, Japan 2013, 230 m<sup>3</sup>/d RO  
 Okinawa Zanami Island, Japan 2013, 100 m<sup>3</sup>/d RO

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477 MLD Chandrawal WTP, Delhi, New Delhi, India 2019, 397,468 m<sup>3</sup>/d Other / Unknown  
 GIDC 100 MLD Desalination Plant, Dahej District, Bharuch State, India 2019, 100,000 m<sup>3</sup>/d RO  
 New Water Injection South-R (NWIS-R) Project, Mumbai, India 2019, 20,000 m<sup>3</sup>/d RO  
 Low Salinity Water Package for NWIS Project of ONGC, India, Offshore near Mumbai, Maharashtra State, India 2019, 18,600 m<sup>3</sup>/d RO  
 CETP Dholera, Gujarat, India 2018, 16,000 m<sup>3</sup>/d RO  
 Shendra-Bidkin Industrial Area STP, Maharashtra, India 2017, 11,000 m<sup>3</sup>/d Tertiary treatment  
 Jhunjunu WWTP, Jhunjunu, Rajasthan, India 2017, 7,000 m<sup>3</sup>/d SBR  
 Shendra-Bidkin Industrial Area CETP, Maharashtra, India 2017, 7,000 m<sup>3</sup>/d Tertiary treatment  
 Jebel Ali STP Phase II, United Arab Emirates 2016, 375,000 m<sup>3</sup>/d Other / Unknown  
 Jebel Ali Sewage Treatment Plant, Jebel Ali, United Arab Emirates 2016, 375,000 m<sup>3</sup>/d Other / Unknown  
 318 MLD STP, Coronation Pillar, New Delhi, Delhi, India 2016, 318,000 m<sup>3</sup>/d Tertiary treatment  
 55 MLD, Nellore, Andhra Pradesh, India 2016, 55,000 m<sup>3</sup>/d Other / Unknown  
 Dholera WWTP, Gujarat, India 2016, 10,000 m<sup>3</sup>/d Tertiary treatment  
 Trans Varuna Sewerage Works, Varanasi, Uttar Pradesh, India 2015, 120,000 m<sup>3</sup>/d UV  
 Alshamal Sewage Treatment plant, Alshamal, Qatar 2015, 7,500 m<sup>3</sup>/d UF  
 Plant water system for Yermarus Thermal power station, Raichur, Karnataka, India 2013, 150,000 m<sup>3</sup>/d  
 31 MLD STP, Bhatpara, West Bengal, India 2013, 31,000 m<sup>3</sup>/d Other / Unknown  
 10 MLD STP, Bhatpara, West Bengal, India 2013, 10,000 m<sup>3</sup>/d Other / Unknown

**EPC and O&M Contractor**

Pali Water and Sewerage Project, Pali, Rajasthan, India 2015, 15,000 m<sup>3</sup>/d SBR

**Laing O'Rourke**[www.laingorourke.com](http://www.laingorourke.com)**SELECTED REFERENCES****EPC Contractor**

Northern Water Treatment Plant, Miles, QLD, Australia 2012, 100,000 m<sup>3</sup>/d RO

## Lantania



[www.lantania.com/en](http://www.lantania.com/en)

### SELECTED REFERENCES

#### EPC Contractor

- Jubail 3A SWRO, Jubail, Saudi Arabia 2021, 600,000 m<sup>3</sup>/d RO  
Atlantic Cooper Industrial waste water treatment plant, Huelva, Spain 2020, 2,592 m<sup>3</sup>/d  
Noreste (II)- El Carmen water treatment plant, Escobedo, Mexico 2017, 1,123 m<sup>3</sup>/d RO  
Mahón generation plant. Water treatment plant, Mahón, Spain 2017, 717 m<sup>3</sup>/d RO  
Ence Huelva Biomass water treatment plant, Huelva, Spain 2017, 130 m<sup>3</sup>/d RO  
Jorf MP-SAP & Energy Power water treatment plant, Cabablanca, Morocco 2016, 5,788 m<sup>3</sup>/d RO  
Topolobampo 2 combined cycle. Water treatment plant, Sinaloa, Mexico 2016, 553 m<sup>3</sup>/d RO  
La Ablaneda drinking water treatment plant, Asturias, Spain 2015, 216,000 m<sup>3</sup>/d  
Noreste combined cycle plant. Water treatment plant, Escobedo, Mexico 2015, 1,123 m<sup>3</sup>/d RO  
Extractora del Sur de Casanare reverse osmosis plant, Casanare, Colombia 2015, 720 m<sup>3</sup>/d RO  
Altamira Congeneration plant. Water treatment plant, Altamira, Mexico 2015, 622 m<sup>3</sup>/d RO  
Kathu I solar thermal plant. Water treatment plant, Kathu, South Africa 2015, 579 m<sup>3</sup>/d RO  
PetStar Industrial waste water treatment plant, Toluca, Mexico 2015, 270 m<sup>3</sup>/d MBR  
Bioenergy El Alcaravan Industrial water treatment plant, Puerto Lopez, Colombia 2014, 300 m<sup>3</sup>/d RO  
Intecsa Industrial Norm Handling Industrial waste water treatment plant, Abu Dhabi, UAE 2014, 120 m<sup>3</sup>/d  
San Pedro biomass Industrial waste water treatment plant, San Pedro Macorís, Rep. Dominicana 2013, 2,885 m<sup>3</sup>/d RO  
Reserva Fria combined cycle plant. Water treatment plant, Chiclayo, Peru 2013, 2,420 m<sup>3</sup>/d RO  
Ramos Kimberly cogeneration plant. Water treatment plant, Monterrey, Mexico 2013, 968 m<sup>3</sup>/d RO  
Copasa Sogama industrial waste water treatment plant., La Coruña, Spain 2013, 400 m<sup>3</sup>/d RO  
Atlantic Copper reverse osmosis plant, Huelva, Spain 2013, 10 m<sup>3</sup>/d RO  
Mancomunada Sector Cardeñosa (Ávila) drinking water treatment plant., Ávila, Spain 2012, 4,320 m<sup>3</sup>/d  
Frigorífico Guadalupe Industrial waste water treatment plant, Bogotá, Colombia 2012, 1,700 m<sup>3</sup>/d  
Bookport solar thermal plant. Water treatment plant, Upington, South Africa 2012, 760 m<sup>3</sup>/d RO  
Quala Industrial waste water treatment plant, Bogotá, Colombia 2012, 528 m<sup>3</sup>/d MBR  
Dragados GULF-Intecsa Industrial (Mina de Bauxita) Industrial waste water treatment plant, Maaden, UAE 2012, 100 m<sup>3</sup>/d RO

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### SELECTED REFERENCES

#### Design, Build, Finance and Operate

Geleen, Netherlands 2016, 2,400 m<sup>3</sup>/d RO

#### Design, Engineering, Building, Construction, Commissioning and Maintenance

Schuwacht, Gouda, Netherlands 2015, 9,600 m<sup>3</sup>/d RO  
Mobile RO, Rotterdam, Netherlands 2015, 4,800 m<sup>3</sup>/d RO  
DWP Phase I, Rotterdam, Netherlands 2010, 33,600 m<sup>3</sup>/d RO

#### Plant Supplier

- Mobile UF, Groot-Ammers, Netherlands 2015, 12,400 m<sup>3</sup>/d Other / Unknown  
Rotterdam, Netherlands 2015, 9,600 m<sup>3</sup>/d RO  
Amsterdam, Netherlands 2015, 3,840 m<sup>3</sup>/d RO  
Mobile RO, Romania 2014, 13,200 m<sup>3</sup>/d RO  
Lieshout, Netherlands 2014, 2,000 m<sup>3</sup>/d NF  
Wastewater reuse, Amsterdam, Netherlands 2014, 390 m<sup>3</sup>/d Other / Unknown  
Tertiary waste water re-use, Gouda, Netherlands 2013, 1,240 m<sup>3</sup>/d RO  
ZH, Netherlands 2012, 600 m<sup>3</sup>/d RO  
Brabant, Netherlands 2012, 240 m<sup>3</sup>/d Other / Unknown  
Rental RO unit, Romania 2013, 13,200 m<sup>3</sup>/d RO

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### SELECTED REFERENCES

#### Plant Supplier (Desal)

- Mt Morgans Gold Project, Laverton, WA, Australia 2017, 450 m<sup>3</sup>/d RO  
Marine Supply Base, Karratha, WA, Australia, 500 m<sup>3</sup>/d RO  
Iron Ore Mine - Rio Tinto, Pilbara, WA, Australia, 360 m<sup>3</sup>/d RO  
Coal Seam Gas Plant, Combabula, Queensland, Australia, 165 m<sup>3</sup>/d UF

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[www.malakoff.com](http://www.malakoff.com)**SELECTED REFERENCES****Plant Owner**Al Ghubrah IWP, Muscat, Oman 2012, 190,932 m<sup>3</sup>/d RO**Marafiq**

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✉️ [registration.projects@marafiq.com.sa](mailto:registration.projects@marafiq.com.sa)[www.marafiq.com.sa](http://www.marafiq.com.sa)**SELECTED REFERENCES****Developer**SWRO Project, Sadara, Saudi Arabia 2013, 178,560 m<sup>3</sup>/d ROYanbu 2 Power and Water Project, Yanbu, Saudi Arabia 2011, 60,000 m<sup>3</sup>/d MED**Marubeni Corporation**

📍 Japan



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[www.marubeni.com](http://www.marubeni.com)**SELECTED REFERENCES****Operation and Maintenance**Doha West WWTP - Phase 3, Doha, Qatar 2014, 105,000 m<sup>3</sup>/d UF**Plant Owner, Operation and Maintenance**Shuqaiq 3, Saudi Arabia 2019, 450,062 m<sup>3</sup>/d RORabigh - Expansion, Saudi Arabia 2014, 54,553 m<sup>3</sup>/d RO**Mascara Renewable Water**

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✉️ [contact@mascara-nt.fr](mailto:contact@mascara-nt.fr)[www.mascara-nt.fr/en](http://www.mascara-nt.fr/en)**SELECTED REFERENCES****Reverse Osmosis Solar Desalination Unit Supplier**Witsand/Hessequa, Western Cape Province, South Africa 2018, 100 m<sup>3</sup>/d ROFurna/Nova Sintra, Brava Island, Cabo Verde 2018, 20 m<sup>3</sup>/d ROPapa Garang Island, East Nusa Tenggara, Indonesia 2018, 5 m<sup>3</sup>/d ROGaza Province (3 x 20m<sup>3</sup>/d, 3 x 30m<sup>3</sup>/d), Mozambique 2017, 150 m<sup>3</sup>/d RORodrigues Island, Mauritius 2017, 80 m<sup>3</sup>/d RORodrigues Island, Mauritius 2017, 20 m<sup>3</sup>/d ROBora-Bora, French Polynesia 2016, 80 m<sup>3</sup>/d RO**MBR Technologies**[www.mbrtech.com.au](http://www.mbrtech.com.au)**SELECTED REFERENCES****Technology Provider**Sunbury Recycled Water Plant - Upgrade, Australia 2018, 9,200 m<sup>3</sup>/d**McWong Environmental Technology Corp., Ltd.**

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✉️ [chenyuanchao@mcwongtech.com](mailto:chenyuanchao@mcwongtech.com)[www.mcwongtech.com](http://www.mcwongtech.com)**SELECTED REFERENCES****Plant Supplier**Water Reuse - ChinaCoal, Inner Mongolia, China 2015, 18,272 m<sup>3</sup>/d ROTaihua New Material Company Zero Liquid Discharge Project, Shanxi, Taiyuan, China 2015, 1,440 m<sup>3</sup>/d ROYangcoal Pingding Zero Liquid Discharge Project, Shanxi , Yangquan, China 2014, 9,600 m<sup>3</sup>/d ROMengda Zero Liquid Discharge Project , Erdos, China 2013, 13,200 m<sup>3</sup>/d ROWater Reuse - Yellow River, China, 14,400 m<sup>3</sup>/d ROMunicipal Reuse-water Treatment, Zhejiang, China, 10,000 m<sup>3</sup>/d OzonationReuse and ZLD - Yangquan Coal Group, Yangquan, China, 5,040 m<sup>3</sup>/d RO

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### SELECTED REFERENCES

#### ED Equipment Supply, Installation and Commissioning

Police, Poland 2019, 17,654 m<sup>3</sup>/d ED  
Philip Morris, Italy 2019, 1,152 m<sup>3</sup>/d ED  
Caesar Pac, Kuwait 2017, 2,160 m<sup>3</sup>/d ED  
Kasra paper, Yazd, Iran 2016, 2,160 m<sup>3</sup>/d ED  
Petrochemical Complex - Comperj, Rio de Janeiro, Itaboráí, Brazil 2015, 10,200 m<sup>3</sup>/d ED  
Taif-Nk, Tatarstan, Russia 2015, 6,000 m<sup>3</sup>/d ED  
Achinsk, Krasnoyarsk, Russia 2015, 500 m<sup>3</sup>/d ED  
Sonepat, India 2015, 264 m<sup>3</sup>/d ED  
Neemrana, India 2015, 240 m<sup>3</sup>/d ED  
PALS Breweries, Aurangabad, India 2014, 240 m<sup>3</sup>/d ED  
Kuybyshev AZOT, Togliatti, Russia 2013, 1,440 m<sup>3</sup>/d ED  
JSC Minudobreniya, Rossoh, Russia 2012, 1,440 m<sup>3</sup>/d ED

#### EDI Equipment Supply, Installation and Commissioning

Termomeccanica, Colombia 2017, 1,440 m<sup>3</sup>/d ED  
G-Power, Georgia 2017, 480 m<sup>3</sup>/d ED  
Al-Khaleej, United Arab Emirates 2016, 960 m<sup>3</sup>/d ED  
Energy, Czech Republic 2014, 2,376 m<sup>3</sup>/d ED

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### SELECTED REFERENCES

#### EPC Contractor

El Bobar WWTP, Almería - Expansion, Andalucía, Spain 2012,  
47,500 m<sup>3</sup>/d MF, UV

## Membrane SRL



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### SELECTED REFERENCES

#### Plant Supplier (Desal)

Offshore, South Korea, Italy 2015, 20 m<sup>3</sup>/d RO  
SEA 20, Offshore, South Korea 2015, 20 m<sup>3</sup>/d RO  
SEA 20, Offshore, Italy 2015, 20 m<sup>3</sup>/d RO  
EDI desalination, Italy 2015, 6 m<sup>3</sup>/d EDI  
EDIDEMI 6, Lyon, Auvergne Rhône-Alpes, France 2015, 6 m<sup>3</sup>/d EDI  
EDIDEMI 6, Milan, Lombardia, Italy 2015, 6 m<sup>3</sup>/d EDI  
SEA 720, Offshore, Nigeria 2013, 720 m<sup>3</sup>/d RO  
OSMODEMI 720, Milan, Lombardia, Italy 2013, 720 m<sup>3</sup>/d RO  
OSMODEMI 300, Milan, Lombardia, Italy 2013, 300 m<sup>3</sup>/d RO  
Sardinia, Italy 2013, 300 m<sup>3</sup>/d RO  
OSMODEMI 300, Sardinia, Italy 2013, 300 m<sup>3</sup>/d RO  
SEA 240, Offshore, Norway 2012, 240 m<sup>3</sup>/d RO  
SEA 240, Offshore, Italy 2012, 240 m<sup>3</sup>/d RO  
Sicily, Italy 2011, 1,600 m<sup>3</sup>/d RO

#### Package Supply

Sewage Water Treatment System DEPUR OIL-120, Offshore, Brazil 2012, 120 m<sup>3</sup>/d Other / Unknown

#### Package Supply/Site Service

Sewage Water MBR Treatment System, Offshore, Italy 2015, 80 m<sup>3</sup>/d Other / Unknown

Desalination Package SEA 240-DPLX-EExD, Offshore, Italy 2012, 240 m<sup>3</sup>/d RO  
Nanofiltration plant, Offshore, Italy 2012, 3 m<sup>3</sup>/d NF

#### Revamping/Site Service

Desalination Package SEA 200-SP-EExi-NSK, Offshore, Norway 2015, 800 m<sup>3</sup>/d RO

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**METITO**



Metito is a pan-emerging market leader of total intelligent water management with operations covering design and build, utilities, operations and maintenance, and chemical solutions. Given its high-value engineering capabilities, the company provides customized and advanced solutions that embody Metito's key founding principles of impact, sustainability, innovation.

Metito operates across the entire treatment value chain specializing in desalination, wastewater treatment, recycling and reuse, water reuse, and industrial solutions (up to hyper-pure water). Metito is also an impact investor in water and wastewater assets, pioneering both Greenfield and Brownfield projects across markets.

Backed by 65 years of history, 4500 plus employees, experience in 50 countries, and over 25 offices globally, Metito is at the forefront of the water and wastewater industry with an impressive project portfolio of over 5,000 projects to date. The company has been announced as the lead supplier for desalination plants developed from July 2021-October 2022 as per Global Water Intelligence Report 2022.

Metito is a key enabler of the circular economy and is committed to working with governments, industries, and communities to meet their water needs by delivering sustainable infrastructure solutions.

For more information please visit [metito.com](http://metito.com)

**SELECTED REFERENCES****O&M Contractor**

El Galala, Egypt 2022, 150,000 m<sup>3</sup>/d RO

Sedra Site, Saudi Arabia 2022, 60,000 m<sup>3</sup>/d

Egyptian Fertilizer Company, Egypt 2022, 25,000 m<sup>3</sup>/d RO

Riffa Views WWTP, Bahrain 2022, 3,600 m<sup>3</sup>/d

Kalba WWTP, UAE 2022, 3,500 m<sup>3</sup>/d

Hatta WWTP, UAE 2022, 3,000 m<sup>3</sup>/d

Salwa Beach Resort WWTP, Qatar 2022, 2,600 m<sup>3</sup>/d

Salwa Beach Resort BWRO Plant, Qatar 2022, 2,600 m<sup>3</sup>/d RO

Al Gassar BWRO Plant, Qatar 2022, 1,700 m<sup>3</sup>/d RO

Boom Construction WWTP, Qatar 2022, 1,000 m<sup>3</sup>/d

Samhaan BWRO Plant, Bahrain 2022, 500 m<sup>3</sup>/d RO

Al Gassar Grey Water System, Qatar 2022, 144 m<sup>3</sup>/d

Emaar Polishing Plant WWTP, UAE 2021, 20,000 m<sup>3</sup>/d

Jafza WWTP, UAE 2021, 8,000 m<sup>3</sup>/d

Al Bayt BWRO Plant, Qatar 2021, 3,600 m<sup>3</sup>/d RO

Naufar BWRO Plant, Qatar 2021, 1,000 m<sup>3</sup>/d RO

Dannat Al Lawzy WWTP, Bahrain 2021, 615 m<sup>3</sup>/d

Barwa Al Khor WWTP, Qatar 2021, 560 m<sup>3</sup>/d

Sewerage Extension to Al Khor ST Works Phase II, Qatar 2012, 3,888 m<sup>3</sup>/d Other / Unknown

**Plant Supplier (Desal)**

Mirfa Seawater Treatment and Supply Company, United Arab Emirates 2023, 500,000 m<sup>3</sup>/d

Perur, India 2023, 400,000 m<sup>3</sup>/d RO

Fouka, Algeria 2023, 300,000 m<sup>3</sup>/d RO

Al-Jubail Desalination Phase 2 SWRO Plant, Saudi Arabia 2022, 1,000,000 m<sup>3</sup>/d RO

Production Restoration of Hamriyah SWRO Plant, United Arab Emirates 2022, 90,800 m<sup>3</sup>/d RO

Corso SWRO Plant, Algeria 2022, 80,000 m<sup>3</sup>/d RO

Manyar Smelter, Indonesia 2022, 34,500 m<sup>3</sup>/d RO

Koskhetau Project, Kazakhstan 2022, 30,000 m<sup>3</sup>/d

Expansion of Caspiy Desalination SWRO Plant, Kazakhstan 2022, 26,600 m<sup>3</sup>/d RO

King Abdullah Economic City, Saudi Arabia 2022, 15,000 m<sup>3</sup>/d RO

Fujairah Fresh Water Production Co. Phase 2 SWRO Plant, United Arab Emirates 2022, 3,500 m<sup>3</sup>/d RO

NEOM Satco Village, Saudi Arabia 2022, 2,000 m<sup>3</sup>/d RO

El Nasr Co. Intermediate Chemicals Abu Rawash, Egypt 2022, 1,920 m<sup>3</sup>/d

Umm Al Afahae Plant, Qatar 2022, 1,000 m<sup>3</sup>/d

Neom Satco Village BWRO Plant, KSA 2022, 250 m<sup>3</sup>/d RO

El Hammam Utilities BWRO Plant, Egypt 2022, 115 m<sup>3</sup>/d RO

Sfax SWRO Plant, Tunisia 2021, 100,000 m<sup>3</sup>/d RO

Abu Tieg Potable Water Treatment Plant, Egypt 2021, 43,200 m<sup>3</sup>/d Other / Unknown

Manflout Potable Water Treatment Plant, Egypt 2021, 43,200 m<sup>3</sup>/d Other / Unknown

Mallaway Potable Water Treatment Plant, Egypt 2021, 38,880 m<sup>3</sup>/d Other / Unknown

Sharm El Sheikh SWRO Plant, Egypt 2021, 30,000 m<sup>3</sup>/d RO

Der Mewas Potable Water Treatment Plant, Egypt 2021, 25,920 m<sup>3</sup>/d RO

Kirikkale Refineries BWRO Plant, Turkey 2021, 7,200 m<sup>3</sup>/d RO

Egyptian Fertilizers Company Demin Plant, Egypt 2021, 3,840 m<sup>3</sup>/d RO

Wika Palu SWRO Plant, Indonesia 2021, 1,953 m<sup>3</sup>/d RO

CSFPP Palu -3 SWRO Power Plant, Indonesia 2021, 1,862 m<sup>3</sup>/d RO

New Palm Oil Refinery SWRO Plant, Indonesia 2021, 1,764 m<sup>3</sup>/d RO

District Cooling Scheme for Business Park, KFUPM, BWRO Plant, Saudi Arabia 2021, 1,712 m<sup>3</sup>/d RO

New Palm Oil Refinery BWRO Plant, Indonesia 2021, 1,500 m<sup>3</sup>/d RO

El Dabaa Port SWRO Plant, Egypt 2021, 250 m<sup>3</sup>/d RO

Sir Abu Nauyr Island SWRO Plant, UAE 2021, 135 m<sup>3</sup>/d RO

Al Jubail Desalination Plant (Phase 2), Saudi Arabia 2020, 400,000 m<sup>3</sup>/d RO

Bahri (construction of desalination plants on 3 barges), Al Shaqeeq, Saudi Arabia 2020, 150,000 m<sup>3</sup>/d RO

kikda/Sedrata BWRO, Skikda, Algeria 2020, 15,000 m<sup>3</sup>/d RO

The Food Complex, Egypt 2020, 1,440 m<sup>3</sup>/d RO

CBWRO Plant for YKK Pakistan, Pakistan 2020, 720 m<sup>3</sup>/d RO

Duba SWRO, Saudi Arabia 2019, 125,000 m<sup>3</sup>/d RO

Al Arish, Egypt 2019, 100,000 m<sup>3</sup>/d RO

# IDRA

## DESALINATION & REUSE HANDBOOK

Laayounes SWRO Plant, Morocco 2019, 26,000 m<sup>3</sup>/d RO  
Fujairah Fresh Water Production Co., United Arab Emirates 2022, 3,500 m<sup>3</sup>/d RO  
Al Bayt Stadium Alkhor, Qatar 2022, 3,500 m<sup>3</sup>/d RO  
6th of October, Egypt 2022, 25,000 m<sup>3</sup>/d  
DUQM Refinery Project, EPC PKG, Service Water Remineralization, Oman 2019, 24,096 m<sup>3</sup>/d Other / Unknown  
DUQM Refinery Project, EPC PKG, Demineralization, Oman 2019, 13,824 m<sup>3</sup>/d Other / Unknown  
The Red Sea Development Company (TRSDC), Saudi Arabia 2019, 12,500 m<sup>3</sup>/d RO  
DUQM Refinery Project, EPC PKG, Condensate Polishing, Oman 2019, 10,416 m<sup>3</sup>/d Other / Unknown  
Desalination Plant - Vipingo Development, Kenya 2019, 3,000 m<sup>3</sup>/d RO  
EPC - Upgrade / Modification WTP System 1 CELL Unit 1 - PLTU SUGE Belitung, Indonesia 2019, 1,128 m<sup>3</sup>/d RO  
System 1 CELL Unit 1 - PLTU SUGE Belitung (Upgrade/Modification WTP), Indonesia 2019, 1,128 m<sup>3</sup>/d RO  
JAWA 1 Combined Cycle Power Plant Project, Indonesia 2019, 969 m<sup>3</sup>/d RO  
Ball Beverage Packaging, Egypt 2019, 370 m<sup>3</sup>/d RO  
DUQM Refinery Project, EPC PKG, Potable Water Remineralization, Oman 2019, 309 m<sup>3</sup>/d Other / Unknown  
Basrah Gas Project, Iraq 2019, 240 m<sup>3</sup>/d RO  
Mobile Desalination Plants in Saudi for SWCC, Saudi Arabia 2018, 150,000 m<sup>3</sup>/d RO  
BOO Water Desalination Plant at Wadi Al Ain Well Field, Wilayah Ibbi, Al Dahirah Governorate, Oman 2018, 40,000 m<sup>3</sup>/d RO  
PCPL Taloja Ammonia (PTA) Project, Mumbai, Taloja, India 2018, 25,704 m<sup>3</sup>/d RO  
Sharma Complex SWRO, Sharma, Saudi Arabia 2018, 24,000 m<sup>3</sup>/d RO  
Tinduf line 3, Algeria 2018, 5,250 m<sup>3</sup>/d RO  
El Negila SWRO, North Coast, Egypt 2018, 5,000 m<sup>3</sup>/d RO  
Tarjun Refinery - WTP, Indonesia 2018, 3,120 m<sup>3</sup>/d RO  
PP12-CC Modularization WT Facility - WTP - Modular Type WTP , Saudi Arabia 2018, 2,000 m<sup>3</sup>/d UF  
Hacienda Bay, North Coast, Egypt 2018, 2,000 m<sup>3</sup>/d RO  
EPC - Revitalization WTP for RU VII Kasim, Indonesia 2018, 1,200 m<sup>3</sup>/d RO  
Sharma Complex BWRO, Sharma, Saudi Arabia 2018, 1,200 m<sup>3</sup>/d RO  
Singapore Refining Company Desalination Project, Jurong Island, Singapore 2018, 1,100 m<sup>3</sup>/d RO  
PP12 – Modularization Water Treatment Facility, Saudi Arabia 2018, 960 m<sup>3</sup>/d RO  
Nasr City Water Purification Plant - Abu Oweikal, Cairo, Egypt 2017, 500,000 m<sup>3</sup>/d RO  
Beash Dam Valley BWRO, Beash, Saudi Arabia 2017, 150,000 m<sup>3</sup>/d RO  
East Port Said Desalination, Port Said, Egypt 2017, 150,000 m<sup>3</sup>/d RO  
SKing Abdullah Economic City - SWRO Plant, Jeddah, Saudi Arabia 2017, 30,000 m<sup>3</sup>/d RO  
ATA Power & Steam Integration Project, Abu Dhabi, Taweeleah, United Arab Emirates 2017, 13,200 m<sup>3</sup>/d RO  
West Damietta Extension, Damietta, Egypt 2017, 12,960 m<sup>3</sup>/d RO  
MAAFCO Misr, New Cairo, Egypt 2017, 11,448 m<sup>3</sup>/d RO  
Rades-C Combined Cycle Power Plant, Tunis, Tunisia 2017, 5,472 m<sup>3</sup>/d RO  
Al Bayt Stadium-TSE RO Polishing Plant, Doha, Qatar 2017, 3,000 m<sup>3</sup>/d RO  
Abu Ali Camp Project, Abu Ali Island, Eastern Region, Saudi Arabia 2017, 120 m<sup>3</sup>/d RO  
Hassi R'mel Boosting Phase 3 Project, Hassi R'mel, Algeria 2017, 1,800 m<sup>3</sup>/d RO

Jizan Hospital Project BWRO & STP, Jeddah, Saudi Arabia 2017, 900 m<sup>3</sup>/d RO  
HRH Prince Khalid Bin Abdullah Palace, Jeddah, Saudi Arabia 2017, 500 m<sup>3</sup>/d RO  
New Jeddah Clinic Hospital, Jeddah, Saudi Arabia 2017, 470 m<sup>3</sup>/d RO  
Indonesia Muara Karang Project, Indonesia 2017, 440 m<sup>3</sup>/d RO  
Hassi R'mel Boosting Phase 3 Project, Hassi R'mel, Algeria 2017, 90 m<sup>3</sup>/d RO  
Aramco Gazan Industrial Support Facilities, Jazan, Saudi Arabia 2017, 60 m<sup>3</sup>/d RO  
El Galala Seawater Reverse Osmosis Project, Ain Sokhna, Egypt 2016, 150,000 m<sup>3</sup>/d RO  
El Tor Seawater Reverse Osmosis Project, El Tor Sinai, Egypt 2016, 30,000 m<sup>3</sup>/d RO  
Tindouf BWRO, Algeria 2016, 10,500 m<sup>3</sup>/d RO  
Uzbekistan Navoiy Fertilizer (UNF) Project – RWTP (BWRO) & Demin, Navoiy, Uzbekistan 2016, 4,320 m<sup>3</sup>/d RO  
Salwa Resort Project - TSE Polishing RO, Doha, Qatar 2016, 1,850 m<sup>3</sup>/d RO  
Al Yosr Seawater Reverse Osmosis Project, Hurghada, Egypt 2015, 80,000 m<sup>3</sup>/d RO  
Touggourt Brackish Water Reverse Osmosis Project, Touggourt, Algeria 2015, 34,000 m<sup>3</sup>/d RO  
Marassi (North Coast) Seawater Reverse Osmosis Project, Sidi Abdel Rahman, Egypt 2015, 12,500 m<sup>3</sup>/d RO  
SONEDE Brackish Water Reverse Osmosis Project , Mareth, Matmata, Beni Khedash, Belkheir, Tunisia 2015, 11,400 m<sup>3</sup>/d RO  
El Burullus Power Plant Seawater Reverse Osmosis/ Brackish Water Reverse Osmosis Project, El Burullus, Egypt 2015, 3,300 m<sup>3</sup>/d RO  
Umm Wuai Phosphate Brackish Water Reverse Osmosis Project, Turaif, Saudi Arabia 2014, 54,600 m<sup>3</sup>/d RO  
Damietta Seawater Reverse Osmosis Project, Damietta, Egypt 2014, 7,200 m<sup>3</sup>/d RO  
KFUPM Student Housing Project , Dhahran, Saudi Arabia 2014, 6,600 m<sup>3</sup>/d RO  
Rabigh 2 Independent Power Project, Rabigh, Saudi Arabia 2014, 5,616 m<sup>3</sup>/d RO  
Cleopatra Seawater Reverse Osmosis Project, Marsa Matrouh, Egypt 2014, 4,500 m<sup>3</sup>/d RO  
Sidi Barani Seawater Reverse Osmosis Project, Sidi Barani, Egypt 2014, 4,500 m<sup>3</sup>/d RO  
City Stars Seawater Reverse Osmosis Project, Sharm El Sheikh, Egypt 2014, 4,500 m<sup>3</sup>/d RO  
Pearl Qatar Seawater Reverse Osmosis Plant, Doha, Qatar 2013, 35,000 m<sup>3</sup>/d RO  
Downtown Dubai Development TSE RO Polishing Plant, Dubai, United Arab Emirates 2013, 20,000 m<sup>3</sup>/d RO  
Musandam Gas Plant Project, Musandam, Oman 2013, 3,600 m<sup>3</sup>/d RO  
Handan Steel 3rd Water Treatment Plant, Handan, China 2011, 45,500 m<sup>3</sup>/d RO  
Arar Brackish Water Reverse Osmosis Plant, Arar, Saudi Arabia 2011, 25,000 m<sup>3</sup>/d RO  
Palm Oil Mill PT Sari Dumai Sejati Project, Dumai, Indonesia 2011, 6,720 m<sup>3</sup>/d RO  
South Yoloten Gas Field Development Project, Yolöten, Turkmenistan 2011, 4,300 m<sup>3</sup>/d RO  
Qatar Steel (Qasco) Project, Qatar 2010, 15,000 m<sup>3</sup>/d RO  
Lisco Brackish Water Reverse Osmosis Project, Misrata, Libya 2010, 3,000 m<sup>3</sup>/d RO  
NEOM, Saudi Arabia 2019, 125,000 m<sup>3</sup>/d RO

### Plant Supplier (Reuse)

Mishref PS & Associated Facilities, Kuwait 2023, 261,000 m<sup>3</sup>/d  
Mbezi Beach, Tanzania 2023, 16,000 m<sup>3</sup>/d

Amwaj Island, Bahrain 2023, 5,000 m<sup>3</sup>/d  
 North Field, Qatar 2023, 4,350 m<sup>3</sup>/d  
 Qatar Petrochemicals Company, Qatar 2023, 3,600 m<sup>3</sup>/d  
 Madinat Khalifa Temp (Rayad Asker and Bur Al Dur), Bahrain 2023, 3,000 m<sup>3</sup>/d  
 Borg El Arab Milk & Cheese Factory, Egypt 2023, 1,500 m<sup>3</sup>/d  
 Al Bayt Village, Qatar 2023, 700 m<sup>3</sup>/d  
 Hamad International Airport (Ras Abrouq), Qatar 2023, 45 m<sup>3</sup>/d  
 Al Wakra Al Wukair, Qatar 2022, 150,000 m<sup>3</sup>/d  
 Namangan Municipal Project, Uzbekistan 2022, 100,000 m<sup>3</sup>/d  
 Zrenjanin Purification Water Plant, Serbia 2022, 30,240 m<sup>3</sup>/d  
 Tanouf, Egypt 2022, 20,000 m<sup>3</sup>/d  
 Ebrash & Kafr Ebrash Villages WWTP, Egypt 2022, 10,000 m<sup>3</sup>/d  
 Shama Village, Egypt 2022, 10,000 m<sup>3</sup>/d  
 Talya Village, Egypt 2022, 10,000 m<sup>3</sup>/d  
 Sobk El Ahd Village, Egypt 2022, 10,000 m<sup>3</sup>/d  
 Qantra West, Egypt 2022, 10,000 m<sup>3</sup>/d  
 Ras Laffan Petrochemicals Project, Qatar 2022, 8,700 m<sup>3</sup>/d  
 Kahk WWTP, Egypt 2022, 7,500 m<sup>3</sup>/d  
 Youssef Al Seddk WWTP, Egypt 2022, 5,000 m<sup>3</sup>/d  
 Arab Zidan WWTP, Egypt 2022, 4,000 m<sup>3</sup>/d  
 NEOM Satco Village WWTP, KSA 2022, 2,000 m<sup>3</sup>/d  
 West Aswan, Egypt 2022, 2,000 m<sup>3</sup>/d  
 Gezirat Abu Saleh, Egypt 2022, 2,000 m<sup>3</sup>/d  
 NEOM Satco Village, Saudi Arabia 2022, 2,000 m<sup>3</sup>/d  
 Um Al Hould Freezone, Qatar 2022, 1,500 m<sup>3</sup>/d  
 Massar, United Arab Emirates 2022, 1,500 m<sup>3</sup>/d  
 Mazzraty Dairy Project and Irakia Farm, Qatar 2022, 1,300 m<sup>3</sup>/d  
 Punagaya Coal Fired Power Plant, Indonesia 2022, 760 m<sup>3</sup>/d  
 Samara Pharmaceutical Plant, Iraq 2022, 500 m<sup>3</sup>/d  
 Al Gassar Grey Water System, Qatar 2022, 144 m<sup>3</sup>/d  
 Taliwang Coal Fired Power Plant, Indonesia 2022, 80 m<sup>3</sup>/d  
 El Hammam Utilities WWTP, Egypt 2022, 50 m<sup>3</sup>/d  
 Al Hammam Water Reuse, Egypt 2021, 7,500,000 m<sup>3</sup>/d Other / Unknown  
 Namangan WWTP, Uzbekistan 2021, 100,000 m<sup>3</sup>/d  
 Sidi Abdella SUD WWTP, Algeria 2021, 32,000 m<sup>3</sup>/d  
 Barwa Housing WWTP, Qatar 2021, 27,200 m<sup>3</sup>/d  
 Wadi Al Arab Sewage Treatment Plants, Jordan 2021, 27,000 m<sup>3</sup>/d Other / Unknown  
 Rehab of Wadi al Arab WWTP, Jordan 2021, 27,000 m<sup>3</sup>/d  
 Kafra El Waslin Sewage Treatment Plant, Egypt 2021, 25,000 m<sup>3</sup>/d Other / Unknown  
 Barmasha WWTP, Egypt 2021, 20,000 m<sup>3</sup>/d  
 Upgrade & Rehab of WWTP (UWN), KSA 2021, 19,200 m<sup>3</sup>/d  
 Camp North Field Expansion WWTP, Qatar 2021, 15,700 m<sup>3</sup>/d  
 Barwa's Family Housing Sewage Treatment Plant, Qatar 2021, 15,337 m<sup>3</sup>/d Other / Unknown  
 Abu Qurkas Sewage Treatment Plant, Egypt 2021, 15,000 m<sup>3</sup>/d Other / Unknown  
 Irbid Central Sewage Treatment Plant, Jordan 2021, 13,000 m<sup>3</sup>/d Other / Unknown  
 Barwa's Labor Accommodation Sewage Treatment Plant, Qatar 2021, 7,644 m<sup>3</sup>/d Other / Unknown  
 The Group of STPs, UAE 2021, 4,000 m<sup>3</sup>/d  
 Feed for Halul Isand STP, Qatar 2019, 600 m<sup>3</sup>/d MBR  
 Rehab of Irbid WWTP, Jordan 2021, 13,000 m<sup>3</sup>/d  
 Al Galalah Sewage Treatment Plant, Egypt 2021, 10,000 m<sup>3</sup>/d Other / Unknown  
 Air Products - Demineralization Package, Jubail WWTP, KSA 2021, 7,440 m<sup>3</sup>/d

El Rashidi El Mizan Factory WWTP, Egypt 2021, 1,000 m<sup>3</sup>/d  
 National Paint Labor Accommodation, UAE 2021, 500 m<sup>3</sup>/d  
 Pyramid Heights Sewage Treatment Plant, Egypt 2021, 400 m<sup>3</sup>/d  
 Other / Unknown  
 El Dabaa Police Station WWTP, Egypt 2021, 300 m<sup>3</sup>/d  
 El Dabaa Port WWTP, Egypt 2021, 250 m<sup>3</sup>/d  
 SARPI Hassi R'mel WWTP, Algeria 2021, 150 m<sup>3</sup>/d  
 Development Du Perimetre de Touggourt WWTP, Algeria 2021, 35 m<sup>3</sup>/d  
 Independent Sewage Treatment Plant (ISTP), Dammam, Saudi Arabia 2020, 350,000 m<sup>3</sup>/d Other / Unknown  
 TRSDC, The Red Sea Development Company - GLS Storage Tanks , Saudi Arabia 2020, 31,209 m<sup>3</sup>/d Other / Unknown  
 Zrenjanin Sewage Treatment Plant, Serbia 2020, 25,000 m<sup>3</sup>/d Other / Unknown  
 Aljada Sewage Treatment Plant, United Arab Emirates 2020, 16,500 m<sup>3</sup>/d Other / Unknown  
 Manshiet Abbas, Egypt 2020, 12,000 m<sup>3</sup>/d Other / Unknown  
 Snita El Rafaeen STP, Egypt 2020, 12,000 m<sup>3</sup>/d MBR  
 El Negila LAB Equipment , Egypt 2020, 10,000 m<sup>3</sup>/d Other / Unknown  
 Fowa Kafr El Sheikh, Egypt 2020, 10,000 m<sup>3</sup>/d Other / Unknown  
 El Mansoura Sewage Treatment Plant, Egypt 2020, 8,000 m<sup>3</sup>/d Other / Unknown  
 El Mansoura Sewage Treatment Plant, Egypt 2020, 7,000 m<sup>3</sup>/d Other / Unknown  
 Manshyet Abdel Rahman Sewage Treatment Plant, Egypt 2020, 3,000 m<sup>3</sup>/d Other / Unknown  
 New Port Project Sewage Treatment Plant, Qatar 2020, 2,931 m<sup>3</sup>/d Other / Unknown  
 New Port Project - NPP 0050, Qatar 2020, 2,900 m<sup>3</sup>/d Other / Unknown  
 Crown Palm Hills, Egypt 2020, 2,000 m<sup>3</sup>/d MBR  
 Assuit Villages, Egypt 2020, 1,950 m<sup>3</sup>/d MBR  
 Um Alhoul Economic Zone (QEZ-3), Qatar 2020, 1,500 m<sup>3</sup>/d MBR  
 Borg Al Arbab, Egypt 2020, 1,380 m<sup>3</sup>/d MBR  
 Mariam Island - STP, United Arab Emirates 2020, 720 m<sup>3</sup>/d MBR  
 Movenpick Sewage Treatment Plants (2x250), Egypt 2020, 500 m<sup>3</sup>/d Other / Unknown  
 King Abdullah Medical City Sewage Treatment Plant, Bahrain 2020, 500 m<sup>3</sup>/d MBR  
 Al Mahsama Treatment Plant, North Sinai, Egypt 2019, 1,000,000 m<sup>3</sup>/d Tertiary treatment  
 New El Alamein STP, Egypt 2019, 90,000 m<sup>3</sup>/d Other / Unknown  
 Boukhalef STP, Morocco 2019, 32,000 m<sup>3</sup>/d Other / Unknown  
 Manshiyet El Horreya WWTP-EGP, Egypt 2019, 30,000 m<sup>3</sup>/d Other / Unknown  
 Relocation of PTP - O&M of DS STW - Work Order No.: PTP - 026, Qatar 2019, 10,000 m<sup>3</sup>/d Other / Unknown  
 Al Nekaidy STP, Egypt 2019, 10,000 m<sup>3</sup>/d Other / Unknown  
 Fadhlil Bachelors Camp STP, Saudi Arabia 2019, 1,000 m<sup>3</sup>/d Other / Unknown  
 Danaat Al Lawzi, Bahrain 2019, 615 m<sup>3</sup>/d MBR  
 Wastewater Plants for Lesotho, Lesotho 2019, 600 m<sup>3</sup>/d MBR  
 Mahe STP - lot2, Seychelles 2019, 80 m<sup>3</sup>/d Other / Unknown  
 JAWA 1 Combined Cycle Power Plant Project, Indonesia 2019, 25 m<sup>3</sup>/d Other / Unknown  
 New Alamin, Egypt 2018, 90,000 m<sup>3</sup>/d Other / Unknown  
 Ghazala STP, Saudi Arabia 2012, 5,000 m<sup>3</sup>/d Other / Unknown  
 East Port Saied STP, Port Said, Egypt 2018, 25,000 m<sup>3</sup>/d Other / Unknown  
 Sawaleh STP, Sharkia, Egypt 2018, 22,000 m<sup>3</sup>/d Other / Unknown  
 Al-Quaway'iyah STP, Al-Quaway'iyah, Saudi Arabia 2018, 10,000 m<sup>3</sup>/d Other / Unknown  
 Badr STP, Egypt 2018, 10,000 m<sup>3</sup>/d Other / Unknown

# IDRA

## DESALINATION & REUSE HANDBOOK

PCPL Taloja Ammonia (PTA) Project, Mumbai, India 2018, 6,840 m<sup>3</sup>/d RO  
Sharjah International Airport Expansion Project, United Arab Emirates 2018, 3,000 m<sup>3</sup>/d MBR  
Bang Pakong Combined Cycle Project, Chachoengsao, Thailand 2018, 2,780 m<sup>3</sup>/d Other / Unknown  
Sharoura STP, Western Region, Saudi Arabia 2018, 2,200 m<sup>3</sup>/d MBR  
Soldiers Accommodation Army Camp, Qatar 2018, 1,200 m<sup>3</sup>/d Other / Unknown  
WWTP-Arab Qatari Co. for Poultry Production, Doha, Qatar 2018, 500 m<sup>3</sup>/d Other / Unknown  
Sewage Treatment Plant for Hotel Ole Sereni, Doha, Qatar 2018, 200 m<sup>3</sup>/d Other / Unknown  
PCPL Taloja Ammonia (PTA) Project, Mumbai, India 2018, 168 m<sup>3</sup>/d Other / Unknown  
Mahalma STP, Algeria 2017, 32,000 m<sup>3</sup>/d Other / Unknown  
KhanYounis Waste Water Treatment Plant, Palestine 2017, 26,000 m<sup>3</sup>/d  
Temp. STP Facility at Southern New Town in Bahrain, Askar, Bahrain 2017, 3,021 m<sup>3</sup>/d Other / Unknown  
Jizan Hospital Project, Jeddah, Saudi Arabia 2017, 1,500 m<sup>3</sup>/d RO  
Lusail Stadium - Labour Camp, Doha, Qatar 2017, 1,000 m<sup>3</sup>/d Other / Unknown  
El Massah, New Capital, Egypt 2017, 1,000 m<sup>3</sup>/d Other / Unknown  
National Guard Specialized Hospital, Qassim, Saudi Arabia 2017, 600 m<sup>3</sup>/d Other / Unknown  
QDVC Labour camp - STP Upgrade, Doha, Qatar 2017, 600 m<sup>3</sup>/d Other / Unknown  
New Jeddah Hospital Clinic, Jeddah, Saudi Arabia 2017, 520 m<sup>3</sup>/d SBR  
Al Iman General Hospital Project, Jeddah, Saudi Arabia 2017, 400 m<sup>3</sup>/d SBR  
Al Jaryan Farm, STP - RDA, Doha, Qatar 2017, 250 m<sup>3</sup>/d Other / Unknown  
Sharjah Main Sewage Treatment Works - Upgrade, Sharjah, United Arab Emirates 2016, 130,000 m<sup>3</sup>/d Other / Unknown  
Khan Younis WWTP and Buildings, Gaza, Palestine 2016, 26,700 m<sup>3</sup>/d Other / Unknown  
Shotb, Assiut, Egypt 2016, 26,000 m<sup>3</sup>/d Other / Unknown  
Dubai Silicon Oasis STP Expansion, Dubai, United Arab Emirates 2016, 15,000 m<sup>3</sup>/d Other / Unknown  
Jebel Ali Hills Package 7-Sewage Treatment Plant, Dubai, United Arab Emirates 2016, 12,000 m<sup>3</sup>/d MBR  
Amwaj Island - STP Expansion Project, Manama, Bahrain 2016, 5,000 m<sup>3</sup>/d MBR  
Expansion of Kalba Sewage Treatment Plant, Sharjah, United Arab Emirates 2016, 3,500 m<sup>3</sup>/d Other / Unknown  
Ithaafushi Island Resort Project, Maldives 2016, 400 m<sup>3</sup>/d Other / Unknown  
DIP East STP – 2nd TSE Storage Tank, Dubai, United Arab Emirates 2015, 10,000 m<sup>3</sup>/d Other / Unknown  
Demashkeen Village - Air Craft, El Fayoum, Egypt 2015, 10,000 m<sup>3</sup>/d Other / Unknown  
Awlad seif Village - Air Craft, El Sharkeya, Egypt 2015, 10,000 m<sup>3</sup>/d Other / Unknown  
Aqiq STP , Al-Aqiq, Saudi Arabia 2015, 6,250 m<sup>3</sup>/d MBR  
Sumail Industrial Estate - STP, Oman 2015, 3,600 m<sup>3</sup>/d MBR  
Organica Trial at DIP West, Dubai, United Arab Emirates 2015, 3,500 m<sup>3</sup>/d Other / Unknown  
Kafr Taboot, Giza, Egypt 2015, 3,000 m<sup>3</sup>/d RO  
Al Jisser WTP, Iraq 2013, 4,000 m<sup>3</sup>/d Other / Unknown  
The Gardens-Supply & Delivery of Floating Process Aerators at STP, Dubai, United Arab Emirates 2014, 30,000 m<sup>3</sup>/d Other / Unknown  
El Tal El Kebeer, Sarkeya, Egypt 2014, 20,000 m<sup>3</sup>/d Other / Unknown  
Zawyet Rozein, Monofeya, Egypt 2014, 20,000 m<sup>3</sup>/d Other / Unknown

Samanoud Sewage Treatment Plant, Samanoud, Egypt 2014, 15,000 m<sup>3</sup>/d Other / Unknown  
Kafr El Khadra, Monofeya, Egypt 2014, 12,000 m<sup>3</sup>/d Other / Unknown  
Al-Yousefeyyah STP, Iraq 2014, 11,000 m<sup>3</sup>/d Other / Unknown  
DIP East Park STP – New Expansion of Phase E2 A/B, Dubai, United Arab Emirates 2014, 10,000 m<sup>3</sup>/d Other / Unknown  
DIP West Park STP Expansion-MBBR 9,000m<sup>3</sup>/day, Dubai, United Arab Emirates 2014, 9,000 m<sup>3</sup>/d MBBR  
Integrated Sewerage System - Tarif & Bida Mutawa, Abu Dhabi, United Arab Emirates 2014, 8,800 m<sup>3</sup>/d Other / Unknown  
Meraas Development - Dubai Parks Project Phase 1, Dubai, United Arab Emirates 2014, 7,500 m<sup>3</sup>/d Other / Unknown  
Reem Development Phase 1 - WWTP, Dubai, United Arab Emirates 2014, 6,000 m<sup>3</sup>/d MBR  
Madina Industrial City - WWTP, Saudi Arabia 2014, 5,000 m<sup>3</sup>/d Other / Unknown  
Ruwaiss Housing Complex Expansion P-III, Temporary STP, Abu Dhabi, United Arab Emirates 2014, 1,000 m<sup>3</sup>/d Other / Unknown  
JAFZA One STP Phase 1, Dubai, United Arab Emirates 2014, 360 m<sup>3</sup>/d Other / Unknown  
Ruwaiss Housing Complex Expansion Phase III. New STP, Abu Dhabi, United Arab Emirates 2013, 30,000 m<sup>3</sup>/d Other / Unknown  
Al Mahmodeyah WTP, Iraq 2013, 4,000 m<sup>3</sup>/d Other / Unknown  
Barwa Al-Khor Housing Development Package 2, Qatar 2013, 560 m<sup>3</sup>/d Other / Unknown  
Al Bustan Zoological Center Slaughter House, Sharjah, United Arab Emirates 2013, 200 m<sup>3</sup>/d Other / Unknown  
Short Term Measures-2nd Package-Grit Removal, Bahrain 2012, 100,000 m<sup>3</sup>/d MBR  
STP Of South Koufa, Iraq 2012, 50,000 m<sup>3</sup>/d Other / Unknown  
Al Basrah STP - Shat Al Arab, Iraq 2012, 10,000 m<sup>3</sup>/d Other / Unknown  
Al Basrah STP - Safwan, Iraq 2012, 10,000 m<sup>3</sup>/d Other / Unknown  
Al Basrah STP - Um Qasser, Iraq 2012, 10,000 m<sup>3</sup>/d Other / Unknown  
Al Hait STP, Saudi Arabia 2012, 5,000 m<sup>3</sup>/d Other / Unknown  
SANG Al-Qasim, Saudi Arabia 2012, 5,000 m<sup>3</sup>/d MBR  
Compact WTO, Iraq 2012, 4,000 m<sup>3</sup>/d Other / Unknown  
Al khor Sewerage Extension to Al Khor ST Works Phase II, Qatar 2012, 3,888 m<sup>3</sup>/d Other / Unknown  
Sanitary STP at BAPCO Refinery, Bahrain 2012, 1,000 m<sup>3</sup>/d MBR

## Midwater



[www.midwatertech.com.eg](http://www.midwatertech.com.eg)

### SELECTED REFERENCES

#### Design, Supply and Installation

Soft Drinks Factory Clarification & Filtration Plant - Alexandria Egypt, Alexandria, Egypt 2015, 750 m<sup>3</sup>/d RO (Reverse Osmosis)

**Mitsubishi Corporation**[www.mitsubishicorp.com](http://www.mitsubishicorp.com)**SELECTED REFERENCES****Developer (via K1 Energy)**

Doha, Qatar 2016, 347,770 m<sup>3</sup>/d MSF  
 Doha, Qatar 2016, 272,760 m<sup>3</sup>/d RO

**EPCM**

Ras Abu Fontas, Qatar 2013, 163,656 m<sup>3</sup>/d MSF

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[www.mhi.co.jp](http://www.mhi.co.jp)
**SELECTED REFERENCES****Plant Supplier (Desal) and EPC Contractor**

Rabigh IWSPP Phase-II, Rabigh, Saudi Arabia 2013, 96,000 m<sup>3</sup>/d  
 RO

**Mitsui & Co.**
[www.mitsui.com/jp/en](http://www.mitsui.com/jp/en)
**SELECTED REFERENCES****Developer**

Chile, Antofagasta 2018, 69,120 m<sup>3</sup>/d RO  
 (WASA) Trinidad y Tobago, San Fernando, Trinidad and Tobago 2016, Other / Unknown

**Sponsor**

Al Dur 2, Al Dur, Bahrain 2018, RO

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**SELECTED REFERENCES****EPC Contractor**

Azad Shahr WWTP, Azadshahr, Golestan Province, Iran 2012,  
 9,000 m<sup>3</sup>/d Other / Unknown

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**SELECTED REFERENCES****Developer and EPC Contractor**

As-Samra WWTP - Expansion, Jordan 2012, 98,000 m<sup>3</sup>/d  
 Secondary

**Much More Water**
[www.muchmorewater.com](http://www.muchmorewater.com)
**SELECTED REFERENCES****Technology Provider: BlueBox**

3P Biotech Denmark Aps, Denmark 2018  
 BlueBox 60RO Solar, Romania 2017, 12 m<sup>3</sup>/d RO  
 BlueBox 450RO, Kenya 2017, 4 m<sup>3</sup>/d RO  
 BlueBox 1200RO, Mali 2014, 2 m<sup>3</sup>/d RO  
 BlueBox 150 Wall-mount, Côte d'Ivoire 2013, 1 m<sup>3</sup>/d RO

**Nafasi Water**
[www.nafasiwater.com](http://www.nafasiwater.com)
**SELECTED REFERENCES****Technology Provider**

Middleburg Water Reclamation Plant, Mpumulanga, Middleburg,  
 South Africa 2021, 20,000 m<sup>3</sup>/d RO

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### SELECTED REFERENCES

#### Developer

Parkandabad 2 WWTP - Expansion, Mashhad, Khorasan-e Razavi Province, Iran 2015, 60,000 m<sup>3</sup>/d Tertiary

## Nesma Water & Energy



[www.nesmawae.com](http://www.nesmawae.com)

### SELECTED REFERENCES

#### EPC Contractor

Jubail - 3B Independent Water Plant (AJIWC), KSA - Jubail, Saudi Arabia 2021, 570,000 m<sup>3</sup>/d RO

Design Built and Operate RO Plant & Pumping for 4 Industrial Cities, KSA - Alhassa - Durma - Hail - Riyadh, Saudi Arabia 2021, 2,000 m<sup>3</sup>/d RO

Yanbu - 4 Independent Water Plant (YIWC), KSA - Yanbu, Saudi Arabia 2020, 450,000 m<sup>3</sup>/d RO

#### O&M Contractor

Dawadmi RO Plant, KSA - Riyadh Dawadmi, Saudi Arabia 2022, 40,000 m<sup>3</sup>/d RO

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[www.septechholdings.com](http://www.septechholdings.com)

### SELECTED REFERENCES

#### Plant Supplier (Desal)

Pearl Dive Pool, Dubai, United Arab Emirates 2014, 74,400 m<sup>3</sup>/d  
Awali Oil Field, Awali Oil Field, Manama, Bahrain 2014, 2,250 m<sup>3</sup>/d

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### SELECTED REFERENCES

#### EPC Contractor

Hefei, China 2017, 12,000 m<sup>3</sup>/d RO

Hefei, China 2017, 8,000 m<sup>3</sup>/d RO

Hwaseong, South Korea 2017, 8,000 m<sup>3</sup>/d RO

Paju, South Korea 2015, 6,400 m<sup>3</sup>/d RO

Xiamen, China 2015, 6,000 m<sup>3</sup>/d RO

Xian, China 2014, 2,000 m<sup>3</sup>/d RO

Guangzhou, China 2014, 1,300 m<sup>3</sup>/d RO

Xian, China 2013, 17,000 m<sup>3</sup>/d RO

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[www.novatron.com.au](http://www.novatron.com.au)**SELECTED REFERENCES****Equipment Supplier**Monkey Mia Dolphin Resort, Coral Coast WA, Australia 2013, 160 m<sup>3</sup>/d ROWindarling #5, Eastern Goldfields WA, Australia 2013, 50 m<sup>3</sup>/d ROMuja Power Station Stage C, WA, Australia 2012, 2,880 m<sup>3</sup>/d ROTropicana Train #3, Goldfields WA, Australia 2012, 160 m<sup>3</sup>/d ROTuckerbianna, Pilbara WA, Australia 2012, 30 m<sup>3</sup>/d RO**Oneka Technologies**

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[www.nvco.org/en](http://www.nvco.org/en)**SELECTED REFERENCES****Developer**Bushehr SWRO Expansion, Bushehr, Iran 2019, 12,500 m<sup>3</sup>/d ROKangan SWRO Desalination Plant, Bandar Kangan, Bushehr Province, Iran 2015, 10,000 m<sup>3</sup>/d ROHendijan BWRO Desalination Plant, Hendijan, Khuzestan Province, Iran 2015, 2,500 m<sup>3</sup>/d ROBushehr SWRO Desalination Plant, Bushehr, Bushehr Province, Iran 2013, 10,000 m<sup>3</sup>/d ROChabahar and Konarak (Phase II) SWRO Desalination Plant, Chabahar, Sistan and Baluchestan Province, Iran 2012, 15,000 m<sup>3</sup>/d RO**Obras y Servicios Copasa**

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Burgos WWTP - Expansion, Burgos, Spain 2013

**Orascom Construction Industries**[www.orascom.com](http://www.orascom.com)**SELECTED REFERENCES****EPC Contractor**Wave Project, Abu Dhabi, United Arab Emirates 2023, 522,800 m<sup>3</sup>/d NF6th of October Industrial Wastewater – Ph. I, 6th of October, Giza Governorate, Egypt 2022, 25,000 m<sup>3</sup>/d Other / UnknownAl Hammam / New Delta Agricultural Wastewater Treatment Plan, Al Hammam, North Coast, Egypt 2021, 7,500,000 m<sup>3</sup>/d Other / UnknownSfax Seawater Desalination Plant, Sfax, Southeast of Tunis, Tunisia 2021, 200,000 m<sup>3</sup>/d RODammam Wastewater Treatment Plant, Al Dammam, Eastern Province, Saudi Arabia 2020, 350,000 m<sup>3</sup>/d Other / UnknownAl Arish Seawater Desalination Plant – Phase 2, Al Arish, Sinai, Egypt 2020, 100,000 m<sup>3</sup>/d ROBahr El Baqr Water Treatment Plant, Port Said, at the northern end of the Suez Canal, Egypt 2019, 5,600,000 m<sup>3</sup>/d Other / UnknownAl Alamein Wastewater Treatment Plant, Al Alamein, North Coast, Egypt 2019, 90,000 m<sup>3</sup>/d Other / UnknownAbu Rawash Waste Water Treatment Plant, Abu Rawash, Giza Governorate, Egypt 2018, 1,600,000 m<sup>3</sup>/d Other / UnknownEast Port Said Sea Water Desalination Plant, Port Said, at the northern end of the Suez Canal, Egypt 2017, 250,000 m<sup>3</sup>/d ROEl Galalah Seawater Desalination Plant, Ain Sokhna, Suez Governorate western shore of the Red Sea's Gulf of Suez., Egypt 2016, 150,000 m<sup>3</sup>/d RO

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### SELECTED REFERENCES

#### Plant Supplier (Desal)

Bintuni, Indonesia 2018, 1,500 m<sup>3</sup>/d RO  
 Bintuni, Indonesia 2018, 1,500 m<sup>3</sup>/d RO  
 Vietnam 2017, 4,140 m<sup>3</sup>/d RO  
 Kagoshima, Japan 2017, 500 m<sup>3</sup>/d RO  
 Taiwan 2016, 30,000 m<sup>3</sup>/d RO  
 Cilegon, Banten, Indonesia 2016, 5,400 m<sup>3</sup>/d RO  
 Cilegon, Banten, Indonesia 2016, 4,848 m<sup>3</sup>/d RO  
 Indonesia 2016, 4,800 m<sup>3</sup>/d RO  
 Bintuni, Papua, Indonesia 2016, 3,500 m<sup>3</sup>/d RO  
 Malaysia 2016, 1,440 m<sup>3</sup>/d RO  
 Kansai, Japan 2016, 1,200 m<sup>3</sup>/d RO  
 Kyushu, Japan 2016, 900 m<sup>3</sup>/d RO  
 Taiwan 2015, 24,000 m<sup>3</sup>/d RO  
 Chubu , Japan 2015, 20,000 m<sup>3</sup>/d RO  
 Taiwan 2015, 16,000 m<sup>3</sup>/d RO  
 Taiwan 2015, 6,700 m<sup>3</sup>/d RO  
 Taiwan 2015, 5,800 m<sup>3</sup>/d RO  
 Chugoku, Japan 2015, 3,800 m<sup>3</sup>/d ED  
 Chugoku, Japan 2015, 3,700 m<sup>3</sup>/d RO  
 Malaysia 2015, 2,400 m<sup>3</sup>/d RO  
 Kyushu , Japan 2015, 1,800 m<sup>3</sup>/d RO  
 Kyushu , Japan 2015, 1,700 m<sup>3</sup>/d ED  
 China 2015, 1,700 m<sup>3</sup>/d RO  
 Kyushu , Japan 2015, 1,200 m<sup>3</sup>/d RO  
 Tohoku, Japan 2015, 500 m<sup>3</sup>/d ED  
 Kansai, Japan 2015, 500 m<sup>3</sup>/d RO  
 Taiwan 2014, 20,000 m<sup>3</sup>/d RO  
 Chubu , Japan 2014, 11,000 m<sup>3</sup>/d RO  
 Shikoku, Japan 2014, 1,400 m<sup>3</sup>/d RO  
 Kyushu , Japan 2014, 1,300 m<sup>3</sup>/d RO  
 Kanto, Japan 2014, 500 m<sup>3</sup>/d RO  
 Chubu, Japan 2014, 400 m<sup>3</sup>/d RO  
 Kyushu, Japan 2014, 260 m<sup>3</sup>/d RO  
 Kanto, Japan 2014, 150 m<sup>3</sup>/d RO  
 Tohoku, Japan 2014, 100 m<sup>3</sup>/d RO  
 Chubu , Japan 2013, 1,000 m<sup>3</sup>/d ED  
 PT. Citicon BWRO, Indonesia 2013, 264 m<sup>3</sup>/d RO  
 PT. Citicon SWRO, Indonesia 2013, 98 m<sup>3</sup>/d RO

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#### EPC Contractor

Palencia WWTP - Expansion, Palencia, Spain 2013, 5,000 m<sup>3</sup>/d  
 Tertiary treatment

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### SELECTED REFERENCES

#### Plant Supplier (Desal)

C NF 230 AM, Norway 2023, 3,000 m<sup>3</sup>/d UF  
 OSMO 54 AM, Venezuela 2023, 1,200 m<sup>3</sup>/d RO  
 OSMO 36 AM, Morocco 2023, 1,000 m<sup>3</sup>/d RO  
 OSMO 24 AM, Cuneo, Italy 2023, 600 m<sup>3</sup>/d RO  
 OSMO 6 AM, Foggia, Italy 2023, 150 m<sup>3</sup>/d RO  
 HD 4 AM, Reggio Emilia, Italy 2023, 100 m<sup>3</sup>/d RO  
 C Nf 200 Am, Norway 2022, 3,000 m<sup>3</sup>/d  
 C NF 105 AM, Norway 2022, 1,500 m<sup>3</sup>/d UF  
 Osmo 48 Am, Cuneo, Italy 2022, 1,350 m<sup>3</sup>/d RO  
 OSMO 54 AM, Libya 2022, 1,200 m<sup>3</sup>/d RO  
 Osmo 12 Am, Morocco 2022, 400 m<sup>3</sup>/d RO  
 Hd 8 Am, Scicli, Italy 2022, 250 m<sup>3</sup>/d RO  
 2x Osmo S Hr 63 Am, Morocco 2021, 1,500 m<sup>3</sup>/d RO  
 OSMO 30 AM, Romania 2021, 750 m<sup>3</sup>/d RO  
 OSMO 24 AM, Morocco 2021, 720 m<sup>3</sup>/d RO  
 Osmo 20 Am, Qatar 2021, 600 m<sup>3</sup>/d RO  
 SHR 49 AM, Libya 2021, 500 m<sup>3</sup>/d RO  
 OSMO 20 AM, Parma, Emilia-Romagna, Italy 2021, 500 m<sup>3</sup>/d RO  
 OSMO 12 AM, Tunisia 2021, 300 m<sup>3</sup>/d RO  
 Hd 8 Am, Caserta, Italy 2021, 250 m<sup>3</sup>/d RO  
 Osmo 8 Am, Vieste, Italy 2021, 250 m<sup>3</sup>/d RO  
 HD 6 AM, Bosnia and Herzegovina 2021, 150 m<sup>3</sup>/d RO  
 Hd 4 Am, Hungary 2021, 150 m<sup>3</sup>/d RO  
 HD 3 AM, Parma, Emilia-Romagna, Italy 2021, 100 m<sup>3</sup>/d RO  
 OSMO S 150 AM, Gallway, Ireland 2020, 3,000 m<sup>3</sup>/d RO  
 OSMO 25 AM, Tunisia 2020, 600 m<sup>3</sup>/d RO  
 OSMO 12 AM, Kediri, Indonesia 2020, 300 m<sup>3</sup>/d RO  
 OSMO S 105 AM, Gallway, Ireland 2019, 2,000 m<sup>3</sup>/d RO  
 OSMO S HR 50 AM, Lebanon 2019, 600 m<sup>3</sup>/d RO  
 OSMO 10 AM, Algeria 2019, 250 m<sup>3</sup>/d RO  
 OSMO 6 AM, Molfetta, Italy 2019, 150 m<sup>3</sup>/d RO

BWRO OSMO 25 AM, Romania, Greece 2012, 750 m<sup>3</sup>/d RO  
 OSMO 20 AM, Perugia, Italy 2012, 600 m<sup>3</sup>/d RO  
 OSMO 18 AM, Vittoria, Italy 2012, 500 m<sup>3</sup>/d RO  
 BWRO OSMO 18 AM, Italy 2012, 500 m<sup>3</sup>/d RO  
 2X BWRO OSMO 10 AM, Libya 2012, 480 m<sup>3</sup>/d RO  
 BWRO HD 4 AM, Italy 2012, 120 m<sup>3</sup>/d RO

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## SELECTED REFERENCES

### Plant Supplier (Desal)

Gas Power Station Demin WTP, Kurri Kurri, NSW, Australia 2023, 2,400 m<sup>3</sup>/d RO  
 Coal Mine WTP, Muswellbrook, NSW, Australia 2023, 1,200 m<sup>3</sup>/d RO  
 Desal for CO<sub>2</sub> Free Water Project, Gulhifalhu Island, Maldives 2023, 500 m<sup>3</sup>/d RO  
 Construction WTP, Neom Project, Saudi Arabia 2022, 21,000 m<sup>3</sup>/d RO  
 Oil Refinery Demin WTP, Basrah, Iraq 2022, 9,700 m<sup>3</sup>/d RO  
 Municipal WTPs, South Tarawa, Kiribati 2022, 6,000 m<sup>3</sup>/d RO  
 Coal Mine WTP, Dawson, QLD, Australia 2022, 4,000 m<sup>3</sup>/d RO  
 LNG Facility Potable WTPs, Barrow Island, WA, Australia 2022, 1,700 m<sup>3</sup>/d RO  
 Coal Seam Gas Facility Brine WTP, Roma, QLD, Australia 2022, 1,600 m<sup>3</sup>/d RO  
 Coal Power Station WTP, Tharparkar, Pakistan 2022, 1,000 m<sup>3</sup>/d RO  
 Gas Power Station Demin WTP, Port Adelaide, SA, Australia 2022, 720 m<sup>3</sup>/d RO  
 Gas Power Station Demin WTP, Bolivar, SA, Australia 2022, 540 m<sup>3</sup>/d RO  
 Iron Ore Mine WTS, Pilbara, WA, Australia 2021, 40,000 m<sup>3</sup>/d RO  
 Municipal Desal ERD Retrofit, Dubai, United Arab Emirates 2021, 32,000 m<sup>3</sup>/d RO  
 Gas Power Station Demin Plant, Sharjah, United Arab Emirates 2021, 5,220 m<sup>3</sup>/d RO  
 Potable water pumpstation, Sharjah, United Arab Emirates 2021, 2,000 m<sup>3</sup>/d RO  
 Effluent Treatment Plant, Dubai, United Arab Emirates 2021, 1,200 m<sup>3</sup>/d RO  
 Coal Seam Gas Facility WTP Refurb, Daandine, QLD, Australia 2020, 12,000 m<sup>3</sup>/d RO  
 Municipal WTP, Dubai, United Arab Emirates 2020, 500 m<sup>3</sup>/d RO  
 Demin WTP, Al Jubail, Saudi Arabia 2020, 300 m<sup>3</sup>/d RO  
 Municipal WTPs, Bourke / Walgett, NSW, Australia 2019, 2,250 m<sup>3</sup>/d RO  
 Lithium Mine WTP, Wodgina, WA, Australia 2018, 10,300 m<sup>3</sup>/d RO

Gas Power Station Demin WTP, Kwinana, WA, Australia 2018, 1,300 m<sup>3</sup>/d RO  
 Gas Power Station Demin WTP, Saih Rawl, OMAN 2018, 400 m<sup>3</sup>/d RO

Iron Ore Mine WTP, Pilbara, WA, Australia 2017, 20,000 m<sup>3</sup>/d RO  
 Osmoflo Brine Squeezing WTP, Jabiru, NT, Australia 2017, 3,000 m<sup>3</sup>/d RO

Brewery WTP Upgrade, Regency Park, SA, Australia 2017, 1,500 m<sup>3</sup>/d RO

Community Desal WTP, Barbados 2017, 1,500 m<sup>3</sup>/d RO

OBS Upgrade of Brewery RO WTP, Yatala, QLD, Australia 2017, 1,000 m<sup>3</sup>/d RO

Municipal WTP, Kangaroo Island, SA, Australia 2017, 400 m<sup>3</sup>/d RO

Municipal WTP, Metro Manila, Philippines 2016, 20,000 m<sup>3</sup>/d RO

Community WTP, Ebeye Island, Marshall Islands 2016, 1,600 m<sup>3</sup>/d RO

Municipal WTP, Barka, Oman 2015, 56,826 m<sup>3</sup>/d RO

Municipal WTP, Mount Isa, QLD, Australia 2015, 25,000 m<sup>3</sup>/d

LNG Facility Construction WTPs, Onslow, WA, Australia 2015, 12,000 m<sup>3</sup>/d RO

Gas PS Potable/Demin WTP, Yarnima, WA, Australia 2015, 8,240 m<sup>3</sup>/d RO

Municipal WTP, Broken Hill, NSW, Australia 2015, 6,000 m<sup>3</sup>/d RO

Coal Seam Gas Facility WTP, Narrabri, NSW, Australia 2015, 1,500 m<sup>3</sup>/d RO

Coal Mine WTP, Mudgee, NSW, Australia 2014, 21,300 m<sup>3</sup>/d RO  
 LNG CPF & FPSO Water Makers, Offshore, WA, Australia 2014, 500 m<sup>3</sup>/d RO

LNG Facility Demin WTP, Darwin, NT, Australia 2012, 1,700 m<sup>3</sup>/d RO

LNG Facility Demin WTP, Barrow Island, WA, Australia 2012, 960 m<sup>3</sup>/d RO

### Desalination Rental Projects

Port Desal BOO WTP Upgrade, Port Hedland, WA, Australia 2023, 4,400 m<sup>3</sup>/d RO

Coal Seam Gas Site WTP Upgrade, Wandoan, QLD, Australia 2023, 2,700 m<sup>3</sup>/d RO

Rental WTP, Umluj, Saudi Arabia 2023, 1,500 m<sup>3</sup>/d RO

Gas Power Station Demin WTP, Yallourn, VIC, Australia 2023, 1,300 m<sup>3</sup>/d RO

Mineral Sands Site WTP, Ceduna, SA, Australia 2023, 150 m<sup>3</sup>/d RO

Coal Seam Gas Site WTP, Wandoan, QLD, Australia 2022, 2,700 m<sup>3</sup>/d RO

Phosphate Mine Rental WTP, Mt Isa, QLD, Australia 2022, 840 m<sup>3</sup>/d RO

Rental WTPs, Olympic Dam, SA, Australia 2021, 2,000 m<sup>3</sup>/d RO

Emergency WTP for Power Station, Rayong, Thailand 2020, 7,000 m<sup>3</sup>/d RO

Coal Mine Rental WTP, Dawson, QLD, Australia 2020, 2,000 m<sup>3</sup>/d RO

Desal Rental WTP, Sharma Project, Saudi Arabia 2018, 14,000 m<sup>3</sup>/d RO

Emergency Rental WTP, Cape Town, South Africa 2018, 2,000 m<sup>3</sup>/d RO

Chemical Plant Demin WTP, Kuantan, Malaysia 2018, 1,800 m<sup>3</sup>/d RO

Municipal WTP, Masirah Island, OMAN 2018, 1,600 m<sup>3</sup>/d RO

Min Sands BOO WTP Refurb, Pooncarie, NSW, Australia 2018, 1,500 m<sup>3</sup>/d RO

Gypsum Production WTP, Carnarvon, WA, Australia 2018, 1,400 m<sup>3</sup>/d RO

Brewery WTP Upgrade, Regency Park, SA, Australia 2017, 4,000 m<sup>3</sup>/d RO

Lithium Mine WTP, Fraser Ranges, WA, Australia 2017, 3,000 m<sup>3</sup>/d RO

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Dairy Desal WTP, Marmum Dairy, Dubai, United Arab Emirates 2017, 300 m<sup>3</sup>/d RO  
Municipal RO Recovery Upgrade, Broken Hill, NSW, Australia 2015, 4,500 m<sup>3</sup>/d RO

## O&M Contractor

Iron Ore Mine WTS, Pilbara, WA, Australia 2023, 40,000 m<sup>3</sup>/d RO  
Municipal WTPs, South Tarawa, Kiribati 2022, 6,000 m<sup>3</sup>/d RO  
Coal Seam Gas Site WTP, Wandoan, QLD, Australia 2022, 5,400 m<sup>3</sup>/d RO  
Pilot Plant, Dubai, United Arab Emirates 2022, 75 m<sup>3</sup>/d RO  
Coal Mine Rental WTP, Dawson, QLD, Australia 2021, 4,000 m<sup>3</sup>/d RO  
Osmoflo Brine Squeezer WTP, Jabiru, NT, Australia 2021, 3,000 m<sup>3</sup>/d RO  
Pilot Plant, Sharjah, United Arab Emirates 2021, 77 m<sup>3</sup>/d RO  
Iron Ore Mine WTP, Pilbara, WA, Australia 2019, 20,000 m<sup>3</sup>/d RO  
Municipal WTP, Abu Dhabi, United Arab Emirates 2018, 21,000 m<sup>3</sup>/d RO  
Lithium Mine WTP, Fraser Ranges, WA, Australia 2017, 3,000 m<sup>3</sup>/d RO  
Community Desal WTP, Ebeye Island, Marshall Islands 2017, 1,600 m<sup>3</sup>/d RO  
Municipal WTP, Broken Hill, NSW, Australia 2016, 10,500 m<sup>3</sup>/d RO  
Coal Seam Gas Facility WTP, Narrabri, NSW, Australia 2015, 1,500 m<sup>3</sup>/d RO  
Port Desal BOO WTP, Port Hedland, WA, Australia 2013, 3,000 m<sup>3</sup>/d RO  
Desal for Magnetite Transport Water, Whyalla, SA, Australia 2012, 3,600 m<sup>3</sup>/d RO

## Pall Corporation



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## SELECTED REFERENCES

### EPC Contractor

Granbury, United States 2015, 9,463 m<sup>3</sup>/d RO

## Pan India



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## SELECTED REFERENCES

### EPC and O&M Contractor

Tonk Water and Sewerage Project, Tonk, Rajasthan, India 2015, 13,000 m<sup>3</sup>/d SBR

## Paramount Ltd.



[www.wastewater-recycle.com](http://www.wastewater-recycle.com)

## SELECTED REFERENCES

### Plant Supplier (Reuse)

Water Treatment Package (Effluent Treatment Plant) of Resid Upgradation Project at Manali Refinery of CPCL, Chennai, Tamil Nadu, India 2014, 8,364 m<sup>3</sup>/d RO

Water Treatment Package (DM Water Plant) of Resid Upgradation Project at Manali Refinery of CPCL, Chennai, Tamil Nadu, India 2014, 7,200 m<sup>3</sup>/d RO

Mazda Colours Limited, Roha, Maharashtra, Roha, Raigad, Maharashtra, India 2014, 200 m<sup>3</sup>/d RO

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## SELECTED REFERENCES

### Design, Supply, Installation and Commissioning of Mechanical and Electrical Equipment

Municipal Wastewater Treatment Plant, Bosnia and Herzegovina 2017, 170,000 m<sup>3</sup>/d Other / Unknown

Exchange Demineralization Plant of the Ford Industrial Wastewater Treatment Plant, India 2014, 8,000 m<sup>3</sup>/d UF

Ford Industrial Wastewater Treatment Plant, India 2014, 4,500 m<sup>3</sup>/d RO

Municipal Wastewater Treatment Plant Extension, Sinaia and Breaza, Romania 2013, 15,232 m<sup>3</sup>/d Other / Unknown

### EPC Contractor

Ribeira WWTP, Ribeira, A Coruña, Spain 2014, 8,000 m<sup>3</sup>/d Tertiary treatment

### EPC and O&M Contractor

Gabal El Asfar WWTP - Phase 2B, Gabal El Asfar Farms, Egypt 2018, 500,000 m<sup>3</sup>/d Tertiary treatment

Coronation Pillar WWTP, Delhi, India 2016, 318,220 m<sup>3</sup>/d Tertiary treatment

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**SELECTED REFERENCES****EPC Contractor**Bétera WWTP - Expansion, Spain 2018, 2,500 m<sup>3</sup>/d Tertiary treatment**Poseidon Resources Corporation**

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**SELECTED REFERENCES****Developer**Claude "Bud" Lewis Carlsbad Desalination Plant, Carlsbad, California, United States 2012, 189,270 m<sup>3</sup>/d RO**Poten Enviro**

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**SELECTED REFERENCES****EPC and O&M Contractor**Shaanxi Future Energy Chemical Company Desalination, Yulin, China 2018, 4,200 m<sup>3</sup>/d ROShaanxi Future Energy Chemical Company Reuse, Yulin, China 2018, 31,200 m<sup>3</sup>/d VC**Plant Supplier (Desal)**Ningxia Eastern Coal-Chemical Industry "Near-Zero Discharge" Wastewater Treatment and Reuse Project, Yinchuan, China 2019, 9,000 m<sup>3</sup>/d RODatang Huangdao Power Plant, China 2017, 5,000 m<sup>3</sup>/d RO**Plant Supplier (Reuse)**Xianyang Road Water Reuse Plant, Tianjin Province, China 2017, 50,000 m<sup>3</sup>/d ROJinmei Mingsheng Dahua Industrial Water Treatment Project (including wastewater treatment, water reuse and desalination systems), Shandong Province, China 2017, 29,520 m<sup>3</sup>/d RO**Power Generation Engineering Services Co. (PGESCO)**

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**SELECTED REFERENCES****Plant Supplier**Burullus Desalination And Water Treatment Facilities, Mediterranean Sea, Egypt 2015, 11,280 m<sup>3</sup>/d ROSouth Helwan Water Treatment Facilities, Egypt 2015, 10,800 m<sup>3</sup>/d RONew Capital Water Treatment Facilities, New Capital, Egypt 2015, 9,000 m<sup>3</sup>/d RONew West Damietta Desalination and Water Treatment Facilities, Damietta, Egypt 2014, 16,950 m<sup>3</sup>/d RONew Assiut Desalination and Water Treatment Facilities, Assiut, Egypt 2014, 12,000 m<sup>3</sup>/d ROBanha Water Treatment Facilities, Middle Delta, Egypt 2012, 6,680 m<sup>3</sup>/d UFSuez Desalination and Water Treatment Facilities, Suez, Egypt 2012, 6,000 m<sup>3</sup>/d MED**PowerChina**

en.powerchina.cn

**SELECTED REFERENCES****EPC Contractor and Investor**Seawater desalination project of the Liuhe Island, Zhoushan, Zhejiang Province, China 2015, 52,000 m<sup>3</sup>/d RO

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### SELECTED REFERENCES

#### Equipment Supplier: Desalination System

Slovakia 2023, 480 m<sup>3</sup>/d RO  
United Kingdom 2022, 1,116 m<sup>3</sup>/d RO  
Czech Republic 2022, 576 m<sup>3</sup>/d  
Hungary 2022, 540 m<sup>3</sup>/d RO  
United Kingdom 2022, 528 m<sup>3</sup>/d RO  
Bulgaria 2022, 360 m<sup>3</sup>/d RO  
Netherlands 2022, 216 m<sup>3</sup>/d NF  
Finland 2021, 4,000 m<sup>3</sup>/d RO  
Sweden 2021, 3,120 m<sup>3</sup>/d NF  
United Kingdom 2021, 1,224 m<sup>3</sup>/d RO  
Belgium 2021, 720 m<sup>3</sup>/d RO  
Bulgaria 2020, 1,200 m<sup>3</sup>/d RO  
Poland 2020, 1,058 m<sup>3</sup>/d RO  
Italy 2019, 2,880 m<sup>3</sup>/d RO  
Sweden 2019, 864 m<sup>3</sup>/d NF  
ProMinent 2019, 400 m<sup>3</sup>/d RO  
Sweden 2018, 5,000 m<sup>3</sup>/d RO  
Vietnam 2017, 6,000 m<sup>3</sup>/d RO  
Vietnam 2017, 4,080 m<sup>3</sup>/d RO  
Algeria 2017, 2,976 m<sup>3</sup>/d RO  
Austria 2017, 600 m<sup>3</sup>/d NF  
Slovakia 2017, 240 m<sup>3</sup>/d RO  
Sweden 2016, 3,024 m<sup>3</sup>/d RO  
Algeria 2016, 1,680 m<sup>3</sup>/d RO  
Seychelles 2016, 334 m<sup>3</sup>/d RO  
Jordan 2016, 120 m<sup>3</sup>/d RO  
Algeria 2015, 1,200 m<sup>3</sup>/d RO  
Algeria 2015, 504 m<sup>3</sup>/d RO  
Romania 2015, 360 m<sup>3</sup>/d RO  
Poland 2015, 240 m<sup>3</sup>/d RO  
Morocco 2015, 120 m<sup>3</sup>/d RO  
Israel 2014, 1,440 m<sup>3</sup>/d RO  
Algeria 2014, 504 m<sup>3</sup>/d RO  
Sweden 2014, 384 m<sup>3</sup>/d RO  
Mauritius 2014, 202 m<sup>3</sup>/d RO  
Sweden 2014, 113 m<sup>3</sup>/d RO  
Croatia 2014, 103 m<sup>3</sup>/d RO  
France, 1,440 m<sup>3</sup>/d UF  
Poland, 1,200 m<sup>3</sup>/d RO

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### SELECTED REFERENCES

#### EPC Contractor

Marassi, Matrouh, Egypt, 8,400 m<sup>3</sup>/d Other / Unknown  
Marassi, Matrouh, Egypt, 2,500 m<sup>3</sup>/d RO  
Sidi Barrani, Matrouh, Egypt, 1,200 m<sup>3</sup>/d RO

#### Plant supplier

Red Sea Water & Wastewater Company, Egypt 2013, 1,500 m<sup>3</sup>/d RO  
Alexandria, Egypt 2012, 5,000 m<sup>3</sup>/d RO  
Marsa Alam, Egypt 2012, 1,500 m<sup>3</sup>/d RO

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### SELECTED REFERENCES

#### Plant Supplier

Southern Tunisia, Tunisia 2012, 36,200 m<sup>3</sup>/d RO  
Tozeur, Tunisia 2012, 6,000 m<sup>3</sup>/d RO  
Tozeur, Tunisia 2012, 4,000 m<sup>3</sup>/d RO

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### SELECTED REFERENCES

#### EPC Contractor

Mine water reclamation plant, Middelburg, Mpumalanga, South Africa 2023, 1,500 m<sup>3</sup>/d RO  
Mine effluent treatment plant, Emalahleni, Mpumalanga, South Africa 2022, 15,000 m<sup>3</sup>/d RO  
Brine water treatment, Vereeniging, Gauteng, South Africa 2022, 10,000 m<sup>3</sup>/d RO

V&A sea water desalination, Cape Town, Western Cape, South Africa 2022, 3,300 m<sup>3</sup>/d RO  
 Borehole Water Treatment Plant, Gqeberha, Eastern Cape, South Africa 2022, 2,000 m<sup>3</sup>/d RO  
 Borehole Water Treatment Plant, Gqeberha, Eastern Cape, South Africa 2022, 1,800 m<sup>3</sup>/d RO  
 Coffee Condensate Water Reuse, Gympie, Queensland, Australia 2022, 220 m<sup>3</sup>/d MBR  
 Mine water reclamation plant, Middelburg, Mpumalanga, South Africa 2021, 50,000 m<sup>3</sup>/d RO  
 Efluent treatment to condensate production, Secunda, Mpumalanga, South Africa 2021, 8,000 m<sup>3</sup>/d RO  
 Mine effluent treatment plant, Secunda, Mpumalanga, South Africa 2021, 7,000 m<sup>3</sup>/d RO  
 Brine water treatment, Middelburg, Mpumalanga, South Africa 2021, 2,000 m<sup>3</sup>/d RO  
 Contaminated Storm Water, Machadodorp, Mpumalanga, South Africa 2021, 1,000 m<sup>3</sup>/d RO  
 Side stream cooling filtration for reuse, Vereeniging, Gauteng, South Africa 2021, 900 m<sup>3</sup>/d RO  
 ArcelorMittal, South Africa 2018, 3,200 m<sup>3</sup>/d RO  
 Tronox, West Coast, South Africa 2018, 1,500 m<sup>3</sup>/d RO  
 Hydrotek Desalination System, Kuwait 2017, 24,000 m<sup>3</sup>/d RO  
 Strandfontein Desalination Plant, Cape Town, South Africa 2017, 7,000 m<sup>3</sup>/d RO  
 Monwabisi Desalination Plant, Cape Town, South Africa 2017, 7,000 m<sup>3</sup>/d RO  
 Al-Diwan Al-Amiri SWRO Plant, Al-Diwan Al-Amiri, Kuwait 2017, 2,400 m<sup>3</sup>/d RO  
 Petrofac, Zakum Islands, United Arab Emirates 2017, 800 m<sup>3</sup>/d RO  
 Glencore Mine, South Africa 2017, 500 m<sup>3</sup>/d RO  
 Peninsula Beverages, Cape Town, South Africa, 2,400 m<sup>3</sup>/d UF

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### SELECTED REFERENCES

#### EPC Contractor

Jakarta, Indonesia 2013, 1,200 m<sup>3</sup>/d RO  
 Palembang, Indonesia 2013, 1,200 m<sup>3</sup>/d RO  
 Pasuruan, Indonesia 2012, 2,400 m<sup>3</sup>/d RO  
 Pulau Laut, Indonesia 2012, 2,040 m<sup>3</sup>/d RO  
 Tangerang, Indonesia 2012, 1,440 m<sup>3</sup>/d RO  
 Jakarta, Indonesia 2012, 1,008 m<sup>3</sup>/d RO

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### SELECTED REFERENCES

#### Equipment Supplier

Puerto Rico 2020, 3,205 m<sup>3</sup>/d Other / Unknown  
 Vietnam 2020, 1,374 m<sup>3</sup>/d RO  
 United States 2020, 1,058 m<sup>3</sup>/d Other / Unknown  
 United States 2020, 818 m<sup>3</sup>/d Other / Unknown  
 Japan 2020, 330 m<sup>3</sup>/d RO  
 Oman 2020, 329 m<sup>3</sup>/d NF  
 U.S.A., United States 2020, 163 m<sup>3</sup>/d RO  
 Saudi Arabia 2019, 3,600 m<sup>3</sup>/d RO  
 United States 2019, 1,744 m<sup>3</sup>/d Other / Unknown  
 Honduras 2019, 852 m<sup>3</sup>/d RO  
 United States 2019, 818 m<sup>3</sup>/d Other / Unknown  
 Colombia 2019, 605 m<sup>3</sup>/d UF  
 Canada 2019, 568 m<sup>3</sup>/d Other / Unknown  
 United States 2019, 545 m<sup>3</sup>/d Other / Unknown  
 Canada 2019, 545 m<sup>3</sup>/d NF  
 Kuwait 2019, 500 m<sup>3</sup>/d RO  
 U.S.A., United States 2019, 492 m<sup>3</sup>/d RO  
 U.S.A., United States 2019, 333 m<sup>3</sup>/d NF  
 Saudi Arabia 2019, 302 m<sup>3</sup>/d RO  
 U.S.A., United States 2019, 278 m<sup>3</sup>/d NF  
 Angola 2019, 136 m<sup>3</sup>/d RO  
 U.S.A., United States 2019, 121 m<sup>3</sup>/d RO  
 Maldives 2019, 121 m<sup>3</sup>/d RO  
 U.S.A., United States 2019, 109 m<sup>3</sup>/d RO  
 Ecuador 2019, 100 m<sup>3</sup>/d RO  
 Oman 2019, 91 m<sup>3</sup>/d RO  
 Ghana 2019, 90 m<sup>3</sup>/d RO  
 Bahamas 2019, 61 m<sup>3</sup>/d RO  
 United States 2018, 5,040 m<sup>3</sup>/d UF  
 U.S.A., United States 2018, 1,298 m<sup>3</sup>/d UF  
 Costa Rica 2018, 1,022 m<sup>3</sup>/d RO  
 Guinea 2018, 719 m<sup>3</sup>/d RO  
 U.S.A., United States 2018, 605 m<sup>3</sup>/d RO  
 Turkmenistan 2018, 528 m<sup>3</sup>/d RO  
 U.S.A., United States 2018, 408 m<sup>3</sup>/d RO  
 U.S.A., United States 2018, 265 m<sup>3</sup>/d RO  
 U.S.A., United States 2018, 190 m<sup>3</sup>/d RO  
 U.S.A., United States 2018, 151 m<sup>3</sup>/d RO  
 U.S.A., United States 2018, 122 m<sup>3</sup>/d RO  
 Ghana 2018, 2 m<sup>3</sup>/d UF  
 Venezuela 2017, 5,460 m<sup>3</sup>/d RO  
 U.S.A., United States 2017, 2,800 m<sup>3</sup>/d UF  
 Jordan 2017, 1,900 m<sup>3</sup>/d UF  
 U.S.A., United States 2017, 1,750 m<sup>3</sup>/d UF  
 Guinea 2017, 1,200 m<sup>3</sup>/d RO  
 Costa Rica 2017, 1,100 m<sup>3</sup>/d RO  
 U.S.A., United States 2017, 950 m<sup>3</sup>/d RO  
 Peru 2017, 800 m<sup>3</sup>/d RO

Qatar 2017, 700 m<sup>3</sup>/d RO  
U.S.A., United States 2017, 568 m<sup>3</sup>/d UF  
Venezuela 2017, 515 m<sup>3</sup>/d RO  
Papua New Guinea 2017, 400 m<sup>3</sup>/d RO  
Peru 2017, 400 m<sup>3</sup>/d RO  
Colombia 2017, 400 m<sup>3</sup>/d RO  
Kuwait 2017, 380 m<sup>3</sup>/d RO  
Maldives 2017, 300 m<sup>3</sup>/d RO  
Ecuador 2017, 227 m<sup>3</sup>/d RO  
Maldives 2017, 150 m<sup>3</sup>/d RO  
Trinidad and Tobago 2017, 76 m<sup>3</sup>/d RO  
Barbados, Bahamas 2017, 76 m<sup>3</sup>/d RO  
Kuwait 2016, 2,200 m<sup>3</sup>/d RO  
Iraq 2016, 1,800 m<sup>3</sup>/d RO  
Guatemala 2016, 960 m<sup>3</sup>/d RO  
Saudi Arabia 2016, 950 m<sup>3</sup>/d UF  
Guatemala 2016, 454 m<sup>3</sup>/d UF  
British Virgin Islands 2016, 454 m<sup>3</sup>/d RO  
Niger 2016, 400 m<sup>3</sup>/d RO  
Venezuela 2016, 330 m<sup>3</sup>/d RO  
Philippines 2016, 273 m<sup>3</sup>/d RO  
Ghana 2016, 227 m<sup>3</sup>/d RO  
Nigeria 2016, 227 m<sup>3</sup>/d RO  
Egypt 2015, 3,000 m<sup>3</sup>/d RO  
Philippines 2015, 495 m<sup>3</sup>/d RO  
Oman 2015, 490 m<sup>3</sup>/d RO  
Philippines 2015, 375 m<sup>3</sup>/d UF  
U.S.A., United States 2015, 246 m<sup>3</sup>/d  
Oman 2014, 2,070 m<sup>3</sup>/d UF  
Venezuela 2014, 2,000 m<sup>3</sup>/d RO  
Algeria 2014, 1,332 m<sup>3</sup>/d RO  
Ecuador 2014, 1,020 m<sup>3</sup>/d RO  
Mexico 2014, 424 m<sup>3</sup>/d RO  
U.S.A., United States 2013, 6,540 m<sup>3</sup>/d RO  
U.S.A., United States 2013, 1,363 m<sup>3</sup>/d RO  
Mexico 2013, 1,363 m<sup>3</sup>/d RO  
Venezuela 2013, 784 m<sup>3</sup>/d RO  
Lebanon 2013, 495 m<sup>3</sup>/d RO  
Canada 2012, 4,029 m<sup>3</sup>/d RO  
Egypt 2012, 3,000 m<sup>3</sup>/d RO

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### SELECTED REFERENCES

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West Texas RO - purifics, Texas, United States 2015, 3,785 m<sup>3</sup>/d RO

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### SELECTED REFERENCES

#### Supplier of Electrodemineralization (FEDI) Units

PREPA South Coast Steam Power Plant, Puerto Rico 2017, 6,548 m<sup>3</sup>/d EDI (Electrodemineralization)

Anshan Steel, China 2016, 3,100 m<sup>3</sup>/d EDI (Electrodemineralization)

Sohar Refinery, Sohar, Oman 2014, 10,080 m<sup>3</sup>/d EDI

ETHYDCO - Alexandria Ethylene Manufacturing, Alexandria, Egypt 2013, 5,040 m<sup>3</sup>/d EDI

## Rawafid Industrial



[www.rawafid.sa](http://www.rawafid.sa)

### SELECTED REFERENCES

#### EPC Contractor

WEC Shuaqaiq 3 Independent Water Plant (IWP), Shuaqaiq, Saudi Arabia 2020, 450,000 m<sup>3</sup>/d RO

Shoaiba 5 SWRO, Shoaiba, Saudi Arabia 2019, 600,000 m<sup>3</sup>/d RO  
Al Qunfotha SWRO, Al Qunfudhah, Saudi Arabia 2018, 51,000 m<sup>3</sup>/d RO

Shuaqaiq SWRO, Al Shuaqaiq, Saudi Arabia 2018, 42,500 m<sup>3</sup>/d RO

Al Lith SWRO, Al Lith, Saudi Arabia 2018, 42,500 m<sup>3</sup>/d RO

Al Wajh SWRO, Al Wajh, Saudi Arabia 2018, 25,500 m<sup>3</sup>/d RO

Duba SWRO, Duba, Saudi Arabia 2018, 25,500 m<sup>3</sup>/d RO

Umluj SWRO, Umluj, Saudi Arabia 2018, 25,500 m<sup>3</sup>/d RO

Haql SWRO, Haql, Saudi Arabia 2018, 17,000 m<sup>3</sup>/d RO

Farasan SWRO, Farasan, Saudi Arabia 2018, 8,500 m<sup>3</sup>/d RO

Khafji SWRO, Al Khafji, Saudi Arabia 2016, 90,000 m<sup>3</sup>/d RO

Alfatah SWRO, Jubail, Saudi Arabia 2012, 75,000 m<sup>3</sup>/d RO

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### SELECTED REFERENCES

#### Plant Supplier (Desal)

- Sea water desalination plant, Upgrading with heat recovery, Sarroch, Italy 2015, 8,500 m<sup>3</sup>/d MSF
- Algeria Mega Deal Project Mostaghanem, Mostaghanem, Algeria 2015, 2,200 m<sup>3</sup>/d MED
- CCPP Ras Djinet, Algeria 2013, 2,200 m<sup>3</sup>/d MED

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### SELECTED REFERENCES

#### EPC Contractor

- Hurghada, Egypt 2013, 1,500 m<sup>3</sup>/d RO
- Hurghada, Egypt 2012, 2,000 m<sup>3</sup>/d RO

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Sacyr Water is a water treatment company fully owned by the Spanish Sacyr Group. It belongs to Sacyr Concessions, head of the PPP activities in the Group.

Sacyr Water is well known as a large contractor in desalination, with many successes in this field since 1995, and more than 2.2 million m<sup>3</sup>/day (in 100 units) installed and more than 1 million in operation, with different contract modalities (EPC, BOT, BOO, OM, Alliance, etc.).

Sacyr Water has also built and operated many large size wastewater treatment plants, including plants with tertiary processes or technologies such as MBR systems UV disinfection, filtration, MF, UF, advanced oxidation and desalination.

The management of municipal water cycles is another big activity with more than 9 million inhabitants supplied in different countries, including the recent acquisition of 3 concessionary companies in Chile; Sacyr Agua Chacabuco, Sacyr Agua Lampa and Sacyr Agua Santiago as well as Sacyr Agua Utilities with private contracts in the Colina District and Sacyr Agua Norte in Antofagasta.

In the international market, Sacyr Water has had important successes in different countries like Algeria, Spain, Tunisia, Chile, Israel, Oman and Australia, with offices all over the world.

