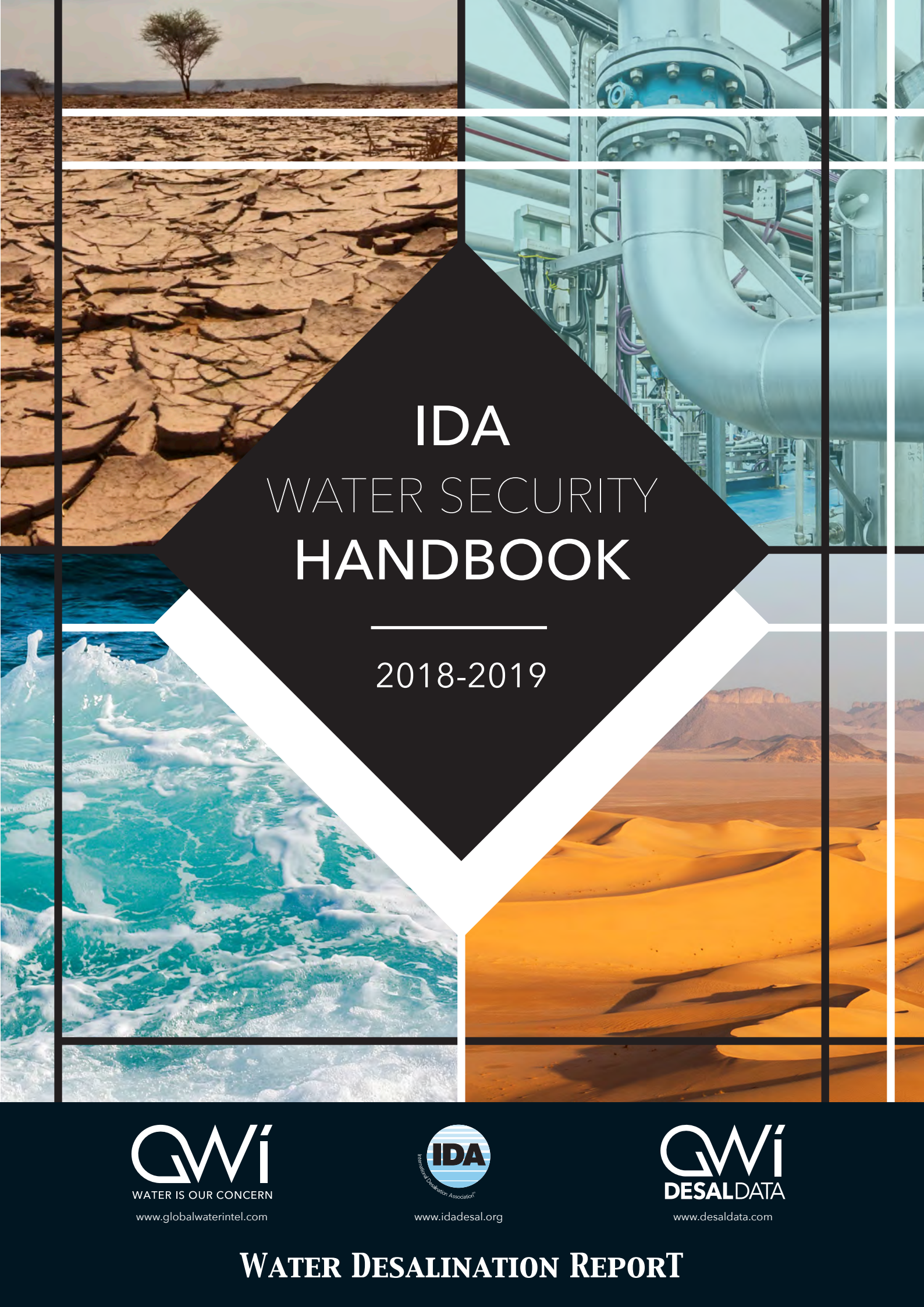




IDA WATER SECURITY HANDBOOK

2018-2019

Creating value through smarter desalination technologies

Az Zour North
MED plant,
Koweit -
486,000 m³/day



© Veolia Photo Library



Sadara Marafiq
SWRO plant,
Jubail - KSA -
178,800 m³/day

With a total of 6,000,000 m³/day installed capacity, SIDEM combines proven expertise in both thermal and reverse osmosis desalination technologies.

SIDEM recently completed large-scale SWRO and MED projects such as Az-Zour South, Az Zour North, Sur extension and Sadara Marafiq.

Through continuous innovation SIDEM has allowed its customers to significantly lower chemical and electrical consumption, reduce footprint and improve overall performance of their plants.

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IDA WATER SECURITY HANDBOOK

2018 – 2019



www.idadesal.org



WATER DESALINATION REPORT

Foreword

The IDA Water Security Handbook is designed to connect decision makers facing water scarcity with the leading desalination, reuse and smart leakage reduction solutions providers. As the successor to the IDA Desalination Yearbook, this publication demonstrates the range of available solutions to water shortage, covering desalination, water reuse and smart leakage reduction. 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 utility and technology profiles and market analysis, commentary and profiles of desalination, reuse and smart water projects around the world, the IDA Water Security Handbook contains three inventories of plants and projects:

- The 31st GWI/IDA Worldwide Desalting Inventory found on p.32 covers desalination plants contracted between July 2017 and June 2018. The Inventory is collected on an annual basis by Global Water Intelligence (GWI) and the International Desalination Association (IDA), and aims to be a comprehensive dataset of every desalination plant with a capacity greater than 500 m³/d.
- The GWI Water Reuse Inventory found on p.63 cover water reuse plants contracted since 2010, with a capacity of 5,000 m³/d or greater and using tertiary or more advanced treatment technology.
- A pilot inventory of smart water management projects in utility distribution networks can be found on p.83. This inventory represents a snapshot of a rapidly growing area of water management, with an increasingly important role in water security across the world.

The IDA Water Security Handbook is published by Global Water Intelligence and the International Desalination 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 Samantha Yates at sy@globalwaterleaders.org 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 IDA Water Security 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 ³)	=	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 1233.6 m ³
1 megalitre	=	1,000 cubic metres
1 gigalitre	=	1,000,000 cubic metres
1 MIGD	=	4,546 m ³ /d
1 MGD	=	3,785 m ³ /d
1 MGD	=	1120 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 31st August 2018.

This report was written and edited by Rory Weaver, Max Howells and Hector Brown.
The Reference Directory was compiled by Nathan Courtney, Max Howells, Edward Wignall, Yujia Shen, and Rory Weaver.
The advertisements were collected by Kirsty Hewitt, Alice Gurr, and Ruth Newcombe.
Layout and production by Charlotte Gurr and Charlotte Massey.

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 Association (IDA) members are encouraged to send references to watersecurityhandbook@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

IDA Water Security Handbook 2018-2019
ISBN: 978-1-907467-55-4

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Contents

The Year in Scarcity	2
Cape Town	2
Windhoek	4
São Paulo	6
Perth, Western Australia	8
Southern California	10
Hunter, New South Wales, Australia	12
The Year in Technology	14
Desalination and reuse	14
Digital water network monitoring	16
Desalination Market Profile	18
Featured Desalination Plants	27
H2Oaks Center, Texas, USA.	27
Djerba, Tunisia	28
Masdar City, Abu Dhabi, UAE	29
Mirfa IWPP, Abu Dhabi, UAE.	30
Barka 4 IWP, Oman	31
New Desalination Plants Contracted 2017-2018	32
Desalination Solutions Finder	44
Reuse Market Profile	51
Featured Reuse Plants	58
Beenyup advanced water recycling plant	58
Ashalim solar power plant	59
Bishui underground WWTP	59
Chapultepec reuse, Mexico	60
Terminal Island AWWP, USA.	61
Bamroli reuse, Gujarat, India	62
Selected Reuse Plants Contracted 2010-2018	63
Reuse Solutions Finder	70
Smart Leakage Reduction Market Profile	74
Featured Smart Leakage Reduction Projects	79
Riyadh, Saudi Arabia: network sectorisation and NRW reduction	79
Qassim, Saudi Arabia: advanced metering infrastructure	80
Knoxville, Tennessee: network upgrade and software adoption	81
Thames Water, UK: smart metering and pressure management	82

Lyon, France: advanced metering infrastructure and fixed-network acoustic leak detection	82
Smart Water Management Project List	83
Smart Leakage Reduction Solutions Finder	88
Reference Directory	89
360 Environmental	89
ABB Group	89
Abengoa	89
Absun Zolal	89
Acciona Agua	90
Ace Water Treatment Co. Ltd	90
ACWA Services Ltd.	92
ADAN Technical & Economic Services Ltd.	92
AECOM Technology Corporation	92
AES Arabia Ltd.	92
AGC Engineering Co. Ltd.	94
AGRU Kunststofftechnik Gesellschaft m.b.H.	94
Al Kafaah LLC	96
Alden Research Laboratory, Inc	96
Alfa Laval Process Technology	97
Almar Water Solutions	97
ANDRITZ	97
Angee & Sons Inc	97
Aqualectra, Water and Power Company of Curacao	98
Aqualia	98
Aqualink	100
Aquamatch Turkiye	100
Aquarion AG	100
Aquarius Spectrum	100
AquaSwiss AG	101
Aquatec-Maxcon	101
Aquatech International Corporation	101
AquaTreat Group	102
Arabian Company for Water & Power Development Ltd. (ACWA Power)	102
Arflu, S.A.	103
Asahi Kasei Corporation	104
ASCO Carbon Dioxide Ltd.	104
Avista Technologies, Inc.	105
Axiom	105
AYESA Group	105

Badger Meter	106
BASF	106
Beijing Origin	106
Beijing Woteer Water Engineering Co., Ltd.	106
BEL Group Limited	106
Berghof Membrane Technology GmbH	107
BESIX	107
BGR Energy System India Ltd	108
Bharat Heavy Electricals Limited	108
BIKAR, Juntas y Compensadores, S.L.	108
Biwater	109
Black & Veatch	109
Boustead Salcon Water Solutions Pte Ltd	110
BS water & energy	110
BWA Water Additives	110
Cadagua	111
Calder GmbH - A Flowserve Company	111
Canadian Environmental Alternatives Ltd.	112
Cannon Artes	112
Caribbean Water Treatment Ltd.	112
Castflow Valves, S.L.	112
Cembrane	113
Chemical Process Piping Pvt Ltd	114
Chiyoda Corporation	114
Chriwa Wasseraufbereitungstechnik GmbH	114
Consolidated Water Co. Ltd.	114
Consulting Engineering Co.	114
Corodex Industries	115
Danfoss A/S	115
Deltares	116
Desalia	116
Desalination Company of Trinidad and Tobago Limited	116
Desalitech, Ltd.	116
DHI Group	117
Dimasa Group	117
Doosan Enpure Ltd.	117
Doosan Heavy Industries & Construction Co., Ltd.	117
Diehl Metering	118
Dow Water & Process Solutions	120
Düchting Pumpen	120
Eastern Environmental Consultants Pty Ltd.	121

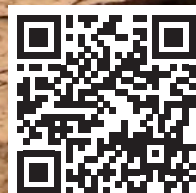
Ebro Armaturen Gebr. Bröer GmbH	121
Echologics	121
Ecoagua Ingenieros	121
Econity	122
Ecopreneur	122
Elster Metering (Honeywell)	122
EMCO Group	122
Energoprojekt Entel	122
Energy Recovery, Inc.	123
ESCO International Ltd	124
Estruagua	124
EVERS GmbH & Co.	124
Evides Industriewater	124
Fichtner GmbH	124
Filtralite / Saint-Gobain	125
Fisia Italimpianti	125
FIP - Formatura Iniezione Polimeri S.p.A.	126
Fluence Corporation	126
Fluid Equipment Development Company (FEDCO)	129
Fluytec S.A.	130
Future Pipe Industries LLC	131
Ganden	131
Georg Fischer Piping System Ltd.	132
Geoscience Support Services, Incorporated	132
GHD	132
GKW Consult	132
Greentech Environmental Co. Ltd.	132
Grundfos	133
GS Inima Environment, S.A.	133
Gutermann	134
H. BUTTING GmbH & Co. KG	134
H2O Innovation	134
H2Oil & Gas Ltd	136
Halma Water Management	136
Hangzhou Water Treatment Technology Development Center Co., Ltd	136
Harmsco Filtration Products	137
Harn R/O Systems Inc.	137
Hatch Ltd.	139
Heartland Water Technologies	139
Hindustan Dorr-Oliver Limited	139

Hitachi Zosen Corporation	139	McWong Environmental Technology Corp., Ltd.	158
Hutchison Water	139	MEGA A.S.	159
Hydranautics – A Nitto Group Company	140	Membrane SRL	159
Hydro Extruded Solutions	141	Met-Pro Global Pump Solutions	160
Hyflux Limited	141	Metito	160
Hyosung Goodsprings	145	Microdyn-Nadir GmbH	162
i2O	145	Midwater	163
IDE Technologies Ltd.	145	Mitsubishi Heavy Industries, Ltd.	163
ILF Consulting Engineers	146	Mott MacDonald	163
Indar Maquinas Hidraulicas, S.L	146	Moya Bushnak	164
Inexa	146	Much More Water A/S	164
inge GmbH, BASF's Ultrafiltration Membrane Business	147	Mueller Water Products	164
Innovyze	147	Neptune Technology Group Inc.	164
Ion Exchange Ltd.	147	New Water Corporation Ltd.	165
ISOBARIX	148	Novatron	165
Italmatch Chemicals	148	NVCo	165
ItN Nanovation	149	Omya International AG	165
Itron	149	OrangeBoat LLC	166
Jacobs	149	Organo	166
Japan Steel Works	150	Osmo Sistemi	166
JF Shea	150	Osmoflo Pty Ltd	167
Kamstrup	150	Piedmont Pacific Corporation	169
KEIKEN Engineering	150	Pentair	170
Keppel Seghers	150	Poseidon Resources Corporation	170
Kiewit Corporation	150	Poten Enviro	170
KII/Suns River	151	Power Generation Engineering Services Co. (PGESCO)	172
King Lee Technologies	151	ProMinent	172
Kirton Engineering Limited	152	PROQUIMARSA S.A.	172
Kolon Engineering	152	Proserve	173
KWI International	152	Protec Arisawa	173
Kurita Water Industries Ltd	152	Proxa	174
KSB Aktiengesellschaft	152	Purifics Water	175
Kyowakiden Industry Co., Ltd.	153	PWN Technologies BV	175
L&T Ltd	154	PWT	175
Lahmeyer International GmbH	154	PURE AQUA, INC.	175
LANXESS Deutschland GmbH	154	QUA Group	176
LG Water Solutions (LG Chem)	156	Rah Shahr International Group	176
Logisticon Water Treatment	158	Reggiane Cranes and Plants	176
MAK Industrial Water Solutions	158	RM Nanotech	176
Malakoff International Ltd	158	ROPV	178
Marafiq	158	Rotork	179

Royal Haskoning DHV	181	Technoform	207
Sacyr Water Services	181	Technolog	207
SafBon Water Technology	181	Techouse	208
Salt Separation Services Ltd	182	Tecnologia Efectiva	208
Samsung Engineering Co., Ltd.	183	Tecton Engineering and Construction Company	208
Sapa Precision Tubing Lichtervelde	183	Tedagua	209
Sasakura Engineering Co Ltd	183	Temak SA	209
Satelytics	183	Tetra Tech, Inc.	210
SAWACO Water Desalination	184	The Institute of Seawater Desalination & Multipurpose Utilization, SOA (Tianjin)	210
Sazeh Sazan Co.	184	Thermal Purification Technologies	210
Scinor Membrane Technology	184	Thermax Limited	210
Scinor Water America	185	TM.P. S.p.A. - Termomeccanica Pompe	211
Sembcorp Industries Ltd.	185	TOMCO2 Systems	211
Seven Seas Water Corporation	185	Toray - a name you can trust	211
Servelec	186	Torishima Pump Manufacturing Co., Ltd.	220
Shanghai Electric Power Generation Group	186	Toyobo Co. Ltd.	222
Shanghai SafBon Water Service	186	Trility Pty. Ltd.	222
Sigma Water Engineering	186	Trimble Water	222
SIDEM (Société Internationale de Dessalement)	187	Trojan Technologies	222
Shimmick Construction	187	Trunz Water Systems AG	222
SIMONA AG	187	Typsa Group	223
South Raadab Engineering Company	188	UES Holdings Pte	223
SPI Engineering	188	UNIHA Wasser Technologie Gmbh	223
SS Gas Lab Asia	188	Utico FZC	224
Sparkle Clean Tech Pvt. Ltd.	189	Utilis	224
Statiflo International Ltd.	189	VA Tech Wabag	224
Strabag	190	Veolia Water Technologies	225
SubSea Infrastructure Ltd.	190	Vigaflow	226
Suez Advanced Solutions	190	Vishvaraj Infrastructure	227
Suez Water Technologies and Solutions	190	Von-Roll Hydro	227
Suido Kiko Middle East	199	Vontron Technology Co., Ltd.	227
Sulzer Ltd.	200	Water & Power Engineering Ltd	228
Sumitomo Corporation	202	Watera Hellas	228
Sundt Construction Inc	202	Waterleau	229
SWM International	202	WaterProfessionals	229
Syrinx	202	Western Summit Constructors, Inc.	229
Sychem	204	Wetico	230
TaKaDu	204	Wigen Water Technologies	234
TALIS	205	Xylem	234
TAM Environmental	206	Zhonghe Seawater Desalination Engineering Co., Ltd	234
Taprogge GmbH	206		

WATER SECURITY SOLUTIONS CENTRE

WEBSITE LAUNCHING NOVEMBER 2018
visit: <http://globalwatersecurity.org/>



Connecting decision makers facing water scarcity with the leading desalination, reuse, and smart water solutions providers.

To accompany The IDA Water Security Handbook, GWI will be launching a new website, 'The Water Security Solutions Centre' in partnership with The Global Water Leaders Group and the IDA.

By 2050 water scarcity will affect the lives of 5 billion people. The Solutions Centre will be a key resource for end-users and utility organisations to connect with strategic partners, contractors, and suppliers, and find the solutions they need for the challenges of the future.

Search through the centre's dedicated desalination, reuse, and smart water solutions hubs to browse company profiles and project references – filtered by region, technology and capacity, and stay updated on new pilot studies and innovations from leading suppliers.

Find new partners from around the world and across the water-supply chain, and assess their expertise.

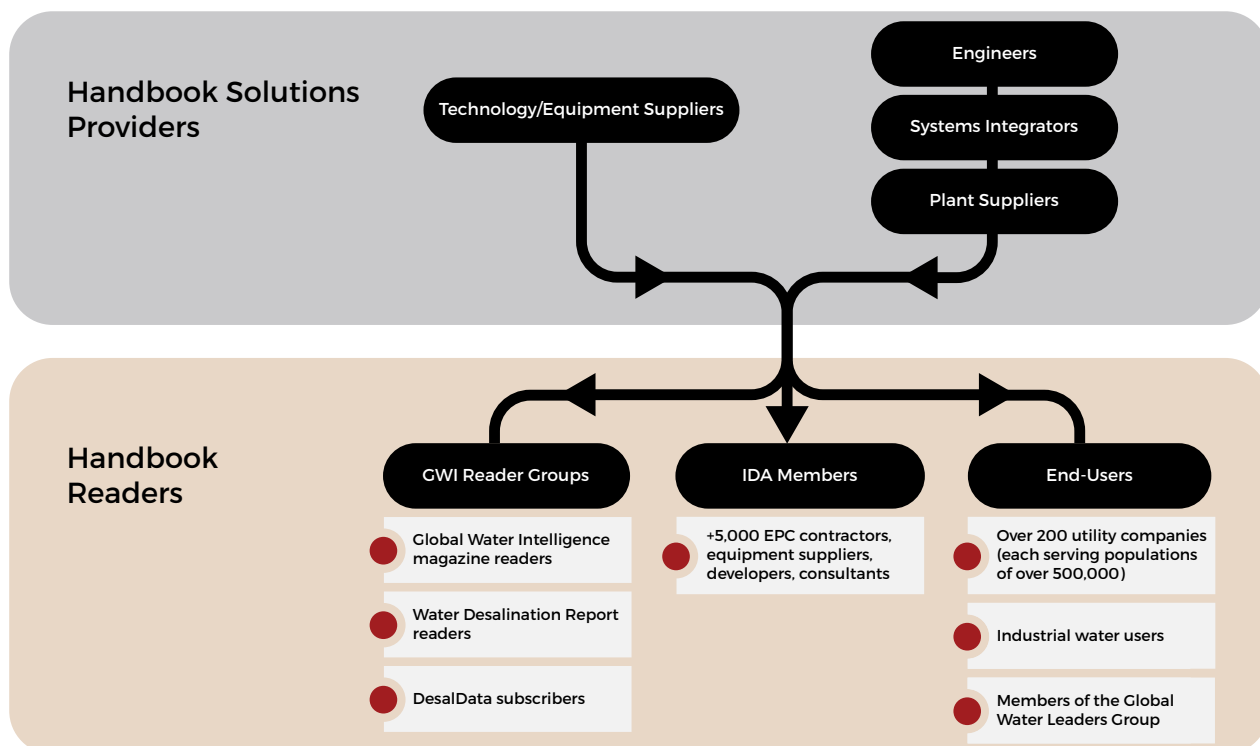
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Showcase your strategies to decision makers looking to reduce demand, increase supply, and ensure the sustainability of their communities and business for 2050 and beyond.

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The Year in Scarcity

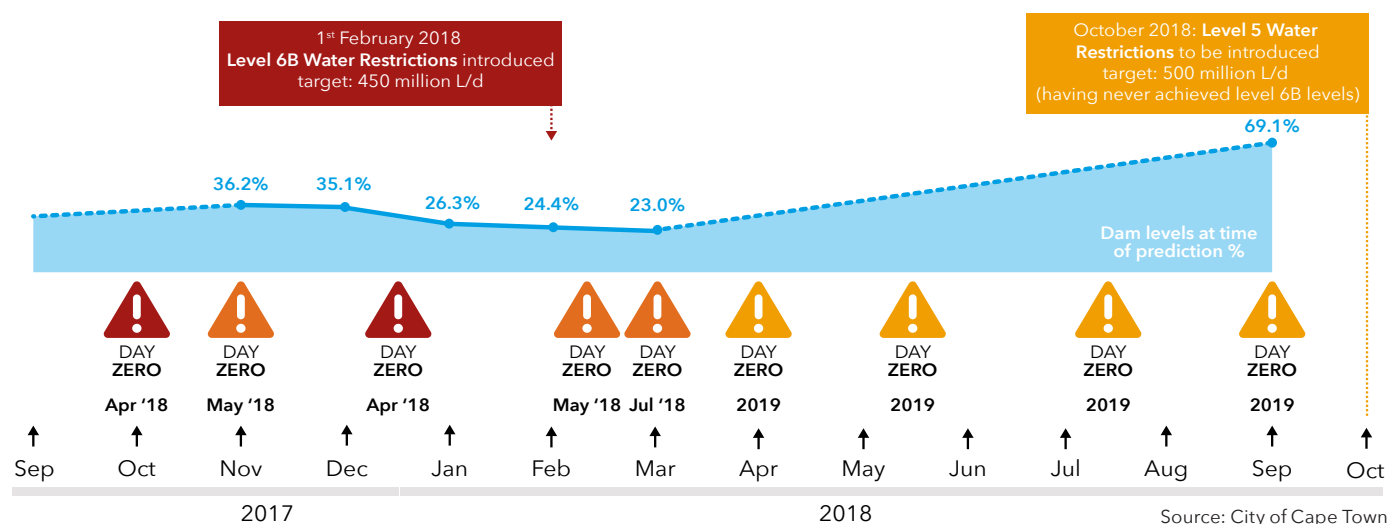
CAPE TOWN



In October 2017, following three years of low rainfall – including two record-breaking, century droughts – the City of Cape Town announced that ‘Day Zero’ was projected to arrive on 12th April 2018. At this point, projected water supplies would be so low that distribution networks would be cut off, with a per-capita water allowance of 25 L/d available from distribution points across the city. The projections, based on worst-case business-as-usual scenarios, spurred a step change in how suppliers and consumers managed their water resources. After weathering the drought without reaching Day Zero, and being granted slightly more room to manoeuvre after 2018’s winter rains, Cape Town is now looking to consolidate the gains made by demand management and develop water sources to move away from reliance on variable rainfall.

Despite attention initially given to emergency desalination projects, demand management was the key to averting the water crisis. Total demand fell from a high of 900,000 m³/d in February 2017 to around 500,000 m³/d through the winter of 2018, and summer spikes in consumption had been mostly eliminated by 2017. The majority of this was down to reductions in domestic use, which made up around 70% of Cape Town’s consumption that year. Public awareness campaigns, water restrictions, and steep tariff increases for higher-volume users were the key drivers of this reduction, as was the elimination of the free first block of water for most users in 2017. Level 6b restrictions in effect from February to October 2018 required per-capita water use to drop to 50 L/d. As of April 2018, around 20,000 households had water usage above 20 m³/month, around 10% of the figure for December 2016.

Day Zero prediction timeline: In October 2017, the City of Cape Town’s media office published a projection that if business-as-usual continued, the city would run out of water in April 2018. Known as ‘Day Zero’ – the day when Cape Town’s taps would be turned off as reservoir levels dropped below 13.5% – was adjusted in real time as reservoir levels fluctuated. Finally, as the agricultural season ended and dam levels remained 23%, ‘Day Zero’ was pushed back to 2019 pending winter rains.



Tariffs

The cost of combined water and wastewater services for a benchmark monthly consumption of 15 m³ rose by almost 380% in Cape Town between 2017 and 2018, mostly due to punitive rates for higher usage intended to reduce demand. The unit cost of water increases significantly at each threshold, with block four usage (>20 m³/month) costing over ten times block one (0-6 m³/month). Rate increases and water usage restrictions have dramatically reduced the number of users consuming water at higher levels.

Legend



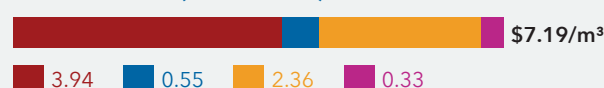
Fixed charges per month Water: **\$0.00** Wastewater: **\$0.00**

Sales tax Water: **0.14** Wastewater: **0.14**

Volumetric charges: increasing

Water: Block (m ³)	\$/m ³	Wastewater: Block (m ³)	\$/m ³
0.0-6.0	1.91	0.0-4.2	1.63
6.0-10.5	3.34	4.2-7.4	2.83
10.5-20.0	7.26	7.4-14.0	6.25
>20.0	21.79	>14.0	7.63

Benchmark tariff (15 m³/month)



Source: Global Water Leaders Group

Unlike previous years, changes in agricultural water use did not exceed allocated quantities. The release of 10 million m³ of water from an agricultural reservoir to the city was a significant contributing factor in Day Zero projections being pushed from April to May in early February, 2018.

A side effect of the City's dramatic demand management has been a reduction in tariff income, which had previously relied on higher volume users to subsidise loss-making lower usage bands. Following a collapse in higher-volume domestic usage, the City is re-evaluating its tariff structure to ensure full cost recovery across all usage bands, with some exceptions for the lowest income households.

The City also upgraded its monitoring and regulation of water pressure, piloting an advanced pressure management technology in 15 sections of its distribution network to reduce pressure by around 25% at critical points. In the network overall, total water losses have decreased less quickly than total water running through the network, resulting in a slight increase in losses as a percentage. The City attributed an average of 55,000 m³/d in water savings to pressure management.

Supply augmentation had a limited impact on Cape Town's ability to last the summer: just three desalination facilities with a combined capacity of 15,000 m³/d were completed, and delays in procurement and commissioning meant that these came online only after the worst of the crisis had passed. It was a clear demonstration that the relatively drawn-out procurement process and costly product water make desalination a poor short-term solution to water scarcity. The City of Cape Town sees 300–350,000 m³/d of supply augmentation as necessary to avoid dams falling to restriction levels at the end of summer, which is set to come from 100,000 m³/d in additional groundwater abstraction, 70,000 m³/d in wastewater reuse capacity, and 120–150,000 m³/d in desalination capacity.

Best-case scenario planning delayed the procurement of a large desalination plant in 2015, when it was decided that the water would not be necessary until after 2020. The worst-case scenario projections of Day Zero may have overplayed the likelihood of water supplies running out, but the pivot to a more precautionary approach to water supply and sustainability is one that drought-stricken regions worldwide can learn from.

Water Supply Augmentation in Cape Town: Having weathered several years of drought, Cape Town is committed to augmenting its water supply by 350,000 m³/d. Assessment of potential water sources' drought vulnerability, implementation speed, and cost led the city to deprioritise seawater desalination due to high water costs and a projected 36 month development period. Wastewater water reuse for groundwater recharge is seen as being cheaper and faster than desalination, and is effective in maximising existing water supplies. Surface water is the cheapest option, but vulnerable to drought and slow to augment. Abstraction of additional groundwater resources - which currently goes largely untapped - represents the city's cheapest and fastest source of short-term water supply augmentation.

New water sources to be tapped in Cape Town (projected cost)



Source: City of Cape Town

WINDHOEK



Namibia has long been at the sharp end of global water scarcity: not only did 2016 witness the second declaration of a state of emergency due to drought in three years, but population pressure and industrial development are set to push the country's water demand from around 900,000 m³/d in 2015 to 2.1 million m³/d in 2030.

Use of unconventional water resources is made necessary by inherent water scarcity: high evaporation rates mean only 1% of annual rainfall goes to recharge groundwater aquifers, with 2% remaining as usable runoff in surface storage facilities, whilst Namibia shares its perennial rivers with neighbouring countries preventing full exploitation.

Direct potable reuse (DPR) has provided a significant proportion of the water used by Namibia's capital, Windhoek, for the past half-century. Inaugurated in 1968, the Goreangab Water Reclamation plant was the world's first use of DPR as a long-term solution to water scarcity. In 2002 the plant was replaced by the 21,000 m³/d New Goreangab Water Reclamation Plant (NGWRP), which serves around a third of Windhoek's potable water demand. A further 25,000 m³/d of DPR capacity is planned at Gammams, with pilot studies set to start in 2018 with KfW funding.

As Namibia makes plans to increase its potable reuse capacity, the rest of the world remains hesitant to adopt it as a direct source for drinking water. While indirect potable reuse (IPR) projects are in operation across the world, DPR projects outside Namibia have been small-scale, short-lived, or use water blending and buffers in a way that, in practice, moves towards IPR. Pipe-to-pipe potable reuse remains unique to Namibia.

In addition to increased wastewater reuse, desalination plays a prominent role in Namibia's 5th National Development Plan (NDP5). A planned 68,500 m³/d plant to supply the Erongo region would be the country's first municipal desalination facility, whilst pilots for brackish water desalination projects in Grünau and Bethanie are being carried out to investigate the potential for small-scale, decentralised water supply to vulnerable communities.

The country's water utility, NamWater, operates in a constant state of drought readiness. Water savings measures are introduced as reserves fall. When reserves drop below 12 months' supply, a state of crisis is declared with measures targeted at achieving water savings of 50%. At this point variable tariffs will reach their most severe, all non-essential construction will stop, and the most loss-prone water infrastructure will cease to operate. NDP5 also outlines plans to expand and diversify the country's water supply portfolio; manage existing resources more effectively, and increase resource cooperation with its neighbours. Increased supply from DPR forms a significant part of these proposals.

As the climate becomes increasingly unpredictable, DPR is being considered as a solution for many arid communities, particularly in the USA. Texas is perhaps the most likely location for the world's second permanent direct potable reuse programme to take root, with several smaller scale or temporary projects seeing success in the past (see chart, opposite). At least in the short-term, however, Namibia will remain unique in its use of pipe-to-pipe DPR as a result of the extreme conditions in which its population must secure their water supplies.

Tariffs

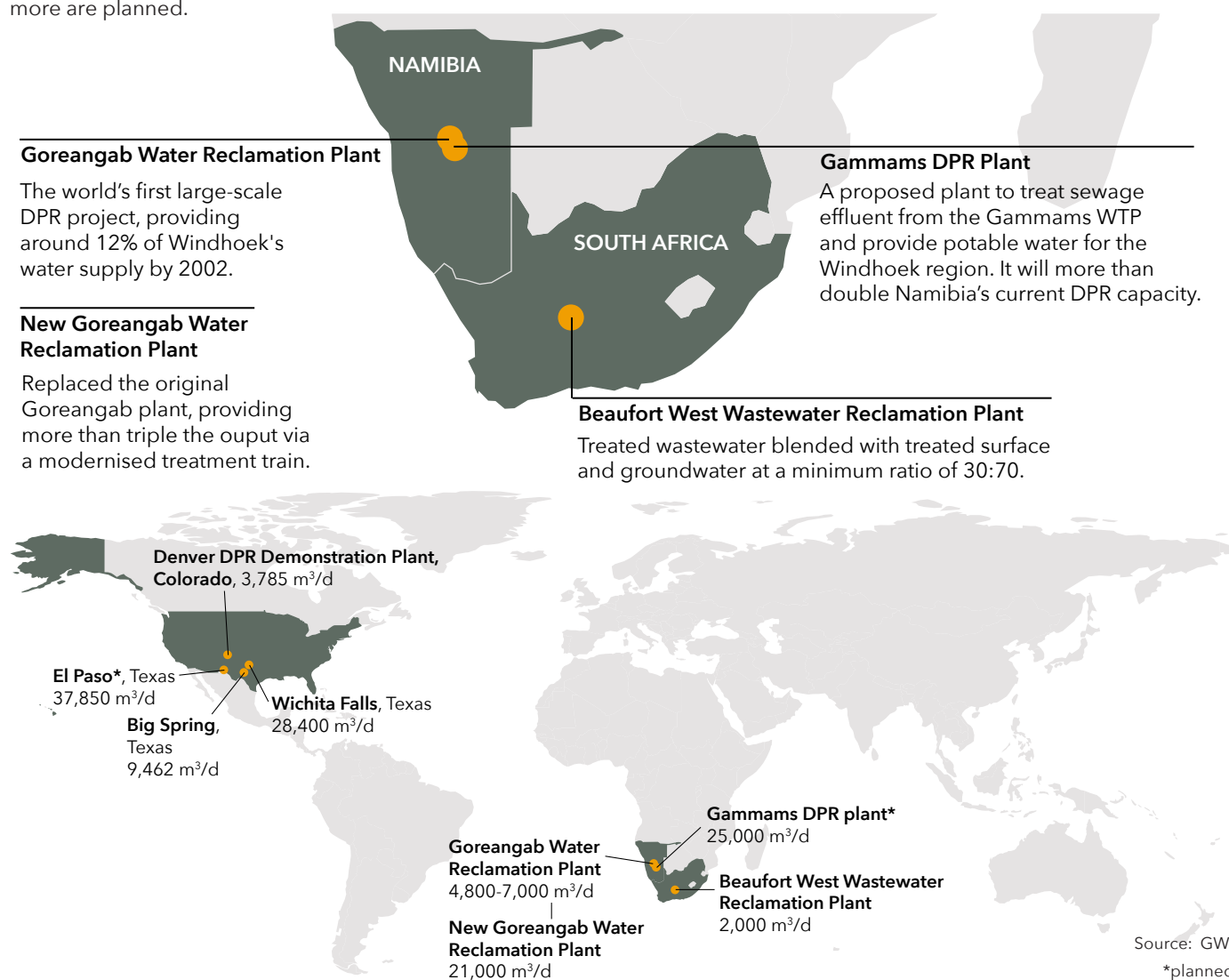
A growing population, expanding industry, and drying climate have placed increasing pressure on Namibia's water supply in recent years. Water tariffs increased by 100% between 2012 and 2018, as Namibia's government and NamWater strove to encourage water savings and fund supply augmentation from more expensive, climate independent sources such as desalination.

Fixed charges per month		Water: \$2.98	Wastewater: \$0.00
Sales tax		Water: 0	Wastewater: 0
Volumetric charges: increasing			
Water: Block (m ³)	\$/m ³	Wastewater: Block (m ³)	\$/m ³
0.0-6.0	1.42	>0.0	0.98
6.0-30.0	2.21		
30.0-45.0	4.08		
>45.0	9.4		
Benchmark tariff (15 m³/month)			
	0.20	1.90	0.98

Source: Global Water Leaders Group

Direct potable reuse in Namibia and beyond

DPR has been established in Namibia since 1968, and no other pipe-to-pipe system for potable reuse are currently in operation. Instead, most examples of potable reuse discharge recycled water into rivers or reservoirs before the blended water undergoes conventional treatment, as is the case in Beaufort, South Africa. The southern USA is the most likely prospect for additional uptake of potable reuse, especially in Texas where several temporary projects have been executed and several more are planned.



SÃO PAULO

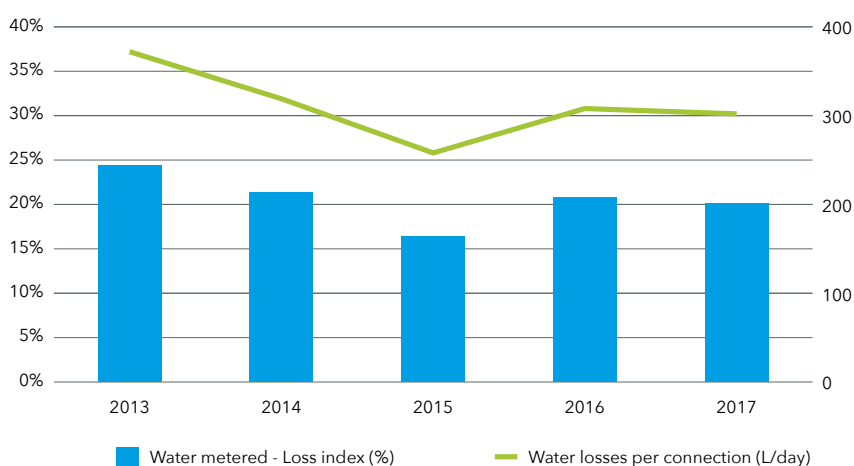


In 2015, municipalities all over São Paulo declared states of calamity: the city was running out of water. Between 2014 and 2015, the combined pressures of endemic pollution in the Billings and Guarapiranga urban reservoirs and prolonged drought drove levels in the rural Cantareira Water System (CWS) – a water source for 9 million people – below 10% for extended periods. Additional piping was installed to access the ‘dead water’ from the CWS’s lowest points, but after decades of neglect, the failure of São Paulo’s water supply was a clear and present danger.

Conventional water security measures – drawing on technical reserves, increases in supply systems, regulation of network pressures, and tariff incentives – were insufficient to mitigate the crisis’ effects. Short-term water diversions and severe supply regulation allowed the city to see out the worst of the shortages until heavy rains in February 2016 recharged the CWS to 52.9%.

São Paulo metered and billed water losses

Total water losses in the Sao Paulo water network fell from 24.4% in 2013 to 20.1% in 2017. Key to this was the increase in regulated connections over the period, which significantly reduced water losses through illegal connections known as ‘gatos’. This represented a 19% reduction in losses per connection, which fell from 372 L/d in 2013 to 302 L/d in 2017. The sudden drop in 2015 was a result of supply cuts during the height of the city’s water crisis.



Source: SABESP

Tariffs

Tariffs in São Paulo have increased markedly since the crisis of 2014/2015, rising by 30% in 2015 and continuing a steep upward trajectory since then. In 2018, benchmark water costs had risen to 150% of their 2012-14 levels, as Sabesp attempted to manage demand and increase revenues in order to finance measures to secure São Paulo's water future.

Legend

■ Fixed water costs	■ Fixed wastewater costs
■ Variable water costs	■ Variable wastewater costs

Fixed charges per month		Water: \$6.49	Wastewater: \$6.50
Sales tax		Water: 0	Wastewater: 0
Volumetric charges: increasing			
Water: Block (m ³)	\$/m ³	Wastewater: Block (m ³)	\$/m ³
0.0-10.0	0	0.0-10.0	0
10.0-20.0	1.02	10.0-20.0	1.02
20.0-50.0	2.54	20.0-50.0	2.54
>50.0	2.8	>50.0	2.8

Benchmark tariff (15 m³/month)

■ ■ ■ ■	\$1.54/m³
■ 0.43 ■ 0.34 ■ 0.43 ■ 0.34	

Source: Global Water Leaders Group

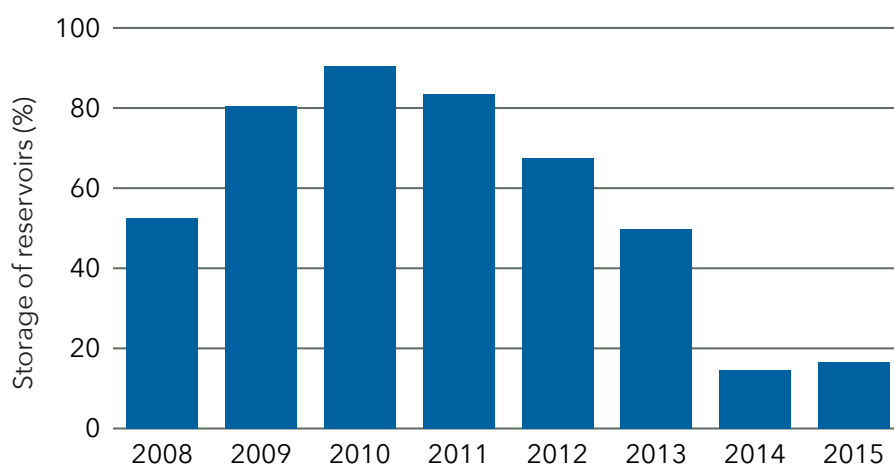
Recognising the decreasing dependability of future rainfall, Sabesp, São Paulo's water utility, has embarked on a campaign of community engagement and continued infrastructure development to avoid a repeat of the 2014/15 crisis, and by 2017, per capita water usage had fallen more than 14% on pre-crisis levels. This was achieved by a combination of rational use awareness and reuse programmes targeting public, residential, and industrial users, alongside punitive tariffs for high use. Whilst such programmes have been in place since the inauguration of the Rational Water Use Program in 1996, they were accelerated during the crisis, and continue along more stringent lines today.

To reduce demand further, Sabesp plans to invest BRL162 million (\$39 million) to install 160,000 new connections by the end of 2018. The new connections will replace the illegal 'gatos' that supply 600,000 *Paulistanos* with water, reducing the losses that occur through improvised connections. The connections made since March 2017 saved 3 million m³ of water by that year's end. Customers connected in the scheme get a safer, more reliable water supply, and are automatically billed at the 'social tariff' of BRL8.19 (\$1.96, one third of the normal tariff), for properties that consume up to 10 m³ per month. The new connections also provide households with a residential address – a prerequisite for many social benefits and citizenship conditions.

Other measures taken include BRL3.4 billion (\$820 million) in investments to improve the city's sewage infrastructure and collection rate. With the installation of 221,800 new sewage connections, Sabesp aims to increase its wastewater collection rate from 83% to 88% by 2022. Coupled with a tender launched in January 2017 for cleaning the Billings reservoir – presently so badly polluted by raw sewage as to be unusable – improvements in sanitation have the potential to guarantee a key water supply which will be instrumental in averting a crisis in the event of another drought.

Annual volumes stored in Cantareira system (2008–2015)

With the urban Billings and Guarapiranga reservoirs unusable due to pollution, the rural Cantareira Water System (CWS) became the largest single water source for São Paulo, supplying 9 million people's needs. When several dry years reduced levels in the CWS to below 20% between 2014 and 2015, the results were almost catastrophic. \$36 million was spent accessing 400 million m³ in 'dead volume' – water stored below the level at which regular pumps function – for the first time.



Source: Urban water supply and the changes in the precipitation patterns in the Metropolitan Area of São Paulo – Brazil (Lima et al., 2018)

PERTH, WESTERN AUSTRALIA



Looking as far as 50 years ahead, Water Corporation of Western Australia's (WCWA) water security plan is built around three key elements: reducing water use; securing new, climate independent water sources; and increasing the region's water recycling capacity.

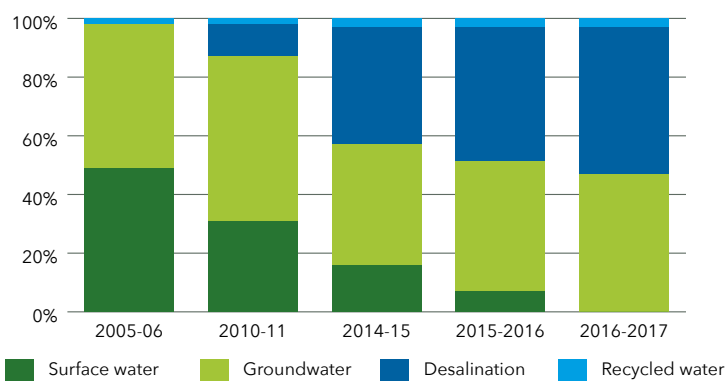
Since the 1970s, long-term public engagement has been favoured over potentially inflammatory, reactionary crisis measures to reduce water consumption. Perth's water consumption has reduced by more than 19% in the last decade alone. This was accomplished by encouraging residents to install more efficient appliances, implementing both permanent and seasonal water use restrictions and introducing gradual tariff increases that made Perth's water the most expensive of all Australia's major cities (18% higher than that of second placed Melbourne). Despite this, Perth's average water consumption (127 m³/capita/yr) remains amongst the highest in Australia, with WCWA targeting 15% reduction by 2030.

WA's rainfall has reduced by 19% and the inflow into Perth's dam network has fallen significantly over the past 50 years. On average, only 75.3 million m³/yr flowed into the region's reservoirs between 2006 and 2010; a drop of more than 100 million m³/yr from 1975–2000 levels. In these circumstances, it was clear that the city's climate-dependent water sources – its dams and superficial aquifer – would no long be able to satisfy demand. Continued dependence on these sources risked shortages and irrevocable damage to local ecosystems.

2011 saw WCWA publish its 'Water Forever, Whatever the Weather' pledge to drought-proof Perth. Alongside light-handed water saving measures, the utility committed to increasing supplies from seawater desalination and water recycling: climate independent sources that could both satisfy demand and stabilise depleted aquifers.

Volume of water sourced in Perth urban centre (%)

Seawater desalination has all but replaced surface water abstraction in Perth's water mix of water sources. Meanwhile wastewater reuse remains a small part of the city's water supply. Public opinion was the key driver behind the decision by Water Corporation WA to pursue desalination over wastewater reuse in the late 2000s - the utility's two-year construction timetable for groundwater recharge capacity was preceded by an 8-year PR campaign to win public support for indirect potable reuse.



Source: Australian Bureau of Meteorology

Tariffs

Despite the steadily increasing cost of Perth's water, the city's consumption is the highest of any major Australian city. Perth's water was the most expensive of any major Australian city, with average consumption one and a half times that of the second most expensive, Melbourne. Half of Perth's drinking water now comes from relatively expensive SWRO, and it seems residents are prepared to pick up the bill.

Legend



Fixed charges per month Water: **\$15.88** Wastewater: **\$68.90**

Sales tax Water: **0** Wastewater: **0**

Volumetric charges: increasing

Water: Block (m ³)	\$/m ³
0.0-12.5	1.32
12.5-41.7	1.75
>41.7	3.28

Benchmark tariff (15 m³/month)



Source: Global Water Leaders Group

Perth was the first Australian city to make large-scale use of seawater reverse osmosis (SWRO) to supply its water needs. With a combined capacity of 240,000 m³/d, the city's two major SWRO plants provide around its fresh water and the technology forms an essential element of the city's long-term, water security planning. Following Perth's example, Sydney, Melbourne, and Gold Coast have all built their own desalination plants, with Californian observers citing the city as demonstrating a relatively cost-effective application of desalination technology on a large scale (avg. \$1.22/m³).

To meet much of the remaining 40% demand (as of 2018) WCWA is developing its deep groundwater network to exploit aquifers far beneath the surface. The superficial aquifer, previously one of Perth's primary water sources, now provides only 10% of the city's water.

Alongside deeper extraction, WCWA has initiated a water recycling and Groundwater Replenishment Scheme, drawing on the example of Orange County, California, where recycled water has recharged aquifers since 2008. Water recycling for potable use has not always enjoyed popular support, but after eight years of public engagement and successful trials between 2010–12, work has begun to increase Perth's potable recycled water supply. By mid-2019, Perth will be capable of recycling 28 million m³ of water for potable use each year, recharging aquifers with enough water to supply 9% of the city. WA's Government has committed AUD262 million (\$189 million) of funding to water recycling development, aiming to recycle 115 million m³/yr of wastewater for mixed uses by 2060. WCWA aims to recycle 60% of Perth's wastewater for potable aquifer recharge by then, protecting vulnerable surface ecosystems and insulating Perth's groundwater supply from depleted rainfall.

These plans are not without their problems. The city's new-found dependence on SWRO brings with it the unavoidable irony that, such are these plants' energy demands, they risk contributing to anthropocentric climate change even as they work to mitigate its effects. To offset some of these concerns, in 2011 WCWA purchased 100% of the energy output from the Greenough River Solar Farm and Mumbida wind farm, developed at a combined cost of AUD200 million (\$144 million) and supplying 65 MW of power to the Western Power grid.

Tariffs and Usage

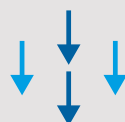


1st amongst Australian cities for cost of water

223 m³/yr of water supplied per property - 32% above nationwide average for major utilities

Key numbers

Reductions



19% reduction in water use 2007-2017

15%
2030 target for water usage reduction

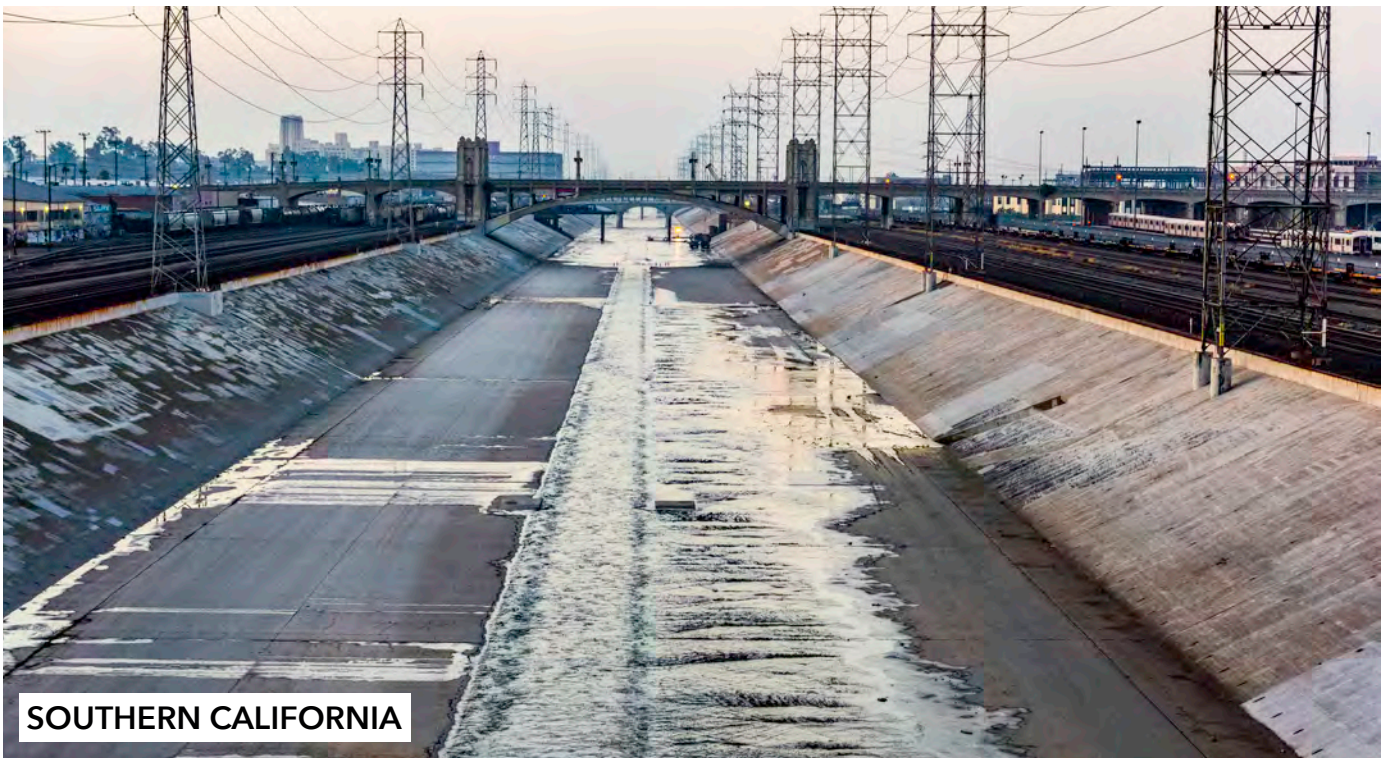
Desalination and Reuse



50% sourced from seawater desalination (2016/17)

8 years of public engagement before building groundwater recharge capacity

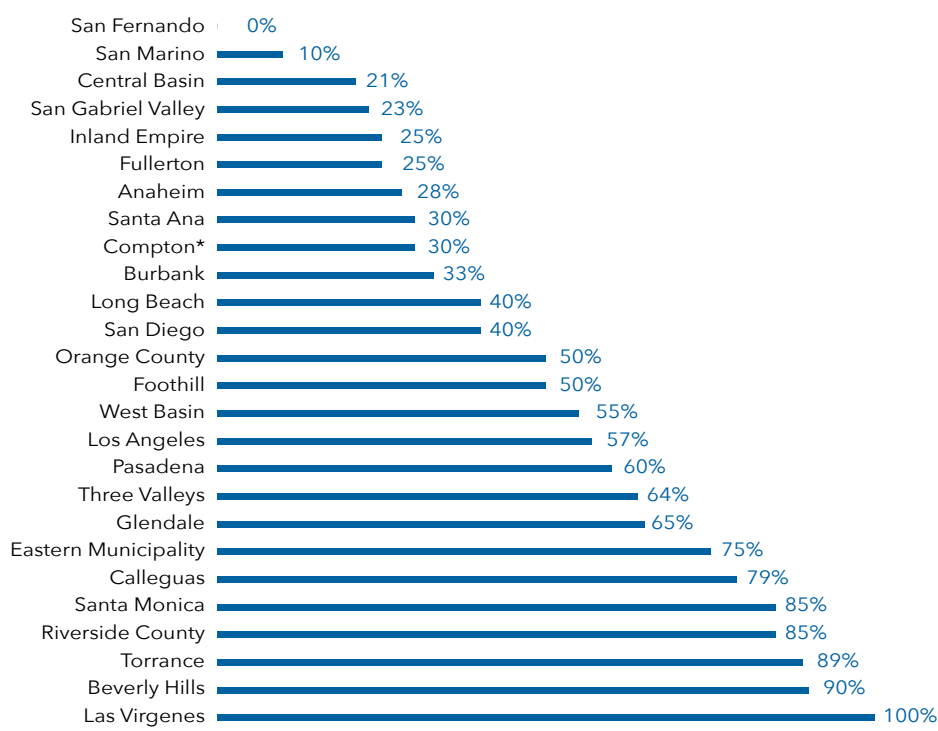
60% target for wastewater used in aquifer recharge by 2060



California’s relationship with water has undergone radical change since drought caused a state of emergency in January 2014. Against a backdrop of state legislation and public conservation, the Metropolitan Water District of Southern California (MWD) has committed to huge infrastructure investment to secure adequate water supply for California’s densely populated south and expand the region’s water recycling capacity to be the largest in the US.

On 10th July 2018, the MWD board committed to provide \$10.8 billion of the \$16.7 billion needed to fund California WaterFix: a plan to replace the Sacramento-San Joaquin Delta’s ageing north-south water import system with an entirely new conveyance infrastructure. The delta presently supplies 30% of Southern California’s water via vulnerable, 19th century levees and a system of powerful pumps which cause significant damage to local ecologies. Subject to securing all

Percentage of water supply imported from MWD by agency

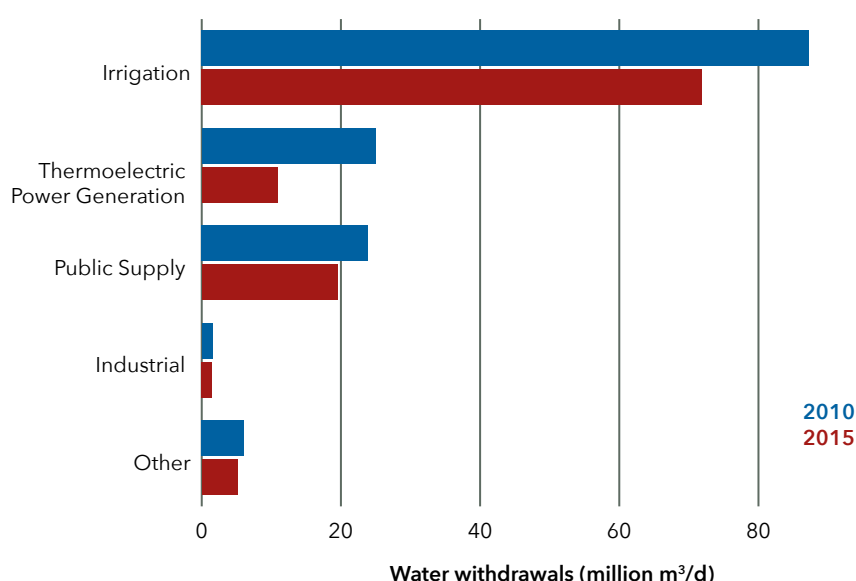


The Metropolitan Water District of Southern California (MWD) provides water to 26 cities and agencies serving a total population of 19 million. While some areas can fulfil their water needs using local sources (San Fernando), others depend entirely on imported water from MWD (Las Virgenes). Regardless of water imported, all distributors will be subject to the per capita usage consumption target of 0.2 m³/d mandated by the state legislature.

*Estimated
Source: GWI

California Water Withdrawals

Total water withdrawals in California dropped by 24% between 2010 and the height of the most recent drought in 2015. Plant closures, a shift from coal to natural gas and more efficient water use in new power plants meant that withdrawals in power generation fell by more than 50%, compared to a national average of 18%. Surface water available to agriculture plummeted during the drought, and the sector made savings of 17.7%. Both groundwater extraction and trading of water between farmers also increased substantially during the drought.



Source: US Geological Survey

outstanding approvals, California WaterFix will be capable of transporting 255 m³/s (22 million m³/d) of water from the Sacramento River to the State Water Project aqueducts in the south through two vast tunnels, bypassing the old system completely. Whilst not increasing supply, the project will make the region's water conveyance system more dependable and able to take advantage of temporary surges without damaging the Delta's delicate ecosystem further.

Alongside increasing the reliability of surface water supplies, MWD is exploring the use of mass-scale, local wastewater reuse. Since 1990, MWD has invested \$1.4 billion in conservation, water recycling, and groundwater replenishment, and now aims to establish the largest such system in the US. At full buildout, the Regional Recycled Water Program will produce 567,759 m³/d of treated effluent to recharge local groundwater sources. Even before the programme's pilot comes online in early 2019, the region's recycling and replenishment capacities are significant. From July 2016–June 2017, MWD-supported projects yielded a collected average of 608,000 m³ recycled water per day, putting more than 597,000 m³/d into groundwater recharge.

Besides securing increased and long-term supplies, steps have been taken to reduce Californian water demands. For the past decade, through residential and commercial 'SoCal Water\$mart' programmes, MWD has offered community outreach, including rebates for high-efficiency appliance installation, irrigation controllers, rain butts, and turf removal. The utility offered rebates of \$1 for every square foot of turf grass converted to California native flora (up to a maximum \$1,500 rebate), and surveys suggest 70% of target properties had carried out full turf removal from their front gardens, with 11% carrying partial removal, between 2015 and 2017.

The public has responded positively to MWD and State conservation initiatives alike. During the 2011–17 drought, the California State Water Resources Control Board (SWRCB) adopted emergency water use regulations for the first time. From July 2014, outdoor potable water use was restricted and urban suppliers serving more than 3,000 connections were required to submit usage reports. In the year following the regulations, per capita water usage fell by almost 26%, from 0.5 m³/d to 0.37 m³/d. Although usage rose following the regulations being lifted in November 2017, state-wide water savings for the five years to June 2018 were approximately 15% – an average of 70,000 m³/d.

In May 2018, water conservation became subject to permanent legislation in California as two bills were signed into law. Together, the new laws require cities and water districts to set strict annual water budgets by 2022, including mandatory usage targets based on a standardised indoor water allowance of 55 US gal/d (0.2 m³/d) per user, regionally defined outdoor usage allowances, and uniform assumptions of losses due to leaks. Punitive action for failing to meet these targets will begin in 2027, with fines for non-compliance of \$1,000/d in normal conditions and \$10,000/d in drought conditions. The per capita indoor water allowance is set to fall to 50 US gal/d (0.19 m³/d) by 2030.

HUNTER, NEW SOUTH WALES



A reliance on the water-intensive mining and agricultural industries in the water-scarce Hunter Valley has long driven Hunter Water to take a proactive approach to water security. With drought driving reservoir levels across southeastern Australia towards 60% – the trigger level for activating desalination plants – Hunter Water (HW) has avoided applying extraordinary water restrictions, with the region's water storage remaining close to 80%.

Water-saving measures initiated following the Millennium Drought that hit Australia in 2001–2011 are largely responsible for this resilience. In 2011, consumer surveys reported 90% of respondents had installed dual flush toilets and 80% had fitted water-efficient shower heads after HW rebate and exchange programmes. Where the average water volume supplied per property by HW was 184 m³ in 2009–2010, the average for the period 2010–2017 was 171.5 m³/yr. This is slightly above the 170 m³/yr average for the same period among Australian utilities serving more than 100,000 connections, with Hunter Water's 2016–2017 average of 172 m³/yr placing the utility 5th in that group.

In 2014, HW issued the Lower Hunter Water Plan, detailing the region's commitment to developing its water security infrastructure in seven key areas: surface water; groundwater; efficiency; demand management; recycled water; rain and stormwater use; and temporary desalination. The Plan also introduced tiered "Water Wise Rules" for consumer water use.

Water Wise Rules are permanent measures to manage demand, ranging from basic rules that are always in effect to more severe measures that kick in as storage levels fall, requiring high-volume users to develop and implement water efficiency plans. In total, these responsible usage programmes account for around 1,200 m³/d of water savings.

Alongside demand management, network efficiency and water recycling are key to Hunter Water's approach to water security. Programmes to detect leaks and manage network pressure are projected to save 1.7 million m³/yr by 2034, with savings from national and regional efficiency programmes expected to save 4.5 million m³/yr over the same period (a combined average of around 17,000 m³/d). Meanwhile, water recycling reduces potable water use in industry: the 2014 Kooragang Industrial Water Scheme provides 9,000 m³/d of treated wastewater for industrial use, resulting in a 5% reduction of overall potable water consumption. The scheme was sold to Water Utilities Australia in 2017.

Hunter Water has managed to avoid reliance on unconventional water resources to secure its potable water supplies. Although the utility is overwhelmingly reliant on surface water, modifications to conveyance infrastructure during the 2000s enabled interregional 'water banking' between Hunter and Central Coast, creating 35,000 m³/d of transfer capacity for resource sharing in times of shortage and the ability to better manage localised stormwater.

A proposed 15,000 m³/d desalination plant remains an emergency measure, with detailed design to be carried out only if storage capacity drops below 65%, with construction starting at 35%. If levels were then to rise above 50%, work on the site would cease.

Tariffs

As NSW continues to experience severe drought, Hunter Water's water prices have remained competitive on a national level. Long-term planning has enabled the Hunter Valley to avoid harsh water restrictions and the regional utility has maintained relatively low tariffs, ranking 10th out of Australia's 14 major water utilities in 2016-2017. Its typical annual bill of AUD1,056 (\$763) is just two thirds of typical annual bill in Perth.

Wastewater cost \$0.77/m³

Water cost:
\$2.65/m³

Total combined bill: \$3.43/m³

Source: Global Water Leaders Group

Open tap restrictions

From 1st July 2014, Hunter Water introduced Everyday Water Wise Rules – water use guidelines with variable restrictions, triggered when local water storage levels reach certain thresholds. At their least restrictive, these are estimated to save 2.5%/yr across combined residential and commercial users. Even as southeastern Australia experiences severe and prolonged drought, Hunter's water storage facilities have so far remained well above the point that would trigger more severe drought restrictions. Prior to their introduction in Hunter, similar rules were already enforced in many regions of Australia, including Sydney and the Central Coast.

	Level	Regional water reserve level (%)	Measures	Expected demand savings % (Residential, Business)
Permanent	Water Wise Rules	100	All hand-held hoses must have a trigger nozzle Restricted hours for garden watering for businesses Hosepipe ban on paths and driveways Vehicles to be washed with a bucket, trigger nozzle hose or pressure cleaner	2.5% (1 million m ³ /yr across residential & businesses)
Drought	1	60	Partial sprinkler ban Restricted hours and days for garden watering for businesses Existing pools can only be topped up using a hose with a trigger nozzle High use customers (>50,000 m ³ /yr) to implement a Water Efficiency Management Plan (WEMP)	4% 6%
	2	50	Efficiency standards required for open space irrigation Further restriction on days for garden watering for businesses Vehicles to be washed and pools maintained with buckets Customers using >10,000 m ³ /yr of water to implement a WEMP	9% 7%
	3	40	Outdoor watering ban except where alternative (non-potable) sources are used	21% 9%
	4	<30	Multi-media advertising programme to encourage indoor savings (voluntary) Commercial kitchens to use air-cooled woks (no water-cooled woks)	29% 11%

Source: Hunter Water

The Year in Technology

Desalination and reuse

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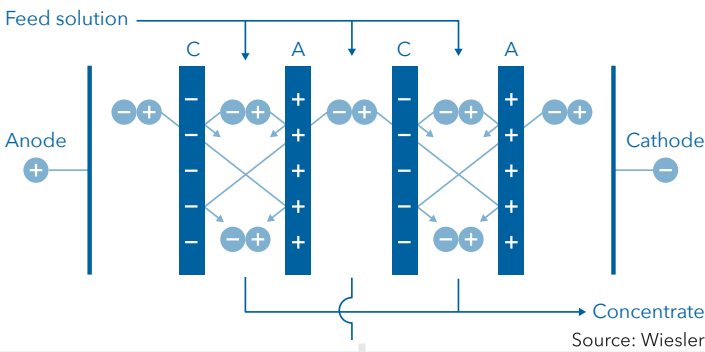
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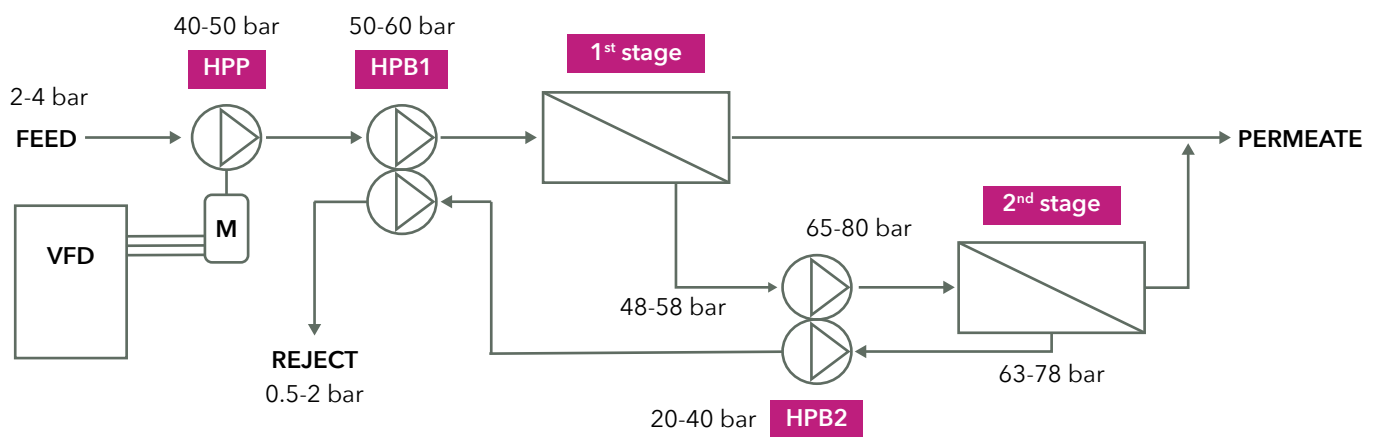
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Electrodialysis

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High recovery SWRO: Turbocharged desalination



*Patent applied for in the U.S. and abroad

“

Frank Zamora, IT Director at Acciona Agua

Digital water network monitoring

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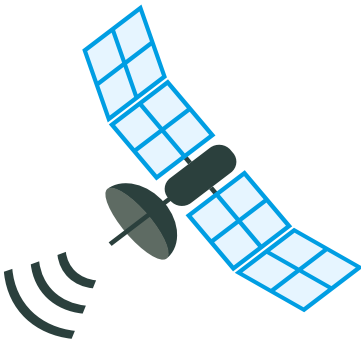
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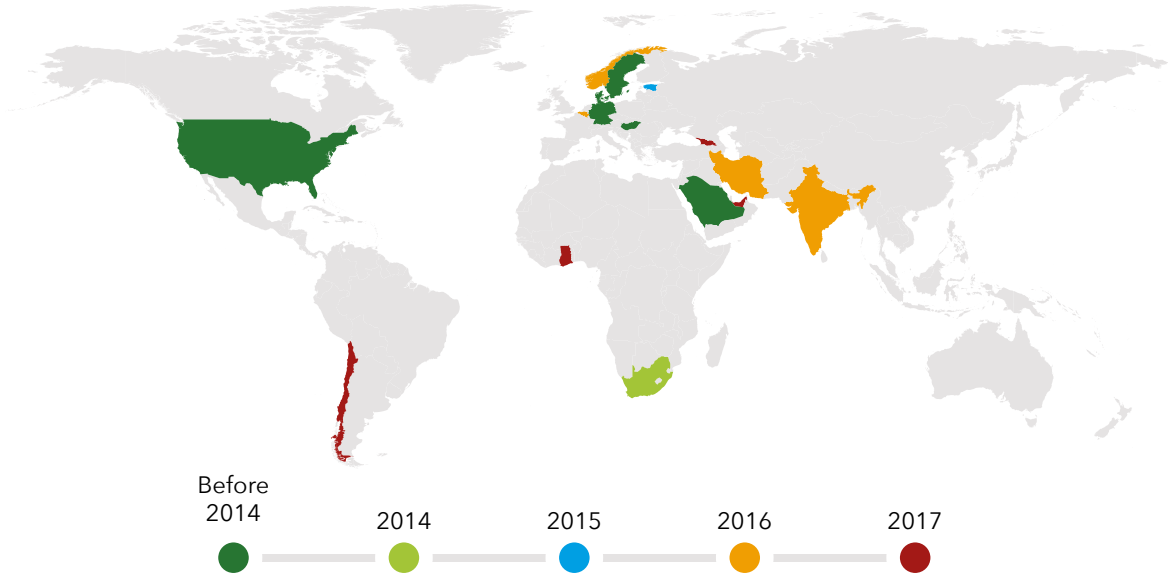
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Kamstrup smart meters go global



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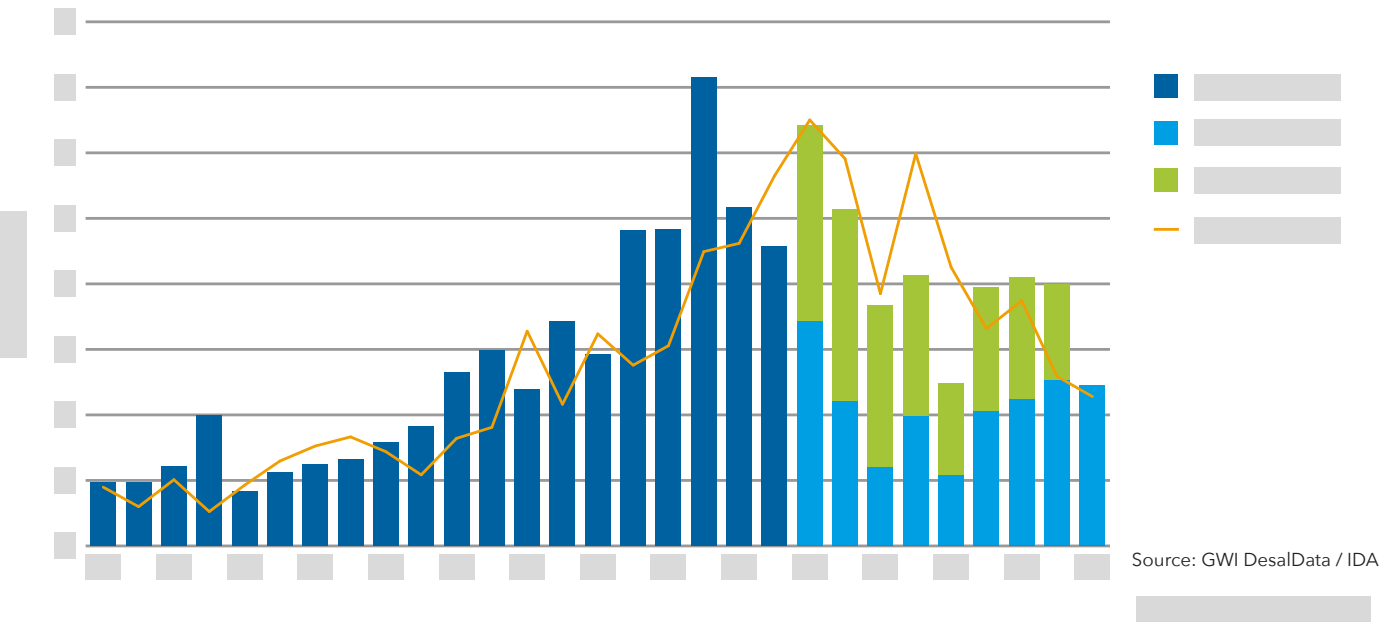
Mike Firstenberg, Director of Industrial Security,
Waterfall Security Solutions

Desalination Market Profile

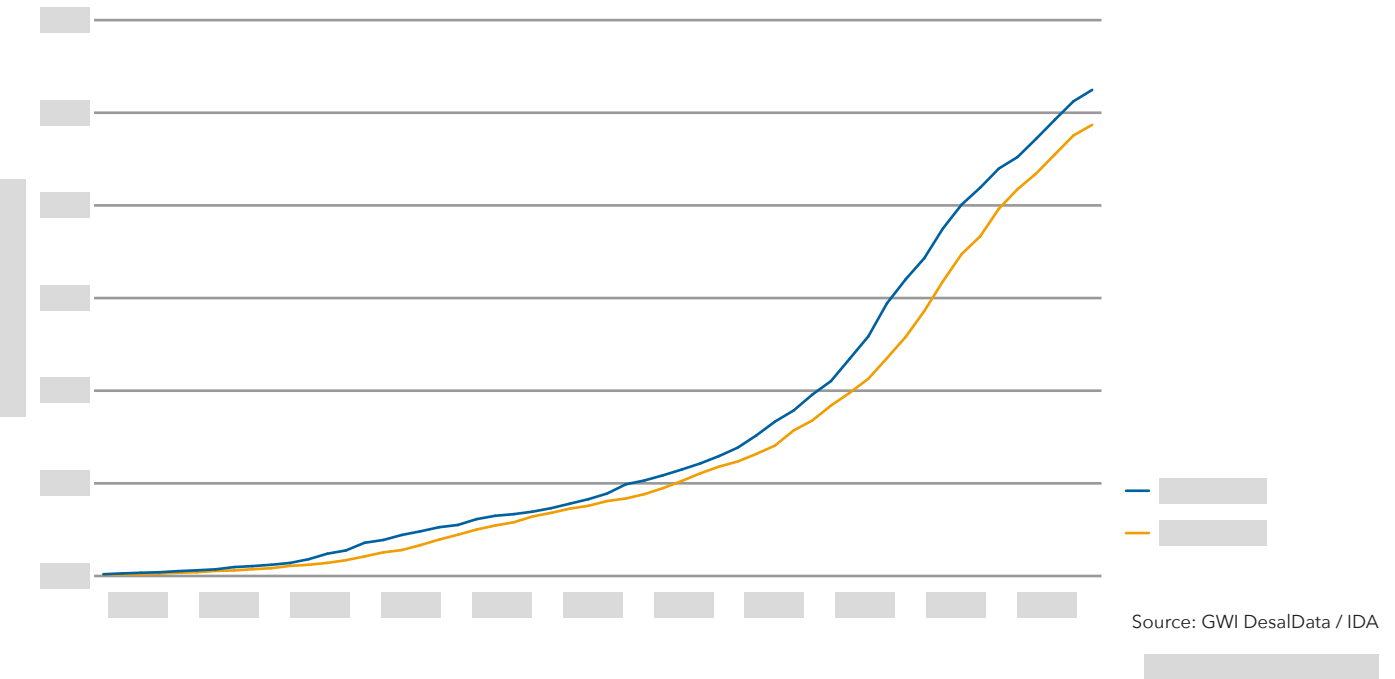
Summary

The top-level desalination market has remained steady since 2015, with contracted capacity in 2017 totalling approximately 4 million m³/d for the third year in a row. Although the first half of 2017 suggested gradual growth, it was followed by a relatively quiet 12 months in the Middle East utility project market. Drops in seawater and brackish water desalination have been levelled out by increased contracted capacity in low-concentration feeds such as wastewater and low-concentration river/surface water. Meanwhile, the industrial desalination market grew by 21% in 2017, driven by increased activity in upstream and downstream oil & gas.