### SELECTED REFERENCES

#### Desalination Concessions and O&M Contracts

- BWRO Cuevas de Almanzora expansion, Almeria, Spain 2017, 15,000 m<sup>3</sup>/d RO
- Southern Seawater Desalination Plant, Binningup, Australia, 306,000 m<sup>3</sup>/d RO
- IPW Sohar, Oman, 250,000 m<sup>3</sup>/d RO
- Aguilas, Murcia, Spain, 210,000 m<sup>3</sup>/d RO
- Honaine, Algeria, 200,000 m<sup>3</sup>/d RO
- Alicante I & II, Spain, 120,000 m<sup>3</sup>/d RO
- Skikda, Algeria, 100,000 m<sup>3</sup>/d RO
- Santa Cruz, Tenerife, Spain, 21,000 m<sup>3</sup>/d RO
- Formentera, Spain, 7,000 m<sup>3</sup>/d RO

#### Plant Supplier (Desal)

- SWRO Bajo Almanzora, Cuevas de Almanzora, Spain 2022, 60,000 m<sup>3</sup>/d RO

# IDRA

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BWRO Cuevas de Almanzora expansion, Almeria, Spain 2017, 15,000 m<sup>3</sup>/d RO  
Mantoverde, Chile 2012, 24,000 m<sup>3</sup>/d RO  
Ashdod, Israel, 384,000 m<sup>3</sup>/d RO  
Southern Seawater Desalination Plant, Binningup, Western Australia , Australia, 306,000 m<sup>3</sup>/d RO  
IPW Sohar, Oman, 250,000 m<sup>3</sup>/d RO  
Aguilas, Murcia, Spain, 210,000 m<sup>3</sup>/d RO  
Honaine, Algeria, 200,000 m<sup>3</sup>/d RO  
Abrera, Barcelona, Spain, 200,000 m<sup>3</sup>/d EDR  
WWTP La Gavia, Madrid, Spain, 129,600 m<sup>3</sup>/d Other / Unknown  
Skikda, Algeria, 100,000 m<sup>3</sup>/d RO  
WWTP La Reguera, Madrid, Spain, 80,000 m<sup>3</sup>/d UV  
WWTP Melilla, Spain, 23,000 m<sup>3</sup>/d UF  
Newman, Western Australia, Australia, 16,500 m<sup>3</sup>/d RO  
WWTP Valle Guerra, Tenerife, Spain, 15,000 m<sup>3</sup>/d MBR  
Bahia de Alcudia, Mallorca, Spain, 14,000 m<sup>3</sup>/d RO  
Repsol Cartagena, Cartagena, Spain, 12,000 m<sup>3</sup>/d RO  
WWTP Llanes, Spain, 8,500 m<sup>3</sup>/d UV  
Formentera, Spain, 7,000 m<sup>3</sup>/d RO  
Pulpí, Almeria, Spain, 6,000 m<sup>3</sup>/d RO  
Nules, Castellon, Spain, 6,000 m<sup>3</sup>/d RO  
Janubio, Lanzarote, Spain, 5,000 m<sup>3</sup>/d RO  
Djerba, Tunisia, 5,000 m<sup>3</sup>/d RO  
WWTP Tres Cantos, Madrid, Spain, 4,500 m<sup>3</sup>/d UV  
Calpe, Alicante, Spain, 4,000 m<sup>3</sup>/d RO  
Burriana, Castellon, Spain, 4,000 m<sup>3</sup>/d RO  
WWTP La Franca, Spain, 1,800 m<sup>3</sup>/d  
WWTP Garcia Carrion, Villanueva de los Castillejos, Spain, 1,200 m<sup>3</sup>/d MBR  
WWTP Helados Alacant, Spain, 700 m<sup>3</sup>/d MBR  
WWTP Power Plant Puente Genil, Spain, 100 m<sup>3</sup>/d MBR

Karbala Refinery Project - Waste Water Treatment Package, Karbala, Iraq 2015, 12,672 m<sup>3</sup>/d RO  
Tampa Electric Polk Power Station-Reclaimed Water Project (TECO RTP) - Expansion, United States 2015, 7,571 m<sup>3</sup>/d RO  
Tampa Electric Big Bend Station Unit 1\_RO System Upgrade Project, United States 2015, 3,785 m<sup>3</sup>/d RO  
Tampa Electric Polk Power Station-Reclaimed Water Project (TECO RTP) - Expansion (3rd RO Train), Mulberry, Florida, United States 2015, 2,347 m<sup>3</sup>/d RO  
Shuqaiq Steam Power Plant (SSPP) – Seawater Desalination & Potable Water Treatment System, Red Sea Coast in Saudi Arabia, Saudi Arabia 2014, 3,596 m<sup>3</sup>/d RO  
Tampa Electric Big Bend Station Unit 1\_RO System Upgrade Project , Gibsonton, Florida, United States 2014, 1,037 m<sup>3</sup>/d RO  
Milpo Cerro Lindo Desal. Plant- Expansion II, Jahuay Beach, Peru 2014, 1,036 m<sup>3</sup>/d RO  
Pass 1 SWRO Train G & Pass 2 BWRO Trains G and H, Trinidad, Trinidad and Tobago 2013, 57,734 m<sup>3</sup>/d RO  
Water Treatment Plant (WTP) Improvements -NSID, North Springs, FL, United States 2013, 25,594 m<sup>3</sup>/d RO  
Saudi Elastomers Project -U&O/CB and MTBE Decomposition Facilities - Demineralized Water Units, Al-Jubail, Saudi Arabia 2013, 11,040 m<sup>3</sup>/d ED  
Palm Coast Water Treatment Plant No.2 Concentrate Zero Liquid Discharge (ZLD), United States 2013, 7,571 m<sup>3</sup>/d MF/UF  
P1044 Camp Pendleton Advanced Water Treatment Plant - RO System, Military Base -Southern of CA, United States 2013, 6,965 m<sup>3</sup>/d RO  
Clearwater Water Treatment Plant No.2- Contract 4: RO Plant Site Expansion Project, Clearwater, FL, USA, United States 2013, 6,624 m<sup>3</sup>/d RO  
Saudi Elastomers Project -U&O/CB and MTBE Decomposition Facilities - Demineralized Water Units, Al-Jubail, Saudi Arabia 2013, 5,640 m<sup>3</sup>/d Other  
PetroAmazonas -Paka Sur Plant -WWT package, Ecuador 2013, 1,666 m<sup>3</sup>/d Other  
Potable Water Plant Modernization, U.S. Navy Support Facility, Diego Garcia, US Navy Base - Diego Garcia Island (British Overseas Territory in the Indian Ocean), United States 2013, 1,211 m<sup>3</sup>/d NF  
Saudi Elastomers Project -U&O/CB and MTBE Decomposition Facilities - Secondary Wastewater Treatment Unit, Al-Jubail, Saudi Arabia 2013, 871 m<sup>3</sup>/d RO  
Saudi Elastomers Project -U&O/CB and MTBE Decomposition Facilities - Secondary Wastewater Treatment Unit, Al-Jubail, Saudi Arabia 2013, 420 m<sup>3</sup>/d RO  
RPLC (Refinería Puerto La Cruz) Deep Conversion Project - Utility Units- WWT, Puerto La Cruz, Edo. Anzoátegui, Venezuela 2013, Other  
Palm Coast Water Treatment Plant No.2 Concentrate Zero Liquid Discharge (ZLD), Palm Coast, FL, United States 2013, Other  
Coral Springs BWRO WTP, United States 2012, 25,551 m<sup>3</sup>/d RO  
Ammonia and Urea, Mary, Turkmenistan 2012, 22,032 m<sup>3</sup>/d RO  
Tampa Electric Polk Power Station-Reclaimed Water Project (TECO RTP) - Expansion, United States 2012, 18,927 m<sup>3</sup>/d RO  
Tampa Electric Polk Power Station-Reclaimed Water Pjt (TECO RTP), Mulberry, FL, United States 2012, 18,184 m<sup>3</sup>/d RO  
California Valley Solar Ranch - Water System (CVSR-WS), Santa Margarita, CA., United States 2012, 77 m<sup>3</sup>/d RO  
Shoaibah II -CCPP, Saudi Arabia 2012, Other  
Ecopetrol, Colombia, 60,566 m<sup>3</sup>/d UF/BWRO  
Santa Clara, United States, 30,283 m<sup>3</sup>/d RO  
NSID RO WTP Improvements, United States, 25,551 m<sup>3</sup>/d BWRO  
Tampa Electric Polk Power Station-Reclaimed Water Project (TECO RTP), United States, 9,085 m<sup>3</sup>/d BWRO  
Prisión Federal Islas Marías - Project I, Mexico, 1,236 m<sup>3</sup>/d SWRO

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## SELECTED REFERENCES

### Equipment Supplier

San Pedro Water Treatment Plant -Containerized SWRO Plant, Ambergris Caye, Belize 2018, 3,785 m<sup>3</sup>/d RO  
Nghi Son 2 Thermal Power Plant Project - Water Treatment Plant, Vietnam 2018, 1,507 m<sup>3</sup>/d RO  
PREPA San Juan Steam Plant (SSSP)-Advance Water Treatment Systems Project, Puerto Rico 2017, 7,571 m<sup>3</sup>/d RO  
UMM Al Houl IWPP - Water & Wastewater Treatment System(also known as Qatar Facility D), Doha, Qatar 2015, 284,000 m<sup>3</sup>/d RO  
Fargo Membrane WTP and Improvements, Fargo, North Dakota, United States 2015, 47,313 m<sup>3</sup>/d RO  
Desalcott Expansion -SWRO Train H, Trinidad and Tobago 2015, 29,523 m<sup>3</sup>/d RO  
Terminal Island Water Reclamation Plant (TIWRP) Advanced Water Purification Facility (AWPF) Ultimate Expansion - RO System, San Pedro, California, United States 2015, 22,710 m<sup>3</sup>/d RO

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New Build Cruise Ship, Germany 2016, 2,400 m<sup>3</sup>/d RO  
 Naval Retrofit - 16 x 35 m<sup>3</sup>/d, Australia 2016, 560 m<sup>3</sup>/d RO  
 HMS Scott, Naval Ship, United Kingdom 2015, 30 m<sup>3</sup>/d RO  
 New Build Research Ship, Italy 2015, 15 m<sup>3</sup>/d RO  
 New Build Cruise Ship, Germany 2014, 2,400 m<sup>3</sup>/d RO  
 HMS Ocean, Naval Ship, United Kingdom 2014, 300 m<sup>3</sup>/d RO  
 New Build Patrol Vessels, Malaysia 2014, 240 m<sup>3</sup>/d RO  
 V Class, Submarine, United Kingdom 2014, 36 m<sup>3</sup>/d RO  
 FPSO, United Kingdom 2014, 30 m<sup>3</sup>/d RO  
 RFA Fort Victoria, Support Ship, United Kingdom 2013, 160 m<sup>3</sup>/d RO  
 CNR Tiffany, Offshore Oil Platform, United Kingdom 2013, 160 m<sup>3</sup>/d RO  
 New Build Cruise Ship, Germany 2012, 2,400 m<sup>3</sup>/d RO  
 Cruise Ship, United States 2012, 800 m<sup>3</sup>/d RO  
 Dairy, Cheshire, United Kingdom 2012, 777 m<sup>3</sup>/d RO  
 CVF Aircraft Carrier, United Kingdom 2012, 525 m<sup>3</sup>/d RO  
 Naval, Portsmouth, United Kingdom 2012, 80 m<sup>3</sup>/d RO  
 Oil Rig, Offshore, United Kingdom 2012, 65 m<sup>3</sup>/d RO  
 Oil Rig, Offshore, United Kingdom 2012, 45 m<sup>3</sup>/d RO  
 Oil Rig, Offshore, United Kingdom 2012, 18 m<sup>3</sup>/d RO  
 Total A15, Offshore Oil Platform, Netherlands 2012, 15 m<sup>3</sup>/d RO  
 Montrose BLP, Offshore Oil Platform, United Kingdom 2012, 12 m<sup>3</sup>/d RO  
 Naval, Portsmouth, United Kingdom 2012, 3 m<sup>3</sup>/d RO  
 Windfarm, Netherlands 2012, 1 m<sup>3</sup>/d RO  
 United Kingdom 2012, NF

SEMV WWT Project, Thai Nguyen, Vietnam 2014, 10,800 m<sup>3</sup>/d RO

SEC Hwasung 16 Line Acid/Alkali Reuse, Hwasung, South Korea 2014, 3,920 m<sup>3</sup>/d RO

SEC Semicon Xian TEN PJT, Xian, China 2014, 3,000 m<sup>3</sup>/d RO

SEC Semicon Xian UPW PJT, Xian, China 2014, 1,248 m<sup>3</sup>/d RO

SEC Semicon Xian M Project PH-2, Xian, China 2013, 4,000 m<sup>3</sup>/d RO

SSL PH-1, Suzhou, China 2012, 27,000 m<sup>3</sup>/d RO

Recycle Phase II, Tangjung, South Korea 2012, 25,000 m<sup>3</sup>/d RO

SDC A2E, Tangjung, South Korea 2012, 20,000 m<sup>3</sup>/d RO

SEC Semicon Xian M Project, Xian, China 2012, 12,000 m<sup>3</sup>/d RO

SEC Hwasung 16Line B2, Hwasung, South Korea 2012, 7,800 m<sup>3</sup>/d RO

SEC Onyang Plant EXP-5, Onyang, South Korea 2012, 2,400 m<sup>3</sup>/d RO

A2 Phase II, Tangjung, South Korea 2011, 45,000 m<sup>3</sup>/d RO

V-1 Phase I, Tangjung, South Korea 2011, 30,000 m<sup>3</sup>/d RO

A2 Phase I, Tangjung, South Korea 2011, 20,000 m<sup>3</sup>/d RO

SCP 2 Phase III, Tangjung, South Korea 2011, 4,300 m<sup>3</sup>/d RO

Recycle Phase I, Tangjung, South Korea 2010, 10,000 m<sup>3</sup>/d RO

C 5.6L TI-CU Capa-up, Cheonan, South Korea 2010, 5,500 m<sup>3</sup>/d RO

15L Acid/Alkali Recovery, Hwasung, South Korea 2010, 4,489 m<sup>3</sup>/d RO

C 6L PLS 15K Capa-up, Cheonan, South Korea 2010, 2,500 m<sup>3</sup>/d NF

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[www.samsungengineering.co.kr](http://www.samsungengineering.co.kr)**SELECTED REFERENCES****Plant Supplier**

Takreer RRE Project 3 U&O, Abu Dhabi, United Arab Emirates 2014, 33,600 m<sup>3</sup>/d MSF

Asan New City Sewage Reuse Project, Asan, South Korea 2014, 27,000 m<sup>3</sup>/d RO

Q PJT (Phase-1) UPW/Reclaim System, Tangjung, South Korea 2014, 20,000 m<sup>3</sup>/d RO

SEC Kiheung Ki UTr, Hwasung, South Korea 2014, 12,000 m<sup>3</sup>/d RO

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[www.sasakura.co.jp](http://www.sasakura.co.jp)**SELECTED REFERENCES****EPC Contractor**

Muara Tawar Combined Cycle Power Plantblock 2,3 & 4 add-on project, Muara Tawar, Indonesia 2018, 2,000 m<sup>3</sup>/d MSF (Multi-stage Flash)

PLN/Hutama Karya, Muara Tawar, Indonesia 2018, 2,000 m<sup>3</sup>/d MSF (Multi-stage Flash)

PLN/MHPS, Tanjung Priok, Indonesia 2017, 300 m<sup>3</sup>/d MED

Shoaibah 2, Saudi Arabia 2015, 91,200 m<sup>3</sup>/d MED

AJ2 C4 Rehabilitation, Saudi Arabia 2014, 231,000 m<sup>3</sup>/d MSF (Multi-stage Flash)

Salalah Metanol Project, Salalah, Oman 2013, 4,560 m<sup>3</sup>/d MED

Hawar, Bahrain 2013, 300 m<sup>3</sup>/d MED

Cilacap RFCC Project, Cilacap, Indonesia 2012, 27,090 m<sup>3</sup>/d MSF

Guacolda, Chile 2012, 1,584 m<sup>3</sup>/d VC

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### SELECTED REFERENCES

#### EPC Contractor

Adeje Arona WWTP - Expansion Phase 2, Arona, Tenerife, Spain 2012, 8,000 m<sup>3</sup>/d Tertiary treatment

SAWACO is certified by internationally recognized quality environment, health & safety management systems and standards such as ISO9001: 2015, ISO14001: 2015, OHSAS18001: 2007 & HACCP

SAWACO currently owns over 50,000m<sup>3</sup>/d of desalination capacity, with its multi-plants under 24 hours operation. In June 2021, SAWACO launched its new decentralised business venture: SAWACO International Water, with 6x1,500m<sup>3</sup>/d compact SWRO plants and 4x1,000m<sup>3</sup>/d BWRO plants. These plants have begun operation on a lease basis in KSA.

SAWACO has a sizeable fleet of trucks fitted with stainless steel tankers Grade 316-L conforming to HACCP requirement. The ample storage facility of Post-Tensioned Reinforced Concrete water tanks avoid ion exchange between water and tank, and the inner surface of the tanks are coated with food grade epoxy.

SAWACO produces and distributes water for different uses and customer classes. SAWACO assures that quality water surpasses standards set by World Health Organization and Saudi Arabian Standard Organization.

SAWACO has a sizeable fleet of trucks fitted with stainless steel tankers Grade 316-L conforming to HACCP requirement. The ample storage facility of Post-Tensioned Reinforced Concrete

### SELECTED REFERENCES

#### Contractor

Ras Al Khair BWRO Plant, Al Jubail, Ras al Khair (Maaden Site), Eastern Region, KSA, Saudi Arabia 2022, 3,000 m<sup>3</sup>/d RO

Ras Al Khair SWRO Plant, Al Jubail, Ras al Khair (Maaden Site), Eastern Region, KSA, Saudi Arabia 2022, 3,000 m<sup>3</sup>/d RO

#### Developer and O&M

Store City Plant, Jeddah, Saudi Arabia 2012, 5,000 m<sup>3</sup>/d SWRO

South Jeddah Corniche Desalination Plant (SOJECO), Jeddah, Saudi Arabia 2010, 16,500 m<sup>3</sup>/d RO

Rosewood Corniche Hotel, Jeddah, Saudi Arabia 2010, 1,000 m<sup>3</sup>/d Corniche Reverse Osmosis Plant (CROP), Jeddah, Saudi Arabia 2007, 4,500 m<sup>3</sup>/d RO

North Obhur Desalination Plant, Jeddah, Saudi Arabia 2001, 16,850 m<sup>3</sup>/d RO

#### Developer/Co-developer

Rabigh 3 IWP, Saudi Arabia 2019, 600,000 m<sup>3</sup>/d SWRO  
Ma'aden, Ras Al Khair, Saudi Arabia 2022, 6,000 m<sup>3</sup>/d SWRO

#### Plant Owner

Sawaco Store City Plant (Expansion-CFRO), Jeddah, Western Region KSA, Saudi Arabia 2022, 1,920 m<sup>3</sup>/d SWRO

Multiple Compact Units, Jeddah, Saudi Arabia 2018, 9,000 m<sup>3</sup>/d SWRO

Three Emergency Sawaco Plants (Multiple Compact Units), Jeddah, Saudi Arabia 2018, 450 m<sup>3</sup>/d SWRO

Store City Plant, Jeddah, Saudi Arabia 2017, 5,000 m<sup>3</sup>/d RO

South Jeddah Corniche (SoJeCo), Jeddah, Saudi Arabia 2013, 16,500 m<sup>3</sup>/d RO

Corniche Reverse Osmosis Plant (CROP), Jeddah, Saudi Arabia 2007, 4,500 m<sup>3</sup>/d RO

North Obhur Desalination Plant, Jeddah, Saudi Arabia 2001, 16,850 m<sup>3</sup>/d SWRO

SAWACO Water Desalination is a member of Saudi Brothers Commercial Group (SBCG) and a cornerstone in water-related activities of this Saudi-based Group. SAWACO is the first private water utility established in Saudi Arabia under license by Ministry of Water in the year 2000 well before IWPP and PPP initiatives were launched.





## SAWACO Water Desalination

### A member of Saudi Brothers

SAWACO is leading the way in sustainable water management through innovative solutions. As the first private water utility in Saudi Arabia under license by the Ministry of Water in 2000, we have consistently demonstrated our commitment to excellence through internationally recognized quality, environment, health, and safety management systems and standards, including ISO9001: 2015, ISO14001: 2015, OHSAS 18001: 2007, and HACCP.

At the core of our business, we offer BOT and BOO solutions for the provision of desalinated water to both public and private sectors, as well as undertaking operation and maintenance of desalination plants across the MENA region. Our cutting-edge approach is evidenced through our over 50,000 m<sup>3</sup>/day desalination capacity across multiple plants that operate 24 hours per day. Additionally, our partnership with AcwaPower – Led consortium secured 600,000 m<sup>3</sup>/day SWRO IWP in Rabigh-3.

Through an extensive network of dedicated pipelines and stainless-steel tanker distribution for off-grid locations , we produce and distribute water for diverse uses and customer classes. At SAWACO, we believe that innovation holds the key to sustainable water management, and we remain committed to pushing the limits of what is possible in service of our customers and the planet.

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### SELECTED REFERENCES

#### Developer and Investor

Persian Gulf Desalination Plant, Bandar Abbas, Iran 2017, 200,000 m<sup>3</sup>/d RO

Bandar Gaz Desalination Plant, Bandar-e Gaz, Golestan Province, Iran 2016, 2,000 m<sup>3</sup>/d RO

Eshtehard, Eshtehard, Alborz Province, Iran 2015, 5,000 m<sup>3</sup>/d RO

Siraf Desal Plant, Siraf, Iran 2015, 1,000 m<sup>3</sup>/d RO

Kish Desalination Plant, Kish, Iran 2014, 5,000 m<sup>3</sup>/d RO

Bandar Lengeh desalination plant, Bandar Lengeh, Hormozgan Province, Iran 2012, 6,000 m<sup>3</sup>/d RO

Abadan desalination plant, Iran, 12,500 m<sup>3</sup>/d RO

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### SELECTED REFERENCES

#### EPC Contractor

Hubei Sanning Chemical Co., LTD. desalination system project, Hubei, Yichang, China 2022, 45,600 m<sup>3</sup>/d UF

Wanhua Chemical new material condensate and desalted water station project, Shandong, Yantai, China 2022, 21,600 m<sup>3</sup>/d UF

#### EPC Contractor, Equipment Supplier

Beijing Changping New City Regeneration Water Plant, Beijing, China 2015, 22,000 m<sup>3</sup>/d UF

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### SELECTED REFERENCES

#### Desalination Plant Owner

Salalah Independent Water and Power Plant, Oman 2012, 68,190 m<sup>3</sup>/d RO

#### Developer

Fujairah, United Arab Emirates 2012, 136,000 m<sup>3</sup>/d RO

#### Wastewater Reuse BOO

Changzhi Industrial Water Plant, Changzhi, Shanxi, China 2013, 1,267,200 m<sup>3</sup>/d Sand filtration

Changzhi Reclaimed Water Plant, China 2013, 38,400 m<sup>3</sup>/d RO

Changzhi Industrial Wastewater Plant, Changzhi, Shanxi, China 2013, 35,040 m<sup>3</sup>/d RO

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#### EPC Contractor

Rabigh 4 IWP, Rabigh, Western Region, Saudi Arabia 2023, 600,000 m<sup>3</sup>/d RO

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### SELECTED REFERENCES

#### EPC Contractor

Satellite SWRO desalination plants, Various location - West Coast of SA, Saudi Arabia 2019, 238,000 m<sup>3</sup>/d RO

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### SELECTED REFERENCES

#### Plant Supplier

- Limetree Bay Terminals Expansion, St. Croix, U.S. Virgin Islands 2019, 6,341 m<sup>3</sup>/d RO
- Aquas de Bayovar, Piura, Peru 2016, 10,220 m<sup>3</sup>/d RO
- Richmond Estate Power Plant Land Based Facility, St. Croix, U.S. Virgin Islands 2012, 14,004 m<sup>3</sup>/d RO
- Randolph E Harley Power Plant Land Based Facility, St. Thomas, U.S. Virgin Islands 2011, 12,490 m<sup>3</sup>/d RO
- Limetree Bay Terminals, St. Croix, U.S. Virgin Islands 2011, 2,462 m<sup>3</sup>/d RO

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[www.shanghaipower.com/power/](http://www.shanghaipower.com/power/)

### SELECTED REFERENCES

#### Plant Supplier (Desal)

- Conch Group Yiyang Reuse of reclaimed water, Shangrao city, Yiyang County, China 2022, 1,440 m<sup>3</sup>/d RO
- Lupsa 800MW Combined Cycle Power Station, Lupsa, Bangladesh 2021, 5,400 m<sup>3</sup>/d RO
- Yulong Refining and chemical integration (Stg. 1) Desalination PC, Longkou city, Huangshanguan Town, China 2022, 80,000 m<sup>3</sup>/d MED
- Yulong Refining and chemical integration (Stg. 1) Desalination PC, Longkou city, Huangshanguan Town, China 2022, 80,000 m<sup>3</sup>/d RO
- Tangshan, Hebei, China 2021, 50,000 m<sup>3</sup>/d RO
- Sierbang Petrochemical, China 2020, 45,000 m<sup>3</sup>/d RO
- Dongguan Zhongtang, China 2020, 28,800 m<sup>3</sup>/d RO
- Shante Power Plant, China 2020, 13,000 m<sup>3</sup>/d RO
- Zhoushan Phase II, China 2019, 200,000 m<sup>3</sup>/d MED
- Zhoushan petrochemical project, Zhejiang, China 2019, 15,000 m<sup>3</sup>/d RO
- Srbija Power Plant, Serbia 2019, 8,640 m<sup>3</sup>/d Other / Unknown
- Thar Power Plant, Pakistan 2019, 6,240 m<sup>3</sup>/d RO
- Noor Energy CSP, Dubai, United Arab Emirates 2019, 3,600 m<sup>3</sup>/d RO
- Missan Power Plant, Iraq 2019, 1,440 m<sup>3</sup>/d RO

- Sylhet Power Plant, Bangladesh 2019, 960 m<sup>3</sup>/d RO
- Zhoushan Phase I, China 2018, 105,000 m<sup>3</sup>/d MED
- Hebei Fengyue SWRO Project, Tangshan, Hebei, China 2018, 75,000 m<sup>3</sup>/d RO
- Medan KIM Industry Park SWRO Project, Medan, North Sumatra, Indonesia 2018, 6,552 m<sup>3</sup>/d RO
- Colon Gas Turbine, Panama 2018, 3,168 m<sup>3</sup>/d RO
- Aden Phase II, Yemen 2018, 2,160 m<sup>3</sup>/d MED
- Feng Huang Mountain ZLD, China 2018, 840 m<sup>3</sup>/d Other / Unknown
- Jin Ling River ZLD, China 2018, 480 m<sup>3</sup>/d ED
- Li Gang Power Plant, China 2018, 192 m<sup>3</sup>/d Other / Unknown
- Zhejiang Petroleum & Refinery Company, Ningbo, Zhoushan, China 2017, 105,000 m<sup>3</sup>/d MED
- Hebei Fengyue MED Project, Tangshan, Hebei, China 2017, 25,000 m<sup>3</sup>/d MED
- PMB, Brunei, Brunei 2016, 37,500 m<sup>3</sup>/d MED
- Hengyi PBM Petrochemical MED Project, Pualu Muara Besar, Serasa, Brunei 2016, 37,500 m<sup>3</sup>/d MED
- Hebei Qinhuang Island desalination project for thermal power plant, Qinghuang Island, Hebei, China 2016, 6,000 m<sup>3</sup>/d MED
- Qinghuang Dao Thermal Power Plant, China 2016, 6,000 m<sup>3</sup>/d MED
- Yangxi Power Plant Phase II RO project, Guangdong, China, Yangxi, Guangdong, China 2016, 4,128 m<sup>3</sup>/d RO
- Aden Phase II, Yemen 2016, 2,160 m<sup>3</sup>/d MED

- Balingian Power Plant, Malaysia 2015, 3,312 m<sup>3</sup>/d Other / Unknown
- Balingian 2x300MW Power plant RO project, Balingian, Sarawak, Malaysia 2015, 3,312 m<sup>3</sup>/d RO
- Bao Steel Zhangjiang Manufacturement Base, Zhanjiang, Donghai Island, China 2014, 30,000 m<sup>3</sup>/d MED
- Wsait Phase II, Iraq 2014, 4,800 m<sup>3</sup>/d RO
- PCPC Power Plant SWRO Project, Concepcion, Iloilo, Philippines 2014, 2,640 m<sup>3</sup>/d RO
- Concepcion Coal Fired Power Plant, Barangay Nipa, Panay Island, Philippines 2014, 2,640 m<sup>3</sup>/d RO
- Yemen Refinery and Chemical Plant, Aden, Yemen 2014, 2,160 m<sup>3</sup>/d MED
- Wassit Power Plant RO Project, Zobidia, Wassit, Iraq 2013, 4,800 m<sup>3</sup>/d RO
- Guohua Power Plant Phase III, Cangzhou, Hebei Province, China 2012, 25,000 m<sup>3</sup>/d MED

#### Plant Supplier (Reuse)

- Guangxi Huayi Chlor Alkali Chemical Co., Ltd, Qinzhoushi, Qinzhou Part Area of China (Guangxi) Pilot Free Trade Zone, China 2021, 18,000 m<sup>3</sup>/d Other / Unknown
- Zongyang Conch Cement Co., Ltd, Anhui, Zongyang, China 2021, 2,400 m<sup>3</sup>/d RO
- Jianghua Conch cement Co., Ltd, Hunan, Jianghua, China 2021, 600 m<sup>3</sup>/d RO
- Digang Conch Cement Co., Ltd, Anhui, Digang, China 2021, 288 m<sup>3</sup>/d ED
- Chaohu Conch Cement Co., Ltd, Anhui, Chaohu, China 2021, 216 m<sup>3</sup>/d ED
- Xuancheng Conch Cement Co., Ltd, Anhui, Xuancheng, China 2021, 144 m<sup>3</sup>/d ED
- NanTong, Jiangsu, China 2020, 17,280 m<sup>3</sup>/d RO

## **Shanghai SafBon Water Service**



[www.safbonwater.com/safbon-shanghai](http://www.safbonwater.com/safbon-shanghai)

### **SELECTED REFERENCES**

#### **Plant Supplier (Desal)**

Novel Pretreatment Process for Seawater Desalination in Yingkou, Yingkou, Liaoning Province, China 2018, 100,000 m<sup>3</sup>/d RO  
Cangzhou Seawater Reverse Osmosis Desalination Plant Project (100,000 t/d), Bohai Development Zone, Cangzhou, Hebei Province, China 2014, 50,000 m<sup>3</sup>/d RO  
Hebei, China 2013, 50,000 m<sup>3</sup>/d RO  
Water Supply Project, Jinzhou, Liaoning Province, China, 250,000 m<sup>3</sup>/d Other / Unknown  
Xingyi Municipal Supply Water Project, Xingyi, Guizhou Province, China, 30,000 m<sup>3</sup>/d Other / Unknown  
Harsh Produced Water Treatment for Shengli Oil Field, Binzhou, Shandong Province, China, 5,000 m<sup>3</sup>/d RO

#### **Plant Supplier (Reuse)**

Reclaimed Water Advanced Treatment for Shouyangshan Power Plant (2x600MW), Shouyangshan, Henan Province, China, 80,000 m<sup>3</sup>/d Other / Unknown  
ZLD for the Uzbekistan Navoi Petrochemical Plant, Uzbekistan, 14,880 m<sup>3</sup>/d RO  
Flue Gas Desulfurization Waste Water Treatment for Yongji Power Plant (2x300MW), Yongji, Shanxi Province, China, 2,640 m<sup>3</sup>/d Other / Unknown

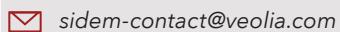
## **SIDEM (Société Internationale de Dessalement)**



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SIDEM, a subsidiary of Veolia Water Technologies, has over 100 years of experience in desalination dating back to the first thermal desalination units in the 1890's.

Benefiting from references of hundreds of running facilities around the world, SIDEM is committed to delivering reliable desalination plants that meet customers' expectations in terms of quality, delivery time and cost. SIDEM can rely on its regional offices (Abu Dhabi, Saudi Arabia, India, etc) and on other Veolia Water Technologies entities to provide local commercial support and engineering services, as well as resources in field activities

With a total of 6,000,000 m<sup>3</sup>/day of SWRO and MED installed capacity, SIDEM combines proven expertise with unsurpassed innovation for both technologies. R&D has always been SIDEM's strategic priority. From detailed process parameters to materials selection, continuous efforts are made to develop innovative solutions for the benefit of our customers. With its new disruptive, safe, compact and digital RO technology, the BARREL™, and its advanced pre-treatment solutions for SWRO plants, SIDEM has enabled the drastic reduction of plants' footprints and the significant decrease of electrical and chemical consumption as well as the overall improvement in plant performance.

### **SELECTED REFERENCES**

#### **EPC Contractor**

Mirfa 2, Mirfa, United Arab Emirates 2023, 545,520 m<sup>3</sup>/d RO  
Sur Barrel B7, Sur, Oman 2019, 5,000 m<sup>3</sup>/d RO

#### **Equipment Supplier: Desalination System**

St Barth Barrel B7, Gustavia, French West Indies, Saint Barthelemy 2023, 4,700 m<sup>3</sup>/d RO  
Glenties Barrel B1, Donegal, Ireland 2023, 2,500 m<sup>3</sup>/d Other / Unknown  
Sawani Barrel B1, Shaqra, Saudi Arabia 2023, 1,000 m<sup>3</sup>/d Other / Unknown  
St Fraimbault Barrel B1, Saint-Fraimbault, France 2023, 580 m<sup>3</sup>/d Other / Unknown  
SWA Mining Barrel B1 & B3, Australia 2022, 9,600 m<sup>3</sup>/d Other / Unknown  
Jourdain Barrel B3, Vienne, France 2022, 3,600 m<sup>3</sup>/d Other / Unknown  
Sydney Barrel B1, Sydney, Australia 2022, 580 m<sup>3</sup>/d Other / Unknown  
St Barth Barrel B1, Gustavia, French West Indies, Saint Barthelemy 2020, 800 m<sup>3</sup>/d RO

St Martin Barrel Br, Marigot, French West Indies, Saint Martin 2017, 800 m<sup>3</sup>/d RO

#### Membrane Desalination: Design and Build

Umm Al Quwain, United Arab Emirates 2019, 681,800 m<sup>3</sup>/d RO  
 Rabigh 3 IWP, Rabigh, Saudi Arabia 2019, 600,000 m<sup>3</sup>/d RO  
 Al Dur 2 IWPP, Al Dur, Bahrain 2019, 227,000 m<sup>3</sup>/d RO  
 Sharqiyah Desalination - Expansion, Sur, Oman 2015, 48,000 m<sup>3</sup>/d RO  
 BWSIP P3 & P4, Basrah, Iraq 2014, 199,000 m<sup>3</sup>/d RO  
 Masdar - Renewable Energy Desalination Program, Abu Dhabi, United Arab Emirates 2014, 300 m<sup>3</sup>/d RO  
 Sadara (Marafiq) SWRO, Al Jubail, Saudi Arabia 2013, 178,800 m<sup>3</sup>/d RO  
 Aruba desalination plant, Aruba 2012, 24,000 m<sup>3</sup>/d RO  
 Az Zour South SWRO, Kuwait 2011, 136,000 m<sup>3</sup>/d RO

#### Thermal Desalination: Design and Build

Ras Lanouf, Libya 2019, 16,000 m<sup>3</sup>/d MED  
 WHR + CFP (ADNOC), Abu Dhabi, United Arab Emirates 2018, 48,800 m<sup>3</sup>/d MED  
 Shougang - Unit 5, Caofeidian, China 2016, 35,000 m<sup>3</sup>/d Thermal  
 Az Zour North 1 IWPP, Kuwait 2013, 490,970 m<sup>3</sup>/d Thermal  
 Yanbu 2, Saudi Arabia 2011, 63,348 m<sup>3</sup>/d MED  
 MAEK Kazatomprom, Aktau, Kazakhstan 2010, 24,000 m<sup>3</sup>/d MED



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#### SELECTED REFERENCES

##### EPC Contractor

Solapur WWTP 1, Maharashtra, India 2012, 75,000 m<sup>3</sup>/d Tertiary treatment  
 Solapur WWTP 2, Maharashtra, India 2012, 15,000 m<sup>3</sup>/d Tertiary treatment  
 Solapur WWTP 3, Maharashtra, India 2012, 12,500 m<sup>3</sup>/d Tertiary treatment



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#### SELECTED REFERENCES

##### Plant Supplier (Reuse)

San Agustín de Guadalix WWTP - Expansion, San Agustín de Guadalix, Spain 2012, 1,500 m<sup>3</sup>/d Tertiary treatment



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#### SELECTED REFERENCES

##### Developer

Sohar, Oman 2016, 250,000 m<sup>3</sup>/d RO

## Singapore Technologies Marine Ltd



[www.stengg.com](http://www.stengg.com)

#### SELECTED REFERENCES

##### Developer, EPC Contractor and Operator

Singapore 2017, 136,380 m<sup>3</sup>/d RO

##### EPC Contractor

Singapore 2015, 22,730 m<sup>3</sup>/d RO

## Six Construct Ltd.



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#### SELECTED REFERENCES

##### EPC Contractor

Doha Industrial Area WWTP - Expansion, Qatar 2014, 30,000 m<sup>3</sup>/d SBR/UF/UV

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### SELECTED REFERENCES

#### Investment and Operation

Torkman & Gomishan, Bandar Torkaman, Iran 2014, 7,600 m<sup>3</sup>/d RO

Zahedan-2, Zahedan, Sistan and Baluchestan, Iran 2013, 2,500 m<sup>3</sup>/d RO

## Sparkle Clean Tech Pvt. Ltd.



[www.sparklecleantech.com](http://www.sparklecleantech.com)

### SELECTED REFERENCES

#### Desalination/Wastewater Reuse System Supplier

Water Reinjection Plant #1, India, 5,000 m<sup>3</sup>/d UF

Water Reinjection Plant #2, India, 5,000 m<sup>3</sup>/d UF

Industrial Water Reuse Plant, India, 540 m<sup>3</sup>/d RO

Automobile ZLD Plant, India, 300 m<sup>3</sup>/d RO

Textile Factory BWRO, India, 36 m<sup>3</sup>/d RO

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### SELECTED REFERENCES

#### Plant Supplier (Desal)

Limassol, Cyprus 2012, 20,000 m<sup>3</sup>/d RO

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A major player in environmental services for over 160 years, SUEZ works every day to support local authorities and industry in managing the essential services of water and waste. The Group deploys all its capacity for innovation to serve a radically new form of resource management: optimizing resources use by exploiting the full potential of new and digital technologies, recycling, recovering value, producing secondary raw materials and alternative resources, etc.

The team of SUEZ is 40,000 women and men, with passion for and commitment to the planet, with a French base and a large international presence that we will continue to successfully strengthen and expand.

#### Innovation & Partnerships

SUEZ is leading cutting-edge innovation in the environmental sector with 9 R&D Centers, with solutions based on data analysis and data exploitation as well as nature-based solutions. SUEZ's innovation policy is based on various programs and projects managed internally, and with a strong commitment to open innovation.

#### Key Expertise

##### Water:

- Engineering & Construction
- O&M
- Smart & sustainable management of water cycle (drinking water & wastewater)
- Smart water solutions & networks performance

##### Waste:

- Collection
- Treatment
- Recycling and waste recovery to produce secondary raw materials and renewable energy

### SELECTED REFERENCES

#### Plant Supplier (Desal)

Auxerre, France, 2023, (under construction), 33,600 m<sup>3</sup>/d LPRO

Wanhua Penglai, China 2023, (under construction), 100,000 m<sup>3</sup>/d RO

Jaffna, Sri Lanka 2021, (under construction), 24,000 m<sup>3</sup>/d RO



**“Our objective:  
to make water and sanitation  
part of the circular economy”**

**Sabrina SOUSSAN,  
SUEZ Chairman and CEO**

### **“SUEZ Group has been a major player in water for 160 years, how are these businesses changing at present?**

Rapid climate change is prompting us to rethink our methods and models as we take action to combat climate change. Throughout the world, the whole water cycle is being significantly disrupted. Rivers are drying out, the level of the sea is rising owing to the melting of glaciers, precipitation is less frequent but more intense which creates run-off phenomena which prevent the replenishment of underground water reserves and disrupt sanitation networks. Drought episodes are becoming more frequent and the scarcity of resources risks impacting numerous economic sectors, including agriculture and industry. New pollutants have appeared: endocrine disruptors, microplastics, pesticide metabolites, etc. At SUEZ, we are convinced that we must make water and sanitation part of the circular economy. Our bet: promote innovation and digitalization of our businesses and develop new public-private partnership modes.

### **How can innovation address the major water challenges?**

To include water in the circular economy, innovation is essential. This means leveraging digital technology when it rolls out connected smart meters to track consumption. In São Paulo, artificial intelligence is being used to monitor leaks in the water network. This has led to savings of more than 95 million m<sup>3</sup> of water since 2007, which is equivalent to the volume of water necessary to supply 660,000 families for one year. Technological innovation also contributes to greater energy sobriety and limits greenhouse gas emissions linked to the production

of drinking water and the processing of wastewater. In the south of France, in Pau, for example, we are transforming a wastewater treatment plant so that it not only processes wastewater, but also produces biomethane or green hydrogen to produce more energy than it consumes. At Gabal El Asfar, in Egypt, we process the wastewater for the 5 million inhabitants in Cairo while also producing the energy for the wastewater plant from sewage sludge. Technological innovation is also key to ensure water reuse and to fight against new forms of pollution such as micropollutants, microplastics, pesticide metabolites, etc. In Shanghai, SUEZ processes and reuses wastewater from a world-leading petrochemical industrial park and is rolling out a patented solution to prevent the propagation of micropollutants in fresh water.

At SUEZ, innovation is also about changing behavior. Our laboratory at Lyre in Bordeaux, which innovates in the quantitative but also the qualitative management of water to limit the impact of urban centers on the environment, has notably adopted a social and societal approach focusing on user practices. But, leveraging technology and social sciences will not be enough: we also need to rethink the ways we cooperate with the different stakeholders.

# IDRA DESALINATION & REUSE HANDBOOK

Elba Islands, Italy 2021, 6,900 m<sup>3</sup>/d RO  
Saint Jean de Braye, France 2019, 7,200 m<sup>3</sup>/d LPRO  
Thiant, France 2016, 9,600 m<sup>3</sup>/d LPRO  
Vicq, France 2016, 12,720 m<sup>3</sup>/d LPRO  
Barka IV-IWP, Oman 2015, 280,000 m<sup>3</sup>/d RO  
Hassi Messaoud DW, Algeria 2015, 24,000 m<sup>3</sup>/d RO  
Hassi Messaoud IW, Algeria 2015, 24,000 m<sup>3</sup>/d RO  
Mirfa, Abu Dhabi, United Arab Emirates 2014, 136,000 m<sup>3</sup>/d RO  
Yunnan Petrol, China 2014, 24,000 m<sup>3</sup>/d RO  
Victorian Desalination Plant, Melbourne, Australia, 2009, 450,000 m<sup>3</sup>/d RO  
Al Dur, Bahrain 2009, 219,000 m<sup>3</sup>/d RO  
Perth 1, WA, Australia 2005, 143,000 m<sup>3</sup>/d RO  
Andratx, Spain 2005, 14,000 m<sup>3</sup>/d RO  
Bredeah, Algeria 2002, 29,000 m<sup>3</sup>/d RO  
Salina Cruz - Pemex I, Mexico 1997, 14,256 m<sup>3</sup>/d RO

## Plant Supplier (Reuse)

Worli, India, 2022, (under construction), 500,000 m<sup>3</sup>/d, 250,000 m<sup>3</sup>/d for reuse  
K&C Valley, India, 2022, (under construction), 248,000 m<sup>3</sup>/d  
Orleans (La Source), France, 2020, 2,400 m<sup>3</sup>/d  
Panki, India, 2019, 40,000 m<sup>3</sup>/d  
Boneo, Australia, 2018, 31,000 m<sup>3</sup>/d  
Chapultepec, Mexico, 2016, 15,000 m<sup>3</sup>/d  
Huai Fang, China, 2015, 600,000 m<sup>3</sup>/d  
Beenyup, Australia, 2013, 43,000 m<sup>3</sup>/d RO  
Cannes, France, 2012, 52,000 m<sup>3</sup>/d  
Adge, France, 2011, 16,000 m<sup>3</sup>/d  
Chengdu Petro Chemical, China, 2009, 67,000 m<sup>3</sup>/d  
Cubbon Park, India, 2004, 1,500 m<sup>3</sup>/d  
Milan San Rocco, Italy, 2002, 345,000 m<sup>3</sup>/d

## Main Contractor

Store City, Jeddah, Saudi Arabia 2017, 5,000 m<sup>3</sup>/d RO  
SOJECO Desalination plant, Jeddah, Saudi Arabia 2015, 5,000 m<sup>3</sup>/d RO  
Waste Water Treatment Plant in Dammam 1 Industrial City (WWTP), Dammam, Saudi Arabia 2014, 3,500 m<sup>3</sup>/d RO  
Salboukh Phase I, Riyadh, Saudi Arabia 2012, 53,040 m<sup>3</sup>/d RO  
Head Quarters Business Park, Jeddah, Saudi Arabia 2012, 1,300 m<sup>3</sup>/d RO

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## SELECTED REFERENCES

### Developer

Ra's az Zawr, Kuwait 2013, 486,400 m<sup>3</sup>/d MED

### Project Sponsor

Al Ghubrah IWP, Muscat City, Oman 2012, 190,932 m<sup>3</sup>/d RO

## Sundt Construction Inc



[www.sundt.com](http://www.sundt.com)

## SELECTED REFERENCES

### Installation

Greenfield Water Reclamation Plant (South), Gilbert, Arizona, United States, 60,566 m<sup>3</sup>/d RO

Butler Water Reclamation Facility, Peoria, Arizona, United States, 37,854 m<sup>3</sup>/d MBR

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## SELECTED REFERENCES

### EPC Contractor

Al Kharji BWRO Plant, Al Kharj, Saudi Arabia 2013, 50,000 m<sup>3</sup>/d RO

Manfuha Plant 2, Riyadh, Saudi Arabia 2013, 38,400 m<sup>3</sup>/d RO

North Obhur, Jeddah, Saudi Arabia 2013, 1,500 m<sup>3</sup>/d RO

Al-Iskan Desalination Plant, Kharkheer, Saudi Arabia 2012, 300 m<sup>3</sup>/d RO

RO Plant for the Camp, Al Baithe, Saudi Arabia 2012, 300 m<sup>3</sup>/d RO

Isuzu Motor-RO Plant, Dammam, Saudi Arabia 2012, 10 m<sup>3</sup>/d RO

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**SELECTED REFERENCES****Engineering, Procurement, Construction and Operations**

Pylaia-Chortiatis Iron Removal Plant IRF 125.000, Asvestochori, Central Macedonia, Greece 2020, 3,000 m<sup>3</sup>/d Other / Unknown  
 Milopotamos Desalination Plant UF-BWRO 2000CMD, Milopotamos, Crete Island, Greece 2020, 2,000 m<sup>3</sup>/d RO  
 Karpathos, Karpathos Island, Aegean Sea, Greece 2020, 1,000 m<sup>3</sup>/d Other / Unknown  
 Heraklion, Crete Island, Greece 2020, 900 m<sup>3</sup>/d MBR  
 Hersonissos, Crete Island, Greece 2020, 250 m<sup>3</sup>/d RO  
 SW 9.000, Ithaca, Ionian Sea, Greece 2020, 200 m<sup>3</sup>/d RO  
 Antipaxoi Seawater Desalination SW 3.000, Antipaxoi Island, Ionian Sea, Greece 2020, 80 m<sup>3</sup>/d RO  
 Katerini Landfill Site LW 2.000, Katerini, Central Macedonia, Greece 2020, 50 m<sup>3</sup>/d RO  
 Heraklion, Crete Island, Greece 2020, 24 m<sup>3</sup>/d MBR  
 Heraklion, Crete Island, Greece 2020, 13 m<sup>3</sup>/d MBR

**EPC contractor**

Bioenergy MegaraMBR - Ceramic UF - LWR02500, Megara, Athens, Greece 2022, 60 m<sup>3</sup>/d RO  
 TW 65000, Larnaca, Cyprus 2021, 1,500 m<sup>3</sup>/d RO  
 DEMI WTP 60000 (4th expansion), Peloponnese, Korinthos, Greece 2021, 1,440 m<sup>3</sup>/d RO  
 Wastewater Reuse for Zoniro Golf Course, Ermionida, Kranidi, Greece 2021, 1,400 m<sup>3</sup>/d  
 WWRO 50.000, Ermionida, Kranidi, Greece 2021, 1,200 m<sup>3</sup>/d RO  
 Boeotia, Oinofyta, Greece 2021, 200 m<sup>3</sup>/d RO  
 Larnaca, Cyprus 2021, 150 m<sup>3</sup>/d RO

**Plant Supplier**

Halkidiki, Central Macedonia, Greece 2020, 14,400 m<sup>3</sup>/d Other / Unknown  
 Halkidiki, Central Macedonia, Greece 2020, 12,000 m<sup>3</sup>/d Other / Unknown  
 Asejire Sanitary TWRO 80.000, Nigeria 2020, 1,920 m<sup>3</sup>/d RO  
 Asejire Sanitary TWRO 60.000, Nigeria 2020, 1,440 m<sup>3</sup>/d RO  
 Mavrachchi Landfill Site 2 x LW 10.000, Thessaloniki, Central Macedonia, Greece 2020, 500 m<sup>3</sup>/d RO  
 Agioi Theodoroi, Corinthia, Greece 2020, 360 m<sup>3</sup>/d Other / Unknown  
 Mykonos, Mykonos Island, Aegean Sea, Greece 2020, 150 m<sup>3</sup>/d RO  
 Thesprotia, Epirus, Greece 2020, 150 m<sup>3</sup>/d RO  
 Siteia Landfill Site LW 2.000, Sitia, Crete Island, Greece 2020, 50 m<sup>3</sup>/d RO  
 Neutralization Skid, Chalkidiki, Greece 2019, 13,200 m<sup>3</sup>/d RO  
 Pakistan RO Plant, Pakistan 2019, 10,000 m<sup>3</sup>/d RO  
 SF300000, Limassol, Cyprus 2019, 7,200 m<sup>3</sup>/d RO  
 Thisvi RO Plant, Greece 2019, 2,880 m<sup>3</sup>/d RO  
 Ghana RO Plant, Ghana 2019, 2,600 m<sup>3</sup>/d RO  
 Sanitary TWRO 35000, Shimatari, Viotia, Greece 2019, 840 m<sup>3</sup>/d RO

BW28000 Leasing, Heraklion, Crete Island, Greece 2019, 675 m<sup>3</sup>/d RO  
 Wastewater Treatment Expansion, Heraklion, Crete, Greece 2019, 600 m<sup>3</sup>/d MBR  
 SW 22000 Leasing, Lerapetra, Crete Island, Greece 2019, 550 m<sup>3</sup>/d RO  
 SW2X25000 Leasing, Milaki, Evia, Greece 2019, 500 m<sup>3</sup>/d RO  
 DEMI WTP10, Limassol, Cyprus 2019, 432 m<sup>3</sup>/d RO  
 BW12000-IND-C, Imathia, Greece 2019, 290 m<sup>3</sup>/d RO  
 SW 8.300 Expansion 2019, Argolida, Pelopponisos, Greece 2019, 200 m<sup>3</sup>/d RO  
 Wastewater Treatment Expansion, Heraklion, Crete Island, Greece 2019, 190 m<sup>3</sup>/d MBR  
 BW6000, Heraklion, Crete Island, Greece 2019, 150 m<sup>3</sup>/d RO  
 SW6000 Leasing, Mykonos Island, Greece 2019, 150 m<sup>3</sup>/d RO  
 LW 3000 - 80 CMD, Annaba, Azzaba, Guelma, Algeria 2019, 80 m<sup>3</sup>/d RO  
 SW4000U-IDN-F Leasing, Mykonos Island, Greece 2019, 80 m<sup>3</sup>/d RO  
 SW1.200 CMD, Ecuador 2018, 1,200 m<sup>3</sup>/d RO  
 DW1.080CMD, Ecuador 2018, 1,080 m<sup>3</sup>/d RO  
 SW43.000, Grand Canaria, Spain 2018, 1,032 m<sup>3</sup>/d RO  
 SW43.000, Ghana 2018, 1,000 m<sup>3</sup>/d RO  
 SW43.000, Ecuador 2018, 1,000 m<sup>3</sup>/d RO  
 SW25.000, Heraklion, Crete Island, Greece 2018, 600 m<sup>3</sup>/d RO  
 BW15.000, Heraklion, Crete, Greece 2018, 360 m<sup>3</sup>/d RO  
 Arina Desalination Plant SW10.000, Heraklion, Crete, Greece 2018, 240 m<sup>3</sup>/d RO  
 BW6.000, Heraklion, Crete, Greece 2018, 150 m<sup>3</sup>/d RO  
 Proteas Desalination Plant, Santorini, Greece 2018, 5,000 m<sup>3</sup>/d RO  
 Almyros Desalination Plant 2xBW65.000, Heraklion, Crete, Greece 2018, 3,000 m<sup>3</sup>/d RO  
 Foinikia Desalination Plant BW85.000, Heraklion, Crete, Greece 2018, 2,000 m<sup>3</sup>/d RO  
 WWRO80.000, Southern California, United States 2018, 1,920 m<sup>3</sup>/d UF  
 Motor Oil Refineries, Corinthia, Greece 2017, 11,830 m<sup>3</sup>/d RO  
 Amandi Power Plant, Demi Water Treatment Plant, Aboadze, Western Region, Ghana 2017, 2,600 m<sup>3</sup>/d RO  
 Amandi Power Plant, Demi Water Treatment Plant, Aboadze, Western Region, Ghana 2017, 1,920 m<sup>3</sup>/d RO  
 WTP, Malevizi, Greece 2017, 720 m<sup>3</sup>/d RO  
 WW17.000 , Rethymno, Crete Island, Greece 2017, 400 m<sup>3</sup>/d UF  
 SW16.000 Leasing, Corfu Island, Ionian Sea, Greece 2017, 384 m<sup>3</sup>/d RO  
 Sacramento, United States 2017, 240 m<sup>3</sup>/d RO  
 BW8.000 Expansion 2017, Argolida, Peloponnese, Greece 2017, 192 m<sup>3</sup>/d RO  
 Enesel SW6.000, Spetses Island, Greece 2017, 150 m<sup>3</sup>/d RO  
 SW6.000 Expansion, Mykonos Island, Greece 2017, 150 m<sup>3</sup>/d RO  
 BW4.000, Rethymno, Crete Island, Greece 2017, 100 m<sup>3</sup>/d RO  
 SW3.000, Naxos Island, Greece 2017, 75 m<sup>3</sup>/d RO  
 Kalamata, Greece 2017, 50 m<sup>3</sup>/d RO  
 Pella, Greece 2017, 45 m<sup>3</sup>/d RO  
 Quriyat Ultra Filtration Plant, Oman 2016, 20,000 m<sup>3</sup>/d Other / Unknown  
 Water Treatment Plant, Taman, Temryuksky District, Russia 2016, 11,000 m<sup>3</sup>/d RO  
 Aseelah Desalination Plant, Al Ashkharah, Oman 2016, 10,000 m<sup>3</sup>/d RO  
 BW Expansion 2016, Agioi Theodoroi, Corinthia, Greece 2016, 1,200 m<sup>3</sup>/d RO  
 Water Treatment Plant, Koh Sichang, Sichang Island, Thailand 2016, 1,000 m<sup>3</sup>/d RO  
 Water Treatment Plant, Paxos Island, Ionian Sea, Greece 2016, 900 m<sup>3</sup>/d RO

# IDRA

## DESALINATION & REUSE HANDBOOK

Water Treatment Plant, Agioi Theodoroi, Corinthia, Greece 2016, 600 m<sup>3</sup>/d RO  
Water Treatment Plant, Thira, Cyclades, Greece 2016, 280 m<sup>3</sup>/d RO  
Demi Water Treatment Plant, Teesside, Middlesbrough, United Kingdom 2016, 240 m<sup>3</sup>/d RO  
Demi Water Treatment Plant, Afam, Rivers State, Nigeria 2016, 140 m<sup>3</sup>/d RO  
WTP Expansion 2015, Agioi Theodoroi, Corinthia, Greece 2015, 2,100 m<sup>3</sup>/d RO  
Water Treatment Plant, Corfu Island, Ionian Sea, Greece 2015, 1,000 m<sup>3</sup>/d RO  
Water Treatment Plant, Manila, Philippines 2015, 1,000 m<sup>3</sup>/d RO  
Water Treatment Plant, Alonnisos Island, Sporades, Greece 2015, 500 m<sup>3</sup>/d RO  
Water Treatment Plant, Safaga, Red Sea Governorate, Egypt 2015, 500 m<sup>3</sup>/d RO  
Water Treatment Plant, Skydra, Pella, Greece 2015, 400 m<sup>3</sup>/d RO  
Demi Water Treatment Plant, Lisbjerg, Aarhus, Denmark 2015, 400 m<sup>3</sup>/d RO  
Water Treatment Plant, Paliouri, Chalkidiki, Greece 2015, 300 m<sup>3</sup>/d RO  
Water Treatment Plant, Oinofyta, Boeotia, Greece 2015, 230 m<sup>3</sup>/d RO  
WTP Pilot Unit, Olympiada, Chalkidiki, Greece 2015, 200 m<sup>3</sup>/d RO  
Water Treatment Plant, Trikala, Greece 2015, 140 m<sup>3</sup>/d RO  
8 mobile gas turbine power generating sets,(Fast Track), Algeria 2014, 3,072 m<sup>3</sup>/d RO  
Opera Project, Kuwait 2014, 2,400 m<sup>3</sup>/d RO  
Temporary Water Treatment Plant, Mykonos Island, Greece 2014, 1,800 m<sup>3</sup>/d RO  
Potabilization unit for the Sunti Project, Mokwa, Nigeria 2014, 720 m<sup>3</sup>/d RO  
Opera Project, Kuwait 2014, 600 m<sup>3</sup>/d RO  
24 Mobile Gas Turbine power generating sets, Algeria 2013, 9,000 m<sup>3</sup>/d RO  
CEEG Phase V Project in Algeria, Mobile Pac, Algeria 2013, 7,680 m<sup>3</sup>/d RO  
Motor Oil Hellas Expansion, Greece 2013, 3,360 m<sup>3</sup>/d RO  
Motor Oil Hellas Expansion, Greece 2013, 3,000 m<sup>3</sup>/d RO  
CEEG Phase IV Project in Algeria, Mobile Pac, Tindouf, Algeria 2013, 2,180 m<sup>3</sup>/d RO  
Almyros Desalination and Educational Park, Heraklion, Crete, Greece 2013, 2,000 m<sup>3</sup>/d RO  
Rom Oil Mills Limited, Ibadan, Oyo State, Nigeria 2013, 1,600 m<sup>3</sup>/d RO  
Samra Power Station, Phase III Add on combined cycle Project, Jordan 2013, 720 m<sup>3</sup>/d RO  
Water Treatment Plant, Kimolos Island, Greece 2013, 600 m<sup>3</sup>/d RO  
Water Treatment Plant, Lipsoi Island, Greece 2013, 600 m<sup>3</sup>/d RO  
Rom Oil Mills Limited, Ibadan, Oyo State, Nigeria 2013, 360 m<sup>3</sup>/d RO

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## SELECTED REFERENCES

### EPC Contractor

TAM, Tolip Taba, Egypt 2019, 500 m<sup>3</sup>/d RO  
Dabaa, Marsa Matrouh, Egypt 2018, 40,000 m<sup>3</sup>/d RO  
Ras Sedr, South Sinai, Egypt 2018, 30,000 m<sup>3</sup>/d RO  
Abu Zenima, South Sinai, Egypt 2018, 20,000 m<sup>3</sup>/d RO  
Dahab, South Sinai, Egypt 2018, 15,000 m<sup>3</sup>/d RO  
Four Seasons, Sharm El Sheikh - South Sinai, Egypt 2018, 2,000 m<sup>3</sup>/d RO  
TAM BOO, Koraya (Marsa Alam), Egypt 2018, 2,000 m<sup>3</sup>/d RO  
TAM Cr, Tolip Taba, Egypt 2018, 500 m<sup>3</sup>/d RO  
TAM BOO C3, Koraya (Marsa Alam), Egypt 2017, 500 m<sup>3</sup>/d RO  
Ain Sokhna, Egypt 2016, 206,000 m<sup>3</sup>/d RO  
Grand Azur (Rexos), Sharm El Sheikh, Egypt 2016, 1,600 m<sup>3</sup>/d RO  
Dabaa Desalination Plant, Al-Dabaa, Egypt 2015, 170,000 m<sup>3</sup>/d RO  
Emak Port Ghalib, Marsa Alam, Egypt 2015, 600 m<sup>3</sup>/d RO  
Remila, Marsa Matrouh, Egypt 2014, 48,000 m<sup>3</sup>/d RO  
El Saloum HCWW, Marsa Alam, Egypt 2014, 700 m<sup>3</sup>/d RO  
Ain Sokhna, Egypt 2013, 91,200 m<sup>3</sup>/d RO  
El Salam, Marsa Alam, Egypt 2013, 700 m<sup>3</sup>/d RO  
Mont Marie, Sharm El Sheikh, Egypt 2013, 500 m<sup>3</sup>/d RO  
Baghoush, Marsa Matrouh, Egypt 2012, 24,000 m<sup>3</sup>/d RO  
Ras Malab (TDA), Ras Sidr, Egypt 2012, 1,500 m<sup>3</sup>/d RO  
Taba (TDA), Taba, Egypt 2012, 1,500 m<sup>3</sup>/d RO  
Ras Sidr 2 (TDA), Ras Sidr, Egypt 2012, 1,500 m<sup>3</sup>/d RO

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## SELECTED REFERENCES

### EPC Contractor

Al Fatah SWRO Desalination Plant, Jubail Industrial City, Marafiq, Jubail, Saudi Arabia 2022, 12,000 m<sup>3</sup>/d RO  
SWCC Shoaiba 5 Plant, Shoaiba, SWCC, Shoaiba, Saudi Arabia 2021, 600,000 m<sup>3</sup>/d RO  
SWCC Shoaiba 5 Plant WWTP, Shoaiba, SWCC, Shoaiba, Saudi Arabia 2021, 30,000 m<sup>3</sup>/d RO  
SWCC West Coast Satellite Desalination Plants, Haql, Duba, Al Wadj, Umlujj, Rabigh, Alith, Qunfudha & Farasan, SWCC: Haql, Duba, Al Wadj, Umlujj, Rabigh, Alith, Qunfudha & Farasan, Saudi Arabia 2020, 238,000 m<sup>3</sup>/d RO  
Saudi Electricity Company Power Plant, Riyadh, PP14, Riyadh, Saudi Arabia 2018, 100 m<sup>3</sup>/d Other / Unknown

Royal Commission of Yanbu & Jubail WWTP Plant, Ras Al Khair, Royal Commission of Yanbu & Jubail, Saudi Arabia 2017, 25,000 m<sup>3</sup>/d Other / Unknown

Saudi Electricity Company STP, Qassim, Qassim, Saudi Arabia 2015, 200 m<sup>3</sup>/d Other / Unknown

Saudi Electricity Company PP14 Power Plant, Riyadh, PP14, Riyadh, Saudi Arabia 2015, 100 m<sup>3</sup>/d Other / Unknown

Hail 2 Power Plant, Hail, Saudi Arabia 2015, 100 m<sup>3</sup>/d Other / Unknown

SEPCO III Power Plant, Riyadh, PP14, Riyadh, Saudi Arabia 2015, 100 m<sup>3</sup>/d Other / Unknown

SEPCO III Power Plant, Riyadh, PP13, Riyadh, Saudi Arabia 2015, 100 m<sup>3</sup>/d Other / Unknown

Ma'aden, Turaif, Saudi Arabia 2014, 1,300 m<sup>3</sup>/d Other / Unknown

Saudi Electricity Company STP, Hail, SEC/Hail, Saudi Arabia 2014, 100 m<sup>3</sup>/d Other / Unknown

Hassi Messaoud New Refinery, Hassi Messaoud, Algeria 2019, 21,500 m<sup>3</sup>/d Other / Unknown

Hamriyah CCGT Power Plant, Sharjah, United Arab Emirates 2019, 8,000 m<sup>3</sup>/d RO

Jazan IGCC, Saudi Arabia 2014, 50,000 m<sup>3</sup>/d RO

Jazan IGCC, Saudi Arabia 2014, 37,952 m<sup>3</sup>/d Other / Unknown

Aegean Star Refinery WWTP, Aliaga, Turkey 2013, 26,500 m<sup>3</sup>/d Other / Unknown

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### SELECTED REFERENCES

#### Complete Project Delivery

Johan Castberg, North Sea, Norway 2017, 27,312 m<sup>3</sup>/d Sulfate Removal

Oseberg South, North Sea, Norway 2017, 0 m<sup>3</sup>/d Electrochlorination

Gina Krog, North Sea, Norway 2015, 600 m<sup>3</sup>/d Membrane Deaeration

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### SELECTED REFERENCES

#### Design, Equipment, Construction, Installation and Start-Up

Penoles Wastewater Treatment Plant with Biological Process, Tertiary Filtration and Uv Light Disinfection for Reverse Osmosis Feeding, 4,492 m<sup>3</sup>/d RO

#### Design, Equipment, Construction, Installation, Start-Up and Operation and Maintenance

Accuride Wastewater Treatment Plant with Membrane Biological Reactor (MBR) and Reverse Osmosis for Water Reuse in Industrial Processes, 326 m<sup>3</sup>/d RO

#### EPC Contractor

Grupo Mexico Residual Water Treatment and Reuse Plant with Remote Pretreatment Station, MBR Plant and Reverse Osmosis, 6,912 m<sup>3</sup>/d RO

Ternium Processing Water Treatment Plant, 4,320 m<sup>3</sup>/d RO

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### SELECTED REFERENCES

#### Engineering Contractor

UPI Power & Infrastructures Units, Antwerp, Belgium 2019, 150,000 m<sup>3</sup>/d Other / Unknown

Socar Mercury Project, Aliaga, Turkey 2019, 30,000 m<sup>3</sup>/d Other / Unknown

#### General Contractor for Detailed Engineering, Civil and Electromechanical Works and Start-Up

Ford Advanced Treatment Plant of Industrial and Sanitary Wastewater with Membrane Biological Reactor Process, 1,296 m<sup>3</sup>/d MBR

#### Main Contractor

Project One - Ethane Cracker WWTP, Lillo, Antwerp, Belgium 2022, 15,000 m<sup>3</sup>/d Other / Unknown

Water production, (RO+Demi) for 4 Combined Cycles, San Luis Rio Colorado, Mexicali, Merida & Valladolid, Sonora, Baja California & Yucatán, Mexico 2022, 50,000 m<sup>3</sup>/d RO

Industrial effluent treatment plant upgrade, Huelva, Andalusia, Spain 2020, 2,400 m<sup>3</sup>/d MBR

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### SELECTED REFERENCES

#### Plant Supplier

Nemmeli Phase 2, Nemmeli, Tamil Nadu, India 2019, 150,000 m<sup>3</sup>/d RO

Gujarat Industrial Development Corporation, Dahej, Gujarat, India 2019, 100,000 m<sup>3</sup>/d RO

Cirebon Phase II, Cirebon, Java, Indonesia 2018, 4,300 m<sup>3</sup>/d RO

Saurashtra Chemicals, Gujarat, Porbandar, India 2016, 12,000 m<sup>3</sup>/d RO

Megha Engineering, Tamilnadu, Tuticorin, India 2016, 7,000 m<sup>3</sup>/d RO

Zadco, Abu Dhabi, Zirku Island, United Arab Emirates 2013, 5,800 m<sup>3</sup>/d RO

Emirates Aluminium, Abu Dhabi, United Arab Emirates 2012, 7,000 m<sup>3</sup>/d RO

Khorfakkan Power Station, United Arab Emirates, 18,927 m<sup>3</sup>/d RO

New Qidfa Power station, Al Zawara, United Arab Emirates, 11,356 m<sup>3</sup>/d RO

#### Plant Supplier and O&M Contractor

Indira Gandhi Center for Atomic Research, Kalpakkam, Tamil Nadu, India 2012, 10,000 m<sup>3</sup>/d RO

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Tedagua has been developing water treatment plants and desalination solutions since beginning operations in 1983 in Las Palmas de Gran Canaria. After 20 years of strong growth, the company became a subsidiary of Cobra Group in 2001, which enabled Tedagua to become a global leader in the design, construction, operation and maintenance of water treatment plants. Tedagua now has more than 150 desalination plant references, as well as more than 100 references for drinking water plants, wastewater treatment plants and recycled water treatment plants.

With contracts in the five continents, Tedagua is now rightfully considered a world leader in the water treatment sector, with important references both in municipal and industrial areas and with second-to-none experiences in flagship projects.

The approach of Tedagua involves a broad range of technologies to provide a customized solution to client needs and implementing a combination of a highly skilled team, R&D effort and environmentally friendly awareness.

Tedagua always strives for the highest quality, owning the most relevant industry certifications and the very best of sustainable management systems, with the mission and values aligned to boost social progress in all the regions in which we participate.

### SELECTED REFERENCES

#### EPC Contractor (Transmission)

Independent Water Transmission Line Rayis-Rabig, Rayis-Rabig, Saudi Arabia 2023, 500,000 m<sup>3</sup>/d RO

#### O&M Contractor

Sludge Thermal Treatment in Madrid Sur WWTP, Comunidad de Madrid, Spain 2023, 345,600 m<sup>3</sup>/d RO

Mutamiel Desalination Plant, Alicante, Spain 2023, 50,000 m<sup>3</sup>/d RO

Reuse WTP in Santa Cruz de Tenerife, Valle San Lorenzo and Adeje-Arona, Tenerife, Canary Islands, Spain 2022, 56,000 m<sup>3</sup>/d RO

Magtaa, Oran, Algeria 2021, 500,000 m<sup>3</sup>/d RO

# El mejor ejemplo de éxito de la internacionalización de las empresas del agua

The best example of success in the internationalisation of water companies

**+30**

**Estaciones de Tratamiento de  
Agua Potable (ETAP)  
para 10 mill. de habitantes**

Drinking water treatment plants (DWTP)  
for 10 million inhabitants

**+100**

**Plantas desaladoras  
por Ósmosis Inversa**

Reverse Osmosis  
Desalination Plants

**+80**

**Plantas de Tratamiento de  
Aguas Residuales (PTAR)  
para 8 mill. de habitantes**

Watewater Treatment Plants (WWTP)  
for 8 million inhabitants



### Plant Supplier (Desal)

Containerised Desalination Plants, La Palma, Canary Islands, Spain 2022, 12,000 m<sup>3</sup>/d RO  
Sfax, Tunisia 2021, 100,000 m<sup>3</sup>/d RO  
East Bay, Manila, Rizal, Philippines 2021, 50,000 m<sup>3</sup>/d RO  
Chira - Soria, Arguineguin, Gran Canaria, Spain 2021, 7,800 m<sup>3</sup>/d RO  
Emergency Desal Plant, Puerto Naos, La Palma, Spain 2021, 7,600 m<sup>3</sup>/d RO  
Roque Prieto, Guía-Gáldar, Canary Islands, Spain 2020, 8,500 m<sup>3</sup>/d RO  
Gran Tarajal, Fuerteventura, Spain 2020, 2,000 m<sup>3</sup>/d RO  
Puerto del Rosario, Fuerteventura, Spain 2020, 2,000 m<sup>3</sup>/d RO  
Corralejo, Fuerteventura, Spain 2020, 2,000 m<sup>3</sup>/d RO  
Chennai Nemmeli II, Chennai, Tamil Nadu, India 2019, 150,000 m<sup>3</sup>/d RO  
The Spence Mine, Mejillones, Antofagasta, Chile 2018, 86,400 m<sup>3</sup>/d RO  
Duqm SEZ, Duqm, Oman 2018, 36,000 m<sup>3</sup>/d RO  
Al Hoceima Desalination Plant, Al Hoceima, Morocco 2018, 17,300 m<sup>3</sup>/d RO  
Djibouti, Republic of Djibouti 2017, 22,500 m<sup>3</sup>/d RO  
Tuas 3, Singapore 2016, 136,000 m<sup>3</sup>/d RO  
Ras Al Khaimah, United Arab Emirates 2015, 100,000 m<sup>3</sup>/d RO  
Provisur, Peru 2014, 35,000 m<sup>3</sup>/d RO  
Provisur Desalination Plant, Santa Maria del Mar, Lima, Peru 2014, 34,905 m<sup>3</sup>/d RO  
Abu Samra, Qatar 2012, 2,000 m<sup>3</sup>/d RO

### Plant Supplier (Reuse)

WWTP in La Rioja, La Rioja, Spain 2023, 13,500 m<sup>3</sup>/d RO  
WWTP Palma de Mallorca II, Palma de Mallorca, Balearic Islands, Spain 2022, 90,000 m<sup>3</sup>/d RO  
WWTP Nabeul, Nabeul, Tunisia 2018, 16,538 m<sup>3</sup>/d Other / Unknown  
WWTP Provisur, Santa Maria del Mar, Lima, Peru 2014, 17,625 m<sup>3</sup>/d Other / Unknown  
Puerto Gaitan, Meta, Colombia 2012, 79,500 m<sup>3</sup>/d RO  
Werribee Stage 1, Werribee, Victoria, Australia 2012, 6,000 m<sup>3</sup>/d RO

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#### Plant Supplier (Reuse)

Borriol WWTP, Castellón , Borriol, Spain 2014, Tertiary treatment

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### SELECTED REFERENCES

#### Designer, Manufacturer and Supplier

Kuwait 2015, 2,400 m<sup>3</sup>/d RO  
Algeria 2015, 360 m<sup>3</sup>/d RO  
Oman 2015, 230 m<sup>3</sup>/d RO  
Oman 2015, 100 m<sup>3</sup>/d RO  
Madagascar 2015, 50 m<sup>3</sup>/d RO  
Bucharest, Romania 2014, 2,400 m<sup>3</sup>/d RO  
Sinas, Oman 2014, 500 m<sup>3</sup>/d RO  
Tunis, Tunisia 2014, 350 m<sup>3</sup>/d RO  
Jeddah, Saudi Arabia 2014, 200 m<sup>3</sup>/d RO  
Kuwait 2014, 200 m<sup>3</sup>/d RO  
Naval Base, Jeddah, Saudi Arabia 2014, 200 m<sup>3</sup>/d RO  
Oman 2014, 37 m<sup>3</sup>/d RO  
Antiparos, Cyprus 2013, 52 m<sup>3</sup>/d RO  
Craiova, Romania 2013, 50 m<sup>3</sup>/d RO  
Food Industry, Lagos, Nigeria 2012, 2,880 m<sup>3</sup>/d RO  
Dubai, United Arab Emirates 2012, 600 m<sup>3</sup>/d RO  
Abu Dhabi, United Arab Emirates 2012, 300 m<sup>3</sup>/d RO  
Dammam, Saudi Arabia 2012, 300 m<sup>3</sup>/d RO  
Dubai, United Arab Emirates 2012, 240 m<sup>3</sup>/d RO  
Dammam, Saudi Arabia 2012, 205 m<sup>3</sup>/d RO

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#### Designer, Manufacturer, Supplier, and Installer

Greece 2020, 4,700 m<sup>3</sup>/d RO  
Greece, Kiklades, Kiklades, Greece 2020, 600 m<sup>3</sup>/d RO  
Greece, Kiklades, Kiklades, Greece 2020, 340 m<sup>3</sup>/d RO  
Greece, Kiklades, Kiklades, Greece 2020, 300 m<sup>3</sup>/d RO  
Athens, Greece 2019, 600 m<sup>3</sup>/d RO  
Crete Island, Crete, Greece 2019, 320 m<sup>3</sup>/d RO  
Crete, Greece 2019, 220 m<sup>3</sup>/d RO

Kikaldes, Kiklades, Greece 2019, 220 m<sup>3</sup>/d RO  
 Egypt 2018, 5,000 m<sup>3</sup>/d RO  
 Mauritius 2018, 2,000 m<sup>3</sup>/d RO  
 Egypt 2018, 1,000 m<sup>3</sup>/d RO  
 Greece 2018, 820 m<sup>3</sup>/d RO  
 Corfu, Greece 2018, 610 m<sup>3</sup>/d RO  
 Greece 2018, 565 m<sup>3</sup>/d RO  
 Crete, Greece 2018, 530 m<sup>3</sup>/d RO  
 Tzia Island, Greece 2018, 500 m<sup>3</sup>/d RO  
 Mauritius 2018, 500 m<sup>3</sup>/d RO  
 Greece 2018, 470 m<sup>3</sup>/d RO  
 Astypalaia, Greece 2018, 300 m<sup>3</sup>/d RO  
 Iraklia Island, Greece 2018, 300 m<sup>3</sup>/d RO  
 Israel 2018, 300 m<sup>3</sup>/d RO  
 Ermioni, Greece 2018, 260 m<sup>3</sup>/d RO  
 Lebanon 2018, 225 m<sup>3</sup>/d RO  
 Argos, Greece 2018, 225 m<sup>3</sup>/d RO  
 Atalanti, Greece 2018, 225 m<sup>3</sup>/d RO  
 Thira, Greece 2018, 200 m<sup>3</sup>/d RO  
 Oman 2018, 115 m<sup>3</sup>/d RO  
 Korinthos, Greece 2018, 100 m<sup>3</sup>/d RO  
 Kuwait 2017, 2,250 m<sup>3</sup>/d RO  
 Romania 2017, 940 m<sup>3</sup>/d RO  
 Maldives 2017, 600 m<sup>3</sup>/d RO  
 Iran 2017, 400 m<sup>3</sup>/d RO  
 Maldives 2017, 300 m<sup>3</sup>/d RO  
 Kuwait 2017, 36 m<sup>3</sup>/d RO  
 Mauritius 2016, 4,000 m<sup>3</sup>/d RO  
 Kuwait 2016, 2,400 m<sup>3</sup>/d RO  
 Kuwait 2016, 1,800 m<sup>3</sup>/d RO  
 Thira Island, Greece 2016, 900 m<sup>3</sup>/d RO  
 Qatar 2016, 500 m<sup>3</sup>/d RO  
 Cyclades, Greece 2016, 260 m<sup>3</sup>/d RO  
 Zante, Greece 2016, 260 m<sup>3</sup>/d RO  
 Fthiotida, Greece 2016, 250 m<sup>3</sup>/d RO  
 Region of Central Greece, Greece 2016, 150 m<sup>3</sup>/d RO  
 Corfu, Greece 2016, 100 m<sup>3</sup>/d RO  
 Oman 2016, 90 m<sup>3</sup>/d RO  
 Oman 2016, 80 m<sup>3</sup>/d RO  
 Oman 2016, 40 m<sup>3</sup>/d RO  
 Municipality of Troizinia, Greece 2015, 1,000 m<sup>3</sup>/d RO  
 Crete, Greece 2015, 400 m<sup>3</sup>/d RO  
 Crete, Greece 2015, 350 m<sup>3</sup>/d RO  
 Gavdos island, Greece 2015, 80 m<sup>3</sup>/d RO  
 Ro Megistis island, Greece 2015, 20 m<sup>3</sup>/d RO  
 Pserimos island, Greece 2015, 10 m<sup>3</sup>/d RO  
 Hydra, Greece 2014, 1,600 m<sup>3</sup>/d RO  
 Hotel 1, Kos, Greece 2014, 700 m<sup>3</sup>/d RO  
 Athens, Greece 2014, 624 m<sup>3</sup>/d RO  
 Antiparos, Greece 2014, 600 m<sup>3</sup>/d RO  
 Hotel 2, Kos, Greece 2014, 500 m<sup>3</sup>/d RO  
 Ierapetra, Greece 2014, 450 m<sup>3</sup>/d RO  
 Private Property, Peloponese, Greece 2014, 350 m<sup>3</sup>/d RO  
 Akrotiri, Santorini, Greece 2014, 250 m<sup>3</sup>/d RO  
 Rhodes, Greece 2014, 180 m<sup>3</sup>/d RO  
 Chalkis, Greece 2014, 100 m<sup>3</sup>/d RO  
 Koufonissi, Greece 2013, 600 m<sup>3</sup>/d RO  
 Chalkis, Greece 2013, 600 m<sup>3</sup>/d RO

Amorgos, Greece 2013, 450 m<sup>3</sup>/d RO  
 Schoinousa, Greece 2013, 400 m<sup>3</sup>/d RO  
 Water Kiosk, Aegean Islands, Greece 2013, 300 m<sup>3</sup>/d RO  
 Athens, Greece 2013, 300 m<sup>3</sup>/d RO  
 Food Industry, Fthiotida, Greece 2013, 300 m<sup>3</sup>/d RO  
 Crete, Greece 2013, 188 m<sup>3</sup>/d RO  
 Aegean Islands, Greece 2013, 138 m<sup>3</sup>/d RO  
 Massirah Island, Oman 2013, 100 m<sup>3</sup>/d RO  
 Cruise Ship, Greece 2013, 64 m<sup>3</sup>/d RO  
 Kalymnos island, Greece 2013, 12 m<sup>3</sup>/d RO  
 Kalymnos island, Greece 2013, 6 m<sup>3</sup>/d RO  
 Crete, Greece 2012, 450 m<sup>3</sup>/d RO  
 Porto Heli, Greece 2012, 445 m<sup>3</sup>/d RO  
 Crete, Greece 2012, 170 m<sup>3</sup>/d RO  
 Thirasia Island, Greece 2012, 140 m<sup>3</sup>/d RO  
 Agathonisi Island, Greece 2012, 80 m<sup>3</sup>/d RO  
 Athens, Greece 2012, 52 m<sup>3</sup>/d RO

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### SELECTED REFERENCES

#### Developer

Lions Gate Secondary WWTP, Vancouver, Canada 2017, 102,000 m<sup>3</sup>/d Other / Unknown

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### SELECTED REFERENCES

#### Technology Provider

CCR Demonstration Plant, Midland, Texas, United States 2019, 240 m<sup>3</sup>/d Direct Spray Distillation

ZLD Plant, Apollo Tyres, Gyöngyöshalász, Hungary 2018, 72 m<sup>3</sup>/d Direct Spray Distillation

Mobile unit, Vaduz, Liechtenstein 2015, 100 m<sup>3</sup>/d Direct Spray Distillation

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### SELECTED REFERENCES

#### Equipment Supplier: Desalination System

Aurobindo Group, Andhra Pradesh, India 2022, 31,250 m<sup>3</sup>/d RO  
Indian Rayon, Gujarat, India 2022, 12,000 m<sup>3</sup>/d RO  
Gujarat Heavy Chemicals Limited, Gujarat, India 2022, 10,000 m<sup>3</sup>/d RO  
Nayara Energy, Gujarat, India 2021, 6,500 m<sup>3</sup>/d RO  
Pearl Distillery, Andhra Pradesh, India 2020, 2,000 m<sup>3</sup>/d RO  
PT Dabi, Indonesia 2019, 12,000 m<sup>3</sup>/d RO  
Ultratech Cement, Gujarat, India 2019, 1,200 m<sup>3</sup>/d RO  
Rohit Surfactant, Porbandar, Gujarat, India 2017, 14,000 m<sup>3</sup>/d RO  
Rohit Surfactant, Porbandar, Gujarat, India 2017, 8,000 m<sup>3</sup>/d NF  
Reliance Industries Limited, Jamnagar, Gujarat, India 2016, 125,000 m<sup>3</sup>/d Other / Unknown  
Sanghi Cement, Gujarat, India 2013, 36,000 m<sup>3</sup>/d Other / Unknown  
ABG Cement Limited, Gujarat, India 2012, 4,100 m<sup>3</sup>/d RO

#### EPC Contractor

Siddhi Vinayak Cement Pvt Ltd, Ahmedabad, Pali, Rajasthan, India, 2,544 m<sup>3</sup>/d RO  
Zero Liquid Discharge Plant at SABMiller, Aurangabad, Aurangabad, India, 1,800 m<sup>3</sup>/d RO

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### SELECTED REFERENCES

#### EPC Contractor

Beenyup Groundwater Replenishment Programme, Australia 2014, 38,356 m<sup>3</sup>/d RO  
East Rockingham WWTP, Australia 2014, 20,000 m<sup>3</sup>/d Other / Unknown

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### SELECTED REFERENCES

#### Equipment Supplier: Desalination System

QAM-ARLM, Oman 2022, 140 m<sup>3</sup>/d FO  
Proteas, Gov Beach, Cyprus 2020, 50 m<sup>3</sup>/d FO  
NELHA, Kailua-Kona, Hawaii, United States 2018, 500 m<sup>3</sup>/d FO

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### SELECTED REFERENCES

#### EPC and O&M Contractor

Agnes Water Desalination, Agnes Waters/1770, Q. 4670, Australia 2012, 1,500 m<sup>3</sup>/d RO  
Campaspe Water Reclamation Scheme - Echuca Reclamation Plant, Echuca, Victoria, Australia, 8,000 m<sup>3</sup>/d Tertiary treatment

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### SELECTED REFERENCES

#### Water Treatment System Supplier

UF+RO water reclamation plant, Singapore 2018, 5,000 m<sup>3</sup>/d UF/ RO

## Triveni Engineering and Industries Ltd.



[www.trvenigroup.com](http://www.trvenigroup.com)

### SELECTED REFERENCES

#### Plant Supplier (Desal)

- 3x500 MW Vallur Thermal Power Project, Vallur, Chennai, India 2016, 6,600 m<sup>3</sup>/d RO
- 3x500 MW Indira Gandhi Super Thermal Power Project, Jhajjar, Haryana, India 2012, 10,800 m<sup>3</sup>/d RO
- 6x135 MW TPP, Angul, Odisha, India, 19,200 m<sup>3</sup>/d RO
- 2x125 MW Giral Lignite Thermal Power Project, Barmer, Rajasthan, India, 5,760 m<sup>3</sup>/d RO
- 108 MW CCPP, Rithala, Delhi, India, 5,040 m<sup>3</sup>/d RO
- 1x370 MW CCPP, Utran, Surat, Gujarat, India, 4,320 m<sup>3</sup>/d RO
- 2x507.5 MW UPCL, Padubidri, Karnataka, India, 1,620 m<sup>3</sup>/d RO

#### Plant Supplier and Operator

- BWPCT, Balotra, Rajasthan, India 2018, 18,000 m<sup>3</sup>/d RO
- Jalipa Lignite Mine, Barmer, Rajasthan, India 2018, 15,000 m<sup>3</sup>/d RO

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### SELECTED REFERENCES

#### Desalination Equipment Supplier

- TSB, Isla, Mexico 2018, 6 m<sup>3</sup>/d RO
- TBB, Solomon Islands 2017, 15 m<sup>3</sup>/d RO
- TSB, Mystery Island, Vanuatu 2017, 6 m<sup>3</sup>/d RO
- TSB, Tarawa, Kiribati 2017, 6 m<sup>3</sup>/d RO
- Survivor RO, Fouzhou, China 2017, 1 m<sup>3</sup>/d RO
- TSB, Spratly Island, Vietnam 2016, 6 m<sup>3</sup>/d RO

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### SELECTED REFERENCES

#### EPC and O&M Contractor

- British Virgin Islands SWRO Desalination Plant, British Virgin Islands 2023, 120,000 gpd RO
- Antigua and Barbuda Reuse Plant, Antigua and Barbuda 2022, 80,000 gpd MBR

#### EPC Contractor

- Cabo San Lucas SWRO Desalination Plant, Cabo San Lucas, Mexico 2023, 2,000 m<sup>3</sup>/d RO
- Cabo San Lucas SWRO Desalination Plant, Cabo San Lucas, Mexico 2022, 1.4 MGD RO
- Bahamas Reuse Plant, Bahamas 2021, 350,000 gpd MBR
- Frenchman's Reef, United States 2020, 200,000 gpd

#### Design and Build

- Bahamas 2021, 500,000 gpd RO
- U.S. Virgin Islands 2021, 200,000 gpd MBR
- USVI, U.S. Virgin Islands 2021, 200,000 gpd RO
- U.S. Virgin Islands 2021, 135,000 gpd MBR
- Mexico 2021, 114,000 gpd MBR
- Costa Rica 2021, 100,000 gpd RO
- Antigua and Barbuda 2021, 80,000 gpd MBR
- U.S. Virgin Islands 2021, 757 m<sup>3</sup>/d RO
- Flamingo Marina, Costa Rica 2019, 100,000 gpd RO
- Coco Cay, Bahamas 2018, 350,000.0 gpd RO
- Coco Cay, Bahamas 2018, 110,000.0 gpd MBR
- Temenos, Anguilla 2014, 240,000.0 gpd MBR
- Ritz Carlton, St. Thomas, U.S. Virgin Islands 2014, 162,000.0 gpd RO
- Amber Cove, Dominican Republic 2014, 75,000.0 gpd RO
- Campeche, Mexico 2013, 300,000.0 gpd RO
- Mosquito Island, British Virgin Islands 2013, 25,000.0 gpd RO
- Sailrock, South Caicos, Turks and Caicos Islands 2013, 10,000.0 gpd RO
- Schooner Bay, Bahamas 2012, 25,000.0 gpd RO
- Long Cay, Bahamas, 10,000.0 gpd RO

#### Design, Build and Operate

- Westin St. John, U.S. Virgin Islands 2018, 200,000.0 gpd MBR
- Chileno Bay, Los Cabos, Mexico 2017, 500,000.0 gpd RO
- Baker's Bay, Bahamas 2016, 25,000.0 gpd MBR
- Baker's Bay, Bahamas 2016, 1,56 MGD RO
- Vista Serena/Maravilla, Los Cabos, Mexico 2016, 1.0 MGD RO
- Westin St. John, U.S. Virgin Islands 2015, 250,000.0 gpd RO
- Westin St. John, U.S. Virgin Islands 2015, 200,000.0 gpd RO
- Westin St. John, U.S. Virgin Islands 2015, 120,000.0 gpd MBR
- Park Hyatt, United Kingdom 2015, 100,000.0 gpd RO

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Park Hyatt, St. Kitts, United Kingdom 2015, 60,000.0 gpd MBR  
Frenchman's Cove, St. Thomas, U.S. Virgin Islands 2014,  
100,000.0 gpd RO  
Amanyara Resort, Turks and Caicos Islands 2013, 60,000.0 gpd RO  
Amanyara Resort, Turks and Caicos Islands, United Kingdom,  
250,000.0 gpd RO

## O&M Contractor

Antigua and Barbuda SWRO Desalination Plant, Antigua and  
Barbuda 2023, 1 mgd RO  
Anguilla 2021, 1,200,000 gpd RO  
Mexico 2020, 1,500,000 gpd RO

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## SELECTED REFERENCES

### EPC Contractor

Menzel Bouzefla WWTP - Rehabilitation/Expansion, Nabeul,  
Tunisia 2013

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## SELECTED REFERENCES

### EPC Contractor

El Bojar WWTP, Almería - Expansion, Almeria, Spain 2012, 47,500  
m<sup>3</sup>/d

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## SELECTED REFERENCES

### Main Contractor

Tuas Water Reclamation Plant Contract 3D2 – Domestic Liquids  
Module 2 – MEICA, Singapore, Tuas 2022, 85.9 MGD MBR  
Tuas Water Reclamation Plant Contract 3D1 – Domestic Liquids  
Module 1 – MEICA and NEWater, Singapore, Tuas 2021, 85.9 MGD  
MBR  
Tuas Water Reclamation Plant Contract 3D1 – Domestic Liquids  
Module 1 – MEICA and NEWater, Singapore, Tuas 2021, 26.1 MGD  
RO

### EPC and O&M Contractor

Second Changi NEWater Plant, Singapore 2014, 50.0 MIDG RO

### EPC Contractor

Jurong Water Reclamation Plant, Singapore 2015, 59,000 m<sup>3</sup>/d  
MBR  
Chesnut Avenue Water Work, Singapore 2015, 60.0 MIDG UF  
Changi Water Reclamation Plant, Singapore 2012, 60 MIDG MBR

## UGL engineering

[www.ugl无限.com](http://www.ugl无限.com)

## SELECTED REFERENCES

### EPC Contractor

Shoalhaven Reclaimed Water Management Scheme, New South  
Wales, Australia 2016

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## SELECTED REFERENCES

### Plant Supplier (Desal)

Cabo Verde 2021, 10,000 m<sup>3</sup>/d RO  
North Africa, Egypt 2018, 12,000 m<sup>3</sup>/d RO  
El Arish, El Arish , Sinai, Egypt 2017, 5,000 m<sup>3</sup>/d RO  
Iran, Persian Gulf 2014, 30,000 m<sup>3</sup>/d RO



Atlantic Ocean 2014, 10,000 m<sup>3</sup>/d RO  
 Persian Gulf, Iran 2012, 30,000 m<sup>3</sup>/d RO  
 Portugal 2012, 5,000 m<sup>3</sup>/d RO  
 Egypt 2011, 12,000 m<sup>3</sup>/d RO  
 Egypt 2011, 5,000 m<sup>3</sup>/d RO

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### SELECTED REFERENCES

#### **Build, Own, Operate, Maintain, Design and EPC; IWP Developer, EPC and O&M Contractor**

Khorkhwair, Ras Al Khaimah, United Arab Emirates 2012, 45,000 m<sup>3</sup>/d RO

#### **IWP Developer EPC Contractor O&M Contractor**

Utico IWP1, Al Hamra, Ras Al Khaimah, UAE, Dubai, United Arab Emirates 2018, 10,000 m<sup>3</sup>/d RO

Utico IWP-03, Al Hamra, Ras Al Khaimah, UAE, Dubai, United Arab Emirates 2017, 48,000 m<sup>3</sup>/d RO

Utico IWP-01, Al Hamra, Ras Al Khaimah, UAE, Dubai, United Arab Emirates 2017, 16,000 m<sup>3</sup>/d RO

Utico IWP-Augmentation RAKIA, Al Hamra, Ras Al Khaimah, UAE, Dubai, United Arab Emirates 2017, 1,000 m<sup>3</sup>/d RO

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sustainable solutions. for a better life.

VA TECH WABAG is a pure play water technology company with a global presence across 25 countries in 4 continents. As a technology integrator with proven expertise, we specialize in offering comprehensive solutions for water treatment, wastewater treatment, desalination, and recycle & reuse, and O&M services catering to utilities and industries worldwide.

WABAG's services range is based on a holistic life-cycle model from process conceptualization to after-sales services and long-term plant operation, and comprises business models such as Engineering-Procurement-Construction (EPC), Design-Build-Operate (DBO), Build-Own-Operate (BOO) and expansion.

WABAG has consistently achieved success in manufacturing high-quality water from alternative sources through our innovative and reliable solutions in Desalination and Water Reuse. We firmly believe in the concept of "Manufactured Water," a contemporary solution that addresses water scarcity, safeguards the environment, and drives economic growth.

### Desalination Solutions:

WABAG offers a range of technologies: reverse osmosis (RO), thermal desalination (MED, MVC, TVC, MSF), ion exchange (IX) and electro-dialysis (ED) coupled with coherent pre- and post-treatment. With a customer-centric focus, WABAG provides tailor-made solutions which are innovative, eco-friendly and cost-effective with minimal footprint.

### Recycle and Reuse Solutions:

With a conviction that "water is too precious to be used just once", WABAG offers sustainable water reclamation systems for municipal and industrial reuse. Depending on individual requirements, we combine appropriate technologies in the form of multi-barrier-systems using advanced biological and physical processes (amongst others MBR, tertiary UF and RO, oxidation, disinfection) to create tailor-made solutions, right up to direct potable reuse.

### SELECTED REFERENCES

#### **DBO (Desal)**

Perur Desalination Plant, Chennai, India 2023, 400,000 m<sup>3</sup>/d RO

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Zarat DWTP, Tunisia 2023, 50,000 m<sup>3</sup>/d RO  
Mamelles SWRO, Dakar City, Senegal 2022, 50,000 m<sup>3</sup>/d RO  
Nemmeli Desalination Plant, DWTP, India 2013, 110,000 m<sup>3</sup>/d RO  
Sohar Industrial Port Area, Muscat, Oman 2013, 20,000 m<sup>3</sup>/d RO

## BOOT (Reuse)

Ujams Industrial Park ETP & Reclamation Plant, Windhoek, Namibia 2014, 5,174 m<sup>3</sup>/d

## DBO (Reuse)

Jajmau Tannery Effluent Treatment Association (JTETA) CETP, India 2023, 20,000 m<sup>3</sup>/d, 5 years O&M  
Centralized Zero Liquid Discharge (ZLD) NMDC, Nagarnar, Chhattisgarh, India 2023, 4,320 m<sup>3</sup>/d, 5 years O&M  
Zaghoul Bahary WWTP & Water Reclamation, Zaghoul, Kafr-El-Sheik district, Egypt 2022, 15,000 m<sup>3</sup>/d, 12 months O&M  
Port Said WWTP and Reuse plant, Egypt 2019, 40,000 m<sup>3</sup>/d, 12 months O&M  
Madinaty WWTP and Reclamation Phase 1, Cairo, Egypt 2018, 40,000 m<sup>3</sup>/d, O&M since 2018  
Koyambedu Tertiary Treatment and Reclamation Plant, Chennai, India 2019, 45,000 m<sup>3</sup>/d RO, 15 years O&M  
ETP and Recycling Plant for Dahej Refinery, India 2015, 43,200 m<sup>3</sup>/d, 36 months O&M  
Madinat Salman WWTP and Reclamation Plant, Bahrain 2018, 40,000 m<sup>3</sup>/d, 5 years O&M

## Hybrid Annuity Projects: HAM (Reuse)

Ghaziabad Tertiary Treatment & Reclamation Plant, Ghaziabad, India 2022, 40,000 m<sup>3</sup>/d RO, 15 years O&M

## Plant Supplier (Desal)

Tobruk DWTP, Libya 2023, 13,333 m<sup>3</sup>/d MED  
Dangote Petrochemical Refinery , RWTP Package, Lagos, Nigeria 2022, 110,040 m<sup>3</sup>/d RO  
RWTP Guru Gobind Singh Refinery, India 2021, 60,000 m<sup>3</sup>/d RO  
Ipsach-Biel DWTP, Switzerland Award 2021, 40,000 m<sup>3</sup>/d RO  
RWTP Mangalore Refinery and Petrochemicals Ltd. (MRPL), India 2021, 30,000 m<sup>3</sup>/d RO  
Dangote Fertilizer, Nigeria 2020, 60,000 m<sup>3</sup>/d RO  
Desalination Plant (RWTP) for Reliance Industries, Dahej, India 2017, 50,000 m<sup>3</sup>/d RO  
Jamnagar, Gujarat, India 2016, 24,000 m<sup>3</sup>/d RO  
Al Ghubrah IWP DWTP, Muscat, Oman 2015, 190,932 m<sup>3</sup>/d RO  
QSTec Polysilicon Project, Qatar 2015, 12,480 m<sup>3</sup>/d RO  
NCC Power Project Nellore, India 2014, 13,248 m<sup>3</sup>/d RO  
APPDCL, Krishnapatnam, Andhra Pradesh, India 2012, 6,000 m<sup>3</sup>/d RO  
SWRO Jamnagar Refinery, Gujarat, India, 53,000 m<sup>3</sup>/d RO  
Jazan Economic City SWRO, Jazan Economic City, Saudi Arabia, 60,000 m<sup>3</sup>/d RO  
Essar Oil, India, 2011, 12,960 m<sup>3</sup>/d, RO  
Muaratawar Power Plant, Indonesia, 2011, 500 m<sup>3</sup>/d, RO  
Al Wasia DWTP, Saudi Arabia, 2010, 200,000 m<sup>3</sup>/d, RO  
Mundra Port SEZ, Gujarat, India, 2010, 21,000 m<sup>3</sup>/d, RO  
Adani, Mundra, India, 2010, 20,000 m<sup>3</sup>/d, RO

## Plant Supplier (Reuse)

Ciulnita FTP and Recycling Plant (Saria), Romania 2023, 370 m<sup>3</sup>/d  
Jubail and its Industrial City, Expansion of SWTP-9 Stage-6, WWTP and Reuse Plant, Saudi Arabia 2022, 120,000 m<sup>3</sup>/d  
Effluent Recycle Plant for DTA Refinery, India, RO  
LFZ-RO-DM, CPU and ETP Package for the Dangote Petrochemical Refinery, Lagos, Nigeria 2022, 26,400 m<sup>3</sup>/d  
Jazan Economic City Port and Infrastructure Project, ETP & Reuse plant, Saudi Arabia 2022, 10,000 m<sup>3</sup>/d  
Madinaty WWTP and Reclamation Plant Phase II, Cairo, Egypt 2022, 40,000 m<sup>3</sup>/d  
Sidi Bou Ali / El Jem & Ouerdanin WWTPs & Reuse, Tunisia 2022, 1,595 m<sup>3</sup>/d  
Thibar WWTP, Thibar, Tunisia Award 2022, 1,150 m<sup>3</sup>/d  
ETP and Recycling Plant for Guru Gobind Singh Refinery for HPCL Mittal Energy Limited, Bathinda, Punjab, India 2021, 13,680 m<sup>3</sup>/d  
Beni Messous WWTP Common Tertiary Treatment and Reuse Plant, Algeria 2017, 100,800 m<sup>3</sup>/d  
Effluent Recycle Plant for Refinery Effluent, Paradip, Odisha, India 2016, 27,600 m<sup>3</sup>/d RO  
Al Kharj Industrial City, ETP&Recycling Plant, Saudi Arabia 2014, 10,000 m<sup>3</sup>/d  
Madinah WWTP and Reuse Plant, Saudi Arabia, 200,000 m<sup>3</sup>/d



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## SELECTED REFERENCES

### Design and Build: Membrane Desalination (SIDEM / Veolia Water Technologies)

Umm Al Quwain, United Arab Emirates 2019, 681,818 m<sup>3</sup>/d RO  
Rabigh 3, Saudi Arabia 2019, 600,000 m<sup>3</sup>/d RO  
Al Dur 2, Bahrain 2019, 227,000 m<sup>3</sup>/d RO  
Samsung Engineering Co, LTD (SECL), United Arab Emirates 2018, 62,500 m<sup>3</sup>/d MED  
Samsung Engineering Co, LTD (SECL), United Arab Emirates 2018, 16,800 m<sup>3</sup>/d MED  
BP Mad Dog Phase 2 LoSal System, Gulf of Mexico, United States 2017, 22,300 m<sup>3</sup>/d RO  
Humaimah Water Treatment Plant, Hail, Saudi Arabia 2017, 10,500 m<sup>3</sup>/d RO  
Rizal Drinking Water Treatment Plant, Manila, Philippines 2016, 50,000 m<sup>3</sup>/d RO  
Woodside Greater Enfield Sulphate Removal System, Australia 2016, 12,720 m<sup>3</sup>/d NF  
Sharqiyah Desalination - Expansion, Sur, Oman 2015, 48,000 m<sup>3</sup>/d RO  
BWSIP P3 & P4, Basrah, Iraq 2014, 199,000 m<sup>3</sup>/d RO  
Egina, Nigeria 2014, 85,625 m<sup>3</sup>/d UF  
WTP for Wajeed Wells Project, Wajeed, Saudi Arabia 2014, 62,712 m<sup>3</sup>/d RO  
Moho Nord, Ghana 2014, 20,668 m<sup>3</sup>/d UF  
East Hub, Angola 2014, 20,032 m<sup>3</sup>/d UF

Masdar - Renewable Energy Desalination Program, Abu Dhabi, United Arab Emirates 2014, 300 m<sup>3</sup>/d RO  
 Sadara (Marafiq) SWRO, Al Jubail, Saudi Arabia 2013, 178,800 m<sup>3</sup>/d RO  
 Quwaeiah WTP Expansion Project, Quwaeiah, Saudi Arabia 2013, 25,000 m<sup>3</sup>/d RO  
 Maraba (Asir) WTP Expansion, Asir, Saudi Arabia 2012, 50,000 m<sup>3</sup>/d RO  
 Aruba desalination plant, Aruba 2012, 24,000 m<sup>3</sup>/d RO  
 Az Zour South SWRO, Az Zour, Kuwait 2011, 136,000 m<sup>3</sup>/d RO  
 Campo de Tarragona, Tarragona, Spain 2010, 20,000 m<sup>3</sup>/d RO

#### Plant Supplier (Reuse)

Jourdain - Vendée Eau, France 2021, 3,600 m<sup>3</sup>/d Other / Unknown  
 Baladna, Qatar 2020, 6,000 m<sup>3</sup>/d Other / Unknown  
 Hefei Binhu Beilaowei (Ph. I), China 2014, 30,000 m<sup>3</sup>/d Other / Unknown

#### Plant Supplier and Operator

Chatelaillon, France 2012, 72 m<sup>3</sup>/d Other / Unknown

#### Design and Build: Thermal Desalination (ENTROPIE / SIDEM / Veolia Water Technologies)

Ras Lanouf, Libya 2019, 16,000 m<sup>3</sup>/d MED  
 WHR + CFP (ADNOC), Abu Dhabi, United Arab Emirates 2018, 48,800 m<sup>3</sup>/d MED  
 Ras Tanura, Saudi Arabia 2018, 9,402 m<sup>3</sup>/d MED  
 Burrup Fertiliser Plant II, Australia 2017, 1,500 m<sup>3</sup>/d MED  
 Shougang - Unit 5, Caofeidian, China 2016, 35,000 m<sup>3</sup>/d MED  
 Liwa, Oman 2016, 8,800 m<sup>3</sup>/d MED  
 Lontar, Indonesia 2016, 3,500 m<sup>3</sup>/d MED  
 Red Dragon / PIEM, Chile 2016, 3,000 m<sup>3</sup>/d MED  
 Zouk, Lebanon 2016, 1,440 m<sup>3</sup>/d MED  
 Az Zour North 1 IWPP, Kuwait 2013, 490,970 m<sup>3</sup>/d MED  
 MAEK Kazatomprom, Aktau, Kazakhstan 2013, 24,000 m<sup>3</sup>/d MED  
 Tripoli West, Libya 2013, 7,200 m<sup>3</sup>/d MED  
 Moron Planta Centro, Venezuela 2013, 5,362 m<sup>3</sup>/d MED  
 Zwitina, Libya 2013, 5,000 m<sup>3</sup>/d MED  
 Cochrane Thermoelectric Power Plant, Chile 2013, 5,000 m<sup>3</sup>/d MED  
 Petron, Philippines 2012, 16,167 m<sup>3</sup>/d MED  
 Suez Thermal Power Plant, Egypt 2012, 6,000 m<sup>3</sup>/d MED  
 Yanbu 2, Saudi Arabia 2011, 63,348 m<sup>3</sup>/d MED

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#### SELECTED REFERENCES

##### Plant Supplier (Reuse)

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#### SELECTED REFERENCES

##### Rental RO Units

Reverse Osmosis Skid 1 for Offshore Oil and Gas Company, Santos Basin, Brazil 2023, 90 m<sup>3</sup>/d RO  
 Reverse Osmosis Skid 2 for Offshore Oil and Gas Company, Santos Basin, Brazil 2023, 90 m<sup>3</sup>/d RO  
 Reverse Osmosis Skid 3 for Offshore Oil and Gas Company, Santos Basin, Brazil 2023, 90 m<sup>3</sup>/d RO  
 Reverse Osmosis Skid 4 for Offshore Oil and Gas Company, Santos Basin, Brazil 2023, 90 m<sup>3</sup>/d RO  
 Reverse Osmosis Skid 5 for Offshore Oil and Gas Company, Espírito Santo Basin, Brazil 2023, 60 m<sup>3</sup>/d RO  
 Reverse Osmosis Skid 6 for Offshore Oil and Gas Company, Espírito Santo Basin, Brazil 2023, 30 m<sup>3</sup>/d RO  
 Poseidon - Aquarius Brazil Floatel, Macaé, Rio de Janeiro, Brazil 2019, 60 m<sup>3</sup>/d RO

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#### SELECTED REFERENCES

##### EPC Contractor

Peru BWRO, Olmos, Peru 2023, 5,184 m<sup>3</sup>/d RO  
 Santiago BWRO 2, Santiago, Chile 2023, 480 m<sup>3</sup>/d RO  
 Lontue BWRO, Lontue, Chile 2023, 312 m<sup>3</sup>/d RO  
 Santiago BWRO 1, Santiago, Chile 2023, 240 m<sup>3</sup>/d RO  
 Concón BWNF, Concón, Chile 2022, 4,320 m<sup>3</sup>/d NF  
 Concón BWRO, Concón, Chile 2022, 864 m<sup>3</sup>/d RO  
 Chillán BWRO, Chillán, Chile 2022, 480 m<sup>3</sup>/d RO



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Antofagasta SWRO, Antofagasta, Chile 2022, 240 m<sup>3</sup>/d RO  
Copiapo BWRO, Copiapo, Chile 2022, 173 m<sup>3</sup>/d RO  
Lautaro BWRO, Lautaro, Chile 2022, 144 m<sup>3</sup>/d RO  
Valparaíso, Chile 2022, 144 m<sup>3</sup>/d RO  
Santiago BWRO 3, Santiago, Chile 2022, 19 m<sup>3</sup>/d RO  
Concón, Chile 2021, 1,944 m<sup>3</sup>/d RO  
Santiago, Chile 2021, 1,836 m<sup>3</sup>/d RO  
Pargua, Chile 2021, 1,728 m<sup>3</sup>/d RO  
Puerto Natales, Chile 2021, 1,728 m<sup>3</sup>/d RO  
Iloca, Chile 2021, 1,296 m<sup>3</sup>/d RO  
Concón, Chile 2021, 720 m<sup>3</sup>/d RO  
Calama, Chile 2021, 600 m<sup>3</sup>/d RO  
Concepción, Chile 2021, 600 m<sup>3</sup>/d RO  
Puerto Montt, Chile 2021, 600 m<sup>3</sup>/d RO  
Santiago, Chile 2021, 600 m<sup>3</sup>/d RO  
Santiago, Chile 2021, 480 m<sup>3</sup>/d RO  
Peru 2021, 432 m<sup>3</sup>/d RO  
Peru 2021, 432 m<sup>3</sup>/d RO  
Santiago, Chile 2021, 432 m<sup>3</sup>/d RO  
Teno, Chile 2021, 360 m<sup>3</sup>/d RO  
Valdivia, Chile 2021, 192 m<sup>3</sup>/d ED  
Santiago, Chile 2021, 120 m<sup>3</sup>/d RO  
Llay-Llay, Chile 2021, 36 m<sup>3</sup>/d RO  
Combarbalá, Chile 2020, 1,200 m<sup>3</sup>/d RO  
Santiago, Chile 2020, 600 m<sup>3</sup>/d MBR  
Valparaíso, Chile 2020, 600 m<sup>3</sup>/d RO  
Santiago, Chile 2020, 600 m<sup>3</sup>/d MBR  
Santiago, Chile 2020, 240 m<sup>3</sup>/d RO  
Brasil, Brazil 2020, 240 m<sup>3</sup>/d RO  
Santiago, Chile 2020, 86 m<sup>3</sup>/d RO  
Talquilla, Chile 2020, 11 m<sup>3</sup>/d RO  
Calama, Chile 2020, 6 m<sup>3</sup>/d RO  
San Antonio, Chile 2019, 6,000 m<sup>3</sup>/d RO  
Puerto Montt, Chile 2019, 2,400 m<sup>3</sup>/d RO  
Mallarauco, Chile 2019, 1,900 m<sup>3</sup>/d RO  
Llay-Llay, Chile 2019, 480 m<sup>3</sup>/d NF  
Santiago, Chile 2019, 132 m<sup>3</sup>/d RO  
Santiago, Chile 2019, 120 m<sup>3</sup>/d RO  
Melipilla, Chile 2019, 96 m<sup>3</sup>/d RO  
Teno, Chile 2019, 60 m<sup>3</sup>/d RO  
Santiago, Chile 2019, 48 m<sup>3</sup>/d RO  
San Pedro, Chile 2019, 40 m<sup>3</sup>/d RO  
Arica, Chile 2019, 36 m<sup>3</sup>/d RO  
Talcahuano, Chile 2019, 36 m<sup>3</sup>/d RO  
Penco, Chile 2019, 36 m<sup>3</sup>/d RO  
Llay Llay, Chile 2019, 36 m<sup>3</sup>/d RO  
Santiago, Chile 2019, 36 m<sup>3</sup>/d RO  
Arica, Chile 2019, 12 m<sup>3</sup>/d RO  
Coliumo, Chile 2019, 10 m<sup>3</sup>/d RO  
Santiago, Chile 2018, 1,680 m<sup>3</sup>/d RO  
Arica, Chile 2018, 1,680 m<sup>3</sup>/d RO  
Punta Arenas, Chile 2018, 1,296 m<sup>3</sup>/d RO  
Santiago, Chile 2018, 960 m<sup>3</sup>/d RO  
Coquimbo, Chile 2018, 864 m<sup>3</sup>/d RO  
Antofagasta, Chile 2018, 696 m<sup>3</sup>/d RO  
Osorno, Chile 2018, 576 m<sup>3</sup>/d RO  
Talca, Chile 2018, 60 m<sup>3</sup>/d RO