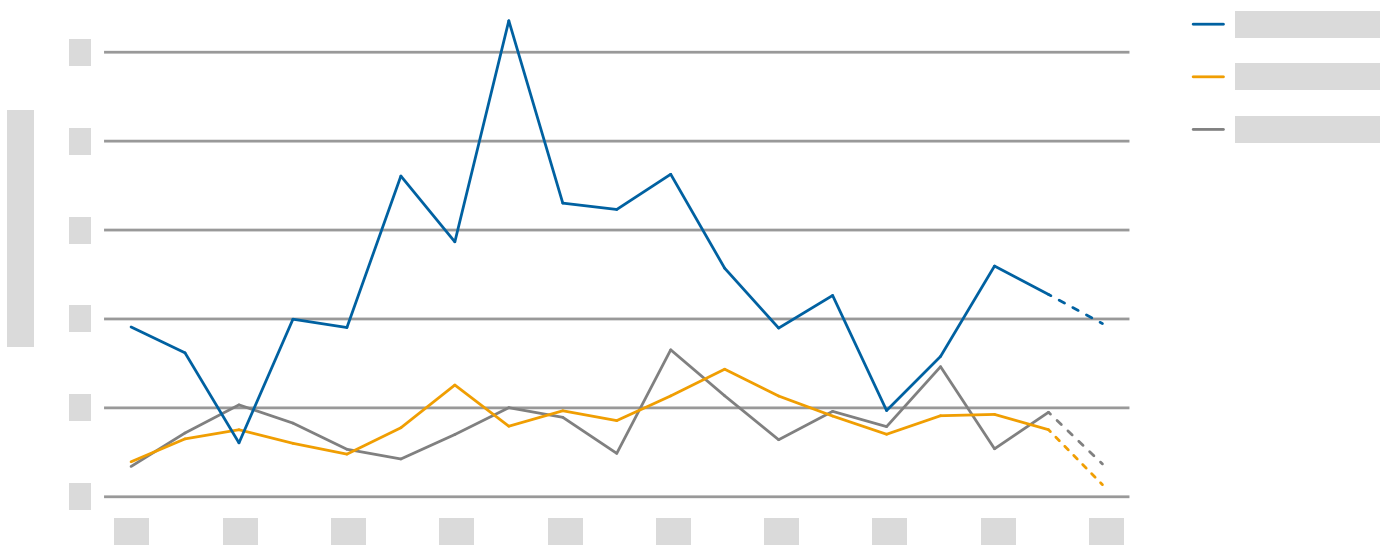
Incremental contracted and online capacity by year



Cumulative contracted and online capacity

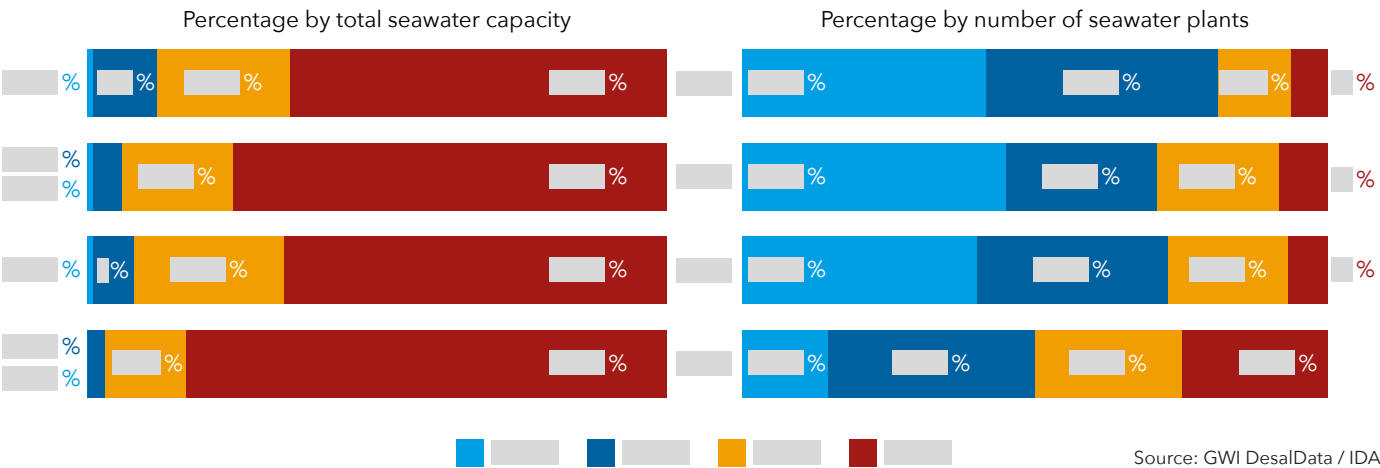
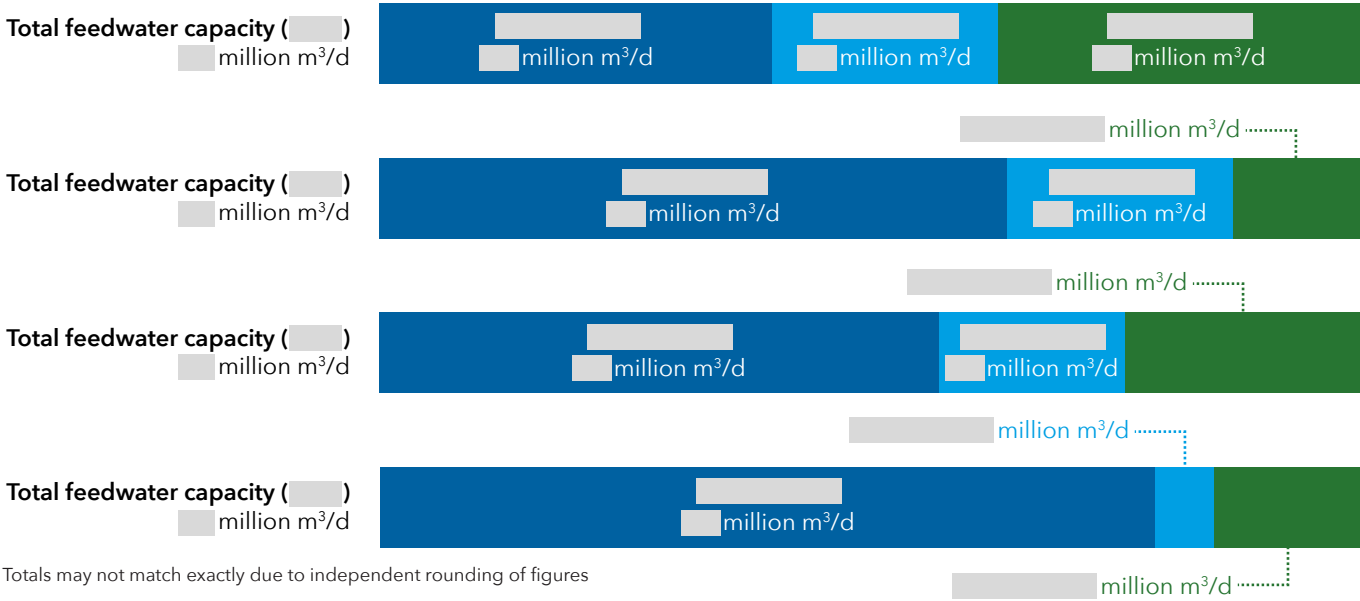


Annual contracted capacity by feedwater type

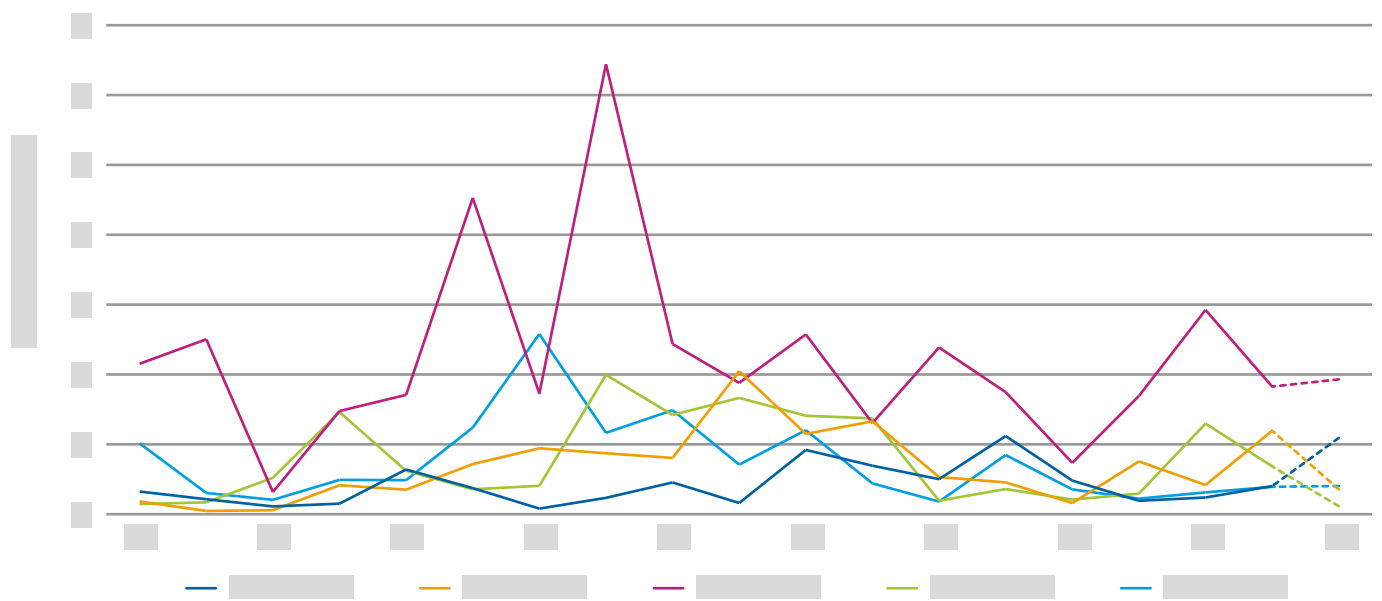


Source: GWI DesalData / IDA

Contracted desalination capacity by feedwater type and plant size

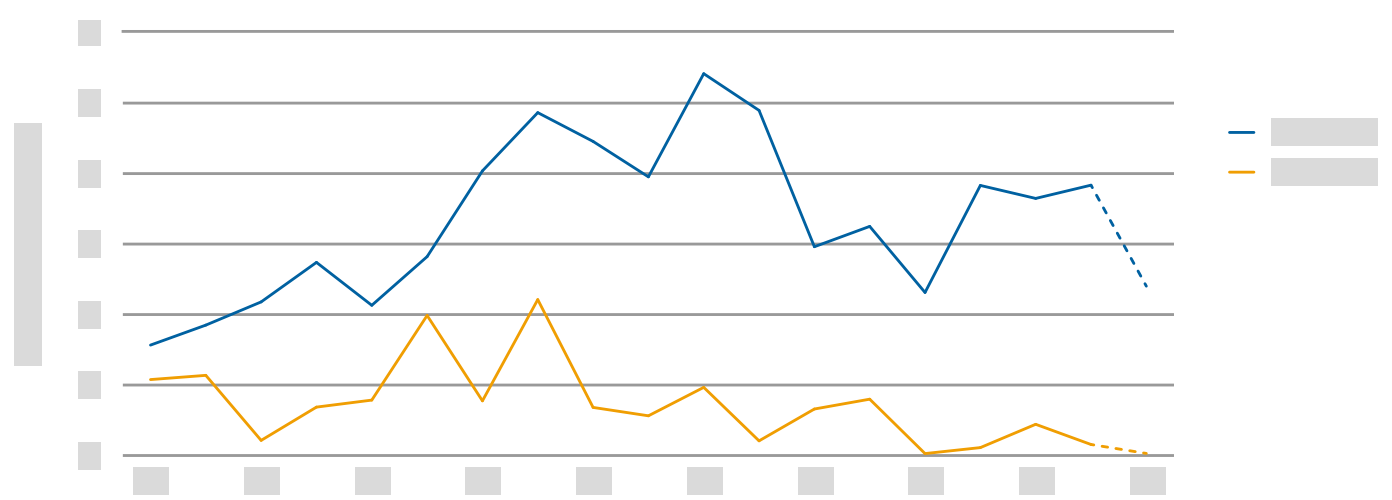


Annual contracted capacity by region



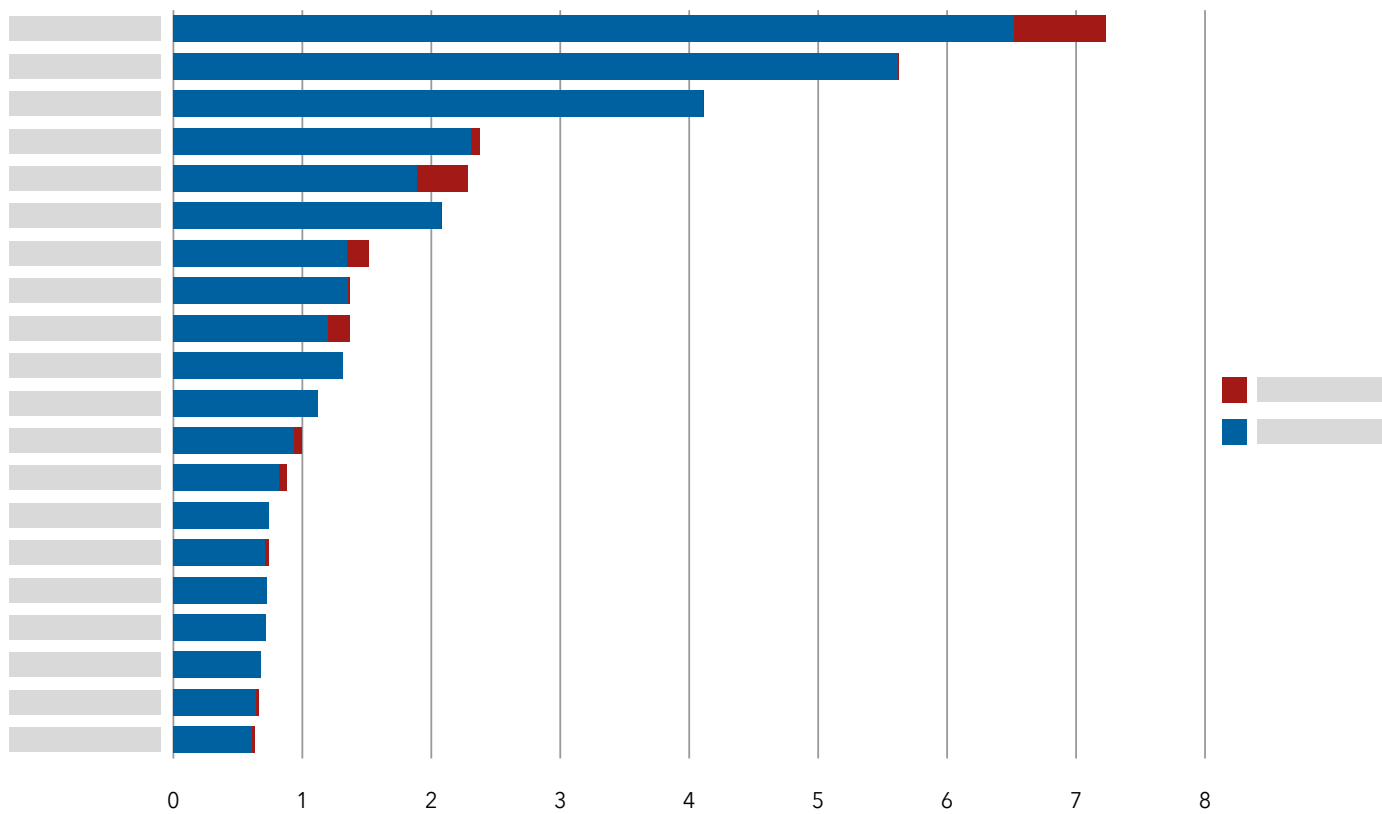
Source: GWI DesalData / IDA

Additional contracted desalination capacity by technology



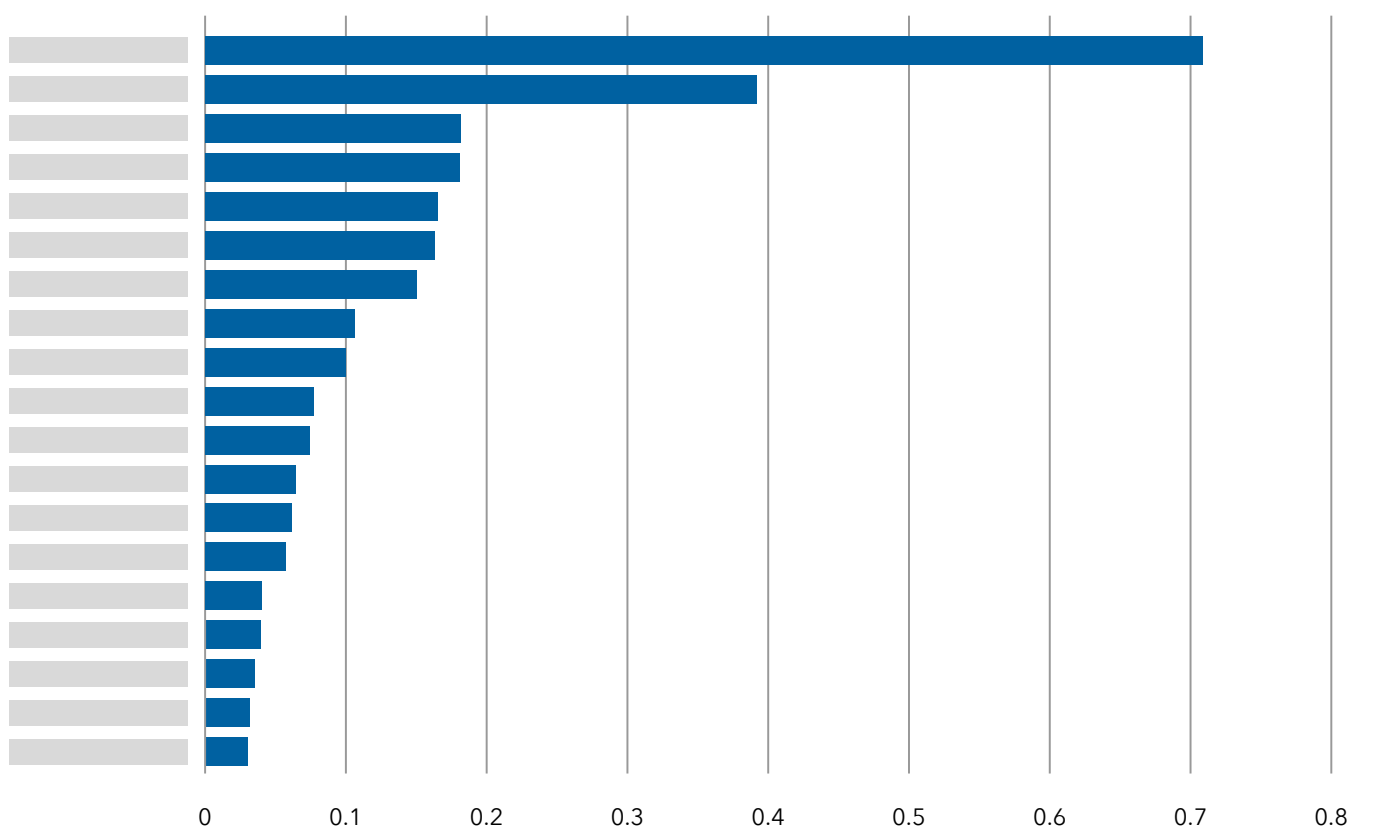
Source: GWI DesalData / IDA

Top 20 plant suppliers by awarded capacity



Source: GWI DesalData / IDA

Top 20 plant suppliers by awarded capacity



Source: GWI DesalData / IDA

Source: GWI DesalData / IDA



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Featured Desalination Plants

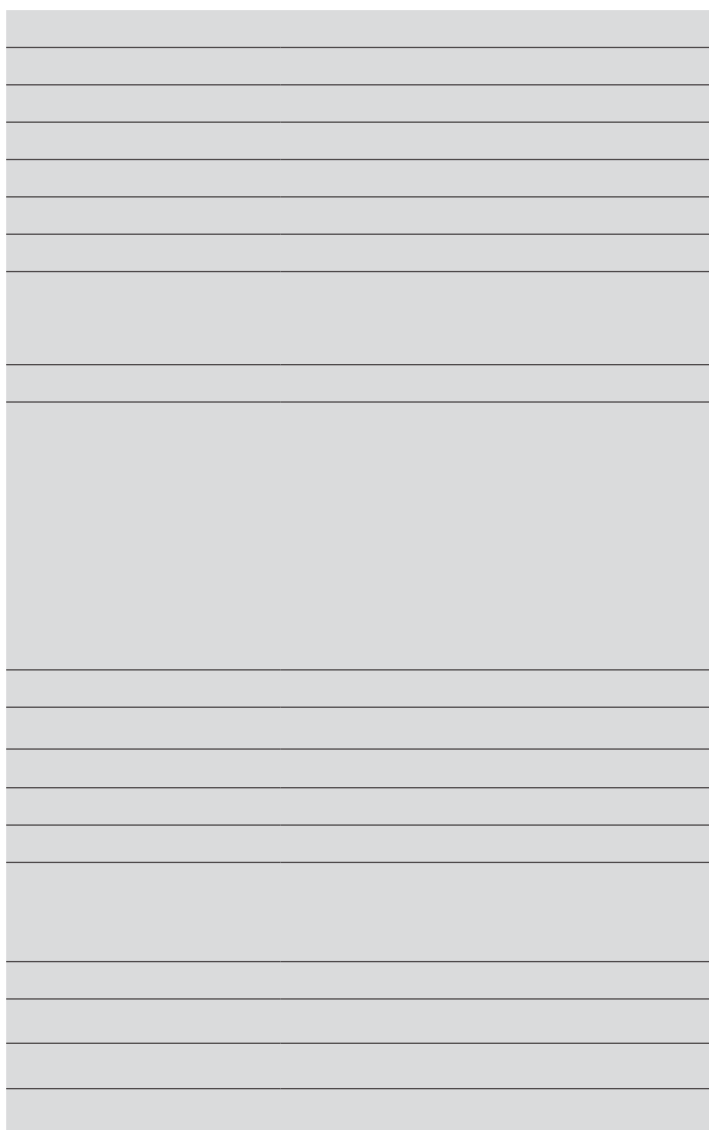
H2OAKS CENTER, TEXAS, USA.

Contracted by the San Antonio Water System (SAWS), the H2Oaks Center in Southern Bexar County, Texas forms part of a long-term phased approach to increase access to drinking water by way of brackish water desalination. The SAWS water management plan envisages an extra quantity of non-conventional water resource development by 2050, of which the H2Oaks Center will eventually provide 30 MGD (113,550 m³/d). The first phase of the project has a capacity of 12 MGD (45,420 m³/d), with additional stages scheduled for commissioning in 2021 and 2026.

The facility blends multiple sources of feedwater with its product water to achieve more efficient groundwater augmentation. The feedwaters are themselves blended from a combination of wells, forming two streams with TDS levels of 1,300 ppm and 1,730 ppm. After treatment at 90% recovery, the resulting permeate water (TDS 120 ppm) is blended with saline water, creating product water for injection into the Wilcox aquifer with a TDS of 400 ppm. The Biwater RO system uses four Biwater Primary RO trains (80% recovery, 33,311 m³/d) and two Biwater Concentrator trains (50% recovery, 4,163 m³/d) to achieve 90% recovery, using DOW BW30-400 membranes. The final RO stage operates at a pressure of 200 psi and includes an ERI Advanced Turbo AT-1500 for energy recovery. The RO system has an energy consumption of 0.5 kWh/m³.

The project was procured under a Construction Manager at Risk (CMAR) model, in which a Black & Veatch-led consortium carried out conceptual design work before the award of the CMAR contract to a joint venture of Zachry Construction and Parsons Corporation. This structure differs from the design-bid-build procurement model, in which a construction project is tendered on completion of design work, instead bringing in a prime contractor at an earlier stage of design.

In addition to contracting Biwater to supply the desalination system, the Zachry-Parsons CMAR team contracted Dynamic Systems as mechanical contractor. SAWS contracted Black & Veatch as project manager, which engaged Tetra Tech as process design engineer.



DJERBA, TUNISIA

The Djerba desalination plant marks a significant step forward for desalination in Tunisia. It constitutes the first stage of the country’s desalination programme and creates an important new North African market for the technology.

The design and construction project, executed jointly by Aqualia and GS Inima, also included the seawater and effluent capture systems, well-water iron removal plant, product water pumping station, and the installation of pipes to connect with the existing distribution network (23.7 km of pipelines). The consortium’s contract with SONEDE also contemplates the commissioning of the facilities and their management for a period of one year.

Water is drawn from the Mediterranean Sea through an intake located 2.9 km offshore at a depth of 5 m, and is subjected to dual media and pressure filtration pretreatment stages. The plant’s two-train RO system operates with a recovery rate of 46%, using Dow membranes and an ERI energy recovery device. Carbon dioxide and calcium hydroxide are added to the product water in the post-treatment stage.



**SARROCH REFINERY
SWRO, SARDINIA**

In January 2018, Acciona Agua commissioned a 12,000 m³/d seawater reverse osmosis (SWRO) plant at Sarlux’s Sarroch Refinery on the island of Sardinia. The project was delivered under a BOT contract in which Acciona will operate and maintain the plant for six years, with the option of a three-year extension. The project takes screened seawater from a submerged, offshore intake. Pretreatment includes 125-micron, self-cleaning strainers and UF membrane filtration, after which seawater undergoes two-pass RO treatment followed by electrodeionisation (EDI) to polish the water to meet boiler feedwater requirements. The system has been designed with 97% availability as a modular and largely containerised plant.

MASDAR CITY, ABU DHABI, UAE

Located 30 km from Abu Dhabi City, Masdar City aims to be the world's first sustainable 'smart city', with no carbon footprint. Construction in the United Arab Emirates began in 2008 and is scheduled for completion in 2025. Solar energy and smart buildings will be used to meet Masdar City's goal of 'zero waste, zero carbon'.

Masdar's Renewable Energy Water Desalination Program launched in early 2013 to test and develop advanced, energy-efficient seawater desalination technologies suitable to be powered by renewable energy sources. In 2018 the programme reported energy savings of up to 75% compared to existing technologies in the UAE.

Veolia SIDEM, one of the technology partners on the pilot programme, built and operated one of the five pilot plants involved. Operating at 42% recovery at the first pass and 85% at the second, it uses Dow membranes and an Osmorec ERD. The project's post-treatment stage uses a limestone filter and sulphuric acid.

Operating in challenging seawater quality conditions, the pilot project had to deal with harmful algal blooms, high nutrient levels and suspended solids peaks while maintaining feedwater quality to prevent the risk of membrane clogging and ensure membrane durability. SWRO membranes are highly sensitive to fouling, making effective raw water pretreatment essential.



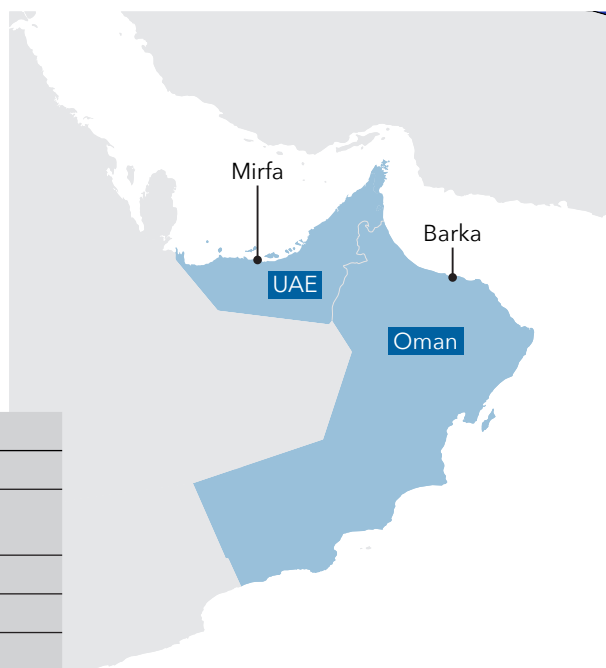
A key part of the project was the implementation of SIDEM's Spidflow Filter for the first time. It combines Veolia's Spidflow dissolved air flotation (DAF) and Filtraflo high rate dual media gravity filtration (TGV). The technology has a 25% reduced footprint compared to conventional pretreatment (DAF+DMF; DAF+UF), does not require thickening, and has a modular design allowing for straightforward extension of existing capacity.

Optimised hydraulics and proprietary white water injection nozzles allow for fast reaction to variations in raw water quality. Operating at a rate of 30 m³/h over 24 months, it maintained standards of feedwater compatible with RO membrane specifications through water quality fluctuations. Filtration cycles reached 40 hours while maintaining high loading rates, resulting in pretreatment recovery rates above 97%. The system also allows biomass development, reducing RO membrane biofouling and enabling low CIP requirements. The system also claims to reduce chemical consumption and increase membrane life duration compared to UF pretreatment.



MIRFA IWPP, ABU DHABI, UAE.

The 52.5 MIGD (238,665 m³/d) Mirfa desalination plant in Abu Dhabi represented a step-change for seawater reverse osmosis (SWRO) in the Gulf region. The facility's 30 MIGD (136,000 m³/d) SWRO system showed the ability for membrane desalination to work at scale in the most hostile of feedwater conditions in the Arabian Gulf. Including a 1,600 MW power station in addition to desalination capacity, at the time of commissioning the facility had the capacity to generate 10% of Abu Dhabi's power requirements, and represented over 5% of the emirate's water generation capacity.



The \$1.5 billion Mirfa independent water and power project (IWPP) was carried out by an EPC consortium of Hyundai Engineering & Construction and Ansaldo Energia. Suez and Fisia Italimpianti supplied the desalination plant's 30 MIGD RO system and legacy 22.5 MIGD (102,000 m³/d) multi-stage flash (MSF) systems respectively.

The Mirfa IWPP has been subject to multiple Global Water Awards, with the project itself winning Water Deal of the Year in 2015 following financial close, and Municipal Desalination Plant of the Year in 2018 following its commissioning. The commissioning of the plant also contributed to Suez winning Desalination Company of the Year in 2018. Construction of the desalination element of the IWPP was particularly challenging due to the three pre-existing multi-stage flash (MSF) units already at the site, which had to be integrated into the new reverse osmosis desalination plant. The complexity of the project garnered international attention from the desalination industry.

The plant's SWRO system has a recovery rate of 38.8%, handling some of the world's most saline seawater with TDS levels of 47,800 ppm. Seawater undergoes DAF and media pressure filter pretreatment before entering the two-pass RO system, which uses Hydranautics membranes in a 10+3 configuration and an ERI-supplied energy recovery device.

At the time of procurement, GdF Suez (now ENGIE) took a 20% stake in the \$1.5 billion project, with the offtaker – Abu Dhabi Water and Electricity Authority (ADWEA) – holding the remaining 80%. A consortium of 13 local and international lenders provided financing for the projects, with First Gulf Bank, National Bank of Abu Dhabi, Union National Bank and Abu Dhabi Commercial Bank lending a total of \$500 million between them. At the time of commissioning, the facility was 60% owned by ADWEA, 20% by ENGIE, and 20% by Abu Dhabi Financial Group.

BARKA 4 IWP, OMAN



In July 2018, the Barka Desalination Company announced the commercial launch of the Barka Independent Water Project (IWP). With a 120,000 m² footprint and 281,000 m³/d production capacity, the seawater reverse osmosis (SWRO) plant is the largest of its kind in Oman. It forms part of an extremely active project pipeline, with planned and contracted projects lined up to 2023, and is the second large-scale SWRO project to be commissioned in 2018, after the April start-up of the Qurayyat IWP. The IWP is the largest single desalination unit in Oman, representing over 10% of the country's operational SWRO capacity.

The plant was financed and built by the Barka Desalination Company (BDC) – a project company made up of Itochu Corporation (36% stake), ENGIE (27%), Suez (27%), and Towell Engineering (10%) – with an EPC cost of \$300 million. BDC signed a 20-year water purchase agreement with the Oman Water and Power Procurement Company (OPWP). Suez designed, built, and commissioned the plant, and will operate and maintain the facility for the duration of the 20-year agreement.

The plant's pretreatment system features SEADAF dissolved air floatation (DAF), coagulation, and dual media granular filtration (DGMF). A two-pass reverse osmosis system in a 12+3 configuration achieves a 46% recovery rate, producing permeate with TDS levels of 120–500 ppm from feedwater with a TDS of 42,000 ppm.

BDC emphasises the importance of the plant's energy consumption in producing an environmentally friendly and sustainable source of high-quality drinking water. Using a DWEER energy recovery system, the Barka 4 IWP operates with an energy consumption of 3.15 kWh/m³.

New Desalination Plants Contracted 2017-2018

A listing of new desalination plants contracted between mid-2017 and mid-2018, drawn from the IDA/GWI Worldwide Desalting Inventory and GWI DesalData. Note that wastewater projects in this list with a capacity of 5,000 m³/d or greater will also appear in the list of selected wastewater reuse projects contracted since 2010 in this publication.

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

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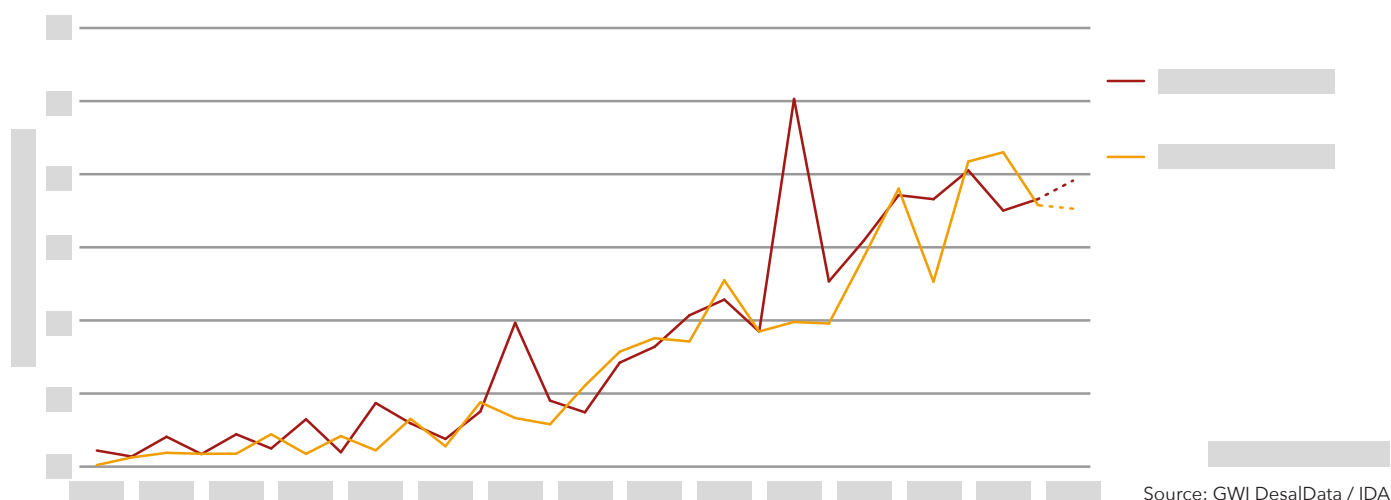
Reuse Market Profile

Global contracted reuse capacity has almost doubled since 2010, with cumulative contracted capacity rising from 59.7 million m³/d in 2009 to 118 million m³/d in 2017. The 58.5 million m³/d in capacity contracted between 2010 and 2017 has seen the epicentre of the global wastewater reuse market move into Asia. Whereas North America made up 34% global reuse capacity contracted to 2009, 49% of capacity contracted between 2010 and 2017 was located in China alone.

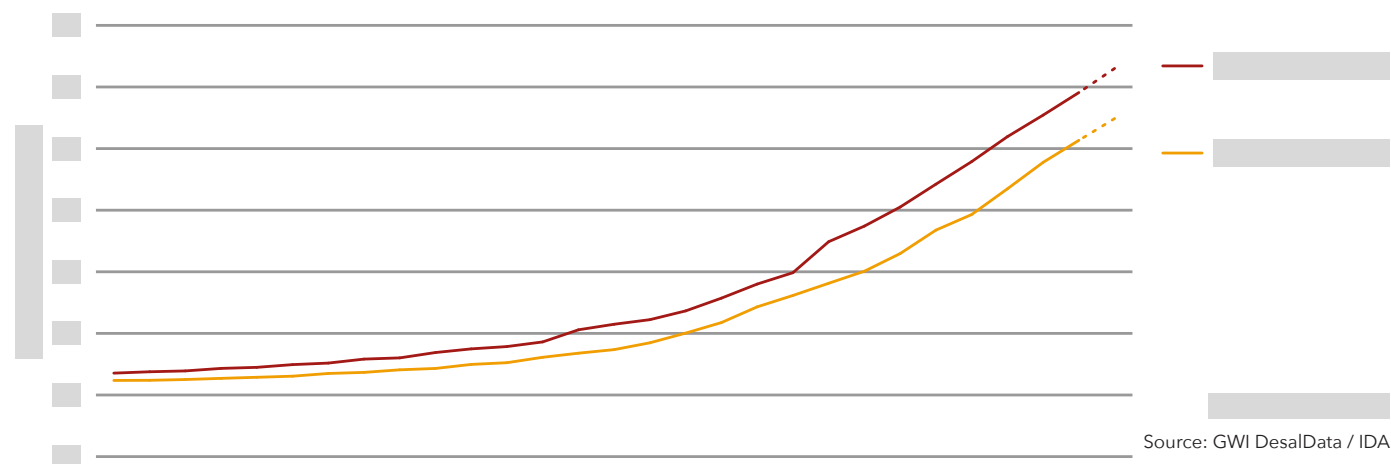
Industrial water demand is the key driver of the wastewater reuse market, especially in water-intensive manufacturing and extraction industries. Population growth in water-scarce regions puts industry in conflict with municipal water users, which tend to be prioritised in times of drought, leading industry to look at alternative water source. Regulations facilitating increased wastewater reuse are also gaining ground worldwide as the urgency of water scarcity gains wider recognition, with impressive results in markets such as India and Taiwan.

There is a growing preference for wastewater reuse over desalination as a solution to drought-induced water scarcity. Vast desalination programmes prompted by unprecedented droughts in Australia, Israel and Cyprus have not been repeated in water-scarce regions since 2010. Both Cape Town and California are pursuing potable reuse of wastewater before large-scale desalination, and reuse of wastewater in industry plays a vital part of policy responses to degradation of water resources in China and India.

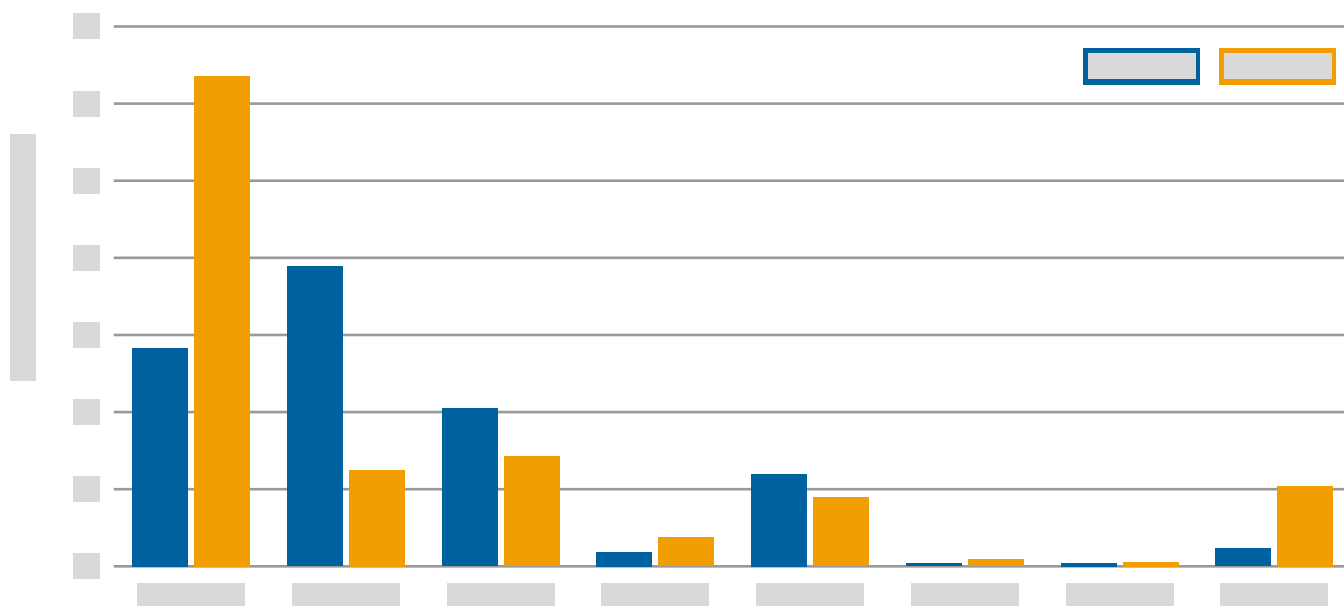
Additional contracted and installed reuse capacity by year



Cumulative contracted and installed reuse capacity by year,

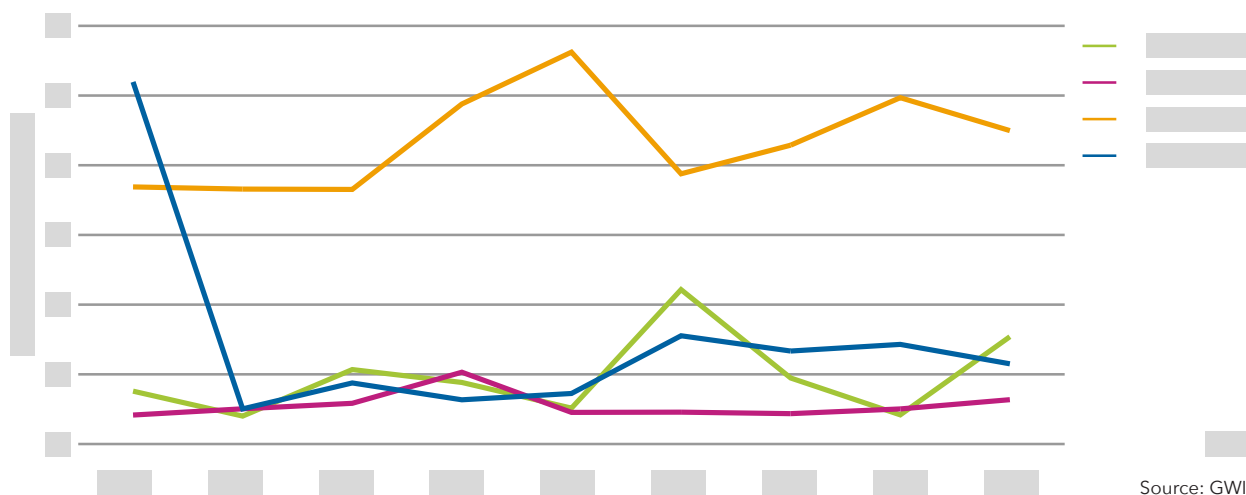


Installed reuse capacity by region to



Source: GWI DesalData / IDA

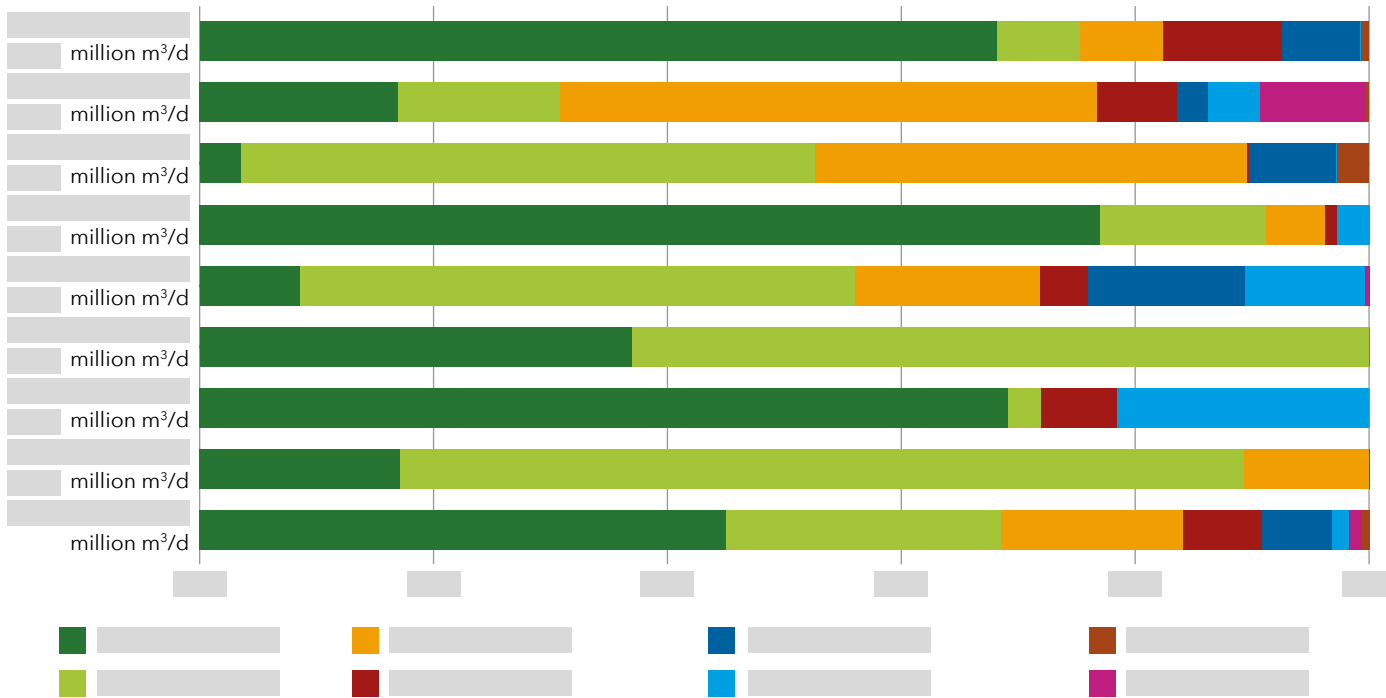
Additional contracted reuse capacity by region,



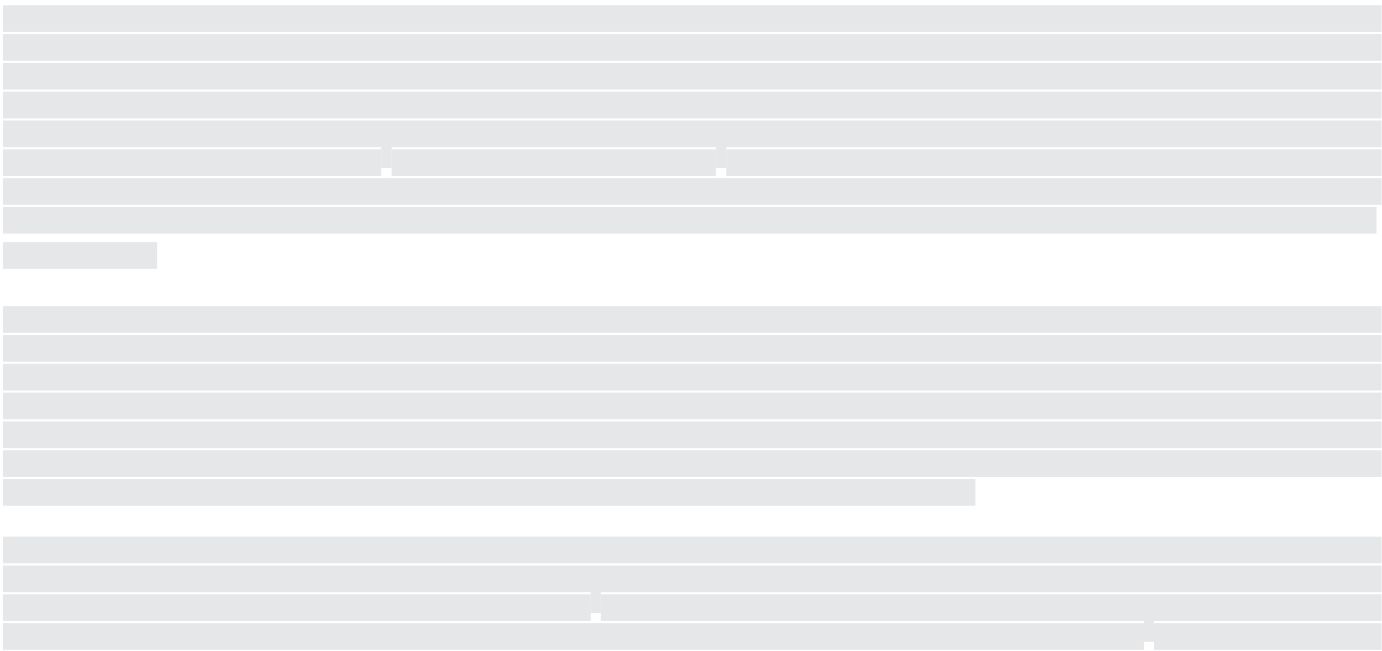
Source: GWI DesalData / IDA



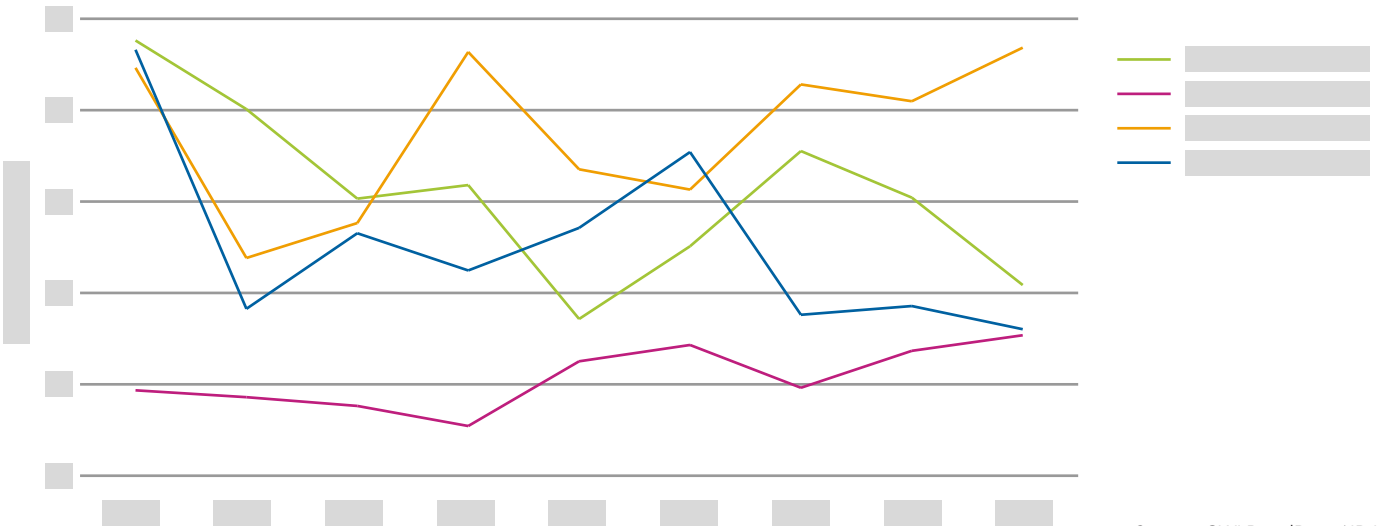
Installed capacity by water reuse application, 



Source: GWI DesalData / IDA

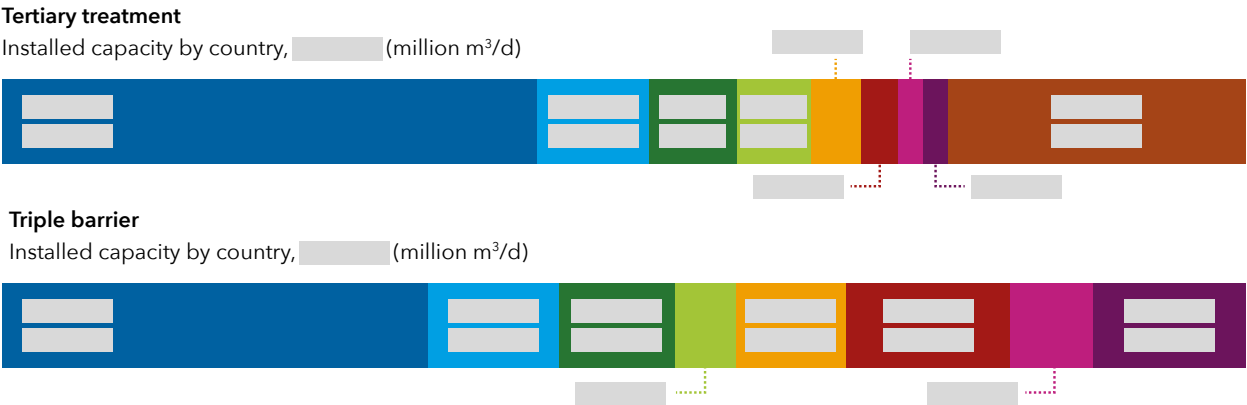


Annual contracted desalination and reuse capacity by technology, [redacted]

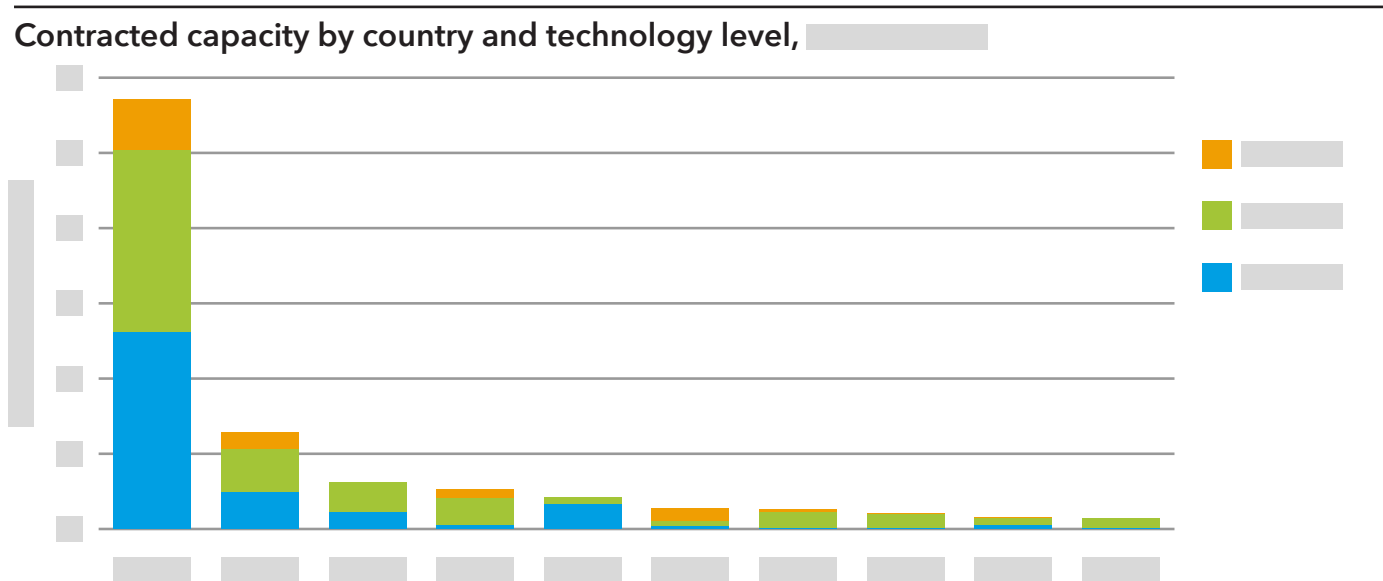


Source: GWI DesalData / IDA
See p.55 for treatment technology definitions

Global distribution of installed tertiary and triple barrier reuse capacity, [redacted]



Source: GWI DesalData / IDA



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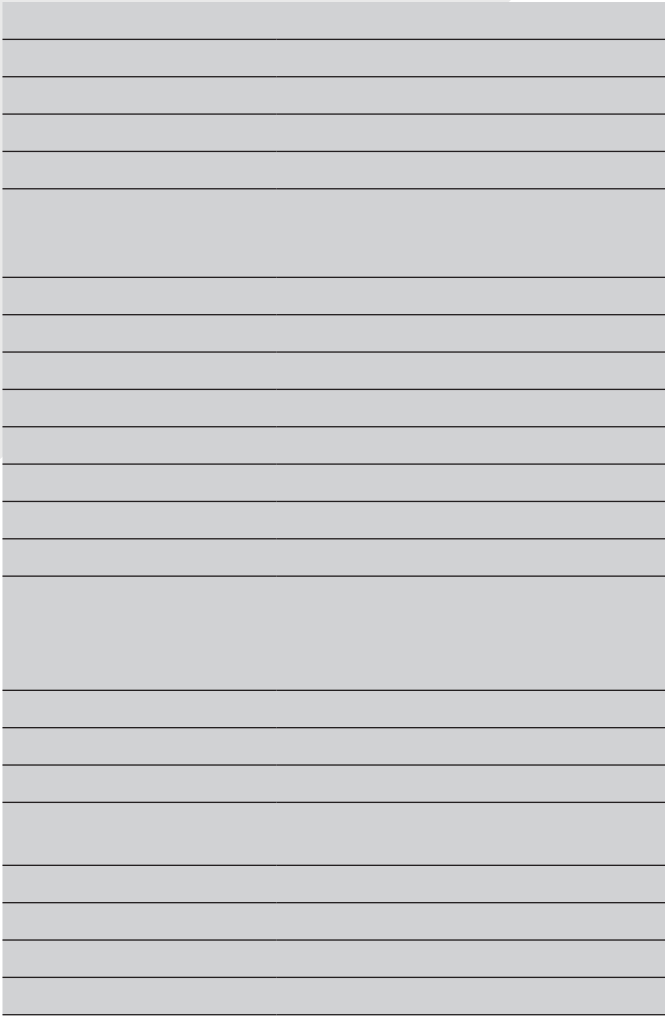
Key municipal reuse projects involving private finance

Country	Project name/location	Project description

Source: GWI

Featured Reuse Plants

BEENYUP ADVANCED WATER RECYCLING PLANT



The Beenyup Advanced Water Recycling Plant forms part of the Water Corporation of Western Australia’s Beenyup Groundwater Replenishment Scheme, injecting highly treated wastewater into key aquifers in the Perth area. Treated effluent from the Beenyup Water Treatment Plant is fed into the advanced water recycling plant (AWRP) involving UF, RO and UV disinfection stages. On completion of phase two of the project in 2019, the project will deliver 28 billion L/yr (38,356 m³/d) into the Gnangara water system – making up a significant portion of the 70–100 billion litres of water supply augmentation envisaged by 2060 in Western Australia’s Water Forever plan.

The two-phase construction schedule involved a project cost of AUD124.6 million (\$90 million) for the first stage, and AUD113 million (\$81.6 million) for plant duplication in the second stage. A further AUD161 million (\$116 million) is budgeted for related infrastructure for stage two of the project, which will include a 13 km recharge pipe and two recharge sites with four additional recharge boreholes.

A contract to design, build and commission stage one of the project was awarded to a Thiess/CH2M joint venture in 2014, with construction of stage two awarded to a Clough/Suez joint venture in 2017. Operations on both projects will be carried out by Aroona Alliance, a 10-year integrated alliance consisting of Degremont (now Suez), Ferrovial-owned Transfield Services, and the Water Corporation of Western Australia (WCWA), the client for the project.

UF pretreatment uses 8 skids of 120 Dow SFD-2880 UF membranes, and the plant’s RO system uses 4 H&E-designed RO skids and Hydranautics ESPA2 LD membranes in a 70:35 configuration, operating at a pressure of 600 kPa. The facility uses 2 Calgon Carbon ‘Sentinal 24’ UV units for disinfection.

Before pursuing aquifer recharge, the Water Corporation carried out an extensive community engagement programme modelled on the successful example of Orange County’s Groundwater Replenishment Scheme. Against a backdrop of widespread public opposition to potable reuse of water in Australia, a Perth survey found approval ratings of 79% for the project in 2016, the year before the first stage of the project was approved to begin groundwater recharge.



ASHALIM SOLAR POWER PLANT



The 121 MW Ashalim solar power plant in the Negev desert is Israel's first utility-scale Concentrated Solar Power (CSP) thermal power plant. The plant's former reliance on local freshwater reserves led the operator, GE Energy, to seek a solution allowing the reuse of treated blowdown wastewater as make-up and ultrapure water, minimising wastewater discharged to evaporation pools.

In January 2014 GE Energy contracted Fluence to supply their Nirobox containerised water reuse system to the facility. The system was commissioned in October 2017 with a capacity of 30 m³/h, of which two thirds is used as cooling make-up and the remainder as boiler feed. Permeate from the first stage (65% recovery) is used for cooling, while a portion undergoes a second stage of RO treatment (bringing recovery up to 90%), followed by gas transfer membrane (GTM) and continuous electrodeionisation (CEDI) treatment stages before use as boiler feed. The two RO stages operate at pressures of 12–14 and 14–16 BAR, with an overall energy consumption of 3 kWh/m³.

The containerised plant allowed the majority of related works to be conducted off-site and reduced installation time, construction costs and system footprint. With an emphasis placed on maximising system

availability and reliability, the system includes a second RO train to provide 100% redundancy, meaning that production is not interrupted during cleaning.

Other components used included DOW UF and RO membranes, BEL pressure vessels, and a control system furnished by ABB. The continuous operation of the wastewater reuse system led to a 50% reduction in freshwater consumption at the power plant, and an 80% reduction in effluent discharge.

BISHUI UNDERGROUND WWTP

The upgrade of the Bishui WWTP is emblematic of the wastewater treatment infrastructure drive that has been gathering speed in China since 2010. Originally constructed with a capacity of 100,000 m³/d for a service population of 700,000 in 2002, the increasing local population and high levels of pollution in the nearby river drove the upgrade of the plant with the addition of advanced treatment, almost doubling the treatment capacity. Treated effluent from the plant meets Class IV standards for surface water and is used towards environmental replenishment of the nearby river.

The advanced treatment stages added to the facility included 26 UF trains supplied by Fenco, and a UV system supplied by Trojan. The update also reduced the plant's footprint from 230,000 m² to 73,000 m². The underground reconstruction of the plant made space for the construction of a recreation area, artificial wetlands and a water garden.



CHAPULTEPEC, MEXICO



The reuse project is set just beyond Chapultepec Park

The Chapultepec water reuse project was contracted to alleviate pressure on water resources around Mexico City, where around 15 million people depend on groundwater. The project involved the construction of a 14,688 m³/d membrane bioreactor (MBR) plant, and an advanced polishing plant using ultrafiltration, reverse osmosis and ultraviolet treatment steps to prepare treated effluent for aquifer recharge.

The initial stage uses biological treatment to eliminate carbon, nitrogen and phosphorus, before MBR treatment and transfer to an environmental buffer in the form of lakes in the Chapultepec forest. This WWTP was the first MBR installation to be commissioned in Mexico. During the rainy season, water from the lakes is treated in the polishing plant to remove dissolved solids and disinfect the water for direct injection into the subsoil via infiltration wells at a depth of 300 m.



In addition to augmenting Mexico City's water supplies, the facility increased sanitation coverage in the city, and use of local lakes as a buffer stage meant that the project also contributed to enhancement of the local environmental by irrigating green spaces. Sludge from the WWTP is used as fertiliser.

This image shows a full page of a document template. It consists of a light gray background with evenly spaced horizontal lines. The lines are thin and dark, creating a series of uniform rectangular bands across the entire page. There are no margins, text, or other markings present.

TERMINAL ISLAND AWPf, USA.

The ultimate expansion of the Terminal Island Advanced Water Purification Facility (AWPF) doubled the treatment capacity of the plant, which injects treated wastewater into the Dominguez Gap Barrier for agricultural and industrial reuse, and to prevent saltwater intrusion into the aquifer. The capacity of the AWPf facility after the expansion is 45,425 m³/d.

Alongside the additional treatment capacity, the expansion added a Xylem ultraviolet advanced oxidation (UV-AOP) system credited for 6-log virus and protozoa removal. The UV-AOP system also achieves NDMA removal and destruction of trace organic compounds. The enhanced disinfection capacity of the system creates greater options for other possible end-users, which could also provide a potential revenue stream for the facility.

A Walsh Group/Carollo Engineers team was formally awarded the design-build contract for the AWPf in May 2015, with commissioning in September 2017. The project location on dredged fill required soil stabilisation to be carried out before construction and a compact design footprint of 12,000 m². Continuous plant operation was maintained throughout the construction sequence, and the project included a 90-day shutdown in which the existing AWPf was transitioned onto the new plant Distributed Control System (DCS) provided as part of the expansion.

The plant runs tertiary treated effluent water from the Terminal Island Water Reclamation plant through MF, RO and UV-AOP disinfection stages. The expansion's MF system uses 6 Memcor® CP 240 PVDF 'N' series modules manufactured by Evoqua, followed by a Doosan Hydro (now SafBon Water Technology) two-stage, four-train RO system with a 130 PSI operating pressure and 66% recovery rate. Biofouling is inhibited by maintaining a 1–3 mg/l chloramine residual in the MF and RO feedwater, and membranes were selected for their tolerance to this level of chloramine concentration.



BAMROLI, GUJARAT, INDIA



Serving the Pandesara industrial estate, the 40,000 m³/d wastewater reuse plant at Bamroli, Gujarat, was a trend-setter for municipal-industrial partnerships involving the use of municipal treated sewage effluent (TSE) by industrial end-users. Following the success of the initial plant, which was commissioned in 2014, an accompanying plant with a capacity of 35,000 m³/d is under construction and scheduled for commissioning in 2019. The new plant will serve the nearby Sachin industrial estate.

EPC contracts for the first and second plants were awarded to Enviro Control Associates in 2012 and 2017 respectively, both with a 10-year O&M period. The first plant uses Toray RO membranes, with rapid gravity sand filtration and ultrafiltration pretreatment stages, while the second uses Hydranautics membranes, with a cloth disc filtration pretreatment stage. Both systems have a recovery rate of 75%, reducing TDS from 1,400 ppm in feedwater to below 500 ppm in their product water.

The plants take secondary treated wastewater from a nearby wastewater treatment plant run by Surat Municipal Corporation, reducing the industrial use of freshwater resources and increasing supplies of potential drinking water. Surat Municipal Corporation offers the treated effluent to industrial users at a rate of INR25/m³ (\$0.35/m³), compared to INR30/m³ (0.42/m³) charged for freshwater.

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A listing of new reuse plants contracted between 2010 and mid-2018 with a capacity greater than 5,000 m³/d and using tertiary or advanced treatment technology. The plant list is drawn from the IDA/GWI Worldwide Desalting Inventory, GWI DesalData, and the GWI Water Reuse Inventory. Note that RO projects contracted since June 2017 will also appear in the list of contracted desalination plants in this publication.

Country	Plant name/location	Capacity (m³/d)	Award date	Technology	Plant supplier
Australia	Bolivar WWTP desalination expansion	17,000	2018	RO	SADYT
Australia	Beenyup Groundwater Replenishment Programme Expansion	38,356	2016	RO, UV	Suez, Ferrovial
Australia	Beenyup Groundwater Replenishment Programme	38,356	2014	RO, UV	CH2M Hill, Thies
Australia	Ulan	21,300	2013	RO	Osmoflo
Australia	Northern Water Treatment Plant	100,000	2012	RO	GE Water
Australia	Australia Pacific LNG Water Treatment Facility	80,000	2012	RO, disinfection	Leighton Contractors, MWH Global, GRC Quantity Surveyors
Australia	West Werribee Dual Water Supply Project	15,000	2012	RO	TEDRA Australia
Australia	Ranger	11,000	2011	RO	Osmoflo
Australia	Kooragang Industrial Water Scheme	9,000	2011	RO, disinfection	Abigroup, CH2M
Australia	South Australia	8,000	2011	RO	-

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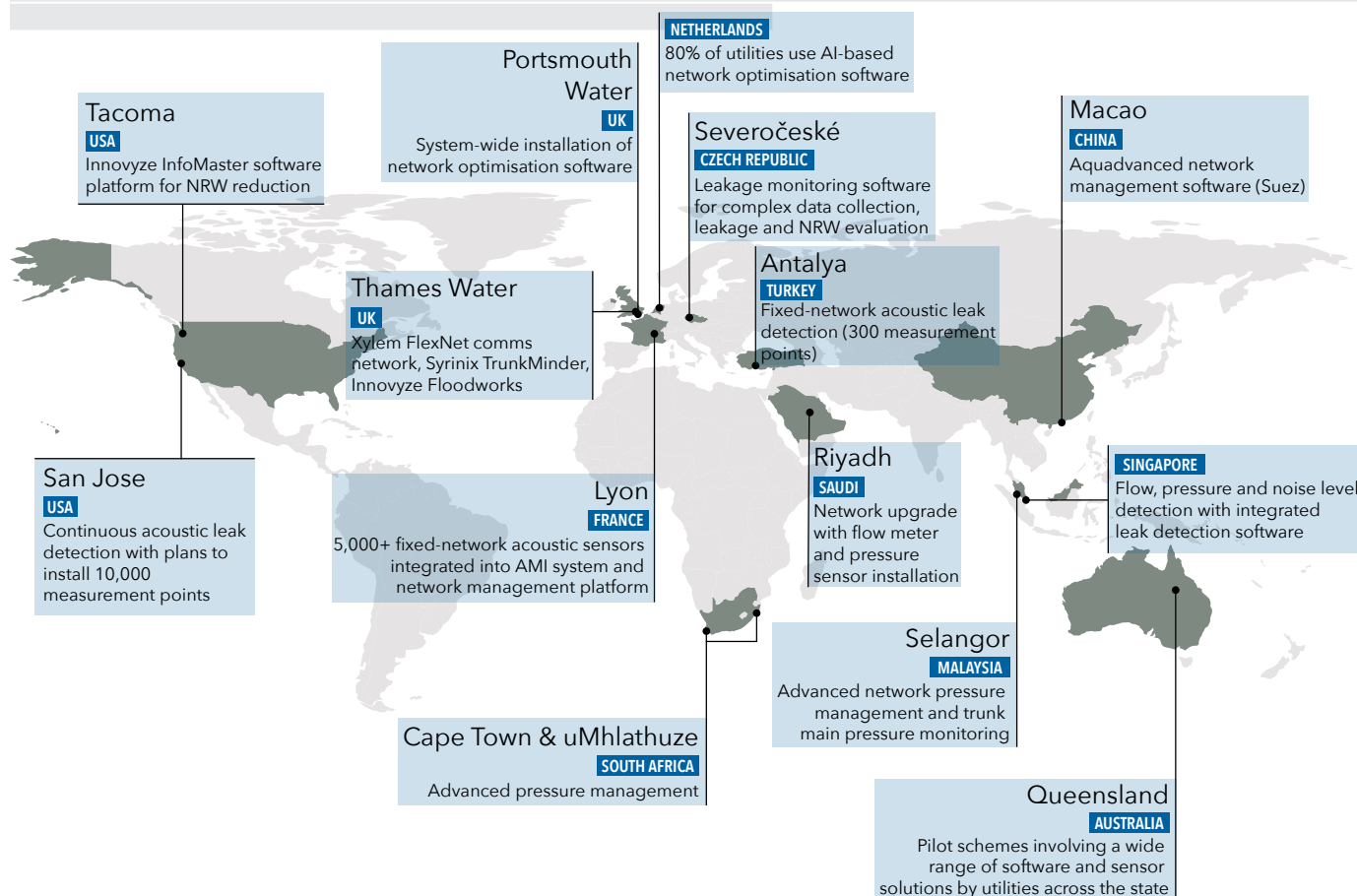
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Smart Leakage Reduction Market Profile

Digital network monitoring: early adopters

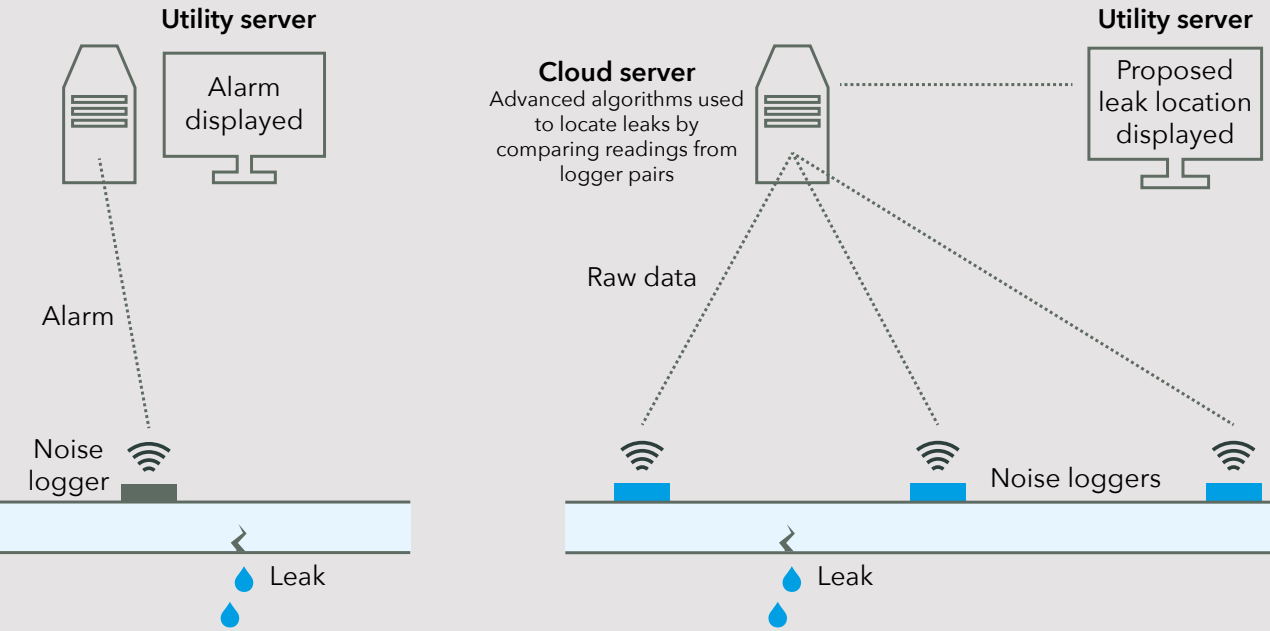


Smart technologies in network loss reduction

NRW's digital transformation

Acoustic leak detection

Alarms vs correlation



Acoustic leak detection

Acoustic leak continued: detection primer

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Software and data management

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WATER'S DIGITAL FUTURE

The outlook for monitoring, control and data management systems

Big data is changing the face of the water industry, and the management of data-driven monitoring and control systems will increasingly infiltrate every part of the water business. In the future, data-feeds and cognitive computing could govern water management and inform every decision in the municipal and industrial sectors. It is critical for **every company working in the water space** to understand how this reality will impact future operations and opportunities in the water industry.

This is the first report of its kind that aims to provide a **comprehensive insight into the market for water monitoring & control systems** and give a holistic perspective of the market's structure, the interaction of various players within the different layers of the market, and their offerings **across the full breadth of the industry**.

There is an increasing demand for these systems to identify **when** an issue has occurred, determine **where** in a network or treatment system a problem is, and effectively **predict** when a problem is likely to occur in order for preventative measures to be taken. This report shows the gaps in the market, what is motivating the end-user to invest in a solution and how the solution provider can access the market.

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QASSIM, SAUDI ARABIA: ADVANCED METERING INFRASTRUCTURE



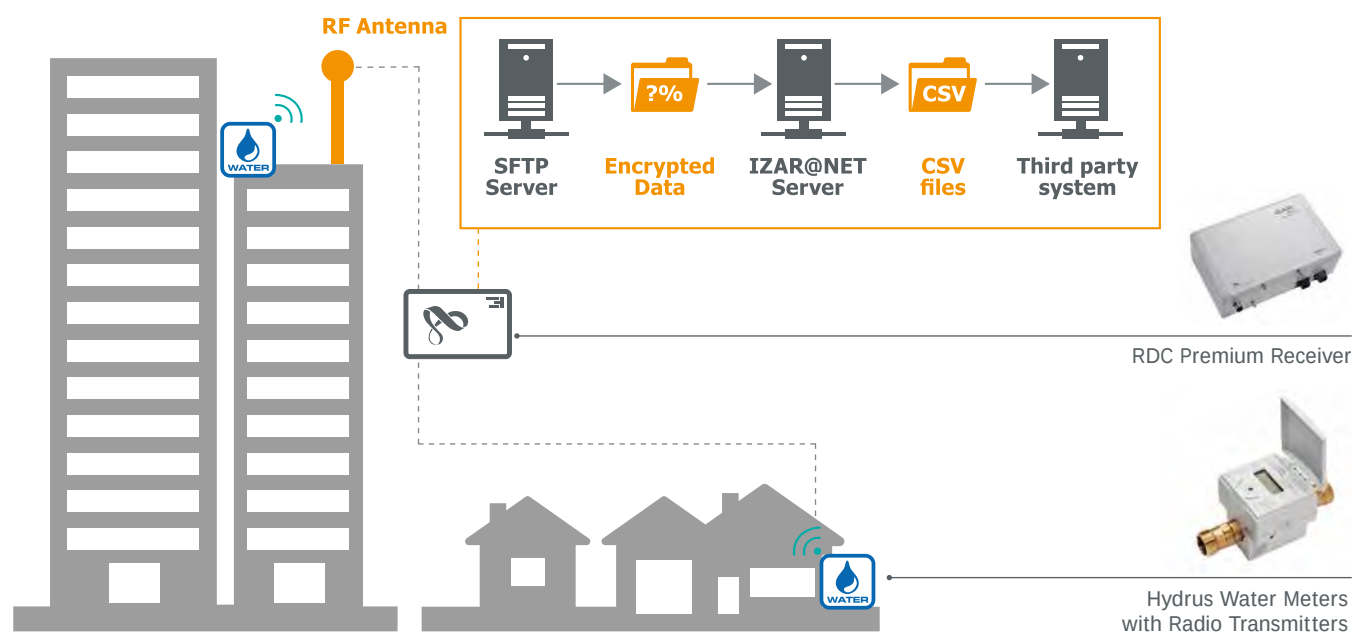
Saudi Arabia is in the process of executing one of the world's largest metering programmes – as of August 2018, 900,000 smart water meters had been installed out of a planned 2.1 million by 2021. This total is spread across the country, and is made up of a large number of municipal and regional projects to increase meter coverage.

The Kingdom represents a challenging environment for traditional mechanical water meters: the moving parts of the meters struggle with sand in pipelines, resulting in readings that underestimate total flow rates. Sand deposits can dirty or block mechanical meters, at the cost of measurement accuracy – as a result actual water consumption is often higher than recorded.

The Al-Qassim region is no exception, Qassim's pipeline system was showing strong signs of wear and tear. As a result, the General Directorate of Water Qassim (GDOW) was aware of high rates of NRW, but had very little data available to facilitate effective network improvements, and was devoting significant resources to manual reading of unreliable meters.

Diehl metering carried out the advanced metering infrastructure (AMI) project along with a local partner, Abunayyan Trading. This involved the installation of 38,500 ultrasonic smart water meters and 22 permanent receivers, removing the need for manual meter reading. Meter data is transmitted from the receivers to a central server every two hours, and is automatically imported into the IZAR@NET 2 meter data management software. The software includes functions to display data in aggregate and geographically, and can be set to automatically email a technician when inferred losses in the network rise unexpectedly.

Leaks within a building can be detected using predefined events, such as an interrupted 24-hour flow without at least 15 minutes of stoppage. Leaks in the network can be inferred from discrepancies between water volumes entering and exiting the network, meaning that a greater density of meters will result in more accurate leak detection.



Source: Diehl

KNOXVILLE, TENNESSEE: NETWORK UPGRADE AND SOFTWARE ADOPTION

Knoxville Utilities Board (KUB) provides water, wastewater, gas and electricity to the East Tennessee Valley, and has taken a proactive approach to reducing non-revenue water (NRW). The utility is committed to overhauling its infrastructure in a cost-effective manner under the Century II infrastructure improvement programme, which began in 2006.

NRW in the KUB's service area has reached highs of 35% in the past decade, and the prevalence of underground leaks was a key obstacle to reducing this figure. To address this, KUB engaged Matchpoint – a contractor specialising in water loss recovery – in a 3-year agreement to manage the installation and implantation of district metered areas (DMAs). The network is now divided into 44 DMAs, each of which serves no more than 3,000 customers, with a total of 102 pressure sensors and flow meters. Pressure and flow data is recorded every 15 minutes and transmitted daily to a central server.

KUB's objective for enhanced data collection was to pivot from reactive to proactive leakage management, and to prioritise certain zones of the network based on complete water costs. However, as more and more data became available, it became increasingly clear that manual data interpretation would be insufficient to achieve an evidence-driven approach to achieving these goals.

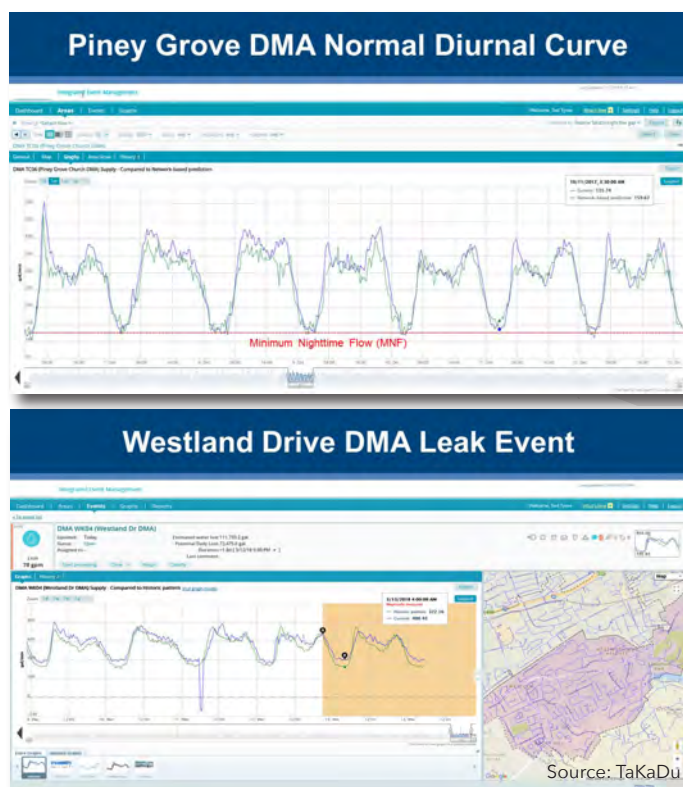
This logistical challenge to effective data management led KUB to issue a tender for a monitoring and event management software in 2016, which it awarded to TaKaDu in April 2017 – TaKaDu's first contract in the US. The software platform allows KUB to sort and address events by type, size and trends, and integrates data from KUB's SCADA system and underground sensors, automatically identifying key changes in trends as they occur, pinpointed to

specific DMAs. In addition to leaks and bursts, the platform identifies asset failure or water contamination, and can input them into work orders, call centres, and a range of other capabilities. Combining data in this way allows for straightforward cross-checking and confirmation of the most urgent bursts and leaks, as well as helping network managers to prioritise leak repairs, as opposed to reacting to rising leaks as they are discovered.

In addition to NRW reductions, the software has facilitated improvements to KUB's operational efficiency, improving network performance, reducing operational costs, optimising network pressure management and improving customer service. In addition to data from SCADA systems, sensors and meters, the platform can also integrate leaks reported to a utility's call centre.

TaKaDu deployed its solution over the course of eight weeks, providing training and support for KUB staff. As the technology began generating insights from the data, TaKaDu was able to further detect where DMAs or meters were incomplete or faulty, providing the additional value of improving the DMA system. Whereas staff previously relied on external experts to access and interpret their SCADA data, the TaKaDu solution was accessible enough for KUB team members to independently assess events and information.

The installation of DMAs provided a vital foundation for the application of sensors and event detection software, and the data generated in turn provided information allowing improvements to the DMAs themselves. Event detection software presents the flood of data generated across a utility network in a way that allows for near real-time data network monitoring, and the aggregation of data produced over a matter of months from disparate sources. Through these platforms, an over-abundance of data can be transformed into a treasure trove of information.



TaKaDu's event management software allows network operators to easily view all data related to a single DMA. The lower image shows actual water supply levels against historic averages, with an unusually high flow measurement indicating a leak event.



Matchpoint, Inc. specialises in water loss recovery and control in North America and the Caribbean. It offers training and infrastructure upgrades, and it is also a reseller for a wide range of sensors and software for use in utility water networks. CEO Barry Hales sees this vertical integration from the DMA to data management as a key strength, estimating that the company's orders are a 50/50 split between turnkey and 'data-as-a-service' contracts. The latter can go as far as investigating potential leaks for entry into a utility's GIS system. Contractors such as Matchpoint can play a vital role in bringing smart technologies to utility end-users, acting as a conduit for a relatively small group of technology providers to access the wider market.

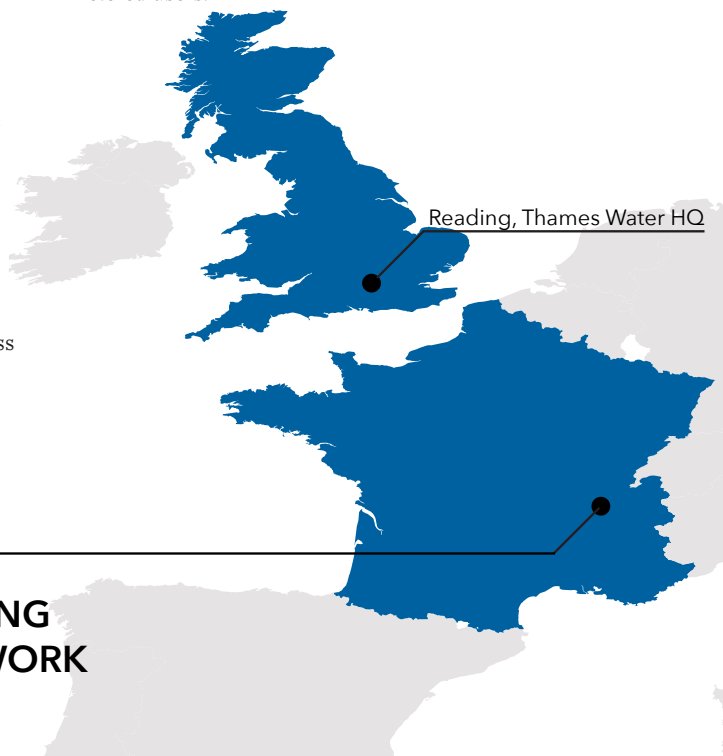
THAMES WATER, UK: SMART METERING AND PRESSURE MANAGEMENT

In 2015, Thames Water, the UK's largest water and wastewater service provider, turned to Sensus, a technology brand owned by Xylem, to develop a smart water system that would identify leaks and reduce losses throughout the network. The potential benefits were enormous. Thames Water provides drinking water to 10 million people through a network of 31,000 km of water mains pipes, registering daily losses of 654,000 m³/d in 2013/14.

After considering options in 2014, Thames Water opted to install a Sensus, end-to-end smart water solution, controlled and delivered via a FlexNet® communication network. The service included implementing sensors and smart meters; a secure, two-way communications network, and back-office data management. As the sensors and meters gather information about system performance, the two-way communications network updates operators hourly and allows them to access data on demand. Once the system detects an irregularity, it broadcasts an alert. By means of a remote-controlled valve system, operators can reduce flow to the affected area, even cutting it off entirely; minimising losses until the issue is resolved.

As of 2017, Thames Water had installed 239,000 smart meters across its network as part of a commitment to use an advanced metering infrastructure (AMI). In 2017/18, 1,437 leaks were repaired in customer homes after being detected by smart meters, with Thames Water crediting 5,900 m³/d in water savings to smart meter leak detection (equivalent to £4.3 million in savings).

The benefits are not simply in preventing physical loss. Smart metering allows suppliers to bill customers for their exact usage, ensuring bills accurately reflect usage. A personalised billing system also encourages customers to better understand their water usage and access a breakdown of their water charges online. In 2018, Thames Water reported smart meter equipped households reduced their water consumption by 13% on average, compared to non-metered users.



LYON, FRANCE: ADVANCED METERING INFRASTRUCTURE AND FIXED-NETWORK ACOUSTIC LEAK DETECTION

Serving 1.3 million people across 54 municipalities, Greater Lyon has the second largest population served of any water distribution network in France. Following the award of an eight-year drinking water production and distribution management contract to Veolia in 2014, smart technology has been rolled out rapidly across the network. Before the award, Veolia had served only around 85% of consumers, with the rest served by contracts held by Lyonnaise des Eaux and Saur. The 2014 contract combined operations of the cities network into a single management project, with the stated aim of reducing network leakage by 13% by 2018.

Since then, Veolia has installed advanced metering infrastructure (AMI) to monitor water consumption; installing 400,000 smart meters. The Téléo metering technology allows customers to check their daily consumption online and can be set to notify customers via text or email when abnormally high consumption – one of the chief indicators of a potential leak – occurs in their connection.

Lyon is unusual from a leak detection standpoint in that a detailed NRW reduction plan was formulated from the outset in order to meet the strategic objectives of the tender. With clear plans and objectives, following in-depth pilots and trials, the roll-out of smart technology has played a vital role in Veolia's estimated water savings of 33,000 m³/d.

In its use of acoustic leak detection (ALD) technology and its communications network integration, Veolia's project exhibits some interesting innovations. With 6,000 sensors (5,500 permanent,

500 movable), the project is among the largest installations of ALD technology in the world. The sensors, provided by Gutermann, are installed across 2,000 km of the most sensitive parts of Grand Lyon's water distribution network.

Under normal conditions, Gutermann's ZONESCAN ALPHA system collects and transmits data to the company's server via proprietary radio receivers for processing, with proposed leaks delivered to the customer's SCADA system. In this case, however, the ALD system was integrated into Veolia's advanced metering infrastructure (AMI), avoiding the need to construct separate radio receivers for acoustic data and halving the unit cost of the acoustic sensor portion of the project. The supply of the sensors also involved integrating Gutermann's acoustic correlation software into Veolia's network management system, which built on previous work undertaken between Veolia, Gutermann and IBM on systems integration.

Integrating sensors into the existing AMI communications networks in this way is unusual, and remains one of just a handful of such projects globally.

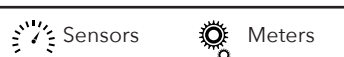
In 2018 GWI conducted a market survey of smart water solutions providers, focusing on water management in utility distribution networks. The list below is the resulting pilot inventory of smart water projects grouped by country. Where the contract date or duration of a project was provided it is listed in brackets in the client/project location column. Smart water projects grouped by solutions provider are available in the reference listings at the back of this publication.

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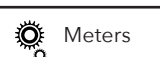
Legend



Software



Sensors



Meters

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Country	Client/project location	Technology provider	Project description	Meters/sensors/software

Legend

 Software

 Sensors

 Meters



GLOBAL WATER INTELLIGENCE MAGAZINE

GWI Magazine is your monthly industry-leading publication for market developments and regional trends in water and desalination, project financing and industry-leading technology intelligence.

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Reference Directory

Selected references since 2010 from desalination and reuse plant and equipment suppliers, and from digital water network monitoring technology providers.

360 Environmental

 Perth, Australia

 +61 8 9388 8360

www.360environmental.com.au

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Baseline studies

Grange Resources, WA, Australia

Expert advice

Sydney, NSW, Australia

Tugan, QLD, Australia

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Planning

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Project environmental management

Burrup Peninsula Industrial Seawater Supplies Project, Karratha, WA, Australia

Perth Seawater Desalination Plant, Kwinana, WA, Australia

Binningup Desalination Plant, Binningup, WA, Australia

ABB Group

 Sesto San Giovanni, Italy

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 water.team@it.abb.com

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Software supplier

Al-Ghubra, Muscat, Oman, 191,000 m³/d RO

Yanbu Desalination Plant, Yanbu, Saudi Arabia, 49,962 m³/d RO

Jeddah Phase 2, Jeddah, Saudi Arabia, 48,848 m³/d RO

Jeddah Phase 1, Jeddah, Saudi Arabia, 48,848 m³/d RO

Abengoa

 Seville, Spain

 +34 954 93 70 00

www.abengoa.com

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EPC Contractor

Yopal, Colombia 2015, 67,392 m³/d

Accra, Nungua, Ghana 2015, 60,000 m³/d RO

Al Khafji, Saudi Arabia 2015, 60,000 m³/d RO

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Norte III combined cycle plant, Mexico 2015, 1,300 m³/d RO

Atacama solar thermal plant, Atacama, Chile 2015, 270 m³/d RO

Norte III combined cycle plant, Mexico 2015, 18 m³/d RO

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Ténès, Algeria 2014, 200,000 m³/d RO

Agadir, Morocco 2014, 100,000 m³/d RO

Barka, Oman 2014, 45,000 m³/d RO

Ratnapura, Sri Lanka 2014, 13,000 m³/d

Angamos, Mejillones, Chile 2014, 4,800 m³/d RO

Masdar, Abu Dhabi, United Arab Emirates 2014, 1,000 m³/d RO

Carty combined cycle plant, Oregon, United States of America 2014, 490 m³/d RO

Qingdao, China 2013, 100,000 m³/d RO

Montes del Plata, Punta Pereira, Uruguay 2013, 25,000 m³/d RO

Donna, Hidalgo, Texas, United States of America 2012, 9,500 m³/d RO

Honaine, Algeria 2011, 200,000 m³/d RO

Chennai, India 2010, 100,000 m³/d RO

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Absun Zolal

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South Cave Steel, Iran, 3,120 m³/d RO

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Siraf Energy, Iran, 2,000 m³/d RO
Entekhab Petrochemical, Yazd, Iran, 1,200 m³/d Other/Unknown
Chaharmahal Bakhtiari Steel Co RO, Iran, 1,056 m³/d RO
OIEC Group, Assaluyeh, Iran, 840 m³/d Other/Unknown
Hamoun Nyzeh Co., Iran, 600 m³/d Other/Unknown
Chaharmahal Bakhtiari Steel Co, Iran, 400 m³/d Other/Unknown
Rohina Steel Complex, Iran, 70 m³/d RO
Iranian Offshore Oil Co., Salman, Iran, 30 m³/d RO

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ACCIONA Agua provides comprehensive solutions which contribute to sustainable development in the water sector. The projects and contracts executed by the Company since its creation contribute to treating, processing, reusing, desalinating and managing water for over 90 million people in more than 25 countries on five continents, always to the highest standards of quality, innovation and sustainability. ACCIONA Agua has placed its name on over 400 drinking water and wastewater treatment plants and over 75 desalination plants. It also operates and maintains a full range of water treatment plants and provides end-to-end water services in over 180 cities. Innovation and the application of cutting-edge technologies are among the cornerstones of ACCIONA Agua's business. One example of this commitment is the R&D and innovation centre in Barcelona, which has a multidisciplinary team of 30 highly-qualified professionals with extensive experience.

Our project portfolio includes some of the world's foremost desalination facilities:

- The Fujairah desalination plant, in Fujairah, UAE (total capacity 137,000 m³/d).
- The Ras Abu Fontas A2, Qatar, 164,000 m³/d
- The Umm Al houl 284,000 m³/d
- One of the largest desalination plants in Australia, in Adelaide (South Australia) (300,000 m³/d).
- The Copiapó desalination plant in Chile, to guarantee the water supply for the region's mining operations (51,840 m³/d).