Coquimbo, Chile 2018, 11 m<sup>3</sup>/d RO  
Concepción, Chile 2018, 11 m<sup>3</sup>/d RO  
Puerto Montt, Chile 2018, 6 m<sup>3</sup>/d RO  
Osorno, Chile 2018, 6 m<sup>3</sup>/d RO  
Coquimbo, Chile 2017, 3,360 m<sup>3</sup>/d RO  
Valparaiso, Chile 2017, 1,560 m<sup>3</sup>/d RO  
Coquimbo, Chile 2017, 11 m<sup>3</sup>/d RO  
Copiapo, Chile 2017, 11 m<sup>3</sup>/d RO

**Design, Equipment Supply and Start-Up**

Valparaiso, Chile 2014, 0 m<sup>3</sup>/d RO

**Design, Equipment Supply, Installation and Start-Up**

Valparaiso, Chile 2017, 10 m<sup>3</sup>/d RO  
Coquimbo, Chile 2017, 8 m<sup>3</sup>/d RO  
Antofagasta, Chile 2016, 132 m<sup>3</sup>/d RO  
Iquique, Chile 2015, 120 m<sup>3</sup>/d RO  
Santiago, Chile 2015, 33 m<sup>3</sup>/d RO  
Valparaiso, Chile 2015, 28 m<sup>3</sup>/d RO  
Antofagasta, Chile 2014, 408 m<sup>3</sup>/d RO

**Design, Manufacture and Start-Up**

Antofagasta, Chile 2014, 144 m<sup>3</sup>/d RO  
Perú, Chile 2014, 120 m<sup>3</sup>/d RO  
Endesa Bocamina II, Coronel, Chile 2012, 1,200 m<sup>3</sup>/d RO

**Design, Manufacture, Installation and Start-Up**

Santiago, Chile 2017, 864 m<sup>3</sup>/d RO  
Santiago, Chile 2017, 480 m<sup>3</sup>/d RO  
Arica, Chile 2017, 480 m<sup>3</sup>/d RO  
Santiago, Chile 2017, 384 m<sup>3</sup>/d UF  
Santiago, Chile 2017, 240 m<sup>3</sup>/d RO  
Valparaiso, Chile 2016, 12,960 m<sup>3</sup>/d RO  
Valparaiso, Chile 2016, 5,352 m<sup>3</sup>/d RO  
Santiago, Chile 2016, 1,440 m<sup>3</sup>/d RO  
Coquimbo, Chile 2016, 840 m<sup>3</sup>/d RO  
Valparaiso, Chile 2016, 720 m<sup>3</sup>/d RO  
Santiago, Chile 2016, 360 m<sup>3</sup>/d RO  
Valparaiso, Chile 2016, 360 m<sup>3</sup>/d RO  
Santiago, Chile 2016, 288 m<sup>3</sup>/d RO  
Antofagasta, Chile 2016, 288 m<sup>3</sup>/d RO  
Puerto Montt, Chile 2016, 160 m<sup>3</sup>/d RO  
Santiago, Chile 2016, 48 m<sup>3</sup>/d UF  
Mobile, Chile 2016, 24 m<sup>3</sup>/d RO  
Iquique, Chile 2016, 12 m<sup>3</sup>/d RO  
Atacama, Chile 2015, 600 m<sup>3</sup>/d RO  
Valparaiso, Chile 2015, 600 m<sup>3</sup>/d RO  
Bio-Bio, Chile 2015, 480 m<sup>3</sup>/d RO  
Bio-Bio, Chile 2015, 120 m<sup>3</sup>/d RO  
Coquimbo, Chile 2014, 552 m<sup>3</sup>/d RO  
Santiago, Chile 2014, 480 m<sup>3</sup>/d RO  
Santiago, Chile 2014, 216 m<sup>3</sup>/d RO  
Santiago, Chile 2014, 48 m<sup>3</sup>/d RO

Cerro Negro Norte, Copiapó, Chile 2013, 168 m<sup>3</sup>/d RO  
 Clorox, Santiago, Chile 2013, 57 m<sup>3</sup>/d RO  
 Syngenta Arica, Arica, Chile 2013, 5 m<sup>3</sup>/d RO  
 Marina Vichuquén, Sexta Región, Chile 2013, 4 m<sup>3</sup>/d RO  
 Coca-Cola Andina, Santiago, Chile 2012, 480 m<sup>3</sup>/d RO  
 Coca-Cola Embenor, Valparaíso, Chile 2012, 240 m<sup>3</sup>/d RO  
 Capel, Ovalle, Chile 2012, 72 m<sup>3</sup>/d RO  
 SUN, Santiago, Chile 2012, 38 m<sup>3</sup>/d RO  
 Coca-Cola Embenor, Valparaíso, Chile 2012, 4 m<sup>3</sup>/d Other / Unknown

**Equipment Supplier**

Sexta Región, Chile 2013, 108 m<sup>3</sup>/d RO

**Installation**

Isla Damas, La Serena, Chile 2012, 2 m<sup>3</sup>/d RO

**Installation and Start-Up**

Santa Beatriz, Antofagasta, Chile 2013, 120 m<sup>3</sup>/d Other / Unknown

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**SELECTED REFERENCES****Developer**

Bhandewadi - Nagpur (Maharashtra) Waste Treatment Plant with reuse (Phase I, II & III), Nagpur, Maharashtra, India, 300,000 m<sup>3</sup>/d Tertiary treatment

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Bhandewadi WWTP, Nagpur, Maharashtra, India 2014, 200,000 m<sup>3</sup>/d

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**SELECTED REFERENCES****EPC and O&M Contractor**

Gujarat International Finance Tec City (GIFT City) STP, Gandhinagar, Gujarat, India 2013, 2,200 m<sup>3</sup>/d Tertiary treatment

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**SELECTED REFERENCES****Developer**

Barka, Oman 2015, 281,000 m<sup>3</sup>/d RO

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**SELECTED REFERENCES****EPC Contractor**

Sahiwal, Pakistan 2013, 2,400 m<sup>3</sup>/d RO  
 Faisalabad, Pakistan 2013, 1,920 m<sup>3</sup>/d RO  
 Faisalabad, Pakistan 2013, 1,440 m<sup>3</sup>/d RO



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China 2016, 4,560 m<sup>3</sup>/d RO  
 Huiquan, China 2016, 1,584 m<sup>3</sup>/d RO  
 Chile, Santiago 2015, 984 m<sup>3</sup>/d RO  
 China, Suzhou 2014, 1,440 m<sup>3</sup>/d RO  
 Israel, Shoham 2014, 600 m<sup>3</sup>/d RO  
 Shafdan, Israel 2014, 192 m<sup>3</sup>/d RO  
 Friesland, Netherlands 2013, 1,440 m<sup>3</sup>/d RO  
 Israel, Rishon Lezion 2012, 192 m<sup>3</sup>/d RO

### SELECTED REFERENCES

#### AST

Greater Maputo, Mozambique, Mozambique 2019, 30,000 m<sup>3</sup>/d  
 Other / Unknown  
 GU3, Tianjin, China 2016, 6,000 m<sup>3</sup>/d RO  
 CN Strauss Group, Zefat, Israel 2016, 200 m<sup>3</sup>/d RO  
 Inner Mongolia Bulinagu CC, Jungar, Inner Mongolia, China 2015, 15,600 m<sup>3</sup>/d  
 Aviv Industries, Ramat Hovav, Israel 2015, 240 m<sup>3</sup>/d RO  
 EIL, Tianjin, China 2014, 750 m<sup>3</sup>/d RO  
 IMD Industrial Park, Dalu, Inner Mongolia, China 2014, 560 m<sup>3</sup>/d RO  
 Amandi, Bauchi, Nigeria 2012, 2,300 m<sup>3</sup>/d

#### AST and ROTEC

Hondoq Gozo SWRO, Gozo Island, Gozo, Malta 2018, 9,000 m<sup>3</sup>/d RO

Singapore 2025, 144,000 m<sup>3</sup>/d RO  
 Daru MPWT, Daru Island, Papua New Guinea 2022, 1,920 m<sup>3</sup>/d RO  
 Santa Monica MPWT, Santa Monica, United States 2021, 41,440 m<sup>3</sup>/d RO  
 China, Jilin 2021, 6,960 m<sup>3</sup>/d RO  
 U.S.A., California, United States 2021, 3,600 m<sup>3</sup>/d RO  
 China, Henan 2021, 2,640 m<sup>3</sup>/d RO  
 Malaysia 2021, 288 m<sup>3</sup>/d RO  
 U.S.A., Georgia, United States 2021, 168 m<sup>3</sup>/d RO  
 U.S.A., Texas, United States 2020, 2,352 m<sup>3</sup>/d RO  
 Shafdan, Israel 2020, 1,440 m<sup>3</sup>/d RO  
 Spain, Catalonia 2020, 1,200 m<sup>3</sup>/d RO  
 U.S.A., California, United States 2020, 840 m<sup>3</sup>/d RO  
 Malaysia, Penang 2020, 336 m<sup>3</sup>/d RO  
 U.S.A., Florida, United States 2020, 169 m<sup>3</sup>/d RO  
 Netherlands, Zwolle 2020, 169 m<sup>3</sup>/d RO  
 U.S.A., California, United States 2020, 168 m<sup>3</sup>/d RO  
 U.S.A., Santa Monica, United States 2020, 168 m<sup>3</sup>/d RO  
 U.S.A., Arizona, United States 2019, 4,320 m<sup>3</sup>/d RO  
 Spain, Tenerife 2019, 1,656 m<sup>3</sup>/d RO  
 China, Henan 2019, 156 m<sup>3</sup>/d RO  
 Chile, Santiago 2018, 720 m<sup>3</sup>/d RO  
 Spain 2018, 384 m<sup>3</sup>/d RO  
 Shafdan, Israel 2018, 360 m<sup>3</sup>/d RO  
 Spain, Huelva 2018, 168 m<sup>3</sup>/d RO  
 Israel, Eilat 2017, 193 m<sup>3</sup>/d RO  
 Singapore 2016, 10,680 m<sup>3</sup>/d RO

### TOXSORB

Green Village (Hakfar Hayarok), Ramat Hasharon, Israel 2018, 270 m<sup>3</sup>/d  
 Metal Surfaces Inc. (MSI), Los Angeles, CA, United States 2016, 10,000 m<sup>3</sup>/d  
 Dalla Torre, Italy 2014, 264 m<sup>3</sup>/d

### TRIPLE-T

Menashe 2- high concentration, Menashe, Gan Shmuel, Israel 2021, 3,500 m<sup>3</sup>/d  
 Iftach WWTP, Iftach, Kiryat Shemonah, Israel 2021, 800 m<sup>3</sup>/d  
 Other / Unknown  
 Menashe 2, Menashe, Gan Shmuel, Israel 2020, 3,500 m<sup>3</sup>/d  
 Zvulun, Haifa, Israel 2020, 800 m<sup>3</sup>/d  
 Bennet, Co, USA, Bennett, CO, United States 2019, 27 m<sup>3</sup>/d  
 Of Hanegev, Ofakim, Negev, Israel 2014, 1,650 m<sup>3</sup>/d  
 Kibbutz Lahav, Lahav, Eastern Negev, Israel 2013, 750 m<sup>3</sup>/d

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### SELECTED REFERENCES

#### EPC Contractor

Belarus 2016, 2,400 m<sup>3</sup>/d RO  
 Russia 2016, 1,200 m<sup>3</sup>/d RO  
 Stary Oskol, Russia 2012, 5,280 m<sup>3</sup>/d RO  
 Dniprodzerzhynsk, Ukraine 2012, 3,366 m<sup>3</sup>/d Other/Unknown  
 Petropavlovsk, Kazakhstan 2012, 2,400 m<sup>3</sup>/d RO  
 Kerch, Ukraine 2012, 1,200 m<sup>3</sup>/d RO  
 Dniprodzerzhynsk, Ukraine 2012, 1,200 m<sup>3</sup>/d Other/Unknown

**Water Standard Company**[www.waterstandard.com](http://www.waterstandard.com)**SELECTED REFERENCES****EPC Contractor**

Offshore boiler feedwater project, Gulf of Mexico, United States  
2016, 11,925 m<sup>3</sup>/d RO

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Bulgaria 2019, 9,000 m<sup>3</sup>/d RO  
 Municipality of Chios, Chios Island, Greece 2019, 2,000 m<sup>3</sup>/d RO  
 Bulgaria 2019, 1,920 m<sup>3</sup>/d RO  
 Municipality of Tinos, Tinos Island, Greece 2019, 1,000 m<sup>3</sup>/d RO  
 Rhodes Island, Greece 2019, 600 m<sup>3</sup>/d RO  
 U.K., United Kingdom 2019, 240 m<sup>3</sup>/d RO  
 Municipality of Milos, Milos Island, Greece 2018, 1,200 m<sup>3</sup>/d RO  
 Rhodes Island, Greece 2018, 1,100 m<sup>3</sup>/d RO  
 Municipality of Syros, Syros Island, Greece 2018, 1,000 m<sup>3</sup>/d RO  
 Rhodes Island, Greece 2018, 600 m<sup>3</sup>/d RO  
 Municipality of Thira, Thira Island, Greece 2018, 340 m<sup>3</sup>/d RO  
 Bulgaria 2017, 2,400 m<sup>3</sup>/d RO  
 Rhodes Island, Greece 2017, 600 m<sup>3</sup>/d RO  
 Municipality of Megisti, Megisti Island, Greece 2017, 400 m<sup>3</sup>/d RO  
 Somalia 2017, 240 m<sup>3</sup>/d RO  
 Bulgaria 2016, 4,320 m<sup>3</sup>/d RO  
 Crete Island, Greece 2016, 700 m<sup>3</sup>/d RO  
 Municipality of Leros, Leros Island, Greece 2015, 2,000 m<sup>3</sup>/d RO  
 Rhodes Island, Greece 2015, 1,200 m<sup>3</sup>/d RO  
 Rodos Marine, Rhodes island, Greece 2015, 600 m<sup>3</sup>/d RO  
 Vitom SA, Thessaloniki, Greece 2015, 460 m<sup>3</sup>/d RO  
 Creta star, Creta island, Greece 2015, 300 m<sup>3</sup>/d RO  
 EQOS Energie, Opava, Czech Republic 2015, 300 m<sup>3</sup>/d RO  
 ELVAL SA, Inofyta, Greece 2015, 290 m<sup>3</sup>/d RO  
 Rhodes Horizon Resort, Rhodes island, Greece 2015, 250 m<sup>3</sup>/d RO  
 Notos Beach Resort, Rhodes island, Greece 2015, 220 m<sup>3</sup>/d RO  
 Loux Marlafekas SA, Patra, Greece 2015, 160 m<sup>3</sup>/d RO  
 Municipality of Mykonos, Mykonos island, Greece 2014, 2,500 m<sup>3</sup>/d RO  
 Municipality of Mykonos, Mykonos island, Greece 2014, 2,000 m<sup>3</sup>/d RO  
 Agroinvest SA, Lamia, Greece 2014, 700 m<sup>3</sup>/d RO  
 Municipality of Tinos, Tinos island, Greece 2014, 600 m<sup>3</sup>/d RO  
 Municipality, Kithnos island, Greece 2014, 600 m<sup>3</sup>/d RO

Lindos Imperial, Rhodes island, Greece 2014, 550 m<sup>3</sup>/d RO  
 Caldera Palace, Creta Island, Greece 2014, 450 m<sup>3</sup>/d RO  
 Olympic Palace, Rhodes island, Greece 2014, 410 m<sup>3</sup>/d RO  
 Kougios SA, Rhodes island, Greece 2014, 300 m<sup>3</sup>/d RO  
 EAS Argolidas, Argolida, Greece 2014, 300 m<sup>3</sup>/d RO  
 Akti Beach, Kos Island, Greece 2014, 300 m<sup>3</sup>/d RO  
 Eureka Hellas SA, Volos, Greece 2014, 270 m<sup>3</sup>/d RO  
 Fulgor SA, Korinthos, Greece 2014, 210 m<sup>3</sup>/d RO  
 Kitantzis SA, Athens, Greece 2014, 165 m<sup>3</sup>/d RO  
 Municipality - Greece, Patmos Island, Greece 2013, 1,200 m<sup>3</sup>/d RO  
 Municipality, Agkistri Island, Greece 2013, 1,200 m<sup>3</sup>/d RO  
 Ibese Plant, Slovakia 2013, 1,080 m<sup>3</sup>/d RO  
 Municipality, Tinos Island, Greece 2013, 720 m<sup>3</sup>/d RO  
 Diagoras SA, Rhodes Island, Greece 2013, 700 m<sup>3</sup>/d RO  
 MITAS SA, Otrokovice, Czech Republic 2013, 480 m<sup>3</sup>/d RO  
 Del Monte Hellas SA, Larisa, Greece 2013, 470 m<sup>3</sup>/d RO  
 Christodoulou SA, Argolida, Greece 2013, 365 m<sup>3</sup>/d RO  
 Xanthiako Co. Ltd., Porto Cheli, Greece 2013, 360 m<sup>3</sup>/d RO  
 Municipality, Folegandros Island, Greece 2013, 360 m<sup>3</sup>/d RO  
 Krestenitis SA, Rhodes Island, Greece 2013, 200 m<sup>3</sup>/d RO  
 Skouras, Sofiko, Greece 2013, 180 m<sup>3</sup>/d RO  
 Municipality, Kalamata, Greece 2013, 150 m<sup>3</sup>/d RO  
 Municipality, Donousa Island, Greece 2013, 150 m<sup>3</sup>/d RO  
 MITAS SA, Otrokovice, Czech Republic 2013, 130 m<sup>3</sup>/d RO  
 Tria, Faliro, Greece 2013, 100 m<sup>3</sup>/d RO  
 Foundation Propondis, Folegandros Island, Greece 2012, 720 m<sup>3</sup>/d RO  
 Colgate Palmolive, Athens, Greece 2012, 690 m<sup>3</sup>/d RO  
 META SA, Salonica, Greece 2012, 570 m<sup>3</sup>/d RO  
 Municipality - Greece, Lakonia, Greece 2012, 350 m<sup>3</sup>/d RO  
 Villaz SA, Kos Island, Greece 2012, 325 m<sup>3</sup>/d RO  
 Zacharakis-Ziganitidis, Chalkidiki, Greece 2012, 300 m<sup>3</sup>/d RO  
 Langlev, Kranidi, Greece 2012, 165 m<sup>3</sup>/d RO  
 EKTE SA, Salonica, Greece 2012, 120 m<sup>3</sup>/d RO  
 Public Power Corporation of Agios Georgios, Attica, Greece 2011, 1,000 m<sup>3</sup>/d RO  
 Laguna Resort Hotel, Crete, Greece 2011, 720 m<sup>3</sup>/d RO  
 Lindos Imperial Hotel, Rhodes, Greece 2011, 400 m<sup>3</sup>/d RO  
 Sunshine Vacation Hotel, Crete, Greece 2011, 300 m<sup>3</sup>/d RO  
 Miramare Resort Hotel, Crete, Greece 2011, 270 m<sup>3</sup>/d RO  
 Sunshine Vacation Hotel, Rhodes, Greece 2011, 220 m<sup>3</sup>/d RO  
 Municipality - Greece, Ios, Greece 2010, 1,000 m<sup>3</sup>/d RO  
 Public Power Corporation of Linoperamata, Crete, Greece 2010, 1,000 m<sup>3</sup>/d RO  
 Municipality - Greece, Ithaki, Greece 2010, 535 m<sup>3</sup>/d RO  
 Patmos Aktis Hotel, Patmos, Greece 2010, 120 m<sup>3</sup>/d RO

**Technology and Equipment Supplier**

Municipality of Folegandros, Folegandros, Greece 2021, 720 m<sup>3</sup>/d RO  
 Rhodes, Greece 2020, 1,400 m<sup>3</sup>/d RO  
 Municipality of Ios, Ios, Greece 2020, 1,080 m<sup>3</sup>/d RO  
 Municipality of Sifnos, Sifnos, Greece 2020, 1,000 m<sup>3</sup>/d RO  
 Imathia, Greece 2020, 550 m<sup>3</sup>/d RO  
 Attica, Greece 2020, 450 m<sup>3</sup>/d RO

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### SELECTED REFERENCES

#### Equipment Supplier: Desalination System

De Watergroep De Blankaart, Diksmuide, Belgium 2022, 240 m<sup>3</sup>/d RO

CCRO De Ganzenpoot, Nieuwpoort, Belgium 2022, 8 m<sup>3</sup>/d RO

#### D&B Turnkey Plant

Watergroep Europoolsystem Zellik EPS, Zelik, Belgium 2017, 480 m<sup>3</sup>/d MBR

Al Shamal STW, Qatar 2014, 8,112 m<sup>3</sup>/d Other / Unknown

#### D&B Turnkey Plant (Containerized)

Diageo, St. James Gate, Ireland 2019, 600 m<sup>3</sup>/d Other / Unknown

#### D&B Turnkey Plant Excl Civils

Diageo, Roseisle, Scotland, UK 2019, 1,080 m<sup>3</sup>/d Other / Unknown

De Watergroep /AB Inbev II, Leuven, Belgium 2019, 960 m<sup>3</sup>/d Other / Unknown

Heineken Sedibeng, Johannesburg, South Africa 2018, 1,517 m<sup>3</sup>/d Other / Unknown

De Watergroep/AB Inbev I, Leuven, Belgium 2017, 720 m<sup>3</sup>/d Other / Unknown

Vlisco, Ghana 2012, 768 m<sup>3</sup>/d Other / Unknown

Colruyt Group, Halle, Belgium, 274 m<sup>3</sup>/d Other / Unknown

#### Developer/Co-developer

Euro Pool Systems, Zellik, Belgium 2017, 480 m<sup>3</sup>/d RO

ABInbev Leuven, Leuven, Belgium 2016, 960 m<sup>3</sup>/d RO

#### EPC Contractor

undisclosed, Sas Van Gent, Belgium 2022, 3,600 m<sup>3</sup>/d UF

Colruyt Group Dassenveld, Halle, Belgium 2022, 300 m<sup>3</sup>/d RO

Cargill Sas Van Gent, Sas Van Gent, Netherlands 2022, 150 m<sup>3</sup>/d UF

Brouwerij Martens, Kaulille, Belgium 2022, 84 m<sup>3</sup>/d RO

Madinaty water treatment plant, Madinaty, Egypt 2021, 1,720 m<sup>3</sup>/d RO

Heineken Kilinto, Addis Ababa, Ethiopia 2021, 124 m<sup>3</sup>/d RO

McCain Lutosa, Leuze, Belgium 2019, 2,600 m<sup>3</sup>/d RO

Danone Rotselaar, Rotselaar, Belgium 2019, 1,680 m<sup>3</sup>/d RO

Diageo Roseisle, Roseisle, U.K. 2019, 1,200 m<sup>3</sup>/d RO

Diageo St James Gate, Dublin, Ireland 2019, 840 m<sup>3</sup>/d RO

Coca-Cola Chaudfontaine, Chaudfontaine, Belgium 2019, 768 m<sup>3</sup>/d RO

Heineken Phnom Penh, Phnom Penh, Cambodia 2018, 2,880 m<sup>3</sup>/d RO

Habesha Breweries, Habesha, Ethiopia 2018, 2,160 m<sup>3</sup>/d RO

Heineken Sedibeng, Sedibeng, South Africa 2018, 1,800 m<sup>3</sup>/d RO  
Heineken Sedibeng, Johannesburg, South Africa 2018, 1,680 m<sup>3</sup>/d RO

Danone Rotselaar, Rotselaar, Belgium 2018, 1,680 m<sup>3</sup>/d RO

McCain Leuze, Leuze-en-Hainaut, Belgium 2017, 2,640 m<sup>3</sup>/d RO  
EPS Brussels, Belgium 2017, 480 m<sup>3</sup>/d RO

Heineken Chihuahua, Chihuahua, Mexico 2016, 6,240 m<sup>3</sup>/d RO

Major Brewery (Confidential), Belgium 2016, 720 m<sup>3</sup>/d RO

P&G Tabler station, Inwood, West Virginia, United States 2016, 400 m<sup>3</sup>/d RO

Heineken Quang Nam, Quang Nam, Vietnam 2015, 120 m<sup>3</sup>/d RO

Vlisco, Ghana 2013, 720 m<sup>3</sup>/d RO

Vlisco, Accra, Ghana 2013, 720 m<sup>3</sup>/d RO

Effluent treatment Reliance, Jamnagar, India, 48,000 m<sup>3</sup>/d RO

Petrochemical Company Desalination Plant, Antwerp, Belgium, 2,280 m<sup>3</sup>/d RO

Farm Frites' Water Reuse Plant, Lommel, Belgium, 1,200 m<sup>3</sup>/d RO

Heineken Factory, Vientiane, Lao P.D.R., 1,200 m<sup>3</sup>/d RO

Textile Factory, Peronne-lez-Binche, Belgium, 240 m<sup>3</sup>/d MBR

### EPC Contractor and O&M Contractor

Marrakech WWTP - Phase 3, Marrakesh, Safi, Morocco 2016, 50,000 m<sup>3</sup>/d Other / Unknown

## WesTech Engineering, Inc.



[www.westech-inc.com](http://www.westech-inc.com)

### SELECTED REFERENCES

#### Plant Supplier

Smoky Canyon Mine Treatment System - selenium removal, Afton, Wyoming, United States 2018, 10,902 m<sup>3</sup>/d RO

**Wetico**

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Shortlisted for the prestigious “Desalination Company of the Year” at the Global Water Awards, 2023, WETICO has reinforced its global presence as a leading desalination, water and wastewater treatment multinational for both the municipal and industrial sectors.

Historically focused on delivery of cost-effective and environmentally sustainable projects in the world's largest water market, Saudi Arabia, WETICO is widening its horizons across the MENA Region, winning a massive trio of contracts for mega projects in Algeria, with capacities totaling 900,000 m<sup>3</sup>/day, while setting the stage for a blockbuster presence in the new generation of mega desalination projects in the Gulf.

With global centers for design innovation and engineering competency coupled with in-house manufacturing facilities for electro-mechanical products and a renowned chemicals range, WETICO is well poised to surge to the top of the water contracting world.

With a global brand reputation of over 3 decades, WETICO has consistently earned a formidable position among IDA's Top 10 Desalination Players by integrating its technologies across a range of desalination plant capacities. With a vision to create a sustainable future as an environmentally conscious organization, WETICO contributes to water security for over 12 million people across the globe every day. WETICO is proud to be one of the premier environmental solutions providers in the Middle East & North Africa.

**SELECTED REFERENCES****EPC Contractor**

- Rabigh IV SWRO, Rabigh, Saudi Arabia 2023, 600,000 m<sup>3</sup>/d RO
- Al Tarf Seawater Desalination Plant, Al Tarf, Algeria 2023, 300,000 m<sup>3</sup>/d RO
- Bejaia Seawater Desalination Plant, Bejaia, Algeria 2023, 300,000 m<sup>3</sup>/d RO
- Cap Djinet Seawater Desalination Plant, Boumerdase, Algeria 2023, 300,000 m<sup>3</sup>/d RO
- Qiddiya WWTP Package -3, Riyadh, Saudi Arabia 2023, 22,000 m<sup>3</sup>/d Other / Unknown
- Qiddiya TSE RO, Riyadh, Saudi Arabia 2023, 16,000 m<sup>3</sup>/d RO
- Dawadmi BWRO Plant, Dawadmi, Saudi Arabia 2022, 1,500 m<sup>3</sup>/d RO
- Yamamah Palace BWRO, Riyadh, Saudi Arabia 2022, 1,100 m<sup>3</sup>/d RO

**Plant Supplier (Desal)**

- Mobile water skids to supply Demineralized Water for Power Plant, Central Region, Saudi Arabia 2022, 6,100 m<sup>3</sup>/d RO
- Nahar Pharma Reverse Osmosis pre-treatment, Riyadh, Saudi Arabia 2022, 28 m<sup>3</sup>/d RO
- Shoiba RO Phase 4 Desalination Project, Shoiba, Saudi Arabia 2021, 19,810 m<sup>3</sup>/d RO
- ICDOC Containerized Reverse Osmosis 1200 M<sup>3</sup>/D + 5000 M<sup>3</sup>/D Plant, Dammam, Saudi Arabia 2021, 6,200 m<sup>3</sup>/d RO
- Misk City-Ph.01 Sitewide Infrastructure project, Wadi Hanifa, Saudi Arabia 2021, 3,500 m<sup>3</sup>/d RO
- WTP for Al Melaidah & Al Sheqah, Qassim, Saudi Arabia 2020, 25,000 m<sup>3</sup>/d RO
- Extension of Wadi Al Dawasir WTP BWRO, Saudi Arabia 2019, 20,000 m<sup>3</sup>/d RO
- Al Washem & Shumaisy BWRO, Riyadh, Saudi Arabia 2019, 12,000 m<sup>3</sup>/d RO
- Al-Watania Poultry BWRO, Qassim, Saudi Arabia 2019, 900 m<sup>3</sup>/d RO
- Tabouk Water Treatment Plant Nano Filtration, Tabouk, Saudi Arabia 2017, 150,000 m<sup>3</sup>/d RO
- King Khalid International Airport (KKIA) WTP, Riyadh, Saudi Arabia 2015, 25,000 m<sup>3</sup>/d RO
- Tabouk Water Treatment Plant Nano Filtration, Tabouk, Saudi Arabia 2014, 100,000 m<sup>3</sup>/d RO
- Al-Hamra Extension RO & Filtration, Al Kharj-Riyadh, Saudi Arabia 2014, 18,000 m<sup>3</sup>/d RO
- Al-Hamra RO+Filtration, Al Kharj-Riyadh, Saudi Arabia 2014, 8,640 m<sup>3</sup>/d RO
- Al-Jomaih Filtration System, Al Qassim, Saudi Arabia 2014, 5,760 m<sup>3</sup>/d RO
- Industrial Cities Development & Operating Company RO Plant, Saudi Arabia 2014, 5,000 m<sup>3</sup>/d RO
- ONEE Boujdour Desalination, Morocco 2013, 10,500 m<sup>3</sup>/d RO
- National Industrial & Mining Co., Zouret, Mauritania 2013, 2,000 m<sup>3</sup>/d RO
- Jeddah, Saudi Arabia 2012, 240,000 m<sup>3</sup>/d RO
- Riyadh water supply enhancement programme, Saudi Arabia 2012, 65,000 m<sup>3</sup>/d RO
- Qurayyah IPP- Independent Power Project, Saudi Arabia 2012, 17,352 m<sup>3</sup>/d RO
- Poultry processing plant Hail Agricultural Development Co., Saudi Arabia 2012, 10,500 m<sup>3</sup>/d RO
- Al Rabiah farm, Al Kharj, Saudi Arabia 2012, 6,000 m<sup>3</sup>/d RO
- ICDOC, Dammam, Saudi Arabia 2012, 5,000 m<sup>3</sup>/d RO
- Al Baraka farm, Brida, Saudi Arabia 2012, 4,800 m<sup>3</sup>/d RO
- Al Badiah farm, Al Kharj, Saudi Arabia 2012, 4,000 m<sup>3</sup>/d RO
- PP10 Power station conversion Riyadh (RO & Demin), Riyadh, Saudi Arabia 2012, 3,840 m<sup>3</sup>/d RO
- BWRO Plant for Abar Al Seeah, Madinah Munawarah, Saudi Arabia 2012, 3,000 m<sup>3</sup>/d RO
- Al Badiah farm, Al Kharj, Saudi Arabia 2012, 2,640 m<sup>3</sup>/d RO
- Al Danah farm, Al Kharj, Saudi Arabia 2012, 2,640 m<sup>3</sup>/d RO
- Busaithah WTP, Al Jouf, Saudi Arabia 2011, 35,000 m<sup>3</sup>/d RO
- Rabigh-IPP - SWRO, Saudi Arabia 2011, 7,680 m<sup>3</sup>/d RO
- Aujan Soft Drinks SWRO Plant., Dammam, Saudi Arabia 2011, 2,400 m<sup>3</sup>/d RO
- Qassim Military Hospital - MODA, Qassim, Saudi Arabia 2011, 1,000 m<sup>3</sup>/d RO
- Al Manifa, Saudi Arabia 2010, 2,180 m<sup>3</sup>/d RO
- Dammam, Saudi Arabia 2010, 1,920 m<sup>3</sup>/d RO
- Al Dura, Saudi Arabia 2010, 1,000 m<sup>3</sup>/d RO
- Bahrain 2010, 720 m<sup>3</sup>/d RO
- Egypt 2010, 432 m<sup>3</sup>/d RO

# IDRA DESALINATION & REUSE HANDBOOK

## Subcontractor

NEOM Logistic Park, Neom, Saudi Arabia 2022, 2,000 m<sup>3</sup>/d Other / Unknown

## Wigen Water Technologies



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✉️ info@wigen.com

[www.wigen.com](http://www.wigen.com)

## SELECTED REFERENCES

### Desalination/Wastewater Reuse System Supplier

Pure Water Oceanside, Oceanside, California, United States 2020, 21,347 m<sup>3</sup>/d UF

Franklin Area WTP, Warren County, OH, United States 2020, 20,150 m<sup>3</sup>/d NF

Richard A. Renneker WTP, Warren County, OH, United States 2020, 34,065 m<sup>3</sup>/d NF

St. Vrain WTP, Firestone, CO, United States 2021, 6,056 m<sup>3</sup>/d RO

Possum Kingdom WSC WTP, Graford, TX, United States 2021, 4,315 m<sup>3</sup>/d RO

Pure Water Soquel, Soquel, CA, United States 2021, 7,949 m<sup>3</sup>/d RO

Pure Water Soquel, Soquel, CA, United States 2021, 6,321 m<sup>3</sup>/d RO

Columbia WTP, Boise, ID, United States 2022, 37,850 m<sup>3</sup>/d UF

Pure Water Oceanside, Oceanside, California, United States 2020, 17,034 m<sup>3</sup>/d UF

Post Falls Water Reclamation Facility, Post Falls, Idaho, United States 2019, 29,526 m<sup>3</sup>/d UF

Northern WTP Phase II Expansion, Brighton, Colorado, United States 2019, 24,984 m<sup>3</sup>/d RO

Marine Corps Air Ground Combat Center, Twentynine Palms, California, United States 2018, 12,113 m<sup>3</sup>/d RO

Pure Water Monterey Groundwater Replenishment Project, Monterey, CA, United States 2017, 37,854 m<sup>3</sup>/d RO

Pure Water Monterey Groundwater Replenishment Project, Monterey, CA, United States 2017, 20,820 m<sup>3</sup>/d RO

Mueller Park WTP, Bountiful City, Utah, United States 2017, 7,571 m<sup>3</sup>/d UF

Napoleon WTP, Napoleon, Ohio, United States 2016, 15,142 m<sup>3</sup>/d NF

Hastings, Nebraska, United States 2016, 6,814 m<sup>3</sup>/d RO

Pearland, Texas, United States 2016, 5,678 m<sup>3</sup>/d RO

Freeport, TX, United States 2014, 87,064 m<sup>3</sup>/d UF

Ferndale, Washington, United States 2014, 8,139 m<sup>3</sup>/d RO

Lake Andes, South Dakota, United States 2012, 15,142 m<sup>3</sup>/d UF

Paulding, Ohio, United States 2012, 4,921 m<sup>3</sup>/d RO

## WOG Group



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## SELECTED REFERENCES

### Design and Build

Textile-Dyeing Wastewater Treatment Plant, Ha Tinh, Distt. Bac Giang Province, Vietnam 2022, 10,000 m<sup>3</sup>/d RO

Supply of Wastewater Treatment and Recycling Plant (300 M<sup>3</sup>/hr. (MBR and RO Based), Faisalabad, Pakistan 2022, 7,200 m<sup>3</sup>/d RO

### EPC Contractor

Textile Effluent Treatment Plant, Andhra Pradesh, India 2022, 10,000 m<sup>3</sup>/d MBR

Deisel Euro V Project, Thailand 2022, 8,640 m<sup>3</sup>/d Other / Unknown

Zero Liquid discharge based Effluent Treatment Plant, Bhatinda, Punjab, India 2022, 1,920 m<sup>3</sup>/d Other / Unknown

Patong SWRO, Phuket, Thailand 2019, 25,000 m<sup>3</sup>/d RO

Pt Berkah Kawasan Manyar Sejahtera (BKMS) SWRO, Singapore 2019, 2,400 m<sup>3</sup>/d RO

IBN Sina wastewater reuse, Saudi Arabia 2019, 840 m<sup>3</sup>/d RO

Sea Water Desalination Plant - Permeate For AKR Port, Gresik, Indonesia 2016, 4,800 m<sup>3</sup>/d RO

## Wood Plc



📍 United Kingdom ☎ 44 20 7429 7500

[www.amecfcw.com](http://www.amecfcw.com)

## SELECTED REFERENCES

### Co-Developer

Lions Gate Secondary WWTP, Vancouver, BC, Canada 2017, 102,000 m<sup>3</sup>/d Secondary treatment

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## Zarzuela, S.A. Empresa Constructora

(R)

 Spain (+34) 983 359 600 zarzuela@zarzelasa.es[www.zarzelasa.es](http://www.zarzelasa.es)**SELECTED REFERENCES****EPC Contractor**

Venta de Baños WWTP - Expansion, Spain 2016, o Tertiary

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## Zhonghe Seawater Desalination Engineering Co., Ltd

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 China +86-22-6619-0111  
+86-22-6619-0100 zh-mail@zhdec.com[www.zhdec.com](http://www.zhdec.com)**SELECTED REFERENCES****Plant Supplier (Desal)**Vee Shaka Pat Nangang , India 2014, 16,000 m<sup>3</sup>/d RO  
Zhoushan, China 2014, 12,000 m<sup>3</sup>/d MED

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## Zhongshan Environmental Protection Industry Development Co., Ltd.

(R)

[www.huron-tech.com/en](http://www.huron-tech.com/en)**SELECTED REFERENCES****EPC Contractor**Chengdu Hi-tech Water Reuse Project, Chengdu, Sichuan Province,  
China 2012, 10,000 m<sup>3</sup>/d

# Electrical Equipment

Selected references since 2012 from companies supplying electrical equipment or control systems for desalination systems. Companies in this directory are not classified by reference type.

## ABB Group



Italy +390224143586  
 water.team@it.abb.com  
[www.abb.com/water](http://www.abb.com/water)

### SELECTED REFERENCES

#### Software Supplier

Al-Ghubra, Muscat, Oman 2012, 190,932 m<sup>3</sup>/d RO

## Adsyst



[www.adsyst.co.uk](http://www.adsyst.co.uk)

### SELECTED REFERENCES

#### Equipment Supplier: PLC/SCADA Control Systems

River Thames Desalination Plant, Greater London, United Kingdom, RO

## Emerson



[www.emerson.com/global](http://www.emerson.com/global)

### SELECTED REFERENCES

#### Equipment Supplier: SCADA Systems

SRCSW Wastewater Treatment Plant, Sacramento, California, United States, 150 MGD Other / Unknown

### Legend



Desalination



Wastewater reuse

## Hach



United States of America 800 227 4224  
 info@hach.com  
[www.Hach.com](http://www.Hach.com)

### SELECTED REFERENCES

#### Water Quality Measurement

Desal Santorini, Greece 2021, 5,500 m<sup>3</sup>/d RO  
Desalination Chora/Tinos, Greece 2021, 1,000 m<sup>3</sup>/d RO  
Nemeli Chennai Phase 2, India 2021, RO  
Planta de Filtros Salar del Carmen, Chile 2021  
Planta desaladora, Chile 2021  
Rabigh III, Saudi Arabia 2020, 600,000 m<sup>3</sup>/d RO  
Rabigh, Saudi Arabia 2020, 600,000 m<sup>3</sup>/d RO  
Shuqaiq 3 IWP, Saudi Arabia 2020, 450,000 m<sup>3</sup>/d RO  
Umm al Houl Expansion, Qatar 2020, 280,000 m<sup>3</sup>/d RO  
Al Khobar 1 Expansion, Saudi Arabia 2020, 210,000 m<sup>3</sup>/d RO  
Tuas South Desalination plant, Singapore 2020, 130,000 m<sup>3</sup>/d RO  
Fouka Extension, Algeria 2020, 120,000 m<sup>3</sup>/d RO  
Dubai, United Arab Emirates 2020, 41,000 m<sup>3</sup>/d RO  
Desaladora Atacama, Chile 2020, 38,880 m<sup>3</sup>/d RO  
Abu Zenima, Egypt 2020, 20,000 m<sup>3</sup>/d RO  
Paphos Desalination Plant, Cyprus 2020, 15,000 m<sup>3</sup>/d RO  
Ras Lanuf, Libya 2020, 5,000 m<sup>3</sup>/d RO  
Planta de Filtros de Baquedano / Planta de Filtros de Sierra Gorda, Chile 2020  
Al Khobar 2, Saudi Arabia 2019, 630,000 m<sup>3</sup>/d RO  
Umm al Houl Expansion, Qatar 2019, 284,000 m<sup>3</sup>/d RO  
Agadir, Morocco 2019, 275,000 m<sup>3</sup>/d RO  
Jurong Island Desalination Plant, Singapore 2019, 137,000 m<sup>3</sup>/d RO  
Salalah 3 IWP, Oman 2019, 114,000 m<sup>3</sup>/d RO  
Sousse, Tunisia 2019, 50,000 m<sup>3</sup>/d RO  
Jebel Ali Power Station, Dubai, United Arab Emirates 2019, 41,000 m<sup>3</sup>/d RO  
Kefalonia Desalination Plant, Greece 2019, 8,000 m<sup>3</sup>/d RO  
Desalination Mykonos, Greece 2019, 2,500 m<sup>3</sup>/d RO  
Chios Desalination (3), Greece 2019, 2,000 m<sup>3</sup>/d RO  
Nisiros Desalination, Greece 2019, 500 m<sup>3</sup>/d RO  
Al Khobar 1 Expansion, Saudi Arabia 2018, 210,000 m<sup>3</sup>/d RO  
Desaladora Minera Spence Mejillones, Chile 2018, 86,000 m<sup>3</sup>/d RO  
IDAM Ensenada, Mexico 2018, 21,600 m<sup>3</sup>/d RO  
Almyros Desalination I+II, Greece 2018, 6,000 m<sup>3</sup>/d RO  
Desalination Naxou, Greece 2018, 1,000 m<sup>3</sup>/d RO  
Ikaria Desalination, Greece 2018, 500 m<sup>3</sup>/d RO  
Alepochori Desalination, Greece 2018, 350 m<sup>3</sup>/d RO

Desalination Irakleia/Santorini, Greece 2018, 300 m<sup>3</sup>/d RO  
 Empalme-Guayamas, Mexico 2017, 21,600 m<sup>3</sup>/d RO  
 Umm al Houl, Qatar 2016, 272,760 m<sup>3</sup>/d RO  
 El Alamein, Egypt 2016, 150,000 m<sup>3</sup>/d RO  
 Sarlux Refinery, Italy 2016, 12,000 m<sup>3</sup>/d RO  
 Desalination Kini/Syros, Greece 2016, 750 m<sup>3</sup>/d RO  
 Tuas Desal 3, Saudi Arabia 2016, RO  
 Basrah P3/P4, Iraq 2015, 199,000 m<sup>3</sup>/d RO  
 Mirfa, UAE 2015, 140,000 m<sup>3</sup>/d RO  
 Al Khafji (Solar-powered), Saudi Arabia 2015, 60,000 m<sup>3</sup>/d RO  
 Yanbu Desal Plant, Saudi Arabia 2015, 30,000 m<sup>3</sup>/d RO  
 Desalination Vari/Syros, Greece 2015, 750 m<sup>3</sup>/d RO  
 Leros Desalination, Greece 2015, 500 m<sup>3</sup>/d RO  
 PTAS La Farfana (Biofactoría), Chile 2014, 760,000 m<sup>3</sup>/d  
 PTAS El Trebal (Biofactoría), Chile 2014, 570,000 m<sup>3</sup>/d  
 Djerba, Tunisia 2014, 50,000 m<sup>3</sup>/d RO  
 Desalination Hydra, Greece 2014, 1,600 m<sup>3</sup>/d RO  
 Planta de pulpa y celulosa (Proyecto Mapa), Chile 2014  
 Az Zour South, Kuwait 2013, 136,000 m<sup>3</sup>/d RO  
 EAC Vassilikos Desalination Plant, Cyprus 2013, 60,000 m<sup>3</sup>/d RO  
 Desaladora Copiapó, Chile 2013, 54,000 m<sup>3</sup>/d RO  
 Desalination Poseidonia/Syros, Greece 2013, 1,000 m<sup>3</sup>/d RO  
 Desalination Ammoudaria/Tinos, Greece 2013, 750 m<sup>3</sup>/d RO  
 Limassol (Episkopi) Desalination Plant, Cyprus 2012, 60,000 m<sup>3</sup>/d RO  
 Desalination Oia/Santorini, Greece 2012, 500 m<sup>3</sup>/d RO  
 Desalination Thirasia/Santorini, Greece 2012, 140 m<sup>3</sup>/d RO  
 Bahrain Naval Base, Bahrain, RO  
 Jebel Ali SWRP, Dubai, United Arab Emirates, RO  
 SWRO Dubal, Dubai, United Arab Emirates, RO  
 Fujairah PP F2, Fujairah, United Arab Emirates, RO  
 Sharjah Electricity and Water Authority SEWA, Khorfaqan, United Arab Emirates, RO  
 Huangua, Libya, ED  
 OCP Desalination Plant, Morocco, RO  
 Bahwan Veolia Water, Oman, RO  
 Sohar Desalination Plant (Ministry), Oman, ED  
 Sur, Oman, RO  
 SWRO Salalah, Oman, RO  
 Doha West, Qatar, RO  
 Ras Abu Fontas, Qatar, RO  
 Ras Girtas, Qatar, RO  
 UHP2, Qatar, RO  
 Ras Laffan - Ras Girtas, Qatar, ED  
 Yanbu 2 desalination plant, Saudi Arabia, RO  
 Al Khobar SWRO, Saudi Arabia, RO  
 SWCC, Saudi Arabia, RO  
 SWCC, Saudi Arabia, ED  
 Sharjah Municipality, Sharjah, United Arab Emirates, RO  
 Ganouch / STEG, Tunisia, RO  
 Fujairah FII (FAPCO), United Arab Emirates, ED  
 Fujairah FII Project (AZALIYA O&M), United Arab Emirates, RO  
 Veolia Sharjah 6 MIGD UF Plant.xls, United Arab Emirates, RO

## Rockwell



[www.rockwellautomation.com](http://www.rockwellautomation.com)

### SELECTED REFERENCES

#### Equipment Supplier: Control Systems

KwaZulu-Natal, South Africa 2018, 2,000 m<sup>3</sup>/d RO

## Rotork



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[www.rotork.com](http://www.rotork.com)

### SELECTED REFERENCES

#### Equipment Supplier: Control Systems

Desalination Plant - North Field Expansion (Ras Laffan), Qatar 2022

Water Supplies Department - Desalination Project, Hong Kong 2022

Haya - Desalination Project, Oman 2022

Shuaibah South Desal Plant, Italy 2022

Manatee Reuse Wet Weather, United States 2021

Al Khobar 2 Desalination Plant, Saudi Arabia 2021

Desalination Plants at Gujarat - India, India 2021

UHP-2- Umm Al Houl II SWRO, Qatar 2021

Orange Country Water District, United States 2021

Umm Al Houl Project, Qatar 2021

Watersure (Suez Water & Ventia UT), Australia 2021

Bacon Park Reuse, Savanna, United States 2019

Naples Reuse Interconnect, United States 2019

Apopka NW WRF Reuse, United States 2018

Valor Blvd Reuse Water System, United States 2017

#### O&M and Equipment Supplier: Valve Actuators and Control Systems

NFP - UHP, Qatar, Other / Unknown

UHP Expansion, Qatar, Other / Unknown

UHP Expansion, Spain , Other / Unknown

#### Equipment Supplier: Valve Actuators and Control Systems

Drouin WWTP Upgrade, Australia 2021, Other / Unknown

CSP - Toowoomba Regional Council, Australia 2021, Other / Unknown

Farley WTP / Hunter Water, Australia 2021, Other / Unknown

Loganholtme Lift Station Dry Well, Australia 2021, Other / Unknown

Luggage Point STP, Australia 2021, Other / Unknown

South Caboolture STP Upgrade, Australia 2021, Other / Unknown

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**DESALINATION & REUSE**  
**HANDBOOK**

S.A. Water, Naracoorte WWTP, Australia 2021, Other / Unknown  
Utilita Goodna WWTP - H2, Australia 2021, Other / Unknown  
Almoayyed Al Ezzel, Bahrain 2021, Other / Unknown  
Ashbridges Bay Treatment Plant Upgrade, Canada 2021, Other / Unknown  
Bonnybrook WWTP Fog Receiving Facility, Canada 2021, Other / Unknown  
Urumqi Recovery Water Project, China 2021, Other / Unknown  
Cheung Sha Wan SPS, Hong Kong 2021, Other / Unknown  
Shau Kei Wan PTW, Hong Kong 2021, Other / Unknown  
Tai Po STW, Hong Kong 2021, Other / Unknown  
Triveni, India 2021, Other / Unknown  
Udaipur Smart City, India 2021, Other / Unknown  
DTSW Terminal Pump Station, Italy 2021, Other / Unknown  
New European PDH Kallo, Italy 2021, Other / Unknown  
Orton Ds-20-0029 Aramco Saudi, Italy 2021, Other / Unknown  
Siauliai Wastewater Plant, Lithuania 2021, Other / Unknown  
South West Wastewater Service, Northern Ireland, United Kingdom 2021, Other / Unknown  
DWR Cymru Welsh Water, Northern Ireland, United Kingdom 2021, Other / Unknown  
Severn Trent Water, Northern Ireland, United Kingdom 2021, Other / Unknown  
Haya Waters Seeb Sewage Treatment Plant, Oman 2021, Other / Unknown  
Mandai Park Development - Dawt, Singapore 2021, Other / Unknown  
Kavak Samsun WWT, Turkey 2021, Other / Unknown  
Dubai Municipality Drainage & Irrigation, United Arab Emirates 2021, Other / Unknown  
Algonquin WWTP, United States 2021, Other / Unknown  
Bay County WWTP, United States 2021, Other / Unknown  
Bowling Green WTP, Kentucky, United States 2021, Other / Unknown  
Carlisle WWTP, United States 2021, Other / Unknown  
Cary South WWTP, United States 2021, Other / Unknown  
CCCSD Pump Station, United States 2021, Other / Unknown  
Cedar Creek WWTP, United States 2021, Other / Unknown  
City Of Charlotte WWTP, Michigan, United States 2021, Other / Unknown  
City Of Louisville Co WWTP, United States 2021, Other / Unknown  
City Of Mount Clemens WWTP, United States 2021, Other / Unknown  
City Of Olathe WWTP, United States 2021, Other / Unknown  
Cleveland Crown WWTP, United States 2021, Other / Unknown  
Dupage County Upgrade Project, United States 2021, Other / Unknown  
DWB Roberts Tunnel, United States 2021, Other / Unknown  
Ershings-Star WWTP, Idaho, United States 2021, Other / Unknown  
Hillsdale WWTP, Kansas, United States 2021, Other / Unknown  
Houston WWTP, Texas, United States 2021, Other / Unknown  
Howard F Curren Advanced WWTP, United States 2021, Other / Unknown  
Jackson WWTP, Michigan, United States 2021, Other / Unknown  
Joliet WWTP Upgrade, Illinois, United States 2021, Other / Unknown  
Kalamazoo WWTP, Michigan, United States 2021, Other / Unknown  
Lauder St WWTP, United States 2021, Other / Unknown  
Miscowater, United States 2021, Other / Unknown  
North Brevard WWTP, United States 2021, Other / Unknown  
Port St. Lucie Westport WWTP, United States 2021, Other / Unknown  
Savanna WWTP, United States 2021, Other / Unknown  
Star WWTP, Indiana, United States 2021, Other / Unknown  
Tomahawk WWTP Leawood, Kansas, United States 2021, Other / Unknown  
Tomahawk WWTP, United States 2021, Other / Unknown  
TSSD Aeration Upgrade, United States 2021, Other / Unknown  
Scottish Water - Tobermory WTW, United Kingdom 2021, Other / Unknown  
Scottish Water - Shieldhall WWTW, United Kingdom 2021, Other / Unknown  
Ashbourne - STW, United Kingdom 2021, Other / Unknown  
Ballykelly WTW Northern Ireland, United Kingdom 2021, Other / Unknown  
Barcombe WTW, United Kingdom 2021, Other / Unknown  
Essex & Suffolk Water, United Kingdom 2021, Other / Unknown  
Glendevon WTW, United Kingdom 2021, Other / Unknown  
Hardham WTW, United Kingdom 2021, Other / Unknown  
Northumbrian Water Limited, United Kingdom 2021, Other / Unknown  
Scottish Water - Earlston WWTW, United Kingdom 2021, Other / Unknown  
Scottish Water - Stoer WTW, United Kingdom 2021, Other / Unknown  
Daldowie WWTW, United Kingdom 2021, Other / Unknown  
Walton Affinity Water, United Kingdom 2021, Other / Unknown  
Winchburgh WWTW - Scottish Water, United Kingdom 2021, Other / Unknown  
DWR CYMRU Welsh Water, United Kingdom 2021, Other / Unknown  
CK and AWT Changing Or Our T31, Cyprus 2020, Other / Unknown  
Shuqaiq 3 Desalination Plant, Saudi Arabia 2019, 450,000 m<sup>3</sup>/d RO  
Umm Al Houl Ii Swro, Qatar 2019, 280,000 m<sup>3</sup>/d RO  
Bapco Med, Bahrain 2019, 67,782 m<sup>3</sup>/d RO  
Aseelah Iwp - Sharqiyah, Oman 2017, 80,000 m<sup>3</sup>/d RO  
Qurayyat IWP Desalination, Oman 2016, 200,000 m<sup>3</sup>/d RO  
Sve Chino Desalter, United States 2016, 6,276 m<sup>3</sup>/d RO  
Aguas Antofagasta - Tocopilla, Chile 2014, 17,280 m<sup>3</sup>/d RO  
Az Zour North 1 IWPP, Ra's az Zawr, Kuwait 2013, 486,400 m<sup>3</sup>/d MED  
Antofagasta, Chile 2013, 216,000 m<sup>3</sup>/d RO  
Ras Abu Fontas 2 Desalination, Qatar 2013, 163,656 m<sup>3</sup>/d MSF  
Es - Cadagua Edar Arona - 1X 1, Spain 2013, 32,000 m<sup>3</sup>/d RO  
Carlsbad proposed site, California, United States 2012, 189,250 m<sup>3</sup>/d RO  
Fujairah Power & Desalination, Dubai, United Arab Emirates 2012, 136,000 m<sup>3</sup>/d RO  
Orange County Water District, United States 2012, 113,550 m<sup>3</sup>/d RO  
Shoaibah 4 Desalination Plant, Saudi Arabia, RO  
Umm Al Houl II SWRO, Qatar, RO  
Wheal Jane Minewater Plant, United Kingdom, Other / Unknown  
Bacon Park Reuse Water System, United States, Other / Unknown  
Naples Reuse Interconnect, United States, Other / Unknown  
Expansion of Tai Po Water Treatment, Hong Kong, Other / Unknown  
Divine Automation, South Africa, Other / Unknown  
Peticië Oferta Val. Papallona, Spain, Other / Unknown  
PTW LTM, Thailand, Other / Unknown  
Seytur IQ, Turkey, Other / Unknown  
Gulf Stream, United States , Other / Unknown

Groundwater Desalter and Well, United States , Other / Unknown  
 UK - Severn Trent Water, United Kingdom , Other / Unknown  
 Australia (Mr2) General Proj., Australia, RO  
 Electric Actuators, France, RO  
 Mrpl - 30 Mld Swro Desalinatio, India, RO  
 Eq19M318 \_ Sepco3 Po# Sao05-Sm, Saudi Arabia, RO  
 Ummlujj Desalination Plant - S, Saudi Arabia, RO  
 Reformas En Desaladora Del Pr, Spain, RO  
 Spain General Proj - Madrid Re, Spain, RO  
 Yuma Desalter, United States, RO  
 Apopka NW WRF Reuse, United States, Other / Unknown  
 Changi Air Base, Singapore, Other / Unknown  
 Changi Membrane Bio-Reactor PH, Singapore, Other / Unknown  
 Changi Water Reclamation Plant - C21B, Singapore, Other / Unknown  
 Changi WRP-EP6, Singapore, Other / Unknown  
 Improve Changi WRP, Singapore, Other / Unknown  
 NeWater Reservoir Project, Singapore, Other / Unknown  
 Valor Blvd Reuse Water System, United States, Other / Unknown  
 ALX9999S, Algeria, Other / Unknown  
 CITIC Pacific Mining, Australia, Other / Unknown  
 CITIC Pacific Mining Pump St, Australia, Other / Unknown  
 Southern Seawater Desalination Plant, Australia, Other / Unknown  
 Desaladora Candelaria, Chile, Other / Unknown  
 INGIMEX Soprole Water Soften, Chile, Other / Unknown  
 Maintenence Desaladora Candela, Chile, Other / Unknown  
 Retrofit & Spares Escondida Water, Chile, Other / Unknown  
 CZX9999A, Czech Republic, Other / Unknown  
 FRX9999Z, Franc, Other / Unknown  
 Phed West Bengal, India , Other / Unknown  
 Al-Zour North IWPP, Kuwait, Other / Unknown  
 Sohar 3 IWP, Oman, Other / Unknown  
 Jubail Desalination Plant C8, Saudi Arabia, Other / Unknown  
 Saudi Arabia General Projects, Saudi Arabia, Other / Unknown  
 SPX9999C, Spain, Other / Unknown  
 SPX9999F, Spain, Other / Unknown  
 Djerba Island Water Desalination, Tunisia, Other / Unknown  
 Chino I Desalter, United States, Other / Unknown  
 Robert Goldsworthy Desalination Expansion, United States, Other / Unknown  
 Robert W. Goldsworthy Desalter, United States, Other / Unknown  
 United Utilities, United Kingdom, Other / Unknown  
 UKXRTWU9, United Kingdom, Other / Unknown  
 Citic Pacific Mining-Sino IR, Australi, Other / Unknown  
 La Chimba Desalination Plant, Chile, Other / Unknown  
 Qatar General Projects, Qatar, Other / Unknown  
 Containerised Desalination Yan, Saudi Arabia, Other / Unknown  
 Shuqaq Retrofit, Saudi Arabia, Other / Unknown  
 Acciona Agua RPC, Venezuela, Other / Unknown  
 Venezuela General Projects, Venezuela, Other / Unknown  
 Escondida Desalination Plant, Chile, Other / Unknown  
 FR9999Z, France, Other / Unknown  
 GH9999A, Ghana, Other / Unknown  
 Jamnagar Desalination/IDE Plant, India, Other / Unknown  
 Israel General Projects, Israel, Other / Unknown  
 Korea General Projects, South Korea, Other / Unknown  
 KR9999X, Korea (South), Other / Unknown  
 Yanbu IWPP Phase 3, Saudi Arabia, Other / Unknown

Yanbu IWPP Phase 4, Saudi Arabia, Other / Unknown  
 SP9999E, Spain, Other / Unknown  
 UA9999A, United Arab Emirates, Other / Unknown  
 Chino Creek Well Field I-20, United States, Other / Unknown  
 Hemlock WTP, United States, Other / Unknown  
 Holland Board of Public Works, United States, Other / Unknown  
 Orlando FL - Eastern WRF, United States, Other / Unknown  
 USA General - JAK - MISC, United States, Other / Unknown  
 Ad Dur, Bahrain, Other / Unknown  
 Hidd Power & Desalination, Bahrain, Other / Unknown  
 Larnaca, Cyprus, Other / Unknown  
 Sirte Power & Desalination, Libya, Other / Unknown  
 Barka Power & Desalination, Oman, Other / Unknown  
 Ghubrah Power & Desalination, Oman, Other / Unknown  
 Al Jubail Power & Desalination, Saudi Arabia, Other / Unknown  
 Al Khobar Phase III, Saudi Arabia, Other / Unknown  
 Jeddah, Saudi Arabia, Other / Unknown  
 Rabigh, Saudi Arabia, Other / Unknown  
 Carboneras Conexion Desaladora, Spain, Other / Unknown  
 Idam Barcelona, Spain, Other / Unknown  
 Puket, Thailand, RO  
 Al Taweealah, United Arab Emirates, Other / Unknown  
 Jebel Ali L, Dubai, United Arab Emirates, Other / Unknown  
 Ras Al Khiamah, United Arab Emirates, Other / Unknown  
 Chino Desalter II, Riverside County, CA, United States, Other / Unknown  
 WA Desal, Australia, Other / Unknown  
 Wonthaggi Desalination Plant, VIC, Australia, Other / Unknown  
 Bahrain General Projects, Bahrain, Other / Unknown  
 Lorne Park WTP, ON, Canada, Other / Unknown  
 Euroguarco Prj, China, Other / Unknown  
 KW II, Kuwait, Other / Unknown  
 Fire-Fighting System, Saudi Arabia, Other / Unknown  
 Industrial Water Pumping Station - Jurong WRP, Singapore, Other / Unknown  
 GE Energy, Spain, Other / Unknown  
 MTS Valves, Spain, Other / Unknown  
 City of Hialeah Deep Injection, FL, United States, Other / Unknown  
 Santa Cruz SWRO, CA, United States, Other / Unknown  
 Desaladora Candelaria, Chile, Other / Unknown  
 Sirusa, Malaysia, Other / Unknown  
 Rolling Hills, United States, Other / Unknown  
 Thames Water, London, United Kingdom, Other / Unknown  
 Gold Coast Desalination Alliance, Australia, Other / Unknown  
 Perth II Southern Seawater Desalination Plant, Australia, Other / Unknown  
 Perth Southern Seawater Desalination Plant, Australia, Other / Unknown  
 Idam Copiapo Desalination Plan, Chile, Other / Unknown  
 Indonesia General Projects, Indonesia, Other / Unknown  
 Dead Sea Works Desalination, Israel, Other / Unknown  
 Shuaikh Desalination Station, Kuwait, Other / Unknown  
 Oman General Projects, Oman, Other / Unknown  
 Philippines General Projects, Philippines, Other / Unknown  
 Jubail WTP - Biological Blower, Saudi Arabia, Other / Unknown  
 Marafiq & Yanbu, Saudi Arabia, Other / Unknown  
 Marin County (Formerly San Raf), United States, Other / Unknown

# IDRA DESALINATION & REUSE HANDBOOK

Yorkville Sanitar II, United States, Other / Unknown  
London Gateway, United Kingdom, Other / Unknown  
Delta Industrial, United States, Other / Unknown  
Carlsbad Desalter, United Arab Emirates, Other / Unknown  
Trinidad WI, Trinidad and Tobago, Other / Unknown  
Spain General Project - V/M's, Spain, Other / Unknown  
Spain General Project - Southwest, Spain, Other / Unknown  
Spain General Project - Northwest, Spain, Other / Unknown  
Campo Dalias Almeria, Spain, Other / Unknown  
SWCC Transmission Upgrade, Saudi Arabia, Other / Unknown  
SWCC - Satellite Desalination, Saudi Arabia, Other / Unknown  
SD3881A, Saudi Arabia, Other / Unknown  
Saudi Arabia General Projects, Saudi Arabia, Other / Unknown  
Portugal General Projects, Portugal, Other / Unknown  
Mexico General Projects, Mexico, Other / Unknown  
KU9999A, Kuwait, Other / Unknown  
Kubota/Yanbu, Japan, Other / Unknown  
Mekorot General Projects, Israel, Other / Unknown  
Ashdod Desalination Plant, Israel, Other / Unknown  
PWD Altinho Panaji-Goa, India, Other / Unknown  
GH9999Z, Ghana, Other / Unknown  
FR9999A, France, Other / Unknown  
CH9999A, Chile, Other / Unknown  
Algeria PF139768, Algeria, Other / Unknown  
SWCC Shoaiba 2 Power and Desalination, Saudi Arabia, Other / Unknown

Al-Lith SWRO, Al Lith, Saudi Arabia 2019, 32,000 m<sup>3</sup>/d RO  
Haql SWRO, Haql, Saudi Arabia 2019, 24,000 m<sup>3</sup>/d RO  
Huba SWRO, Huba, Saudi Arabia 2019, 24,000 m<sup>3</sup>/d RO  
Al-Wadj SWRO, Al Wadj, Saudi Arabia 2019, 24,000 m<sup>3</sup>/d RO  
Umm Lujj SWRO, Umm Lujj, Saudi Arabia 2019, 24,000 m<sup>3</sup>/d RO  
Farsan SWRO, Farsan, Saudi Arabia 2019, 16,000 m<sup>3</sup>/d RO  
Al Khafji solar SWRO, Al Khafji, Saudi Arabia 2016, 60,000 m<sup>3</sup>/d RO

## Equipment Supplier: DCS, Instrumentation and Gas Insulated Switchgear

Taweelah RO IWP, Taweelah, United Arab Emirates 2020, 910,000 m<sup>3</sup>/d RO  
Ghalilah RO, United Arab Emirates 2014, 68,000 m<sup>3</sup>/d RO

## Equipment Supplier: DCS, Instrumentation and Switchgear

Al Khobar 1 SWRO, Saudi Arabia 2019, 210,000 m<sup>3</sup>/d RO

## Equipment Supplier: Switchgear

Al Khobar 2 SWRO, Al Khobar, Saudi Arabia 2020, 600,000 m<sup>3</sup>/d RO

## Schneider Electric SA



[www.se.com/za/en](http://www.se.com/za/en)

### SELECTED REFERENCES

#### Smart Solutions Provider

Fritzens wastewater treatment plant (WWTP), Austria, Other / Unknown

## Siemens AG



Global

[water.automation@siemens.com](mailto:water.automation@siemens.com)

[www.siemens.com/water](http://www.siemens.com/water)

### SELECTED REFERENCES

#### Equipment Supplier: Complete Instrument and Control and Electrical Systems

Shoaiba 5 SWRO (Shoaiba 1 Replacement), Shoaiba, Saudi Arabia 2021, 600,000 m<sup>3</sup>/d RO  
Qunfudha SWRO, Qunfudha, Saudi Arabia 2019, 48,000 m<sup>3</sup>/d RO  
Rabigh Satellite SWRO, Rabigh, Saudi Arabia 2019, 32,000 m<sup>3</sup>/d RO

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### SELECTED REFERENCES

#### Equipment Supplier: Electrical Equipment and Solutions

Metito and SSEM, Jubail, Saudi Arabia 2023, 1,000,000 m<sup>3</sup>/d RO  
SIDEM, Mirfa, United Arab Emirates 2023, 363,800 m<sup>3</sup>/d RO  
Collahuasi SWRO (CMDIC), Iquique, Chile 2022, 90,720 m<sup>3</sup>/d RO  
Aconcagua SWRO (Quintero), Quillota, Chile 2022, 86,400 m<sup>3</sup>/d RO  
Chira-Soria SWRO-Gran Canaria, Salto de Chiria, Spain 2022, 7,800 m<sup>3</sup>/d RO  
Melilla Desalination Plant Expansion, Melilla, Spain 2021, 30,000 m<sup>3</sup>/d RO  
Mobile SWRO Package No.2, Saudi Arabia 2021, 10,000 m<sup>3</sup>/d RO  
Jubail 3A IWP, Saudi Arabia 2020, 600,000 m<sup>3</sup>/d RO  
Sorek 2 Desalination Plant, Israel 2020, 548,000 m<sup>3</sup>/d RO  
Mostaganen SWRO, Mostaganen, Algeria 2020, 200,000 m<sup>3</sup>/d RO  
Cap Djinet SWRO, Cap Djinet, Algeria 2020, 100,000 m<sup>3</sup>/d RO  
Los Pelambres SWRO, Los Vilos, Chile 2020, 34,560 m<sup>3</sup>/d RO  
Antofagasta SWRO - La Chimba Expansion, Chile 2020, 32,832 m<sup>3</sup>/d RO  
Rabigh 3 SWRO, Saudi Arabia 2019, 600,000 m<sup>3</sup>/d RO  
Shuqaiq Desalination Plant Phase 3 (IWP), Saudi Arabia 2019, 450,000 m<sup>3</sup>/d RO  
Jubail 1 Replacement (Jubail RO 2), Saudi Arabia 2019, 400,000 m<sup>3</sup>/d RO  
Shuqaiq 3 SWRO, Saudi Arabia 2019, 380,000 m<sup>3</sup>/d RO  
Agadir SWRO, Morocco 2019, 275,000 m<sup>3</sup>/d RO  
Al Dur Independent Water & Power Plant (Phase 2), Bahrain 2019, 227,300 m<sup>3</sup>/d RO  
Emirates Global Aluminium Complex SWRO, Jebel Ali, United Arab Emirates 2019, 40,914 m<sup>3</sup>/d RO  
Lanzarote III, Spain 2019, 30,000 m<sup>3</sup>/d RO  
Empalmes & Guaymas SWRO, Mexico 2019, 17,280 m<sup>3</sup>/d RO

Talara Refinery Modernization (PMRT), Talara, Peru 2019, 20,000 m<sup>3</sup>/d RO

ArcelorMittal Tubarão, Tubarão, Brazil 2019, 12,000 m<sup>3</sup>/d RO

Shuaibah 4 SWRO, Saudi Arabia 2018, 400,000 m<sup>3</sup>/d RO

Shuaibah Plant 3 Expansion, Saudi Arabia 2018, 250,000 m<sup>3</sup>/d RO

Minera Spence SWRO, Antofagasta, Chile 2018, 138,240 m<sup>3</sup>/d RO

Jurong Island SWRO, Singapore 2018, 136,380 m<sup>3</sup>/d RO

Quebrada Blanca Phase II SWRO, Tarapacá, Chile 2018, 73,400 m<sup>3</sup>/d RO

Atacama SWRO, Caldera, Chile 2018, 38,880 m<sup>3</sup>/d RO

Provisur SWRO, Lima, Peru 2018, 38,560 m<sup>3</sup>/d RO

Al Khafji SWRO Desalination Plant, Saudi Arabia 2016, 60,000 m<sup>3</sup>/d RO

Djerba SWRO Desalination Plant, Tunisia 2016, 50,000 m<sup>3</sup>/d RO

Al Jubail SWRO Desalination Plant, Saudi Arabia 2015, 100,000 m<sup>3</sup>/d RO

## Yokogawa Electric Corp.

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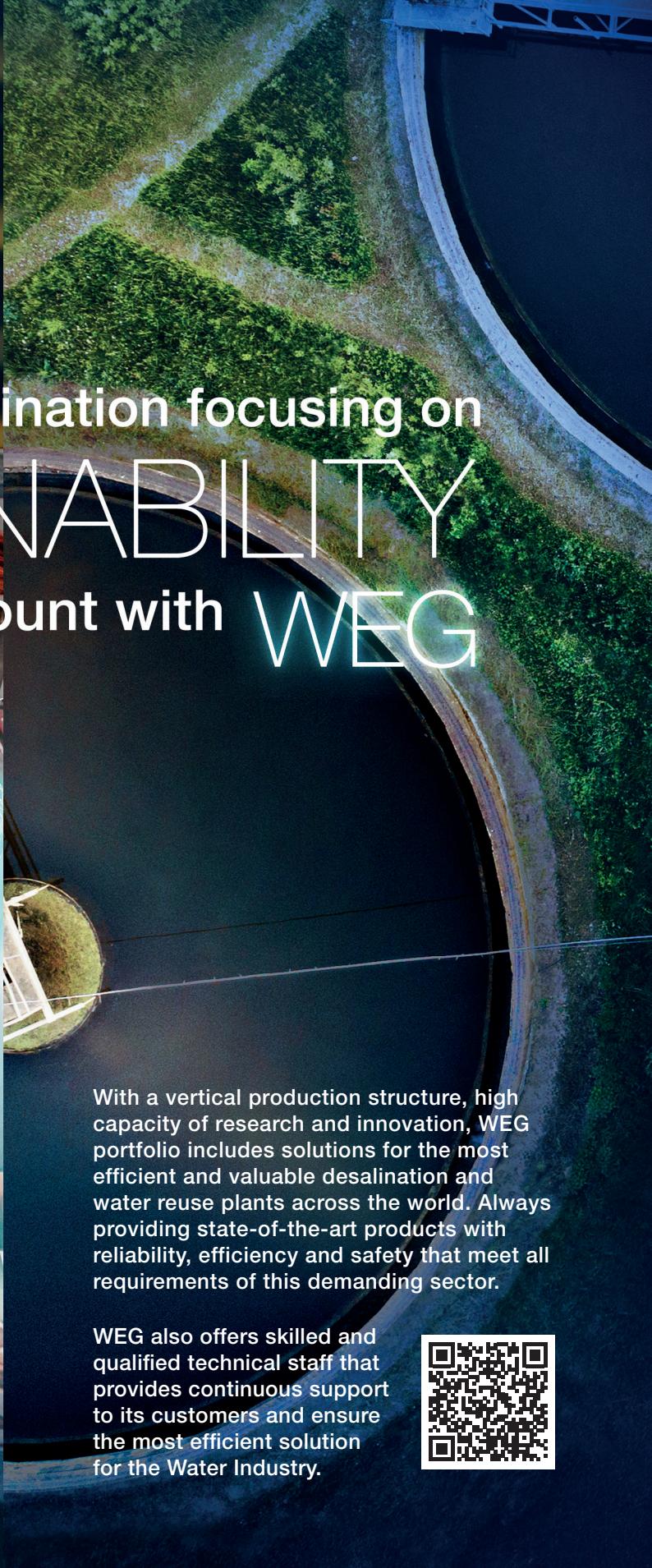
### SELECTED REFERENCES

#### Equipment Supplier: Control Systems

Provisur SWRO, Lima, Peru 2013, 2,019 m<sup>3</sup>/d RO



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# Engineers

Selected references since 2012 from engineering consultancies and civil contractors active in desalination or reuse. Companies that undertake both process engineering and civil engineering are placed in the 'Developers & plant suppliers' section.

## Legend

 Desalination  Wastewater reuse

## 360 Environmental

 Australia  +61 8 9388 8360  
[www.360environmental.com.au](http://www.360environmental.com.au)

### SELECTED REFERENCES

#### Expert Advice

Sydney, NSW, Australia

#### Planning

Esperance, WA, Australia



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 [Ofer@adan-tech.com](mailto:Ofer@adan-tech.com)

[www.adan-tech.com](http://www.adan-tech.com)

### SELECTED REFERENCES

#### Technical Advisor

Ramat Ha'sharon IMI, Ramat Ha'sharon, Israel 2023, 15,600 m<sup>3</sup>/d  
Other / Unknown  
IMI "Magen" compound, Tel Aviv, Israel 2020, Other / Unknown

#### Engineering Consultant

Sorek 2, Israel 2019, 200,000,000.0 m<sup>3</sup>/yr RO  
Dead Sea Water Project (Phase I), Israel 2015, RO  
Ashdod, Israel 2011, 274,000 m<sup>3</sup>/d RO  
Sorek 1, Israel 2010, 411,000 m<sup>3</sup>/d RO  
Palmachim expansion from 45 MCMY to 90 MCMY, Israel 2013, 123,287 m<sup>3</sup>/d RO  
Jordan Valley, Israel 2013, 19,180 m<sup>3</sup>/d RO  
Western Galilee, Israel 2022, 100,000,000.0 m<sup>3</sup>/yr RO  
IMI "Magen" compound, Tel Aviv, Israel 2020, Other / Unknown  
Ramat Ha'sharon IMI, Ramat Har'sharon, Israel, 48,000 m<sup>3</sup>/d ED

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### SELECTED REFERENCES

#### Contractor

Princess Noura University for Women (PNUFW), Riyadh, Saudi Arabia 2012, 7,000 m<sup>3</sup>/d RO



## AECOM Technology Corporation

 United States of America  +1 213 593 8000  
 [BusinessInquiry.GC@aecom.com](mailto:BusinessInquiry.GC@aecom.com)

[www.aecom.com](http://www.aecom.com)



## Adams Robinson Enterprise, Inc.

[www.adamsrobinson.com](http://www.adamsrobinson.com)



### SELECTED REFERENCES

#### Prime Contractor

Orange County Eastern WRP - Phase 5, Orlando, Florida, United States 2015, 18,925 m<sup>3</sup>/d Tertiary treatment

### SELECTED REFERENCES

#### Design Engineer

Lions Gate Secondary WWTP, Vancouver, Canada 2017, 102,000 m<sup>3</sup>/d  
City of Hialeah WTP, FL, United States 2013, 47,312 m<sup>3</sup>/d RO  
Tampa Electric Co. Water Reclamation Facility, FL, United States 2013, 32,172 m<sup>3</sup>/d RO

Davie WTP, Town of Davie, FL, United States 2013, 22,710 m<sup>3</sup>/d  
RO

Bridgewater Acres Waste to Energy WTP, St. Petersburg, FL, United States 2012, 9,462 m<sup>3</sup>/d RO

#### Improvement and Expansion

Kinmen Desalination Plant Improvement and Expansion, Kinmen, Taiwan, 4,000 m<sup>3</sup>/d RO (Reverse Osmosis)

### Ahrens Associate



[www.ahrenscorporations.com](http://www.ahrenscorporations.com)

#### SELECTED REFERENCES

##### Contractor

Riverhead WWTP - Upgrade, New York, United States 2014, 5,299 m<sup>3</sup>/d MBR, UV

### Alden Research Laboratory, LLC (A Verdantus Company)



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#### SELECTED REFERENCES

##### Engineering Consultant

Claude "Bud" Lewis Carlsbad Desalination Plant, Carlsbad, California, United States 2022, 190,000 m<sup>3</sup>/d MD

##### Environmental Consultant

WaterReuse Research Foundation, VA, United States, Other / Unknown

##### Research and Modelling

Poseidon Water Huntington Beach Desalination Plant, Huntington Beach, California, United States 2021, 189,250 m<sup>3</sup>/d RO  
U.S.A., CA, United States 2015, 9,463 m<sup>3</sup>/d Other / Unknown  
SCWD2 Regional Seawater Desalination Project, CA, United States 2015, 9,463 m<sup>3</sup>/d RO  
Carlsbad Desalination Plant, Carlsbad, CA, United States 2014, 189,270 m<sup>3</sup>/d RO  
Proposed Bay Area Regional Desalination Plant, CA, United States, 75,708 m<sup>3</sup>/d Other / Unknown

### Archer Western Contractors



[www.walshgroup.com](http://www.walshgroup.com)

#### SELECTED REFERENCES

##### Prime Contractor

Wichita Falls River Road IPR, Wichita Falls, Texas, United States 2016, 60,560 m<sup>3</sup>/d RO

Snapfinger WWTP - Upgrade Phase 2, Dekalb County, Georgia, United States 2015, 204,390 m<sup>3</sup>/d MBR

Temecula Valley Regional WRF - Expansion, California, United States 2015, 18,925 m<sup>3</sup>/d MBR

### Auburn Constructors



[www.auburnconstructors.com](http://www.auburnconstructors.com)

#### SELECTED REFERENCES

##### Prime Contractor

San Luis Obispo County, Los Osos Wastewater Project, San Luis Obispo, California, United States 2014, 4,542 m<sup>3</sup>/d

### AYESA Group



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#### SELECTED REFERENCES

##### Basic Design, Tender Specifications and Bid Evaluation

Shoaibah-5, Shoaibah, Saudi Arabia 2019, 600,000 m<sup>3</sup>/d RO  
Shuqaiq-4, Shuqaiq, Saudi Arabia 2019, 400,000 m<sup>3</sup>/d RO

##### Design Engineer

Masirah, Oman 2019, 10,000 m<sup>3</sup>/d RO  
Agadir, Morocco 2018, 100,000 m<sup>3</sup>/d RO  
Marina East Desalination Plant, Singapore 2017, 136,380 m<sup>3</sup>/d RO  
Djibouti, Republic of Djibouti 2017, 22,500 m<sup>3</sup>/d RO  
Doha, Kuwait 2016, 227,300 m<sup>3</sup>/d RO  
Barka IV, Oman 2015, 281,000 m<sup>3</sup>/d RO  
Dakhla, Morocco 2015, 12,000 m<sup>3</sup>/d RO  
Al Ghubrah, Oman 2012, 190,932 m<sup>3</sup>/d RO

##### Detailed Design

Jubail-II, Jubail, Saudi Arabia 2019, 400,000 m<sup>3</sup>/d RO

# IDRA DESALINATION & REUSE HANDBOOK

## Engineering Consultant

La Estrella, Barcelona, Spain 2022, 86,400 m<sup>3</sup>/d RO  
Replacement of Shoaiba-2, Shoaiba, Saudi Arabia 2021, 545,000 m<sup>3</sup>/d RO  
Replacement of Yanbu-2, Yanbu, Saudi Arabia 2021, 500,000 m<sup>3</sup>/d RO  
Campo de Dalías, Almería, Spain 2021, 117,000 m<sup>3</sup>/d RO  
Adeje-Arona, Adeje - Arona, Tenerife, Canary Islands, Spain 2020, 60,000 m<sup>3</sup>/d RO  
Jubail-II, Jubail, Saudi Arabia 2019, 400,000 m<sup>3</sup>/d RO  
Replacement of Shoaiba-1, Shoaiba, Saudi Arabia 2018, 600,000 m<sup>3</sup>/d RO  
Al Khobar-3 RO plant, Al Khobar, Saudi Arabia 2018, 600,000 m<sup>3</sup>/d RO  
Replacement of Shuqaiq-1, Shuqaiq, Saudi Arabia 2018, 400,000 m<sup>3</sup>/d RO  
Satellite plants, Along the Red Sea Coast, Saudi Arabia 2017, 51,000 m<sup>3</sup>/d RO  
Lima Sur, Lima, Peru 2015, 35,000 m<sup>3</sup>/d RO

## Owner's Engineer

Laâyoune, Western Sahara, Morocco 2017, 26,000 m<sup>3</sup>/d RO

## Technical Advisor

Duqm, Oman 2018, 40,000 m<sup>3</sup>/d RO  
Khasab, Oman, 16,000 m<sup>3</sup>/d RO  
Rabigh-3, Saudi Arabia 2018, 600,000 m<sup>3</sup>/d RO  
Salalah, Oman 2017, 120,000 m<sup>3</sup>/d RO  
Salalah, Oman 2015, 113,500 m<sup>3</sup>/d RO  
Sharqiyah, Oman 2015, 80,000 m<sup>3</sup>/d RO  
Qurayyat, Oman 2013, 200,000 m<sup>3</sup>/d RO

# BESIX



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## SELECTED REFERENCES

### Intake, Outfall and Pumping Station Construction

Hamriyah Power and Desalination Station, Sharjah, United Arab Emirates, 420,000 m<sup>3</sup>/d RO

### Prime Contractor

Al Sajaa TDF and Sewage Treatment Plant, Sharjah, Al Sajaa Industrial Area, United Arab Emirates 2018, 11 million m<sup>3</sup>/yr Other / Unknown  
SAFI Water Reuse Station 2, Ajman, Al Jurf industrial Area, United Arab Emirates 2018, 3,000 m<sup>3</sup>/d RO

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## SELECTED REFERENCES

### Construction Management

Pure Water San Diego, San Diego, California, United States, 30 MGD RO  
Sembcorp NEWater Plant (SNP), Changi, Singapore 2015, 228,000 m<sup>3</sup>/d RO  
Butler Drive Water Reclamation Facility, Peoria, AZ, United States, 49,205 m<sup>3</sup>/d Other / Unknown  
Silicon Valley Advanced Water Purification Center (SVAWPC), Santa Clara, CA, United States, 30,000 m<sup>3</sup>/d RO  
Shuaibah IWPP, Saudi Arabia, 230.0 MGD RO  
Orange County Water District (GWRS Groundwater Replenishment), Irvine, California, United States, 100.0 MGD RO  
Shuqaiq IWPP, Saudi Arabia, 55.0 MGD RO  
Copiapo Valley Mines Project, Chile, 43.0 MGD Other / Unknown  
Shuibah Phase III- SWRO Extension Project, Saudi Arabia, 40.0 MGD RO  
El Abra Seawater Desalination Plant Feasibility, Chile, 38.0 MGD RO  
Long Beach Seawater Desalination Facility, Long Beach, California, United States, 10.0 MGD RO  
Nevada WTP Improvements, Missouri, United States, 1.4 MGD RO  
Anuvia Plant Nutrients: Plant Assessment and Process Optimization, Zellwood, Florida, United States, RO  
New Electrodialysis Technology to Reduce Energy Required for Salinity Management, California, United States, ED  
Old Ford, London, United Kingdom, MBR

### Consultant

Paso Robles WWTP - Tertiary treatment, Paso Robles, CA, United States 2017, 18,546 m<sup>3</sup>/d UV

### Design

Advanced Water Purification System, Palo Alto, California, United States 2021, 2.25 MGD RO  
Tseung Kwan O Desalination Plant, Hong Kong, China 2019, 36 MGD RO  
Groundwater Replenishment System Final Expansion, Fountain Valley, California, United States 2019, 30 MGD RO  
Perris II Desalination Plant, Perris, California, United States 2019, 5.4 MGD RO  
Membrane Filtration Reverse Osmosis (MFRO) Facility for Agriculture, Escondido, California, United States 2019, 2.5 MGD RO  
Jurong Island Desalination Plant, Singapore 2017, 36 MGD RO

Escondida Water Supply Expansion, Antofagasta, Chile 2017, 19 MGD RO  
 Escondida Water Supply, Antofagasta, Chile 2013, 57 MGD RO  
 Groundwater Replenishment System Initial Expansion, Fountain Valley, California, United States 2012, 30 MGD RO  
 Victoria Desalination Project, Wonthaggi, Australia, 109.0 MGD RO  
 Radomiro Tomic Copper Mine, Desalination Water Supply, Tocopilla, Chile, 57.0 MGD RO  
 Jurong Island Desalination Plant, Singapore, 36.0 MGD RO  
 Tseung Kwan O Desalination Plant, Hong Kong, 35.6 MGD RO  
 Az Zabirah Aluminum Project, Ras as Zour, Saudi Arabia, 20.0 MGD RO  
 Spence Growth Option, Mejillones, Chile, 18.0 MGD RO  
 Spence Hypogene Project, Santiago, Chile, 18.0 MGD RO  
 Nueva Union Desalination Project, Huasco, Chile, 16.5 MGD RO  
 Cave Creek Water Reclamation Plant - Advanced Water Purification Facility, Phoenix, Arizona, United States, 12.5 MGD RO  
 Brackish Groundwater Desalination Program, San Antonio, Texas, United States, 12.0 MGD RO  
 Silicon Valley Advanced Water Purification Centre, San Jose, California, United States, 6.0 MGD RO  
 Dublin (DSRSD), California, United States, 3.0 MGD RO  
 Sumitomo Consortium, Central Java, Indonesia, 1.58 MGD RO  
 Middle Area Desalination Plant, Deir Al Balah, West Bank, Palestine, 1.0 MGD RO  
 Escondida Water Supply, Antofagasta, Chile, 57 MGD RO  
 Livermore Advanced Reclamation Demonstration, California, United States, 1.0 MGD RO  
 Middle Area Desalination Plant, Gaza, Gaza, Palestine, Palestine, 1 MGD RO  
 Tuas I, Singapore, 36 MGD RO  
 Escondida Water Supply Expansion, Antofagasta, Chile, 19 MGD RO  
 Fargo Membrane WTP, Fargo, North Dakota, United States, 16 MGD RO  
 Geneva RO Water Treatment Plant, Geneva, Illinois, United States, 8 MGD RO  
 Oxnard G.R.E.A.T. Desalination Facility, Oxnard, California, United States, 7.5 MGD RO  
 RO Treatment Facility, O'Fallon, Missouri, United States, 6 MGD RO  
 Richmond Advanced Recycling Expansion (RARE), Oakland, California, United States, 4 MGD RO  
 Franklin County Water Treatment Plant, Franklin County, Alabama, United States, 3 MGD RO  
 Advanced Water Purification System, Palo Alto, California, United States, 2.25 MGD RO  
 RO Treatment Facility, Hays, Kansas, United States, 2 MGD RO  
 Carlsbad Water Recycling Facility, Carlsbad, California, United States, 1 MGD RO

### Design and Build

Chanticleer Advanced Water Purification Facility, Soquel Creek, California, United States 2020, 3.3 MGD RO  
 Groundwater Replenishment System (GWR) Final Expansion, Fountain Valley, California, United States 2019, 30 MGD RO  
 Morro Bay Advanced Water Treatment Plant, California, United States 2019, 1.0 MGD RO  
 Groundwater Replenishment System (GWR) Initial Expansion, Fountain Valley, California, United States 2012, 30 MGD RO  
 Escondida Water Supply Project, Antofagasta, Chile, 57.0 MGD RO  
 Escondida Water Supply Expansion Project, Antofagasta, Chile, 19.0 MGD RO

Fargo Surface Water Treatment Plant, North Dakota, United States, 16.0 MGD RO  
 Charnock Well Field Restoration Project, Santa Monica, California, United States, 10.0 MGD RO  
 Dunedin WTP Improvements, Florida, United States, 7.0 MGD RO  
 Richmond Advanced Recycling Expansion (RARE), California, United States, 5.0 MGD RO  
 Potable Water Plant Modernization, US Navy, Diego Garcia Island, UK Overseas Territory in Indian Ocean, United Kingdom, 1.9 MGD RO  
 Soquel Pure Water Plant, Soquel Creek, California, United States, 1.0 MGD RO  
 JEA Advanced Water Treatment Plant, Jacksonville, Florida, United States, 1.0 MGD RO  
 Beenyup Ground Water Replenishment Trial, Perth, Australia, 1.0 MGD RO  
 Bundamba Advanced Water Treatment Plant, Brisbane, Australia, 17 MGD RO  
 Gresik desalination plant, Indonesia, 9 MGD RO  
 Chanticleer Advanced Water Purification Facility, Soquel Creek, California, United States, 3.3 MGD RO  
 Diego Garcia Water Treatment Plant, Diego Garcia, 1.9 MGD RO  
 H2.O Water facility, Jacksonville, Florida, United States, 1 MGD RO

### Lender's Engineer

Carlsbad SWRO, California, United States, 50.0 MGD RO  
 Al Ghubrah Independent Sea Water Desalination Project, Oman, 50.0 MGD RO  
 Huntington Beach, CA (SWRO), California, United States, 50.0 MGD RO

### Owner's Engineer

Jeddah Seawater Reverse Osmosis Desalination Plant, Jeddah, United Arab Emirates 2017, 100 MGD RO  
 Claude "Bud" Lewis Carlsbad Desalination Plant, Carlsbad, California, United States 2012, 50 MGD RO  
 Tuas II (SWRO), Singapore, 84.0 MGD RO  
 Changi 2 NE Water Project, Singapore, 60.0 MGD RO  
 Changi NE Water Reuse Project, Singapore, 60.0 MGD RO  
 Marina East Seawater Desalination Plant, Singapore, 36.0 MGD RO  
 Salalah Independent Water and Power Project, Oman, 18.0 MGD RO  
 Jeddah Seawater Reverse Osmosis Desalination Plant, Jeddah, Saudi Arabia, 100 MGD RO  
 Claude "Bud" Lewis Carlsbad Desalination Plant, Carlsbad, California, United States, 50 MGD RO  
 Zara Ma'in Water Project, Amman, Jordan, 34 MGD RO  
 Tampa Bay Seawater Desalination Facility, Tampa Bay, Florida, United States, 25 MGD RO

### Program Manager

San Antonio, TX, United States, 45,420 m<sup>3</sup>/d RO

## Brown & Caldwell



### SELECTED REFERENCES

#### Design

Arcadia Water Treatment Plant (expansion), Santa Monica, California, Southern California, United States 2023, 13 MGD RO  
North City Pure Water Facility, San Diego, California, Southern California, United States 2021, 34 MGD  
Hyperion AWPF, Los Angeles, California, Southern California, United States 2021, 1.5 MGD MBR

#### Design and Construction Management

MR/RO Facility, Escondido, California, Southern California, United States 2019, 4 MGD RO

#### Owner's Advisor

Chanticleer Advanced Water Purification Facility, Aptos, California, Central Coast, United States 2021, 1.3 MGD

## BRW Construction Group



[www.brwconstruction.com](http://www.brwconstruction.com)

### SELECTED REFERENCES

#### Prime Contractor

Bacon Park WWTP, Savannah, GA, United States 2014, 3,785 m<sup>3</sup>/d MBR

## Canadian Environmental Alternatives Ltd.



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### SELECTED REFERENCES

#### Consultant: Process and Controls

Gwangyang SWRO, Gwangyang, South Korea 2012, 30,200 m<sup>3</sup>/d RO

## Caribbean Water Treatment Ltd.



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### SELECTED REFERENCES

#### Installation and Commissioning

Mill Reef Club Antigua, Half Moon Bay, Antigua and Barbuda 2016, 189 m<sup>3</sup>/d SWRO with PX  
South Caicos, Turks and Caicos Islands 2016, 189 m<sup>3</sup>/d SWRO with ERT  
Hodges Bay Resort Antigua, Hodges Bay, Antigua and Barbuda 2016, 133 m<sup>3</sup>/d SWRO with PX

## Carollo Engineers, Inc.



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### SELECTED REFERENCES

#### Engineering Consultant

Yucca Valley Water Reclamation Project, CA, United States 2017, 3,785 m<sup>3</sup>/d MBR  
Altamonte Springs reuse pilot, Altamonte Springs, FL, United States 2017, 109 m<sup>3</sup>/d UF+GAC+UV

## CDM Smith



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### SELECTED REFERENCES

#### Construction Management

Escondida Water Supply Expansion, Antofagasta, Chile 2018, 71,971 m<sup>3</sup>/d RO

#### Consultant

Phase III - Study and alternatives feasibility design Santiago, Chile 2018, 917,568 m<sup>3</sup>/d

#### Design

Norte 550 Desalination Plant, Chile 2018, 47,520 m<sup>3</sup>/d

Desalination Plant, Chile 2016, 17,280 m<sup>3</sup>/d

San Andrés Desalination Plant, Colombia 2015, 4,320 m<sup>3</sup>/d

**Evaluation and Consulting**

Desalination Plant, Peru 2019, 41,472 m<sup>3</sup>/d Other / Unknown

**Owner's Engineer**

Aqaba Desalination Plant of 6,340 lps, Aqaba, Jordan 2019, 821,917 m<sup>3</sup>/d RO

**Prime Contractor**

P-192, Twentynine Palms, California, United States 2019, 11,355 m<sup>3</sup>/d RO

El Rawda, Egypt 2019, 500 m<sup>3</sup>/d RO

Aqaba Desalination Plant, Aqaba, Jordan 2019, RO

Brunswick County RO Facility, Brunswick County, North Carolina, United States 2018, 155,185 m<sup>3</sup>/d RO

Expansion of the North Desalination Plant (La Chimba), Chile 2017, 8,640 m<sup>3</sup>/d

California American Water Seawater Desalination Plant, Monterey, California, United States 2016, 26,495 m<sup>3</sup>/d

Arbennie Pritchett WRF - Expansion, Fort Walton Beach, FL, United States 2015, 45,424 m<sup>3</sup>/d UV

Arbennie Pritchett WRF - Expansion, Fort Walton Beach, FIL, United States 2015, 18,925 m<sup>3</sup>/d UV

Carlsbad Municipal Water District WRF - Phase 3, Carlsbad, CA, United States 2015, 11,360 m<sup>3</sup>/d RO

City of Hays WWTP - Upgrade, Hays, KS, United States 2015, 9,462 m<sup>3</sup>/d MBR

Spence Growth Option, Chile 2014, 86,400 m<sup>3</sup>/d RO

Fort Irwin Water Works WTP, Fort Irwin, California, United States 2014, 22,723 m<sup>3</sup>/d

Dania Beach WTP Groundwater Desalination Facility, Dania Beach, Florida, United States 2014, 7,570 m<sup>3</sup>/d RO

Groundwater Recharge Potable Reuse Facility for Emergency Water Supply, Cambria, California, United States 2013, 2,180 m<sup>3</sup>/d RO

Groundwater Desalination Facility P-113, Camp Pendleton, California, United States 2012, 37,850 m<sup>3</sup>/d RO

LPRO Groundwater Desalination Facility, Western Springs, Illinois, United States, 11,544 m<sup>3</sup>/d RO

LPRO WTP Expansion for West WTP, Deerfield Beach, Florida, United States, 11,355 m<sup>3</sup>/d RO

Water Recovery Facility, Sheridan, Wyoming, United States, 5,450 m<sup>3</sup>/d RO

Beach Well Coastal Desalination Facility, Sand City, California, United States, 1,135 m<sup>3</sup>/d RO

**Study and Design**

Drinking water resilience study and prefeasibility design Rancagua, Chile 2019, 30,153 m<sup>3</sup>/d Other / Unknown

Drinking water resilience study and prefeasibility design for Iloca, Chile 2019, 2,592 m<sup>3</sup>/d Other / Unknown

Study and alternatives feasibility design for Santiago, Phase III, Chile 2018

**Study and Support Services**

Desalination Plant, Chile 2019, 142,560 m<sup>3</sup>/d Other / Unknown

Ore Access 1 (OA1) Desalination Plant, Iquique, Chile 2019, 13,997 m<sup>3</sup>/d RO

Engineering of Permits and Marine Works for Desalination Plant, Chile 2018, 136,080 m<sup>3</sup>/d

Antofagasta Desalination Plant, Chile 2018, 54,172 m<sup>3</sup>/d

Ore Access One, Chile 2017, 13,996 m<sup>3</sup>/d Other / Unknown

AES Ventanas, Chile, 51,840 m<sup>3</sup>/d RO

**Technical Advisor**

Codelco Water Supply, Chile 2018, 168,998 m<sup>3</sup>/d RO

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**SELECTED REFERENCES****Process Design and Equipment Supplier: Ceramic UF Membranes**

Turbah, Hail, Saudi Arabia 2021, 5,200 m<sup>3</sup>/d Other / Unknown

Agfar, Hail, Saudi Arabia 2021, 5,300 m<sup>3</sup>/d Other / Unknown

Hangzhou Coal Mine, Hangzhou, China 2020, 7,920 m<sup>3</sup>/d Other / Unknown

Polokwane 2, South Africa 2020, 3,600 m<sup>3</sup>/d UF

VPF, Thailand 2020, 3,000 m<sup>3</sup>/d UF

CPF, Thailand 2020, 1,640 m<sup>3</sup>/d UF

Mnasheer, Jordan 2020, 1,000 m<sup>3</sup>/d UF

Polokwane, South Africa 2019, 4,800 m<sup>3</sup>/d Other / Unknown

Lactasoy, Thailand 2019, 2,400 m<sup>3</sup>/d UF

Watreat Lac-1, Prachinburi, Thailand 2019, 2,400 m<sup>3</sup>/d Other / Unknown

Al Saawy WTP, Saudi Arabia 2019, 1,200 m<sup>3</sup>/d UF

Baireen, Jordan 2018, 3,120 m<sup>3</sup>/d UF

Polokwane, South Africa 2018, 1,680 m<sup>3</sup>/d UF

Mashtal Faisal, Jordan 2017, 13,500 m<sup>3</sup>/d UF

Humaimah, Saudi Arabia 2015, 143,000 m<sup>3</sup>/d UF

Humaimah 2, Hail, Saudi Arabia 2015, 55,000 m<sup>3</sup>/d RO

**CeraMem**

[www.alsys-group.com/en/group/global-locations/alsys-usa-ceramem](http://www.alsys-group.com/en/group/global-locations/alsys-usa-ceramem)

**SELECTED REFERENCES****Equipment Supplier: Ceramic Membranes and Engineering Services**

India 2013, 3,715 m<sup>3</sup>/d UF

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### SELECTED REFERENCES

#### Civil Contractor

Beenyup Groundwater Replenishment Programme - Phase 2,  
Perth, WA, Australia 2017, 38,356 m<sup>3</sup>/d RO

- Water distribution and transmission
- Water pumping station
- Electrical substation, distribution and transmission systems
- Chemical plants such as salt, chlorine caustic soda and hydrochloric acid plants
- Civil, I&C (SCADA, DCS), fuel supply and stores.

Services include feasibility studies, forecasts, network flow and stability, engineering, design, preparation of tender documents, contract management and major tests at works, supervision of construction and commissioning of the plants with guarantee period services.

### SELECTED REFERENCES

#### Concrete Structures Repair

Sewage Treatment Plant, Port Fouad, Egypt 2016, 40,000 m<sup>3</sup>/d

#### Consultancy Services for Hydrogeological Mapping, Geophysics, Well drilling and Testing

UAE Contract No. PCD-CS-0387-EQS-WDS-5113040, United Arab Emirates, 7,500,000 m<sup>3</sup>/d Other / Unknown

#### Consultant

Replacement and Renovation Works of Port Said Sewage treatment plant-Om Khalaf, Port Said, Port Said South - Om Khalaf Village, Egypt 2023, 600 m<sup>3</sup>/d Other / Unknown

MATS (Multipurpose Application by Thermodynamic Solar), Borg El Arab, Alexandria, Egypt 2023, 250 m<sup>3</sup>/d MED

EPC WORKS FOR INSTALLATION OF RO UNITS AT DIFFERENT LOCATIONS, Abu Dhabi, Abu Dhabi city, United Arab Emirates 2022, 0.25 MIGD RO

#### Culverts Concrete Slab Repair

Ghubrah, Oman 2012, 27,360 m<sup>3</sup>/d MSF

#### Engineering Consultant

National Organization For Potable Water And Sanitary Drainage Plant, Port Said, Port Said West, Egypt 2021, 20,000 m<sup>3</sup>/d RO

Sir Bani Yas Island, Abu Dhabi, United Arab Emirates 2020, 45,000 m<sup>3</sup>/d RO

Desk study of wastewater evaporation ponds at new capital power plant, Egypt 2020, 800 m<sup>3</sup>/d RO

New Assuit Combined Cycle Engineering Works for Wastewater Discharge, Egypt 2019, 20,000 m<sup>3</sup>/d RO

Technical Evaluation of Al Yosr Plant and Preparing Tender for Operation and Maintenance, Hurghada, Egypt 2018, 80,000 m<sup>3</sup>/d RO

Assuit West CC Power Plant – wastewater study problem, Egypt 2018, 6,000 m<sup>3</sup>/d Other / Unknown

Reef Oasis SWRO, Egypt 2018, 1,000 m<sup>3</sup>/d RO

Upgrade of Um Al Zamool R.O. plant, United Arab Emirates 2018, 1,000 m<sup>3</sup>/d RO

Port Said phase 1, Egypt 2017, 40,000 m<sup>3</sup>/d RO

Repair Treatment of Cracked Concrete Structures (Intake Channel and Surge Structure), Port Said East, Egypt 2016, 200,000 m<sup>3</sup>/d

Preliminary Design and Bill of Quantities, Al Ain El-Sokhna, Integrated Water and Power Plant (IWPP), Al Ain El Sokhna, Egypt 2016, 150,000 m<sup>3</sup>/d RO

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[Previously Dr. M. H. Ali El-Saie Consulting Engineers]

Dr. M. H. Ali El-Saie Consulting Engineers was established 1964 (Kuwait), 1970 (Abu Dhabi), 1975 (Oman), 1983 (Egypt) by Dr. M. H. Ali El-Saie, the Owner and Managing Director. Dr. El-Saie is one of the world's leading experts and pioneers in the field of dual-purpose power and desalination plants.