Our work on major treatment facilities in Spain and overseas includes the following plants:

- The Atotonilco WWTP in Mexico, with a capacity of 3,024,000 m³/day - the biggest WWTP in the world.
- The Arroyo Culebro WWTP, in Madrid - capacity: 172,800 m³/d.

- The Sarlux Industrial desalination plant 12,000 m³/d
- The Bello WWTP in Medellin, Colombia, has a total capacity of 440,000 m³/d.

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Khobar, Saudi Arabia 2018 210,000 m³/d
Jebel Ali Power and Desalination station complex (JAPS), Jebel Ali, Dubai, United Arab Emirates 2018 181,840 m³/d RO

Desalination plant supplier

Isla de Sal, Cape Verde 2014 5,000 m³/d RO
Sao Vicente, Cape Verde 2014 5,000 m³/d RO
Fujairah 1, Fujairah, United Arab Emirates 2012 137,000 m³/d RO
SWRO-4 (Al-Jubail), Eastern Providence, Saudi Arabia 2012 100,000 m³/d RO
Adelaide, SA, Australia 2010 300,000 m³/d RO
Paraguaná, Venezuela 2010 75,000 m³/d RO

Ace Water Treatment Co. Ltd

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www.acewater.co.jp

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Desalination plant supplier

Japan 2017, 500 m³/d RO
Japan 2017, 312 m³/d RO
Fiji 2017, 300 m³/d RO
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Fiji 2017, 100 m³/d RO
Japan 2016, 400 m³/d RO
Japan 2016, 288 m³/d RO
Japan 2016, 240 m³/d RO
French Polynesia 2016, 150 m³/d RO
Fiji 2016, 100 m³/d RO
Palau 2016, 100 m³/d RO
Japan 2016, 100 m³/d RO
Philippines 2015, 750 m³/d RO
Sri Lanka 2015, 350 m³/d RO
United States Minor Outlying Islands 2015, 240 m³/d RO
Abu Dhabi, United Arab Emirates 2014, 1,000 m³/d RO
Japan 2013, 300 m³/d RO
Colombo, Sri Lanka 2013, 200 m³/d RO
Nadi, Fiji 2013, 130 m³/d RO
Mie, Japan 2013, 120 m³/d RO
Miyagi, Japan 2013, 100 m³/d RO
Nadi, Fiji 2013, 100 m³/d RO
Hawaii, U.S.A. 2012, 120 m³/d RO
Power Plant Project, Fukushima, Japan 2012, 100 m³/d RO

ACCIONA AGUA WORKS FOR A MORE DIGITAL WATER FUTURE

In ACCIONA Agua we desalinate, purify, treat and re-use water using the latest technologies, from reverse osmosis to smart platforms for the control and maintenance of facilities, plants and distribution and supply networks. We use the Internet of Things (IoT) to connect all our plants and supply networks to the digital platforms.

Nadi, Fiji 2012, 100 m³/d RO
Camp water project, South Sudan 2011, 300 m³/d RO
Desalination Project, Shizuoka, Japan 2011, 200 m³/d RO
Fluorine removal project, Yamaguchi, Japan 2011, 170 m³/d RO
Passenger Ship Project, Yokohama, Japan 2011, 100 m³/d RO
Resort Island project, Fiji 2011, 100 m³/d RO
LNG Project, Algeria 2010, 1,000 m³/d RO
Thermal power plant, Sea of Japan area, Japan 2010, 600 m³/d RO
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Cooling system project, Fukushima, Japan 2010, 200 m³/d RO
Pilot plant project, Kanagawa, Japan 2010, 130 m³/d RO
Fluorine removal project, Miyagi, Japan 2010, 100 m³/d RO
Japan, 28,800 m³/d Other

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www.acwa.co.uk

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Contractor

Brackish Water RO Plant, Princess Noura University for Women, Riyadh, Saudi Arabia 2011, 13,000 m³/d RO
Golden Sands, Oman 2011, 850 m³/d RO

Desalination plant supplier

15 plants, each 50-300 m³/d, Static Company, Maldives, RO

Subcontractor

Princess Noura University for Women (PNUFW), Riyadh, Saudi Arabia 2012, 7,000 m³/d RO

ADAN Technical & Economic Services Ltd.

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Engineering consultancy

Dead Sea Water Project (Phase I), Israel 2015
Ashdod, Israel 2014, 274,000 m³/d RO
Soreq, Israel 2013, 411,000 m³/d RO
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AECOM Technology Corporation

📍 Los Angeles, CA, USA 📞 +1.213.593.8000

www.aecom.com

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Design engineer

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Bridgeway Acres Waste to Energy WTP, St. Petersburg, FL, U.S.A. 2012, 9,462 m³/d RO

Improvement and expansion

Kinmen Desalination Plant Improvement and Expansion, Kinmen, Taiwan, 4,000 m³/d RO

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Over the past 20 years AES ARABIA LTD. have developed a global reputation as high quality solutions providers for a diversified range of water treatment applications. 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 H₂S 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, Abu Dhabi, Oman and Iraq. AES has designed membrane and MSF antiscalants that allowed the complete elimination of sulphuric acid dosing thereby reducing hazardous chemical handling and saving hundreds of thousands of dollars in annual operating costs. Our advanced technology has guaranteed the control of Silica scaling at prohibitive saturation levels. Our RO membrane cleaning chemicals have also allowed for effective removal of stubborn foulants.

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With vast experience in the field, and continued success in various markets, AES is now 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.

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Nada Dairy Factory, Al Hasa, Saudi Arabia 2017 6,246 m³/d RO
 Al Fanar Labor Camp, Riyadh, Saudi Arabia 2017 1,000 m³/d RO
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 Mawten Hilton Double Tree & Garden Inn, Riyadh, Saudi Arabia 2017 500 m³/d RO
 NCC Labor Camp Project, Jubail, Saudi Arabia 2017 455 m³/d RO
 King Abdul Aziz Arabia Horse Center, Riyadh, Saudi Arabia 2017 300 m³/d RO
 Prince Mohd Bin Fahd General Hospital, Qatif, Saudi Arabia 2017 250 m³/d RO
 Three Bees Building, Khobar, Saudi Arabia 2017 220 m³/d RO
 300 Bed Arar Central Hospital Project – MOH, Arar, Saudi Arabia 2017 200 m³/d RO
 Champion Technologies New Factory, Dammam, Saudi Arabia 2017 70 m³/d RO
 Saudi Food & Drug Authority-Riyadh, Riyadh, Saudi Arabia 2017 25 m³/d RO
 Sheikh Beach House, Khobar, Saudi Arabia 2016 1,000 m³/d RO
 Dallah Healthcare Complex - Namar, Riyadh, Saudi Arabia 2016 802 m³/d RO
 KFU (King Faisal University) Technical Hospital, Al Hasa, Saudi Arabia 2016 725 m³/d RO
 Jazan Site Camp I, Jazan, Saudi Arabia 2016 700 m³/d RO
 Jazan IGCC Site, Jazan, Saudi Arabia 2016 700 m³/d RO
 Al Darb Hospital, Jizan, Saudi Arabia 2016 325 m³/d RO
 Centro Hotel at Rotana Center, Khobar, Saudi Arabia 2016 316 m³/d RO
 King Fahd University For Petroleum & Minerals (KFUPM), Khobar, Saudi Arabia 2016 257 m³/d RO
 Imam Abdulrahman Bin Faisal Hospital for National Guard, Khobar, Saudi Arabia 2016 200 m³/d RO
 Rijal Almaa Hospital, Rijal Almaa - Abha, Saudi Arabia 2016 165 m³/d RO
 Zahran Al Janoub Hospital, Zahran Al Janoub, Saudi Arabia 2016 165 m³/d RO
 Novotel Hotel, Jazan, Saudi Arabia 2016 152 m³/d RO
 Saudi Ceramics Company, Riyadh, Saudi Arabia 2016 150 m³/d RO
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 Takween Plastic Factory, AlHasa, Saudi Arabia 2015 1,514 m³/d RO
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 Housing Units for Armed Forces - Phase 2, Dhahran, Saudi Arabia 2015 1,041 m³/d RO
 Housing Units for Armed Forces - Phase 2, Al Hasa, Saudi Arabia 2015 825 m³/d RO
 RRO Plant for MPD Camp, Manifa, Saudi Arabia 2015 549 m³/d RO
 Al Qunfudhah General Hospital, Al Qunfudhah, Saudi Arabia 2015 454 m³/d RO
 Al Enmaa Food Company, Jeddah, Saudi Arabia 2015 401 m³/d RO
 Athieb Village, Khobar, Saudi Arabia 2015 303 m³/d RO
 Sinsina Labor Camp, Jubail, Saudi Arabia 2015 301 m³/d RO
 Holiday Inn Half Moon, Khobar, Saudi Arabia 2015 251 m³/d RO
 Irish Dairy Cheese Factory, Al Kharj, Saudi Arabia 2015 250 m³/d RO
 Medical Center - Armed Forces Hospital, Jazan, Saudi Arabia 2015 201 m³/d RO
 Abdulah Fouad Family Complex, Dammam, Saudi Arabia 2015 201 m³/d RO
 Construction Of Second Male Technical College, Al Hasa, Saudi Arabia 2015 151 m³/d RO
 Secondary Industrial Institute, Hail, Saudi Arabia 2015 151 m³/d RO
 Madinah Apartment Project - Al Rashid Mall, Madinah, Saudi Arabia 2015 140 m³/d RO
 Al Rajhi Bank Head Quarter, Riyadh, Saudi Arabia 2015 39 m³/d RO
 Nasser S Al Hajri Villa, Khobar, Saudi Arabia 2015 15 m³/d RO
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 Prince Mohammad Bin Fahad University Staff Housing Project, Khobar, Saudi Arabia 2014 1,758 m³/d RO
 Nesma Labor Camp, Jizan, Saudi Arabia 2014 1,325 m³/d RO
 Jazan Integrated Gasification combined Cycle - Utilities & Common Area Pkg#5, Jazan, Saudi Arabia 2014 1,211 m³/d RO
 Tamimi Labor camp, Hawiyah, Saudi Arabia 2014 1,000 m³/d RO
 300 Bed Hospital - MOH, Sakakah, Saudi Arabia 2014 470 m³/d RO
 Renovation of King Khalid Hospital, Al Kharj, Saudi Arabia 2014 450 m³/d RO
 Shooting Range Project (SRP Phase III) - Officers Housing, Abha, Saudi Arabia 2014 401 m³/d RO
 Al Fozan Beach House, Khobar, Saudi Arabia 2014 200 m³/d RO
 Qassim University Hospital, Al Qassim, Saudi Arabia 2014 110 m³/d RO
 Rafha Medical Tower 100 Beds, Rafha, Saudi Arabia 2014 100 m³/d RO
 Princess Nora University - Hospital Area Building , Riyadh, Saudi Arabia 2014 100 m³/d RO
 50 Bed Al Mahani Hospital, Taif, Saudi Arabia 2014 100 m³/d RO
 Al Mana General Hospital - Parking Building, Dammam, Saudi Arabia 2014 81 m³/d RO
 Armed Forces Hospital - Kidney Dialysis Building, Wadi Al Dawasir, Saudi Arabia 2014 72 m³/d RO

Princess Nora University - Research Area Building, Riyadh, Saudi Arabia 2014 64 m³/d RO
Princess Nora University - Research Area Building, Riyadh, Saudi Arabia 2014 60 m³/d RO
Al Fozan Villa, Khobar, Saudi Arabia 2014 50 m³/d RO
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Shaybah NGL Recovery & Utilities Package 2 - (WTP-RO), Shaybah, Saudi Arabia 2013 3,408 m³/d RO
Durrat Al Riyadh Touristic & Residential City, Riyadh, Saudi Arabia 2013 2,000 m³/d RO
Al Marai Co. Central Processing Plant, Al Kharj, Saudi Arabia 2013 1,575 m³/d RO
Kingdom of Resort Expansion Work, Riyadh, Saudi Arabia 2013 1,000 m³/d RO
Al Marai Co. CPP - Water Reuse Project, Al Kharj, Saudi Arabia 2012 3,000 m³/d RO
Habshan Sulphur Granulation Plant Project, Habshan- Abu Dhabi, United Arab Emirates 2012 1,900 m³/d RO
500 Beds Jeddah Hospital, Jeddah, Saudi Arabia 2012 1,000 m³/d RO
Tanajib Sea Water RO Plant Expansion, Manifa, Saudi Arabia 2011 27,350 m³/d RO
Lafarge Cement Plant, Aleppo, Syria 2011 5,500 m³/d RO
Durrat Al Bahrain Resort, Bahrain 2011 4,000 m³/d RO
Karan Utilities & Co-Generation Project, Khursaniyah, Saudi Arabia 2011 3,567 m³/d RO
King Abdullah Park, Riyadh, Saudi Arabia 2011 2,000 m³/d RO
Ras Al Khair Power Plant, Ras As Zawr, Saudi Arabia 2011 1,200 m³/d RO
Shaybah PKG-1 Inlet & Gas Treatment Project, Shaybah, Saudi Arabia 2011 1,000 m³/d RO
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Nour Can Factory, Adra Industrial City, Syria 2011 500 m³/d RO
Four Season Hotel, Riyadh, Saudi Arabia 2011 300 m³/d RO
Al Kawthar Gas Processing Plant, Al Kawthar, Oman 2010 500 m³/d RO
Fakieh Slaughter House, Abha, Saudi Arabia 2,400 m³/d RO
Ras Tanura Refinery - Aramco, Rastannura, Saudi Arabia 2,000 m³/d RO
Wasit Gas Plant, Khursaniyah, Saudi Arabia 2,000 m³/d RO
Sadara Projects Chemical I, Jubail, Saudi Arabia 1,500 m³/d RO
Petrokemya ABS Project, Al Kharj, Saudi Arabia 1,300 m³/d RO
Riyadh Power Plant (PP12), Riyadh, Saudi Arabia 1,200 m³/d RO

Plant Supplier

Technical Institute For Naval Studies, Dammam, Saudi Arabia 2018 501 m³/d RO
Private Farm for Abdul Latif Al Saleh Al Shaik, Dalim, Saudi Arabia 2018 802 m³/d RO
Al-Mohamadia Compound, Khobar, Saudi Arabia 2018 301 m³/d RO
Housing Project Of Hafer Al-Batin General Hospital, Nairyah, Saudi Arabia 2018 301 m³/d RO
Taazeez Tower, Dammam, Saudi Arabia 2018 240 m³/d RO
TVTC Housing Project, Zulfi, Saudi Arabia 2018 151 m³/d RO
Water Treatment Chemical Plant, Dammam, Saudi Arabia 2018 120 m³/d RO
Abdullah Al-Osais Villa, Dhahran, Saudi Arabia 2018 50 m³/d RO
Equestrian Club, Riyadh, Saudi Arabia 2017 200 m³/d RO
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SRD Hotel, Riyadh, Saudi Arabia 2017 80 m³/d RO
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Jazan Integrated Gasification combined Cycle - Utilities & Common Area Pkg#5, Jazan, Saudi Arabia 2014 36,000 m³/d RO
Jazan Integrated Gasification combined Cycle - Utilities & Common Area Pkg#5, Jazan, Saudi Arabia 2014 13,200 m³/d RO

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SELECTED REFERENCES

Plant supplier

China 2016, 3,100 m³/d ED
Israel 2016, 1,000 m³/d ED
Japan 2016, 6 m³/d ED
Japan 2015, 160 m³/d ED
Japan 2015, 40 m³/d ED
Japan 2014, 30 m³/d ED
Japan 2011, 50 m³/d ED
Japan 2011, 12 m³/d ED
Japan 2011, 12 m³/d ED

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The thermoplastics worked by AGRU are extremely high-quality engineering polymers used in virtually all branches of industry where durability, operational dependability, cost certainty and versatility are essential.

SELECTED REFERENCES

Tuas Desalination, Tuas, Singapore RO
P.Des. Puerto Alcudia, Alcudia (P. Mallorca), Spain
P Des. Ciutadella, Ciutadella (Menorca), Spain
P Des Aguilas I fase, Aguilas (Murcia), Spain
P.Des. Torrevieja, Torrevieja (Alicante), Spain
P Des Andrax, Andrax, Spain
P Des PERH, Perth, Australia
P Des Fujaihr, Fujaihr, Saudi Arabia
Desalinizadora, Martos (Jaen), Spain
P Desaladora, Honaine, Algeria
P Des. Sur, Las Palmas G.C, Spain
P. Des. Granadilla, Carboneras Almeria, Spain
P Des Mazarron, Mazarron Murcia, Spain
P. Des Candelaria, Candelaria, Chile
Tenerife, Spain
P. Des Lanzarote IV, Lanzarote, Spain
P. Des Ashdod, Ashdod, Israel
P Des Mazarron, Mazarron Murcia, Spain
P. Des Candelaria, Candelaria, Chile
Tenerife, Spain
P. Des Lanzarote IV, Lanzarote, Spain
P. Des Ashdod, Ashdod, Israel
Venezuela
Desaladora, Honaine (Argelia), Algeria
Desaladora, Teness (Argelia), Algeria
Desaladora, Mantosverdes, Chile

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SELECTED REFERENCES

Desalination plant supplier

Jawhrat Project, Kuwait City, Kuwait, 2,082 m³/d RO

Ajman Palace Hotel, Ajman, United Arab Emirates, 1,514 m³/d Other/Unknown

Camp Accommodation Facility – Ruweis Refinery, Ruweis, United Arab Emirates, 1,363 m³/d RO

Commission for Public Infrastructure, Port Louis, Mauritius, 1,003 m³/d RO

Yas Mall - Abu Dhabi, Abu Dhabi, Yas Island, United Arab Emirates, 757 m³/d Other/Unknown

Safaniya / Khafji Crude Desalting Facility, Dharan, Saudi Arabia, 416 m³/d RO

Al Yasat Island, Abu Dhabi, United Arab Emirates, 379 m³/d RO

Al Qarnain Island, Abu Dhabi, United Arab Emirates, 303 m³/d RO

US Embassy Complex, Kabul, Afghanistan, 246 m³/d RO

Private Farm & Greenhouse, Al Ain, United Arab Emirates, 227 m³/d RO

Sweiha Agriculture, Abu Dhabi, United Arab Emirates, 189 m³/d RO

Fujairah Group, Fujairah, Abu Hail, United Arab Emirates, 132 m³/d RO

Ras Al Khaimah Agriculture, Ras Al Khaimah, United Arab Emirates, 95 m³/d RO

Oil Rig Al Khobar, Al Khobar, Saudi Arabia, 95 m³/d RO

Angola Housing Project, Luanda, Angola, 76 m³/d RO

Al Saeedi Private Farm, Abu Dhabi, Khatem, United Arab Emirates, 76 m³/d RO

Al Rashid Farm, Sharjah, United Arab Emirates, 76 m³/d RO

Al Qubaisi Farm, Abu Dhabi, Al Khazna, United Arab Emirates, 76 m³/d RO

China Embassy Complex, Mogadishu, Somalia, 45 m³/d RO

The Lakes - Private Villa, Dubai, Lakes Jumeirah, United Arab Emirates, 38 m³/d RO

Private Farm in Sharjah, Sharjah, United Arab Emirates, 38 m³/d RO

Sheikh Suhail Bin Maktoum Al Maktoum - Majlis, Dubai, Rashidiya, United Arab Emirates, 19 m³/d RO

Somalia Camp, Bosaso, Somalia, 19 m³/d RO

Cargo Vessel SN63, Sharjah, United Arab Emirates, 5 m³/d RO

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SELECTED REFERENCES

Consultant

Carlsbad Desalination Plant, Carlsbad, United States of America 2014, 189,270 m³/d RO

Environmental consultant

WaterReuse Research Foundation, VA, U.S.A., Other

Research and modelling

CA, U.S.A. 2015, 9,463 m³/d

SCWD2 Regional Seawater Desalination Project, CA, U.S.A. 2015, 9,463 m³/d RO

Proposed Bay Area Regional Desalination Plant, CA, U.S.A., 75,708 m³/d

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SELECTED REFERENCES

Equipment Supplier

Sundrop Farms Solar Desalination, Australia 2016, 1,000 m³/d MED

Hirgigo Power Plant, Massawa, Eritrea 2016, 528 m³/d MED

Genkei Nuclear Power Plant, Genkai, Japan 2012, 800 m³/d VC

Electrawinds, Oostende, Belgium 2012, 650 m³/d MED

Baja California Sur, Mexico 2012, 240 m³/d VC

Delimara Diesel Power, Malta 2011, 1,500 m³/d MED

Koudiet Power Plant, Koudiet, Algeria 2011, 720 m³/d MED

Equipment Supplier & Engineering & Manufacturing & Commissioning

AMPCO, Malabo, Equatorial Guinea 2010, 1,365 m³/d MED

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Almar Water Solutions is a specialist provider of technical capabilities and expertise for water infrastructure development, including design, financing and operation. Its dedicated team of accomplished professionals draws on international experience gained in over two decades across 25 international markets in the water industry and is today continuously working to develop integrated solutions to meet the growing needs of both municipal and industrial sectors.

Almar Water Solutions was established as part of Abdul Latif Jameel Energy & Environmental Services in 2016. Abdul Latif Jameel was founded in 1945 and is now one of the most well-respected businesses in the Middle East, North Africa, and Turkey (MENAT region), with operations in more than 30 countries and with over 17,000 employees worldwide.

With a solid financial standing and benefiting from the strong networks and long-established relationships of Abdul Latif Jameel, Almar Water Solutions tackles the challenges of water scarcity, quality and contamination from a uniquely holistic perspective.

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ANDRITZ is not only a world leading OEM in the hydropower sector, but also has been building pumps for more than 165 years. Our longstanding experience in hydraulic machine manufacturing and complete process know-how form the basis for the high standard of our pump engineering. We provide the complete pump portfolio and technical support for efficient and economic desalination, especially for Reverse Osmosis (RO) plants. Our highly engineered and reliable pump technology supports processes like seawater intake, filtered water, high-pressure 1st pass and 2nd pass feed, for water transport, as booster of flushing pumps, for backwash, and energy recovery (Pelton turbine provided by ANDRITZ) to process seawater to potable water, irrigation or industrial purposes. Depending on the level of salinity and on temperature, the pumps are available starting from gray cast iron to duplex and super duplex steel.

Our quality and high-efficiency products as well as our understanding of customer requirements have made us a preferred partner for pumping solutions worldwide. We offer everything from a single source – from development work, model tests, engineering design, manufacture and project management, to after-sales service and training as well as a vast portfolio of Industrial IoT solutions for an overall optimized plant operation.

SELECTED REFERENCES

Equipment supplier: pumps

Tangshan Seawater Desalination, Hebei, China 100,000 m³/d RO

Zhoushan Liuheng Desalination P3, Zhejiang, Zhoushan/Zhejiang, China 80,000 m³/d RO

Bandar Lengeh Plant, Bandar Lengeh, Iran 18,000 m³/d RO

Chabahar Plant, Chabahar, Iran 16,000 m³/d RO

Chabahar Plant 2, Chabahar, Iran 16,000 m³/d RO

Shengli-Oil, Karamay, Xinjiang, China 5,000 m³/d VC

ShengSi Desalination P5, Zhejiang, Hebei, China 800 m³/d RO

Angee & Sons Inc

SELECTED REFERENCES

Retained Consultant

Enable Final Contract For- WW Recycle - Santa Catarina, Santa Catarina, Mexico, 4,320 m³/d RO

"Techno-Commercial Eval. - MOL Refinery WWT Design - High COD & O&G From Oil/Water Separator", East European Plant, 1,211 m³/d

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SELECTED REFERENCES

Owner

Sta. Barbara, Curacao 2014, 6,000 m³/d RO

Plant supplier and offtaker

Expansion RO-1/2/3 E/H, Mundo Nobo water & power plant, Curaçao 2013, 8,000 m³/d RO

Extension SWRO Sta. Barbara, Sta. Barbara, Curaçao 2012, RO
RO-4 Sta. Barbara, Sta. Barbara, Curaçao 2010, 7,100 m³/d RO
New SWRO Plant, 27,500 m³/d RO

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Aqualia is the water management company of FCC, one of the leading citizen services groups in Europe. It is in the top ten of private water companies worldwide.

Aqualia responds to the needs of all parties, both private and public, at all stages of the water cycle, providing water for human, industrial and agricultural purposes and serving 22.5 million users of 1100 municipalities in 22 countries (Spain, Italy, Portugal, Czech Republic, Poland, Romania, Montenegro, Bosnia, Mexico, Chile, Uruguay, Algeria, Egypt, Saudi Arabia, Serbia, Panama, Tunisia, Qatar, Oman, Colombia and Ecuador).

In fiscal year 2017, the Company invoiced 1,025 million euros and reached a business portfolio of more than 14.4 billion euros

SELECTED REFERENCES

Desalination plant supplier

Mostaganem, Algeria 200,000 m³/d (RO)
El Alamein, Egypt 150,000.0 m³/d (RO)
Cap Djinet, Algeria 100,000 m³/d (RO)
Tordera II, Blanes, Spain 62,000 m³/d (RO)

Bajo Almanzora, Almería, Spain 60,000 m³/d (RO)
Djerba, Tunisia 50,000 m³/d (RO)
Candelaria, III Region, Chile 45,000 m³/d (RO)
Tordera I, Girona, Spain 28,800 m³/d (RO)
Adeje-Arona, Tenerife, Spain 22,000 m³/d (RO)
Empalme-Guaymas desalination plant, Sonora, Mexico 18,000 m³/d (RO)
San Antonio, Ibiza, Spain 17,500 m³/d (RO)
San Antonio. Extension & Upgrade, Spain 18,000 m³/d (RO)
Santa Eulalia, Ibiza, Spain 15,000 m³/d (RO)
Tenerife Oeste, Spain 14,000 m³/d (RO)
Ibiza, Spain 12,500 m³/d (RO)
Janubio, Lanzarote, Spain 10,500 m³/d (RO)
La Caleta, Tenerife, Spain 10,000 m³/d (RO) Extendible to 20,000 m³/d
Sierra Gorda, II Region, Chile 9,000 m³/d (RO) Extendible to 12,000 m³/d
Roque Prieto, Gran Canaria, Spain 5,000 m³/d (RO)
Arrecife, Lanzarote, Spain 5,000 m³/d (RO)
Fuerteventura III, Canary Islands, Spain 4,000 m³/d (RO)
CEPSA, Tenerife, Spain 2,880 m³/d (RO)
La Ranilla, Sevilla, Spain 2,000 m³/d (RO)
Corralejo, Fuerteventura, Spain 1,500 m³/d (RO)
Grand Tarajal, Fuerteventura, Spain 1,500 m³/d (RO)
Gando, Gran Canaria, Spain 1,000 m³/d (RO)
Algodor, Toledo, Spain 62,208 m³/d (RO)
Campo de Calatrava, Spain 19,440 m³/d (RO)
Racons-Denia, Alicante, Spain 16,200 m³/d (RO)
Huechun, Chile 8,640 m³/d (NF) Currently on execution
Beniatla-Denia, Alicante, Spain 8,000 m³/d (RO)
La Solana, Ciudad Real, Spain 7,152 m³/d (RO)
Tarragona I, Spain 3,550 m³/d (RO)
SA Pobra, Mallorca, Spain 3,000 m³/d (RO)
Pedro Muñoz, Ciudad Real, Spain 1,600 m³/d (NF)
Repsol Quimica, Tarragona, Spain 1,440 m³/d (RO)
Abaran, Murcia, Spain 1,080 m³/d (NF+RO)
Llanos del Caudillo, Ciudad Real, Spain 408 m³/d (RO)
Haria, Lanzarote, Spain 200 m³/d (RO)

Reuse Plant Supplier

La China WWTP Tertiary Treatment, Madrid, Spain 133,920 m³/d
Quart de Benager Extension WWTP Tertiary Treatment, Valencia, Spain 60,000 m³/d
Alicantí Sur WWTP Tertiary Treatment, Alicante, Spain 30,000 m³/d
Vilaseca-Salou WWTP Tertiary Treatment, Vila-Seca, Spain 17,280 m³/d
Alcobendas Extension WWTP Tertiary Treatment, Alcobendas, Spain 16,372 m³/d
Orihuela-Molins WWTP Tertiary Treatment, Orihuela, Spain 12,960 m³/d
Islas Canarias WWTP Tertiary Treatment, Canary Islands, Spain 9,900 m³/d
Bahía de Alcudia WWTP Tertiary Treatment, Mallorca, Spain 8,500 m³/d
Cala d'Or WWTP Tertiary Treatment, Mallorca, Spain 4,320 m³/d



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Aqualia, the water management company of FCC, one of Europe's leading citizen services groups, is among the ten largest private water companies in the world. It serves 22.5 million users and provides services to 1,100 municipalities in 22 countries. In the field of reverse osmosis desalination **Aqualia** has built more than 30 installations for both public and private sector and provides drinking water for a population of three million inhabitants.

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SELECTED REFERENCES

Smart leak detection hardware provider

Novo Mesto Utility, Novo Mesto, Slovenia

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SELECTED REFERENCES

Desalination plant supplier

HABAS STEEL MILL ALIAGA, Aliaga, Turkey 2018, 9,600 m³/d RO

BAHRAIN AIRPORT, Muharraq, Bahrain 2018, 4,320 m³/d RO

NEF BODRUM PROJECT, Bodrum, Turkey 2018, 400 m³/d RO

Eren Energy, Zonguldak, Turkey 2016, 11,520 m³/d RO

Kuwait Fund, Gaza, Palestine 2016, 10,200 m³/d RO

Titanic Hotel, Mugla, Turkey 2016, 800 m³/d RO

DNM Textile, Egypt 2016, 650 m³/d RO

Emrah Hotel, Mugla, Turkey 2016, 600 m³/d RO

Teos Hiddenbay Hotel, Izmir, Turkey 2016, 500 m³/d RO

Astas Hotel, Mugla, Turkey 2016, 270 m³/d RO

UNICEF, Gaza, Palestine 2015, 6,000 m³/d RO

Kaya Artemis, Bafra, Cyprus 2015, 750 m³/d RO

Palmwings Hotel, Izmir, Turkey 2015, 610 m³/d RO

Aksa, Yalova, Yalova Province, Turkey 2014, 11,568 m³/d

Titanik Hotel, Bodrum, Turkey 2014, 800 m³/d

Özyer Grup Artev, Bodrum, Turkey 2014, 750 m³/d

Sealight Hotel, Kusadasi, Turkey 2014, 500 m³/d

Sealight Amara Hotel, Kusadasi, Turkey 2014, 500 m³/d

Cactus Hotel, Bodrum, Turkey 2014, 280 m³/d

Caressa Hotel, Bodrum, Turkey 2014, 280 m³/d

Biryaz Hotel, Bodrum, Turkey 2014, 280 m³/d

Awaza Hotel, Turkmenistan 2014, 250 m³/d

Porto Beach Alacati Hotel, Bodrum, Turkey 2014, 150 m³/d

Kusadasi Hilton Hotel, Kusadasi, Turkey 2014, 140 m³/d

Atlas Energy Thermal Power Plant, Iskenderun, Turkey 2013, 12,000 m³/d RO

Al-sadder Gas Turbine Power Plant Demineralisation, Baghdad, Iraq 2012, 5,760 m³/d RO

Erbil Combined Cycle Power Plant Demineralisation, Erbil, Iraq 2012, 2,400 m³/d RO

AstaşBodrum Hotel & Villa, Bodrum, Turkey 2012, 1,600 m³/d

Acarsoy Power Plant, Denizli, Turkey 2012, 600 m³/d RO

Merit Afroditi Hotel, Cyprus 2012, 490 m³/d RO

Buyukhanli Kardesler Hotel, Bodrum, Turkey 2012, 280 m³/d

Suhan Hotel, Cappadocia, Turkey 2012, 140 m³/d

Ayasandra Hotel, Bodrum, Turkey 2012, 140 m³/d

Sirene Yalikavak Hotel, Bodrum, Turkey 2012, 140 m³/d

Tekfen Muhendislik Demineralization System, Samsun, Turkey 2012, 110 m³/d

Nuh' Un Gemisi Hotel, Bafra Turizm Bolgesi, Cyprus 2012, 32 m³/d

Steel Mill Plant, Myanmar 2011, 5,040 m³/d RO

Basrah Airport, Basrah, Iraq 2011, 3,600 m³/d RO

Meydan Project Desalination, Baku, Azerbaijan 2011, 2,400 m³/d RO

Guvercinlik Hotel, Bodrum, Turkey 2011, 750 m³/d RO

Hilton Hotel, Bodrum, Turkey 2011, 700 m³/d RO

Bodrum Beton Desalination, Bodrum, Turkey 2011, 490 m³/d RO

Ozkan Steel Mill, Izmir, Turkey 2010, 4,320 m³/d RO

Diler Steel Mill, Izmit, Turkey 2010, 3,600 m³/d RO

Enka Power Gebze-Adapazari Demineralisation, Adapazari, Turkey 2010, 1,848 m³/d RO

Gama Power System / Riga TTP-2 Power Plant, Riga, Latvia 2010, 816 m³/d RO

Noah's Ark Hotel, Cyprus 2010, 350 m³/d RO

İÇDAŞSTEEL MİLL Phase II, Çanakkale-Biga, Turkey, 12,000 m³/d RO

DILER STEEL MILL – GEBZE Phase II, Gebze, Turkey, 3,800 m³/d RO

Diler Steel Mill, Gebze, Turkey, 3,600 m³/d Reverse osmosis (RO)

Enka Power Aliaga, Izmir-Aliaga, Turkey, 1,800 m³/d Reverse osmosis (RO)

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SELECTED REFERENCES

Plant Supplier

Giza, Ain Sukhna, Egypt 2013, 2,400 m³/d RO

Aquarius Spectrum

SELECTED REFERENCES: SMART LEAKAGE REDUCTION

Smart leak detection system provider

New Jersey, SUEZ, U.S.A. 2017

Jerusalem, Hagihon, Israel 2015

London, Thames Water, U.K. 2017

AquaSwiss AG

SELECTED REFERENCES

EPC

Sulaibya Zero Liquid Discharge (ZLD) Plant, Sulaibya, Kuwait 2013, Other/Unknown

Turkmenbashi Refinery Complex, Turkmenbashi, Turkmenistan 2012, 4,500 m³/d Other/Unknown

Vasilikos Desal Plant, Larnaca, Cyprus 2011, 60,000.0 RO

Tianjin Desal Plant Phase II, Tianjin, China 2010, 100,000.0 MED

EPC, O&M

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 m³/d RO

Khiran Desal Plant, Al Khiran, Oman 2014, 600 m³/d RO

Qurayyat Desal Plant, Qurayyat, Oman 2013, 3,600 m³/d RO

Al Gharamah Desal Plant, Saudi Arabia 2013, 1,700 m³/d RO

EPC, O&M, and Water Sale on a BOO basis

Aseeiah Desal Plant, Aseeiah, Oman 2015, 10,000 m³/d RO

Qurayyat Desal Plant, Qurayyat, Oman 2015, 8,000 m³/d RO

O&M

ESPAC Desal Plant, Saudi Arabia 2013, 700.0 RO

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SELECTED REFERENCES

Design, installation

Castlemaine Perkins Water Recycling Plant, Brisbane, Queensland, Australia, 20,000 m³/d RO

Smith's Wastewater Treatment Plant, Tingalpa, Queensland, Australia, 13,000 m³/d RO

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SELECTED REFERENCES

Desalination plant supplier

Abu Dhabi, UAE 2014, 8,280 m³/d SWRO / BWRO

Mukhaizna Facilities Development, Oman 2013, 186,522 m³/d Other

Reliance Industries Ltd., Jamanagar, Gujarat, India 2013, 173,328 m³/d Other

SWRO Plant from Federal Electricity and Water Agency (FEWA), Ghailah, Ras Al Khaimah, United Arab Emirates 2013, 68,100 m³/d RO

Hinduja National Power Corporation Ltd., Vishakhapatnam, Andhra Pradesh, India 2013, 12,500 m³/d RO

Maithon Power Limited, Dhanbad, Jharkha, India 2013, 10,800 m³/d RO

CEPL MUTIARA Thermal Power Project, Tuticorin, Tamil Nadu, India 2012, 12,960 m³/d RO

Expansion & Modernisation of International Terminal, Mumbai International Airport, Maharashtra, India 2012, 10,008 m³/d RO

Langley Gulch CC Power Plant, New Plymouth, ID, U.S.A. 2011, 7,080 m³/d Other

Hulun Buir Jinxing Chemicals Co Ltd., Hulunbuir City, China 2011, 2,400 m³/d RO

Langley Gulch CC Power Plant, New Plymouth, ID, U.S.A. 2011, 1,320 m³/d RO

Honolulu Resource Recovery Venture, Kapolei, HI, U.S.A. 2011, 264 m³/d RO

CGPL Mundra, India 2010, 25,200 m³/d SWRO

HMEL, Refinery, Bhatinda, Punjab, India 2010, 20,600 m³/d HERO™

Abu Qir Thermal Power Plant, Egypt 2010, 10,000 m³/d MED

South Port, Egypt 2010, 8,330 m³/d HERO™

Jamnagar, India 2010, 7,272 m³/d HERO™

Medical Research Facility, Fort Detrick, MD, U.S.A. 2010, 5,688 m³/d Other

Waste to Energy, Tulsa, OK, U.S.A. 2010, 5,472 m³/d Other

Old Hickory Fiberweb Utility, Old Hickory, TN, U.S.A. 2010, 4,608 m³/d Other

Waste to Energy, Tulsa, OK, U.S.A. 2010, 3,600 m³/d RO

Gila River Power Unit, AZ, U.S.A. 2010, 3,240 m³/d Other

Brazos Electric Power Co-Op Plant, Cleburne, TX, U.S.A. 2010, 1,800 m³/d EDI

Manifa Utility and Water Injection Project, Tanajib, Saudi Arabia 2010, 1,800 m³/d Other

Las Garassas CC Power Plant, Venezuela 2010, 1,632 m³/d Other

Waste to Energy, Tulsa, OK, U.S.A. 2010, 1,488 m³/d Other

Reid Gardner Generation Station Retrofit, Moapa, NV, U.S.A. 2010, 1,200 m³/d EDI

Hunlock Creek Power Station, Hunlock Creek, PA, U.S.A. 2010, 1,200 m³/d EDI

EPC Contractor for Water and Wastewater Treatment Systems

Dhanbad, Jharkhand, India 2014, 10,800 m³/d HEROTm

Sadara Project (RTIP), Al Jubail, Saudi Arabia 2012, 184,272 m³/d Other

Wastewater Treatment Plant for OPAL, Dahej, Gujarat, India 2012, 26,328 m³/d RO

Covington PRG Facility, CA, U.S.A. 2012, 13,104 m³/d Other

China Coal Tuke Fertilizer Limited, Inner Mongolia, China 2012, 4,800 m³/d Hybrid

Genesis Solar, CA, U.S.A. 2012, 3,168 m³/d RO

Baja Mining Sulfuric Acid Plant, Santa Rosalia, Mexico 2012, 2,784 m³/d RO

Portsmouth Waste to Energy, VA, U.S.A. 2012, 1,368 m³/d RO

WAC Softeners for Harmon Valley South Plant, Alberta, Canada 2012, 1,008 m³/d Other

NRG Energy Center, Pennsylvania, U.S.A. 2012, 552 m³/d RO

Fossil Fuel Energy Co-Op Power at Gantt, AL, U.S.A. 2012, 336 m³/d RO

Wastewater Treatment Plant for South Yoloten Gas Field, South Yoloten Gas Field, Turkmenistan, Turkmenistan 2011, 2,424 m³/d RO

Gainesville Renewable Energy Center, FL, U.S.A. 2011, 912 m³/d RO

Pepsi Gatorade Facility, TX, U.S.A. 2011, 864 m³/d RO

Water Treatment Plant for Amal Steam Surface Facilities Project, West and East Amal Oil Fields, Oman 2010, 5,000 m³/d Other

IBN Rushd, Yanboo, Saudi Arabia, 6,240 m³/d Other

Equipment Supplier, Installation & Commission Guide

Corpus Christi, Texas, USA 2015, 432 m³/d RO

Equipment supplier, installation & commission guide

Ford Louisville Assembly Plant, Louisville, Kentucky, U.S.A. 2018, 1,728 m³/d

Port Said, Egypt 2016, 8,640 m³/d RO

Yibal Sultante, Oman 2016, 6,000 m³/d RO

Kuwait 2016, 480 m³/d RO

Swift Current, Saskatchewan, Canada 2016, 272 m³/d RO

New Plymouth, Idaho, USA 2014, 7,080 m³/d HEROTm

Equate Waste Water Recycle Plant, Kuwait 2013, 4,800 m³/d RO

KAIA Desalination Project, Jeddah, Saudi Arabia 2012, 8,200 m³/d RO

Nikiski Cogeneration Plant, Nikiski, AK, U.S.A. 2012, 336 m³/d RO

Brazos 620 MW Combined Cycle Power, Bridgeport, TX, U.S.A. 2011, 21,816 m³/d RO

Nacogdoches Power Biomass Generating Facility, Cushing, TX, U.S.A. 2011, 7,248 m³/d RO

Solidaris, LLC, 2 x 50 MW Simple Cycle, Bajo Grande, Venezuela 2011, 384 m³/d RO

COVANTA Renewable Energy Project, Kapolei, HI, U.S.A. 2011, 264 m³/d RO

Supply of Complete ZLD System

Pune, Maharashtra, India 2016, 600 m³/d HEROTm / ZLD

Stonewall Energy, Leesburg, Virginia, United States of America 2015, 2,736 m³/d VC

KOWEPO Taean FGD ZLD Project/Taeon Thermal Power Plant Project Unit #1-8, U.S.A. 2018, 1,440 m³/d

Fulcrum Sierra Biorefinery, McCarren, Nevada, United States 2018, 681 m³/d

Hazira ZLD Project, Gujarat, India 2018, 83 m³/d

Bodega, Colombia 2017, 4,704 m³/d RO

PDO Expansion Project/BioProduct Evaporator System, Loudon, Tennessee, U.S.A. 2017, 2,180 m³/d

Claycomo, Missouri, USA 2017, 1,728 m³/d RO

Dover, New York, USA 2017, 1,488 m³/d RO

Hawizeh Marshes, Iraq 2016, 4,632 m³/d RO

Emporia, Virginia, USA 2016, 3,504 m³/d RO

Manjari SEZ RO Recovery, Pune, Maharashtra, India 2016, 1,000 m³/d

Ethydco petrochemical complex, Alexandria, Egypt 2016, 600 m³/d Other

Alexandria, Egypt 2016, 141 m³/d HEROTm / ZLD

Middle Town, New York, USA 2015, 9,600 m³/d RO

Cameron Parish, Louisiana, USA 2015, 5,640 m³/d RO

Sabine Pass Liquefaction Project, Cameron Parish, Louisiana, U.S.A. 2014, 40,850 m³/d RO

Lindbergh SAGD Facility, Alberta, Canada 2014, 10,519 m³/d Thermal

Petrochemical & Refining, Rabigh, Saudi Arabia 2014, 10,080 m³/d Other

Plant Daniel, Escatawpa, Mississippi, U.S.A. 2014, 8,448 m³/d

Healy, Arkansas, USA 2014, 864 m³/d RO

Petrochemical & Refining, Rabigh, Saudi Arabia 2014, 315 m³/d Other

Ridgeville, South Carolina, USA 2014, 43 m³/d ZLD

Channel Energy Center Expansion, Houston, Texas, U.S.A. 2013, 20,784 m³/d

Plainfield Renewable Energy Power Plant, Plainfield, Connecticut, U.S.A. 2013, 3,816 m³/d

Zinc Recycle, Mooreseboro, North Carolina, U.S.A. 2013, 2,736 m³/d RO

York Energy Centre, Courtice, Ontario, Canada 2013, 192 m³/d RO

Buckey Florida Treatment, Perry, Florida, U.S.A. 2012, 816 m³/d

Merrimack Station Unit 1 & 2, Bow, New Hampshire, U.S.A. 2012, 403 m³/d Thermal

Supply of desalination and post-treatment units

Sohar Refinery, Sohar, Oman 2014, 16,056 m³/d MED

Technology & Equipment Supplier

Shenhua Ningxia Coal to Chemical Project, Ningxia, Ningxia Province, China 2015, 55,200 m³/d Other

Inner Mongolia Baotou Tuyou Qi Gejia, Inner Mongolia, Baotou City, Inner Mongolia, China 2015, 30,000 m³/d Other

Tuke Mining, Ordos, Inner Mongolia Autonomous Region, China 2015, 9,600 m³/d Other

Inner Mongolia Huineng, Ordos City, Inner Mongolia Autonomous Region, China 2015, 6,120 m³/d Other

Gansu Honghui, Jiabei Industrial Park, Jiayuguan City, Gansu Province, China 2015, 192 m³/d Other

Puente Alto, Chile 2014, 216 m³/d RO

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SELECTED REFERENCES

Desalination plant supplier

Hadalat Borehole equipped with Containerized RO Desalination Plant, Ruwaished, Jordan 2016, 1,367 m³/d RO

KEMAPCO site, Aqaba, Jordan 2015, 13,680 m³/d RO

Thahret Rameh Desalination Plant - Modification of Al Karameh Dam -BOT Project, Jordan Valley, Jordan 2015, 2,400 m³/d RO

Al Alali UF Plant, Fuahais, Jordan 2015, 600 m³/d

Operation and Maintenance of Byrain Ultra Filtration Water Treatment Plant, Zarqa, Jordan 2014, 2,640 m³/d

Operation and Maintenance of Al Modawarah Desalination Plant, Modawarah, Jordan 2014, 1,200 m³/d RO

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SELECTED REFERENCES

Plant supplier

SHUAIBAH EXPANSION II IWP, Saudi Arabia, 250,000 m³/d RO
 UMM AL QUWAIN IWP, Umm Al Quwain, United Arab Emirates, 204,500 m³/d RO
 SHUAIBAH EXPANSION IWP, Saudi Arabia, 150,000 m³/d RO
 SALALAH IWP, Dhofar Region, Oman, 113,650 m³/d RO
 BOWAREGE IWP, Yanbu, Saudi Arabia, 50,000 m³/d RO
 BARKA I IWP EXPANSION IWP PHASE I, Muscat, Oman, 57 m³/d RO
 BARKA I EXPANSION PHASE II IWP, Muscat, Oman, 12.5 MIDG RO

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SELECTED REFERENCES

Plug Valve Manufacturer

Royalton Santa Lucia, Santa Lucia, 400,000 m³/d RO
 TUAS II (Improvement), Singapore, 318,500 m³/d RO
 Facility D, Qatar, 284,000 m³/d RO
 Shuaibah III (Extension II), Saudi Arabia, 250,000 m³/d RO
 Al Ghubrah, Oman, 200,000 m³/d RO
 Ras Abu Fontas A3, Qatar, 164,000 m³/d RO
 Janmagar, Gujarat SWRO, India, 160,000 m³/d RO
 El Galalah SWRO, Egypt, 150,000 m³/d RO
 El Alamein, Egypt, 150,000 m³/d RO
 3rd Desalination Plant at Tuas, Singapore, 136,000 m³/d RO
 Az Zour South, Kuwait, 131,000 m³/d RO
 Atacata SWRO, Chile, 104,000 m³/d RO
 SWRO Jubail, United Arab Emirates, 100,000 m³/d RO
 Cia. Cervecera Dam, Spain, 100,000 m³/d RO
 IDAM Copiapo Ampliation, Chile, 80,000 m³/d RO
 IDAM Copiapo , Chile, 80,000 m³/d RO
 EDAM Ghana - Nungua, Ghana, 60,000 m³/d RO
 El Yousr Plant Expansion, Egypt, 40,000 m³/d RO
 El Yousr Plant, Egypt, 40,000 m³/d RO
 Sea Water SWRO System Teheran, Iran, 40,000 m³/d RO
 Red Sea SWRO Plant, Saudi Arabia, 40,000 m³/d RO
 Las Palmas II, Canary Islands, Spain, 36,000 m³/d RO
 Al Khafji, Saudi Arabia, 30,000 m³/d RO
 Moncofa Desalination Plant, Castellón, Spain, 28,000 m³/d RO

IDAM Lanzarote V, Spain, 24,000 m³/d RO
 Cit of Ceuta Enlargement Project, Ceuta, Spain, 23,000 m³/d RO
 Djibouti SWRO, Republic of Djibouti, 22,500 m³/d RO
 IDAM Ceuta, Spain, 22,000 m³/d RO
 IDAM Puerto del Rosario, Spain, 21,000 m³/d RO
 Al-Hoceima, Morocco, 20,000 m³/d RO
 Sarlux Refinery, Italy, 17,280 m³/d RO
 Provisur, Peru, 16,000 m³/d RO
 Hongyanhe N°1 SWRO Plant, China, 16,000 m³/d RO
 Granadilla, Spain, 14,000 m³/d RO
 Fujian Ningde Nuclear Plant, China, 11,000 m³/d RO
 CILACAP SWRO Project, Indonesia, 10,000 m³/d RO
 Kaltim Project, Indonesia, 7,200 m³/d RO
 Boleo Project, Baja California, United States of America, 5,000 m³/d RO
 EDAM Roque Prieto, Gran Canaria, Spain, 5,000 m³/d RO
 Angamos/Mejillones Phase I, Chile, 4,800 m³/d RO
 Asona project Takoradi T2, Ghana, 3,400 m³/d RO
 MSM Project in BQ field, UAE, 3,180 m³/d RO
 Jazan Utility SWRO, Saudi Arabia, 2,535 m³/d RO
 Halayeb & Shalateen, Egypt, 1,500 m³/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
 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
 AGRAGUA Retrofit SWRO, Spain, 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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Microza is a filtration module containing unique hollow fiber membranes developed by Asahi Kasei for filtration systems. Several types of MF/UF hollow fiber membranes are available, and in various organic polymers. Liquid filtration takes place through the pores, or gaps, in the hollow fiber wall structure. Microza membranes have sharp pore size distributions that provide superior and stable filtration performance.

SELECTED REFERENCES

Doha, Kuwait 610,000 m³/d MF/UF
Barka, Oman 134,640 m³/d MF/UF
PTT Chemicals, Thailand 66,500 m³/d MF/UF
Majis, port of Sohar, Oman 58,000 m³/d MF/UF
PingHai Power Plant, China 48,000 m³/d
Yueqing Power Plant, China 48,000 m³/d MF/UF
DUQM, Oman 18,000 m³/d MF/UF
Tampines VSP, Singapore 11,800 m³/d MF/UF
TMVW, Belgium 10,000 m³/d MF/UF
Tanjung Pinang, Indonesia 10,000 m³/d MF/UF
Swansea, MA, United States of America 8,000 m³/d MF/UF
BASF - Port of Antwerp, Belgium 5,000 m³/d MF/UF
Long Beach, CA, United States of America 3,800 m³/d MF/UF

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All about CO₂ – ASCO's credo says it all: The Swiss CO₂ specialist is a provider of individual and complete CO₂ solutions. The product range includes CO₂ production and recovery plants, dry ice production machines, dry ice blasting equipment, CO₂ storage tanks, cylinder filling systems, vaporisers, CO₂ testing equipment and other CO₂ accessories. Thanks to a high degree of expertise and broad range of products, customers benefit from having a one-stop provider of individual, complete solutions.

As CO₂ is an important part in the process of desalination, ASCO's product range also specialises in this application: With ASCO CO₂ dosing systems the pH value of desalinated sea water is kept neutral by adding precisely dosed CO₂. A CO₂ dosing system is a complete stand-alone unit but can easily be connected to the main control of the desalination plant. ASCO CO₂ dosing systems are delivered completely with:

- CO₂ dosing systems
- CO₂ storage tanks
- Atmospheric CO₂ vaporisers
- As per customer's requirement, static mixers or complete gas dispersion systems
- All other necessary CO₂ equipment

ASCO also takes care of the CO₂ need: On the one hand with plants to recover CO₂ as a by-product from other processes. On the other hand, in countries where desalination plants are used, often CO₂ is not available as a by-product from other industrial processes. In this case ASCO offers CO₂ production plants producing CO₂ from diesel, kerosene or natural gas.

Layout of complete ASCO CO₂ Dosing Systems incl. CO₂ storage tanks and atmospheric CO₂ vaporisers. A double line CO₂ dosing system provides a fully redundant system.

SELECTED REFERENCES

CO2 equipment supplier

Shuaibah 2, Saudi Arabia 2018, 250,000 m³/d RO
Ain al Sokhna, Egypt 2018, 164,000 m³/d RO
Shuaibah 3, Saudi Arabia 2018, 150,000 m³/d RO
Al Hoceima, Morocco 2018, 100,000 m³/d RO
Jazan, Saudi Arabia 2018, 80,000 m³/d RO
Al Dur, Bahrain 2017, 218,000 m³/d RO
El Galalah, Egypt 2017, 150,000 m³/d RO
UTE, Tunisia 2017, 50,000 m³/d
All Yosr, Egypt 2015, 80,000 m³/d
Matrouh Seawater RO Desalination Plant, Bagoush - Matrouh, Egypt 2013, 24,000 m³/d RO
Al Magtaa, Algeria 2011, 500,000 m³/d RO
Salalah, Oman 2011, 68,500 m³/d RO
Marafiq, Al Jubail, Saudi Arabia 2010, 800,000 m³/d MED
Tlemcen, Algeria 2010, 200,000 m³/d RO

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Avista® Technologies is an industry leader in speciality chemical formulations and process support for reverse osmosis, microfiltration/ultrafiltration and multimedia filtration systems in over 90 countries. Our extensive line of membrane specific formulations includes NSF certified antiscalants, cleaners, coagulants, chlorine scavengers, and membrane storage chemicals and EPA certified biocides.

Our laboratories foster continuous chemical development and membrane compatibility testing in accordance with key protocols accepted by the industry's leading manufactures. All Avista formulations undergo comprehensive product testing and regulatory certifications to ensure they meet the unique challenges posed by diverse applications and challenging feedwaters.

In our fully equipped laboratories, we develop chemistry and test for compatibility using a strict protocol widely accepted by all major membrane manufactures. We are leaders in membrane analytics with more than 3500 membrane autopsies using CEISM or Chromatic Elemental ImagingSM and data collected on over 150,000 cleaning studies.

Our team of Application Specialists and Technical Engineers provide worldwide support services including procedure and chemical application recommendations, data normalization and on-site troubleshooting.

Your success is the driving force behind everything we do to enhance the performance, reliability, and productive life of your membrane system and we are pleased to be your partner.

Axiom

SELECTED REFERENCES

Desalination plant supplier

Bandar Lengeh Desalination Plant, Bandar Lengeh, Iran 2011, 15,000 m³/d RO

AYESA Group

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SELECTED REFERENCES

Technical Consultant

Qurayyat, Oman, 200,000 m³/d RO
Salalah, Oman, 113,500 m³/d RO
Sharqiyah, Oman, 80,000 m³/d RO
Duqm, Oman, 60,000 m³/d RO
Khasab, Oman, 16,000 m³/d RO

Design Engineer

Rabigh-3, Saudi Arabia, 600,000 m³/d RO
Shuqaiq-3, Saudi Arabia, 450,000 m³/d RO
Jeddah-4, Saudi Arabia, 400,000 m³/d RO
Barka IV, Oman, 281,000 m³/d RO
Doha, Kuwait, 272,000 m³/d RO
Satellite desalination plants, Saudi Arabia, 238,000 m³/d RO
Al Ghubrah, Oman, 200,000 m³/d RO
Barcelona, Spain, 200,000 m³/d RO
Ras Laffan, Qatar, 181,000 m³/d RO
Aguilas, Aquilas, Spain, 180,000 m³/d RO
Nemmeli, India, 150,000 m³/d RO
Marina East desalination plant, Singapore, 137,000 m³/d RO
Jaffna, Sri Lanka, 100,000 m³/d RO
Quebrada Blanca, Chile, 100,000 m³/d RO
Safi, Morocco, 100,000 m³/d RO
Agadir, Morocco, 100,000 m³/d RO
Djibouti, 35,000 m³/d RO
Lima Sur, Lima, Peru, 35,000 m³/d RO
Umm Lujj, Saudi Arabia, 27,000 m³/d RO
Marina Baja, Spain, 24,000 m³/d RO
Denia, Spain, 24,000 m³/d RO
Goulmima-Tinjdad, Morocco, 20,000 m³/d RO
Dakhla, Morocco, 17,000 m³/d RO
Dakhla, Morocco, 8,000 m³/d RO
Desalination Park, Saudi Arabia, RO

Owner's Engineer

Barcelona, Spain, 200,000 m³/d RO
Carboneras, Spain, 120,000 m³/d RO
San Pedro del Pinatar, Spain, 65,000 m³/d RO
Alicante, Spain, 65,000 m³/d RO
Laâyoune, Morocco, Laâyoune, Morocco, 25,000 m³/d RO
Ensenada, Mexico, Ensenada, Mexico, 21,600 m³/d RO
Andratx, Mallorca, Spain, 14,000 m³/d RO
Alcudia, Mallorca, Spain, 14,000 m³/d RO
Santa Eulalia, Ibiza, Spain, 10,000 m³/d RO
Ciutadella, Menorca, Spain, 10,000 m³/d RO

Badger Meter

SELECTED REFERENCES

Installation of cellular endpoints for upgrade to AMI system

City of Highland Village, Highland Village, U.S.A. 2016

Installation of cellular endpoints, meters and software for network management

City of Avon, U.S.A. 2016

City of Merced, Merced, U.S.A. 2015

City of Santa Fe, Santa Fe, U.S.A. 2013

Henard Utility Products, Inc, Heber Springs, U.S.A.

Installation of fixed network for remote meter monitoring

City of South Elgin, South Elgin, U.S.A.

BASF

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SELECTED REFERENCES

Chemical supplier

AGP - Taweelah "B" Plant, Abu Dhabi, Abu Dhabi, United Arab Emirates, 450,000 m³/d MSF (Multi-stage Flash)

Homs Power and Water Station, Libya, 410,000 m³/d MSF (Multi-stage Flash)

GECOL Homs Power and Water Station, Libya, Libya, 410,000 m³/d MSF (Multi-stage Flash)

Ras Lanuf Oil Company (RASCO), Libya, 410,000 m³/d MSF (Multi-stage Flash)

Fujairah 1 Emirates Sembcorp, Fujairah, United Arab Emirates, 307,000 m³/d MSF (Multi-stage Flash)

Ras Laffan C, Ras Girtas Power Company, Qatar, 290,000 m³/d MED (Multi-effect Distillation)

Hidd Power Company, Bahrain, 272,000 m³/d MED (Multi-effect Distillation)

Gulf Total Tractebel company, Taweelah A2, Abu Dhabi, United Arab Emirates, 240,000 m³/d MED (Multi-effect Distillation)

Ghubra Power and Water, Oman, 190,909 m³/d MSF (Multi-stage Flash)

General Desalination Company Libya (All Plants), Libya, 190,000 m³/d MED (Multi-effect Distillation)

Sohar Power and Desalination Plant, Oman, 163,363 m³/d MSF (Multi-stage Flash)

Gulf Total Tractebel company, Taweelah A1, Abu Dhabi, United Arab Emirates, 145,000 m³/d MSF (Multi-stage Flash)

Hidd Power Company, Bahrain, 140,000 m³/d MSF (Multi-stage Flash)

Hidd Power Company, Bahrain, Bahrain, 140,000 m³/d MSF (Multi-stage Flash)

Bainounah Power Company, ADWEA, Abu Dhabi, United Arab Emirates, 140,000 m³/d MSF (Multi-stage Flash)

Sitra Power and Water Station, Bahrain, 113,000 m³/d MSF (Multi-stage Flash)

Takreer (Abu Dhabi National Oil Co.), Abu Dhabi, United Arab Emirates, 68,000 m³/d MSF (Multi-stage Flash)

Aluminium Bahrain, Bahrain, 41,000 m³/d MED (Multi-effect Distillation)

Libya Iron and Steel Company, Libya, 31,000 m³/d MSF (Multi-stage Flash)

Maaden Phosphate, Saudi Arabia, 13,464 m³/d MED (Multi-effect Distillation)

UCDEM St. Barthelemy, French West Indies, France, 9,000 m³/d MED (Multi-effect Distillation)

Tripoli West Power Station, Libya, 9,000 m³/d MED (Multi-effect Distillation)

Kuwait National Petroleum Company, Kuwait, 8,515 m³/d MSF (Multi-stage Flash)

Hawar Power Station, MEW, Bahrain, Bahrain, 2,300 m³/d MED (Multi-effect Distillation)

Beijing Origin

SELECTED REFERENCES

Developer and membrane provider

TBD water reuse PPP project of Changping District, Beijing, Beijing, Changping District, China 2017, 200,000 m³/d MBR

Taoziwan Wastewater treatment plant (supply for Wanhua industrial park), Yantai City, Shandong Province, China 2017, 150,000 m³/d RO

Princess Mansion Wastewater Advanced Treatment Project, Hohhot City, Inner Mongolia, China 2017, 50,000 m³/d

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SELECTED REFERENCES

Desalination plant supplier

Yongji, China 2014, 6,264 m³/d RO

Changxing, China 2014, 600 m³/d FO

Xingtai, China 2013, 3,840 m³/d RO

Yitai, China 2012, 7,200 m³/d RO

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SELECTED REFERENCES

Pressure vessels

Sorek, Israel, 510,000 m³/d RO

Hadera, Israel, 360,000 m³/d RO

IVM - Ashdod, Ashdod, Israel, 300,000 m³/d RO

Perth II, WA, Australia, 250,000 m³/d RO

Az Zour south RO, Az Zour, Kuwait, 136,000 m³/d RO

Gold Coast, QLD, Australia, 125,000 m³/d RO

Palmachim, Israel, 125,000 m³/d RO

Al Jubail phase 4, Saudi Arabia, 103,500 m³/d

Al Jubail phase 2, Al Jubail, Saudi Arabia, 100,000 m³/d RO
 Pacific Rubiales Energy, Colombia, 79,500 m³/d RO
 Larnaca, Cyprus, 64,000 m³/d RO
 Escombreras Desalination Plant, Cartagena, Murcia, Spain, 60,000 m³/d RO

Vasilikos Power Plant, Cyprus, 60,000 m³/d RO
 El Agodor, Toledo, Spain, 58,400 m³/d RO
 Trekkopje, Swakopmund, Namibia, 55,000 m³/d RO
 Bajo de Almanzora, Andalucia, Spain, 50,000 m³/d RO
 Paphos, Cyprus, 45,000 m³/d RO
 Limassol, Cyprus, 40,000 m³/d
 Episkopi, Limassol, Cyprus, 40,000 m³/d RO
 Lahat, Israel, 40,000 m³/d RO
 Mossel Bay, South Africa, 37,500 m³/d RO
 Yuhuan Power Plant, Zhejiang, China, 36,000 m³/d RO
 Ma'agan Michael, Israel, 35,000 m³/d RO
 MODEC Offshore, Angola, 31,800 m³/d
 Medupi Power Station, South Africa, 30,000 m³/d
 Eemshaven RWE, Netherlands, 30,000 m³/d
 Emirates Steel, United Arab Emirates, 28,800 m³/d
 Moncófar, Castellón, Spain, 28,000 m³/d RO
 Suministros, Algeria, 25,500 m³/d
 Enlg. Rincon de León, Alicante, Spain, 25,000 m³/d RO
 Balashi, Aruba, 24,000 m³/d RO
 Sagunto, Valencia, Spain, 23,000 m³/d RO
 Moni, Cyprus, 22,000 m³/d
 Pal Technology Services, United Arab Emirates, 20,900 m³/d
 La Caleta, Tenerife, Spain, 20,000 m³/d RO
 Emalahleni, South Africa, 20,000 m³/d RO
 Consol Energy, U.S.A., 18,900 m³/d
 Point Fortin, Trinidad, 17,400 m³/d
 Costa del Sol, Spain, 16,000 m³/d
 Petrobras Offshore, Brazil, 15,000 m³/d
 Aguas Ponta Preta, Cabo Verde, 15,000 m³/d
 PTOI Placilla, Chile, 14,000 m³/d
 Puerto del Rosario, Spain, 14,000 m³/d
 NieuWater Emmen, Netherlands, 13,200 m³/d
 Komati, South Africa, 12,000 m³/d RO
 Tifert, Tunisia, 12,000 m³/d RO
 Hilton Head, U.S.A., 11,000 m³/d
 Doolittle, U.S.A., 11,000 m³/d
 Owassa, U.S.A., 11,000 m³/d
 Mantoverde, Chile, 10,400 m³/d
 Enlarg Ceuta, Spain, 10,000 m³/d
 Adeje Arona, Spain, 10,000 m³/d
 Ceuta, Spain, 10,000 m³/d RO
 Marsa Alam, Egypt, 10,000 m³/d
 Aguas Porto Novo, Cabo Verde, 10,000 m³/d
 St. Croix Water, US Virgin Is., 9,400 m³/d
 Curaçao Water Plant, Curaçao, 9,400 m³/d
 Altona, Melbourne, Australia, 9,000 m³/d RO
 Shat Al Basra, Iraq, 9,000 m³/d
 Power Station La Spezia, Italy, 9,000 m³/d
 Saint John's, Antigua, 8,500 m³/d
 Estate Richmond Power Plant, St. Croix, 8,325 m³/d
 Randolph E Harley Power Plant, St. Thomas, 8,300 m³/d
 Engelse Werk, Netherlands, 8,250 m³/d

C.C.C. Campo de Gibraltar, Gibraltar, 8,000 m³/d
 South Coast Steam, U.S.A., 7,500 m³/d
 Paguera, Malaga, Spain, 7,500 m³/d
 Donna, U.S.A., 7,500 m³/d
 Baiji Power Plant, Iraq, 7,100 m³/d
 Tortola, BVI Plant, Virgin Is., 5,440 m³/d
 C.T.C.C. Tarragona, Spain, 5,400 m³/d
 Lei Ji Power Plant, China, 5,000 m³/d
 Reliance, Algeria, 4,600 m³/d
 Las Galletas, Spain, 4,000 m³/d
 Pepsico Baghdad, Iraq, 3,900 m³/d
 New York Power, U.S.A., 3,750 m³/d
 Boleo, Mexico, 3,750 m³/d
 Palma Rio II, Córdoba, Spain, 3,600 m³/d RO
 SWRO, Libya, 2,750 m³/d
 North Sound, Cayman, Cayman Is., 2,640 m³/d
 Sharm el-Sheikh, Egypt, 2,600 m³/d
 CTCC Sagunto, Spain, 2,500 m³/d
 Syros Island, Greece, 2,500 m³/d
 SWRO, Libya, 2,500 m³/d
 Masar Alam, Egypt, 2,500 m³/d
 Hotel, Egypt, 2,000 m³/d RO
 Bir Shalateyn, Egypt, 2,000 m³/d
 La Ranilla, Spain, 2,000 m³/d
 Sohar, Oman, 1,730 m³/d
 Pepsico Arabia bottling plant, Saudi Arabia, 1,500 m³/d
 Al Dibba bottling plant, United Arab Emirates, 1,500 m³/d
 Brabant Water, Netherlands, 1,200 m³/d
 EMPOWER Dubai Health Care City, United Arab Emirates, 1,000 m³/d
 Sohar, Oman, 1,000 m³/d

Berghof Membrane Technology GmbH

SELECTED REFERENCES

Membrane Supplier

Kunshan Zhong Yan - Chemical Plant, Kunshan, Jiangsu, China, 2,784 m³/d UF
 Tractor Factory, Turkey, 740 m³/d MBR

BESIX



Brussels, Belgium



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SELECTED REFERENCES

Intake, outfall and pumping station construction

amriyah Power and Desalination Station, Sharjah, Hamriyah, United Arab Emirates, 420,000 m³/d RO

BGR Energy System India Ltd

SELECTED REFERENCES

EPC Contractor

Water Treatment Plant Package for 3 x 800 MW Krishnapatnam APPDCL Project, Andhra Pradesh, India, 55,000 m³/d

Tertiary Treatment Reverse Osmosis Plant (TTRO), Tamil Nadu, India, 45,000 m³/d RO

Bharat Heavy Electricals Limited

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SELECTED REFERENCES

Desalination plant supplier

NTECL, Vallur-3x500MW TPS, Vallur, Tamil Nadu, India 2017, 2,400 m³/d EDI

Kilwa Energy-370 MW CCPP, Kilwa, Tanzania 2017, 2,160 m³/d RO

Kilwa Energy-370 MW CCPP, Kilwa, Tanzania 2017, 1,776 m³/d RO

Kilwa Energy-370 MW CCPP, Kilwa, Tanzania 2017, 528 m³/d RO

Kilwa Energy-370 MW CCPP, Kilwa, Tanzania 2017, 432 m³/d RO

BIFPCL, Maitree, Maitree, Khulna, Bangladesh 2016, 18,912 m³/d RO

BIFPCL, Maitree, Maitree, Khulna, Bangladesh 2016, 1,776 m³/d RO

BHEL, Trichy, Trichy, Tamil Nadu, India 2015, 2,000 m³/d

KPCL, Yelahanka, Yelahanka, Karnataka, India 2015, 320 m³/d RO

Ennore 2x660 MW TPS, Ennore, Tamil Nadu, India 2014, 38,400 m³/d

Ennore 2x660 MW TPS, Ennore, Tamil Nadu, India 2014, 13,440 m³/d RO

BHEL, Hyderabad, Hyderabad, Telengana, India 2014, 8,000 m³/d

Ennore 2x660 MW TPS, Ennore, Tamil Nadu, India 2014, 2,880 m³/d RO

KPCL, Yelahanka 370 MW CCPP, Yelahanka, Karnataka, India 2014, 1,056 m³/d

KPCL, Yelahanka 370 MW CCPP, Yelahanka, Karnataka, India 2014, 840 m³/d RO

KPCL, Yelahanka 370 MW CCPP, Yelahanka, Karnataka, India 2014, 480 m³/d RO

OPaL, Dahej, Dahej, Gujarat, India 2013, 96,000 m³/d

HNPCL, Vizag, Visakhapatnam, Andhra, India 2011, 2,976 m³/d RO

BHEL, Ranipet, Ranipet, Tamil Nadu, India 2011, 2,000 m³/d

RPCL, Edlapur-I, Edlapur, Karnataka, India 2010, 5,136 m³/d RO

RPCL, Yeramarus-I & 2, Yeramarus, Karnataka, India 2010, 5,040 m³/d RO

KPCL, Bellary-3, Bellary, Karnataka, India 2010, 2,280 m³/d RO

KPCL, Bellary-3, Bellary, Karnataka, India 2010, 1,824 m³/d RO

PPCL, Pragati-II, Bamnauli, New Delhi, India 2010, 840 m³/d RO

PPCL, Pragati-II, Bamnauli, New Delhi, India 2010, 744 m³/d RO

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SELECTED REFERENCES

Manufacturers of expansion joints

Atacama Desalination Plant, Mexico 2018

Al-Hoceima Desalination Plant, Morocco 2018

Barka IV Desalination Plant, Oman 2017, 280,000 m³/d

Sohar Desalination Plant, Oman 2017, 250,000 m³/d

Kigoro Desalination Plant, Kenya 2017, 142,000 m³/d

TUAS Desalination Plant, Singapore 2017, 136,380 m³/d

El Tor SWRO Plant, Egypt 2017, 30,000 m³/d

Shuaibah III Desalination Plant, UAE 2017, 250 m³/d

Bahia De Palma Desalination Plant, Spain 2017, 7 m³/d

Al Ghubrah Desalination Plant, Oman 2017

Osmorec SWCC Retrofit, UAE 2017

Umm Al Houf Desalination Plant, Qatar 2016, 514,000 m³/d

Basrah P3 Desalination Plant, Iraq 2016, 190,000 m³/d

Doha West Desalination Plant, Qatar 2016, 110,000 m³/d

Mexico 2016

Az Zour North Desalination Plant, Kuwait 2014

Magtaa Desalination Plant, Algeria, 500,000 m³/d

Victorian Desalination Plant, Australia, 410,000 m³/d

Ashdod Desalination Plant, Israel, 384,000 m³/d

Perth III Desalination Plant, Australia, 306,000 m³/d

Perth II Desalination Plant, Australia, 306,000 m³/d

Adelaide Desalination Plant, Australia, 300,000 m³/d

Athmania A Desalination Plant, Algeria, 262,500 m³/d

Mirfa Desalination Plant, United Arab Emirates, 240,000 m³/d

Ad Dur IWPP Plant (Integrated Water & Power Plant), Bahrain, 218,000 m³/d

Aguilas Desalination Plant, Spain, 210,000 m³/d

Tlemcen Desalination Plant Tlata Souk, Algeria, 200,000 m³/d

Desalination Plant Tenés, Algeria, 200,000 m³/d

Skikda Desalination Plant, Algeria, 200,000 m³/d

Barcelona Desalination Plant, Spain, 200,000 m³/d

Valdelentisco Desalination Plant, Spain, 200,000 m³/d

Al Ghubrah Desalination Plant, Oman, 191,000 m³/d

Ad Dur Power and Water Plant, Bahrain, 183,000 m³/d

Fujairah Desalination Plant, United Arab Emirates, 170,500 m³/d

Fujairah Desalination Plant, United Arab Emirates, 137,000 m³/d

Ras Abu Fontas A3 Desalination Plant, Qatar, 136,000 m³/d

Beckton Desalination Plant, United Kingdom, 120,000 m³/d

SWR4 Jubail Desalination Plant, Saudi Arabia, 100,000 m³/d

Qingdao Desalination Plant, China, 100,000 m³/d

Cap D'Jinet Desalination Plant, Algeria, 100,000 m³/d

SWRO Desalination Plant Jorf Lasfar, Morocco, 75,800 m³/d

Galilah SWRO Desalination Plant, Ras Al Khaima, United Arab Emirates, 68,000 m³/d

Salalah Power and Desalination Plant, Oman, 68,000 m³/d

San Pedro Del Pinatar, Murcia Desalination Plant, Chile, 65,000 m³/d
 Nungua Desalination Plant, Ghana, 60,000 m³/d
 Rambla Morales, Almeira Desalination Plant, Spain, 60,000 m³/d
 Ain Tinn Desalination Plant, Algeria, 58,000 m³/d
 Mar Valle Desalination Plant, Copiapó, Chile, 51,840 m³/d
 Madinah Yanbu Desalination Plant, Saudi Arabia, 50,400 m³/d
 Al-Haraj SWRO, Saudi Arabia, 50,000 m³/d
 10 MIGD SWRO Desalination Plant- AL Zawra, United Arab Emirates, 45,000 m³/d
 Moncofa Desalination Plant, Spain, 36,000 m³/d
 Mostaganem Desalination Plant, Algeria, 36,000 m³/d
 Salboub RO Plant, Saudi Arabia, 30,000 m³/d
 Marina Baja Desalination Plant, Spain, 25,000 m³/d
 Sagunto Desalination Plant, Spain, 22,900 m³/d
 Curaçao RO Desalination Plant, Netherlands Antilles, Netherlands, 18,000 m³/d
 SWRO Desalination Plant ASRY, Bahrain, 7,000 m³/d

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SELECTED REFERENCES

Plant Supplier: Desalination

Walkersville Water Treatment Plant, Walkersville, Maryland, United States 2018, 5,300 m³/d RO
 Cherry Point Marine Corps Air Station Water Treatment Plant, Cherry Point, North Carolina, United States of America 2017, 25,549 m³/d RO
 San Francisco Westside Recycled Water Treatment Facility, San Francisco, California, United States of America 2017, 19,862 m³/d RO
 DTS Westside Regional Water Reclamation Facility, Daytona Beach, Florida, United States of America 2017, 1,000 m³/d RO
 Robert W. Goldsworthy Desalter, Torrance, California, United States of America 2016, 17,412 m³/d RO
 Chino I Desalter Expansion, Chino, California, United States of America 2016, 6,813 m³/d RO
 Padre Dam Advanced Water Purification Facility, Santee, California, United States of America 2016, 70 m³/d RO
 San Antonio Desalination Plant, Elmendorf, Texas, United States of America 2015, 37,854 m³/d RO
 Penn State University Water Treatment Plant, University Park, Pennsylvania, United States of America 2015, 12,870 m³/d RO
 Padre Dam Advanced Water Purification Facility, Santee, California, United States of America 2014, 38 m³/d RO
 Chino II Desalter Concentrate Reduction Facility, Jurupa Valley, CA, U.S.A. 2013, 15,140 m³/d RO
 Dixon Water Treatment Plant, Holly Ridge, NC, U.S.A. 2013, 11,355 m³/d RO
 Color Removal WTP, Costa Mesa, CA, U.S.A. 2012, 32,554 m³/d NF
 Seminole Brighton WTP, Brighton, FL, U.S.A. 2012, 6,056 m³/d RO

Springtree WTP, Sunrise, FL, U.S.A. 2012, 5,678 m³/d RO
 Pinellas County WTE WTP, St. Petersburg, FL, U.S.A. 2011, 7,570 m³/d RO
 Hollywood WTP (Train A), Hollywood, FL, U.S.A. 2011, 7,570 m³/d RO
 Village of Tequesta WTP, FL, U.S.A. 2011, 4,542 m³/d RO
 Six SWRO plants, South Province, Maldives 2011, 3,000 m³/d RO
 Arcadia WTP, Santa Monica, CA, U.S.A. 2010, 35,150 m³/d RO
 Irvine Ranch Wells 21/22, CA, U.S.A. 2010, 23,750 m³/d RO
 City of Dania Beach, FL, U.S.A. 2010, 18,925 m³/d NF
 Port Hueneme, Oxnard, CA, U.S.A. 2010, 15,140 m³/d NF
 Paraquita Bay, Tortola, British Virgin Islands 2010, 10,477 m³/d RO
 Buwayb, Saudi Arabia, 59,000 m³/d RO
 14 Plants for Oil and Gas Platforms, 29,342 m³/d RO
 Lanzarote, Canary Islands, Spain, 7,500 m³/d RO
 Basra, Iraq, 5,760 m³/d RO
 Dagenham, U.K., 5,000 m³/d RO
 Basra, Iraq, 4,320 m³/d RO
 Basra, Iraq, 2,880 m³/d RO
 Backies, U.K., 2,200 m³/d RO
 Bonar Bridge, U.K., 1,100 m³/d NF+RO
 16 x 50 m³/d for Type 23 Frigate Royal Navy, 800 m³/d RO
 Broadford, U.K., 705 m³/d NF+RO
 Teangue, U.K., 350 m³/d NF+RO
 Cruise Liner, 250 m³/d RO
 Bracadale, U.K., 230 m³/d RO
 BBC, Ascension Island, 80 m³/d RO

Plant Supplier: Wastewater Recycling and Reuse

San Francisco Westside Recycled Water Treatment Facility, San Francisco, CA, U.S. 2017, 19,862 m³/d RO
 DTS Westside Regional Water Reclamation Facility, Daytona Beach, FL, U.S. 2017, 1,000 m³/d RO
 Padre Dam Advanced Water Purification Facility, Santee, CA, U.S. 2016, 70 m³/d RO
 Padre Dam Advanced Water Purification Facility, Santee, CA, U.S. 2014, 40 m³/d RO
 Yen So Park, Hanoi, Vietnam 2011, UF
 Sembcorp Changi NEWater, Changi, Singapore 2010, RO

UF/RO reuse plant design & supply

Groundwater Reliability Improvement Program Advanced Water Treatment Facility, Pico Rivera, California, United States of America 2016, 56,024 m³/d RO

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SELECTED REFERENCES

Consultant

Sembcorp NEWater Plant (SNP) - Changi, Singapore, 228,000 m³/d RO
Butler Drive Water Reclamation Facility, Peoria, Arizona, U.S.A., 49,205 m³/d
Silicon Valley Advanced Water Purification Center (SVAWPC), Santa Clara, California, U.S.A., 30,000 m³/d RO
Old Ford, London, U.K., MBR (Membrane Bioreactor)

Program Manager

San Antonio, Texas, U.S.A., 45,420 m³/d RO

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SELECTED REFERENCES

EPC Contractor

Central Java Coal Fired Power Plant, Indonesia 2014, 10,000 m³/d RO
Rizhao Effluent Treatment Plant, Shandong, China 2011, 40,000 m³/d RO
Isabela Bioethanol Cogeneration Plant, Philippines 2011, 6,720 m³/d UF+RO
Tembusu BMCC Plant, Singapore 2011, 1,800 m³/d RO
Glow Energy GSPP 2/3 Project, Thailand 2010, 6,720 m³/d MF+RO
Hydroair III, India 2010, 2,500 m³/d UF+RO
AL WATHBA ENHANCED TREATED SEWAGE EFFLUENT TREATMENT PLANT UNITED ARAB EMIRATES, Abu Dhabi, United Arab Emirates, 27,700 m³/d UF
Petronas LNG 9 Feed Train, Malaysia, 1,718 m³/d Other/Unknown

BS water & energy

SELECTED REFERENCES

Desalination equipment supplier

WATER DESALINATION PLANT IN- EL GARAWLA, MARSA MATROUH, El Garawla, Egypt, 1,000 m³/d RO
SWRO DESALINATION PLANT AT SEA VIEW RESORT, El-Narges Village, Egypt, 1,000 m³/d RO
SWRO DESALINATION PLANT- MARSEILIA BEACH 4 NORTH COAST, Marseilia, Egypt, 1,000 m³/d RO
RENOVATION OF THE SWRO DESALINATION PLANT AT BLUE BAY – RED SEA, EL SOKHNA -EGYPT, El Sokhna, Egypt, 750 m³/d RO
RENOVATION OF THE SWRO DESALINATION PLANT AT GORGONIA BEACH MARSA ALAM EGYPT, Egypt, 600 m³/d RO
SWRO DESALINATION PLANT AT BUNGALOWS RESORT, Egypt, 500 m³/d RO

BWRO DESALINATION PLANT AT MARSEILIA ALAM EL ROUM, Marseilia, Egypt, 500 m³/d RO

SWRO DESALINATION PLANT- MARSEILIA BEACH 2 NORTH COAST, Marseilia, Egypt, 500 m³/d RO

NICE 4 VILLAGE- SEA WATER DESALINATION PLANT, Egypt, 500 m³/d RO

EL-HAYAH RAS SEDR VILLAGE- SEA WATER DESALINATION PLANT, Elhayah Ras Sedr village, Egypt, 500 m³/d RO

JUMEIRAH BAY VILLAGE- SEA WATER DESALINATION PLANT, Jumeirah Bay Village, Egypt, 500 m³/d RO

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BWA Water Additives is the leading global provider of specialty water solutions for desalination, industrial water treatment, and the oil & gas industries. BWA's antiscalant, corrosion inhibitor and microbiocide technologies and services provide customers with the essential elements required to meet today's water management challenges. Our superior performing brands: Belgard®, Belite®, Flocon®, Flodose®, Belclene®, Belsperse®, Belcor®, Bellasol®, Bellacide®, BromiCide® and Geogard™ are recognized worldwide for the highest quality.

BWA Water Additives is the global leader in thermal desalination and reverse osmosis. BWA's Belgard® antiscalant and antifoulant polymers, based on proprietary enhanced maleate technology, continue to be the most widely used globally in thermal MSF & MED systems. BWA's Flocon® antiscalant polymers, microbiological control agents, and membrane cleaners are approved by leading RO membrane manufacturers worldwide. BWA's Belgard® and Flocon® ranges meet NSF/ANSI Standard 60.