Fields:

- Power Generation (SC, CC) (steam, gas and diesel)
- Water desalination plants of different size, capacities and types (MSF, RO, VC, ME)
- Combined cycle power, desalination plants and dual-purpose plants including gas turbine with WHR boilers with desalination plant extraction, condensing steam turbine with desalination plants, back pressure turbine with desalination plants, cooling water intake of different types and capacities up to 750 000/cm/hr, and outfalls especially from and to the sea

Concrete Structures Repair at Sewage Treatment Plant, Port Fouad, Egypt 2016, 40,000 m<sup>3</sup>/d  
 Additional RO Unit Utilizing BWRO reject, Madinaty, Egypt 2016, 2,000 m<sup>3</sup>/d RO  
 Additional RO Unit in Madinaty Desalination Plant, Cairo, Egypt 2016, 1,600 m<sup>3</sup>/d RO  
 Upgrade of Um Al Zamool RO plant, United Arab Emirates 2018, Desalination Plant, Hurgada, Egypt 2015, 80,000 m<sup>3</sup>/d RO  
 Cairo Festival City Project Desalination Plant, New Cairo, Egypt 2015, 5,000 m<sup>3</sup>/d RO  
 Sewage Treatment, Madinaty, Egypt 2015, 3,000 m<sup>3</sup>/d RO  
 Desalination of ground water, Madinaty, Egypt 2014, 10,000 m<sup>3</sup>/d RO  
 Masirah Seawater intake plant , Oman 2013, 15,000 m<sup>3</sup>/d RO  
 Halaniyat RO, Oman 2013, 300 m<sup>3</sup>/d RO  
 Taweeleah (B), United Arab Emirates 2012, 450,000 m<sup>3</sup>/d MSF  
 Desalination Plant, Hurgada, Egypt 2012, 40,000 m<sup>3</sup>/d RO  
 Sur RO Plant Bypass 800mm Pipe, Sur, Oman 2013, 42,000 m<sup>3</sup>/d RO  
 Culverts Concrete Slab Repair , Ghubrah, Oman 2012, 27,360 m<sup>3</sup>/d MSF  
 Ghubrah Sea Water Line PH-3 intake to Ph-2, Oman 2012, 81 m<sup>3</sup>/d MSF  
 Main Recycled Water System in Al Dhafra Region (Abu Dhabi mainland and Adjacent Island), Abu Dhabi and adjacent island, Al Dhafra, United Arab Emirates, 7,500,000 m<sup>3</sup>/d Other / Unknown  
 Consultancy services for Hydrogeological mapping, Geophysics, Well drilling and testing of the United Arab Emirates contract no. PCD-CS-0387-EQS-WDS-5113040, United Arab Emirates, 7,500,000 m<sup>3</sup>/d Other / Unknown

#### Preliminary Design and Bill of Quantities

Al Ain El-Sokhna Integrated Water and Power Plant (IWPP), Al Ain El Sokhna, Egypt 2016, 150,000 m<sup>3</sup>/d RO  
 Sewage Treatment Plant, Port Fouad, Egypt 2016, 40,000 m<sup>3</sup>/d

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#### SELECTED REFERENCES

##### EP Contractor

Samsung Onyang Pretreatment Demineralization System, South Korea 2012, 9,800 m<sup>3</sup>/d MF/UF  
 Samsung Electronics Industrial Water System, South Korea 2012, 5,000 m<sup>3</sup>/d MF/UF

## Cushman Contracting Corp.



[www.cushmancontracting.com](http://www.cushmancontracting.com)

#### SELECTED REFERENCES

##### Prime Contractor

Paso Robles WWTP - Tertiary treatment, CA, United States 2017, 18,546 m<sup>3</sup>/d UV

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#### SELECTED REFERENCES

##### Hydraulic Model Testing and Hydraulic Studies

Ras Abu Fontas A2, Doha, Qatar 2013, 163,656 m<sup>3</sup>/d MSF  
 Yanbu 3, Saudi Arabia 2012, 550,000 m<sup>3</sup>/d MSF

##### Marine Research and Consultancy

Jafza Utility project, Dubai, United Arab Emirates 2012, RO

##### Pumping Station Tests and Recirculation

Yanbu 3 - IWPP, Saudi Arabia 2012, 550,000 m<sup>3</sup>/d MSF

## Department of Environment, Land, and Planning



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#### SELECTED REFERENCES

##### Contract Manager on behalf of State Government of Victoria

Victoria Desalination Project, Wonthaggi, Victoria, Australia 2012, 440,000 m<sup>3</sup>/d RO

## Ecoagua Ingenieros



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### SELECTED REFERENCES

#### Consultant

Jeddah IV Seawater Reverse Osmosis Desalination Plant, Jeddah, Saudi Arabia 2016, 404,000 m<sup>3</sup>/d SWRO

Barka 4 Seawater Reverse Osmosis Desalination Plant, Barka, Oman 2015, 281,000 m<sup>3</sup>/d SWRO

Sohar 3 Seawater Reverse Osmosis Desalination Plant, Sohar, Oman 2015, 250,750 m<sup>3</sup>/d SWRO

Qurayyat Seawater Reverse Osmosis Desalination Plant, Qurayyat, Oman 2014, 200,000 m<sup>3</sup>/d SWRO

Ras Laffan Seawater Reverse Osmosis Desalination Plant, Ras Laffan, Qatar 2014, 159,100 m<sup>3</sup>/d SWRO

La Chimba Expansion Seawater Reverse Osmosis Desalination Plant, Antofagasta, Chile 2014, 25,920 m<sup>3</sup>/d SWRO

Basra Brackish Water Reverse Osmosis Desalination Plant, Basra, Iraq 2013, 199,000 m<sup>3</sup>/d BWRO

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### SELECTED REFERENCES

#### Engineering Consultant

RAF A3, Al Wakrah, Ras Abu Fontas, Qatar 2015, 163,656 m<sup>3</sup>/d RO  
RO II Sohar Industrial Port Area, Oman 2014, 35 MLD RO

Grainfield power and water plant Facility D, Qatar 2012, 272,760 m<sup>3</sup>/d RO

Extension of PWPA for RAFA power and water plant, Qatar 2012, 250,030 m<sup>3</sup>/d MSF

Industrial Desalinated Water Facility, Qatar 2012, 204,570 m<sup>3</sup>/d RO

Extension of potable water production, Qatar 2012, 181,840 m<sup>3</sup>/d RO/MSF/MED

Ras Abu Fontas A, Qatar, 315,000 m<sup>3</sup>/d MSF

Ras Abu Fontas C, Qatar, 120,000 m<sup>3</sup>/d MSF

## Estruagua



[www.estruagua.com/en](http://www.estruagua.com/en)

### SELECTED REFERENCES

#### Seawater Intake

TUAS 3, Singapore, 57,246 m<sup>3</sup>/d RO

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### SELECTED REFERENCES

#### Consultant

Sohar IWP, Sohar, Oman 2016, 250,000 m<sup>3</sup>/d RO

Barka IWP, Barka, Oman 2015, 281,000 m<sup>3</sup>/d RO

Saghi Kosar (SAKO), Bandar Abbas, Hormozgan Province, Iran 2015, 100,000 m<sup>3</sup>/d RO

Mamelles RO Plant, Senegal 2015, 100,000 m<sup>3</sup>/d RO

Sur Extension, Sur, Oman 2015, 42,922 m<sup>3</sup>/d RO

SDC Extension, Sur, Oman 2015, 10,0 MIGD RO

West Coast, Saudi Arabia 2014, 10,000 m<sup>3</sup>/d RO

Olympic Dam Expansion Project, BHP, Adelaide, SA, Australia 2013, 169,000 m<sup>3</sup>/d RO

Mile 6 IWP, Windhoek, Namibia 2013, 60,000 m<sup>3</sup>/d RO

MENA Study Phase 2, 170,000 m<sup>3</sup>/d RO

Bandar Abbas, Iran, 100,000 m<sup>3</sup>/d RO

Khafji, Saudi Arabia, 30,000 m<sup>3</sup>/d RO

MAA Oil Refinery, Safat, Kuwait, 4 MIGD Other / Unknown

#### Lender's Technical Advisor

CWS Codelco, Antofagasta, Chile 2020, 72,576 m<sup>3</sup>/d RO

Sur IWP, Sur, Oman, 83,648 m<sup>3</sup>/d RO

Cobra - Technical Advisor für 2 Entsalzungsanlagen, Oman, Other / Unknown

#### Owner's Engineer

Al-Jubail SWRO Desalination Plant Phase 2, Al Jubail, Saudi Arabia 2020, 400,000 m<sup>3</sup>/d RO

Offshore floating desalination barges, Janbu, Saudi Arabia 2020, 150,000 m<sup>3</sup>/d RO

Khobar 2 RO, Al Khobar, Saudi Arabia 2019, 630,000 m<sup>3</sup>/d RO

RAF A3, Doha, Qatar 2015, 163,330 m<sup>3</sup>/d RO

Al Khafji RO Desalination Plant, Al Khafji, Saudi Arabia 2014, 30,000 m<sup>3</sup>/d RO

Az Zour North I WPP, Kuwait 2013, 486,422 m<sup>3</sup>/d MED  
 RAF A2, Qatar 2013, 163,656 m<sup>3</sup>/d RO  
 Ras Abu Fontas 2, Doha, United Arab Emirates 2013, 40,914 m<sup>3</sup>/d  
 Seychelles 2012, 13,050 m<sup>3</sup>/d RO  
 Shuweihat 2, Abu Dhabi, United Arab Emirates 2011, 454,200 m<sup>3</sup>/d MSF  
 Ras Az Zawr SWCC, Saudi Arabia 2010, 1,025,000 m<sup>3</sup>/d Other / Unknown

#### Technical Advisor

M2 RO IWP, Mirfa, United Arab Emirates 2023, 120 MIGD RO  
 Shuweihat 4 IWP, Abu Dhabi, Shuweihat, United Arab Emirates 2022, 70 MIGD RO  
 Barka 5, Barka, Oman 2021, 100,000 m<sup>3</sup>/d RO  
 Ghubrah 3, Ghubrah, Oman 2020, 300,000 m<sup>3</sup>/d RO  
 Rabigh Phase 3 IWPP, Saudi Arabia 2019, 600,000 m<sup>3</sup>/d RO  
 Al Ghubrah IWP, Muscat, Oman 2014, 191,000 m<sup>3</sup>/d RO  
 Gaza Central Desalination Plant, Gaza, Palestine 2014, 160,000 m<sup>3</sup>/d RO  
 Yánbu 3, Yanbu, Saudi Arabia 2013, 550,000 m<sup>3</sup>/d Other / Unknown  
 Sohar IWP, Suwaiq, Oman 2013, 225,000 m<sup>3</sup>/d RO  
 Jorf Lasfar, OCP, Morocco 2013, 150,000 m<sup>3</sup>/d RO  
 Quebrada Blanca Phase 2, Quebrada, Chile 2013, 110,000 m<sup>3</sup>/d RO  
 Salalah IWPP, OPWP, Oman 2012, 70,000 m<sup>3</sup>/d RO  
 Seychelles 2012, 13,050 m<sup>3</sup>/d RO  
 Maqtaa - equipment due diligence, Algeria 2011, 500,000 m<sup>3</sup>/d RO  
 Victoria Desalination Plant (IWP), Melbourne, VIC, Australia 2011, 450,000 m<sup>3</sup>/d RO  
 Ras Laffan C IWPP, Doha, Qatar 2011, 280,000 m<sup>3</sup>/d MSF  
 Barka I Expansion, Oman 2011, 45,460 m<sup>3</sup>/d RO  
 Jebel Ali Power and Desalination Station M, Dubai, United Arab Emirates 2010, 636,440 m<sup>3</sup>/d MSF  
 Fujairah F2 IWPP, ADWEA, United Arab Emirates 2010, 600,000 m<sup>3</sup>/d MED  
 Yanbu III SWCC, Saudi Arabia 2010, 550,000 m<sup>3</sup>/d MSF  
 Sydney Water Desalination Plant, NSW, Australia 2010, 250,000 m<sup>3</sup>/d RO  
 Shuqaiq IWPP Phase II, WEC, Saudi Arabia 2010, 212,000 m<sup>3</sup>/d RO

#### Technical Advisor for Plant Owner/ Operator

Barka 1, Phase 2, Oman, 56,825 m<sup>3</sup>/d RO

#### Technical Advisor for the Offtaker, IWP/P Tender

Jubail Phase 3 IWPP, Saudi Arabia, 340,000 m<sup>3</sup>/d RO  
 Water 2021 IWP, Muscat, Oman, 325,000 m<sup>3</sup>/d Other / Unknown  
 AL Hamriyah, Sharjah, United Arab Emirates, 250,000 m<sup>3</sup>/d RO  
 Shuaibah RO Extension II, Saudi Arabia, 250,000 m<sup>3</sup>/d RO  
 Salalah 2 IWPP, Oman, 45,460 m<sup>3</sup>/d Other / Unknown

## Florida Design Contractors, Inc.



[www.floridadesigncontractors.com](http://www.floridadesigncontractors.com)

#### SELECTED REFERENCES

##### Prime Contractor

Dayton Beach reuse pilot, Daytona Beach, Florida, United States 2018, 757 m<sup>3</sup>/d RO

## Ganden



[www.ganden.com.au](http://www.ganden.com.au)

#### SELECTED REFERENCES

##### Consultant for Desalination Feasibility Study

Rous County Council, Northern New South Wales, Australia, 10,000 m<sup>3</sup>/d RO

##### Design and Upgrade of the Process, Civil, Mechanical and Structural Design

Cloncurry Sewage Treatment Plant, Cloncurry Shire Council, Queensland, Australia 2019, 1,500 m<sup>3</sup>/d

##### Engineering Consultant

San Andres Desalination Plant, San Andres, Colombia 2017, 4,500 m<sup>3</sup>/d RO

Lorim Point STP, Weipa, Queensland, Australia 2017, 250 m<sup>3</sup>/d UF

Awonga Point STP, Weipa, Queensland, Australia 2015, 2,000 m<sup>3</sup>/d UF

Confidential, Brisbane, Queensland, Australia, 40 m<sup>3</sup>/d MBR

##### Principal Consultant

Mossman STP, Mossman, Douglas Shire Council, Queensland, Australia 2021, 1,730 m<sup>3</sup>/d Other / Unknown

Mirani Water Recycling Facility, Mackay, Queensland, Australia, 5,560 m<sup>3</sup>/d Other / Unknown

Bonny Hills Sewage Treatment Plant, Bonny Hills, New South Wales, Australia, 2,984 m<sup>3</sup>/d Other / Unknown

Wujal Wujal Sewage Treatment Plant, Wujal Wujal, Queensland, Australia, 2,025 m<sup>3</sup>/d MBR

Grenfell Sewage Treatment Plant, Grenfell, New South Wales, Australia, 1,390 m<sup>3</sup>/d Other / Unknown

Confidential, Sydney, New South Wales, Australia, 900 m<sup>3</sup>/d MBR

Port Hinchinbrook Sewage Treatment Plant, Port Hinchinbrook (Oyster Point, Cardwell), Queensland, Australia, 756 m<sup>3</sup>/d Other / Unknown

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### SELECTED REFERENCES

#### Engineering Consultant

South Orange County Desalination Project, Orange County, California, U.S.A., 5 MGD  
Monterey Peninsula Water Supply Project, Monterey County, California, U.S.A., 4.8 MGD  
City Of Oceanside Waste water Treatment Plant Injection System, San Diego County, California, U.S.A., 3 MGD  
Chino Basin Desalter Authority - Chino Desalter II, Phase 3 (Vertical Wells), Chino, California, United States 2016, 79,485 m<sup>3</sup>/d RO  
Municipal Water District of Orange County (Slant Well Installation), Dana Point, California, United States 2016, 56,775 m<sup>3</sup>/d RO  
California American Water (Slant Well Installation), Marina, California, United States 2016, 41,640 m<sup>3</sup>/d RO  
City of Oceanside (Vertical Wells), Oceanside, California, United States 2016, 18,925 m<sup>3</sup>/d RO  
California American Water (Slant Wells), Marina, California, United States 2014, 24,225 m<sup>3</sup>/d RO  
San Diego County Water Authority (Vertical Wells), Camp Pendleton/Oceanside, California, United States 2013, 189,270 m<sup>3</sup>/d RO  
Monterey County Water Resources Agency (Slant Wells), Monterey, California, United States 2013, 22,700 m<sup>3</sup>/d RO

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### SELECTED REFERENCES

#### Consulting Engineer

Newman Water Treatment Plant, Newman, Western Australia, Australia 2015, 16,000 m<sup>3</sup>/d RO  
Carlsbad Desalination Plant, Carlsbad, California, United States 2012, 189,250 m<sup>3</sup>/d RO

#### Owner's Engineer

Doheny Desalination Project, California, United States 2024, 5 MGD RO  
Carlsbad Desalination Plant, Carlsbad, California, United States 2012, 189,250 m<sup>3</sup>/d RO

## GKW Consult

www.gkw-consult.com

### SELECTED REFERENCES

#### Consultant

Multiple desalination facilities, Tunisia, 32,500 m<sup>3</sup>/d



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### SELECTED REFERENCES

#### Engineering Only

Confidential Client, Alberta, Canada 2018, 36 m<sup>3</sup>/d NF  
NAIT - Research Membrane Pilot, Alberta, Canada 2018, 31 m<sup>3</sup>/d RO



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### SELECTED REFERENCES

#### Engineering Consultant

Barka 1 Expansion Phase 2, Oman 2015, 56,832 m<sup>3</sup>/d RO  
FPSO Cidade de Itajai, Brazil 2015, 15,000 m<sup>3</sup>/d NF  
FRD Oprisenesti, Oprisenesti, Romania 2015, 1,920 m<sup>3</sup>/d  
Mangala Processing Terminal SRP, Rajasthan, India 2014, 50,081 m<sup>3</sup>/d NF  
Ichthys FPSO, Offshore, Australia 2013, 360 m<sup>3</sup>/d RO  
Ichthys CPF, Offshore, Australia 2013, 206 m<sup>3</sup>/d RO

#### FEED Engineering

Angsi CEOR, Offshore, Malaysia 2012, 25,448 m<sup>3</sup>/d RO

#### Recommissioning

Chayvo OPF Expansion, Sakhalin Islands, Russia 2013, 25,440 m<sup>3</sup>/d  
Mina Al Fahal, Muscat, Oman 2013, 720 m<sup>3</sup>/d

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**SELECTED REFERENCES****RO Pilot Studies**

- San Angelo Texas, San Angelo, Texas, United States
- Seminole Tribe of Florida Brighton, Brighton, Florida, United States
- City of Grimes Iowa, Grimes, Iowa, United States
- City of Washington, Iowa, Washington, Iowa, United States
- El Paso Texas, El Paso, Texas, United States
- City of West Liberty, Iowa, West Liberty, Iowa, United States
- City of North Liberty, Iowa, North Liberty, Iowa, United States
- Lawrence Kansas, Lawrence, Kansas, United States
- Affordable Desalination Water Collaboration, Port Hueneme, California, United States
- US Filter for Tampa Bay Water, Tampa, Florida, United States
- Dow Filmtec Seawater Pilot, United States
- Collier County Pilot, Collier County, Florida, United States
- Grand Bahamas Industrial Application, Grand Bahamas, Bahamas

**UF Pilot Studies**

- Marco Island Florida, Marco Island, Florida, United States
- City of Sarasota, Sarasota, Florida, United States
- Manatee County Florida, Manatee County, Florida, United States
- Alameda County Water District California, Alameda County, California, United States
- Menterey California, Monterey, California, United States
- Abilene Texas, Abilene, Texas, United States
- Clearwater Florida, Clearwater , Florida, United States
- Lawrence Kansas, Lawrence, Kansas, United States
- Fort Worth Texas, Fort Worth , Texas, United States

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[www.hatch.ca](http://www.hatch.ca)

[www.hatch.com](http://www.hatch.com)

**SELECTED REFERENCES****Design Engineer**

- Port Stanvac, Adelaide, SA, Australia 2012, 273,800 m<sup>3</sup>/d RO

**Engineering: Pipelines**

- Port Stanvac, Adelaide, SA, Australia 2012, 273,800 m<sup>3</sup>/d RO

**EPCM**

- Copper mine, Confidential client, Chile 2013, 63,900 m<sup>3</sup>/d RO
- Copper mine, Confidential client, Chile 2013, 29,800 m<sup>3</sup>/d RO
- Candelaria, Punta Padrones, Region III, Chile 2012, 43,200 m<sup>3</sup>/d RO

**Technical Advisor**

- United Arab Emirates, 110,000 m<sup>3</sup>/d RO
- Carlsbad, San Diego, United States, 189,250 m<sup>3</sup>/d RO

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**SELECTED REFERENCES****Prime Contractor**

- SAFCOL, Elizabeth, South Australia, Australia 2021, 300 m<sup>3</sup>/d RO
- Japan Rental, Japan 2019, 2,000 m<sup>3</sup>/d RO
- Glencore Clermont Coal Mine, Queensland, Australia 2019, 700 m<sup>3</sup>/d UF
- Roy Hill, Pilbara, Western Australia, Australia 2018, 20,000 m<sup>3</sup>/d RO
- ERA Ranger OBS Project, Ranger, Northern Territory, Australia 2018, 3,000 m<sup>3</sup>/d RO
- Kwinana Power Station, Kwinana, Western Australia, Australia 2018, 1,300 m<sup>3</sup>/d RO

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**SELECTED REFERENCES****Prime Contractor**

- Tuas III, Singapore 2015, 136,000 m<sup>3</sup>/d RO

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### SELECTED REFERENCES

#### Owner's Engineer

Marvel Desalination And Salt Production Plant, Cilegon, Banten Province, Indonesia 2021, 24,000 m<sup>3</sup>/d RO

South Dhahran WWTP, Saudi Arabia 2014, 70,000 m<sup>3</sup>/d Other / Unknown

Dharan Wastewater Reuse Plant, Dhahran, Saudi Arabia 2014, 70,000 m<sup>3</sup>/d Other / Unknown

Al Heet/Al Kharj Road WWTP - Phase 3, Riyadh, Saudi Arabia 2012, 200,000 m<sup>3</sup>/d Other / Unknown

Sadara IWP, Al Jubail, Saudi Arabia 2012, 178,500 m<sup>3</sup>/d RO

#### Detailed Design Engineering

Ghadeer 2 STP, Abu Dhabi, United Arab Emirates 2021, 12,000 m<sup>3</sup>/d

#### Engineering Services

Tasiast plant, Mauritania 2013, 75,000 m<sup>3</sup>/d Other / Unknown

Jubail RO Plant, Saudi Arabia 2012, 75,000 m<sup>3</sup>/d RO

#### Feasibility Study

Planta Desaladora Coquimbo, Coquimbo, Chile 2022, 100,000 m<sup>3</sup>/d RO

Namibia, Windhoek 2019, RO

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### SELECTED REFERENCES

#### Technical Advisor

AD RO Islands, Abu Dhabi, United Arab Emirates 2022, RO

Taweelah IWP, United Arab Emirates 2019, 909,000 m<sup>3</sup>/d RO

North Batinah IWP, Oman 2019, 150,000 m<sup>3</sup>/d RO

Dhofar Water IWP, Oman 2019, 150,000 m<sup>3</sup>/d RO

Barka V IWP, Oman 2019, 100,000 m<sup>3</sup>/d RO

Ghubrah III IWP, Oman 2019, 100,000 m<sup>3</sup>/d RO

Taweelah IWP SWRO, United Arab Emirates 2017, 909,000 m<sup>3</sup>/d RO

Shuqaiq III IWP, Saudi Arabia 2017, 100 MIGD RO

Yanbu IV IWP, Saudi Arabia 2017, 100 MIGD RO

Sharqiyah IWP, Oman 2016, 80,000 m<sup>3</sup>/d RO

Umm Al Quwain, United Arab Emirates 2016, 150 MIGD RO

SAKO Desalination & Power Plant, Iran 2014, 1,000,000 m<sup>3</sup>/d RO

South Dharan SWRO, Saudi Arabia 2014, 100,000 m<sup>3</sup>/d RO

Renewable Energy Pilot Plants, United Arab Emirates 2012, 1,500 m<sup>3</sup>/d RO

MIRFA IWPP, United Arab Emirates 2012, 30 MIGD RO

#### Consultant

Sanandaj WWTP Javeh Dam Inflow Water Quality Upgrade Iran 2015, 118,640 m<sup>3</sup>/d Other / Unknown

Sulaibiya Wastewater Treatment and Reclamation Plant Expansion, Kuwait 2014, 225,000 m<sup>3</sup>/d RO

Dharan Desalination Plant, Dhahran, Saudi Arabia 2014, 100,000 m<sup>3</sup>/d RO

## Integrated Water Services



[www.integrated-water.co.uk](http://www.integrated-water.co.uk)

### SELECTED REFERENCES

#### Prime Contractor

Padre Dam Advanced Water Treatment Demonstation Project, California, United States 2014, 380 m<sup>3</sup>/d RO

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[www.jacobs.com](http://www.jacobs.com)

**SELECTED REFERENCES****Design Engineer**

Changi NEWater Factory 3 (CNF3), Singapore 2021, 227,000 m<sup>3</sup>/d RO

Tuas Water Reclamation Plant, Singapore 2021, 113,550 m<sup>3</sup>/d RO

Chua Chu Kang Water Works plant upgrade, Singapore Public Utilities Board, Singapore 2019, 360,000 m<sup>3</sup>/d

Confidential Industrial Client, Goodyear, Arizona, United States 2021, 7,000 m<sup>3</sup>/d RO

Brandon Water Treatment Facility, Brandon, Manitoba, Canada 2020, 30,000 m<sup>3</sup>/d NF

Chua Chu Kang Water Works Plant Upgrade, Singapore Public Utilities Board, Singapore 2019, 360,000 m<sup>3</sup>/d Other / Unknown

Green Meadows Water Treatment Plant, Fort Myers, Florida, United States 2017, 28,390 m<sup>3</sup>/d RO

Cherry Point WTP, North Carolina, United States 2017, 22,710 m<sup>3</sup>/d NF

Reynolds Desalination Facility, Chula Vista, California, United States 2017, 20,000 m<sup>3</sup>/d RO

NSID Nanofiltration Facility, North Springs, FL, United States 2016, 25,549 m<sup>3</sup>/d NF

Sherman WTP, TX, United States 2015, 44,000 m<sup>3</sup>/d RO

Lakeview WTP Phase II Expansion, Missasauga, Ontario, Canada 2014, 473,125 m<sup>3</sup>/d UF

Marco Island North Water Treatment Plant, Marco Island, FL, United States 2013, 25,250 m<sup>3</sup>/d Other / Unknown

Hadnot WTP, Camp Lejeune, NC, United States, 30,283 m<sup>3</sup>/d NF

**Engineering Consultant**

Advanced Metering Infrastructure (AMI) Specialist for PUB Singapore's Smart Water Meter Programme Rollout, Singapore 2019, 1,627,727 m<sup>3</sup>/d

Jorf Lasfar Seawater Desalination Plant, Morocco 2018, 130,000 m<sup>3</sup>/d RO

Jurong Island Desalination Plant, Singapore 2017, 136,000 m<sup>3</sup>/d RO

Tuas 3, Singapore 2015, 136,000 m<sup>3</sup>/d RO

ACWA Power Barka, Oman 2015, 56,777 m<sup>3</sup>/d RO

Twenty-nine Palms Water Treatment Plant, California, United States 2017, 11,350 m<sup>3</sup>/d RO

Tuas 3 Desalination Plant, Singapore 2015, 136,000 m<sup>3</sup>/d RO

Marina East Desalination Plant, Singapore 2015, 136,000 m<sup>3</sup>/d RO

ACWA Power Barka Desalination Plant, Oman 2015, 56,777 m<sup>3</sup>/d RO

MIRFA Independent Water and Power Project, Abu Dhabi, United Arab Emirates 2014, 136,000 m<sup>3</sup>/d RO

National Water Company's Al-Saad Water Treatment Plant, Riyadh, Saudi Arabia 2013, 360,000 m<sup>3</sup>/d RO

Gwinnett County NRW/Smart Cities AMI Pilot, GA, United States, 264,979 m<sup>3</sup>/d UF

SWIFT Potable Reuse Groundwater Replenishment Project, VA, United States, 3,800 m<sup>3</sup>/d current, 380,000 m<sup>3</sup>/d planned

**JF Shea**

[www.jfshea.com](http://www.jfshea.com)

**SELECTED REFERENCES****Prime Contractor**

Groundwater Reliability Improvement Programme, Pico Rivera, California, United States 2016, 33,520 m<sup>3</sup>/d RO

Carlsbad Desalination Plant, San Diego, United States 2012, 189,250 m<sup>3</sup>/d RO

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**SELECTED REFERENCES****Construction**

Kay Bailey Hutchison Desalination Plant, El Paso, United States, 104,087 m<sup>3</sup>/d RO

Northwater Treatment Plant, Golden, Colorado, United States, 283,906 m<sup>3</sup>/d Unknown

Claude "Bud" Lewis Desalination Plant, Carlsbad, California, United States, 204,412 m<sup>3</sup>/d RO

F. Wayne WRC Contracts, Buford, Georgia, United States, 189,271 m<sup>3</sup>/d RO

Peter D. Binney WPF, Aurora, Colorado, United States, 189,271 m<sup>3</sup>/d Unknown

Brightwater Treatment Plant, Woodinville, Washington, United States, 136,275 m<sup>3</sup>/d MBR

Buckman WTP, Santa Fe, New Mexico, United States, 56,781 m<sup>3</sup>/d Unknown

Perris Water Filtration Plant, California, United States, 37,854 m<sup>3</sup>/d RO

Broadway Road Water Treatment Campus, Buckeye, Arizona, United States, 30,283 m<sup>3</sup>/d RO

Santa Monica Sustainable Water Infrastructure Project (SWIP), California, United States, 20,820 m<sup>3</sup>/d RO

Perris II Desalination Facility, California, United States, 20,441 m<sup>3</sup>/d RO

Charles E. Meyer Desalination Facility Refit, Santa Barbara, California, United States, 11,356 m<sup>3</sup>/d RO

Hillburn (formerly Western Ramapo) Advanced Wastewater Treatment, Hillburn, New York, United States, 5,678 m<sup>3</sup>/d RO

Carson Advanced Water Treatment Facility - Pilot, California, United States, 3,785 m<sup>3</sup>/d RO

**Construction and Testing**

South Bay Water Reclamation Plant, San Diego, United States, 56,775 m<sup>3</sup>/d RO

**Design and Construction**

Carlsbad Desalination Plant, San Diego, United States, 189,250 m<sup>3</sup>/d RO

Charles E Meyer Desalination Plant, Santa Barbara, United States, 11,355 m<sup>3</sup>/d RO

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### SELECTED REFERENCES

#### Engineering Consultant

Al Khairan IWPP, Kuwait 2021, 568,000 m<sup>3</sup>/d Unknown  
Kuwait City, Kuwait 2017, MED  
Ras Abu Fontas A2, Doha, Qatar 2015, 164,000 m<sup>3</sup>/d MSF  
Facility D IWPP, Dohar, Qatar 2014, 591,000 m<sup>3</sup>/d RO, MSF  
Az Zour North IWPP Phase I, Ra's az Zawr, Kuwait 2013, 486,400 m<sup>3</sup>/d MED  
Mirfa IWPP, Abu Dhabi, United Arab Emirates 2013, 239,000 m<sup>3</sup>/d RO

## Leed Engineering and Construction



[www.leed.net.au](http://www.leed.net.au)

### SELECTED REFERENCES

#### Prime Contractor

Bolivar WWTP desalination expansion, Australia 2018, 17,000 m<sup>3</sup>/d RO  
Bolivar WWTP upgrade, Australia 2018, 54,000 m<sup>3</sup>/d Tertiary treatment

## Mitsubishi Corporation



[www.mitsubishicorp.com](http://www.mitsubishicorp.com)

### SELECTED REFERENCES

#### Prime Contractor

Ehime, Japan 2016, 1,800 m<sup>3</sup>/d RO  
Ras Abu Fontas, Qatar 2015, 163,656 m<sup>3</sup>/d RO

## Mitsui & Co.



[www.mitsui.com/jp/en](http://www.mitsui.com/jp/en)

### SELECTED REFERENCES

#### Prime Contractor

WWTP for Chemical Industry, Coatzacoalcos, Nuevo León, Mexico 2021, ED  
WWTP for Food and Beverage Industry, Apodaca, Nuevo León, Mexico 2021, Other / Unknown  
WWTP for Chemical Industry, Ecatepec, Edo. México, Mexico 2020, RO  
WWTP for Chemical Industry, Villa de García, Nuevo León, Mexico 2013, ED  
WWTP for Automotive Industry, Celaya, Guanajuato, Mexico 2012, MBR

## MNS Engineers, Inc.



[www.mnsengineers.com](http://www.mnsengineers.com)

### SELECTED REFERENCES

#### Prime Contractor

Pure Water Monterey, California, United States 2017, 15,140 m<sup>3</sup>/d RO

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### SELECTED REFERENCES

#### Prime Contractor

Rio Rancho reuse project, Rio Rancho, New Mexico, United States 2017, 5,678 m<sup>3</sup>/d MBR  
Australia Pacific LNG Water Treatment Facility, Brisbane, Australia 2012, 80,000 m<sup>3</sup>/d RO

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RAF A2 Desalination Plant, Ras Abu Fontas, Qatar 2014, MSF  
 Qurayyat IWP, Oman 2013, 200,024 m<sup>3</sup>/d RO  
 Barka 1 Expansion (Phase 2), Oman 2013, 59,098 m<sup>3</sup>/d RO  
 Sur Expansion, Oman 2013, 48,188 m<sup>3</sup>/d RO  
 Re-location of temporary plant to Khasab, Khasab, Oman 2013, RO

**Design and Consultancy**

Tampa Bay Desalination Plant Upgrades, Florida, United States 2013, 94,635 m<sup>3</sup>/d RO  
 Ghubrah Independent Water Project, Muscat, Oman 2013, 42 MIGD RO  
 Hamma Desalination Plant, Algiers, Algeria 2012, 200,000 m<sup>3</sup>/d RO  
 Carlsbad Desalination Plant, United States 2012, 196,841 m<sup>3</sup>/d RO  
 Ghubrah IWP, Oman 2012, 190,932 m<sup>3</sup>/d RO  
 Ras Abu Fontas Power and Desalination Plant, Doha, Qatar 2012, 136,274 m<sup>3</sup>/d Thermal  
 Rabigh Independent Water Steam Power Producer II, Rabigh, Saudi Arabia 2012, 93,500 m<sup>3</sup>/d RO  
 Barka I SWRO, Oman 2012, 45,450 m<sup>3</sup>/d RO  
 Batinah temporary desalination plant, Sohar, Oman 2012, 20,000 m<sup>3</sup>/d RO  
 Barka 1 Expansion, Oman 2012, 10 MIGD RO  
 Songo and Mnazi Gas Fields, Mnazi Bay, Songo Songo Island, Tanzania 2012, Other / Unknown  
 Ras Al Zour, Saudi Arabia, 249,810 m<sup>3</sup>/d Other / Unknown  
 Al Taweeleah, Abu Dhabi, United Arab Emirates, 227,100 m<sup>3</sup>/d Other / Unknown  
 Keppel Fel, Singapore, 136,260 m<sup>3</sup>/d RO  
 Sharqiya IWP, Sur, Oman, 121,120 m<sup>3</sup>/d Other / Unknown  
 Jafza, Dubai, United Arab Emirates, 99,924 m<sup>3</sup>/d RO  
 North Palm Water RO Plant, United Arab Emirates, 90,840 m<sup>3</sup>/d RO  
 Rabigh, Saudi Arabia, 81,756 m<sup>3</sup>/d Other / Unknown  
 Al Slam City SWRO Plant, United Arab Emirates, 75,700 m<sup>3</sup>/d RO  
 Decosol, Spain, 56,775 m<sup>3</sup>/d Other / Unknown  
 Taweeleah A1, Abu Dhabi, United Arab Emirates, 45,420 m<sup>3</sup>/d Other / Unknown  
 Shoreham, United Kingdom, 29,902 m<sup>3</sup>/d Other / Unknown  
 Floating Desalination Plants, Algeria, 29,901 m<sup>3</sup>/d Other / Unknown  
 Barge Raka, Saudi Arabia, 24,981 m<sup>3</sup>/d RO  
 8 RO Plants, United Arab Emirates, 22,710 m<sup>3</sup>/d RO  
 Barge mounted desalination plant, Limassol, Cyprus, 24,000 m<sup>3</sup>/d RO  
 Dhekelia, Cyprus, 18,925 m<sup>3</sup>/d Other / Unknown  
 Ajman, Dubai, United Arab Emirates, 14,004 m<sup>3</sup>/d RO  
 Fujairah, 9,084 m<sup>3</sup>/d Other / Unknown  
 Alba Power Station, Bahrain, 3,785 m<sup>3</sup>/d RO  
 Wudham & Goat Island, Oman, 2,384 m<sup>3</sup>/d

**Design and Engineering**Umm Al Quwain, United Arab Emirates, 13,626 m<sup>3</sup>/d RO**Feasibility Study**Cherokee Metro District Black Squirrel Reclamation Facility, Colorado, United States 2014, 6,057 m<sup>3</sup>/d UV**Moya Bushnak**

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[www.bushnak.com](http://www.bushnak.com)**SELECTED REFERENCES****Engineering Consultant**

Ministry of Water & Agriculture, Djibouti, Republic of Djibouti 2017, 22,500 m<sup>3</sup>/d RO  
 Al-Afandi Buhairat, Jeddah, Saudi Arabia 2012, 4,921 m<sup>3</sup>/d RO

**Murugappa Group**[www.murugappawater.com](http://www.murugappawater.com)**SELECTED REFERENCES****Prime Contractor**Waste Water Recycle Plant, Bangalore, India 2018, 600 m<sup>3</sup>/d**Myers & Sons**[www.myers-sons.com](http://www.myers-sons.com)**SELECTED REFERENCES****Prime Contractor**Malibu Civil Centre WWTP, California, United States 2017, 723 m<sup>3</sup>/d MBR

## Nomura Micro Science



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[www.nomura.com](http://www.nomura.com)

### SELECTED REFERENCES

#### Consultant

Xian, China 2012, 12,000 m<sup>3</sup>/d RO

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### SELECTED REFERENCES

#### Consultant

Middle East, 216,000 m<sup>3</sup>/d RO

Southeast Asia, 300,000 m<sup>3</sup>/d RO

#### Consultant: Operation

Canada 2008, 6,541 m<sup>3</sup>/d RO

Indonesia, 2,000 m<sup>3</sup>/d RO

#### Consulting Services: RO System and Pretreatment

Australia 2009, 444,000 m<sup>3</sup>/d RO

Australia, 140,045 m<sup>3</sup>/d RO

Middle East, 910,000 m<sup>3</sup>/d RO

Europe, 189,250 m<sup>3</sup>/d RO

Australia, 136,260 m<sup>3</sup>/d Other/Unknown

USA, United States, 8,327 m<sup>3</sup>/d Other/Unknown

USA, United States, 7,570 m<sup>3</sup>/d Other/Unknown

Latin America, 40,878 m<sup>3</sup>/d RO

Caribbean, 36,336 m<sup>3</sup>/d Other/Unknown

Middle East, 11,355 m<sup>3</sup>/d RO

North America, 11,355 m<sup>3</sup>/d RO

North America, 9,084 m<sup>3</sup>/d NF

Middle East, 5,000 m<sup>3</sup>/d RO

Latin America, 4,542 m<sup>3</sup>/d RO

## Pacific Advanced Civil Engineering, Inc. (PACE)



[www.pacewater.com](http://www.pacewater.com)

### SELECTED REFERENCES

#### Prime Contractor

Pacific Grove reuse, Pacific Grove, California, United States 2015, 946 m<sup>3</sup>/d MBR

## PERC Water Corporation



[www.percwater.com](http://www.percwater.com)

### SELECTED REFERENCES

#### O&M and Prime Contractor

Pacific Grove reuse, California, United States 2015, 946 m<sup>3</sup>/d MBR

#### Prime Contractor

Groundwater Reliability Improvement Programme, Pico Rivera, California, United States 2016, 33,520 m<sup>3</sup>/d RO

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### SELECTED REFERENCES

#### Engineering Consultant

Qeshm Island, Hormozgan Province, Iran, 6,000 m<sup>3</sup>/d MSF

Parsian SWRO, Parsian, Hormozgan Province, Iran, 750,000 m<sup>3</sup>/d RO

Bandar Abbas SWRO, Bandar Abbas, Hormozgan Province, Iran, 100,000 m<sup>3</sup>/d RO

**RJ Industries**[www.rjindustriesny.com](http://www.rjindustriesny.com)**SELECTED REFERENCES****Prime Contractor**

Riverhead WWTP - Upgrade, New York, United States 2014, 5,299 m<sup>3</sup>/d MBR

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[www.scinorwater.com](http://www.scinorwater.com)**SELECTED REFERENCES****Prime Contractor**

Gaocheng southern part new-built sewage treatment plant project, Hebei, Shijiazhuang, China 2022, 55,000 m<sup>3</sup>/d, MBR

**Shaporji Pallonji**[www.shaporjipallonji.com](http://www.shaporjipallonji.com)**SELECTED REFERENCES****Subcontractor**

Al Dur Power and Water Project Phase - 2, Abu Dhabi, United Arab Emirates 2018, 227,304 m<sup>3</sup>/d RO

**Shimmick Construction**[www.shimmick.com](http://www.shimmick.com)**SELECTED REFERENCES****Construction**

Robert Goldsworthy De-salter Expansion, Torrance, California, United States, RO

**Southern Champion Construction**[www.southernchampion.com](http://www.southernchampion.com)**SELECTED REFERENCES****Prime Contractor**

Pooler MBR - Expansion, Pooler, Georgia, United States 2016, 3,027 m<sup>3</sup>/d MBR

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[www.stantec.com/water](http://www.stantec.com/water)**SELECTED REFERENCES****Prime Consultant**

City of Santa Monica Sustainable Water Infrastructure Program (SWIP) Owner's Advisory Services, California, Santa Monica, California, United States 2017, 1.5 MGD MBR

Advanced Purification Center, Carson, California, United States 2016, 0.5 MGD RO

Pure Water Facility, San Diego, California, United States 2015, 30 MGD RO

Westside Recycled Water Project, San Francisco, California, United States, 4.5 MGD RO

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[www.sychem.gr](http://www.sychem.gr)**SELECTED REFERENCES****Subcontractor**

Agia Paraskevi Desalination Plant Expansion - SWRO 5000CMD, Ag. Paraskevi, Santorini, Greece 2022, 5,000 m<sup>3</sup>/d RO

Hudayriat SWRO 4,000CMD, Abu Dhabi, United Arab Emirates 2022, 4,000 m<sup>3</sup>/d RO

Gastouni Filtration Plant - AFM 150.000, Gastouni, Ilia, Greece 2022, 3,600 m<sup>3</sup>/d Other / Unknown

Oia Desalination Plant - SWRO 2000CMD, Oia, Santorini, Greece 2022, 2,000 m<sup>3</sup>/d RO

SWRO 1500CMD, Red sea, Saudi Arabia 2022, 1,500 m<sup>3</sup>/d RO

SWRO 1000CMD, Red sea, Saudi Arabia 2022, 1,000 m<sup>3</sup>/d RO

AFM 30000, Dhaka, Bangladesh 2022, 720 m<sup>3</sup>/d Other / Unknown

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WWTP AFM- ceramic UF 20000, Oinofyta, Boeotia, Greece 2022, 500 m<sup>3</sup>/d Other / Unknown  
Landfill leachate UF-LWRO5000, Athens, Greece 2022, 100 m<sup>3</sup>/d RO  
MBR - Ceramic UF1000, Heraklion, Crete, Greece 2022, 25 m<sup>3</sup>/d Other / Unknown  
Jorf Lasfar 2 Expansion, Jorf Lasfar, Morocco 2021, 30,000 m<sup>3</sup>/d RO  
AFM 16000, Dhaka, Bangladesh 2021, 3,840 m<sup>3</sup>/d Other / Unknown  
Ag. Nikolaos CCPP - Demi WTP, Voiotia, Ag. Nikolaos, Greece 2021, 720 m<sup>3</sup>/d ED  
Tobruk Open Cycle Power Plant, Tobruk, Libya 2021, 384 m<sup>3</sup>/d ED  
Peloponnesian Landfill SDIT -Leachate Treatment, Peloponnese, Arkadia, Greece 2021, 125 m<sup>3</sup>/d RO  
Peloponnesian Landfill SDIT -Leachate Treatment, Peloponnese, Lakonia, Greece 2021, 90 m<sup>3</sup>/d RO  
Peloponnesian Landfill SDIT -Leachate Treatment, Peloponnese, Messinia, Greece 2021, 90 m<sup>3</sup>/d RO  
Landfill leachate Oum El Bouaghi, Oum El Bouaghi, Algeria 2021, 80 m<sup>3</sup>/d RO  
Landfill leachate Souk Ahras, Souk Ahras, Algeria 2021, 80 m<sup>3</sup>/d RO  
Landfill leachate Tebessa, Tebessa, Algeria 2021, 80 m<sup>3</sup>/d RO  
Landfill leachate Oum El Bouaghi, Oum El Bouaghi, Algeria 2021, 80 m<sup>3</sup>/d RO

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### SELECTED REFERENCES

#### Engineering and Construction Services

Claude "Bud" Lewis Carlsbad Seawater Desalination Project, Carlsbad, California, United States 2012, 204,412 m<sup>3</sup>/d RO  
San Antonio Desalination Plant: H2Oaks Center, Texas, United States, 45,425 m<sup>3</sup>/d RO

#### Prime Contractor

Groundwater Reliability Improvement Programme, Pico Rivera, California, United States 2016, 33,520 m<sup>3</sup>/d RO

## The Institute of Seawater Desalination & Multipurpose Utilization, SOA (Tianjin)



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[www.sdmu.com.cn](http://www.sdmu.com.cn)

### SELECTED REFERENCES

#### Technology Provider

Hainan Sansha Yongxing Island desalination plant, Sansha, Hainan, China 2013, 1,000 m<sup>3</sup>/d RO

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### SELECTED REFERENCES

#### Owner's Engineer

Site supervision services for Shuaibah 3 IWP, Shuaibah, Saudi Arabia 2023, 600,000 m<sup>3</sup>/d RO

Site supervision services for Jubail 3A IWP, Jubail, Saudi Arabia 2022, 600,000 m<sup>3</sup>/d RO

Site supervision services for Jubail 3B IWP, Jubail, Saudi Arabia 2022, 570,000 m<sup>3</sup>/d RO

Site supervision services for Yanbu 4 IWP, Yanbu, Saudi Arabia 2022, 450,000 m<sup>3</sup>/d RO

Site supervision services for Shuaibah 3 Expansion II SWRO, Shuaibah, Saudi Arabia 2019, 250,000 m<sup>3</sup>/d RO

Al-Khafji desalination and photovoltaic power generation plant, Al-Khafji, Saudi Arabia 2018, 60,300 m<sup>3</sup>/d RO

Technical assistance and site supervision of the SWRO plant at Torrevieja (Alicante), Alicante, Com. Valenciana, Spain 2013, 240,000 m<sup>3</sup>/d RO

#### Engineering Consultant

Basic Design for Foix - Desalination Plant, Tarragona, Catalunya, Spain 2022, 400,000 m<sup>3</sup>/d RO

Basic Design for Tordera-2 Expansion - Desalination Plant, Tarragona, Catalunya, Spain 2022, 180,000 m<sup>3</sup>/d RO

Basic and Detailed Design for Chira-Soria Desalination Plant, Gran Canaria, Canaria Island, Spain 2022, 7,800 m<sup>3</sup>/d RO

Tender Design for Los Cabos Desalination Plant, Los Cabos, Baja California, Mexico 2021, 21,600 m<sup>3</sup>/d RO

Preliminary Design for Chira-Soria Desalination Plant, Gran Canaria, Canaria Island, Spain 2021, 7,800 m<sup>3</sup>/d RO

Basic Design of sea water desalination plants in Turkmenbashi and Ekerem. Stage 0, Turkmenbashi, Balkan, Turkmenistan 2019, 1,200,000 m<sup>3</sup>/d RO

Design and Construction of a complex of seawater desalination facilities: Stage 1 Preliminary Design and Stage 2 Tender Design, Turkmenbashi, Balkan, Turkmenistan 2019, 1,200,000 m<sup>3</sup>/d RO

Tender Design Marine Works of Desalination Plant in Quintero, Chile (Aconcagua Project), Quintero, Chile 2019, 86,400 m<sup>3</sup>/d RO

Tender Design for IWP Rabigh-3, Rabigh, Saudi Arabia 2018, 600,000 m<sup>3</sup>/d RO

Detailed design of the desalination plant of Ras Al Khaimah (UAE), Ras Al Khaima, United Arab Emirates 2018, 100,000 m<sup>3</sup>/d RO

Detailed design of the RO racks of the SWRO desalination plant at TUAS (Singapore), Tuas / Singapore, Singapore 2016, 136,383 m<sup>3</sup>/d RO

Al Khafji Desalination (Saudi Arabia), Al-Khafji, Saudi Arabia 2015, 1,440,000 m<sup>3</sup>/d RO

Jorf Lasfar Desalination Plant, Morocco 2012, 75,800 m<sup>3</sup>/d RO

Location study of the intake structure of the desalination Plant in Moncoba, Castellon, Com. Valenciana, Spain 2012, 50,000 m<sup>3</sup>/d RO

External independent checking of the Environmental Documentation of the Desalination Plant in Moncoba (Castellon), Castellon, Com. Valenciana, Spain 2012, 50,000 m<sup>3</sup>/d RO

Niksic Treatment (Montenegro), Niksic, Montenegro, 18,864 m<sup>3</sup>/d UV

#### Technical Advisor

Feasibility study for a SWRO in Peru, Trujillo, Peru 2021, 210,000 m<sup>3</sup>/d RO

#### Environmental Advisor

Advisory Services for Operation and Maintenance Contract for the Desalination Plant in Sagunto (Valencia), Sagunto, Com. Valenciana, Spain 2016, RO



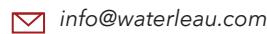
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#### SELECTED REFERENCES

##### Engineering Consultant

Sao Paolo, Brazil 2021, 396 m<sup>3</sup>/d RO

Cali, Colombia 2021, 369 m<sup>3</sup>/d RO

Flint, U.K. 2020, 400 m<sup>3</sup>/d RO

## W.M. Lyles Co.



[www.wmlylesco.com](http://www.wmlylesco.com)

#### SELECTED REFERENCES

##### Prime Contractor

Yucca Valley Water Reclamation Project, California, United States 2017, 3,785 m<sup>3</sup>/d MBR

Chino II Desalter Concentrate Reduction Facility, Chino Basin, California, United States 2013, 14,092 m<sup>3</sup>/d RO



## Welsbach Electric Corp

[www.welsbachelectric.com](http://www.welsbachelectric.com)

#### SELECTED REFERENCES

##### Prime Contractor

Riverhead WWTP - Upgrade, New York, United States 2014, 5,299 m<sup>3</sup>/d MBR

## Water & Wastewater Consulting Engineers Company



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#### SELECTED REFERENCES

##### Developer

Parkandabad 2 WWTP - Expansion, Mashhad, Khorasan-e Razavi Province, Iran 2015, 60,000 m<sup>3</sup>/d Tertiary

## Western Summit Constructors, Inc.

[www.westernsummit.com](http://www.westernsummit.com)

#### SELECTED REFERENCES

##### Construction

Kay Bailey Hutchison Desalination Plant, El Paso, United States, 102,195 m<sup>3</sup>/d RO



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**WS Atkins**



**SELECTED REFERENCES**

**Technical Advisor**

First Desalination, NEOM, Saudi Arabia 2023, 500,000 m<sup>3</sup>/d RO  
Madinah 3 ISTP, Madinah, Saudi Arabia 2021, 200,000 m<sup>3</sup>/d  
Other / Unknown  
Buraydah-2 ISTP, Buraydah, Saudi Arabia 2021, 150,000 m<sup>3</sup>/d  
Other / Unknown  
Tabuk 2 ISTP, Tabuk, Saudi Arabia 2021, 90,000 m<sup>3</sup>/d Other /  
Unknown  
Jubail 3A IWP, Jubail, Saudi Arabia 2020, 600,000 m<sup>3</sup>/d RO  
Jubail 3B IWP, Jubail, Saudi Arabia 2020, 570,000 m<sup>3</sup>/d RO  
Jeddah Airport 2 ISTP, Jeddah Airport, Saudi Arabia 2020,  
300,000 m<sup>3</sup>/d Other / Unknown  
Dammam ISTP, Dammam, Saudi Arabia 2020, 200,000 m<sup>3</sup>/d  
Other / Unknown  
Taif ISTP, Taif, Saudi Arabia 2020, 100,000 m<sup>3</sup>/d Other /  
Unknown

**Lender's Engineer**

Rabigh 4, Rabigh, Saudi Arabia 2023, 600,000 m<sup>3</sup>/d RO  
Project Wave, Abu Dhabi, United Arab Emirates 2023, 522,800  
m<sup>3</sup>/d NF  
Jafurah IWP, Jafurah, Saudi Arabia 2023, 80,000 m<sup>3</sup>/d RO  
Shuaibah 3 IWP, Shuaibah, Saudi Arabia 2022, 600,000 m<sup>3</sup>/d RO  
Mirfa 2, Abu Dhabi, United Arab Emirates 2022, 545,531 m<sup>3</sup>/d RO  
Zuluf Water Treatment Plant, Zuluf, Saudi Arabia 2022, 184,775  
m<sup>3</sup>/d Other / Unknown  
Hassyan IWP, Hassyan, United Arab Emirates 2021, 545,000 m<sup>3</sup>/d  
RO  
Yanbu 4 IWP, Yanbu, Saudi Arabia 2021, 450,000 m<sup>3</sup>/d RO  
Shuaibah 2 Exp II IWP, Shuaibah, Saudi Arabia 2021, 250,000  
m<sup>3</sup>/d RO  
Shuaibah 3 Exp 2 IWP, Shuaibah, Saudi Arabia 2020, 250,000  
m<sup>3</sup>/d RO  
Umm Al Quwain IWP, Umm Al Qwain, United Arab Emirates  
2019, 682,000 m<sup>3</sup>/d RO  
Rabigh 3 IWP, Rabigh, Saudi Arabia 2018, 600,000 m<sup>3</sup>/d RO  
Shuqaiq 3 IWP, Shuqaiq, Saudi Arabia 2018, 450,000 m<sup>3</sup>/d RO  
Muharraq STP, Muharraq, Bahrain 2012, 100,000 m<sup>3</sup>/d Other /  
Unknown  
Ajman STP, Ajman, United Arab Emirates 2012, 90,000 m<sup>3</sup>/d  
Other / Unknown

# The future of high-recovery RO

Unlocking the potential of the world's leading desalination technology

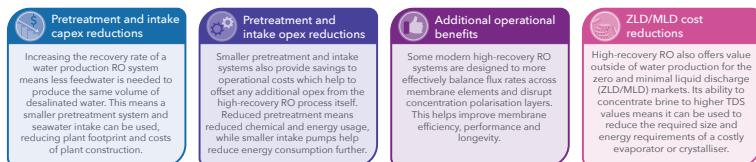


## The advantages of high-recovery RO

Increasing recovery rates can save money and improve efficiency throughout a desalination treatment train

RO is a well developed technology but it is not fully mature. One of the key areas in which the technology can still be improved is recovery rate. Traditionally, continuous single-stage SWRO systems are operated to recover around 30-50% of the feedwater as permeate. However, running at higher recovery rates brings several significant benefits to a desalination process, from pretreatment to brine management.

### The benefits of high-recovery RO over traditional RO systems:



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## The road to high-recovery SWRO

New components mean multi-stage SWRO is now viable

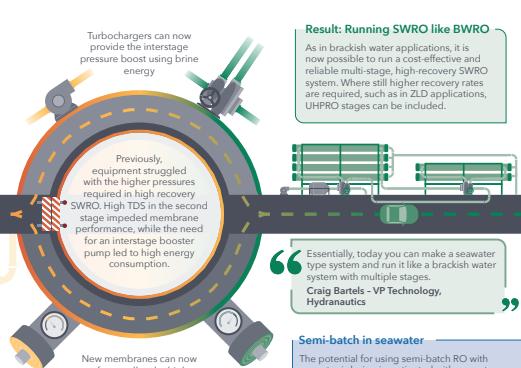
**Historical approach to SW & BW**  
In the past, single stages are commonly used to provide higher recovery rates. SWRO has historically involved just a single stage. However, producing more water from a single stage results in overflooded lead elements, increasing scaling potential and decreasing membrane lifespan. The solution is to use multiple stages.

**Single stage SWRO 40% recovery**

**Multi-stage SWRO 60% recovery**

**Multi-stage for SWRO**

A multi-stage configuration allows pressure to be increased across the system as the TDS and osmotic pressure of the feedwater increases. This leads to lower energy and avoiding overflooded. Multi-stage SWRO systems have been built in the past but were historically limited by the performance of available components.



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## Explore the use of high-recovery RO systems in the desalination sector

### Access this white paper for:

- The advantages and available technologies for high-recovery RO
- Potential growth opportunities within high-recovery RO for brackish and seawater application

## The technological landscape of high-recovery

There are multiple approaches to increasing recovery rates currently on the market

Although high-recovery RO can often be talked about as a single idea, it is a goal rather than a specific approach. To reach this goal, the two key membrane-centric obstacles are scaling and pressure limitations, with several approaches to addressing them.

"The industry has seen a lot of emphasis on improving desal system recovery to both make more effective use of the feedwater and minimise the complications and cost of concentrate disposal. There are a growing number of options available to increase RO system recovery and even more potential options that are currently under development.

Tom Pankratz - Editor, WDR

### Approaches:

**Description**  
Utilise multiple stages  
Multi-stage RO allows for higher recovery rates while keeping cross-flow velocity high and flux balanced across the system, reducing scaling potential and allowing membranes to operate in relaxed conditions.  
BiTurbo™

**Description**  
Operate in timed modes  
Halting brine discharge until desired conditions are met allows for more water to be recovered, and means recovery can be easily controlled by varying the time interval between discharges.  
Semi-batch RO, Pulse flow RO

**Description**  
Reduce osmotic pressure gradient  
Bringing down the osmotic pressure gradient across the membrane reduces the pressure requirements and permeate may want to be recovered from high-salinity streams without damage.  
Counterflow RO, Osmotically assisted RO, Impact RO™

**Description**  
Disrupt or resist scale formation  
Changes to hydraulic conditions to disrupt scale formation, or specifically designed membrane coatings and cleaning methods, allow an RO system to exceed standard operating conditions without damage.  
Osmoflo Brine Squeezer™, Flow-reversal RO

**Description**  
Increase pressure  
Increasing operating pressure allows for more water to be recovered but requires specialist components and brings additional operational challenges.  
Ultra-high pressure RO

### Design considerations



**Begin with the membrane**  
Traditional RO configurations restrict options for optimising membrane efficiency. Configurations should be chosen to allow the membranes to best meet desired recovery and permeate quality.



**Potential for hybrid configurations**  
Many of the approaches listed can theoretically be used in combination with each other, allowing for even higher recovery rates where needed, such as in brine minimisation applications.

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5

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# Pipes, Valves & Fittings

Selected references since 2012 from companies supplying pipes, valves and fittings to desalination or reuse projects.

## Legend

(D) Desalination (R) Wastewater reuse

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Our ability to supply everything from a single source sets us apart. AGRU Kunststofftechnik GmbH offers piping systems, semi-finished products, concrete protection liners and lining systems made from high-grade raw material. When it comes to application-technical consulting, we are your best partner in the field. Conservation of resources and respect for the environment occupy the foreground in all our business endeavours. Customers all over the world trust the plastics expertise the company has amassed in the course of a lifetime.

#### SELECTED REFERENCES

##### Thermoplastic Fittings

- Honaine, Algeria 2007, RO
- Desaladora, Honaine (Argelia), Algeria 2007
- P.Des. Puerto Alcudia, Alcudia (P. Mallorca), Spain 2006
- P Des Aguilas I fase, Aguilas (Murcia), Spain 2006
- P.Des. Torrevieja, Torrevieja (Alicante), Spain 2006
- P Des. Ciutadella, Ciutadella (Menorca), Spain 2005
- Desalinizadora, Martos (Jaen), Spain 2002
- P. Des. Granadilla, Carboneras Almeria, Spain 2000
- P. Des Lanzarote IV, Lanzarote, Spain 2000
- Tuas, Singapore, RO
- Andrax, Spain, RO

Perth, WA, Australia, RO  
Fujairah, Saudi Arabia, RO  
Las Palmas, Gran Canaria, Spain, RO  
Candelaria, Chile, RO  
Tenerife, Spain, RO  
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Tenes, Algeria, RO  
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#### SELECTED REFERENCES

##### Equipment Supplier: Membrane Outlet Sampling Three-Way Ball Valves

- Sierra Gorda, Chile 2013, 30,000 m<sup>3</sup>/d RO
- Spain 2013, 24,000 m<sup>3</sup>/d RO
- Beckton, United Kingdom 2010, 150,000 m<sup>3</sup>/d RO

##### Equipment Supplier: Thermoplastic Valves and Fittings

- Ptolemais, Greece 2018, 60,000 m<sup>3</sup>/d RO
- Qurayyat, Oman 2017, 200,000 m<sup>3</sup>/d RO
- Jubail IV, Saudi Arabia 2015, 100,000 m<sup>3</sup>/d RO
- Fujairah, Saudi Arabia 2014, 137,000 m<sup>3</sup>/d RO
- Sorek, Israel 2013, 624,000 m<sup>3</sup>/d RO
- Tuas II, Singapore 2013, 318,500 m<sup>3</sup>/d RO
- Carlsbad, United States 2013, 205,000 m<sup>3</sup>/d RO
- Jamnagar Gujarat, India 2013, 168,000 m<sup>3</sup>/d MED
- Episkopi, Cyprus 2013, 50,000 m<sup>3</sup>/d RO
- Sierra Gorda, Chile 2013, 30,000 m<sup>3</sup>/d RO
- Spain 2013, 24,000 m<sup>3</sup>/d RO
- Majis Sohar Industrial Port Complex, Oman 2013, 16,000 m<sup>3</sup>/d RO

##### Equipment Supplier: Valves

- Qurayyat, Oman 2016, 200,000 RO
- Ras Abu Fontas, Qatar 2015, 163,656 RO
- Sierra Gorda, Chile 2014, 8,800 RO

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Jamnagar, India 2013, 168,000 RO  
Al Ghubrah, Oman 2012, 190,932 RO  
Carlsbad proposed site, United States 2012, 189,250 RO  
Al Jubail, Saudi Arabia 2012, 100,000 RO

Hubu SWRO, China, RO  
Santa Bárbara, Curaçao, RO  
Zhilaza SWRO, China, RO  
PCN Project, Panama, RO  
Masinloc Project, Philippines, RO  
70 MW Cogeneration Power Plant, India, RO  
Assuit Power Plant, Egypt, RO  
WTP Baja California III, Mexico, RO  
New West Damietta, Egypt, RO  
Vinh Tan 4 SWRO Project, Vietnam, RO  
Ethane Cracker & EP/PP Plant, Turkmenistan, RO  
P198\_10 SWRO ASRY, Bahrain, RO  
Xudapu Nuclear Plant SWRO Project, China, RO  
Phase III Enlargement WTS Project, Shoaiba, Saudi Arabia, RO  
Saba Cooling Plant with Sea Water, Iran, RO

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### SELECTED REFERENCES

#### Equipment Supplier: Plug Valves

Shuaibah III (Extension II), Saudi Arabia 2017, 250,000 m<sup>3</sup>/d RO  
Djibouti SWRO, Republic of Djibouti 2017, 22,500 m<sup>3</sup>/d RO  
Al-Hoceima, Morocco 2017, 17,280 m<sup>3</sup>/d RO  
Facility D, Qatar 2016, 272,760 m<sup>3</sup>/d RO  
El Galalah SWRO, Egypt 2016, 150,000 m<sup>3</sup>/d RO  
El Alamein, Egypt 2016, 150,000 m<sup>3</sup>/d RO  
Sarlux Refinery, Sarroch, Italy 2016, 12,000 m<sup>3</sup>/d RO  
Ras Abu Fontas A3, Qatar 2015, 163,656 m<sup>3</sup>/d RO  
3rd Desalination Plant at Tuas, Singapore 2015, 136,260 m<sup>3</sup>/d RO  
Mirfa, Abu Dhabi, United Arab Emirates 2014, 140,000 m<sup>3</sup>/d RO  
CILACAP SWRO Project, Indonesia 2014, 7,800 m<sup>3</sup>/d RO  
AGRAGUA Retrofit SWRO, Galdar, Gran Canaria, Spain 2014, 5,000 m<sup>3</sup>/d RO  
Angamos/Mejillones Phase I, Chile 2014, 4,800 m<sup>3</sup>/d RO  
Janmagar, Gujarat SWRO, India 2013, 168,000 m<sup>3</sup>/d RO  
Provisur, Lima, Peru 2013, 12,960 m<sup>3</sup>/d RO  
Al Ghubrah, Oman 2012, 190,932 m<sup>3</sup>/d RO  
Fujairah, Al Fujairah, United Arab Emirates 2012, 136,000 m<sup>3</sup>/d RO  
Kaltim Project, Bontang, East Kalimantan, Indonesia 2012, 7,200 m<sup>3</sup>/d RO  
Asona project Takoradi T2, Ghana 2012, 2,600 m<sup>3</sup>/d RO  
Royalton Santa Lucia, Saint Lucia, 400,000 m<sup>3</sup>/d RO  
Atacata SWRO, Chile, 104,000 m<sup>3</sup>/d RO  
SWRO Jubail, United Arab Emirates, 100,000 m<sup>3</sup>/d RO  
Cia. Cerveceria Dam, Spain, 100,000 m<sup>3</sup>/d RO  
El Yousr Plant Expansion, Egypt, 40,000 m<sup>3</sup>/d RO  
El Yousr Plant, Egypt, 40,000 m<sup>3</sup>/d RO  
Sea Water SWRO System Tehran, Iran, 40,000 m<sup>3</sup>/d RO  
Red Sea SWRO Plant, Saudi Arabia, 40,000 m<sup>3</sup>/d RO  
Las Palmas II, Canary Islands, Spain, 36,000 m<sup>3</sup>/d RO  
Al Khafji, Saudi Arabia, 30,000 m<sup>3</sup>/d RO  
IDAM Ceuta, Spain, 22,000 m<sup>3</sup>/d RO  
Boleo Project, Baja California, United States, 5,000 m<sup>3</sup>/d RO  
MSM Project in BQ field, United Arab Emirates, 3,180 m<sup>3</sup>/d RO  
Jazan Utility SWRO, Saudi Arabia, 2,535 m<sup>3</sup>/d RO  
Halayeb & Shalateen, Egypt, 1,500 m<sup>3</sup>/d RO  
Mirfa SWRO Plant, United Arab Emirates, 30.0 MIGD RO  
Shandong Longkov SWRO, China, RO  
Pembroke Retrofit, Malta, RO  
Huangdao SWRO, China, RO

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### SELECTED REFERENCES

#### Equipment Supplier: Electric Actuators for Valve Automation

Zarat Seawater Desalination Plant, Tunisia 2020, 100,000 m<sup>3</sup>/d RO  
SWCC Satellite SWRO plants, Saudi Arabia 2019, 240,000 m<sup>3</sup>/d RO  
Aguas Chañar SWRO Caldera, Atacama, Chile 2018, 77,760 m<sup>3</sup>/d RO  
Minera Spence Desaladora, Chile 2017, 138,240 m<sup>3</sup>/d RO  
Barka Independent Water Project, Oman 2016, 281,000 m<sup>3</sup>/d RO  
Marina East 4 Desalination Plant, Singapore 2016, 30.0 MGD RO  
Yanbu III Desalination Plant, Saudi Arabia 2015, 550,000 m<sup>3</sup>/d MSF  
Qurayyat Desalination, Oman 2015, 200,000 m<sup>3</sup>/d RO  
Santa Barbara, California, United States 2015, 4.0 million m<sup>3</sup>/yr RO  
Carlsbad Desalination, California, United States 2014, 190,000 m<sup>3</sup>/d RO  
Ensenada Desalination, Mexico 2014, 21,600 m<sup>3</sup>/d RO  
Ras Al Khair IWPP Desalination Plant, Saudi Arabia 2013, 1,036,000 m<sup>3</sup>/d MSF  
Marafiq IWPP Jubail, Saudi Arabia 2012, 800,000 m<sup>3</sup>/d MED  
SWCC QASSIM RO, Saudi Arabia 2012, RO  
Shuaibah III IWPP DES, Saudi Arabia, 880,000 m<sup>3</sup>/d MSF  
Subiya Desalination Plant, Kuwait, 454,600 m<sup>3</sup>/d MSF  
Sydney Desalination Plant (formerly known as Bluewaters Desalination Plant), Australia, 250,000 m<sup>3</sup>/d RO  
Sohar Desalination, Oman, 250,000 m<sup>3</sup>/d RO  
Shuqaiq IWPP DES, Saudi Arabia, 212,000 m<sup>3</sup>/d RO  
Sohar IWPP, Oman, 150,000 m<sup>3</sup>/d RO  
Cape Preston Desalination Plant, Australia, 140,000 m<sup>3</sup>/d RO  
Melbourne Desalination Plant, Australia, 160.0 million m<sup>3</sup>/yr RO  
Soreq Desalination Plant (formerly known as Shafdan), Israel, 150.0 million m<sup>3</sup>/yr RO

Jebel Ali M Desalination Plant, United Arab Emirates, 140.0  
MIGD MSF  
Hadera Desalination Plant, Israel, 127.0 million m<sup>3</sup>/yr RO  
Palmachim Desalination Plant Extension, Israel, 90.0 million m<sup>3</sup>/yr RO  
Palmachim Desalination Plant, Israel, 45.0 million m<sup>3</sup>/yr RO

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### SELECTED REFERENCES

#### Equipment Supplier: Expansion Joints

Salalah Power and Desalination Plant, Oman 2019, 113,650 m<sup>3</sup>/d  
Jebel Ali Power & Desalination SWRO, Dubai, United Arab Emirates 2019, 182,000 m<sup>3</sup>/d RO  
KSA West Coast New Satellite Plants, Saudi Arabia 2019, 23,800 m<sup>3</sup>/d  
Morgan Desalination Plant, Egypt 2019  
Djibouti Desalination Plant, Djibouti 2018, 45,000 m<sup>3</sup>/d  
Provisur Desalination Plant, Peru 2018, 35,000 m<sup>3</sup>/d  
Desalination Plant - Agadir I, Morocco 2018, 27,500 m<sup>3</sup>/d  
NSAR Desalination Plant, Egypt 2018  
ATACAMA DESALINATION PLANT, Mexico 2018  
AL-HOCEIMA DESALINATION PLANT, Morocco 2018, RO  
Barka IV Desalination Plant, Oman 2017, 280,000 m<sup>3</sup>/d RO  
Sohar Desalination Plant, Oman 2017, 250,000 m<sup>3</sup>/d RO  
Kigoro Desalination Plant, Kenya 2017, 142,000 m<sup>3</sup>/d RO  
TUAS Desalination Plant, Singapore 2017, 136,380 m<sup>3</sup>/d RO  
EL TOR SWRO PLANT, Egypt 2017, 30,000 m<sup>3</sup>/d RO  
SHUAIBAH III DESALINATION PLANT, United Arab Emirates 2017, 250 m<sup>3</sup>/d  
BAHIA DE PALMA DESALINATION PLANT, Spain 2017, 7 m<sup>3</sup>/d  
BARKA IV IWPP - Desalination Plant - BATCH 3, Oman 2017, RO  
Osmorec SWCC Retrofit, United Arab Emirates 2017  
AL GHUBRAH Desalination Plant, Oman 2017, RO  
Umm Al Houl Desalination Plant, Qatar 2016, 514,000 m<sup>3</sup>/d RO  
Basrah P3 Desalination Plant, Iraq 2016, 190,000 m<sup>3</sup>/d RO  
Doha West Desalination Plant, Qatar 2016, 110,000 m<sup>3</sup>/d RO  
Mexico 2016, RO  
Ras Abu Fontas A3 Desalination Plant, Qatar 2015, 163,656 m<sup>3</sup>/d RO  
Az Zour North Desalination Plant, Kuwait 2014, RO  
Al Ghubrah Desalination Plant, Oman 2012, 190,932 m<sup>3</sup>/d  
SWR4 Jubail Desalination Plant, Saudi Arabia 2012, 100,000 m<sup>3</sup>/d  
Salbouk RO Plant, Saudi Arabia 2012, 30,000 m<sup>3</sup>/d RO  
Perth III Desalination Plant, Australia, 306,000 m<sup>3</sup>/d  
Athmania A Desalination Plant, Algeria, 262,500 m<sup>3</sup>/d  
Mirfa Desalination Plant, United Arab Emirates, 240,000 m<sup>3</sup>/d  
Aguilas Desalination Plant, Spain, 210,000 m<sup>3</sup>/d  
Fujairah Desalination Plant, United Arab Emirates, 170,500 m<sup>3</sup>/d  
Fujairah Desalination Plant, United Arab Emirates, 137,000 m<sup>3</sup>/d

Beckton Desalination Plant, United Kingdom, 120,000 m<sup>3</sup>/d  
Galilah SWRO Desalination Plant, Ras Al Khaima, United Arab Emirates, 68,000 m<sup>3</sup>/d RO  
San Pedro Del Pinatar, Murcia Desalination Plant, Chile, 65,000 m<sup>3</sup>/d  
Ain Tinn Desalination Plant, Algeria, 58,000 m<sup>3</sup>/d  
Al-Haraj SWRO, Saudi Arabia, 50,000 m<sup>3</sup>/d  
10 MIGD SWRO Desalination Plant- AL Zawra, United Arab Emirates, 45,000 m<sup>3</sup>/d RO  
Moncofa Desalination Plant, Spain, 36,000 m<sup>3</sup>/d  
Marina Baja Desalination Plant, Spain, 25,000 m<sup>3</sup>/d

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Castflow Valves is a valve manufacturer that specializes in check valves. Our range of manufacturing includes BALL CHECK, DUAL PLATE, SILENT CHECK and FOOT VALVES, and covers DN25 (1") to DN1500 (60") PN10-100 ANSI150-600# wafer/flanged/lug style. Valves can be cast in different materials, including iron, stainless and super-duplex steel, as well as other special, exotic alloys.

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### SELECTED REFERENCES

#### Equipment Supplier: High Pressure Dual Plate Check Valves

Increment SWRO Las Americas, Tenerife, Spain 2015, 10,000 m<sup>3</sup>/d RO  
Carlsbad SWRO Desalination Project, CA, United States 2014, 204,412 m<sup>3</sup>/d RO  
Seawater RO Desalination, Janmagar, India 2014, 160,000 m<sup>3</sup>/d RO

#### Equipment Supplier: High Pressure Nozzle Check Valves

Larnaca Desalination, Larnaca, Cyprus 2013, 46,500 m<sup>3</sup>/d RO  
Ashdod Desalination Plant, Ashdod, Israel 2012, 320,000 m<sup>3</sup>/d RO

#### Equipment Supplier: Low and High Pressure Dual Plate Check Valves

Oman Sur IWP Expansion, Oman 2015, 48,000 m<sup>3</sup>/d RO  
Sadara SWRO Desalination Plant, Jubail, Saudi Arabia 2013, 178,560 m<sup>3</sup>/d RO  
Campo Dalias, Almeria, Spain 2013, 97,200 m<sup>3</sup>/d RO  
SWRO Jorf Lasfar, Morocco 2013, 75,800 m<sup>3</sup>/d RO  
Ras Al Khaimah Ghalilah, Ras Al Khaimah, United Arab Emirates 2013, 68,100 m<sup>3</sup>/d RO  
Mantoverde, Chile 2013, 24,000 m<sup>3</sup>/d RO  
Tia Juana, Venezuela 2013, RO  
Az Zour South RO Desalination Plant, Kuwait 2012, 136,000 m<sup>3</sup>/d RO

Punta Cardon Desalination Plant PVDSA, Punta Cardon, Venezuela 2012, 75,000 m<sup>3</sup>/d RO  
Vasilikos Desalination Plant, Vasilikos, Cyprus 2012, 60,000 m<sup>3</sup>/d RO  
Al Zawrah Power Plant FEWA, Ajman, United Arab Emirates 2012, 45,560 m<sup>3</sup>/d RO  
Aruba Desalination Plant, Aruba 2012, 24,000 m<sup>3</sup>/d RO  
Extension Lanzarote V, Lanzarote, Spain 2012, 10,000 m<sup>3</sup>/d RO  
SA Desalination Plant, Adelaide, Australia 2011, 300,000 m<sup>3</sup>/d RO  
Extension IDAM Campio De Cartagena Valdelentisco, Cartagena, Spain 2011, 210,000 m<sup>3</sup>/d RO  
Marina Baja Mutxamell, Alicante, Spain 2011, 50,000 m<sup>3</sup>/d RO  
Extension Itam Ute Telde Phase II, Telde, Spain 2011, 16,000 m<sup>3</sup>/d RO  
Rafah And El Sheikh Zowayed Sinai SWRO, Rafah and El Sheikh Zowayed Sinai, Egypt 2011, 10,000 m<sup>3</sup>/d RO  
IDAM Torrevieja, Torrevieja, Spain 2010, 240,000 m<sup>3</sup>/d RO  
Beckton Desalination Plant Thames Gateway Water, Beckton, United Kingdom 2010, 150,000 m<sup>3</sup>/d RO  
Sino Iron Cape Preston, WA, Australia 2010, 140,000 m<sup>3</sup>/d RO  
Extension Itam Delta De La Tordera, Tordera, Spain 2010, 28,800 m<sup>3</sup>/d RO

#### Equipment Supplier: Low Pressure Dual Plate Check Valves

Sorek Bot SWRO Project, Israel 2012, 624,000 m<sup>3</sup>/d RO  
Fujairah II RO Desalination Plant, United Arab Emirates 2010, 136,000 m<sup>3</sup>/d RO

#### Equipment Supplier: Valves

Jubail 2 Replacement Plant, Al Jubail, South America, Saudi Arabia 2022, 1,000,000 m<sup>3</sup>/d RO

Shoaiba 5, Shuaiba, MENA, Saudi Arabia 2022, 600,000 m<sup>3</sup>/d RO  
Mirfa 2 IWP, Abu Dhabi, MENA, United Arab Emirates 2022, 545,520 m<sup>3</sup>/d RO  
Shoaiba 3 expansion 2 IWP, Shuaiba, MENA, Saudi Arabia 2022, 250,000 m<sup>3</sup>/d RO  
Doña Ines de Collahuasi Seawater Desalination Plant, Collahuasi, South America, Chile 2022, 90,720 m<sup>3</sup>/d RO  
Sorek B Desalination Plant, Israel 2020, 550,000 m<sup>3</sup>/d RO  
Atacama, Copiapo, Chile 2019, 38,800 m<sup>3</sup>/d RO  
Umm Al Quwain IWP, Umm Al Quwain, United Arab Emirates 2020, 150,000 m<sup>3</sup>/d RO  
Formosa Petrochemical Corporation, Formosa, Taiwan 2020, 105,000 m<sup>3</sup>/d RO  
KSA Westcoast Satellite, Saudi Westcoast, Saudi Arabia 2019, 187,000 m<sup>3</sup>/d RO  
Jebel Ali Powerplant, Jebel Ali, United Arab Emirates 2020, 40,000 m<sup>3</sup>/d RO  
Jurong Island, Singapore 2019, 136,000 m<sup>3</sup>/d RO  
Quebrada 2, Quebrada, Chile 2019, RO  
Spence Copper Mine, Spence, Chile 2018, 86,400 m<sup>3</sup>/d RO  
Djibouti Desallement, Republic of Djibouti 2018, 22,500 m<sup>3</sup>/d RO  
Increment, Ashkelon, Israel 2017, 330,000 m<sup>3</sup>/d RO  
Bandar Abas Sako, Bandar Abas, Iran 2017, 200,000 m<sup>3</sup>/d RO  
Basrah P4 Water Supply Improvement Project, Basrah, Iraq 2017, 100,000 m<sup>3</sup>/d RO  
Seawater RO Desalination, Al Khafji, Saudi Arabia 2017, 60,000 m<sup>3</sup>/d RO  
Increment SWRO EDAM Maspalomas, Maspalomas, Spain 2013, 5,000 m<sup>3</sup>/d RO

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### SELECTED REFERENCES

#### Equipment Supplier: GRP Pipes and Fittings

CMWSSB, 150 MLD Sea Water Desalination, Nemmeli, Chennai, India 2022, 150,000 m<sup>3</sup>/d RO  
Tanajib SWRO Desalination, Marjan, Saudi Arabia 2022, 24,000 m<sup>3</sup>/d RO  
150MLD Sea Water Desalination, Nemmeli, Chennai, India 2021, 150,000 m<sup>3</sup>/d RO  
100 MLD SWRO Desalination Plant, Dahej, Gujarat, India 2021, 100,000 m<sup>3</sup>/d RO

M/s. Jaziah Water Desalination Company, Jubail 3A. IWP Project, Al Jubail, Saudi Arabia 2021, 600,000 m<sup>3</sup>/d Other / Unknown  
ADNOC CFP Project 18002 for Desalination Plant, Abu Dhabi, United Arab Emirates 2021, Other / Unknown  
150 MLD Nemili Phase-II Desalination Project at Tamil Nadu, Tamil Nadu, India 2020, 150,000 m<sup>3</sup>/d  
100 MLD GIDC SWRO Desalination Project in Dahej, Gujarat, India 2020, 100,000 m<sup>3</sup>/d RO  
AMSA Minera Los Palambres Desalination Project in Chile, Bechtel Chile Ltd., Chile 2020  
ADNOC CFP Project 18002 for Desalination Plant at Abu Dhabi (UAE), Abu Dhabi, United Arab Emirates 2019  
Escondida Water Supply Expansion Project, Minera Escondida Ltd., Chile 2018, 216,000 m<sup>3</sup>/d RO  
Keppel Marina East SWRO Plant, Singapore 2018, 137,000 m<sup>3</sup>/d RO  
Escondida Water Supply Expansion (EWS) Project in Chile, Minera Escondida Ltd., Chile 2018  
Reliance Industries SWRO Plant, Jamnagar, Gujarat, India 2017, 160,000 m<sup>3</sup>/d RO  
Escondida Water Supply Expansion Project, Minera Escondida Ltd., Chile 2017, 69,120 m<sup>3</sup>/d RO  
King Abdulaziz International Airport Desalination Plant, Jeddah, Saudi Arabia 2017, 35,000 m<sup>3</sup>/d RO  
RO Desalination Plant Jeddah, K.S.A., Saudi Arabia, Jeddah, Saudi Arabia 2017, 35,000 m<sup>3</sup>/d RO  
Saurashtra Chemicals (Division of Nirma Ltd.) Saukem Desalination Project, Porbander, Gujarat, India 2017, 10,000 m<sup>3</sup>/d RO  
Kindasa Water Services Kau Rabigh SWRO Plant, Saudi Arabia 2017, 6,000 m<sup>3</sup>/d RO  
SWRO Plant, Saudi Arabia, Saudi Arabia 2017, 6,000 m<sup>3</sup>/d  
3rd Desalination Plant at Tuas, Tuas, Singapore 2017, RO  
Saukem Desalination Project at Porbander, Gujarat, Porbander, Gujarat, India 2017  
SWRO Plant, Jamnagar, Gujarat, Jamnager, Gujarat, India 2017, RO  
Escondida Water Supply Expansion (EWS) Project in Chile, Minera Escondida Ltd., Chile 2017  
SWRO Desalination Plant, Nemmeli, Chennai, India 2016, 100,000 m<sup>3</sup>/d RO  
3rd Desalination Plant at Tuas, Singapore, Tuas, Singapore 2016  
Putatan Water Treatment Plant, Philippines 2014, 150,000 m<sup>3</sup>/d RO  
Mirfa desalination plant, Abu Dhabi, Mirfa, United Arab Emirates 2014, 140,000 m<sup>3</sup>/d RO  
Beetham Water Recycling Project, Trinidad and Tobago 2014, 37,854 m<sup>3</sup>/d RO  
Putatan Water Treatment Plant in Philippines, Philippines 2014  
WTP Plant, Ganga Jal Project, Agra, India 2013, 144,000 m<sup>3</sup>/d RO  
Putatan Water Treatment Plant, Manila, Philippines 2013, 100,000 m<sup>3</sup>/d RO  
Mong Duong II Desalination Project, Vietnam 2013, RO  
Tuas 2 - DBOO Seawater Desalination Project, Singapore 2012, 264,978 m<sup>3</sup>/d RO  
Barka Desalination Project, Barka, Oman 2012, 45,460 m<sup>3</sup>/d RO  
Seawater Desalination Project in Singapore, Singapore 2012, 70 MGD  
UTE Abeima Teyma Barka Desalination Project in Oman, Oman 2012

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### SELECTED REFERENCES

#### Equipment Supplier: Valves

Al Jazeerah Seawater Desalination Plant, Al Hamra, Emirate of Ras Al Khaimah, United Arab Emirates 2020, 83,279 m<sup>3</sup>/d Other / Unknown  
Ras Al Khaimah Desalination Plant, Ras Al Khaimah, United Arab Emirates 2019, 100,000 m<sup>3</sup>/d RO  
Kalba SWRO, Sharjah, United Arab Emirates 2019, 10,000 m<sup>3</sup>/d RO  
Adeje, Tenerife, Spain 2017, 40,000 m<sup>3</sup>/d RO  
Formentera, Spain 2017, 5,000 m<sup>3</sup>/d RO  
Perth II, Perth, Australia 2014, 140,000 m<sup>3</sup>/d RO  
Minera Candelaria, Cerro Padrones, Chile 2012, 29,800 m<sup>3</sup>/d RO  
Hamriyah IV Phase I, Hamriyah, United Arab Emirates, 90,922 m<sup>3</sup>/d RO

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### SELECTED REFERENCES

#### Equipment Supplier: Fiberglass Pipe Systems

Facility D Independent Power & Water Project at Umm Al Houl, Doha, Umm Al Houl, Qatar 2016, 347,770 m<sup>3</sup>/d Hybrid  
Az Zour North IWPP Project – Offshore, Kuwait 2014, 486,400 MED  
Jeddah South Project, Jeddah, Saudi Arabia 2014, RO  
Qurayyah IPP, Saudi Arabia 2013, 17,352 RO  
Takoradi T1 Cooling System Project, Takoradi, Ghana 2013, 4,000 RO  
Takoradi T2 Power Plant Expansion EPC Project, Takoradi, Ghana 2013, RO  
Yanbu-II Power and Water Project, Yanbu, Saudi Arabia 2013, Other/Unknown  
PACO Coal Fired Power Plant, Panama 2013, VC  
Al Hidd Power Plant, Al Hidd, Bahrain 2012, Other/Unknown  
Kimanis Power Plant Project, Kimanis, Malaysia 2012, Other/Unknown  
Shuweihat S3 Power Plant, United Arab Emirates 2012, RO

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### SELECTED REFERENCES

#### Equipment Supplier and Installer: GRP Piping

Sousse SWRO, Tunisia 2019, 50,000 m<sup>3</sup>/d RO  
Atacama, Copiapo & Chanaral Desalination Project, Chile 2018  
Desalination Project 2018  
Curaçao Desalination Plant, Spain 2018  
Republic of Djibouti 2018  
Oropesa Desalination Project, Spain 2017  
Janubio Desalination Project, Spain 2017  
Granadilla Desalination Project, Spain 2015  
Tenerife Desalination Project, Spain 2015  
Atacama, Copiapo & Chanaral Desalination Project, Chile 2015  
Lanzarote Desalination Project, Spain 2013  
Granadilla Desalination Project, Granadilla, Spain 2013  
Lanzarote Desalination Project, Lanzarote 2012

#### Equipment Supplier and Installer: GRP Piping and Tanks

Djerba Desalination Project, Tunisia 2015

#### Equipment Supplier and Installer: GRP Piping Spools

Zart SWRO, Tunisia 2020, 50,000 m<sup>3</sup>/d RO  
Limassol SWRO, Cyprus 2019, 50,000 m<sup>3</sup>/d RO  
Sousse SWRO, Tunisia 2018, 50,000 m<sup>3</sup>/d RO

#### Equipment Supplier and Installer: Pipes

Sfax SWRO Desalination Project, Sfax, Tunisia 2022, 100,000 m<sup>3</sup>/d RO  
Sugar Refinery, Saudi Arabia 2019

#### Equipment Supplier: GRP Piping Spools

Sousse SWRO, Sousse, Tunisia 2018, 50,000 m<sup>3</sup>/d RO



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### SELECTED REFERENCES

#### Equipment Supplier: Plastic Pipes, Fittings and Valves

Carlsbad SWRO, Carlsbad, CA, United States 2014, 189,250 m<sup>3</sup>/d RO  
Sadara SWRO, Al Jubail, Saudi Arabia 2014, 178,560 m<sup>3</sup>/d RO  
Turkmenbashi Phase 2, Turkmenbashi, Turkmenistan 2014, 70,000 m<sup>3</sup>/d RO  
Barka I expansion ph. 2, Barka, Oman 2014, 56,775 m<sup>3</sup>/d RO  
BP Khazzan Project, Oman 2014, 6,000 m<sup>3</sup>/d RO  
Cleopatra SWRO, Marsa Matruh, Egypt 2014, 4,500 m<sup>3</sup>/d RO  
Sidi Barani SWRO, Sidi Barani, Egypt 2014, 3,000 m<sup>3</sup>/d RO  
Kailey Hutchinson Facility, El Paso, TX, United States 2014, RO

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### SELECTED REFERENCES

#### Equipment Supplier: Pipes and Prefabrication

Azzour, Kuwait 2015, 486,000 m<sup>3</sup>/d RO  
Mirfa, Abu Dhabi, United Arab Emirates 2015, 238,665 m<sup>3</sup>/d RO  
Sohar, Oman 2015, 5,600 m<sup>3</sup>/d RO  
Al Ghubrah, Oman 2013, 190,000 m<sup>3</sup>/d RO  
Carlsbad, United States 2013, 189,000 m<sup>3</sup>/d RO  
Jamnagar, India 2013, 168,000 m<sup>3</sup>/d RO  
Azzour South, Kuwait 2013, 136,000 m<sup>3</sup>/d RO  
Ghalilah R.A.K., United Arab Emirates 2013, 68,000 m<sup>3</sup>/d RO  
Larnaca, Cyprus 2013, 52,000 m<sup>3</sup>/d RO  
Tuas II, Singapore 2012, 318,500 m<sup>3</sup>/d RO  
Ashdod, Israel 2012, 270,000 m<sup>3</sup>/d RO  
Palmachim Expansion, Israel 2012, 125,000 m<sup>3</sup>/d RO  
Al Zawrah, United Arab Emirates 2012, 45,460 m<sup>3</sup>/d RO  
Adani Desalination Plant, India 2012, 30,000 m<sup>3</sup>/d RO  
Sohar Desalination, Oman 2012, 16,000 m<sup>3</sup>/d RO  
Fujairah II, United Arab Emirates, 125,000 m<sup>3</sup>/d RO  
Steel Mill MMK Atakas, Dörtyol, Turkey 31,000 m<sup>3</sup>/d RO  
SWRO Ghana Seawater, Ghana, 20,000 m<sup>3</sup>/d RO  
New Qidfa Desalination Plant, Fujairah, United Arab Emirates, 13,600 m<sup>3</sup>/d RO

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Dubai Palm, Dubai, United Arab Emirates, RO  
Hamriyah II, Sharjah, United Arab Emirates, RO  
Qatar Desalination Plant, Qatar, RO  
Sohar, Al Batinah Coast, Oman, 250,000 m<sup>3</sup>/d RO  
SAKO Desalination Plant, Iran, 200,000 m<sup>3</sup>/d Unknown  
Damavand Petrochemical Complex, Iran, 50,000 m<sup>3</sup>/d Unknown  
West Coast Desalination Plants (28x), Saudi Arabia, 8,500 m<sup>3</sup>/d

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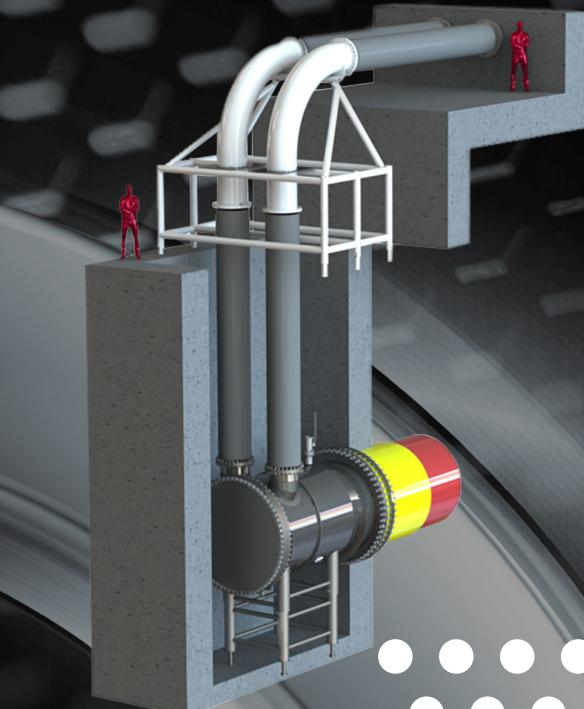


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## SELECTED REFERENCES

### Equipment Supplier

United Arab Emirates 2022, 65,000 m<sup>3</sup>/d RO  
Sukari Gold Mine, Egypt 2021, 442,800 m<sup>3</sup>/d RO  
United Arab Emirates 2021, 400,200 m<sup>3</sup>/d RO  
United Arab Emirates 2021, 12,630 m<sup>3</sup>/d RO  
Formosa, Taiwan 2021, 3,900 m<sup>3</sup>/d RO  
Umm Al Houl II, Qatar 2018, 300,000 m<sup>3</sup>/d RO  
Barka IV, Oman 2018, 280,000 m<sup>3</sup>/d RO  
Agadir, Morocco 2018, 275,000 m<sup>3</sup>/d RO  
Shuaibah III Exp. II IWP, Saudi Arabia 2018, 250,000 m<sup>3</sup>/d RO  
Shoiba 4, Saudi Arabia 2018, 250,000 m<sup>3</sup>/d RO  
SWCC Satellite Plants, Saudi Arabia 2018, 240,000 m<sup>3</sup>/d RO  
AL DUR II, Bahrain 2018, 227,300 m<sup>3</sup>/d RO  
Alkhobar, Saudi Arabia 2018, 210,000 m<sup>3</sup>/d RO  
JIDP, Singapore 2018, 200,000 m<sup>3</sup>/d RO  
Jebel Ali, United Arab Emirates 2018, 182,000 m<sup>3</sup>/d RO  
East Port Said, Egypt 2018, 150,000 m<sup>3</sup>/d RO  
6 SWRO, Egypt 2018, 120,000 m<sup>3</sup>/d RO  
Salalah, Oman 2018, 113,650 m<sup>3</sup>/d RO  
Ras Al Khaimah, United Arab Emirates 2018, 100,000 m<sup>3</sup>/d RO  
Quebrada Blanca, Chile 2018, 80,000 m<sup>3</sup>/d RO  
Oman Sur Expansion, Oman 2018, 42,922 m<sup>3</sup>/d RO  
Atacama, Chile 2018, 38,800 m<sup>3</sup>/d RO  
Provisur, Peru 2018, 35,000 m<sup>3</sup>/d RO  
El Tor, Egypt 2018, 30,000 m<sup>3</sup>/d RO  
KAEC, Saudi Arabia 2018, 30,000 m<sup>3</sup>/d RO  
Safaniyah, Saudi Arabia 2018, 30,000 m<sup>3</sup>/d RO  
Sharma, Saudi Arabia 2018, 24,000 m<sup>3</sup>/d RO  
Djibouti, Republic of Djibouti 2018, 22,500 m<sup>3</sup>/d RO  
Tenerife Este retro + ext, Spain 2018, 20,000 m<sup>3</sup>/d RO  
Malta 2018, 20,000 m<sup>3</sup>/d RO  
Egypt 2018, 20,000 m<sup>3</sup>/d RO  
Talara, Peru 2018, 20,000 m<sup>3</sup>/d RO  
El Galalah, Egypt 2017, 150,000 m<sup>3</sup>/d RO  
Putatan WTP, Philippines 2017, 100,000 m<sup>3</sup>/d RO  
Khurais, Saudi Arabia 2017, 16,000 m<sup>3</sup>/d RO  
Umm Al Houl IWPP, Qatar 2016, 284,000 m<sup>3</sup>/d RO  
Barka IWP, Oman 2016, 281,000 m<sup>3</sup>/d RO  
Basrah Desalination Plant, Iraq 2016, 200,000 m<sup>3</sup>/d RO  
Tuas III, Singapore 2016, 136,000 m<sup>3</sup>/d RO  
Cartagena, Spain 2016, 64,000 m<sup>3</sup>/d RO  
King Abdullah University, Thuwal, Saudi Arabia 2016, 40,000 m<sup>3</sup>/d RO  
Mirfa IWPP, United Arab Emirates 2015, 240,000 m<sup>3</sup>/d RO  
Escondida Water Supply, Atacama desert, Chile 2015, 220,000 m<sup>3</sup>/d RO  
Qurayyat IWP, Oman 2015, 200,000 m<sup>3</sup>/d RO



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Antofagasta , Chile 2015, 85,000 m<sup>3</sup>/d RO  
Fujairah IWPP, United Arab Emirates 2014, 455,000 m<sup>3</sup>/d RO  
Sadara, Saudi Arabia 2014, 150,000 m<sup>3</sup>/d RO  
Al Ghubrah, Oman 2013, 191,000 m<sup>3</sup>/d RO  
Reliance, Jagmnagar, India 2013, 168,000 m<sup>3</sup>/d RO  
Orange County GWRS, United States 2012, 265,000 m<sup>3</sup>/d RO  
Perth SSDP, Australia 2012, 140,000 m<sup>3</sup>/d RO  
Barka, Oman 2012, 45,460 m<sup>3</sup>/d RO

### Equipment Supplier: Couplings

Ras Laffan, Qatar 2021  
Shoaibah Expansion, Saudi Arabia 2021  
Al Khobar II, Al Khobar, Saudi Arabia 2021  
Jubail 3B, Al Jubail, Saudi Arabia 2021  
Yanbu IV, Yanbu, Al Madinah, Saudi Arabia 2021  
Shuqaiq 4, Al Shuqaiq, Saudi Arabia 2021  
La Marsa, Algeria 2021  
Laguna Lake, Philippines 2021  
Nemeli, Tamil Nadu, India 2021  
Tsung Kwan, Hong Kong 2021  
Barka V, Barka, Oman 2021  
Jorf Lasfar Phase 2, Jorf Lasfar, Morocco 2021  
Anna Nery, Offshore 2021  
Jaffna, Northern Province, Sri Lanka 2021  
San Diego North RO, United States 2021, RO

UHP Expansion, Qatar, Other / Unknown  
UHP Expansion, Spain , Other / Unknown

### Equipment Supplier: Valve Actuators and Control Systems

Drouin WWTP Upgrade, Australia 2021, Other / Unknown  
CSP - Toowoomba Regional Council, Australia 2021, Other / Unknown  
Farley WTP / Hunter Water, Australia 2021, Other / Unknown  
Loganholme Lift Station Dry Well, Australia 2021, Other / Unknown  
Luggage Point STP, Australia 2021, Other / Unknown  
South Caboolture STP Upgrade, Australia 2021, Other / Unknown  
S.A. Water, Naracoorte WWTP, Australia 2021, Other / Unknown  
Utilita Goodna WWTP - H<sub>2</sub>, Australia 2021, Other / Unknown  
Almoayyed Al Ezzel, Bahrain 2021, Other / Unknown  
Ashbridges Bay Treatment Plant Upgrade, Canada 2021, Other / Unknown  
Bonnybrook WWTP Fog Receiving Facility, Canada 2021, Other / Unknown  
Urumqi Recovery Water Project, China 2021, Other / Unknown  
Cheung Sha Wan SPS, Hong Kong 2021, Other / Unknown  
Shau Kei Wan PTW, Hong Kong 2021, Other / Unknown  
Tai Po STW, Hong Kong 2021, Other / Unknown  
Triveni, India 2021, Other / Unknown  
Udaipur Smart City, India 2021, Other / Unknown  
DTSW Terminal Pump Station, Italy 2021, Other / Unknown  
New European PDH Kallo, Italy 2021, Other / Unknown  
Orton Ds-20-0029 Aramco Saudi, Italy 2021, Other / Unknown  
Siauliai Wastewater Plant, Lithuania 2021, Other / Unknown  
South West Wastewater Service, Northern Ireland, United Kingdom 2021, Other / Unknown  
DWR Cymru Welsh Water, Northern Ireland, United Kingdom 2021, Other / Unknown  
Severn Trent Water, Northern Ireland, United Kingdom 2021, Other / Unknown  
Haya Waters Seeb Sewage Treatment Plant, Oman 2021, Other / Unknown  
Mandai Park Development - Dawt, Singapore 2021, Other / Unknown  
Kavak Samsun WWT, Turkey 2021, Other / Unknown  
Dubai Municipality Drainage & Irrigation, United Arab Emirates 2021, Other / Unknown  
Algonquin WWTP, United States 2021, Other / Unknown  
Bay County WWTP, United States 2021, Other / Unknown  
Bowling Green WTP, Kentucky, United States 2021, Other / Unknown  
Carlisle WWTP, United States 2021, Other / Unknown  
Cary South WWTP, United States 2021, Other / Unknown  
CCCSO Pump Station, United States 2021, Other / Unknown  
Cedar Creek WWTP, United States 2021, Other / Unknown  
City Of Charlotte WWTP, Michigan, United States 2021, Other / Unknown  
City Of Charlotte WWTP, Michigan, United States 2021, Other / Unknown  
City Of Louisville Co WWTP, United States 2021, Other / Unknown  
City Of Mount Clemens WWTP, United States 2021, Other / Unknown  
City Of Olathe WWTP, United States 2021, Other / Unknown  
Cleveland Crown WWTP, United States 2021, Other / Unknown  
Dupage County Upgrade Project, United States 2021, Other / Unknown

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### SELECTED REFERENCES

#### Equipment Supplier: Glass Reinforced Polyester Pipes and Fittings

Corral de los Chanchos Bay, Chile 2012, 10,368 m<sup>3</sup>/d RO

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### SELECTED REFERENCES

#### O&M and Equipment Supplier: Valve Actuators and Control Systems

NFP - UHP, Qatar, Other / Unknown

DWB Roberts Tunnel, United States 2021, Other / Unknown  
 Ershings-Star WWTP, Idaho, United States 2021, Other / Unknown  
 Hillsdale WWTP, Kansas, United States 2021, Other / Unknown  
 Houston WWTP, Texas, United States 2021, Other / Unknown  
 Howard F Curren Advanced WWTP, United States 2021, Other / Unknown  
 Jackson WWTP, Michigan, United States 2021, Other / Unknown  
 Joliet WWTP Upgrade, Illinois, United States 2021, Other / Unknown  
 Kalamazoo WWTP, Michigan, United States 2021, Other / Unknown  
 Launder St WWTP, United States 2021, Other / Unknown  
 Micsowater, United States 2021, Other / Unknown  
 North Brevard WWTP, United States 2021, Other / Unknown  
 Port St. Lucie Westport WWTP, United States 2021, Other / Unknown  
 Savanna WWTP, United States 2021, Other / Unknown  
 Star WWTP, Indiana, United States 2021, Other / Unknown  
 Tomahawk WWTP Leawood, Kansas, United States 2021, Other / Unknown  
 Tomahawk WWTP, United States 2021, Other / Unknown  
 TSSD Aeration Upgrade, United States 2021, Other / Unknown  
 Scottish Water - Tobermory WTW, United Kingdom 2021, Other / Unknown  
 Scottish Water - Shieldhall WWTW, United Kingdom 2021, Other / Unknown  
 Ashbourne - STW, United Kingdom 2021, Other / Unknown  
 Balleykelly WTW Northern Ireland, United Kingdom 2021, Other / Unknown  
 Barcombe WTW, United Kingdom 2021, Other / Unknown  
 Essex & Suffolk Water, United Kingdom 2021, Other / Unknown  
 Glendevon WTW, United Kingdom 2021, Other / Unknown  
 Hardham WTW, United Kingdom 2021, Other / Unknown  
 Northumbrian Water Limited, United Kingdom 2021, Other / Unknown  
 Scottish Water - Earlston WWTW, United Kingdom 2021, Other / Unknown  
 Scottish Water - Stoer WTW, United Kingdom 2021, Other / Unknown  
 Daldowie WWTW, United Kingdom 2021, Other / Unknown  
 Walton Affinity Water, United Kingdom 2021, Other / Unknown  
 Winchburgh WWTW - Scottish Water, United Kingdom 2021, Other / Unknown  
 DWR CYMRU Welsh Water, United Kingdom 2021, Other / Unknown  
 CK and AWT Changing Our T31, Cyprus 2020, Other / Unknown  
 Shuqaiq 3 Desalination Plant, Saudi Arabia 2019, 450,000 m<sup>3</sup>/d RO  
 Umm Al Houl Ii Swro, Qatar 2019, 280,000 m<sup>3</sup>/d RO  
 Bapco Med, Bahrain 2019, 67,782 m<sup>3</sup>/d RO  
 Aseelah Iwp - Sharqiyah, Oman 2017, 80,000 m<sup>3</sup>/d RO  
 Qurayyat IWP Desalination, Oman 2016, 200,000 m<sup>3</sup>/d RO  
 Sve Chino Desalter, United States 2016, 6,276 m<sup>3</sup>/d RO  
 Aguas Antofagasta - Tocopilla, Chile 2014, 17,280 m<sup>3</sup>/d RO  
 Az Zour North 1 IWPP, Ra's az Zawr, Kuwait 2013, 486,400 m<sup>3</sup>/d MED  
 Antofagasta, Chile 2013, 216,000 m<sup>3</sup>/d RO  
 Ras Abu Fontas 2 Desalination, Qatar 2013, 163,656 m<sup>3</sup>/d MSF  
 Es - Cadagua Edar Arona - IX I, Spain 2013, 32,000 m<sup>3</sup>/d RO  
 Carlsbad proposed site, California, United States 2012, 189,250 m<sup>3</sup>/d RO

Fujairah Power & Desalination, Dubai, United Arab Emirates 2012, 136,000 m<sup>3</sup>/d RO  
 Orange County Water District, United States 2012, 113,550 m<sup>3</sup>/d RO  
 Shoaibah 4 Desalination Plant, Saudi Arabia, RO  
 Umm Al Houl II SWRO, Qatar, RO  
 Wheal Jane Minewater Plant, United Kingdom, Other / Unknown  
 Bacon Park Reuse Water System, United States, Other / Unknown  
 Naples Reuse Interconnect, United States, Other / Unknown  
 Expansion of Tai Po Water Treatment, Hong Kong, Other / Unknown  
 Divine Automation, South Africa, Other / Unknown  
 Peticië Oferta Val. Papallona, Spain, Other / Unknown  
 PTW LTM, Thailand, Other / Unknown  
 Senvur IQ, Turkey, Other / Unknown  
 Groundwater Desalter and Well, United States , Other / Unknown  
 Gulf Stream, United States , Other / Unknown  
 UK - Severn Trent Water, United Kingdom , Other / Unknown  
 Australia (Mr2) General Proj., Australia, RO  
 Electric Actuators, France, RO  
 Mrpl - 30 Mld Swro Desalinatio, India, RO  
 Eqri9M318 \_ Sepco3 Po# Sao05-Sm, Saudi Arabia, RO  
 Ummlujj Desalination Plant - S, Saudi Arabia, RO  
 Reformas En Desaladora Del Pr, Spain, RO  
 Spain General Proj - Madrid Re, Spain, RO  
 Yuma Desalter, United States, RO  
 Apopka NW WRF Reuse, United States, Other / Unknown  
 Changi Air Base, Singapore, Other / Unknown  
 Changi Membrane Bio-Reactor PH, Singapore, Other / Unknown  
 Changi Water Reclamation Plant - C21B, Singapore, Other / Unknown  
 Changi WRP-EP6, Singapore, Other / Unknown  
 Improve Changi WRP, Singapore, Other / Unknown  
 NeWater Reservoir Project, Singapore, Other / Unknown  
 Valor Blvd Reuse Water System, United States, Other / Unknown  
 ALX9999S, Algeria, Other / Unknown  
 CITIC Pacific Mining, Australia, Other / Unknown  
 CITIC Pacific Mining Pump St, Australia, Other / Unknown  
 Southern Seawater, Australia, Other / Unknown  
 Southern Seawater Desalination Plant, Australia, Other / Unknown  
 Desaladora Candelaria, Chile, Other / Unknown  
 INGIMEX Soprole Water Soften, Chile, Other / Unknown  
 Maintenence Desaladora Candela, Chile, Other / Unknown  
 Retrofit & Spares Escondida Water, Chile, Other / Unknown  
 CZX9999A, Czech Republic, Other / Unknown  
 FRX9999Z, Franc, Other / Unknown  
 Phed West Bengal, India , Other / Unknown  
 Al-Zour North IWPP, Kuwait, Other / Unknown  
 Sohar 3 IWP, Oman, Other / Unknown  
 Jubail Desalination Plant C8, Saudi Arabia, Other / Unknown  
 Saudi Arabia General Projects, Saudi Arabia, Other / Unknown  
 SPX9999C, Spain, Other / Unknown  
 SPX9999F, Spain, Other / Unknown  
 Djerba Island Water Desalination, Tunisia, Other / Unknown  
 Chino I Desalter, United States, Other / Unknown  
 Robert Goldsworthy Desalination Expansion, United States, Other / Unknown  
 Robert W. Goldsworthy Desalter, United States, Other / Unknown  
 United Utilities, United Kingdom, Other / Unknown