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SELECTED REFERENCES

Engineering and construction

Valmayor DWTP, Madrid, Spain, 518,400 m³/d Other/Unknown
 RÍO VERDE, Malaga, Spain, 397,440 m³/d Other/Unknown
 VENTA ALTA, Vizcaya, Spain, 345,600 m³/d Other/Unknown
 ABRERA, Barcelona, Spain, 345,600 m³/d Other/Unknown
 VARSOVIA CENTRALNY, Warsaw, Poland, 300,000 m³/d Other/Unknown
 AGUILAS SDP, Aguilas, Murcia, Spain, 181,000 m³/d RO
 PILONES, Malaga, Santa Rosalia, Spain, 172,800 m³/d Other/Unknown
 Sorbe DWTP, Guadalajara, Spain, 129,600 m³/d Other/Unknown
 Alzira DWTP, Valencia, Spain, 86,400 m³/d Other/Unknown
 EGUILLOR, Navarre, Spain, 69,120 m³/d Other/Unknown
 NEW DARSAIT STP, Muscat, Oman, 50,000 m³/d MBR
 ENTRALGO, Asturias, Spain, 43,200 m³/d Other/Unknown
 DESALADORA DE CEUTA, Ceuta, Spain, 33,000 m³/d RO
 GAVÁ – VILADECANS, Barcelona, Spain, 32,000 m³/d MBR
 Viseu Sul, Portugal, 30,320 m³/d MBR
 SANTA CRUZ DE TENERIFE, Santa Cruz de Tenerife, Spain, 20,700 m³/d RO
 EL ANDÉVALO, Huelva, Spain, 17,971 m³/d Other/Unknown
 OURENSE, Orense, Spain, 17,280 m³/d Other/Unknown
 GRANADILLA DESALINATION PLANT, Tenerife, Spain, 14,000 m³/d RO
 TRUJILLO (SANTA LUCÍA DAM), Cáceres, Spain, 10,368 m³/d

LA ALDEA DESALINATION PLANT, Gran Canaria, Spain, 10,000 m³/d RO

YALDE DWTP, La Rioja, Spain, 9,600 m³/d

TROPHY CLUB Texas, Texas, U.S.A., 6,624 m³/d MBR

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SELECTED REFERENCES

Dual work exchanger energy recovery

Sorek, Israel, 560,000 m³/d RO
 Ashkelon, Israel, 350,000 m³/d RO
 Tuaspring, Singapore, 320,000 m³/d RO
 Sydney, Australia, 250,000 m³/d RO
 Minera Escondida, Chile, 215,000 m³/d RO
 Aguilas, Spain, 180,000 m³/d RO
 Az Zour, Kuwait, 136,000 m³/d RO
 Singspring, Singapore, 130,000 m³/d RO
 Gold Coast, Australia, 125,000 m³/d RO
 Sur, Oman, 120,000 m³/d RO
 Campo de Dalias, Spain, 90,000 m³/d RO
 Salalah, Oman, 68,000 m³/d RO
 Palm Jumeirah, United Arab Emirates, 66,000 m³/d RO
 Larnaca, Cyprus, 65,000 m³/d RO
 Barka, Oman, 55,000 m³/d
 Sea Hero, Korea, 35,000 m³/d

Equipment supplier

Fengnan Steel, Shanghai, China 2018, 90,000 m³/d RO
 Spence, Antofagasta, Mejillones, Chile 2018, 86,400 m³/d RO
 Atacama, Copiapó, Chile 2018, 38,880 m³/d RO
 Minera Escondida Expansion, Antofagasta, Chile 2017, 72,000 m³/d RO
 Barbados 2017, 12,000 m³/d RO

Equipment supplier - ERT, Energy recovery turbines

Shuquaiq, Saudi Arabia, 240,000 m³/d
 Rabigh I, Saudi Arabia, 200,000 m³/d
 El Atabal, Spain, 165,000 m³/d
 Fujairah I, United Arab Emirates, 160,000 m³/d
 Palmachim and Ext., Israel, 150,000 m³/d RO
 Beckton, United Kingdom, 150,000 m³/d
 Trinidad and Ext., Trinidad and Tobago, 140,000 m³/d RO
 Fujairah II, United Arab Emirates, 136,000 m³/d
 Carboneras, 120,000 m³/d
 Rabigh II, Saudi Arabia, 108,000 m³/d RO
 Red Sea Area, Egypt, 78,000 m³/d
 Alicante, Spain, 70,000 m³/d
 Jubail, Al Jubail, Saudi Arabia, 65,000 m³/d RO
 Las Palmas III, 65,000 m³/d

Kaust, Saudi Arabia, 60,000 m³/d
Bahia de Palma, 60,000 m³/d
Sabha, Israel, 55,000 m³/d RO
BP Clair Ridge, 30,000 m³/d RO

Pumps for Desalination

Yanbu III, Yanbu, Saudi Arabia, 550,000 m³/d Other
Tuaspring, Singapore, 320,000 m³/d RO
Ras Al Khair, Saudi Arabia, 300,000 m³/d RO
Adelaide I & II, Australia, 280,000 m³/d RO
Tenes, Algeria, 260,000 m³/d RO
Shuqaiq, Saudi Arabia, 220,000 m³/d RO
Minera Escondida, Chile, 215,000 m³/d RO
Al Goubrah, Oman, 200,000 m³/d RO
Cap D'Jinet, Algeria, 200,000 m³/d RO
Mostaganem, Algeria, 200,000 m³/d RO
Barcelona, Spain, 200,000 m³/d RO
Rabigh I, Saudi Arabia, 200,000 m³/d RO
Carlsbad, United States of America, 189,000 m³/d RO
Jamnagar Refinery, Gujarat, India, 160,000 m³/d MED (Multi-effect Distillation)
Beckton, United Kingdom, 150,000 m³/d
Perth 2, Australia, 140,000 m³/d RO
Perth 1, Australia, 140,000 m³/d RO
Barka, Oman, 140,000 m³/d RO
Alicante I & 2, Spain, 120,000 m³/d RO
Cartagena 1 & 2, Spain, 120,000 m³/d RO
Carboneras, Spain, 120,000 m³/d RO
Rabigh II, Saudi Arabia, 108,000 m³/d RO
Nemeli, India, 100,000 m³/d RO
Fouka, Algeria, 100,000 m³/d RO
Minjur, India, 100,000 m³/d RO
Larnaca, Cyprus, 65,000 m³/d RO
Kaust, Saudi Arabia, 60,000 m³/d

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Consultant: Process & Controls

Gwangyang SWRO, Gwangyang, South Korea 2012, 30,200 m³/d RO
Ras Al Khair Desalination Ph-I, Ras Al Khair, Saudi Arabia 2011, 306,000 m³/d RO
Jeddah SWRO III, Saudi Arabia 2011, 240,000 m³/d RO
Shuaibah PH III, Shuaibah, Saudi Arabia, 150,000 m³/d Reverse osmosis (RO)
Shuwaikh, Kuwait, 140,000 m³/d Reverse osmosis (RO)
Barka II Expansion, Barka, Oman, 125,000 m³/d Reverse osmosis (RO)
Geneva WTP, Geneva, IL, United States of America, 30,000 m³/d Reverse osmosis (RO)
Dahab Expansion, Dahab, Egypt, 10,000 m³/d Reverse osmosis (RO)

Frade FPSO, Atlantic Ocean, Brazil, 3,200 m³/d Reverse osmosis (RO)

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Engineering, supply and commissioning (excluding civil work)

WWTP, Caivano, Salerno, Italy 2017, 240 m³/d MBR
Water and Waste Water Treatment package, Garabogaz, Turkmenistan 2015, 1,200 m³/d RO
WWTP, Battipaglia, Salerno, Italy 2015, 480 m³/d MBR

O&M Contractor (engineering, supply of critical equipment, commissioning)

Refinery Effluent Treatment Plant, Turkmenbashi, Turkmenistan 2014, 26,880 m³/d RO

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Installation & Commissioning

Mill Reef Club Antigua, Half Moon Bay, Antigua & Barbuda 2016, 189 m³/d SWRO with PX
South Caicos, Turks & Caicos 2016, 189 m³/d SWRO with ERT
Hodges Bay Resort Antigua, Hodges Bay, Antigua & Barbuda 2016, 133 m³/d SWRO with PX

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High pressure dual plate check valves

Increment SWRO Las Americas, Tenerife, Spain 2015, 10,000 m³/d
Carlsbad SWRO Desalination Project, CA, United States of America 2014, 204,412 m³/d

Seawater RO Desalination, Janmagar, India 2014
Increment SWRO Edam Maspalomas, Maspalomas, Spain 2013, 5,000 m³/d

High pressure nozzle check valves

Increment SWRO Edam Maspalomas, Maspalomas, Spain 2013, 5,000 m³/d
Larnaca Desalination, Larnaca, Cyprus 2013, 46 m³/d
Ashdod Desalination Plant, Ashdod, Israel 2012, 320,000 m³/d

Low and high pressure dual plate check valves

Oman Sur IWP Expansion, Oman 2015, 48,000 m³/d
Sadara SWRO Desalination Plant, Jubail, Saudi Arabia 2013, 178,560 m³/d
Campo Dalias, Almeria, Spain 2013, 97,200 m³/d
SWRO Jorf Lasfar, Morocco 2013, 75,800 m³/d
Ras Al Khaimah Ghalilah, Ras Al Khaimah, United Arab Emirates 2013, 68,100 m³/d
Mantoverde, Chile 2013, 24,000 m³/d
Tia Juana, Venezuela 2013
Az Zour South RO Desalination Plant, Kuwait 2012, 136,000 m³/d
Punta Cardon Desalination Plant PVDSA, Punta Cardon, Venezuela 2012, 75,000 m³/d
Vasilikos Desalination Plant, Vasilikos, Cyprus 2012, 60,000 m³/d
Al Zawrah Power Plant FEWA, Ajman, United Arab Emirates 2012, 45,560 m³/d
Aruba Desalination Plant, Aruba 2012, 24,000 m³/d
Extension Lanzarote V, Lanzarote, Spain 2012, 10,000 m³/d
SA Desalination Plant, Adelaide, Australia 2011, 300,000 m³/d

Extension IDAM Campio De Cartagena Valdelentisco, Cartagena, Spain 2011, 210,000 m³/d

Marina Baja Mutxamel, Alicante, Spain 2011, 50,000 m³/d

Extension Itam Ute Telde Phase II, Telde, Spain 2011, 16,000 m³/d

Rafah And El Sheikh Zowayed Sinai SWRO, Rafah and El Sheikh Zowayed Sinai, Egypt 2011, 10,000 m³/d

IDAM Torre Vieja, Torre Vieja, Spain 2010, 240,000 m³/d

Beckton Desalination Plant Thames Gateway Water, Beckton, United Kingdom 2010, 150,000 m³/d

Sino Iron Cape Preston, WA, Australia 2010, 140,000 m³/d

Extension Itam Delta De La Tordera, Tordera, Spain 2010, 28,800 m³/d

Low pressure dual plate check valves

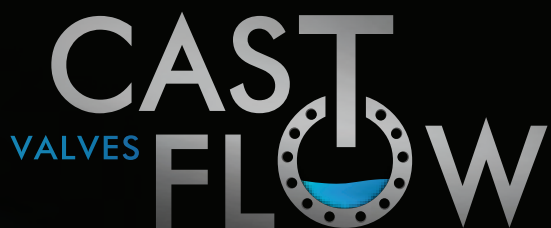
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Cembrane

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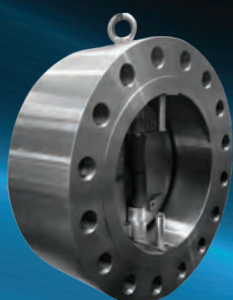
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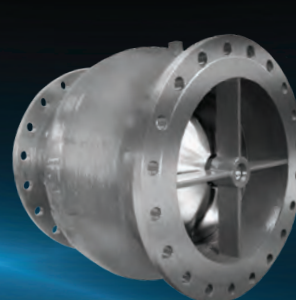
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GRP pipes & fittings supplier

Mirfa desalination plant, Abu Dhabi, Mirfa, United Arab Emirates 2014, 140,000 m³/d RO

Putatan Water Treatment Plant, Philippines 2013

Barka Desalination Project, Barka, Oman, 45,000 m³/d RO

Chiyoda Corporation

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www.chiyoda-corp.com

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EP Contractor

MODON DIC-1 WASTEWATER RECLAMATION PLANT, Dammam, Dammam, KSA, Saudi Arabia 2012, 3,500 m³/d RO

Chriwa Wasseraufbereitungstechnik GmbH

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Plant Supplier

Malambo Colombia, Malambo, Colombia, 5,616 m³/d RO

Lithuania Drinking Water Treatment, Lithuania, 900 m³/d RO

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Desalination Plant Supplier

Sawangan, Bali, Indonesia 2013, 3,000 m³/d RO

Blue Hills II, New Providence, Bahamas 2011, 18,184 m³/d RO

Britannia, Grand Cayman, Cayman Islands, 2,700 m³/d RO

Consulting Engineering Co.

📍 Abu Dhabi, United Arab Emirates ☎ +971-6272762

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Established 1964 (Kuwait), 1970 (Abu Dhabi), 1975 (Oman), 1983 (Egypt) by Dr. M. H. Ali El-Saie, the Owner and Managing Director.

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Services include feasibility studies, forecasts, networks flow an stability, engineering design preparation of tender documents, contract management and major tests at works, supervision of construction and commissioning of the plants guarantee period services.

SELECTED REFERENCES**Consultant**

Technical Evaluation of Al Yosr Plant and Preparing Tender for Operation and Maintenance, Hurghada, Egypt 2018 80,000 m³/d RO

Concrete Structures Repair at Sewage Treatment Plant, Port Fouad, Egypt 2016 40,000 m³/d

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Consultant of Contractor -Preparing Preliminary Design and Bill of Quantities

Al Ain El-Sokhna Integrated Water and Power Plant (Ipwp), Al Ain El Sokhna, Egypt 2016 150,000 m³/d RO

Engineering Consultancy

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Taweelah (B), Taweelah, United Arab Emirates 2012 450,000 m³/d MSF

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Culverts Concrete Slab Repair , Ghubrah, Oman 2012 27,360 m³/d MSF

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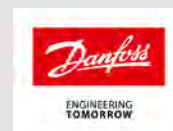
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Danfoss High Pressure Pumps, part of the Danfoss Group, has a clear mission: to develop, manufacture and market the most energy-efficient high-pressure pumps and energy recovery devices for the reverse osmosis (RO) market.

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SELECTED REFERENCES**Design, Supply, Installation, Maintenance**

Delma Island, Dubai, United Arab Emirates, 12,500 m³/d RO

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www.deltares.nl/io

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Hydraulic model testing, hydraulic studies

Yanbu 3, Yanbu, Saudi Arabia, 550,000 m³/d MSF
Ras Abu Fontas A2, Doha, Qatar, 164,000 m³/d MSF

Hydraulic modelling and recirculation studies

Sacyr Oman, Sohar, Oman, 250.0 m³/day RO

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Jafza Utility project, Dubai, United Arab Emirates 2012, RO
Shuweihat, Abu Dhabi, United Arab Emirates 2011
Az Zour North Power and Desalination Plant, Kuwait 2011
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Yanbu 3 - IWPP, Yanbu, Saudi Arabia, 550,000 m³/d

Seawater intake design concept evaluation

Red Sea Dead Sea Conveyance and Desalination, Jordan

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Desalination Plant Supplier

NCIC Ain Sokhna, Ain Sokhna, Egypt 2016, 64,000 m³/d RO
Remelah I & II, Matrouh, Egypt 2014, 48,000 m³/d RO

Desalination Company of Trinidad and Tobago Limited

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SELECTED REFERENCES

Desalination plant supplier and operator

Point Lisas, Trinidad and Tobago 2013, 272,520 m³/d RO

Desalitech, Ltd.

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Desalination equipment supplier

Agriculture, Illinois, United States of America 2015, 4,900 m³/d RO
Beer Brewery, Tanzania 2015, 3,270 m³/d RO
Auto Manufacturer, California, United States of America 2015, 545 m³/d RO
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Pulp and Paper Manufacturer, U.S.A. 2014, 2,180 m³/d RO
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 Agriculture Company, OH, USA, 204 m³/d RO
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 Agriculture, Indiana, United States of America, 82 m³/d
 Demo Unit, Ohio, United States of America, 82 m³/d
 Pulp and Paper, Lima, Peru, 74 m³/d RO
 Brewery, South Africa, 68 m³/d RO
 CA, USA, NM, USA, 68 m³/d RO
 Brewery, GA, USA, 36 m³/d RO
 Auto Manufacturing, CA, USA, 23 m³/d RO
 TX, USA, TX, USA, 17 m³/d RO
 Power Generation, CA, USA, 12 m³/d RO
 CA, USA, CA, USA, 11 m³/d RO
 Chemicals, China, 9 m³/d RO
 Agriculture Company, CA, USA, 7 m³/d RO
 Agriculture, CA, USA, 4 m³/d RO
 Municipal Reuse, CA, USA, 4 m³/d RO
 China, 4 m³/d RO
 UTEP, USA, 4 m³/d RO
 Agriculture Company, USA, 4 m³/d RO
 Multiple Locations, RO

DHI Group

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Data Integration Management System for network

City of Cape Town, Cape Town, South Africa

Leakage monitoring software for leakage and NRW evaluation

Severovévodské Water and Sewerage Company (SCVK a.s.), Czech Republic

Network analytics and modelling

Bhakra Beas Management Board (BBMB), India

Urban water management development based on modelling

Municipality of Olomouc, Olomouc, Czech Republic

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<http://www.dimasagrupo.com/>

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Cartridge Filters

Planta Desaladora de Escombreras, Murcia, Escombreras, Spain 2015, 835.0 m³/h Cartridge Filter previous to RO

Sand Filters

Planta Desaladora de Ensenada, Baja California, Ensenada, México 2015, 545.0 m³/h Sand Filter previous to RO

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Pre-treatment contractor

TUAS 3 Desalination Plant, Singapore 2016, 136,000 m³/d RO
 Shuqaiq Power Plant Project, Shuqaiq, Saudi Arabia 2014, 19,776 m³/d RO

Escondida Water Supply Project, Antofagasta, Chile 2013, 510,278 m³/d RO

Ras Al Khair Power and Desalination Plant, Ras Al Khair, Saudi Arabia 2010, 1,000,000 m³/d RO

Ras Al Khair Power and Desalination Pilot Plant, Ras Al Khair, Saudi Arabia 2010, 1,470 m³/d RO

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Demo Plant

Youngheung Power Plant FGD WW ZLD Demonstration, South Korea 2015, 100 m³/d

Changwon ZLD Demonstration, South Korea 2014, 120 m³/d

EP Contractor

Song Hau 1 Power Plant FGD WW ZLD, Vietnam 2018, 312 m³/d
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EP Supplier

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EPC Contractor

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 Youngheung Power Plant FGD WW ZLD, South Korea 2017, 1,248 m³/d

Yanbu Ph.3, Yanbu, Saudi Arabia 2016, 550,070 m³/d MSF

Doha SWRO Desalination Plant Ph.1, Kuwait City, Kuwait 2016, 227,100 m³/d RO

Youngdong Power Plant FGD WW ZLD, South Korea 2016, 120 m³/d

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Busan Gijang RO, Busan, Korea 2014, 45.4

Jeddah Ph.3 RO, Saudi Arabia 2013, 240,030 m³/d RO

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Yanbu Ph.3 , Yanbu, Saudi Arabia 2012, 550,000 m³/d MSF (Multi-stage Flash)
Yanbu Ph.2 Expansion MED, Yanbu, Saudi Arabia 2012, 68,190 m³/d MED
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Shuwaikh RO, Shuwaikh, Kuwait 2011, 136,380 m³/d RO
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Marafiq Yanbu MED, Yanbu, Saudi Arabia 2011, 54,550 m³/d MED
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Rabigh Power No.2 MSF Unit , Rabigh, Saudi Arabia 2010, 9,820 m³/d MSF (Multi-stage Flash)

EPC/Prime Contractor

Sharqiyah IWP, Oman 2018, 80,000 m³/d

Equipment Supplier

Escondida Water Supply , Antofagasta, Chile 2013, 220,000 m³/d RO

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Diehl Metering is a corporate division of the Diehl Group, headquartered in Nuremberg. With a total annual turnover of 3.75 billion euros, the technology company employs around 17,200 people worldwide.

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KEY REFERENCES: SMART LEAKAGE REDUCTION

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Jamaican National Water Commission (NWC), Kingston, Jamaica

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Drive-by AMR system installation

Berlin Water Authority, Berlin, Germany
Municipality Grand Belfort, France

Dow Water & Process Solutions

 Midland, MI, USA  +1 800-447-4369

www.dowwaterandprocess.com

SELECTED REFERENCES

Membrane supplier

Beijing Changping WTP, China 2019, 200,000 m³/d UF (Ultrafiltration)
Zhangjiagang No.4 WTP, China 2019, 100,000 m³/d NF (Nanofiltration)
Laayoune SWRO, Morocco 2019, 26,000 m³/d UF+RO
Al Roubeaky MLD plant, Egypt 2019, 5,000 m³/d UF+RO+IER
Barka 4 IWP, Oman 2018, 281,000 m³/d RO (Reverse Osmosis)
Doha phase I, Kuwait 2018, 227,300 m³/d RO (Reverse Osmosis)
Yuhang Water Renhe Wanter Plant, China 2018, 100,000 m³/d UF (Ultrafiltration)
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Saras Refinery, Saras, Italy 2017, 12,000 m³/d UF+RO+EDI
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SAFI Water, United Arab Emirates 2016, 2,000 m³/d UF+RO
Claude "Bud" Lewis Carlsbad Desalination, California, U.S.A. 2015, 190,000 m³/d RO
Sadara, Saudi Arabia 2015, 179,390 m³/d RO
Jamnagar, India 2015, 168,000 m³/d RO (Reverse Osmosis)
Larnaca Renovation, Cyprus 2015, 60,000 m³/d RO (Reverse Osmosis)
Angamos, Chile 2015, 11,796 m³/d UF
Kiev, Ukraine 2015, 9,000 m³/d UF+RO+RO+EDI
Jorf Lasfar OCP, Jorf Lasfar, Morocco 2014, 76,566 m³/d UF+RO
Barka, Oman 2014, 45,000 m³/d RO
POSCO, Gwang-yang, South Korea 2014, 30,000 m³/d UF+RO
Mantoverde phase I, Mantoverde, Chile 2014, 10,368 m³/d UF+RO
Ceyranbatan, Baku, Azerbaijan 2013, 520,000 m³/d UF
Vasilikos, Cyprus 2013, 60,000 m³/d RO
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Fountain Hills Sanitary District, Arizona, U.S.A. 2013, 18,800 m³/d UF
Erdos, Dongsheng District, China 2012, 120,000 m³/d UF+NF
Episkopi, Cyprus 2012, 100,000 m³/d UF+RO
CRP, Caracas, Venezuela 2012, 74,880 m³/d RO
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Cap Djinet, Algeria 2011, 100,000 m³/d RO
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Paraganá, Venezuela 2011, 75,000 m³/d RO
San Pedro del Pinatar I, Murcia, Spain 2011, 72,000 m³/d RO
Marina Baja, Alicante, Spain 2011, 50,500 m³/d RO
Oropesa, Castellón, Spain 2011, 50,000 m³/d RO
Minera Candelaria, Cerro Padrones, Chile 2011, 30,000 m³/d RO
Camp de Tarragona Wastewater Reclamation, Tarragona, Spain 2011, 20,000 m³/d RO
Pakistan Bin Jia Sheng 560MW Power Plant Seawater Desalination System, Karachi, Pakistan 2011, 18,000 m³/d UF+RO
Ceuta II, Ceuta, Spain 2011, 10,000 m³/d RO
Hadera, Israel 2010, 368,000 m³/d RO
Sydney, NSW, Australia 2010, 250,000 m³/d RO
Shuqaiq, Saudi Arabia 2010, 212,000 m³/d RO
Mostaganem, Algeria 2010, 200,000 m³/d RO
Cape Preston, WA, Australia 2010, 175,000 m³/d RO
ETAP del Tajo, Almoguera, Spain 2010, 120,000 m³/d RO
Cap Djinet, Zeralda, Algeria 2010, 100,000 m³/d RO
Hadera Expansion, Israel 2010, 88,000 m³/d RO
Cartagena I replacement, Spain 2010, 65,000 m³/d RO
Pafos, Cyprus 2010, 40,000 m³/d RO
La Tordera II, Barcelona, Spain 2010, 28,800 m³/d RO
Taranto - phase I+II, Italy 2010, 13,440 m³/d UF+RO
Minera Esperanza, Sierra Gorda, Chile 2010, 5,282 m³/d UF+RO

Düchting Pumpen

 Witten-Annen, Germany  +49 2302 969 0

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SELECTED REFERENCES

High pressure and booster pumps

Al Youstr, Egypt 2014
 Remela, Egypt 2014
 Gyeongbuk, Korea (South) 2013
 Sharjah, United Arab Emirates 2013
 U.S. Virgin Islands 2012
 QGC, Australia 2012
 British Virgin Islands 2012
 EG EHC UHDE, Egypt 2012
 Layyah, United Arab Emirates 2012
 Caribbean Sea 2012
 Middle East 2012
 Musandam, Oman 2012
 Egypt 2012
 Chinchilla, QLD, Australia 2011
 Egypt 2011
 Middle East 2011
 Japan 2011
 Spain 2011
 Huta-Rabigh, Saudi Arabia 2011
 Matrouh, Egypt 2011
 NTPC Vallur, India 2010, 20,000 m³/d RO
 Eemshaven, Netherlands, 30,000 m³/d RO
 Aruba II, Aruba, 24,000 m³/d RO
 Trinidad and Tobago, 15,000 m³/d RO
 CEPL, India, 13,000 m³/d RO
 Black Sea, Russia, 10,000 m³/d RO

Eastern Environmental Consultants Pty Ltd.

 Kensington, Australia  +61 2 9318 0388

www.easternenviro.com.au

SELECTED REFERENCES

Design, Consult

Burrup Desalination, Burrup, Western Australia, Australia, 6,000 m³/d MVC Evaporators

Ebro Armaturen Gebr. Bröer GmbH

 Hagen, Germany  +49 (0)2331 904 -0

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www.ebro-armaturen.com

SELECTED REFERENCES

Equipment supplier - Valves

Adeje, Tenerife, Spain 2017, 40,000 m³/d RO
 Formentera, Spain 2017, 5,000 m³/d RO
 Perth II, Perth, Australia 2014, 140,000 m³/d RO
 Minera Candelaria, Cerro Padrones, Chile 2012, 29,800 m³/d

Wonthaggi, Melbourne, Australia 2011, 444,000 m³/d RO
 Perth II, WA, Australia 2011, 140,000 m³/d RO
 Kurnell, Sydney, Australia 2010, 250,000 m³/d RO
 Aguilas, Murcia, Spain, 180,000 m³/d RO
 Al Hidd I, Al Hidd, Bahrain, 136,200 m³/d
 Hamriyah IV Phase I, Hamriyah, United Arab Emirates, 90,922 m³/d
 Rafah and El Zowayed, Sinai, Egypt, 10,000 m³/d RO

Echologics

SELECTED REFERENCES

Pipe condition assessment services

East Canada Hydroelectric Maintenance Facility, Eastern Canada, Canada
 South West USA University Campus, South West, U.S.A.
 Ontario Utility Company, Ontario, Canada
 Finnish Municipality, Finland

Smart leak detection system provider

California American Water, CA, U.S.A.
 PA, U.S.A.
 San Jose Water Company (SWJC), San Jose, U.S.A.

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SELECTED REFERENCES

Consultant

Jeddah IV Seawater Reverse Osmosis Desalination Plant, Jeddah, Saudi Arabia 2016, 404,000 m³/d RO
 Barka 4 Seawater Reverse Osmosis Desalination Plant, Barka, Oman 2015, 281,000 m³/d RO
 Sohar 3 Seawater Reverse Osmosis Desalination Plant, Sohar, Oman 2015, 250,750 m³/d RO
 Qurayyat Seawater Reverse Osmosis Desalination Plant, Qurayyat, Oman 2014, 200,000 m³/d RO
 Ras Laffan Seawater Reverse Osmosis Desalination Plant, Ras Laffan, Qatar 2014, 159,100 m³/d RO
 La Chimba Expansion Seawater Reverse Osmosis Desalination Plant, Antofagasta, Chile 2014, 25,920 m³/d RO
 Basra Brackish Water Reverse Osmosis Desalination Plant, Basra, Iraq 2013, 199,000 m³/d RO

Econity

SELECTED REFERENCES

Technology provider

Songsan Green City Wastewater Treatment Plant, Songsan, South Korea, 84,000 m³/d

Incheon City Chungla Kongchon Water Reclamation Plant, Incheon, South Korea, 65,000 m³/d

Incheon City Yongjong Songsan Water Reclamation Plant, Incheon, South Korea, 30,000 m³/d

Okchon Wastewater Treatment Plant, Okcheon, South Korea, 18,000 m³/d

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SELECTED REFERENCES

Plant Supplier

Effluent Plant, Port Coloso, Port Coloso, Chile 2018, 6,912.0 UF

El Toro II, Alto Hospicio, Iquique, 0.0 2017, 1,800 m³/d NF

El Carmelo, Chile 2016, 64,800.0 Other/Unknown

Solid-Liquid Separation Plant, Angloamerican, Chagres, Chile 2015, 168.0 Other/Unknown

Colun Planta verde, La Union, Los Lagos, 0.0 2014, 24 m³/d RO

Las Bambas, Peru 2012, 240 m³/d RO

Concepción, Bío Bío, Chile 2010, 350.0 UF

Elster Metering (Honeywell)

SELECTED REFERENCES

Advanced metering infrastructure (AMI) supplier

Anglian Water, Colchester, U.K.

Vitens, Netherlands

Department of Water Affairs, Jansenville, South Africa

Montpellier Mediterranean Airport, Montpellier, France

Macao Water Supply Company, Macau, China

Local Municipality, Johannesburg, South Africa

Sembcorp Bournemouth Water, Bournemouth, U.K.

EMCO Group

 Dubai, UAE

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SELECTED REFERENCES

EPC Contractor

Saudi Arabia, 105,991 m³/d RO

Hail City Water Desalination Plant, Saudi Arabia, Ha'il, Saudi Arabia, 100,000 m³/d

Buraidah Sewerage Treatment Plant, Saudi Arabia, Buraidah, Qassim Province, Saudi Arabia, 69,000 m³/d Other/Unknown

Iraq, 24,075 m³/d RO

U.S.A., 22,712 m³/d RO

Al Kheyam, Al Khyam, Lebanon, 16,000 m³/d Other/Unknown

New Doha International Airport (NDIA) Sewage Treatment Plant, Doha, Qatar, 13,600 m³/d Other/Unknown

U.S.A., 7,571 m³/d RO

Qaraoun Sewerage Treatment Plant, Lebanon, Qaraoun, Lebanon, 5,000 m³/d Other/Unknown

BCHARRE Wastewater Treatment Plant, Lebanon, Bcharre, Lebanon, 2,500 m³/d Other/Unknown

MASHTA HAMMOUD MBBR WWTP, Lebanon, Mashta Hammoud, Akkar, Lebanon, 2,400 m³/d Other/Unknown

REGGANE NORD DEVELOPMENT .GTE Service Water and Demineralized Water & De-oxygenation Package, Algeria, Reggane, Algeria, 343 m³/d RO

Al Khazna Tannery Wastewater Treatment Plant, Al Kaznah, Abu Dabhi, United Arab Emirates, 250 m³/d Other/Unknown

Energoprojekt Entel

 Belgrade, Serbia

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www.ep-entel.com

SELECTED REFERENCES

Assessor

RAF A3, Al Wakrah, Ras Abu Fontas, Qatar 2015, 163,656 m³/d RO

Engineering consultancy

RO II, Sohar Industrial Port Area, Oman 2014, 35 MLD RO

Grainfield power and water plant Facility D, Qatar 2012, 272,760 m³/d RO

Extension of PWPA for RAFA power and water plant, Qatar 2012, 250,030 m³/d MSF

Industrial Desalinated Water Facility, Qatar 2012, 204,570 m³/d RO

Extension of potable water production, Qatar 2012, 181,840 m³/d RO/MSF/MED

RO Pilot Project, Qatar 2011, 13,650 m³/d RO

Duqum, Oman 2011, 6,000 m³/d RO

Ras Abu Fontas A, Qatar, 315,000 m³/d MSF

Ras Abu Fontas C, Qatar, 120,000 m³/d MSF

Ras Abu Fontas A, Qatar, 45,000 m³/d MSF

Energy Recovery, Inc.

 San Leandro, CA, USA  +1 (510) 483-7370

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SELECTED REFERENCES

Energy recovery device supplier

Shoiba 4, Saudi Arabia 2018, 400,000 m³/d RO
 Spence, Chile 2018, 105,000 m³/d RO
 Ain Sokhna, Egypt 2018, 105,000 m³/d RO
 East Port Saeid, Egypt 2018, 75,000 m³/d RO
 Djibouti SWRO plant, Republic of Djibouti 2018, 45,000 m³/d RO
 IDAM Atacama, Chile 2018, 39,000 m³/d RO
 Lima Sur II, Peru 2018, 37,500 m³/d RO
 KAEC King Abdulla Economic City, Saudi Arabia 2018, 32,000 m³/d RO
 Tangshan Nanfeng Steel Plant, China 2018, 25,000 m³/d RO
 Hebei Fengyue, China 2018, 24,000 m³/d RO
 Ennore Thermal 2 x 660 MW, India 2018, 20,160 m³/d RO
 Sharma Tabuk, Saudi Arabia 2018, 20,000 m³/d RO
 Shinhalul Nuclear, South Korea 2018, 14,816 m³/d RO
 SWRO 2x6500m³/d, Morocco 2018, 13,000 m³/d RO
 Jaipur CETP, India 2018, 11,040 m³/d RO
 Agragua, Spain 2018, 11,000 m³/d RO
 Habas Steel Mill SWRO, Turkey 2018, 10,000 m³/d RO
 Doha SWRO, Kuwait 2017, 284,736 m³/d RO
 Shoaibah III exp II, Saudi Arabia 2017, 278,000 m³/d RO
 Marina East, Singapore 2017, 160,000 m³/d RO
 Ras Al Khaimah IWP, United Arab Emirates 2017, 121,968 m³/d RO
 Zhejiang Longsheng, China 2017, 88,000 m³/d RO
 JAZAN Economic city ARAMCO, Saudi Arabia 2017, 82,250 m³/d RO
 Valdelentisco Retrofit, Spain 2017, 72,000 m³/d RO
 KAIA Interstage application, Saudi Arabia 2017, 45,000 m³/d RO
 Ghar Lapsi & Pembroke, Malta 2017, 36,000 m³/d RO
 Sri Damodaran TPS Ash Handling Water, India 2017, 34,200 m³/d RO
 Nanshan SWRO project, China 2017, 33,120 m³/d RO
 El-Tour SWRO, Egypt 2017, 30,000 m³/d RO
 Fong Shang Creep Project, Taiwan 2017, 27,000 m³/d RO
 Shandong Bohui ZLD, China 2017, 21,000 m³/d RO
 1 x 800 MW North Chennai Stage III, India 2017, 20,160 m³/d RO
 Shandong Steel, China 2017, 20,064 m³/d RO
 Peru SWRO, Peru 2017, 20,000 m³/d RO
 Al Khurais Aramco, Saudi Arabia 2017, 18,864 m³/d RO
 Bajiao Power Plant, China 2017, 18,000 m³/d RO
 EDAM Janubio, Spain 2017, 18,000 m³/d RO
 NCIC SWRO 2, Egypt 2017, 17,500 m³/d RO
 AL HOCEIMA, Morocco 2017, 17,000 m³/d RO
 Windsor, Bahamas 2017, 15,000 m³/d RO
 Chapala, Mexico 2017, 14,586 m³/d RO
 H₂GO, U.S.A. 2017, 14,000 m³/d RO
 Curaçao, Brazil 2017, 14,000 m³/d RO
 Shanghai Yuanmai, China 2017, 12,672 m³/d RO
 DUBAI HASSYAN Power Plant, United Arab Emirates 2017, 12,288 m³/d RO
 Oman 3 x 2,800 m³/day, Oman 2017, 11,200 m³/d RO
 Darmex Agro, Indonesia 2017, 10,560 m³/d RO
 Gaza 2 SWRO 4x2500 m³/d, Palestine 2017, 10,000 m³/d RO
 SOHAR, Oman 2016, 275,000 m³/d RO
 Tuas III, Singapore 2016, 153,000 m³/d RO
 El Galala, Egypt 2016, 150,000 m³/d RO
 Al Khafji Solar - KACST, Saudi Arabia 2016, 73,152 m³/d RO
 Djerba, Tunisia 2016, 50,250 m³/d RO
 Cangzhou New Bohai, China 2016, 50,000 m³/d RO
 AL YOUSSEF 2, Egypt 2016, 42,000 m³/d RO
 Reliance Jamnagar Expansion, India 2016, 26,640 m³/d RO
 CABO VERDE SAO, Cape Verde 2016, 25,000 m³/d RO
 TPL, India 2016, 21,360 m³/d RO
 Nirma, India 2016, 20,544 m³/d RO
 NCIC, Egypt 2016, 17,500 m³/d RO
 SAKUM, India 2016, 15,408 m³/d RO
 Khafji, Saudi Arabia 2016, 15,120 m³/d RO
 Dalian Power Plant, China 2016, 14,400 m³/d RO
 RSPL, India 2016, 13,920 m³/d RO
 KEMAPCO Aqaba, Jordan 2016, 13,680 m³/d RO
 Project SAR, Egypt 2016, 12,360 m³/d RO
 Zhongmei Tuke, China 2016, 12,345 m³/d RO
 Macanao Island SWRO, Venezuela 2016, 11,112 m³/d RO
 Al F retrofit, Saudi Arabia 2016, 11,000 m³/d RO
 Oman 2 x 5000 m³/d, Oman 2016, 10,400 m³/d RO
 Umm Al Houl Power and Water project, Qatar 2015, 336,000 m³/d RO
 RAS ABU FONTAS A3, Qatar 2015, 200,200 m³/d RO
 Qurayyat IWP, Oman 2015, 200,000 m³/d RO
 Dongjiakou Jiaonan, China 2015, 106,872 m³/d RO
 JAZAN SWRO Plant, Saudi Arabia 2015, 60,000 m³/d RO
 San Antonio Water BWRO, United States 2015, 37,860 m³/d RO
 JUMBO project / TEXAS, Italy 2015, 36,000 m³/d RO
 TACE Project, Turkmenistan 2015, 35,100 m³/d RO
 ENSENADA, Mexico 2015, 26,000 m³/d RO
 Remelah, Egypt 2015, 24,000 m³/d RO
 Cangzhou New Bohai(Shanghai Safbon), China 2015, 22,500 m³/d RO
 Carboneras, Spain 2015, 21,038 m³/d RO
 PWT - Esenguly, Turkmenistan 2015, 20,160 m³/d RO
 Maspalomas II, Spain 2015, 20,000 m³/d RO
 Adeje Arona (Tenerife), Spain 2015, 20,000 m³/d RO
 Shishi Hongshan Power Plant, China 2015, 15,600 m³/d RO
 Santa Barbara RO, United States 2015, 15,000 m³/d RO
 Vietnam Yongxin, Vietnam 2015, 12,672 m³/d RO
 Punta Catalina, Dominican Republic 2015, 12,000 m³/d RO
 Aguas de Antofagasta, Chile 2015, 12,000 m³/d RO
 Caleta, Argentina 2015, 12,000 m³/d RO
 Meenaxi Energy Phase II, India 2015, 11,736 m³/d RO
 Jersey Island SWRO Project, United Kingdom 2015, 10,800 m³/d RO
 SAFI SWRO, Morocco 2015, 10,296 m³/d RO
 Shanghai Jinta, China 2015, 10,000 m³/d RO
 Eren Power Plant SWRO, Turkey 2015, 10,000 m³/d RO

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SELECTED REFERENCES

BTEX: gas effluent & water

China, 432 m³/d

COD reduction: wastewater

Taiwan, 3,600 m³/d

China, 2,400 m³/d

Taiwan, 600 m³/d

Industrial AOP Pilot for COD & TOC

South Africa, 24 m³/d

Odour & VOC removal: Food waste process

Netherlands

Odour treatment: gas and water

Taiwan, 720 m³/d

Process water, TOC reduction

China, 7,200 m³/d

Singapore, 1,560 m³/d

Singapore, 1,440 m³/d

Taiwan, 600 m³/d

TOC reduction

China, 144,000 m³/d

VOC reduction: gas stream

China, 24,000 m³/d

Taiwan, 3,000 m³/d

Taiwan, 384 m³/d

VOC treatment: gas and water

Taiwan, 288 m³/d

Taiwan, 240 m³/d

Taiwan, 120 m³/d

VOC, COD treatment: gas and water

Taiwan, 1,320 m³/d

Taiwan, 960 m³/d

Taiwan, 240 m³/d

Estruagua

SELECTED REFERENCES

Seawater Intake

TUAS 3, Singapore, 57,246 m³/d RO

EVERS GmbH & Co.

 Hopsten, Germany  +49 5458 9307-0

 info@evers.de

www.evers.de

SELECTED REFERENCES

Filter Material Provider

Barka, m³/d, Oman 2017, 281,000.0 RO

Djerba, m³/d, Tunisia 2017, 50,000.0 RO

Mirfa, United Arab Emirates 2015, 140,000 m³/d RO

Águilas-Murcia, Spain 2013, 180,000 m³/d RO

Copiapó, Chile 2013, 50,000 m³/d RO

Tenes, m³/d, Algeria 2013, 200,000 RO

Chennai, India 2012, 100,000 m³/d RO

Oropesa, Spain 2012, 50,000 m³/d RO

Evides Industriewater

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SELECTED REFERENCES

O&M

Demin Water Plant Botlek, Rotterdam, Netherlands, 38,400 m³/d RO

Dow Benelux, Terneuzen, Netherlands, 25,200 m³/d RO

Demin Water Plant Baanhoek, Dordrecht, Netherlands, 3,600 m³/d RO

Fichtner GmbH

 Stuttgart, Germany  +49 711 8995-0

www.fichtner.de

SELECTED REFERENCES

Consultant

SAKO, Bandar Abbas, Hormuzgan, Iran 2015, 100,000 m³/d RO

Mamelles RO Plant, Senegal 2015, 100,000 m³/d RO

West Coast, Saudi Arabia 2014, 10,000 m³/d

Olympic Dam Expansion Project, BHP, Adelaide, SA, Australia 2013, 169,000 m³/d RO

Mile 6 IWP, Windhoek, Namibia 2013, 60,000 m³/d RO

Mena Study Phase 2, 170,000 m³/d RO

Bandar Abbas, Iran, 100,000 m³/d RO

Erongo Desalination Plant, Wlotzkasbaken, Namibia, 55,000 m³/d Reverse osmosis (RO)

MAA Oil Refinery, Safat, Kuwait, 4 MIGD

Lenders Technical Advisor

Sur IWP, Sur, Sultanate of Oman, 83,648 m³/d

Cobra - Technical Advisor für 2 Entsalzungsanlagen, Sultanate of Oman

Owner's Engineer

RAF A3, Doha, Qatar 2015, 163,330 m³/d RO

Al Khafji RO Desalination Plant, Al Khafji, Saudi Arabia 2014, 30,000 m³/d RO

Az Zour North I WPP, Kuwait 2013, 486,422 m³/d MED

Ras Abu Fontas 2, Doha, United Arab Emirates 2013, 40,914 m³/d Thermal

Shuweiha 2, Abu Dhabi, United Arab Emirates 2011, 454,200 m³/d MSF

Ras Az Zawr SWCC, Saudi Arabia 2010, 1,025,000 m³/d Hybrid

RAF A2, Qatar, 145,500 m³/d RO

Seychelles, 13,500 m³/d RO

Technical Advisor

Al Ghubrah IWP, Muscat, Oman 2014, 191,000 m³/d RO

Gaza Central Desalination Plant, Gaza, Palestine 2014, 160,000 m³/d RO

Yanbu 3, Yanbu, Saudi Arabia 2013, 550,000 m³/d Thermal

Sohar IWP, Suwaiq, Oman 2013, 225,000 m³/d RO

Jorf Lasfar, OCP, Morocco 2013, 150,000 m³/d RO

Quebrada Blanca Phase 2, Quebrada, Chile 2013, 110,000 m³/d RO

Salalah IWPP, OPWP, Oman 2012, 70,000 m³/d

Seychelles 2012, 13,050 m³/d RO

Maqtaa - equipment due diligence, Algeria 2011, 500,000 m³/d RO

Victoria Desalination Plant (IWP), Melbourne, VIC, Australia 2011, 450,000 m³/d RO

Ras Laffan C IWPP, Doha, Qatar 2011, 280,000 m³/d MSF

Barka I Expansion, Oman 2011, 45,460 m³/d RO

Kümköy, Sirinohori, Cyprus 2011, 23,000 m³/d RO

Jebel Ali Power and Desalination Station M, Dubai, United Arab Emirates 2010, 636,440 m³/d MSF

Fujairah F2 IWPP, ADWEA, United Arab Emirates 2010, 600,000 m³/d MED+RO

Yanbu III SWCC, Saudi Arabia 2010, 550,000 m³/d

Sydney Water Desalination Plant, NSW, Australia 2010, 250,000 m³/d RO

Shuqaiq IWPP Phase II, WEC, Saudi Arabia 2010, 212,000 m³/d RO

Technical Advisor for Plant Owner/Operator

Barka I, Phase 2, Sultanate of Oman, 56,825 m³/d

Helgoland, Helgoland, Germany, 1,000 m³/d

Technical Advisor for the Offtaker, IWP/P Tender

Jubail Phase 3 IWPP, Saudi Arabia, 1,200,000 m³/d

Rabigh Phase 3 IWPP, Saudi Arabia, 600,000 m³/d

Water 2021 IWP, Muscat Sultanate of Oman, 325,000 m³/d

AL Hamriyah, Sharjah, United Arab Emirates, 250,000 m³/d

Shuaibah RO Extension II, 250,000 m³/d

Kwinana/Perth Seawater Desalination Plant, Kwinana (Perth), Western Australia, 140,600 m³/d

Salalah 2 IWPP, Salalah Sultanate of Oman, 45,460 m³/d

Technical advisor

SDC Extension, Sur, Oman 2015, 10.0 MIGD RO

Barka IWP, Barka, Oman, 281,000 m³/d RO

Sohar IWP, Sohar, Oman, 250,000 m³/d RO

Sur Extension, Sur, Oman, 48,000 m³/d RO

Khafji, Saudi Arabia, 30,000 m³/d RO

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SELECTED REFERENCES

Filter Material Provider

Thames Gateway Water Treatment Plant, London, Beckton, U.K., 150,000 m³/d RO

Fisia Italimpianti

Genoa, Italy

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www.fisia.it

SELECTED REFERENCES

EPC Contractor

Shuaibah, Saudi Arabia 2017, 250,000 m³/d

Salalah, Oman 2017, 113,600 m³/d

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FIP - Formatura Iniezione Polimeri S.p.A.

Since 1954 FIP has been producing injection moulded valves and fittings in thermoplastic materials for pressure pipeline system thus becoming nowadays the largest European valves manufacturer and one of the key brands of Aliaxis Group

FIP products are the result of over 60 years of experience as well as a strong quest for innovation: the company is constantly developing products featuring design, innovation, functionality, reliability and safety. The high quality of FIP products starts with the special attention paid to raw materials preparation and processing: 40 different thermoplastic resins are handled,

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Thanks to the versatility of thermoplastics materials PVC-U, PVC-C, PP-H, PVDF, PE, FIP offers proper solutions for chemical and process industry, desalination plants, water and waste-water treatment industry: fittings, manual or actuated valves but also a wide range of electronic instruments for the measurement and control of Flow, pH, ORP, Conductivity, Level, Pressure and Depth.

FIP supply also includes PP Mechanical compression joints for PE irrigation piping, PVC-U and PP clamp saddles, PE electrofusion fittings for water and gas, mechanical couplings in steel and cast iron for pipe connections in all materials and diameters and special production of valves in natural PP and ABS on customer request.

Find out more at www.fipnet.com

SELECTED REFERENCES

Membrane Outlet Sampling 3 Way Ball Valves

Al Ghubrah, Oman 2016 190,000 m³/d RO
Sierra Gorda, Chile 2013 30,000 m³/d RO

Lanzarote V, Spain 2013 24,000 m³/d RO
Tenerife Island, Spain 2011 10,000 m³/d RO
Beckton, United Kingdom 2010 150,000 m³/d RO
Candelaria, Chile 2010 30,000 m³/d RO
Ibiza, Spain 2010 12,500 m³/d RO

Thermoplastic Valves and Fittings

Ptolemais, Greece 2018 60,000 m³/d RO
Qurayyat, Oman 2017 200,000 m³/d RO
Ras Abu Fontas, Al Wakra, Qatar 2017 164,000 m³/d RO
Al Ghubrah, Oman 2016 190,000 m³/d RO
Jubail IV, Saudi Arabia 2015 100,000 m³/d RO
Fujairah, Saudi Arabia 2014 137,000 m³/d RO
Sorek, Israel 2013 624,000 m³/d RO
Tuas II, Singapore 2013 318,500 m³/d RO
Carlsbad, United States of America 2013 205,000 m³/d RO
Jamnagar Gujarat, India 2013 168,000 m³/d MED
Episkopi, Cyprus 2013 50,000 m³/d RO
Sierra Gorda, Chile 2013 30,000 m³/d RO
Lanzarote V, Spain 2013 24,000 m³/d RO
Majis Sohar Industrial Port Complex, Oman 2013 16,000 m³/d RO
Mantoverde, Chile 2012 35,000 m³/d RO
Los Cabos, Mexico 2011 20,000 m³/d RO
Tenerife Island, Spain 2011 10,000 m³/d RO
Hadera, Israel 2010 456,000 m³/d RO
Beckton, United Kingdom 2010 150,000 m³/d RO
Cap D'Jinet, Algeria 2010 100,000 m³/d RO
Candelaria, Chile 2010 30,000 m³/d RO
Ibiza, Spain 2010 12,500 m³/d RO

Fluence Corporation

SELECTED REFERENCES

Contractor

San Quintin, Mexico 2016, 21,600 m³/d RO
Pacific Rubiales Energy, Colombia 2012, 80,000 m³/d RO
Arauco, Chile 2012, 3,960 m³/d RO
Azenco, Azerbaijan 2012, 1,200 m³/d RO
Aguas De Altiplano, Chile 2012, 1,080 m³/d RO
Termosierra, Colombia 2012, 1,080 m³/d RO
Israel Aircraft Industries, Israel 2012, 750 m³/d RO
Rio Lluta, Chile 2012, 720 m³/d RO
Israel Electricity Corporation, Israel 2012, 600 m³/d RO
Mitrelli, Angola 2012, 288 m³/d RO
San Cristobal, Bolivia 2012, 240 m³/d RO
Shamba Wells, Kenya 2012, 120 m³/d RO
Daunia, Australia 2012, 48 m³/d RO
Nahariya Hospital, Israel 2012, 36 m³/d RO
Townsville, Australia 2012, 36 m³/d RO
SERWA, Victoria, Australia 2011, 2,400 m³/d RO
Dong Energy, Denmark 2011, 960 m³/d RO
Jentu, Italy 2011, 600 m³/d RO
Mano Maritime, Haifa, Israel 2011, 192 m³/d RO
Episkopi, Limassol, Cyprus 2010, 50,000 m³/d RO
CleanTeq, Victoria, Australia 2010, 12,000 m³/d RO
Makteshim Chemical Works, Ramat Hovav, Israel 2010, 3,600 m³/d RO
Joe White Maltings, Tamworth, Australia 2010, 240 m³/d RO

Design, equipment supply, installation supervision, commissioning and startup

Richards Bay, South Africa 2016, 10,000 m³/d RO

Equipment Supply

Mobile unit, Memphis, TN, U.S.A. 2014, 5,450 m³/d RO
 ROWPU, Maryland, U.S.A. 2014, 1,000 m³/d RO
 Vista Club, Angola 2013, 96 m³/d RO
 Sience & Tech. park, Sheyang, China 2013, 30 m³/d RO

Equipment Supply and Supervision of Erection

Solar, Fortaleza, Brazil 2014, 3,600 m³/d RO
 Reginald Lee S.A., Buenos Aires, Argentina 2014, 2,400 m³/d RO
 Fideicomiso Funes City, Santa Fe, Argentina 2014, 1,200 m³/d RO
 Shimal II, Azerbaijan 2014, 1,200 m³/d RO
 Reginald Lee S.A., Buenos Aires, Argentina 2014, 600 m³/d Other
 Gramadal, Huarmey, Peru 2014, 576 m³/d RO
 Estancias del Lago, Durazno, Uruguay 2014, 336 m³/d RO
 Clariant, Rio de Janeiro, Brazil 2014, 324 m³/d RO
 Interfarma, Buenos Aires, Argentina 2014, 216 m³/d NF
 Guardian do Brasil Vidros Planos Ltda., São Paulo, Brazil 2014, 211 m³/d EDI
 Obras Sanitarias, Buenos Aires, Argentina 2014, 192 m³/d RO
 Guardian do Brasil Vidros Planos Ltda., São Paulo, Brazil 2014, 192 m³/d RO
 Bunge Campana, Buenos Aires, Argentina 2014, 192 m³/d RO
 Embotelladora Puyehue, Puyehue, Chile 2014, 120 m³/d RO
 Cementos Pascamayo SAA, Piura, Peru 2013, 1,200 m³/d RO
 Larnaca port, Larnaca, Cyprus 2013, 150 m³/d RO

MABR Wastewater treatment plant: suppliers of equipment and design

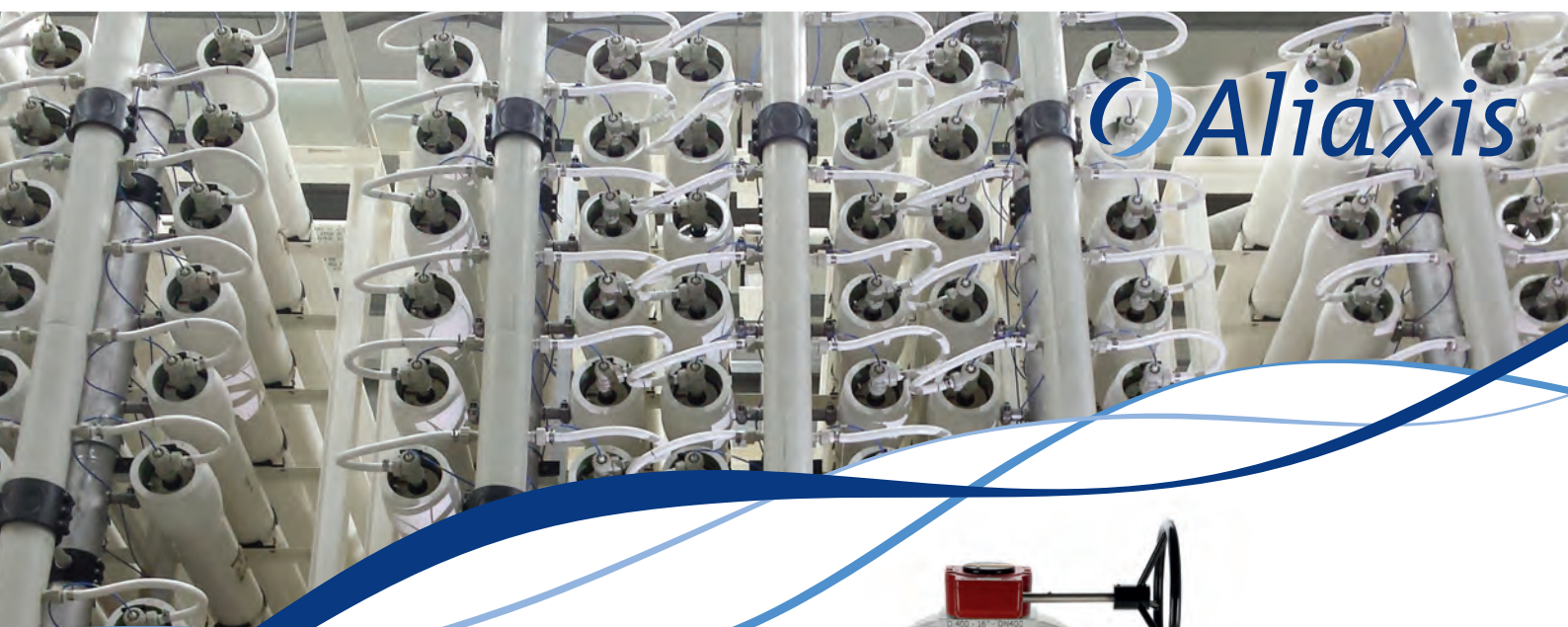
Hefei, Hefei Province, China, China 2018, 40 m³/d MABR
 Quzhou, Zhejiang Province China, China 2017, 40 m³/d MABR
 Bordeaux, Saint Thomas, Saint Thomas, US VI, U.S. Virgin Islands 2016, 100 m³/d MABR

Nirobox SWRO desalination suppliers (design, installation and commissioning)

Island of Mayotte (Petite Terre), Mayotte 2017, 3,000 m³/d RO

Plant supplier

Manila, Philippines 2018, 400 m³/d
 South Africa 2016, 10,000 m³/d RO
 Isla de Cedros, Mexico 2016, 400 m³/d RO
 Mozambique 2016, 50 m³/d RO
 Vietnam 2016, 30 m³/d RO
 Municipalidad de Caleta Olivia, Santa Cruz, Argentina 2015, 12,000 m³/d RO
 Kiryat Gat, Israel 2015, 5,040 m³/d RO
 STX, Chile 2015, 2,400 m³/d RO
 Arca Tucumán, Tucumán, Argentina 2015, 1,680 m³/d RO
 Guanacaste, Costa Rica 2015, 1,500 m³/d RO
 Municipalidad de Puerto Deseado, Santa Cruz, Argentina 2015, 1,500 m³/d RO
 Ivess Jaureguy, Buenos Aires, Argentina 2015, 960 m³/d RO
 Aguas Danone de Argentina, Buenos Aires, Argentina 2015, 768 m³/d RO



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Administración SAO, Santa Cruz de la Sierra, Bolivia 2015, 720 m³/d RO
 Massalin Particulares, Buenos Aires, Argentina 2015, 720 m³/d RO
 Ives Jumiellano, Buenos Aires, Argentina 2015, 720 m³/d RO
 Generación Frias S.A., Santiago del Estero, Argentina 2015, 600 m³/d RO
 Camelot Brasil, Fortaleza, Brazil 2015, 600 m³/d RO
 Embotelladoras Chilenas Unidas, Santiago, Chile 2015, 480 m³/d RO
 Ives Rosmino y CIA, Buenos Aires, Argentina 2015, 480 m³/d RO
 Braun Medical S.A., Buenos Aires, Argentina 2015, 288 m³/d RO
 Sancor La Carlota, Santa Fe, Argentina 2015, 268 m³/d RO
 Pepsico - Dilexis Plant, San Juan, Argentina 2015, 264 m³/d RO
 PIM (Pooled Equipment Inventory Co.), USA 2015, 240 m³/d RO
 Petroquímica de Cuyo, Buenos Aires, Argentina 2015, 192 m³/d RO
 Nestlé Magdalena, Buenos Aires, Argentina 2015, 192 m³/d RO
 Cementos Pacasmayo, Piura, Peru 2015, 192 m³/d RO
 Establecimiento Las Marias, Corrientes, Argentina 2015, 144 m³/d RO
 Laboratorio Arboreto, Juiz de fora, Brazil 2015, 120 m³/d RO
 Cisper, Sao Paulo, Brazil 2015, 120 m³/d RO
 Basf, Santa Fe, Argentina 2015, 108 m³/d RO
 Rizobacter Argentina S.A., Buenos Aires, Argentina 2015, 96 m³/d RO
 Solar, Fortaleza, Brazil 2014, 3,600 m³/d RO
 Reginald Lee S.A., Buenos Aires, Argentina 2014, 2,400 m³/d RO
 Fideicomiso Funes City, Santa Fe, Argentina 2014, 1,200 m³/d RO
 Reginald Lee S.A., Buenos Aires, Argentina 2014, 600 m³/d Other
 Gramadal, Huarmey, Peru 2014, 576 m³/d RO
 Estancias del Lago, Durazno, Uruguay 2014, 336 m³/d RO
 Clariant, Rio de Janeiro, Brazil 2014, 324 m³/d RO
 Interfarma, Buenos Aires, Argentina 2014, 216 m³/d NF
 Guardian do Brasil Vidros Planos Ltda., São Paulo, Brazil 2014, 211 m³/d EDI
 Bunge Campana, Buenos Aires, Argentina 2014, 192 m³/d RO
 Guardian do Brasil Vidros Planos Ltda., São Paulo, Brazil 2014, 192 m³/d RO
 Embotelladora Puyehue, Puyehue, Chile 2014, 120 m³/d RO
 LDC Citrus, Bebedouro, Brazil 2013, 1,728 m³/d RO
 Cementos Pascamayo SAA, Piura, Peru 2013, 1,200 m³/d RO
 Petrobrás, Puerto San Martín, Argentina 2013, 960 m³/d RO
 Inca Tops, Arequipa, Peru 2013, 624 m³/d RO
 CCU, Temuco, Chile 2013, 600 m³/d RO
 Nestlé, Lima, Peru 2013, 432 m³/d RO
 Constructora de Cuyo, Mendoza, Argentina 2013, 360 m³/d RO
 Guaracachi S.A., Santa Cruz, Bolivia 2013, 240 m³/d EDI
 GoldCorp, Perito Moreno, Argentina 2013, 120 m³/d RO
 MCV, Barranquilla, Colombia 2012, 3,120 m³/d RO
 Ingenio Suco Alcohólico Aguai, Santa Cruz, Bolivia 2012, 1,200 m³/d RO
 Montevideo Refrescos, Montevideo, Uruguay 2012, 1,080 m³/d RO
 Granos Bolivia, Santa Cruz, Bolivia 2012, 840 m³/d RO
 Peugeot, Brazil 2012, 672 m³/d RO
 Aguas Danone de Argentina, Mendoza, Argentina 2012, 600 m³/d RO
 Bunge, San Gerónimo, Argentina 2012, 480 m³/d RO
 Nestlé, Gran Buenos Aires, Argentina 2012, 288 m³/d RO
 Guaracachi S.A., Santa Cruz, Bolivia 2012, 264 m³/d RO
 Salta Refrescos, Salta, Argentina 2012, 216 m³/d RO
 Holcim, Latacunga, Ecuador 2012, 144 m³/d RO

Condominio Paso Chico, Lurín, Lima, Peru 2012, 124 m³/d RO
 Vodatec, Federal Capital - Buenos Aires, Argentina 2011, 13,440 m³/d RO
 Coca Cola BRASAL, Brasilia, Brazil 2011, 2,400 m³/d Other
 Gandules, Jayanca - Chiclayo, Peru 2011, 2,160 m³/d RO
 Coca Cola EDASA, Córdoba, Argentina 2011, 1,920 m³/d Other
 Central Puerto, Federal Capital, Argentina 2011, 1,800 m³/d RO
 Coca Cola Reginald Lee, Federal Capital - Buenos Aires, Argentina 2011, 1,680 m³/d RO
 Central Puerto, Buenos Aires, Argentina 2011, 1,608 m³/d EDI
 Maple, Sullana-Piura, Peru 2011, 1,320 m³/d RO
 BASF, Guaratinguetá, Brazil 2011, 1,272 m³/d EDI
 Basf, Guaratinguetá, Brazil 2011, 1,272 m³/d RO
 Coca Cola FEMSA, Ezeiza - Buenos Aires, Argentina 2011, 1,152 m³/d RO
 GISA, San Miguel Tucumán, Argentina 2011, 1,056 m³/d RO
 GISA, San Miguel Tucumán, Argentina 2011, 960 m³/d EDI
 La Jolla, Lima, Peru 2011, 864 m³/d RO
 PROSAL, Salta, Argentina 2011, 720 m³/d RO
 CBA Votorantins, Brazil 2011, 600 m³/d RO
 Prosal, Campo Santo, Argentina 2011, 600 m³/d RO
 Smurfit Kappa Argentina, Bernal - Buenos Aires, Argentina 2011, 576 m³/d RO
 Sabormex, Puebla, Mexico 2011, 552 m³/d RO
 Maple, Sullana-Piura, Peru 2011, 480 m³/d EDI
 Mayagüez, Colombia 2011, 432 m³/d RO
 Pritty, Córdoba, Argentina 2011, 360 m³/d RO
 Aji No Moto, Callao-Lima, Peru 2011, 360 m³/d RO
 Aguas Bonaerenses, Buenos Aires, Argentina 2011, 288 m³/d RO
 Compañía Minera Argentum, Morococha, Peru 2011, 260 m³/d RO
 Shougang Hierro Perú, Peru 2011, 240 m³/d RO
 Shopping Don Pedro, Campinas, Brazil 2011, 240 m³/d RO
 Conarco Argentina, Chascomús, Argentina 2011, 240 m³/d RO
 Minera Tritón, Gobernador Gregores - Santa Cruz, Argentina 2011, 216 m³/d RO
 Sabormex, Puebla, Mexico 2011, 216 m³/d RO
 Rio de Janeiro, Brazil 2011, 192 m³/d RO
 Molino Río de la Plata, Concepción del Uruguay, Argentina 2011, 168 m³/d RO
 Ady Resources Limited, Salar del Rincón - Jujuy, Argentina 2011, 144 m³/d RO
 Bebidas Nihuil, Mar del Plata, Argentina 2011, 144 m³/d RO
 Corpora Tres Montes, Casablanca, Chile 2011, 144 m³/d RO
 Siderar, Federal Capital - Buenos Aires, Argentina 2011, 144 m³/d RO
 Kimberly Clark, Venezuela 2011, 120 m³/d RO
 Tabacal, Orán, Argentina 2010, 2,880 m³/d RO
 Gas Atacama, Mejillones, Chile 2010, 2,592 m³/d RO
 Coca Cola, Bahía Blanca, Argentina 2010, 1,920 m³/d RO
 Nestlé, Moreno, Argentina 2010, 1,296 m³/d RO
 Coca Cola, Buenos Aires, Argentina 2010, 1,200 m³/d RO
 Inmobiliaria Masías, Peru 2010, 1,152 m³/d RO
 Chagrés, Chile 2010, 720 m³/d RO
 IVESS, La Matanza-Buenos Aires, Argentina 2010, 576 m³/d RO
 Mayagüez, Cali, Colombia 2010, 545 m³/d RO
 Coca Cola, Bahía Blanca, Argentina 2010, 480 m³/d RO
 Guaracachi, Santa Cruz, Bolivia 2010, 240 m³/d ED
 Triarc, Arequipa, Peru 2010, 240 m³/d RO
 Comasa, Chile 2010, 240 m³/d RO

Kimberly Clark, Bernal - Buenos Aires, Argentina 2010, 192 m³/d RO

Rama Caída, Mendoza, Argentina 2010, 192 m³/d RO

La Anónima, Ituzaingo-Buenos Aires, Argentina 2010, 144 m³/d RO

Bayovar, Lima, Peru 2010, 120 m³/d RO

IVESS, La Matanza-Buenos Aires, Argentina 2010, 120 m³/d RO

Turnkey

Dead Sea Works, Dead Sea, Israel 2014, 6,000 m³/d RO

Pri-Chen, Kfar Kara, Israel 2014, 96 m³/d RO

MFO North Camp, North Sinai, Egypt 2013, 600 m³/d RO

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SELECTED REFERENCES

ERD Supplier: BWRO LPH Energy Recovery

Groundwater Reliability Improvement Program (GRIP), Pico River, CA, U.S.A. 2017, 46,631 m³/d RO

Chino I Desalter Expansion, Chino, CA, U.S.A. 2016, 2,240 m³/d RO

North Jensen Beach BWRO, Martin County, Florida, United States of America 2015, 22,710 m³/d RO

Springtree Water Treatment Plant, Sunrise, Florida, U.S.A. 2014, 5,680 m³/d RO

Chino II Desalter, Santa Fe Springs, CA, United States of America 2014, RO

Daesan K-Water, Daesan, Korea (South) 2012, 119,000 m³/d RO

Port Hueneme Brackish Reclamation Plant, City of Port Hueneme, California, U.S.A. 2011, 15,140 m³/d RO

North Lee County WTP, Fort Myers, Florida, U.S.A. 2010, 37,850 m³/d RO

Santa Monica WTP, Santa Monica, California, U.S.A. 2010, RO

Orange County Water District (OCWD) Groundwater Replenishment System Expansion (GWRS), Fountain Valley, California, U.S.A., 19,000 m³/d Reverse osmosis (RO)

ERD Supplier: SWRO HPB Energy Recovery Turbochargers

Baja California, Mexico 2015, 36,000 m³/d RO

Ras Al-Khair Power and Desalination Plant, Ras Al-Khair, Saudi Arabia 2014, 306,700 m³/d RO

Ras Al Khaimah, United Arab Emirates 2014, 25,000 m³/d RO

Oman 2014, 6,750 m³/d RO

BP Khazzan, Oman 2014, 6,000 m³/d RO

Archean Chemicals, Chennai, India 2014, 3,727 m³/d RO

United Arab Emirates 2014, 3,000 m³/d RO

Saudi Arabia 2014, 2,000 m³/d RO



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Email: sales@fedco-usa.com

Saudi Arabia 2014, 2,000 m³/d RO
Qatar 2014, 2,000 m³/d RO
Saudi Arabia 2014, 1,300 m³/d RO
Saudi Arabia 2014, 200 m³/d RO

Pump Supplier: SWRO

Marshall Island Desal., Ebeye, Marshall Islands 2016, 1,600 m³/d RO
Baja California, Mexico 2015, 36,000 m³/d RO
Pakistan 2014, 100,000 m³/d RO
Iraq 2014, 75,000 m³/d RO
Ras Al Khaimah, United Arab Emirates 2014, 25,000 m³/d RO
BP Khazzan, Oman 2014, 6,000 m³/d RO
Sanmen, Qingdao, China 2013, 8,501 m³/d RO
Takoradi, Ghana 2013, 4,000 m³/d RO
Angola 2013, 2,592 m³/d RO
OOCEP Abu Tubul Block 60 Project Water Treatment Plant, Abu Tubul, Oman 2013, 900 m³/d RO
Upper Zakum U750, South Island, United Arab Emirates 2013, 705 m³/d RO
Pakistan 2012, 31,000 m³/d RO
Ras Al Khaimah, United Arab Emirates 2012, 20,160 m³/d RO
Wheatstone, Western Australia, Australia 2012, 10,000 m³/d RO
Ras Al Khaimah, United Arab Emirates 2012, 9,000 m³/d RO
Libya 2012, 8,000 m³/d RO
Saudi Arabia 2012, 2,200 m³/d RO
TASIAST Expansion Kinross, Mauritania 2012, 856 m³/d RO
Al Khaleej, United Arab Emirates 2012, RO
Maldives 2011, 4,000 m³/d RO
Offshore, Jakarta, Indonesia 2011, 180 m³/d RO
Basrah, Iraq 2010, 10,400 m³/d RO
Sharm El Sheikh SWRO Plant, Sharm El Sheikh, Egypt 2010, 880 m³/d RO
Manifa MM6, Manifa, Saudi Arabia 2010, RO

Pump, ERD Supplier

Buritica Gold Mine, Buritica, Colombia 2017, 2,400 m³/d RO
Multiple Municipal Plants, Venezuela 2017, RO
Beenyup Advanced Water Recycling, Perth, Australia 2017, 105,980 m³/d RO
Richard Reynolds Desalination Facility, Chula Vista, CA, U.S.A. 2016, 3,270 m³/d RO

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SELECTED REFERENCES

Cartridge filters, Filters and Ultrafiltration Systems

El Oued, Algeria 2016, 30,000 m³/d
Sal & San Vicente SWRO, Cape Vert 2016, 10,000 m³/d
IWPP Facility D (Qatar), Qatar 2015, 590,000 m³/d
Qurayyat 200MLD Water Plant, Oman 2015, 200,000 m³/d
RAF 3 Ras Abu Fontas 3 SWRO, Qatar 2015, 160,000 m³/d
Al Yosr II, Egypt 2015, 80,000 m³/d
Al Yosr, Egypt 2015, 45,360 m³/d
Khouribga BWRO, Morocco 2015, 28,512 m³/d RO
Hassi Messaud SWRO, Algeria 2015, 24,000 m³/d RO
Desalcott Expansion, Trinidad and Tobago 2015, 15,000 m³/d
Damietta Power Station, Egypt 2015, 10,400 m³/d
Huechun NF, Huechun, Chile 2015, 8,640 m³/d
El Arish, Egypt 2015, 8,500 m³/d
Sheikh Zouwayed SWRO, Egypt 2015, 8,338 m³/d
Marassi SWRO, Egypt 2015, 7,500 m³/d
ZADCO Project, Abu Dhabi, United Arab Emirates 2015, 5,185 m³/d
Al Arish SWRO, Egypt 2015, 5,000 m³/d
DEWA, Al Yassat Island RO Plant, Dubai, United Arab Emirates 2015, 5,000 m³/d
Puerto Deseado SWRO, Santa Cruz, Argentina 2015, 3,000 m³/d
Sidi Barani, Egypt 2015, 1,000 m³/d
Hassi R'Mel, Algeria 2015, 650 m³/d
Sadara, Saudi Arabia 2014, 150,000 m³/d
Mirfa, Abu Dhabi, United Arab Emirates 2014, 120,000 m³/d
Remela, Egypt 2014, 27,600 m³/d
Copiapo Exp., Copiapo, Chile 2014, 21,816 m³/d
Jeddah North & SOJECO, Jeddah, Saudi Arabia 2014, 15,160 m³/d
Shalateen SWRO, Shalateen, Egypt 2014, 7,500 m³/d
Djelfa, Algeria 2014, 5,800 m³/d
Angamos, Chile 2014, 5,600 m³/d
Zubair, Iraq 2014, 3,080 m³/d
PP10CC-WTP, Riyadh, Saudi Arabia 2012, 168,000 m³/d
Rabigh IWPP Phase 2, Rabigh, Saudi Arabia 2012, 120,000 m³/d
SWRO Jorf Lasfar, Morocco 2012, 75,000 m³/d
SWRO Nungua Ghana, Accra, Ghana 2012, 60,000 m³/d
SWRO Tia Juana, Venezuela 2012, 48,000 m³/d SWRO
SWRO Puerto Rosario, Fuerteventura, Canary Islands, Spain 2012, 48,000 m³/d
Barka Phase 3, Barka, Oman 2012, 45,500 m³/d
SWRO Point Lisas Plant Extension, Trinidad and Tobago 2012, 18,000 m³/d
SWRO Tenerife Oeste, Tenerife, Canary Islands, Spain 2012, 14,000 m³/d
Punjilloyd Polysilicon Plant, Doha, Qatar 2012, 12,000 m³/d
Qurayyah IPP CCGT Power Plant, Saudi Arabia 2012, 11,520 m³/d
Saudi City Project, Saudi Arabia 2012, 9,000 m³/d
SWRO Santa Barbara, Curaçao, Dutch Antilles 2012, 6,000 m³/d

Morro Besudo Plant extension, Maspalomas, Spain 2012, 6,000 m³/d
 Perth II Phase II, WA, Australia 2011, 153,000 m³/d SWRO
 Ouargla, Algeria 2011, 40,000 m³/d BWRO
 Copiapó, Chile 2011, 30,000 m³/d SWRO
 Saint Thomas, Saint Thomas, Virgin Islands, U.S.A. 2011, 30,000 m³/d SWRO
 Marsa Matrouth, Egypt 2011, 24,000 m³/d SWRO
 Albacete, Spain 2011, 23,616 m³/d BWRO
 Tenerife Oeste, Canary Islands, Spain 2011, 21,000 m³/d SWRO
 Mantoverde, Chile 2011, 20,000 m³/d SWRO
 West Damietta Power Station, Egypt 2011, 10,000 m³/d SWRO
 St. Croix, Virgin Islands, U.S.A. 2011, 8,000 m³/d
 WWTP Werribee, Werribee, Australia 2011, 6,000 m³/d
 Soreq, Israel 2010, 500,000 m³/d SWRO
 UDEM Ténés, Algeria 2010, 200,000 m³/d RO
 Aruba, Dutch Antilles 2010, 57,000 m³/d SWRO
 IDAM Sagunto, Valencia, Spain 2010, 23,000 m³/d RO
 Mossel Bay, South Africa 2010, 15,000 m³/d SWRO
 Águilas, Spain, 200,000 m³/d RO
 Algodor, Spain, 65,000 m³/d
 Arroyo Culebro, Madrid, Spain, 17,500 m³/d RO
 Altona, VIC, Australia, 9,000 m³/d RO

Equipment Supplier

Barka IV, Oman 2016, 281,000.0 m³/d
 SOHAR SWRO, Oman 2016, 250,000.0 m³/d
 Putatan WTP, Philippines 2016, 150,000.0 m³/d
 El Galalah SWRO, Egypt 2016, 150,000.0 m³/d
 Trinidad y Tobago SWRO, Trinidad and Tobago 2016, 130,000.0 m³/d
 Al Jubail SWRO, Saudi Arabia 2016, 100,000.0 m³/d
 El Tor SWRO, Egypt 2016, 60,000.0 m³/d
 Djerba SWRO, Tunisia 2016, 50,000.0 m³/d
 Jamnagar SWRO Phase 2, India 2016, 24,000.0 m³/d
 Chandra Asri SWRO, Indonesia 2016, 10,000.0 m³/d

Pretreatment system

Jamnagar Reliance, Jamnagar, Gujarat, India 2014, 160,000 m³/d RO
 Fujairah 1 expansion, Fujairah, United Arab Emirates 2014, 137,000 m³/d RO
 Jeddah South Port, Jeddah, Saudi Arabia 2014, 15,000 m³/d RO
 City of Tarpon Springs AWS, Florida, U.S.A. 2014, 15,000 m³/d
 Venta Alta DWTP, Bilbao, Spain 2014, 14,400 m³/d
 Curaçao phase 6, Curaçao, Netherlands Antilles 2014, 10,500 m³/d RO
 King Abdullah University, Jeddah, Saudi Arabia 2014, 10,000 m³/d
 Aruba VI, Aruba, Netherlands Antilles 2014, 10,000 m³/d
 Mopco, Damietta, Egypt 2014, 8,160 m³/d
 Kebilli, Tunisia 2014, 7,560 m³/d RO
 Souk Lahad, Tunisia 2014, 7,560 m³/d
 Buhairat, Jeddah, Saudi Arabia 2014, 7,500 m³/d RO
 Boujdour, Morocco 2014, 7,000 m³/d RO
 Sogeco expansion, Jeddah, Saudi Arabia 2014, 6,500 m³/d RO
 BP Khazzan, Khazzan, Oman 2014, 5,000 m³/d

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SELECTED REFERENCES

Fiberglass Pipe System

Jeddah South Project, Jeddah, Saudi Arabia 2014
 Az Zour North IWPP Project – Offshore, Kuwait 2014
 Qurayyah IPP, Saudi Arabia 2013
 Takoradi T1 Cooling System Project, Takoradi, Ghana 2013
 Takoradi T2 Power Plant Expansion EPC Project, Takoradi, Ghana 2013
 Yanbu-II Power and Water Project, Yanbu, Saudi Arabia 2013
 PACO Coal Fired Power Plant, Panama 2013
 Al Hidd Power Plant, Al Hidd, Bahrain 2012
 Kimanis Power Plant Project, Kimanis, Malaysia 2012
 Shuweihat S3 Power Plant, United Arab Emirates 2012
 Evonik Power Plant, Singapore 2011
 Kharir Power & Desalination Plant, Yemen 2011
 Shuweihat S2, United Arab Emirates 2011
 Al Ain El-Sokhna Power Plant, Al Ain El-Sokhna, Egypt 2010
 Barka Power Plant, Barka, Oman 2010

Fiberglass supplier

Facility D Independent Power & Water Project at Umm Al Houl, Doha, Umm Al Houl, Qatar 2016

Garden

SELECTED REFERENCES

Consultant

San Andres Desalination Plant, San Andres, Colombia, 4,320 m³/d RO

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SELECTED REFERENCES

Equipment Supplier - Plastic Pipes, Fittings & Valves

Carlsbad SWRO, Carlsbad, CA, United States of America 2014, 189,250 m³/d RO

Sadara SWRO, Al Jubail, Saudi Arabia 2014, 178,560 m³/d RO

Turkmenbashi Phase 2, Turkmenbashi, Turkmenistan 2014, 70,000 m³/d RO

Barka I expansion ph. 2, Barka, Oman 2014, 56,775 m³/d RO

BP Khazzan Project, Oman 2014, 6,000 m³/d RO

Cleopatra SWRO, Marsa Matruh, Egypt 2014, 4,500 m³/d RO

Sidi Barani SWRO, Sidi Barani, Egypt 2014, 3,000 m³/d RO

Kailey Hutchinson Facility, El Paso, TX, United States of America 2014, RO

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www.gssiwater.com

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Feasibility for subsurface intake systems installation (Beach Wells, Slant Wells, Vertical Wells, and HDD Wells) for feedwater supply

Chino Basin Desalter Authority - Chino Desalter II, Phase 3 (Vertical Wells), Chino, California, United States of America 2016, 79,485 m³/d RO

Municipal Water District of Orange County (Slant Well Installation), Dana Point, California, United States of America 2016, 56,775 m³/d RO

California American Water (Slant Well Installation), Marina, California, United States of America 2016, 41,640 m³/d RO

City of Oceanside (Vertical Wells), Oceanside, California, United States of America 2016, 18,925 m³/d RO

City of Oceanside (Vertical Wells), Oceanside, California, United States of America 2016, 18,925 m³/d

California American Water (Slant Wells), Marina, California, United States of America 2014, 24,225 m³/d RO

San Diego County Water Authority (Vertical Wells), Camp Pendleton/Oceanside, California, United States of America 2013, 189,270 m³/d RO

San Diego County Water Authority (HDD Wells), Camp Pendleton/Oceanside, California, United States of America 2013, 189,270 m³/d RO

Monterey County Water Resources Agency (Slant Wells), Monterey, California, United States of America 2013, 22,700 m³/d RO

Monterey, California, United States of America 2013, 22,700 m³/d RO

Cambria Community Services Dist / US Army Corps of Engineers (Slant Wells), Cambria, California, United States of America 2011, 4,021 m³/d

City of Santa Cruz (Slant Wells), Santa Cruz, California, United States of America 2010, 9,460 m³/d

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SELECTED REFERENCES

Owner's Engineer

Carlsbad Desalination Plant, Carlsbad, California, U.S.A., 189,250 m³/d RO

Newman Water Treatment Plant, Newman, Western Australia, Australia, 16,500 m³/d RO

GKW Consult

SELECTED REFERENCES

Consultant

Multiple desalination facilities, Tunisia, 32,500 m³/d

Greentech Environmental Co. Ltd.

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Plant Supplier

Hengling WWTP Phase I Upgrade Project, Shenzhen, Guangdong Province, China 2018, 200,000 m³/d UF

Weifang Industrial Park WWTP Upgrade Project, Weifang, Shandong Province, China 2018, 15,000 m³/d UF

Taizhou Jiaojiang Wastewater Reuse Project Phase II, Taizhou, Zhejiang Province, China 2016, 38,000 m³/d UF

Yuhuan Wastewater Reuse Project, Yuhuan, Zhejiang Province, China 2016, 20,000 m³/d UF

Zhongwei Zero Liquid Discharge Project, Zhongwei, Ningxia, China 2016, 13,500 m³/d RO

Fuxin Wastewater Reuse Project, Fuxin, Liaoning Province, China 2015, 42,500 m³/d RO

Iran steel plant Reuse Water Treatment, Kerman, Iran 2015, 15,000 m³/d RO

Beijing Daoxianghu Wastewater Reuse project, Beijing, China 2014, 80,000 m³/d UF

Taizhou Jiaojiang Wastewater Reuse Project, Taizhou, Zhejiang Province, China 2014, 18,000 m³/d RO

Shanxi Yuncheng Wastewater Reuse Project, Yuncheng, Shanxi Province, China 2010, 30,000 m³/d RO

Hebei GaoYang Wastewater Reuse Project, Gaoyang, Hebei Province, China 2010, 15,000 m³/d RO

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SELECTED REFERENCES

Pump supplier

Gibraltar 2017, 5,200 m³/d RO
 Singapore 2017, 1,500 m³/d RO
 Italy 2017, 700 m³/d RO
 Greece 2017, 650 m³/d RO
 China 2017, 600 m³/d RO
 Spain 2016, 750 m³/d RO
 France 2016, 700 m³/d RO
 Italy 2016, 660 m³/d RO
 Spain 2016, 660 m³/d RO
 Greece 2016, 660 m³/d RO
 Argentina 2015, 12,000 m³/d RO
 Argentina 2015, 1,500 m³/d RO
 Argentina 2015, 1,500 m³/d RO
 Egypt 2015, 1,000 m³/d RO
 Greece 2015, 1,000 m³/d RO
 Spain 2015, 1,000 m³/d RO
 Spain 2015, 960 m³/d RO
 Spain 2015, 552 m³/d RO
 Italy 2014, 1,080 m³/d RO
 Italy 2014, 1,080 m³/d RO
 Italy 2014, 1,080 m³/d RO
 Venezuela 2014, 1,000 m³/d RO
 Turkey 2014, 500 m³/d RO
 Kenya 2014, 360 m³/d RO
 Turkey 2014, 350 m³/d RO
 Turkey 2014, 300 m³/d RO
 Providence & Anse Boileau, Seychelles 2012, 7,500 m³/d RO
 Providence & Anse Boileau, Seychelles 2011, 4,000 m³/d RO
 Lipari Island, Italy 2011, 3,600 m³/d RO
 Paros, Greece 2011, 2,600 m³/d RO
 Samsung Power Plant, Turkey 2011, 2,000 m³/d RO
 Gibraltar 2011, 1,500 m³/d RO
 Cap Verde 2011, 1,272 m³/d RO
 Kusadasi, Turkey 2011, 1,200 m³/d RO
 Naxos, Greece 2011, 1,125 m³/d RO
 Kusadasi, Turkey 2011, 1,000 m³/d RO
 Gaza Strip, Israel 2011, 720 m³/d RO
 Spain 2011, 500 m³/d RO
 Bodrum, Turkey 2011, 500 m³/d RO
 Bodrum, Turkey 2011, 360 m³/d RO
 Spetsopoula, Greece 2011, 300 m³/d RO
 Cap Verde 2011, 168 m³/d RO
 Rhodes, Greece 2011, 96 m³/d RO
 Maldives 2010, 3,000 m³/d RO
 Argentina 2010, 3,000 m³/d RO
 Atacama, Chile 2010, 3,000 m³/d RO
 Bitou, South Africa 2010, 2,100 m³/d RO
 China 2010, 1,200 m³/d RO

Ios Island, Greece 2010, 1,100 m³/d RO
 Bodrum, Turkey 2010, 1,000 m³/d RO
 Egypt 2010, 1,000 m³/d RO
 Chios, Greece 2010, 1,000 m³/d RO
 Crete, Greece 2010, 1,000 m³/d RO
 Pakistan 2010, 912 m³/d RO
 Didim Marina, Turkey 2010, 720 m³/d RO
 Turkey 2010, 624 m³/d RO
 Furteventura, Canary Islands, Spain 2010, 576 m³/d RO
 Traena, Norway 2010, 552 m³/d RO
 Oman 2010, 500 m³/d RO
 Haima, Oman 2010, 500 m³/d RO
 Ithaki Island, Greece 2010, 500 m³/d RO
 Korea 2010, 500 m³/d RO
 Tunisia 2010, 500 m³/d RO
 Tassias, Tasmania, Australia 2010, 500 m³/d RO
 Maldives 2010, 400 m³/d RO
 Turkey 2010, 384 m³/d RO
 Bodrum, Turkey 2010, 384 m³/d RO
 Turkey 2010, 360 m³/d RO
 India 2010, 300 m³/d RO
 Izmir, Turkey 2010, 300 m³/d RO
 Malohom Bay, Malaysia 2010, 200 m³/d RO
 Palm Beach, Cyprus 2010, 150 m³/d RO
 Lamberts Bay, South Africa, 5,000 m³/d RO
 Lipari Island, Italy, 3,600 m³/d RO
 Argentina, 3,600 m³/d RO
 Turkey, 1,344 m³/d RO
 Turkey, 1,100 m³/d RO
 Quatar, Italy, 864 m³/d RO
 Gocek Marin-Mugla, Turkey, 500 m³/d RO
 Namibia, 432 m³/d RO
 Corfu, Greece, 400 m³/d RO
 Tasmania, 240 m³/d RO
 Isles of Scilly, U.K., 200 m³/d RO

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SELECTED REFERENCES

Desalination Plant Supplier

Radomiro Tomic, Chile 2015, 72,600 m³/d RO
 D'Jerba, Tunisia 2014, 50,000 m³/d RO
 Ensenada, Baja California, Mexico 2012, 21,600 m³/d RO
 Mostaganem, Algeria 2010, 200,000 m³/d RO
 Cap Dijnet, Algeria 2010, 100,000 m³/d RO
 Hialeah, Miami Dade, FL, United States of America 2010, 40,000 m³/d RO
 Moncofa, Castellón, Spain 2010, 36,000 m³/d RO

Design, Engineer, Build

IDAM de Atacama, Atacama, Chile, 38,880 m³/d RO

Design, Engineer, Build, Operate

Estación Depuradora de Aguas Residuales de Algeciras, Algeciras, Spain, 51,000 m³/d UV

Estación Depuradora de Aguas Residuales de Rejas, Madrid, Spain, 17,280 m³/d UV

Gutermann

SELECTED REFERENCES

Acoustic water leak detection loggers

Teccura Software Limited, Berkshire, U.K. 2016

Supplied over 5,000 Zonescan Alpha measurement points

Veolia, Lyon, France 2016

Supplied over 500 Zonescan Alpha measurement points

Albstradtwerke, Albstadt, Germany 2015

Trunk Main Correlator

Water Leak Location Services, Hampshire, U.K. 2014

Supplied over 300 Zonescan Alpha measurement points

ASAT, Antalya, Turkey 2016

Miami Dade, Miami, U.S.A. 2015

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SELECTED REFERENCES

Equipment Supplier - Pipes / Pre-fabrication

Azzour, Kuwait 2015, 486,000 m³/d

Mirfa, Abu Dhabi, United Arab Emirates 2015, 238,665 m³/d

Sohar, Oman 2015, 5,600 m³/d

Al Ghubrah, Oman 2013, 190,000 m³/d

Carlsbad, United States of America 2013, 189,000 m³/d

Jamnagar, India 2013, 168,000 m³/d

Azzour South, Kuwait 2013, 136,000 m³/d

Ghalilah R.A.K., United Arab Emirates 2013, 68,000 m³/d

Larnaca, Cyprus 2013, 52,000 m³/d

Tuas II, Singapore 2012, 318,500 m³/d

Ashdod, Israel 2012, 270,000 m³/d

Palmachim Expansion, Israel 2012, 125,000 m³/d

Al Zawrah, United Arab Emirates 2012, 45,460 m³/d

Adani Desalination Plant, India 2012, 30,000 m³/d

Sohar Desalination, Oman 2012, 16,000 m³/d

Hadera Project, Israel, 456,000 m³/d RO

Melbourne SWRO Plant, VIC, Australia, 450,000 m³/d RO

Soreq Desalination Plant, Israel, 400,000 m³/d RO

OTID Desalination Plant Ashkelon Project, Ashkelon, Israel, 350,000 m³/d RO

Southern Seawater Alliance, Australia, 153,000 m³/d RO

Gold Coast, QLD, Australia, 133,000 m³/d RO

Fujairah II, United Arab Emirates, 125,000 m³/d RO

Nemmili Desalination Plant, Chennai, India, 100,000 m³/d RO

Caofeidian Energy recovery system, Tangshan, Hebei, China, 50,000 m³/d RO

Oropesa Desalination Plant, Castellón, Spain, 41,000 m³/d RO

Steel Mill MMK Atakas, Dörtyol, Turkey, 31,000 m³/d RO

Aruba Desalination Plant, Aruba, 24,000 m³/d RO

SWRO Ghana Seawater, Ghana, 20,000 m³/d RO

Rosario Desalination Plant, Fuerteventura/Puerto del Rosario, Spain, 14,000 m³/d RO

New Qidfa Desalination Plant, Fujairah, United Arab Emirates, 13,600 m³/d RO

Rafah and El Zowayed Desalination Plant, Sinai, Egypt, 10,000 m³/d RO

Al Arish Desalination Plant, Egypt, 5,000 m³/d RO

Abutaraba Desalination Plant, Libya, RO

Dubai Palm, Dubai, United Arab Emirates, RO

Hamriyah II, Sharjah, United Arab Emirates, RO

Qatar Desalination Plant, Qatar, RO

RWE Power Plant, Eemshaven, Netherlands, RO

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SELECTED REFERENCES

Desalination/equipment supplier

Tate Monroe, Ohio, U.S.A. 2018, 3,785 m³/d RO

Confidential Client, Iowa, U.S.A. 2018, 2,725 m³/d UF

Pouch Cove WTP, Newfoundland, CA, Canada 2018, 2,649 m³/d MF

Confidential Client, Indiana, U.S.A. 2018, 2,157 m³/d RO

Pouch Cove WTP, Newfoundland, CA, Canada 2018, 1,892 m³/d RO

Confidential Client, New-Brunswick, CA, Canada 2018, 1,892 m³/d RO

Confidential Client, Arkansas, U.S.A. 2018, 1,514 m³/d RO

Kuujuaq, Quebec, CA, Canada 2018, 1,514 m³/d MF

Kuujuaq, Quebec, CA, Canada 2018, 1,135 m³/d RO

Confidential Client, North Carolina, U.S.A. 2018, 302 m³/d MBR

Confidential Client, North Carolina, U.S.A. 2018, 189 m³/d RO

San Diego IPR, California, U.S.A. 2017, 151,400 m³/d UF

Confidential Client, Oregon, U.S.A. 2017, 6,548 m³/d UF

City of Beaumont, California, U.S.A. 2017, 6,245 m³/d RO

Bonita Springs Utilities, Inc., Bonita Springs, Florida, United States of America 2017, 5,678.0 m³/day RO

Confidential Client, Virginia, U.S.A. 2017, 2,649 m³/d MBR

Confidential Client, Virginia, U.S.A. 2017, 2,649 m³/d RO

Confidential Client, Idaho, U.S.A. 2017, 378 m³/d UF

- Confidential Client, New York, U.S.A. 2017, 378 m³/d UF
- Confidential Client, New York, U.S.A. 2017, 227 m³/d MBR
- Hamlin Beach, New York, U.S.A. 2017, 113 m³/d MBR
- University of Iowa, Iowa city, Iowa, United States of America 2016, 9,463.0 m³/day RO
- Cinco Municipal Utility District Plant #1, Katy, Texas, United States of America 2016, 7,570.0 m³/day RO
- Frontier Water Systems, San Francisco Bay Area, California, United States of America 2016, 5,678.0 m³/day RO
- Disraeli, Quebec, Canada 2016, 1,772.0 m³/day NF
- Barrow Utilities and Electric Co-Op, Barrow, Alaska, United States of America 2016, 1,136.0 m³/day RO
- Sherburn WTP, Sherburn, Texas, United States of America 2016, 946.0 m³/day RO
- Slate Falls Nation WTP, Slate Falls, Ontario, Canada 2016, 379.0 m³/day NF
- Monterey, California, United States of America 2015, 42,396 m³/d RO
- Cambria, California, United States of America 2015, 3,218 m³/d RO
- John D'or, Alberta, Canada 2015, 1,136 m³/d
- Boyer River, Alberta, Canada 2015, 530 m³/d
- Meander River, Alberta, Canada 2015, 530 m³/d
- Abilene - Possom Kingdom, Abilene, Texas, United States of America 2014, 16,656 m³/d RO
- Hamby-Abilene, Abilene, Texas, United States of America 2014, 15,899 m³/d RO
- Craven County, North Carolina, United States of America 2014, 7,571 m³/d RO
- Abilene - Hargesheimer, Tuscola, Texas, United States of America 2014, 5,678 m³/d RO
- Lower Valley, Grand Cayman, Cayman Islands 2014, 4,353 m³/d RO
- Everglades City, Florida, U.S.A. 2014, 1,892 m³/d RO
- Liberty, Iowa, U.S.A. 2014, 1,325 m³/d RO
- Fort Irwin, California, U.S.A. 2014, 916 m³/d NF
- Eastman, Quebec, Canada 2014, 757 m³/d RO
- Stornoway Mine, Northern Quebec, Quebec, Canada 2014, 492 m³/d RO
- Jack River, Jack River School, Manitoba, Canada 2014, 189 m³/d
- Supra-Ledoux-Haiti, Haiti 2014, 151 m³/d RO
- Fort Irwin, California, United States of America 2014, 76 m³/d RO
- Freeport-Indonesia, Freeport, Indonesia 2014, 49 m³/d RO
- Long Beach, CA, U.S.A. 2013, 16,843 m³/d RO
- Calimesa, CA, U.S.A. 2013, 8,970 m³/d RO
- J.R. Simplot, Caldwell, Idaho, United States of America 2013, 5,451 m³/d RO
- Cadwell, ID, U.S.A. 2013, 5,450 m³/d RO
- Saint-Tite, QC, Canada 2013, 4,905 m³/d NF
- Calgary, AB, Canada 2013, 3,815 m³/d NF
- Port Cartier, QC, Canada 2013, 3,785 m³/d NF
- Emmetsberg, Iowa, U.S.A. 2013, 3,270 m³/d RO
- Waterville, Quebec, Canada 2013, 2,990 m³/d RO
- Dunes, Florida, United States of America 2013, 2,725 m³/d RO
- Hillsboro, ND, U.S.A. 2013, 1,855 m³/d NF
- Spencerville, OH, U.S.A. 2013, 1,843 m³/d NF
- Pomona, CA, U.S.A. 2013, 1,351 m³/d RO
- Calgary, AB, Canada 2013, 1,185 m³/d RO
- Minnesota, U.S.A. 2013, 870 m³/d RO
- Swan Lake, MB, Canada 2013, 829 m³/d NF
- Calypso, Ontario, Canada 2013, 817 m³/d RO
- Pike, Alberta, Canada 2013, 574 m³/d RO
- Conklin, AB, Canada 2013, 352 m³/d NF
- La Macaza, Quebec, Canada 2013, 341 m³/d NF
- Fort McMurray AB, Canada 2013, 220 m³/d RO
- West Jefferson, NC, U.S.A. 2013, 163 m³/d RO
- Laval, QC, Canada 2013, 11 m³/d RO
- Mannington Power Plant, WV, U.S.A. 2012, 18,531 m³/d RO
- Linton, ND, U.S.A. 2012, 11,226 m³/d NF
- City of Hillsboro, Hillsboro, ND, U.S.A. 2012, 3,706 m³/d RO
- West Olive Power Plant, MI, U.S.A. 2012, 2,180 m³/d RO
- Quebec, Canada 2012, 1,703 m³/d NF
- Cal Poma, California, U.S.A. 2012, 1,351 m³/d RO
- Quebec, Canada 2012, 1,226 m³/d NF
- Calgary, AB, Canada 2012, 1,008 m³/d RO
- Swan Lake, Minnesota, U.S.A. 2012, 828 m³/d NF
- Quebec, Canada 2012, 818 m³/d NF
- Quebec, Canada 2012, 791 m³/d NF
- University of Illinois, IL, U.S.A. 2012, 545 m³/d RO
- Pointe-Lebel, Quebec, Canada 2012, 162 m³/d NF
- Quebec, Canada 2012, 83 m³/d NF
- Quebec, Canada 2012, 26 m³/d RO
- Port Cartier, Quebec, Canada 2012, 11 m³/d RO
- City of Scottsdale Water Campus, AZ, U.S.A. 2011, 26,987 m³/d RO
- City of Oxnard, CA, U.S.A. 2011, 23,656 m³/d RO
- East Cherry Creek Valley, CO, U.S.A. 2011, 23,656 m³/d RO
- SCRWD Emmons County, ND, U.S.A. 2011, 12,869 m³/d UF/RO
- City of Sterling, CO, U.S.A. 2011, 11,827 m³/d RO
- SCRWD North Burleigh County, ND, U.S.A. 2011, 7,949 m³/d UF
- L&T Heavy Forge, India 2011, 7,000 m³/d UF/RO
- Power Generating Station, AZ, U.S.A. 2011, 6,050 m³/d RO
- Bismarck, ND, U.S.A. 2011, 5,678 m³/d NF
- Eastern Correctional Institute, MD, U.S.A. 2011, 5,034 m³/d RO
- Westover, MD, U.S.A. 2011, 5,034 m³/d RO
- Campeche, Mexico 2011, 3,815 m³/d RO
- Power Generating Plant, MD, U.S.A. 2011, 3,270 m³/d RO
- Becker, MN, U.S.A. 2011, 3,270 m³/d RO
- Winkler, MB, Canada 2011, 2,737 m³/d RO
- Manitoba, Canada 2011, 2,737 m³/d RO
- IPR Demonstration HF Facility, CA, U.S.A. 2011, 2,562 m³/d UF/RO
- Sousse, Tunisia 2011, 2,452 m³/d RO
- Power Generating Plant, MI, U.S.A. 2011, 2,180 m³/d RO
- University, Champaign, IL, U.S.A. 2011, 1,269 m³/d RO
- Bayport, MN, U.S.A. 2011, 1,090 m³/d RO
- City of Elmore, MN, U.S.A. 2011, 953 m³/d RO
- Quebec, Canada 2011, 871 m³/d NF
- Edina, MN, U.S.A. 2011, 719 m³/d RO
- Industrial client, Montreal, QC, Canada 2011, 655 m³/d RO
- Electric utility, MO, U.S.A. 2011, 628 m³/d RO
- Sibley, MO, U.S.A. 2011, 628 m³/d RO
- St-Denis de Brompton, Quebec, Canada 2011, 397 m³/d NF
- Fort McMurray O&G Client, AB, Canada 2011, 360 m³/d UF/RO
- Alberta, Canada 2011, 201 m³/d NF
- Industrial client, Kalingrad, Russia 2011, 200 m³/d Other
- Bemidji, MN, U.S.A. 2011, 110 m³/d NF
- Quebec, Canada 2011, 110 m³/d NF
- Egypt 2011, 44 m³/d RO

Sherbrooke, Quebec, Canada 2011, 26 m³/d RO
Ottawa, ON, Canada 2011, 26 m³/d RO
St-Valerien, Quebec, Canada 2011, 15 m³/d NF
EBMUD Rare, CA, U.S.A. 2010, 22,710 m³/d RO
Newark Expansion, CA, U.S.A. 2010, 18,925 m³/d RO
Fremont, CA, U.S.A. 2010, 18,925 m³/d RO
EBMUD, Richmond, CA, U.S.A. 2010, 15,140 m³/d RO
Power Generating Plant, KS, U.S.A. 2010, 6,322 m³/d RO
Clay Center, KS, U.S.A. 2010, 6,321 m³/d RO
Coolidge, AZ, U.S.A. 2010, 6,048 m³/d RO
Willow Glen Plant, LA, U.S.A. 2010, 2,180 m³/d RO
St. Gabriel, LA, U.S.A. 2010, 2,180 m³/d RO
Wemindji, First Nation, QC, Canada 2010, 1,776 m³/d UF/NF
Lynn Lake, Manitoba, Canada 2010, 1,718 m³/d NF
Langham, Saskatchewan, Canada 2010, 1,363 m³/d RO
Princeton, MN, U.S.A. 2010, 1,226 m³/d RO
St-Ir    , QC, Canada 2010, 680 m³/d NF
Bapetco Refinery, Egypt 2010, 600 m³/d RO
Tampa, FL, U.S.A. 2010, 545 m³/d Other
Sarnia, Ontario, Canada 2010, 545 m³/d RO
Clinton, IA, U.S.A. 2010, 435 m³/d RO
Fort Mc Murray Oil & Gas Client, AB, Canada 2010, 430 m³/d RO
Cottage Grove, MN, U.S.A. 2010, 163 m³/d RO
Algeria 2010, 120 m³/d RO
Fouka, Alger, Algeria 2010, 96 m³/d RO
Alberta, Canada 2010, 49 m³/d RO
Sweetwater RO expansion, San Diego, California, United States of America, 37,854 m³/d RO
Carmel Area Water District, Carmel, California, United States of America, 4,542 m³/d RO
Quincy WWTP RO, Quincy, Washington, United States of America, 3,785 m³/d RO
Municipalit   de Chambord, Chambord, Quebec, Canada, 1,552 m³/d NF (Nanofiltration)
Quebec, Canada, 768 m³/d NF
Quebec, Canada, 400 m³/d RO
Quebec, Canada, 284 m³/d NF
Quebec, Canada, 273 m³/d NF
Quebec, Canada, 261 m³/d NF
Quebec, Canada, 87 m³/d NF
Hydro Quebec - La Romaine, La Romaine, Quebec, Canada, 53 m³/d NF (Nanofiltration)
Quebec, Canada, 26 m³/d NF
Tillman Reuse BWRO Pilot, Los Angeles, California, United States of America, 19 m³/d RO

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SELECTED REFERENCES

Engineering consultant

Barka 1 Expansion Phase 2, Barka, Oman 2015, 56,832 m³/d RO
FRD Oprisenesti, Oprisenesti, Romania 2015, 1,920 m³/d

Mangala Processing Terminal SRP, Rajasthan, India 2014, 50,081 m³/d NF

Ichthys FPSO , Offshore, Australia 2013, 360 m³/d RO

Ichthys CPF, Offshore, Australia 2013, 206 m³/d RO

Jubail Phase 2, Jubail, Saudi Arabia 2011, 162,300 m³/d RO

Tiffany, North Sea, United Kingdom 2011, 160 m³/d NF

Piper Bravo, North Sea, United Kingdom 2010, 8,748 m³/d NF

Santos Aurecon, Roma & Arcadia Valley, Australia 2010, 1,273 m³/d RO

Sleipner, North Sea, Norway 2010, 245 m³/d RO

Equipment supplier

SK310 Br5 Development, Offshore, Malaysia 2016, 164 m³/d
Produced Water Treatment (PWT)

FEED engineering

Angsi CEOR , Offshore, Malaysia 2012, 25,448 m³/d RO

Recommissioning

Chayvo OPF Expansion, Sakhalin Islands, Russia 2013, 25,440 m³/d

Mina Al Fahal, Muscat, Oman 2013, 720 m³/d

Akpo, Offshore, Nigeria 2011, 67,824 m³/d

Spares equipment supplier

FPSO Kikeh, Offshore, Malaysia 2011, 41,351 m³/d

Halma Water Management

SELECTED REFERENCES

Data logger installation

Leif Koch A/S, Copenhagen, Denmark

Plymouth University, Plymouth, U.K.

Essex & Suffolk Water, Essex & Suffolk, U.K.

Bristol Water, Pilton, U.K.

Noise loggers for leak detection

P.N. Daly, Guildford, U.K.

Noise loggers, correlators and microphones for leak detection

Service for Water and Sewerage department (SAAE), Sao Paulo, Brazil

Hangzhou Water Treatment Technology Development Center Co., Ltd

SELECTED REFERENCES

EPC Contractor

Zhejiang, 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

Zhejiang, Shengsi, China 2017, 2,000 m³/d RO
 Djibouti 2017, 100 m³/d RO
 Zhejiang, 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
 Duyen Hai, Vietnam 2015, 6,720 m³/d RO
 Iran 2014, 150,000 m³/d RO
 Banten, Indonesia 2013, 6,096 m³/d RO
 Dumai, Indonesia 2013, 3,120 m³/d RO
 Yanpet, Saudi Arabia 2013, 3,000 m³/d RO
 Pudingbatu, Philippines 2013, 2,520 m³/d RO
 Adipala, Indonesia 2011, 6,000 m³/d RO
 Sumatera Barat, Indonesia 2010, 3,000 m³/d RO
 Textile wastewater reuse (phase 1), Shengzhou City, Zhejiang, China, 50,000 m³/d
 Textile wastewater reuse (phase 2), Shengzhou City, Zhejiang, China, 50,000 m³/d
 Liheng Seawater Desalination Project 2 Phase 2, Zhoushan, Zhejiang, China, 20,000 m³/d RO
 EPC project of wastewater treatment project of Shandong Jinling Group, Dongying City, Shandong, China, 20,000 m³/d
 Taizhou Number 2 Power Plant Auxiliary Seawater Desalination, Zhejiang, China, 18,000 m³/d RO
 Shandong Haiyang Nuclear Power Plant Desalination Project, Yantai, Shandong, China, 16,800 m³/d RO
 Hongshan Thermal Power Plant Desalination Project Phase 2, Quanzhou, Fujian, China, 15,600 m³/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, 10,000 m³/d
 Foshan City Sanshui District Datang Wastewater Treatment Company Brine separation and reuse pilot project, Foshan City, Guangdong, China, 4,800 m³/d
 Wastewater treatment and ZLD project, Inner Mongolia, China, 3,600 m³/d
 Dongtong Luxi Island Seawater Desalination Plant (Phase 1), Wenzhou, Zhejiang, China, 500 m³/d RO

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SELECTED REFERENCES

Prefiltration & Drinking Water Suppliers

California, United States of America 8,726 m³/d
 New York, United States of America 2,866 m³/d
 Texas, United States of America 2,722 m³/d
 Nunavut Territories, Canada 2,174 m³/d
 British Columbia, Canada 2,174 m³/d
 Colorado, United States of America 1,642 m³/d

Prefiltration Suppliers

Czech Republic 7,200 m³/d
 Italy 5,520 m³/d
 Azerbaijan 3,600 m³/d
 Italy 3,600 m³/d
 Romania 3,600 m³/d
 Washington, United States of America 2,722 m³/d

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SELECTED REFERENCES

RO Equipment Supplier

Lee County Green Meadows WTP, Lee County, Florida, United States of America 2016, 28,388 m³/d RO
 Skyco WTP, Dare County, North Carolina, United States of America 2016, 11,393 m³/d RO
 Gasparilla Island Water Assoc., Boca Grande, Florida, United States of America 2016, 3,596 m³/d RO
 City of Grimes WTP, Train 2, Grimes, Iowa, United States of America 2016, 3,104 m³/d RO
 City of West Liberty WTP, West Liberty, Iowa, United States of America 2016, 2,422 m³/d RO

NCR WTP , Naples, Florida, United States of America 2015, 45,420 m³/d RO

City of Pella WTP, Pella, Iowa, United States of America 2015, 8,176 m³/d RO

North Jensen WWTP, Martin County, Florida, United States of America 2015, 7,570 m³/d RO

Signal Hill WTP, Signal Hill, California, United States of America 2015, 6,397 m³/d RO

City of Grimes WTP, Train 1, Grimes, Iowa, United States of America 2015, 3,104 m³/d RO

Babcock Ranch Water System, Babcock Ranch, Florida, United States of America 2015, 946 m³/d RO

Tarpon Springs WTP, Tarpon Springs, Florida, United States of America 2013, 24,224 m³/d RO

City of Venice WTP, Venice, Florida, United States of America 2013, 16,654 m³/d RO

PWWSD #26, Strong City, Kansas, United States of America 2013, 1,779 m³/d RO

Hills Municipal Water, Hills, Iowa, United States of America 2012, 1,173 m³/d RO

North County Regional WTP Upgrades, Naples, Florida, U.S.A., 45,425 m³/d RO

LANCASTER, OH, Ohio, U.S.A., 30,283 m³/d RO

Jacksonville: Jacksonville, North Carolina, Jacksonville, North Carolina, U.S.A., 30,283 m³/d RO

Green Meadows Water Treatment Plant, Lee County, Florida, U.S.A., 28,391 m³/d RO

City of Yankton WTP Improvements, Yankton, South Dakota, U.S.A., 24,982 m³/d RO

Jordan Valley Water District: West Jordan, Utah, West Jordan, Utah, U.S.A., 22,712 m³/d RO

Central Iowa Water Association: Waverly, Iowa, Waverly, Iowa, U.S.A., 12,265 m³/d RO

North Liberty Water Treatment Plant, North Liberty, Iowa, U.S.A., 11,447 m³/d RO

Clearwater R/O Plant #1 Expansion, Clearwater, Florida, United States of America, 11,355 m³/d RO

Allegan: Allegan, Michigan, Allegan, Michigan, U.S.A., 8,517 m³/d RO

Pasquotank County: Elizabeth City, North Carolina, Elizabeth City, North Carolina, U.S.A., 7,571 m³/d RO

Washington WTP, Washington, Iowa, U.S.A., 6,672 m³/d RO

MT. PLEASANT, SC, South Carolina, U.S.A., 6,435 m³/d RO

Hardinsburg: Hardinsburg, Kentucky, Hardinsburg, Kentucky, U.S.A., 6,057 m³/d RO

City of Labelle WTP, Labelle, Florida, United States of America, 5,678 m³/d RO

Bogue Banks Water Corporation, Emerald Isle, North Carolina, U.S.A., 5,678 m³/d RO

Oden Water Association, Sandpoint, Idaho, United States of America, 4,883 m³/d RO

Southern Outer Banks WTP, Corolla, North Carolina, United States of America, 2,839 m³/d RO

West Jefferson Water Treatment Plant, West Jefferson, Ohio, U.S.A., 2,529 m³/d RO

Douglas County RWD #3, Tecumseh, Kansas, United States of America, 2,347 m³/d RO

Bermuda Water Works, Bermuda, 2,271 m³/d RO

Atkins: Atkins, Iowa, Atkins, Iowa, U.S.A., 2,180 m³/d RO

SE Morris Cty. Mun. Utility (uf): Morris County, New Jersey, Morris County, New Jersey, U.S.A., 1,893 m³/d RO

Tyrell County: Columbia, North Carolina, Columbia, North Carolina, U.S.A., 1,635 m³/d RO

Hyde County: Engelhard, North Carolina, Engelhard, North Carolina, U.S.A., 1,635 m³/d RO

Hartley: Hartley, Iowa, Hartley, Iowa, U.S.A., 1,526 m³/d RO

Desoto County: Arcadia, Florida, Arcadia, Florida, U.S.A., 1,401 m³/d RO

Town of Jupiter, Jupiter, Florida, United States of America, 1,211 m³/d RO

Saint Lucie Mobile Village, Indiantown, Florida, United States of America, 568 m³/d RO

Denali Princess Lodge: Denali, Alaska, Denali, Alaska, U.S.A., 379 m³/d RO

Key Colony Beach WTP, Key Colony Beach, Florida, United States of America, 379 m³/d RO

FREEMPORT, GRAND BAHAMA ISLAND, Freeport, Grand Bahama, Bahamas, 327 m³/d RO

ADC Seawater Pilot System: Port Hueneme, California, Port Hueneme, California, U.S.A., 303 m³/d RO

City of Rule WTP, Rule, Texas, United States of America, 303 m³/d RO

Harbor Branch: Fort Pierce, Florida, Fort Pierce, Florida, U.S.A., 250 m³/d RO

Dow Seawater Pilot System: Carlsbad, California, Carlsbad, California, U.S.A., 191 m³/d RO

Tampa Bay Seawater Pilot Plant: Tampa, FL, Tampa Bay, Florida, U.S.A., 189 m³/d RO

RO Pilot Studies

San Angelo Texas, San Angelo, Texas, United States of America

Seminole Tribe of Florida Brighton, Brighton, Florida, United States of America

City of Grimes Iowa, Grimes, Iowa, United States of America

City of Washington, Iowa, Washington, Iowa, United States of America

El Paso Texas, El Paso, Texas, United States of America

City of West Liberty, Iowa, West Liberty, Iowa, United States of America

City of North Liberty, Iowa, North Liberty, Iowa, United States of America

Lawrence Kansas, Lawrence, Kansas, United States of America

RO Seawater Pilot Study

Affordable Desalination Water Collaboration, Port Hueneme, California, United States of America

US Filter for Tampa Bay Water, Tampa, Florida, United States of America

Dow Filmtec Seawater Pilot, United States of America

Collier County Pilot, Collier County, Florida, United States of America

Grand Bahamas Industrial Application, Grand Bahamas, Bahamas

UF Pilot Studies

Marco Island Florida, Marco Island, Florida, United States of America

City of Sarasota, Sarasota, Florida, United States of America

Manatee County Florida, Manatee County, Florida, United States of America

Alameda County Water District California, Alameda County, California, United States of America

Monterey California, Monterey, California, United States of America

Abilene Texas, Abilene, Texas, United States of America

Clearwater Florida, Clearwater , Florida, United States of America

Lawrence Kansas, Lawrence, Kansas, United States of America

Fort Worth Texas, Fort Worth , Texas, United States of America

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SELECTED REFERENCES

Design engineer

Port Stanvac, Adelaide, SA, Australia 2012, 273,800 m³/d RO

Citic Pacific, WA, Australia 2011, 139,600 m³/d RO

Luggage Point, QLD, Australia, 70,200 m³/d RO

EPCM

Copper mine, Confidential client, Chile 2013, 63,900 m³/d RO

Copper mine, Confidential client, Chile 2013, 29,800 m³/d RO

Candelaria, Punta Padrones, Region III, Chile 2012, 43,200 m³/d RO

Koniambo, Koné, New Caledonia, WA, Australia 2011, RO

Goldcorp, El Morro, Chile, 64,000 m³/d RO

Transnet, Saldanha Bay, South Africa, 3,600 m³/d RO

Engineering - pipelines

Port Stanvac, Adelaide, SA, Australia 2012, 273,800 m³/d RO

Chile 2010, 276,480 m³/d RO

Australia 2010, 10,000 m³/d Other thermal process

Owner's engineer

Candelaria, Punta Padrones, Region III, Chile 2011, 43,200 m³/d RO

Technical advisor

Carlsbad, San Diego, U.S.A., 189,250 m³/d RO

United Arab Emirates, 110,000 m³/d RO

Heartland Water Technologies

SELECTED REFERENCES

Technology provider: Brine concentration

USA Generating Station, U.S.A., 189 m³/d

Waste Management King George #3, U.S.A., 151 m³/d

Seneca Resources Cherry Flats, Philadelphia, U.S.A., 114 m³/d

Waste Management King George #1, U.S.A., 114 m³/d

Waste Management King George #2, U.S.A., 114 m³/d

Brunner Landfill, U.S.A., 91 m³/d

Waste Management Turnkey Landfill, New Hampshire, U.S.A., 76 m³/d

Waste Management Phoenix Resources Landfill, Pennsylvania, U.S.A., 45 m³/d

Kenai Peninsula Borough Central Peninsula Landfill, Alaska, U.S.A., 45 m³/d

Southern Company Plant Bowen, Georgia, U.S.A., 4 m³/d

First Energy Harrison Plant- EPRI, West Virginia, U.S.A., 4 m³/d

Hindustan Dorr-Oliver Limited

SELECTED REFERENCES

EPC, O&M

Chennai Petrochemicals Ltd., Manali, India, 9,600 m³/d RO

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SELECTED REFERENCES

Desalination plant supplier

Qatar, 347,770.0 m³/day MSF

Qatar, 272,760.0 m³/day RO

Qatar, 164,000.0 m³/day MSF

Abu Dhabi, 113,650.0 m³/day MSF

Oman, 93,900.0 m³/day MSF

Algeria, 88,887.0 m³/day MSF

Abu Dhabi, 33,600.0 m³/day MSF

Taiwan, 2,200.0 m³/day MED

Japan, 1,300.0 m³/day MED

Japan, 800.0 m³/day VVC

Japan, 370.0 m³/day RO

Japan, 360.0 m³/day RO

Japan, 340.0 m³/day RO

Japan, 300.0 m³/day RO

Japan, 240.0 m³/day RO

Japan, 180.0 m³/day RO

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SELECTED REFERENCES

Developer, EPC and O&M Contractor

Sorek, Israel 2010, 624,000 m³/d RO

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Hydranautics is a part of the Nitto Group and is one of the global leaders in the field of Integrated Membrane Solutions. Hydranautics offers complete membrane solutions like Reverse Osmosis, Nanofiltration, Ultrafiltration, and Microfiltration for water, wastewater and process treatment and applications. Hydranautics' membrane based solutions are currently in use on seven continents throughout the world for diverse applications such as

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- Industrial High-Purity Water
- Surface Water Treatment
- Wastewater Treatment
- Specialty Process Applications

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SELECTED REFERENCES

Membrane Supplier

Jazan, Saudi Arabia 2019, 84,000 m³/d RO (Reverse Osmosis)
TPL, India 2019, 52,000 m³/d RO (Reverse Osmosis)
Reliance, India 2019, 24,000 m³/d RO (Reverse Osmosis)
PT Dabi, Indonesia 2019, 4,500 m³/d RO (Reverse Osmosis)
JIGCC - Utility & Demin water, Saudi Arabia 2018, 44,000 m³/d RO (Reverse Osmosis)
RSPL, India 2018, 14,000 m³/d RO (Reverse Osmosis)
Sohar Power Plant 3, Oman 2018, 7,776 m³/d RO (Reverse Osmosis)
NTPC Vallur, India 2018, 7,000 m³/d RO (Reverse Osmosis)
DM Shaheen Power Plant, United Arab Emirates 2018, 5,820 m³/d RO (Reverse Osmosis)
Sharma Complex, Saudi Arabia 2018, 5,100 m³/d RO (Reverse Osmosis)
JIGCC - Potable water, Saudi Arabia 2018, 2,400 m³/d RO (Reverse Osmosis)
Qurayyat IWP, Oman 2017, 200,000 m³/d RO (Reverse Osmosis)
Nirma Industries, India, India 2017, 15,400 m³/d RO (Reverse Osmosis)
KEMAPCO, Jordan 2017, 13,680 m³/d RO (Reverse Osmosis)
Meenakshi Power, India 2017, 11,700 m³/d RO (Reverse Osmosis)
TAC, India 2017, 3,200 m³/d RO (Reverse Osmosis)
Mirfa IWPP, United Arab Emirates 2016, 138,000 m³/d RO (Reverse Osmosis)
Qingdao Dongjiakou Desalination, China 2016, 100,000 m³/d RO (Reverse Osmosis)
Minergy, Philippines 2016, 3,000 m³/d RO (Reverse Osmosis)
Duqm Desalination Plant, Oman 2016, 2,000 m³/d RO (Reverse Osmosis)
Barka 1 Phase 2, Oman 2015, 56,900 m³/d RO (Reverse Osmosis)
Tuticorin, India 2015, 56,880 m³/d RO (Reverse Osmosis)
EMAL expansion, United Arab Emirates 2015, 5,760 m³/d RO (Reverse Osmosis)
Tabuk Cement, Saudi Arabia 2015, 1,500 m³/d RO (Reverse Osmosis)
Al-Hamriyah Power Station, UAE 2014, 91,200 m³/d RO (Reverse Osmosis)
Moncofar, Spain 2014, 30,300 m³/d RO (Reverse Osmosis)
Jubail Phase 2, KSA 2014, 23,400 m³/d RO (Reverse Osmosis)
Kindasa Expansion, KSA 2014, 15,000 m³/d RO (Reverse Osmosis)
TPCIL, India 2014, 13,000 m³/d RO (Reverse Osmosis)
Majis SWRO, Oman 2014, 12,300 m³/d RO (Reverse Osmosis)
IGCAR, India 2014, 9,000 m³/d RO (Reverse Osmosis)
MAJIS SWRO, Oman 2014, 3,168 m³/d RO (Reverse Osmosis)
Tampa Bay, USA 2014, RO (Reverse Osmosis)
Sorek, Israel 2013, 75,000,000 m³/d RO (Reverse Osmosis)
Copiapo, Chile 2013, 17,453 m³/d RO (Reverse Osmosis)
TPL, India 2013, 2,000 m³/d RO (Reverse Osmosis)
Krishnapattanam Port trust, India 2013, 2,000 m³/d RO (Reverse Osmosis)
Matrouh, Egypt 2013, 1,020 m³/d RO (Reverse Osmosis)
Fluor Santos Gladstone LNG Upstream Project, QLD, Australia 2013, RO (Reverse Osmosis)
Victoria Desalination Plant, Australia 2012, 411,000 m³/d RO (Reverse Osmosis)
Chennai Metro, India 2012, 100,000 m³/d RO (Reverse Osmosis)
Jubail Phase 1 replacement, KSA 2012, 50,150 m³/d RO (Reverse Osmosis)
Al Zawrah II, UAE 2012, 31,850 m³/d RO (Reverse Osmosis)

Majis RO Desalination Plant, Sohar, Oman 2012, 16,000 m³/d RO (Reverse Osmosis)
 TPCIL, India 2012, 13,000 m³/d RO (Reverse Osmosis)
 Kindasa Water Services B2 Expansion, KSA 2012, 8,944 m³/d RO (Reverse Osmosis)
 SOJECO, Saudi Arabia 2012, 2,500 m³/d RO (Reverse Osmosis)
 Al Buhairat City, Saudi Arabia 2012, 2,500 m³/d RO (Reverse Osmosis)
 Adelaide Desalination Plant, Australia 2011, 300,000 m³/d RO (Reverse Osmosis)
 Petro-Rabigh, KSA 2011, 20,000 m³/d RO (Reverse Osmosis)
 Meenakshi Power, India 2011, 3,600 m³/d RO (Reverse Osmosis)
 North Obhur, Saudi Arabia 2011, 2,500 m³/d RO (Reverse Osmosis)
 T.T. Edar Arroyo Culebro Project, Spain 2011, RO (Reverse Osmosis)
 Tlemcen, Algeria 2010, 200,000 m³/d RO (Reverse Osmosis)
 Honaine, Algeria 2010, 200,000 m³/d RO (Reverse Osmosis)
 Fouka, Algeria 2010, 100,000 m³/d RO (Reverse Osmosis)
 Bajo Almanzora, Spain 2010, 60,000 m³/d RO (Reverse Osmosis)
 Antofagasta, Santiago, Chile 2010, 52,000 m³/d RO (Reverse Osmosis)
 Al Ghubrah Power Station, Oman 2010, 26,208 m³/d RO (Reverse Osmosis)
 Adani Power, India 2010, 20,000 m³/d RO (Reverse Osmosis)
 CGPL, India 2010, 20,000 m³/d RO (Reverse Osmosis)
 Telde, Spain 2010, 16,000 m³/d RO (Reverse Osmosis)
 Barge SWRO, UAE 2010, 15,000 m³/d RO (Reverse Osmosis)
 EMAL, UAE 2010, 11,600 m³/d RO (Reverse Osmosis)
 Ras Meshaab, Saudi Arabia 2010, 6,000 m³/d RO (Reverse Osmosis)
 KAEC, Saudi Arabia 2010, 5,000 m³/d RO (Reverse Osmosis)
 Guang Dong Hui Lai Desalination Plant, China 2010, RO (Reverse Osmosis)

Hydro Extruded Solutions

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Condenser Tube Supplier

Reliance, Jamnagar, Gujarat, India 2013, 72,000 m³/d MED
 Tianjin SDIC, Tianjin, China 2010/2013, 200,000 m³/d MED

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Desalination/wastewater treatment equipment supplier

Duba SWRO, Duba, Saudi Arabia 2017, 16,000 m³/d RO
 Wajh SWRO, Wajh, Saudi Arabia 2017, 16,000 m³/d RO
 Haql SWRO, Haql, Saudi Arabia 2017, 16,000 m³/d RO

Pitos Bulk Water Supply WTP, Cebu, Philippines 2017, 720 m³/d
 Guangdong YuDean Group Huangpu Power Plant, China 2017, 720 m³/d
 Guangdong Shao Guan Waste Water Recycling Project, China 2017, 200 m³/d
 Mulatos Mine at Hermosillo, Sonora, Mexico 2017, 30 m³/d
 Waste Water Treatment Plant, Honduras 2017, 3 m³/d
 Capitaland DI-Mansions Condo (WT 400CMD) Project, Vietnam 2017
 Fruit of the Loom Textile UF Recycling Plant, Morocco 2017
 SUECO - KIER MBR for study on Eco Friendly Water Treatment Process System, South Korea 2017
 West Qurna Field MBR Replacement, South Korea 2017
 Ain Sokhna Integrated Water and Power Project, Egypt 2016, 150,000 m³/d RO
 SWRO & Sulphate Removal Facilities Package, Khurais, Saudi Arabia 2016, 16,000 m³/d RO
 7.2MLD Philippines Kauswagan Power Plant Desal Project, Philippines 2016, 7,200 m³/d
 Tian Jin Da Gang Newspring Desalination Extended Construction Project, China 2016, 5,000 m³/d
 Philippines Resort Brackish Water RO System, Manila, Philippines 2016, 5,000 m³/d RO
 C.P Vietnam, Ninh Thuan, Vietnam 2016, 4,800 m³/d
 Deepak Fertiliser, India 2016, 4,800 m³/d
 Vizag UB Breweries unit, India 2016, 1,200 m³/d
 Capitaland • Vista Verde, HCMC, Vietnam 2016, 700 m³/d
 GNPowr Kauswagan Power Plant Desalination Project, Philippines 2016, 675 m³/d
 Xinjiang Akesu ZheJiang Zheneng Power Plant, China 2016, 500 m³/d
 CP Shrimp Farm Seawater 3rd WTP 20m³/h SWRO unit Project, Vietnam 2016, 480 m³/d
 Taj Palace, Delhi, India 2016, 450 m³/d
 Jiang Su Huadian Tongzhou Thermal Power Plant 2x200MW Desalted & Wastewater Treatment System, China 2016, 400 m³/d
 Xinjiang Blue Ridge Tunhe Chemical Engineering Project, China 2016, 400 m³/d
 Anhui Anqing Shuguang Chemical Engineering Project, China 2016, 400 m³/d
 Shanxi Jinneng Baode Group's Coal Power Project 2x660MW, China 2016, 240 m³/d
 PLN Tarahan, Indonesia 2016, 240 m³/d
 Shanxi Lishi Jinneng Group Lishi Datu River 2x 35 KW Coal Power Cogeneration Project, China 2016, 216 m³/d
 Hilton Hotel, Indonesia 2016, 140 m³/d
 Aquamarine Wastewater MBR Demo Plant, South Africa 2016, 100 m³/d
 Huzhou Project, China 2016, 72 m³/d
 Xiamen Project, China 2016, 42 m³/d
 Shandong Ji Nan Meidu Project, China 2016, 18 m³/d
 Gildan Wastewater Treatment MBR Replacement, Israel 2016
 Pilot Testing for Sugar Refinery Project, Thailand 2016
 Tambak Lorok Coal Fired Power Plant WTP (replacement), Indonesia 2016
 Triveni, India 2016
 UN (Humanitarian Aid) South Sudan Project - Drinking WTP, Israel 2016
 1180 MW RLNG BHIKKI POWER PROJECT, Water Treatment System, Pakistan 2016
 1223 MW RLNG BALLOKI POWER PROJECT, Water Treatment System, Pakistan 2016
 VT2 Power Plant UF Replacement, Vietnam 2016
 CapitalLand Vietnam, Vietnam 2016

10x3MLD Yanbu Red Sea Containerised Desalination Modular System Desalination Plant, Saudi Arabia 2015, 30,000 m³/d

Containerised Desalination System to Yanbu Desalination Plant on the Red Sea coast, Yanbu, Saudi Arabia 2015, 30,000 m³/d RO

Indonesia Hongfa Weili Coal Thermal Power Plant Desal System, Indonesia 2015, 25,500 m³/d RO

TuasOne Waste To Energy, Singapore 2015, 3,600 m³/d

Zero Liquid Discharge Effluent Treatment Plant, India 2015, 2,000 m³/d

Capitaland • Mulberry Lane Hanoi, Vietnam 2015, 1,200 m³/d

Yanbu Port Containerized Modular Desalination Plant, Yanbu, Saudi Arabia 2015, 1,000 m³/d UF + RO

Jiangsu Huaneng Group Nanjing Yudai Power Plant, China 2015, 833 m³/d

UB Vizag brewery unit, India 2015, 650 m³/d

Henan Huaneng Group Shengchi Power Plant 2x300MW Unit, China 2015, 600 m³/d

Hubei Ezhou Power Plant Heat Supply Project, China 2015, 600 m³/d

Jiangsu Wuxi Lan Tian Thermal Power Plant, China 2015, 360 m³/d

Shandong Jining Dyeing Project, China 2015, 360 m³/d

Shanxi Yongji Power Plant, China 2015, 240 m³/d

Jiang Su Huarun Huaxin Power Plant, China 2015, 180 m³/d

CNNOC Shandong Haihua Chlorine-Alkali Chemical Water Station, China 2015, 173 m³/d

Bao Steel Group Guangdong Zhanjiang Cold Rolling Waste Water Treatment Project, China 2015, 168 m³/d

Guangxi Baise Mining Group Xinshan Aluminium Industry's independent Power Plant Engineering 2x350KW, China 2015, 132 m³/d

San Dimas mine at Tayoltita, Durango, Mexico 2015, 130 m³/d

Gildan Wastewater Treatment MBR Demo Plant, Honduras 2015, 100 m³/d

Hotel Resort STP MBR Plant, Africa 2015, 40 m³/d

Pelabuhan Ratu Coal Fired Power Plant WTP (replacement), Indonesia 2015

Tambak Lorok Coal Fired Power Plant WTP (replacement), Indonesia 2015

ICDAS Power Plant, Turkey 2015

JBC WTP (replacement), Indonesia 2015

Sungai Kepong Plant, Malaysia 2015

Magtaa Desalination Plant, Magtaa, Algeria 2014, 500,000 m³/d RO

Qurayyat Desalination Plant, Qurayyat, Oman 2014, 200,000 m³/d RO

Opal Water Treatment Plant, India 2014, 96,000 m³/d

Zheneng Ningbo Zhenhai Gas-Fired Cogeneration Project, Zhejiang, China 2014, 38,400 m³/d UF + RO

38.4MLD Zhenhai Natural Gas-Fired Thermal Power WTP Project, China 2014, 38,400 m³/d

Liu Heng Power Plant, Zhejiang, China 2014, 24,000 m³/d UF + RO

Zhongshan Jiaming Power Plant, Guangdong, China 2014, 21,600 m³/d UF + RO

Taizhou Second Power Station, Zhejiang, China 2014, 18,000 m³/d UF + RO

Zhejiang Wenzhou Boiler Feed Water Project, Zhejiang, China 2014, 17,280 m³/d UF + RO

Shanxi Tongde Aluminum Demineralized Water, China 2014, 16,800 m³/d

Henan Zhoukou Gas Power WTP Project, China 2014, 16,800 m³/d

14.4MLD Huaneng Mianchi Power Plant, 2 x 300MW Generator Set Wastewater Recycling Project, China 2014, 14,400 m³/d

Huaneng Tongxiang Gas-Fired Co-generation Project, Zhejiang, China 2014, 14,328 m³/d UF + RO

Ramatex Textile Wastewater MBR Plant, Malaysia 2014, 12,000 m³/d

12MLD Tianjin Harbour Power Plant WTP Project, China 2014, 12,000 m³/d

11.52MLD Zhanjiang Power Plant WTP Project, China 2014, 11,520 m³/d

Huaneng Luntai Power Plant, 2 x 300MW Generator Set Wastewater Recycling Project, China 2014, 11,520 m³/d

Belarus 40-ton Pulp Mill, Svetlogorsk, Belarus 2014, 10,800 m³/d

10.6 MLD Fushun Thermal Power Plant Wastewater Recycling Project, China 2014, 10,600 m³/d

Yong Xin Power Plant, Binh Thuan, Vietnam 2014, 9,600 m³/d UF + RO

Blue Ridge Tunhe Project Wastewater Recycling Project, China 2014, 9,600 m³/d

8.64MLD Anqing Power Plant WTP Project, China 2014, 8,640 m³/d

Kaltim-5 Desalination Plant, Indonesia 2014, 7,200 m³/d

Xinjiang East Hope Metals Brine Water Project, Xinjiang, China 2014, 7,200 m³/d UF + RO

Huaneng Changxing Power Plant, Zhejiang, China 2014, 5,760 m³/d UF + RO

Changzhi Xinlong Coal Gangue Power Plant, China 2014, 5,760 m³/d

Shanxi Yongji Power Plant Expansion Wastewater Recycling Project, China 2014, 5,760 m³/d

Xinjiang Shenhua State Grid Hami WTP Project, China 2014, 5,760 m³/d

Indonesia Cilacap Power Station, Cilacap, Indonesia 2014, 5,280 m³/d RO

Inner Mongolia Mengtai Boiler Feed Water Project, Inner Mongolia, China 2014, 4,800 m³/d UF + RO

Henan Zhongyuan Gold Smelting Plant, China 2014, 4,320 m³/d

Datang Sanmenxia Power Plant Wastewater Recycling Project, China 2014, 3,600 m³/d

Inner Mongolia Northwest Energy Power Plant Wastewater Recycling Project, China 2014, 3,600 m³/d

OEM, Brazil 2014, 3,000 m³/d

2,500 m³/day OEM Textile Wastewater Treatment, Morocco 2014, 2,500 m³/d

2.16MLD DongduCheon Dream Power Plant Demin WTP Project, South Korea 2014, 2,160 m³/d

Dong du Cheon Dream Power Plant, South Korea 2014, 2,160 m³/d

Tembusu Centralised WW MBR Plant, Singapore 2014, 1,500 m³/d

Coca Cola Group Mais Juice Wastewater Recycling, Espirito Santo, Brazil 2014, 1,440 m³/d

OEM, Brazil 2014, 1,100 m³/d

AWWAS 1 MLD Containerized Desalination Jeddah KSA, Saudi Arabia 2014, 1,000 m³/d

Pun Hlaing Golf Estate Water Treatment Plant, Yangon, Myanmar (Burma) 2014, 1,000 m³/d RO

DKI Desalination Plant, Balikpapan, Indonesia 2014, 720 m³/d UF + RO

Liaoning Fushun Thermal Power Plant, China 2014, 442 m³/d

Xinjiang Lanshan Tunhe Chemical Engineering Project, China 2014, 400 m³/d

Jurong Water Reclamation MBR Plant, Singapore 2014, 300 m³/d

OEM, Campania, Italy 2014, 300 m³/d

Shanxi Changzhi Xinlong Meiganshi Power Plant, China 2014, 240 m³/d

PLB Terang Penang Leachate Wastewater MBR Plant, Malaysia 2014, 200 m³/d

200 m³/day OEM Textile Wastewater Recycling, Veneto, Italy 2014, 200 m³/d

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- Da Tang Sanmenxia Project, China 2014, 150 m³/d
- Neimeng Xibeineng Water Recycling Project, China 2014, 150 m³/d
- Diaper Plant in Colombia, Colombia 2014, 144 m³/d
- BWRO WTP system for ZEESM Hotel Oecusse, Timor Leste, Timor-Leste 2014, 120 m³/d
- OEM, Slovenia 2014, 120 m³/d
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- Beetham 2014
- Jiangsu Lantian Power Plant, China 2014
- Tuaspring Desalination Plant, Tuas, Singapore (2013) 318,500 m³/d (RO), Tuas, Singapore 2013, 318,500 RO
- Wu Sha Shan Power Plant, Zhejiang, China 2013, 22,000 m³/d UF + RO
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- Dian Swastatika Sentosa phase 3, Indonesia 2013, 4,800 m³/d
- Beverage Factory 60m³/h UF Plant Replacement, Brazil 2013, 4,320 m³/d
- Summarecon Serpong Phase 3 WTP, Indonesia 2013, 4,320 m³/d
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- OEM, India 2013, 2,500 m³/d
- OEM, Mexico 2013, 2,500 m³/d
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- 2.88MLD CNPC Aktobe Petroleum Gas Power WTP Project, Kazakhstan 2013, 1,920 m³/d
- Zheneng Group Ningbo zhenhai Dongli Center Natural Gas Power Plant Project, China 2013, 1,600 m³/d
- Xinjiang Xinwen Mining Project, China 2013, 1,350 m³/d
- Sungai Rumbok Plant, Malaysia 2013, 1,000 m³/d
- Colombia 2013, 1,000 m³/d
- Colombia 2013, 1,000 m³/d
- China National Coal Group's Shanxi Pingshuo Coal Comprehensive Utilization Project, China 2013, 900 m³/d
- Zhongshan Jiaming Power Plant, China 2013, 900 m³/d
- Huaneng Yingcheng Power Plant, China 2013, 856 m³/d
- Huaneng Jinmen Thermal Power Plant 2x 350 MW heat supply, China 2013, 800 m³/d
- Dongguan China New Energy Power Plant, China 2013, 720 m³/d
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- Shanxi Guojin Power Plant, China 2013, 700 m³/d
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- Anhui Anqing Shuguang Chemical Water Recycling Project, China 2013, 400 m³/d
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- Sharaton huahin hotel Water treatment system, Thailand 2013, 288 m³/d
- Inner Mongolia Mengtai Power Plant, China 2013, 200 m³/d
- State Power Investment Er Lang Power Plant, China 2013, 200 m³/d
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- Saic Motor Ningbo Assembly Plant, China 2013, 150 m³/d
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- Guatemala 2013, 60 m³/d
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- Etra S.p.A., Italy 2012, 2,000 m³/d

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Aurangabad UB Breweries unit (48m³/hr), India 2012, 576 m³/d
Palakkad UB Breweries unit, India 2012, 480 m³/d
Henan Xinlianxi Fertilizer Company, China 2012, 460 m³/d
OEM, Italy 2012, 400 m³/d
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India 2012, 40 m³/d
Brazil 2012, 30 m³/d
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Souk Tleta Desalination Plant, Souk Tleta, Algeria 2011, 200,000 RO
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Zhejiang Zheneng Group Liuheng Power Plant 2*1000MW, China 2011, 2,224 m³/d
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China Coal Group Erdos Project of fertilizer synthesis ammonia and the wastewater reuse of urea, China 2011, 1,350 m³/d

Xinjiang Yili Chuanning Biotechnology Co.Ltd 2x135MW +1x55MW thermal generator set, China 2011, 1,040 m³/d
Pig iron making plant operating under Romelt process, Myanmar 2011, 960 m³/d
Colombia 2011, 900 m³/d
Vizag UB Breweries unit, India 2011, 840 m³/d
Skoll Breweries (35m³/hr), India 2011, 840 m³/d
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Mexico 2011, 20 m³/d
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Privilege Unit, India 2010, 360 m³/d
AT&S China, China 2010, 200 m³/d
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10,000m³/d Industrial Wastewater Treatment Project, China, 10,000 m³/d
PDAM Krian I WTP, Indonesia, 8,640 m³/d
PDAM Krian II WTP, Indonesia, 8,640 m³/d

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 3,500 m³/d Desalination Water Project, China, 3,500 m³/d
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 1,200 m³/d Ultra Pure Water Project, China, 1,200 m³/d
 1,200 m³/d Ultra Pure Water Project, China, 1,200 m³/d
 1,000 m³/d Ultra Pure Water Project, China, 1,000 m³/d
 960 m³/d Ultra Pure Water Project, China, 960 m³/d
 720m³/d Ultra Pure Water Project, China, 720 m³/d
 600 m³/d Ultra Pure Water Project, China, 600 m³/d
 600 m³/d Ultra Pure Water Project, China, 600 m³/d
 Beach Walk Mall Kuta, Indonesia, 600 m³/d
 FX Mall Senayan Jakarta Recycling STP UF System, Indonesia, 600 m³/d
 500 m³/d Ultra Pure Water Project, China, 500 m³/d
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 Le Grandeur Hotel Mangga Dua Recycling STP UF System, Indonesia, 400 m³/d
 Cibubur Junction Recycling STP UF System, Indonesia, 400 m³/d
 390 m³/d Ultra Pure Water Project, China, 390 m³/d
 120m³/day Familia Sancela Diaper Production Project, Colombia, 120 m³/d
 72 m³/d Ultra Pure Water Project, China, 72 m³/d
 48 m³/d Ultra Pure Water Project, China, 48 m³/d
 Dian Swastatika Sentosa phase 1, Indonesia, 2 m³/d
 Paramount Serpong Phase 1, Indonesia, 2 m³/d
 Mitra Artha Semesta, Indonesia
 50MW Olivenza Thermosolar Power Plant Cooling Tower Blowdown, Spain

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Engineering, Procurement, Installation and Commissioning

Dongducheon CCPP, Dongducheon, Korea 2012, 7,900 m³/d Hybrid

Takoradi II CCPP, Ghana 2012, 2,600 m³/d Hybrid

Dongducheon CCPP, Dongducheon, Korea 2012, 1,680 m³/d Hybrid

Equipment supplier

Daesan RO System, Daesan, Korea 2011, 119,000 m³/d RO

Pumps

Hyundai Steel Mill, Dangjin, Chungcheongbukdo, South Korea 2010, 125,400 m³/d RO

Abadan Refinery, Iran 2010, 17,400 m³/d RO

Young Heung Power Plant, South Korea 2010, 2,000 m³/d RO

Angamos Thermal Plant, Chile 2010, 200 m³/d RO

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Pressure and flow loggers to monitor water distribution network

South West Water, U.K.

Advanced pressure management

Anglian Water, U.K.

Air Selangor, Malaysia

City of Capetown, Cape Town, South Africa

ESVAL, Chile

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A world leader in water treatment solutions, IDE specializes in the development, engineering, construction and operation of enhanced desalination, industrial water treatment and water reuse solutions.

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IDE has teams in the US, China, India, Australia, Chile and its head office in Israel, enabling full partnership anywhere in the world.

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Minera Panama, Punta Rincon, Panama 2016, 1,920 m³/d MVC
Guacolda Energia, Huasco, Chile 2015, 3,360 m³/d MVC
Black Fox, Tocopilla, Chile 2015, 985 m³/d MVC
AES Norgener, Tocopilla, Chile 2014, 1,200 m³/d MVC
Maire Engineering, Puerto Coronel, Chile 2009, 1920 m³/d MVC

Desalination plant supplier - Multi-Effect Distillation

Corporacion Electrica Nacional, Tocoa, Vargas State, Venezuela 2017, 3,600 m³/d MED
Tianjin SDIC, Tianjin, China 2013, 100,000 m³/d MED
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Essar, Gujarat, India 2012, 48,000 m³/d MED

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Formosa Petrochemical, Mai-Liao, Taiwan 2020, 105,000 m³/d SWRO
OTEKO, Taman, Russia 2018, 11,000 m³/d BWRO
Reliance, Jamnagar, Gujarat, India 2017, 168,000 m³/d SWRO
City of Santa Barbara, Santa Barbara, U.S.A 2017, 10,560 m³/d SWRO
San Diego County Water Authority, Carlsbad, California, U.S.A. 2015, 204,412 m³/d SWRO
Koh Tao Water, Koh Tao, Thailand 2014, 1,000 m³/d SWRO
State of Israel, Sorek, Israel 2013, 624,000 m³/d SWRO
State of Tamil Nadu, Chennai, Tamil Nadu, India 2012, 100,000 m³/d SWRO

Electricity Authority of Cyprus, Vasilikos, Cyprus 2012, 60,000 m³/d SWRO
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Industrial Water Treatment

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Wastewater Reuse

Chennai Metropolitan Water Supply and Sewerage Board, Koyambedu, India 2019, 45,000 m³/d Reuse
Central Coast Blue, Pismo Beach, California, USA 2018, 163 m³/d Eco-reuse

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Consultant

Dharan Desalination Plant, Dhahran, Saudi Arabia 2014, 100,000 m³/d RO
Dharan Wastewater Reuse Plant, Dhahran, Saudi Arabia 2014, 70,000 m³/d
Sadara IWP, Al Jubail, Saudi Arabia 2012, 178,500 m³/d RO

Indar Maquinas Hidraulicas, S.L

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Equipment supplier (Submersible pump and motor sets)

Adeje Arona, Canary Islands, Spain, 30,000.0 m³/day
IDAM Granadilla, Canary Islands, Spain, 14,000.0 m³/day
Monterey Slant Well, California, United States of America, 12,000.0 m³/day

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Plant Supplier

ASRY Shipyard, Hidd, Bahrain 2010, 3,500 m³/d RO

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inge GmbH, based in Greifenberg, Germany, is a world's leading provider of ultrafiltration technology, a membrane process used to treat drinking water, process water, waste water and sea water.

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Accra, Ghana 2014, 135,000 m³/d
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Off-shore, Angola 2013, 62,000 m³/d
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Ghana, 135,000 m³/d
China, 110,016 m³/d
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China, 65,040 m³/d
Angola, 62,400 m³/d
Turkmenistan, 58,320 m³/d
Turkey, 57,600 m³/d
China, 50,400 m³/d
Ukraine, 48,000 m³/d
Germany, 38,400 m³/d
China, 37,992 m³/d
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India, 28,800 m³/d
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Innovyze

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Software for dynamic sewer modelling

Central Costa Sanitary District (Central San), Portland, U.S.A. 2018

Software for network modelling and maintenance

City of San Jose, San Jose, U.S.A. 2016

Software for real-time modelling and system optimisation

Thames Water, London, U.K. 2012

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Plant Supplier

NTPC-TNEB JV 3 x 500 MW thermal power plant, Vallur, Tamil Nadu, India 2010, 19,800 m³/d RO

5X270 MW Sinnar Thermal Power Project, Nashik, Maharashtra, India, 117,000 m³/d Tertiary Treatment
Indian Rayon & Industries, Veraval, Gujarat, India, 6,000 m³/d RO
Chennai Petroleum Corporation, India, 4,800 m³/d RO
Gujarat Electricity Board, Sikka, Gujarat, India, 4,300 m³/d RO

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XPR pressure exchanger (Osmotic Power pilot plants)

National University of Singapore, Singapore 2015, 1 m³/d Other
Nanyang Technological University, NTU, Singapore 2014, 22 m³/d Other
Osmoblue, Lausanne, Switzerland 2014, 10 m³/d Other
National University of Singapore, NUS, Singapore 2014, 5 m³/d Other
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University of Nevada, Reno, United States of America 2010, 10 m³/d FO

XPR pressure exchanger (SWRO)

Municipality, Island, Indonesia 2015, 2,428 m³/d RO
MASDAR, Dubai, United Arab Emirates 2015, 1,070 m³/d RO
Hotel, Island, United Arab Emirates 2015, 171 m³/d RO
Research Institute, Shanghai, China 2015, 100 m³/d RO
Shuqaik Power, Red Sea, Saudi Arabia 2014, 8,016 m³/d RO
Municipality, Island, Turks and Caicos Islands 2014, 1,454 m³/d RO
Mining facility, Island, Peru 2014, 1,244.0 m³/d RO
Hotel, Island, Greece 2014, 600 m³/d RO
Avedøre Power, Copenhagen, Denmark 2014, 600 m³/d RO
Hotel, Island, Italy 2014, 600 m³/d RO
Hotel, Island, Greece 2014, 350 m³/d RO
Hotel, Island, Italy 2014, 265 m³/d RO
Hotel, Island, Taiwan 2014, 150 m³/d RO
Hotel, Island, South Korea 2014, 125 m³/d RO
Ship, Marine, France 2014, 100 m³/d RO
Hotel, Island, Greece 2013, 750 m³/d RO
Hotel, Island, Greece 2013, 600 m³/d RO
Oasis Caribe, Island, Mexico 2013, 600 m³/d RO
Oasis Sens, Island, Mexico 2013, 600 m³/d RO
Hotel, Island, Greece 2013, 500 m³/d RO
Averø Power Plant, Copenhagen, Denmark 2012, 600 m³/d RO
Averø Power Plant, Copenhagen, Denmark 2010, 600 m³/d RO

Italmatch Chemicals

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www.dequest.com



The Dequest Business is offering unique specialty additives to meet the needs of these industries that deal with water management, industrial processes or applications where water plays a crucial role.

More than 40 years ago, Dequest pioneered the development of phosphonate based antiscalants. Dequest phosphonates have been the product of choice for antiscalants / dispersants / corrosion inhibitors / chelants in various applications for many years.

Today Dequest offers a broad range of water management solutions that go far beyond phosphonates and also include a wide range of polymeric antiscalants and dispersants, biodegradable polymers and tailor made products for specific applications. For pre-treatment and post treatment Italmatch can also provide a complete solution of coagulants and flocculants.

Italmatch offers Dequest® antiscalant solutions and cleaners for reverse osmosis/nanofiltration and Albrivap® antiscalants and antifoams for thermal desalination.

Our scale inhibitors can save you money by:

- Preventing premature membrane replacement,
- Reducing the downtime caused by frequent (membrane) cleanings,
- Improving plant operations via; - stabilizing high recover rates, - reducing energy costs, - reducing water consumption and concentrate production
- Reducing overall chemical treatment costs (pretreatment, acid, antiscalants and cleaners).
- Extending equipment (thermal units) life via reducing acid cleaning frequency
- Maintaining heat exchangers surfaces clean
- Allowing units (MED and MSF) runs in more severe conditions (higher Top Brine Temperature);

No matter your individual needs, whether municipal or industrial, Italmatch can provide the right solution which will minimize inorganic scaling of your membranes and thermal desalination units.

SELECTED REFERENCES

Water management

Jebel Ali, United Arab Emirates 2,136,620 m³/d MSF
 Shuaiba, Saudi Arabia 582,689 m³/d MSF
 Hadera, Israel 456,000 m³/d RO
 Al Khobar, Saudi Arabia 432,580 m³/d MSF
 Ashkelon, Adom Ltd., Israel 330,000 m³/d RO
 Hadera SWRO, Israel 330,000 m³/d
 Yanbu, Saudi Arabia 321,625 m³/d MSF
 Carlsbad, United States of America 204,412 m³/d RO
 Bahia de Palma, Spain 68,000 m³/d RO
 Vasilikos, Cyprus 60,000 m³/d RO
 Dhekelia, Cyprus 60,000 m³/d RO
 Limassol, Cyprus 60,000 m³/d RO
 Larnaca SWRO Water Desalination Plant, Cyprus 60,000 m³/d
 Larnaca Water Partner, Cyprus 52,000 m³/d RO
 PUB Bedok NeWater Factory Phase II, Singapore 50,000 m³/d
 Caramondani Desalination Plant, Cyprus 40,000 m³/d
 PUB Bedok NeWater Factory Phase I, Singapore 32,000 m³/d
 Mt. Pleasant Waterworks, U.S.A. 26,495 m³/d
 Andratx, Spain 14,000 m³/d RO
 Variable Salinity Plant, Singapore 13,600 m³/d
 PUB Bedok NeWater Demo Plant, Singapore 10,000 m³/d
 DOW 16" Membrane Pilot Study WWRP, Singapore 2,400 m³/d
 Grahamtek EMF membrane Pilot Plant, Singapore 1,800 m³/d

ItN Nanovation

SELECTED REFERENCES

Membrane Supplier

Buraydah Main, Qassim, Saudi Arabia, 110,000 m³/d RO
 Buraydah North, Qassim, Saudi Arabia, 60,000 m³/d RO
 Red Sea Gate, Jeddah, Saudi Arabia, 300 m³/d UF
 St Wendel Hotel, St Wendel, Germany, 50 m³/d MBR

Itron

SELECTED REFERENCES

Fixed network data collection system

Kalgoorlie City, Kalgoorlie, Australia
 Lake County, Illinois, U.S.A.
 Evides, Zeeland, Netherlands
 Aqualia, El Vendrell, Spain

Water meter data analytics

PDAM Kota Malang, Indonesia
 National Water Sewerage Company (NWSC), Uganda

Jacobs

 Dallas, United States of America  1.214.638.0145

www.jacobs.com

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Jacobs leads the global professional services sector delivering solutions for a more connected, sustainable world. With \$15 billion in fiscal 2017 revenue when combined with full-year CH2M revenues and a talent force of more than 77,000, Jacobs provides a full spectrum of services including scientific, technical, professional and construction- and program-management for business, industrial, commercial, government and infrastructure sectors. For more information, visit www.jacobs.com, and connect with Jacobs on LinkedIn, Twitter, Facebook and Instagram.

SELECTED REFERENCES

Design engineer

Green Meadows Water Treatment Plant, Fort Myers, Florida, U.S.A. 2017, 28,390 m³/d RO
 NSID Nanofiltration Facility, North Springs, FL, U.S.A. 2016, 25,549 m³/d NF
 Sherman WTP, TX, U.S.A. 2015, 44,000 m³/d UF/RO
 Lakeview WTP Phase II Expansion, Mississauga, Ontario, Canada 2014, 473,125 m³/d UF
 Marco Island North Water Treatment Plant, Marco Island, FL, U.S.A. 2013, 25,250 m³/d MF
 CSID Nanofiltration Facility, Coral Springs, FL, U.S.A. 2011, 25,549 m³/d NF
 Suffolk Water Treatment Plant, Suffolk, VA, U.S.A., 64,345 m³/d ED
 Hadnot WTP, Camp Lejeune, NC, United States of America, 30,283 m³/d NF / SR
 Cherry Point WTP, North Carolina, United States of America, 22,710 m³/d NF

EPC contractor

BSU RO WTP Expansion, Bonita Springs, FL, United States of America 2017, 75,571 m³/d RO
 Camp Pendleton Northern Advanced Water Treatment Plant, Oceanside, CA, U.S.A. 2015, 25,100 m³/d RO
 Beenyup Advanced Water Recycling Plant, Australia, 74,712 m³/d UF/RO
 Luggage Point Advanced Water Treatment Plant, QLD, Australia, 10,030 m³/d MF/RO

Engineering consultancy

Jurong Island Desalination Plant, Singapore 2017, 136,000 m³/d
 Twentynine Palms Water Treatment Plant, California, United States of America 2017, 11,350 m³/d RO
 Marina East Desalination Plant, Singapore 2015, 136,000 m³/d RO
 Tuas 3, Singapore 2015, 136,000 m³/d UF/RO
 ACWA Power Barka, Oman 2015, 56,777 m³/d RO
 MIRFA Independent Water and Power Project, Abu Dhabi, United Arab Emirates 2014, 136,000 m³/d RO
 National Water Company's Al-Saad Water Treatment Plant, Riyadh, Saudi Arabia 2013, 360,000 m³/d RO
 Changi NWater Plant, Singapore 2011, 227,000 m³/d MBR/RO

Southdown Desalination Plant, WA, Australia 2011, 30,280 m³/d RO
Kooragang Industrial Water Scheme, Newcastle, NSW, Australia 2011, 9,000 m³/d Hybrid

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<http://www.jsw.co.jp/en/products/clad/index.html>

SELECTED REFERENCES

Clad Steel Plate Supply

Yanbu 3, Yanbu, Saudi Arabia 2014, 550,000 m³/d
Yanbu #3 (Piping Portion), Saudi Arabia 2014
Yanbu #3, Saudi Arabia 2014
Ras Abu Fontas A2, Doha, Qatar 2013, 164,000 m³/d MSF
Ras Abu Fontas A2, Qatar 2013
Yanbu #3, Saudi Arabia 2013
Ras Abu Fontas A2, Qatar 2013
Yanbu III, Saudi Arabia 2013
Ras Abu Fontas A II, Qatar 2013
Ras Al-Khair, Saudi Arabia 2012
Ras Az Zawr, Saudi Arabia 2012
Ras Az Zawr, Saudi Arabia 2011-2012
Rabigh #6, Saudi Arabia 2011
Ruwais #3, United Arab Emirates 2011
Ras Az Zawr, Saudi Arabia 2011
Rabigh VI, Saudi Arabia 2011
Ruwais III, United Arab Emirates 2011
Ras Az Zawr, Saudi Arabia 2011
Qurayyah, Saudi Arabia 2010

JF Shea

SELECTED REFERENCES

Construction

Carlsbad Desalination Plant, San Diego, U.S.A., 189,250 m³/d RO

Kamstrup

ADDITIONAL REFERENCES: SMART LEAKAGE REDUCTION

Supplier: smart leak detection services

Assens Water Utility, Assens, Denmark
Herning Water Utility, Herning, Denmark
Skanderborg Utility, Skanderborg, Denmark
Tekniska Verken Kiruna Ltd., Kiruna, Sweden

Västervik Environment & Energy Ltd, Västervik, Sweden
Oppegaard Municipality, Oppegaard, Norway
Estonian Waterworks Association, Estonia
Avenue Gardens, Budapest, Hungary
Wasserzweckverband Warndt, Ludweiler-Warndt, Germany
Water company Juragruppe, Pegnitz, Germany
Fairview Water District, Fairview, OR, U.S.A.
Town of Dexter, Dexter, NM, U.S.A.

KEIKEN Engineering

SELECTED REFERENCES

BAF gravel support supplier

Putatan water treatment plant 2, Putatan, Philippines 2016, 150,000 m³/d RO

Filter Nozzles for filtration system supplier

Nungua Desalination Plant, Accra, Ghana 2015, 60,000 m³/d RO

Filter media (Anthracite, Pirulosite, Sand, Garnet) supplier

IDAS Cuevas de Almanzora, Almeria, Spain, 25,000 m³/d RO

Filter media (Anthracite, Sand, Gravel) supplier

SWRO Skikda, Skikda, Algeria, 100,000 m³/d RO

Filter media (Anthracite, Sand, Gravel, Calcite) supplier

SWRO El Alamein, El Alamein, Egypt 2016, 150,000 m³/d RO

Polyelectrolyte dosing system supplier

The Umm Al Houl desalination plant, Qatar 2015, 284,000 m³/d RO

Sight glasses for RO unit supplier

Nungua Desalination Plant, Accra, Ghana 2015, 60,000 m³/d RO

Keppel Seghers

SELECTED REFERENCES

EPC Contractor

Keppel Marina East Desalination Plant, Singapore 2017, 137,000 m³/d RO

Kiewit Corporation

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SELECTED REFERENCES

Construction

Kay Bailey Hutchison Desalination Plant, El Paso, U.S., 104,087 m³/d RO

Construction, Testing

South Bay Water Reclamation Plant, San Diego, U.S., 56,775 m³/d RO

Design, Construction

Carlsbad Desalination Plant, San Diego, U.S., 189,250 m³/d RO

Charles E Meyer Desalination Plant, Santa Barbara, U.S., 11,355 m³/d RO

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SELECTED REFERENCES**Solar Desalination Technology**

Technology License, El Paso, TX, United States Minor Outlying Islands 2015

King Lee Technologies

 San Diego, CA, USA

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SELECTED REFERENCES**Membrane process chemicals and process design**

China 2016, 160,000 m³/d RO

United States of America 2016, 40,000 m³/d RO

Saudi Arabia 2016, 40,000 m³/d RO

Canada 2016, 40,000 m³/d RO

Egypt 2016, 24,000 m³/d RO

India 2016, 8,000 m³/d RO

Pakistan 2016, 8,000 m³/d RO

China 2015, 160,000 m³/d RO

South America 2014, 60,000 m³/d RO

Egypt 2014, 40,000 m³/d RO

Pakistan 2014, 40,000 m³/d RO

Colorado, United States of America 2014, 24,000 m³/d RO

United Arab Emirates 2014, 20,000 m³/d RO

Arizona, United States of America 2014, 16,000 m³/d RO

Canada 2014, 16,000 m³/d RO

Southeast Asia 2014, 12,000 m³/d RO

Mexico 2014, 10,000 m³/d RO

California, United States of America 2014, 8,400 m³/d RO

India 2014, 8,000 m³/d RO

Florida, United States of America 2014, 8,000 m³/d RO

Bahrain 2014, 8,000 m³/d RO

Africa 2014, 4,000 m³/d RO

Arizona, U.S.A. 2013, 72,000 m³/d RO

California, U.S.A. 2013, 42,000 m³/d RO

China 2013, 38,000 m³/d RO

Colorado, U.S.A. 2013, 26,000 m³/d RO

Egypt 2013, 19,000 m³/d RO

Virginia, U.S.A. 2013, 15,000 m³/d RO

California, U.S.A. 2012, 224,000 m³/d

CA, U.S.A. 2012, 84,000 m³/d RO

India 2012, 80,000 m³/d RO

AZ, U.S.A. 2012, 80,000 m³/d RO

Arizona, U.S.A. 2012, 76,000 m³/d

CO, U.S.A. 2012, 72,000 m³/d RO

FL, U.S.A. 2012, 60,000 m³/d RO

Central and South America 2012, 52,000 m³/d

China 2012, 48,000 m³/d RO

United Arab Emirates 2012, 48,000 m³/d

Egypt 2012, 40,000 m³/d RO

South America 2012, 40,000 m³/d RO

Southeast Asia 2012, 40,000 m³/d RO

Korea 2012, 40,000 m³/d RO

China 2012, 40,000 m³/d

Egypt 2012, 40,000 m³/d

Colorado, U.S.A. 2012, 30,000 m³/d

India/Pakistan 2012, 24,000 m³/d

United Arab Emirates 2012, 20,000 m³/d RO

Indonesia 2012, 20,000 m³/d RO

Mexico 2012, 20,000 m³/d RO

Southeast Asia 2012, 20,000 m³/d

Canada 2012, 20,000 m³/d

Saudi Arabia 2012, 12,000 m³/d

Bahrain 2012, 4,000 m³/d RO

United Arab Emirates 2010, 240,000 m³/d RO

CA, U.S.A. 2010, 103,500 m³/d RO

Egypt 2010, 96,000 m³/d RO

TX, U.S.A. 2010, 76,000 m³/d RO

Bahrain 2010, 66,000 m³/d RO

CO, U.S.A. 2010, 56,000 m³/d RO

Mexico 2010, 50,000 m³/d RO

China 2010, 48,000 m³/d RO

OH, U.S.A. 2010, 46,000 m³/d RO/NF

AZ, U.S.A. 2010, 42,000 m³/d RO

South America 2010, 31,000 m³/d RO

Central Canada 2010, 30,000 m³/d RO

FL, U.S.A. 2010, 30,000 m³/d RO/NF

Central America 2010, 25,000 m³/d RO

India 2010, 25,000 m³/d RO

UT, U.S.A. 2010, 23,000 m³/d RO

Philippines 2010, 15,000 m³/d RO

Pakistan 2010, 10,000 m³/d RO

Piloting Membrane Process Chemicals and Process Design/Support

North City, San Diego, CA, U.S.A., 113,562 m³/d RO

Kirton Engineering Limited

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SELECTED REFERENCES

Plant Supplier

Compact & Energy Efficient High-Pressure Pumping Stations, Gibraltar, 24,000 m³/d RO

Containerised RO Plant Nigeria, Port Harcourt, Nigeria, 2,400 m³/d RO

Containerised Reverse Osmosis Desalination System Gibraltar, Gibraltar, 1,500 m³/d RO

Sea Water Reverse Osmosis System, St Marys Island, Isles of Scilly, U.K., 400 m³/d RO

Kolon Engineering

SELECTED REFERENCES

EP

KNPC CFP WWT, Kuwait, 11,520 m³/d

Karbala Refinery Project WT & WWT, Iraq, 3,000 m³/d

MOHO Nord, Democratic Republic of the Congo, 6 m³/d

EPC

Samsung Electronics WWT, Hwaseong, South Korea, 84,000 m³/d Other/Unknown

SK Hynix M12 WWT, Cheongju, South Korea, 60,000 m³/d

SADARA C/T Sidestream Filter, Jubail, Saudi Arabia, 57,600 m³/d Other/Unknown

NSRP Complex Water Treatment, Thanh Hoa, Vietnam, 51,600 m³/d RO

RPLC Deep Conversion WWT, Puerto de La Cruz, Venezuela, 24,000 m³/d RO

Gimcheon Cogeneration WT WWT, Gimcheon, South Korea, 10,440 m³/d

Lotte Chemical P2 WWT, Yeosu, South Korea, 6,400 m³/d Other/Unknown

Sejong City Group Energy Service Water Treatment, South Korea, 4,800 m³/d

Jijel & Biskra CCPP WT WWT, Jijel & Biskra, Algeria, 3,600 m³/d RO

Goyang Samsung WT WWT, Goyang, South Korea, 3,600 m³/d

KumHo Polychem YEP Wastewater Treatment System, South Korea, 3,600 m³/d

Yeosu Oil Tank Terminal WT/ WWT, South Korea, 1,080 m³/d

Hyundai Green Power Plant Water & Wastewater Treatment System, South Korea, 960 m³/d

Suwon Homaesil Mass Energy Plant Water & Wastewater Treatment System, South Korea, 840 m³/d

SM200 Phase 1 WT WWT, Southern Mindanao, Philippines, 720 m³/d RO

KWI International

 Ferlach, Austria  +43 4227 3266

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SELECTED REFERENCES

Engineering of DAF system, equipment supply

Rabigh 2, Saudi Arabia 2014, 9,590 m³/d

Al Zawra, United Arab Emirates 2011, 121,400 m³/d

Candelaria, Chile 2010, 102,500 m³/d

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 Jawa Barat, Indonesia  +62-21-893-6245

 Selangor Darul Ehsan, Malaysia  +60-3-6157-3166

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SELECTED REFERENCES

Equipment supplier - pumps

Sadara SWRO, Jubail Industrial City, Saudi Arabia 2014, 178,000 m³/d RO
 Puerto del Rosario, Spain 2013, 14,500 m³/d
 Az Zour South RO Desalination Plant, Az Zour, Kuwait 2012, 136,380 m³/d RO
 Caofeidian Desalination Plant, Tangshan, Hebei, China 2012, 60,000 m³/d RO
 Oropesa Desalination Plant, Castellón, Spain 2012, 50,000 m³/d RO
 Qurrayah SWRO, Qurrayah, Saudi Arabia 2012, 26,000 m³/d RO
 Jizan Port SWRO, Jizan, Saudi Arabia 2012, 3,600 m³/d RO
 Al Rass, Saudi Arabia 2012, RO
 Salalah, Oman 2011, 68,130 m³/d RO
 Al Zawrah, Dubai, United Arab Emirates 2011, 45,460 m³/d RO
 Al Zawrah Desalination Plant, Ajman, United Arab Emirates 2011, 30,000 m³/d RO
 Sagunto Desalination Plant, Valencia, Spain 2011, 22,000 m³/d RO
 Fujairah II, United Arab Emirates 2010, 454,492 m³/d MED
 Águilas-Guadalest Desalination Plant, Águilas, Murcia, Spain 2010, 200,000 m³/d RO
 Tlemcen Desalination Plant, Souk Tleta, Algeria 2010, 200,000 m³/d RO
 Shuweihat 1, Abu Dhabi, United Arab Emirates, 455,000 m³/d MSF
 Al Taweelah B, Abu Dhabi, United Arab Emirates, 346,000 m³/d MSF

Jeddah I MSF Desalination Plant, Saudi Arabia, 320,000 m³/d MSF
 Al Mirfa Power Plant, Abu Dhabi, United Arab Emirates, 140,045 m³/d
 Caofeidian, Tangshan, Hebei, China, 110,000 m³/d RO
 Campo Dalias, Campo de Dalias, Spain, 97,200 m³/d RO
 Al Zawrah III, Ajman, United Arab Emirates, 31,794 m³/d RO

Kyowakiden Industry Co., Ltd.

 Nagasaki, Japan

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www.kyowa-kk.co.jp

SELECTED REFERENCES

EPC Contractor

Okinawa Hateruma Island, Japan 2013, 230 m³/d
 Okinawa Zanami Island, Japan 2013, 100 m³/d
 Nagasaki Oushima Island, Japan 2011, 24 m³/d

KURITA provides solution

Since 1949, we provide solution for water by chemicals, facilities and maintenance service.

Water treatment chemicals

We help prevent problems by various chemicals
 For boiler, cooling water, wastewater, RO membrane and more.

For contact, Please see KURITA's directory.

L&T Ltd

SELECTED REFERENCES

EPC Contractor

CETP Dholera, Dholera, Gujarat, India 2018, 16,000 m³/d RO
Jebel Ali Sewage Treatment Plant, Jebel Ali, United Arab Emirates
2016, 375,000 m³/d Other/Unknown

318 MLD STP, Coronation Pillar, New Delhi, India 2016, 318,000
m³/d Other/Unknown

55 MLD, Nellore, Nellore, Andhra Pradesh, India 2016, 55,000 m³/d
Other/Unknown

Trans Varuna Sewerage Works, Varanasi, Uttar Pradesh, India 2015,
120,000 m³/d Other/Unknown

Alshamal Sewage Treatment plant, Alshamal, Qatar 2015, 7,500
m³/d UF

Plant water system for Yermarus Thermal power station, Raichur,
Karnataka, India 2013, 150,000 m³/d MF

31 MLD STP, Bhatpara, Bhatpara, West Bengal, India 2013, 31,000
m³/d Other/Unknown

10 MLD STP, Bhatpara, Bhatpara, West Bengal, India 2013, 10,000
m³/d Other/Unknown

58 MLD STP, Moradabad, Moradabad, Uttar Pradesh, India 2011,
58,000 m³/d Other/Unknown

Doha South Sewage Treatment plant, Doha, Qatar 2010, 241,000
m³/d UF

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SELECTED REFERENCES

Engineering Consultancy

Kuwait City, Kuwait 2017, MED

Technical Advisor

Facility D IWPP, Dohar, Qatar 2014, 591,000 m³/d
Mirfa IWPP, Abu Dhabi, United Arab Emirates 2013, 239,000 m³/d
Al Khairan IWPP, Kuwait, 568,000 m³/d
Az Zour North IWPP Phase I, Kuwait, 486,000 m³/d

Technical Assessor

Ras Abu Fontas A2, Doha, Qatar 2015, 164,000 m³/d MSF

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LANXESS

Energizing Chemistry

LANXESS is a major global solution provider for liquid purification, with a leading position in ion exchange resins (IX) and a strong commitment to its reverse osmosis (RO) membrane business. We have 80 years of experience in water treatment and purification applications. This knowledge is essential for complex combined processes, which are requested to reuse or recycle water in minimal liquid discharge (MLD) processes. The Lewabrane® product line includes elements for all the main RO applications, including desalinating seawater, brackish water, and low-salinity water. Leading fields of application include the production of drinking water, but also the treatment of process water and wastewater. LANXESS manufactures its RO membrane elements in a modern production plant in Bitterfeld, Germany. All Lewabrane® products are compliant with NSF/ANSI Standard 61. In July 2018, LANXESS has entered into an agency agreement with French company Polymem for the distribution of Polymem's Gigamem ultrafiltration (UF) modules range featuring Neophil™ hollow fiber membranes worldwide excluding the territories USA and Canada. With the intuitive design software LewaPlus® LANXESS offers a comprehensive tool for the planning and designing of industrial water treatment systems. It allows the dimensioning of IX and RO systems for a wide variety of unique system configurations. Numerous modules are available for the calculation of every step of the water treatment process. With the latest 2.0 release, users now have the unique ability using drag and drop to combine different technologies into one design.