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UKXRTWU9, United Kingdom, Other / Unknown  
Citic Pacific Mining-Sino IR, Australia, Other / Unknown  
La Chimba Desalination Plant, Chile, Other / Unknown  
Qatar General Projects, Qatar, Other / Unknown  
Containerised Desalination Yan, Saudi Arabia, Other / Unknown  
Shuqaiq Retrofit, Saudi Arabia, Other / Unknown  
Acciona Agua RPC, Venezuela, Other / Unknown  
Venezuela General Projects, Venezuela, Other / Unknown  
Escondida Desalination Plant, Chile, Other / Unknown  
FR9999Z, France, Other / Unknown  
GH9999A, Ghana, Other / Unknown  
Jamnagar Desalination/IDE Plant, India, Other / Unknown  
Israel General Projects, Israel, Other / Unknown  
Korea General Projects, South Korea, Other / Unknown  
KR9999X, Korea (South), Other / Unknown  
Yanbu IWPP Phase 3, Saudi Arabia, Other / Unknown  
Yanbu IWPP Phase 4, Saudi Arabia, Other / Unknown  
SP9999E, Spain, Other / Unknown  
UA9999A, United Arab Emirates, Other / Unknown  
Chino Creek Well Field I-20, United States, Other / Unknown  
Hemlock WTP, United States, Other / Unknown  
Holland Board of Public Works, United States, Other / Unknown  
Orlando FL - Eastern WRF, United States, Other / Unknown  
USA General - JAK - MISC, United States, Other / Unknown  
Ad Dur, Bahrain, Other / Unknown  
Hidd Power & Desalination, Bahrain, Other / Unknown  
Larnaca, Cyprus, Other / Unknown  
Sirte Power & Desalination, Libya, Other / Unknown  
Barka Power & Desalination, Oman, Other / Unknown  
Ghubrah Power & Desalination, Oman, Other / Unknown  
Al Jubail Power & Desalination, Saudi Arabia, Other / Unknown  
Al Khobar Phase III, Saudi Arabia, Other / Unknown  
Jeddah, Saudi Arabia, Other / Unknown  
Rabigh, Saudi Arabia, Other / Unknown  
Carboneras Conexion Desaladora, Spain, Other / Unknown  
Idam Barcelona, Spain, Other / Unknown  
Puket, Thailand, RO  
Al Taweeleah, United Arab Emirates, Other / Unknown  
Jebel Ali L, Dubai, United Arab Emirates, Other / Unknown  
Ras Al Khiamah, United Arab Emirates, Other / Unknown  
Chino Desalter II, Riverside County, CA, United States, Other / Unknown  
WA Desal, Australia, Other / Unknown  
Wonthaggi Desalination Plant, VIC, Australia, Other / Unknown  
Bahrain General Projects, Bahrain, Other / Unknown  
Lorne Park WTP, ON, Canada, Other / Unknown  
Euroguard Prj, China, Other / Unknown  
KW II, Kuwait, Other / Unknown  
Fire-Fighting System, Saudi Arabia, Other / Unknown  
Industrial Water Pumping Station - Jurong WRP, Singapore, Other / Unknown  
GE Energy, Spain, Other / Unknown  
MTS Valves, Spain, Other / Unknown  
City of Hialeah Deep Injection, FL, United States, Other / Unknown  
Santa Cruz SWRO, CA, United States, Other / Unknown  
Desaladora Candelaria, Chile, Other / Unknown  
Sirusa, Malaysia, Other / Unknown  
Rolling Hills, United States, Other / Unknown

Thames Water, London, United Kingdom, Other / Unknown  
Gold Coast Desalination Alliance, Australia, Other / Unknown  
Perth II Southern Seawater Desalination Plant, Australia, Other / Unknown  
Perth Southern Seawater Desalination Plant, Australia, Other / Unknown  
Idam Copiapo Desalination Plan, Chile, Other / Unknown  
Indonesia General Projects, Indonesia, Other / Unknown  
Dead Sea Works Desalination, Israel, Other / Unknown  
Shuwaikh Desalination Station, Kuwait, Other / Unknown  
Oman General Projects, Oman, Other / Unknown  
Philippines General Projects, Philippines, Other / Unknown  
Jubail WTP - Biological Blower, Saudi Arabia, Other / Unknown  
Marafiq & Yanbu, Saudi Arabia, Other / Unknown  
Marin County (Formerly San Raf), United States, Other / Unknown  
Yorkville Sanitar II, United States, Other / Unknown  
London Gateway, United Kingdom, Other / Unknown  
Delta Industrial, United States, Other / Unknown  
Carlsbad Desalter, United Arab Emirates, Other / Unknown  
Trinidad WI, Trinidad and Tobago, Other / Unknown  
Spain General Project - V/M's, Spain, Other / Unknown  
Spain General Project - Southwest, Spain, Other / Unknown  
Spain General Project - Northwest, Spain, Other / Unknown  
Campo Dalias Almeria, Spain, Other / Unknown  
SWCC Transmission Upgrade, Saudi Arabia, Other / Unknown  
SWCC - Satellite Desalination, Saudi Arabia, Other / Unknown  
SD3881A, Saudi Arabia, Other / Unknown  
Saudi Arabia General Projects, Saudi Arabia, Other / Unknown  
Portugal General Projects, Portugal, Other / Unknown  
Mexico General Projects, Mexico, Other / Unknown  
KU9999A, Kuwait, Other / Unknown  
Kubota/Yanbu, Japan, Other / Unknown  
Mekorot General Projects, Israel, Other / Unknown  
Ashdod Desalination Plant, Israel, Other / Unknown  
PWD Altinho Panaji-Goa, India, Other / Unknown  
GH9999Z, Ghana, Other / Unknown  
FR9999A, France, Other / Unknown  
CH9999A, Chile, Other / Unknown  
Algeria PF139768, Algeria, Other / Unknown  
SWCC Shoaiba 2 Power and Desalination, Saudi Arabia, Other / Unknown

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### SELECTED REFERENCES

#### Equipment Supplier: Valves

Ra's az Zawr, Kuwait 2013, 486,400 m<sup>3</sup>/d MED

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### SELECTED REFERENCES

#### Equipment Supplier: Condenser Tubes

Reliance, Jamnagar , Gujarat, India 2013, 72,000 m<sup>3</sup>/d MED  
Tianjin SDIC, Tianjin, China 2013, 200,000 m<sup>3</sup>/d MED

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### SELECTED REFERENCES

#### Equipment Supplier: Thermoplastic Pipes and Fittings

Doha (Kuwait) SWRO, Kuwait City, Kuwait 2016, 227,300 m<sup>3</sup>/d RO  
Changi II NEWater plant, Singapore 2015, 228,000 m<sup>3</sup>/d RO  
Rizal WTP, Province of Rizal, Philippines 2015, 50,000 m<sup>3</sup>/d RO  
Jamnagar Refinery J3 expansion, India 2013, 168,000 m<sup>3</sup>/d RO  
Carlsbad SWRO, United States 2012, 189,250 m<sup>3</sup>/d RO

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### SELECTED REFERENCES

#### Equipment Supplier: Pipes

Al Khobar, Khobar, Saudi Arabia 2021, 210,000 m<sup>3</sup>/d RO  
Shoaiba Desalination Plant, Shoaiba, Saudi Arabia 2018, 450,000 m<sup>3</sup>/d MSF  
Djibouti Desalination Plant, Djibouti 2018, 22,500 m<sup>3</sup>/d RO

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### SELECTED REFERENCES

#### Equipment Supplier: Valves

Jubail-2, Saudi Arabia 2023, 1,000,000 m<sup>3</sup>/d RO  
Safi Mobile, Morocco 2023, RO  
Shuqaiq-1, Saudi Arabia 2022, 600,000 RO  
Shoaibah 5, Saudi Arabia 2022, 600,000 RO  
Jubail 3B, Saudi Arabia 2022, 400,000 RO  
Nemmeli, India 2022, 150,000 RO  
Ras Laffan, Qatar 2022, 165,000 m<sup>3</sup>/d RO  
KPRC, Iran 2022, 80,000 m<sup>3</sup>/d RO  
Jaffna, Sri Lanka 2022, 41,000 RO  
Jorf Lasfar Expansion, Morocco 2022, 20,000 RO  
Soreq 2, Israel 2021, 545,000 RO  
Ensenada Expansion, Mexico 2021, 10,000 RO  
Al Khobar 2 SWRO, Saudi Arabia 2021, 600,000 m<sup>3</sup>/d RO  
Jubail 3A SWRO, Saudi Arabia 2021, 600,000 m<sup>3</sup>/d RO  
Jubail 2 SWRO, Saudi Arabia 2021, 400,000 m<sup>3</sup>/d RO  
Tseung Kwan O SWRO, Hong Kong 2021, 135,000 m<sup>3</sup>/d RO  
ShanDong lubei SWRO, China 2020, 100,000 m<sup>3</sup>/d RO  
Zarat SWRO, Tunisia 2020, 50,000 m<sup>3</sup>/d RO  
Nuweiba SWRO, Egypt 2020, 15,000 m<sup>3</sup>/d RO  
Bandar Abbas SWRO Phase 2, Iran 2019, 80,000 m<sup>3</sup>/d RO  
Marina East SWRO, Singapore 2018, 136,500 m<sup>3</sup>/d RO  
Al Hoceima SWRO, Morocco 2018, 20,000 m<sup>3</sup>/d RO  
Shougang jingtang SWRO, China 2018, 10,000 m<sup>3</sup>/d RO  
El Galalah SWRO, Egypt 2017, 150,000 m<sup>3</sup>/d RO  
Marina East SWRO, Singapore 2017, 136,380 m<sup>3</sup>/d RO  
Al Khafji SWRO, Saudi Arabia 2017, 60,000 m<sup>3</sup>/d RO  
Bandar Abbas SWRO, Bandar Abbas, Hormozgan Province, Iran 2017, 20,000 m<sup>3</sup>/d RO  
Sardegna SWRO, Italy 2017, 20,000 m<sup>3</sup>/d RO  
Janubio Refurbishment SWRO, Spain 2017, 18,000 m<sup>3</sup>/d RO  
Al Hoceima SWRO, Morocco 2017, 17,280 m<sup>3</sup>/d RO  
Isla De Sal and Sao Vicente SWRO, Cabo Verde 2017, 10,000 m<sup>3</sup>/d RO  
Java SWRO, Indonesia 2017, 10,000 m<sup>3</sup>/d RO  
Facility D SWRO, Qatar 2016, 284,000 m<sup>3</sup>/d RO  
Barka SWRO, Oman 2016, 280,000 m<sup>3</sup>/d RO  
2nd Changi NEWater (WRP), Singapore 2016, 228,000 m<sup>3</sup>/d RO  
Qurayyat SWRO, Oman 2016, 200,000 m<sup>3</sup>/d RO  
El Alamein SWRO, Egypt 2016, 150,000 m<sup>3</sup>/d RO  
Tuas 3 SWRO, Singapore 2016, 130,000 m<sup>3</sup>/d RO  
Sur SWRO (additional), Oman 2016, 83,500 m<sup>3</sup>/d RO

# IDRA

## DESALINATION & REUSE HANDBOOK

Djerba SWRO, Tunisia 2016, 50,000 m<sup>3</sup>/d RO  
Al Yousr 2 SWRO, Egypt 2016, 40,000 m<sup>3</sup>/d RO  
El Tor SWRO, Egypt 2016, 30,000 m<sup>3</sup>/d RO  
Cangzhou SWRO, Hebei Province, China 2016, 30,000 m<sup>3</sup>/d RO  
Ensenada SWRO, Mexico 2016, 21,600 m<sup>3</sup>/d RO  
Marassi SWRO, Egypt 2016, 10,000 m<sup>3</sup>/d RO  
In Salah BWRO, Algeria 2016, RO  
Ras Abu Fontas 3 SWRO, Qatar 2015, 164,000 m<sup>3</sup>/d RO]  
Mirfa IWPP-SWRO, United Arab Emirates 2015, 136,380 m<sup>3</sup>/d RO  
Al Yosr SWRO, Egypt 2015, 80,000 m<sup>3</sup>/d RO  
Barka II Expansion, Oman 2015, 57,000 m<sup>3</sup>/d RO  
Beetham RO-WRP, Trinidad and Tobago 2015, 50,000 m<sup>3</sup>/d RO  
Al Yousr SWRO, Egypt 2015, 40,000 m<sup>3</sup>/d RO  
Marsa Matrouh SWRO, Egypt 2015, 24,000 m<sup>3</sup>/d RO  
Lanzarote-4 SWRO Expansion, Spain 2015, 20,000 m<sup>3</sup>/d RO  
Sharm El-Sheikh SWRO, Egypt 2015, 6,000 m<sup>3</sup>/d RO  
Marsa Matrouh SWRO, Egypt 2014, 24,000 m<sup>3</sup>/d RO  
Sadara SWRO, Saudi Arabia 2013, 178,560 m<sup>3</sup>/d RO  
Angamos SWRO, Chile 2013, 19,200 m<sup>3</sup>/d RO  
Al Ghubrah IWP - SWRO , Oman 2012, 190,932 m<sup>3</sup>/d RO  
Jubail SWRO-4, Saudi Arabia 2012, 100,000 m<sup>3</sup>/d RO  
Pacific Rubiales Puerto Galan BWRO, Colombia 2012, 79,500 m<sup>3</sup>/d RO  
Barka 1 IWPP expansion , Oman 2012, 45,460 m<sup>3</sup>/d RO  
Taweeleah SWRO, Al Taweeleah, United Arab Emirates, 900,000 m<sup>3</sup>/d RO  
Rabigh-3 SWRO, Rabigh, Saudi Arabia, 600,000 m<sup>3</sup>/d RO  
Shuqaiq-3 SWRO, Al Shuqaiq, Saudi Arabia, 450,000 m<sup>3</sup>/d RO  
Agadir SWRO, Agadir, Morocco, 450,000 m<sup>3</sup>/d RO  
Umm Al Houl Ii SWRO, Doha, Qatar, 284,000 m<sup>3</sup>/d RO  
Fujairah SWRO, United Arab Emirates, 284,000 m<sup>3</sup>/d RO  
Zhou Shan SWRO, Zoushan, Zhejiang Province, China, 283,000 m<sup>3</sup>/d RO  
Al Khobar SWRO, Al Khobar, Saudi Arabia, 210,000 m<sup>3</sup>/d RO  
Almeria-Almanzora, Spain, 200,000 m<sup>3</sup>/d RO  
Melilla SWRO, Spain, 200,000 m<sup>3</sup>/d RO  
Ceuta SWRO, Spain, 200,000 m<sup>3</sup>/d RO  
Port Said SWRO, Port Said, Egypt, 150,000 m<sup>3</sup>/d RO  
Beckton London BWRO, United Kingdom, 150,000 m<sup>3</sup>/d RO  
Fujairah I Expansion SWRO, United Arab Emirates, 136,000 m<sup>3</sup>/d RO  
Duba SWRO, Duba, Saudi Arabia, 125,000 m<sup>3</sup>/d RO  
Salalah IWP SWRO, Salalah, Oman, 113,500 m<sup>3</sup>/d RO  
Alicante I SWRO, Spain, 100,000 m<sup>3</sup>/d RO  
Talara SWRO, Talara, Peru, 86,400 m<sup>3</sup>/d RO  
Nasr SWRO, Egypt, 80,000 m<sup>3</sup>/d RO  
Alicante II SWRO, Spain, 64,000 m<sup>3</sup>/d RO  
Delta de la Tordera SWRO, Spain, 62,000 m<sup>3</sup>/d RO  
Valle de Copiapo SWRO, Chile, 54,000 m<sup>3</sup>/d RO  
Al Zawrah SWRO, United Arab Emirates, 45,000 m<sup>3</sup>/d RO  
Oropesa SWRO, Spain, 41,000 m<sup>3</sup>/d RO  
New Mansoura, Mansoura, Egypt, 40,000 m<sup>3</sup>/d RO  
Provisur SWRO, Lima, Peru, 35,000 m<sup>3</sup>/d RO  
Kaec SWRO, King Abdullah Economic City, Saudi Arabia, 30,000 m<sup>3</sup>/d RO  
Djibuti SWRO, Djibouti City, Republic of Djibouti, 22,000 m<sup>3</sup>/d RO  
Zhou Shan SWRO, Zhoushan, Zhejiang Province, China, 20,000 m<sup>3</sup>/d RO  
Lanzarote-4 SWRO Expansion, Spain, 20,000 m<sup>3</sup>/d RO

Las Palmas SWRO, Spain, 20,000 m<sup>3</sup>/d RO  
AGAMOS SWRO, Chile, 19,200 m<sup>3</sup>/d Other / Unknown  
Alpha SWRO Expansion, Sharja, United Arab Emirates, 10,000 m<sup>3</sup>/d RO  
Bernice SWRO, Port Bernice, Egypt, 10,000 m<sup>3</sup>/d RO  
Al Saad BWRO, Saudi Arabia, Other / Unknown  
Fujairah SWRO, United Arab Emirates, 284,000 m<sup>3</sup>/d RO  
Almeria-Almanzora , Spain, 200,000 m<sup>3</sup>/d RO  
Melilla SWRO, Spain, 200,000 m<sup>3</sup>/d RO  
Beckton London BWRO, United Kingdom, 150,000 m<sup>3</sup>/d RO  
Fujairah I Expansion SWRO, United Arab Emirates, 136,000 m<sup>3</sup>/d RO  
NASR SWRO, Egypt, 80,000 m<sup>3</sup>/d RO  
Alicante II SWRO, Spain, 64,000 m<sup>3</sup>/d RO  
Delta de la Tordera SWRO, Spain, 62,000 m<sup>3</sup>/d RO  
Valle de Copiapo SWRO, Chile, 54,000 m<sup>3</sup>/d RO  
Al Zawrah SWRO, United Arab Emirates, 45,000 m<sup>3</sup>/d RO  
Las Palmas SWRO , Spain, 20,000 m<sup>3</sup>/d RO  
Alpha SWRO Exp., Sharja, United Arab Emirates, 10,000 m<sup>3</sup>/d RO

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## SELECTED REFERENCES

### Equipment Supplier: Valves

Jubail 3B IWP SWRO Plant, Jubail, Saudi Arabia 2023, 570,000 m<sup>3</sup>/d RO  
Laguna Lake DWTP, Muntinlupa, Philippines 2023, 150,000 m<sup>3</sup>/d RO  
Desaladora De Collahuasi, Puerto Patache, Chile 2023, 90,000 m<sup>3</sup>/d RO  
Shuqaiq 4 Desalination Plant, Shuqaiq, Saudi Arabia 2022, 400,000 m<sup>3</sup>/d RO  
North Field Expansion Project EPC-I, Ras Laffan, Qatar 2022, 279,000 m<sup>3</sup>/d RO  
Shoaiba 1 Desalination Plant, Shuaiba, Saudi Arabia 2022, 250,000 m<sup>3</sup>/d RO  
Tseung Kwang O Desalination Plant, Tseung Kwang O, China 2022, 135,000 m<sup>3</sup>/d RO  
Al Khobar 2 Desalination Plant, Al Khobar, Saudi Arabia 2021, 600,000 m<sup>3</sup>/d RO  
Shuqaiq 3 Desalination Plant, Shuqaiq, Saudi Arabia 2020, 450,000 m<sup>3</sup>/d RO  
Nuweiba Desalination Plant, Nuweiba, Egypt 2020, 15,000 m<sup>3</sup>/d RO  
Atm Mojave, Mojave, United States 2020, 6,000 m<sup>3</sup>/d RO  
Al Khobar 1 Desalination Plant, Al Khobar, Saudi Arabia 2019, 210,000 m<sup>3</sup>/d RO  
Jebel Ali Power Station Desalination Plant, Jebel Ali, United Arab Emirates 2019, 182,000 m<sup>3</sup>/d RO  
Atacama Desalination Plant, Atacama, Chile 2019, 38,880 m<sup>3</sup>/d RO  
El-Alamein Desalination Plant, El-Alamein, Egypt 2018, 150,000 m<sup>3</sup>/d RO  
Fosterville Gold Mine, Fosterville, Australia 2018, 2,000 m<sup>3</sup>/d RO

Norte Iii Combined Cycle Plant, Ciudad Juarez, Mexico 2018, 1,300 m<sup>3</sup>/d RO

Tuas III Desalination Plant, Singapore 2017, 136,000 m<sup>3</sup>/d RO

Putatán Desalination Plant, Putatán, Philippines 2017, 100,000 m<sup>3</sup>/d RO

Djerba Desalination Plant, Djerba, Tunisia 2017, 50,000 m<sup>3</sup>/d RO

Solana Generating Station, Gila Bend, United States 2017, 14,000 m<sup>3</sup>/d RO

Province Of Bartle Water Treatment Plant, Bartle, Cuba 2017, 8,000 m<sup>3</sup>/d RO

Amandi II Combined Cycle Power Plant Of 192MW, Takoradi, Ghana 2017, 2,600 m<sup>3</sup>/d RO

Umm Al Houl Power Iwpp, Umm Al Houl, Qatar 2016, 284,000 m<sup>3</sup>/d RO

Mahé Desalination Plant, Mahé, Seychelles 2016, 16,000 m<sup>3</sup>/d RO

Bahia De Alcudia Desalination Plant, Bahia De Alcudia, Spain 2016, 12,000 m<sup>3</sup>/d RO

Formentera Desalination Plant, Formentera, Spain 2016, 5,000 m<sup>3</sup>/d RO

Ras Abu Fontas A3 Ro Plant, Ras Abu Fontas, Qatar 2015, 136,000 m<sup>3</sup>/d RO

Mostaganem Desalination Plant, Mostaganem, Algeria 2015, 100,000 m<sup>3</sup>/d RO

Lanzarote Iv Desalination Plant, Lanzarote, Spain 2015, 30,000 m<sup>3</sup>/d RO

Ensenada Desalination Plant, Ensenada, Mexico 2015, 21,600 m<sup>3</sup>/d RO

Fujairah Desalination Plant, Fujairah, United Arab Emirates 2014, 135,000 m<sup>3</sup>/d RO

Al Jubail Desalination Plant, Al Jubail, Saudi Arabia 2014, 100,000 m<sup>3</sup>/d RO

Ténés Desalination Plant, Ténés, Algeria 2013, 200,000 m<sup>3</sup>/d RO

Campo De Dalias Desalination Plant, Campo De Dalias, Spain 2013, 129,600 m<sup>3</sup>/d RO

Scm Sierra Gorda Ro Plant, Sierra Gorda, Chile 2013, 52,000 m<sup>3</sup>/d RO

Via Maris Desalination Plant, Palmahim, Israel 2012, 123,000 m<sup>3</sup>/d RO

Antofagasta Desalination Plant, Antofagasta, Chile 2012, 45,000 m<sup>3</sup>/d RO

San Antonio Desalination Plant, San Antonio, Spain 2012, 17,500 m<sup>3</sup>/d RO

Copiapó Desalination Plant, Copiapó, Chile 2012, 17,000 m<sup>3</sup>/d RO

Ibiza Desalination Plant, Ibiza, Spain 2012, 5,500 m<sup>3</sup>/d RO

Al Lakbi Desalination Plant, Al Lakbi, Oman 2012, 500 m<sup>3</sup>/d RO

Iria Mare Water Treatment Plant, Nafplio, Greece 2012, 200 m<sup>3</sup>/d RO

Tuvalu Desalination Plant, Tuvalu 2012, 65 m<sup>3</sup>/d RO

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## SELECTED REFERENCES

### Equipment Supplier: Valves

Gelundalu, China 2019, RO

Maldives 2019, 12,000 m<sup>3</sup>/d RO

Sorek, Israel 2018, 624,000 m<sup>3</sup>/d RO

Escondida Ext., Chile 2018, 216,000 m<sup>3</sup>/d RO

Quebrada Blanca, Chile 2018, 140,000 m<sup>3</sup>/d RO

Jurong, Singapore 2018, 137,000 m<sup>3</sup>/d RO

Ras Shuqueir, Red Sea, Egypt 2018, 45,000 m<sup>3</sup>/d RO

Guogeng Steel, Hebei, China 2018, 30,000 m<sup>3</sup>/d RO

Leizhou, Guandong, China 2018, 8,500 m<sup>3</sup>/d RO

Minguru, Indonesia 2018, 4,800 m<sup>3</sup>/d RO

Jingtang Steel, Hebei, China 2018, 4,800 m<sup>3</sup>/d RO

Lumaila, Zhejiang, China 2018, 4,000 m<sup>3</sup>/d RO

Kaibar, Indonesia 2018, 1,500 m<sup>3</sup>/d RO

Las Palmas, Las Palmas de Gran Canaria, Spain 2018, RO

Burton, Australia 2018, RO

Tenerife, Spain 2018, RO

Elmasa, Canarias, Spain 2018, RO

Marina East, Singapore 2017, 439,000 m<sup>3</sup>/d RO

Tenes, Algeria 2017, 200,000 m<sup>3</sup>/d RO

Honaine, Algeria 2017, 100,000 m<sup>3</sup>/d RO

Valdelentisco Refurbish, Murcia, Spain 2017, 70,000 m<sup>3</sup>/d RO

Buritica, Colombia 2017, 68,000 m<sup>3</sup>/d RO

KAIA (King abdulaziz International airport Jeddah), Saudi Arabia 2017, 35,000 m<sup>3</sup>/d RO

Adeje, Canary Islands, Spain 2017, 30,000 m<sup>3</sup>/d RO

Phoenix, United States 2017, 20,000 m<sup>3</sup>/d RO

Rizhao, Shandong, China 2017, 20,000 m<sup>3</sup>/d RO

TJB, Tanjung, Indonesia 2017, 20,000 m<sup>3</sup>/d RO

Emal, United Arab Emirates 2017, 17,000 m<sup>3</sup>/d RO

Black Sea, Russia 2017, 11,000 m<sup>3</sup>/d RO

Dalian ERRE, Lianing, China 2017, 8,500 m<sup>3</sup>/d RO

Yantai Bajiao Power Plant, Shandong, China 2017, 8,500 m<sup>3</sup>/d RO

Janubio, Spain 2017, 7,500 m<sup>3</sup>/d RO

Baitong, Indonesia 2017, 5,000 m<sup>3</sup>/d RO

Zubair, Iraq 2017, 3,000 m<sup>3</sup>/d RO

Nevada, United States 2017, RO

Qurayyat, Oman 2016, 500,000 m<sup>3</sup>/d RO

Jamnagar, India 2016, 200,000 m<sup>3</sup>/d RO

Dongjiakou, Shandong, China 2016, 100,000 m<sup>3</sup>/d RO

Hamriyah, Sharjah, United Arab Emirates 2016, 90,000 m<sup>3</sup>/d RO

Sohar Refinery Plant, Oman 2016, 90,000 m<sup>3</sup>/d RO

Sur, Oman 2016, 80,000 m<sup>3</sup>/d RO

Sarb, Dubai, United Arab Emirates 2016, 50,000 m<sup>3</sup>/d RO

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**HANDBOOK**

Gelundaluo, China 2019, RO  
Maldives 2019, 12,000 m<sup>3</sup>/d RO  
Qasim, Pakistan 2016, 15,000 m<sup>3</sup>/d RO  
Carboneras, Cartagena, Spain 2016, 10,000 m<sup>3</sup>/d RO  
Baolihua Nuclear Plant, Guandong, China 2016, 10,000 m<sup>3</sup>/d RO  
Shidaowan Nuclear Plant, Shandong, China 2016, 8,500 m<sup>3</sup>/d RO  
Formentera, Spain 2016, 5,000 m<sup>3</sup>/d RO  
Zubair, Iraq 2016, 3,000 m<sup>3</sup>/d RO  
Arizona, United States 2016, 3,000 m<sup>3</sup>/d RO  
Takalar, Sulawesi, Indonesia 2016, 2,500 m<sup>3</sup>/d RO  
Canarias, Spain 2016, RO  
Herjimar, Spain 2016, RO  
Barka, Oman 2015, 136,660 m<sup>3</sup>/d RO  
Ras Al Khaimah, United Arab Emirates 2015, 100,000 m<sup>3</sup>/d RO  
Jamnagar, India 2015, 96,000 m<sup>3</sup>/d RO  
Sur, Oman 2015, 51,000 m<sup>3</sup>/d RO  
Las Americas, Canary Islands, Spain 2015, 15,000 m<sup>3</sup>/d RO  
Aquatech (SARB), India 2015, 15,000 m<sup>3</sup>/d RO  
Santa Barbara, California, United States 2015, 10,550 m<sup>3</sup>/d RO  
Dianqui, China 2015, 10,000 m<sup>3</sup>/d RO  
Zubair, Iraq 2015, 2,712 m<sup>3</sup>/d RO  
Laayoune, Morocco 2014, 550,000 m<sup>3</sup>/d RO  
Escondida, Chile 2014, 218,000 m<sup>3</sup>/d RO  
Taizhou 2nd Plant, Zhejiang, China 2014, 15,000 m<sup>3</sup>/d RO  
Philippines PCPC, Iloilo, Philippines 2014, 2,500 m<sup>3</sup>/d RO  
Pall, Australia 2014, RO  
Sydney (Veolia), Australia 2014, RO  
Carlsbad, California, United States 2013, 378,544 m<sup>3</sup>/d RO  
Jorf Lasfar, Morocco 2013, 222,200 m<sup>3</sup>/d RO  
Rabigh 2, Saudi Arabia 2013, 192,000 m<sup>3</sup>/d RO  
Sadara, Jubail, Saudi Arabia 2013, 173,000 m<sup>3</sup>/d RO  
Jorf Las Far, Morocco 2013, 75,800 m<sup>3</sup>/d RO  
Al-Zawrah, Ajman, United Arab Emirates 2013, 45,500 m<sup>3</sup>/d RO  
Gwangyang SWRO, China 2013, 30,200 m<sup>3</sup>/d RO  
Qurayyat IPP, Saudi Arabia 2013, 17,352 m<sup>3</sup>/d RO  
Tenerife Oeste, Spain 2013, 14,000 m<sup>3</sup>/d RO  
Guia de Isora, Spain 2013, 14,000 m<sup>3</sup>/d RO  
Sanmen nuclear Power Plant, Zhejiang, China 2013, 5,000 m<sup>3</sup>/d RO  
Yanhu Dafeng, Jiangsu, China 2013, 5,000 m<sup>3</sup>/d RO  
Al taweelah, United Arab Emirates 2013, 1,584 m<sup>3</sup>/d RO  
NCC SWRO Project, South Korea 2012, 431,870 m<sup>3</sup>/d RO  
Ashdod, Israel 2012, 273,972 m<sup>3</sup>/d RO  
Tarragona Power Plant, Llobregat, Spain 2012, 180,000 m<sup>3</sup>/d RO  
Jubail, Saudi Arabia 2012, 100,000 m<sup>3</sup>/d RO  
Sur, Oman 2012, 80,000 m<sup>3</sup>/d RO  
Ghallilah, United Arab Emirates 2012, 68,000 m<sup>3</sup>/d RO  
Jubail, Saudi Arabia 2012, 58,500 m<sup>3</sup>/d RO  
Al Zawrah, United Arab Emirates 2012, 45,500 m<sup>3</sup>/d RO  
Al Gubrah, Barka, Oman 2012, 45,460 m<sup>3</sup>/d RO  
Minera Candelaria, Cerro Padrones, Chile 2012, 43,200 m<sup>3</sup>/d RO  
Mantoverde, Chile 2012, 25,920 m<sup>3</sup>/d RO  
Tuticorin, India 2012, 24,480 m<sup>3</sup>/d RO  
Wu sha shan, Zhejiang, China, China 2012, 22,000 m<sup>3</sup>/d RO  
Haiyang Nuclear Power Plant, China 2012, 16,800 m<sup>3</sup>/d RO  
CEPSA Refinery Tenerife, Spain 2012, 14,000 m<sup>3</sup>/d RO  
Laayoune, Morocco 2012, 13,000 m<sup>3</sup>/d RO  
Paraquita Bay, Virgin Islands, United States 2012, 10,400 m<sup>3</sup>/d RO  
Sierra Gorda, Chile 2012, 8,800 m<sup>3</sup>/d RO  
Tan Tan, Morocco 2012, 8,600 m<sup>3</sup>/d RO  
Sanmen nuclear Power Plant, China 2012, 5,657 m<sup>3</sup>/d RO  
Yanhu Haina Chemical Plant, Qinghai, China 2012, 5,500 m<sup>3</sup>/d RO  
HES-P11151, Shanghai, China 2012, 4,800 m<sup>3</sup>/d RO  
Carboneras Ext., Almeria, Spain 2012, RO  
Pembroke, Malta 2012, RO  
Formosa, Taiwan, 105,000 m<sup>3</sup>/d RO  
Las Palmas III, Las Palmas de Gran Canaria, Spain, RO

# Pumps, ERDs & Pressure Vessels

Selected references since 2012 from companies supplying pumps, energy recovery devices (ERDs) or pressure vessels to desalination or reuse projects.

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[www.andritz.com/pumps](http://www.andritz.com/pumps)



Megacities such as Atlanta, Barcelona, Beijing, Dubai, Hong Kong, Riyadh, Santiago and Singapore already rely on leading-edge ANDRITZ water management technologies when it comes to providing a safe and affordable potable water supply for millions of people.

ANDRITZ is not only a world-leading OEM in the hydropower sector, but has also been building centrifugal pumps and separation equipment and systems for more than 170 years. In fact, our flexible packages covering seawater intake, pumping, screening, and dewatering help dozens of major cities worldwide to continuously safeguard their water supply at significantly lower operating costs. Our reliable technologies support all stages in the process chain. We provide the complete centrifugal pump portfolio, water intake screen systems, sludge and brine treatment systems, and technical support for efficient and economic desalination, especially for Reverse Osmosis (RO) plants to convert seawater into potable water or for irrigation or industrial purposes. Depending on the level of salinity and temperature, corrosion-resistant technologies are available, from Duplex to Super Duplex steel cast in ANDRITZ's foundry.

Our quality and high-efficiency products, as well as our understanding of customer requirements, have made us a preferred partner for pumping and separation solutions worldwide. We offer everything from a single source – from development work, model tests, engineering design, casting, manufacture, and project management, to after-sales service and training, as well as a vast portfolio of Industrial IoT solutions for optimized plant operation.

## SELECTED REFERENCES

### Equipment Supplier: Pumps

Cap Blanc, Algeria 2023, 100,000 m<sup>3</sup>/d RO  
Tianjin Xiandra (phase 1), China 2023, 150,000 m<sup>3</sup>/d RO

## Legend

Desalination Wastewater reuse

Safi, Morocco 2023, 120,000 m<sup>3</sup>/d RO  
DaeSan SWRO, South Korea 2022, 100,000 m<sup>3</sup>/d RO  
Aconcagua, Chile 2022, 86,400 m<sup>3</sup>/d RO  
Red Sea SWRO, Saudi Arabia 2022, 65,000 m<sup>3</sup>/d RO  
Sembawang, Indonesia 2022, 40,000 m<sup>3</sup>/d RO  
Bahrain Desalination Plant, Bahrain 2022, 6,000 m<sup>3</sup>/d RO  
Fujairah, United Arab Emirates 2022, 3,500 m<sup>3</sup>/d RO  
Jubail 3b IWP, Al-Jubail, Saudi Arabia 2021, 570,000 m<sup>3</sup>/d RO  
Laguna Lake DWTP, Muntinlupa, Philippines 2021, 150,000 m<sup>3</sup>/d RO  
East Bay Drinking Water Treatment Plant, Manila, Philippines 2021, 50,000 m<sup>3</sup>/d RO  
Sorek 2, Israel 2020, 670,000 m<sup>3</sup>/d RO  
Zhoushan Phase II Desalination Project, Zhejiang, China 2020, 200,000 m<sup>3</sup>/d MED  
Zhejiang Petrochemical Desalination Project, China 2020, 200,000 m<sup>3</sup>/d MED  
Tangshan Seaport Desalination, China 2020, 30,000 m<sup>3</sup>/d RO  
Qingdao Baifa RO Phase 2, China 2020, 10,000 m<sup>3</sup>/d RO  
Al Khobar SWRO, Saudi Arabia 2019, 210,000 m<sup>3</sup>/d RO  
Quebrada Blanca Phase 2, Iquique, Chile 2019, 106,400 m<sup>3</sup>/d RO  
SULB 4.5 MLD Desalination Plant, Bahrain 2019, 5,000 m<sup>3</sup>/d RO  
Shougang Jingtang Phase II Desalination Project, Jingtang, Hebei, China 2018, 20,000 m<sup>3</sup>/d RO  
Hassyan Desalination Project, Dubai, United Arab Emirates 2017, 100,000 m<sup>3</sup>/d RO  
Shengli-Oil, Karamay, Xinjiang, China 2015, 5,000 m<sup>3</sup>/d MED  
Zhoushan Liuheng Desalination P3, Liuheng, Zhejiang, China 2011, 80,000 m<sup>3</sup>/d RO  
ShengSi Desalination P5, Zhejiang, Hebei, China 2009, 600 m<sup>3</sup>/d RO  
Tangshan Seawater Desalination, Hebei, China, 100,000 m<sup>3</sup>/d RO

### Equipment Supplier: Brine Dewatering Centrifuges

Taweebah, Abu Dhabi, United Arab Emirates 2018, 909,000 m<sup>3</sup>/d RO  
Qurayyat IWP, Oman 2016, 200,000 m<sup>3</sup>/d RO  
Barka SWRO, Muscat, Oman 2016, 120,000 m<sup>3</sup>/d RO  
Mirfa IWPP, Abu Dhabi, United Arab Emirates 2014, 85,000 m<sup>3</sup>/d RO  
Marafig Sadara Desalination Plant, Jubail, Saudi Arabia 2013, 800,000 m<sup>3</sup>/d RO  
Al Gubrah Desalination plant, Muscat City, Oman 2013, 191,000 m<sup>3</sup>/d RO  
Barka 4 SWRO, Muscat City, Oman 2009, 281,000 m<sup>3</sup>/d RO  
Barka 2 SWRO, Muscat City, Oman 2007, 120,000 m<sup>3</sup>/d RO

### Equipment Supplier: Brine Dewatering Centrifuges and Pumps

Quebrada Blanca, Chile 2018, 74,000 m<sup>3</sup>/d RO

# IDRA

## DESALINATION & REUSE

### HANDBOOK

#### Equipment Supplier: Filter Press

Tseung Kwan O, Hong Kong 2020, 135,000 m<sup>3</sup>/d RO

#### Equipment Supplier: Fine Active Screens and Brine Dewatering Centrifuges

Victorian Desalination Plant, Dalyston, Southern Victoria, Australia 2010, 150,000 m<sup>3</sup>/d RO

Marina Baja Desalination Plant, Mutxamel, Spain 2010, 50,000 m<sup>3</sup>/d RO

Tanjung Jati B SWRO, Indonesia 2010, 20,000 m<sup>3</sup>/d RO

Kumell, Sydney, Australia 2008, 250,000 m<sup>3</sup>/d RO

Fujairah SWRO, United Arab Emirates 2007, 136,500 m<sup>3</sup>/d RO

Aguas del Ter Llobregat Desalination, Barcelona, El Prat del Llobregat, Spain, 200,000 m<sup>3</sup>/d RO

#### Equipment Supplier: Passive Intake Screens

Collahuasi SWRO, Chile 2022, 100,000 m<sup>3</sup>/d RO

SUR Desalination Plant, Oman 2014, 29,000 m<sup>3</sup>/d RO

Al Zawrah Desalination plant, Ajman, United Arab Emirates 2012, 45,560 m<sup>3</sup>/d RO

#### Equipment Supplier: Pretreatment

Chile 2022, 404,000 m<sup>3</sup>/d RO

United Arab Emirates 2021, 158,000 m<sup>3</sup>/d RO

United Arab Emirates 2020, 31,000 m<sup>3</sup>/d RO

United Arab Emirates 2018, 31,000 m<sup>3</sup>/d RO

Oman 2017, RO

Oman 2014, 29,000 m<sup>3</sup>/d RO

Oman 2013, 720,000 m<sup>3</sup>/d RO

United Arab Emirates 2012, 158,000 m<sup>3</sup>/d RO

Oman 2011, 23,000 m<sup>3</sup>/d RO

United Kingdom 2008, 823,000 m<sup>3</sup>/d RO

United Arab Emirates 2004, 384,000 m<sup>3</sup>/d RO

United Arab Emirates 2004, 360,000 m<sup>3</sup>/d RO

Advanced Water Technologies, Al Khafji, Saudi Arabia 2017, 60,000 m<sup>3</sup>/d RO

Kfar Massarik, Northern coastal plain, Israel 2017, 13,500 m<sup>3</sup>/d RO

Mogan, Gran Canaria, Spain 2016, 1,800 m<sup>3</sup>/d RO

Shat Al Basra, Iraq 2014, 9,600 m<sup>3</sup>/d RO

Bahrain 2014, 4,500 m<sup>3</sup>/d RO

Antofagasta, Chile 2013, 216,000 m<sup>3</sup>/d RO

Agragua, Gran Canaria, Spain 2013, 10,000 m<sup>3</sup>/d RO

Pepsico Arabia bottling plant, Saudi Arabia 2013, 1,056 m<sup>3</sup>/d RO

Pacific Rubiales Energy, Puerto Gaitán, Meta, Colombia 2012, 79,500 m<sup>3</sup>/d RO

Mantoverde, Corral de los Chanchos Bay, Chile 2012, 10,368 m<sup>3</sup>/d RO

Boleo, Santa Rosalia, Mexico 2012, 3,785 m<sup>3</sup>/d RO

Gold Coast, Queensland, Australia, 125,000 m<sup>3</sup>/d RO

Al Jubail phase 4, Saudi Arabia, 103,500 m<sup>3</sup>/d

El Agodor, Toledo, Spain, 58,400 m<sup>3</sup>/d RO

Trekkopje, Swakopmund, Namibia, 55,000 m<sup>3</sup>/d RO

Larnaca, Cyprus, 54,000 m<sup>3</sup>/d RO

Yuhuan Power Plant, Zhejiang, China, 36,000 m<sup>3</sup>/d RO

Medupi Power Station, South Africa, 30,000 m<sup>3</sup>/d

Emirates Steel, United Arab Emirates, 28,800 m<sup>3</sup>/d

Ma'agan Michael, Israel, 27,000 m<sup>3</sup>/d RO

Suministros, Algeria, 25,500 m<sup>3</sup>/d

Moni, Cyprus, 22,000 m<sup>3</sup>/d

Pal Technology Services, United Arab Emirates, 20,900 m<sup>3</sup>/d

Emalahleni, South Africa, 20,000 m<sup>3</sup>/d RO

Consol Energy, United States, 18,900 m<sup>3</sup>/d

Point Fortin, Trinidad, 17,400 m<sup>3</sup>/d

Costa del Sol, Spain, 16,000 m<sup>3</sup>/d

Aguas Ponta Preta, Cabo Verde, 15,000 m<sup>3</sup>/d

PTOI Placilla, Chile, 14,000 m<sup>3</sup>/d

NieuWater Emmen, Netherlands, 13,200 m<sup>3</sup>/d

Tifert, Tunisia, 12,000 m<sup>3</sup>/d RO

Hilton Head, United States, 11,000 m<sup>3</sup>/d

Doolittle, United States, 11,000 m<sup>3</sup>/d

Owassa, United States, 11,000 m<sup>3</sup>/d

Aguas Porto Novo, Cabo Verde, 10,000 m<sup>3</sup>/d

Curaçao Water Plant, Curaçao, 9,400 m<sup>3</sup>/d

Power Station La Spezia, Italy, 9,000 m<sup>3</sup>/d

Estate Richmond Power Plant, St. Croix, 8,325 m<sup>3</sup>/d

Randolph E Harley Power Plant, St. Thomas, 8,300 m<sup>3</sup>/d

Engelse Werk, Netherlands, 8,250 m<sup>3</sup>/d

C.C.C. Campo de Gibraltar, Gibraltar, 8,000 m<sup>3</sup>/d

South Coast Steam, United States, 7,500 m<sup>3</sup>/d

Paguera, Malaga, Spain, 7,500 m<sup>3</sup>/d

Donna, United States, 7,500 m<sup>3</sup>/d

Baiji Power Plant, Iraq, 7,100 m<sup>3</sup>/d

Lei Ji Power Plant, China, 5,000 m<sup>3</sup>/d

Reliance, Algeria, 4,600 m<sup>3</sup>/d

Las Galletas, Spain, 4,000 m<sup>3</sup>/d

Pepsico Baghdad, Iraq, 3,900 m<sup>3</sup>/d

New York Power, United States, 3,750 m<sup>3</sup>/d

SWRO, Libya, 2,750 m<sup>3</sup>/d

SWRO, Libya, 2,500 m<sup>3</sup>/d

Masar Alam, Egypt, 2,500 m<sup>3</sup>/d

Bir Shalateyn, Egypt, 2,000 m<sup>3</sup>/d

La Ranilla, Spain, 2,000 m<sup>3</sup>/d

Al Dibba bottling plant, United Arab Emirates, 1,500 m<sup>3</sup>/d

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## SELECTED REFERENCES

#### Equipment Supplier: Pressure Vessels

OCP Desalination Project Phase 2, Jorf Lasfar, Morocco 2022, 30,000 m<sup>3</sup>/d RO, Morocco 2022, 30,000 m<sup>3</sup>/d RO

Expansion Atabal, Malaga, Spain 2022, 16,500 m<sup>3</sup>/d RO

textile factory, Dominican Republic 2022, 10,000 m<sup>3</sup>/d RO

Expansion Cobre Cruces, Sevilla, Spain 2022, 4,000 m<sup>3</sup>/d RO

Inter Atlantic, Scotland, U.K. 2020, 5,000 m<sup>3</sup>/d RO

Expansion PTOI Placilla, Copiapo, Chile 2018, 7,000 m<sup>3</sup>/d RO



# HOW TO DESALINATE WATER MORE EFFICIENTLY AND SUSTAINABLY?

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- ANDRITZ decanter centrifuges and filter presses guarantee cost-efficient, continuous operation with minimal sludge mass for safe disposal.

We offer everything from a single source: from model tests, engineering design, manufacture, after-sales service to a vast portfolio of Industrial IoT solutions for optimized plant operation.



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## DESALINATION & REUSE HANDBOOK

Brabant Water, Netherlands, 1,200 m<sup>3</sup>/d  
EMPOWER Dubai Health Care City, United Arab Emirates, 1,000 m<sup>3</sup>/d  
Al Yassat Island, United Arab Emirates, 750 m<sup>3</sup>/d RO  
Mobile water treatment, Iraq, 500 m<sup>3</sup>/d RO  
Containerised SWRO, Tunisia, 500 m<sup>3</sup>/d RO  
Containerised SWRO, Oman, 500 m<sup>3</sup>/d RO  
Ajman Labour Camp, United Arab Emirates, 400 m<sup>3</sup>/d RO  
Karachi Industrial, Pakistan, 400 m<sup>3</sup>/d RO  
Sharjah Labour Camp, United Arab Emirates, 400 m<sup>3</sup>/d RO  
Ajman Labour Camp, United Arab Emirates, 400 m<sup>3</sup>/d RO  
Um al Quwain Labour Camp, United Arab Emirates, 400 m<sup>3</sup>/d RO  
Al-Saad Irrigation, United Arab Emirates, 325 m<sup>3</sup>/d RO  
Al Ain Irrigation, United Arab Emirates, 300 m<sup>3</sup>/d RO  
Ras al Khaimah Irrigation, United Arab Emirates, 300 m<sup>3</sup>/d RO  
Containerised SWRO, Kenya, 300 m<sup>3</sup>/d RO  
Abu Samra Irrigation, United Arab Emirates, 170 m<sup>3</sup>/d RO  
Containerised SWRO, Kenya, 60 m<sup>3</sup>/d RO

We engineer tomorrow to build a better future, become our customers' preferred decarbonization partner, and create long-term value for our customers and employees.

### SELECTED REFERENCES

#### Equipment Supplier: Pumps and Energy Recovery

Indonesia 2023, 28,800 m<sup>3</sup>/d RO  
Morocco 2023, 20,000 m<sup>3</sup>/d RO  
Indonesia 2023, 7,650 m<sup>3</sup>/d RO  
Italy 2023, 7,000 m<sup>3</sup>/d RO  
Spain 2023, 4,000 m<sup>3</sup>/d RO  
Spain 2023, 2,400 m<sup>3</sup>/d RO  
Gran Canaria, Spain 2023, 2,000 m<sup>3</sup>/d RO  
Taiwan 2022, 12,000 m<sup>3</sup>/d RO  
Hamriya, Dubai, United Arab Emirates 2022, 11,030 m<sup>3</sup>/d RO  
Morocco 2022, 5,400 m<sup>3</sup>/d RO  
Norway 2022, 5,000 m<sup>3</sup>/d RO  
Mauritius 2022, 5,000 m<sup>3</sup>/d RO  
Kenya 2022, 5,000 m<sup>3</sup>/d RO  
Istanbul, Turkey 2022, 3,150 m<sup>3</sup>/d RO  
Morocco 2022, 2,700 m<sup>3</sup>/d RO  
Taiwan 2021, 7,200 m<sup>3</sup>/d RO  
Taiwan 2021, 6,000 m<sup>3</sup>/d RO  
Canary Island, Spain 2021, 6,000 m<sup>3</sup>/d RO  
Taiwan 2021, 6,000 m<sup>3</sup>/d RO  
Norway 2021, 5,200 m<sup>3</sup>/d RO  
Norway 2021, 5,000 m<sup>3</sup>/d RO  
Algeria 2021, 2,660 m<sup>3</sup>/d RO  
Saudi Arabia 2021, 2,000 m<sup>3</sup>/d RO  
Turkey 2021, 1,200 m<sup>3</sup>/d RO  
Turkey 2021, 1,000 m<sup>3</sup>/d RO  
Caribbean, Cuba 2020, 6,000 m<sup>3</sup>/d RO  
Fuerteventura, Spain 2020, 2,000 m<sup>3</sup>/d RO  
Spain 2020, 1,200 m<sup>3</sup>/d RO  
Hawaii, United States 2020, 1,200 m<sup>3</sup>/d RO  
Bahamas 2020, 1,135 m<sup>3</sup>/d RO  
Peru 2019, 5,000 m<sup>3</sup>/d RO  
Maldives 2019, 2,000 m<sup>3</sup>/d RO  
Pakistan 2019, 1,800 m<sup>3</sup>/d RO  
Turkmenistan 2019, 1,296 m<sup>3</sup>/d RO  
Turkmenistan 2019, 1,296 m<sup>3</sup>/d RO  
Turkmenistan 2019, 1,296 m<sup>3</sup>/d RO  
Curaçao 2019, 1,250 m<sup>3</sup>/d RO  
Turkmenistan 2019, 1,200 m<sup>3</sup>/d RO  
Turkmenistan 2019, 1,200 m<sup>3</sup>/d RO  
Turkmenistan 2019, 1,200 m<sup>3</sup>/d RO  
Spain 2019, 1,000 m<sup>3</sup>/d RO  
Turkey 2019, 1,000 m<sup>3</sup>/d RO  
Turkey 2019, 1,000 m<sup>3</sup>/d RO  
Tasmania, Australia 2018, 16,800 m<sup>3</sup>/d RO  
Egypt 2018, 12,000 m<sup>3</sup>/d RO  
Brindisi, Italy 2018, 9,600 m<sup>3</sup>/d RO  
India 2018, 7,000 m<sup>3</sup>/d RO

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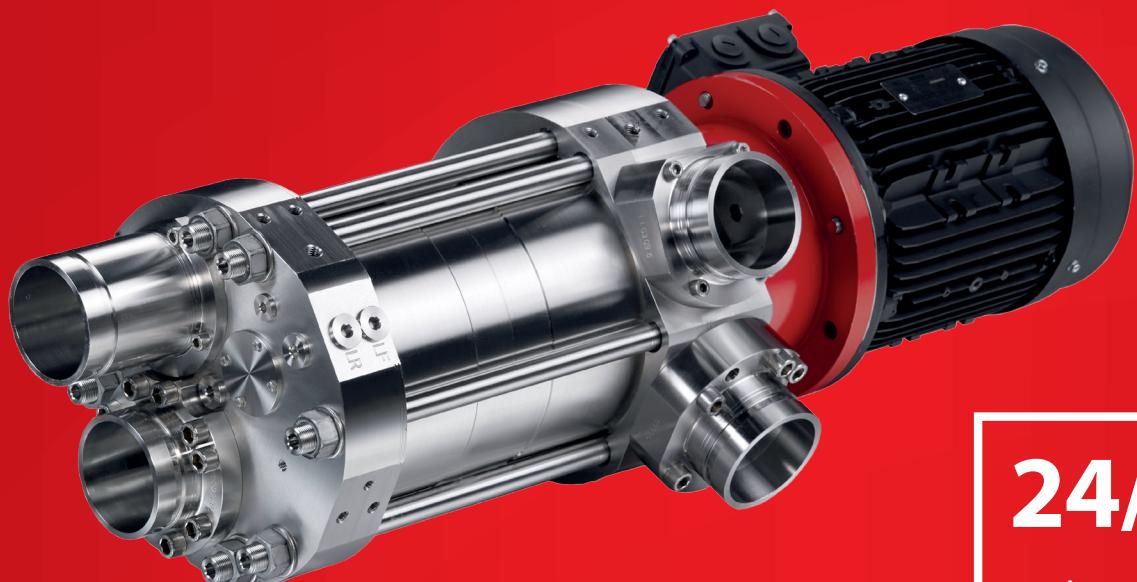


Danfoss is a global leader in mechanical and electronic innovations that help save energy. Around the world and across a broad spectrum of industries and applications, our many solutions make modern life easier and enable our customers to pursue their own journeys towards decarbonization.

As part of the Danfoss Group, Danfoss High Pressure Pumps is a fast-growing division that designs and produces energy-efficient high-pressure pumps and energy recovery devices. With over 22,000 installations worldwide, our innovative products help provide an increasingly thirsty world with fresh water through seawater reverse osmosis (SWRO) with industry-leading energy efficiency and reliability for unparalleled OPEX and TCO. In addition to desalination, our axial piston high-pressure pumps also save energy in wastewater treatment (ZLD), humidification, firefighting, and ultra-pure water cleaning application

In total, the Danfoss Group employs over 40,000 people to serve customers in more than 100 countries. Whether working in our 95 factories in 27 countries, driving innovation in our R&D facilities in four continents, or working closely with our partners to understand their needs, we share the same purpose.

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Ghana 2018, 4,125 m<sup>3</sup>/d RO  
 Abu Dhabi, United Arab Emirates 2018, 4,000 m<sup>3</sup>/d RO  
 Caribbean, Bahamas 2018, 3,000 m<sup>3</sup>/d RO  
 Iran 2018, 3,000 m<sup>3</sup>/d RO  
 Iran 2018, 3,000 m<sup>3</sup>/d RO  
 Tasmania, Australia 2018, 1,700 m<sup>3</sup>/d RO  
 Tasmania, Australia 2018, 1,700 m<sup>3</sup>/d RO  
 Italy 2017, 14,800 m<sup>3</sup>/d RO  
 South Africa 2017, 12,000 m<sup>3</sup>/d RO  
 Philippines 2017, 7,000 m<sup>3</sup>/d RO  
 Mauritania 2017, 6,000 m<sup>3</sup>/d RO  
 India 2017, 2,184 m<sup>3</sup>/d RO  
 South Africa 2017, 2,000 m<sup>3</sup>/d RO  
 Tasmania, Australia 2017, 1,700 m<sup>3</sup>/d RO  
 Casablanca, Morocco 2020, 1,275 m<sup>3</sup>/d RO  
 Dubai, United Arab Emirates 2017, 1,200 m<sup>3</sup>/d RO  
 Argentina 2017, 1,000 m<sup>3</sup>/d RO  
 Egypt 2017, 1,000 m<sup>3</sup>/d RO  
 Philippines 2017, 1,000 m<sup>3</sup>/d RO  
 Gran Canaria, Spain 2016, 2,600 m<sup>3</sup>/d RO  
 Saudi Arabia 2016, 1,000 m<sup>3</sup>/d RO  
 South Korea 2016, 1,000 m<sup>3</sup>/d RO  
 Curaçao 2015, 16,000 m<sup>3</sup>/d RO  
 Aruba 2015, 11,000 m<sup>3</sup>/d RO  
 Dubai, United Arab Emirates 2015, 2,000 m<sup>3</sup>/d RO  
 Chile 2014, 8,600 m<sup>3</sup>/d RO  
 Rodrigues Island, Mauritius 2014, 2,000 m<sup>3</sup>/d RO  
 Egypt 2014, 1,845 m<sup>3</sup>/d RO  
 Saudi Arabia 2014, 1,200 m<sup>3</sup>/d RO  
 Norway 2013, 3,900 m<sup>3</sup>/d RO  
 Oman 2013, 1,700 m<sup>3</sup>/d RO  
 Oman 2013, 1,200 m<sup>3</sup>/d RO  
 Taiwan 2012, 2,100 m<sup>3</sup>/d RO  
 South Korea 2012, 1,000 m<sup>3</sup>/d RO  
 Iran 2010, 1,200 m<sup>3</sup>/d RO  
 Mexico, 3,000 m<sup>3</sup>/d RO

#### Equipment Supplier: Pumps

Canary Island, Spain 2023, 7,500 m<sup>3</sup>/d RO  
 Spain 2023, 2,500 m<sup>3</sup>/d RO  
 Philippines 2022, 20,000 m<sup>3</sup>/d RO  
 Saudi Arabia 2022, 3,600 m<sup>3</sup>/d RO  
 Cyprus 2020, 12,000 m<sup>3</sup>/d RO  
 Malta 2020, 8,000 m<sup>3</sup>/d RO  
 Caribbean 2020, 6,000 m<sup>3</sup>/d RO  
 South Africa 2020, 4,732 m<sup>3</sup>/d RO  
 Spain 2020, 2,000 m<sup>3</sup>/d RO  
 Spain 2020, 1,440 m<sup>3</sup>/d RO  
 Turkey 2019, 600 m<sup>3</sup>/d RO  
 China 2018, 30,000 m<sup>3</sup>/d RO  
 China 2018, 12,000 m<sup>3</sup>/d RO  
 Egypt 2017, 3,600 m<sup>3</sup>/d RO  
 Maldives 2017, 2,000 m<sup>3</sup>/d RO  
 Lanzarote, Spain 2017, 1,250 m<sup>3</sup>/d RO  
 Gran Canaria, Spain 2016, 1,800 m<sup>3</sup>/d RO  
 Bahrain 2015, 3,500 m<sup>3</sup>/d RO

Dubai, United Arab Emirates 2015, 1,600 m<sup>3</sup>/d RO  
 China 2009, 5,800 m<sup>3</sup>/d RO

#### Equipment Supplier: Energy Recovery

Spain 2021, 15,000 m<sup>3</sup>/d RO  
 Tanzania 2021, 4,800 m<sup>3</sup>/d RO  
 Turkey 2018, 1,200 m<sup>3</sup>/d RO

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#### SELECTED REFERENCES

#### Equipment Supplier: High Pressure and Booster Pumps

Corso, Algeria 2023, 80,000 m<sup>3</sup>/d RO  
 Sharm El Sheikh, Egypt 2023, 30,000 m<sup>3</sup>/d RO  
 East Matrough, Egypt 2022, 65,000 m<sup>3</sup>/d RO  
 Reghaia SWRO, Algeria 2022, 60,000 m<sup>3</sup>/d RO  
 Zeralda, La Fontaine, Palm Beach and Bateau Cassé, Algeria 2022, 35,000 m<sup>3</sup>/d RO  
 SWRO Jaffna, Sri Lanka 2021, 24,000 m<sup>3</sup>/d RO  
 Barges x3, United Arab Emirates 2021, 3x 50,000 m<sup>3</sup>/d RO  
 Quebrada Blanca, Chile 2020, 102,360 m<sup>3</sup>/d RO  
 Formosa, Taiwan 2020, RO  
 TRSDC SWRO, Saudi Arabia 2020, RO  
 SWRO Nuweiba, Egypt 2020, RO  
 EDAM Los Cangrejos, Spain 2019, RO  
 Kalselteng 2, Indonesia 2019, RO  
 El Sokhna, Egypt 2019, RO  
 DUBA, Egypt 2019, RO  
 Ain Sokhna Ex, Egypt 2019, RO  
 Dahab, Egypt 2019, RO  
 Ras Sedr 2, Egypt 2019, RO  
 Abu Zenima, Egypt 2019, RO  
 Ras Sedr 1, Egypt 2019, RO  
 Paphos Desal Plant, Cyprus 2019, RO  
 IDAM, Curaçao 2018, RO  
 KAIA Train 6, Saudi Arabia 2018, RO  
 DABAA, Egypt 2018, RO  
 Ain Sokhna, Egypt 2018, RO  
 IWPP RAK, United Arab Emirates 2018, RO  
 KAEC SWRO, Saudi Arabia 2018, RO  
 Four Seasons, Egypt 2018, RO  
 Ain Sokhna, Egypt 2017, RO  
 Masinloc, Philippines 2017, RO  
 Central Java CFPP Project, Indonesia 2017, RO  
 Al Hamra, United Arab Emirates 2017, RO  
 SWRO RAK, United Arab Emirates 2017, RO  
 ZOFD SWRO, Iraq 2016, RO

Al Yousr II, Egypt 2016, RO  
 Paraquita, British Virgin Islands 2016, RO  
 Barka IWP, Oman 2016, RO  
 El Toor, Egypt 2016, RO  
 Dhekelia-Bosster, Cyprus 2016, RO  
 Sal & Sao Vicente, Cabo Verde 2016, RO  
 Angamos, Chile 2015, RO  
 Oman-sur extension, Oman 2015, RO  
 Puerto Rosario, Spain 2015, RO  
 Remela 2, Egypt 2015, RO  
 Al Yousr, Egypt 2014, RO  
 Remela, Egypt 2014, RO  
 Gyeongbuk, South Korea 2013, RO  
 Sharjah, United Arab Emirates 2013, RO  
 U.S. Virgin Islands 2012, RO  
 QGC, Australia 2012, RO  
 British Virgin Islands 2012, RO  
 EG EHC UHDE, Egypt 2012, RO  
 Layyah, United Arab Emirates 2012, RO  
 Caribbean Sea 2012, RO  
 Middle East 2012, RO  
 Musandam, Oman 2012, RO  
 Egypt 2012, RO  
 Trinidad and Tobago, 15,000 m<sup>3</sup>/d RO

Starkos, Brazil 2023, 12,000 m<sup>3</sup>/d RO  
 Indonesian SWRO, Indonesia 2023, 10,000 m<sup>3</sup>/d RO  
 Doolittle BWRO, United States 2023, 9,000 m<sup>3</sup>/d RO  
 Polish, Poland 2023, 8,000 m<sup>3</sup>/d RO  
 Sichuan Longmang, China 2023, 7,000 m<sup>3</sup>/d RO  
 Coromandel SWRO, India 2023, 6,000 m<sup>3</sup>/d RO  
 Peru SWRO, Peru 2023, 6,000 m<sup>3</sup>/d RO  
 Eren, Turkey 2023, 6,000 m<sup>3</sup>/d RO  
 Fong Shang, Taiwan 2023, 5,000 m<sup>3</sup>/d RO  
 5 MLD SWRO, United Arab Emirates 2023, 5,000 m<sup>3</sup>/d RO  
 Jubail II, Al Jubail, Saudi Arabia 2022, 1,000,000 m<sup>3</sup>/d RO  
 North Field, Qatar 2022, 377,000 m<sup>3</sup>/d RO  
 Sfax, Tunisia 2022, 100,000 m<sup>3</sup>/d RO  
 Corso, Algeria 2022, 80,000 m<sup>3</sup>/d RO  
 Yulong, China 2022, 80,000 m<sup>3</sup>/d RO  
 East Matrouh, Marsa Matruh, Egypt 2022, 65,000 m<sup>3</sup>/d RO  
 Mar de Alboran, Alboran Sea, Spain 2022, 60,000 m<sup>3</sup>/d RO  
 Tianwan Plant, Lianyungang, China 2022, 45,600 m<sup>3</sup>/d RO  
 Red Sea, Saudi Arabia 2022, 45,000 m<sup>3</sup>/d RO  
 40 MLD SWRO, Morocco 2022, 40,000 m<sup>3</sup>/d RO  
 OCP SWRO, Morocco 2022, 30,000 m<sup>3</sup>/d RO  
 Aurobindo, India 2022, 25,000 m<sup>3</sup>/d RO  
 20 MLD BOOT, United Arab Emirates 2022, 20,000 m<sup>3</sup>/d RO  
 Morocco SWRO, Morocco 2022, 15,000 m<sup>3</sup>/d RO  
 Mantoverde, Atacama, Chile 2022, 15,000 m<sup>3</sup>/d RO  
 Tibet Plant, Tibet, China 2022, 14,800 m<sup>3</sup>/d RO  
 Membranetec Brackish, Switzerland 2022, 13,600 m<sup>3</sup>/d RO  
 Indian Rayon, India 2022, 12,000 m<sup>3</sup>/d RO  
 Aurobindo Vizag, India 2022, 10,000 m<sup>3</sup>/d RO  
 Habas SWRO, Turkey 2022, 10,000 m<sup>3</sup>/d RO  
 Jubail 3A, Al Jubail, Saudi Arabia 2021, 600,000 m<sup>3</sup>/d RO  
 Shoaiba 5, Red Sea, Saudi Arabia 2021, 600,000 m<sup>3</sup>/d RO  
 Jubail 3B, Al Jubail, Saudi Arabia 2021, 570,000 m<sup>3</sup>/d RO  
 Yanbu 4, Yanbu, Saudi Arabia 2021, 450,000 m<sup>3</sup>/d RO  
 Shuqaiq 4, Al Shuqaiq, Saudi Arabia 2021, 400,000 m<sup>3</sup>/d RO  
 Ghubrah, Muscat, Al Gubrah, Oman 2021, 300,000 m<sup>3</sup>/d RO  
 Nemmeli, Chennai, India 2021, 175,000 m<sup>3</sup>/d RO  
 Barka, Oman 2021, 100,000 m<sup>3</sup>/d RO  
 Pertamina, Indonesia 2021, 100,000 m<sup>3</sup>/d RO  
 Qingdao Befesa, China 2021, 80,000 m<sup>3</sup>/d RO  
 El Marsa, Algeria 2021, 60,000 m<sup>3</sup>/d RO  
 Tangshan SWRO, Tangshan, Hebei, China 2021, 50,000 m<sup>3</sup>/d RO  
 Anping WWT, Anping, Taiwan 2021, 42,500 m<sup>3</sup>/d RO  
 Palm Jumeirah, United Arab Emirates 2021, 36,000 m<sup>3</sup>/d RO  
 West Village, New York City, United States 2021, 34,000 m<sup>3</sup>/d RO  
 Melilla, Spain 2021, 34,000 m<sup>3</sup>/d RO  
 Jaffna SWRO, Jaffna, Northern Province, Sri Lanka 2021, 32,000 m<sup>3</sup>/d RO  
 Mobile Plant, Saudi Arabia 2021, 30,000 m<sup>3</sup>/d RO  
 Weihai Huaneng Power, China 2021, 30,000 m<sup>3</sup>/d RO  
 ADASA Norte, Chile 2021, 29,550 m<sup>3</sup>/d RO  
 North Africa, Morocco 2021, 28,000 m<sup>3</sup>/d RO  
 Zeralda, Algiers, Algeria 2021, 25,000 m<sup>3</sup>/d RO  
 Cebu Cordova, Cebu, Philippines 2021, 22,500 m<sup>3</sup>/d RO  
 NCIC, Egypt 2021, 17,500 m<sup>3</sup>/d RO  
 Grasim Vilayat ETP, Vilayat, India 2021, 15,500 m<sup>3</sup>/d RO  
 Mobile Plant, Saudi Arabia 2021, 15,000 m<sup>3</sup>/d RO  
 Pali, Thailand 2021, 12,500 m<sup>3</sup>/d RO

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## SELECTED REFERENCES

**Equipment Supplier: Energy Recovery Devices**

Mirfa IWP, United Arab Emirates 2023, 545,520 m<sup>3</sup>/d RO  
 Shoaiba, Saudi Arabia 2023, 545,000 m<sup>3</sup>/d RO  
 Bejaia, Algeria 2023, 300,000 m<sup>3</sup>/d RO  
 El Tarf, Algeria 2023, 300,000 m<sup>3</sup>/d RO  
 Western Galilee, Israel 2023, 274,000 m<sup>3</sup>/d RO  
 Collahuasi, Chile 2023, 100,000 m<sup>3</sup>/d RO  
 Tianjin, China 2023, 100,000 m<sup>3</sup>/d RO  
 K-Water, South Korea 2023, 100,000 m<sup>3</sup>/d RO  
 Fortaleza, Brazil 2023, 86,000 m<sup>3</sup>/d RO  
 Anglo America, Chile 2023, 85,000 m<sup>3</sup>/d RO  
 Wanhua SWRO, China 2023, 70,000 m<sup>3</sup>/d RO  
 Reliance Jamnagar, India 2023, 50,000 m<sup>3</sup>/d RO  
 Mamelles, Senegal 2023, 50,000 m<sup>3</sup>/d RO  
 Gangcheng Power Plant, China 2023, 45,000 m<sup>3</sup>/d RO  
 ENCE, Spain 2023, 14,000 m<sup>3</sup>/d RO  
 SOPC, Egypt 2023, 12,600 m<sup>3</sup>/d RO

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- JSW Bellary, Ballari, Karnataka, India 2021, 10,500 m<sup>3</sup>/d RO  
Bou Ismail, Tipasa Province, Algeria 2021, 10,000 m<sup>3</sup>/d RO  
Le Bateau Cassé, Bordj El Kiffan, Algeria 2021, 10,000 m<sup>3</sup>/d RO  
Negela SWRO, Egypt 2021, 10,000 m<sup>3</sup>/d RO  
Rasheed SWRO, Egypt 2021, 10,000 m<sup>3</sup>/d RO  
Zhejiang Shengsi, China 2021, 10,000 m<sup>3</sup>/d RO  
Sharm El Sheikh, Egypt 2021, 3,000 m<sup>3</sup>/d RO  
Soreq, Yavne, Israel 2020, 572,000 m<sup>3</sup>/d RO  
Jubail, Al Jubail, Saudi Arabia 2020, 420,000 m<sup>3</sup>/d RO  
Barges, Al Shuqaiq, Saudi Arabia 2020, 150,000 m<sup>3</sup>/d RO  
Khobar 2, Saudi Arabia 2019, 770,000 m<sup>3</sup>/d RO  
Shuqaiq, Saudi Arabia 2019, 400,000 m<sup>3</sup>/d RO  
Facility D Expansion, Qatar 2019, 364,000 m<sup>3</sup>/d RO  
Chtouka SWRO, Morocco 2019, 275,000 m<sup>3</sup>/d RO  
AL Dur 2, Bahrain 2019, 240,000 m<sup>3</sup>/d RO  
Satellite Projects, Saudi Arabia 2019, 238,000 m<sup>3</sup>/d RO  
Duba, Saudi Arabia 2019, 153,840 m<sup>3</sup>/d RO  
Sharqiyah IWP, Oman 2019, 80,000 m<sup>3</sup>/d RO  
Sousse, Tunisia 2019, 50,000 m<sup>3</sup>/d RO  
Mansoura, Egypt 2019, 40,500 m<sup>3</sup>/d RO  
Shandong Lubei, China 2019, 33,340 m<sup>3</sup>/d RO  
MRPL, India 2019, 32,616 m<sup>3</sup>/d RO  
Talara, Peru 2019, 31,600 m<sup>3</sup>/d RO  
Westside BWRO, United States 2019, 26,000 m<sup>3</sup>/d RO  
Guaymas y Empalmes, Mexico 2019, 18,400 m<sup>3</sup>/d RO  
Pakistan Lucky SWRO, Pakistan 2019, 15,840 m<sup>3</sup>/d RO  
Paphos, Cyprus 2019, 15,000 m<sup>3</sup>/d RO  
Gaza 3, Palestine 2019, 14,000 m<sup>3</sup>/d RO  
Bengal S.ALAM, Bangladesh 2019, 11,160 m<sup>3</sup>/d RO  
Iraq SHATT, Iraq 2019, 11,000 m<sup>3</sup>/d RO  
NGH2, Vietnam 2019, 11,000 m<sup>3</sup>/d RO  
Pakistan 2019, 10,000 m<sup>3</sup>/d RO  
Kalba, United Arab Emirates 2019, 10,000 m<sup>3</sup>/d RO  
Punta Gorda, United States 2019, 10,000 m<sup>3</sup>/d RO  
Shoaiba 4, Saudi Arabia 2018, 400,000 m<sup>3</sup>/d RO  
South Dhahran, Saudi Arabia 2018, 235,020 m<sup>3</sup>/d RO  
Jebel Ali Power & Desalination complex, United Arab Emirates 2018, 210,816 m<sup>3</sup>/d RO  
Jurong Island, Singapore 2018, 136,000 m<sup>3</sup>/d RO  
Salalah OPWP, Oman 2018, 110,000 m<sup>3</sup>/d RO  
Spence, Chile 2018, 105,000 m<sup>3</sup>/d RO  
Ain Sokhna, Egypt 2018, 105,000 m<sup>3</sup>/d RO  
Quebrada Blanca, Chile 2018, 102,300 m<sup>3</sup>/d RO  
East Port Saeid, Egypt 2018, 75,000 m<sup>3</sup>/d RO  
Djibouti SWRO plant, Republic of Djibouti 2018, 45,000 m<sup>3</sup>/d RO  
El Dabaa, Egypt 2018, 43,750 m<sup>3</sup>/d RO  
IDAM Atacama, Chile 2018, 39,000 m<sup>3</sup>/d RO  
Lima Sur II, Peru 2018, 37,500 m<sup>3</sup>/d RO  
KAEC King Abdulla Economic City, Saudi Arabia 2018, 32,000 m<sup>3</sup>/d RO  
IDAM Sta Cruz Tenerife, Spain 2018, 30,000 m<sup>3</sup>/d RO  
Maitree Power, Bangladesh 2018, 26,409 m<sup>3</sup>/d RO  
Tangshan Nanfeng Steel Plant, China 2018, 25,000 m<sup>3</sup>/d RO  
GUPCO, Egypt 2018, 24,000 m<sup>3</sup>/d RO  
Hebei Fengyue, China 2018, 24,000 m<sup>3</sup>/d RO  
Ennore Thermal 2 x 660 MW, India 2018, 20,160 m<sup>3</sup>/d RO  
Ghar Lapsi & Pembroke, Malta 2018, 20,000 m<sup>3</sup>/d RO  
Lanzarote, Spain 2018, 20,000 m<sup>3</sup>/d RO  
Sharma Tabuk, Saudi Arabia 2018, 20,000 m<sup>3</sup>/d RO  
HPCL, India 2018, 18,840 m<sup>3</sup>/d RO  
Kazakhstan 2018, 17,000 m<sup>3</sup>/d RO  
Shinhalul Nuclear, South Korea 2018, 14,816 m<sup>3</sup>/d RO  
SWRO 2x6500m3d, Morocco 2018, 13,000 m<sup>3</sup>/d RO  
Balotra, India 2018, 12,600 m<sup>3</sup>/d RO  
Las Palmas III, Spain 2018, 12,500 m<sup>3</sup>/d RO  
Jaipur CETP, India 2018, 11,040 m<sup>3</sup>/d RO  
Agragua, Spain 2018, 11,000 m<sup>3</sup>/d RO  
Haihua Project, China 2018, 10,000 m<sup>3</sup>/d RO  
Capital Steel, China 2018, 10,000 m<sup>3</sup>/d RO  
Nirma, India 2018, 10,000 m<sup>3</sup>/d RO  
Habas Steel Mill SWRO, Turkey 2018, 10,000 m<sup>3</sup>/d RO  
Doha SWRO , Kuwait 2017, 284,736 m<sup>3</sup>/d RO  
Shoibah III exp II, Saudi Arabia 2017, 278,000 m<sup>3</sup>/d RO  
Marina East, Singapore 2017, 160,000 m<sup>3</sup>/d RO  
Ras Al Khaimah IWP, United Arab Emirates 2017, 121,968 m<sup>3</sup>/d RO  
Zhejiang Longsheng, China 2017, 88,000 m<sup>3</sup>/d RO  
JAZAN Economic city ARAMCO, Saudi Arabia 2017, 82,250 m<sup>3</sup>/d RO  
Valdelentisco Retrofit, Spain 2017, 72,000 m<sup>3</sup>/d RO  
Macanao Island SWRO, Venezuela 2016, 11,112 m<sup>3</sup>/d RO  
Al F retrofit, Saudi Arabia 2016, 11,000 m<sup>3</sup>/d RO  
Oman 2 x 5000 m<sup>3</sup>/d, Oman 2016, 10,400 m<sup>3</sup>/d RO  
Umm Al Houl Power and Water project, Qatar 2015, 336,000 m<sup>3</sup>/d RO  
Ras Abu Fontas A3 , Qatar 2015, 200,200 m<sup>3</sup>/d RO  
Qurayyat IWP, Oman 2015, 200,000 m<sup>3</sup>/d RO  
Dongjiakou Jiaonan, China 2015, 106,872 m<sup>3</sup>/d RO  
Jazan SWRO Plant, Saudi Arabia 2015, 60,000 m<sup>3</sup>/d RO  
San Antonio Water BWRO, TX, United States 2015, 37,860 m<sup>3</sup>/d RO  
JUMBO Project, Texas, United States 2015, 36,000 m<sup>3</sup>/d RO  
TACE Project, Turkmenistan 2015, 35,100 m<sup>3</sup>/d RO  
Ensenada, Mexico 2015, 26,000 m<sup>3</sup>/d RO  
Remelah , Egypt 2015, 24,000 m<sup>3</sup>/d RO  
Cangzhou New Bohai (Shanghai Safbon), China 2015, 22,500 m<sup>3</sup>/d RO  
Carboneras , Spain 2015, 21,038 m<sup>3</sup>/d RO  
PWT - Esenguly, Turkmenistan 2015, 20,160 m<sup>3</sup>/d RO  
Maspalomas II, Spain 2015, 20,000 m<sup>3</sup>/d RO  
Adeje Arona , Tenerife, Spain 2015, 20,000 m<sup>3</sup>/d RO  
Shishi Hongshan Power Plant, China 2015, 15,600 m<sup>3</sup>/d RO  
Santa Barbara, United States 2015, 15,000 m<sup>3</sup>/d RO  
Yongxin, Vietnam 2015, 12,672 m<sup>3</sup>/d RO  
Punta Catalina, Dominican Republic 2015, 12,000 m<sup>3</sup>/d RO  
Aguas de Antofagasta, Chile 2015, 12,000 m<sup>3</sup>/d RO  
Caleta, Argentina 2015, 12,000 m<sup>3</sup>/d RO  
Meenaxi Energy Phase II , India 2015, 11,736 m<sup>3</sup>/d RO  
Jersey Island SWRO Project, United Kingdom 2015, 10,800 m<sup>3</sup>/d RO  
Safi SWRO, Morocco 2015, 10,296 m<sup>3</sup>/d RO  
Shanghai Jinta, China 2015, 10,000 m<sup>3</sup>/d RO  
Eren Power Plant SWRO , Turkey 2015, 10,000 m<sup>3</sup>/d RO  
Sri Damodaran TPS Ash Handling Water, India, 34,200 m<sup>3</sup>/d RO

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Flowserve manufactures and services fluid motion control solutions for the world's toughest, most critical applications. Our history began over 200 years ago, and today Flowserve employs more than 15,000 associates in 300-plus locations around the world, including over 180 quick response centers that provide aftermarket parts and services to customers.

We are continually evolving our desalination technology to support the needs of our customers. Our products and services can optimize energy efficiency and reduce carbon emissions, helping make your next desalination project even more sustainable. Count on the expertise of Flowserve for your fresh water needs.

We offer:

- A complete, integrated flow control portfolio:
  - Pumps
  - Energy Recovery Devices
  - Valves
  - Mechanical Seals
- End-to-end Internet of Things (IOT) solution, RedRaven
- Unparalleled design and operational excellence
- Extensive engineering and technical resources
- Global presence with localized support
- Educational services ...and more

Through our unmatched combination of products, engineering and aftermarket services, we help our customers achieve tangible business results: lower operating costs, optimized performance, prolonged equipment life, mitigated risks and higher productivity.

Draw on our industry expertise to help address your most pressing challenges while reducing expenses, minimizing risk and maximizing performance.

**SELECTED REFERENCES****Equipment Supplier: Pumps, Energy Recovery Devices, ERD Boosters**

Jubail 2, Saudi Arabia 2022, 1,000,000 m<sup>3</sup>/d RO

Ashdod, Israel 2022, 705,600 m<sup>3</sup>/d RO

Jorf Lasfar 3, Morocco 2022, 113,000 m<sup>3</sup>/d RO

Jamnagar, India 2022, 52,800 m<sup>3</sup>/d RO

Tanajib, Saudi Arabia 2022, 32,000 m<sup>3</sup>/d RO

Mantoverde, Chile 2022, 18,400 m<sup>3</sup>/d RO

Farwest Oxy, Oman 2022

Shuqaiq 4, Saudi Arabia 2021, 513,000 m<sup>3</sup>/d RO

Shuqaiq 1 replacement, Saudi Arabia 2021, 400,000 m<sup>3</sup>/d RO

Barka V, Oman 2021, 100,000 m<sup>3</sup>/d RO

Las Palmas 3, Spain 2021, 90,000 m<sup>3</sup>/d RO

Jorf Lasfar 2, Morocco 2021, 27,000 m<sup>3</sup>/d RO

Hydra, Greece 2021, 2,000 m<sup>3</sup>/d RO

AL Jubail 3A, Saudi Arabia 2020, 600,000 m<sup>3</sup>/d RO

Yanbu 4, Saudi Arabia 2020, 450,000 m<sup>3</sup>/d RO

Kaust Expansion, Saudi Arabia 2020, 59,000 m<sup>3</sup>/d

Planta Desaladora Antofagasta 300, Chile 2020, 33,000 m<sup>3</sup>/d RO

Taweeelah, United Arab Emirates 2019, 909,000 m<sup>3</sup>/d RO

Rabigh 3, Saudi Arabia 2019, 600,000 m<sup>3</sup>/d RO

Shuqaiq 3, Saudi Arabia 2019, 400,000 m<sup>3</sup>/d RO

Dubai, Dubai, United Arab Emirates 2019, 50,000 m<sup>3</sup>/d RO

Talara, Peru 2019, 32,000 m<sup>3</sup>/d RO

Fengnan Steel, Shanghai, China 2018, 90,000 m<sup>3</sup>/d RO

Spence, Antofagasta, Mejillones, Chile 2018, 86,000 m<sup>3</sup>/d RO

Sharqiyah, Oman 2018, 80,000 m<sup>3</sup>/d RO

Fengnan Steel, China 2018, 40,000 m<sup>3</sup>/d RO

La Chimba, Chile 2018, 40,000 m<sup>3</sup>/d RO

Atacama, Copiapó, Chile 2018, 38,880 m<sup>3</sup>/d RO

Talara, Chile 2018, 35,000 m<sup>3</sup>/d RO

Tenerife, Spain 2018, 20,000 m<sup>3</sup>/d RO

Escondida, Chile 2017, 288,000 m<sup>3</sup>/d RO

Minera Escondida Expansion, Antofagasta, Chile 2017, 72,000 m<sup>3</sup>/d RO

Barbados 2017, 12,000 m<sup>3</sup>/d RO

Agragua, Spain 2017, 10,000 m<sup>3</sup>/d RO

Maspalomas I, Spain 2017, 6,000 m<sup>3</sup>/d RO

Barka 4, Oman 2016, 281,000 m<sup>3</sup>/d RO

Tuas 3, Singapore 2016, 150,000 m<sup>3</sup>/d RO

Al Khafji, Saudi Arabia 2015, 60,000 m<sup>3</sup>/d RO

Barka, Oman 2015, 56,780 m<sup>3</sup>/d RO

Jumbo, United States 2015, 40,000 m<sup>3</sup>/d RO

Repsol Butano, Spain 2015, RO

Sabha, Israel 2014, 55,000 m<sup>3</sup>/d RO

Minera Escondida, Antofagasta, Chile 2013, 216,000 m<sup>3</sup>/d RO

Carlsbad, USA 2013, 189,250 m<sup>3</sup>/d RO

Jamnagar Refinery, Gujarat, India 2013, 168,000 m<sup>3</sup>/d MED

Yanbu III, Yanbu, Saudi Arabia 2012, 550,000 m<sup>3</sup>/d MSF

Al Goubrah, Oman 2012, 190,932 m<sup>3</sup>/d RO

Jorf Lasfar, Morocco 2012, 81,000 m<sup>3</sup>/d

Al Ghalilah, Ras al-Jaima (UAE) 2012, 76,000 m<sup>3</sup>/d

Qatar Solar, Qatar 2012, 34,600 m<sup>3</sup>/d RO

Mantoverde, Chile 2012, 18,400 m<sup>3</sup>/d

Haquel, Saudi Arabia 2012, 16,000 m<sup>3</sup>/d RO

Candelaria, Chile 2012, 15,200 m<sup>3</sup>/d RO  
Kaltim 5, Indonesia 2012, 7,200 m<sup>3</sup>/d RO  
Mobile unit, Canada 2012, 3,400 m<sup>3</sup>/d  
Cargill España, Spain 2012, 1,200 m<sup>3</sup>/d  
Unelco, Spain 2012, RO  
Enlevement Transit BCL, France 2012, RO  
Instalaciones Hidráulicas, Spain 2012, RO  
Palmachim and Ext., Israel 2011, 150,000 m<sup>3</sup>/d RO  
Az Zour, Kuwait 2011, 136,000 m<sup>3</sup>/d RO  
Sorek, Tel Aviv, Israel 2010, 540,000 m<sup>3</sup>/d RO  
Point Lisas, Trinidad and Tobago 2010, 72,736 m<sup>3</sup>/d RO  
Salalah, Oman 2010, 68,200 m<sup>3</sup>/d RO  
Adelaide I & II, South Australia, Australia 2009, 274,000 m<sup>3</sup>/d RO  
Campo de Dalias, Spain 2009, 90,000 m<sup>3</sup>/d RO  
Sydney, New South Wales, Australia 2008, 250,000 m<sup>3</sup>/d RO  
Shuqaiq, Jeddah, Saudi Arabia 2008, 240,000 m<sup>3</sup>/d RO  
Aguilas, Spain 2008, 180,000 m<sup>3</sup>/d RO  
Sur, Oman 2008, 120,000 m<sup>3</sup>/d RO  
Al Jubail, Saudi Arabia 2008, 60,000 m<sup>3</sup>/d RO  
Kaust, Saudi Arabia 2008, 60,000 m<sup>3</sup>/d RO  
Gold Coast, Australia 2007, 126,000 m<sup>3</sup>/d RO  
Barka II plant, Barka, Oman 2007, 120,000 m<sup>3</sup>/d RO  
Ashkelon, Israel 2005, 330,000 m<sup>3</sup>/d RO  
Perth 1, Western Australia, Australia 2005, 143,700 m<sup>3</sup>/d RO  
Perth 2, Western Australia, Australia 2005, 143,700 m<sup>3</sup>/d RO  
Singspring, Tuas, Singapore 2003, 136,000 m<sup>3</sup>/d RO  
El Atabal, Spain 2001, 165,000 m<sup>3</sup>/d  
Carboneras, Spain 2000, 120,000 m<sup>3</sup>/d RO  
Alicante I & 2, Spain 2000, 64,000 m<sup>3</sup>/d RO  
Tuaspring, Singapore, 320,000 m<sup>3</sup>/d RO  
Ras Al Khair, Saudi Arabia, 300,000 m<sup>3</sup>/d RO  
Tenes, Algeria, 260,000 m<sup>3</sup>/d RO  
Barcelona, Spain, 200,000 m<sup>3</sup>/d RO  
Rabigh I, Saudi Arabia, 200,000 m<sup>3</sup>/d RO  
Cap D'Jinet, Algeria, 200,000 m<sup>3</sup>/d RO  
Mostaganem, Algeria, 200,000 m<sup>3</sup>/d RO  
Carlsbad, United States, 189,000 m<sup>3</sup>/d RO  
Fujairah I, United Arab Emirates, 160,000 m<sup>3</sup>/d RO  
Beckton, United Kingdom, 150,000 m<sup>3</sup>/d RO  
Trinidad and Ext., Trinidad and Tobago, 140,000 m<sup>3</sup>/d RO  
Fujairah II, United Arab Emirates, 136,000 m<sup>3</sup>/d RO  
Cartagena 1 & 2, Spain, 120,000 m<sup>3</sup>/d RO  
Rabigh II, Saudi Arabia, 108,000 m<sup>3</sup>/d RO  
Minjur, India, 100,000 m<sup>3</sup>/d RO  
Nemeli, India, 100,000 m<sup>3</sup>/d RO  
Larnaca, Cyprus 2013, 60,000 m<sup>3</sup>/d RO  
Lanzarote V, Spain 2013, 18,000 m<sup>3</sup>/d RO  
Fouka, Algeria, 100,000 m<sup>3</sup>/d RO  
Red Sea Area, Egypt, 78,000 m<sup>3</sup>/d RO  
Alicante, Spain, 70,000 m<sup>3</sup>/d RO  
Palm Jumeirah, United Arab Emirates, 66,000 m<sup>3</sup>/d RO  
Bahia de Palma, Spain, 60,000 m<sup>3</sup>/d RO  
Sabha, Israel, 55,000 m<sup>3</sup>/d RO  
Sea Hero, South Korea, 35,000 m<sup>3</sup>/d RO  
BP Clair Ridge, 30,000 m<sup>3</sup>/d RO

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### SELECTED REFERENCES

#### Equipment Supplier: Energy Recovery and High Pressure Feed Pumps

Roy Hill Mine, Australia 2022, 40,000 m<sup>3</sup>/d RO  
ArcelorMittal SWRO, Brazil 2021, 12,000 m<sup>3</sup>/d RO  
Basrah Water Plant, Iraq 2020, 36,000 m<sup>3</sup>/d RO  
Oil & Gas Company, Iraq 2020, 24,000 m<sup>3</sup>/d RO  
Hotel, Hurghada, Egypt 2020, 6,000 m<sup>3</sup>/d RO  
Rancho San Lucas, Los Cabos, Mexico 2019, 500 m<sup>3</sup>/d RO  
RO hire plant, Adelaide, Australia 2019, RO  
RO plant, Queensland, Australia 2019, RO  
Beenyup AWRP, Craigie, Australia 2017, 50,000 m<sup>3</sup>/d RO  
Buritica Gold Mine, Buritica, Colombia 2017, 2,400 m<sup>3</sup>/d RO  
Multiple Municipal Plants, Venezuela 2017, RO  
Changi Newater Expansion, Singapore 2015, 228,000 m<sup>3</sup>/d RO  
Baja California, Mexico 2015, 36,000 m<sup>3</sup>/d RO  
BP Khazzan, Oman 2014, 6,000 m<sup>3</sup>/d RO  
Sanmen, Qingdao, China 2013, 8,501 m<sup>3</sup>/d RO  
Takoradi, Ghana 2013, 4,000 m<sup>3</sup>/d RO  
OOCEP Abu Tubul Block 6o Project Water Treatment Plant, Abu Tubul, Oman 2013, 900 m<sup>3</sup>/d RO  
Upper Zakum U750, South Island, United Arab Emirates 2013, 705 m<sup>3</sup>/d RO  
Pakistan 2012, 31,000 m<sup>3</sup>/d RO  
Ras Al Khaimah, United Arab Emirates 2012, 20,160 m<sup>3</sup>/d RO  
Saudi Arabia 2012, 2,200 m<sup>3</sup>/d RO

#### Equipment Supplier: Energy Recovery and High Pressure Feed Pumps: BiTurbo™ High Recovery SWRO

Resort, Indonesia 2023, 3,000 m<sup>3</sup>/d RO  
Resort, Indonesia 2022, 3,000 m<sup>3</sup>/d RO  
Agriculture, Mexico 2022, 2,300 m<sup>3</sup>/d RO  
Resort, Mexico 2022, 700 m<sup>3</sup>/d RO  
Brine Mining (Ultra High Pressure), Saudi Arabia 2022, 672 m<sup>3</sup>/d RO  
Gili Trawangang Authority, Indonesia 2020, 3,000 m<sup>3</sup>/d RO  
Rancho San Lucas, Baja California, Mexico 2019, 360 m<sup>3</sup>/d RO

#### Equipment Supplier: Energy Recovery and High Pressure Feed Pumps: Ultra High Pressure RO

DTRI/SWCC Brine Mining Pilot, Saudi Arabia 2020, RO  
FGD Wastewater ZLD, Turow, Poland 2019, 1,000 m<sup>3</sup>/d RO

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## Equipment Supplier: Energy Recovery Devices

Saline Water conversion Company, Saudi Arabia 2022, 67,200 m<sup>3</sup>/d RO  
United Arab Emirates 2022, 24,000 m<sup>3</sup>/d RO  
San Quintin, Mexico 2022, 2,300 m<sup>3</sup>/d RO  
Cancun, Mexico 2022, 700 m<sup>3</sup>/d RO  
Jubail, Saudi Arabia 2022, 672 m<sup>3</sup>/d RO  
SWRO for Mining Application, Chile 2021, 34,560 m<sup>3</sup>/d RO  
Groundwater Reliability Improvement Program (GRIP), Pico River, CA, United States 2017, 46,631 m<sup>3</sup>/d RO  
Cuevas de Almanzora WTP, Cuevas de Almanzora, Spain 2017, 10,000 m<sup>3</sup>/d RO  
Richard Reynolds Desalination Facility, Chula Vista, CA, United States 2016, 3,270 m<sup>3</sup>/d RO  
Chino I Desalter Expansion, Chino, CA, United States 2016, 2,240 m<sup>3</sup>/d RO  
North Jensen Beach BWRO, Martin County, FL, United States 2015, 22,710 m<sup>3</sup>/d RO  
Ras Al-Khair Power and Desalination Plant, Ras Al-Khair, Saudi Arabia 2014, 306,700 m<sup>3</sup>/d RO  
Ras Al Khaimah, United Arab Emirates 2014, 25,000 m<sup>3</sup>/d RO  
Richard Reynolds Desalination Facility, Chula Vista, CA, United States 2016, 3,270 m<sup>3</sup>/d RO  
Chino I Desalter Expansion, Chino, CA, United States 2016, 2,240 m<sup>3</sup>/d RO  
North Jensen Beach BWRO, Martin County, FL, United States 2015, 22,710 m<sup>3</sup>/d RO  
Ras Al-Khair Power and Desalination Plant, Ras Al-Khair, Saudi Arabia 2014, 306,700 m<sup>3</sup>/d RO  
Ras Al Khaimah, United Arab Emirates 2014, 25,000 m<sup>3</sup>/d RO  
Oman 2014, 6,750 m<sup>3</sup>/d RO  
Springtree Water Treatment Plant, Sunrise, FL, United States 2014, 5,680 m<sup>3</sup>/d RO  
Archean Chemicals, Chennai, India 2014, 3,727 m<sup>3</sup>/d RO  
United Arab Emirates 2014, 3,000 m<sup>3</sup>/d RO  
Saudi Arabia 2014, 2,000 m<sup>3</sup>/d RO  
Qatar 2014, 2,000 m<sup>3</sup>/d RO  
Saudi Arabia 2014, 1,300 m<sup>3</sup>/d RO  
Saudi Arabia 2014, 200 m<sup>3</sup>/d RO  
Chino II Desalter, Santa Fe Springs, CA, United States 2014, RO  
Jeddah RO Phase III, Saudi Arabia 2013, 240,030 m<sup>3</sup>/d RO  
Adani Expansion, Mundra, India 2013, 20,000 m<sup>3</sup>/d RO  
Qurayyah IPP, Al Qurayyah, Saudi Arabia 2013, 17,352 m<sup>3</sup>/d RO  
United Arab Emirates 2013, 15,000 m<sup>3</sup>/d RO  
Qatar Solar Technologies Polysilicon, Ras Laffan, Qatar 2013, 12,000 m<sup>3</sup>/d RO  
Kaltim-5, Bontang, Indonesia 2013, 7,200 m<sup>3</sup>/d RO  
HM Ocean, United Kingdom 2013, 240 m<sup>3</sup>/d RO  
Sea Hero Test Bed SWRO, Busan, South Korea 2013, RO  
Daesan K-Water, Daesan, South Korea 2012, 119,000 m<sup>3</sup>/d RO  
Orange County Water District (OCWD) Groundwater  
Ras Al Khaimah, United Arab Emirates 2012, 18,000 m<sup>3</sup>/d RO  
Bechtel Wheatstone, WA, Australia 2012, 10,000 m<sup>3</sup>/d RO  
Al Khaleej, United Arab Emirates 2012, RO  
Kyianli Desalination DWP, Turkmenistan, 30,000 m<sup>3</sup>/d RO  
Angola, 1,200 m<sup>3</sup>/d RO  
Ternium Wastewater Treatment Plant, Mexico, RO

## Equipment Supplier: High Pressure Feed Pumps

SUEZ WTS Solutions USA, Inc., United States 2023, 9,600 m<sup>3</sup>/d RO  
Pact Engineering FZC, United Arab Emirates 2022, 115,200 m<sup>3</sup>/d RO  
Pact Engineering FZC, United Arab Emirates 2022, 96,000 m<sup>3</sup>/d RO  
Shook and AECOM, USA 2022, 50,400 m<sup>3</sup>/d RO  
Pact Engineering FZC, United Arab Emirates 2022, 38,400 m<sup>3</sup>/d RO  
ESLI END. Ur. Paz. Sen Ve Tic. Ltd. Sti., Turkey 2022, 28,800 m<sup>3</sup>/d RO  
AEREX Industries, United States 2022, 19,200 m<sup>3</sup>/d RO  
ESLI END. Ur. Paz. Sen Ve Tic. Ltd. Sti., Turkey 2022, 16,800 m<sup>3</sup>/d RO  
Marlo Inc, United States 2022, 9,600 m<sup>3</sup>/d RO  
Albany Resort, Nassau, New Providence Island, Bahamas 2018, 757 m<sup>3</sup>/d RO  
Husky Refinery, Lima, Ohio, United States 2017, 5,923 m<sup>3</sup>/d RO  
Marshall Island Desal., Ebeye, Marshall Islands 2016, 1,600 m<sup>3</sup>/d RO  
Pakistan 2014, 100,000 m<sup>3</sup>/d RO  
Iraq 2014, 75,000 m<sup>3</sup>/d RO  
Ras Al Khaimah, United Arab Emirates 2014, 25,000 m<sup>3</sup>/d RO  
Angola 2013, 2,592 m<sup>3</sup>/d RO  
Wheatstone, WA, Australia 2012, 10,000 m<sup>3</sup>/d RO  
Ras Al Khaimah, United Arab Emirates 2012, 9,000 m<sup>3</sup>/d RO  
Libya 2012, 8,000 m<sup>3</sup>/d RO  
TASIAST Expansion Kinross, Mauritania 2012, 856 m<sup>3</sup>/d RO  
Al Khaleej, United Arab Emirates 2012, RO

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## SELECTED REFERENCES

### Equipment Supplier: Pumps

Gibraltar 2017, 5,200 m<sup>3</sup>/d RO  
Singapore 2017, 1,500 m<sup>3</sup>/d RO  
Italy 2017, 700 m<sup>3</sup>/d RO  
Greece 2017, 650 m<sup>3</sup>/d RO  
China 2017, 600 m<sup>3</sup>/d RO  
Spain 2016, 750 m<sup>3</sup>/d RO  
France 2016, 700 m<sup>3</sup>/d RO  
Italy 2016, 660 m<sup>3</sup>/d RO  
Spain 2016, 660 m<sup>3</sup>/d RO  
Greece 2016, 660 m<sup>3</sup>/d RO  
Argentina 2015, 12,000 m<sup>3</sup>/d RO  
Argentina 2015, 1,500 m<sup>3</sup>/d RO  
Egypt 2015, 1,000 m<sup>3</sup>/d RO  
Greece 2015, 1,000 m<sup>3</sup>/d RO

Spain 2015, 1,000 m<sup>3</sup>/d RO  
 Spain 2015, 960 m<sup>3</sup>/d RO  
 Spain 2015, 552 m<sup>3</sup>/d RO  
 Italy 2014, 1,080 m<sup>3</sup>/d RO  
 Venezuela 2014, 1,000 m<sup>3</sup>/d RO  
 Turkey 2014, 500 m<sup>3</sup>/d RO  
 Turkey 2014, 500 m<sup>3</sup>/d RO  
 Kenya 2014, 360 m<sup>3</sup>/d RO  
 Turkey 2014, 350 m<sup>3</sup>/d RO  
 Turkey 2014, 300 m<sup>3</sup>/d RO  
 Lamberts Bay, South Africa 2013, 1,700 m<sup>3</sup>/d RO  
 Providence & Anse Boileau, Seychelles 2012, 7,500 m<sup>3</sup>/d RO  
 South Korea 2010, 500 m<sup>3</sup>/d RO  
 Tasias, Australia 2010, 500 m<sup>3</sup>/d RO  
 Argentina, 3,600 m<sup>3</sup>/d RO  
 Turkey, 1,344 m<sup>3</sup>/d RO  
 Turkey, 1,100 m<sup>3</sup>/d RO  
 Gocek Marin-Mugla, Turkey, 500 m<sup>3</sup>/d RO  
 Namibia, 432 m<sup>3</sup>/d RO  
 Corfu, Greece, 400 m<sup>3</sup>/d RO  
 Tasmania, Australia, 240 m<sup>3</sup>/d RO  
 Isles of Scilly, United Kingdom, 200 m<sup>3</sup>/d RO

Rabigh III Independent Water Project, Saudi Arabia 2019, 600,000 m<sup>3</sup>/d RO  
 Al-Khobar SWRO II Desalination Plant, Saudi Arabia 2019, 600,000 m<sup>3</sup>/d RO  
 Shuaigai 3 Independent Water Project, Saudi Arabia 2019, 450,000 m<sup>3</sup>/d RO  
 Al Dur Phase II, Bahrain 2019, 230,000 m<sup>3</sup>/d RO  
 Seawater Desalination Plant in Sousse, Tunisia 2019, 50,000 m<sup>3</sup>/d RO  
 Aksaray, Turkey 2019, 45,000 m<sup>3</sup>/d Other / Unknown  
 New Mansoura Desalination Plant, Egypt 2019, 40,000 m<sup>3</sup>/d Other / Unknown  
 IDAM Tenerife Seawater Desalination Plant Extension, Spain 2019, 30,000 m<sup>3</sup>/d RO  
 DUQM Integrated Power & Water Plant ("DIPWP") Project, Oman 2019, 30,000 m<sup>3</sup>/d Other / Unknown  
 Seawater Desalination Project for the Modernization of the Talara Refinery, Peru 2019, 20,500 m<sup>3</sup>/d RO  
 IDAM Guaymas, Mexico 2019, 18,000 m<sup>3</sup>/d RO  
 Adecuacion IDAM Lanzarote III, Spain 2019, 14,000 m<sup>3</sup>/d RO  
 Al Khobar SWRO Project, Saudi Arabia 2018, 210,000 m<sup>3</sup>/d RO  
 Jebel Ali Power and Desalination Station, United Arab Emirates 2018, 180,000 m<sup>3</sup>/d RO  
 Salalah Independent Water Project, Oman 2018, 120,000 m<sup>3</sup>/d RO  
 Seawater Desalination Plant of Atacama, Chile 2018, 40,000 m<sup>3</sup>/d RO  
 Santa Cruz de Tenerife Seawater Desalination Plant Extension, Spain 2018, 30,000 m<sup>3</sup>/d Other / Unknown  
 Provisur SWRO, Peru 2018, 25,000 m<sup>3</sup>/d RO  
 Djibouti SWRO, Republic of Djibouti 2018, 21,000 m<sup>3</sup>/d RO  
 Antofagasta and Tocopilla Desalination Plant, Chile 2018, 20,000 m<sup>3</sup>/d RO  
 Hassi Messaoud Demineralization Station Extension, Algeria 2018, 14,350 m<sup>3</sup>/d Other / Unknown  
 El-Alamein Seawater Reverse Osmosis Desalination Plant, El-Alamein, Egypt 2017, 150,000 m<sup>3</sup>/d RO  
 Desalination Plant at Marina East DBOO Project, Singapore 2017, 135,000 m<sup>3</sup>/d RO  
 Rizal Province Water Supply Improvement Project Phase I & II, Philippines 2017, 76,000 m<sup>3</sup>/d RO  
 Fengshangxi Plant, Taiwan 2017, 60,000 m<sup>3</sup>/d RO  
 Sohar Sea Water Reverse Osmosis Plant, Sohar, Oman 2016, 250,000 m<sup>3</sup>/d RO  
 Tuas 3rd Desalination Plant, Tuas, Singapore 2016, 113,562 m<sup>3</sup>/d RO  
 TUAS 3rd Desalination Plant, Tuas, Singapore 2016, 113,562 m<sup>3</sup>/d RO  
 Dongjiakou Seawater Desalination Plant, Qing Dao, China 2016, 100,000 m<sup>3</sup>/d RO  
 Putatan Water Treatment Plant 2, Putatan, Muntinlupa, Philippines 2016, 90,000 m<sup>3</sup>/d RO  
 Oil Refinery, Russia 2016, 35,000 m<sup>3</sup>/d Other / Unknown  
 Hassi Messaoud Demineralization Station, Algeria 2016, 24,000 m<sup>3</sup>/d Other / Unknown  
 Aktau Desalination Plant, Kazakhstan 2016, 20,000 m<sup>3</sup>/d RO  
 Shell Appomattox, United States 2016, 20,000 m<sup>3</sup>/d Other / Unknown  
 Changi NEWater Project Phase 2, Singapore 2015, 228,000 m<sup>3</sup>/d RO  
 Qurayyat Independent Water Project, Qurayyat, Oman 2015, 200,000 m<sup>3</sup>/d RO  
 Sharqiyah Desalination Plant, Sur, Oman 2015, 50,000 m<sup>3</sup>/d RO  
 Expansion of Kranji NEWater Factory, Singapore 2015, 22,730 m<sup>3</sup>/d RO  
 DBOM of the Beetham Water Recycling Plant, Trinidad and Tobago 2014, 50,000 m<sup>3</sup>/d RO

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### SELECTED REFERENCES

#### Equipment Supplier: Pressure Vessels

Yanbu 4 Independent Water Project, Saudi Arabia 2021, 600,000 m<sup>3</sup>/d RO  
 Ghubrah III Independent Water Project, Oman 2021, 300,000 m<sup>3</sup>/d Other / Unknown  
 Barka V Independent Water Project, Oman 2021, 100,000 m<sup>3</sup>/d Other / Unknown  
 Laguna Lake Water Treatment Plant at La Poblacion City, Manila, Philippines 2021, Other / Unknown  
 Antofagasta Desalination Plant, Chile 2021, Other / Unknown  
 Umm Al Quwain SWRO Desalination Plant, United Arab Emirates 2020, 680,000 m<sup>3</sup>/d RO  
 Al Jubail 3A Seawater Desalination Plant, Saudi Arabia 2020, 600,000 m<sup>3</sup>/d RO  
 Sorek 2 Plant (2nd Pass), Israel 2020, 548,000 m<sup>3</sup>/d RO  
 Tseung Kwan O Desalination Plant Stage 1, China 2020, 135,000 m<sup>3</sup>/d RO  
 Dubal SWRO Water Plant, United Arab Emirates 2020, 40,000 m<sup>3</sup>/d RO  
 Boiler Feed Water Treatment Plant, Lençóis Paulista, São Paulo State, Brazil 2020, RO  
 Taweelah RO Independent Water Project I & II, United Arab Emirates 2019, 909,200 m<sup>3</sup>/d RO

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- Zhenhai Petrochemical Water Treatment Project, China 2014, 38,400 m<sup>3</sup>/d RO
- PetroChina Yunnan Petrochemical Company Limited Wastewater Treatment Plant, China 2014, 24,000 m<sup>3</sup>/d RO
- Angamos Phase I, Chile 2014, 4,800 m<sup>3</sup>/d RO
- Carlsbad Desalination Plant, California, United States 2013, 189,500 m<sup>3</sup>/d RO
- APLNG Project, Australia 2013, 60,000 m<sup>3</sup>/d RO
- Baogang Steel Group Water Treatment Project, Hebei, China 2013, 30,000 m<sup>3</sup>/d MED
- Tuaspring Desalination Plant, Singapore 2012, 318,500 m<sup>3</sup>/d RO
- QGC LNG Upstream Plant - Phase 1, Australia 2012, 100,000 m<sup>3</sup>/d RO
- ORIGIN SRO Project, Australia 2012, 3,000 RO
- City Stars Project, Egypt 2012, 3,000 m<sup>3</sup>/d RO
- Municipal Water Treatment Project, Australia, 500,000 m<sup>3</sup>/d Other / Unknown
- ZOLAL IRAN JOB Water Block Fajr 2, Iran, 120,000 m<sup>3</sup>/d Other / Unknown
- QGC LNG Upstream Plant - Phase 2, Australia, 100,000 m<sup>3</sup>/d Other / Unknown
- West Sydney Water Treatment Project, Australia, 90,720 m<sup>3</sup>/d Other / Unknown
- Anshan CO., Ltd Water Treatment Project, China, 74,400 m<sup>3</sup>/d Other / Unknown
- Tianjin Petrochemical Corporation Water Treatment Project, China, 60,000 m<sup>3</sup>/d Other / Unknown
- Anshan CO., Ltd Water Treatment Project, China, 57,600 m<sup>3</sup>/d Other / Unknown
- Anshan CO., LTD Water Treatment Project, China, 57,600 m<sup>3</sup>/d
- Sur Desalination Plant, Barbera Sharqiyah, Oman, 50,000 m<sup>3</sup>/d RO
- Nanbao Reclaimed Water Reuse Project, China, 48,000 m<sup>3</sup>/d Other / Unknown
- Xuanhua Steel Group CO., LTD Water Treatment Project, China, 40,800 m<sup>3</sup>/d Other / Unknown
- Rizhao Senbo Paper Making Plant, China, 35,000 m<sup>3</sup>/d Other / Unknown
- Zhouping Power Plant Water Treatment Project, China, 33,600 m<sup>3</sup>/d Other / Unknown
- Tangshan Guofeng Iron and Steel Plant Water Treatment Project(Phase), China, 33,600 m<sup>3</sup>/d Other / Unknown
- Yangchen Power Plant Water Treatment Project, China, 31,200 m<sup>3</sup>/d Other / Unknown
- Complexo Petroquímico do Rio de Janeiro, Comperj, Brazil, 28,000 m<sup>3</sup>/d Other / Unknown
- Jinan Steel Water Reuse Project, China, 26,400 m<sup>3</sup>/d Other / Unknown
- Jian Chemical Water Treatment Project, China, 26,400 m<sup>3</sup>/d Other / Unknown
- Yuhuang Water Treatment Project, Heze, China, 24,000 m<sup>3</sup>/d Other / Unknown
- Jun Liangcheng Power Plant Water Treatment Project, Tianjin, China, 24,000 m<sup>3</sup>/d Other / Unknown
- Jinxin Petrochemical Water Treatment Project, China, 24,000 m<sup>3</sup>/d Other / Unknown
- Yangquan Sewage Plant Water Treatment Project, China, 21,600 m<sup>3</sup>/d Other / Unknown
- Tangshan Guofeng Iron and Steel Plant Water Treatment Project(II Phase), China, 21,600 m<sup>3</sup>/d Other / Unknown
- Changhong Industrial Zone Water Treatment Project, Sichuan, China, 21,600 m<sup>3</sup>/d Other / Unknown
- Minmetals Yingkou Medium Plate Co., Ltd Water Treatment Project, China, 19,200 m<sup>3</sup>/d Other / Unknown
- Chengde Steel Group Water Treatment Project, China, 19,200 m<sup>3</sup>/d Other / Unknown
- Xuanwei Power Generating CO., LTD Water Treatment Project, China, 18,000 m<sup>3</sup>/d Other / Unknown
- Shandong Jindu Electronics CO.,LTD Water Treatment Project, China, 18,000 m<sup>3</sup>/d Other / Unknown
- Shenguang Power Plant Water Treatment Project, China, 16,800 m<sup>3</sup>/d Other / Unknown
- Dushanzi Petrochemical Water Treatment Project, China, 16,800 m<sup>3</sup>/d Other / Unknown
- Beijing Beixiaohe WWTP Water Treatment Project, China, 16,800 m<sup>3</sup>/d Other / Unknown
- Yueyang Paper Shareholding Company Water Treatment Project, China, 15,600 m<sup>3</sup>/d Other / Unknown
- China Petroleum & Chemical Corporation Methanol Filtration Project, China, 14,976 m<sup>3</sup>/d Other / Unknown
- China Petroleum & Chemical Corporation Methanol Filtration Project, China, 14,976 m<sup>3</sup>/d Other / Unknown
- Elion Chemical Industry CO.LTD, Inner Mongolia Water Treatment Project, China, 12,000 m<sup>3</sup>/d Other / Unknown
- Sidem Marafiq Saudi Arabia Desalination Project, Jubail, Saudi Arabia, 10,000 m<sup>3</sup>/d Other / Unknown
- Liuheg Water Supply Co.Ltd Project, China, 10,000 m<sup>3</sup>/d Other / Unknown
- Seawater Desalination Project, India, 10,000 m<sup>3</sup>/d Other / Unknown
- Huaqiang Petrochemical Water Treatment Project, China, 9,600 m<sup>3</sup>/d Other / Unknown
- Shouqin Metel Material CO.,LTD Water Treatment Project, China, 7,200 m<sup>3</sup>/d Other / Unknown
- Shanna Synthetic Rubber Corporation Water Treatment Project, China, 7,200 m<sup>3</sup>/d Other / Unknown
- Ningxia Eppens Bioengineering CO.,LTD Water Treatment Project, China, 7,200 m<sup>3</sup>/d Other / Unknown
- Jinheng Chemical Fertilizer CO.,LTD Water Treatment Project, Hebei, China, 7,200 m<sup>3</sup>/d Other / Unknown
- METITO Seawater Project, United Arab Emirates, 6,000 m<sup>3</sup>/d Other / Unknown
- Indonesia Water Project, Indonesia, 5,000 m<sup>3</sup>/d Other / Unknown
- Changtu Seawater Project, China, 5,000 m<sup>3</sup>/d Other / Unknown
- India TWAD Seawater Desalination Project, India, 5,000 m<sup>3</sup>/d Other / Unknown
- Jiaokou Thermal Power Ltd Water Treatment Project, China, 4,800 m<sup>3</sup>/d Other / Unknown
- BIGA Seawater Project, Turkey, 4,000 m<sup>3</sup>/d Other / Unknown
- Sumatra Island Seawater Desalination Project, Indonesia, 4,000 m<sup>3</sup>/d Other / Unknown
- Huawei Thermal Power Co., Ltd Water Treatment Project, Huafang, China, 3,600 m<sup>3</sup>/d Other / Unknown
- Baja, Texas Project, Mexico, Other / Unknown
- Water Mobile Equipment, Europe, Other / Unknown
- Namibia Water Treatment Project, Namibia, Other / Unknown
- DOOSAN Water Treatment Project, Saudi Arabia, Other / Unknown
- Doha Water Treatment Project, Qatar, Other / Unknown

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**SELECTED REFERENCES****Equipment Supplier: Pumping Systems**

- San Pedro del Pinatar I Desalination Plant, San Pedro del Pinatar, Murcia, Spain 2023, 276,480 m<sup>3</sup>/d RO  
 Salto de Chira-Soria Desalination Plant, Gran Canaria, Spain 2023, 26,688 m<sup>3</sup>/d RO  
 Alicante I Desalination Plant, Alicante, Spain 2023, 21,600 m<sup>3</sup>/d RO  
 Spence Copper Mine Desalination Plant, Mejillones, Chile 2021, 86,400 m<sup>3</sup>/d  
 The Charles E. Meyer Desalination Plant, California, United States 2021, 26,000 m<sup>3</sup>/d  
 Claude "Bud" Lewis Desalination Plant, California, United States 2019, 227,304 m<sup>3</sup>/d  
 Khor Fakkan Desalination Plant, Sharjah, United Arab Emirates 2019, 19,000 m<sup>3</sup>/d  
 Edam de Cabos San Lucas, Baja California Sur, Mexico 2017, 47,350 m<sup>3</sup>/d  
 Virgen del Milagro Desalination Plant (MAZARRÓN), Spain 2016, 110,160 m<sup>3</sup>/d  
 Red Sea Desalination Plant, Rabigh, Saudi Arabia, 600,000 m<sup>3</sup>/d  
 Monterey Slant Well, California, United States of America, 12,000.0 m<sup>3</sup>/day

Municipality, Island, Turks and Caicos Islands 2014, 1,454 m<sup>3</sup>/d ROMining facility, Island, Peru 2014, 1,244 m<sup>3</sup>/d ROHotel, Island, Greece 2014, 600 m<sup>3</sup>/d ROAvedøre Power, Copenhagen, Denmark 2014, 600 m<sup>3</sup>/d ROHotel, Island, Italy 2014, 600 m<sup>3</sup>/d ROHotel, Island, Greece 2014, 350 m<sup>3</sup>/d ROHotel, Island, Italy 2014, 265 m<sup>3</sup>/d ROHotel, Island, Taiwan 2014, 150 m<sup>3</sup>/d ROHotel, Island, South Korea 2014, 125 m<sup>3</sup>/d ROShip, Marine, France 2014, 100 m<sup>3</sup>/d ROHotel, Island, Greece 2013, 750 m<sup>3</sup>/d ROHotel, Island, Greece 2013, 600 m<sup>3</sup>/d ROOasis Caribbe, Island, Mexico 2013, 600 m<sup>3</sup>/d ROOasis Sens, Island, Mexico 2013, 600 m<sup>3</sup>/d ROHotel, Island, Greece 2013, 600 m<sup>3</sup>/d ROHotel, Island, Greece 2013, 500 m<sup>3</sup>/d ROAverø Power Plant, Copenhagen, Denmark 2012, 600 m<sup>3</sup>/d RO**ISOBARIX**

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**SELECTED REFERENCES****Equipment Supplier: XPR Pressure Exchanger (Osmotic Power Pilot Plants)**

- National University of Singapore, Singapore 2015, 1 m<sup>3</sup>/d Other / Unknown  
 Nanyang Technological University, NTU, Singapore 2014, 22 m<sup>3</sup>/d Other / Unknown  
 Osmoblue, Lausanne, Switzerland 2014, 10 m<sup>3</sup>/d Other / Unknown  
 National University of Singapore, NUS, Singapore 2014, 5 m<sup>3</sup>/d Other / Unknown

**Equipment Supplier: XPR Pressure Exchanger (SWRO)**

- Municipality, Island, Indonesia 2015, 2,428 m<sup>3</sup>/d RO  
 MASDAR, Dubai, United Arab Emirates 2015, 1,070 m<sup>3</sup>/d RO  
 Hotel, Island, United Arab Emirates 2015, 171 m<sup>3</sup>/d RO  
 Research Institute, Shanghai, China 2015, 100 m<sup>3</sup>/d RO  
 Shuqaik Power, Red Sea, Saudi Arabia 2014, 8,016 m<sup>3</sup>/d RO

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**SELECTED REFERENCES****Equipment Supplier: Pump Replacements**

- Compact & Energy Efficient High-Pressure Pumping Stations, Gibraltar, 24,000 m<sup>3</sup>/d RO

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**SELECTED REFERENCES****Equipment Supplier: Pumps**

- Kindasa Water Services, Jeddah, Saudi Arabia, 40,000 m<sup>3</sup>/d RO  
 Al Shallal Park, Jeddah, Saudi Arabia, 35,952 m<sup>3</sup>/d  
 Aquaries Arabia, Yanbu, Saudi Arabia, 4,000 m<sup>3</sup>/d RO  
 Private Desalination Plant, SAWACO, Jeddah, Saudi Arabia

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### SELECTED REFERENCES

#### Equipment Supplier: Pressure Vessels

Bacalhau FPSO, Brazil 2021, Ozonation  
Lithuania 2021, Other / Unknown  
Shoaiba, Saudi Arabia 2021, Other / Unknown  
Kingisepp, Russia 2021, Other / Unknown  
Poland 2021, Other / Unknown  
Shuqaiq IV, Saudi Arabia 2021, Other / Unknown  
Negela Rasheed Taba Expansion Ain Sokhna, Egypt 2021, Other / Unknown  
Jawa Project, South Korea 2021, Other / Unknown  
Jubail Plant, Saudi Arabia 2021, Other / Unknown  
MERO 3, Brazil 2021, Other / Unknown  
Bateau Cassé Project, Algeria 2021, Other / Unknown  
Reghaia, Algeria 2021, Other / Unknown  
Marvel Project Brine concentration- Indonesia, Turkey 2021, Other / Unknown  
Desali el Matrouh, Egypt 2021, Other / Unknown  
SIDI IFNI, Morocco 2021, Other / Unknown  
Laayoune, Morocco 2020, Other / Unknown  
Bonaire, Netherlands 2020, Other / Unknown  
Sonede Zarat SWRO, Tunisia 2020, Other / Unknown  
MARLIM1 - MV33 - Anita Garibaldi FPSO, Brazil 2020, Other / Unknown  
MARLIM2 - Anna Nery FPSO, Brazil 2020, Other / Unknown  
“PLANT B” SEAWATER DESALINATION, Israel 2020, Other / Unknown  
Sulaibiya, Kuwait 2020, Other / Unknown  
Farys 2, Belgium 2020, Other / Unknown  
Ras Al Khair, Saudi Arabia 2020, Other / Unknown  
EVIDES BASF ANTWERP PROJECT, Belgium 2020, Other / Unknown  
Liza 3 FPSO, Guyana 2020, Other / Unknown  
South Korea 2020, Other / Unknown  
La Fonatine & Zeralda, Algeria 2020, Other / Unknown  
Sangomar FPSO, Senegal 2020, Other / Unknown  
Formosa Desalination Plant, China (Taiwan) 2019, 105,000 m<sup>3</sup>/d  
Other / Unknown  
Basrah, Iraq 2019, 72 m<sup>3</sup>/d Other / Unknown  
Shoaiba Phase 4 Desalination Project, Saudi Arabia 2019, Other / Unknown  
Shafab/Esfahan refinery, Iran 2019, Other / Unknown  
FPSO Carioca (MV30), Brazil 2019, Other / Unknown  
Minera Spence, Chile 2019, Other / Unknown  
Johan Castberg project, Norway 2019, Other / Unknown  
SHARQIYAH IWP, Oman 2019, Other / Unknown  
Farys, Belgium 2019, Other / Unknown

Agadir Desalination Plant, Morocco 2019, Other / Unknown  
El Oued, Algeria 2019, Other / Unknown  
FPSO Guanabara (MV31), Brazil 2019, Other / Unknown  
Umm Al Houl Water Expansion, Qatar 2019, Other / Unknown  
SJ7262, Singapore 2019, Other / Unknown  
WSC Pembroke Reverse Osmosis plant, Malta 2019, Other / Unknown  
SWRO Nuweiba, Egypt 2019, Other / Unknown  
Linde Russia, Russia 2019, Other / Unknown  
Buzios V FPSO, Brazil 2019, Other / Unknown  
Liza 2 FPSO, Guyana 2019, Other / Unknown  
Sherman Texas, USA 2018, Other / Unknown  
Beenyup, Australia 2018, Other / Unknown  
Cherry Point, USA 2018, Other / Unknown  
City of Yankton, United States 2018, Other / Unknown  
Quebrada Blanca, Chile 2018, Other / Unknown  
ARAMCO, Saudi Arabia 2018, Other / Unknown  
Doha SWRO Stage I desalination project, Kuwait 2017, Other / Unknown  
Umluj project, Saudi Arabia 2017, Other / Unknown  
Sako Bandar Abbas project, Iran 2017, Other / Unknown  
Mad Dog project, Gulf of Mexico 2017, Other / Unknown  
16" project in Saudi Arabia, Saudi Arabia 2017, Other / Unknown  
WTP Ptolemais project, Greece 2017, Other / Unknown  
Escondida Expansion, Chile 2017, Other / Unknown  
Project in Saudi Arabia, Saudi Arabia 2017, Other / Unknown  
King Abdullah International Airported project, Saudi Arabia 2017, Other / Unknown  
Shuaibah III - Expansion II Seawater desalination plant, Saudi Arabia 2017, Other / Unknown  
Sulaibiya Wastewater Treatment and Reclamation Plant, Kuwait 2017, Other / Unknown  
Ain Sokhna, Egypt 2017, Other / Unknown  
Daaba, Egypt 2017, Other / Unknown  
Barka IV IWP, Oman 2016, 281 m<sup>3</sup>/d Other / Unknown  
Basrah IRAK Water Supply Improvement Project P4, Iraq 2016, 199 m<sup>3</sup>/d Other / Unknown  
Jazan IGCC (Aramco), Saudi Arabia 2016, Other / Unknown  
Kouribgh Morocco, Morocco 2016, Other / Unknown  
Project in Egypt, Egypt 2016, Other / Unknown  
Sulaibiya Wastewater Treatment and Reclamation Plant, Kuwait 2016, Other / Unknown  
Ulu Pandan expansion project, Singapore 2016, Other / Unknown  
Sarlux-Saras Project, Italy 2016, Other / Unknown  
Agadir, Morocco 2015, 100,000 m<sup>3</sup>/d Other / Unknown  
Umm Al Houl – Facility D, Qatar 2015, 590 m<sup>3</sup>/d Other / Unknown  
Questa Mines, USA 2015, 20 m<sup>3</sup>/d Other / Unknown  
Blue Hills, Bahamas 2015, 10 m<sup>3</sup>/d Other / Unknown  
Granadilla, Spain 2015, Other / Unknown  
Kyanli Desalination DWP, Turkmenistan 2015, Other / Unknown  
Mirfa, UAE 2015, Other / Unknown  
East Hub, Angola 2015, Other / Unknown  
Beenyup AWRP, Australia 2015, Other / Unknown  
FPSO P68-P71, Brazil 2015, Other / Unknown  
FPSO Cidade de Campos dos Goytacaces, Brazil 2015, Other / Unknown  
Integra (P67 & P70), Brazil 2014, Other / Unknown  
P76, Brazil 2014, Other / Unknown  
P74, Brazil 2014, Other / Unknown  
Marica & Saquarema, Brazil 2013, Other / Unknown

P66 & P69, Brazil 2013, Other / Unknown  
 Kaust Project, Saudi Arabia 2013, Other / Unknown  
 Modon WTP, Saudi Arabia 2013, Other / Unknown  
 Rabigh II, Saudi Arabia 2013, Other / Unknown  
 Campo Rubiales, Colombia 2013, Other / Unknown  
 Copiapó Expansion, Chile 2013, Other / Unknown  
 Ghana 2013, Other / Unknown  
 Barka, Oman 2013, Other / Unknown  
 UGCC WT PJT, Uzbekistan 2013, Other / Unknown  
 Ras Al Khair, Saudi Arabia 2012, Other / Unknown  
 Petrobras Platform, Brazil 2012, Other / Unknown  
 Nevada Water Systems, USA 2012, Other / Unknown  
 Al Zawrah, UAE 2012, Other / Unknown  
 West Hub, Angola 2012, Other / Unknown  
 Ilhabela, Brazil 2012, Other / Unknown  
 Riyadh Water - NWC, Saudi Arabia 2012, Other / Unknown  
 Shuqaiq Expansion, Saudi Arabia 2012, Other / Unknown  
 Laayoune, Morocco 2012, Other / Unknown  
 Melbourne, VIC, Australia, 418,000 m<sup>3</sup>/d RO  
 Ras Al Khair, Saudi Arabia, 310,000 m<sup>3</sup>/d RO  
 Ras Al Khair, Saudi Arabia, 306,700 m<sup>3</sup>/d RO  
 Carlsbad, United States 2014, 189,250 m<sup>3</sup>/d RO  
 Ras Abu Fontas A3, Qatar 2015, 163,656 m<sup>3</sup>/d RO  
 Adelaide II, Australia, 150,000 m<sup>3</sup>/d RO  
 Fujairah, United Arab Emirates 2013, 136,000 m<sup>3</sup>/d RO  
 Orange County GWRD, United States 2012, 113,550 m<sup>3</sup>/d RO  
 Qingdao, China 2010, 100,000 m<sup>3</sup>/d RO  
 Ghalilah, United Arab Emirates 2012, 68,140 m<sup>3</sup>/d RO  
 Marina Baja - Mutxamel, Spain, 50,000 m<sup>3</sup>/d RO  
 Oropesa, Spain, 50,000 m<sup>3</sup>/d RO  
 Copiapo, Chile 2012, 17,000 m<sup>3</sup>/d RO  
 Kaust, Saudi Arabia 2020, 15,000 m<sup>3</sup>/d RO  
 Sterling, CO, United States 2011, 11,827 m<sup>3</sup>/d RO  
 Tan Tan, Morocco 2012, 8,600 m<sup>3</sup>/d RO  
 Ampliación Cabo Verde, Cabo Verde, 5,000 m<sup>3</sup>/d RO  
 MV27, Brazil, RO  
 FPSO - CLOV, Angola, RO  
 Al Zawrah, United Arab Emirates, RO

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# SULZER

As a global leader in pump design, Sulzer is recognized for delivering excellent product quality and performance reliability for the most critical applications in desalination. With our experience and proven technology, we help you to operate your plants more efficiently. We share our expertise and create enduring and economical solutions.

Sulzer primarily focuses on pumps for the reverse osmosis processes, but we also serve the distillation area. We are a full-line pump supplier for medium-to-large reverse osmosis plants. We provide pumps for seawater intake, pretreatment, high-pressure membrane feed, energy recovery device boosting, and product water transport. Our customers benefit from getting all pumps from one supplier, and we make sure to optimize the desalination process using Sulzer quality pumps and know-how.

Sulzer also delivers products such as pumps, mixers, compressors and other aeration products and screening, sedimentation and filtration solutions for applications within clean water, municipal and industrial wastewater.

**SELECTED REFERENCES****Equipment Supplier: Pumps**

Corso, Algeria 2022, 80,000 m<sup>3</sup>/d RO  
 Manyar Smelter, Indonesia 2022, 45,000 m<sup>3</sup>/d RO  
 Sharm El Sheikh, Egypt 2022, 25,000 m<sup>3</sup>/d RO  
 Basrah, Iraq 2022, 2,500 m<sup>3</sup>/d RO  
 North Field Expansion SWRO, Ras Laffan, Qatar 2021, 283,000 m<sup>3</sup>/d RO  
 Soreq 2, Israel 2020, 670,000 m<sup>3</sup>/d RO  
 Shoaibah 5, Shoaibah, Saudi Arabia 2020, 600,000 m<sup>3</sup>/d RO  
 East Matrouh, Matrouh, Egypt 2020, 65,000 m<sup>3</sup>/d RO  
 Los Pelambres, Chile 2020, 34,560 m<sup>3</sup>/d RO  
 SES South Sinai, South Sinai, Egypt 2020, 6,500 m<sup>3</sup>/d RO  
 Sharm El Sheikh (Movenpick hotel), Shalm El Sheikh, Egypt 2020, 3,000 m<sup>3</sup>/d RO  
 Um Al Quwain, United Arab Emirates 2019, 681,818 m<sup>3</sup>/d RO  
 Khobar 2 replacement SWRO, Saudi Arabia 2019, 630,000 m<sup>3</sup>/d RO  
 Shuqaiq 3 IWP, Saudi Arabia 2019, 450,000 m<sup>3</sup>/d RO  
 Umm Al Houl 2, Qatar 2019, 300,000 m<sup>3</sup>/d RO  
 West Coast SWRO Plants, Saudi Arabia 2019, 238,500 m<sup>3</sup>/d RO  
 Jebel Ali SWRO, United Arab Emirates 2019, 182,000 m<sup>3</sup>/d RO  
 Bahri Barge Units, Saudi Arabia 2019, 150,000 m<sup>3</sup>/d RO  
 Shandong Binzhou, China 2019, 60,000 m<sup>3</sup>/d RO  
 Zaarat, Tunisia 2019, 50,000 m<sup>3</sup>/d RO

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Al-Wakrah, Qatar 2015, 170,000 m<sup>3</sup>/d RO  
New Mansoura City, Egypt 2019, 40,000 m<sup>3</sup>/d RO  
Laayounne 2, Morocco 2019, 26,000 m<sup>3</sup>/d RO  
Guaymas SWRO, Mexico 2019, 18,500 m<sup>3</sup>/d RO  
Los Cabos Expansion SWRO, Mexico 2019, 15,000 m<sup>3</sup>/d RO  
East Port Said SWRO, Egypt 2018, 150,000 m<sup>3</sup>/d RO  
Agadir Expansion, Morocco 2018, 100,000 m<sup>3</sup>/d RO  
Sousse SWRO, Tunisia 2018, 50,000 m<sup>3</sup>/d RO  
SWRO Laayoun, Morocco 2018, 26,000 m<sup>3</sup>/d RO  
SWRO Al Hoceima, Morocco 2018, 17,500 m<sup>3</sup>/d RO  
SWRO Jeddah (Emergency Plants), Saudi Arabia 2018, 7,300 m<sup>3</sup>/d RO  
Shuaibah III Expansion II Desalination Plant, Saudi Arabia 2017, 250,000 m<sup>3</sup>/d RO  
El Alamein SWRO Plant, Egypt 2017, 150,000 m<sup>3</sup>/d RO  
El Galalah Desalination Plant, Egypt 2017, 150,000 m<sup>3</sup>/d RO  
Jazan SWRO Plant, Saudi Arabia 2017, 150,000 m<sup>3</sup>/d RO  
SWRO Sri Damodaram Sanjeevaiah TPS, India 2017, 100,000 m<sup>3</sup>/d RO  
Valdelentisco (refurbishment), Spain 2017, 96,000 m<sup>3</sup>/d RO  
Marcona SWRO Plant, Peru 2017, 19,500 m<sup>3</sup>/d RO  
IDAM Janubio, Spain 2017, 18,000 m<sup>3</sup>/d RO  
Chennai Tamilnadu India, India 2017, 13,500 m<sup>3</sup>/d RO  
Palestine SWRO, Palestine 2017, 12,000 m<sup>3</sup>/d RO  
Rabigh 3x 2000 m<sup>3</sup>/day (Kindsa), Saudi Arabia 2017, 6,000 m<sup>3</sup>/d RO  
SAWACO Store City Plant, Saudi Arabia 2017, 5,000 m<sup>3</sup>/d RO  
Barka IV, Oman 2016, 281,000 m<sup>3</sup>/d RO  
Sohar IWP, Oman 2016, 250,000 m<sup>3</sup>/d RO  
Ras Al Khaima, United Arab Emirates 2016, 150,000 m<sup>3</sup>/d RO  
Iga II, Burkina Faso 2016, 120,000 m<sup>3</sup>/d Other / Unknown  
Putatan WTP 2, Philippines 2016, 100,000 m<sup>3</sup>/d RO  
Cangzhou SWRO Plant, China 2016, 50,000 m<sup>3</sup>/d RO  
Hangzhou WWT, China 2016, 50,000 m<sup>3</sup>/d Other / Unknown  
Khurais, Saudi Arabia 2016, 50,000 m<sup>3</sup>/d RO  
Remelah II, Egypt 2016, 20,000 m<sup>3</sup>/d RO  
Shenhua Ningxia Coal Plant, China 2016, 20,000 m<sup>3</sup>/d RO  
El M'Ghaier, Algeria 2016, 16,000 m<sup>3</sup>/d RO  
Formentera SWRO Plant, Spain 2016, 15,000 m<sup>3</sup>/d RO  
Guangdong Baolihua Power Plant, China 2016, 8,000 m<sup>3</sup>/d RO  
Magtaa Expansion, Algeria 2015, 500,000 m<sup>3</sup>/d RO  
Um Al Houl, Qatar 2015, 300,000 m<sup>3</sup>/d RO  
Qurayyat, Oman 2015, 200,000 m<sup>3</sup>/d RO  
Basrah, Iraq 2015, 200,000 m<sup>3</sup>/d RO  
Ras Abu Fontas, Qatar 2015, 170,000 m<sup>3</sup>/d RO  
Agadir, Morocco 2015, 100,000 m<sup>3</sup>/d RO  
Qingdao Dongjiakou, China 2015, 100,000 m<sup>3</sup>/d RO  
Xiaotangshan Water Treatment Plant, China 2015, 100,000 m<sup>3</sup>/d Other / Unknown  
Djerba, Tunisia 2015, 50,000 m<sup>3</sup>/d RO  
Khouribga, Morocco 2015, 38,000 m<sup>3</sup>/d RO  
Santa Barbara, United States 2015, 20,000 m<sup>3</sup>/d RO  
Yanbu Containerized SWRO plant, Saudi Arabia 2015, 12,000 m<sup>3</sup>/d RO  
BV Plant, Vietnam 2015, 8,000 m<sup>3</sup>/d RO  
Xinjiang Guanghui, China 2015, 6,000 m<sup>3</sup>/d RO  
Hongyanhe Nuclear Power Plant SWRO P3, China 2015, 4,500 m<sup>3</sup>/d RO  
Shenhua Ningxia Coal Plant, China 2015, 3,600 m<sup>3</sup>/d RO  
Hezoua, Tunisia 2014, 10,000 m<sup>3</sup>/d RO

Hongyanhe Nuclear Power Plant SWRO P2, China 2015, 4,000 m<sup>3</sup>/d RO  
Ningde Nuclear Power Plant SWRO P2, China 2015, 3,500 m<sup>3</sup>/d RO  
Hongdun Wastewater Reuse Plant, China 2015, 3,000 m<sup>3</sup>/d RO  
Egypt Container SWRO P2, Egypt 2015, 2,000 m<sup>3</sup>/d RO  
Jamnagar, India 2014, 168,000 m<sup>3</sup>/d RO  
Mirfa, United Arab Emirates 2014, 136,000 m<sup>3</sup>/d RO  
United Arab Emirates 2014, 136,000 m<sup>3</sup>/d RO  
Beetham, Trinidad and Tobago 2014, 50,000 m<sup>3</sup>/d RO  
Trinidad and Tobago 2014, 50,000 m<sup>3</sup>/d NF  
Baosteel Desalination plant, China 2014, 30,000 m<sup>3</sup>/d RO  
Baosteel, China 2014, 30,000 m<sup>3</sup>/d MED  
Polimeks, Turkmenistan 2014, 30,000 m<sup>3</sup>/d RO  
Kiyaly, Turkmenistan 2014, 30,000 m<sup>3</sup>/d RO  
Tianjin Zhongxin Shengtaicheng, China 2014, 20,000 m<sup>3</sup>/d RO  
Tianjin Zhongxin Shengtaicheng, China 2014, 20,000 m<sup>3</sup>/d RO  
Granadilla, Spain 2014, 16,000 m<sup>3</sup>/d RO  
Malaysia Keysino BWRO Plant P1, Malaysia 2014, 15,000 m<sup>3</sup>/d RO  
Barka SWRO Plant (Small Plant), Oman 2014, 12,000 m<sup>3</sup>/d RO  
Tozeur, Tunisia 2014, 10,000 m<sup>3</sup>/d RO  
Nafta, Tunisia 2014, 10,000 m<sup>3</sup>/d NF  
Indonesia Wandan Power Plant, Indonesia 2014, 7,500 m<sup>3</sup>/d RO  
Marasi, Egypt 2014, 5,000 m<sup>3</sup>/d RO  
Tenes, Algeria 2013, 200,000 m<sup>3</sup>/d RO  
Al Ghubrah, Oman 2013, 191,000 m<sup>3</sup>/d RO  
Carlsbad, United States 2013, 189,250 m<sup>3</sup>/d RO  
Tembusu SWRO (Intake), Singapore 2013, 182,000 m<sup>3</sup>/d RO  
Jamnagar Desalination plant, Jamnagar, India 2013, 168,000 m<sup>3</sup>/d RO  
Al Fujairah 1 SWRO expansion, United Arab Emirates 2013, 136,000 m<sup>3</sup>/d RO  
Jubail 4 SWRO, Saudi Arabia 2013, 136,000 m<sup>3</sup>/d RO  
Al Jubail SWRO-4., Saudi Arabia 2013, 100,000 m<sup>3</sup>/d RO  
Cap Djinet, Algeria 2013, 100,000 m<sup>3</sup>/d RO  
Salalah, Oman 2013, 68,200 m<sup>3</sup>/d RO  
Ghana SWRO, Nungua, Ghana 2013, 60,000 m<sup>3</sup>/d RO  
Teshie Nungua, Ghana 2013, 60,000 m<sup>3</sup>/d RO  
Taiyuan Steel Plant, China 2013, 36,000 m<sup>3</sup>/d RO  
Salalah Steel Plant, Oman 2013, 35,000 m<sup>3</sup>/d RO  
Hongyang Power Plant, China 2013, 30,000 m<sup>3</sup>/d RO  
Yuhuan Power Plant SWRO (intake upgrade), China 2013, 30,000 m<sup>3</sup>/d RO  
Middelburg water reclamation plant, Middelburg, South Africa 2013, 20,000 m<sup>3</sup>/d RO  
Sabha B Project (1st stage pump for Boron Removal RO System), Israel 2013, 15,000 m<sup>3</sup>/d RO  
Guia de Isora/Oeste de Tenerife, Tenerife, Spain 2013, 14,000 m<sup>3</sup>/d RO  
Nellore, India 2013, 10,000 m<sup>3</sup>/d RO  
Muthukurmandal, Nellore Andhra Pradesh, India 2013, 10,000 m<sup>3</sup>/d RO  
Dafeng SWRO, Dafeng, China 2013, 5,000 m<sup>3</sup>/d RO  
Datang Keqi Coal Plant ZLD, China 2013, 3,200 m<sup>3</sup>/d MED  
Soreq, Israel 2012, 510,000 m<sup>3</sup>/d RO  
Magtaa, Oran, Algeria 2012, 500,000 m<sup>3</sup>/d RO  
Melbourne, VIC, Australia 2012, 411,000 m<sup>3</sup>/d RO  
Ashdod, Israel 2012, 320,000 m<sup>3</sup>/d RO  
Qingdao, China 2012, 100,000 m<sup>3</sup>/d RO  
Aktau, Kazakhstan 2011, 12,000 m<sup>3</sup>/d MED  
Jorf Lasfar, Morocco 2012, 75,000 m<sup>3</sup>/d RO

Salboukh, Riyadh, Saudi Arabia 2012, 53,040 m<sup>3</sup>/d RO  
 Copiapó, Chile 2012, 51,840 m<sup>3</sup>/d RO  
 Waste Water MBR Plant, Bahrain 2012, 40,000 m<sup>3</sup>/d Other / Unknown  
 Hadera Expansion, Israel 2012, 40,000 m<sup>3</sup>/d RO  
 Minakshi Desalination Plant, India 2012, 40,000 m<sup>3</sup>/d RO  
 Touggourt, Algeria 2012, 37,000 m<sup>3</sup>/d RO  
 Turicorin, India 2012, 31,800 m<sup>3</sup>/d RO  
 Sud Khenifra, Morocco 2012, 30,000 m<sup>3</sup>/d RO  
 Aktau, Kazakhstan 2012, 24,000 m<sup>3</sup>/d MED  
 Majis, Oman 2012, 20,000 m<sup>3</sup>/d RO  
 Oeste de Tenerife, Spain 2012, 18,000 m<sup>3</sup>/d RO  
 Shenhua Ordos Coal Plant, China 2012, 15,000 m<sup>3</sup>/d RO  
 Laayoune Extension, Morocco 2012, 13,000 m<sup>3</sup>/d RO  
 Tianjin Dagang SWRO Plant Expansion, China 2012, 12,500 m<sup>3</sup>/d RO  
 Mantoverde Copper Mine, Chile 2012, 10,368 m<sup>3</sup>/d RO  
 PT Pupuk-Kaltim, Kalimantan, Indonesia 2012, 10,000 m<sup>3</sup>/d RO  
 JSW, India 2012, 10,000 m<sup>3</sup>/d RO  
 Yanbu Construction Material Group, Saudi Arabia 2012, 10,000 m<sup>3</sup>/d RO  
 Tan Tan, Morocco 2012, 8,600 m<sup>3</sup>/d RO  
 Marasi, Sidi Abdel Rahman, Egypt 2012, 5,000 m<sup>3</sup>/d RO  
 Rafah, Sinai, Egypt 2012, 5,000 m<sup>3</sup>/d RO  
 Atlas Enerji, Turkey 2012, 5,000 m<sup>3</sup>/d RO  
 Sanmen Nuclear Power Plant SWRO, China 2012, 5,000 m<sup>3</sup>/d RO  
 Intel Ocotillo, Ocotillo, California, United States 2012, 4,000 m<sup>3</sup>/d RO  
 Chilca SWRO, Peru 2012, 2,500 m<sup>3</sup>/d RO  
 PT Pupuk - Kaltim 5, Indonesia 2012, 2,000 m<sup>3</sup>/d RO  
 Ashdod, Israel 2011, 320,000 m<sup>3</sup>/d RO  
 Ad Dur, Bahrain 2011, 218,000 m<sup>3</sup>/d RO  
 Az Zour South Hybridisation, Kuwait 2011, 136,000 m<sup>3</sup>/d RO  
 Jorf Lasfar, Morocco 2011, 75,800 m<sup>3</sup>/d RO  
 Valdelentisco Expansion, Murcia, Spain 2011, 65,000 m<sup>3</sup>/d RO  
 Marina Baja, Alicante, Spain 2011, 48,000 m<sup>3</sup>/d RO  
 Limassol, Cyprus 2011, 40,000 m<sup>3</sup>/d RO  
 Minera Candelaria, Cerro Padrones, Chile 2011, 29,800 m<sup>3</sup>/d RO  
 Sohar Industrial Port (Majis), Oman 2011, 16,000 m<sup>3</sup>/d RO  
 Kap Verde, Cabo Verde 2011, 5,000 m<sup>3</sup>/d RO  
 Shuqaiq Hail, Saudi Arabia 2010, 132,000 m<sup>3</sup>/d Other / Unknown  
 Coastal Gujarat SWRO, India 2010, 50,000 m<sup>3</sup>/d RO  
 Mesa California, United States 2010, 32,500 m<sup>3</sup>/d NF  
 Chino II, Riverside County, CA, United States 2010, 26,000 m<sup>3</sup>/d RO  
 Isla Praia Expansion, Cabo Verde 2010, 5,000 m<sup>3</sup>/d RO

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Founded in 1919 in Osaka, Japan, Torishima pumps has been providing engineered pump solutions across all industries for over 100 years. Torishima has supplied pumps for a wide range of low and high-pressure applications for all desalination processes (RO, MED, and MSF) for over 40 years. There are now over 2000 pumps operating in desalination plants in about 20 countries around the world. The Torishima brand is built on reliability, flexibility, and customer satisfaction. Our recent global desalination projects include some of the largest desalination plants currently in operation. Applications include:

- Seawater Intake
- Brine Blow Down
- Brine Recirculation
- Condensate
- Distillate Extraction
- Seawater Recirculation
- WE Filter Feed
- HPRO Filter Feed
- HPRO Pump
- WE Booster Pumps
- Product Water Pumps

In parallel to our desalination expertise, Torishima is a world leader in the supply of pumping equipment for the water and wastewater industry.

Torishima has the capability to supply all pump types and is a specialist in the supply of engineered pumps for larger water transmission and wastewater projects. Torishima does not only supply the pumps but design, install and commission the complete pumping stations.

# IDRA

## DESALINATION & REUSE HANDBOOK

With a highly skilled engineering team that understands your process requirements, we can provide products suited to your exact requirements.

In addition, as a premier engineered equipment supplier, we are committed to providing the highest quality aftermarket service. Our innovative solutions can enhance performance and increase the lifespan of pumps, other equipment, and plants. This allows operators to maximize efficiency, reduce maintenance costs and conserve energy.

### SELECTED REFERENCES

#### Equipment Supplier: Pumps

Mirfa II Seawater Reverse Osmosis Desalination Plant, Mirfa, United Arab Emirates 2023, 550,000 m<sup>3</sup>/d RO  
Shuaibah 3 IWP Project, Shuaibah, Saudi Arabia 2022, 600,000 m<sup>3</sup>/d RO  
Shuqaiq 1 Reverse Osmosis Desalination, Shuqaiq, Saudi Arabia 2022, 400,000 m<sup>3</sup>/d RO  
Al Jubail Desalination Plant Phase 2, Jubail, Saudi Arabia 2022, 400,000 m<sup>3</sup>/d RO  
Sfax SWRO Plant 100MLD, Tunisia 2022, 100,000 m<sup>3</sup>/d RO  
Al Khobar, Saudi Arabia 2021, 600,000 m<sup>3</sup>/d RO  
Al Jubail 3A, Saudi Arabia 2021, 600,000 m<sup>3</sup>/d RO  
Jubail 3B, Al Jubail, Saudi Arabia 2021, 570,000 m<sup>3</sup>/d RO  
Yanbu 4, Yanbu, Saudi Arabia 2021, 450,000 m<sup>3</sup>/d RO  
Jubail 2, Saudi Arabia 2021, 400,000 m<sup>3</sup>/d RO  
Al Arish, Egypt 2021, 100,000 m<sup>3</sup>/d RO  
Dahej, India 2021, 100,000 m<sup>3</sup>/d RO  
Al Dur II, Bahrain 2020, 227,000 m<sup>3</sup>/d RO  
Al Khobar SWRO Desalination Plant, Saudi Arabia 2020, 210,000 m<sup>3</sup>/d RO  
Jurong Island Design-Build-Own-Operate Project, Singapore 2020, 137,000 m<sup>3</sup>/d RO  
ADNOC Refining Waste Heat Recovery Project (WHRP), United Arab Emirates 2020, 16,800 m<sup>3</sup>/d MED  
Umm Al Quwain SWRO Desalination Plant, United Arab Emirates 2019, 681,000 m<sup>3</sup>/d RO  
Rabigh SWRO Desalination Plant, Saudi Arabia 2019, 600,000 m<sup>3</sup>/d RO  
Naqaa Desalination Plant, Al Medfeq, Umm Al Quwain, United Arab Emirates 2019, 447,700 m<sup>3</sup>/d RO  
Shoaiba RO Phase 4 Desalination Plant, Saudi Arabia 2019, 400,000 m<sup>3</sup>/d RO  
Shuaibah III Expansion II, Saudi Arabia 2019, 250,000 m<sup>3</sup>/d RO  
Marina East Desalination Plant, Singapore 2019, 136,380 m<sup>3</sup>/d RO  
Salalah SWRO Desalination Plant, Oman 2019, 120,000 m<sup>3</sup>/d RO  
Mangalore Refinery and Petrochemicals, Mangaluru, Karnataka, India 2019, 30,000 m<sup>3</sup>/d RO  
Umm Al Houl Power, Umm Al Houl, Qatar 2016, 590,000 m<sup>3</sup>/d MSF  
Yanbu Phase 3, Yanbu, Saudi Arabia 2014, 550,000 m<sup>3</sup>/d MSF  
Az Zour North IWPP, Az Zour, Kuwait 2014, 486,000 m<sup>3</sup>/d MED  
Fujairah F1, Fujairah, United Arab Emirates 2014, 136,000 m<sup>3</sup>/d RO  
Ras Abu Fontas A2, Qatar 2013, 160,000 m<sup>3</sup>/d MSF  
Mirfa, United Arab Emirates 2013, 136,380 m<sup>3</sup>/d RO  
Nungua SWRO Desalination Plant, Accra, Ghana 2013, 60,000 m<sup>3</sup>/d RO  
Barka I Seawater Desalination Plant Expansion, Oman 2013, 45,000 m<sup>3</sup>/d RO  
Liuhsing Power Plant, China 2013, RO  
Tuaspring Desalination Plant, Singapore 2012, 318,000 m<sup>3</sup>/d RO

Ras Al Khair Power and Desalination Plant P1, Saudi Arabia 2012, 300,000 m<sup>3</sup>/d RO

Az Zour South RO Desalination plant, Az Zour South, Kuwait 2012, 136,000 m<sup>3</sup>/d RO

Yanbu MED, Saudi Arabia 2012, 68,000 m<sup>3</sup>/d MED

Planta Desalinizadora de Agua de Mar Valle de Copiapo, Copiapo, Chile 2012, 52,000 m<sup>3</sup>/d RO

Khoms Desalination Plant, Libya 2012, 43,680 m<sup>3</sup>/d MSF

Qingdao, China 2011, 100,000 m<sup>3</sup>/d RO

Magtaa, Oran, Algeria 2010, 500,000 m<sup>3</sup>/d RO

Shuweihat S2 IWPP, Abu Dhabi, United Arab Emirates 2010, 500,000 m<sup>3</sup>/d MSF

Victorian Desalination Plant, Melbourne, Victoria, Australia 2010, 411,000 m<sup>3</sup>/d RO

Jeddah Phase III, Saudi Arabia 2010, 150,000 m<sup>3</sup>/d RO

Salalah IWPP, Oman 2010, 68,200 m<sup>3</sup>/d RO



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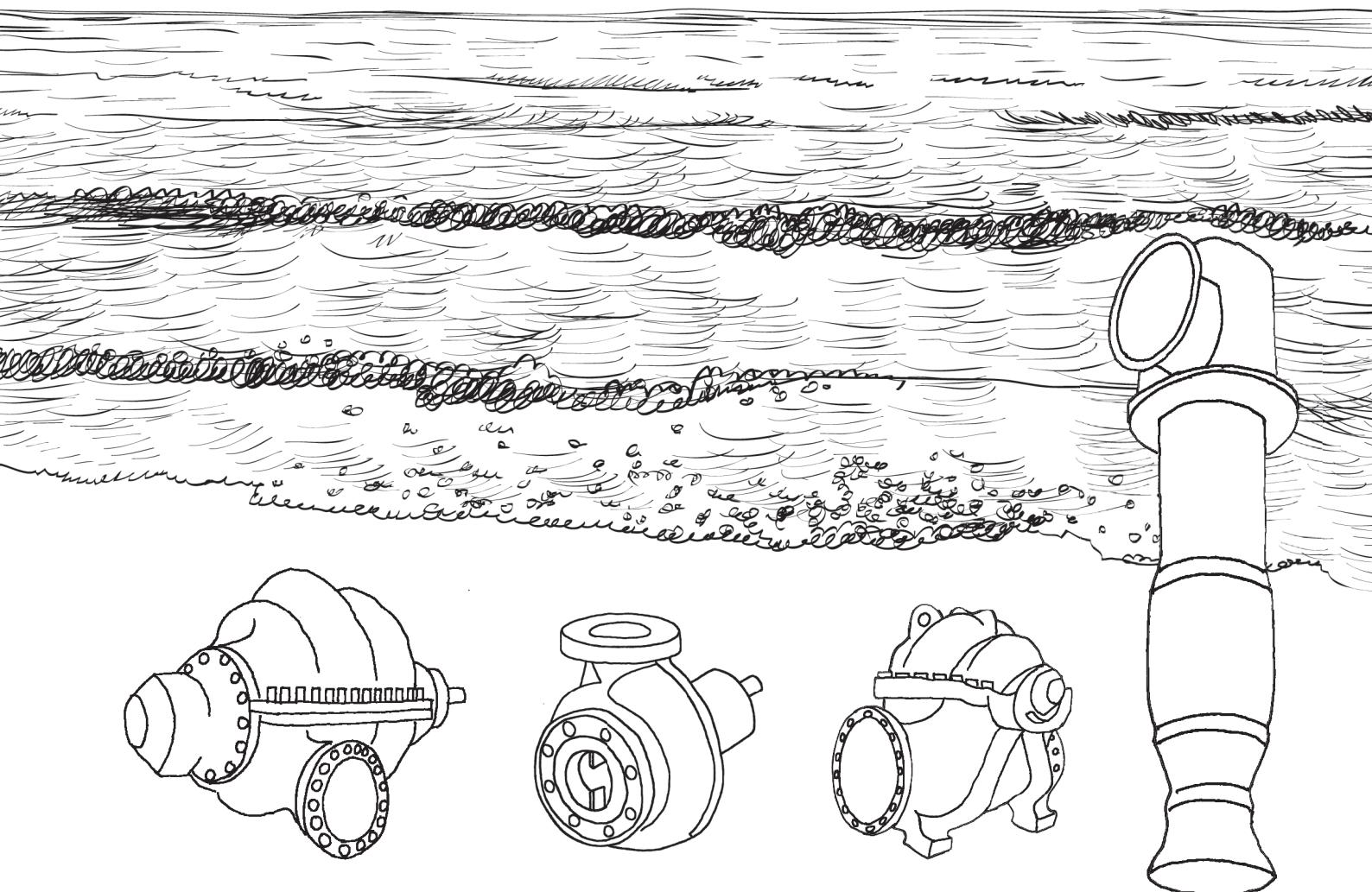
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# RO/NF Membranes

Selected references since 2012 from companies supplying reverse osmosis (RO) or nanofiltration (NF) membranes to desalination or reuse projects.

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[www.en.originwater.com](http://www.en.originwater.com)



### SELECTED REFERENCES

#### Developer and Equipment Supplier: Membranes

TBD water reuse PPP project, Changping District, Beijing, China 2017, 200,000 m<sup>3</sup>/d MBR

Taoziwan Wastewater treatment plant (supply for Wanhua industrial park), Yantai City, Shandong Province, China 2017, 150,000 m<sup>3</sup>/d RO

Princess Mansion Wastewater Advanced Treatment Project, Hohhot City, Inner Mongolia, China 2017, 50,000 m<sup>3</sup>/d RO

#### Equipment Supplier: Membranes

The Second Water Supply Project in Dafeng District, Yancheng, Jiangsu Province, China 2015, 42,000 m<sup>3</sup>/d NF

Water Supply Project for Semiconductor North China Corporation, Beijing, China 2015, 21,000 m<sup>3</sup>/d RO

Yudaokou Water Supply Upgrade Project, Chengde, Hebei Province, China 2014, 500 m<sup>3</sup>/d RO

Haibowan District North Water Purification Plant, Wuhai, Neimenggu, China 2020, 100,000 m<sup>3</sup>/d RO

Dalad Banner Recycled Water Treatment Plant, Ordos, China 2015, 36,000 m<sup>3</sup>/d RO

Luolong River Water Upgrade Project, Kunming, Yunnan, China 2016, 25,000 m<sup>3</sup>/d NF

Longchang Economic Development District Wastewater Treatment Plant Phase I, Sichuan, China 2019, 25,000 m<sup>3</sup>/d NF

Haidian District Shangzhuang Water Reclamation Plant, Beijing, China 2019, 12,000 m<sup>3</sup>/d MBR

Wuhai Economic Development Zone Low Carbon Industrial Park Water Purification Plant Project, Wuhai, Neimenggu, China 2020, 10,000 m<sup>3</sup>/d RO

Cuihu Water Reclamation Plant, Beijing, China 2014, 10,000 m<sup>3</sup>/d MBR

Eryuan Second Wastewater Treatment Plant, Yunnan, China 2019, 10,000 m<sup>3</sup>/d NF

Doujin River Wastewater Treatment Plant Reclaimed Water Reuse Project, Qingdao, Shandong, China 2015, 10,000 m<sup>3</sup>/d NF

Wuda District Water Purification Plant, Wuhai, Neimenggu, China 2020, 7,500 m<sup>3</sup>/d RO

Hainan District Water Purification Plant, Wuhai, Neimenggu, China 2020, 4,000 m<sup>3</sup>/d NF

Xizang Aliraguo Resources Company Salt lake-based Lithium Extraction Project, Tibet, China, 2 million m<sup>3</sup>/yr RO

### Legend



Desalination



Wastewater reuse

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### SELECTED REFERENCES

#### Equipment Supplier: RO Membranes

GIDC Dahej Desalination - Gujarat (EPC), Dahej, India 2023, 100,000 m<sup>3</sup>/d RO

Nigeria Industrial Fertilizer Facility, Nigeria 2022, 70,608 m<sup>3</sup>/d Other / Unknown

Hangfeng WTP, Zhejiang, China 2021, 100,008 m<sup>3</sup>/d RO

Industrial Refinery Facility, India 2021, 78,240 m<sup>3</sup>/d Other / Unknown

Industrial Petrochemical Facility, India 2021, 78,240 m<sup>3</sup>/d Other / Unknown

Industrial Mining Facility, Chile 2021, 76,800 m<sup>3</sup>/d Other / Unknown

Industrial Mining Facility, Chile 2021, 72,000 m<sup>3</sup>/d Other / Unknown

Carlsberg Group, Fredericia, Denmark 2021, 1,992 m<sup>3</sup>/d Other / Unknown

Municipal Drinking Water Facility, Morocco 2020, 646,704 m<sup>3</sup>/d Other / Unknown

Shafdan Wastewater Treatment Plant, Ugandan, Israel 2020, 350,000 m<sup>3</sup>/d RO

Luxembourg Municipal Drinking Water Facility, Luxembourg 2020, 123,000 m<sup>3</sup>/d Other / Unknown

Atacama Desalination Plant, Atacama, Chile 2020, 83,376 m<sup>3</sup>/d UF

Benxi Plant & Beiyang Plant, Benxi, Liaoning, China 2020, 41,400 m<sup>3</sup>/d RO

Drinking Water Facility, China 2019, 199,992 m<sup>3</sup>/d Other / Unknown

Municipal Drinking Water Facility, Oman 2019, 170,544 m<sup>3</sup>/d Other / Unknown

Municipal Wastewater/Reuse Facility, China 2019, 169,992 m<sup>3</sup>/d Other / Unknown

Jurong Island Desalination Plant, Singapore 2019, 139,200 m<sup>3</sup>/d RO

Quebrada Blanca Phase 2, Punta Patache, Chile 2019, 102,240 m<sup>3</sup>/d RO

Industrial Facility, China 2019, 100,800 m<sup>3</sup>/d Other / Unknown

Municipal Drinking Water Facility, France 2019, 100,008 m<sup>3</sup>/d Other / Unknown

Zhangjiagang No.4 WTP, China 2019, 100,000 m<sup>3</sup>/d NF

Industrial Electronics Facility, South Korea 2019, 97,992 m<sup>3</sup>/d  
Other / Unknown

Municipal Drinking Water Facility, Chile 2019, 83,376 m<sup>3</sup>/d Other / Unknown

Chino Basin Desalter Authority, Montclair, California, United States 2019, 81,000 m<sup>3</sup>/d RO

Shandong Chemming Paper Holdings Limited, Shouguang, China 2019, 79,992 m<sup>3</sup>/d RO

CHN Energy, Ningxia, China 2019, 72,000 m<sup>3</sup>/d RO

Chenming Huanggang, Huanggang, Hubei, China 2019, 60,000 m<sup>3</sup>/d RO

Chenming Zhanjiang, Zhanjiang, Guangdong, China 2019, 50,000 m<sup>3</sup>/d RO

Laayoune SWRO, Morocco 2019, 26,000 m<sup>3</sup>/d RO

Vertical Knits, Yucatán, Mexico 2019, 24,000 m<sup>3</sup>/d RO

Doha Phase 1, Kuwait 2018, 227,300 m<sup>3</sup>/d RO

Tampa Bay Desalination Plant, Florida, United States 2018, 95,000 m<sup>3</sup>/d RO

Indian River Water, Indian River, Florida, United States 2018, 80,000 m<sup>3</sup>/d RO

Koyambedu, Chennai, Tamil Nadu, India 2018, 45,000 m<sup>3</sup>/d RO

Fargonaazot, Uzbekistan 2018, 24,000 m<sup>3</sup>/d RO

AbuZabal Waste Water Reuse, Cairo, Egypt 2018, 2,000 m<sup>3</sup>/d RO

Barka 4 IWP, Oman 2017, 281,000 m<sup>3</sup>/d RO

Shandong Chuanyang Iron & Steel company, Zouping, China 2017, 3,600 m<sup>3</sup>/d RO

OCP Jorf Lasfar desalination plant, Jorf Lasfar, Morocco 2016, 75,800 m<sup>3</sup>/d RO

Orange County Water District, California, United States 2015, 379,000 m<sup>3</sup>/d RO

GNPower Mariveles Coal Plant, Mariveles, Philippines 2015, 5,304 m<sup>3</sup>/d RO

Shaanxi Yanchang Zhongmei Yulin Energy & Chemical Plant, JingBian, China 2013, 21,600 m<sup>3</sup>/d RO

#### **Equipment Supplier: UF Membranes for RO Pretreatment (Inge, now under DuPont™ IntegraTec™ brand)**

ONEE, Ministry of Agriculture, Agadir, Morocco 2020, 646,704 m<sup>3</sup>/d UF

Zhenhai, China 2019, 100,800 m<sup>3</sup>/d Other / Unknown

Atacama, Chile 2019, 83,376 m<sup>3</sup>/d Other / Unknown

Emaar, the Economic City, King Abdullah Economic City, Saudi Arabia 2019, 74,880 m<sup>3</sup>/d UF

King Abdullah Economic City, Saudi Arabia 2019, 30,000 m<sup>3</sup>/d

China 2017, 37,992 m<sup>3</sup>/d RO

Duliajan-Assam, Dibrugarh, Assam, India 2017, 3,696 m<sup>3</sup>/d

Jazan, Saudi Arabia 2016, 168,000 m<sup>3</sup>/d RO

Manila, Philippines 2016, 150,000 m<sup>3</sup>/d RO

Jamnagar, India 2015, 456,000 m<sup>3</sup>/d RO

Accra, Ghana 2014, 60,000 m<sup>3</sup>/d RO

Mangalore, India 2014, 21,600 m<sup>3</sup>/d RO

Dubai, United Arab Emirates 2014, 931 m<sup>3</sup>/d

Jamnagar, Gujarat, India 2013, 168,000 m<sup>3</sup>/d RO

Off-shore, Angola 2013, 62,000 m<sup>3</sup>/d RO

Kochi, India 2013, 28,800 m<sup>3</sup>/d RO

India 2013, 28,000 m<sup>3</sup>/d RO

Phuket, Thailand 2013, 25,000 m<sup>3</sup>/d RO

Konya, Turkey 2013, 20,400 m<sup>3</sup>/d RO

Jeddah, Saudi Arabia 2013, 19,296 m<sup>3</sup>/d RO

Balkhash, Kazakhstan 2013, 10,000 m<sup>3</sup>/d RO

Tangshan, China 2012, 110,000 m<sup>3</sup>/d RO

Dongguan, Guangdong, China 2012, 65,000 m<sup>3</sup>/d RO

China, 110,016 m<sup>3</sup>/d

United Arab Emirates, 84,000 m<sup>3</sup>/d

Turkmenistan, 58,320 m<sup>3</sup>/d

Turkey, 57,600 m<sup>3</sup>/d

Ukraine, 48,000 m<sup>3</sup>/d

Germany, 38,400 m<sup>3</sup>/d

Hungary, 36,000 m<sup>3</sup>/d

Egypt, 34,320 m<sup>3</sup>/d

Thailand, 24,984 m<sup>3</sup>/d

U.S.A., 9,000 m<sup>3</sup>/d

#### **Equipment Supplier: MF/UF Membranes**

Umm Al Houl, Doha, Qatar 2022, 674,400 m<sup>3</sup>/d UF

Tuas Desalination Plant, Singapore 2021, 760,008 m<sup>3</sup>/d UF

Al Asilah Desalination, Sharqiyah, Oman 2019, 170,544 m<sup>3</sup>/d UF

Al Roubeaky MLD plant, Egypt 2019, 5,000 m<sup>3</sup>/d RO

CRCW, United States 2017, 87,000 m<sup>3</sup>/d UF

Saudi Pretreatment RO Wastewater Facility, Saudi Arabia 2017, 85,200 m<sup>3</sup>/d RO

Mery sur Oise, Val-d'Oise, Île-de-France, France 2017, 70,000 m<sup>3</sup>/d NF

Djerba, Tunisia 2017, 50,000 m<sup>3</sup>/d RO

Shandong Power Plant, Shandong, China 2017, 36,000 m<sup>3</sup>/d RO

Tar Power Plant, Pakistan 2017, 35,000 m<sup>3</sup>/d RO

Moho Nord, Republic of Congo 2017, 35,000 m<sup>3</sup>/d NF

Sicagen, Chennai, India 2017, 30,000 m<sup>3</sup>/d UF

Oil Field Water, Russia 2017, 28,000 m<sup>3</sup>/d RO

Aktau, Kazakhstan 2017, 25,000 m<sup>3</sup>/d RO

Dickinson, United States 2017, 22,750 m<sup>3</sup>/d UF

Hebei Seawater desalination plant, Hebei, China 2017, 22,500 m<sup>3</sup>/d RO

Xinjiang Drinking Water Plant, Xinjiang, China 2017, 20,000 m<sup>3</sup>/d NF

Temirtau, Kazakhstan 2017, 18,000 m<sup>3</sup>/d RO

Bahia Blanca, Argentina 2017, 15,600 m<sup>3</sup>/d UF

Shandong chemical plant MLD project, Shandong, China 2017, 15,000 m<sup>3</sup>/d RO

Saras Refinery, Saras, Italy 2017, 12,000 m<sup>3</sup>/d RO+deionisation

Charles Meyer Desalination Plant Refit, Santa Barbara, United States 2017, 10,475 m<sup>3</sup>/d RO

Sinar Mas Group OKI, Indonesia 2016, 200,000 m<sup>3</sup>/d RO

France Municipal Drinking Water Facility, France 2016, 150,000 m<sup>3</sup>/d Other / Unknown

Drinking Water Facility, China 2016, 105,000 m<sup>3</sup>/d Other / Unknown

Zhongwei Zero Liquid Discharge Project, Zhongwei, Ningxia province, China 2016, 13,500 m<sup>3</sup>/d RO

Johanneslöt, Gävle, Sweden 2016, 8,640 m<sup>3</sup>/d NF

SAFI Water, United Arab Emirates 2016, 2,000 m<sup>3</sup>/d RO

KEMYA, Al Jubail, Eastern province, Saudi Arabia 2016, 1,056 m<sup>3</sup>/d RO

Claude "Bud" Lewis Carlsbad Desalination, CA, United States 2015, 190,000 m<sup>3</sup>/d RO

Sadara, Saudi Arabia 2015, 179,390 m<sup>3</sup>/d RO

Jamnagar, India 2015, 168,000 m<sup>3</sup>/d RO

Municipal Drinking Water Facility, United States 2015, 79,200 m<sup>3</sup>/d Other / Unknown

Municipal Drinking Water Facility, France 2015, 60,000 m<sup>3</sup>/d Other / Unknown

Larnaca Renovation, Cyprus 2015, 60,000 m<sup>3</sup>/d RO

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Philippines Municipal Drinking Water Facility, Philippines 2015, 50,040 m<sup>3</sup>/d Other / Unknown  
Angamos, Chile 2015, 11,796 m<sup>3</sup>/d UF  
Kiev, Ukraine 2015, 9,000 m<sup>3</sup>/d RO+deionisation  
Ghana Municipal Drinking Water Facility, Ghana 2014, 135,000 m<sup>3</sup>/d Other / Unknown  
Jorf Lasfar OCP, Jorf Lasfar, Morocco 2014, 76,566 m<sup>3</sup>/d RO  
Barka, Oman 2014, 45,000 m<sup>3</sup>/d RO  
POSCO, Gwang-yang, South Korea 2014, 30,000 m<sup>3</sup>/d RO  
Mantoverde phase I, Mantoverde, Chile 2014, 10,368 m<sup>3</sup>/d RO  
Guizhou, Guizhou province, China 2014, 1,200 m<sup>3</sup>/d RO  
Gansu, Baiyin, Gansu province, China 2014, 1,000 m<sup>3</sup>/d RO  
Ceyranbatan, Baku, Azerbaijan 2013, 520,000 m<sup>3</sup>/d UF  
Vasilikos, Cyprus 2013, 60,000 m<sup>3</sup>/d RO  
Oasis, United States 2013, 32,210 m<sup>3</sup>/d UF  
Maspalomas, Canary Islands, Spain 2013, 32,000 m<sup>3</sup>/d RO  
Fountain Hills Sanitary District, AZ, United States 2013, 18,800 m<sup>3</sup>/d UF  
Maithon Power, Dhanbad, Jharkhand, India 2013, 10,800 m<sup>3</sup>/d RO  
Erdos, Dongsheng District, Mongolia 2012, 120,000 m<sup>3</sup>/d NF  
Episkopi, Cyprus 2012, 100,000 m<sup>3</sup>/d RO  
CRP, Caracas, Venezuela 2012, 74,880 m<sup>3</sup>/d RO  
Pakistan Municipal, Pakistan 2012, 57,600 m<sup>3</sup>/d Other / Unknown  
Chanaral, Chile 2012, 25,000 m<sup>3</sup>/d RO  
Whyalla, Australia 2012, 13,680 m<sup>3</sup>/d RO  
Orange County GWRS, United States, 700,300 m<sup>3</sup>/d UF  
Adelaide Desalination, Australia, 626,000 m<sup>3</sup>/d UF  
Souther Seawater Desalination, Australia, 360,000 m<sup>3</sup>/d UF  
Jurong Island Desalination Plant UF, Singapore 2019, 207,000 m<sup>3</sup>/d UF  
HERA Rimini, Italy, 152,472 m<sup>3</sup>/d MBR  
Geoduk, South Korea, 140,000 m<sup>3</sup>/d MBR  
Changsha Chengnan, China, 140,000 m<sup>3</sup>/d UF  
City of Stockton, United States, 136,275 m<sup>3</sup>/d UF  
City of Highland Park, United State, 113,560 m<sup>3</sup>/d UF  
Townsville, Australia, 100,224 m<sup>3</sup>/d MBR  
Shek Wu Hui, Hong Kong, 80,000 m<sup>3</sup>/d MBR  
City of Forest Park, United States, 52,900 m<sup>3</sup>/d UF  
Modesto Jennings WWTP, United States, 47,696 m<sup>3</sup>/d MBR  
Morgantown Star City WWTP, United States, 47,696 m<sup>3</sup>/d MBR  
Liuheg Power Plant, China, 44,300 m<sup>3</sup>/d UF  
Songdo, South Korea, 42,500 m<sup>3</sup>/d MBR  
Semirara, Philippines, 35,000 m<sup>3</sup>/d UF  
Santa Margherita Ligure, Italy, 21,599 m<sup>3</sup>/d UF  
Yuzhong Energy, China, 13,000 m<sup>3</sup>/d UF  
Yuedian Shaoguan, China, 11,500 m<sup>3</sup>/d UF  
Changi Newater, Singapore, 316,000 m<sup>3</sup>/d  
Formosa Plastics, Taiwan, 105,000 m<sup>3</sup>/d RO  
Gippsland Water Factory, Australia, 44,000 m<sup>3</sup>/d MBR

## GESSNER



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## SELECTED REFERENCES

### EPC Contractor, Membrane and Pretreatment Supplier

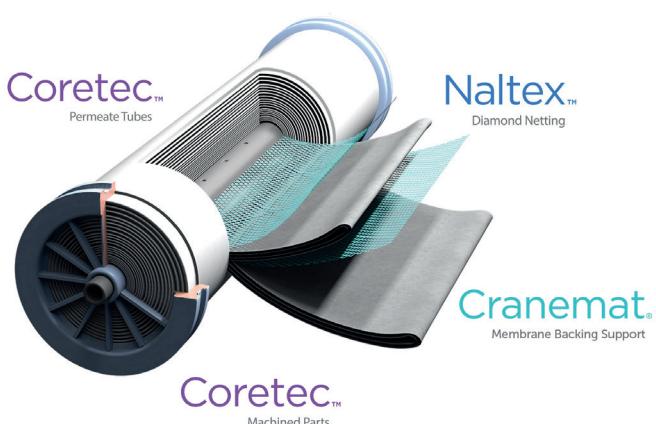
Ningbo Seawater Desalination System, Ningbo, Zhejiang, China  
2022, 12,000 m<sup>3</sup>/d RO



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Shandong Xinhecheng Chemical Water Treatment System, Weifang, Shandong, China 2022, 9,600 m<sup>3</sup>/d RO  
Xinte Energy Huaidong Industrial Park Demineralization Project, Hami, Xinjiang, China 2022, 5,232 m<sup>3</sup>/d RO  
Shandong Xinhecheng Chemical Water Treatment System, Weifang, Shandong, China 2022, 4,800 m<sup>3</sup>/d RO  
Xinte Energy Huaidong Industrial Park Demineralization Project, Hami, Xinjiang, China 2022, 3,840 m<sup>3</sup>/d RO  
Zhonghao Chenguang Organic Fluorine Material Project Deionized Water Station, Zigong, Sichuan, China 2022, 3,600 m<sup>3</sup>/d RO  
Zhonghao Chenguang Organic Fluorine Material Project Deionized Water Station, Zigong, Sichuan, China 2022, 2,520 m<sup>3</sup>/d RO  
Jiatong Reclaimed Water Reuse EPC Project, Nantong, Jiangsu, China 2021, 43,200 m<sup>3</sup>/d RO  
Binhai Thermal Power Plant, Shaoxing, China 2021, 19,200 m<sup>3</sup>/d RO  
Lianjiang Nuclear Power Project, Guangzhou, China 2021, 9,600 m<sup>3</sup>/d RO  
Xinjiang Guanghui Wastewater Capacity Expansion and Emission Reduction Project, Xinjiang, China 2021, 8,952 m<sup>3</sup>/d RO  
Methanol Project Seawater Desalination Station Project, Russia 2020, 5,184 m<sup>3</sup>/d RO  
Shanxi Jinmei Tianyuan Chemical Co., Ltd. Wastewater Zero Discharge Technical Reform Project, Jincheng, Shanxi, China 2020, 3,600 m<sup>3</sup>/d RO  
Zhenjiang New Sodium Acid Wastewater Comprehensive Utilization Project, Zhenjiang, Jiangsu, China 2020, 250 m<sup>3</sup>/d RO

**Equipment Supplier: Membranes**

Reuse project, Lianyungang, Jiangsu, China 2023, 100,000 m<sup>3</sup>/d  
Other / Unknown  
Membrane treatment system of sodium sulfate recovery project in a perfume enterprise, Jining, Shandong, China 2022, 7,700 m<sup>3</sup>/d RO

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**SELECTED REFERENCES**

**Equipment Supplier: RO Membranes**

Spence, Chile 2020, 88,000 m<sup>3</sup>/d RO  
Lima Sur, Peru 2020, 77,760 m<sup>3</sup>/d RO  
Sousse, Tunisia 2020, 50,000 m<sup>3</sup>/d RO  
Dubai, Saudi Arabia 2020, 41,000 m<sup>3</sup>/d RO  
Atacama, Chile 2020, 40,000 m<sup>3</sup>/d RO  
Duqm, United Arab Emirates 2020, 32,000 m<sup>3</sup>/d RO  
Laayoun, Morocco 2020, 25,000 m<sup>3</sup>/d RO  
Talara, Peru 2020, 18,000 m<sup>3</sup>/d RO  
ONGC, India 2020, 16,200 m<sup>3</sup>/d RO  
Gazze 2, Palestine 2020, 15,000 m<sup>3</sup>/d RO  
Kalinganagar, India 2020, 12,000 m<sup>3</sup>/d RO

Oceanside IPR, California, United States 2020, 11,355 m<sup>3</sup>/d RO  
Town Square TSE Polishing, United Arab Emirates 2020, 1,600 m<sup>3</sup>/d RO  
Silicon Park TSE Polishing, United Arab Emirates 2020, 960 m<sup>3</sup>/d RO  
GWRS Phase III, CA, Orange County, California, United States 2019, 113,500 m<sup>3</sup>/d RO  
Jazan, Saudi Arabia 2019, 81,000 m<sup>3</sup>/d RO  
Dangote Fertilizer, Nigeria 2019, 81,000 m<sup>3</sup>/d RO  
TPL, India 2019, 52,000 m<sup>3</sup>/d RO  
Reliance, India 2019, 24,000 m<sup>3</sup>/d RO  
Adani Power SWRO Mundra, India 2019, 20,000 m<sup>3</sup>/d RO  
Kuwait Oil Corporation, Kuwait 2019, 20,000 m<sup>3</sup>/d RO  
Dholera, India 2019, 16,000 m<sup>3</sup>/d RO  
Emirates Palace, United Arab Emirates 2019, 13,750 m<sup>3</sup>/d RO  
PT Dabi, Indonesia 2019, 4,500 m<sup>3</sup>/d RO  
Jebel Ali, Dubai, United Arab Emirates 2018, 200,000 m<sup>3</sup>/d RO  
Oman SUR extension, Sur, Oman 2018, 50,000 m<sup>3</sup>/d RO  
JIGCC - Utility & Demin water, Saudi Arabia 2018, 44,000 m<sup>3</sup>/d RO  
Beenyup Phase 2, Perth, Australia 2018, 38,356 m<sup>3</sup>/d RO  
Huizhou Refinery Phase 2, Huizhou, Guangdong province, China 2018, 22,080 m<sup>3</sup>/d RO  
RSPL, India 2018, 12,000 m<sup>3</sup>/d RO  
Sohar Power Plant 3, Oman 2018, 7,776 m<sup>3</sup>/d RO  
University of Kuwait, Kuwait 2018, 7,200 m<sup>3</sup>/d RO  
NTPC Vallur, India 2018, 7,000 m<sup>3</sup>/d RO  
DM Shaheen Power Plant, United Arab Emirates 2018, 5,820 m<sup>3</sup>/d RO  
Sharma Complex, Saudi Arabia 2018, 5,100 m<sup>3</sup>/d RO  
JIGCC - Potable water, Saudi Arabia 2018, 2,400 m<sup>3</sup>/d RO  
Cobden WWTP Upgrades, Ontario, Canada 2018, 1,000 m<sup>3</sup>/d RO  
Qurayyat IWP, Oman 2017, 200,000 m<sup>3</sup>/d RO  
Ningdong Nanhu sewage reuse project, Yinchuan, Ningxia province, China 2017, 30,720 m<sup>3</sup>/d RO  
Nirma Industries, India 2017, 15,400 m<sup>3</sup>/d RO  
WuKuang Yingkou Steel, Yingkou, Liaoning province, China 2017, 29,376 m<sup>3</sup>/d RO  
Pure Water Monterey, Monterey, California, United States 2017, 15,140 m<sup>3</sup>/d RO  
KEMAPCO, Jordan 2017, 13,680 m<sup>3</sup>/d RO  
Meenakshi Power, India 2017, 11,700 m<sup>3</sup>/d RO  
TAC, India 2017, 3,200 m<sup>3</sup>/d RO  
Mirfa IWPP, Abu Dhabi, United Arab Emirates 2016, 138,000 m<sup>3</sup>/d RO  
Qingdao Dongjiakou Desalination, China 2016, 100,000 m<sup>3</sup>/d RO  
Beenyup Groundwater Replenishment Programme, Perth, Western Australia, Australia 2016, 38,356 m<sup>3</sup>/d RO  
Qianan Steel, Qianan, Hebei province, China 2016, 31,200 m<sup>3</sup>/d RO  
Shanxi Jincheng Anthracite Mining Group Co., Ltd. Beishidian Sewage plant, Jincheng, Shanxi province, China 2016, 20,000 m<sup>3</sup>/d RO  
Handan Steel, Handan, Hebei province, China 2016, 18,000 m<sup>3</sup>/d RO  
Xinjiang Wujiaqu Fufeng Biological, Wujiaqu, Xinjiang, China 2016, 15,000 m<sup>3</sup>/d RO  
Guanghui Industry Hami Plant, Hami, Xinjiang province, China 2016, 10,000 m<sup>3</sup>/d RO  
Minergy, Philippines 2016, 3,000 m<sup>3</sup>/d RO  
Duqm Desalination Plant, Oman 2016, 2,000 m<sup>3</sup>/d RO  
Padre Dam Advanced Water Purification Facility, Santee, California, United States 2016, 70 m<sup>3</sup>/d RO  
Barka 1 Phase 2, Oman 2015, 56,900 m<sup>3</sup>/d RO

Tuticorin, India 2015, 56,880 m<sup>3</sup>/d RO  
 Terminal Island WRF expansion, Los Angeles, California, United States 2015, 22,710 m<sup>3</sup>/d RO  
 Liaoyang Guocheng thermal power plant, Liaoyang, Liaoning province, China 2015, 13,000 m<sup>3</sup>/d RO  
 EMAL expansion, United Arab Emirates 2015, 5,760 m<sup>3</sup>/d RO  
 Tabuk Cement, Saudi Arabia 2015, 1,500 m<sup>3</sup>/d RO  
 WTP Pilot Unit, Greece 2015, 200 m<sup>3</sup>/d RO  
 Al-Hamriyah Power Station, United Arab Emirates 2014, 91,200 m<sup>3</sup>/d RO  
 Moncofar, Spain 2014, 30,300 m<sup>3</sup>/d RO  
 Jubail Phase 2, Saudi Arabia 2014, 23,400 m<sup>3</sup>/d RO  
 Kindasa Expansion, Saudi Arabia 2014, 15,000 m<sup>3</sup>/d RO  
 Romania 2014, 13,200 m<sup>3</sup>/d RO  
 TPCIL, India 2014, 13,000 m<sup>3</sup>/d RO  
 Majis SWRO, Oman 2014, 12,300 m<sup>3</sup>/d RO  
 IGCAR, India 2014, 9,000 m<sup>3</sup>/d RO  
 Dammam Industrial City-1 WWTP, Dammam, Saudi Arabia 2014, 3,500 m<sup>3</sup>/d RO  
 Majis SWRO, Oman 2014, 3,168 m<sup>3</sup>/d RO  
 Pulp and Paper Manufacturer, United States 2014, 2,180 m<sup>3</sup>/d RO  
 Food & Beverage Manufacturer, United States 2014, 1,680 m<sup>3</sup>/d RO  
 Amsterdam, North Holland, Netherlands 2014, 390 m<sup>3</sup>/d RO  
 Mid American Steel, Oklahoma, United States 2014, 240 m<sup>3</sup>/d RO  
 Large Municipal Water Treatment, United States 2014, 100 m<sup>3</sup>/d RO  
 Sorek, Israel 2013, 205,000 m<sup>3</sup>/d RO  
 Downtown Dubai Development - TSE RO Polishing Plant, Dubai, United Arab Emirates 2013, 20,000 m<sup>3</sup>/d RO  
 Copiapo, Chile 2013, 17,453 m<sup>3</sup>/d RO  
 Majis SWRO, Sohar, Oman 2013, 8,200 m<sup>3</sup>/d RO  
 TPL, India 2013, 2,000 m<sup>3</sup>/d RO  
 Krishnapattanam Port Trust, India 2013, 2,000 m<sup>3</sup>/d RO  
 Gouda, South Holland, Netherlands 2013, 1,240 m<sup>3</sup>/d RO  
 Matrouh, Egypt 2013, 1,020 m<sup>3</sup>/d RO  
 GCC WWTP, Ras Al Khaimah, United Arab Emirates 2013, 1,000 m<sup>3</sup>/d RO  
 Saudi Elastomers Project -U&O/CB and MTBE Decomposition Facilities - Secondary Wastewater Treatment Unit, Al Jubail, Saudi Arabia 2013, 871 m<sup>3</sup>/d RO  
 Vlisco, Ghana 2013, 720 m<sup>3</sup>/d RO  
 Victoria Desalination Plant, Victoria, Australia 2012, 411,000 m<sup>3</sup>/d RO  
 Chennai, India 2012, 100,000 m<sup>3</sup>/d RO  
 Jubail Phase 1 replacement, Saudi Arabia 2012, 50,150 m<sup>3</sup>/d RO  
 Al Zawrah II, United Arab Emirates 2012, 31,850 m<sup>3</sup>/d RO  
 Majis RO Desalination Plant, Sohar, Oman 2012, 16,000 m<sup>3</sup>/d RO  
 TPCIL, India 2012, 13,000 m<sup>3</sup>/d RO  
 Kindasa Water Services B2 Expansion, Saudi Arabia 2012, 8,944 m<sup>3</sup>/d RO  
 Oskol Electrometallurgical Plant, Stary Oskol, Russia 2012, 5,280 m<sup>3</sup>/d RO  
 SOJECO, Saudi Arabia 2012, 2,500 m<sup>3</sup>/d RO  
 Al Buhairat City, Saudi Arabia 2012, 2,500 m<sup>3</sup>/d RO  
 Carboneras, Spain, 120,000 m<sup>3</sup>/d RO  
 Marbella, Spain, 56,000 m<sup>3</sup>/d RO  
 Almeria, Spain, 50,000 m<sup>3</sup>/d RO  
 Adeje Arona, Tenerife, Spain, 22,000 m<sup>3</sup>/d RO  
 DVB, India, India, 2,200 m<sup>3</sup>/d RO  
 ABG Cement, India, 2,000 m<sup>3</sup>/d RO  
 Saurashtra Chemicals, India, RO

**Equipment Supplier: RO Membranes and UF Modules**

Emicool TSE Polishing, Dubai, United Arab Emirates 2016, 2,900 m<sup>3</sup>/d RO  
 Arab Center TSE Polishing, Doha, Qatar 2016, 760 m<sup>3</sup>/d RO  
 Majis CETRP, Sohar, Oman 2015, 10,000 m<sup>3</sup>/d RO  
 Lusail TSE Polishing, Doha, Qatar 2015, 6,600 m<sup>3</sup>/d RO  
 West Bay TSE Polishing, Doha, Qatar 2015, 5,000 m<sup>3</sup>/d RO  
 Wafi Mall TSE Polishing, Dubai, United Arab Emirates 2015, 1,000 m<sup>3</sup>/d RO  
 Dubai Parks TSE Polishing, Dubai, United Arab Emirates 2015, 1,000 m<sup>3</sup>/d RO  
 Emaar DCP3, Dubai, United Arab Emirates 2014, 20,160 m<sup>3</sup>/d RO  
 Gulf Cement WWTP, Ras Al Khaimah, United Arab Emirates 2013, 1,000 m<sup>3</sup>/d RO

**Equipment Supplier: RO Membranes, Thin-film-composite**

Doha, Qatar 2016, 3,000 m<sup>3</sup>/d RO

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[www.linkedin.com/company/lgwatersolutions](http://www.linkedin.com/company/lgwatersolutions)

[www.youtube.com/c/LGWaterSolutions](http://www.youtube.com/c/LGWaterSolutions)

**SELECTED REFERENCES****Equipment Supplier: RO Membranes**

Laguna Lake, Philippines 2023, 150,000 m<sup>3</sup>/d RO

**IDRA**  
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**HANDBOOK**

Las Palmas III, Spain 2023, 80,000 m<sup>3</sup>/d RO  
Mar de Alborán, Spain 2023, 60,000 m<sup>3</sup>/d RO  
Benisaf SWRO, Algeria 2023, 50,000 m<sup>3</sup>/d RO  
Carboneras retrofit, Spain 2023, 40,000 m<sup>3</sup>/d RO  
Gwangyang SWRO Project, South Korea 2023, 11,040 m<sup>3</sup>/d RO  
Escombreras, Spain 2023, 10,000 m<sup>3</sup>/d RO  
Maspalomas 2, Spain 2023, 10,000 m<sup>3</sup>/d RO  
Heineken Seville, Spain 2023, 10,000 m<sup>3</sup>/d RO  
Puerto Rico, Spain 2023, 5,500 m<sup>3</sup>/d RO  
Saint Martin, France 2023, 5,000 m<sup>3</sup>/d RO  
LGD Paju, South Korea 2023, 4,000 m<sup>3</sup>/d RO  
ITC Demostration Project, Spain 2023, 2,500 m<sup>3</sup>/d RO  
LA Gomera – SWRO mobile units, Spain 2023, 2,000 m<sup>3</sup>/d RO  
Port Elizabeth, South Africa 2023, 2,000 m<sup>3</sup>/d RO  
Venctor/Huntsman Tioxide, Spain 2023, 1,400 m<sup>3</sup>/d RO  
Qingdao Befesa SWRO Plant, China 2022, 100,000 m<sup>3</sup>/d RO  
Corso, Egypt 2022, 82,000 m<sup>3</sup>/d RO  
Municipality, Algeria 2022, 60,000 m<sup>3</sup>/d RO  
Tangshan Haigang, China 2022, 50,000 m<sup>3</sup>/d RO  
LGD Paju, South Korea 2022, 45,000 m<sup>3</sup>/d RO  
Kindasa, Jeddah Sea Port, Saudi Arabia 2022, 23,600 m<sup>3</sup>/d RO  
Municipality, Israel 2022, 20,000 m<sup>3</sup>/d RO  
ETAP La Tordera SWRO (Partial replacement), Spain 2022, 20,000 m<sup>3</sup>/d RO  
Gwangyang SWRO Project, South Korea 2022, 16,560 m<sup>3</sup>/d RO  
Coastal Gujarat Pvt Ltd (Tata Power), India 2022, 10,000 m<sup>3</sup>/d RO  
Municipality, Algeria 2022, 10,000 m<sup>3</sup>/d RO  
Roque Prieto, Spain 2022, 10,000 m<sup>3</sup>/d RO  
Stainless steel factory, Italy 2022, 7,500 m<sup>3</sup>/d RO  
Industrial plant, Turkey 2022, 7,000 m<sup>3</sup>/d RO  
Industrial plant, Belgium 2022, 4,800 m<sup>3</sup>/d RO  
Shenwan power plant, China 2022, 2,500 m<sup>3</sup>/d RO  
Packaging material manufacturer, Spain 2022, 1,600 m<sup>3</sup>/d RO  
Hinojosa Paper, Spain 2022, 1,600 m<sup>3</sup>/d RO  
Jurong power plant, China 2022, 1,500 m<sup>3</sup>/d RO  
Chennai Water Desalination Ltd., India 2021, 100,000 m<sup>3</sup>/d RO  
Barka V, Oman 2021, 100,000 m<sup>3</sup>/d RO  
Steel mill, Turkey 2021, 12,000 m<sup>3</sup>/d RO  
Industrial plant, Israel 2021, 10,000 m<sup>3</sup>/d RO  
Municipality, Spain 2021, 9,500 m<sup>3</sup>/d RO  
Hamriyah IPP, United Arab Emirates 2021, 9,400 m<sup>3</sup>/d RO  
Jianlong steel company, China 2021, 8,000 m<sup>3</sup>/d RO  
Well water drinking water plant, Israel 2021, 5,000 m<sup>3</sup>/d RO  
Yueyang paper, China 2021, 5,000 m<sup>3</sup>/d RO  
Sichuan tongwei solar energy, China 2021, 5,000 m<sup>3</sup>/d RO  
Sh.Mansour Bin Zayed Office, United Arab Emirates 2021, 5,000 m<sup>3</sup>/d RO  
Municipality, Turkey 2021, 5,000 m<sup>3</sup>/d RO  
Multiple refineries, Italy 2021, 4,800 m<sup>3</sup>/d RO  
Aguas Altiplano, Chile 2021, 4,700 m<sup>3</sup>/d RO  
Huajing semi-conductor, China 2021, 3,000 m<sup>3</sup>/d RO  
Premier Energies Ltd, India 2021, 2,500 m<sup>3</sup>/d RO  
Containerized SWRO system, Israel 2021, 1,200 m<sup>3</sup>/d RO  
Udipi Power (Adani Power), India 2020, 10,000 m<sup>3</sup>/d RO  
Al Khobar II, Saudi Arabia 2020, 636,000 m<sup>3</sup>/d RO  
Al Jubail II, Saudi Arabia 2020, 404,000 m<sup>3</sup>/d RO  
Barges, Saudi Arabia 2020, 150,000 m<sup>3</sup>/d RO  
Al Arish Phase I, Egypt 2020, 100,000 m<sup>3</sup>/d RO  
Linhai Wastewater Reclaimed Plant, Taiwan 2020, 77,000 m<sup>3</sup>/d RO  
China Coal Yulin Energy & Chemical, China 2020, 10,800 m<sup>3</sup>/d RO  
Shuqaiq III, Saudi Arabia 2019, 450,000 m<sup>3</sup>/d RO  
Al Khobar 1, Saudi Arabia 2019, 210,000 m<sup>3</sup>/d RO  
Neom, Saudi Arabia 2019, 125,000 m<sup>3</sup>/d RO  
Basra, Iraq 2019, 72,000 m<sup>3</sup>/d RO  
Mansoura, Egypt 2019, 40,000 m<sup>3</sup>/d RO  
Kipas, Turkey 2019, 38,520 m<sup>3</sup>/d RO  
Ternium Steel Pesqueria Plant, Mexico 2019, 25,000 m<sup>3</sup>/d RO  
Sichuan Hebang, China 2019, 16,000 m<sup>3</sup>/d RO  
PhosAgro, Russia 2019, 12,000 m<sup>3</sup>/d RO  
Datang Dongying Power Plant, China 2019, 12,000 m<sup>3</sup>/d RO  
El Alamein, Egypt 2018, 150,000 m<sup>3</sup>/d RO  
East Port Said I, Egypt 2018, 150,000 m<sup>3</sup>/d RO  
Salalah, Oman 2018, 120,000 m<sup>3</sup>/d RO  
Ain Sokhna, Egypt 2018, 100,000 m<sup>3</sup>/d RO  
King Abdullah Economic City Airport, Saudi Arabia 2018, 60,000 m<sup>3</sup>/d RO  
Huadian Rugao Power plant, China 2018, 21,600 m<sup>3</sup>/d RO  
Dongyuan PCB, China 2018, 14,400 m<sup>3</sup>/d RO  
Huadian Wangting Power Plant, China 2018, 14,400 m<sup>3</sup>/d RO  
STP, India 2018, 10,000 m<sup>3</sup>/d RO  
Heesung Electric, China 2018, 10,000 m<sup>3</sup>/d RO  
El Galalah, Egypt 2017, 150,000 m<sup>3</sup>/d RO  
Hebei Fengyue Energy Technology Desalination Plant, China 2017, 75,000 m<sup>3</sup>/d RO  
LG Display Guangzhou Plant, China 2017, 50,000 m<sup>3</sup>/d RO  
Paju Sewage Reuse System, South Korea 2017, 40,000 m<sup>3</sup>/d RO  
Atacama, Chile 2017, 40,000 m<sup>3</sup>/d RO  
Pohang Sewage Reuse System, South Korea 2017, 34,000 m<sup>3</sup>/d RO  
Xinjiang Qinghua Group Water Treatment Plant, China 2017, 27,000 m<sup>3</sup>/d RO  
Panipat Refinery and Petrochemical Complex, India 2017, 18,900 m<sup>3</sup>/d RO  
Datun Power Plant, China 2017, 15,000 m<sup>3</sup>/d RO  
Coalchemical Industrial DI Water Plant, China 2017, 12,960 m<sup>3</sup>/d RO  
Sohar, Oman 2016, 250,000 m<sup>3</sup>/d RO  
Mostaganem, Algeria 2016, 150,000 m<sup>3</sup>/d RO  
Putatan 2 Drinking Water Plant, Philippines 2016, 150,000 m<sup>3</sup>/d RO  
NCIC, Egypt 2016, 68,000 m<sup>3</sup>/d RO  
Las Palmas III, Spain 2016, 57,000 m<sup>3</sup>/d RO  
Asia Symbol Paper Company, China 2016, 30,000 m<sup>3</sup>/d RO  
LG Electronics Solar Factory, South Korea 2016, 10,000 m<sup>3</sup>/d RO  
LG Display DI Plant, South Korea 2015, 125,000 m<sup>3</sup>/d RO

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### SELECTED REFERENCES

#### Equipment Supplier: Membranes

Municipal WWTP, Spain, RO  
 Oil Refinery, Spain, RO

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### SELECTED REFERENCES

#### Equipment Supplier: Hollow Fiber Membrane Filtration

West Morgan, United States 2019, 72,737 m<sup>3</sup>/d RO

#### Equipment Supplier: MF and RO Membranes

Manila, Philippines 2013, 100,000 m<sup>3</sup>/d RO

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### SELECTED REFERENCES

#### Equipment Supplier: Membranes

Heat and power station 1, Nizhnekamsk, Tatarstan, Russia 2015, 3,984 m<sup>3</sup>/d RO  
 Heat and Power station, Orel, Russia 2015, 3,600 m<sup>3</sup>/d RO  
 Heat and power station 21, Moscow, Russia 2015, 2,400 m<sup>3</sup>/d RO  
 Power station 2, Yuzhnouralsk, Chelyabinsk region, Russia 2015, 1,620 m<sup>3</sup>/d RO  
 Lukoil-Permnefteorgsintez, Perm, Russia 2013, 3,000 m<sup>3</sup>/d RO  
 Phosagro, Orel, Russia, 48,000 m<sup>3</sup>/d RO  
 Zainskaya Thermal Power Station, Rostov-On-Don, Russia, 2,880 m<sup>3</sup>/d RO  
 Shaturskaya Gres Power Plant - A Part Of International E.ON Group, Shatura, Russia, 2,400 m<sup>3</sup>/d RO  
 Novocherkassk, Rostov-On-Don, Russia, 2,160 m<sup>3</sup>/d RO  
 Orel Heat and Power Station - Affiliate of JSC "QUADRA", Orel, Russia, 2,160 m<sup>3</sup>/d RO  
 Volgograd Central Heating and Power Plant, Volgograd, Russia, 2,160 m<sup>3</sup>/d RO  
 Nizhnelamansk Heat and Power Station 1 - Affiliate of TGK-16, Nizhnelamansk, Russia, 2,040 m<sup>3</sup>/d RO  
 Kazan Central Heating and Power Plant, Kazan, Russia, 1,440 m<sup>3</sup>/d RO  
 JSC "METRAFRAX", Perm, Russia, 840 m<sup>3</sup>/d RO  
 RM Nanotech JSC, Vladimir, Vladimir Region, Russia, 297,000,000 gpd RO  
 RM Nanotech JSC, Vladimir, Vladimir Region, Russia, 33,000,000 gpd RO

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#### Equipment Supplier: RO Membranes

Zhejiang Zheneng China coal Zhoushan Coal Power plant phase II seawater desalination project, Zhejiang, Zhoushan, China 2022, 30,000 m<sup>3</sup>/d RO  
 Beijing BDA East Regeneration Water Plant, Beijing, China 2012, 10,000 m<sup>3</sup>/d RO

**Equipment Supplier: Membranes (Replacement)**

Hualu Hengsheng Chemical Co., Ltd. water vapor workshop, Shandong, China 2018, 18,000 m<sup>3</sup>/d RO  
Orange County Water District, Los Angeles, California, United States 2018, 18,000 m<sup>3</sup>/d RO  
West Basin Municipal Water District, Los Angeles, California, United States 2017, 48,000 m<sup>3</sup>/d RO

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**SELECTED REFERENCES**

**Equipment Supplier: Membranes**

Saudi Arabia SWRO, Saudi Arabia 2023, 750 m<sup>3</sup>/d RO  
Rabigh IWSPP Phase II, Rabigh, Saudi Arabia 2015, 108,000 m<sup>3</sup>/d RO  
Ras Al Khair, Saudi Arabia 2014, 345,000 m<sup>3</sup>/d RO  
Jeddah 3, Saudi Arabia 2013, 260,000 m<sup>3</sup>/d RO  
Ras Abu Jarjur, Bahrain 2012, 7,200 m<sup>3</sup>/d RO

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[www.csmfilter.com](http://www.csmfilter.com)

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Specialty and Dairy: Spiral-wound RO, NF, UF, MF and heat-sanitizable membrane elements for dairy and specialty separations (<https://www.water.toray/products/specialty/>)

RPI Antiscalants: ROPUR RPI® Antiscalants for RO system (<https://ropur.com/>)

## SELECTED REFERENCES

### Equipment Supplier: Desalination System

Munifa, Nabyah, Eastern, Saudi Arabia 2022, 20,000 m³/d RO  
 2nd Industrial City, Eastern, Saudi Arabia 2022, 20,000 m³/d RO  
 SANG Plant, Riyadh, Saudi Arabia 2022, 15,000 m³/d RO  
 Ma'aden, Eastern, Saudi Arabia 2022, 15,000 m³/d RO  
 Ma'aden, Eastern, Saudi Arabia 2022, 15,000 m³/d RO  
 Wadi dawasir/ Riyadh / NWC, Riyadh, Saudi Arabia 2022, 12,000 m³/d RO  
 Aflag RO Plant, Riyadh, Saudi Arabia 2022, 10,000 m³/d RO  
 Nadec Diary, Riyadh, Saudi Arabia 2022, 5,000 m³/d RO  
 Saudi Airline plant, Jeddah, Saudi Arabia 2022, 5,000 m³/d RO  
 Almarai Farms, Riyadh, Saudi Arabia 2022, 5,000 m³/d RO  
 Dhurma / Riyadh / NWC, Riyadh, Saudi Arabia 2022, 5,000 m³/d RO  
 Barri Gas Plant, Eastern, Saudi Arabia 2022, 5,000 m³/d RO  
 Salwa , Batha, Eastern, Saudi Arabia 2022, 5,000 m³/d RO  
 Khrasanyah, Eastern, Saudi Arabia 2022, 4,000 m³/d RO  
 SEC Riyadh, Riyadh, Saudi Arabia 2022, 3,500 m³/d RO  
 Wadi dawasir/ Riyadh / MOD, Riyadh, Saudi Arabia 2022, 3,500 m³/d RO  
 SEC Riyadh, Jeddah, Saudi Arabia 2022, 3,000 m³/d RO  
 Suliman Enizi Plant, Riyadh, Saudi Arabia 2022, 2,000 m³/d RO  
 Huyndai, Eastern, Saudi Arabia 2022, 1,000 m³/d RO  
 Jubail 3A, Eastern, Saudi Arabia 2020, 600,000 m³/d RO  
 Al Dur 2 IWPP, Al Dur, Bahrain 2019, 227,000 m³/d RO

### Equipment Supplier: Membranes

Containerized BWRO/MEW, Kuwait 2023, 15,000 m³/d RO  
 Water Reclamation KN3, Singapore 2023, 7,584 m³/d RO  
 Some chemical plant, Guizhou province, China 2023, 4,000 m³/d RO  
 Some power plant, Guangdong province, China 2023, 4,000 m³/d RO  
 Some coal chemical plant, Shanxi province, China 2023, 3,400 m³/d RO  
 Industrial Electronic FN, Ho Chi Minh, Vietnam 2023, 2,700 m³/d MBR  
 Industrial SMM, Gresik, Indonesia 2023, 1,440 m³/d RO  
 Safaga, Egypt 2023, 1,200 m³/d RO  
 North Coast, Egypt 2023, 1,200 m³/d RO  
 Industrial textile STY, Karachi, Pakistan 2023, 1,080 m³/d MBR  
 UAE 2022, 683,500 m³/d RO  
 Argelia 2022, 200,000 m³/d RO  
 UAE 2022, 170,500 m³/d RO  
 China 2022, 136,000 m³/d RO  
 Spain 2022, 120,000 m³/d RO  
 Argelia 2022, 100,000 m³/d RO  
 Spain 2022, 63,000 m³/d RO

Ghana 2022, 60,000 m³/d RO  
 Industrial Adan, Gujarat, India 2022, 33,000 m³/d RO  
 Some power plant, Hubei province, China 2022, 22,000 m³/d RO  
 Turkey 2022, 21,216 m³/d RO  
 Containerized SWRO, Neom, Saudi Arabia 2022, 21,000 m³/d RO  
 Some Chemical Plant, Xinjiang province, China 2022, 20,000 m³/d RO  
 Some Textile Plant, Guangdong province, China 2022, 20,000 m³/d  
 Water Reclamation SW, Wollongong, Australia 2022, 20,000 m³/d RO  
 Some steel plant, Neimenggu province, China 2022, 18,000 m³/d RO  
 Some paper plant, Fujian province, China 2022, 14,500 m³/d RO  
 Some coal chemical plant, Neimenggu province, China 2022, 9,900 m³/d RO  
 Russia 2022, 9,600 m³/d RO  
 South Africa 2022, 9,018 m³/d RO  
 Some Chemical Plant, Ningxia province, China 2022, 8,600 m³/d RO  
 Some power plant, Shandong province, China 2022, 8,300 m³/d RO  
 Some steel plant, Neimenggu province, China 2022, 7,900 m³/d RO  
 Some electronic plant, Chongqing, China 2022, 7,700 m³/d RO  
 Drinking Water Plant, Austria 2022, 7,680 m³/d RO  
 Some electronic plant, Jiangsu province, China 2022, 7,300 m³/d RO  
 Some textile plant, Jiangsu province, China 2022, 7,200 m³/d RO  
 Some Chemical Plant, Sichuan province, China 2022, 6,500 m³/d RO  
 Some new energy projects, Gansu province, China 2022, 6,500 m³/d RO  
 Kazakhstan 2022, 6,480 m³/d RO  
 HH.SHK. Mansoor Bin Zayed Al-Nahyan Palace, Fujairah, United Arab Emirates 2022, 5,500 m³/d RO  
 Process Plant, Germany 2022, 5,400 m³/d RO  
 Industrial WHAES, Bangkok, Thailand 2022, 4,000 m³/d RO  
 Some Food And Beverage Plant, Hainan province, China 2022, 3,000 m³/d RO  
 Sokhna, Egypt 2022, 3,000 m³/d RO  
 Some food and beverage plant, Liaoning province, China 2022, 3,000 m³/d RO  
 Municipal, Cilacap, Indonesia 2022, 2,880 m³/d RO  
 Water Reclamation Lang, Ho Chi Minh, Vietnam 2022, 2,500 m³/d MBR  
 Some food and beverage plant, Jiangsu province, China 2022, 2,400 m³/d RO  
 Some Food And Beverage Plant, Henan province, China 2022, 2,000 m³/d RO  
 Some food and beverage plant, Heilongjiang province, China 2022, 2,000 m³/d RO  
 Marsa Alam, Egypt 2022, 1,500 m³/d RO  
 Industrial textile SURM, Dhaka, Bangladesh 2022, 1,260 m³/d MBR  
 North Coast, Egypt 2022, 1,000 m³/d RO  
 U.S.A. 2022, 12 m³/d RO  
 Some chemical plant, Hubei province, China 2022, NF  
 Some municipal wastewater reuse plant, Hubei province, China 2022, MBR  
 Some medical plant, Beijing, China 2022  
 Some power plant, Guangdong province, China 2022, RO  
 Some Municipal Wastewater Reuse Plant, Hebei province, China 2021, 325,000 m³/d