SELECTED REFERENCES

Membrane supplier

Najran, Saudi Arabia 2018, 8,000 m³/d RO
Riyadh, Saudi Arabia 2018, 4,000 m³/d RO
Milazzo, Italy 2018, 3,840 m³/d RO
San Salvador, El Salvador 2018, 2,448 m³/d RO
Roermond, Netherlands 2018, 2,400 m³/d RO
Torino, Italy 2018, 2,400 m³/d RO
Texas, United States 2018, 2,180 m³/d RO
Perundurai, India 2018, 2,160 m³/d RO
Kansas, United States 2018, 2,040 m³/d RO
Al-Madinah, Saudi Arabia 2018, 2,000 m³/d RO
Dammam, Saudi Arabia 2018, 2,000 m³/d RO
Tocancipa, Colombia 2018, 1,920 m³/d RO
Jhagadia, India 2018, 1,800 m³/d RO

Lima, Peru 2018, 1,560 m³/d RO
 Rabigh, Saudi Arabia 2018, 1,000 m³/d RO
 Virginia, United States 2018, 830 m³/d RO
 North Carolina, United States 2018, 555 m³/d RO
 California, United States 2018, 432 m³/d RO
 Dammam, Saudi Arabia 2018, 400 m³/d RO
 Chennai, India 2018, 240 m³/d RO
 Krasnystaw, Poland 2018, 240 m³/d RO
 Tampico, Mexico 2017, 21,600 m³/d RO
 Guandong, China 2017, 12,000 m³/d RO
 Tuapse, Russia 2017, 9,240 m³/d RO
 Mangalore, India 2017, 7,512 m³/d RO
 Ghent, Belgium 2017, 6,000 m³/d RO
 Liaoning, China 2017, 4,800 m³/d RO
 Henan, China 2017, 4,800 m³/d RO
 West Thurrock, United Kingdom 2017, 3,980 m³/d RO
 Granbury, Texas, United States 2017, 3,785 m³/d RO
 Hubei, China 2017, 3,600 m³/d RO
 Anhui, China 2017, 3,600 m³/d RO
 Shanxi, China 2017, 3,600 m³/d RO
 Liaoning, China 2017, 3,600 m³/d RO
 Neimenggu, China 2017, 3,600 m³/d RO
 Shandong, China 2017, 3,600 m³/d RO
 Telangana, India 2017, 3,445 m³/d RO
 Keansburg, New Jersey, United States 2017, 3,380 m³/d RO
 Oland, Sweden 2017, 3,000 m³/d RO
 Ford City, Pennsylvania, United States 2017, 2,950 m³/d RO
 Arizona, U.S.A. 2017, 2,725 m³/d RO
 Tirupur, India 2017, 2,700 m³/d RO
 Mendelevsk, Russia 2017, 2,640 m³/d RO
 Randfontein, South Africa 2017, 2,640 m³/d RO
 Roermond, Netherlands 2017, 2,400 m³/d RO
 Beijing, China 2017, 2,400 m³/d RO
 Hebei, China 2017, 2,400 m³/d RO
 Jiangxi, China 2017, 2,400 m³/d RO
 Guandong, China 2017, 2,400 m³/d RO
 Shanxi, China 2017, 2,400 m³/d RO
 Jiangsu, China 2017, 2,400 m³/d RO
 Tirupur, India 2017, 2,040 m³/d RO
 Scarlino, Italy 2017, 1,680 m³/d RO
 Beni Suef, Egypt 2017, 1,680 m³/d RO
 Sydney, Australia 2017, 1,360 m³/d RO
 Tirupur, India 2017, 1,320 m³/d RO
 Devnia, Bulgaria 2017, 1,260 m³/d RO
 Parma, Italy 2017, 1,200 m³/d RO
 Pordenone, Italy 2017, 1,200 m³/d RO
 Henan, China 2017, 1,200 m³/d RO
 Jiangxi, China 2017, 1,200 m³/d RO
 Medan, Indonesia 2017, 912 m³/d RO
 Sw. Katarzyna, Poland 2017, 840 m³/d RO
 Porbandar, India 2017, 720 m³/d RO
 Kagoshima, Japan 2017, 720 m³/d RO
 West Java, Indonesia 2017, 600 m³/d RO
 Surabaya, Indonesia 2017, 600 m³/d RO
 Bukowno, Poland 2017, 600 m³/d RO
 Suzzara, Italy 2017, 552 m³/d RO
 Katowice, Poland 2017, 528 m³/d RO

Aceh, Indonesia 2017, 480 m³/d RO
 Valencia, Spain 2017, 450 m³/d RO
 Algemesi, Spain 2017, 360 m³/d RO
 Bor, Serbia 2017, 360 m³/d RO
 Czarnkow, Poland 2017, 288 m³/d RO
 Bursa, Turkey 2016, 14,400 m³/d RO
 Neimenggu, China 2016, 4,800 m³/d RO
 Guandong, China 2016, 4,800 m³/d RO
 Frankfurt/Main, Germany 2016, 3,600 m³/d RO
 Leuna, Germany 2016, 3,240 m³/d RO
 Barranquilla, Colombia 2016, 2,592 m³/d RO
 Xalostoc, Mexico 2016, 2,180 m³/d RO
 Gedebe, Azerbaijan 2016, 2,160 m³/d RO
 Jakarta, Indonesia 2016, 1,560 m³/d RO
 São Paulo, Brazil 2016, 1,440 m³/d RO
 Tirupur, India 2016, 1,320 m³/d RO
 Ixtlahuacin, Mexico 2016, 1,090 m³/d RO
 Windhoek, Namibia 2016, 1,044 m³/d RO
 Veracruz, Mexico 2016, 1,000 m³/d RO
 Gorontalo, Indonesia 2016, 936 m³/d RO
 Arizona, U.S.A. 2016, 908 m³/d RO
 Surabaya, Indonesia 2016, 840 m³/d RO
 Cartagena, Colombia 2016, 816 m³/d RO
 Chennai, India 2016, 800 m³/d RO
 Czarnków, Poland 2016, 768 m³/d RO
 Texas, U.S.A. 2016, 636 m³/d RO
 Liaoning, China 2015, 14,400 m³/d RO
 Tampico, Mexico 2015, 13,824 m³/d RO
 Triunfo, Brazil 2015, 10,800 m³/d RO
 Shchekino, Russia 2015, 7,800 m³/d RO
 Foshan, China 2015, 7,680 m³/d RO
 Alexandria, Egypt 2015, 5,760 m³/d RO
 Gumi, South Korea 2015, 5,300 m³/d RO
 Manzhouli, China 2015, 4,800 m³/d RO
 Perth, Australia 2015, 4,000 m³/d RO
 Bratislava, Slovakia 2015, 3,000 m³/d RO
 South East, U.S.A. 2015, 2,180 m³/d RO
 Ploiesti, Romania 2015, 2,040 m³/d RO
 Wiesbaden, Germany 2015, 1,440 m³/d RO
 Lippendorf, Germany 2015, 1,200 m³/d RO
 Glogów, Poland 2015, 1,200 m³/d RO
 Alexandria, Egypt 2015, 750 m³/d RO
 Haiphong, Vietnam 2015, 720 m³/d RO
 Trujillo, Peru 2015, 720 m³/d RO
 Hurghada, Egypt 2015, 600 m³/d RO
 Bursa, Turkey 2015, 600 m³/d RO
 Hurghada, Egypt 2015, 500 m³/d RO
 Sharm El Sheikh, Egypt 2015, 500 m³/d RO
 Czarna Woda, Poland 2015, 480 m³/d RO
 Tirupur, India 2015, 480 m³/d RO
 Surat, India 2015, 240 m³/d RO
 Bratislava, Slovakia 2014, 16,200 m³/d RO
 Huhehaote, China 2014, 8,640 m³/d RO
 Ningxia, China 2014, 8,400 m³/d RO
 Pancevo, Serbia 2014, 7,200 m³/d RO
 Sydney, Australia 2014, 6,000 m³/d RO
 Ansan, South Korea 2014, 4,750 m³/d RO

Pingxiang, China 2014, 4,320 m³/d RO
 Wuhai, China 2014, 4,032 m³/d RO
 Australia 2014, 3,600 m³/d RO
 Pyeongtaek, South Korea 2014, 3,400 m³/d RO
 Taiyuan, China 2014, 2,400 m³/d RO
 Lingfeng, China 2014, 2,400 m³/d RO
 Changzhou, China 2014, 2,400 m³/d RO
 Shenzhen, China 2014, 2,400 m³/d RO
 Qingdao, China 2014, 1,920 m³/d RO
 Tampico, Mexico 2014, 1,728 m³/d RO
 Texas, U.S.A. 2014, 1,500 m³/d RO
 Wuhan, China 2014, 1,440 m³/d RO
 Shanghai, China 2014, 1,200 m³/d RO
 Nava, Mexico 2014, 1,008 m³/d RO
 Shenzhen, China 2014, 1,000 m³/d RO
 Ain Sokhna, Egypt 2014, 960 m³/d RO
 Nanjing, China 2014, 960 m³/d RO
 Maryland, U.S.A. 2014, 950 m³/d RO
 Jacksonville, U.S.A. 2014, 681 m³/d RO
 Chennai, India 2014, 600 m³/d RO
 Japan 2014, 288 m³/d RO
 Australia 2013, 7,920 m³/d RO
 Chemnitz, Germany 2013, 2,880 m³/d RO
 Nizhnekamsk, Russia 2013, 2,448 m³/d RO
 Bad Köstritz, Germany 2013, 2,400 m³/d RO
 Beijing, China 2013, 2,400 m³/d RO
 Florida, U.S.A. 2013, 2,270 m³/d RO
 Shandong, China 2013, 1,920 m³/d RO
 Cabo de Santo Agostinho, Brazil 2013, 1,680 m³/d RO
 Shandong, China 2013, 1,440 m³/d RO
 Shanghai, China 2013, 1,296 m³/d RO
 Lima, Peru 2013, 1,080 m³/d RO
 Nagda, Madhya Pradesh, India 2013, 760 m³/d RO
 Shanghai, China 2013, 720 m³/d RO
 Leborg, Poland 2013, 480 m³/d RO
 Shanghai, China 2013, 480 m³/d RO
 Jiangxi, China 2013, 432 m³/d RO
 Texas, U.S.A. 2013, 380 m³/d RO
 Shanghai, China 2013, 360 m³/d RO
 Newcastle, South Africa 2013, 312 m³/d RO
 Hangzhou, China 2013, 288 m³/d RO
 Alabama, U.S.A. 2013, 270 m³/d RO
 Jedlicze, Poland 2013, 240 m³/d RO
 Australia 2013, 240 m³/d RO
 Suzhou, China 2013, 240 m³/d RO
 Shanghai, China 2013, 240 m³/d RO
 Jiangxi, China 2013, 192 m³/d RO
 Lanzhou, China 2013, 192 m³/d RO
 Shanghai, China 2013, 144 m³/d RO
 Suzhou, China 2013, 120 m³/d RO
 Shanghai, China 2013, 96 m³/d RO

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Responsive and responsible for your water innovation LG Water Solutions, part of LG Chem, LTD., manufactures the full line of NanoH₂O™ seawater, brackish water and residential reverse osmosis (RO) membranes based on innovative Thin Film Nanocomposite(TFN) technology. We are constantly evolving and have had great success in winning large desalination projects and continue to strengthen market leadership for seawater RO. Beyond SWRO, BWRO and TWRO membranes have already proven their performance and quality that has led to repeat customers.

Contact us to find out how we deliver more efficient and reliable products.

SELECTED REFERENCES

Membrane Supplier

Ground Water Replenishment System, United States 2018, 56,781 m³/d RO

Silicon Valley Advanced Water Purification Center, United States 2018, 30,280 m³/d RO

Edward C. Little Water Recycling Facility, United States 2018, 11,356 m³/d RO

Dhuruma Power Plant PPII, Saudi Arabia 2018, 10,000 m³/d RO

East Port Said, Egypt 2017, 300,000 m³/d RO

El Alamein, Egypt 2017, 150,000 m³/d RO

El Galalah, Egypt 2017, 150,000 m³/d RO

Hebei Fengyue Energy Desalination, Hebei, China 2017, 75,000 m³/d RO

King Abdulaziz International Airport, Saudi Arabia 2017, 60,000 m³/d RO

Sohar SWRO LLC, Oman 2016, 250,000 m³/d RO

LG Display, Paju, Korea, 125,000 m³/d

City of Scottsdale, Arizona, United States, 27,000 m³/d RO



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LG Water Solutions, part of LG Chem, LTD., manufactures the full line of NanoH₂O™ seawater, brackish water and residential reverse osmosis (RO) membranes based on innovative Thin Film Nanocomposite(TFN) technology.

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Contact us to find out how we deliver more efficient and reliable products.



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SELECTED REFERENCES

Desalination/wastewater reuse plant supplier

Mobile UF, Groot-Amers, Netherlands 2015, 12,400 m³/d Other
Rotterdam, Netherlands 2015, 9,600 m³/d RO
Amsterdam, Netherlands 2015, 3,840 m³/d RO
Mobile RO, Romania 2014, 13,200 m³/d RO
Nanofiltration, Lieshout, Netherlands 2014, 2,000 m³/d NF
Wastewater reuse, Amsterdam, Netherlands 2014, 390 m³/d Other
Tertiary waste water re-use, Gouda, Netherlands 2013, 1,240 m³/d RO

Design, build

ZH, Netherlands 2012, 600 m³/d RO
Brabant, Netherlands 2012, 240 m³/d Other

Design, build, finance and operate

Geleen, Netherlands 2016, 2,400 m³/d RO

Design, engineering, building, construction, commissioning and maintenance

Schuwacht, Gouda, Netherlands 2015, 9,600 m³/d RO
Mobile RO, Rotterdam, Netherlands 2015, 4,800 m³/d RO
RO Polishing, Antwerp, Belgium 2011, 11,520 m³/d RO
Russia 2011, 5,280 m³/d Flotation
Mobile RO plants, Rotterdam, Netherlands 2011, 4,800 m³/d RO
UF pretreatment, Le Havre, France 2011, 3,840 m³/d Other
MBR KMS, Chile 2011, 1,800 m³/d MBR
Oosterhof Holman, Berlikum, Netherlands 2011, 1,500 m³/d UF+RO
ZS Lekkerkerk, Gouda, Netherlands 2011, 1,440 m³/d RO
Nuon Magnum, Eemshaven, Netherlands 2011, 1,200 m³/d RO+EDI
DWP Phase I, Rotterdam, Netherlands 2010, 33,600 m³/d Softener+RO+Mixedbed
NieuWater, Emmen, Netherlands 2010, 13,200 m³/d RO+EDI
MRO, Rotterdam, Netherlands 2010, 4,800 m³/d RO
OY, Lieshout, Netherlands 2010, 3,600 m³/d Other
Anaerobic RO, Zevenbergen, Netherlands 2010, 600 m³/d RO
Isala, Zwolle, Netherlands 2010, 240 m³/d MBR

Rental

Rental RO unit, Romania 2013, 13,200 m³/d RO

MAK Industrial Water Solutions

SELECTED REFERENCES

Plant Supplier

Mt Morgans Gold Project, Laverton, WA, Australia 2017, 450 m³/d RO
Marine Supply Base, Karratha, WA, Australia, 500 m³/d RO
Iron Ore Mine - Rio Tinto, Pilbara, WA, Australia, 360 m³/d RO
Coal Seam Gas Plant, Combabula, Queensland, Australia, 165 m³/d UF

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SELECTED REFERENCES

Plant owner

Shuaibah Phase 3 IWPP, Jeddah, Saudi Arabia, 800,000 m³/d MSF (Multi-stage Flash)
Al Hidd IWPP, Hidd, Bahrain, 272,000 m³/d MSF (Multi-stage Flash)
Souk Tleta IWP, Tlemcen, Algeria, 200,000 m³/d RO
Al Ghubrah IWP, Muscat, Oman, 191,000 m³/d RO
Shuaibah Phase 3 IWPP, Jeddah, Saudi Arabia, 150,000 m³/d RO

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SELECTED REFERENCES

Developer

Yanbu 2 Power and Water Project, Yanbu, Saudi Arabia 2011, 60,000 m³/d MED
IWPP Project Jubail, Jubail, Saudi Arabia, 800,000 m³/d MED (Multi-effect Distillation)
Sea Water Reverse Osmosis Project, Sadara, Saudi Arabia, 178,560 m³/d RO

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SELECTED REFERENCES

Plant supplier

Taihua New Material Company Zero Liquid Discharge Project, Shanxi, Taiyuan, China 2015, 1,440 m³/d RO
 Yangcoal Pingding Zero Liquid Discharge Project, Shanxi, Yangquan, China 2014, 9,600 m³/d RO
 Mengda Zero Liquid Discharge Project, Erdos, China 2013, 13,200 m³/d RO
 Water Reuse - Yellow River, China, 14,400 m³/d RO
 Water Reuse - ChinaCoal, Inner Mongolia, China, 13,200 m³/d RO
 Municipal Reuse-water Treatment - Zhejiang, Zhejiang, China, 10,000 m³/d Ozonation
 Reuse and ZLD - Yangquan Coal Group, Yangquan, China, 5,040 m³/d RO

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SELECTED REFERENCES

Electrodeionization equipment supplier (equipment supply, installation, commissioning)

Termomeccanica, Colombia 2017, 1,440 m³/d RO
 G-Power, Georgia 2017, 480 m³/d RO
 Al-Khaleej, United Arab Emirates 2016, 960 m³/d RO
 ENERGY, Czech Republic 2014, 2,376 m³/d RO

Electrodialysis equipment supplier (equipment supply, installation, commissioning)

Caesar Pac, Kuwait 2017, 2,160 m³/d
 Kasra paper, Yazd, Iran 2016, 2,160 m³/d
 Petrochemical Complex - Comperj, Rio de Janeiro, Itaboraí, Brazil 2015, 10,200 m³/d MBR
 TAIF-NK, Tatarstan, Russia 2015, 6,000 m³/d RO
 Achinsk, Krasnoyarsk, Russia 2015, 500 m³/d RO
 Sonepat, India 2015, 264 m³/d Other/Unknown
 Neemrana, India 2015, 240 m³/d Other/Unknown
 PALS Breweries, Aurangabad, India 2014, 240 m³/d Other/Unknown
 Kuybyshev AZOT, Togliatti, Russia 2013, 1,440 m³/d Other/Unknown
 JSC Minudobreniya, Rossosh, Russia 2012, 1,440 m³/d Other/Unknown
 Depurbaix, Barcelona, Spain 2010, 48,000 m³/d Other/Unknown

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SELECTED REFERENCES

Desalination plant supplier

South Korea 2015, 20 m³/d RO
 France 2015, 6 m³/d EDI
 Nigeria 2013, 720 m³/d RO
 Italy 2013, 300 m³/d RO
 Norway 2012, 240 m³/d RO
 Sicily 2011, 1,600 m³/d RO
 Norway 2011, 800 m³/d RO
 Lazio, Italy 2011, 800 m³/d NF
 Lazio, Italy 2011, 400 m³/d NF
 Indonesia 2011, 60 m³/d RO

Package supply

Sewage Water Treatment System DEPUR OIL-120, Brazil 2012, 120 m³/d Other
 Water Makers, Kazakhstan 2011, 38 m³/d RO
 Demineralization System IONEX-PHARM, Italy 2010, 30 m³/d Other

Package supply/Site service

Sewage Water MBR Treatment System, Italy 2015, 80 m³/d Other
 Incoming Sewage Water Treatment System, Italy 2015, 80 m³/d Other
 Desalination Package SEA 240-DPLX-EEXD, Italy 2012, 240 m³/d RO
 Nanofiltration plant, Italy 2012, 3 m³/d NF
 Desalination Package TOWN-800 DPLX, Italy 2011, 1,600 m³/d RO
 Concentration/Separation Package (pharmaceutical) CONC 800-NF (Nanofiltration)-EEXD, Italy 2011, 800 m³/d NF
 Desalination Package SEA 200-SP-EEXi-NSK 2011, 800 m³/d RO
 Concentration/Separation Package (pharmaceutical) CONC 400-UF-EEXD, Italy 2011, 400 m³/d Other
 Sewage Water Treatment System DEPUR-MBR 200, Saipem, Kazakhstan 2011, 400 m³/d Other
 Desalination and Potable Water System Village 60, Kazakhstan 2011, 120 m³/d RO
 Desalination and Potable Water System SEA 60, Indonesia 2011, 60 m³/d RO
 Desalination Package SEA 50-DPLX-EEXD, Libya 2011, 50 m³/d RO
 Sewage Water Treatment System DEPUR-MBR 200, Saipem, Kazakhstan 2010, 400 m³/d Other
 Desalination and Potable Water System Village 60, Kazakhstan 2010, 120 m³/d RO

Plant supplier

South Korea, Offshore, Italy 2015, 20 m³/d RO
 France, Italy 2015, 6 m³/d EDI
 Nigeria, Offshore, Italy 2013, 720 m³/d RO
 Italy, Sardinia 2013, 300 m³/d RO
 Norway, Offshore, Italy 2012, 240 m³/d RO
 Italy, Sicily 2011, 1,600 m³/d RO
 Norway, Offshore, Italy 2011, 800 m³/d RO
 CONC-NF, Italy, Lazio 2011, 800 m³/d NF
 CONC-NF, Italy, Lazio 2011, 400 m³/d NF
 Indonesia, Inshore, Italy 2011, 60 m³/d RO

Revamping/Site service

Desalination Package SEA 200-SP-EEXi-NSK, 800 m³/d RO

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SELECTED REFERENCES

Pump supplier

SWRO, Jeddah, Saudi Arabia 2011, 12,000 m³/d RO
Mafraq MBR WWTP, Abu Dhabi, United Arab Emirates 2011, 7,200 m³/d Other
Zakher MBR WWTP, Al Ain, United Arab Emirates 2011, 7,200 m³/d Other
SWRO, Jeddah, Saudi Arabia 2011, 5,000 m³/d RO
Sewage Treatment Plant, Sharjah, United Arab Emirates 2011, 2,117 m³/d Other
MBR Plant, Occidental, Muscat, Oman 2011, 120 m³/d RO
R.O. Unit, Occidental, Muscat, Oman 2011, RO
Desalination Plant, Dubai, United Arab Emirates 2011, RO
GZ Industrial, Nigeria 2011, RO
Havaz Ahmed Contracting, Dubai, United Arab Emirates 2011, RO
National Tabaco Co 2011, RO
Al Barari, Dubai, United Arab Emirates 2011, RO
DEWA, Dubai, United Arab Emirates 2011, RO
Kindasa Water Services, Jeddah, Saudi Arabia, 40,000 m³/d RO
Al Shallal Park, Jeddah, Saudi Arabia, 35,952 m³/d
Kindasa Water, Saudi Arabia, 25,000 m³/d RO
Best Water, Ajman, United Arab Emirates, 24,000 m³/d RO
Kindasa Water Services, Jeddah, Saudi Arabia, 17,000 m³/d RO
Kindasa Water, Saudi Arabia, 14,000 m³/d RO
WESSCO Saudia, Jeddah, Saudi Arabia, 13,000 m³/d RO
Jeddah, Saudi Arabia, 12,000 m³/d RO
Jeddah, Saudi Arabia, 9,000 m³/d RO
Bohairat Desalination Plant, Jeddah, Saudi Arabia, 7,500 m³/d RO
Brothers Commercial, Jeddah, Saudi Arabia, 6,000 m³/d RO
Tabuk, Saudi Arabia, 6,000 m³/d RO
Al Khoraef, Jeddah, Saudi Arabia, 5,500 m³/d RO
Aquaries Arabia, Yanbu, Saudi Arabia, 4,000 m³/d RO
Bushnak Group, India, 3,785 m³/d RO
Jubail Royal Commission, Saudi Arabia, 3,785 m³/d RO
Damman, Saudi Arabia, 2,500 m³/d RO
Saudi Arabia, 1,000 m³/d RO
MBR Plant, Sharjah, United Arab Emirates, 840 m³/d Other
Prince Sultan Palace, Jeddah, Saudi Arabia, 800 m³/d RO
Jeddah, Saudi Arabia, 750 m³/d RO
Private Desalination Plant, SAWACO, Jeddah, Saudi Arabia
Jeddah, Saudi Arabia, RO
Al Jubail, Saudi Arabia, RO
R.O. Unit, Desalination Plant, RO
Desalination Plant, Nigeria, RO
Dept. of the Presidents Affairs, Abu Dhabi, United Arab Emirates, RO

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Metito is a leading global provider for total intelligent water management solutions with operations covering three business areas: design and build, specialty chemicals, and utilities.

With 60 years of experience, the Group provides customized, comprehensive and advanced solutions across the full spectrum of its industry; from clean to dirty water; desalination and re-use; industrial solutions (up to hyper pure water); investing into water and wastewater assets; and structuring both greenfield and brownfield schemes under project finance structures.

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SELECTED REFERENCES

Plant supplier: Desalination

PCPL Taloja Ammonia (PTA) Project, Mumbai, Taloja, India 2018, 25,704 m³/d RO
Sharma Complex SWRO, Sharma, Kingdom of Saudi Arabia 2018, 24,000 m³/d RO
Tinduf 3, Algeria 2018, 5,250 m³/d RO
El Negela SWRO, North Coast, Egypt 2018, 5,000 m³/d RO
Hacienda Bay, North Coast, Egypt 2018, 2,000 m³/d RO
Hacienda White, North Coast, Egypt 2018, 2,000 m³/d RO
Sharma Complex BWRO, Sharma, Kingdom of Saudi Arabia 2018, 1,200 m³/d RO

Singapore Refining Company Desalination Project, Jurong Island, Singapore 2018, 1,100 m³/d RO

Nasr City Water Purification Plant - Abu Oweikal, Cairo, Egypt 2017, 500,000 m³/d RO

Beash Dam Valley BWRO, Beash, Saudi Arabia 2017, 150,000 m³/d RO

East Port Saeid Desalination, Port Said, Egypt 2017, 150,000 m³/d RO

King Abdullah Economic City - SWRO Plant, Jeddah, Kingdom of Saudi Arabia 2017, 30,000 m³/d RO

ATA Power & Steam Integration Project, Abu Dhabi, Taweelah, UAE 2017, 13,200 m³/d RO

West Damietta Extension, Damietta, Egypt 2017, 12,960 m³/d RO

West Damietta Extension, Damietta, Egypt 2017, 12,600 m³/d RO

MAAFCO Misr, New Cairo, Egypt 2017, 11,448 m³/d RO

Rades-C Combined Cycle Power Plant, Tunis, Tunisia 2017, 5,472 m³/d RO

Al Bayt Stadium-TSE RO Polishing Plant, Doha, Qatar 2017, 3,000 m³/d RO

Hassi R'mel Boosting Phase 3 Project, Hassi R'mel, Algeria 2017, 1,800 m³/d RO

Rades-C Combined Cycle Power Plant, Tunis, Tunisia 2017, 1,680 m³/d RO

Jizan Project Hospital, Jeddah, Western Region, Saudi Arabia 2017, 840 m³/d RO

HRH Prince Khalid Bin Abdullah Palace, Jeddah, Saudi Arabia 2017, 500 m³/d RO

New Jeddah Clinic Hospital, Jeddah, Saudi Arabia 2017, 470 m³/d RO

Indonesia Muara Karang Project, Indonesia 2017, 440 m³/d RO

Abu Ali Camp Project, Abu Ali Island, Eastern Region, Kingdom of Saudi Arabia 2017, 120 m³/d RO

Hassi R'mel Boosting Phase 3 Project, Algeria 2017, 90 m³/d RO

Aramco Gazan Industrial Support Facilities, Jazan, KSA 2017, 60 m³/d RO

Al Galalah Seawater Reverse Osmosis Project, Ain Sokhna, Egypt 2016, 150,000 m³/d RO

El Tor Seawater Reverse Osmosis Project, El Tor Sinai, Egypt 2016, 30,000 m³/d RO

Tindouf, BWRO, Algeria, Tindouf, Algeria 2016, 10,500 m³/d RO

Uzbekistan Navoiy Fertilizer (UNF) Project – (BWRO) Republic of Uzbekistan 2016, 4,320 m³/d RO

Salwa Resort Project - TSE Polishing RO, Doha, Qatar 2016, 1,850 m³/d RO

Al Yosr Seawater Reverse Osmosis Project, Hurghada, Egypt 2015, 80,000 m³/d RO

Touggourt Brackish Water Reverse Osmosis Project, Touggourt, Algeria 2015, 34,000 m³/d RO

Marassi (North Coast) Seawater Reverse Osmosis Project, Sidi Abdel Rahman, Egypt 2015, 12,500 m³/d RO

SONEDE Brackish Water Reverse Osmosis Project, Mareth, Matmata, Beni Khedash, Belkheir, Tunisia 2015, 11,400 m³/d RO

El Burullus Power Plant Seawater Reverse Osmosis/ Brackish Water Reverse Osmosis Project, El Burullus, Egypt 2015, 3,300 m³/d RO

Umm Wual Phosphate Brackish Water Reverse Osmosis Project, Turaif, Saudi Arabia 2014, 54,600 m³/d RO

Damietta Seawater Reverse Osmosis Project, Damietta, Egypt 2014, 7,200 m³/d RO

KFUPM Student Housing Project, Dhahran, Saudi Arabia 2014, 6,600 m³/d RO

Rabigh 2 Independent Power Project, Rabigh, Saudi Arabia 2014, 5,616 m³/d RO

Cleopatra Seawater Reverse Osmosis Project, Marsa Matrouh, Egypt 2014, 4,500 m³/d RO

Sidi Barani Seawater Reverse Osmosis Project, Sidi Barani, Egypt 2014, 4,500 m³/d RO

City Stars Seawater Reverse Osmosis Project, Sharm El Sheikh, Egypt 2014, 4,500 m³/d RO

Pearl Qatar Seawater Reverse Osmosis Plant, Doha, Qatar 2013, 35,000 m³/d RO

Downtown Dubai Development TSE RO Polishing Plant, Dubai, United Arab Emirates 2013, 20,000 m³/d RO

Musandam Gas Plant Project, Musandam, Oman 2013, 3,600 m³/d RO

Handan Steel 3rd Water Treatment Plant, Handan, China 2011, 45,500 m³/d RO

Arar Brackish Water Reverse Osmosis Plant, Arar, Saudi Arabia 2011, 25,000 m³/d RO

Palm Oil Mill PT Sari Dumai Sejati Project, Dumai, Indonesia 2011, 6,720 m³/d RO

South Yoloten Gas Field Development Project, Yolöten, Turkmenistan 2011, 4,300 m³/d RO

Qatar Steel (Qasco) Project, Qatar 2010, 15,000 m³/d RO

Lisco Brackish Water Reverse Osmosis Project, Misrata, Libya 2010, 3,000 m³/d RO

Plant supplier: Wastewater Recycling and Reuse

Mahsama Treatment Plant, North Sinai, Egypt 2018, 1,000,000 m³/d

New Alamin, Egypt 2018, 90,000 m³/d

East Port Saied STP, Port Said, Egypt 2018, 25,000 m³/d

Swaleh STP, Sharkia, Egypt 2018, 22,000 m³/d

Al-Quaway'iyah STP, Saudi Arabia 2018, 10,000 m³/d

Badr STP, Egypt 2018, 10,000 m³/d

Sharjah International Airport Expansion Project, Sharjah, United Arab Emirates 2018, 3,000 m³/d

Sharoura STP, Western Region, Saudi Arabia 2018, 2,200 m³/d

Bang Pakong Combined Cycle Project, Chachoengsao, Thailand 2018, 1,920 m³/d

WWTP-Arab Qatari Co. for Poultry Production, Doha, Qatar 2018, 500 m³/d

Sewage Treatment Plant for Hotel Ole Sereni, Doha, Qatar 2018, 200 m³/d

Mahalma STP, Algeria 2017, 32,000 m³/d

Temp. STP Facility at Southern New Town in Bahrain, Askar, Bahrain 2017, 3,021 m³/d

Jizan Hospital Project, Jeddah, Saudi Arabia 2017, 1,500 m³/d

Lusail Stadium - Labour Camp, Doha, Qatar 2017, 1,000 m³/d

El Massah, New Capital, Egypt 2017, 1,000 m³/d

QDVC Labour camp - STP Upgrade, Doha, Qatar 2017, 600 m³/d

Al Iman General Hospital Project, Jeddah, Saudi Arabia 2017, 400 m³/d

Al Jaryan Farm, STP - RDA, Doha, Qatar 2017, 250 m³/d

Sharjah Main Sewage Treatment Works - Upgrade, Sharjah, United Arab Emirates 2016, 130,000 m³/d

Khan Younis WWTP and Buildings, Gaza, Palestine 2016, 26,700 m³/d

Shothb, Assiut, Egypt 2016, 26,000 m³/d

Dubai Silicon Oasis STP Expansion, Dubai, United Arab Emirates 2016, 15,000 m³/d

Jebel Ali Hills Package 7-Sewage Treatment Plant, Dubai, United Arab Emirates 2016, 12,000 m³/d

Amwaj Island - STP Expansion Project, Manama, Bahrain 2016, 5,000 m³/d

Expansion of Kalba Sewage Treatment Plant, Sharjah, United Arab Emirates 2016, 3,500 m³/d
Ithaafushi Island Resort Project, Maldives 2016, 400 m³/d
DIP East STP – 2nd TSE Storage Tank, Dubai, United Arab Emirates 2015, 10,000 m³/d
Demashkeen Village - Air Craft, El Fayoum, Egypt 2015, 10,000 m³/d
Awlad seif Village - Air Craft, El Sharkeya, Egypt 2015, 10,000 m³/d
Aqiq STP - MBR, Al-Aqiq, Saudi Arabia 2015, 6,250 m³/d
Sumail Industrial Estate - STP, Oman 2015, 3,600 m³/d
Organica Trial at DIP West, Dubai, United Arab Emirates 2015, 3,500 m³/d
Kafr Taboot, Giza, Egypt 2015, 3,000 m³/d
The Gardens-Supply & Delivery of Floating Process Aerators at STP, Dubai, United Arab Emirates 2014, 30,000 m³/d
El Tal El Kebeer, Sarkeya, Egypt 2014, 20,000 m³/d
Zawyet Rozein, Monofeya, Egypt 2014, 20,000 m³/d
Samanoud Sewage Treatment Plant, Samanoud, Egypt 2014, 15,000 m³/d
Kafr El Khadra, Monofeya, Egypt 2014, 12,000 m³/d
Al-Yousefeyyah STP, Iraq 2014, 11,000 m³/d
DIP East Park STP – New Expansion of Phase E2 A/B, Dubai, United Arab Emirates 2014, 10,000 m³/d
DIP West Park STP Expansion-MBBR 9,000m³/day, Dubai, United Arab Emirates 2014, 9,000 m³/d
Integrated Sewerage System - Tarif & Bida Mutawa, Abu Dhabi, United Arab Emirates 2014, 8,800 m³/d
Meraas Development - Dubai Parks Project Phase I, Dubai, United Arab Emirates 2014, 7,500 m³/d
Reem Development Phase I - WWTP, Dubai, United Arab Emirates 2014, 6,000 m³/d
Madina Industrial City - WWTP, Saudi Arabia 2014, 5,000 m³/d
Ruwais Housing Complex Expansion P-III, Temporary STP, Abu Dhabi, United Arab Emirates 2014, 1,000 m³/d
Jafza One STP Phase I, Dubai, United Arab Emirates 2014, 360 m³/d
Ruwais Housing Complex Expansion Phase III. New STP, Abu Dhabi, United Arab Emirates 2013, 30,000 m³/d
Al Jisser WTP, Iraq 2013, 4,000 m³/d
Al Mahmodeyah WTP, Iraq 2013, 4,000 m³/d
Barwa Al-Khor Housing Development Package 2, Qatar 2013, 560 m³/d
Al Bustan Zoological Center Slaughter House, Sharjah, United Arab Emirates 2013, 200 m³/d
Short Term Measures-2nd Package-Grit Removal, Bahrain 2012, 100,000 m³/d
STP of South Koufa, Iraq 2012, 50,000 m³/d
Al Basrah STP - Shat Al Arab, Iraq 2012, 10,000 m³/d
Al Basrah STP - Safwan, Iraq 2012, 10,000 m³/d
Al Basrah STP - Um Qasser, Iraq 2012, 10,000 m³/d
Al Hait STP, Saudi Arabia 2012, 5,000 m³/d
Ghazala STP, Saudi Arabia 2012, 5,000 m³/d
Sang Al-Qasim, Saudi Arabia 2012, 5,000 m³/d
Compact WTO, Iraq 2012, 4,000 m³/d
Al khor Sewerage Extension to Al Khor ST Works Phase II, Qatar 2012, 3,888 m³/d
Sanitary STP at BAPCO Refinery, Bahrain 2012, 1,000 m³/d
Doha West STW, Doha, Qatar 2011, 50,000 m³/d
Rehabilitation Of Freeha STP, Freeha – Karbala'a, Iraq 2011, 50,000 m³/d

Al Hindya WTP - Al Hindeyeh, Iraq 2011, 48,000 m³/d
International City - Sewage Pumping Station Rectification Works, United Arab Emirates 2011, 21,600 m³/d
Industrial Zone Area A - Sewage Treatment Plant, Abu Dhabi, United Arab Emirates 2011, 11,000 m³/d
DIP East Phase E1 and E2, Dubai, United Arab Emirates 2011, 10,000 m³/d
Sonbat- Disa- Kofor El Sheikh Villages, El Fayoum, Egypt 2011, 7,500 m³/d
Barzan Camp, Al Wajba, Qatar 2011, 3,300 m³/d
Marasi Project, North Coast, Egypt 2011, 2,000 m³/d
Enhancement & Upgrading of STP (Phase 2), United Arab Emirates 2011, 1,728 m³/d
Shah Gas Development Pkg 4. U&O Project-WWTP, Abu Dhabi, United Arab Emirates 2011, 239 m³/d
Tubli WPCC Upgrade, Manama, Bahrain 2010, 200,000 m³/d
Monouf Sewage Treatment Plant, Menofya, Egypt 2010, 12,000 m³/d
Sanaded Village - Air Craft, El Gharbia, Egypt 2010, 10,000 m³/d
Al Khayrat & Al Jadwal Al Gharbi WTP, Iraq 2010, 4,000 m³/d
Skycourts STP, Dubai, United Arab Emirates 2010, 2,000 m³/d
Kabul Military Training Center, Afghanistan 2010, 800 m³/d
Ghuweifat STP upgrade, Abu Dhabi, United Arab Emirates 2010, 500 m³/d
Housing Complex in Shuwaihat Stage II (G-5418), Abu Dhabi, United Arab Emirates 2010, 400 m³/d
STP for Iraqi Complex in Tikrit, Iraq 2010, 180 m³/d
Package STP & Sewage Lift Station for Construction, Abu Dhabi, United Arab Emirates 2010, 60 m³/d
Ruwais Housing Complex Expansion STP, Abu Dhabi, United Arab Emirates 2010, 4,300 m³/d
STP and TSE Pumping Station, Dubai, United Arab 2010, 5,000 m³/d
Dubai Silicon Oasis STP, Dubai, United Arab Emirates 2010, 3,000 m³/d

Microdyn-Nadir GmbH

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Membrane supplier

Marienhospital, Gelsenkirchen, Gelsenkirchen, Germany, 200 m³/d MBR (Membrane Bioreactor)

Midwater

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Design, Supply and Installation

Soft Drinks Factory RO Plant - Assuit / Egypt, Assuit, Egypt, 2,400 m³/d RO

Soft Drinks Factory RO Plant - Cairo/Egypt, Cairo, Egypt, 1,200 m³/d RO

Soft Drinks Factory Clarification & Filtration Plant - Alexandria Egypt, Alexandria, Egypt, 1,200 m³/d RO

Food & Beverage Factory RO Plant, Cairo / Egypt, Cairo, Egypt, 1,200 m³/d RO

Food & Beverage Factory RO Plant, Egypt, Egypt, 500 m³/d RO

Central Sinai RO Plants - Sinai/Egypt, Sinai, Egypt, 60 m³/d RO

Glass Factory RO, Egypt, Egypt, 15 m³/d RO

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Desalination plant supplier & EPC Contractor

Rabigh IWSP Phase-II, Rabigh, Saudi Arabia 2013, 96,000 m³/d RO

Shuqaiq IWPP, Saudi Arabia 2011, 216,000 m³/d RO

Huis Ten Bosch, Sasebo, Japan, 1,000 m³/d RO

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www.mottmac.com

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Consultant

RAF A2 Desalination Plant, Ras Abu Fontas, Qatar 2014

Qurayyat IWP, Qurayyat, Oman 2013, 200,024 m³/d RO

Barka I Expansion (Phase 2), Barka, Oman 2013, 59,098 m³/d RO

Sur Expansion, Sur, Oman 2013, 48,188 m³/d RO

Re-location of temporary plant to Khasab, Khasab, Oman 2013, RO

Design and consultancy

Tampa Bay Desalination Plant Upgrades, Florida, United States of America 2013, 94,635 m³/d

Ghubrah Independent Water Project, Muscat, Oman 2013, 42 MIGD RO

Hamma Desalination Plant, Algiers, Algeria 2012, 200,000 m³/d RO

Carlsbad Desalination Plant, Carlsbad, U.S.A. 2012, 196,841 m³/d RO

Ras Abu Fontas Power and Desalination Plant, Doha, Qatar 2012, 136,274 m³/d Thermal

Rabigh Independent Water Steam Power Producer II, Rabigh, Saudi Arabia 2012, 93,500 m³/d RO

Barka I SWRO, Barka, Oman 2012, 45,450 m³/d RO

Batinah temporary desalination plant, Sohar, Oman 2012, 20,000 m³/d RO

Barka I Expansion, Barka, Oman 2012, 10 MIGD RO

Songo and Mnazi Gas Fields, Mnazi Bay, Songo Songo Island, Tanzania 2012

Male Airport Desalination, Hulhule, Maldives 2011, 500 m³/d RO

Marate Desalination Plant, Mahoot Wilayat, Oman 2011, 400 m³/d RO

Majis Desalination Plant, Sohar, Oman 2010, 20,000 m³/d RO

Shuaiba II, Jeddah, Saudi Arabia, 454,607 m³/d

Ras Abu Fontas A Station, Qatar, 272,764 m³/d

Ras Laffan B, Doha, Qatar, 272,764 m³/d

Ras Al Zour, Saudi Arabia, 249,810 m³/d

Al Taweelah, Abu Dhabi, United Arab Emirates, 227,100 m³/d

Al Dur, Bahrain, 218,000 m³/d RO

Ghubrah IWP, Oman, 190,680 m³/d RO

Ras Abu Fontas B Station, Qatar, 150,000 m³/d

Ras Abu Fontas B II Station, Qatar, 136,382 m³/d

Keppel Fel, Singapore, 136,260 m³/d

Sharqiya IWP, Sur, Oman, 121,120 m³/d

Jafza, Dubai, United Arab Emirates, 99,924 m³/d

North Palm Water RO Plant, United Arab Emirates, 90,840 m³/d RO

Rabigh, Saudi Arabia, 81,756 m³/d

Al Slam City SWRO Plant, United Arab Emirates, 75,700 m³/d RO

Decosol, Spain, 56,775 m³/d

Taweelah A1, Abu Dhabi, United Arab Emirates, 45,420 m³/d

Floating Desalination Plants, Algeria, 29,902 m³/d

Shoreham, U.K., 29,902 m³/d

Barge Raka, Saudi Arabia, 24,981 m³/d RO

Barge mounted desalination plant, Limassol, Cyprus, 24,000 m³/d RO

8 RO Plants, United Arab Emirates, 22,710 m³/d RO

Dhekelia, Cyprus, 18,925 m³/d

Ajman, Dubai, United Arab Emirates, 14,004 m³/d

Alba RO3, Bahrain, 9,841 m³/d RO

Fujairah, 9,084 m³/d

Alba Power Station, Bahrain, 3,785 m³/d

Wudham & Goat Island, Oman, 2,384 m³/d

Kuria Maria Island RO Plant, Oman, 1,816 m³/d RO

Design and engineering

Halul Island Desalination Plant, Qatar 2010, 2,400 m³/d RO

Umm Al Quwain, United Arab Emirates, 13,626 m³/d

Detailed Design

Sterling, CO Reverse Osmosis Plant, Colorado, United States of America 2010, 10.0 MDG

Engineering

PP11, Riyadh, Saudi Arabia, 11,000 m³/d RO

Feasibility Study

Cherokee Metro District Black Squirrel Reclamation Facility, Colorado, United States of America 2014, 6,057 m³/d

Maintenance

Al Hidd Plant, United Arab Emirates 2011, 409,140 m³/d MSF

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Engineering consultancy

Government of Abu Dhabi represented by the President Office, Fujera, United Arab Emirates, 454,000 m³/d RO
Rawec, Saudi Arabia, 220,000 m³/d RO
DuPont, USA, Jeddah, Saudi Arabia, 91,000 m³/d RO
Al-Fatah International Shipping Company, Jubail, Saudi Arabia, 75,000 m³/d RO
Ministry of Water & Agriculture, Djibouti, Republic of Djibouti, 50,000 m³/d RO
Ministry of Agriculture, natural resources and environment, Cyprus 2, Limmasol, Cyprus, 40,000 m³/d RO
DuPont, USA, Al-Dur, Bahrain, 38,000 m³/d RO
Kindasa Water Services company, Jeddah, Saudi Arabia 2, Jeddah, Saudi Arabia, 36,000 m³/d RO
Ministry of Agriculture, natural resources and environment, Cyprus, Moni, Cyprus, 20,000 m³/d RO
Bharat Heavy Electricals Limited (BHEL), India 3, Tuticorin, India, 20,000 m³/d RO
Saudi Consulting Service Company (SaudConsult), Ras-Al Khair, Saudi Arabia, 15,000 m³/d RO
Kindasa Water Services company, Jeddah, Saudi Arabia, Jeddah, Saudi Arabia, 14,000 m³/d RO
Kindasa Water Services company, Jeddah Saudi Arabia 3, Jeddah, Saudi Arabia, 14,000 m³/d RO
Saudi Aramco, Rabigh, Saudi Arabia, 10,000 m³/d RO
Wesco & Pallava Water & Power Co. Ltd., Karaikal, India, 10,000 m³/d RO
King Faisal Naval Base, Jeddah, Saudi Arabia, Jeddah, Saudi Arabia, 7,570 m³/d RO
Al-Rawia Port Sudan, Port, Sudan, 5,000 m³/d RO
Zahid Tractor, Jeddah, Jeddah, Saudi Arabia, 5,000 m³/d RO
Al-Afandi Buhairat, Jeddah, Saudi Arabia, 5,000 m³/d RO
Bharat Heavy Electricals Limited, India, India, 3,785 m³/d RO
Bharat Heavy Electricals Limited, INDIA 2, India, 3,785 m³/d RO
Saudi Company for Recreation Centers, Jeddah Saudi Arabia, Jeddah, Saudi Arabia, 3,000 m³/d RO
South Ganga Waters Technologies Pvt Limited, India, India, 500 m³/d RO
Oman National Electric Co. (SAOG), OMAN, Masirah, Oman, 400 m³/d RO
Al-Fadl, Jeddah, Saudi Arabia, 150 m³/d RO

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Water purification plant supplier

BlueBox 60RO Solar, Romania 2017, 12 m³/d RO
BlueBox 450RO, Kenya 2017, 4 m³/d RO
BlueBox 1200RO, Mali 2014, 2 m³/d RO
BlueBox 1200RO, Ebola zones 2014, 2 m³/d
BlueBox 150 Wall-mount, Côte d'Ivoire 2013, 1 m³/d RO

Mueller Water Products

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SELECTED REFERENCES: SMART LEAKAGE REDUCTION

Leak location in water distribution network

Sewerage & Water Board of New Orleans, New Orleans, LA, U.S.A. 2018

Monitoring of critical pipeline for water loss mitigation

Singapore PUB, Singapore 2018

Installation of smart leak detection nodes on fire hydrants

Medicine Hat Utility, Alberta, Canada 2018

Water main condition assessment and leak detection

City of Flint Water Department, Flint, MI, U.S.A. 2017

Water mains condition validation

Doyon Utilities, AK, U.S.A. 2017

Neptune Technology Group Inc.

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Installation of MACH 10 meters in city-wide solution for NRW reduction

City of Benicia, Benicia, U.S.A.

Installation of R900 fixed network AMI system for network management

City of Battle Creek, Battle Creek, U.S.A.

Installation of R900 system to improve meter monitoring as part of gradual migration to fixed network solution

Wausau Water Works, Wausau, U.S.A.

Installation of cloud-based data and analytics for improved network management with a view to leveraging AMI data for hydraulic modeling, pressure monitoring and other beneficial system upgrades

City of Toronto Water Meter Program, Toronto, Canada 2016

Installation of unified AMR system based on R900 RF technology for streamlined meter monitoring

Virginia Water Authority, Dinwiddie County, U.S.A.
 City of Bloomington, Bloomington, U.S.A.
 Town of Longboat Key, Longboat Key, U.S.A.
 Indio Water Authority, Indio, U.S.A.

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www.newwatercorporation.com

www.septechholdings.com

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Plant Supplier

Pearl Dive Pool, Dubai, United Arab Emirates 2014, 74,400 m³/d Filtration System
 Awali Oil Field, Awali Oil Field, Manama, Bahrain 2014, 2,250 m³/d Mobile Water System
 Al Ghubrah Mobile Water Treatment Plant, Muscat, Oman 2010, 22,730 m³/d RO
 Oxy Oil Field, Mukhaizna, Oman 2010, 12,000 m³/d RO

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Equipment Supplier

Monkey Mia Dolphin Resort, Coral Coast WA, Australia 2013, 160 m³/d RO
 Windarling #5, Eastern Goldfields WA, Australia 2013, 50 m³/d RO
 Muja Power Station Stage C, WA, Australia 2012, 2,880 m³/d RO
 Tropicana Train #3, Goldfields WA, Australia 2012, 160 m³/d RO
 Tuckerbianna, Pilbara WA, Australia 2012, 30 m³/d RO
 Karntarma Stage 2, Pilbara WA, Australia 2011, 350 m³/d RO
 Wonnawinta, Central West NSW, Australia 2011, 350 m³/d RO
 Tropicana Train 1&2, Goldfields WA, Australia 2011, 320 m³/d RO
 Nickel West, Goldfields WA, Australia 2011, 150 m³/d RO
 Hope Down 1, Pilbara WA, Australia 2011, 45 m³/d RO
 Karrara, Mid West WA, Australia 2010, 500 m³/d RO
 Karntarma Stage 1, Pilbara WA, Australia 2010, 350 m³/d RO

NVCo

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Developer

Hendijan BWRO Desalination Plant, Hendijan, Khuzestan, Iran 2015, 10,000 m³/d RO
 Kangan SWRO Desalination Plant, Bandar Kangan, Bushehr, Iran 2013, 20,000 m³/d RO
 Bushehr SWRO Desalination Plant, Bushehr, Iran 2013, 20,000 m³/d RO
 Chabahar and Konarak (Phase II) SWRO Desalination Plant, Chabahar, Sistan and Baluchestan, Iran 2012, 20,000 m³/d RO
 Chabahar and Konarak (Phase I) SWRO Desalination Plant, Chabahar, Sistan and Baluchestan, Iran 2011, 20,000 m³/d RO

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Founded in 1884 in Switzerland, Omya is a global leading producer of industrial minerals and a worldwide distributor of chemical products. The company's major markets are the paper, plastics and construction industries as well as the water & energy, agriculture and consumer goods markets.

Omya focus on following water treatment markets:

- Desalination Pre- and Post-Treatment (Remineralization, RO Pre-Treatment Chemicals)
- Potable Water Treatment (Softening & Hardening, Heavy Metals Removal)
- Surface & Ground Water Treatment (TSS Removal, Dewatering)
- Waste Water Treatment (Heavy Metals Removal, Neutralization, TSS Removal, Dewatering)

Omya produces natural mineral products such as high purity drinking water approved (EN-1018, NSF-60) "Omyaqua" calcium carbonate for the post-treatment respectively remineralization of desalinated water (e.g. calcite contactors, limestone filter).

With its broad engineering know-how and competence Omya develops water treatment processes such as the cost optimized "Omya Advanced Remineralization Process" (OARP) using "Omyaqua" micronized calcium carbonate for the post-treatment of desalination water.

New and innovative natural minerals-based products are developed targeting a more efficient removal of suspended solids (TSS), improve sludge dewatering performance or remove heavy metals in surface & ground water or process & waste water treatment. In selected countries Omya offers a range of water treatment products such as high performance Reverse Osmosis Antiscalants and Membrane cleaning chemicals.

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Consultant: operation

Canada, 6,540 m³/d RO
Indonesia, 2,000 m³/d RO

Consulting services pertaining to the RO system and its pretreatment

Middle East, 910,000 m³/d RO
Australia, 411,000 m³/d RO
Europe, 189,250 m³/d RO
Australia, 140,045 m³/d RO
Australia, 136,260 m³/d
Latin America, 40,878 m³/d RO
Caribbean, 36,336 m³/d
Middle East, 11,355 m³/d RO
North America, 11,355 m³/d RO
North America, 9,084 m³/d NF
U.S.A., 8,327 m³/d
U.S.A., 7,570 m³/d
Middle East, 5,000 m³/d RO
Latin America, 4,542 m³/d RO

Organo

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Desalination plant supplier

Thermal Power Plant Project, Vietnam 2017, 4,140 m³/d RO
Sendai Nuclear Power Station, Kagoshima, Japan 2017, 500 m³/d RO
Taiwan 2016, 30,000 m³/d RO

PT. Asahimas Chemical SWRO, Cilegon, Banten, Indonesia 2016, 5,400 m³/d RO
PT. Asahimas Chemical BWRO, Cilegon, Banten, Indonesia 2016, 4,848 m³/d RO
Indonesia 2016, 4,800 m³/d RO
PT. BP Tangguh, Bintuni, Papua, Indonesia 2016, 3,500 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
Taiwan 2015, 24,000 m³/d RO
Chubu, Japan 2015, 20,000 m³/d RO
Taiwan 2015, 16,000 m³/d RO
Taiwan 2015, 6,700 m³/d RO
Taiwan 2015, 5,800 m³/d RO
Chugoku, Japan 2015, 3,800 m³/d ED
Chugoku, Japan 2015, 3,700 m³/d RO
Malaysia 2015, 2,400 m³/d RO
Kyushu, Japan 2015, 1,800 m³/d RO
Kyushu, Japan 2015, 1,700 m³/d ED
China 2015, 1,700 m³/d RO
Kyushu, Japan 2015, 1,200 m³/d RO
Kansai, Japan 2015, 500 m³/d RO
Tohoku, Japan 2015, 500 m³/d ED
Taiwan 2014, 20,000 m³/d RO
Chubu, Japan 2014, 11,000 m³/d RO
Shikoku, Japan 2014, 1,400 m³/d RO
Kyushu, Japan 2014, 1,300 m³/d RO
Kanto, Japan 2014, 500 m³/d RO
Chubu, Japan 2014, 400 m³/d RO
Kyushu, Japan 2014, 260 m³/d RO
Kanto, Japan 2014, 150 m³/d RO
Tohoku, Japan 2014, 100 m³/d RO
Chubu, Japan 2013, 1,000 m³/d ED
PT. Citicon BWRO, Indonesia 2013, 264 m³/d RO
PT. Citicon SWRO, Indonesia 2013, 98 m³/d RO
Taiwan 2011, 12,000 m³/d RO
Taiwan 2011, 11,000 m³/d RO
Kyushu, Japan 2011, 2,640 m³/d RO
PT. Indonesia Power SWRO, Semarang, Central Java, Indonesia 2011, 746 m³/d RO
PT. Indonesia Power BWRO, Semarang, Central Java, Indonesia 2011, 634 m³/d RO
Taiwan 2010, 19,200 m³/d RO
Taiwan 2010, 12,000 m³/d RO
China 2010, 3,000 m³/d RO
Hokuriku, Japan 2010, 1,440 m³/d RO
Tomari Nuclear Power Station, Hokkaido, Japan, 3,000 m³/d RO

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Desalination plant supplier

OSMO 42 AM, Tripoli, Libya 2016, 1,200 m³/d RO
 OSMO B 42 AM, Casablanca, Morocco 2016, 1,200 m³/d RO
 FAF 1200-1200, Bejaia, Algeria 2016, 500 m³/d Other
 OSMO B 20 AM, Tunis, Tunisia 2016, 400 m³/d RO
 OSMO S HR 18 AM, Dammam, Saudi Arabia 2016, 200 m³/d RO
 OSMO S HR 10 AM, Split, Croatia 2016, 120 m³/d RO
 2xOSMO B 112 AM, Dakhla, Morocco 2015, 12,000 m³/d RO
 OSMO B 36 AM, Monte Porzio, Italy 2015, 1,200 m³/d RO
 OSMO B 16 AM, Athens, Greece 2015, 400 m³/d RO
 OSMO SHR 36 AM, Athens, Greece 2015, 400 m³/d RO
 C OSMO B 10 AM, Tripoli, Libya 2015, 400 m³/d RO
 HD 6 AM, Tirana, Albania 2015, 200 m³/d RO
 HD 3 AM, Reggio Emilia, Italy 2015, 150 m³/d RO
 3 X OSMO S HR 150 AM, Alexandria, Egypt 2014, 5,000 m³/d RO
 2 X C OSMO B 15 AM, Tripoli, Libya 2014, 1,000 m³/d RO
 OSMO B 40 AM, Kahira, Egypt 2014, 1,000 m³/d RO
 OSMO B 30 AM, Casablanca, Morocco 2014, 900 m³/d RO
 OSMO S HR 42 AM, Crete, Greece 2014, 500 m³/d RO
 2 X C OSMO S HR 15 AM, Valetta, Malta 2014, 400 m³/d RO
 OSMO B 6 AM, Sicily, Italy 2014, 200 m³/d RO
 OSMO 6 AM, Crete, Greece 2014, 200 m³/d RO
 HD 4 AM, Sicily, Italy 2014, 150 m³/d RO
 HD 4 AM, Italy 2014, 150 m³/d RO
 OSMO 4 AM, Crete, Greece 2014, 140 m³/d RO
 OSMO 30 AM, Reggio Emilia, Italy 2013, 900 m³/d RO
 OSMO 12 AM, Tirana, Albania 2013, 400 m³/d RO
 OSMO 9 AM, Bucharest, Romania 2013, 300 m³/d RO
 OSMO S HR 12 AM, Tirana, Malta 2013, 150 m³/d RO
 OSMO HD 6 AM, Brindisi, Italy 2013, 150 m³/d RO
 HD 4 AM, Sicily, Italy 2013, 140 m³/d RO
 HD 3 AM, Reggio Emilia, Italy 2013, 100 m³/d RO
 OSMO HD 4 AM, Monza Brianza, Italy 2013, 100 m³/d RO
 OSMO HD 3 AM, Reggio Emilia, Italy 2013, 100 m³/d RO
 2 X BWRO OSMO 231 AM, Dakhla, Morocco 2012, 17,800 m³/d RO
 BWRO OSMO 150 AM, Osimo, Italy 2012, 5,000 m³/d RO
 2 X C OSMO 18 AM, Isola d'Elba, Italy 2012, 1,400 m³/d RO
 BWRO OSMO 36 AM, Brescia, Italy 2012, 1,000 m³/d RO
 BWRO OSMO 25 AM, Romania, Greece 2012, 750 m³/d RO
 OSMO 20 AM, Perugia, Italy 2012, 600 m³/d RO
 OSMO 18 AM, Vittoria, Italy 2012, 500 m³/d RO
 BWRO OSMO 18 AM, Italy 2012, 500 m³/d RO
 2X BWRO OSMO 10 AM, Libya 2012, 480 m³/d RO
 BWRO HD 4 AM, Italy 2012, 120 m³/d RO
 2XOSMO 18 AM, Nairobi, Kenya 2011, 1,500 m³/d RO
 OSMO 36 AM, Parma, Italy 2011, 1,200 m³/d RO
 OSMO 24 AM, Tunisia 2011, 1,000 m³/d RO
 SWRO OSMO SHR 42 AM, Egypt 2011, 500 m³/d RO
 OSMO 12 AM, Cuneo, Italy 2011, 500 m³/d RO
 CSWRO SHR 25 AM, Cabo Verde, Portugal 2011, 300 m³/d RO
 2XHD2AM, Nairobi, Kenya 2011, 200 m³/d RO
 OSMO 6 AM, Arezzo, Italy 2011, 200 m³/d RO
 OSMO 4 AM, Foggia, Italy 2011, 150 m³/d RO
 2 X BWRO OSMO 2 AM, Nairobi, Kenya 2011, 100 m³/d RO
 OSMO 60 AM, Tripoli, Libya 2010, 2,000 m³/d RO
 OSMO 42 AM, Tripoli, Libya 2010, 1,500 m³/d RO
 OSMO 42 AM +OSMO 20 AM, Theran, Iran 2010, 1,000 m³/d RO

OSMO 42 AM +OSMO 26 AM, Theran, Iran 2010, 1,000 m³/d RO
 OSMO 30 AM, Theran, Iran 2010, 800 m³/d RO
 OSMO 12 AM, Tripoli, Libya 2010, 500 m³/d RO
 OSMO 10 AM, Vittoria, Italy 2010, 500 m³/d RO
 OSMO B 12 AM, Torrita di Siena, Italy 2010, 300 m³/d RO
 OSMO B 8 AM, Athens, Greece 2010, 200 m³/d RO
 2XSHR 8 AM, Nigeria 2010, 200 m³/d RO
 OSMO 6 AM, Sofia, Bulgaria 2010, 150 m³/d RO

Desalination plant supplier/manufacturer

OSMO SHR 54 AM +OSMO 18 AM, Jeddah, Saudi Arabia 2017, 600 m³/d RO
 OSMO 20 AM, Sicily, Italy 2017, 500 m³/d RO
 OSMO SHR 36 AM, Crete Island, Greece 2017, 400 m³/d RO
 OSMO 6 AM, Tbilisi, Georgia 2017, 150 m³/d RO
 OSMO B 60 AM, United Arab Emirates 2016, 1,500 m³/d RO
 OSMO SHR 42 AM, Vanvikan, Norway 2016, 500 m³/d RO

Plant designer & manufacturer

OSMO S 105 AM, Norway 2018, 2,000 m³/d RO
 OSMO S 105 AM, Norway 2018, 2,000 m³/d RO
 OSMO S 105 AM, Norway 2018, 2,000 m³/d RO
 OSMO 90 AM, Dubai, United Arab Emirates 2018, 2,000 m³/d RO
 OSMO 72 AM, Ethiopia 2018, 1,800 m³/d RO
 OSMO 30 AM, Salerno, Italy 2018, 800 m³/d RO
 OSMO 30 AM, Zahle, Lebanon 2018, 800 m³/d RO
 2XOSMO 112 AM, Zagora, Morocco 2017, 5,000 m³/d RO
 C OSMO S 90 AM, Norway 2017, 1,650 m³/d RO
 OSMO 60 AM, Libya 2017, 1,500 m³/d RO
 OSMO 12 AM, Terni, Italy 2017, 300 m³/d RO
 OSMO 18 AM +OSMO 12 AM, Algeria 2017, 300 m³/d RO
 OSMO SHR 18 AM, Crete, Greece 2017, 200 m³/d RO

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SELECTED REFERENCES

Desalination Equipment Supplier

Roy Hill, Piblara, WA, Australia 2018, 20,000 m³/d RO
 CSI, Piblara, WA, Australia 2018, 10,300 m³/d RO
 Energy Resources Australia, Ranger, NT, Australia 2018, 3,000 m³/d RO
 Rio Tinto, Hail Creek, QLD, Australia 2018, 300 m³/d RO
 ESMACC, Pt Augusta, SA, Australia 2018, 150 m³/d RO
 Bendigo, VIC, Australia 2017, 2,000 m³/d RO

Regency Park, SA, Australia 2017, 1,500 m³/d RO
 APR Energy, SA, Australia 2017, 1,200 m³/d RO
 ERM Power, Toowoomba, QLD, Australia 2017, 1,000 m³/d RO
 Yatala, QLD, Australia 2017, 1,000 m³/d RO
 OHL Limited, Oman 2017, 408 m³/d RO
 Penneshaw, SA, Australia 2017, 400 m³/d RO
 South Africa 2017, 240 m³/d Other
 PAX Australia, Ingleburn, NSW, Australia 2017, 200 m³/d RO
 Putatan, Malaysia 2016, 20,000 m³/d RO
 McArthur River, NT, Australia 2016, 4,400 m³/d Other
 Ebeye Island, Marshall Islands 2016, 1,600 m³/d RO
 Burra, SA, Australia 2016, 600 m³/d RO
 Richlands, QLD, Australia 2016, 300 m³/d RO
 New Zealand 2016, 250 m³/d RO
 Salvador, Chile 2016, 240 m³/d RO
 Melbourne, VIC, Australia 2016, 120 m³/d RO
 Murwillumbah, NSW, Australia 2016, 60 m³/d RO
 Onslow, WA, Australia 2015, 7,500 m³/d
 Australind, WA, Australia 2015, 3,000 m³/d RO
 Antucoya, Chile 2015, 3,000 m³/d RO
 Barrow Island, WA, Australia 2015, 2,100 m³/d RO
 Narrabri, NSW, Australia 2015, 1,500 m³/d RO
 Barrow Island, WA, Australia 2015, 860 m³/d RO
 West Pennant Hills, NSW, Australia 2015, 550 m³/d RO
 Onslow, WA, Australia 2015, 370 m³/d
 Ingleburn, NSW, Australia 2015, 200 m³/d Other
 Broken Hill, NSW, Australia 2015, 150 m³/d RO
 Ulan, NSW, Australia 2014, 21,300 m³/d MF/BWRO
 Newman, WA, Australia 2014, 8,000 m³/d Hybrid
 Onslow, WA, Australia 2014, 4,500 m³/d RO
 Antucoya, Chile 2014, 4,000 m³/d SWRO/BWRO
 Darwin, NT, Australia 2014, 1,700 m³/d RO
 Pickanjinie, QLD, Australia 2014, 1,200 m³/d RO
 Angry Jungle, QLD, Australia 2014, 1,200 m³/d RO
 Mt Weld, WA, Australia 2014, 1,200 m³/d RO
 Nauru 2014, 1,000 m³/d RO
 Guyra, NSW, Australia 2014, 1,000 m³/d RO
 Jigalong, WA, Australia 2014, 550 m³/d RO
 Offshore, WA, Australia 2014, 300 m³/d Hybrid
 Cambridge, TAS, Australia 2014, 240 m³/d RO
 Offshore, WA, Australia 2014, 200 m³/d Hybrid
 Cape Lambert, WA, Australia 2014, 100 m³/d Hybrid
 Mt Barker, SA, Australia 2014, 20 m³/d RO
 Heron Island, QLD, Australia 2014, 12 m³/d RO
 Onslow, WA, Australia 2013, 7,500 m³/d MF/SWRO
 Onslow, WA, Australia 2013, 4,500 m³/d MF/SWRO
 Pickanjinie, QLD, Australia 2013, 1,200 m³/d MF/BWRO
 Angry Jungle, QLD, Australia 2013, 1,200 m³/d MF/BWRO
 Nauru 2013, 1,000 m³/d MMF/SWRO
 Channa PS, Thailand 2013, 440 m³/d Hybrid
 Pilbara, WA, Australia 2013, 240 m³/d Hybrid
 Coolaroo, VIC, Australia 2013, 240 m³/d Hybrid
 Collie, WA, Australia 2012, 10,000 m³/d MF/RO
 Pilbara, WA, Australia 2012, 79 m³/d Hybrid
 Ranger, NT, Australia 2011, 11,000 m³/d Hybrid
 Muja Power Station, WA, Australia 2011, 10,000 m³/d Hybrid

One Steel, SA, Australia 2011, 5,100 m³/d Hybrid
 Barrow Island, WA, Australia 2011, 2,100 m³/d MF/SWRO
 Nyrcstar, SA, Australia 2011, 1,600 m³/d Hybrid
 Port Pirie, SA, Australia 2011, 1,600 m³/d MMF/BWRO
 Agnes Water, QLD, Australia 2011, 1,500 m³/d MF/SWRO
 Santos, QLD, Australia 2011, 1,500 m³/d MF/SWRO
 Barrow Island, WA, Australia 2011, 1,400 m³/d MF/SWRO
 Bridging Plant, WA, Australia 2011, 1,400 m³/d RO
 Barrow Island, WA, Australia 2011, 960 m³/d Hybrid
 Merredin, WA, Australia 2011, 250 m³/d RO
 Windibri, QLD, Australia 2010, 6,000 m³/d MF/RO
 Wallerawang Power Station, NSW, Australia 2010, 6,000 m³/d MF/RO
 Temporary Plant, WA, Australia 2010, 2,400 m³/d RO
 Permanent Plant, WA, Australia 2010, 2,100 m³/d RO
 Penrice Soda Products Upgrade, SA, Australia 2010, 1,100 m³/d RO
 Darling Downs Power Station, QLD, Australia 2010, 1,080 m³/d MF/RO
 Cape Preston, WA, Australia 2010, 1,000 m³/d MF/SWRO
 CITIC Pacific Mining, WA, Australia 2010, 1,000 m³/d SWRO
 Demin Plant, WA, Australia 2010, 960 m³/d RO
 Burra, SA, Australia 2010, 500 m³/d MF/BWRO
 Adchem Australia, SA, Australia 2010, 500 m³/d MF/RO
 Cape Preston, WA, Australia 2010, 250 m³/d BWRO
 CITIC Pacific Mining, WA, Australia 2010, 250 m³/d RO

Desalination Rental Projects

NESMA, Saudi Arabia 2018, 14,000 m³/d RO
 Sigma Water Engineering, Kuantan, Malaysia 2018, 1,800 m³/d RO
 SOGEX LLC, Masirah Island, Oman 2018, 1,600 m³/d RO
 Rio Tinto, Lake MacLeod, WA, Australia 2018, 1,400 m³/d RO
 Independence Group, Balladonia, WA, Australia 2018, 1,000 m³/d RO
 WA, Australia 2017, 3,000 m³/d RO
 QFS, Cape Town, South Africa 2017, 2,000 m³/d RO
 BHP Billiton, Olympic Dam, SA, Australia 2017, 2,000 m³/d RO
 Warnambool Cheese & Butter, Allansford, VIC, Australia 2017, 1,200 m³/d RO
 Dubai, United Arab Emirates 2017, 300 m³/d Other
 Yatala, QLD, Australia 2016, 1,000 m³/d RO
 Tieri, QLD, Australia 2016, 250 m³/d Other
 Barka, Oman 2015, 56,800 m³/d RO
 Cyprus 2015, 21,000 m³/d RO
 Broken Hill, NSW, Australia 2015, 10,500 m³/d RO
 Haypoint, QLD, Australia 2015, 10,000 m³/d Other
 SA, Australia 2015, 9,000 m³/d RO
 Mt Isa, QLD, Australia 2015, 4,800 m³/d Other
 Whyalla, SA, Australia 2015, 3,600 m³/d Other
 El Salvador, Chile 2015, 2,000 m³/d RO
 Sierra Gorda, Chile 2015, 1,200 m³/d RO
 WA, Australia 2015, 1,000 m³/d RO
 Onslow, WA, Australia 2015, 1,000 m³/d RO
 Beverley, SA, Australia 2015, 800 m³/d Other
 Botany, NSW, Australia 2015, 800 m³/d RO
 Mandurah, WA, Australia 2015, 500 m³/d RO
 Sydney, NSW, Australia 2015, 200 m³/d RO
 Broome, WA, Australia 2015, 150 m³/d RO
 Barrow Island, WA, Australia 2015, 150 m³/d RO

Mt Isa, QLD, Australia 2014, 20,000 m³/d MF
 Haypoint, QLD, Australia 2014, 10,000 m³/d Other
 SA, Australia 2014, 9,500 m³/d Other
 Mt Garnet, QLD, Australia 2014, 2,500 m³/d MF/RO
 Mt Weld, WA, Australia 2014, 2,400 m³/d Other
 QLD, Australia 2014, 2,000 m³/d Other
 Gladstone, QLD, Australia 2014, 1,200 m³/d RO
 Gladstone, QLD, Australia 2013, 2,500 m³/d MF
 Onslow, WA, Australia 2013, 2,000 m³/d MF/SWRO
 Offshore, Gabon 2013, 300 m³/d SWRO
 Onslow, WA, Australia 2013, 200 m³/d MMF/MF/SWRO
 Whyalla, SA, Australia 2012, 4,100 m³/d MF/SWRO
 Jabiru, NT, Australia 2011, 11,000 m³/d MF/RO
 Barrow Island, WA, Australia 2011, 2,000 m³/d SWRO
 Pooncarrie, NSW, Australia 2011, 200 m³/d MMF/RO
 Barrow Island, WA, Australia 2010, 2,400 m³/d MF/SWRO
 Osborne, SA, Australia 2010, 1,100 m³/d BWRO
 Tumut, NSW, Australia 2010, 900 m³/d MF/RO
 Heron Island, QLD, Australia, 150 m³/d SWRO
 Kiribati Island, Republic of Kiribati, 20 m³/d MF/SWRO

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SELECTED REFERENCES

Equipment supplier

El Galalah, Egypt 2017, 150,000 m³/d
 Putatan WTP, Philippines 2017, 100,000 m³/d
 Khurais, Saudi Arabia 2017, 16,000 m³/d
 Umm Al Houl IWPP, Qatar 2016, 284,000.0
 Barka IWP, Oman 2016, 281,000.0
 Basrah Desalination Plant, Iraq 2016, 200,000.0
 Tuas III, Singapore 2016, 136,000 m³/d
 Cartagena, Spain 2016, 64,000 m³/d
 King Abdullah University, Thuwal, Saudi Arabia 2016, 40,000 m³/d
 Mirfa IWPP, United Arab Emirates 2015, 240,000.0
 Escondida Water Supply, Atacama desert, Chile 2015, 220,000.0
 Qurayyat IWP, Oman 2015, 200,000.0
 Antofagasta, Chile 2015, 85,000.0
 Fujairah IWPP, United Arab Emirates 2014, 455,000.0
 Sadara, Saudi Arabia 2014, 150,000 m³/d
 Al Ghubrah, Oman 2013, 191,000.0
 Orange County GWRS, United States Of America 2012, 265,000.0
 Perth SSDP, Australia 2012, 140,000.0
 Aguilas-Guadaleatin, Spain 2011, 180,000.0
 Jeddah, Saudi Arabia 2011, 57,700.0
 Candelaria Minera, Chile 2011, 45,000 m³/d
 Moncòfa, Spain 2011, 30,000 m³/d
 Las Palmas, Canary Islands, Spain 2010, 75,000.0

Tenerife, Spain 2010, 10,000 m³/d
 Via Maris Desalination, Israel, 624,000.0
 Saudi Arabia, 250,000 m³/d
 Kuwait, 227,100 m³/d
 Brownsville, United States Of America, 227,000.0
 Sant Joan Despi, Barcelona, Spain, 206,000 m³/d
 Carlsbad, United States Of America, 204,000.0
 Tianjin SDIC, China, 200,000.0
 Reliance, Jagmnagar, India, 168,000.0
 Ras Abu Fontas, Qatar, 164,000.0
 Sunbo Unitech Gu-Pyeong Factory, South Korea, 127,425.0
 U.S.A., 125,000 m³/d
 Tampa Bay, Florida, U.S.A., 100,000 m³/d
 American Water Pridesa, United States Of America, 95,000.0
 Sharjah Electricity & Water Authority, United Arab Emirates, 90,920.0
 UTE Desaladora Campo de Cartagena, Spain, 73,973.0
 Plutonio, Angola, 66,027.0
 Luggage Point, Australia, 66,000.0
 San Pedro del Pinatar, Spain, 65,000.0
 Antofagasta, Chile, 51,840.0
 Madinat Yanbu, Saudi Arabia, 50,400.0
 Barka, Oman, 47,317.0
 U.S.A., 45,000 m³/d
 U.S.A., 45,000 m³/d
 Santa Barbara, USA, 33,000 m³/d
 Lancaster, United States Of America, 30,280.0
 U.S.A., 27,000 m³/d
 Lamprell Energy Limited, Saudi Arabia, 25,500.0
 UTE Desaladora Campo de Cartagena, Spain, 20,000.0
 Las Palmas, Canary Islands, Spain, 17,000.0
 Las Palmas, Canary Islands, Spain, 16,000.0
 West Hub (P76), Angola, 15,899.0
 Curacao, Lesser Antilles, 15,850.0
 Five Forks Water Treatment Facility, United States Of America, 14,565.0

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Pentair Advanced Filtration delivers progress in water treatment. We are a leading international producer, developer and distributor of filtration solutions. We help original equipment manufacturers (OEMs), engineering consulting firms and EPC contractors around the world to make the most of filtration technology. With carefully selected partners, we work on innovative concepts and installations that are always up to the job and point to the future of water management.