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**DESALINATION & REUSE**  
**HANDBOOK**

Some Chemical Plant, Hebei province, China 2021, 38,000 m<sup>3</sup>/d RO  
Some Municipal Wastewater Reuse Plant, Anhui province, China 2021, 70,000 m<sup>3</sup>/d  
Some Chemical Plant, Shandong province, China 2021, 45,000 m<sup>3</sup>/d RO  
Some Municipal Wastewater Reuse Plant, Zhejiang province, China 2021, 30,000 m<sup>3</sup>/d  
Some Coal Chemical Plant, Neimeng province, China 2021, 25,800 m<sup>3</sup>/d RO  
Municipal, Manila, Philippines 2021, 25,000 m<sup>3</sup>/d RO  
Some Power Plant, Zhejiang province, China 2021, 21,400 m<sup>3</sup>/d RO  
Some Chemical Plant, Hunan province, China 2021, 18,200 m<sup>3</sup>/d RO  
Some Chemical Plant, Xinjiang province, China 2021, 18,000 m<sup>3</sup>/d RO  
Turkey 2021, 16,224 m<sup>3</sup>/d RO  
Some Steel Plant, Shandong province, China 2021, 16,000 m<sup>3</sup>/d RO  
KAUST Expansion, Jeddah, KAUST, Saudi Arabia 2021, 16,000 m<sup>3</sup>/d RO  
Kazakhstan 2021, 15,360 m<sup>3</sup>/d RO  
Some Electronic Plant, Shanghai province, China 2021, 14,500 m<sup>3</sup>/d RO  
Some Paper Plant, Sichuan province, China 2021, 12,500 m<sup>3</sup>/d RO  
Municipal Wastewater Reuse Plant, Neimenggu province, China 2021, 11,200 m<sup>3</sup>/d RO  
Refuse Landfill, Hebei province, China 2021, 10,200 m<sup>3</sup>/d RO  
Some Chemical Plant, Jiangxi province, China 2021, 10,200 m<sup>3</sup>/d RO  
Chemical Plant, Shandong province, China 2021, 8,752 m<sup>3</sup>/d RO  
Some Power Plant, Jiangsu province, China 2021, 7,500 m<sup>3</sup>/d RO  
Germany 2021, 6,600 m<sup>3</sup>/d RO  
Some Electronic Plant, Guangdong province, China 2021, 6,100 m<sup>3</sup>/d RO  
Some Chemical Plant, Xinjiang province, China 2021, 6,000 m<sup>3</sup>/d RO  
Dammam Industrial Zone 2, Dammam, Saudi Arabia 2021, 5,800 m<sup>3</sup>/d RO  
Poland 2021, 5,700 m<sup>3</sup>/d RO  
Food and Beverage Plant, Guangdong province, China 2021, 4,234 m<sup>3</sup>/d RO  
Germany 2021, 3,100 m<sup>3</sup>/d RO  
Romania 2021, 2,016 m<sup>3</sup>/d RO  
Chemical Plant, Jiangxi province, China 2021, 1,958 m<sup>3</sup>/d RO  
Food and Beverage Plant, Guangdong province, China 2021, 1,901 m<sup>3</sup>/d RO  
Aramco, Jubail, Saudi Arabia 2021, 1,900 m<sup>3</sup>/d RO  
Germany 2021, 1,800 m<sup>3</sup>/d RO  
Hungary 2021, 1,560 m<sup>3</sup>/d RO  
Some Coal Chemical Plant, Shandong province, China 2021, 700 m<sup>3</sup>/d RO  
Drinking Water Plant, Austria 2021, 460 m<sup>3</sup>/d RO  
United Arab Emirates 2020, 681,000.0 m<sup>3</sup>/d RO  
Chemical Plant, Tianjin, China 2020, 46,760 m<sup>3</sup>/d RO  
Textile Plant, Guangdong province, China 2020, 26,765 m<sup>3</sup>/d RO  
Coal Chemical Plant, Ningxia province, China 2020, 24,869 m<sup>3</sup>/d RO  
Drinking Water Plant, Karabük, Turkey 2020, 19,752 m<sup>3</sup>/d RO  
Steel Plant, Shanxi province, China 2020, 19,008 m<sup>3</sup>/d RO  
Seawater Desalination Plant, Zhejiang province, China 2020, 14,113 m<sup>3</sup>/d RO  
Red Sea Development Company, Saudi Arabia 2020, 12,500 m<sup>3</sup>/d RO

Chemical Plant, Tianjin, China 2020, 14,256 m<sup>3</sup>/d RO  
Chemical Plant, Shanxi province, China 2020, 11,294 m<sup>3</sup>/d RO  
Petrochemical Plant, Gansu, China 2020, 10,800 m<sup>3</sup>/d RO  
Drinking Water Plant, Karabük (Rplc), Turkey 2020, 10,392 m<sup>3</sup>/d RO  
Electronic Plant, Jiangsu province, China 2020, 10,282 m<sup>3</sup>/d RO  
Power Plant, Shandong province, China 2020, 9,979 m<sup>3</sup>/d RO  
Food and Beverage Plant, Zhejiang province, China 2020, 9,878 m<sup>3</sup>/d RO  
Power Plant, Zhejiang province, China 2020, 9,504 m<sup>3</sup>/d RO  
Coal Chemical Plant, Shandong province, China 2020, 9,504 m<sup>3</sup>/d RO  
Power Plant, Jiangxi province, China 2020, 9,409 m<sup>3</sup>/d RO  
Semiconductor UPW Plant, Villach, Austria 2020, 8,700 m<sup>3</sup>/d RO  
Petrochemical Plant, Shandong province, China 2020, 8,640 m<sup>3</sup>/d RO  
Seawater Desalination Plant, Tianjin, China 2020, 8,112 m<sup>3</sup>/d RO  
Coal Chemical Plant, Ningxia, China 2020, 7,900 m<sup>3</sup>/d RO  
Chemical Plant, Neimenggu province, China 2020, 7,589 m<sup>3</sup>/d RO  
Coal Chemical Plant, Hebei province, China 2020, 7,344 m<sup>3</sup>/d RO  
Coal Chemical Plant, Hebei province, China 2020, 7,344 m<sup>3</sup>/d RO  
Taiwan 2020, 7,200 m<sup>3</sup>/d RO  
Electronic Plant, Jiangsu province, China 2020, 6,682 m<sup>3</sup>/d RO  
Beverage plant, Liaoning, China 2020, 6,500 m<sup>3</sup>/d RO  
Petrochemical Plant, Gansu province, China 2020, 6,162 m<sup>3</sup>/d RO  
Refuse Landfill, Beijing, China 2020, 6,120 m<sup>3</sup>/d RO  
Beverage plant, Tianjin, China 2020, 6,100 m<sup>3</sup>/d RO  
Coal Chemical Plant, Xinjiang province, China 2020, 6,083 m<sup>3</sup>/d RO  
Taiwan 2020, 5,600 m<sup>3</sup>/d RO  
Electronic Plant, Guangdong province, China 2020, 5,100 m<sup>3</sup>/d RO  
Coal Chemical Plant, Ningxia province, China 2020, 4,752 m<sup>3</sup>/d RO  
Layyah WTP, United Arab Emirates 2020, 4,000 m<sup>3</sup>/d RO  
Textile Plant, Hebei province, China 2020, 3,917 m<sup>3</sup>/d RO  
Petrochemical Plant, Shandong province, China 2020, 3,672 m<sup>3</sup>/d RO  
Power Plant, Henan, China 2020, 3,600 m<sup>3</sup>/d RO  
Business Bay 3, United Arab Emirates 2020, 3,500 m<sup>3</sup>/d RO  
Beverage plant, Xinjiang, China 2020, 3,500 m<sup>3</sup>/d RO  
Wastewater Treatment Plant, Guangxi, China 2020, 3,500 m<sup>3</sup>/d RO  
Pharmacy Plant, Sichuan, China 2020, 3,200 m<sup>3</sup>/d RO  
Food and Beverage Plant, Shaanxi province, China 2020, 3,110 m<sup>3</sup>/d RO  
Drinking Water Plant, Saint Jean de Braye, France 2020, 3,060 m<sup>3</sup>/d RO  
Drinking Water Plant, Austria 2020, 3,000 m<sup>3</sup>/d RO  
Drinking Water Plant, Austria 2020, 3,000 m<sup>3</sup>/d RO  
Tulin, Austria 2020, 3,000 m<sup>3</sup>/d RO  
Power Plant, Xinjiang province, China 2020, 2,756 m<sup>3</sup>/d RO  
Food and Beverage Plant, Jilin province, China 2020, 2,754 m<sup>3</sup>/d RO  
Petrochemical Plant, Xinjiang province, China 2020, 2,661 m<sup>3</sup>/d RO  
Taiwan 2020, 2,400 m<sup>3</sup>/d RO  
Photovoltaic Power Plant, Henan, China 2020, 2,300 m<sup>3</sup>/d RO  
Food & Beverage Plant, United Arab Emirates 2020, 2,200 m<sup>3</sup>/d RO  
Al Ain, United Arab Emirates 2020, 2,200 m<sup>3</sup>/d RO  
Paper Plant, Guizhou province, China 2020, 2,091 m<sup>3</sup>/d RO  
Mining Plant, Shandong, China 2020, 2,000 m<sup>3</sup>/d RO

Power Plant, Guizhou, China 2019, 12,000 m<sup>3</sup>/d RO  
 Food and Beverage Plant, Guangdong province, China 2020, 1,901 m<sup>3</sup>/d RO  
 JVC TSE Polishing Plant, United Arab Emirates 2020, 1,800 m<sup>3</sup>/d RO  
 Food & Beverage Plant, Russia 2020, 1,800 m<sup>3</sup>/d RO  
 Refuse Landfill, Guizhou province, China 2020, 1,795 m<sup>3</sup>/d RO  
 Paper Plant, Zhejiang province, China 2020, 1,711 m<sup>3</sup>/d RO  
 Crolle, France 2020, 1,584 m<sup>3</sup>/d RO  
 Refuse Landfill, Guizhou province, China 2020, 1,550 m<sup>3</sup>/d RO  
 Power Plant, Heilongjiang, China 2020, 1,200 m<sup>3</sup>/d RO  
 Taiwan 2020, 1,000 m<sup>3</sup>/d RO  
 Novobirsk, Russia 2020, 1,000 m<sup>3</sup>/d RO  
 Process Plant, Austria 2020, 253 m<sup>3</sup>/d RO  
 Taweealah IWP, Abu Dhabi, Taweealah, United Arab Emirates 2019, 909,200 m<sup>3</sup>/d RO  
 Rabigh-3 IWP, Rabigh, Saudi Arabia 2019, 600,000 m<sup>3</sup>/d RO  
 Bahrain 2019, 227,000.0 m<sup>3</sup>/d RO  
 Wastewater Reuse Plant, Tianjin, China 2019, 64,000 m<sup>3</sup>/d RO  
 Power Plant, Guangdong, China 2019, 57,600 m<sup>3</sup>/d RO  
 Coal Chemical Plant, Shanxi, China 2019, 50,400 m<sup>3</sup>/d RO  
 Steel Plant, Shanxi, China 2019, 32,300 m<sup>3</sup>/d RO  
 Power Plant, Shandong, China 2019, 24,000 m<sup>3</sup>/d RO  
 Petrochemical Plant, Shandong, China 2019, 20,800 m<sup>3</sup>/d RO  
 Electric Plant, Guangdong, China 2019, 18,800 m<sup>3</sup>/d RO  
 Textile Plant, Guangdong, China 2019, 17,800 m<sup>3</sup>/d RO  
 Waste water treatment plant, Tianjin, China 2019, 14,000 m<sup>3</sup>/d RO  
 Jiangxi province, China 2019, 12,000 m<sup>3</sup>/d RO  
 Mexico 2019, 10,000 m<sup>3</sup>/d RO  
 Belgium 2019, 9,600 m<sup>3</sup>/d RO  
 Steel Plant, Jiangsu, China 2019, 8,700 m<sup>3</sup>/d RO  
 Power Plant, Zhejiang, China 2019, 8,040 m<sup>3</sup>/d RO  
 Kazakhstan 2019, 8,000 m<sup>3</sup>/d RO  
 Power Plant, Guangdong, China 2019, 7,800 m<sup>3</sup>/d RO  
 Municipal Water Supply Plant, Shandong, China 2019, 6,300 m<sup>3</sup>/d RO  
 Paper plant, Shandong, China 2019, 5,700 m<sup>3</sup>/d RO  
 Ukraine 2019, 5,600 m<sup>3</sup>/d RO  
 Wastewater Treatment Plant, Shanxi, China 2019, 5,040.0 m<sup>3</sup>/d RO  
 Russia 2019, 4,800 m<sup>3</sup>/d RO  
 Shanxi province, China 2019, 4,500 m<sup>3</sup>/d RO  
 Steel plant, Shandong province, China 2019, 4,500 m<sup>3</sup>/d RO  
 Buzau, Romania 2019, 4,000 m<sup>3</sup>/d RO  
 Ostroleka, Poland 2019, 3,600 m<sup>3</sup>/d RO  
 Sichuan province, China 2019, 3,500 m<sup>3</sup>/d RO  
 Russia 2019, 3,320 m<sup>3</sup>/d RO  
 Petrochemical plant, Gansu province, China 2019, 3,000 m<sup>3</sup>/d RO  
 Shandong province, China 2019, 3,000 m<sup>3</sup>/d RO  
 Coal chemical plant, Inner Mongolia, China 2019, 3,000 m<sup>3</sup>/d RO  
 Sichuan province, China 2019, 3,000 m<sup>3</sup>/d RO  
 Kyoto, Japan 2019, 3,000 m<sup>3</sup>/d RO  
 Energy plant, Beijing, China 2019, 2,500 m<sup>3</sup>/d RO  
 Ukraine 2019, 2,500 m<sup>3</sup>/d RO  
 Ukraine 2019, 2,400 m<sup>3</sup>/d RO  
 Russia 2019, 2,400 m<sup>3</sup>/d RO  
 Ukraine 2019, 2,200 m<sup>3</sup>/d RO  
 Shaanxi province, China 2019, 2,000 m<sup>3</sup>/d RO  
 Shandong province, China 2019, 2,000 m<sup>3</sup>/d RO

Electronic plant, Zhejiang provine, China 2019, 2,000 m<sup>3</sup>/d RO  
 Liaoning province, China 2019, 1,600 m<sup>3</sup>/d RO  
 Neckartailfingen, Germany 2019, 1,500 m<sup>3</sup>/d RO  
 Tatabanya, Hungary 2019, 1,500 m<sup>3</sup>/d RO  
 Nagano, Japan 2019, 1,500 m<sup>3</sup>/d RO  
 Saitama, Japan 2019, 1,500 m<sup>3</sup>/d RO  
 Ukraine 2019, 1,400 m<sup>3</sup>/d RO  
 Russia 2019, 1,350 m<sup>3</sup>/d RO  
 Dresden, Germany 2019, 1,200 m<sup>3</sup>/d RO  
 Belarus 2019, 1,200 m<sup>3</sup>/d RO  
 Indonesia 2019, 1,200 m<sup>3</sup>/d RO  
 Coal chemical plant, Gansu province, China 2019, 1,200 m<sup>3</sup>/d RO  
 Russia 2019, 1,150 m<sup>3</sup>/d RO  
 Karsruhe, Germany 2019, 1,000 m<sup>3</sup>/d RO  
 Ukraine 2019, 1,000 m<sup>3</sup>/d RO  
 Kazakhstan 2019, 1,000 m<sup>3</sup>/d RO  
 Refuse landfill, Chengdu, Sichuan province, China 2019, 700 m<sup>3</sup>/d RO  
 Shuaibah, Saudi Arabia 2018, 250,000 m<sup>3</sup>/d RO  
 Jizan, Saudi Arabia 2018, 100,000 m<sup>3</sup>/d RO  
 Xian, China 2018, 45,000 m<sup>3</sup>/d RO  
 Mining plant, Inner Mongolia, China 2018, 37,000 m<sup>3</sup>/d RO  
 Coal chemical plant, Xinjiang province, China 2018, 30,000 m<sup>3</sup>/d RO  
 Pyontaek, South Korea 2018, 25,000 m<sup>3</sup>/d RO  
 Thermo-power plant, Shandong province, China 2018, 19,000 m<sup>3</sup>/d RO  
 Ichon, South Korea 2018, 18,000 m<sup>3</sup>/d RO  
 Thermo-power plant, Shandong province, China 2018, 18,000 m<sup>3</sup>/d RO  
 Hefei, China 2018, 15,000 m<sup>3</sup>/d RO  
 Suweon, South Korea 2018, 15,000 m<sup>3</sup>/d RO  
 Municipal Drinking Water, Baden Baden, Germany 2018, 14,400 m<sup>3</sup>/d RO  
 Municipal Drinking Water, Vienna, Austria 2018, 13,018 m<sup>3</sup>/d RO  
 Xian, China 2018, 13,000 m<sup>3</sup>/d RO  
 Ulgin, South Korea 2018, 12,000 m<sup>3</sup>/d RO  
 RO Project, Kazakhstan 2018, 12,000 m<sup>3</sup>/d RO  
 Food and beverage plant, China 2018, 12,000 m<sup>3</sup>/d RO  
 Ichon, South Korea 2018, 10,000 m<sup>3</sup>/d RO  
 Ningxia province, China 2018, 10,000 m<sup>3</sup>/d RO  
 Petrochemical plant, Shanxi province, China 2018, 10,000 m<sup>3</sup>/d RO  
 Thermo-power plant, Ningxia province, China 2018, 10,000 m<sup>3</sup>/d RO  
 Photovoltaic Power Plant, Jiangsu province, China 2018, 10,000 m<sup>3</sup>/d RO  
 Thermo-power plant, Shandong province, China 2018, 8,000 m<sup>3</sup>/d RO  
 Paper plant, Shandong province, China 2018, 8,000 m<sup>3</sup>/d RO  
 Sakhalin, Russia 2018, 7,200 m<sup>3</sup>/d RO  
 Wuhan, Hubei, China 2018, 7,000 m<sup>3</sup>/d RO  
 Cheongju, South Korea 2018, 7,000 m<sup>3</sup>/d RO  
 Municipal Drinking Water, Quedlinburg, Germany 2018, 7,000 m<sup>3</sup>/d RO  
 Tianjin, China 2018, 7,000 m<sup>3</sup>/d RO  
 BWRO projects, Japan 2018, 6,000 m<sup>3</sup>/d RO  
 South Korea 2018, 6,000 m<sup>3</sup>/d RO  
 Syzran, Russia 2018, 5,400 m<sup>3</sup>/d RO  
 BWRO project, South Korea 2018, 5,000 m<sup>3</sup>/d RO

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**DESALINATION & REUSE**  
**HANDBOOK**

Power plant, Shandong province, China 2018, 5,000 m<sup>3</sup>/d RO  
Power plant, Anhui province, China 2018, 5,000 m<sup>3</sup>/d RO  
Mining Energy Project, China 2018, 4,950 m<sup>3</sup>/d RO  
Voronezh, Russia 2018, 4,800 m<sup>3</sup>/d RO  
Siktifkar, Russia 2018, 4,800 m<sup>3</sup>/d RO  
BWRO project, Russia 2018, 4,560 m<sup>3</sup>/d RO  
Ichon, South Korea 2018, 4,500 m<sup>3</sup>/d RO  
BWRO project, Saudi Arabia 2018, 4,320 m<sup>3</sup>/d RO  
Goseong, South Korea 2018, 4,000 m<sup>3</sup>/d RO  
Paper plant, Sichuan province, China 2018, 4,000 m<sup>3</sup>/d RO  
Waste water treatment plant, Ningxia province, China 2018, 4,000 m<sup>3</sup>/d RO  
Beverage plant, Hubei province, China 2018, 4,000 m<sup>3</sup>/d RO  
Mining Group Project, China 2018, 3,780 m<sup>3</sup>/d RO  
Moscow, Russia 2018, 3,600 m<sup>3</sup>/d RO  
BOT Project, China 2018, 3,075 m<sup>3</sup>/d RO  
Precision instrument factory, Jiangsu province, China 2018, 3,000 m<sup>3</sup>/d RO  
Power plant, Xinjiang province, China 2018, 3,000 m<sup>3</sup>/d RO  
Power plant, Zhejiang province, China 2018, 3,000 m<sup>3</sup>/d RO  
Nyergesujfal, Hungary 2018, 2,600 m<sup>3</sup>/d RO  
Cement plant, Guangdong province, China 2018, 2,600 m<sup>3</sup>/d RO  
Henan province, China 2018, 2,500 m<sup>3</sup>/d RO  
Power plant, Inner Mongolia, China 2018, 2,500 m<sup>3</sup>/d RO  
Inner Mongolia, China 2018, 2,500 m<sup>3</sup>/d RO  
Kwangju, South Korea 2018, 2,400 m<sup>3</sup>/d RO  
Low concentrated saline water RO, Russia 2018, 2,400 m<sup>3</sup>/d RO  
BWRO, Russia 2018, 2,400 m<sup>3</sup>/d RO  
Low concentrated saline water RO, Ukraine 2018, 2,400 m<sup>3</sup>/d RO  
Beverage plant, Guangdong province, China 2018, 2,400 m<sup>3</sup>/d RO  
Municipal Drinking Water, Vienna, Austria 2018, 2,333 m<sup>3</sup>/d RO  
Solar Power Plant, Andalucia, Spain 2018, 2,200 m<sup>3</sup>/d RO  
Chongqing, China 2018, 2,000 m<sup>3</sup>/d RO  
RO project, South Korea 2018, 2,000 m<sup>3</sup>/d RO  
Gifu, Japan 2018, 2,000 m<sup>3</sup>/d RO  
Pyontaek, South Korea 2018, 2,000 m<sup>3</sup>/d RO  
Shanghai, China 2018, 2,000 m<sup>3</sup>/d RO  
Metal Industry Plant, Asturias, Spain 2018, 2,000 m<sup>3</sup>/d RO  
Solar Power Plant, Extremadura, Spain 2018, 2,000 m<sup>3</sup>/d RO  
Power plant, Anhui province, China 2018, 2,000 m<sup>3</sup>/d RO  
Hebei province, China 2018, 1,900 m<sup>3</sup>/d RO  
Heat & Power Plant, China 2018, 1,771 m<sup>3</sup>/d RO  
Pure water or tap water RO, Japan 2018, 1,700 m<sup>3</sup>/d RO  
Shizuoka, Japan 2018, 1,600 m<sup>3</sup>/d RO  
Wuxi, China 2018, 1,500 m<sup>3</sup>/d RO  
Power Plant, China 2018, 1,425 m<sup>3</sup>/d RO  
Song-Hau, Vietnam 2018, 1,400 m<sup>3</sup>/d RO  
Soft Drink Plant, Malaga, Spain 2018, 1,400 m<sup>3</sup>/d RO  
Soft Drink Plant, Barcelona, Spain 2018, 1,300 m<sup>3</sup>/d RO  
Energy Company Project, China 2018, 1,233 m<sup>3</sup>/d RO  
Japan 2018, 1,200 m<sup>3</sup>/d RO  
Microelectronics Company, China 2018, 1,200 m<sup>3</sup>/d RO  
Industrial Plant, Extremadura, Spain 2018, 1,200 m<sup>3</sup>/d RO  
BWRO project, Germany 2018, 1,200 m<sup>3</sup>/d RO  
Food and Beverage Plants, China 2018, 1,045 m<sup>3</sup>/d RO  
Gunma, Japan 2018, 1,000 m<sup>3</sup>/d RO  
Hokkaido, Japan 2018, 1,000 m<sup>3</sup>/d RO  
Soft Drink Plant, Barcelona, Spain 2018, 1,000 m<sup>3</sup>/d RO

Power Plant, China 2018, 840 m<sup>3</sup>/d RO  
Municipal Drinking Water, Wolkersdorf, Austria 2018, 972 m<sup>3</sup>/d RO  
Waste water treatment plant, Tianjin, China 2018, 900 m<sup>3</sup>/d RO  
Tokushima, Japan 2018, 800 m<sup>3</sup>/d RO  
Shizuoka, Japan 2018, 800 m<sup>3</sup>/d RO  
Waste Water Project, China 2018, 792 m<sup>3</sup>/d RO  
Steel Plant, China 2018, 756 m<sup>3</sup>/d RO  
Osaka, Japan 2018, 720 m<sup>3</sup>/d RO  
Countryside Water treatment, China 2018, 700 m<sup>3</sup>/d RO  
Environment Protection Co., Ltd, China 2018, 630 m<sup>3</sup>/d RO  
Power plant, Vietnam 2018, 600 m<sup>3</sup>/d RO  
Pharmaceutical plant, Jiangxi province, China 2018, 600 m<sup>3</sup>/d RO  
Power Plant, China 2018, 597 m<sup>3</sup>/d RO  
Food plant, Chengdu, China 2018, 500 m<sup>3</sup>/d RO  
Kumamoto, Japan 2018, 480 m<sup>3</sup>/d RO  
Steel Plant, China 2018, 450 m<sup>3</sup>/d RO  
Textile Plant, China 2018, 415 m<sup>3</sup>/d RO  
Kyoto, Japan 2018, 400 m<sup>3</sup>/d RO  
Kagawa, Japan 2018, 400 m<sup>3</sup>/d RO  
Mie, Japan 2018, 400 m<sup>3</sup>/d RO  
Power Plant, China 2018, 367 m<sup>3</sup>/d RO  
Pure water or tap water plant, Japan 2018, 360 m<sup>3</sup>/d RO  
Ehime, Japan 2018, 360 m<sup>3</sup>/d RO  
Tokyo, Honshu, Japan 2018, 360 m<sup>3</sup>/d RO  
Electronics plant, Japan 2018, 360 m<sup>3</sup>/d RO  
Electronics plant, Japan 2018, 360 m<sup>3</sup>/d RO  
Japan 2018, 360 m<sup>3</sup>/d RO  
Aichi, Japan 2018, 360 m<sup>3</sup>/d RO  
Saitama, Japan 2018, 360 m<sup>3</sup>/d RO  
Power Plant, China 2018, 324 m<sup>3</sup>/d RO  
Microelectronics Company, China 2018, 252 m<sup>3</sup>/d RO  
Miyazaki, Kyushu, Japan 2018, 240 m<sup>3</sup>/d RO  
Miyazaki, Japan 2018, 240 m<sup>3</sup>/d RO  
Kanagawa, Japan 2018, 240 m<sup>3</sup>/d RO  
Fukui, Japan 2018, 240 m<sup>3</sup>/d RO  
Chemical Plant, China 2018, 222 m<sup>3</sup>/d RO  
Osaka, Japan 2018, 200 m<sup>3</sup>/d RO  
Shiga, Japan 2018, 200 m<sup>3</sup>/d RO  
Gifu, Japan 2018, 200 m<sup>3</sup>/d RO  
Refuse landfill, Chengdu, Sichuan province, China 2018, 200 m<sup>3</sup>/d RO  
Gumi, Gyeongsangbukdo, South Korea 2017, 90,000 m<sup>3</sup>/d RO  
Jubail , Saudi Arabia 2017, 90,000 m<sup>3</sup>/d RO  
Tabouk, Saudi Arabia 2017, 50,000 m<sup>3</sup>/d RO  
Chengdu, China 2017, 48,000 m<sup>3</sup>/d RO  
Industrial, China 2017, 37,783 m<sup>3</sup>/d RO  
Akhal Valayat, Turkmenistan 2017, 36,000 m<sup>3</sup>/d RO  
China 2017, 25,401 m<sup>3</sup>/d RO  
China 2017, 25,401 m<sup>3</sup>/d RO  
Jubail, Saudi Arabia 2017, 25,000 m<sup>3</sup>/d RO  
Cheongju, South Korea 2017, 20,000 m<sup>3</sup>/d RO  
Icheon, South Korea 2017, 16,500 m<sup>3</sup>/d RO  
China 2017, 13,178 m<sup>3</sup>/d RO  
China 2017, 12,852 m<sup>3</sup>/d RO  
Hefei, China 2017, 12,000 m<sup>3</sup>/d RO  
Icheon, South Korea 2017, 11,000 m<sup>3</sup>/d RO  
Fujairah, United Arab Emirates 2017, 11,000 m<sup>3</sup>/d RO

Wuhan, China 2017, 8,300 m<sup>3</sup>/d RO  
 Hefei, China 2017, 8,000 m<sup>3</sup>/d RO  
 Hwaseong, South Korea 2017, 8,000 m<sup>3</sup>/d RO  
 South Korea 2017, 6,000 m<sup>3</sup>/d RO  
 China 2017, 5,443 m<sup>3</sup>/d RO  
 China 2017, 5,365 m<sup>3</sup>/d RO  
 China 2017, 5,140 m<sup>3</sup>/d RO  
 Saga, Japan 2017, 5,000 m<sup>3</sup>/d RO  
 Philippines 2017, 5,000 m<sup>3</sup>/d RO  
 South Korea 2017, 5,000 m<sup>3</sup>/d RO  
 China 2017, 2,577 m<sup>3</sup>/d RO  
 Buenos Aires, Argentina 2017, 2,500 m<sup>3</sup>/d RO  
 Indonesia 2017, 2,238 m<sup>3</sup>/d RO  
 Indonesia 2017, 2,238 m<sup>3</sup>/d RO  
 Seoul, South Korea 2017, 2,000 m<sup>3</sup>/d RO  
 South Korea 2017, 2,000 m<sup>3</sup>/d RO  
 China 2017, 1,958 m<sup>3</sup>/d RO  
 China 2017, 1,864 m<sup>3</sup>/d RO  
 Malaysia 2017, 1,700 m<sup>3</sup>/d RO  
 South Korea 2017, 1,500 m<sup>3</sup>/d RO  
 Ilsan, South Korea 2017, 1,500 m<sup>3</sup>/d RO  
 Vietnam 2017, 1,400 m<sup>3</sup>/d RO  
 China 2017, 1,360 m<sup>3</sup>/d RO  
 Buenos Aires, Argentina 2017, 1,350 m<sup>3</sup>/d RO  
 China 2017, 1,310 m<sup>3</sup>/d RO  
 Batan, Vietnam 2017, 1,200 m<sup>3</sup>/d RO  
 Tokushima, Japan 2017, 1,200 m<sup>3</sup>/d RO  
 Asan, South Chungcheong, South Korea 2017, 1,150 m<sup>3</sup>/d RO  
 Canary Islands, Fuerteventura, Spain 2017, 1,100 m<sup>3</sup>/d RO  
 Taiwan 2017, 1,080 m<sup>3</sup>/d RO  
 Philippines 2017, 1,000 m<sup>3</sup>/d RO  
 Gunma, Japan 2017, 1,000 m<sup>3</sup>/d RO  
 Kanagawa, Japan 2017, 1,000 m<sup>3</sup>/d RO  
 Gunma, Japan 2017, 960 m<sup>3</sup>/d RO  
 Contryside Water treatment, China 2017, 890 m<sup>3</sup>/d RO  
 Yeongheung, South Korea 2017, 840 m<sup>3</sup>/d RO  
 Power Plant, China 2017, 756 m<sup>3</sup>/d RO  
 Saitama, Japan 2017, 720 m<sup>3</sup>/d RO  
 Kumamoto, Japan 2017, 700 m<sup>3</sup>/d RO  
 Biotechnology Co, Ltd, China 2017, 691 m<sup>3</sup>/d RO  
 Hiroshima, Japan 2017, 600 m<sup>3</sup>/d RO  
 Shizuoka, Japan 2017, 550 m<sup>3</sup>/d RO  
 Nigeria 2017, 480 m<sup>3</sup>/d RO  
 Kanagawa, Japan 2017, 480 m<sup>3</sup>/d RO  
 Shiga, Japan 2017, 480 m<sup>3</sup>/d RO  
 Kanagawa, Japan 2017, 400 m<sup>3</sup>/d RO  
 Miyagi, Japan 2017, 360 m<sup>3</sup>/d RO  
 Japan 2017, 360 m<sup>3</sup>/d RO  
 Ehime, Japan 2017, 360 m<sup>3</sup>/d RO  
 Fukushima, Japan 2017, 360 m<sup>3</sup>/d RO  
 Philippines 2017, 360 m<sup>3</sup>/d RO  
 Toyama, Japan 2017, 360 m<sup>3</sup>/d RO  
 Philippines 2017, 360 m<sup>3</sup>/d RO  
 Textile Plant, China 2017, 360 m<sup>3</sup>/d RO  
 Ibaragi, Japan 2017, 330 m<sup>3</sup>/d RO  
 RO reuse, Japan 2017, 300 m<sup>3</sup>/d RO  
 Shizuoka, Japan 2017, 300 m<sup>3</sup>/d RO

Kumamoto, Japan 2017, 300 m<sup>3</sup>/d RO  
 Shimane, Japan 2017, 300 m<sup>3</sup>/d RO  
 Miyazaki, Japan 2017, 240 m<sup>3</sup>/d RO  
 Fukui, Japan 2017, 240 m<sup>3</sup>/d RO  
 Tokyo, Japan 2017, 240 m<sup>3</sup>/d RO  
 Aichi, Japan 2017, 240 m<sup>3</sup>/d RO  
 Shizuoka, Japan 2017, 240 m<sup>3</sup>/d RO  
 Tochigi, Japan 2017, 180 m<sup>3</sup>/d RO  
 Vietnam 2017, 160 m<sup>3</sup>/d RO  
 Ibaragi, Japan 2017, 120 m<sup>3</sup>/d RO  
 Buenos Aires, Argentina 2017, RO  
 Buenos Aires, Argentina 2017, RO  
 Al Khafji SWRO, Khafji, Saudi Arabia 2016, 60,000 m<sup>3</sup>/d RO  
 Wajeed, Saudi Arabia 2016, 60,000 m<sup>3</sup>/d RO  
 South Korea 2016, 58,000 m<sup>3</sup>/d RO  
 South Korea 2016, 58,000 m<sup>3</sup>/d RO  
 Asan, South Chungcheong, South Korea 2016, 28,000 m<sup>3</sup>/d RO  
 Ain Salah, Algeria 2016, 26,500 m<sup>3</sup>/d RO  
 Foshan, Guangdong province, China 2016, 25,872 m<sup>3</sup>/d RO  
 King Khaled International Airport, Riyadh, Saudi Arabia 2016, 25,000 m<sup>3</sup>/d RO  
 Ningbo, China 2016, 24,969 m<sup>3</sup>/d RO  
 Dongming, China 2016, 23,011 m<sup>3</sup>/d RO  
 Jinghai Village Drinking Water, Tianjin, China 2016, 16,704 m<sup>3</sup>/d RO  
 Vietnam 2016, 15,000 m<sup>3</sup>/d RO  
 Yancheng, China 2016, 14,918 m<sup>3</sup>/d RO  
 China 2016, 14,136 m<sup>3</sup>/d RO  
 Plock, Poland 2016, 13,500 m<sup>3</sup>/d RO  
 Plock, Poland 2016, 13,500 m<sup>3</sup>/d RO  
 Panzhihua, China 2016, 13,219 m<sup>3</sup>/d RO  
 China 2016, 12,028 m<sup>3</sup>/d RO  
 China 2016, 11,913 m<sup>3</sup>/d RO  
 Lu'an, China 2016, 11,810 m<sup>3</sup>/d RO  
 Handan, China 2016, 10,886 m<sup>3</sup>/d RO  
 Nanjing, China 2016, 10,886 m<sup>3</sup>/d RO  
 Datang Lin Qing, China 2016, 10,752 m<sup>3</sup>/d RO  
 Xin Yuan Guo Neng Alashan, China 2016, 10,368 m<sup>3</sup>/d RO  
 Singapore 2016, 9,600 m<sup>3</sup>/d RO  
 Aspire, Qatar 2016, 9,500 m<sup>3</sup>/d RO  
 China 2016, 9,180 m<sup>3</sup>/d RO  
 Yili, China 2016, 8,812 m<sup>3</sup>/d RO  
 Pan Steel, China 2016, 8,352 m<sup>3</sup>/d RO  
 RO reuse, China 2016, 8,248 m<sup>3</sup>/d RO  
 Shang Ban Cheng project, China 2016, 8,064 m<sup>3</sup>/d RO  
 China 2016, 7,588 m<sup>3</sup>/d RO  
 South Korea 2016, 7,500 m<sup>3</sup>/d RO  
 China 2016, 7,257 m<sup>3</sup>/d RO  
 Hua Run project, China 2016, 6,912 m<sup>3</sup>/d RO  
 China 2016, 6,854 m<sup>3</sup>/d RO  
 Rong Xing Chemical, China 2016, 6,384 m<sup>3</sup>/d RO  
 South Korea 2016, 6,000 m<sup>3</sup>/d RO  
 Shaoxing, China 2016, 5,875 m<sup>3</sup>/d RO  
 Long Da, Nantong , China 2016, 5,760 m<sup>3</sup>/d RO  
 Tai Da Xin Shui Yuan, Tianjin, China 2016, 5,712 m<sup>3</sup>/d RO  
 China 2016, 5,630 m<sup>3</sup>/d RO  
 Dongguan, China 2016, 5,406 m<sup>3</sup>/d RO  
 Thailand 2016, 4,291 m<sup>3</sup>/d RO

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China 2016, 4,284 m<sup>3</sup>/d RO  
Boise City, United States 2016, 4,900 m<sup>3</sup>/d RO  
Chongqing, China 2016, 4,500 m<sup>3</sup>/d RO  
Qingdao, China 2016, 4,406 m<sup>3</sup>/d RO  
China 2016, 4,401 m<sup>3</sup>/d RO  
China 2016, 4,182 m<sup>3</sup>/d RO  
Industrial, China 2016, 4,080 m<sup>3</sup>/d RO  
China 2016, 4,032 m<sup>3</sup>/d RO  
Russia 2016, 4,000 m<sup>3</sup>/d RO  
2017, 10,000 m<sup>3</sup>/d RO  
Batan, Vietnam 2016, 4,000 m<sup>3</sup>/d RO  
China 2016, 3,916 m<sup>3</sup>/d RO  
Xiaoshan, China 2016, 3,672 m<sup>3</sup>/d RO  
China 2016, 3,628 m<sup>3</sup>/d RO  
Zeitz, Germany 2016, 3,600 m<sup>3</sup>/d RO  
China 2016, 3,549 m<sup>3</sup>/d RO  
China 2016, 3,360 m<sup>3</sup>/d RO  
China 2016, 3,060 m<sup>3</sup>/d RO  
China 2016, 3,023 m<sup>3</sup>/d RO  
Germany 2016, 3,000 m<sup>3</sup>/d RO  
Romania 2016, 2,880 m<sup>3</sup>/d RO  
China 2016, 2,822 m<sup>3</sup>/d RO  
Akita, Japan 2016, 2,800 m<sup>3</sup>/d RO  
Thailand 2016, 2,620 m<sup>3</sup>/d RO  
China 2016, 2,570 m<sup>3</sup>/d RO  
Shenzhen, China 2016, 2,550 m<sup>3</sup>/d RO  
Shanghai, China 2016, 2,509 m<sup>3</sup>/d RO  
Gunsan, South Korea 2016, 2,500 m<sup>3</sup>/d RO  
Lichtenfels, Germany 2016, 2,500 m<sup>3</sup>/d RO  
Basel, Switzerland 2016, 2,500 m<sup>3</sup>/d RO  
Qingyang, China 2016, 2,448 m<sup>3</sup>/d RO  
China 2016, 2,436 m<sup>3</sup>/d RO  
Tianjin, China 2016, 2,419 m<sup>3</sup>/d RO  
Belarus 2016, 2,400 m<sup>3</sup>/d RO  
China 2016, 2,385 m<sup>3</sup>/d RO  
Junnan, China 2016, 2,203 m<sup>3</sup>/d RO  
China 2016, 2,203 m<sup>3</sup>/d RO  
Donguan, China 2016, 2,162 m<sup>3</sup>/d RO  
Datteln, Germany 2016, 2,112 m<sup>3</sup>/d RO  
Yiwu, China 2016, 2,016 m<sup>3</sup>/d RO  
South Korea 2016, 2,000 m<sup>3</sup>/d RO  
Kumamoto, Japan 2016, 2,000 m<sup>3</sup>/d RO  
Kouchi, Japan 2016, 2,000 m<sup>3</sup>/d RO  
South Korea 2016, 2,000 m<sup>3</sup>/d RO  
Murcia, Cartagena, Spain 2016, 2,000 m<sup>3</sup>/d RO  
Luoyang, China 2016, 1,958 m<sup>3</sup>/d RO  
China 2016, 1,958 m<sup>3</sup>/d RO  
Lithuania 2016, 1,920 m<sup>3</sup>/d RO  
Ehime, Japan 2016, 1,800 m<sup>3</sup>/d RO  
North Mexico, Mexico 2016, 1,680 m<sup>3</sup>/d RO  
China 2016, 1,612 m<sup>3</sup>/d RO  
Ningxia, China 2016, 1,611 m<sup>3</sup>/d RO  
Xinjiang Yi Hua, China 2016, 1,600 m<sup>3</sup>/d RO  
Xinjiang Tian Ye water reuse project , Xinjiang Province, China 2016, 1,536 m<sup>3</sup>/d RO  
Munich, Germany 2016, 1,500 m<sup>3</sup>/d RO  
Ukraine 2016, 1,500 m<sup>3</sup>/d RO

Munich, Germany 2016, 1,500 m<sup>3</sup>/d RO  
RO reuse, Ukraine 2016, 1,500 m<sup>3</sup>/d RO  
Ochsenfurt, Germany 2016, 1,440 m<sup>3</sup>/d RO  
Kenya 2016, 1,416 m<sup>3</sup>/d RO  
China 2016, 1,243 m<sup>3</sup>/d RO  
Russia 2016, 1,200 m<sup>3</sup>/d RO  
Morocco 2016, 1,200 m<sup>3</sup>/d RO  
Huludao, China 2016, 1,081 m<sup>3</sup>/d RO  
China 2016, 1,020 m<sup>3</sup>/d RO  
Industrial, China 2016, 1,008 m<sup>3</sup>/d RO  
Kyoto, Japan 2016, 1,000 m<sup>3</sup>/d RO  
Anyang, South Korea 2016, 1,000 m<sup>3</sup>/d RO  
Romania 2016, 960 m<sup>3</sup>/d RO  
Ukraine 2016, 900 m<sup>3</sup>/d RO  
Sumatra, Indonesia 2016, 860 m<sup>3</sup>/d RO  
Donguan, China 2016, 856 m<sup>3</sup>/d RO  
China 2016, 816 m<sup>3</sup>/d RO  
Industrial, Romania 2016, 720 m<sup>3</sup>/d RO  
Tochigi, Japan 2016, 600 m<sup>3</sup>/d RO  
Romania 2016, 528 m<sup>3</sup>/d RO  
Tokyo, Japan 2016, 480 m<sup>3</sup>/d RO  
Shiga, Japan 2016, 480 m<sup>3</sup>/d RO  
Tokyo, Japan 2016, 480 m<sup>3</sup>/d RO  
Hyogo, Japan 2016, 480 m<sup>3</sup>/d RO  
Ibaragi, Japan 2016, 430 m<sup>3</sup>/d RO  
Osaka, Japan 2016, 420 m<sup>3</sup>/d RO  
Osaka, Japan 2016, 400 m<sup>3</sup>/d RO  
Honshu, Saitama, Japan 2016, 400 m<sup>3</sup>/d RO  
Miyagi, Japan 2016, 300 m<sup>3</sup>/d RO  
RO reuse, China 2016, 183 m<sup>3</sup>/d RO  
Tonga 2016, 120 m<sup>3</sup>/d RO  
Germany 2016, RO  
Odessa, Ukraine 2016, RO  
Al Ghubra, Oman 2015, 201,600 m<sup>3</sup>/d RO  
Fujairah, United Arab Emirates 2015, 145,472 m<sup>3</sup>/d RO  
Cheongju, South Korea 2015, 30,000 m<sup>3</sup>/d RO  
Suwon, South Korea 2015, 30,000 m<sup>3</sup>/d RO  
Suzhou, China 2015, 24,000 m<sup>3</sup>/d RO  
Wei Qiao Indonesia project, Indonesia 2015, 23,040 m<sup>3</sup>/d RO  
Wuhan, China 2015, 20,000 m<sup>3</sup>/d RO  
Vietnam 2015, 20,000 m<sup>3</sup>/d RO  
China Coal, China 2015, 18,272 m<sup>3</sup>/d RO  
Vietnam 2015, 17,000 m<sup>3</sup>/d RO  
Kunshan, China 2015, 16,000 m<sup>3</sup>/d RO  
Newman, Australia 2015, 16,000 m<sup>3</sup>/d RO  
BHP Newman, Newman, Australia 2015, 16,000 m<sup>3</sup>/d RO  
Yongin, South Korea 2015, 15,000 m<sup>3</sup>/d RO  
Tenerife - Oeste, Spain 2015, 14,000 m<sup>3</sup>/d RO  
Tenerife Oeste, Arona, Spain 2015, 14,000 m<sup>3</sup>/d RO  
Jersey, United Kingdom 2015, 13,200 m<sup>3</sup>/d RO  
Printing and Dyeing Mill , Malaysia 2015, 12,960 m<sup>3</sup>/d RO  
Zhong Tian He Chuang, China 2015, 12,432 m<sup>3</sup>/d RO  
Mo Long, China 2015, 12,000 m<sup>3</sup>/d RO  
Yan Mining , Erdos, China 2015, 11,712 m<sup>3</sup>/d RO  
Fuxin Waste water reuse project, China 2015, 10,368 m<sup>3</sup>/d RO  
2017, 700 m<sup>3</sup>/d RO  
Chansha Nanfang Yu Hang ,Chansha,China 2015, 15,040 m<sup>3</sup>/d RO

Yanshan Steel , Yanshan, China 2015, 11,376 m<sup>3</sup>/d RO  
 Tianfu East power plant, Xinjiang, China 2015, 10,304 m<sup>3</sup>/d RO  
 Foxconn, Shenzhen, China 2015, 10,224 m<sup>3</sup>/d RO  
 Guangzhou, China 2015, 10,000 m<sup>3</sup>/d RO  
 Yang Quan Coal Industry, China 2015, 9,792 m<sup>3</sup>/d RO  
 Li Xin power plant, China 2015, 9,504 m<sup>3</sup>/d RO  
 Bao Steel , Baotou, China 2015, 8,640 m<sup>3</sup>/d RO  
 Gumi, South Korea 2015, 8,000 m<sup>3</sup>/d RO  
 Russia 2015, 7,000 m<sup>3</sup>/d RO  
 Paju, South Korea 2015, 6,400 m<sup>3</sup>/d RO  
 China Coal Erdos replacement, Erdos, China 2015, 6,352 m<sup>3</sup>/d RO  
 Xiamen, China 2015, 6,000 m<sup>3</sup>/d RO  
 Bao Steel , Baotou, China 2015, 5,616 m<sup>3</sup>/d RO  
 Seat, Spain 2015, 5,500 m<sup>3</sup>/d RO  
 Krasnodar Power Plant, Krasnodar, Russia 2015, 5,060 m<sup>3</sup>/d RO  
 Chongqing, China 2015, 5,000 m<sup>3</sup>/d RO  
 Russia 2015, 5,000 m<sup>3</sup>/d RO  
 Buzau, Romania 2015, 4,000 m<sup>3</sup>/d RO  
 Nicaragua 2015, 3,500 m<sup>3</sup>/d RO  
 Russia 2015, 3,000 m<sup>3</sup>/d RO  
 Suez Fertilizers Co., Suez, Egypt 2015, 3,000 m<sup>3</sup>/d RO  
 Renningen-Mönchshöf, Germany 2015, 2,500 m<sup>3</sup>/d RO  
 WW Lüssow, Lüssow, Germany 2015, 2,500 m<sup>3</sup>/d RO  
 WW Renningen, Renningen, Baden Württemberg, Germany 2015, 2,400 m<sup>3</sup>/d RO  
 Russia 2015, 2,300 m<sup>3</sup>/d RO  
 Russia 2015, 2,200 m<sup>3</sup>/d RO  
 Richter Gedeon, Budapest, Hungary 2015, 2,160 m<sup>3</sup>/d RO  
 Miyagi, Japan 2015, 2,000 m<sup>3</sup>/d RO  
 Xi'an, Xian, Shaanxi province, China 2015, 2,000 m<sup>3</sup>/d RO  
 Chongqing, China 2015, 2,000 m<sup>3</sup>/d RO  
 Kouchi, Japan 2015, 2,000 m<sup>3</sup>/d RO  
 Coca Cola, Spain 2015, 1,800 m<sup>3</sup>/d RO  
 Playas de Jandia, Spain 2015, 1,700 m<sup>3</sup>/d RO  
 Kazakhstan 2015, 1,700 m<sup>3</sup>/d RO  
 WW Venningen, Venningen, Rheinland Pfalz, Germany 2015, 1,680 m<sup>3</sup>/d RO  
 WWBT, Marsa Alam, Egypt 2015, 1,500 m<sup>3</sup>/d RO  
 Marsellia Beach 4, North coast, Egypt 2015, 1,500 m<sup>3</sup>/d RO  
 Austria 2015, 1,440 m<sup>3</sup>/d RO  
 Villach, Germany 2015, 1,440 m<sup>3</sup>/d RO  
 Ingolstadt, Bavaria, Germany 2015, 1,440 m<sup>3</sup>/d RO  
 Kocaeli, Turkey 2015, 1,440 m<sup>3</sup>/d RO  
 Netherlands 2015, 1,248 m<sup>3</sup>/d RO  
 Grawla, North coast, Egypt 2015, 1,000 m<sup>3</sup>/d RO  
 Blue Bay, Ein El Sokhna, Egypt 2015, 750 m<sup>3</sup>/d RO  
 El Narges, North coast, Egypt 2015, 500 m<sup>3</sup>/d RO  
 Marsellia Beach, North coast, Egypt 2015, 500 m<sup>3</sup>/d RO  
 Nice 3, North coast, Egypt 2015, 500 m<sup>3</sup>/d RO  
 Nice 4, North coast, Egypt 2015, 500 m<sup>3</sup>/d RO  
 Jiangsu, China 2015, 478 m<sup>3</sup>/d RO  
 Shanghai, China 2015, 329 m<sup>3</sup>/d RO  
 Guizhou, China 2015, 328 m<sup>3</sup>/d RO  
 Beijing, China 2015, 318 m<sup>3</sup>/d RO  
 Shandong, China 2015, 199 m<sup>3</sup>/d RO  
 Shandong , China 2015, 188 m<sup>3</sup>/d RO  
 Zhejiang, China 2015, 152 m<sup>3</sup>/d RO  
 Jiangsu, China 2015, 117 m<sup>3</sup>/d RO

Chongqing, China 2015, 116 m<sup>3</sup>/d RO  
 Nanjing, China 2014, 45,000 m<sup>3</sup>/d RO  
 South Korea 2014, 38,000 m<sup>3</sup>/d RO  
 RO plant, Touggourt, Algeria 2014, 34,560 m<sup>3</sup>/d RO  
 Dahej, India 2014, 25,000 m<sup>3</sup>/d RO  
 Zhong Sha CoalChemical, Tianjin, China 2014, 20,736 m<sup>3</sup>/d RO  
 Xi'an, China 2014, 17,000 m<sup>3</sup>/d RO  
 Inner Mongolia, China 2014, 16,000 m<sup>3</sup>/d RO  
 Gaiziantep, Turkey 2014, 14,163 m<sup>3</sup>/d RO  
 Granadilla, Granadilla de Abona, Spain 2014, 14,000 m<sup>3</sup>/d RO  
 Basra, Iraq 2014, 13,500 m<sup>3</sup>/d RO  
 Dammam, Eastern Province, Saudi Arabia 2014, 11,636 m<sup>3</sup>/d RO  
 Rajpura, India 2014, 11,000 m<sup>3</sup>/d RO  
 Jhajjar, India 2014, 11,000 m<sup>3</sup>/d RO  
 Nellore, India 2014, 10,000 m<sup>3</sup>/d RO  
 Cilacap, Indonesia 2014, 7,800 m<sup>3</sup>/d RO  
 Sierra Gorda Enlargement, Sierra Gorda, Chile 2014, 7,400 m<sup>3</sup>/d RO  
 Vietnam 2014, 7,200 m<sup>3</sup>/d RO  
 City of Odessa, Texas, United States 2014, 5,678 m<sup>3</sup>/d RO  
 Agragua, Gáldar, Spain 2014, 5,000 m<sup>3</sup>/d RO  
 Marassi, North coast, Egypt 2014, 5,000 m<sup>3</sup>/d RO  
 Nanjing, China 2014, 4,600 m<sup>3</sup>/d RO  
 Kharji, Saudi Arabia 2014, 4,411 m<sup>3</sup>/d RO  
 Nuclear Power Plant , Paks, Hungary 2014, 3,600 m<sup>3</sup>/d RO  
 Anhui, China 2014, 3,200 m<sup>3</sup>/d RO  
 Xinjiang, China 2014, 3,200 m<sup>3</sup>/d RO  
 Nicaragua, Managua 2014, 2,800 m<sup>3</sup>/d RO  
 Henan, China 2014, 2,500 m<sup>3</sup>/d RO  
 Jiangsu, China 2014, 2,500 m<sup>3</sup>/d RO  
 Ningxia, China 2014, 2,500 m<sup>3</sup>/d RO  
 Jiangsu, China 2014, 2,470 m<sup>3</sup>/d RO  
 Yamaguchi, Japan 2014, 2,400 m<sup>3</sup>/d RO  
 Kyoto, Japan 2014, 2,400 m<sup>3</sup>/d RO  
 RO plant, Indonesia 2014, 2,400 m<sup>3</sup>/d RO  
 Zhejiang, China 2014, 2,000 m<sup>3</sup>/d RO  
 Suzhou, China 2014, 2,000 m<sup>3</sup>/d RO  
 Xi'an, China 2014, 2,000 m<sup>3</sup>/d RO  
 City of Bushnell, Illinois, United States 2014, 1,893 m<sup>3</sup>/d RO  
 Baiji, Iraq 2014, 1,728 m<sup>3</sup>/d RO  
 Jiangsu, China 2014, 1,647 m<sup>3</sup>/d RO  
 Heilongjiang, China 2014, 1,600 m<sup>3</sup>/d RO  
 Fuerteventura, Jandía, Spain 2014, 1,600 m<sup>3</sup>/d RO  
 Shanghai, China 2014, 1,518 m<sup>3</sup>/d RO  
 Jiangsu, China 2014, 1,464 m<sup>3</sup>/d RO  
 Villach, Austria 2014, 1,440 m<sup>3</sup>/d RO  
 Hebei, China 2014, 1,400 m<sup>3</sup>/d RO  
 South Korea 2014, 1,300 m<sup>3</sup>/d RO  
 Guangzhou, China 2014, 1,300 m<sup>3</sup>/d RO  
 Kanagawa, Japan 2014, 1,300 m<sup>3</sup>/d RO  
 WW Lüssow , Lüssow, Mecklenburg Vorpommern, Germany 2014, 1,300 m<sup>3</sup>/d RO  
 Tokushima, Japan 2014, 1,300 m<sup>3</sup>/d RO  
 WW Finnentrop, Finnentrop, NRW, Germany 2014, 1,150 m<sup>3</sup>/d RO  
 Yamagata, Japan 2014, 1,000 m<sup>3</sup>/d RO  
 Hebei, China 2014, 1,000 m<sup>3</sup>/d RO  
 Kiriazy, Obour, Egypt 2014, 1,000 m<sup>3</sup>/d RO  
 Ningxia, China 2014, 941 m<sup>3</sup>/d RO

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**DESALINATION & REUSE**  
**HANDBOOK**

Miyagi, Japan 2014, 700 m<sup>3</sup>/d RO  
Ningxia, China 2014, 891 m<sup>3</sup>/d RO  
Kumamoto, Japan 2014, 800 m<sup>3</sup>/d RO  
Guangdong, Guangdong province, China 2014, 796 m<sup>3</sup>/d RO  
Jiangsu, China 2014, 796 m<sup>3</sup>/d RO  
Jiangsu, China 2014, 737 m<sup>3</sup>/d RO  
Shenzhen, China 2014, 720 m<sup>3</sup>/d RO  
Shanghai, China 2014, 707 m<sup>3</sup>/d RO  
Jiangsu, China 2014, 701 m<sup>3</sup>/d RO  
Shanghai, China 2014, 648 m<sup>3</sup>/d RO  
Shanghai, China 2014, 582 m<sup>3</sup>/d RO  
Jiangsu, China 2014, 537 m<sup>3</sup>/d RO  
Shanghai, China 2014, 517 m<sup>3</sup>/d RO  
Shanghai, China 2014, 511 m<sup>3</sup>/d RO  
Arla Foods Deutchland GmbH , Pronsfeld, Germany 2014, 500 m<sup>3</sup>/d Other / Unknown  
Indonesia 2014, 479 m<sup>3</sup>/d RO  
Shanghai, China 2014, 476 m<sup>3</sup>/d RO  
Shanghai, China 2014, 464 m<sup>3</sup>/d RO  
Jiangsu, China 2014, 454 m<sup>3</sup>/d RO  
Shanghai, China 2014, 432 m<sup>3</sup>/d RO  
Shanghai, China 2014, 431 m<sup>3</sup>/d RO  
Neimenggu, China 2014, 418 m<sup>3</sup>/d RO  
Shanghai , China 2014, 418 m<sup>3</sup>/d RO  
Henan, China 2014, 415 m<sup>3</sup>/d RO  
Miyagi, Japan 2014, 400 m<sup>3</sup>/d RO  
Shandong , China 2014, 398 m<sup>3</sup>/d RO  
Tianjin, China 2014, 358 m<sup>3</sup>/d RO  
Shanghai, China 2014, 348 m<sup>3</sup>/d RO  
Shanxi, China 2014, 348 m<sup>3</sup>/d RO  
Shanghai, China 2014, 325 m<sup>3</sup>/d RO  
Niigata, Japan 2014, 320 m<sup>3</sup>/d RO  
South Korea 2014, 320 m<sup>3</sup>/d RO  
Australia 2014, 315 m<sup>3</sup>/d RO  
Shanghai, China 2014, 315 m<sup>3</sup>/d RO  
Shandong, China 2014, 313 m<sup>3</sup>/d RO  
Osaka, Honshu, Japan 2014, 300 m<sup>3</sup>/d RO  
Zhejiang, China 2014, 285 m<sup>3</sup>/d RO  
Shandong, Shandong province, China 2014, 268 m<sup>3</sup>/d RO  
Shanghai, China 2014, 263 m<sup>3</sup>/d RO  
Shandong, China 2014, 244 m<sup>3</sup>/d RO  
Shanghai, China 2014, 232 m<sup>3</sup>/d RO  
Beijing, China 2014, 229 m<sup>3</sup>/d RO  
Shanghai, China 2014, 223 m<sup>3</sup>/d RO  
Shanghai, China 2014, 220 m<sup>3</sup>/d RO  
Shandong , China 2014, 219 m<sup>3</sup>/d RO  
Shanghai, China 2014, 219 m<sup>3</sup>/d RO  
Jiangsu, China 2014, 214 m<sup>3</sup>/d RO  
Beijing, China 2014, 209 m<sup>3</sup>/d RO  
Shanghai, China 2014, 205 m<sup>3</sup>/d RO  
Hebei, China 2014, 199 m<sup>3</sup>/d RO  
Shandong, China 2014, 194 m<sup>3</sup>/d RO  
Beijing, China 2014, 179 m<sup>3</sup>/d RO  
Shanghai , China 2014, 174 m<sup>3</sup>/d RO  
Tianjin, China 2014, 174 m<sup>3</sup>/d RO  
Shandong, China 2014, 164 m<sup>3</sup>/d RO  
Shandong, China 2014, 156 m<sup>3</sup>/d RO  
Anhui, China 2014, 151 m<sup>3</sup>/d RO

Zhejiang, China 2014, 149 m<sup>3</sup>/d RO  
Shanghai, China 2014, 149 m<sup>3</sup>/d RO  
Shanghai, China 2014, 139 m<sup>3</sup>/d RO  
Shandong, China 2014, 134 m<sup>3</sup>/d RO  
Shanghai, China 2014, 127 m<sup>3</sup>/d RO  
Shanghai, China 2014, 124 m<sup>3</sup>/d RO  
Shanghai, China 2014, 122 m<sup>3</sup>/d RO  
Shanghai, China 2014, 119 m<sup>3</sup>/d RO  
Yinchuan, China 2014, 116 m<sup>3</sup>/d RO  
Jiangsu, China 2014, 116 m<sup>3</sup>/d RO  
Shanghai, China 2014, 116 m<sup>3</sup>/d RO  
Jiangsu, Jiangsu province, China 2014, 109 m<sup>3</sup>/d RO  
Tianjin, China 2014, 104 m<sup>3</sup>/d RO  
Datang Waste water treatment plant, Foshan, China 2013, 468,816 m<sup>3</sup>/d RO  
Jubail-4, Saudi Arabia 2013, 100,000 m<sup>3</sup>/d RO  
Suzhou, China 2013, 70,000 m<sup>3</sup>/d RO  
South Korea 2013, 56,000 m<sup>3</sup>/d RO  
Saudi Arabia 2013, 53,000 m<sup>3</sup>/d RO  
India 2013, 40,000 m<sup>3</sup>/d RO  
Ningmei Alkene, Ningxia, China 2013, 39,000 m<sup>3</sup>/d RO  
Shaanxi, China 2013, 37,000 m<sup>3</sup>/d RO  
Yantai Laishan Waterworks, Shandong, China 2013, 37,000 m<sup>3</sup>/d RO  
Shandong, China 2013, 36,000 m<sup>3</sup>/d RO  
ChinaCoal Yulin Reuse Project, Yulin, Shaanxi province, China 2013, 32,000 m<sup>3</sup>/d RO  
ChinaCoal Yulin Desalted Water, Shaanxi, China 2013, 30,000 m<sup>3</sup>/d RO  
North Springs, Florida, United States 2013, 25,551 m<sup>3</sup>/d RO  
Ningmei Alkene, Ningxia, China 2013, 22,000 m<sup>3</sup>/d RO  
St. Lucie West, Florida, United States 2013, 20,441 m<sup>3</sup>/d RO  
South Korea 2013, 20,000 m<sup>3</sup>/d RO  
Ningxia, China 2013, 16,000 m<sup>3</sup>/d RO  
Liuhe Power Plant, Zhejiang, China 2013, 12,000 m<sup>3</sup>/d RO  
Cuddalore, India 2013, 10,600 m<sup>3</sup>/d RO  
Guangzhou, China 2013, 9,000 m<sup>3</sup>/d RO  
Paju, South Korea 2013, 7,500 m<sup>3</sup>/d RO  
Liaoning, China 2013, 7,400 m<sup>3</sup>/d RO  
Saudi Arabia 2013, 7,200 m<sup>3</sup>/d RO  
Barwon Black Rock, Australia 2013, 5,678 m<sup>3</sup>/d RO  
Village of Western Springs, Illinois, United States 2013, 5,678 m<sup>3</sup>/d RO  
Inner Mongolia, China 2013, 5,000 m<sup>3</sup>/d RO  
Chung Ching, China 2013, 4,500 m<sup>3</sup>/d RO  
Liaoning, China 2013, 3,000 m<sup>3</sup>/d RO  
Zhejiang Xiushan, Zhejiang, China 2013, 3,000 m<sup>3</sup>/d RO  
Hebei, China 2013, 2,700 m<sup>3</sup>/d RO  
Tianjin, China 2013, 2,200 m<sup>3</sup>/d RO  
Ichon, South Korea 2013, 2,000 m<sup>3</sup>/d RO  
Xi'an, China 2013, 2,000 m<sup>3</sup>/d RO  
Neimenggu, China 2013, 627 m<sup>3</sup>/d RO  
Hiroshima, Japan 2013, 540 m<sup>3</sup>/d RO  
Ibaragi, Japan 2013, 540 m<sup>3</sup>/d RO  
Yamagata, Japan 2013, 400 m<sup>3</sup>/d RO  
Kanagawa, Japan 2013, 400 m<sup>3</sup>/d RO  
Kagawa, Japan 2013, 400 m<sup>3</sup>/d RO  
Tochigi, Japan 2013, 320 m<sup>3</sup>/d RO  
Shandong, China 2013, 159 m<sup>3</sup>/d RO

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Shanghai, China 2013, 313 m<sup>3</sup>/d RO  
Miyagi, Japan 2013, 300 m<sup>3</sup>/d RO  
Shiga, Japan 2013, 300 m<sup>3</sup>/d RO  
Shimane, Japan 2013, 300 m<sup>3</sup>/d RO  
Neimenggu, China 2013, 298 m<sup>3</sup>/d RO  
Tokushima, Japan 2013, 250 m<sup>3</sup>/d RO  
Guangzhou, China 2013, 199 m<sup>3</sup>/d RO  
Shanghai, China 2013, 194 m<sup>3</sup>/d RO  
Shandong, China 2013, 180 m<sup>3</sup>/d RO  
RO desalination, China 2013, 159 m<sup>3</sup>/d RO  
Hangzhou, China 2013, 140 m<sup>3</sup>/d RO  
RO desalination, China 2013, 133 m<sup>3</sup>/d RO  
Neimenggu, China 2013, 119 m<sup>3</sup>/d RO  
Al Gubra, Muscat, Oman 2013, 42.0 MIGD RO  
Fujairah expansion 1, United Arab Emirates 2012, 137,496 m<sup>3</sup>/d RO  
Riyadh, Saudi Arabia 2012, 78,720 m<sup>3</sup>/d RO  
Ghalilah Desalination Plant, Ra's al Khaymah, United Arab Emirates 2012, 68,000 m<sup>3</sup>/d RO  
Dalateqi Waterworks II, Inner Mongolia, China 2012, 50,000 m<sup>3</sup>/d NF  
Al Zawrah, Ajman, United Arab Emirates 2012, 45,920 m<sup>3</sup>/d RO  
RO desalination, Tunisia 2012, 35,000 m<sup>3</sup>/d RO  
RO desalination, Saudi Arabia 2012, 33,000 m<sup>3</sup>/d RO  
Riyadh, Saudi Arabia 2012, 29,960 m<sup>3</sup>/d RO  
India 2012, 26,328 m<sup>3</sup>/d RO  
Comperj, Rio de Janeiro, Brazil 2012, 24,080 m<sup>3</sup>/d RO  
Tu Ke project, China 2012, 24,000 m<sup>3</sup>/d RO  
RO desalination, Saudi Arabia 2012, 8,320 m<sup>3</sup>/d RO  
RO desalination, Singapore 2012, 7,000 m<sup>3</sup>/d RO  
RO desalination, Iraq 2012, 7,000 m<sup>3</sup>/d RO  
RO desalination, India 2012, 7,000 m<sup>3</sup>/d RO  
Barwon Northern, Australia 2012, 5,678 m<sup>3</sup>/d RO  
Yamaguchi, Japan 2012, 5,100 m<sup>3</sup>/d RO  
Otagua, Canary Islands, Spain 2012, 4,440 m<sup>3</sup>/d RO  
Fukushima, Japan 2012, 4,320 m<sup>3</sup>/d RO  
RO desalination, United Kingdom 2012, 3,600 m<sup>3</sup>/d RO  
RO desalination, Tunisia 2012, 2,700 m<sup>3</sup>/d RO  
Tokyo, Japan 2012, 1,800 m<sup>3</sup>/d RO  
Xinjiang, China 2012, 1,235 m<sup>3</sup>/d RO  
Tokushima, Japan 2012, 1,080 m<sup>3</sup>/d RO  
Hiroshima, Japan 2012, 400 m<sup>3</sup>/d RO  
Jilin, China 2012, 388 m<sup>3</sup>/d RO  
Kumamoto, Japan 2012, 350 m<sup>3</sup>/d RO  
RO desalination, China 2012, 300 m<sup>3</sup>/d RO  
RO desalination, Japan 2012, 300 m<sup>3</sup>/d RO  
Miyazaki, Japan 2012, 300 m<sup>3</sup>/d RO  
Yamagata, Japan 2012, 300 m<sup>3</sup>/d RO  
Tokyo, Japan 2012, 270 m<sup>3</sup>/d RO  
Ibaragi, Japan 2012, 240 m<sup>3</sup>/d RO  
Fukui, Japan 2012, 200 m<sup>3</sup>/d RO  
Fukui, Japan 2012, 200 m<sup>3</sup>/d RO  
70MGD DBOO Project, Tuaspring, Singapore 2011, 318,500 m<sup>3</sup>/d RO  
Al Dur, Bahrain 2011, 222,336 m<sup>3</sup>/d RO  
SSDP Expansion, Perth, WA, Australia 2011, 140,000 m<sup>3</sup>/d RO  
Caofeidian SW, Hebei, China 2011, 50,000 m<sup>3</sup>/d RO  
Dalateqi Waterworks I, Inner Mongolia, China 2011, 50,000 m<sup>3</sup>/d NF

City of Scottsdale, AZ, United States 2011, 18,927 m<sup>3</sup>/d RO  
RO desalination, South Korea 2011, 10,000 m<sup>3</sup>/d RO  
South Korea 2011, 5,000 m<sup>3</sup>/d RO  
Paju, South Korea 2011, 1,130 m<sup>3</sup>/d RO  
South Korea 2011, 600 m<sup>3</sup>/d RO  
Magtaa, Oran, Algeria 2010, 500,000 m<sup>3</sup>/d RO  
South Korea 2010, 45,000 m<sup>3</sup>/d RO  
Paju, South Korea 2010, 36,000 m<sup>3</sup>/d RO  
South Korea 2010, 15,000 m<sup>3</sup>/d RO  
South Korea 2010, 10,000 m<sup>3</sup>/d RO  
South Korea 2010, 8,000 m<sup>3</sup>/d RO  
Onyang, South Korea 2010, 1,440 m<sup>3</sup>/d RO  
Lu An Coal Chemical, China, 34,560 m<sup>3</sup>/d RO  
Beitang Waste water treatment plant, Tianjin, China, 30,464 m<sup>3</sup>/d RO  
Yitai Hang Jing Qi, China, 29,376 m<sup>3</sup>/d RO  
Wan Hua Da Xie project, Ning Bo, China, 27,648 m<sup>3</sup>/d RO  
Clearwater WTP2, Florida, United States, 19,873 m<sup>3</sup>/d RO  
Hong Shan power plant, Hong Shan, China, 15,120 m<sup>3</sup>/d RO  
Liao Yang Guo Cheng, Liao Yang, China, 12,960 m<sup>3</sup>/d RO  
Bohui Replacement, China, 10,368 m<sup>3</sup>/d RO  
Villach, Austria, 8,700 m<sup>3</sup>/d RO  
Moscow, Russia, 4,800 m<sup>3</sup>/d RO  
City of Dunes WTP, Florida, United States, 2,839 m<sup>3</sup>/d RO  
Austria, 1,800 m<sup>3</sup>/d RO  
ONWASA, Dixon, North Carolina, United States of America, 3.0 MIGD RO  
U.S.A., United States, 12,000 m<sup>3</sup>/d  
Pyeongteak, South Korea, 10,000 m<sup>3</sup>/d RO  
Dangjin, South Korea, 3,600 m<sup>3</sup>/d RO  
Taiwan, 3,000 m<sup>3</sup>/d  
Taiwan, 2,000 m<sup>3</sup>/d  
Kurosaki, Japan, 1,800 m<sup>3</sup>/d RO  
Taiwan, 1,500 m<sup>3</sup>/d  
N, United States 2017, 25,549 RO

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## SELECTED REFERENCES (Formerly Lanxess References)

### Equipment Supplier: Membranes

Thyssen, Sagunto, Spain 2020, 2,400 m<sup>3</sup>/d RO  
 Slough, United Kingdom 2020, 1,080 m<sup>3</sup>/d RO  
 Raw water treatment plant, Dahej, Dahej, India, India 2020, 700 m<sup>3</sup>/d RO  
 Ormond Beach, Florida, United States 2019, 15,200 m<sup>3</sup>/d RO  
 Fabrika vode Zrenjanin, Zrenjanin, Serbia 2019, 10,800 m<sup>3</sup>/d RO  
 Linden Cogen, Linden, New Jersey, United States 2019, 8,700 m<sup>3</sup>/d RO  
 Karaipudur Common effluent Treatment Plant, Tirupur, Tirupur, India, India 2019, 2,688 m<sup>3</sup>/d RO  
 Lovochemie, Lovosice, Czech Republic 2019, 2,160 m<sup>3</sup>/d RO  
 Alpiq, Kladno, Czech Republic 2019, 1,920 m<sup>3</sup>/d RO  
 Chirk, United Kingdom 2019, 1,920 m<sup>3</sup>/d RO  
 Royapuram Common effluent Treatment Plant, Tirupur, Tirupur, India, India 2019, 1,848 m<sup>3</sup>/d RO  
 GEPP (Pepsi), Yucatan, Mexico 2019, 1,200 m<sup>3</sup>/d RO  
 ETP recycle, Dahej, Dahej, India, India 2019, 1,200 m<sup>3</sup>/d RO  
 SRK Natural Products, Chennai, Chennai, India, India 2019, 1,008 m<sup>3</sup>/d RO  
 RK Aqua, Hyderabad, Hyderabad, India, India 2019, 912 m<sup>3</sup>/d RO  
 Vishnu Processing, Erode, Erode, India, India 2019, 840 m<sup>3</sup>/d RO  
 Suman Aqua, Hyderabad, Hyderabad, India, India 2019, 840 m<sup>3</sup>/d RO  
 IMLEK, Belgrade, Serbia 2019, 720 m<sup>3</sup>/d RO  
 Multipure Technologies, Bangalore, Bangalore, India, India 2019, 552 m<sup>3</sup>/d RO  
 ETP treated water, Bhuj, Bhuj, India, India 2019, 550 m<sup>3</sup>/d RO  
 Raw water treatment plant, Nadiad, Nadiad, India, India 2019, 500 m<sup>3</sup>/d RO  
 ETP treated water, Goa, Goa, India, India 2019, 480 m<sup>3</sup>/d RO  
 Oberösterreich, Austria 2019, 342 m<sup>3</sup>/d RO  
 Oberösterreich, Oberösterreich, AT, Austria 2019, 340 m<sup>3</sup>/d RO  
 Aroma AD, Devnya, Bulgaria 2019, 240 m<sup>3</sup>/d RO  
 Proflink Ltd, Plovdiv, Bulgaria 2019, 240 m<sup>3</sup>/d RO  
 Niederösterreich, Niederösterreich, AT, Austria 2019, 200 m<sup>3</sup>/d RO  
 Colombia, Barranca 2018, 20,000 m<sup>3</sup>/d RO  
 Najran, Saudi Arabia 2018, 8,000 m<sup>3</sup>/d RO  
 Colombia, Villavicencio 2018, 4,000 m<sup>3</sup>/d RO  
 Riyadh, Saudi Arabia 2018, 4,000 m<sup>3</sup>/d RO  
 Milazzo, Italy 2018, 3,840 m<sup>3</sup>/d RO  
 London, West Thurrock, United Kingdom 2018, 3,600 m<sup>3</sup>/d RO  
 E Kentucky Power, Maysville, Kentucky, United States 2018, 3,400 m<sup>3</sup>/d RO  
 Tapo Canyon, Simi Valley, California, United States 2018, 2,500 m<sup>3</sup>/d RO  
 San Salvador, El Salvador 2018, 2,448 m<sup>3</sup>/d RO  
 Roermond, Netherlands 2018, 2,400 m<sup>3</sup>/d RO  
 Torino, Italy 2018, 2,400 m<sup>3</sup>/d RO  
 Texas, United States 2018, 2,180 m<sup>3</sup>/d RO  
 Perunduarai, India 2018, 2,160 m<sup>3</sup>/d RO  
 Kansas, United States 2018, 2,040 m<sup>3</sup>/d RO  
 Al-Madinah, Saudi Arabia 2018, 2,000 m<sup>3</sup>/d RO

Dammam, Saudi Arabia 2018, 2,000 m<sup>3</sup>/d RO  
 CFE, Tampico, Mexico 2018, 1,920 m<sup>3</sup>/d RO  
 Tocancipa, Colombia 2018, 1,920 m<sup>3</sup>/d RO  
 Jhagadia, India 2018, 1,800 m<sup>3</sup>/d RO  
 Lima, Peru 2018, 1,560 m<sup>3</sup>/d RO  
 Covanta, Niagara Falls, New York, United States 2018, 1,360 m<sup>3</sup>/d RO  
 Rabigh, Saudi Arabia 2018, 1,000 m<sup>3</sup>/d RO  
 Schkopau, Denmark 2018, 940 m<sup>3</sup>/d RO  
 Stanford-le-Hope, United Kingdom 2018, 888 m<sup>3</sup>/d RO  
 Virginia, United States 2018, 830 m<sup>3</sup>/d RO  
 North Carolina, United States 2018, 555 m<sup>3</sup>/d RO  
 Raw water treatment plant, Siddhpur, India 2018, 500 m<sup>3</sup>/d RO  
 California, United States 2018, 432 m<sup>3</sup>/d RO  
 Dammam, Saudi Arabia 2018, 400 m<sup>3</sup>/d RO  
 Chennai, India 2018, 240 m<sup>3</sup>/d RO  
 Krasnystaw, Poland 2018, 240 m<sup>3</sup>/d RO  
 Tampico, Mexico 2017, 21,600 m<sup>3</sup>/d RO  
 Guandong, China 2017, 12,000 m<sup>3</sup>/d RO  
 Tuapse, Russia 2017, 9,240 m<sup>3</sup>/d RO  
 Mangalore, India 2017, 7,512 m<sup>3</sup>/d RO  
 Ghent, Belgium 2017, 6,000 m<sup>3</sup>/d RO  
 Henan, China 2017, 4,800 m<sup>3</sup>/d RO  
 Liaoning, China 2017, 4,800 m<sup>3</sup>/d RO  
 West Thurrock, United Kingdom 2017, 3,980 m<sup>3</sup>/d RO  
 Granbury, Texas, United States 2017, 3,785 m<sup>3</sup>/d RO  
 Hubei, China 2017, 3,600 m<sup>3</sup>/d RO  
 Anhui, China 2017, 3,600 m<sup>3</sup>/d RO  
 Shanxi, China 2017, 3,600 m<sup>3</sup>/d RO  
 Liaoning, China 2017, 3,600 m<sup>3</sup>/d RO  
 Neimenggu, China 2017, 3,600 m<sup>3</sup>/d RO  
 Shandong, China 2017, 3,600 m<sup>3</sup>/d RO  
 Telangana, India 2017, 3,445 m<sup>3</sup>/d RO  
 Keansburg, New Jersey, United States 2017, 3,380 m<sup>3</sup>/d RO  
 Oland, Sweden 2017, 3,000 m<sup>3</sup>/d RO  
 Ford City, Pennsylvania, United States 2017, 2,950 m<sup>3</sup>/d RO  
 Arizona, United States 2017, 2,725 m<sup>3</sup>/d RO  
 Tirupur, India 2017, 2,700 m<sup>3</sup>/d RO  
 Mendeleevsk, Russia 2017, 2,640 m<sup>3</sup>/d RO  
 Randfontein, South Africa 2017, 2,640 m<sup>3</sup>/d RO  
 Beijing, China 2017, 2,400 m<sup>3</sup>/d RO  
 Hebei, China 2017, 2,400 m<sup>3</sup>/d RO  
 Jiangxi, China 2017, 2,400 m<sup>3</sup>/d RO  
 Guandong, China 2017, 2,400 m<sup>3</sup>/d RO  
 Shanxi, China 2017, 2,400 m<sup>3</sup>/d RO  
 Jiangsu, China 2017, 2,400 m<sup>3</sup>/d RO  
 Roermond, Netherlands 2017, 2,400 m<sup>3</sup>/d RO  
 Tirupur, India 2017, 2,040 m<sup>3</sup>/d RO  
 Beni Suef, Egypt 2017, 1,680 m<sup>3</sup>/d RO  
 Scarlino, Italy 2017, 1,680 m<sup>3</sup>/d RO  
 Sydney, Australia 2017, 1,360 m<sup>3</sup>/d RO  
 Tirupur, India 2017, 1,320 m<sup>3</sup>/d RO  
 Devnia, Bulgaria 2017, 1,260 m<sup>3</sup>/d RO  
 Henan, China 2017, 1,200 m<sup>3</sup>/d RO  
 Jiangxi, China 2017, 1,200 m<sup>3</sup>/d RO  
 Parma, Italy 2017, 1,200 m<sup>3</sup>/d RO  
 Pordenone, Italy 2017, 1,200 m<sup>3</sup>/d RO  
 Medan, Indonesia 2017, 912 m<sup>3</sup>/d RO  
 Sw. Katarzyna, Poland 2017, 840 m<sup>3</sup>/d RO

**IDRA**  
**DESALINATION & REUSE**  
**HANDBOOK**

Kagoshima, Japan 2017, 720 m<sup>3</sup>/d RO  
Porbandar, India 2017, 720 m<sup>3</sup>/d RO  
West Java, Indonesia 2017, 600 m<sup>3</sup>/d RO  
Surabaya, Indonesia 2017, 600 m<sup>3</sup>/d RO  
Bukowno, Poland 2017, 600 m<sup>3</sup>/d RO  
Suzzara, Italy 2017, 552 m<sup>3</sup>/d RO  
Katowice, Poland 2017, 528 m<sup>3</sup>/d RO  
Aceh, Indonesia 2017, 480 m<sup>3</sup>/d RO  
Valencia, Spain 2017, 450 m<sup>3</sup>/d RO  
Algemesí, Spain 2017, 360 m<sup>3</sup>/d RO  
Bor, Serbia 2017, 360 m<sup>3</sup>/d RO  
Czarnkow, Poland 2017, 288 m<sup>3</sup>/d RO  
Bursa, Turkey 2016, 14,400 m<sup>3</sup>/d RO  
New Jersey, United States 2016, 4,800 m<sup>3</sup>/d RO  
Guangdong, China 2016, 4,800 m<sup>3</sup>/d RO  
Frankfurt/Main, Germany 2016, 3,600 m<sup>3</sup>/d RO  
Leuna, Germany 2016, 3,240 m<sup>3</sup>/d RO  
Barranquilla, Colombia 2016, 2,592 m<sup>3</sup>/d RO  
Xalostoc, Mexico 2016, 2,180 m<sup>3</sup>/d RO  
Gedebey, Azerbaijan 2016, 2,160 m<sup>3</sup>/d RO  
Jakarta, Indonesia 2016, 1,560 m<sup>3</sup>/d RO  
São Paulo, Brazil 2016, 1,440 m<sup>3</sup>/d RO  
Tirupur, India 2016, 1,320 m<sup>3</sup>/d RO  
Ixtlahuacín, Mexico 2016, 1,090 m<sup>3</sup>/d RO  
Windhoek, Namibia 2016, 1,044 m<sup>3</sup>/d RO  
Veracruz, Mexico 2016, 1,000 m<sup>3</sup>/d RO  
Gorontalo, Indonesia 2016, 936 m<sup>3</sup>/d RO  
Arizona, United States 2016, 908 m<sup>3</sup>/d RO  
Surabaya, Indonesia 2016, 840 m<sup>3</sup>/d RO  
Cartagena, Colombia 2016, 816 m<sup>3</sup>/d RO  
Chennai, India 2016, 800 m<sup>3</sup>/d RO  
Czarnków, Poland 2016, 768 m<sup>3</sup>/d RO  
Texas, United States 2016, 636 m<sup>3</sup>/d RO  
Liaoning, China 2015, 14,400 m<sup>3</sup>/d RO  
Tampico, Mexico 2015, 13,824 m<sup>3</sup>/d RO  
Triunfo, Brazil 2015, 10,800 m<sup>3</sup>/d RO  
Shchokino, Russia 2015, 7,800 m<sup>3</sup>/d RO  
Foshan, China 2015, 7,680 m<sup>3</sup>/d RO  
Alexandria, Egypt 2015, 5,760 m<sup>3</sup>/d RO  
Gumi, Yeongnam, South Korea 2015, 5,300 m<sup>3</sup>/d RO  
Manzhouli, China 2015, 4,800 m<sup>3</sup>/d RO  
Perth, WA, Australia 2015, 4,000 m<sup>3</sup>/d RO  
Bratislava, Slovakia 2015, 3,000 m<sup>3</sup>/d RO  
South East, United States 2015, 2,180 m<sup>3</sup>/d RO  
Ploiești, Romania 2015, 2,040 m<sup>3</sup>/d RO  
Wiesbaden, Germany 2015, 1,440 m<sup>3</sup>/d RO  
Lippendorf, Germany 2015, 1,200 m<sup>3</sup>/d RO  
Głogów, Poland 2015, 1,200 m<sup>3</sup>/d RO  
Alexandria, Egypt 2015, 750 m<sup>3</sup>/d RO  
Haiphong, Vietnam 2015, 720 m<sup>3</sup>/d RO  
Trujillo, Peru 2015, 720 m<sup>3</sup>/d RO  
Hurghada, Egypt 2015, 600 m<sup>3</sup>/d RO  
Bursa, Turkey 2015, 600 m<sup>3</sup>/d RO  
Hurghada, Egypt 2015, 500 m<sup>3</sup>/d RO  
Sharm El Sheikh, Egypt 2015, 500 m<sup>3</sup>/d RO  
Czarna Woda, Poland 2015, 480 m<sup>3</sup>/d RO  
Tirupur, India 2015, 480 m<sup>3</sup>/d RO  
Surat, India 2015, 240 m<sup>3</sup>/d RO  
Bratislava, Slovakia 2014, 16,200 m<sup>3</sup>/d RO  
Huhehaote, China 2014, 8,640 m<sup>3</sup>/d RO  
Ningxia, China 2014, 8,400 m<sup>3</sup>/d RO  
Pan evo, Serbia 2014, 7,200 m<sup>3</sup>/d RO  
Sydney, NSW, Australia 2014, 6,000 m<sup>3</sup>/d RO  
Ansan, South Korea 2014, 4,750 m<sup>3</sup>/d RO  
Pingxiang, China 2014, 4,320 m<sup>3</sup>/d RO  
Wuhai, China 2014, 4,032 m<sup>3</sup>/d RO  
Australia 2014, 3,600 m<sup>3</sup>/d RO  
Pyeongtaek, South Korea 2014, 3,400 m<sup>3</sup>/d RO  
Taiyuan, China 2014, 2,400 m<sup>3</sup>/d RO  
Lingfeng, China 2014, 2,400 m<sup>3</sup>/d RO  
Changzhou, China 2014, 2,400 m<sup>3</sup>/d RO  
Shenzhen, China 2014, 2,400 m<sup>3</sup>/d RO  
Hangzhou, Zhejiang province, China 2014, 2,400 m<sup>3</sup>/d RO  
Qingdao, China 2014, 1,920 m<sup>3</sup>/d RO  
Tampico, Mexico 2014, 1,728 m<sup>3</sup>/d RO  
Texas, United States 2014, 1,500 m<sup>3</sup>/d RO  
Wuhan, China 2014, 1,440 m<sup>3</sup>/d RO  
Shanghai, China 2014, 1,200 m<sup>3</sup>/d RO  
Nava, Mexico 2014, 1,008 m<sup>3</sup>/d RO  
Shenzhen, China 2014, 1,000 m<sup>3</sup>/d RO  
Ain Sokhna, Egypt 2014, 960 m<sup>3</sup>/d RO  
Nanjing, China 2014, 960 m<sup>3</sup>/d RO  
Maryland, United States 2014, 950 m<sup>3</sup>/d RO  
Jacksonville, United States 2014, 681 m<sup>3</sup>/d RO  
Chennai, India 2014, 600 m<sup>3</sup>/d RO  
Japan 2014, 288 m<sup>3</sup>/d RO  
Australia 2013, 7,920 m<sup>3</sup>/d RO  
Chemnitz, Germany 2013, 2,880 m<sup>3</sup>/d RO  
Nizhnekamsk, Russia 2013, 2,448 m<sup>3</sup>/d RO  
Bad Köstritz, Germany 2013, 2,400 m<sup>3</sup>/d RO  
Beijing, China 2013, 2,400 m<sup>3</sup>/d RO  
Florida, United States 2013, 2,270 m<sup>3</sup>/d RO  
Shandong, China 2013, 1,920 m<sup>3</sup>/d RO  
Cabo de Santo Agostinho, Brazil 2013, 1,680 m<sup>3</sup>/d RO  
Shandong, China 2013, 1,440 m<sup>3</sup>/d RO  
Shanghai, China 2013, 1,296 m<sup>3</sup>/d RO  
Lima, Peru 2013, 1,080 m<sup>3</sup>/d RO  
Nagda, Madhya Pradesh, India 2013, 760 m<sup>3</sup>/d RO  
Shanghai, China 2013, 720 m<sup>3</sup>/d RO  
Lebork, Poland 2013, 480 m<sup>3</sup>/d RO  
Shanghai, China 2013, 480 m<sup>3</sup>/d RO  
Jiangxi, China 2013, 432 m<sup>3</sup>/d RO  
Texas, United States 2013, 380 m<sup>3</sup>/d RO  
Shanghai, China 2013, 360 m<sup>3</sup>/d RO  
Newman, Newcastle, South Africa 2013, 312 m<sup>3</sup>/d RO  
Hangzhou, China 2013, 288 m<sup>3</sup>/d RO  
Yixing, Jiangsu province, China 2013, 288 m<sup>3</sup>/d RO  
Alabama, United States 2013, 270 m<sup>3</sup>/d RO  
Jedlicze, Poland 2013, 240 m<sup>3</sup>/d RO  
Australia 2013, 240 m<sup>3</sup>/d RO  
Suzhou, China 2013, 240 m<sup>3</sup>/d RO  
Shanghai, China 2013, 240 m<sup>3</sup>/d RO  
Jiangxi, China 2013, 192 m<sup>3</sup>/d RO  
Lanzhou, China 2013, 192 m<sup>3</sup>/d RO  
Yixing, Jiangsu province, China 2013, 192 m<sup>3</sup>/d RO  
Shanghai, China 2013, 144 m<sup>3</sup>/d RO

Suzhou, China 2013, 120 m<sup>3</sup>/d RO  
 Shanghai, China 2013, 96 m<sup>3</sup>/d RO  
 Rotterdam, Netherlands, 12,000 m<sup>3</sup>/d RO  
 Rotterdam, Terneuzen & Antwerp, Netherlands, 8,000 m<sup>3</sup>/d RO  
 Binh Thuan, Vietnam, 4,800 m<sup>3</sup>/d RO  
 Ghent, Belgium, 4,000 m<sup>3</sup>/d RO  
 Negeri Sembilan, Malaysia, 3,600 m<sup>3</sup>/d RO  
 Thailand, 3,600 m<sup>3</sup>/d RO  
 Kerteh, Malaysia, 3,400 m<sup>3</sup>/d RO  
 Victoria, Melbourne, Australia, 2,950 m<sup>3</sup>/d RO  
 Singapore, 2,880 m<sup>3</sup>/d RO  
 Perth, Western Australia, Australia, 2,500 m<sup>3</sup>/d RO  
 Selangor, Malaysia, 2,400 m<sup>3</sup>/d RO  
 Various, Belgium, 2,400 m<sup>3</sup>/d RO  
 Karachi, Pakistan, 1,514 m<sup>3</sup>/d RO  
 Southwest Region of the Netherlands, Netherlands, 1,200 m<sup>3</sup>/d RO  
 Thailand, 1,152 m<sup>3</sup>/d RO  
 Western Australia, Perth, Australia, 1,100 m<sup>3</sup>/d RO  
 Sumatera BWRO 1, Sumatera, Indonesia, 960 m<sup>3</sup>/d RO  
 Sumatera BWRO 2, Sumatera, Indonesia, 960 m<sup>3</sup>/d RO  
 Sumatera BWRO 3, Sumatera, Indonesia, 960 m<sup>3</sup>/d RO  
 Sumatera BWRO 4, Sumatera, Indonesia, 960 m<sup>3</sup>/d RO  
 HBIS Group Serbia, Smederevo, Serbia, 960 m<sup>3</sup>/d RO  
 E.O.N., Malzenice, Slovakia, 960 m<sup>3</sup>/d RO  
 Binh Duong, Vietnam, 720 m<sup>3</sup>/d RO  
 Karachi, Pakistan, 672 m<sup>3</sup>/d RO  
 New South Wales, Sydney, Australia, 600 m<sup>3</sup>/d RO  
 Indonesia, Sumatera, 600 m<sup>3</sup>/d RO  
 Eindhoven, Netherlands, 600 m<sup>3</sup>/d RO

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# VONTRON

Vontron Technology Co., Ltd. is a listed company of CRRC Group (stock referred to as "Vontron", code 000920). The company is registered in Southwest China's Guiyang High-tech Industrial Zone, a large-scale enterprise of the central government in Guizhou, and the company's largest shareholder is CRRC Industrial Investment Co., Ltd..

The company is a publicly traded company that specializes in the research and development, manufacturing, and sale of separation membranes and related materials, supplemented by comprehensive utilization of plant fibers and membrane separation industry.

Vontron's core business is membranes, with over 20 years of experience in the manufacture of spiral-wound membrane elements. Vontron specializes in R&D and manufacturing of reverse osmosis (RO), nanofiltration (NF), and ultrafiltration (UF) membrane elements as a national standard-setting unit of reverse osmosis membranes and a national high-tech enterprise. The company owns the core technologies in membrane manufacturing and system design, aiming to providing quality services to its clients. Vontron's products are widely sold in over 130 countries and regions.

Vontron has developed over 20 series and over 200 specifications of membrane products, including desalination membranes, fouling resistant membranes, oxidation resistant membranes, nanofiltration membranes, special separation membranes and residential membranes, which are applicable to bottled water, municipal drinking water, industrial pure water, electric high-purity water, seawater desalination, brackish water desalination, wastewater reuse, separation of high-salinity water and near-zero emission, food and beverage production, pharmaceutical manufacturing, material separation and purification as well as other applications. Vontron is currently China's largest manufacturer and service provider of dry-type reverse osmosis membrane elements.

### SELECTED REFERENCES

#### Membrane Application Case

One Biochemical industry Company of Shandong, Shandong, China 2021, 20,000 m<sup>3</sup>/d RO  
 North Municipal plant of Haibowan, China 2020, 100,000 m<sup>3</sup>/d RO  
 One Stainless Steel of Shanxi, Shanxi, China 2020, 16,000 m<sup>3</sup>/d RO  
 One Chemical industry Company of CNOOC, Inner Mongolia, China 2020, 11,520 m<sup>3</sup>/d RO  
 One Coal-chemical industry Corp. of Xinjiang, Xinjiang, China 2019, 40,000 m<sup>3</sup>/d RO  
 Kangrui Envi-protection Corp., Inner Mongolia, China 2019, 30,000 m<sup>3</sup>/d RO  
 One Photoelectric Corp. of Guangdong, Guangdong, China 2019, 10,000 m<sup>3</sup>/d RO  
 Chemical Plant Watertreatment in Xinjiang, China 2019, 10,000 m<sup>3</sup>/d RO  
 Woolen, Dongguan, China 2018, 5,000 m<sup>3</sup>/d RO  
 Taiwan Water Factory, Kaohsiung, Taiwan 2018, 300,000 m<sup>3</sup>/d RO  
 Water Service, Nantong, Jiangsu province, China 2018, 40,000 m<sup>3</sup>/d RO  
 Seawater Desalination, Tianjin, China 2018, 28,800 m<sup>3</sup>/d RO  
 CNOOC, China 2018, 20,000 m<sup>3</sup>/d RO  
 Pharmaceutical Company, Shandong province, China 2018, 10,000 m<sup>3</sup>/d RO  
 Dyeing Company, Jiaxing, Zhejiang province, China 2018, 10,000 m<sup>3</sup>/d RO  
 Chinasalt, China 2018, 10,000 m<sup>3</sup>/d RO  
 Offshore Oilfield of CNOOC, China 2018, 10,000 m<sup>3</sup>/d RO  
 Wahaha Beverage, China 2018, 5,700 m<sup>3</sup>/d RO  
 Dyeing Company, Dongguan, Guangdong province, China 2018, 5,000 m<sup>3</sup>/d RO  
 Oilfield of Sinopec, China 2018, 3,000 m<sup>3</sup>/d RO

**IDRA**  
**DESALINATION & REUSE**  
**HANDBOOK**

Pharmaceutical Company, Xinjiang province, China 2018, 2,000 m<sup>3</sup>/d RO  
Colgate Factory, China 2018, 1,500 m<sup>3</sup>/d RO  
Foxconn Industrial Park, China 2017, 30,000 m<sup>3</sup>/d RO  
Petroleum, Shaanxi province, China 2017, 20,000 m<sup>3</sup>/d RO  
Yingli, China 2017, 16,800 m<sup>3</sup>/d RO  
BYD Electronics, China 2017, 15,000 m<sup>3</sup>/d RO  
Chemical, Chongqing, China 2017, 9,600 m<sup>3</sup>/d RO  
Materials Science and Technology, Fujian province, China 2017, 8,400 m<sup>3</sup>/d RO  
Chemical, Inner Mongolia, China 2017, 8,200 m<sup>3</sup>/d RO  
Electronics Technology, Guangdong province, China 2017, 8,000 m<sup>3</sup>/d RO  
Petrochemical, Shandong province, China 2017, 5,000 m<sup>3</sup>/d RO  
Urban and Rural Water Supply, Gansu province, China 2017, 4,000 m<sup>3</sup>/d RO  
Electronics, Guangzhou, Guangdong province, China 2017, 3,000 m<sup>3</sup>/d RO  
Water Supply, Shanxi province, China 2017, 2,160 m<sup>3</sup>/d RO  
Chemical Industrial Company, Jilin province, China 2016, 6,000 m<sup>3</sup>/d RO  
Guizhou, Guizhou province, China 2015, 24,000 m<sup>3</sup>/d RO  
Guizhou, China 2015, 24,000 m<sup>3</sup>/d RO  
Process Water Project, China 2015, 9,600 m<sup>3</sup>/d RO  
Heze, Shandong, China 2014, NF  
China Railway Equipment, China 2014, 45,360 m<sup>3</sup>/d RO  
Tianjin, China 2014, 33,600 m<sup>3</sup>/d RO  
Hebei Iron and Steel, Hebei province, China 2014, 30,000 m<sup>3</sup>/d RO  
Anshan Iron and Steel, Anshan, Liaoning province, China 2014, 30,000 m<sup>3</sup>/d RO  
Pangang Group, China 2014, 28,800 m<sup>3</sup>/d RO  
Binzhou, Shandong, China 2014, 28,800 m<sup>3</sup>/d RO  
Binzhou, Shandong, China 2014, 24,000 m<sup>3</sup>/d RO  
Chengdu, Sichuan, China 2014, 20,000 m<sup>3</sup>/d RO  
Cangzhou, Hebei, China 2014, 16,800 m<sup>3</sup>/d RO  
Jiangsu Jintan Thermal Power Plant, Jiangsu province, China 2014, 10,800 m<sup>3</sup>/d RO  
Chongqing Aluminum Company, Sichuan province, China 2014, 10,800 m<sup>3</sup>/d RO  
Binzhou, Shandong, China 2014, 9,600 m<sup>3</sup>/d RO  
Tangshan, Hebei, China 2014, 9,600 m<sup>3</sup>/d RO  
Ningxia manganese, Sichuan province, China 2014, 9,000 m<sup>3</sup>/d RO  
CHALCO, China 2014, 7,200 m<sup>3</sup>/d RO  
Shougang, China 2014, 7,200 m<sup>3</sup>/d RO  
Cangzhou, Hebei, China 2014, 7,200 m<sup>3</sup>/d RO  
RO project, Guiyang, Guizhou, China 2014, 7,200 m<sup>3</sup>/d RO  
Fuzhou, Fujian, China 2014, 7,000 m<sup>3</sup>/d RO  
Sichuan cellulose, Sichuan province, China 2014, 6,700 m<sup>3</sup>/d RO  
Hubei Xiangyun Chemical, Hubei province, China 2014, 6,700 m<sup>3</sup>/d RO  
Tangshan, Hebei, China 2014, 5,280 m<sup>3</sup>/d RO  
Yihua Fertilizer, Hubei province, China 2014, 5,000 m<sup>3</sup>/d RO  
Dalate, Inner Mongolia, China 2014, 5,000 m<sup>3</sup>/d RO  
Tangshan, Hebei, China 2014, 5,000 m<sup>3</sup>/d RO  
Shenzhen, Guangdong, China 2014, 5,000 m<sup>3</sup>/d RO  
Yihua Fertilizer, Hubei, China 2014, 5,000 m<sup>3</sup>/d RO  
Kunming Iron And Steel Holding Company, Kunming, Yunnan province, China 2014, 4,800 m<sup>3</sup>/d RO  
Linyi, Shandong, China 2014, 4,800 m<sup>3</sup>/d RO  
Hengshui, Hebei, China 2014, 4,800 m<sup>3</sup>/d RO

Ordos, Inner Mongolia, China 2014, 3,840 m<sup>3</sup>/d RO  
Inner Mongolia Chemical, Inner Mongolia, China 2014, 3,000 m<sup>3</sup>/d RO  
Tianjin, China 2014, 3,000 m<sup>3</sup>/d RO  
Jining, Shandong, China 2014, 2,400 m<sup>3</sup>/d RO  
Chaoyang, Liaoning, China 2014, 2,400 m<sup>3</sup>/d RO  
Chongqing, China 2014, 2,400 m<sup>3</sup>/d RO  
Jiangmen, Guangdong, China 2014, 2,200 m<sup>3</sup>/d RO  
Hengshui, Hebei, China 2014, 2,160 m<sup>3</sup>/d RO  
Guangzhou, Guangdong, China 2014, 2,000 m<sup>3</sup>/d RO  
RO project, Pakistan 2014, 1,920 m<sup>3</sup>/d RO  
Electroplating Wastewater Treatment Project, Rizhao, Shandong province, China 2014, 1,500 m<sup>3</sup>/d RO  
Tianjin, China 2014, 1,152 m<sup>3</sup>/d RO  
Cangzhou, Huanghua, Hebei, China 2014, 840 m<sup>3</sup>/d RO  
Zibo, Shandong, China 2014, 400 m<sup>3</sup>/d RO  
Sansha, Hainan, China 2014, 400 m<sup>3</sup>/d RO  
Jinan, Shandong, China 2014, 360 m<sup>3</sup>/d RO  
Hua Neng Group Power Station, China 2013, 10,500 m<sup>3</sup>/d RO  
DTPC Thermal Power Plant, China 2011, 10,000 m<sup>3</sup>/d RO  
Dalian Thermal Power Plant of China Guodian Corporation, Dalian, Liaoning province, China 2011, 7,200 m<sup>3</sup>/d RO  
CPIC Thermal Power Plant, Dalian, Liaoning province, China 2011, 4,500 m<sup>3</sup>/d RO  
Weiqiao, Shandong province, China 2010, 144,000 m<sup>3</sup>/d RO  
Municipal Supply Water Project, China, 300,000 m<sup>3</sup>/d RO  
Boiler Replenishment Water Project, China, 144,000 m<sup>3</sup>/d RO  
Ultrapure Water Project, China, 35,000 m<sup>3</sup>/d RO  
Process Water Project, China, 30,000 m<sup>3</sup>/d RO  
Boiler Replenishment Water Project, China, 24,000 m<sup>3</sup>/d RO  
Beverage Water Project, China, 20,000 m<sup>3</sup>/d RO  
Boiler Replenishment Water Project, China, 20,000 m<sup>3</sup>/d RO  
Ultrapure Water Project, China, 10,000 m<sup>3</sup>/d RO  
Shanghai Coking & Chemical Co., Ltd., Boiler Replenishment Water Project, China, 8,640 m<sup>3</sup>/d RO  
Boiler Replenishment Water Project, China, 7,200 m<sup>3</sup>/d RO  
Replenishment Water Project, China, 7,200 m<sup>3</sup>/d RO  
Drink Water Project, China, 7,200 m<sup>3</sup>/d RO  
Boiler Replenishment Water Project, China, 5,000 m<sup>3</sup>/d RO  
Process Water Project, China, 5,000 m<sup>3</sup>/d RO  
Process Water Project, China, 2,400 m<sup>3</sup>/d RO

# Suspended Solids Removal, Desalination Pretreatment & Disinfection

Selected references since 2012 from companies supplying technologies for suspended solids removal or disinfection technologies in reuse projects, or for desalination pretreatment.

## Legend



Desalination



Wastewater reuse

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### SELECTED REFERENCES

#### Equipment Supplier: UF Modules

Aksaray Municipality, Aksaray, Turkey 2018, 34,560 m<sup>3</sup>/d MF/UF  
Nuh Cement Facility 2, Kocaeli, Turkey 2018, 28,224 m<sup>3</sup>/d MF/UF  
Kazan Soda Plant, Ankara, Turkey 2018, 27,216 m<sup>3</sup>/d MF/UF  
Surface Water Filtration, Azerbaijan 2018, 18,144 m<sup>3</sup>/d MF/UF  
Surface Water Filtration, India 2018, 15,120 m<sup>3</sup>/d MF/UF  
Mingecever Power Plant, Mincegever, Azerbaijan 2018, 13,500 m<sup>3</sup>/d MF/UF  
Ground Water, Bursa, Turkey 2018, 8,400 m<sup>3</sup>/d MF/UF  
Istanbul New Airport, Istanbul, Turkey 2018, 5,040 m<sup>3</sup>/d MF/UF  
Nuh Cement Facility 1, Kocaeli, Turkey 2017, 28,224 m<sup>3</sup>/d MF/UF  
Tuzla Leather OIZ, Istanbul, Turkey 2017, 14,400 m<sup>3</sup>/d MF/UF  
AKSA, Yalova, Turkey 2017, 6,480 m<sup>3</sup>/d MF/UF  
Water Bottling, Eskisehir, Turkey 2017, 2,400 m<sup>3</sup>/d MF/UF  
Water Bottling, Tunceli, Turkey 2017, 1,920 m<sup>3</sup>/d MF/UF

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### SELECTED REFERENCES

#### Equipment Supplier: Disc Filters

Kemper County Coal Power Plant, United States 2013, 33,600 m<sup>3</sup>/d

#### Equipment Supplier: Disc Filters (Coal Seam Gas Process Water)

Queensland Gas Company, Australia 2014, 84,000 m<sup>3</sup>/d RO  
Queensland Gas Company (QGC), Queensland, Australia 2013, 84,000 m<sup>3</sup>/d RO  
Origin energy, Australia 2013, 48,000 m<sup>3</sup>/d RO  
Chevron, Australia 2013, 8,400 m<sup>3</sup>/d RO  
Santos, Australia 2012, 2,880 m<sup>3</sup>/d RO

#### Equipment Supplier: Disc Filters (Seawater Desalination)

JIDP, Singapore 2019, 336,000 m<sup>3</sup>/d RO

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## DESALINATION & REUSE HANDBOOK

Marina East Desalination Plant, Singapore 2018, 336,000 m<sup>3</sup>/d RO  
TUAS III, Singapore 2017, 307,200 m<sup>3</sup>/d RO  
Acciona Spain, Spain 2015, 321,600 m<sup>3</sup>/d RO  
Korady, India 2015, 129,600 m<sup>3</sup>/d RO  
Reliance, India 2015, 90,000 m<sup>3</sup>/d RO  
Brownsville, TX, Brownsville, Texas, United States 2015, 56,640 m<sup>3</sup>/d RO  
Desalcott (Trinidad), Trinidad and Tobago 2015, 50,400 m<sup>3</sup>/d RO  
Vizag (Aquatech hinduga), Vizag, India 2015, 36,000 m<sup>3</sup>/d RO  
Jamnagar, India 2014, 420,000 m<sup>3</sup>/d RO  
Vasilikos, Cyprus 2014, 139,680 m<sup>3</sup>/d RO  
Seawater Open Intake SK-UF-RO, Trinidad and Tobago 2014, 51,432 m<sup>3</sup>/d RO  
Arcelor Brasil, Brazil 2014, 33,600 m<sup>3</sup>/d RO  
Ashdod, Israel 2012, 960,000 m<sup>3</sup>/d RO  
Oman 2012, 84,000 m<sup>3</sup>/d RO  
Puerto Gaitán, Meta, Colombia 2012, 80,000 m<sup>3</sup>/d RO

We offer everything from a single source – from development work, model tests, engineering design, casting, manufacture, and project management, to after-sales service and training, as well as a vast portfolio of Industrial IoT solutions for optimized plant operation.

### SELECTED REFERENCES

#### Equipment Supplier: Brine Dewatering Centrifuges

Taweebah, Abu Dhabi, United Arab Emirates 2018, 909,000 m<sup>3</sup>/d RO  
Qurayyat IWP, Oman 2016, 200,000 m<sup>3</sup>/d RO  
Barka SWRO, Muscat, Oman 2016, 120,000 m<sup>3</sup>/d RO  
Mirfa IWPP, Abu Dhabi, United Arab Emirates 2014, 85,000 m<sup>3</sup>/d RO  
Marafiq Sadara Desalination Plant, Jubail, Saudi Arabia 2013, 800,000 m<sup>3</sup>/d RO  
Al Gubrah Desalination plant, Muscat City, Oman 2013, 191,000 m<sup>3</sup>/d RO  
Barka 4 SWRO, Muscat City, Oman 2009, 281,000 m<sup>3</sup>/d RO  
Barka 2 SWRO, Muscat City, Oman 2007, 120,000 m<sup>3</sup>/d RO

#### Equipment Supplier: Filter Press

Tseung Kwan O, Hong Kong 2020, 135,000 m<sup>3</sup>/d RO

#### Equipment Supplier: Fine Active Screens and Brine Dewatering Centrifuges

Victorian Desalination Plant, Dalyston, Southern Victoria, Australia 2010, 150,000 m<sup>3</sup>/d RO  
Marina Baja Desalination Plant, Mutxamel, Spain 2010, 50,000 m<sup>3</sup>/d RO  
Tanjung Jati B SWRO, Indonesia 2010, 20,000 m<sup>3</sup>/d RO  
Kumell, Sydney, Australia 2008, 250,000 m<sup>3</sup>/d RO  
Fujairah SWRO, United Arab Emirates 2007, 136,500 m<sup>3</sup>/d RO  
Aguas del Ter Llobregat Desalination, Barcelona, El Prat del Llobregat, Spain, 200,000 m<sup>3</sup>/d RO

#### Equipment Supplier: Passive Intake Screens

Collahuasi SWRO, Chile 2022, 100,000 m<sup>3</sup>/d RO  
SUR Desalination Plant, Oman 2014, 29,000 m<sup>3</sup>/d RO  
Al Zawrah Desalination plant, Ajman, United Arab Emirates 2012, 45,560 m<sup>3</sup>/d RO

#### Equipment Supplier: Pretreatment

Chile 2022, 404,000 m<sup>3</sup>/d RO  
United Arab Emirates 2021, 158,000 m<sup>3</sup>/d RO  
United Arab Emirates 2020, 31,000 m<sup>3</sup>/d RO  
United Arab Emirates 2018, 31,000 m<sup>3</sup>/d RO  
Oman 2017, RO  
Oman 2014, 29,000 m<sup>3</sup>/d RO  
Oman 2013, 720,000 m<sup>3</sup>/d RO  
United Arab Emirates 2012, 158,000 m<sup>3</sup>/d RO  
Oman 2011, 23,000 m<sup>3</sup>/d RO  
United Kingdom 2008, 823,000 m<sup>3</sup>/d RO  
United Arab Emirates 2004, 384,000 m<sup>3</sup>/d RO  
United Arab Emirates 2004, 360,000 m<sup>3</sup>/d RO

See pp.195–196 for Pumps references.

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Megacities such as Atlanta, Barcelona, Beijing, Dubai, Hong Kong, Riyadh, Santiago and Singapore already rely on leading-edge ANDRITZ water management technologies when it comes to providing a safe and affordable potable water supply for millions of people.

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### SELECTED REFERENCES

#### Equipment Supplier: Filter Media

Waterworks Nigeria, Nigeria 2023, Other / Unknown  
 Saudi Arabia 2023, Other / Unknown  
 Waterworks Turkey, Turkey 2022, Other / Unknown  
 Waterworks Belgium, Belgium 2022, Other / Unknown  
 Shoaiba 5 Project, Saudi Arabia 2022, Other / Unknown  
 TKO Hong Kong Project, Hong Kong 2022, Other / Unknown  
 Bahrain 2021, Other / Unknown  
 Saudi Arabia 2021, Other / Unknown  
 Waterworks Switzerland, Switzerland 2021, Other / Unknown  
 Waterworks Turkey, Turkey 2021, Other / Unknown  
 Waterworks Nigeria, Nigeria 2021, Other / Unknown  
 Saudi Arabia 2020, Other / Unknown  
 Waterworks The Netherlands, Netherlands 2020, Other / Unknown  
 Waterworks Switzerland, Switzerland 2020, Other / Unknown  
 Waterworks Nigeria, Nigeria 2020, Other / Unknown  
 Sohar Aluminium Power Plant III, Oman 2019, Other / Unknown  
 8 Sattelite Project, United Arab Emirates 2019, Other / Unknown  
 Waterworks Turkey, Turkey 2019, Other / Unknown  
 Waterworks Nigeria, Nigeria 2019, Other / Unknown  
 Waterworks The Netherlands, Netherlands 2019, Other / Unknown  
 Waterworks Belgium, Belgium 2019, Other / Unknown  
 Waterworks Finland, Finland 2019, Other / Unknown  
 Bioenergy Value Sdn, Malaysia 2019, Other / Unknown  
 France 2019, Other / Unknown  
 Oman 2019, Other / Unknown

## Arvia



<https://www.arviatechnology.com>

### SELECTED REFERENCES

#### Design and Installation: Process Water

Textiles, United Kingdom 2018, 24 m<sup>3</sup>/d UV/AOP  
 Tea production, Kenya 2017, 6 m<sup>3</sup>/d UV/AOP

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### SELECTED REFERENCES

#### Equipment Supplier: MF/UF Membranes

Reuse Project, Shangdong, China 2022, 72,000 m<sup>3</sup>/d UF  
 Reuse Project, Beijing, China 2022, 72,000 m<sup>3</sup>/d UF  
 Reuse Project, Shangdong, China 2022, 48,000 m<sup>3</sup>/d UF  
 Reuse Project, Liaoning, China 2022, 38,000 m<sup>3</sup>/d UF  
 Reuse Project, Anhui, China 2022, 22,000 m<sup>3</sup>/d UF  
 Reuse Project, Jiangxi, China 2022, 8,000 m<sup>3</sup>/d UF  
 Reuse Project, Coinbatore, India 2022, 4,000 m<sup>3</sup>/d UF  
 Reuse Project, Coinbatore, India 2022, 2,000 m<sup>3</sup>/d UF  
 Reuse Project, Anhui, China 2021, 64,800 m<sup>3</sup>/d UF  
 Reuse Project, Cairo, Egypt 2021, 50,000 m<sup>3</sup>/d UF  
 Reuse Project, Anhui, China 2021, 36,000 m<sup>3</sup>/d UF  
 Reuse Project, Xinjiang, China 2021, 32,400 m<sup>3</sup>/d UF  
 Reuse Project, Beijing, China 2021, 26,000 m<sup>3</sup>/d UF  
 Reuse Project, Inner Mongolia, China 2021, 21,600 m<sup>3</sup>/d UF  
 Reuse Project, Hebei, China 2021, 20,400 m<sup>3</sup>/d UF  
 Reuse Project, Shanxi, China 2021, 14,400 m<sup>3</sup>/d UF  
 Reuse Project, Inner Mongolia, China 2021, 12,960 m<sup>3</sup>/d UF

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Reuse Project, Guangdong, China 2021, 11,520 m<sup>3</sup>/d UF  
Reuse Project, Hebei, China 2021, 10,224 m<sup>3</sup>/d UF  
Reuse Project, Guangdong, China 2021, 10,008 m<sup>3</sup>/d UF  
Reuse Project, Andhra Pradesh, India 2020, 46,000 m<sup>3</sup>/d UF  
Doha Desalination Plant, Doha, Kuwait 2017, 610,000 m<sup>3</sup>/d UF  
Changi NEWater Plant Phase 2, Changi, Singapore 2015, 288,000 m<sup>3</sup>/d UF  
NEWater Plant, Singapore, 320,000 m<sup>3</sup>/d UF  
NEWater Plant, Singapore, 191,000 m<sup>3</sup>/d UF  
Gumi Reuse Project, South Korea, 112,000 m<sup>3</sup>/d UF  
NEWater Plant, Singapore, 73,000 m<sup>3</sup>/d UF  
Beijing Reuse Project, China, 55,000 m<sup>3</sup>/d UF  
Kalimantan Desalination Plant, Indonesia, 50,304 m<sup>3</sup>/d UF  
Guangdong Desalination Plant, China, 48,000 m<sup>3</sup>/d UF  
Zhejiang Desalination Plant, China, 48,000 m<sup>3</sup>/d UF  
Mangalore Reuse Project, India, 22,700 m<sup>3</sup>/d UF

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**SELECTED REFERENCES**

**Equipment Supplier: Low Pressure Membranes**

The Second Water Supply Project in Dafeng District, Yancheng, Jiangsu Province, China 2015, 42,000 m<sup>3</sup>/d NF  
Water Supply Project for Semiconductor North China Corporation, Beijing, China 2015, 21,000 m<sup>3</sup>/d RO  
Haibowan District North Water Purification Plant, Wuhai, Neimenggu, China 2020, 100,000 m<sup>3</sup>/d RO  
Mentougou Second Water Reclamation Plant, Mentougou, China 2017, 80,000 m<sup>3</sup>/d MBR  
Dalad Banner Recycled Water Treatment Plant, Ordos, China 2015, 36,000 m<sup>3</sup>/d RO  
Luolong River Water Upgrade Project, Kunming, Yunnan, China 2016, 25,000 m<sup>3</sup>/d NF  
Longchang Economic Development District Wastewater Treatment Plant Phase I, Sichuan, China 2019, 25,000 m<sup>3</sup>/d NF  
Haidian District Shangzhuang Water Reclamation Plant, Beijing, China 2019, 12,000 m<sup>3</sup>/d MBR  
Wuhai Economic Development Zone Low Carbon Industrial Park Water Purification Plant Project, Wuhai, Neimenggu, China 2020, 10,000 m<sup>3</sup>/d RO  
Cuihu Water Reclamation Plant, Beijing, China 2014, 10,000 m<sup>3</sup>/d MBR  
Eryuan Second Wastewater Treatment Plant, Yunnan, China 2019, 10,000 m<sup>3</sup>/d NF  
Doujin River Wastewater Treatment Plant Reclaimed Water Reuse Project, Qingdao, Shandong, China 2015, 10,000 m<sup>3</sup>/d NF  
Wuda District Water Purification Plant, Wuhai, Neimenggu, China 2020, 7,500 m<sup>3</sup>/d RO  
Hainan District Water Purification Plant, Wuhai, Neimenggu, China 2020, 4,000 m<sup>3</sup>/d NF

**Berghof Membrane  
Technology GmbH**



[www.berghofmembranes.com](http://www.berghofmembranes.com)

**SELECTED REFERENCES**

**Equipment Supplier: Low Pressure Membranes**

EPS Brussels, Brussels, Belgium 2017, 480 m<sup>3</sup>/d RO+MBR  
Kunshan Zhong Yan - Chemical Plant, Kunshan, Jiangsu, China, 2,784 m<sup>3</sup>/d UF  
Tractor Factory, Turkey, 740 m<sup>3</sup>/d MBR

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**SELECTED REFERENCES**

**Equipment Supplier: Filter Floors for Multi-media Gravity Filters**

Sharqiyah SWRO Plant, Oman 2017, 80,000 m<sup>3</sup>/d RO

**Calgon Carbon Corporation**



[www.calgoncarbon.com](http://www.calgoncarbon.com)

**SELECTED REFERENCES**

**Equipment Supplier: UV Systems**

Beenyup AWRP, Perth, Western Australia, Australia 2014, 38,556 m<sup>3</sup>/d UF/RO/UV

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**SELECTED REFERENCES**

**Equipment Supplier: SiC Ceramic UF Membranes**

Basra, Iraq 2023, 28,800 m<sup>3</sup>/d UF  
Basra, Iraq 2023, 19,200 m<sup>3</sup>/d UF

# REFERENCE DIRECTORY – SUSPENDED SOLIDS REMOVAL, DESALINATION PRETREATMENT & DISINFECTION

Sydney, Australia 2023, 1,100 m<sup>3</sup>/d UF  
India 2023, 500 m<sup>3</sup>/d UF  
Vietnam 2023, 300 m<sup>3</sup>/d UF  
Raubling, Germany 2023, 120 m<sup>3</sup>/d UF  
Kefalonias, Greece 2023, 120 m<sup>3</sup>/d UF  
Palmachin, Israel 2022, 11,400 m<sup>3</sup>/d UF  
Manisa, Turkey 2022, 9,600 m<sup>3</sup>/d UF  
Ontario, Canada 2022, 2,160 m<sup>3</sup>/d UF  
Rio Negro, Argentina 2022, 1,700 m<sup>3</sup>/d UF  
India 2022, 200 m<sup>3</sup>/d UF  
Humaimah 1, Hail, Saudi Arabia 2015, 143,000 m<sup>3</sup>/d RO  
Saudi Arabia, 55,000 m<sup>3</sup>/d RO  
Singapore, 20,000 m<sup>3</sup>/d RO  
Caspian Sea, 14,500 m<sup>3</sup>/d RO  
Jordan, 13,500 m<sup>3</sup>/d RO  
Turkey, 9,600 m<sup>3</sup>/d RO  
Saudi Arabia, 8,160 m<sup>3</sup>/d RO  
Thailand, 3,000 m<sup>3</sup>/d Other / Unknown  
Thailand, 2,400 m<sup>3</sup>/d RO  
Malaysia, 2,040 m<sup>3</sup>/d RO  
Argentina, 1,700 m<sup>3</sup>/d RO  
Argentina, 1,700 m<sup>3</sup>/d RO  
South Africa, 1,680 m<sup>3</sup>/d RO  
Thailand, 1,640 m<sup>3</sup>/d Other / Unknown  
Turkey, 1,500 m<sup>3</sup>/d RO  
East Africa, 1,300 m<sup>3</sup>/d RO  
China, 1,100 m<sup>3</sup>/d RO  
Jordan, 1,000 m<sup>3</sup>/d RO  
India, 1,000 m<sup>3</sup>/d RO  
India, 700 m<sup>3</sup>/d RO  
United Arab Emirates, 250 m<sup>3</sup>/d RO  
China, 70 m<sup>3</sup>/d RO

Confidential, Qassim, Saudi Arabia 2019, 15,600 m<sup>3</sup>/d  
Polokwane, South Africa 2019, 4,800 m<sup>3</sup>/d Other / Unknown  
Lactasoy, Thailand 2019, 2,400 m<sup>3</sup>/d UF  
Watreat Lac-1, Prachinburi, Thailand 2019, 2,400 m<sup>3</sup>/d Other / Unknown  
Al Saawy WTP, Saudi Arabia 2019, 1,200 m<sup>3</sup>/d UF  
Baireen, Jordan 2018, 3,120 m<sup>3</sup>/d UF  
Polokwane, South Africa 2018, 1,680 m<sup>3</sup>/d UF  
Mashtal Faisal, Jordan 2017, 13,500 m<sup>3</sup>/d UF  
Humaimah, Saudi Arabia 2015, 143,000 m<sup>3</sup>/d UF  
Humaimah 2, Hail, Saudi Arabia 2015, 55,000 m<sup>3</sup>/d RO

## CeraMem



[www.alsys-group.com/en/group/global-locations/alsys-usa-ceramem](http://www.alsys-group.com/en/group/global-locations/alsys-usa-ceramem)

### SELECTED REFERENCES

#### Equipment Supplier: Ceramic Membrane Skid System

United States 2017, 1,822 m<sup>3</sup>/d UF  
France 2017, 360 m<sup>3</sup>/d RO  
United States 2016, 1,536 m<sup>3</sup>/d UF  
United States 2015, 1,242 m<sup>3</sup>/d UF  
United States 2014, 3,175 m<sup>3</sup>/d RO  
Canada 2014, 1,800 m<sup>3</sup>/d UF  
United States 2012, 1,076 m<sup>3</sup>/d RO

#### Equipment Supplier: Ceramic Membranes

South Africa 2019, 10,685 m<sup>3</sup>/d UF  
United States 2019, 250 m<sup>3</sup>/d RO  
South Africa 2018, 1,210 m<sup>3</sup>/d UF  
Australia 2017, 3,456 m<sup>3</sup>/d RO

#### Equipment Supplier: Ceramic Membranes and Engineering Services

India 2013, 3,715 m<sup>3</sup>/d UF

#### Equipment Supplier: Membrane Containers

France 2017, 50 m<sup>3</sup>/d RO

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### SELECTED REFERENCES

#### Process Design and Equipment Supplier: Ceramic UF Membranes

Aseeb, Muscat, Oman 2022, 100,000 m<sup>3</sup>/d  
Turbah, Hail, Saudi Arabia 2021, 5,200 m<sup>3</sup>/d Other / Unknown  
Agfar, Hail, Saudi Arabia 2021, 5,300 m<sup>3</sup>/d Other / Unknown  
Livqao, China 2021, 2,500 m<sup>3</sup>/d  
Hangzhou Coal Mine, Hangzhou, China 2020, 7,920 m<sup>3</sup>/d Other / Unknown  
Polokwane 2, South Africa 2020, 3,600 m<sup>3</sup>/d UF  
VPF, Thailand 2020, 3,000 m<sup>3</sup>/d UF  
CPF, Thailand 2020, 1,640 m<sup>3</sup>/d UF  
Mnasheer, Jordan 2020, 1,000 m<sup>3</sup>/d UF

## DeNora Water Technologies



[www.denora.com](http://www.denora.com)

### SELECTED REFERENCES

#### Equipment Supplier: Disinfection System

Mobile disinfection units, Texas, United States 2018, 235,000 barrels/day

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### SELECTED REFERENCES

#### Equipment Supplier: Cartridge Filters

Planta Desaladora de Escombreras, Murcia, Spain 2015, 835.0 m<sup>3</sup>/h Tertiary treatment

#### Equipment Supplier: Sand Filters

Planta Desaladora de Ensenada, Baja California, Ensenada, Mexico 2015, 545.0 m<sup>3</sup>/h Tertiary treatment

Monwabisi Cape Town, South Africa 2018, 7,500 m<sup>3</sup>/d RO  
Strandfontein Cape Town, South Africa 2018, 7,500 m<sup>3</sup>/d RO  
Cape Town Plant, Cape Town, South Africa 2018, 7,200 m<sup>3</sup>/d RO  
KTI Plant, Taiwan 2018, 4,800 m<sup>3</sup>/d RO

Amandi - Power Projects Plant, Takoradi, Ghana 2018, 2,592 m<sup>3</sup>/d RO

Ulphin Food Plant, Taiwan 2018, 480 m<sup>3</sup>/d RO  
Matsu Desalination Plant, Matsu, Taiwan 2018, 480 m<sup>3</sup>/d RO  
Container Desalination Plant, Taiwan 2018, 312 m<sup>3</sup>/d RO  
Kinmen Desalination Plant, Taiwan 2017, 12,000 m<sup>3</sup>/d RO  
PengHu Desalination Plant, Taiwan 2017, 12,000 m<sup>3</sup>/d RO  
Creta Farm UF Plant WW17000 & BW4.000, Crete, Greece 2017, 9,600 m<sup>3</sup>/d RO

Trikala Landfill Leachate WW6.001, Trikala, Greece 2017, 4,800 m<sup>3</sup>/d RO

WCSA Desalination Plant, Cape Town, South Africa 2017, 3,600 m<sup>3</sup>/d RO

Riccard Pernod Plant, Dublin, Ballymount, Ireland 2017, 2,400 m<sup>3</sup>/d RO

Slane Castle Distillery Plant, Meath, Slane Castle, Ireland 2017, 2,400 m<sup>3</sup>/d RO

Jameson Whiskey/Riccard Pernod, Ballymount, Ireland 2017, 2,400 m<sup>3</sup>/d RO

Slane Castle Distillery, Meath, Ireland 2017, 2,400 m<sup>3</sup>/d RO

G.P. Constructions Plant - BW2.000, Euboea, Greece 2017, 1,200 m<sup>3</sup>/d RO

Proxa Desalination Plant, South Africa 2017, 1,200 m<sup>3</sup>/d RO

Almopia Landfill Leachate LW1.300, Almopia, Greece 2017, 1,080 m<sup>3</sup>/d RO

Shiny Chemical Industrial Plant, Taiwan 2017, 480 m<sup>3</sup>/d RO

Motor Oil Hellas Corinth Refineries Desalination Plant, Corinth, Greece 2017, 72 m<sup>3</sup>/d RO

Kellogg Mumbai Plant, Mumbai, India 2017, RO

Coalgate PalmOlive Goa Plant, Goa, India 2017, RO

Guinness/DIAGO Plant, Dublin, Ireland 2016, 7,200 m<sup>3</sup>/d RO

LGChem YS Plant, South Korea 2016, 3,240 m<sup>3</sup>/d RO

LGChem NJ Plant, South Korea 2016, 1,920 m<sup>3</sup>/d RO

Budweiser Plant, China 2016, RO

Raymond Denim Textile Plant, India 2016, RO

Trikala Landfill Leachate WW6.000, Trikala, Greece 2015, 4,800 m<sup>3</sup>/d RO

Paraga Beach AE-Scorpions SW5.000, Mykonos, Greece 2015, 2,880 m<sup>3</sup>/d RO

Port Manama Plant, Manama, Bahrain 2015, 1,200 m<sup>3</sup>/d RO

Posco GW Plant, South Korea 2015, 240 m<sup>3</sup>/d FO

Square Pharmaceuticals Plant, Bangladesh 2014, 1,440 m<sup>3</sup>/d RO

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#### Equipment Supplier: Pretreatment

Shuaibah 3 IWP, Shuaibah, Saudi Arabia 2022, 600,000 m<sup>3</sup>/d RO  
Yanbu 4 IWP, Ar Rayyis, Medina, Madinah Province, Saudi Arabia 2021, 450,000 m<sup>3</sup>/d RO

#### Pretreatment Contractor

TUAS 3 Desalination Plant, Singapore 2016, 136,000 m<sup>3</sup>/d RO  
Shuqaiq Power Plant Project, Shuqaiq, Saudi Arabia 2014, 19,776 m<sup>3</sup>/d RO  
Escondida Water Supply Project, Antofagasta, Chile 2013, 510,278 m<sup>3</sup>/d RO

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### SELECTED REFERENCES

#### Equipment Supplier: UF Membranes for RO Pretreatment (Inge, now under DuPont™ IntegraTec™ brand)

Facility D, Qatar 2020, 674,400 m<sup>3</sup>/d Other / Unknown

# REFERENCE DIRECTORY - SUSPENDED SOLIDS REMOVAL, DESALINATION PRETREATMENT & DISINFECTION

ONEE, Ministry of Agriculture, Agadir, Morocco 2020, 646,704 m<sup>3</sup>/d UF  
 Sharqiyah, Oman 2019, 170,544 m<sup>3</sup>/d Other / Unknown  
 Zhenhai, China 2019, 100,800 m<sup>3</sup>/d Other / Unknown  
 Atacama, Chile 2019, 83,376 m<sup>3</sup>/d Other / Unknown  
 Sharqiyah, Oman 2019, 80,000 m<sup>3</sup>/d  
 Emaar, the Economic City, King Abdullah Economic City, Saudi Arabia 2019, 74,880 m<sup>3</sup>/d UF  
 King Abdullah Economic City, Saudi Arabia 2019, 30,000 m<sup>3</sup>/d  
 North Chennai, India 2019, 15,360 m<sup>3</sup>/d  
 Shrimp Farms, Thailand 2019, 8,640 m<sup>3</sup>/d  
 Izmir, Turkey 2019, 8,563 m<sup>3</sup>/d  
 Jinggangshan, Jian, Jiangxi province, China 2019, 7,872 m<sup>3</sup>/d  
 Fujian, China 2019, 7,680 m<sup>3</sup>/d  
 Kocaeli, Turkey 2019, 7,200 m<sup>3</sup>/d  
 Abu Dhabi, United Arab Emirates 2019, 6,758 m<sup>3</sup>/d  
 Abu Dhabi, United Arab Emirates 2019, 4,608 m<sup>3</sup>/d  
 Abu Dhabi, United Arab Emirates 2019, 4,032 m<sup>3</sup>/d  
 India 2019, 1,209 m<sup>3</sup>/d  
 Wuxi Xincheng Water Plant 2 Wastewater Reuse Project, Wuxi, Jiangsu province, China 2018, 170,000 m<sup>3</sup>/d UF  
 Jazan, Saudi Arabia 2018, 105,000 m<sup>3</sup>/d RO  
 Jeddah, Saudi Arabia 2018, 17,000 m<sup>3</sup>/d RO  
 Leuze En Hainaut, Hainaut, Wallonia, Belgium 2018, 2,640 m<sup>3</sup>/d  
 Prinzhöfte, Oldenburg, Lower Saxony, Germany 2018, 240 m<sup>3</sup>/d  
 RO project, Singapore 2017, 289,000 m<sup>3</sup>/d RO  
 China 2017, 37,992 m<sup>3</sup>/d RO  
 Duliajan-Assam, Dibrugarh, Assam, India 2017, 3,696 m<sup>3</sup>/d  
 Jazan, Saudi Arabia 2016, 168,000 m<sup>3</sup>/d RO  
 Manila, Philippines 2016, 150,000 m<sup>3</sup>/d RO  
 Jamnagar, India 2015, 456,000 m<sup>3</sup>/d RO  
 Accra, Ghana 2014, 60,000 m<sup>3</sup>/d RO  
 Mangalore, India 2014, 21,600 m<sup>3</sup>/d RO  
 Dubai, United Arab Emirates 2014, 931 m<sup>3</sup>/d  
 Jamnagar, Gujarat, India 2013, 168,000 m<sup>3</sup>/d RO  
 Off-shore, Angola 2013, 62,000 m<sup>3</sup>/d RO  
 Kochi, India 2013, 28,800 m<sup>3</sup>/d RO  
 India 2013, 28,000 m<sup>3</sup>/d RO  
 Phuket, Thailand 2013, 25,000 m<sup>3</sup>/d RO  
 Konya, Turkey 2013, 20,400 m<sup>3</sup>/d RO  
 Jeddah, Saudi Arabia 2013, 19,296 m<sup>3</sup>/d RO  
 Balkhash, Kazakhstan 2013, 10,000 m<sup>3</sup>/d RO  
 Tangshan, China 2012, 110,000 m<sup>3</sup>/d RO  
 Dongguan, Guangdong, China 2012, 65,000 m<sup>3</sup>/d RO  
 China , 110,016 m<sup>3</sup>/d  
 United Arab Emirates, 84,000 m<sup>3</sup>/d  
 Turkmenistan,, 58,320 m<sup>3</sup>/d  
 Turkey, 57,600 m<sup>3</sup>/d  
 Ukraine, 48,000 m<sup>3</sup>/d  
 Germany, 38,400 m<sup>3</sup>/d  
 Hungary, 36,000 m<sup>3</sup>/d  
 Egypt, 34,320 m<sup>3</sup>/d  
 Thailand, 24,984 m<sup>3</sup>/d  
 U.S.A., 9,000 m<sup>3</sup>/d

## **Equipment Supplier: UF Membranes**

Umm Al Houl, Doha, Qatar 2022, 674,400 m<sup>3</sup>/d UF  
 Tuas Desalination Plant, Singapore 2021, 760,008 m<sup>3</sup>/d UF

Beijing Changping WTP, China 2019, 200,000 m<sup>3</sup>/d UF  
 Al Asilah Desalination, Sharqiyah, Oman 2019, 170,544 m<sup>3</sup>/d UF  
 Al Roubeaky MLD plant, Egypt 2019, 5,000 m<sup>3</sup>/d RO  
 Jurong Island Desalination Plant UF, Singapore, 2019, 207,000 m<sup>3</sup>/d UF  
 USA Municipal Drinking Water Facility, United States 2017, 112,800 m<sup>3</sup>/d Other / Unknown  
 China Drinking Water Facility, China 2017, 100,080 m<sup>3</sup>/d Other / Unknown  
 CRCW, United States 2017, 87,000 m<sup>3</sup>/d UF  
 Saudi Pretreatment RO Wastewater Facility, Saudi Arabia 2017, 85,200 m<sup>3</sup>/d RO  
 India Industrial Facility, India 2017, 81,360 m<sup>3</sup>/d Other / Unknown  
 France Municipal Drinking Water Facility, France 2017, 72,000 m<sup>3</sup>/d Other / Unknown  
 Mery sur Oise, Val-d'Oise , Île-de-France, France 2017, 70,000 m<sup>3</sup>/d NF  
 China Industrial Power Generation Facility, China 2017, 60,000 m<sup>3</sup>/d Other / Unknown  
 India Municipal Wastewater/Reuse Facility, India 2017, 56,640 m<sup>3</sup>/d Other / Unknown  
 China Drinking Water Facility, China 2017, 52,448 m<sup>3</sup>/d Other / Unknown  
 Djerba, Tunisia 2017, 50,000 m<sup>3</sup>/d RO  
 Shandong Power Plant, Shandong, China 2017, 36,000 m<sup>3</sup>/d RO  
 Tar Power Plant, Pakistan 2017, 35,000 m<sup>3</sup>/d RO  
 Moho Nord, Republic of Congo 2017, 35,000 m<sup>3</sup>/d NF  
 Sicagen, Chennai, India 2017, 30,000 m<sup>3</sup>/d UF  
 Oil Field Water, Russia 2017, 28,000 m<sup>3</sup>/d RO  
 Aktau, Kazakhstan 2017, 25,000 m<sup>3</sup>/d RO  
 Dickinson, United States 2017, 22,750 m<sup>3</sup>/d UF  
 Hebei Seawater desalination plant, Hebei, China 2017, 22,500 m<sup>3</sup>/d RO  
 Xinjiang Drinking Water Plant, Xinjiang, China 2017, 20,000 m<sup>3</sup>/d NF  
 Temirtau, Kazakhstan 2017, 18,000 m<sup>3</sup>/d RO  
 Bahia Blanca, Argentina 2017, 15,600 m<sup>3</sup>/d UF  
 Shandong chemical plant MLD project, Shandong , China 2017, 15,000 m<sup>3</sup>/d RO  
 Saras Refinery, Saras, Italy 2017, 12,000 m<sup>3</sup>/d RO+deionisation  
 Charles Meyer Desalination Plant Refit, Santa Barbara, United States 2017, 10,475 m<sup>3</sup>/d RO  
 Sinar Mas Group OKI, Indonesia 2016, 200,000 m<sup>3</sup>/d RO  
 France Municipal Drinking Water Facility, France 2016, 150,000 m<sup>3</sup>/d Other / Unknown  
 China Drinking Water Facility, China 2016, 105,000 m<sup>3</sup>/d Other / Unknown  
 Johanneslöt, Gävle, Sweden 2016, 8,640 m<sup>3</sup>/d NF  
 SAIFI Water, United Arab Emirates 2016, 2,000 m<sup>3</sup>/d RO  
 KEMYA, Al Jubail, Eastern province, Saudi Arabia 2016, 1,056 m<sup>3</sup>/d RO  
 Johanneslöt, Gävle, Sweden 2016, 8,640 m<sup>3</sup>/d NF  
 SAIFI Water, United Arab Emirates 2016, 2,000 m<sup>3</sup>/d RO  
 Claude "Bud" Lewis Carlsbad Desalination, CA, United States 2015, 190,000 m<sup>3</sup>/d RO  
 Sadara, Saudi Arabia 2015, 179,390 m<sup>3</sup>/d RO  
 Jamnagar, India 2015, 168,000 m<sup>3</sup>/d RO  
 USA Municipal Drinking Water Facility, United States 2015, 79,200 m<sup>3</sup>/d Other / Unknown  
 France Municipal Drinking Water Facility, France 2015, 60,000 m<sup>3</sup>/d Other / Unknown  
 Larnaca Renovation, Cyprus 2015, 60,000 m<sup>3</sup>/d RO  
 Philippines Municipal Drinking Water Facility, Philippines 2015, 50,040 m<sup>3</sup>/d Other / Unknown  
 Angamos, Chile 2015, 11,796 m<sup>3</sup>/d UF

# IDRA DESALINATION & REUSE HANDBOOK

Kiev, Ukraine 2015, 9,000 m<sup>3</sup>/d RO+deionisation  
Ghana Municipal Drinking Water Facility, Ghana 2014, 135,000 m<sup>3</sup>/d Other / Unknown  
Jorf Lasfar OCP, Jorf Lasfar, Morocco 2014, 76,566 m<sup>3</sup>/d RO  
Barka, Oman 2014, 45,000 m<sup>3</sup>/d RO  
POSCO, Gwang-yang, South Korea 2014, 30,000 m<sup>3</sup>/d RO  
Mantoverde phase I, Mantoverde, Chile 2014, 10,368 m<sup>3</sup>/d RO  
Guizhou, Guizhou province, China 2014, 1,200 m<sup>3</sup>/d RO  
Gansu, Baiyin, Gansu province, China 2014, 1,000 m<sup>3</sup>/d RO  
Ceyranbatan, Baku, Azerbaijan 2013, 520,000 m<sup>3</sup>/d UF  
Vasilikos, Cyprus 2013, 60,000 m<sup>3</sup>/d RO  
Oasis, United States 2013, 32,210 m<sup>3</sup>/d UF  
Maspalomas, Canary Islands, Spain 2013, 32,000 m<sup>3</sup>/d RO  
Fountain Hills Sanitary District, AZ, United States 2013, 18,800 m<sup>3</sup>/d UF  
Maithon Power, Dhanbad, Jharkhand, India 2013, 10,800 m<sup>3</sup>/d RO  
Erdos, Dongsheng District, Mongolia 2012, 120,000 m<sup>3</sup>/d NF  
Episkopi, Cyprus 2012, 100,000 m<sup>3</sup>/d RO  
CRP, Caracas, Venezuela 2012, 74,880 m<sup>3</sup>/d RO  
Pakistan Municipal, Pakistan 2012, 57,600 m<sup>3</sup>/d Other / Unknown  
Chanaral, Chile 2012, 25,000 m<sup>3</sup>/d RO  
Whyalla, Australia 2012, 13,680 m<sup>3</sup>/d RO  
Orange County GWRS, United States, 700,300 m<sup>3</sup>/d UF  
Adelaide Desalination, Australia, 626,000 m<sup>3</sup>/d UF  
Southern Seawater Desalination, Australia, 360,000 m<sup>3</sup>/d UF  
HERA Rimini, Italy, 152,472 m<sup>3</sup>/d MBR  
Changi LM3/Train 5, Singapore, 150,000 m<sup>3</sup>/d MBR  
Geoduk, South Korea, 140,000 m<sup>3</sup>/d MBR  
Changsha Chengnan, China, 140,000 m<sup>3</sup>/d UF  
City of Stockton, United States, 136,275 m<sup>3</sup>/d UF  
City of Highland Park, United States, 113,560 m<sup>3</sup>/d UF  
Townsville, Australia, 100,224 m<sup>3</sup>/d MBR  
Shek Wu Hui, Hong Kong, 80,000 m<sup>3</sup>/d MBR  
City of Forest Park, United States, 52,900 m<sup>3</sup>/d UF  
Modesto Jennings WWTP, United States, 47,696 m<sup>3</sup>/d MBR  
Morgantown Star City WWTP, United States, 47,696 m<sup>3</sup>/d MBR  
Liuhe Power Plant, China, 44,300 m<sup>3</sup>/d UF  
Songdo, South Korea, 42,500 m<sup>3</sup>/d MBR  
Semirara, Philippines, 35,000 m<sup>3</sup>/d UF  
Santa Margherita Ligure, Italy, 21,599 m<sup>3</sup>/d UF  
Yuzhong Energy, China, 13,000 m<sup>3</sup>/d UF  
Yuedian Shaoguan, China, 11,500 m<sup>3</sup>/d UF  
Changi Newater, Singapore, 316,000 m<sup>3</sup>/d  
Jurong Island Desalination Plant UF, Singapore, 207,000 m<sup>3</sup>/d  
Formosa Plastics, Taiwan, 105,000 m<sup>3</sup>/d RO  
Gippsland Water Factory, Australia, 44,000 m<sup>3</sup>/d MBR

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## SELECTED REFERENCES

### Equipment Supplier: UV Systems

Sutherlin New WWTP, Sutherlin, Oregon, United States 2018, 34,065 m<sup>3</sup>/d UV

Ayer WWTP, Ayer, MA, United States, 9,085 m<sup>3</sup>/d UV  
Point Pleasant WWTP, Point Pleasant, WV, United States, 4,921 m<sup>3</sup>/d UV  
Cortland WWTP, Cortland, IL, United States, 0 m<sup>3</sup>/d UV

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Entegris, Inc. (NASDAQ: ENTG) is a world-class supplier of advanced materials and process solutions for the semiconductor, life sciences, and other high-tech industries.

For decades, we have been committed to solving our customers' most demanding process challenges through a broad solutions portfolio, collaborative and innovative product development, and a focus on science and applications knowledge. With advanced manufacturing capabilities, worldwide infrastructure, customer services, technical support, and unmatched technical expertise, we provide proven performance and reliability to protect your overall process quality and efficiency.

For over 50 years, we have successfully met the water purification specifications of semiconductors, the most demanding industry. From pre-reverse osmosis to clean-in-place processes we understand your challenges and work with you to provide reliable, easy-to-use solutions at a lower cost.

As far as desalination is concerned, Entegris offers corrosion-resistant multi-round filter housings and reliable filters to decrease downtime, increase filter life, and increase operational efficiencies from the laboratory to the largest municipal and industrial applications. These high-loading and low pressure drop filters improve the RO's efficiency and reduce the plant's overall energy consumption. For clean-in-place (CIP) filtration and chemical delivery, our solutions maximize system uptime and reduce operating costs.

## SELECTED REFERENCES

### Equipment Supplier: Cartridge Filters

Mirfa-2, Mirfa, United Arab Emirates 2022, 550,000 m<sup>3</sup>/d RO  
Sorek 2, Israel 2021, 670,000 m<sup>3</sup>/d RO  
Adama expansion, Israel 2021, 5,184 m<sup>3</sup>/d RO

# REFERENCE DIRECTORY - SUSPENDED SOLIDS REMOVAL, DESALINATION PRETREATMENT & DISINFECTION

Umm Al-Quwain, United Arab Emirates 2019, 680,000 m<sup>3</sup>/d RO  
Rabigh 3, Rabigh, Saudi Arabia 2019, 600,000 m<sup>3</sup>/d RO  
Al-Dur II, Al-Dur, Bahrain 2019, 227,000 m<sup>3</sup>/d RO  
Marina East, Singapore 2018, 137,000 m<sup>3</sup>/d RO  
Adama, Israel 2016, 1,728 m<sup>3</sup>/d RO  
Pacific Rubiales, Colombia 2013, 100,000 m<sup>3</sup>/d RO

## Industrial AOP Pilot for COD and TOC

SASOL, South Africa, 24 m<sup>3</sup>/d UV/AOP

## Odour and VOC Removal

ABN (food waste processing), Netherlands, UV/AOP

## Odour Treatment

CPC-China Petrochemical, Taiwan, 720 m<sup>3</sup>/d UV/AOP

## Process Water and TOC Reduction

InfoVision, TFT-LCD, China, 7,200 m<sup>3</sup>/d UV/AOP

ST Microelectrocnic-AMK8, Singapore, 1,560 m<sup>3</sup>/d UV/AOP  
ST Microelectronic-AMK6, Singapore, 1,440 m<sup>3</sup>/d UV/AOP  
Promos microelectronic, Taiwan, 600 m<sup>3</sup>/d UV/AOP

## TOC Reduction

Kunshan, TFT-LCD, China, 144,000 m<sup>3</sup>/d UV/AOP

## VOC and COD Treatment

ASE-Semiconductor K7, Taiwan, 1,320 m<sup>3</sup>/d UV/AOP  
ASE-Semiconductor K5, Taiwan, 960 m<sup>3</sup>/d UV/AOP  
ASE-Semiconductor K5, Taiwan, 240 m<sup>3</sup>/d UV/AOP

## VOC Treatment

CTP, Taiwan, 288 m<sup>3</sup>/d UV/AOP  
PVI, Taiwan, 240 m<sup>3</sup>/d UV/AOP  
ITRI, Taiwan, 120 m<sup>3</sup>/d UV/AOP

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## SELECTED REFERENCES

### Technology Provider: AOP

infoVision, TFT-LCD, China, 7,200 m<sup>3</sup>/d Other / Unknown  
ASE-K12, Semicon, Taiwan, 3,600 m<sup>3</sup>/d Other / Unknown  
Xintec – Semicon, Taiwan, 3,000 m<sup>3</sup>/d Other / Unknown  
LDT, China, 2,400 m<sup>3</sup>/d Other / Unknown  
T Microelectrocnic AMK8, Singapore, 1,560 m<sup>3</sup>/d Other / Unknown  
T Microelectrocnic AMK6, Singapore, 1,440 m<sup>3</sup>/d Other / Unknown  
Kunshan, TFT-LCD, China, 1,440 m<sup>3</sup>/d Other / Unknown  
SE Semiconductor K7, Taiwan, 1,320 m<sup>3</sup>/d Other / Unknown  
ASE-Semiconductor K5, Taiwan, 960 m<sup>3</sup>/d Other / Unknown  
CPC-China Petrochemical, Taiwan, 720 m<sup>3</sup>/d Other / Unknown  
Optimax, Taiwan, 600 m<sup>3</sup>/d Other / Unknown  
Promos microelectronic, Taiwan, 600 m<sup>3</sup>/d Other / Unknown  
LDT-Guandzou Petrochem, China, 432 m<sup>3</sup>/d Other / Unknown  
SE-ChongLi Semicon, Taiwan, 384 m<sup>3</sup>/d Other / Unknown  
CTP, Taiwan, 288 m<sup>3</sup>/d Other / Unknown  
SE Semiconductor k5, Taiwan, 240 m<sup>3</sup>/d Other / Unknown  
PVI, Taiwan, 240 m<sup>3</sup>/d Other / Unknown  
ITRI, Taiwan, 120 m<sup>3</sup>/d Other / Unknown  
Refinery, Russia, Russia, 48 m<sup>3</sup>/d Other / Unknown  
SASOL, South Africa, 24 m<sup>3</sup>/d Other / Unknown  
LDT, China, 2 m<sup>3</sup>/d Other / Unknown

### BTEX

LDT-Guangzhou Petrochem, China, 432 m<sup>3</sup>/d UV/AOP

### COD Reduction

LDT, Guangzhou, China 2018, 2 m<sup>3</sup>/d UV/AOP  
ASE-K12, Semicon, Taiwan, 3,600 m<sup>3</sup>/d UV/AOP  
Xintec – Semicon, Taiwan, 3,000 m<sup>3</sup>/d UV/AOP  
Optimax, Taiwan, 600 m<sup>3</sup>/d UV/AOP  
ASE-ChongLi-Semicon, Taiwan, 384 m<sup>3</sup>/d UV/AOP

### COD Reduction and Oil Content Removal

Industrial AOP pilot (refining), Russia, 48 m<sup>3</sup>/d UV/AOP

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## SELECTED REFERENCES

### Equipment Supplier: Filtration Materials

Zarat Desalination Plant, Zarat, Tunisia 2022, 50,000 m<sup>3</sup>/d RO  
Hamma, Algeria 2019, 200,000 m<sup>3</sup>/d RO  
Barka, Oman 2017, 281,000 m<sup>3</sup>/d RO  
Djerba, Tunisia 2017, 50,000 m<sup>3</sup>/d RO  
Al Saad, Saudi Arabia 2016, 360,000 m<sup>3</sup>/d RO  
Mirfa, United Arab Emirates 2015, 140,000 m<sup>3</sup>/d RO  
Tenes, Algeria 2013, 200,000 m<sup>3</sup>/d RO

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Aguilas-Murcia, Spain 2013, 180,000 m<sup>3</sup>/d RO  
Copiapo, Chile 2013, 140,000 m<sup>3</sup>/d RO  
Chennai, India 2012, 100,000 m<sup>3</sup>/d RO  
Oropesa, Spain 2012, 50,000 m<sup>3</sup>/d RO

## Evoqua Water Technologies

[www.evoqua.com](http://www.evoqua.com)

### SELECTED REFERENCES

#### Equipment Supplier: Disinfection

Reclamation Plant to Process Wastewater for Irrigation Reuse, United States 2015, 60,567 m<sup>3</sup>/d Other / Unknown

#### Equipment Supplier: UV Systems

CEMEX, United Kingdom, 3,000 m<sup>3</sup>/d UV

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### SELECTED REFERENCES

#### Equipment Supplier: Filtration Materials

Fouka II, Fouka, Algeria 2023, 300,000 m<sup>3</sup>/d RO  
Skikda Desalination Plant, Skikda, Algeria 2022, 100,000 m<sup>3</sup>/d RO  
Corso Seawater Desalination Plant, Corso, Algeria 2022, 80,000 m<sup>3</sup>/d RO  
  
IDAM Rambla Morales, Almeria, Spain 2022, 55,000 m<sup>3</sup>/d RO  
EDAS de Beniadla, Denia, Spain 2022, 25,000 m<sup>3</sup>/d RO  
Beni Saf Desalination Plant, Beni Saf, Algeria 2021, 200,000 m<sup>3</sup>/d RO  
  
Fouka Desalination Plant, Fouka, Algeria 2021, 120,000 m<sup>3</sup>/d RO  
Beni Saf Desalination Plant, Beni Saf, Algeria 2020, 200,000 m<sup>3</sup>/d RO  
Racons Brackish Water Desalination Plant, Alicante, Spain 2020, 16,000 m<sup>3</sup>/d RO  
Mostaganem Desalination Plant, Mostaganem, Algeria 2019, 200,000 m<sup>3</sup>/d RO  
Cap Djenet Seawater Desalination Plant, Djinet, Algeria 2019, 100,000 m<sup>3</sup>/d RO

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### SELECTED REFERENCES

#### Equipment Supplier: Static Mixers, Cartridge Filters, Filters and Ultrafiltration Systems

Jubail RJPPh2, Saudi Arabia 2022, 1,000,000 m<sup>3</sup>/d RO  
North Field Expansion, Qatar 2022, 165,000 m<sup>3</sup>/d RO  
Daesan SWRO, South Korea 2022, 100,000 m<sup>3</sup>/d RO  
SWRO Collahuasi, Chile 2022, 90,000 m<sup>3</sup>/d RO  
Corso, Algeria 2022, 80,000 m<sup>3</sup>/d RO  
Kangan Utility & Offsite Project (Phase II), Spain 2022, 65,000 m<sup>3</sup>/d RO  
Desalination Plant For Manyar Smelter Plant, Indonesia 2022, 50,000 m<sup>3</sup>/d RO  
Kaspy, Kazakhstan 2022, 40,000 m<sup>3</sup>/d RO  
SWRO Plants for remote Areas, Saudi Arabia 2022, 30,000 m<sup>3</sup>/d RO  
SWCC Remote Plants, Saudi Arabia 2022, 30,000 m<sup>3</sup>/d RO  
Golgohar Iron and Steel Development, Germany 2022, 25,000 m<sup>3</sup>/d RO  
48 MLD Jamnagar 2x1 100 Desal Plant, India 2022, 24,000 m<sup>3</sup>/d RO  
WTP Kikinda, Serbia 2022, 8,500 m<sup>3</sup>/d RO  
RAK SWRO, United Arab Emirates 2022, 8,000 m<sup>3</sup>/d RO  
Local Small Capacity Plants, Morocco 2022, 7,500 m<sup>3</sup>/d RO  
Water Desalination Plants North Obur, Saudi Arabia 2022, 7,500 m<sup>3</sup>/d RO  
HKIWMF (Integrated Waste Management Facility), Hong Kong 2022, 6,000 m<sup>3</sup>/d RO  
NPC Process Water, Egypt 2022, 6,000 m<sup>3</sup>/d RO  
WTP Oleochemical - BWRO & SWRO Feed, Indonesia 2022, 6,000 m<sup>3</sup>/d RO  
Bahamas Nassau New Providence Island, Bahamas 2022, 5,000 m<sup>3</sup>/d RO  
V&A Waterfront, South Africa 2022, 5,000 m<sup>3</sup>/d RO  
P79 FPSO Buzios Oil Filed Development, Brazil 2022, 5,000 m<sup>3</sup>/d RO  
P78 FPSO Buzios Oil Filed Development, Brazil 2022, 5,000 m<sup>3</sup>/d RO

#### Equipment Supplier: Cartridge Filters, Filters and Ultrafiltration Systems

Al Shuaiba SWRO Desalination, Saudi Arabia 2021, 600,000 m<sup>3</sup>/d RO  
East Matrough, Egypt 2021, 65,000 m<sup>3</sup>/d RO  
Reghaia SWRO, Algeria 2021, 60,000 m<sup>3</sup>/d RO  
East Bay, Philippines 2021, 50,000 m<sup>3</sup>/d RO  
Zubair, Iraq 2021, 30,000 m<sup>3</sup>/d RO  
Sharm El Sheikh SWRO, Egypt 2021, 30,000 m<sup>3</sup>/d RO  
La Fontaine, Algeria 2021, 22,500 m<sup>3</sup>/d RO  
Jaffna, Sri Lanka 2021, 22,000 m<sup>3</sup>/d RO  
Al Bahadli, United Arab Emirates 2021, 18,000 m<sup>3</sup>/d RO  
Zeralda, Algeria 2021, 18,000 m<sup>3</sup>/d RO  
SWRO Modular Plants, Saudi Arabia 2021, 15,000 m<sup>3</sup>/d RO  
NCIC Extension, Egypt 2021, 12,000 m<sup>3</sup>/d RO

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Palm Beach, Algeria 2021, 7,500 m<sup>3</sup>/d RO  
 Taba, Egypt 2021, 5,000 m<sup>3</sup>/d RO  
 Al Khobar II – SWRO, Saudi Arabia 2020, 600,000 m<sup>3</sup>/d RO  
 Jubail – SWRO, Saudi Arabia 2020, 400,000 m<sup>3</sup>/d RO  
 Barge – SWRO, United Arab Emirates 2020, 150,000 m<sup>3</sup>/d RO  
 Dubal - SWRO for Jebel Ali Aluminum Smelter, United Arab Emirates 2020, 35,000 m<sup>3</sup>/d RO  
 Layoune – RO, Morocco 2020, 26,000 m<sup>3</sup>/d RO  
 GOPWTU, Germany 2020, 25,000 m<sup>3</sup>/d RO  
 Aktau SWRO, Kazakhstan 2020, 20,000 m<sup>3</sup>/d RO  
 Nuweiba – SWRO, Egypt 2020, 10,000 m<sup>3</sup>/d RO  
 Eramet – Centenario Lithium Project, Argentina 2020, 8,900 m<sup>3</sup>/d RO  
 Shalateen – SWRO Extension, Egypt 2020, 6,500 m<sup>3</sup>/d RO  
 NCIC – SWRO, Egypt 2020, 5,800 m<sup>3</sup>/d RO  
 Umm Al Houl Expansion, Qatar 2019, 280,000 m<sup>3</sup>/d RO  
 NEOM SWRO, Saudi Arabia 2019, 215,000 m<sup>3</sup>/d RO  
 Jebel Ali SWRO, United Arab Emirates 2019, 183,000 m<sup>3</sup>/d RO  
 Jurong Island Desalination Plant (JIDP), Singapore 2019, 137,000 m<sup>3</sup>/d RO  
 Salalah IWP, Oman 2019, 114,000 m<sup>3</sup>/d RO  
 Formosa SWRO Desalination Plant, Taiwan 2019, 105,000 m<sup>3</sup>/d RO  
 Quebrada Blanca SWRO (Mining Project), Chile 2019, 102,360 m<sup>3</sup>/d RO  
 Aghadir SWRO, Morocco 2019, 100,000 m<sup>3</sup>/d RO  
 New Mansoura 20 MLD, Egypt 2019, 100,000 m<sup>3</sup>/d RO  
 Ain Shokna SWRO, Egypt 2019, 64,000 m<sup>3</sup>/d RO  
 Paphos SWRO, Cyprus 2019, 35,000 m<sup>3</sup>/d RO  
 Jazan Refinery SWRO, Saudi Arabia 2018, 200,000 m<sup>3</sup>/d RO  
 Tabouk Water Treatment Plant, Saudi Arabia 2018, 150,000 m<sup>3</sup>/d RO  
 KAEC King Abdullah Economic City SWRO, Saudi Arabia 2018, 30,000 m<sup>3</sup>/d RO  
 Umlujj SWRO, Saudi Arabia 2018, 18,000 m<sup>3</sup>/d RO  
 Al Hoceima SWRO, Morocco 2018, 17,300 m<sup>3</sup>/d RO  
 Kalba SWRO, Fujairah, United Arab Emirates 2018, 8,327 m<sup>3</sup>/d RO  
 Tocopilla SWRO, Chile 2018, 6,480 m<sup>3</sup>/d RO  
 SWRO Plant in Emirates Palace, Abu Dhabi, United Arab Emirates 2018, 4,500 m<sup>3</sup>/d RO  
 El Alamein SWRO, Egypt 2017, 150,000 m<sup>3</sup>/d RO  
 Al Jubail SWRO, Saudi Arabia 2017, 100,000 m<sup>3</sup>/d RO  
 Kindasa SWRO, Saudi Arabia 2017, 90,000 m<sup>3</sup>/d RO  
 Cuevas de Almanzora, Spain 2017, 25,000 m<sup>3</sup>/d RO  
 Kaia Tse Polishing plant, Saudi Arabia 2017, 20,000 m<sup>3</sup>/d RO  
 Majis RO I Desalination Plant, Sohar Port, Oman 2017, 20,000 m<sup>3</sup>/d RO  
 Bayovar SWRO, Peru 2017, 10,400 m<sup>3</sup>/d RO  
 Barka IV , Oman 2016, 281,000.0 m<sup>3</sup>/d RO  
 Sohar SWRO, Oman 2016, 250,000.0 m<sup>3</sup>/d RO  
 Putatan WTP, Philippines 2016, 150,000.0 m<sup>3</sup>/d RO  
 El Galalah SWRO, Egypt 2016, 150,000.0 m<sup>3</sup>/d RO  
 Trinidad and Tobago SWRO, Trinidad and Tobago 2016, 130,000.0 m<sup>3</sup>/d RO  
 Al Jubail SWRO, Saudi Arabia 2016, 100,000.0 m<sup>3</sup>/d RO  
 Remelah SWRO, Marsa Matrouh, Egypt 2016, 60,000 m<sup>3</sup>/d RO  
 El Tor SWRO, Egypt 2016, 60,000.0 m<sup>3</sup>/d RO  
 Djerba SWRO, Tunisia 2016, 50,000.0 m<sup>3</sup>/d RO  
 El Oued, Algeria 2016, 30,000 m<sup>3</sup>/d RO  
 Jamnagar SWRO Phase 2, India 2016, 24,000.0 m<sup>3</sup>/d RO  
 Chandra Asri SWRO, Indonesia 2016, 10,000 m<sup>3</sup>/d RO

Sal & San Vicente SWRO, Cabo Verde 2016, 10,000 m<sup>3</sup>/d RO  
 Formentera SWRO, Spain 2016, 5,000 m<sup>3</sup>/d RO  
 El Arish SWRO, Egypt 2016, 1,000 m<sup>3</sup>/d RO  
 IWPP Facility D (Qatar), Qatar 2015, 590,000 m<sup>3</sup>/d RO  
 Qurayyat 200 MLD Water Plant , Oman 2015, 200,000 m<sup>3</sup>/d RO  
 RAF 3 Ras Abu Fontas 3 SWRO, Qatar 2015, 160,000 m<sup>3</sup>/d RO  
 Al Yosr II, Egypt 2015, 80,000 m<sup>3</sup>/d RO  
 Al Yosr, Egypt 2015, 45,360 m<sup>3</sup>/d RO  
 Khouribga BWRO, Morocco 2015, 28,512 m<sup>3</sup>/d RO  
 Hassi Messaud SWRO, Algeria 2015, 24,000 m<sup>3</sup>/d RO  
 Desalcott Expansion, Trinidad and Tobago 2015, 15,000 m<sup>3</sup>/d RO  
 Damietta Power Station, Egypt 2015, 10,400 m<sup>3</sup>/d RO  
 Huechun NF, Huechun, Chile 2015, 8,640 m<sup>3</sup>/d NF  
 El Arish, Egypt 2015, 8,500 m<sup>3</sup>/d Other / Unknown  
 Sheikh Zouwayed SWRO, Egypt 2015, 8,338 m<sup>3</sup>/d RO  
 Marassi SWRO, Egypt 2015, 7,500 m<sup>3</sup>/d RO  
 ZADCO Project, Abu Dhabi, United Arab Emirates 2015, 5,185 m<sup>3</sup>/d RO  
 Al Arish SWRO, Egypt 2015, 5,000 m<sup>3</sup>/d RO  
 DEWA, Al Yassat Island RO Plant, Dubai, United Arab Emirates 2015, 5,000 m<sup>3</sup>/d RO  
 Puerto Deseado SWRO, Santa Cruz, Argentina 2015, 3,000 m<sup>3</sup>/d RO  
 Sidi Barani, Egypt 2015, 1,000 m<sup>3</sup>/d RO  
 Hassi R'Mel, Algeria 2015, 650 m<sup>3</sup>/d RO  
 Jamnagar Reliance, Gujarat, India 2014, 160,000 m<sup>3</sup>/d RO  
 Sadara, Saudi Arabia 2014, 150,000 m<sup>3</sup>/d RO  
 Fujairah 1 expansion, Fujairah, United Arab Emirates 2014, 137,000 m<sup>3</sup>/d RO  
 Mirfa, Abu Dhabi, United Arab Emirates 2014, 120,000 m<sup>3</sup>/d RO  
 Remela, Egypt 2014, 27,600 m<sup>3</sup>/d Other / Unknown  
 Copiapo Exp., Copiapo, Chile 2014, 21,816 m<sup>3</sup>/d RO  
 Jeddah North & SOJECO, Jeddah, Saudi Arabia 2014, 15,160 m<sup>3</sup>/d Other / Unknown  
 Jeddah South Port, Jeddah, Saudi Arabia 2014, 15,000 m<sup>3</sup>/d RO  
 City of Tarpon Springs AWS, Florida, United States 2014, 15,000 m<sup>3</sup>/d RO  
 Venta Alta DWTP, Bilbao, Spain 2014, 14,400 m<sup>3</sup>/d Other / Unknown  
 Curaçao phase 6, Curaçao 2014, 10,500 m<sup>3</sup>/d RO  
 King Abdullah University, Jeddah, Saudi Arabia 2014, 10,000 m<sup>3</sup>/d Other / Unknown  
 Aruba VI, Aruba 2014, 10,000 m<sup>3</sup>/d Other / Unknown  
 Mopco, Damietta, Egypt 2014, 8,160 m<sup>3</sup>/d RO  
 Kebilli, Tunisia 2014, 7,560 m<sup>3</sup>/d RO  
 Souk Lahad, Tunisia 2014, 7,560 m<sup>3</sup>/d RO  
 Shalateen SWRO, Shalateen, Egypt 2014, 7,500 m<sup>3</sup>/d RO  
 Buhairat, Jeddah, Saudi Arabia 2014, 7,500 m<sup>3</sup>/d RO  
 Boujdour, Morocco 2014, 7,000 m<sup>3</sup>/d RO  
 Sogeco expansion, Jeddah, Saudi Arabia 2014, 6,500 m<sup>3</sup>/d RO  
 Djelfa, Algeria 2014, 5,800 m<sup>3</sup>/d Other / Unknown  
 Angamos, Chile 2014, 5,600 m<sup>3</sup>/d RO  
 BP Khazzan, Khazzan, Oman 2014, 5,000 m<sup>3</sup>/d RO  
 Zubair, Iraq 2014, 3,080 m<sup>3</sup>/d RO  
 PPioCC-WTP, Riyadh, Saudi Arabia 2012, 168,000 m<sup>3</sup>/d Other / Unknown  
 Rabigh IWPP Phase 2, Rabigh, Saudi Arabia 2012, 120,000 m<sup>3</sup>/d RO  
 SWRO Jorf Lasfar, Morocco 2012, 75,000 m<sup>3</sup>/d RO  
 SWRO Nungua Ghana, Accra, Ghana 2012, 60,000 m<sup>3</sup>/d RO  
 Tia Juana SWRO, Venezuela 2012, 48,000 m<sup>3</sup>/d RO

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Puerto Rosario SWRO, Fuerteventura, Canary Islands, Spain 2012, 48,000 m<sup>3</sup>/d RO  
Barka Phase 3, Barka, Oman 2012, 45,500 m<sup>3</sup>/d RO  
Point Lisas Plant Extension SWRO, Trinidad and Tobago 2012, 18,000 m<sup>3</sup>/d RO  
Tenerife Oeste SWRO, Tenerife, Canary Islands, Spain 2012, 14,000 m<sup>3</sup>/d RO  
Punjilloyd Polysilicon Plant, Doha, Qatar 2012, 12,000 m<sup>3</sup>/d RO  
Qurayyah IPP CCGT Power Plant, Saudi Arabia 2012, 11,520 m<sup>3</sup>/d Other / Unknown  
Saudi City Project, Saudi Arabia 2012, 9,000 m<sup>3</sup>/d Other / Unknown  
Santa Barbara SWRO, Curaçao 2012, 6,000 m<sup>3</sup>/d RO  
Morro Besudo Plant extension, Maspalomas, Spain 2012, 6,000 m<sup>3</sup>/d RO  
Perth II Phase II, WA, Australia 2011, 153,000 m<sup>3</sup>/d RO  
Copiapo, Chile 2011, 30,000 m<sup>3</sup>/d RO  
Saint Thomas, Saint Thomas, Virgin Islands, United States 2011, 30,000 m<sup>3</sup>/d RO  
St. Croix SWRO, Virgin Islands, United States 2011, 8,000 m<sup>3</sup>/d RO  
Soreq, Israel 2010, 500,000 m<sup>3</sup>/d RO  
UDEM Ténés, Algeria 2010, 200,000 m<sup>3</sup>/d RO  
Aruba 2010, 57,000 m<sup>3</sup>/d RO  
IDAM Sagunto, Valencia, Spain 2010, 23,000 m<sup>3</sup>/d RO  
Mossel Bay, South Africa 2010, 15,000 m<sup>3</sup>/d RO  
Algodor, Spain , 65,000 m<sup>3</sup>/d RO

## GESSNER



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### SELECTED REFERENCES

#### Equipment Supplier: GRP Filters

Zart SWRO, Tunisia 2020, 100,000 m<sup>3</sup>/d RO  
Dubal SWRO 2020, 41,000 m<sup>3</sup>/d RO

# REFERENCE DIRECTORY - SUSPENDED SOLIDS REMOVAL, DESALINATION PRETREATMENT & DISINFECTION

Arish SWRO, Egypt 2020, RO  
Taweeleah SWRO, United Arab Emirates 2019, 900,000 m<sup>3</sup>/d RO  
Shuqaiq 3 SWRO, Saudi Arabia 2019, 450,000 m<sup>3</sup>/d RO  
Duqm SWRO, Oman 2019, 150,000 m<sup>3</sup>/d RO  
Ras Al Khaimah SWRO, United Arab Emirates 2019, 100,000 m<sup>3</sup>/d RO  
Sousse SWRO, Tunisia 2019, 50,000 m<sup>3</sup>/d RO  
9 SWRO Plants, Saudi Arabia 2019, RO  
Antofagasta SWRO, Chile 2019, RO  
Shuqaiq SWRO, Saudi Arabia 2018, 500,000 m<sup>3</sup>/d RO  
Shuaibah SWRO, Saudi Arabia 2018, 250,000 m<sup>3</sup>/d RO  
SWCC Satellite Plants, Saudi Arabia 2018, 240,000 m<sup>3</sup>/d  
Al Khobar SWRO, Saudi Arabia 2018, 210,000 m<sup>3</sup>/d RO

Russia Methanol Project Seawater Desalination Station Project, Russia 2020, 5,184 m<sup>3</sup>/d RO  
Shanxi Jinmei Tianyuan Chemical Co., Ltd. Wastewater Zero Discharge Technical Reform Project, Jincheng, Shanxi, China 2020, 3,600 m<sup>3</sup>/d RO  
Zhenjiang New Sodium Acid Wastewater Comprehensive Utilization Project, Zhenjiang, Jiangsu, China 2020, 250 m<sup>3</sup>/d RO

## Hangzhou Creflux Membrane Technology



[www.crefluxmembrane.com](http://www.crefluxmembrane.com)

### SELECTED REFERENCES

#### Equipment Supplier: UF Membranes

Oji Holdings Wastewater Reuse, Nantong, Jiangsu Province, China 2014, 40,000 m<sup>3</sup>/d UF

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### SELECTED REFERENCES

#### EPC Contractor, Membrane and Pretreatment Supplier

Ningbo Seawater Desalination System, Ningbo, Zhejiang, China 2022, 12,000 m<sup>3</sup>/d RO

Shandong Xinhecheng Chemical Water Treatment System, Weifang, Shandong, China 2022, 9,600 m<sup>3</sup>/d RO

Xinte Energy Huaidong Industrial Park Demineralization Project, Hami, Xinjiang, China 2022, 5,232 m<sup>3</sup>/d RO

Shandong Xinhecheng Chemical Water Treatment System, Weifang, Shandong, China 2022, 4,800 m<sup>3</sup>/d RO

Xinte Energy Huaidong Industrial Park Demineralization Project, Hami, Xinjiang, China 2022, 3,840 m<sup>3</sup>/d RO

Zhonghao Chenguang Organic Fluorine Material Project Deionized Water Station, Zigong, Sichuan, China 2022, 3,600 m<sup>3</sup>/d RO

Zhonghao Chenguang Organic Fluorine Material Project Deionized Water Station, Zigong, Sichuan, China 2022, 2,520 m<sup>3</sup>/d RO

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### SELECTED REFERENCES

#### Equipment Supplier: Prefiltration and Drinking Water

New York, United States of America, 2,866 m<sup>3</sup>/d  
Colorado, United States of America, 1,642 m<sup>3</sup>/d  
California, United States of America, 8,726 m<sup>3</sup>/d  
Texas, United States of America, 2,722 m<sup>3</sup>/d

#### Equipment Supplier: Prefiltration

Italy, 5,520 m<sup>3</sup>/d RO  
Azerbaijan, 3,600 m<sup>3</sup>/d RO  
Czech Republic, 7,200 m<sup>3</sup>/d RO  
Italy, 3,600 m<sup>3</sup>/d RO  
Romania, 3,600 m<sup>3</sup>/d RO  
Washington, United States of America, 2,722 m<sup>3</sup>/d

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### SELECTED REFERENCES

#### Equipment Supplier: RO Membranes and UF Modules

Emicool TSE Polishing, Dubai, United Arab Emirates 2016, 2,900 m<sup>3</sup>/d RO  
Arab Center TSE Polishing, Doha, Qatar 2016, 760 m<sup>3</sup>/d RO  
Majis CETRP, Sohar, Oman 2015, 10,000 m<sup>3</sup>/d RO  
Lusail TSE Polishing, Doha, Qatar 2015, 6,600 m<sup>3</sup>/d RO  
West Bay TSE Polishing, Doha, Qatar 2015, 5,000 m<sup>3</sup>/d RO  
Wafi Mall TSE Polishing, Dubai, United Arab Emirates 2015, 1,000 m<sup>3</sup>/d RO

# IDRA DESALINATION & REUSE HANDBOOK

Dubai Parks TSE Polishing, Dubai, United Arab Emirates 2015, 1,000 m<sup>3</sup>/d RO  
Emaar DCP3, Dubai, United Arab Emirates 2014, 20,160 m<sup>3</sup>/d RO  
Gulf Cement WWTP, Ras Al Khaimah, United Arab Emirates 2013, 1,000 m<sup>3</sup>/d RO

## Equipment Supplier: GAC

Laguna Lake Drinking Water Treatment Plant, Manila, Muntinlupa, Philippines 2023, 150,000 m<sup>3</sup>/d RO

## Equipment Supplier: Polyelectrolyte Dosing System

The Umm Al Houl desalination plant, Qatar 2015, 284,000 m<sup>3</sup>/d RO

## ItN Nanovation



[www.itn-nanovation.com](http://www.itn-nanovation.com)

### SELECTED REFERENCES

#### Equipment Supplier: UF Membranes and Ceramic Flat Membranes (CFM)

Yingkou, Liaoning, China 2018, 100,000 m<sup>3</sup>/d RO  
Kuryk, Mangystau Oblasty, Kazakhstan 2018, 50,000 m<sup>3</sup>/d RO  
Red Sea Gate, Jeddah, Saudi Arabia, 300 m<sup>3</sup>/d UF  
St Wendel Hotel, St Wendel, Germany, 50 m<sup>3</sup>/d MBR

#### Equipment Supplier: Polyelectrolyte Equipment

Barka V IWP, Oman 2020, 100,000 m<sup>3</sup>/d RO

#### Equipment Supplier: Pressurized MM Filter and GAC Filter, Carbon Steel

East Bay Drinking Water Treatment Plant, Manila, Pakil-Laguna, Philippines 2021, 50,000 m<sup>3</sup>/d RO

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### SELECTED REFERENCES

#### Equipment Supplier: BAF Gravel Support

Putatan water treatment plant 2, Putatan, Philippines 2016, 150,000 m<sup>3</sup>/d RO

#### Equipment Supplier: Filter Media (Anthracite)

Al Khobar 2, East Coast, Saudi Arabia 2020, 600,000 m<sup>3</sup>/d RO  
Shuqaiq 3 SWRO, Coast of the Red Sea, Saudi Arabia 2019, 450,000 m<sup>3</sup>/d RO

#### Equipment Supplier: Filter Media (Anthracite, Sand, Gravel and Calcite)

SWRO El Alamein, El Alamein, Egypt 2016, 150,000 m<sup>3</sup>/d RO

#### Equipment Supplier: Filter Media (Anthracite, Silica Sand and Gravel)

Sousse SWRO, Sousse, Tunisia 2017, 50,000 m<sup>3</sup>/d RO

#### Equipment Supplier: Filter Nozzles and Sight Glasses for RO

Nungua Desalination Plant, Accra, Ghana 2015, 60,000 m<sup>3</sup>/d RO

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### SELECTED REFERENCES

#### Equipment Supplier: DAF Pretreatment

Daesan SWRO plant, South Korea 2023, 232,200 m<sup>3</sup>/d RO  
Bangkok WTP, Thailand 2023, 115,200 m<sup>3</sup>/d Other / Unknown  
SOPC Oil and Gas, Egypt 2023, 48,000 m<sup>3</sup>/d Other / Unknown  
Sarney WTP, Iran 2022, 129,600 m<sup>3</sup>/d Other / Unknown  
Duqm SWRO plant, Oman 2022, 105,600 m<sup>3</sup>/d RO  
East Bay SWRO plant, Philippines 2022, 58,080 m<sup>3</sup>/d RO  
Ghubrah III SWRO plant, Ghubrah, Muscat, Oman 2021, 748,000 m<sup>3</sup>/d RO  
Yingkou SWRO, Liaoning, China 2021, 456,000 m<sup>3</sup>/d RO  
Chennai SWRO plant, Chennai, Coromandel, India 2021, 375,000 m<sup>3</sup>/d RO  
Barka V SWRO plant, Barka, Al Batinah, Oman 2021, 245,000 m<sup>3</sup>/d RO  
Kuryk SWRO, Mangystau, Kazakhstan 2021, 108,000 m<sup>3</sup>/d RO  
Thangshan SWRO plant, Tangshan, Hebei, China 2021, 100,000 m<sup>3</sup>/d RO  
Jubail 2 SWRO plant, Jubail, Eastern Province, Saudi Arabia 2020, 1,000,000 m<sup>3</sup>/d RO  
Pertamina SWRO plant, Balikpapan, East Kalimantan, Indonesia 2020, 243,000 m<sup>3</sup>/d RO  
Dubai SWRO plant, United Arab Emirates 2020, 99,400 m<sup>3</sup>/d RO  
Jawa SWRO plant, Indonesia 2020, 9,600 m<sup>3</sup>/d RO  
Taweelelah SWRO, Abu Dhabi, United Arab Emirates 2019, 909,000 m<sup>3</sup>/d RO

Desalination plant PROVISUR, Lima, Peru 2018, 8,800 m<sup>3</sup>/h RO  
Spence Copper Mine Desalination Plant, Spence Mine, Chile 2018,  
8,800 m<sup>3</sup>/h RO  
Rabigh 2, Saudi Arabia 2014, 9,590 m<sup>3</sup>/d RO  
Al Zawrah SWRO plant, U.A.E, 2012, 139,200 m<sup>3</sup>/d RO

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### SELECTED REFERENCES

#### Equipment Supplier: Low Pressure Membranes

Marienhospital, Gelsenkirchen, Gelsenkirchen, Germany, 200 m<sup>3</sup>/d MBR  
Municipal WWTP, Israel, 4,000 m<sup>3</sup>/d MBR  
Tuna Cannery, Mexico, 1,150 m<sup>3</sup>/d MBR

## Meidensha Corporation



[www.meidensha.com](http://www.meidensha.com)

### SELECTED REFERENCES

#### Equipment Supplier: MBR Systems

New York, United States 2018, 178 m<sup>3</sup>/d MBR

## Mitsubishi Chemical Corporation



[www.m-chemical.co.jp](http://www.m-chemical.co.jp)

### SELECTED REFERENCES

#### Equipment Supplier: MBR Membranes

Dammam Industrial City-1 WWTP MBR unit, Dammam, Eastern Province, Saudi Arabia 2014, 5,000 m<sup>3</sup>/d MBR

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### SELECTED REFERENCES

#### Equipment Supplier: Ceramic UF Membranes

Power plant, Xinjiang, China 2023, 15,120 m<sup>3</sup>/d UF  
Power plant, Shandong, China 2023, 6,480 m<sup>3</sup>/d UF  
Electronics plant, Zhejiang, China 2023, 3,480 m<sup>3</sup>/d UF  
Electronics plant, Zhejiang, China 2023, 2,160 m<sup>3</sup>/d UF  
Display manufacturing plant, Anhui, China 2023, 1,848 m<sup>3</sup>/d UF  
Specialty glass plant, Hunan, China 2023, 1,080 m<sup>3</sup>/d UF  
Refinery, Jiangsu, China 2022, 6,182 m<sup>3</sup>/d UF  
Specialty glass plant, Anhui, China 2022, 5,553 m<sup>3</sup>/d UF  
Chemical plant, Zhejiang, China 2022, 5,000 m<sup>3</sup>/d UF  
Power plant, Anhui, China 2022, 4,320 m<sup>3</sup>/d UF  
Power plant, Shandong, China 2022, 3,960 m<sup>3</sup>/d UF  
Wafer plant, Zhejiang, China 2022, 3,600 m<sup>3</sup>/d UF  
PV manufacturing plant, Xinjiang, China 2022, 3,312 m<sup>3</sup>/d UF  
Coal mine, Shanxi, China 2022, 2,112 m<sup>3</sup>/d UF  
Semiconductor fab, Anhui, China 2022, 1,920 m<sup>3</sup>/d UF  
Power plant, Anhui, China 2022, 1,872 m<sup>3</sup>/d UF  
Refinery, Hunan, China 2022, 1,800 m<sup>3</sup>/d UF  
Chemical plant, Zhejiang, China 2022, 1,728 m<sup>3</sup>/d UF  
Semiconductor fab, Anhui, China 2022, 1,440 m<sup>3</sup>/d UF  
PV manufacturing plant, Ningxia, China 2022, 1,392 m<sup>3</sup>/d UF  
Semiconductor fab, Singapore 2022, 1,363 m<sup>3</sup>/d UF  
Power plant, Xinjiang, China 2022, 1,200 m<sup>3</sup>/d UF  
Steel plant, Inner Mongolia, China 2022, 960 m<sup>3</sup>/d UF  
Display manufacturing plant, Anhui, China 2022, 800 m<sup>3</sup>/d UF  
Chemical plant, Jiangsu, China 2022, 576 m<sup>3</sup>/d UF  
Chemical plant, Shandong, China 2022, 456 m<sup>3</sup>/d UF  
Semiconductor plant, Shanghai, China 2022, 420 m<sup>3</sup>/d UF  
Semiconductor fab, Taiwan, Hsinchu, China 2022, 150 m<sup>3</sup>/d UF  
Semiconductor fab, Shanghai, China 2022, 144 m<sup>3</sup>/d UF  
Xiaojihan coal mining wastewater reuse, Yulin, Shanxi province, China 2019, 34,848 m<sup>3</sup>/d UF  
Huadian Weifang power plant cooling tower water reuse, Weifang, Shandong province, China 2018, 9,360 m<sup>3</sup>/d UF

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Huozhou coal electricity group of Lvliangshan Dianping mine water treatment project, Huozhou, Shanxi province, China 2018, 6,000 m<sup>3</sup>/d UF

Wistron Kunshan grinding waste water & cutting waste water reuse, Kunshan, Jiangsu province, China 2018, 4,400 m<sup>3</sup>/d UF

Huadian Jurong FGD waste water ZLD project, Jurong, Jiangsu province, China 2018, 4,000 m<sup>3</sup>/d UF

Huadian Jinxing Power Xiaojiawa coal mine water reuse, Xiaojiawa, Shanxi province, China 2018, 3,900 m<sup>3</sup>/d UF

SMIC HF waste water ZLD project, Shanghai, China 2018, 3,000 m<sup>3</sup>/d UF

Wujing power plant cooling tower water reuse, Shanghai, China 2018, 1,440 m<sup>3</sup>/d UF

Huatian Kunshan electronic waste water phase 2, Kunshan, Jiangsu province, China 2018, 1,000 m<sup>3</sup>/d UF

Semiconductor manufacturer grinding waste water reuse phase 4, East China, China 2018, 800 m<sup>3</sup>/d UF

Malaysia grinding waste water & cutting waste water reuse project, Malaysia 2018, 480 m<sup>3</sup>/d UF

Suzhou Power Plant cooling tower waste water reuse phase 1 and 2, Suzhou, Anhui province, China 2017, 7,200 m<sup>3</sup>/d UF

CNSIC Hongsifang waste water reuse, Hefei, Anhui province, China 2017, 3,600 m<sup>3</sup>/d UF

Huatian Kunshan grinding waste water & cutting waste water reuse project phase 1, Kunshan, Jiangsu province, China 2017, 1,920 m<sup>3</sup>/d UF

Semiconductor manufacturer grinding waste water reuse phase 3, East China, China 2017, 800 m<sup>3</sup>/d UF

Qinghai Salt Lake Group Haina Chemical waste water reuse, Xining, Qinghai province, China 2016, 3,120 m<sup>3</sup>/d UF

Semiconductor manufacturer waste water reuse phase 1, East China, China 2016, 1,200 m<sup>3</sup>/d UF

Semiconductor manufacturer grinding waste water & cutting waste water reuse project phase 2, East China, China 2016, 800 m<sup>3</sup>/d UF

China Coal Menkeqing Coal mine, Wushen, Inner Mongolia, China, 60,000 m<sup>3</sup>/d RO

Huadian Yuheng Xiaojian Coal Mine, Yulin, Shanxi, China, 44,000 m<sup>3</sup>/d RO

China Coal Muduchaideng Coal mine, Wushen, Inner Mongolia, China, 11,520 m<sup>3</sup>/d RO

Wistron Corporation (Kunshan) Grinding & Cutting WW Reuse, Kunshan, Jiangsu, China, 5,040 m<sup>3</sup>/d RO

Datang Linqing BFW Retrofit Project, Shandong, China, 3,960 m<sup>3</sup>/d RO

Henan Xinlianxin Group, Pingdingshan, Henan, China, 2,880 m<sup>3</sup>/d RO

Nixi Semiconductor Technology, Shanghai, China, 1,650 m<sup>3</sup>/d RO

Qingdao Huike Project, Qingdao, Shandong, China, 1,512 m<sup>3</sup>/d RO

Shanghai Kaihong Project, Shanghai, China, 1,378 m<sup>3</sup>/d RO

Micron SG Grinding Wastewater reuse, Singapore, 1,363 m<sup>3</sup>/d RO

Huatian Technology (Kunshan) Electronics Co. Ltd Cutting Waste Water, Kunshan, Jiangsu, China, 1,351 m<sup>3</sup>/d RO

Zhejiang Jinruihong Grinding Waste Water Project, Ningbo, Zhejiang, China, 1,212 m<sup>3</sup>/d RO

Huatian Technology (Kunshan) Electronics Co. Ltd Heavy Metal Waste Water, Kunshan, Jiangsu, China, 1,200 m<sup>3</sup>/d RO

ASE Backgrinding & Dicing Saw Wastewater reuse, Singapore, 1,158 m<sup>3</sup>/d RO

Global Foundries, Malta, New York, United States, 1,150 m<sup>3</sup>/d RO

Hangzhou Shilan, Hangzhou, Zhejiang, China, 1,008 m<sup>3</sup>/d RO

Huatian Technology (Kunshan) Electronics Co. Ltd Grinding Waste Water, Kunshan, Jiangsu, China, 772 m<sup>3</sup>/d RO

Micron Batu Kawan Ph.2 Wastewater reuse, Seberang Perai, Penang, Malaysia, 600 m<sup>3</sup>/d RO

Ferrotec (Hangzhou), Hangzhou, Zhejiang, China, 595 m<sup>3</sup>/d RO

Chinalco Ningxia Yingxing power plant, Yinchuan, Ningxia, China, 480 m<sup>3</sup>/d RO

Micron Batu Kawan Wastewater reuse, Seberang Perai, Penang, Malaysia, 360 m<sup>3</sup>/d RO

Jining Birla Carbon High Salinity Wastewater TMF Retrofit, Jinan, Shandong, China, 360 m<sup>3</sup>/d RO

Wuhan Qianshui Environment Science and Technology, Wuhan, Hubei, China, 336 m<sup>3</sup>/d RO

Shanxi Energy Shangluo Power Plant, Shangluo, Shanxi, China, 308 m<sup>3</sup>/d RO

Universal Scientific Industrial (Shanghai) Co. Ltd.(ASE HUANXU), Shanghai, China, 288 m<sup>3</sup>/d RO

Huawei (Wuhan), Wuhan, Hubei, China, 240 m<sup>3</sup>/d RO

Shanghai Jita Semiconductor Waste Water Reuse, Shanghai, China, 144 m<sup>3</sup>/d RO

## Nijhuis Industries



[www.nijhuisindustries.com](http://www.nijhuisindustries.com)

### SELECTED REFERENCES

#### Equipment Supplier: DAF Pretreatment System

Singapore 2017, 136,380 m<sup>3</sup>/d RO

## Pall Corporation



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[www.pall.com](http://www.pall.com)

### SELECTED REFERENCES

#### Equipment Supplier: MF and RO Membranes

Manila, Philippines 2013, 100,000 m<sup>3</sup>/d RO

#### Equipment Supplier: MF Membranes

Westside Recycled Water Project, San Francisco, United States 2017, 6,056 m<sup>3</sup>/d RO

Sohar, Oman 2013, 3,000 m<sup>3</sup>/d RO

#### Equipment Supplier: MF Pretreatment System

Barka, Oman 2015, 56,780 m<sup>3</sup>/d RO

#### Equipment Supplier: Pretreatment System

Asyut, Egypt 2015, 13,440 m<sup>3</sup>/d RO

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[www.passavant-geiger.com/en/water-intakes-and-pumping-stations](http://www.passavant-geiger.com/en/water-intakes-and-pumping-stations)

### SELECTED REFERENCES

#### Equipment Supplier: Water Intake Screening Equipment

- Jebel Ali Power and Desalination Plant, Dubai, United Arab Emirates 2020, 181,840 m<sup>3</sup>/d RO
- Marina East Desalination Plant, Singapore 2018, 136,380 m<sup>3</sup>/d RO
- Barka IV Power and Desalination Plant, Oman 2017, 281,000 m<sup>3</sup>/d RO
- Sohar Power and Desalination Plant, Oman 2017, 250,000 m<sup>3</sup>/d RO
- Doha West Power and Desalination Plant, Kuwait 2016, 392,400 m<sup>3</sup>/d MSF
- Ras Abu Fontas A3 Desalination Plant, Qatar 2016, 164,000 m<sup>3</sup>/d RO
- Shoaiba Power and Desalination Plant SWCC, Saudi Arabia 2015, 91,200 m<sup>3</sup>/d RO

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### SELECTED REFERENCES

#### Equipment Supplier: Low Pressure Membranes

- Offshore SW-UF, Offshore, Brazil 2023, 71,800 m<sup>3</sup>/d
- Offshore SW-UF, Offshore, Angola 2023, 45,000 m<sup>3</sup>/d
- Offshore SW-UF, Offshore, Brazil 2022, 54,600 m<sup>3</sup>/d
- Drinking water UF, Harelbeke, Belgium 2022, 50,000 m<sup>3</sup>/d
- Offshore SW-UF, Offshore, Persian Gulf 2022, 27,800 m<sup>3</sup>/d
- Drinking water UF, Tashkent, Uzbekistan 2022, 26,000 m<sup>3</sup>/d
- SWRO UF, Chennai, India 2021, 340,000 m<sup>3</sup>/d
- Drinking water UF, Trollhättan, Sweden 2021, 28,000 m<sup>3</sup>/d
- Drinking water UF, Gothenburg, Sweden 2021, 6,600 m<sup>3</sup>/d
- SWRO UF, Copiapó, Chile 2021, 74,000 + 49,000 m<sup>3</sup>/d
- Drinking water UF, Gothenburg, Sweden 2019, 186,000 m<sup>3</sup>/d
- Dual mode SWRO & BWRO UF, Singapore 2017, 300,000 m<sup>3</sup>/d
- SWRO UF, Calama, Chile 2017, 19,400 m<sup>3</sup>/d
- SWRO UF, Ras al-Khafji, Saudi Arabia 2016, 175,000 m<sup>3</sup>/d
- WTP Drinking water UF, Kungälv, Sweden 2016, 26,000 m<sup>3</sup>/d
- BWRO UF, Basra, Iraq 2014, 266,000 m<sup>3</sup>/d
- WTP Drinking water UF, Skärholmen, Sweden 2014, 26,000 m<sup>3</sup>/d
- SWRO, Al Jubail, Saudi Arabia 2013, 430,000 m<sup>3</sup>/d
- SWRO UF, Al Jubail, Saudi Arabia 2012, 260,000 m<sup>3</sup>/d

SWRO UF, Al Jubail, Saudi Arabia 2012, 240,000 m<sup>3</sup>/d  
SWRO UF, Barka, Oman 2012, 110,000 m<sup>3</sup>/d

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### SELECTED REFERENCES

#### Equipment Supplier: Filters

- Shuqaiq 4 IWP, Saudi Arabia 2021, 400,000 m<sup>3</sup>/d RO
- Laguna Lake, Philippines 2021, 100,000 m<sup>3</sup>/d RO
- Jubail 3A SWRO, Saudi Arabia 2020, 600,000 m<sup>3</sup>/d RO
- El Arish, Egypt 2020, 100,000 m<sup>3</sup>/d RO
- Basra, Iraq 2020, 100,000 m<sup>3</sup>/d Other / Unknown
- Sousse, Tunisia 2020, 50,000 m<sup>3</sup>/d RO
- Zarat, Tunisia 2020, 50,000 m<sup>3</sup>/d Other / Unknown
- Barge, Saudi Arabia 2020, 50,000 m<sup>3</sup>/d Other / Unknown
- TRSDC, Saudi Arabia 2020, 12,500 m<sup>3</sup>/d Other / Unknown
- Sukari Gold Mine, Egypt 2020, 2,000 m<sup>3</sup>/d Other / Unknown
- Taweelah, United Arab Emirates 2019, 909,000 m<sup>3</sup>/d RO
- Shuqaiq III, Saudi Arabia 2019, 450,000 m<sup>3</sup>/d RO
- Al Khobar, Saudi Arabia 2019, 250,000 m<sup>3</sup>/d RO
- Marina East SWRO, Singapore 2019, 200,000 m<sup>3</sup>/d RO
- Tseung Kwan O SWRO, China 2019, 135,000 m<sup>3</sup>/d RO
- Antofagasta, Chile 2019, 105,600 m<sup>3</sup>/d Other / Unknown
- Dubai, United Arab Emirates 2019, 41,000 m<sup>3</sup>/d RO
- Duqum, Oman 2019, 36,000 m<sup>3</sup>/d RO
- TRSDC, Saudi Arabia 2019, 12,500 m<sup>3</sup>/d RO
- Desalitech, Malaysia 2019, 6,300 m<sup>3</sup>/d Other / Unknown

#### Equipment Supplier: FRP Filter Housings

- Jubail 3B, Al Jubail, Saudi Arabia 2021
- Sfax, Tunisia 2021
- Jorf Lasfar Phase 2, Jorf Lasfar, Morocco 2021
- San Diego North RO, San Diego, California, United States 2021, RO
- WBII Grand Cayman SWRO, Grand Cayman, Cayman Islands 2021, RO

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### SELECTED REFERENCES

#### Equipment Supplier: Media Filters

Al Yasat Island, United Arab Emirates 2020, 9,500 m<sup>3</sup>/d RO  
Lambayeque, Peru 2020, RO  
Saudi Arabia 2020, RO  
Bonaire, Netherlands 2020, RO  
Bahrain Steel, Bahrain 2020, RO  
Kedougou, Senegal 2019, RO  
Foundioungne, Senegal 2019, RO  
Dakar, Senegal 2019, RO  
Duba, Saudi Arabia 2017, 8,000 m<sup>3</sup>/d RO  
Al Raja, United Arab Emirates 2017, RO  
Qatar 2015, RO  
Fonsalía (Guía de Isora), Spain 2014, 14,000 m<sup>3</sup>/d RO  
Las Cruces, Seville, Spain 2012, RO

Hebei Taihang Iron and Steel Group Co., Ltd. UF Project, Hebei Province, China 2020, 19,968 m<sup>3</sup>/d RO

Yangshuihe UF Project of Guizhou Kailin Fertilizer Co., Ltd., Guizhou, China 2020, 15,120 m<sup>3</sup>/d RO

Chemical Water Updating EPC Project for China Guodian Shenyang Thermal Power Plant, Shenyang, China 2020, 13,680 m<sup>3</sup>/d RO

Zhenhai Power Plant Boiler Water Supply UF Project of Zhejiang Energy Group Co., Ltd., China 2020, 12,312 m<sup>3</sup>/d RO

Dry Quenching Plant Desalination Project (2x190), India 2020, 12,024 m<sup>3</sup>/d RO

UF Project of Chenzhen Energy Chaoan Power Plant, Guangdong, China 2020, 9,600 m<sup>3</sup>/d RO

Osmoflo Seawater Containerized Purification System for Potable Use, Thailand 2020, 9,000 m<sup>3</sup>/d RO

Desalinated Water Project of Xinlianxin Fertilizer Co., Ltd., Henan Province, China 2019, 22,680 m<sup>3</sup>/d RO

Source leakage sewage treatment project, Jiaoyishan Phosphogypsum storage yard, Guizhou Crach-Guiyang Phosphorus Fertilizer Co., Ltd, Guizhou, China 2019, 20,400 m<sup>3</sup>/d UF

Reclaimed Water Project of Xinlianxin Fertilizer Co., Ltd., Henan Province, China 2019, 19,152 m<sup>3</sup>/d RO

Laiwu UF Project of Shandong Fulun Steel Company Ltd. of Jiuyang Enterprise Group, Shandong Province, China 2019, 18,860 m<sup>3</sup>/d RO

Bin Tanzania UF Project of Nanshan Group, Bin Tanzania, Indonesia 2019, 15,480 m<sup>3</sup>/d RO

UF Project for Expansion Desalting System of Shandong Bin Yang Gasification Co., Ltd., Binyang, Shandong Province, China 2019, 9,720 m<sup>3</sup>/d RO

Beijing Future Science and Technology City Water Plant, Beijing, China 2012, 80,000 m<sup>3</sup>/d UF

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### SELECTED REFERENCES

#### EPC Contractor and Equipment Supplier

Beijing Changping New City Regeneration Water Plant, Beijing, China 2015, 22,000 m<sup>3</sup>/d UF

#### Equipment Supplier: Membranes (Replacement)

Pretreatment Plant at APP OKI Pulp & Paper Mills, Indonesia 2020, 66,000 m<sup>3</sup>/d RO

Submerged UF Replacement Project II of TISCO Shanxi Taigang Stainless Steel Co., Ltd., Shanxi Province, China 2020, 17,556 m<sup>3</sup>/d RO

UF Replacement Project of Petro-China Lanzhou Petrochemical Company, Lanzhou, Gansu, China 2020, 13,249 m<sup>3</sup>/d RO

UF Project of Inner Mongolia Wuhai Chemical Industry Co., Ltd., Inner Mongolia, China 2020, 12,816 m<sup>3</sup>/d RO

Desalination Plant UF Replacement Project for Shuangxin Environment-Friendly Material Co., Ltd., Inner Mongolia, China 2020, 11,760 m<sup>3</sup>/d RO

HD UF Project of Indonesia Coal-fired Power Plant Project, Indonesia 2020, 1,600 m<sup>3</sup>/d RO

Aqueous Seawater Desalination Containerized Project, United States 2019, 24,000 m<sup>3</sup>/d UF

UF Replacement Project of the Cangzhou Power Plant, Cangzhou, Hebei Province, China 2019, 12,000 m<sup>3</sup>/d RO

Fengnan Steel UF Replacement Project I of Hebei Zongheng Steel & Iron Group Co., Ltd., Hebei Province, China 2019, 12,000 m<sup>3</sup>/d RO

GE Retrofit Project of Chesapeake Drinking Water Plant, Virginia, United States 2019, 6,280 m<sup>3</sup>/d UF

Barwon Water Municipal Wastewater Project, Australia 2018, 6,600 m<sup>3</sup>/d UF

Shenhua Ningxia Coal Group Olefin cleaning water UF workshop, Ningdong, Ningxia province, China 2017, 70,000 m<sup>3</sup>/d RO

#### Equipment Supplier: Low Pressure Membranes

Huaneng Zhengning coal power coal mine wastewater advanced treatment project, Gansu, Qingyang, China 2022, 39,000 m<sup>3</sup>/d UF  
Xintian Coal Chemical biochemical workshop replacement project, Xinjiang, Yili, China 2022, 30,720 m<sup>3</sup>/d UF

Tisco NO.3 membrane workshop water reuse system project, Taiyuan, Shanxi, China 2022, 25,200 m<sup>3</sup>/d UF

Shougang Hierro Peru Seawater Desalination expansion project, Peru 2022, 22,464 m<sup>3</sup>/d UF

Huizhou Pinghai power plant project, Guangdong, Huizhou, China 2022, 12,000 m<sup>3</sup>/d UF

Baoyi thermal power plant reclaimed water transformation project, Inner Mongolia, Baotou, China 2022, 11,500 m<sup>3</sup>/d UF

Shihezi sewage treatment system project, Shihezi, Xinjiang, China 2022, 10,080 m<sup>3</sup>/d UF

China Coal Yulin Energy & Chemical Co., Ltd. Project, Yulin, Gansu, China 2020, 22,656 m<sup>3</sup>/d RO

# REFERENCE DIRECTORY - SUSPENDED SOLIDS REMOVAL, DESALINATION PRETREATMENT & DISINFECTION

## Scinor Water America



[www.scinor.com](http://www.scinor.com)

### SELECTED REFERENCES

#### Equipment Supplier: MF Membranes

Pure Water Monterey, Monterey, California, United States 2017,  
15,140 m<sup>3</sup>/d RO

Al-Ghubrah, Oman 2012, 190,932 m<sup>3</sup>/d RO  
Carlsbad, United States 2012, 190,000 m<sup>3</sup>/d RO  
Fujairah Fr Expansion, United Arab Emirates 2012, 171,000 m<sup>3</sup>/d RO  
Barka Desalination Plant, Oman 2012, 120,000 m<sup>3</sup>/d RO  
Fujairah II, United Arab Emirates, 640,000 m<sup>3</sup>/d RO  
North Field Expansion Project, Qatar Peninsula, Offshore Qatar, Qatar Offshore, Qatar

#### Equipment Supplier: UF Membranes

West Basin Edward C. Little Water Recycling Facility, El Segundo, California, United States 2017, 41,639 m<sup>3</sup>/d RO

## Shanghai SafBon Water Service



[www.safbonwater.com/safbon-shanghai](http://www.safbonwater.com/safbon-shanghai)

### SELECTED REFERENCES

#### EPC Contractor (Pretreatment)

Taweeleah SWRO, Abu Dhabi, United Arab Emirates 2019,  
909,000 m<sup>3</sup>/d RO

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### SELECTED REFERENCES

#### Equipment Supplier: Tube Cleaning Systems and Debris Filters

Umm al Houl IWPP, Qatar 2016, 347,770 m<sup>3</sup>/d MSF  
Barka 1, Oman 2015, 56,780 RO  
Ras Abu Fontas A 2, Qatar 2013, 163,656 m<sup>3</sup>/d MSF  
Dubai Aluminium, United Arab Emirates 2013, MSF  
SWCC Al Khobar, Saudi Arabia 2012, MSF

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### SELECTED REFERENCES

#### Equipment Supplier: Static Mixers

Collahuasi Mine, Patache Port, Iquique, Patache Port, Chile 2022,  
90,720 m<sup>3</sup>/d  
Sorek 2, Tel Aviv, Israel 2021, 548,000 m<sup>3</sup>/d RO  
Yanbu 4, Ar Rayyis, Red Sea Coast, Saudi Arabia 2021, 450,000  
m<sup>3</sup>/d RO  
Tseung Kwan O Stage 1, Tseung Kwan O, Hong Kong 2021,  
270,000 m<sup>3</sup>/d RO  
Jaffna, Sri Lanka 2021, 24,000 m<sup>3</sup>/d RO  
Doha RO P1, Middle East, Kuwait 2017, 189,250 m<sup>3</sup>/d  
Marafiq, Jubail, Middle East, Saudi Arabia 2016, 800,000 m<sup>3</sup>/d  
Aguas Antofagasta, South America, Chile 2016  
Unm Al Houl, Qatar 2015, 620,000 m<sup>3</sup>/d RO  
Yanbu Phase 3, Saudi Arabia 2015, 550,000 m<sup>3</sup>/d Other /  
Unknown  
Ras Abu Fontas A3, Qatar 2015, 136,000 m<sup>3</sup>/d RO  
Az Zour North, Kuwait 2014, 486,000 m<sup>3</sup>/d RO  
Escondida, Chile 2013, 216,000 m<sup>3</sup>/d RO  
Jeddah III SWRO, Saudi Arabia 2012, 240,000 m<sup>3</sup>/d RO

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[www.desalinisation.co.uk](http://www.desalinisation.co.uk)

### SELECTED REFERENCES

#### Equipment Supplier: Pumice Filtration Media

Desaladora de Escombreras, Escombreras, Murcia, Spain 2016, RO  
Aramco, Dammam, Saudi Arabia 2016, RO  
Al Jubail, Saudi Arabia 2016, RO  
Sur IWP, Sohar, Oman 2015, RO  
London, United Kingdom 2015, NF  
Mumbai, India 2014, RO  
Kempton Park WTW, London, United Kingdom 2014, Tertiary  
Muscat, Oman 2014, RO  
Paris, France 2014, NF  
Al Aweer STP, Dubai, United Arab Emirates 2014, RO  
Sur IWP, Sohar, Oman 2014, RO  
Helsinki, Finland 2013, Other

San Miguel, AD, Malaga, Spain 2013, Other  
Al Qurayat, Muscat, Oman 2013, RO  
Utrecht, Netherlands 2013, NF  
Fujairah F1, United Arab Emirates 2013, RO  
Kindasa Phase A O&M, Jeddah, Saudi Arabia 2013, RO  
Geneva, Switzerland 2012, Other  
Fujairah 1, United Arab Emirates 2012, RO  
Desaladora de Oropesa, Oropesa del Mar, Spain 2012, RO  
Kindasa Expansion BOO, Jeddah, Saudi Arabia 2012, RO  
Oil & Gas OM, Houston, United States 2012, NF  
EPC Baiji/Salahaldeen, Baghdad, Iraq 2012, NF  
Al Jubail, Saudi Arabia, RO (Reverse Osmosis)

## Tecnoquimica Exterior



[www.tecexsa.es/en](http://www.tecexsa.es/en)

### SELECTED REFERENCES

**Equipment Supplier: DAF Pretreatment System**

Al Ghubrah, Oman 2012, 190,932 m<sup>3</sup>/d RO

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See pp. 224–234 for Membranes references.

## Equipment Supplier: UV/AOP System

Los Angeles, Los Angeles, California, United States 2015, 22,710 m³/d RO

## Subcontractor and Equipment Supplier: UV/AOP

San Diego, California, United States 2019, 128,690 m³/d RO

## Trojan Technologies



[www.trojantechologies.com](http://www.trojantechologies.com)

## SELECTED REFERENCES

### Equipment Supplier: Disinfection Systems

MWD Regional Recycled Water Scheme, CA (Demo plant), Los Angeles, California, United States 2019, 1,892 m³/d MBR/RO-UV/AOP

Groundwater Reliability Improvement Programme, California, United States 2016, 33,520 m³/d RO

Oceanside IPR, Oceanside, California, United States 2020, 11,355 m³/d RO+AOP

Albert Robles Center for Water Recycling and Environmental Learning, Water Reclamation District, California, United States 2017, 56,775 m³/d UV/AOP

Fresno-Clovis Water Reclamation Facility, Fresno, California, United States 2014, 18,925 m³/d UV/AOP

Groundwater Replenishment System Expansion, Fountain Valley, California, United States 2012, 113,550 m³/d RO

Leo J Vander Lans Advanced Water Treatment Facility Expansion, Long Beach, California, United States 2012, 18,925 m³/d RO

## Xylem Inc.



[www.xylem.com/en-uk](http://www.xylem.com/en-uk)

## SELECTED REFERENCES

### Equipment Supplier: Leopold Clari-DAF System

Fujairah, United Arab Emirates 2012, 136,000 m³/d RO

### Equipment Supplier: Ozone and UV/AOP

Monterey, California, United States 2017, 15,140 m³/d RO

### Equipment Supplier: UV System

Pure Water Project Demo, Agoura Hills, California, United States 2019, 545 m³/d RO

San Francisco, California, United States 2017, 6,056 m³/d RO

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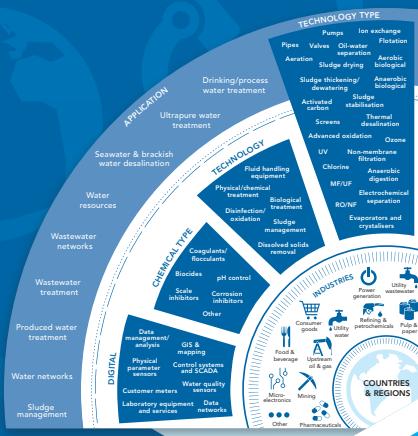
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22,000+ US industrial facilities



1,200+ industrial end users

11 Industrial Verticals

6,500+ water & wastewater utility profiles



57,000+ water & wastewater treatment plants with technology breakdown



568 cities from 186 countries in the tariff survey



### Download our product brochure

By bringing GWI's market forecasts and proprietary databases together with regular analyst commentary and direct access to third-party datasets, GWI WaterData will revolutionise the way you conduct strategic research and take big decisions.

### Join a Diverse Range of Water Sector Professionals and Executives

Who rely on the platform as the backbone of their strategy planning for three key business functions:



### Market Metrics

Validate the current size and growth rate of your market



### Market Dynamics

Assess the competitive and technological landscape of your market



### Market Access

Identify potential customers, partners and routes to opportunity

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