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Check our websites to find more about our references: advancedfiltration.pentair.com | xflow.pentair.com | codeline.pentair.com

SELECTED REFERENCES

Ashdod, Israel 930,000 m³/d
Shuwaikh RO, Kuwait 350,000 m³/d
Jubail Phase IV, Al Jubail, Saudi Arabia 260,000 m³/d
Jubail Phase II, Al Jubail, Saudi Arabia 240,000 m³/d
Qingdao, China 235,000 m³/d
Nemmeli, Chennai, India 222,000 m³/d
Uramin, Namibia 189,000 m³/d
Beckton, United Kingdom 185,000 m³/d
FEWA Ghalilah, Ras Al Khaimah, United Arab Emirates 171,000 m³/d
FEWA Al Zawrah, Ajman, United Arab Emirates 115,000 m³/d
Barka, Oman 110,000 m³/d
Candelaria, Chile 100,000 m³/d
Palm Jumeirah, Dubai, United Arab Emirates 96,000 m³/d
Sadara, Saudi Arabia 430,000 m³/d

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SELECTED REFERENCES

Project management

Carlsbad Desalination Plant, San Diego, U.S.A., 189,250 m³/d RO
Huntington Beach Desalination Plant, Huntington Beach, U.S.A., 189,250 m³/d RO

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SELECTED REFERENCES

Desalination Plant Supplier

Datang Huangdao Power Plant, China 2017, 5,000 m³/d

Wastewater Reuse Plant Supplier

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Xianyang Road Water Reuse Plant, Tianjin Province, China 2017, 50,000 m³/d RO

Jinmei Mingsheng Dahua Industrial Water Treatment Project (including wastewater treatment, water reuse and desalination systems), Shandong Province, China 2017, 29,520 m³/d RO

Power Generation Engineering Services Co. (PGESCO)

SELECTED REFERENCES

Plant supplier

Burullus Desalination And Water Treatment Facilities, Mediterranean Sea, Egypt 2015, 11,280 m³/d RO

South Helwan Water Treatment Facilities, Egypt 2015, 10,800 m³/d RO

New Capital Water Treatment Facilities, New Capital, Egypt 2015, 9,000 m³/d RO

New West Damietta Desalination and Water Treatment Facilities, Damietta, Egypt 2014, 16,950 m³/d RO

New Assiut Desalination and Water Treatment Facilities, Assiut, Egypt 2014, 12,000 m³/d RO

Banha Water Treatment Facilities, Middle Delta, Egypt 2012, 6,680 m³/d UF

Suez Desalination and Water Treatment Facilities, Suez, Egypt 2012, 6,000 m³/d MED

Al Shabab Desalination and Water Treatment Facilities, Ismailia, Egypt 2011, 18,000 m³/d RO

West Damietta Desalination and Water Treatment Facilities, Damietta, Egypt 2011, 8,880 m³/d RO

El Ain El Sokhna Desalination and Water Treatment Facilities, Sinai, Egypt 2010, 8,000 m³/d MED

Sousa Sea Water Desalination Project, Libya, 40,000 m³/d

Abu Traba Sea Water Desalination Project, Libya, 40,000 m³/d MED

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Desalination plant supplier

Vietnam 2017, 6,000 m³/d RO

Vietnam 2017, 4,080 m³/d RO

Algeria 2017, 2,976 m³/d RO

Austria 2017, 600 m³/d NF

Slovakia 2017, 240 m³/d RO

Sweden 2016, 3,024 m³/d RO

Finland 2016, 1,824 m³/d RO

Algeria 2016, 1,680 m³/d RO

Seychelles 2016, 334 m³/d RO

Jordan 2016, 120 m³/d RO

Algeria 2015, 1,200 m³/d RO

Algeria 2015, 504 m³/d RO

Romania 2015, 360 m³/d RO

Poland 2015, 240 m³/d RO

Morocco 2015, 120 m³/d RO

Israel 2014, 1,440 m³/d RO

Algeria 2014, 504 m³/d RO

Sweden 2014, 384 m³/d RO

Mauritius 2014, 202 m³/d RO

Sweden 2014, 113 m³/d RO

Croatia 2014, 103 m³/d RO

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SELECTED REFERENCES

Equipment supplier

ARCA CONTINENTAL, GUAYAQUIL, Ecuador 2018, 708 m³/d RO

DURAN CITY, DURAN, Ecuador 2018, 650 m³/d RO

GISIS, DURAN, Ecuador 2018, 650 m³/d RO

TESALIA, MILAGRO, Ecuador 2018, 333 m³/d RO

LOGISITC FERDERA, DURAN, Ecuador 2018, 250 m³/d RO

EXPORTQUILSA, DURAN, Ecuador 2018, 250 m³/d RO

ARCA CONTINENTAL, GUAYAQUIL, Ecuador 2017, 654 m³/d RO

ARCA CONTINENTAL, SANTO DOMINGO, Ecuador 2017, 436 m³/d RO

LOGISITC FERDERA, DURAN, Ecuador 2017, 250 m³/d RO

GINSBERG, QUITO, Ecuador 2017, 120 m³/d RO

MALL DEL PACIFICO, MANTA, Ecuador 2017, 80 m³/d RO

OEM Contractor

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

Aqua Sani, Manta, Ecuador 2017, RO

Beautik, Duran, Ecuador 2017, RO

Villa Hermosa, Duran, Ecuador 2016, 400 m³/d RO

Ginsberg Pharma, Quito, Ecuador 2016, 120 m³/d

Propemar, Manta, Ecuador 2016, 100 m³/d RO

Beautik, Duran, Ecuador 2016, 36 m³/d

Agua Lay, Manta, Ecuador 2016, 36 m³/d RO

Agua Activa, Chone, Ecuador 2016, 24 m³/d RO

Fundacion Buen Samaritano, Portoviejo, Ecuador 2016, 24 m³/d RO

Quimica Ariston Pharma, Quito, Ecuador 2016, 12 m³/d RO

Municipio Santa Ana, Santa Ana, Ecuador 2016, 12 m³/d RO

Famagua, Pedro Carbo, Ecuador 2016, 12 m³/d RO

Ramon Dueñas, Chone, Ecuador 2016, 12 m³/d RO

Ginsberg, Quito, Ecuador 2016, EDI

Ginsberg, Quito, Ecuador 2016, RO

Ariston, Quito, Ecuador 2016, RO

Ciauto Car Assembly, Ambato, Ecuador 2015, 60 m³/d RO

Electrocables, Guayaquil, Ecuador 2015, 50 m³/d RO
 Andelas, Ambato, Ecuador 2015, 24 m³/d RO
 Duran City, Duran, Ecuador 2014, 630 m³/d RO
 Duralum, Duran, Ecuador 2014, 87 m³/d RO
 La Fabril, Manta, Ecuador 2014, 72 m³/d RO
 Agua Bonty, Quito, Ecuador 2014, 72 m³/d RO
 Scalpy Cosmetics, Duran, Ecuador 2014, 48 m³/d RO
 Agua Aqua, Manta, Ecuador 2014, 24 m³/d RO
 Agricola El Naranjo S.A., Canoa, Ecuador 2014, 15 m³/d RO
 Montecristi Golf Club, Montecristi, Ecuador 2014, 12 m³/d RO
 Gondi S.A., Manta, Ecuador 2013, 200 m³/d RO
 La Fabril S.A., Manta, Ecuador 2013, 120 m³/d RO
 Agroaves, Duran, Ecuador 2013, 48 m³/d RO
 Agua Tropical, Manta, Ecuador 2013, 24 m³/d RO
 EuroFish S.A., Manta, Ecuador 2012, 600 m³/d RO
 Galapesca S.A., Guayaquil, Ecuador 2012, 600 m³/d RO
 OceanFish S.A., Manta, Ecuador 2012, 200 m³/d RO
 Quimpac S.A., Guayaquil, Ecuador 2011, 240 m³/d RO
 Promarisco S.A. Duran, Duran, Ecuador 2010, 700 m³/d RO
 La Fabril S.A., Manta, Ecuador 2010, 300 m³/d RO
 Guayaquil, Ecuador, 240 m³/d Other
 Duran, Ecuador, 200 m³/d RO
 Puerto Cayo, Ecuador, 200 m³/d RO
 Santa Elena, Ecuador, 200 m³/d RO
 Daule, Ecuador, 170 m³/d RO
 Duran, Ecuador, 100 m³/d RO
 Yaguachi, Ecuador, 72 m³/d RO
 Duran, Ecuador, 72 m³/d RO
 Esmeraldas, Ecuador, 72 m³/d RO
 Guayaquil, Ecuador, 50 m³/d RO
 Pedernales, Ecuador, 48 m³/d RO
 Salinas, Ecuador, 36 m³/d RO
 Machala, Ecuador, 36 m³/d RO
 Quito, Ecuador, 36 m³/d RO
 Ambato, Ecuador, 24 m³/d RO
 Manta, Ecuador, 24 m³/d RO
 Chone, Ecuador, 24 m³/d RO

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Plant supplier

Red Sea Water & Wastewater Company, 1,500 m³/d RO

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SELECTED REFERENCES

Equipment Supplier - Pressure Vessel

Kyianli Desalination DWP, Turkmenistan 2015
 Mirfa, United Arab Emirates 2015
 East Hub, Angola 2015
 Beenyup AWRP, Australia 2015
 Ras Abu Fontas A3, Qatar 2015
 Agadir, Morocco 2015
 INTEGRA (P67 & P70), Brazil 2014
 P76, Brazil 2014
 P74, Brazil 2014
 MV27, Brazil 2014

Granadilla, Tenerife, Spain 2014
 Integra (P67 & P70), Brazil 2014 RO
 Copiapó Expansion, Chile 2013
 Ghana 2013
 UGCC WT PJT , South Korea 2013
 Marica & Saquarima, Brazil 2013
 P66 & P69, Brazil 2013
 Kaust Project , Saudi Arabia 2013
 Modon WTP, Saudi Arabia 2013
 Fujairah, United Arab Emirates 2013
 Rabigh II, Saudi Arabia 2013
 Carlsbad, United States of America 2013
 Copiapo Expansion, Chile 2013
 UGCC WT PJT, Korea (South) 2013 RO
 Marica & Saquarima, Brazil 2013 RO
 P66 & P69, Brazil 2013 RO
 Kaust, Saudi Arabia 2013 RO
 Modon WTP, Saudi Arabia 2013 RO
 Fujairah, United Arab Emirates 2013 RO
 Rabigh II, Saudi Arabia 2013 RO
 Carlsbad, U.S.A. 2013 RO
 Ras Al Khair, Saudi Arabia 2012 310,000 m³/d RO
 Copiapo, Chile 2012
 Petrobras Platform, Brazil 2012
 Orange County GWRD, United States of America 2012
 Nevada Water Systems, United States of America 2012
 Al Zawrah, United Arab Emirates 2012
 West Hub, Angola 2012
 Ghalilah, United Arab Emirates 2012
 Ilhabela, Brazil 2012
 Riyadh Water -NWC, Saudi Arabia 2012
 Shuqaiq Expansion, Saudi Arabia 2012
 Tan Tan, Morocco 2012
 Laayoune, Morocco 2012
 Campo Rubiales, Colombia 2012
 Copiapo, Chile 2012 RO
 Al Zawarah, United Arab Emirates 2012 RO
 West Hub, Angola 2012 RO
 Ghalilah, United Arab Emirates 2012 RO
 Petrobras Platform 2012
 Orange Coutry GWRD 2012
 Nevada Water System, U.S.A. 2012
 Ilhabela, Brazil 2012
 Riyadh Water - NWC, Saudi Arabia 2012
 Shuqaiq Expansion, Saudi Arabia 2012
 Tan Tan 2012
 Laayoune 2012
 Campo Rubiales, Colombia 2012
 Marina Baja -Muxamel, Spain 2011 50,000 m³/d
 Oropesa, Spain 2011 50,000 m³/d
 Ampliación Cabo Verde, Cape Verde 2011 5,000 m³/d
 CLOV Project, Saudi Arabia 2011
 Al Qassim, Saudi Arabia 2011
 Manifa, Saudi Arabia 2011
 Al Aflaj, Saudi Arabia 2011
 Davie, FL, United States of America 2011

Camp Pendelton, CA, United States of America 2011
 Hialeah, FL, United States of America 2011
 Sterling, CO, United States of America 2011
 Ras Al Khair, Saudi Arabia 2011
 FPSO - CLOV, U.K. 2011 RO
 Camp Pendelton, U.S.A. 2011 RO
 Sterling, U.S.A. 2011 RO
 Hialeah, U.S.A. 2011 RO
 Al Qassim, Saudi Arabia 2011 RO
 Manifa, Saudi Arabia 2011 RO
 AL Aflaj, Saudi Arabia 2011 RO
 Davie, U.S.A. 2011 RO
 Magtaa, Algeria 2010 500,000 m³/d
 Melbourne, VIC, Australia 2010 418,000 m³/d RO
 Ténès, Algeria 2010 200,000 m³/d RO
 Adelaide II, Australia 2010 150,000 m³/d
 Adelaide, SA, Australia 2010 150,000 m³/d RO
 Qingdao, China 2010 100,000 m³/d RO
 CPR, Venezuela 2010
 Victorian Desalination Plant -Melbourne , Australia 2010
 Qingdao, China 2010
 Hail Project, Saudi Arabia 2010
 Oxnard, CA, United States of America 2010
 Sea Coast, FL, United States of America 2010
 Muxamel, Spain 2010 RO
 Oropesa, Spain 2010 RO

Proxa

SELECTED REFERENCES

Desalination plant supplier

TRONOX, SOUTH AFRICA, West Coast, South Africa 2018, 1,500 m³/d RO
 Hydrotek desalination system, Kuwait, 24,000 m³/d RO
 STRANDFONTEIN DESALINATION PLANT, CITY OF CAPE TOWN, Cape Town, South Africa, 7,500 m³/d RO
 MONWABISI DESALINATION PLANT, CITY OF CAPE TOWN, Monwabisi, South Africa, 7,500 m³/d RO
 ARCELORMITTAL, SOUTH AFRICA, South Africa, 3,200 m³/d RO
 PENINSULA BEVERAGES, SOUTH AFRICA, Cape Town, South Africa, 2,400 m³/d UF
 AL-DIWAN AL-AMIRI, KUWAIT SWRO PLANT, Al-Diwan Al-Amiri, Kuwait, 2,400 m³/d RO

 SASOL, SOUTH AFRICA, South Africa, 2,400 m³/d RO
 PETROFAC, UNITED ARAB EMIRATES, Zakum Islands, United Arab Emirates, 800 m³/d RO
 Glencore Mine, South Africa, 500 m³/d RO
 MOLYB, CHILE, Chile, 345 m³/d Other/Unknown

Purifics Water

SELECTED REFERENCES

Desalination system supplier

West Texas RO - purifics, Texas, U.S.A. 2015, 3,785 m³/d RO

PWN Technologies BV

📍 Velsersbroek, Netherlands 📞 +31 23 541 3740

SELECTED REFERENCES

Plant supplier

Project Water Treatment Plant Choa Chu Kang Waterworks, Singapore, Singapore, 180,000 m³/d MF (Microfiltration)

Andijk III – PWN, The Netherlands, Andijk, Netherlands, 114,000 m³/d MF (Microfiltration)

PWT

SELECTED REFERENCES

Equipment supplier: chemicals

U.S.A., 378,500 m³/d RO

Philippines, 150,000 m³/d RO

U.S.A., 113,550 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

India, 40,000 m³/d RO

U.S.A., 37,850 m³/d RO

Saudi Arabia, 30,000 m³/d RO

Thailand, 24,000 m³/d RO

Canada, 23,000 m³/d RO

China, 21,575 m³/d RO

U.S.A., 15,140 m³/d RO

Pakistan, 15,000 m³/d RO

U.S.A., 14,762 m³/d RO

United Arab Emirates, 14,000 m³/d RO

Saudi Arabia, 13,000 m³/d RO

Mexico, 11,520 m³/d RO

U.S.A., 11,355 m³/d RO

Thailand, 10,400 m³/d RO

Saudi Arabia, 10,000 m³/d RO

Tunisia, 10,000 m³/d RO

Pakistan, 6,480 m³/d RO

Thailand, 5,000 m³/d RO

Mexico, 3,983 m³/d RO

Egypt, 3,407 m³/d RO

Egypt, 3,028 m³/d RO

Tunisia, 2,500 m³/d RO

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SELECTED REFERENCES

Equipment Supplier

United States 2018 1,298 m³/d MF/UF (Micro/Ultrafiltration)

Guinea 2018 719 m³/d RO

United States 2018 605 m³/d RO

Turkmenistan 2018 528 m³/d RO

United States 2018 408 m³/d RO

United States 2018 265 m³/d RO

United States 2018 151 m³/d RO

Ghana 2018 2 m³/d MF/UF (Micro/Ultrafiltration)

Venezuela 2017 5,460 m³/d RO

United States 2017 2,800 m³/d MF/UF (Micro/Ultrafiltration)

Jordan 2017 1,900 m³/d MF/UF (Micro/Ultrafiltration)

United States 2017 1,750 m³/d MF/UF (Micro/Ultrafiltration)

Guinea 2017 1,200 m³/d RO

Iraq 2016 1,800 m³/d RO

Guatemala 2016 960 m³/d RO

Saudi Arabia 2016 950 m³/d MF/UF (Micro/Ultrafiltration)

Guatemala 2016 454 m³/d MF/UF (Micro/Ultrafiltration)

British Virgin Islands 2016 454 m³/d RO

Niger 2016 400 m³/d RO

Venezuela 2016 330 m³/d RO

Philippines 2016 273 m³/d RO

Ghana 2016 227 m³/d RO

Nigeria 2016 227 m³/d RO

Egypt 2015 3,000 m³/d RO

Philippines 2015 495 m³/d RO

Oman 2015 490 m³/d RO

Philippines 2015 375 m³/d MF/UF (Micro/Ultrafiltration)

United States 2015 246 m³/d Other/Unknown

Oman 2014 2,070 m³/d MF/UF (Micro/Ultrafiltration)

Venezuela 2014 2,000 m³/d RO
United States 2015 246 m³/d Other/Unknown
Oman 2014 2,070 m³/d MF/UF (Micro/Ultrafiltration)
Venezuela 2014 2,000 m³/d RO
Algeria 2014 1,332 m³/d RO
Ecuador 2014 1,020 m³/d RO
Mexico 2014 424 m³/d RO
United States 2013 6,540 m³/d RO
United States 2013 1,363 m³/d RO
Mexico 2013 1,363 m³/d RO
Venezuela 2013 784 m³/d RO
Lebanon 2013 495 m³/d RO
Canada 2012 4,029 m³/d RO
Egypt 2012 3,000 m³/d RO
Iraq 2011 2,670 m³/d RO
Kuwait 2011 1,525 m³/d RO
Egypt 2010 3,000 m³/d RO
Azerbaijan 2010 400 m³/d RO

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SELECTED REFERENCES

Supplier of Electyrodionization (FEDI) units

Sohar Refinery , Sohar, Oman 2014, 10,080 m³/d EDI
ETHYDCO - Alexandria Ethylene Manufacturing , Alexandria , Egypt 2013, 5,040 m³/d EDI
Sabine Pass Liquefaction Project II, Louisiana, United States of America, 25,320 m³/d EDI (Electrodeionization)
PREPA South Coast Steam Power Plant, Puerto Rico, 6,552 m³/d EDI (Electrodeionization)
Petrogas, Turkmenistan, 6,312 m³/d EDI (Electrodeionization)
Anshan Steel, China, 3,120 m³/d EDI (Electrodeionization)
Satah Al Razboot Field Development-EPC Package , United Arab Emirates, 3,000 m³/d EDI (Electrodeionization)
Greenville County Power Station, North Carolina, United States of America, 2,184 m³/d EDI (Electrodeionization)
Brazos Electric Power Co-Op Plant, Johnson County, Cleburne, Texas, United States of America, 1,800 m³/d EDI (Electrodeionization)
Reid Gardner Generation Station Retrofit, Moapa, Nevada, United States of America, 1,200 m³/d EDI (Electrodeionization)
Colorado Bend Energy Center, Wharton, Texas, United States of America, 1,104 m³/d EDI (Electrodeionization)
Quail Run Energy Center, Odessa, Texas, United States of America, 1,104 m³/d EDI (Electrodeionization)
Gainesville Renewable Energy Center, Gainesville, United States of America, 816 m³/d EDI (Electrodeionization)
Bajo Grande, Venezuela , 768 m³/d EDI (Electrodeionization)
Ultratech Cements, India, 504 m³/d EDI (Electrodeionization)
Nacogdoches Power Biomass Generating Facility, Cushing, Texas, United States of America, 336 m³/d EDI (Electrodeionization)
Langley Gulch Combined Cycle Power Plant, New Plymouth, Idaho, United States of America, 192 m³/d EDI (Electrodeionization)

Supplier of Ultrafiltration (Q-SEP) units

Hinduja Power Plant Seawater Desalination, Vizag, India, 39,240 m³/d

Mumbai International Airport Ltd. Wastewater Recycle, Mumbai, India, 7,200 m³/d

Greenville County Power Station, North Carolina, United States of America, 5,184 m³/d

Equate Olefins Petrochemical, Kuwait, 4,824 m³/d

Sutton Combined Cycle Power Plant, Wilmington, North Carolina, United States of America, 3,264 m³/d Other

CPV Valley Energy, New York, United States of America, 2,784 m³/d

Raymonds Textile Effluent, India, 1,536 m³/d

Banswara Syntex Textiles, India, 960 m³/d

Asian Paints, India, 600 m³/d

Puento Alto Cogen Power, Chile, 576 m³/d

Wheelabrator Portsmouth Power Plant, Virginia, United States of America, 408 m³/d

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SELECTED REFERENCES

Engineering Consultancy

Qeshm Island, Hormozgan Province, Iran, 6,000 m³/d MSF

Parsian SWRO, Parsian, Hormozgan Province, Iran, 750,000 m³/d

Bandar Abbas SWRO, Bandar Abbas, Hormozgan Province, Iran, 100,000 m³/d

Reggiane Cranes and Plants

 Reggio Emilia, Italy

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SELECTED REFERENCES

Desalination plant supplier

Sea water desalination plant, Upgrading with heat recovery, Sarroch, Italy 2015, 8,500 m³/d MSF (Multi-stage Flash)

Algeria Mega Deal Project Mostaghanem, Mostaghanem, Algeria 2015, 2,200 m³/d MED

CCPP Ras Djinet, Algeria 2013, 2,200 m³/d MED

Misurata CCPP, Libya 2010, 5,000 m³/d MED

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Equipment supplier - Membranes

Heat and power station 1, Nizhnekamsk, Tatarstan, Russian Federation 2015, 3,984 m³/d RO
Heat and Power station, Orel, Orel region, Russian Federation 2015, 3,600 m³/d RO
Heat and power station 21, Moscow, Moscow region, Russian Federation 2015, 2,400 m³/d RO
Power station 2, Yuzhnouralsk, Chelyabinks region, Russian Federation 2015, 1,620 m³/d RO
Lukoil-Permnefteorgsintez, Perm, Russia 2013, 3,000 m³/d RO
Phosagro, Orel, Russia, 48,000 m³/d RO
Zainskaya Thermal Power Station, Rostov-On-Don, Russia, 2,880 m³/d RO
Shaturskaya Gres Power Plant - A Part Of International E.ON Group, Shatura, Russia, 2,400 m³/d RO
Novocherkassk, Rostov-On-Don, Russia, 2,160 m³/d RO
Orel Heat and Power Station - Affiliate of JSC "QUADRA", Orel, Russia, 2,160 m³/d RO
Volgograd Central Heating and Power Plant, Volgograd, Russia, 2,160 m³/d RO
Nizhnelamsk Heat and Power Station 1 - Affiliate of TGK-16, Nizhnelamsk, Russia, 2,040 m³/d RO
Yuzhnouralsk Power Station 2, Affiliate of JSC Inter-Rao Powergeneration, Yuzhnouralsk, Russia, 1,632 m³/d RO
Kazan Central Heating and Power Plant, Kazan, Russia, 1,440 m³/d RO
JSC "METRAFRAX", Perm, Russia, 840 m³/d RO

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SELECTED REFERENCES

Pressure vessel supplier

El-Alamein Seawater Reverse Osmosis Desalination Plant, El-Alamein, Egypt 2016, 150,000 m³/d RO
Desalination Plant at Marina East DBOO Project, Singapore 2016, 135,000 m³/d
Municipal Water Treatment Project, Australia, 500,000 m³/d
Tuaspring desalination plant, Singapore, 318,500 m³/d
Sohar Sea Water Reverse Osmosis Plant, Sohar, Oman, 250,000 m³/d RO
Changi NEWater Project Phase 2, Singapore, 228,000 m³/d
Changi NEWater RO Water Purification Project, Singapore, 228,000 m³/d RO
Qurayyat Independent Water Project, Qurayyat, Oman, 200,000 m³/d
Carlsbad desalination plant, California, USA, 189,500 m³/d
Doha South Sewage Treatment Works, Doha, Qatar, 187,000 m³/d
Dubai Palm Island Water Treatment Project, UAE, 184,000 m³/d
ZOLAL IRAN JOB Water Block Fajr 2, 120,000 m³/d
TUAS 3rd Desalination Plant, Tuas, Singapore, 113,562 m³/d RO
Kenya Water Treatment Plant (QGC Coal Seam Project), Australia, 100,000 m³/d
Gibson Island Advanced Water Treatment Project, Australia, 100,000 m³/d

QGC LNG Upstream Plant - Phase 2, Australia, 100,000 m³/d
QGC LNG Upstream Plant - Phase 1, Australia, 100,000 m³/d
West Sydney Water Treatment Project, Australia, 90,720 m³/d
Putatan Water Treatment Plant 2, Putatan, Muntinlupa, Philippines, 90,000 m³/d
Anshan CO.,LTD Water Treatment Project, China, 74,400 m³/d
Fengshangxi Plant, Taiwan, 60,000 m³/d
APLNG, Australia, 60,000 m³/d
Tianjin Petrochemical Corporation Water Treatment Project, China, 60,000 m³/d
Handan Steel Group Water Treatment Project, Hebei, China, 57,600 m³/d
Anshan CO.,LTD Water Treatment Project, China, 57,600 m³/d
Taiyuan Steel Group Water Treatment Project, China, 55,200 m³/d
Dalian Petrochemical Corporation Water Treatment Project, China, 50,400 m³/d
50MLD DBOM of the Beetham Water Recycling Plant, Trinidad and Tobago, 50,000 m³/d
Tangshan Caofeidian water desalination project, China, 50,000 m³/d
Bundamba Advanced Water Treatment Project, Australia, 50,000 m³/d
Sharqiyah Desalination Plant, Sur, Oman, 50,000 m³/d
Nine Dragons Paper Ltd Water Treatment Project, China, 48,000 m³/d
Nanbao Reclaimed Water Reuse Project, China, 48,000 m³/d
Baogang Steel Group Water Treatment Project, Hebei, China, 48,000 m³/d
Yizhuang Water Treatment Project, Beijing, China, 43,200 m³/d
Sur, Barbera Sharqiyah, Oman, 42,690 m³/d
Xuanhua Steel Group CO., LTD Water Treatment Project, China, 40,800 m³/d
Taiyuan Steel Group Water Treatment Project, China, 40,800 m³/d
Dawadmi RO Water Plant, Saudi Arabia, 40,000 m³/d
Zhenhai Petrochemical Water Treatment Project, China, 38,400 m³/d
Shenhua Baotou MTO Water Treatment Project, China, 38,400 m³/d
Rizhao Senbo Paper Making Plant, China, 35,000 m³/d
Zhouping Power Plant Water Treatment Project, China, 33,600 m³/d
Tangshan Guofeng Iron and Steel Plant Water Treatment Project(I Phase), China, 33,600 m³/d
Beijing PEK Capital Airport Terminal 3 Water Treatment Project, China, 33,600 m³/d
Yangchen Power Plant Water Treatment Project, China, 31,200 m³/d
Jingdongfang Water Treatment Project, China, 28,800 m³/d
Complexo Petroquímico do Rio de Janeiro, Comperj, Brazil, 28,000 m³/d
Tongxin Water Treatment Project, China, 26,400 m³/d
Jinan Steel Water Reuse Project, China, 26,400 m³/d
Jian Chemical Water Treatment Project, China, 26,400 m³/d
Ghar Lapsi RO Plant, Ghar Lapsi, Malta, 24,000 m³/d RO
Yuhuang Water Treatment Project, Heze, China, 24,000 m³/d
Jun Liangcheng Power Plant Water Treatment Project, Tianjin, China, 24,000 m³/d
Jinxin Petrochemical Water Treatment Project, China, 24,000 m³/d
Expansion of Kranji NEWater Factory, Singapore, 22,730 m³/d
Yangquan Sewage Plant Water Treatment Project, China, 21,600 m³/d
Tangshan Guofeng Iron and Steel Plant Water Treatment Project(II Phase), China, 21,600 m³/d

Changhong Industrial Zone Water Treatment Project, Sichuan, China, 21,600 m³/d

Minmetals Yingkou Medium Plate Co., Ltd Water Treatment Project, China, 19,200 m³/d

Chengde Steel Group Water Treatment Project, China, 19,200 m³/d

Xuanwei Power Generating CO., LTD Water Treatment Project, China, 18,000 m³/d

Shenhua Ningxia Coal Industry Group Co., Ltd BOT Project, China, 18,000 m³/d

Shandong Jindu Electronics CO.,LTD Water Treatment Project, China, 18,000 m³/d

Shengguang Power Plant Water Treatment Project, China, 16,800 m³/d

Jinshi Chemical Fertilizer CO.,LTD Water Treatment Project, Shijiazhuang, China, 16,800 m³/d

Heze Hongye Chemical Water Treatment Project, China, 16,800 m³/d

Guanhua Knitwear Mill Water Treatment Project, Jiang Men, China, 16,800 m³/d

Dushanzi Petrochemical Water Treatment Project, China, 16,800 m³/d

Beijing Beixiaohe WWTP Water Treatment Project, China, 16,800 m³/d

Nanshan Aluminum Material Factory Water Treatment Project, China, 16,320 m³/d

Yueyang Paper Shareholding Company Water Treatment Project, China, 15,600 m³/d

China Petroleum & Chemical Corporation Methanol Filtration Project, China, 14,976 m³/d

China Petroleum & Chemical Corporation Methanol Filtration Project, China, 14,976 m³/d

China Petroleum & Chemical Corporation Methanol Filtration Project, China, 14,976 m³/d

Chongqing Steel Group CO.,LTD Water Treatment Project, China, 14,400 m³/d

Elion Chemical Indusry CO.LTD, Inner Mongolia Water Treatment Project, China, 12,000 m³/d

Sidem Marafiq Saudi Arabia Desalination Project, Jubail, Saudi Arabia, 10,000 m³/d

Liuheng Water Supply Co.Ltd Project, China, 10,000 m³/d

Huangdao Power Plant Seawater Project, China, 10,000 m³/d

Seawater Desalination Project, India, 10,000 m³/d

Huaqiang Petrochemical Water Treatment Project, China, 9,600 m³/d

Shouqin Metel Material CO.,LTD Water Treatment Project, China, 7,200 m³/d

Shanna Synthetic Rubber Corporation Water Treatment Project, China, 7,200 m³/d

Ningxia Eppens Bioengineering CO.,LTD Water Treatment Project, China, 7,200 m³/d

Jinheng Chemical Fertilizer CO.,LTD Water Treatment Project, Hebei, China, 7,200 m³/d

Fujian Fukang Pharmaceutical Co., Ltd Seawater Project, China, 7,000 m³/d

Zouping Thermal Power Plant (II Phase) Water Treatment Project, China, 6,720 m³/d

METITO Seawater Project, UAE, 6,000 m³/d

Indonesia Water Project, Indonesia, 5,000 m³/d

Changtu Seawater Project, China, 5,000 m³/d

India TWAD Seawater Desalination Project, India, 5,000 m³/d

Angamos Phase I , Chile, 4,800 m³/d

Jiaokou Thermal Power Ltd Water Treatment Project, China, 4,800 m³/d

BIGA Seawater Project, Turkey, 4,000 m³/d

Sumatra Island Seawater Desalination Project , Indonesia, 4,000 m³/d

Sumatra Island Seawater Desalination Project , Indonesia, 4,000 m³/d

Shengsi Shiji City Seawater Project, China, 4,000 m³/d

Shengsi Seawater Desalination Project, China, 4,000 m³/d

Isla Maria project, Mexico, 3,600 m³/d

Huawei Thermal Power Co., Ltd Water Treatment Project, Huaifang, China, 3,600 m³/d

Young Heung Power Plant Water Treatment Project, Korea, 2,000 m³/d

City Stars Project, Egypt, 1,500 m³/d

ORIGIN SRO Project, Australia

Baja, Texas Project, México & USA

Water Mobile Equipment, Europe

Namibia Water Treatment Project, Namibia

PetroChina Yunnan Petrochemical Company Limited Wastewater Treatment Plant, China

DOOSAN Water Treatment Project, Saudi Arabia

Doha Water Treatment Project, Qatar

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Valve actuators and control systems

SP9999E, Spain

UA9999A, United Arab Emirates

Chino Creek Well Field I-20, United States of America

Hemlock WTP, United States of America

Holland Board of Public Works, United States of America

Orlando FL - Eastern WRF, United States of America

USA General - JAK - MISC, United States of America

Ad Dur, Bahrain

Hidd Power & Desalination, Bahrain

Larnaca, Cyprus

Sirte Power & Desalination, Libya

Barka Power & Desalination, Oman

Ghubrah Power & Desalination, Oman

Al Jubail Power & Desalination, Saudi Arabia

Al Khobar Phase III, Saudi Arabia

Jeddah, Saudi Arabia

Rabigh, Saudi Arabia

Tuas Power & Desalination, Singapore

Alcudia, Desaladora, Spain

Carboneras Conexion Desaladora, Spain

Denia Desaladora, Spain

Llobregat, Spain

Idam Barcelona, Spain

Puket, Thailand, RO

Al Taweelah, United Arab Emirates

Fujairah Power & Desalination, Dubai, United Arab Emirates

Jebel Ali L, Dubai, United Arab Emirates

Ras Al Khiamah
La Rosiere, U.K.
Chino Desalter II, Riverside County, CA, U.S.A.
WA Desal, Australia
Wonthaggi Desalination Plant, VIC, Australia
Bahrain General Projects, Bahrain
Lorne Park WTP, ON, Canada
Euroguarco Prj, China
KW II, Kuwait
Fire-Fighting System, Saudi Arabia
Industrial Water Pumping Station - Jurong WRP, Singapore
Desaladora Moncofar, Spain
GE Energy, Spain
MTS Valves, Spain
City of Hialeah Deep Injection, FL, U.S.A.
Santa Cruz SWRO, CA, U.S.A.
Desaladora Candelaria, Chile
Sirusa, Malaysia
Rolling Hills, U.S.A.
Thames Water, London, U.K.
Gold Coast Desalination Alliance, Australia
Perth II Southern Seawater Desalination Plant, Australia
Perth Southern Seawater Desalination Plant, Australia
Idam Copiapo Desalination Plan, Chile
Indonesia General Projects, Indonesia
Dead Sea Works Desalination, Israel
Shuwaikh Desalination Station, Kuwait
Oman General Projects, Oman
Philippines General Projects, Philippines
Jubail WTP - Biological Blower, Saudi Arabia
Marafiq & Yanbu, Saudi Arabia
Tuas 2 Project, Singapore
Marin County (Formerly San Raf), U.S.A.
Yorkville Sanitar II, U.S.A.
London Gateway, U.K.
Delta Industrial, U.S.A.
Carlsbad Desalter, United Arab Emirates
Trinidad WI, Trinidad and Tobago
Spain General Project - V/M's, Spain
Spain General Project - Southwest, Spain
Spain General Project - Northwest, Spain
Campo Dalias Almeria, Spain
SWCC Transmission Upgrade, Saudi Arabia
SWCC - Satellite Desalination, Saudi Arabia
SD3881A, Saudi Arabia
Saudi Arabia General Projects, Saudi Arabia
Ras Abu Fontas 2 Desalination, Qatar
Portugal General Projects, Portugal
Mexico General Projects, Mexico
KU9999A, Kuwait
Al Zour North IWPP, Kuwait
Kubota/Yanbu, Japan
Mekorot General Projects, Israel
Ashdod Desalination Plant, Israel
PWD Altinho Panaji-Goa, India
GH9999Z, Ghana

FR9999A, France
CH9999A, Chile
Algeria PF139768, Algeria
SWCC Shoaiba 2 Power and Desalination, Saudi Arabia
Apopka NW WRF Reuse, U.S.A.
Changi Air Base, Singapore
Changi Membrane Bio-Reactor PH, Singapore
Changi Water Reclamation Plant - C21B, Singapore
Changi WRP-EP6, Singapore
Improve Changi WRP, Singapore
NeWater Reservoir Project, Singapore
Valor Blvd Reuse Water System, U.S.A.
ALX9999S, Algeria
CITIC Pacific Mining, Australia
CITIC Pacific Mining Pump St, Australia
Southern Seawater, Australia
Southern Seawater Desalination Plant, Australia
Desaladora Candelaria, Chile
INGIMEX Soprole Water Soften, Chile
Maintenance Desaladora Candela, Chile
Retrofit & Spares Escondida Water, Chile
CZX9999A, Czech Republic
FRX9999Z, France
Phed West Bengal, India
Al-Zour North IWPP, Kuwait
Sohar 3 IWP, Oman
Ras Abu Fontas 2 Desalination, Qatar
Jubail Desalination Plant C8, Saudi Arabia
Saudi Arabia General Projects, Saudi Arabia
Tuas Seawater Desalination Plant, Singapore
Planta desaladora Maspalomas I, Spain
SPX9999C, Spain
SPX9999F, Spain
Djerba Island Water Desalination, Tunisia
Chino I Desalter, USA
Robert Goldsworthy Desalination Expansion, USA
Robert W. Goldsworthy Desalter, USA
United Utilities, United Kingdom
UKXRTWU9, United Kingdom
Citic Pacific Mining-Sino IR, Australia
La Chimba Desalination Plant, Chile
Qurayat IWP Desalination, Oman
Qatar General Projects, Qatar
Containerised Desalination Yan, Saudi Arabia
Shuqaiq Retrofit, Saudi Arabia
Planta Desaladora Maspalomas I, Spain
Chino I Desalter, U.S.A.
Acciona Agua RPC, Venezuela
Venezuela General Projects, Venezuela
Escondida Desalination Plant, Chile
FR9999Z, France
GH9999A, Ghana
Jamnagar Desalination/IDE Plant, India
Israel General Projects, Israel
Korea General Projects, Korea (South)
KR9999X, Korea (South)

Yanbu IWPP Phase 3, Saudia Arabia
 Yanbu IWPP Phase 4, Saudi Arabia
 Idam Granadilla, Spain

Royal Haskoning DHV

KEY REFERENCES: SMART LEAKAGE REDUCTION

Supply of leak & burst detection and localisation machine learning software & systems

Oasen, Netherlands
 PWN, Netherlands
 Brabant Water, Netherlands
 Waterbedrijf Groningen, Netherlands
 Dunea, Netherlands
 WML, Netherlands

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Sacyr Water Services (formerly called Valoriza Agua) is a water treatment company fully owned by the Spanish Sacyr Group. It is included in Sacyr Servives, head of the services activities in the Group.

The main speciality of Sacyr Water is desalination, with many successes in this field since 1995, and more than 2.2 million m³/day (in 100 units) installed or under construction.

Sacyr Water has also built many large size wastewater treatment plants including plants with tertiary processes or new technologies like MBR systems.

Within the industrial sector, the company has installed plants to produce ultrapure water with RO+EDI for power plants, and have also implemented other technologies (chemical dosing, EDR, electro-chlorination, ultra/microfiltration, MBS, etc.) for process water and effluent treatment.

Wastewater reuse is another important activity with technologies including different treatments (UV disinfection, filtration, MF, UF, advanced oxidation and desalination).

Sacyr Water Services has a great number of plants in operation and maintenance (desalination, wastewater, drinking water plants and reuse), with different contract modalities (EPC, BOT, BOO, O&M, Alliance, etc.).

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.

R&D is another key area for the company, with different projects covering most of the technologies and processes.

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Muchamiel, Marina Baja, Spain 2016-2018, 50,000 m³/d RO
 Southern Seawater Desalination Plant, Binningup, Australia 2011-present, 306,000 m³/d RO
 Aguilas, Murcia, Spain 2010-present, 210,000 RO
 Tlemcem, Honaine, Algeria 2010-present, 200,000 m³/d RO

Skikda, Algeria 2010-present, 100,000 m³/d RO
 Las Palmas III, Gran Canaria, Spain 2010-present, 80,000 m³/d RO
 Cuevas de Almanzora, Almeria, Spain 2003-present, 30,000 m³/d RO
 Santa Cruz, Tenerife, Spain 2006-present, 21 m³/d RO

SELECTED REFERENCES: DESALINATION PLANT SUPPLIER

IPW Sohar, Oman 2015, 250,000 m³/d RO
 Newman, Western Australia, Australia 2013, 16,500 m³/d RO
 Mantoverde, Chile 2012, 16,000 m³/d RO
 Southern Seawater Desalination Plant, Binningup, Western Australia, Australia 2011, 306,000 m³/d RO
 Aguilas, Murcia, Spain 2011, 210,000 m³/d RO
 Tlemcem, Honaine, Algeria 2010, 200,000 m³/d RO
 Barcelona, Abrera, Spain 2010, 200,000 m³/d EDR
 Skikda, Algeria 2010, 100,000 m³/d RO

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SELECTED REFERENCES

Desalination/wastewater reuse plant supplier

Sulfate Removal Facilities Project (SRF) - Nanofiltration (NF) Package, Saudi Arabia 2017, 69,273 m³/d RO
 PREPA San Juan Steam Plant (SSSP)-Advance Water Treatment Systems Project, Puerto Rico 2017, 6,549 m³/d RO
 West Bank/Gaza IWP II - Middle Area Desalination Plant Expansion, Gaza Blending Tanks, and Network Improvements Project, Gaza, Palestine 2017, 3,407 m³/d RO
 Seawater RO plant, Mexico 2017, 1,893 m³/d RO

UMM Al Houf IWPP - Water & Wastewater Treatment System(also known as Qatar Facility D), Doha, Qatar 2015, 284,000 m³/d RO

Fargo Membrane WTP and Improvements, Fargo, North Dakota, United States of America 2015, 47,313 m³/d RO

Desalcott Expansion -SWRO Train H, Trinidad and Tobago 2015, 29,523 m³/d RO

Terminal Island Water Reclamation Plant (TIWRP) Advanced Water Purification Facility (AWPF) Ultimate Expansion - RO System, San Pedro, California, United States of America 2015, 22,710 m³/d RO

Karbala Refinery Project - Waste Water Treatment Package, Karbala, Iraq 2015, 12,672 m³/d RO

Tampa Electric Polk Power Station-Reclaimed Water Project (TECO RTP) - Expansion (3er RO Train), Mulberry, Florida, United States of America 2015, 2,347 m³/d RO

Shuqaiq Steam Power Plant (SSPP) – Seawater Desalination & Potable Water Treatment System, Red Sea Coast in Saudi Arabia, Saudi Arabia 2014, 3,596 m³/d RO

Tampa Electric Big Bend Station Unit 1-RO System Upgrade Project , Gibsonton, Florida, United States of America 2014, 1,037 m³/d RO

Milpo Cerro Lindo Desal. Plant- Expansion II, Jahuay Beach, Peru 2014, 1,036 m³/d RO

Pass 1 SWRO Train G & Pass 2 BWRO Trains G and H, Trinidad, Trinidad and Tobago 2013, 57,734 m³/d RO

Water Treatment Plant (WTP) Improvements -NSID, North Springs, FL, U.S.A. 2013, 25,594 m³/d RO

Saudi Elastomers Project -U&O/CB and MTBE Decomposition Facilities - Demineralized Water Units, Al-Jubail, Saudi Arabia 2013, 11,040 m³/d

Pro44 Camp Pendleton Advanced Water Treatment Plant - RO System, Military Base -Southern of CA, U.S.A. 2013, 6,965 m³/d RO

Clearwater Water Treatment Plant No.2- Contract 4: RO Plant Site Expansion Project, Clearwater, FL, USA, U.S.A. 2013, 6,624 m³/d RO

Saudi Elastomers Project -U&O/CB and MTBE Decomposition Facilities - Demineralized Water Units, Al-Jubail, Saudi Arabia 2013, 5,640 m³/d Other

PetroAmazonas -Paka Sur Plant -WWT package, Ecuador 2013, 1,666 m³/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), U.S.A. 2013, 1,211 m³/d NF

Saudi Elastomers Project -U&O/CB and MTBE Decomposition Facilities - Secondary Wastewater Treatment Unit, Al-Jubail, Saudi Arabia 2013, 871 m³/d RO

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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, U.S.A. 2013, Other

Coral Springs BWRO WTP, U.S.A. 2012, 25,551 m³/d RO

Ammonia and Urea, Mary, Turkmenistan 2012, 22,032 m³/d RO

Tampa Electric Polk Power Station-Reclaimed Water Pjt (TECO RTP), Mulberry, FL, U.S.A. 2012, 18,184 m³/d RO

California Valley Solar Ranch - Water System (CVSR-WS), Santa Margarita, CA,, U.S.A. 2012, 77 m³/d RO

Shoaibah II -CCPP, Saudi Arabia 2012, Other

Ras Al Khair (Former Ras Az Zawr), Ras Al Khair, Saudi Arabia 2011, 35,686 m³/d SWRO

Chino II Desalter Expansion, U.S.A. 2011, 22,712 m³/d RO

GWRS (Ground Water Replenishment System) Project- Orange County, Fountain Valley, CA, U.S.A. 2011, 18,911 m³/d RO

West Basin Municipal Water District - Phase V Expansion of Edward C. Little Water Recycling Facility, El Segundo CA, U.S.A. 2011, 9,556 m³/d

Sanmen, Qingdao, China 2011, 8,501 m³/d SWRO

Bayonne, NJ, U.S.A. 2011, 4,353 m³/d UF, BWRO+EDI

Mong Doung II - WT, Mong Doung, Vietnam 2011, 3,000 m³/d SWRO

Awar Awar, Indonesia 2011, 2,000 m³/d SWRO

Cerro Lindo Project - Expansion Phase III, Cerro Lindo, Peru 2011, 1,000 m³/d SWRO

Ann Binh SWRO Project, An Binh Island, Vietnam 2011, 182 m³/d

Mong Doung II - WWT, Mong Doung, Vietnam 2011

Dateland Public Service Co., Dateland, U.S.A. 2011

Ghana SWRO Accra, Ghana 2010, 20,000 m³/d SWRO

Kings Bay Naval Base, Kingsway, GA, U.S.A. 2010, 7,571 m³/d RO

Keansburg, NJ, U.S.A. 2010, 4,428 m³/d RO

Canyon Power Plant, Anaheim, CA, U.S.A. 2010, 3,255 m³/d RO

GCC WTP, Um Babb, Qatar 2010, 2,500 m³/d RO

East End Housing, Baghdad, Iraq 2010, 606 m³/d RO

Ecopetrol, Colombia, 60,566 m³/d UF/BWRO

Santa Clara, U.S.A., 30,283 m³/d RO

NSID RO WTP Improvements, U.S.A., 25,551 m³/d BWRO

Tampa Electric Polk Power Station-Reclaimed Water Project (TECO RTP), U.S.A., 9,085 m³/d BWRO

Prisión Federal Islas Marías - Project I, Mexico, 1,236 m³/d SWRO

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SELECTED REFERENCES

Desalination systems supplier

New Build Cruise Ship, Germany 2016, 2,400 m³/d RO

Naval Retrofit - 16 x 35 m³/d, Australia 2016, 560 m³/d RO

HMS Scott, Naval Ship, U.K. 2015, 30 m³/d RO

New Build Research Ship, Italy 2015, 15 m³/d RO

New Build Cruise Ship, Germany 2014, 2,400 m³/d RO

HMS Ocean, Naval Ship, U.K. 2014, 300 m³/d RO

New Build Patrol Vessels, Malaysia 2014, 240 m³/d RO

V Class, Submarine, U.K. 2014, 36 m³/d RO

FPSO, United Kingdom 2014, 30 m³/d RO

RFA Fort Victoria, Support Ship, U.K. 2013, 160 m³/d RO

CNR Tiffany, Offshore Oil Platform, U.K. 2013, 160 m³/d RO

New Build Cruise Ship, Germany 2012, 2,400 m³/d RO

Cruise Ship, U.S.A. 2012, 800 m³/d RO

Dairy, Cheshire, U.K. 2012, 777 m³/d RO

CVF Aircraft Carrier, U.K. 2012, 525 m³/d RO

Naval, Portsmouth, U.K. 2012, 80 m³/d RO

Oil Rig, Offshore, U.K. 2012, 65 m³/d RO

Oil Rig, Offshore, U.K. 2012, 45 m³/d RO

Oil Rig, Offshore, U.K. 2012, 18 m³/d RO

Total A15, Offshore Oil Platform, Netherlands 2012, 15 m³/d RO

Montrose BLP, Offshore Oil Platform, U.K. 2012, 12 m³/d RO
 Naval, Portsmouth, U.K. 2012, 3 m³/d RO
 Windfarm, Netherlands 2012, 1 m³/d RO
 Afghanistan, U.K. 2012, NF
 New Build Cruise Ship, Germany 2011, 900 m³/d RO
 CVF Aircraft Carrier, U.K. 2011, 525 m³/d RO
 Illustrious, Aircraft Carrier, U.K. 2011, 150 m³/d RO
 Oil Rig, Offshore, U.K. 2011, 25 m³/d RO
 Belfast, U.K. 2011, 2 m³/d RO
 New Build Cruise Ship, Germany 2010, 900 m³/d RO
 Symphony, Cruise Ship, U.S.A. 2010, 400 m³/d RO
 Ascension Island 2010, 240 m³/d RO
 St. Albans, Frigate, U.K. 2010, 80 m³/d RO
 Somerset, Frigate, U.K. 2010, 80 m³/d RO

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Plant supplier

Takreer RRE Project 3 U&O, Abu Dhabi, United Arab Emirates 2014, 33,600 m³/d MSF
 Asan New City Sewage Reuse Project, Asan, Korea (South) 2014, 27,000 m³/d RO
 Q PJT (Phase-I) UPW/Reclaim System, Tangjung, Korea (South) 2014, 20,000 m³/d RO
 SEC Kiheung K1 UTI, Hwasung, Korea (South) 2014, 12,000 m³/d RO
 SEMV WWT Project, Thai Nguyen, Vietnam 2014, 10,800 m³/d RO
 SEC Hwasung 16 Line Acid/Alkali Reuse, Hwasung, Korea (South) 2014, 3,920 m³/d RO
 SEC Semicon Xian TEN PJT, Xian, China 2014, 3,000 m³/d RO
 SEC Semicon Xian TEN UPW PJT, Xian, China 2014, 1,248 m³/d RO
 SEC Semicon Xian M Project PH-2, Xian, China 2013, 4,000 m³/d RO
 SSL PH-I, Suzhou, China 2012, 27,000 m³/d RO
 Recycle Phase II, Tangjung, Korea (South) 2012, 25,000 m³/d RO
 SDC A2E, Tangjung, Korea (South) 2012, 20,000 m³/d RO
 SEC Semicon Xian M Project, Xian, China 2012, 12,000 m³/d RO
 SEC Hwasung 16Line B2, Hwasung, Korea (South) 2012, 7,800 m³/d RO
 SEC Onyang Plant EXP-5, Onyang, Korea (South) 2012, 2,400 m³/d RO
 A2 Phase II, Tangjung, Korea (South) 2011, 45,000 m³/d RO
 V-1 Phase I, Tangjung, Korea (South) 2011, 30,000 m³/d RO
 A2 Phase I, Tangjung, Korea (South) 2011, 20,000 m³/d RO
 SCP 2 Phase III, Tangjung, Korea (South) 2011, 4,300 m³/d RO
 Recycle Phase I, Tangjung, Korea (South) 2010, 10,000 m³/d RO
 C 5.6L TI-CU Capa-up, Cheonan, Korea (South) 2010, 5,500 m³/d RO
 15L Acid/Alkali Recovery, Hwasung, Korea (South) 2010, 4,489 m³/d RO
 C 6L PLS 15K Capa-up, Cheonan, Korea (South) 2010, 2,500 m³/d NF

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Condenser Tube Supplier

Reliance, Jamnagar, Gujarat, India 2013, 72,000 m³/d MED
 Tianjin SDIC, Tianjin, China 2010/2013, 200,000 m³/d MED

Sasakura Engineering Co Ltd

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EPC contractor

PLN/Hutama Karya, Muara Tawar, Indonesia, Indonesia 2018, 2,000 m³/d MSF (Multi-stage Flash)
 PLN/MHPS, Tanjung Priok, Indonesia, Indonesia 2017, 300 m³/d MED
 Shoaibah 2, Saudi Arabia 2015, 91,200 m³/d MED
 AJ2 C4 Rehabilitation, Saudi Arabia 2014, 231,000 m³/d MSF (Multi-stage Flash)
 Salalah Metanol Project, Salalah, Oman 2013, 4,560 m³/d MED
 Hawar, Bahrain 2013, 300 m³/d MED
 Cilacap RFCC Project, Cilacap, Indonesia 2012, 27,090 m³/d MSF
 Guacolda, Chile 2012, 1,584 m³/d VC
 Tanjung Priok, Central Java, Indonesia 2011, 1,220 m³/d MED
 Hakuryu-5, Japan 2011, 120 m³/d VC

Satellytics

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Watershed and water quality analysis of the Catawba-Wateree River: Chlorophyll-a, Phycocyanin, Total Phosphorus, and Copper.

Black & Veatch, Kansas City, MO, U.S.A.

Evaluation of excess thermal discharge from a power plant on Lake Michigan, using satellite imagery

Ramboll Environ, Arlington, VA, U.S.A.

Metals analysis in water

BP Remediation Services, Naperville, IL, U.S.A.

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📍 CROP Plant, Jeddah ☎ 966-12-6076672

📍 SOJECO Plant, Jeddah ☎ 966-12-2902156

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SAWACO - Water Desalination

ISO9001:2008, ISO14001:2015, OHSAS 18001:2007 and HACCP Certified

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 is certified by internationally recognized quality, environment, health & safety management systems and standards such as ISO9001: 2008, ISO14001:2015, OHSAS 18001:2007 & HACCP.

SAWACO currently owns over 40,000 m³/day desalination capacity with its multi-plants under 24 hours operation. In addition, a new plant with capacity of 9,000m³/day is under construction. 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's line of business includes BOT and BOO solutions for the provision of desalinated water both public and private sectors throughout MENA region. In addition, Sawaco undertakes Operation & Maintenance of desalination plants all over MENA region.

www.sawaco.com

SELECTED REFERENCES

Developer and O&M

Store City Plant, Jeddah, Saudi Arabia, 5,000 m³/d RO (under construction)

South Jeddah Corniche Desalination Plant (SOJECO), Jeddah, Saudi Arabia 2010, 15,000 m³/d RO

Rosewood Corniche Hotel, Jeddah, Saudi Arabia 2010, 1,000 m³/d RO

Plant Owner

South Jeddah Corniche (SoJeCo), Jeddah, Saudi Arabia 2013, 15,000 m³/d RO

Store City Plant, Jeddah, Saudi Arabia, 5,000 m³/d RO (under construction)

3 Multiple Compact Units, Jeddah, Saudi Arabia, 9,000 m³/d RO (under construction)

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SELECTED REFERENCES

Developer, investor

Bandar Gaz Desalination Plant, Bandar Gaz, Iran 2016, 2,000 m³/d RO

Persian Gulf, Iran 2015, 200,000 m³/d RO

Eshtehard, Iran 2015, 5,000 m³/d RO

Khorramshahr water treatment plant, Khorramshahr, Iran, 70,000 m³/d Other/Unknown

Abadan water treatment plant, Abadan, Iran, 50,000 m³/d Other/Unknown

Khorramshahr desalination plant, Khorramshahr, Iran, 15,000 m³/d RO

Abadan desalination plant, Abadan, Iran, 15,000 m³/d RO

Bandar Lengeh desalination plant, Bandar Lengeh, Iran, 8,800 m³/d RO

Scinor Membrane Technology

SELECTED REFERENCES

Equipment Supplier

Beijing Changping New City Regeneration Water Plant, Beijing, China 2015, 22,000 m³/d UF

Beijing Future Science and Technology City Water Plant, Beijing, China 2012, 80,000 m³/d UF

Beijing BDA East Regeneration Water Plant, Beijing, China 2012, 10,000 m³/d RO

Equipment Supplier (replacement)

Orange County Water District, Los Angeles, CA, U.S.A. 2018, 18,000 m³/d RO

Shenhua Ningxia Coal Group Olefin cleaning water UF workshop, Ningxia, China 2017, 70,000 m³/d RO

West Basin Municipal Water District, Los Angeles, CA, U.S.A. 2017, 48,000 m³/d RO

Scinor Water America

SELECTED REFERENCES

UF membrane supplier

West Basin Edward C. Little Water Recycling Facility, El Segundo, CA, U.S.A. 2017, 41,639 m³/d RO

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SELECTED REFERENCES

Desalination plant owner

Salalah Independent Water and Power Plant, Oman 2012, 68,190 m³/d RO

Wastewater Reuse BOO

Changzhi Industrial Water Plant, China, 1,267,200 m³/d Sand filtration

Changzhi Reclaimed Water Plant, China, 38,400 m³/d RO

Changzhi Industrial Wastewater Plant, China, 35,040 m³/d

Servelec

SELECTED REFERENCES: SMART LEAKAGE REDUCTION

Portsmouth Water, Portsmouth, U.K. 2016

Software platform supply

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Seven Seas Water offers Water-as-a-Service™ solutions by providing outsourced desalination and wastewater treatment services for governmental, municipal, industrial and hospitality customers. Our solutions utilize seawater reverse osmosis and other purification technologies to produce potable and high purity industrial process water. Our containerized or modular equipment allows for quick commissioning and expansion of production capacity. We design, finance, construct and operate the water treatment facilities and long-term agreements guarantee our customers a specified quality and quantity of water. Our customers benefit from a highly reliable, long-term clean water supply with predictable pricing, limited or no capital investment and outsourced management of operations and maintenance.

Seven Seas Water, based in Tampa, Florida, operates facilities in seven countries across the Caribbean and in Chile and Peru.

Seven Seas Water is a subsidiary of AquaVenture Holdings Limited, a multinational provider of Water-as-a-Service™ solutions that provide our customers with a reliable and cost effective source of clean drinking and process water.

SELECTED REFERENCES

Water Supplier

Aquas de Bayovar, Piura, Peru 2016 10,220 m³/d RO

Richmond Estate Power Plant Land Based Facility, St. Croix, United States Virgin Islands 2012 14,004 m³/d RO

Randolph E Harley Power Plant Land Based Facility, St. Thomas, United States Virgin Islands 2011 12,490 m³/d RO

Limetree Bay Terminals, St. Croix, United States Virgin Islands 2011 2,462 m³/d RO

Point Fortin SWRO, Point Fortin, Trinidad and Tobago 2010 25,362 m³/d RO

Paraquita Bay, Tortola, British Virgin Islands 2010 10,598 m³/d RO

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SELECTED REFERENCES

Desalination plant supplier

Hebei Fengyue SWRO Project, Hebei China, Tangshan, Hebei, China 2018, 75,000 m³/d RO

Medan KIM Industry Park SWRO Project, Indonesia, Medan, North Sumatra, Indonesia 2018, 6,552 m³/d RO

Zhejiang Petroleum & Refinery Company, Ningbo, Zhoushan, China 2017, 105,000 m³/d MED

Hebei Fengyue SWRO+MED Project, Hebei China, Tangshan, Hebei, China 2017, 25,000 m³/d MED

Hengyi PBM Petrochemical MED Project, Brunei, Pualu Muara Besar, Serasa, Brunei Darussalam 2016, 37,500 m³/d MED

Qinghuang Dao Thermal Power Plant, Qinghuang Dao, China 2016, 6,000 m³/d MED

Yangxi Power Plant Phase II RO project, Guangdong, China, Yangxi, Guangdong, China 2016, 4,128 m³/d RO

Balingian 2x300MW Power plant RO project, Balingian, Sarawak, Malaysia 2015, 3,312 m³/d RO

Bao Steel Zhangjiang Manufacturement Base, Zhanjiang, Donghai Island, China 2014, 30,000 m³/d MED

PCPC Power Plant SWRO Project, Philippine, Concepcion, Lloilo, Philippines 2014, 2,640 m³/d RO

Concepcion Coal Fired Power Plant, Barangay Nipa, Panay Island, Philippines 2014, 2,640 m³/d RO

Yemen Refinery and Chemical Plant, Aden, Yemen, Aden, Yemen 2014, 2,160 m³/d MED

Wassit Power Plant RO Project, Iraq, Zobidia, Wassit, Iraq 2013, 4,800 m³/d RO

Guohua Power Plant Phase III, Hebei, China, Cangzhou, Hebei Province, China 2012, 25,000 m³/d MED

Vietnam Electricity Vinh Tan 3x600MW Power Plant SWRO project, Vinh Tan, BinhThuan, Vietnam 2011, 9,600 m³/d RO

Huilai Power Plant SWRO Project, Guangdong, China, Huilai, Guangdong, China, 10,080 m³/d RO

Pelabuhan Ratu Power Plant SWRO Project, Indonesia, Pelabuhan Ratu, Sukabumi, Indonesia, 7,680 m³/d RO

Hebei Qinhuang Island desalination project for thermal power plant, Qinghuang Island, Hebei, China, 6,000 m³/d MED

Shanghai SafBon Water Service

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Desalination/wastewater reuse plant supplier

Water Supply Project, Jinzhou, China (250,000 t/d), Jinzhou, Liaoning Province, China, 250,000 m³/d Other/Unknown

Cangzhou Seawater Reverse Osmosis Desalination Plant Project (100,000 t/d), Bohai Development Zone, Cangzhou, Hebei Province, China, 100,000 m³/d RO

Novel Pretreatment Process for Seawater Desalination in Yingkou (100,000 t/d), Yinkou, China, 100,000 m³/d RO

Reclaimed Water Advanced Treatment for Shouyangshan Power Plant (2x600MW), Shouyangshan, Henan Province, China, 80,000 m³/d Other/Unknown

Xingyi Municipal Supply Water Project (30,000 t/d), Xingyi, Guizhou Province, China, 30,000 m³/d Other/Unknown

ZLD for the Uzbekistan Navoi Petrochemical Plant, Uzbekistan, 14,880 m³/d RO

Sanmen Nuclear Power Plant Desalination Project, Sanmen, Zhejiang Province, China, 8,496 m³/d RO

Harsh Produced Water Treatment for Shengli Oil Field, Binzhou, Shandong Province, China, 5,000 m³/d RO

Flue Gas Desulfurization Waste Water Treatment for Yongji Power Plant (2x300MW), Yongji, Shanxi Province, China, 2,640 m³/d Other/Unknown

Sigma Water Engineering

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Design, procurement and Installation

Selangor overview wastewater treatment plant, Selangor, Malaysia, 48,000 m³/d RO

Saudi Arabia Food and Beverage WWTP, Saudi Arabia, 5,280 m³/d RO

Mbarara Brewery 2, Mbarara, Uganda, 3,600 m³/d UF (Ultrafiltration)

Mbarara Brewery 1, Mbarara, Uganda, 3,120 m³/d UF (Ultrafiltration)

Selangor UF Skid, Selangor, Malaysia, 2,400 m³/d RO

Johor Food and Beverage, Johor, Malaysia, 2,400 m³/d MBR (Membrane Bioreactor)

Selangor Brewery, Selangor, Malaysia, 2,400 m³/d RO

Egypt Dairy Products factory, Egypt, 1,680 m³/d RO

Australia Containerized BWRO System, Australia, 1,500 m³/d RO

Doha Drinking Water Plant, Doha, Qatar, 768 m³/d RO

Selangor UF Skid 2, Selangor, Malaysia, 400 m³/d MBR (Membrane Bioreactor)

Sabah Sea Water Desalination Plant, Sabah, Malaysia, 168 m³/d RO

Oman Sea Water Desalination Plant, Oman, 140 m³/d RO

SIDEM (Société Internationale de Dessalement)

 Paris, France



SIDEM, subsidiary of Veolia Water Technologies (VWT), has over 100 years of experience in desalination dating back to the first thermal desalination units in 1890's.

Benefiting from references of hundreds of running facilities around the world, SIDEM is committed to deliver reliable desalination plants that meet customer's expectations in terms of quality, delivery time and cost. SIDEM can rely on its regional offices (Abu Dhabi, Saudi Arabia, India ...) and on VWT which provide local commercial support, engineering services, as well as resources in field activities.

With a total of 6,000,000 m³/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. For instance in enhancing advanced pre-treatment solutions for SWRO plants, SIDEM has allowed drastic reduction of plants footprint, significant decrease of electrical and chemical consumption as well as overall improvement of the plants performance.

SELECTED REFERENCES

Thermal Desalination - Design and Build

Shougang - Unit 5, Caoheidian, China 2016 35,000 m³/d
Az Zour North 1 IWPP, Kuwait 2013 490,970 m³/d

Membrane Desalination - Design and Build

Sharqiyah Desalination - Expansion, Sur, Oman 2015 48,000 m³/d
BWSIP P3 & P4, Basrah, Iraq 2014 199,000 m³/d
Masdar - Renewable Energy Desalination Program, Abu Dhabi, United Arab Emirates 2014 300 m³/d
Sadara (Marafiq) SWRO, Al Jubail, Saudi Arabia 2013 178,800 m³/d
Aruba desalination plant, Aruba 2012 24,000 m³/d
Az Zour South SWRO, Az Zour, Kuwait 2011 136,000 m³/d

Shimmick Construction

SELECTED REFERENCES

Construction

Robert Goldsworthy De-salter Expansion, Torrance, California, U.S.A., RO

SIMONA AG

 Kirn, Germany

 +49(0)6752 14 0

www.simona.de



GLOBAL THERMOPLASTIC SOLUTIONS

Plastic piping systems for water treatment

SIMONA is acknowledged as one of the leading producers and development partners in the field of thermoplastics. We are able to offer you best-in-class solutions tailored to your applications: in the chemical processing industry, in the water and energy supply sector as well as in the field of environmental technology, mobility, construction and agriculture. What is more, our operations span the globe.

SIMONA supplies PE and PP piping system components used in state-of-the-art water treatment units, e.g. desalination plants. The thermoplastic pipes and fittings are ideally suited to this thanks to the high air temperature, and solar and UV radiation. Due to our in-house plastic workshop, we are able to realise individual designs and, e.g., to deliver the distribution racks with pre-welded sockets directly to the construction site. We deliver the component "in one piece", thereby reducing assembly times. Our excellent process engineering, quality and best-in-class technical service have been inextricably linked with the SIMONA name for the last 160 years.

National and international approvals:

DVGW, SVGW, IIP, NF, NSF, WRAS, KIWA, DIBt, TÜV, VIK-HR, FM approved

Key contact:

Mr. Daniel Gebhardt

Business Development Manager Desalination and Water Treatment

Email: daniel.gebhardt@simona.de

Mobile: +49 (0) 171 4048127

For more information visit: www.simona.de/desalination

SELECTED REFERENCES

Soreq Desalination Plant, Israel, 540,000 m³/d RO
Changi II NEWater plant, Singapore, 228,000 m³/d RO
Doha (Kuwait) SWRO, Kuwait City, Kuwait, 227,300 m³/d RO
Tianjin SDIC Desalination Plant, China, 200,000 m³/d MED
Carlsbad SWRO, USA, 189,250 m³/d RO
Jamnagar Refinery J3 expansion, India, 168,000 m³/d RO
Vasilikos power plant, Cyprus, 60,000 m³/d RO
Rizal WTP, Province of Rizal, Philippines, 50,000 m³/d RO
Palmachim SWRO Expansion, Palmachim, Israel, 41,000 m³/d RO

South Raadab Engineering Company

📍 Tehran, Iran

☎ +98 21 8878 9227

✉ info@raadab.com

www.raadab.com

SELECTED REFERENCES

Investment and Operation

Torkman & Gomishan, Torkaman Port, Gorgan, Iran 2014, 7,600 m³/d RO
Zahedan-2, Zahedan, Sistan & Baloochestan, Iran 2013, 2,500 m³/d RO
Zahedan-1, Zahedan, Sistan & Baloochestan, Iran 2011, 20,000 m³/d RO
Dargahan, Hormozgan, Iran 2010, 6,500 m³/d RO

SPI Engineering

SELECTED REFERENCES

Membrane process consultant

Fridley Membrane Filtration Plant, Minneapolis, Minnesota, U.S.A., 359,613 m³/d UF (Ultrafiltration)
Scottsdale Water Campus - Phase 4 Expansion, Scottsdale, AZ, U.S.A., 200,626 m³/d RO
Tucson Water Quality Improvements Program Phase I and II, Tucson, AZ, U.S.A., 189,270 m³/d RO
Central Arizona Project (CAP) WTP Expansion, Phoenix, AZ, U.S.A., 151,416 m³/d RO
Scottsdale Water Campus - Phase 3 Expansion, Scottsdale, AZ, U.S.A., 112,805 m³/d RO
Chaparral Water Treatment Plant, Chaparral, NM, U.S.A., 109,777 m³/d MF (Microfiltration)
Scottsdale Water Campus RO System Expansion, Scottsdale, AZ, U.S.A., 90,471 m³/d RO
San Patricio (2008 improvements), San Patricio, TX, U.S.A., 79,493 m³/d MF (Microfiltration)
Scottsdale Water Campus (Phase 1 and 2), Scottsdale, AZ, U.S.A., 77,601 m³/d RO
Chino I Desalter, Chino, CA, U.S.A., 60,566 m³/d RO
Temescal Desalter, Corona, CA, U.S.A., 56,781 m³/d RO
Yucaipa Valley Water District Regional Water Filtration Facility, Yucaipa, CA, U.S.A., 45,425 m³/d MF (Microfiltration)
San Patricio Plant C Expansion 2005, San Patricio, TX, U.S.A., 42,775 m³/d MF (Microfiltration)
Edward C. Little WRF Phase IV Expansion, Carson, CA, U.S.A., 41,639 m³/d RO
Chino II Desalter, Chino, CA, U.S.A., 37,854 m³/d RO
Bullard Water Campus, Goodyear, AZ, U.S.A., 37,854 m³/d RO
Henry N. Wochholz Regional WRF - YVWD, CA, U.S.A., 25,362 m³/d MF (Microfiltration)
Columbia Heights Membrane Filtration Plant, Columbia Heights, Minnesota, U.S.A., 24,605 m³/d RO
Irvine Desalter Project, Orange County, CA, U.S.A., 24,605 m³/d RO
St. Helen's Water Treatment Plant, St. Helens, Oregon, U.S.A., 22,712 m³/d MF (Microfiltration)
Edward C. Little WRF Phase III Expansion, Carson, CA, U.S.A., 20,441 m³/d RO

Carson Regional Water Recycling Facility, Carson, CA, U.S.A., 18,927 m³/d RO

Healdsburg Wastewater Treatment Plant, Healdsburg, CA, U.S.A., 15,142 m³/d MBR (Membrane Bioreactor)

Exxon-Mobil Boiler Feed Project, Torrance, CA, U.S.A., 12,113 m³/d RO

Edward C. Little WRF Phase II Expansion, Carson, CA, U.S.A., 9,464 m³/d RO

Goldworthy Desalter, Los Angeles, CA, U.S.A., 9,464 m³/d RO

Cabezon WRF, Rio Rancho, NM, U.S.A., 6,814 m³/d MBR (Membrane Bioreactor)

Yucaipa Valley Water District Interim Water Plant, Yucaipa, CA, U.S.A., 3,785 m³/d MF (Microfiltration)

City of Filer, ID Wastewater Treatment Plant, Filer, ID, U.S.A., 3,558 m³/d MBR (Membrane Bioreactor)

Doheny Ocean Desalination Project Phase 3, Orange County, CA, U.S.A.

SS Gas Lab Asia

📍 New Delhi, India

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http://ssgaslab.com/



GASLAB is the Asian leader for smarter, safer and greener CO₂ technology solutions. Designed for high efficiency pH control, the CIS® range of advanced solutions offer superior dissolution and conversion, are easy to maintain and inexpensive to own. From onsite generation to flue stack recovery to injection from storage, GASLAB serves the complete CO₂ spectrum for water treatment facilities.

With decades of deep technical experience in application oriented solutions in over twenty countries, GASLAB has successfully delivered more than 200 systems worldwide ranging in size and complexity.

Focussed on producing industry specific research, the GASLAB R&D centre enjoys technical collaborations with leading engineering institutes in Europe and Asia. In-house manufacturing capability for pressure vessels, heat exchangers, boilers and columns ensure tighter quality control, high availability, reduced delivery time and costs. GASLAB's manufacturing unit regularly produces vessels compliant with ASME U-Stamp, CE Marking and other local specialized standards. As an organization committed to the protection of environment, GASLAB has technology offerings in Carbon Capture & Sequestration, Waste-to-Energy, and Sustainable agriculture.

SELECTED REFERENCES

CO₂ Generation System

Congo 2017 840 m³/d
 Iran 2016 9,000 m³/d
 Algeria 2015 9,000 m³/d
 Iran 2015 9,000 m³/d
 Algeria 2015 9,000 m³/d
 Iran 2015 9,000 m³/d
 Mozambique 2015 600 m³/d
 Mozambique 2015 600 m³/d
 Sierra Leone 2013 840 m³/d
 Iran 2011 9,000 m³/d
 Germany 2011 3,600 m³/d
 Saudi Arabia 2011 840 m³/d
 Ethiopia 2011 600 m³/d
 Turkmenistan 2010 3,600 m³/d
 Ghana 2010 840 m³/d

CO₂ Generation System with Gas injection system (150 kg/hr x2)

IWPP Barka Project, Barka, Oman 2015
 IWPP Barka Project, Barka, Oman 2015

CO₂ Recovery System

Iran 2018 12,000 m³/d
 Myanmar 2015 7,200 m³/d
 Myanmar 2015 7,200 m³/d

CO₂ Storage Tank System

Iran 2017 12,000 m³/d
 Iran 2017 12,000 m³/d
 India 2015 20.0 m³
 India 2015 20.0 m³
 Uganda 2015 10.0 m³
 Uganda 2015 10.0 m³
 Iran 2013 50.0 m³
 Tanzania 2013 50.0 m³
 Saudi Arabia 2013 20.0 m³
 Tanzania 2013 20.0 m³
 Tanzania 2010 20.0 m³

CO₂ Storage Tank System with Carbonic Injection System (25 kg/hr)

NTECL Power Project (Vallur Thermal Power Project), Vallur, India 2018

CO₂ Storage Tank System with Gas injection system

IWPP Barka Project, Barka, Oman 2015

CO₂ Storage Tank System with vaporizer, pressure reduction station and gas injection system

Nemmeli Seawater Desalination Plant, Nemmeli, India 2012

CO₂ gas manifold system with Gas injection system

Sewage treatment plant, Akshardham Temple, Delhi, India 2017

Sparkle Clean Tech Pvt. Ltd.

SELECTED REFERENCES

Desalination/wastewater reuse system supplier

Water Reinjection Plant #1, India, 5,000 m³/d UF
 Water Reinjection Plant #2, India, 5,000 m³/d UF
 Industrial Water Reuse Plant, India, 540 m³/d RO
 Automobile ZLD Plant, India, 300 m³/d RO
 Textile Factory BWRO, India, 36 m³/d RO

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SELECTED REFERENCES

Equipment supplier - static mixer

Doha RO Ph1 , Doha, Middle East, Kuwait 2017, 189,250 m³/d
 Marafiq, Jubail, Middle East, Saudi Arabia 2016, 800,000 m³/d
 Aguas Antofagasta, Antofagasta, South America, Chile 2016
 Unm Al Houli, Qatar 2015, 620,000 m³/d RO
 Yanbu Phase 3, Saudi Arabia 2015, 550,000 m³/d Other
 Ras Abu Fontas A3, Qatar 2015, 136,000 m³/d RO
 Az Zour North, Kuwait 2014, 486,000 m³/d RO
 Jeddah III SWRO, Saudi Arabia 2012, 240,000 m³/d RO
 Barka Desalination Plant, Barka, Oman 2012, 120,000 m³/d RO
 Ras Al Khair Phase I Desalination Plant, Yanbu, Saudi Arabia 2011, 3,828,192 m³/d ME
 Az Zour South Desalination Plant, Az Zour, Kuwait 2011, 551,520 m³/d RO
 Oropesa Desalination Plant, Castellón, Spain 2011, 293,832 m³/d RO
 Al Dur - IWPP, Bahrain 2011, 218,208 m³/d RO
 Jeddah III Desalination Plant, Saudi Arabia 2011, 128,198 m³/d RO
 Marsa Alam Seawater Desalination Plant, Egypt 2011, 27,048 m³/d RO
 Palm Jumeirah, Dubai, United Arab Emirates 2010, 320,000 m³/d RO
 Jebel Ali, Dubai, United Arab Emirates 2010, 250,030 m³/d RO
 Ras Abu Fontas A I, Qatar 2010, 204,570 m³/d RO
 Jebel Ali, Dubai, United Arab Emirates 2010, 113,652 m³/d RO
 Fujairah II, United Arab Emirates, 640,000 m³/d RO
 Carlsbad, U.S.A., 190,000 m³/d RO
 Al-Ghubrah, Oman, 190,000 m³/d RO
 Fujairah F1 Expansion, Fujairah, United Arab Emirates, 171,000 m³/d RO
 Ghalilah Rak Desalination Plant, Ghalilah, United Arab Emirates, 13,638 m³/d RO
 Escondida, Chile, 47.6 MIGD RO

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SELECTED REFERENCES

Construction services

Prishtina DWTP Shkabaj, Kosovo, 60,840 m³/d Other/Unknown

Resita DWTP, Romania, Romania, 54,000 m³/d

Tongu WASU II, Ghana, Ghana, 5,000 m³/d

Tongu WASU I, Ghana, Ghana, 2,500 m³/d

SubSea Infrastructure Ltd.

📍 London, UK 📞 +44 (0)207 060 2150

www.subseainfrastructure.com

SELECTED REFERENCES

Plant supplier

Limassol, Cyprus 2012, 20,000 m³/d RO

Suez Advanced Solutions

SELECTED REFERENCES

Aquacircle: water loss modelling for NRW action plan

Adelaide, Australia

Aquacis: customer relationship management software

Cartagena, Columbia

Aquadvanced: network management, data analysis and NRW reduction

San Jose, U.S.A.

Barcelona, Spain

Macao, China

Casablanca, Morocco

iDroloc: smart leak detection and NRW reduction

Jeddah, Saudi Arabia

Suez Water Technologies and Solutions

📍 Treviso, U.S.A. 📞 +1 215 355 3300

www.suezwatertechnologies.com



SUEZ has been a pioneer in the desalination field. With 50 years' experience and more than 255 desalination plants built around the world, the Group supplies 10 million people. 4,200,000 m³/day of desalinated water is produced by plants built by SUEZ and 2,000,000 m³/day is produced by a plant operated by SUEZ.

Thanks to its strong expertise on DBO (design, build, operate) contracts, SUEZ offers treatment infrastructure solutions for local authorities and industry. SUEZ designs and builds customised seawater or brackish water desalination plants - small or large, modular or standardized - to meet specific client needs. SUEZ also offers operation and service solutions for daily plant management and optimization covering pre-treatment, energy consumption and the washing of membranes. SUEZ also supplies equipment, spare parts, site rehabilitation and employee training.

Continuous improvements in technology are gradually making desalination an affordable solution for more and more countries. In ten years, water production costs have been reduced by one half and production capacity has doubled thanks to constant optimization of the reverse osmosis processes. Through major investments in research and development, SUEZ continuously provides its customers with innovative and more sustainable solutions, consuming less energy and producing more water therefore reducing greenhouse gas emissions.

With 90 000 people on the five continents, SUEZ is a world leader in smart and sustainable resource management. We provide water and waste management solutions that enable cities and industries optimize their resource management and strengthen their environmental and economic performances, in line with regulatory standards. To meet increasing demands to overcome resource quality and scarcity challenges, SUEZ is fully engaged in the resource revolution. With the full potential of digital technologies and innovative solutions, the Group recovers 17 million tons of waste a year, produces 3.9 million tons of secondary raw materials and 7 TWh of local renewable energy. It also secures water resources, delivering wastewater treatment services to 58 million people and reusing 882 million m³ of wastewater. SUEZ generated total revenues of 15.9 billion euros in 2017.

SELECTED REFERENCES

U.S.A. 2018, 39,746 m³/d RO

Norway 2018, 28,608 m³/d RO

Singapore 2018, 24,000 m³/d RO

TX, U.S.A. 2018, 10,902 m³/d RO



solutions for cities and industries

**your water resources
are depleting,
you need fresh
water to thrive.**

Supplying drinking and fresh water to an ever increasing world population is a daily challenge. Desalination and water reuse are the obvious answers.

As a pioneer in reverse osmosis desalination, through its unique expertise, SUEZ can deliver small, large, modular or standardized desalination units around the world. So that, you can:

- produce clean desalinated water, of guaranteed hygienic quality
- comply with local health, safety and environmental standards
- decrease more and more your energy costs
- increase your competitiveness...

As a worldwide leader in the new circular economy of resources, SUEZ can produce high-quality water covering the full spectrum of water reuse specifications for all your needs such as:

- process water
- irrigation
- public road maintenance,
- reconstitution of water reserves...

We offer one of the largest portfolios to solve your desalination and water reuse needs, and contribute to the circular economy – the heart of the resource revolution.

Are you ready?

**we are ready
to desalinate any
type of salted water
and to produce
high-quality water
from your
wastewater.**



ready for the resource revolution

Australia 2018, 10,000 m³/d RO
OR, U.S.A. 2018, 9,084 m³/d RO
TX, U.S.A. 2018, 8,994 m³/d RO
IN, U.S.A. 2018, 8,721 m³/d RO
Quebec, Canada 2018, 5,665 m³/d RO
Jamaica 2018, 5,451 m³/d RO
GA, U.S.A. 2018, 5,451 m³/d RO
Portugal 2018, 3,600 m³/d RO
Alberta, Canada 2018, 3,270 m³/d RO
TX, U.S.A. 2018, 2,452 m³/d RO
IN, U.S.A. 2018, 2,452 m³/d RO
France 2018, 2,400 m³/d RO
Israel 2018, 2,180 m³/d RO
Illinois, U.S.A. 2018, 2,180 m³/d RO
New Zealand 2018, 2,040 m³/d RO
Taiwan 2018, 2,000 m³/d RO
Alberta, Canada 2018, 1,744 m³/d RO
New Zealand 2018, 1,680 m³/d RO
IA, U.S.A. 2018, 1,635 m³/d RO
TX, U.S.A. 2018, 1,635 m³/d RO
U.K. 2018, 1,440 m³/d RO
U.K. 2018, 1,200 m³/d RO
Idaho, U.S.A. 2018, 1,090 m³/d RO
CA, U.S.A. 2018, 1,090 m³/d RO
Washington, U.S.A. 2018, 981 m³/d RO
Brazil 2018, 960 m³/d RO
Belgium 2018, 720 m³/d RO
TX, U.S.A. 2018, 708 m³/d RO
Ohio, U.S.A. 2018, 681 m³/d RO
Brazil 2018, 600 m³/d RO
New Mexico, U.S.A. 2018, 545 m³/d RO
NY, U.S.A. 2018, 545 m³/d RO
Illinois, U.S.A. 2018, 545 m³/d RO
CA, U.S.A. 2018, 545 m³/d RO
Brazil 2018, 540 m³/d RO
IA, U.S.A. 2018, 302 m³/d RO
Ontario, Canada 2018, 272 m³/d RO
Tennessee, U.S.A. 2018, 272 m³/d RO
Pennsylvania, U.S.A. 2018, 272 m³/d RO
Mexico 2018, 105 m³/d RO
Brazil 2018, 100 m³/d RO
India 2018, 50 m³/d RO
Bahamas 2018, 27 m³/d RO
Russia 2017, 84,000 m³/d
Australia 2017, 43,801 m³/d RO
IA, U.S.A. 2017, 26,497 m³/d RO
NY, U.S.A. 2017, 6,541 m³/d RO
U.K. 2017, 6,323 m³/d RO
Singapore 2017, 5,520 m³/d RO
Nevada, U.S.A. 2017, 5,451 m³/d RO
OK, U.S.A. 2017, 5,451 m³/d RO
Belgium 2017, 5,400 m³/d RO
Poland 2017, 5,280 m³/d
Singapore 2017, 3,600 m³/d
Mexico 2017, 3,500 m³/d RO
Mexico 2017, 3,456 m³/d RO

Belgium 2017, 3,240 m³/d RO
Brazil 2017, 3,144 m³/d RO
Illinois, U.S.A. 2017, 2,725 m³/d RO
Belgium 2017, 2,400 m³/d RO
France 2017, 2,400 m³/d RO
France 2017, 2,400 m³/d RO
Mexico 2017, 2,100 m³/d RO
Ontario, Canada 2017, 2,000 m³/d RO
India 2017, 2,000 m³/d RO
India 2017, 2,000 m³/d RO
Uzbekistan 2017, 1,800 m³/d
AZ, U.S.A. 2017, 1,689 m³/d RO
Barbados 2017, 1,635 m³/d RO
Kentucky, U.S.A. 2017, 1,635 m³/d RO
CA, U.S.A. 2017, 1,635 m³/d RO
Brazil 2017, 1,440 m³/d RO
Illinois, U.S.A. 2017, 1,362 m³/d RO
Utah, U.S.A. 2017, 1,210 m³/d RO
Belgium 2017, 1,200 m³/d RO
Italy 2017, 1,200 m³/d RO
Alabama, U.S.A. 2017, 1,199 m³/d RO
Pennsylvania, U.S.A. 2017, 1,144 m³/d RO
Ontario, Canada 2017, 1,090 m³/d RO
Tennessee, U.S.A. 2017, 1,090 m³/d RO
Michigan, U.S.A. 2017, 1,090 m³/d RO
Florida, U.S.A. 2017, 1,090 m³/d RO
Missouri, U.S.A. 2017, 1,090 m³/d RO
Florida, U.S.A. 2017, 1,090 m³/d RO
India 2017, 1,000 m³/d RO
Australia 2017, 960 m³/d RO
Spain 2017, 840 m³/d RO
Mexico 2017, 839 m³/d RO
NY, U.S.A. 2017, 817 m³/d RO
New Jersey, U.S.A. 2017, 817 m³/d RO
Malaysia 2017, 816 m³/d RO
Belgium 2017, 720 m³/d RO
Mexico 2017, 720 m³/d RO
U.K. 2017, 720 m³/d RO
Nevada, U.S.A. 2017, 654 m³/d RO
Nevada, U.S.A. 2017, 654 m³/d RO
Belgium 2017, 600 m³/d RO
North Carolina, U.S.A. 2017, 545 m³/d RO
Maryland, U.S.A. 2017, 545 m³/d RO
Ontario, Canada 2017, 539 m³/d RO
Brazil 2017, 480 m³/d RO
Netherlands 2017, 480 m³/d RO
CA, U.S.A. 2017, 436 m³/d RO
Montana, U.S.A. 2017, 272 m³/d RO
Belarus 2017, 200 m³/d
Kansas, U.S.A. 2017, 190 m³/d RO
India 2017, 150 m³/d
Norway 2017, 120 m³/d
Alberta, Canada 2017, 100 m³/d RO
Brazil 2017, 100 m³/d RO
Brazil 2017, 100 m³/d RO
India 2017, 60 m³/d
Colombia 2017, 52 m³/d

Singapore 2017, 27 m³/d RO
 Rosarito, Mexico 2016, 380,000 m³/d
 Barka IV-IWP, Oman 2015, 280,000 m³/d
 Hassi Messaoud DW, Algeria 2015, 24,000 m³/d
 Hassi Messaoud IW, Algeria 2015, 24,000 m³/d
 Doha Aspire, Qatar 2015, 15,000 m³/d
 Mirfa, Abu Dhabi, United Arab Emirates 2014, 140,000 m³/d
 SRU FPSO P-66, offshore oil field, Brazil 2014, 38,200 m³/d
 SRU FPSO P-69, offshore oil field, Brazil 2014, 38,200 m³/d
 SRU FPSO MV-27, Brazil 2014, 31,000 m³/d
 Yunnan Petrol, China 2014, 24,000 m³/d
 Modon, Saudi Arabia 2014, 18,000 m³/d
 FWMO FPSO P-66, offshore oil field, Brazil 2014, 1,200 m³/d
 FWMO FPSO P-69, offshore oil field, Brazil 2014, 1,200 m³/d
 SRU FPSO P-74, Brazil 2013, 47,200 m³/d
 SRU FPSO P-68, Brazil 2013, 38,200 m³/d
 SRU FPSO P-71, Brazil 2013, 38,200 m³/d
 Salboukh, Riyadh, Saudi Arabia 2013, 35,000 m³/d
 Buwaib, Riyadh, Saudi Arabia 2013, 35,000 m³/d
 SR17/SR18 (Laban district), Riyadh, Saudi Arabia 2013, 10,000 m³/d
 Badea6, Riyadh, Saudi Arabia 2013, 10,000 m³/d
 Al Qairawann, Riyadh, Saudi Arabia 2013, 10,000 m³/d
 Al Narjis, Riyadh, Saudi Arabia 2013, 10,000 m³/d
 Al Fawaz, Riyadh, Saudi Arabia 2013, 10,000 m³/d
 Al Shifa, Riyadh, Saudi Arabia 2013, 10,000 m³/d
 Azizia, Riyadh, Saudi Arabia 2013, 10,000 m³/d
 Sudair, Saudi Arabia 2013, 6,000 m³/d
 Al Kharj, Saudi Arabia 2013, 6,000 m³/d
 Dammam, Saudi Arabia 2013, 6,000 m³/d
 Badea5, Riyadh, Saudi Arabia 2013, 5,000 m³/d
 Al Rimal, Riyadh, Saudi Arabia 2013, 5,000 m³/d
 Erqaa, Riyadh, Saudi Arabia 2013, 5,000 m³/d
 TGS, Riyadh, Saudi Arabia 2013, 5,000 m³/d
 Al Hijaz, Riyadh, Saudi Arabia 2013, 5,000 m³/d
 Various, Saudi Arabia 2013, 4,500 m³/d
 FWMO FPSO P-68, Brazil 2013, 2,400 m³/d
 FWMO FPSO P-71, Brazil 2013, 2,400 m³/d
 Fuerteventura IV, Canary Islands, Spain 2012, 15,000 m³/d
 Melbourne, VIC, Australia 2011, 450,000 m³/d
 Al Dur, Bahrain 2011, 218,000 m³/d

Desalination plant supplier

Qatar 2016, 15,984.0 m³/d Other
 Ohio, United States of America 2016, 13,082.0 m³/d RO
 India 2016, 12,000.0 m³/d RO
 Pakistan 2016, 7,560.0 m³/d RO
 Alabama, United States of America 2016, 6,540.0 m³/d RO
 New York, United States of America 2016, 5,451.0 m³/d RO
 Texas, United States of America 2016, 4,687.0 m³/d Other
 Georgia, United States of America 2016, 3,785.0 m³/d EDI (Electrodeionization)
 Singapore 2016, 3,600.0 m³/d Other
 Singapore 2016, 3,600.0 m³/d RO
 Saudi Arabia 2016, 3,000.0 m³/d RO
 Brazil 2016, 2,880.0 m³/d EDI (Electrodeionization)
 Texas, United States of America 2016, 2,726.0 m³/d RO
 Mexico 2016, 2,589.0 m³/d RO

Indiana, United States of America 2016, 2,453.0 m³/d RO
 Brazil 2016, 2,400.0 m³/d RO
 Singapore 2016, 2,180.0 m³/d EDI (Electrodeionization)
 Texas, United States of America 2016, 2,067.0 m³/d Other
 North Carolina, United States of America 2016, 1,893.0 m³/d RO
 Texas, United States of America 2016, 1,723 m³/d (Electrodialysis)
 Wisconsin, United States of America 2016, 1,635.0 m³/d RO
 Alabama, United States of America 2016, 1,635.0 m³/d RO
 Pakistan 2016, 1,500.0 m³/d RO
 India 2016, 1,400.0 m³/d Other
 Colorado, United States of America 2016, 1,363.0 m³/d RO
 Argentina 2016, 1,308.0 m³/d RO
 Saudi Arabia 2016, 1,128.0 m³/d RO
 Alberta, Canada 2016, 1,090.0 m³/d RO
 California, United States of America 2016, 1,090.0 m³/d RO
 Canada 2016, 1,080.0 m³/d RO
 Spain 2016, 1,080.0 m³/d RO
 France 2016, 960.0 m³/d RO
 Florida, United States of America 2016, 818.0 m³/d RO
 Texas, United States of America 2016, 818.0 m³/d RO
 New Jersey, United States of America 2016, 818.0 m³/d RO
 Philippines 2016, 792.0 m³/d RO
 Belgium 2016, 720.0 m³/d RO
 India 2016, 720.0 m³/d RO
 Spain 2016, 720.0 m³/d EDI (Electrodeionization)
 Texas, United States of America 2016, 681.0 m³/d RO
 Oregon, United States of America 2016, 670.0 m³/d RO
 India 2016, 600.0 m³/d RO
 Argentina 2016, 545.0 m³/d RO
 Brazil 2016, 545.0 m³/d RO
 China 2016, 504.0 m³/d Other
 Belgium 2016, 480.0 m³/d RO
 France 2016, 480.0 m³/d RO
 Sweden 2016, 420.0 m³/d Other
 France 2016, 370.0 m³/d Other
 United Kingdom 2016, 336.0 m³/d RO
 Lebanon 2016, 312.0 m³/d RO
 United States of America 2016, 245.0 m³/d RO
 Pennsylvania, United States of America 2016, 212.0 m³/d RO
 Australia 2016, 180.0 m³/d Other
 California, United States of America 2016, 164.0 m³/d RO
 Angola 2016, 156.0 m³/d RO
 France 2016, 132.0 m³/d Other
 Mexico 2016, 120.0 m³/d ED (Electrodialysis)
 Spain 2016, 100.0 m³/d Other
 India 2016, 60.0 m³/d RO
 Minnesota, United States of America 2016, 55.0 m³/d RO
 Italy 2016, 48.0 m³/d RO
 Portugal 2016, 24.0 m³/d RO
 Egypt 2016, 10.0 m³/d RO
 United Kingdom 2016, 5.0 m³/d RO
 Ontario, Canada 2016, 0.38 m³/d RO
 Spain 2015, 96,000.0 m³/d Other
 Texas, United States of America 2015, 14,718.0 m³/d Other
 Singapore 2015, 12,600.0 m³/d RO
 South Africa 2015, 9,600.0 m³/d Other
 Indonesia 2015, 7,500.0 m³/d RO

Taiwan 2015, 6,120.0 m³/d RO
 Singapore 2015, 5,400.0 m³/d RO
 California, United States of America 2015, 5,298.0 m³/d RO
 Russian Federation 2015, 4,800.0 m³/d Other
 Arkansas, United States of America 2015, 3,840.0 m³/d RO
 Mexico 2015, 3,380.0 m³/d RO
 China 2015, 2,952.0 m³/d RO
 Connecticut, United States of America 2015, 2,726.0 m³/d RO
 Indonesia 2015, 2,616.0 m³/d RO
 Ontario, Canada 2015, 2,507.0 m³/d RO
 Brazil 2015, 2,400.0 m³/d RO
 Portugal 2015, 2,400.0 m³/d RO
 Georgia, United States of America 2015, 2,180.0 m³/d RO
 Korea (North), Democratic People's Republic of 2015, 1,908.0 m³/d Other
 North Carolina, United States of America 2015, 1,893.0 m³/d RO
 India 2015, 1,680.0 m³/d RO
 Illinois, United States of America 2015, 1,635.0 m³/d RO
 United Kingdom 2015, 1,632.0 m³/d RO
 Dominican Republic 2015, 1,472.0 m³/d EDI (Electrodeionization)
 Texas, United States of America 2015, 1,363.0 m³/d RO
 Indiana, United States of America 2015, 1,363.0 m³/d RO
 California, United States of America 2015, 1,136.0 m³/d RO
 Argentina 2015, 1,090.0 m³/d RO
 Indonesia 2015, 1,090.0 m³/d RO
 Brazil 2015, 1,080.0 m³/d RO
 Kenya 2015, 1,080.0 m³/d RO
 China 2015, 960.0 m³/d Other
 China 2015, 872.0 m³/d RO
 Massachusetts, United States of America 2015, 818.0 m³/d RO
 Kentucky, United States of America 2015, 818.0 m³/d Other
 Oklahoma, United States of America 2015, 818.0 m³/d Other
 Spain 2015, 792.0 m³/d RO
 Ecuador 2015, 720.0 m³/d RO
 Spain 2015, 720.0 m³/d Other
 Nova Scotia, Canada 2015, 687.0 m³/d EDI (Electrodeionization)
 Utah, United States of America 2015, 670.0 m³/d RO
 Texas, United States of America 2015, 670.0 m³/d RO
 United States of America 2015, 552.0 m³/d RO
 Argentina 2015, 545.0 m³/d RO
 Brazil 2015, 528.0 m³/d RO
 South Carolina, United States of America 2015, 491.0 m³/d RO
 China 2015, 480.0 m³/d Other
 United States Virgin Islands 2015, 436.0 m³/d RO
 Texas, United States of America 2015, 409.0 m³/d RO
 Brazil 2015, 360.0 m³/d RO
 China 2015, 327.0 m³/d RO
 Norway 2015, 250.0 m³/d RO
 Brazil 2015, 216.0 m³/d EDI (Electrodeionization)
 Honduras 2015, 191.0 m³/d RO
 Italy 2015, 168.0 m³/d ED (Electrodialysis)
 California, United States of America 2015, 164.0 m³/d RO
 New Zealand 2015, 136.0 m³/d RO
 Mexico 2015, 125.0 m³/d RO
 Norway 2015, 120.0 m³/d ED (Electrodialysis)
 India 2015, 60.0 m³/d RO
 Pakistan 2015, 55.0 m³/d RO
 India 2015, 50.0 m³/d RO

Norway 2015, 48.0 m³/d ED (Electrodialysis)
 Saudi Arabia 2015, 24.0 m³/d RO
 Italy 2015, 6.0 m³/d RO
 Mexico 2015, 5.0 m³/d RO
 United States, Dallas, Texas 2014, 15,208 m³/d RO
 United States, Byron Center, MI 2014, 15,208 m³/d RO
 United States, California 2014, 15,208 m³/d RO
 Tunisia 2014, 12,000 m³/d RO
 India, Angul 2014, 10,800 m³/d RO
 Iraq, Al Khairat 2014, 5,280 m³/d RO
 Canada, Alberta 2014, 4,497 m³/d RO
 Mozambique 2014, 4,440 m³/d RO
 United States, Illinois 2014, 3,270 m³/d RO
 Iraq 2014, 2,400 m³/d RO
 Bahrain 2014, 2,304 m³/d RO
 Australia, New South Wales 2014, 2,256 m³/d RO
 United States, Tulsa, OK 2014, 2,180 m³/d RO
 Tunisia 2014, 2,160 m³/d RO
 Belgium 2014, 1,920 m³/d RO
 Belgium 2014, 1,920 m³/d RO
 United States, Texas 2014, 1,920 m³/d ED
 United States, Oregon 2014, 1,853 m³/d RO
 Ghana 2014, 1,632 m³/d RO
 Tunisia 2014, 1,400 m³/d EDI
 Paraguay 2014, 1,320 m³/d RO
 Brazil, Sao Paulo 2014, 1,200 m³/d RO
 India, Gujarat 2014, 1,176 m³/d RO
 United States, Illinois 2014, 1,144 m³/d RO
 United States, Texas 2014, 1,090 m³/d RO
 United States, Minnesota 2014, 1,090 m³/d RO
 United Kingdom, Great Britain 2014, 960 m³/d RO
 United States, Missouri 2014, 817 m³/d RO
 Canada, Ontario 2014, 817 m³/d RO
 United States, Kentucky 2014, 817 m³/d RO
 India, Rajasthan 2014, 784 m³/d ED
 Pakistan 2014, 720 m³/d RO
 Colombia, Barranquillas 2014, 654 m³/d RO
 United States, Pennsylvania 2014, 637 m³/d RO
 Pakistan 2014, 720 m³/d RO
 Colombia, Barranquillas 2014, 654 m³/d RO
 United States, Pennsylvania 2014, 637 m³/d RO
 Belarus 2014, 600 m³/d RO
 Switzerland 2014, 552 m³/d RO
 Peru, Lima y Callao 2014, 552 m³/d RO
 Netherlands, Temeuzen, The Netherlands 2014, 545 m³/d ED
 Guatemala 2014, 545 m³/d RO
 United States, Illinois 2014, 545 m³/d RO
 Argentina 2014, 528 m³/d RO
 United Kingdom, West Midlands 2014, 480 m³/d RO
 United States, Freeport, AZ 2014, 480 m³/d RO
 India, Delhi 2014, 436 m³/d RO
 Australia, Northern Territory 2014, 307 m³/d RO
 Canada, Ontario 2014, 272 m³/d RO
 Poland 2014, 249 m³/d RO
 Pakistan 2014, 240 m³/d RO
 Italy 2014, 240 m³/d RO
 Angola, Luanda 2014, 218 m³/d RO

Trinidad and Tobago 2014, 190 m³/d RO
 Venezuela 2014, 163 m³/d ED
 Mexico 2014, 150 m³/d RO
 United Arab Emirates 2014, 136 m³/d RO
 Belarus 2014, 90 m³/d RO
 Miles, Australia 2012, 99,556 m³/d RO
 Jeddah, Saudi Arabia 2012, 17,489 m³/d RO
 Russia 2012, 12,231 m³/d RO
 Valley City, U.S.A. 2012, 11,356 m³/d EDI
 Sydney, Australia 2012, 9,085 m³/d RO
 Willemstad, Netherlands Antilles 2012, 7,495 m³/d RO
 La Corne, Canada 2012, 7,359 m³/d RO
 Al Brega, Libya 2012, 7,287 m³/d RO
 Nainawa, Iraq 2012, 6,057 m³/d RO
 Temiscaming, Canada 2012, 5,724 m³/d ED
 Khairat, Iraq 2012, 5,451 m³/d RO
 Buhairat, Saudi Arabia 2012, 4,921 m³/d RO
 St Louis, U.S.A. 2012, 4,906 m³/d RO
 Brandon, Canada 2012, 4,361 m³/d RO
 Leixlip, Ireland 2012, 4,361 m³/d RO
 Kusile, South Africa 2012, 3,816 m³/d RO
 India 2012, 3,816 m³/d RO
 Singapore 2012, 3,816 m³/d RO
 India 2012, 3,558 m³/d ED
 U.S.A. 2012, 3,483 m³/d RO
 Thurso, Canada 2012, 3,271 m³/d RO
 Venezuela 2012, 3,271 m³/d RO
 Prosser, U.S.A. 2012, 3,271 m³/d RO
 Columbus, U.S.A. 2012, 3,271 m³/d RO
 Bedford Park, U.S.A. 2012, 3,271 m³/d RO
 Turkey 2012, 2,725 m³/d RO
 Bandirma, Turkey 2012, 2,688 m³/d ED
 El Cajon, U.S.A. 2012, 2,589 m³/d ED
 Phoenix, U.S.A. 2012, 2,589 m³/d RO
 Willemstad, Netherlands Antilles 2012, 2,498 m³/d RO
 Dallas, U.S.A. 2012, 2,453 m³/d RO
 Junin - Buenos Aires, Argentina 2012, 2,453 m³/d RO
 Venezuela 2012, 2,453 m³/d RO
 U.S.A. 2012, 2,453 m³/d RO
 Burnside, U.S.A. 2012, 2,453 m³/d RO
 Saudi Arabia 2012, 2,453 m³/d RO
 Brazil 2012, 2,453 m³/d RO
 Antofagasta, Chile 2012, 2,453 m³/d RO
 Geismar, U.S.A. 2012, 2,453 m³/d RO
 Allentown, U.S.A. 2012, 2,453 m³/d RO
 Mooresville, U.S.A. 2012, 2,453 m³/d RO
 Mon Belvieu, U.S.A. 2012, 2,290 m³/d RO
 Porto Alegre, Brazil 2012, 2,289 m³/d RO
 Tulsa, U.S.A. 2012, 2,180 m³/d RO
 Jacksonville, U.S.A. 2012, 2,180 m³/d RO
 Chihuahua, Mexico 2012, 2,180 m³/d ED
 SKHIRA, Tunisia 2012, 2,180 m³/d RO
 Laranjeiras, Brazil 2012, 2,180 m³/d RO
 Pakistan 2012, 2,180 m³/d RO
 Delano, U.S.A. 2012, 2,082 m³/d ED
 Alice Springs catchment area, Australia 2012, 1,976 m³/d ED
 Louisiana, MO, U.S.A. 2012, 1,908 m³/d RO

West Palm Beach, U.S.A. 2012, 1,908 m³/d RO
 Quinton, U.S.A. 2012, 1,908 m³/d RO
 Bucheon-si, Korea, Republic of 2012, 1,817 m³/d ED
 Old Town, ME, U.S.A. 2012, 1,703 m³/d ED
 Burnsville, U.S.A. 2012, 1,635 m³/d RO
 Cleveland, U.S.A. 2012, 1,635 m³/d RO
 El Paso Electric, U.S.A. 2012, 1,635 m³/d RO
 Winchester, U.S.A. 2012, 1,635 m³/d RO
 Venezuela 2012, 1,635 m³/d RO
 Gallup, U.S.A. 2012, 1,635 m³/d RO
 Edmonton, Canada 2012, 1,635 m³/d RO
 San Lorenzo, Venezuela 2012, 1,635 m³/d RO
 Gibbons, Canada 2012, 1,635 m³/d RO
 Glassboro, U.S.A. 2012, 1,635 m³/d RO
 Delhi, India 2012, 1,635 m³/d RO
 Vizag, India 2012, 1,635 m³/d EDI
 Al Anbar, Iraq 2012, 1,635 m³/d RO
 Town of Jupiter Island, U.S.A. 2012, 1,635 m³/d RO
 Rayong, Thailand 2012, 1,635 m³/d RO
 Allentown, U.S.A. 2012, 1,635 m³/d RO
 Kovaya, India 2012, 1,586 m³/d RO
 Korea, Korea, Republic of 2012, 1,438 m³/d ED
 Pleasanton, U.S.A. 2012, 1,438 m³/d ED
 Peoria, U.S.A. 2012, 1,363 m³/d RO
 Kingshill, U.S. Virgin Islands 2012, 1,226 m³/d RO
 Uljin, Gyeongbuk, Korea, Republic of 2012, 1,211 m³/d ED
 Dongguan, China 2012, 1,200 m³/d RO
 India 2012, 1,196 m³/d RO
 Offshore, Norway 2012, 1,192 m³/d RO
 Wynnewood, U.S.A. 2012, 1,090 m³/d RO
 Lagos de Moreno, Mexico 2012, 1,090 m³/d RO
 Middletown Ohio, U.S.A. 2012, 1,090 m³/d RO
 U.S.A. 2012, 1,090 m³/d RO
 Rogersville, U.S.A. 2012, 1,090 m³/d RO
 Detroit, U.S.A. 2012, 1,090 m³/d RO
 Milan, Italy 2012, 1,090 m³/d EDI
 Erechim, Brazil 2012, 1,090 m³/d RO
 VIZAG, India 2012, 1,090 m³/d EDI
 Tabasco, Mexico 2012, 1,090 m³/d EDI
 Tunis, Tunisia 2012, 1,090 m³/d ED
 Parnngurr, Australia 2012, 1,090 m³/d ED
 Kiwirrkurra, Australia 2012, 1,090 m³/d ED
 East Chicago, U.S.A. 2012, 1,090 m³/d RO
 Zimbabwe 2012, 1,079 m³/d RO
 Fayyum, Egypt 2012, 1,079 m³/d RO
 Brazil 2012, 984 m³/d EDI
 India 2012, 984 m³/d RO
 Villavicencio, Colombia 2012, 908 m³/d EDI
 Col. Lomas de Vista Heriosa, Mexico 2012, 840 m³/d RO
 Atlanta, U.S.A. 2012, 818 m³/d RO
 Uruguay 2012, 818 m³/d RO
 Modesto, U.S.A. 2012, 644 m³/d RO
 Bloomfield, U.S.A. 2012, 545 m³/d RO
 Freeport, Bahamas 2012, 545 m³/d RO
 Knowlton, Canada 2012, 545 m³/d RO
 Groveland, U.S.A. 2012, 545 m³/d RO
 Noblesville, U.S.A. 2012, 545 m³/d RO

Tengiz, Kazakhstan 2012, 545 m³/d RO
Damietta, Egypt 2012, 545 m³/d RO
aragua do Sul, Brazil 2012, 545 m³/d RO
Porto Real, Brazil 2012, 545 m³/d RO
Brazil 2012, 545 m³/d RO
Tadcaster, U.K. 2012, 545 m³/d RO
Hobart, Australia 2012, 545 m³/d RO
Lachine, Canada 2012, 545 m³/d RO
Canada 2012, 500 m³/d RO
Chile 2012, 500 m³/d RO
New Albany, U.S.A. 2012, 492 m³/d RO
American Canyon, U.S.A. 2012, 436 m³/d RO
Peru 2012, 409 m³/d Other
Santander, Colombia 2012, 409 m³/d EDI
Raul Leoni, Venezuela 2012, 382 m³/d RO
Shirley, U.S.A. 2012, 367 m³/d RO
Cambridge, U.S.A. 2012, 273 m³/d RO
Candiac, Canada 2012, 273 m³/d RO
Gous-Khroustalnyi, Russia 2012, 273 m³/d RO
Alcazar de San Juan, Spain 2012, 245 m³/d RO
Decatur, U.S.A. 2012, 227 m³/d EDI
India 2012, 193 m³/d RO
Palo Alto, U.S.A. 2012, 68 m³/d RO
Pleasanton, U.S.A. 2012, 61 m³/d RO
Hamilton, MA, U.S.A. 2011, 37,800 m³/d RO
Vicksburg, MS, U.S.A. 2011, 34,020 m³/d EDR
Nogales, AZ, U.S.A. 2011, 27,720 m³/d EDR
Cairo, Egypt 2011, 23,965 m³/d RO
Shanghai, China 2011, 20,880 m³/d UF+RO
Valley City, ND, U.S.A. 2011, 17,614 m³/d UF+RO
JTerrel, NC, U.S.A. 2011, 15,937 m³/d RO
Venezuela 2011, 15,649 m³/d RO
Macdonald, Manitoba, Canada 2011, 7,938 m³/d UF+RO
Malta, NY, U.S.A. 2011, 7,620 m³/d RO
St. Eustache, Manitoba, Canada 2011, 6,902 m³/d UF+RO
Zibo, Shandong, China 2011, 5,000 m³/d UF+RO
San Diego, CA, U.S.A. 2011, 3,780 m³/d EDR
Alor Gajah, Melaka, Malaysia 2011, 3,780 m³/d RO
Sorocaba, São Paulo, Brazil 2011, 3,780 m³/d RO
Cohasse, MN, U.S.A. 2011, 3,780 m³/d RO+EDI
Woodbury, NJ, U.S.A. 2011, 3,538 m³/d RO
Kiryat Gat, Israel 2011, 3,265 m³/d RO
Pachuca, Hidal, Mexico 2011, 3,064 m³/d RO
Cairo, Egypt 2011, 2,396 m³/d RO
Sao Paulo, Penha, Brazil 2011, 2,176 m³/d RO
Kenitra, Morocco 2011, 1,509 m³/d RO
La Plata, Argentina 2011, 1,473 m³/d RO
Cliffside, NC, U.S.A. 2011, 1,360 m³/d RO
Erechim, Rio Grande Do Sul, Brazil 2011, 1,088 m³/d RO
Hasan, India 2011, 790 m³/d RO
Lebrija, Seville, Spain 2011, 719 m³/d RO+EDR
Delhi, India 2011, 719 m³/d UF+RO
Jaragua Do Sul, Brazil 2011, 512 m³/d RO
Mexico 2011, 489 m³/d EDR
Abu Dhabi, United Arab Emirates 2011, 455 m³/d RO
Minnetonka, MN, U.S.A. 2011, 383 m³/d RO
Tripoli, Libya 2011, 376 m³/d RO

Oak Ridge, TN, U.S.A. 2011, 342 m³/d RO
Sao Paulo, Penha, Brazil 2011, 287 m³/d RO
Querétaro Qro, Mexico 2011, 244 m³/d EDR
Izmir, Turkey 2011, 239 m³/d RO
Nishi Ku, Yokohama, Japan 2011, 53 m³/d RO+EDR
Chandler, AZ, U.S.A. 2011, 27 m³/d RO
Bromont, QC, Canada 2011, EDI
Ikitelli/Istanbul, Turkey 2011, EDI
Diadema, São Paulo, Brazil 2011, RO
St Paul, NC, U.S.A. 2011, RO
Bangalore, Karnataka, India 2011, RO
Addison, IL, U.S.A. 2011, RO
Muscat, Oman 2011, RO
Rufisque, Dakar, Senegal 2011, RO
Comunidad De Madrid, Castilla, Spain 2010, 193,000 m³/d UF+RO
Leixlip, Co Kildare, Ireland 2010, 55,440 m³/d RO
St. Louis, MO, U.S.A. 2010, 28,350 m³/d EDR
Kahului, HI, U.S.A. 2010, 15,120 m³/d EDI
Shijiazhuang, Hebei, China 2010, 11,520 m³/d UF+RO
Los Angeles, CA, U.S.A. 2010, 11,340 m³/d EDR
Valencia, Spain 2010, 10,984 m³/d EDR
Yuzhniy, Odessa Oblast, Ukraine 2010, 9,586 m³/d UF+EDI
Secunda, South Africa 2010, 8,867 m³/d UF+EDR
Paulding, OH, U.S.A. 2010, 7,560 m³/d RO
Scotford, Alberta, Canada 2010, 7,560 m³/d UF+RO
San Diego, CA, U.S.A. 2010, 7,348 m³/d EDR
Valencia, Spain 2010, 6,490 m³/d EDR
Edmonton, Alberta, Canada 2010, 5,991 m³/d UF+RO
Lakewood, CO, U.S.A. 2010, 5,987 m³/d RO
TX, U.S.A. 2010, 5,670 m³/d EDR
Jefferson, LA, U.S.A. 2010, 5,670 m³/d EDR
Ferndale, WA, U.S.A. 2010, 5,443 m³/d RO
Tenerife, Spain 2010, 4,992 m³/d EDR
Turkmenbashi, Turkmenistan 2010, 4,601 m³/d RO
San Pedro Garza Garc, Nuevo Leon, Mexico 2010, 4,313 m³/d UF+RO
Ras Al Khaimah, United Arab Emirates 2010, 3,834 m³/d RO
Kralendijk, Netherlands Antilles 2010, 3,780 m³/d RO
Norco, LA, U.S.A. 2010, 3,780 m³/d RO
Kosching, Germany 2010, 3,780 m³/d RO
Tulsa, OK, U.S.A. 2010, 3,780 m³/d RO
Fox Creek, Alberta, Canada 2010, 3,780 m³/d RO
Braidwood, IL, U.S.A. 2010, 3,780 m³/d RO
Warszawa, Poland 2010, 3,355 m³/d RO+EDR
Poland 2010, 3,355 m³/d EDR
Anakaish District, Jeddah, Saudi Arabia 2010, 3,271 m³/d RO
Garcia, Nuevo Leon, Mexico 2010, 3,265 m³/d RO
Fort McMurray, Alberta, Canada 2010, 2,986 m³/d RO
Manning, Alberta, Canada 2010, 2,797 m³/d UF+RO
Hull, U.K. 2010, 2,636 m³/d UF+RO
Virden, Manitoba, Canada 2010, 2,600 m³/d RO
Jeddah, Saudi Arabia 2010, 2,516 m³/d RO
Jeddah, Saudi Arabia 2010, 2,496 m³/d RO
Laguna, Philippines 2010, 2,454 m³/d RO
Taichung, Wuqi, Taiwan 2010, 2,396 m³/d UF+RO
Kösching, Germany 2010, 2,396 m³/d EDR
St. John, VA, U.S.A. 2010, 2,268 m³/d RO

Morro Bay, CA, U.S.A. 2010, 2,177 m³/d RO
 Ray, ND, U.S.A. 2010, 2,177 m³/d RO
 Woodward, OK, U.S.A. 2010, 2,177 m³/d RO
 Port Arthur, TX, U.S.A. 2010, 2,177 m³/d RO
 Warrenton, MT, U.S.A. 2010, 2,176 m³/d RO
 Punta Arenas, Chile 2010, 2,143 m³/d RO
 Stone Mountain, GA, U.S.A. 2010, 2,030 m³/d RO
 Guaira, São Paulo, Brazil 2010, 1,917 m³/d RO
 Bellevue, WA, U.S.A. 2010, 1,888 m³/d RO
 Anaconda, MT, U.S.A. 2010, 1,801 m³/d RO
 Mystic Harbor, MD, U.S.A. 2010, 1,701 m³/d UF+RO
 Calgary, Alberta, Canada 2010, 1,633 m³/d UF+RO
 Westwego, LA, U.S.A. 2010, 1,633 m³/d RO
 Pauliceia, São Paulo, Brazil 2010, 1,629 m³/d RO
 Al-Khobar, Saudi Arabia 2010, 1,597 m³/d RO
 Pompano Beach, FL, U.S.A. 2010, 1,556 m³/d UF+RO
 Black Rock, VIC, Australia 2010, 1,538 m³/d UF+RO
 Houston, TX, U.S.A. 2010, 1,518 m³/d RO
 Tempe, AZ, U.S.A. 2010, 1,518 m³/d RO
 Hudson, WY, U.S.A. 2010, 1,512 m³/d UF+RO
 Nairobi, Kenya 2010, 1,452 m³/d RO
 Auburndale, FL, U.S.A. 2010, 1,360 m³/d RO
 Tunapuna, Trinidad and Tobago 2010, 1,360 m³/d RO
 Portland, IN, U.S.A. 2010, 1,360 m³/d RO
 Qiryat-Gat, Israel 2010, 1,360 m³/d RO
 Wilmington, DE, U.S.A. 2010, 1,360 m³/d RO+EDR
 Porbandar, Gujarat, India 2010, 1,342 m³/d RO
 Tukkguda, Maheswaram, Andhra Pradesh, India 2010, 1,318 m³/d RO
 Maracaju, Mato Grosso Do Sul, Brazil 2010, 1,198 m³/d RO
 Cagua, Ara, Venezuela 2010, 1,170 m³/d RO
 Baton Rouge, LA, U.S.A. 2010, 1,088 m³/d RO
 Yuma, AZ, U.S.A. 2010, 1,088 m³/d RO
 Yorkton, Saskatchewan, Canada 2010, 1,088 m³/d RO
 Cigli, Izmir, Turkey 2010, 1,088 m³/d RO
 Tortuguitas, Argentina 2010, 1,088 m³/d RO
 Everett, WA, U.S.A. 2010, 1,034 m³/d RO
 Warren, OH, U.S.A. 2010, 1,023 m³/d UF+EDR
 Harrisonburg, LA, U.S.A. 2010, 1,020 m³/d RO
 Agronomia Df, Brazil 2010, 970 m³/d RO
 Diadema, São Paulo, Brazil 2010, 958 m³/d RO
 Taipei 104, Taiwan 2010, 945 m³/d RO
 Harahan, LA, U.S.A. 2010, 870 m³/d RO
 Karnataka, Bangalore, India 2010, 848 m³/d UF+RO
 Sertaozinho, São Paulo, Brazil 2010, 838 m³/d RO
 Kwinana, Perth, WA, Australia 2010, 766 m³/d RO
 Kansas City, KS, U.S.A. 2010, 745 m³/d RO
 Wamego, KS, U.S.A. 2010, 723 m³/d RO+EDR
 Murcia, Spain 2010, 723 m³/d RO
 Dubai, United Arab Emirates 2010, 697 m³/d RO
 Burlington, Ontario, Canada 2010, 680 m³/d RO
 Laredo, TX, U.S.A. 2010, 642 m³/d RO
 Tema, Greater Accra, Ghana 2010, 642 m³/d RO
 Isla Margarita, Venezuela 2010, 598 m³/d RO
 Caslan, Alberta, Canada 2010, 567 m³/d UF+RO
 Howell, MI, U.S.A. 2010, 567 m³/d UF+RO
 Grimsby, South Humberside, U.K. 2010, 551 m³/d RO

Landborough, Australia 2010, 551 m³/d RO+EDR
 Singapore 2010, 544 m³/d RO
 Maribor, Slovenia 2010, 479 m³/d RO
 Tupaciguara, Brazil 2010, 479 m³/d RO
 Patrocinio Paulista, São Paulo, Brazil 2010, 417 m³/d RO
 Nairobi, Kenya 2010, 407 m³/d RO
 Nairobi, Kenya 2010, 405 m³/d RO
 Abu Dhabi, United Arab Emirates 2010, 325 m³/d RO+EDR
 Cabo De Santo Agosti, Pernambuco, Brazil 2010, 287 m³/d RO
 Como, Italy 2010, 263 m³/d RO
 Cary, IL, U.S.A. 2010, 217 m³/d RO
 Calgary, Alberta, Canada 2010, 167 m³/d UF+RO
 Olanchito, Honduras 2010, 98 m³/d RO
 Oakville, Alberta, Canada 2010, 70 m³/d RO
 Valencia, Venezuela 2010, 54 m³/d RO
 Auburn Hills, MI, U.S.A. 2010, 40 m³/d RO
 Edwardsburg, MI, U.S.A. 2010, 18 m³/d RO+EDR
 Brive La Gaillarde, France 2010, RO
 Avila Beach, CA, U.S.A. 2010, RO
 Bremerton, WA, U.S.A. 2010, RO
 Pottstown, PA, U.S.A. 2010, RO
 Brunswick, GA, U.S.A. 2010, RO
 Mayville, WI, U.S.A. 2010, RO
 Mississauga, Ontario, Canada 2010, RO
 Franklin Furnace, OH, U.S.A. 2010, RO
 Manhattan, NY, U.S.A. 2010, RO
 Tangshan, China 2010, RO
 Addison, IL, U.S.A. 2010, RO
 Hillsboro, OR, U.S.A., 201,600 m³/d RO
 Kuwait, 191,250 m³/d RO
 Doral, FL, U.S.A., 113,400 m³/d RO
 Mexico City, Mexico, 94,500 m³/d RO
 Sacramento, CA, U.S.A., 63,000 m³/d RO
 Prattville, AL, U.S.A., 50,400 m³/d RO
 Valdosta, GA, U.S.A., 50,400 m³/d RO
 Turkmenistan, 50,000 m³/d RO
 Russian Federation, 43,172 m³/d RO
 Jacksonville, FL, U.S.A., 37,800 m³/d RO
 Prior Lake, MN, U.S.A., 37,800 m³/d RO
 Richardson, TX, U.S.A., 29,484 m³/d RO
 Nuevo León, Mexico, 29,184 m³/d RO
 California, United States of America, 28,390 m³/d ED (Electrodialysis)
 Oroville, WA, U.S.A., 20,160 m³/d RO
 Joilet, IL, U.S.A., 18,900 m³/d RO
 Russian Federation, 16,800 m³/d
 EL PASO, TX, U.S.A., 12,600 m³/d RO
 Clinton, FL, U.S.A., 12,600 m³/d RO
 Winchester, KY, U.S.A., 12,600 m³/d RO
 Aruba, 12,000 m³/d RO
 Sao Paulo, Penha, Brazil, 11,982 m³/d RO
 Louisiana, United States of America, 11,448 m³/d RO
 CLAYTON, MO, U.S.A., 11,340 m³/d RO
 Ontario, Canada, 10,610 m³/d RO
 China, 9,600 m³/d RO
 Ontario, Canada, 8,176 m³/d RO
 Sanford, Manitoba, Canada, 7,938 m³/d UF-RO

Iowa, United States of America of America, 7,570 m³/d RO
Thailand, 7,560 m³/d RO
Battle Creek, MI, U.S.A., 7,560 m³/d RO
Curaçao, 7,500 m³/d RO
Washington, United States of America of America, 6,814 m³/d RO
Illinois, United States of America, 6,432 m³/d RO
Kansas, United States of America of America, 5,678 m³/d RO
Western Australia, Australia, 5,000 m³/d
Zibo, Shandong, China, 5,000 m³/d MBR-RO
Russian Federation, 4,752 m³/d RO
Andhra Pradesh, India, 4,560 m³/d RO
Quebec, Canada, 4,368 m³/d RO
Colorado, United States of America of America, 3,960 m³/d RO
Israel, 3,600 m³/d ED (Electrodialysis)
Myanmar (Burma), 3,600 m³/d RO
Israel, 3,408 m³/d RO
Huelva, Spain, 3,360 m³/d RO
Texas, United States of America of America, 3,118 m³/d RO
Western Australia, Australia, 3,000 m³/d RO
Bangkok, Thailand, 2,884 m³/d RO
California, United States of America, 2,725 m³/d RO
Saudi Arabia, 2,500 m³/d RO
Iowa, United States of America of America, 2,448 m³/d ED (Electrodialysis)
Queensland, Australia, 2,400 m³/d RO
Iraq, 2,400 m³/d RO
Guatemala, 2,398 m³/d RO
Iraq, 2,304 m³/d RO
Illinois, United States of America of America, 2,180 m³/d RO
Western Australia, Australia, 2,000 m³/d RO
India, 2,000 m³/d RO
Jakarta, Thailand, 2,000 m³/d RO
India, 2,000 m³/d RO
Villavicencio, Meta, Colombia, 1,890 m³/d RO
Arkansas, United States of America of America, 1,869 m³/d RO
France, 1,680 m³/d RO
Portugal, 1,680 m³/d ED (Electrodialysis)
South Carolina, United States of America of America, 1,635 m³/d RO
Egypt, 1,635 m³/d RO
California, United States of America of America, 1,635 m³/d RO
Bonaire, Bonaire, Sint Eustatius and Saba, 1,600 m³/d RO
West Virginia, United States of America of America, 1,514 m³/d RO
South Korea, 1,500 m³/d ED (Electrodialysis)
India, 1,500 m³/d RO
Mississauga, Ontario, Canada, 1,437 m³/d RO
Wisconsin, United States of America, 1,363 m³/d RO
Kuwait, 1,308 m³/d RO
Qatar, 1,248 m³/d EDI (Electrodeionization)
Sao Paulo, Penha, Brazil, 1,198 m³/d RO
Hyderabad, Andhra Pradesh, India, 1,090 m³/d RO
Arizona, United States of America, 1,090 m³/d RO
Texas, United States of America, 1,090 m³/d RO
Florida, United States of America, 1,090 m³/d RO
Robards, KY, U.S.A., 1,088 m³/d RO
Shaoxing, Zhejiang, China, 1,054 m³/d MBR-RO
Taiwan, 1,032 m³/d
India, 1,008 m³/d RO

Saluzzo, Italy, 998 m³/d RO
China, 960 m³/d
Manitoba, Canada, 953 m³/d RO
Texas, United States of America, 840 m³/d RO
Tennessee, United States of America, 820 m³/d RO
Egypt, 818 m³/d RO
Jamaica, 818 m³/d RO
Texas, United States of America, 818 m³/d RO
Washington, United States of America, 817 m³/d RO
Indiana, United States of America, 817 m³/d
Fullerton, CA, U.S.A., 816 m³/d RO
Algeria, 816 m³/d RO
Campbellfield, VIC, Australia, 723 m³/d RO
Ireland, 670 m³/d RO
Ontario, Canada, 654 m³/d RO
Pennsylvania, United States of America, 637 m³/d RO
Washington, United States of America, 615 m³/d RO
Delaware, United States of America, 567 m³/d RO
Ireland, 552 m³/d RO
California, United States of America, 545 m³/d RO
Florida, United States of America, 545 m³/d RO
District of Columbia, United States of America, 545 m³/d RO
Mexico, 544 m³/d RO
Westfield, WI, U.S.A., 544 m³/d RO
Alberta, Canada, 510 m³/d RO
Auckland, New Zealand, 500 m³/d RO
British Columbia, Canada, 490 m³/d RO
British Columbia, Canada, 490 m³/d RO
Nebraska, United States of America, 480 m³/d EDI (Electrodeionization)
California, United States of America, 454 m³/d RO
Algeria, 408 m³/d RO
Florida, United States of America, 381 m³/d RO
Virgin Islands, United States Virgin Islands, 305 m³/d RO
Hyderabad, Andhra Pradesh, India, 282 m³/d RO
Massachusetts, United States of America, 272 m³/d RO
California, United States of America, 272 m³/d RO
Georgia, United States of America, 272 m³/d RO
Western Australia, Australia, 265 m³/d ED (Electrodialysis)
Belarus, 240 m³/d ED (Electrodialysis)
Turkey, 240 m³/d RO
South Dakota, United States of America, 227 m³/d ED (Electrodialysis)
Angola, 218 m³/d RO
Lebanon, 200 m³/d RO
Trinidad and Tobago, 190 m³/d RO
Texas, United States of America, 137 m³/d RO
Maharashtra, India, 120 m³/d RO
Virgin Islands, United States Virgin Islands, 109 m³/d RO
BURTON, TX, U.S.A., 102 m³/d RO
Belarus, 90 m³/d RO
Norway, 46 m³/d RO
Italy, 24 m³/d RO

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Creating Resources out of waste

Suido Kiko Middle East (SKME), a Joint Venture between Saudi Brothers Commercial Group and Suido Kiko Kaisha, Ltd., Japan, is a Jeddah based company that provides complete water treatment solutions in Saudi Arabia and the Gulf.

SKME focuses on reducing the impact of waste water on the environment and perceives waste water as a resource. SKME has secured many significant projects in water and waste water sectors in Saudi Arabia and the Middle East within a short span of time. Its clientele are the Ministry of Water and Electricity, Municipal Authorities, National Water Company, MODON, leading public sector organizations and other leading private sector industries. SKME takes pride in winning of three prestigious awards in the last three consecutive years, 2011, 2012 & 2013.

Global Water Award 2011, "Water Re-use Project of the Year 2011" for the waste water treatment plant of Asla Valley Lake. This is the largest flat-sheet MBR facility Saudi Arabia that treated up to 3 million m³ of Jeddah Sewage Lake during its clean-up.

- HRH Prince Turki Bin Nasser Award for Environmental Protection, 2012 for Nazeem Lake Clean-up Project, Riyadh, Saudi Arabia. SKME evacuated sewage water from the lake and treated 2 million m³ of mixed industrial and domestic sludge.
- Global Water Award 2013, "Industrial Water Sustainability Award" for Water Re-use System built for National Food Industries Company, Jeddah, Saudi Arabia. SKME takes prides in Designing, Procurement and Construction of this prestigious industrial water re-use system.

SKME is certified by internationally recognized quality, environment, health & safety management systems and standards such as ISO9001:2008, ISO14001: 2015, OHSAS 18001:2007.

SKME's head quarter is located in Jeddah, Saudi Arabia and have branches in Riyadh, Dammam and Abu Dhabi, UAE.

SELECTED REFERENCES

Contractor

Salboux Phase I, Riyadh, Saudi Arabia 2012, 53,040 m³/d RO
Head Quarters Business Park, Jeddah, Saudi Arabia 2012, 1,300 m³/d RO

Hadada, Najran, Saudi Arabia 2011, 200 m³/d RO

EPC

Al Kharji BWRO Plant, Al Kharj, Saudi Arabia 2013, 50,000 m³/d RO

Manfuha Plant 2, Riyadh, Saudi Arabia 2013, 38,400 m³/d RO

North Obhur, Jeddah, Saudi Arabia 2013, 1,500 m³/d RO

Al-Iskan Desalination Plant, Kharkheer, Saudi Arabia 2012, 300 m³/d RO

RO Plant for the Camp, Al Baithe, Saudi Arabia 2012, 300 m³/d RO

Isuzu Motor-RO Plant, Dammam, Saudi Arabia 2012, 10 m³/d RO

South Jeddah Corniche Desalination Plant (SOJECO), Jeddah, Saudi Arabia 2011, 10,000 m³/d RO

National Food Industries Co (NFIC) 1,500 m³/d BWRO Plant, Jeddah, Saudi Arabia 2011, 1,500 m³/d RO

HBWRO Desalination Plant, Asfan, Saudi Arabia 2011, 500 m³/d RO

Brackish Water Treatment Plant, Riyadh, Saudi Arabia 2011, 500 m³/d RO

Containerised BWRO Plant, Najran, Saudi Arabia 2010, 300 m³/d RO

King Abdul Aziz University Project 100 m³/d RO, Jeddah, Saudi Arabia 2010, 100 m³/d RO

Main Contractor

Store City, Jeddah, Saudi Arabia 2017, 5,000 m³/d RO

SOJECO Desalination plant, Jeddah, Saudi Arabia 2015, 5,000 m³/d RO

Waste Water Treatment Plant in Dammam 1 Industrial City(WwTP), Dammam, Saudi Arabia 2014, 3,500 m³/d 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 for applications within clean water, municipal and industrial wastewater.

SELECTED REFERENCES

SWRO Laayoun, Morocco 2018, 26,000 m³/d RO
SWRO Al Hoceima, Morocco 2018, 17,500 m³/d RO
SWRO Jeddah (Emergency Plants), KSA 2018, 7,300 m³/d RO
Shuaibah III Expansion II Desalination Plant, KSA 2017, 250,000 m³/d RO
El Alamein SWRO Plant, Egypt 2017, 150,000 m³/d RO
El Galalah Desalination Plant, Egypt 2017, 150,000 m³/d RO
Jazan SWRO Plant, KSA 2017, 150,000 m³/d RO
SWRO Sri Damodaram Sanjeevaiah TPS, India 2017, 100,000 m³/d RO
Valdelentisco (refurbishment), Spain 2017, 96,000 m³/d RO
Marcona SWRO Plant, Peru 2017, 19,500 m³/d RO
IDAM Janubio, Spain 2017, 18,000 m³/d RO
Chennai Tamilnadu India, India 2017, 13,500 m³/d RO
Palestine SWRO, Palestine 2017, 12,000 m³/d RO
Rabigh 3x 2000 m³/day (Kindsa), KSA 2017, 6,000 m³/d RO
SAWACO Store City Plant, KSA 2017, 5,000 m³/d RO
Barka IV, Oman 2016, 281,000 m³/d RO
Sohar IWP, Oman 2016, 250,000 m³/d RO
Ras Al Khaima, UAE 2016, 150,000 m³/d RO
Ziga II, Burkina Faso 2016, 120,000 m³/d
Putatan WTP 2, Philippines 2016, 100,000 m³/d
Cangzhou SWRO Plant, China 2016, 50,000 m³/d RO
Hangzhou WWT, China 2016, 50,000 m³/d MBR
Khurais, KSA 2016, 50,000 m³/d RO
Remelah II, Egypt 2016, 20,000 m³/d RO
Shnehua Ningxia Coal Plant, China 2016, 20,000 m³/d RO
El M'Ghaier, Algeria 2016, 16,000 m³/d RO

Formentera SWRO Plant, Spain 2016, 15,000 m³/d RO
Guangdong Baolihua Power Plant, China 2016, 8,000 m³/d RO
Magtaa Expansion, Algeria 2015, 500,000 m³/d RO
Um Al Houl, Qatar 2015, 300,000 m³/d RO
Qurayyat, Oman 2015, 200,000 m³/d RO
Ras Abu Fontas, Qatar 2015, 170,000 m³/d RO
Agadir, Morocco 2015, 100,000 m³/d RO
Qingdao Dongjiakou, China 2015, 100,000 m³/d RO
Xiaotangshan Water Treatment Plant, China 2015, 100,000 m³/d MF/UF (Micro/Ultrafiltration)
Djerba, Tunisia 2015, 50,000 m³/d RO
Khouribga, Morocco 2015, 38,000 m³/d RO
Santa Barbara, USA 2015, 20,000 m³/d RO
Yanbu Containerized SWRO plant, KSA 2015, 12,000 m³/d RO
BV Plant, Vietnam 2015, 8,000 m³/d RO
Xinjiang Guanghui, China 2015, 6,000 m³/d RO
Hongyanhe Nuclear Power Plant SWRO P3, China 2015, 4,500 m³/d RO
Hongyanhe Nuclear Power Plant SWRO P2, China 2015, 4,000 m³/d RO
Shnehua Ningxia Coal Plant, China 2015, 3,600 m³/d
Ningde Nuclear Power Plant SWRO P2, China 2015, 3,500 m³/d RO
Hongdun Wastewater Reuse Plant, China 2015, 3,000 m³/d RO
Egypt Container SWRO P2, Egypt 2015, 2,000 m³/d RO
Jamnagar, India 2014, 168,000 m³/d RO
Mirfa, UAE 2014, 136,000 m³/d RO
Beetham, Trinidad and Tobago 2014, 50,000 m³/d
Polimeks, Turkmenistan 2014, 30,000 m³/d RO
Baosteel, China 2014, 30,000 m³/d MED
Tianjin zhongxinshengtaicheng, China 2014, 20,000 m³/d RO
Granadilla, Spain 2014, 16,000 m³/d RO
Malaysia Keysino BWRO Plant P1, Malaysia 2014, 15,000 m³/d RO
Barka SWRO Plant (Small Plant), Oman 2014, 12,000 m³/d RO
Nafta, Tunisia 2014, 10,000 m³/d RO
Tozeur, Tunisia 2014, 10,000 m³/d RO
Hezoua, Tunisia 2014, 10,000 m³/d RO
Marasi, Egypt 2014, 5,000 m³/d RO
Tenes, Algeria 2013, 200,000 m³/d RO
Al Ghubrah, Oman 2013, 190,000 m³/d RO
Carlsbad, USA 2013, 190,000 m³/d RO
Jubail 4 SWRO, KSA 2013, 136,000 m³/d RO
Cap Djinet, Algeria 2013, 100,000 m³/d RO
Teshie Nungua, Ghana 2013, 60,000 m³/d RO
Taiyuan Steel Plant, China 2013, 36,000 m³/d RO
Salalah Steel Plant, Oman 2013, 35,000 m³/d RO
Hongyang Power Plant, China 2013, 30,000 m³/d RO
Yuhuan Power Plant SWRO (intake upgrade), China 2013, 30,000 m³/d RO
Sabha B Project (1st stage pump for Boron Removal RO System), Israel 2013, 15,000 m³/d RO
Muthukurmandal, Nellore Andhra Pradesh, India 2013, 10,000 m³/d RO
Datang Keqi Coal Plant ZLD, China 2013, 3,200 m³/d MED
Ashdod, Israel 2012, 320,000 m³/d RO
Jorf Lasfar, Morocco 2012, 75,000 m³/d RO
Majis, Oman 2012, 20,000 m³/d RO
Oeste de Tenerife, Spain 2012, 18,000 m³/d RO
Shenhua Ordos Coal Plant, China 2012, 15,000 m³/d RO
Laayoune Extension, Morocco 2012, 13,000 m³/d RO

Tianjin Dagang SWRO Plant Expansion, China 2012, 12,500 m³/d RO

Mantoverde, Chile 2012, 10,300 m³/d RO

JSW, India 2012, 10,000 m³/d RO

Yanbu Construction Material Group, KSA 2012, 10,000 m³/d RO

Tan Tan, Morocco 2012, 8,600 m³/d RO

Sanmen Nuclear Power Plant SWRO, China 2012, 5,000 m³/d RO

PT Pupuk - Kaltim 5, Indonesia 2012, 2,000 m³/d RO

Soreq, Israel 2011, 510,000 m³/d RO

Tuas II, Singapore 2011, 320,000 m³/d RO

Az Zour, Kuwait 2011, 135,000 m³/d RO

Hadera Expansion, Israel 2011, 74,000 m³/d RO

Copiapó, Chile 2011, 45,000 m³/d RO

Lee & Man Paper Plant BWRO P5, China 2011, 35,000 m³/d RO

Candelaria, Chile 2011, 30,000 m³/d RO

Minakshi, India 2011, 30,000 m³/d RO

Minera Candelaria, Chile 2011, 30,000 m³/d RO

Minera Candelaria Extension, Chile 2011, 30,000 m³/d RO

Al Nasr, Iraq 2011, 25,000 m³/d

Al Nasr, Iraq 2011, 25,000 m³/d

Ghammas, Iraq 2011, 25,000 m³/d

Marsah Matrouh, Egypt 2011, 20,000 m³/d RO

Mundra-Adani Power Plant, India 2011, 13,400 m³/d RO

Aktau, Kazakhstan 2011, 12,000 m³/d MED

Laizhou Power Plant SWRO, China 2011, 10,000 m³/d RO

Vinh Tan Power Plant SWRO, Vietnam 2011, 10,000 m³/d RO

Kap Verde, Cape Verde 2011, 5,000 m³/d RO

Nuh Enerji 3, Turkey 2011, 4,800 m³/d RO

Sri Lanka Puttalam Coal Power Plant SWRO P2, Sri Lanka 2011, 3,000 m³/d RO

Burton, Australia 2011, 2,500 m³/d RO

Fenix Chilca, Peru 2011, 2,000 m³/d RO

La Blanche Hotel, Turkey 2011, 500 m³/d RO

Melbourne, Australia 2010, 411,000 m³/d RO

Tembusu SWRO, Singapore 2010, 182,000 m³/d RO

Shuqaiq Hail, KSA 2010, 132,000 m³/d

Qingdao, China 2010, 100,000 m³/d RO

Salalah Independent Water and Power Plant, Oman 2010, 69,000 m³/d RO

Vasilikos, Cyprus 2010, 60,000 m³/d RO

Marina Baja, Spain 2010, 48,000 m³/d RO

Limmasol, Cyprus 2010, 40,000 m³/d RO

Mesa California, USA 2010, 32,500 m³/d NF/SR (NF/Sulphate Removal)

Tarraagona y Vilaseca, Spain 2010, 30,000 m³/d

Tuticorin, India 2010, 25,000 m³/d RO

Qatar Steel (Qasco), Qatar 2010, 15,000 m³/d

Huilai Power Plant SWRO, China 2010, 10,000 m³/d RO

Isla Praia Expansion, Cape Verde 2010, 5,000 m³/d RO

Philippines Mariveles Power Plant SWRO, Philippines 2010, 5,000 m³/d RO

POGC Iran SWRO Plant, Iran 2010, 3,000 m³/d RO

Gorgon Demin, Australia 2010, 1,500 m³/d RO

Equipment Supplier - Pumps

Basrah, Iraq 2015, 200,000 m³/d RO

Al-Wakrah, Qatar 2015, 170,000 m³/d RO

United Arab Emirates 2014, 136,000 m³/d RO

Trinidad and Tobago 2014, 50,000 m³/d NF

Kiyanly, Turkmenistan 2014, 30,000 m³/d RO

Baosteel Desalination plant, China 2014, 30,000 m³/d RO

Hezoua, Tunisia 2014, 10,000 m³/d NF

Nafta, Tunisia 2014, 10,000 m³/d NF

Tozeur, Tunisia 2014, 10,000 m³/d NF

Indonesia Wandan Power Plant, Indonesia 2014, 7,500 m³/d RO

Al Ghubrah, Oman 2013, 191,000 m³/d RO

Carlsbad, U.S.A. 2013, 189,250 m³/d RO

Tembusu SWRO (Intake), Singapore 2013, 182,000 m³/d RO

Jamnagar Desalination plant, Jamnagar, India 2013, 168,000 m³/d RO

Al Fujairah 1 SWRO expansion, Fujairah, United Arab Emirates 2013, 136,000 m³/d RO

Al Jubail SWRO-4., Jubail, Saudi Arabia 2013, 100,000 m³/d RO

Salalah, Oman 2013, 68,200 m³/d RO

Ghana SWRO, Nungua, Ghana 2013, 60,000 m³/d RO

Middelburg water reclamation plant, Middelburg, South Africa 2013, 20,000 m³/d RO

Guia de Isora/Oeste de Tenerife, Tenerife, Spain 2013, 14,000 m³/d RO

Nellore, India 2013, 10,000 m³/d RO

Dafeng SWRO, Dafeng, China 2013, 5,000 m³/d RO

Soreq, Israel 2012, 510,000 m³/d RO

Magtaa, Oran, Algeria 2012, 500,000 m³/d RO

Melbourne, VIC, Australia 2012, 411,000 m³/d RO

Qingdao, China 2012, 100,000 m³/d RO

Salboubkh, Riyadh, Saudi Arabia 2012, 53,040 m³/d RO

Copiapó, Chile 2012, 51,840 m³/d RO

Waste Water MBR Plant, Bahrain 2012, 40,000 m³/d Other

Hadera Expansion, Israel 2012, 40,000 m³/d RO

Minakshi Desalination Plant, India 2012, 40,000 m³/d RO

Tougourt, Algeria 2012, 37,000 m³/d RO

Turicorin, India 2012, 31,800 m³/d RO

Sud Khenifra, Morocco 2012, 30,000 m³/d RO

Aktau, Kazakhstan 2012, 24,000 m³/d MED

Mantoverde Copper Mine, Chile 2012, 10,368 m³/d RO

PT Pupuk-Kaltim, Kalimantan, Indonesia 2012, 10,000 m³/d RO

Marasi, Sidi Abdel Rahman, Egypt 2012, 5,000 m³/d RO

Rafah, Sinai, Egypt 2012, 5,000 m³/d RO

Atlas Enerji, Turkey 2012, 5,000 m³/d RO

Intel Ocotillo, Ocotillo, CA, U.S.A. 2012, 4,000 m³/d RO

Chilca SWRO, Peru 2012, 2,500 m³/d RO

Ashdod, Israel 2011, 320,000 m³/d RO

Tuas II, Singapore 2011, 274,000 m³/d RO

Ad Dur, Bahrain 2011, 218,000 m³/d RO

Az Zour South Hybridisation, Kuwait 2011, 136,000 m³/d RO

Jorf Lasfar, Morocco 2011, 75,800 m³/d RO

Valdelentisco Expansion, Murcia, Spain 2011, 65,000 m³/d

Marina Baja, Alicante, Spain 2011, 48,000 m³/d RO

Limassol, Cyprus 2011, 40,000 m³/d RO

Tarragona y Vilaseca, Spain 2011, 30,000 m³/d RO

Minera Candelaria, Cerro Padrones, Chile 2011, 29,800 m³/d RO

Adani Power, India 2011, 25,000 m³/d RO

Marsa Matrouh, Egypt 2011, 24,000 m³/d RO

Sohar Industrial Port (Majis), Oman 2011, 16,000 m³/d RO

Shuqaiq Hail, Saudi Arabia 2010, 132,000 m³/d Other

Paraguaná, Venezuela 2010, 75,000 m³/d RO

Coastal Gujarat SWRO, India 2010, 50,000 m³/d RO
Chino II, Riverside County, CA, U.S.A. 2010, 26,000 m³/d RO
ETAP Algodor, Spain 2010, 25,000 m³/d RO

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SELECTED REFERENCES

Project Sponsor

Al Ghubrah IWP, Ghubrah - Muscat City, Oman 2012, 190,932 m³/d RO

Shareholder

Shuweihaat SI, Abu Dhabi, United Arab Emirates, 454,200 m³/d MSF

Al-Hidd IWPP, Bahrain, 408,780 m³/d MSF/MED

Sundt Construction Inc

SELECTED REFERENCES

Installation

Greenfield Water Reclamation Plant (South), Gilbert, Arizona, U.S.A., 60,566 m³/d

Butler Water Reclamation Facility, Peoria, Arizona, U.S.A., 37,854 m³/d MBR

SWM International



About Us:

From the Renaissance to today, SWM's story spans multiple centuries, continents, products and markets, with a single focus on engineering for tomorrow. As a leader in product engineering and manufacturing for the filter market, SWM has over 70 years of experience developing niche components. Our netting, tubes, nonwovens and films are recognized worldwide for superior performance in demanding applications.

SWM produces extruded diamond netting; particularly feed spacer nets used in reverse osmosis (RO) water filtration, as well as center tubes. Other products include meltblown media for air and liquid filtration, and electrostatic media for air filtration.

Beyond filtration applications and technologies, SWM has other diversified capabilities, including paper (various fibers), TPU film, netting, yarn, and engineered composite materials, which are used in a variety of other end-markets ranging from transportation to medical.

For more information on our markets and products visit:

www.swmintl.com

Syrinix

SELECTED REFERENCES

Collaboration with client's R&D department to improve deployment of the PIPEMINDER-S device to monitor water pressure for smart leak detection and NRW reduction

Anglian Water, Newmarket, U.K.

Deployment of 10 PIPEMINDER-S devices to monitor water pressure for smart leak detection and NRW reduction

Cobb County Marietta Water Authority (CCMWA), Marietta, U.S.A.

Deployment of PIPEMINDER-S devices, operated through the RADAR online interface to monitor water pressure for smart leak detection and NRW reduction

Las Vegas Valley Water District's (LVVWD), Las Vegas, U.S.A.

Installation of TransientMinder units to monitor water pressure in real-time

Cambridge Water, Cambridge, U.K.

Installation of TrunkMinder sensor array for real-time data collection and monitoring

Thames Water, London, U.K.

Crossrail, London, U.K.



We're SWM.
What Can
We Engineer
For You?

At SWM, our commitment to partnering with RO Membrane Filtration Customers is at the heart of how we deliver long-term value. We offer customized feed spacer netting and machined core tubes for our global customers.

Engineered for tomorrow. Engineered for you.

Learn more at: swmintl.com
Contact us at: ams@swmintl.com

Coretec®
Machined Cores



Naltex®
Diamond Netting

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SELECTED REFERENCES

Motor Oil Refineries, Corinthia, Greece 2017, 11,830 m³/d RO

Engineering, procurement, construction and operations

WTP, Malevizi, Greece 2017, 720 m³/d

WTP Expansion 2015, Agioi Theodoroi, Corinthia, Greece 2015, 2,100 m³/d RO

Water Treatment Plant, Alonnisos Island, Sporades, Greece 2015, 500 m³/d RO

Water Treatment Plant, Paliouri, Chalkidiki, Greece 2015, 300 m³/d RO

Temporary Water Treatment Plant, Mykonos Island, Greece 2014, 1,800 m³/d RO

Motor Oil Hellas Expansion 2013, 3,000 m³/d RO

Motor Oil Hellas, Greece 2010, 3,700 m³/d RO

Motor Oil Hellas, Greece 2010, 3,200 m³/d RO

Almyros Desalination and Educational Park, Heraklion, Crete, Greece 2013, 2,000 m³/d RO

Ydrominoiki SA, Crete, Greece 2010, 3,000 m³/d

Metka S.A / Korinthos Power CCPP, Greece 2010, 860 m³/d RO

Metka S.A / Korinthos Power CCPP, Greece 2010, 720 m³/d RO

BW Expansion 2016, Agioi Theodoroi, Corinthia, Greece 2016, 1,200 m³/d RO

Water Treatment Plant, Agioi Theodoroi, Corinthia, Greece 2016, 600 m³/d RO

Water Treatment Plant, Thira, Cyclades, Greece 2016, 280 m³/d RO

Plant Supplier

Crete Island, Greece 2018, 600 m³/d RO

Amandi Power Plant, Demi Water Treatment Plant, Aboadze, Western Region, Ghana 2017, 2,600 m³/d RO

Amandi Power Plant, Demi Water Treatment Plant, Aboadze, Western Region, Ghana 2017, 1,920 m³/d RO

Corfu Island, Ionian Sea, Greece 2017, 400 m³/d RO

Crete, Greece 2017, 400 m³/d MF/UF (Micro/Ultrafiltration)

Porto Heli, Peloponnese, Greece 2017, 200 m³/d RO

Spetses Island, Greece 2017, 150 m³/d RO

Mykonos, Greece 2017, 150 m³/d RO

Crete, Greece 2017, 100 m³/d RO

South Aegean, Greece 2017, 75 m³/d RO

Kalamata, Greece 2017, 50 m³/d RO

Pella, Greece 2017, 45 m³/d RO

WTP Pilot Unit, Olympiada, Chalkidiki, Greece 2015, 200 m³/d RO

Water Treatment Plant, Trikala, Greece 2015, 140 m³/d RO

8 mobile gas turbine power generating sets, (Fast Track), Algeria 2014, 3,072 m³/d RO

Water Treatment Plant, Paxos Island, Ionian Sea, Greece 2016, 900 m³/d RO

Water Treatment Plant, Skydra, Pella, Greece 2015, 400 m³/d RO

Demi Water Treatment Plant, Afam, Rivers State, Nigeria 2016, 140 m³/d RO

Water Treatment Plant, Oinofyta, Boeotia, Greece 2015, 230 m³/d RO

Water Treatment Plant, Safaga, Red Sea Governorate, Egypt 2015, 500 m³/d RO

Water Treatment Plant, Corfu Island, Ionian Sea, Greece 2015, 1,000 m³/d RO

Potabilization unit for the Sunti Project, Mokwa, Nigeria 2014, 720 m³/d RO

CEEG Phase V Project in Algeria, Mobile Pac, Algeria 2013, 7,680 m³/d RO

CEEG Phase IV Project in Algeria, Mobile Pac, Tindouf, Algeria 2013, 2,180 m³/d RO

Rom Oil Mills Limited, Ibadan, Oyo State, Nigeria 2013, 1,600 m³/d RO

Rom Oil Mills Limited, Ibadan, Oyo State, Nigeria 2013, 360 m³/d RO

24 mobile gas turbine power generating sets, Algeria 2013, 9,000 m³/d RO

Samra Power Station, Phase III Add on combined cycle Project, Samra, Jordan 2013, 720 m³/d RO

Water Treatment Plant, Kimolos Island, Greece 2013, 600 m³/d RO

Water Treatment Plant, Lipsoi Island, Greece 2013, 600 m³/d RO

Paros Municipality 2011, 2,500 m³/d

Quriyat Ultra Filtration Plant, Quriyat, Oman 2016, 20,000 m³/d Other

System Manufacturer

Water Treatment Plant, Taman, Temryuksky District, Russian Federation 2016, 11,000 m³/d RO

Canary Islands, Spain 2017, 1,032 m³/d RO

Sacramento, USA 2017, 240 m³/d RO

Aseelah Desalination Plant, Aseelah, Al Ashkharah, Oman 2016, 10,000 m³/d RO

Water Treatment Plant, Koh Sichang, Sichang Island, Thailand 2016, 1,000 m³/d RO

Demi Water Treatment Plant, Teesside, Middlesbrough, United Kingdom 2016, 240 m³/d RO

Water Treatment Plant, Manila, Philippines 2015, 1,000 m³/d RO

Demi Water Treatment Plant, Lisbjerg, Aarhus, Denmark 2015, 400 m³/d RO

Opera Project, Kuwait 2014, 2,400 m³/d RO

Opera Project, Kuwait 2014, 600 m³/d RO

TaKaDu

SELECTED REFERENCES: SMART LEAKAGE REDUCTION

Central Event Management, IoT cloud-based technology, big data analytics, integration with other alerting/IT systems

KUB, Knoxville, TN, U.S.A 2017

Unitywater, Queensland, Australia 2013

Mei Carmel, Haifa, Israel 2016

QUU, SE Australia, Australia 2014

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www.belgicast.eu

SELECTED REFERENCES

Equipment Supplier - Valves

El Galalah SWRO, Egypt 2017, 150,000 m³/d SWRO
 Al Khafji SWRO, Saudi Arabia 2017, 60,000 m³/d SWRO
 Bandar Abbas SWRO, Iran 2017, 20,000 m³/d SWRO
 Sardegna SWRO, Italy 2017, 20,000 m³/d SWRO
 Janubio Refurbishment SWRO, Spain 2017, 18,000 m³/d SWRO
 Isla De Sal & Sao Vicente SWRO, Cabo Verde 2017, 10,000 m³/d SWRO
 Facility D SWRO, Qatar 2016, 284,000 m³/d
 Barka SWRO, Oman 2016, 280,000 m³/d
 2nd Changi NEWater (WRP), Singapore 2016, 228,000 m³/d
 Qurayyat SWRO, Oman 2016, 200,000 m³/d
 Tuas 3 SWRO, Singapore 2016, 130,000 m³/d SWRO
 Sur SWRO (additional), Oman 2016, 83,500 m³/d SWRO
 Djerba SWRO, Tunisia 2016, 50,000 m³/d SWRO

Al Youssr 2 SWRO, Egypt 2016, 40,000 m³/d
 Cangzhou SWRO, China 2016, 30,000 m³/d
 Ensenada SWRO, Mexico 2016, 21,600 m³/d
 Marassi SWRO, Egypt 2016, 10,000 m³/d
 In Salah BWRO, Algeria 2016, BWRO
 Ras Abu Fontas 3 SWRO, Qatar 2015, 164,000 m³/d
 Mirfa IWPP-SWRO, United Arab Emirates 2015, 136,380 m³/d
 Barka II Expansion, Oman 2015, 57,000 m³/d
 Beetham RO-WRP, Trinidad & Tobago 2015, 50,000 m³/d
 Al Youssr SWRO, Egypt 2015, 40,000 m³/d
 Marsa Matrouh SWRO, Egypt 2015, 24,000 m³/d
 Lanzarote-4 SWRO Expansion, Spain 2015, 20,000 m³/d
 Angamos SWRO, Chile 2015, 19,200 m³/d
 Ashkelon SWRO, Israel, 330,000 m³/d RO
 Hadera SWRO, Israel, 330,000 m³/d RO
 Ashdod SWRO, Israel, 320,000 m³/d RO
 Fujairah SWRO, United Arab Emirates, 284,000 m³/d RO
 Adelaide SWRO, Australia, 274,000 m³/d RO
 Perth I SWRO, Australia, 200,000 m³/d RO
 Ceuta SWRO, Spain, 200,000 m³/d RO
 TLEMEN, Algeria, 200,000 m³/d
 BARCELONA SWRO, Spain, 200,000 m³/d
 Tenes SWRO, Algeria, 200,000 m³/d RO
 Honaine SWRO, Algeria, 200,000 m³/d RO
 Almeria-Almanzora, Spain, 200,000 m³/d RO
 Mostaganem SWRO, Algeria, 200,000 m³/d RO
 Melilla SWRO, Spain, 200,000 m³/d RO



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WATER ENERGY

DESALINATION
ULTRA FILTRATION
WASTE WATER TREATMENT

GEOEXCHANGE
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ENERGY SAVING

CORROSION PROTECTION

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Al Ghubrah IWP - SWRO , Oman, 190,932 m³/d RO
 Aguilas SWRO, Spain, 180,000 m³/d RO
 Sadara SWRO, Saudi Arabia, 178,560 m³/d RO
 Ras Abu Fontas 3 SWRO, Qatar, 164,000 m³/d RO
 EL ALAMEIN SWRO, Egypt, 150,000 m³/d
 SHOAIBAH 3 EXPANSION II, Saudi Arabia, 150,000 m³/d
 Beckton London BWRO, United Kingdom, 150,000 m³/d RO
 Campo de Valdelentisco SWRO , Spain, 140,000 m³/d RO
 MARINA EAST SWRO, Singapore, 136,500 m³/d
 Mirfa IWPP-SWRO, United Arab Emirates, 136,380 m³/d RO
 Fujairah I Expansion SWRO, United Arab Emirates, 136,000 m³/d RO
 Carboneras SWRO, Spain, 120,000 m³/d RO
 Fouka SWRO, Algeria, 120,000 m³/d RO
 Alicante I SWRO, Spain, 100,000 m³/d RO
 Jubail SWRO-4, Saudi Arabia, 100,000 m³/d RO
 Qingdao SWRO, China, 100,000 m³/d RO
 Cap Djinet SWRO, Algeria, 100,000 m³/d RO
 Chennai SWRO, India, 100,000 m³/d RO
 NASR SWRO, Egypt, 80,000 m³/d
 Pacific Rubiales Puerto Galan BWRO, Colombia, 79,500 m³/d RO
 Jorf Lasfar SWRO, Morocco, 75,800 m³/d RO
 Alicante II SWRO, Spain, 64,000 m³/d RO
 Delta de la Tordera SWRO, Spain, 62,000 m³/d RO
 Nungua SWRO, Ghana, 60,000 m³/d RO
 Barka II expansion , Oman, 57,000 m³/d RO
 Valle de Copiapó SWRO, Chile, 54,000 m³/d RO
 Antofagasta SWRO, Chile, 52,000 m³/d RO
 Yanbu SWRO, Saudi Arabia, 50,400 m³/d RO
 Beetham RO-WRP , Trinidad&Tobago, 50,000 m³/d RO
 Barka I IWPP expansion , Oman, 45,460 m³/d RO
 Al Zawrah SWRO, United Arab Emirates, 45,000 m³/d RO
 Oropesa SWRO, Spain, 41,000 m³/d RO
 Al Yosr SWRO, Egypt, 40,000 m³/d RO
 El TOR SWRO, Egypt, 30,000 m³/d
 Candelaria SWRO, Chile, 29,800 m³/d RO
 Dhekelia SWRO, Cyprus, 24,000 m³/d RO
 Montazah SWRO, Egypt, 24,000 m³/d RO
 Marsa Matrouh SWRO, Egypt, 24,000 m³/d RO
 Los Cabos SWRO, Mexico, 20,000 m³/d RO
 Las Palmas SWRO , Spain, 20,000 m³/d RO
 AL HOCEIMA SWRO, Morocco, 20,000 m³/d
 Lanzarote-4 SWRO Expansion, Spain, 20,000 m³/d RO
 AGAMOS SWRO, Chile, 19,200 m³/d
 Angamos SWRO, Chile, 19,200 m³/d RO
 Arica SWRO, Chile, 18,000 m³/d RO
 Andratx SWRO, Spain, 14,000 m³/d RO
 JAVA SWRO, Indonesia, 10,000 m³/d
 Sheikh Zouwayed SWRO, Egypt, 10,000 m³/d RO
 SHARM EL-SHEIKH SWRO, Egypt, 6,000 m³/d
 AL SAAD BWRO, Saudi Arabia

TAM Environmental

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SELECTED REFERENCES

EPC Contractor

Ain Sokhna, Egypt, 164,000 m³/d RO
 Dabaa Desalination Plant, Al-Dabaa, Egypt, 80,000 m³/d RO
 Baghoush, Egypt, 24,000 m³/d RO
 El Salam, Marsa Alam, Egypt, 700 m³/d RO

Taprogge GmbH

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www.taprogge.de

SELECTED REFERENCES

Tube cleaning systems and debris filters

Ras Abu Fontas A 2, Qatar 2013, MSF
 Dubai Aluminium, United Arab Emirates 2013, MSF
 SWCC Al Khobar, Saudi Arabia 2012, MSF
 Ras Al Kafji, Saudi Arabia 2011, MSF
 Shuaiba North, Kuwait 2010, MSF
 Rabigh, Saudi Arabia 2010, MED
 Al Lith, Saudi Arabia 2010, MED
 Al Khobar, Saudi Arabia 2010, MSF
 Farasan, Saudi Arabia 2010, MED
 Al Wajh, Saudi Arabia 2010, MED
 Qunfuda, Saudi Arabia 2010, MED
 Umm Luj, Saudi Arabia 2010, MED
 Aden Refinery Evaporator, Aden, Yemen, MSF (Multi-stage flash)
 Barka I, Oman, RO
 Az-Zour South Phase 2, Kuwait, MSF
 Umm al Houli IWPP, Qatar, MSF

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www.pumicefiltrationmedia.com

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 2015, RO
 London, UK 2015, NF
 Mumbai, India 2014, RO
 Kempton Park WTW, London, United Kingdom 2014
 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 Fr, Fujairah, United Arab Emirates 2013, RO
 Kindasa Phase A O&M, Jeddah, Saudi Arabia 2013, RO
 Geneva, Switzerland 2012, Other
 Fujairah I, Fujairah, 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 of America 2012, NF
 EPC Baiji/Salahaldeen, Baghdad, Iraq 2012, NF
 Al Jubail, Saudi Arabia, RO
 Ras Tanura, Jeddah, Saudi Arabia, NF (Nanofiltration)
 Mossel Bay SWRO, Cape Town, South Africa, RO
 Al Jubail, Saudi Arabia, NF (Nanofiltration)
 Fujairah II, Fujairah, United Arab Emirates, RO
 Rabat SWRO, Rabat, Morocco, NF (Nanofiltration)
 Rosebery WTW, Glasgow, United Kingdom, Other
 Plutonio, Luanda, Angola, RO
 Durleigh WTW, Taunton, United Kingdom, Other
 Mourne WTW, Donegal, Ireland, Other
 Kindasa, Jeddah, Saudi Arabia, RO
 Lake Como WTW, Milan, Italy, Other

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TECHNOFORM

Technoform is a market leader in the extrusion of technical thermoplastics for the construction industry and other industrial applications. The processing of materials with high amounts of fillers (like glass- / carbon-fibers, graphite or metal particles) enables Technoform to introduce polymer-based profiles to industries, where plastics have not been widely used before.

For water treatment applications, the extrusion specialist has developed polymer-graphite based materials and manufactures high performance heat transfer structures such as evaporator tubes. Combining the corrosion resistance of plastics with exceptionally high heat conductivity, they are an excellent alternative to current metal-based solutions in thermal desalination processes under harsh conditions.

The benefits are manifold: a very smooth surface can reduce fouling and especially scaling substantially, enabling plant operation with fewer additives and maintenance. Stable material availability, efficient logistics and reduced weight can furthermore reduce capital expenditure and the overall footprint of water treatment. Other applications of the technology include heat recovery and cooling processes that involve aggressive fluids.

Technoform is headquartered in Kassel, Germany and serves its customers around the world with over 1400 employees at 45 sales and production sites.

Technolog

SELECTED REFERENCES

Advanced metering infrastructure (AMI) supplier

Hidrocapital, South America

Monitoring system supplier

South West Water, Plymouth, U.K.

Smart PRV system supplier

Old Gainesboro Road Utility District, Putnam County, TN, U.S.A.
 WRP Consulting Engineers, Khayelitsha, South Africa
 WRP Consulting Engineers, Drakenstein, South Africa

Smart PRV system supplier and network restructuring services

Bavitech, Tan An City, Vietnam
Bavitech, Ho Chi Minh City, Vietnam

Techouse

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SELECTED REFERENCES

Complete project delivery

Johan Castberg, North Sea 2017, 27,312 m³/d Sulfate Removal
Gina Krog, North Sea 2015, 600 m³/d Membrane Deaeration

Tecnologia Efectiva

SELECTED REFERENCES

EPC, O&M

GrupoMexico RESIDUAL WATER TREATMENT AND REUSE PLANT WITH REMOTE PRETREATMENT STATION, MBR PLANT AND REVERSE OSMOSIS, 6,912 m³/d RO

Ternium Processing Water Treatment Plant, 4,320 m³/d RO

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 m³/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 m³/d RO

GENERAL CONTRACTOR FOR DETAILED ENGINEERING, CIVIL AND ELECTROMECHANICAL WORKS AND STARTING UP.

Ford ADVANCED TREATMENT PLANT OF INDUSTRIAL AND SANITARY WASTEWATER WITH MEMBRANE BIOLOGICAL REACTOR PROCESS, 1,296 m³/d MBR

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SELECTED REFERENCES

Construction

Khorfakkan Power Station, Khorfakkan, United Arab Emirates, 18,927 m³/d RO

EPC Contractor

Saurashtra Chemicals, Gujarat, Porbandar, India 2016, 12,000 m³/d Single Pass RO

Megha Engineering, Tamilnadu, Tuticorn, India 2016, 7,000 m³/d 2 Pass RO

Zadco, Abu Dhabi, Zirku Island, United Arab Emirates 2013, 5,800 m³/d 2 Pass RO

Emirates Aluminium, Abu Dhabi, United Arab Emirates 2012, 7,000 m³/d 2 Pass RO

Neyvelignite Corporation and Tamilnadu Electricity Board, Tamilnadu, Tuticorn, India 2011, 20,000 m³/d 2 Pass RO

EPC Contractor, O&M

Indira Gandhi Centre For Atomic Research, Tamilnadu, Kalpakkam, India 2012, 2 Pass RO

Design, Procurement, Construction

Al Zawarah Power Station, Al Zawara, United Arab Emirates, 22,712 m³/d RO

New Qidfa Power station, Al Zawara, United Arab Emirates, 11,356 m³/d RO

Design, Procurement, Construction

Hamriyah Desalination Plant, Hamriyah, United Arab Emirates, 91,000 m³/d RO

Tedagua



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Tedagua has been developing water purification and desalination solutions for three decades since beginning operations in Las Palmas de Gran Canaria. After 20 years of strong growth, the company became a subsidiary of the ACS Group, 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 70 references for drinking water plants, wastewater treatment plants and recycled water treatment plants.

With contracts on the five continents, Tedagua is now rightfully considered a world leader in the water treatment sector, having recently delivered major projects, such as the Beni Saf (Algeria) or Ras Al Khaimah (UAE) desalination plants and the Taboada WWTP in Lima Peru (1,210 MLD).

Tedagua is expanding its presence in water treatment for industrial purposes. We design the best water treatment solutions for thermosolar installations or combined cycle plants. Some of the world's most important petroleum companies like Repsol and Pacific Rubiales, now have water treatment plants supplied by Tedagua.

Tedagua always strives for the highest quality. We have strong industry certifications and the very best of sustainable management systems.

SELECTED REFERENCES

Desalination plant supplier

The Spence Mine, Sierra Gorda, Chile 2018, 86,400 m³/d RO
 Djibouti, Republic of Djibouti 2017, 22,500 m³/d RO
 Al Hoceima Desalination Plant, Al Hoceima, Morocco 2018, 17,300 m³/d RO
 Tuas 3, Singapore 2016, 136,000 m³/d RO
 Ras Al Khaimah, United Arab Emirates 2015, 100,000 m³/d RO
 Provisur, Peru 2014, 35,000 m³/d RO
 Puerto Gaitan, Colombia 2012, 79,500 m³/d RO
 Werribee Stage 2, Australia 2012, 15,000 m³/d RO
 Werribee Stage 1, Australia 2012, 6,000 m³/d
 Abu Samra, Qatar 2012, 2,000 m³/d RO
 Tlemcen-Honaine, Algeria 2010, 200,000 m³/d
 Altona, VIC, Australia 2010, 9,000 m³/d UF+RO
 Las Playitas, Spain 2010, 3,000 m³/d RO

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SELECTED REFERENCES

Designer, Manufacturer, Supplier

Kuwait 2015, 2,400 m³/d RO
 Algeria 2015, 360 m³/d RO
 Oman 2015, 230 m³/d RO
 Oman 2015, 100 m³/d RO
 Madagascar 2015, 50 m³/d RO
 Bucharest, Romania 2014, 2,400 m³/d RO
 Sinhas, Oman 2014, 500 m³/d RO
 Tunis, Tunisia 2014, 350 m³/d RO
 Jeddah, Saudi Arabia 2014, 200 m³/d RO
 Kuwait 2014, 200 m³/d RO
 Naval Base, Jeddah, Saudi Arabia 2014, 200 m³/d RO
 Oman 2014, 37 m³/d RO
 Antiparos, Cyprus 2013, 52 m³/d RO
 Craiova, Romania 2013, 50 m³/d RO
 Food Industry, Lagos, Nigeria 2012, 2,880 m³/d BWRO
 Dubai, United Arab Emirates 2012, 600 m³/d RO
 Abu Dhabi, United Arab Emirates 2012, 300 m³/d RO
 Dammam, Saudi Arabia 2012, 300 m³/d RO
 Dubai, United Arab Emirates 2012, 240 m³/d RO
 Dammam, Saudi Arabia 2012, 205 m³/d RO
 Yas Island, Abu Dhabi, United Arab Emirates 2010, 1,800 m³/d SWRO
 Food Industry, Sallala, Oman 2010, 230 m³/d BWRO

Designer, Manufacturer, Supplier, Installer

Kuwait 2017, 2,250 m³/d RO
 Romania 2017, 940 m³/d RO
 Maldives 2017, 600 m³/d RO
 Iran 2017, 400 m³/d RO
 Maldives 2017, 300 m³/d RO
 Kuwait 2017, 36 m³/d RO
 Mauritius 2016, 4,000 m³/d Filtration
 Kuwait 2016, 2,400 m³/d RO
 Kuwait 2016, 1,800 m³/d RO
 Thira Island, Greece 2016, 900 m³/d RO
 Qatar 2016, 500 m³/d RO
 Cyclades, Greece 2016, 260 m³/d RO
 Zante, Greece 2016, 260 m³/d RO
 Fthiotida, Greece 2016, 250 m³/d RO
 Region of Central Greece, Greece 2016, 150 m³/d RO
 Corfu, Greece 2016, 100 m³/d RO
 Oman 2016, 90 m³/d RO
 Oman 2016, 80 m³/d RO
 Oman 2016, 40 m³/d RO
 Municipality of Troizinia, Greece 2015, 1,000 m³/d RO
 Crete, Greece 2015, 400 m³/d RO
 Crete, Greece 2015, 350 m³/d RO

Gavdos island, Greece 2015, 80 m³/d RO
Ro Megistis island, Greece 2015, 20 m³/d RO
Pserimos island, Greece 2015, 10 m³/d RO
Hydra, Greece 2014, 1,600 m³/d RO
Hotel 1, Kos, Greece 2014, 700 m³/d RO
Athens, Greece 2014, 624 m³/d RO
Antiparos, Greece 2014, 600 m³/d RO
Hotel 2, Kos, Greece 2014, 500 m³/d RO
Ierapetra, Greece 2014, 450 m³/d RO
Private Property, Peloponese, Greece 2014, 350 m³/d RO
Akrotiri, Santorini, Greece 2014, 250 m³/d RO
Rhodes, Greece 2014, 180 m³/d RO
Chalkis, Greece 2014, 100 m³/d RO
Koufonissi, Greece 2013, 600 m³/d RO
Chalkis, Greece 2013, 600 m³/d RO
Amorgos, Greece 2013, 450 m³/d RO
Schoinousa, Greece 2013, 400 m³/d RO
Athens, Greece 2013, 300 m³/d RO
Food Industry, Fthiotida, Greece 2013, 300 m³/d RO
Water Kiosk, Aegean Islands, Greece 2013, 300 m³/d RO
Crete, Greece 2013, 188 m³/d RO
Aegean Islands, Greece 2013, 138 m³/d RO
Massirah Island, Oman 2013, 100 m³/d RO
Cruise Ship, Greece 2013, 64 m³/d RO
Kalymnos island, Greece 2013, 12 m³/d RO
Kalymnos island, Greece 2013, 6 m³/d RO
Crete, Greece 2012, 450 m³/d SWRO
Porto Heli, Greece 2012, 445 m³/d RO
Crete, Greece 2012, 170 m³/d SWRO
Thirasia Island, Greece 2012, 140 m³/d SWRO
Agathonisi Island, Greece 2012, 80 m³/d SWRO
Athens, Greece 2012, 52 m³/d RO
Santorini, Greece 2011, 500 m³/d RO
Santorini Island, Greece 2011, 500 m³/d SWRO
Eparchía Chíou, Greece 2010, 1,000 m³/d RO
Chios, Greece 2010, 1,000 m³/d SWRO
Nissiros Island, Greece 2010, 700 m³/d SWRO
Crete, Greece 2010, 380 m³/d RO
Avlóna, Greece 2010, 100 m³/d RO

Designer, Manufacturer, Supplier, Installer, and Operator

Hydra, Greece 2014, 1,600 m³/d RO

Tetra Tech, Inc.

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www.tetrattech.com

SELECTED REFERENCES

Engineering/construction services

Claude "Bud" Lewis Carlsbad Seawater Desalination Project, Carlsbad, California, U.S.A. 2012, 204,412 m³/d RO
San Antonio Desalination Plant: H2Oaks Center, San Antonio, Texas, U.S.A., 45,425 m³/d RO

The Institute of Seawater Desalination & Multipurpose Utilization, SOA (Tianjin)

 Tianjin, China

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www.sdmu.com.cn/

SELECTED REFERENCES

Plant supplier: Demonstration desalination units

Hainan Sansha Yongxing Island desalination plant, Sansha, Hainan, China, 1,000 m³/d RO

Hainan Xisha Antelope Reef reverse osmosis desalination plant, Hainan, China, 100 m³/d RO

Lianyungang Che Niu Shan Island solar powered reverse osmosis desalination plant, Lianyung Port, Jiangsu, China, 5 m³/d RO

Thermal Purification Technologies

 Buchs, Switzerland

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www.t-p-tec.ch

SELECTED REFERENCES

Technology provider

Mobile unit, Vaduz, Liechtenstein 2015, 100 m³/d Other

El Gouna, Egypt 2010, 500 m³/d Other

Würenlingen, Switzerland 2010, 24 t/day dry matter Other

ZLD Plant, Apollo Tyres, Gyöngyöshalász, Hungary, 72 m³/d Other/Unknown

Thermax Limited

 Pune, India

 +91 20 6605 1200

 wws@thermaxindia.com

www.thermaxindia.com

SELECTED REFERENCES

Plant supplier

Siddhi Vinayak Cement Pvt Ltd, Ahmedabad, Pali, Rajasthan, India, 2,544 m³/d RO

Zero Liquid Discharge Plant at SABMiller, Aurangabad, Aurangabad, India, 1,800 m³/d RO

TM.P. S.p.A. - Termomeccanica Pompe

📍 La Spezia, Italy ☎ +39-0187-552.1

✉ pumps@termomeccanica.com

www.tmp.termomeccanica.com

SELECTED REFERENCES

Equipment supplier - pumps

Jeddah Desalination Plant - Phase 4, Jeddah, Saudi Arabia 2011, MSF (Multi-stage Flash)

Assir Desalination & Power Plant, L Station Phase II (MSF), Dubai, United Arab Emirates, MSF

Al Jubail Desalination Plant, Saudi Arabia, MSF

Jebel Ali Power & Desalination Plant, K Station Phase I, Dubai, United Arab Emirates, MSF

TOMCO2 Systems

📍 Loganville, CA, USA ☎ +1-800-832-4262

www.TOMCOsystems.com

SELECTED REFERENCES

Remineralization (CO2 - Acidified)

El Tor, Egypt 2017

Qurayyat IWP, Qurayyat, Oman 2016

Rabab Harweel Integrated Project (RHIP), Harweel, Oman 2016

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

Masdar renewable energy, Abu Dhabi, United Arab Emirates 2015

Yanbu, Saudi Arabia 2015

Charles Meyer SWRO Plant, Santa Barbara, California, United States of America 2015

Minera Escondida, Antofagasto, Chile 2014

Central Java Power, Pemalang, Central Java, Indonesia 2014

Sadara Chemical, Jubail, Saudi Arabia 2013

Ma'aden, Al Khafji, Saudi Arabia 2013

Paraguaná, Venezuela 2012

Ghalilah, United Arab Emirates 2012

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www.ropur.com

www.csmfilter.com

TORAY
Innovation by Chemistry

Toray Membrane offers expertise across the entire spectrum of high-performance water treatment membranes, including Reverse-Osmosis (RO), Nanofiltration (NF), Ultrafiltration (UF), Microfiltration (MF) membrane elements, Membrane Bioreactor (MBR) membrane modules, complementary membrane related products such as high performance reverse osmosis ROPUR-RPI® antiscalants, ROMEMBRA® and CSM® Toray Group RO Membrane: Toray first began producing Reverse Osmosis and Nanofiltration spiral wound membrane elements in 1967, starting with cellulose acetate membrane elements.

Today, our product line includes a full range of state-of-the-art cross-linked polyamide composite membranes manufactured under ISO-9001 certification. TORAYFIL® Toray Group UF/MF Membrane: Toray's PVDF hollow fiber membrane module effectively removes suspended solids and microorganisms such as pathogens, when used for various types of water treatment. This innovative membrane module was developed with polymer science and the membrane fabrication technologies accumulated in Toray Industries, Inc. for more than 30 years. MEMBRAY® Toray Group MBR Membrane: Toray's Membrane Bioreactor (MBR) process is a combination of biological wastewater treatment and membrane filtration. Biodegradable pollution is reduced using bacteria and microorganisms. Following biological treatment, the activated sludge is separated from the treated water by a microfiltration membrane.

SELECTED REFERENCES

Tabouk, KSA 2017, 50,000 m³/d RO
Jubail, KSA 2017, 25,000 m³/d RO
Fujairah, UAE 2017, 11,000 m³/d RO

Membrane Supplier

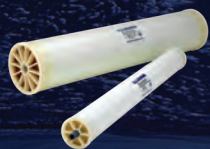
Some Mining Energy Project, China 2018, 4,950 m³/d RO
Some Mining Group Project, China 2018, 3,780 m³/d RO
Some BOT Project, China 2018, 3,075 m³/d RO
Some Heat & Power Plant, China 2018, 1,771 m³/d RO
Some Power Plant, China 2018, 1,425 m³/d RO
Some Energy Company Project, China 2018, 1,233 m³/d RO
Some Microelectronic Company, China 2018, 1,200 m³/d RO
Some Food and Beverage Plants, China 2018, 1,045 m³/d RO
Some Power Plant, China 2018, 840 m³/d RO
Some Waste Water Project, China 2018, 792 m³/d RO
Some Steel Plant, China 2018, 756 m³/d RO
Some Countryside Water treatment, China 2018, 700 m³/d RO
Some Environment Protection Co., Ltd, China 2018, 630 m³/d RO
Some Power Plant, China 2018, 597 m³/d RO
Some Steel Plant, China 2018, 450 m³/d RO
Some Textile Plant, China 2018, 415 m³/d RO
Some Power Plant, China 2018, 367 m³/d RO
Some Power Plant, China 2018, 324 m³/d RO
Some Microelectronic Company, China 2018, 252 m³/d RO
Some Chemical Plant, China 2018, 222 m³/d RO
Jubail, KSA 2017, 90,000 m³/d RO
Chengdu, China 2017, 48,000 m³/d RO
China 2017, 37,783 m³/d RO
Akhal Valayat, Turkmenistan 2017, 36,000 m³/d RO
China 2017, 25,401 m³/d RO
China 2017, 25,401 m³/d RO
Icheon, South Korea 2017, 16,500 m³/d RO
China 2017, 13,178 m³/d RO
China 2017, 12,852 m³/d RO
Hefei, China 2017, 12,000 m³/d RO
Icheon, South Korea 2017, 11,000 m³/d RO
2017, 10,000 m³/d RO
Wuhan, China 2017, 8,300 m³/d RO
Hefei, China 2017, 8,000 m³/d RO
Hwaseong, South Korea 2017, 8,000 m³/d RO
South Korea 2017, 6,000 m³/d RO

China 2017, 5,443 m³/d RO
China 2017, 5,365 m³/d RO
China 2017, 5,140 m³/d RO
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Philippines 2017, 5,000 m³/d RO
South Korea 2017, 5,000 m³/d RO
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China 2017, 2,577 m³/d RO
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Indonesia 2017, 2,238 m³/d RO
Indonesia 2017, 2,238 m³/d RO
South Korea 2017, 2,000 m³/d RO
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China 2017, 1,864 m³/d RO
Malaysia 2017, 1,700 m³/d RO
South Korea 2017, 1,500 m³/d RO
Ilsan, South Korea 2017, 1,500 m³/d RO
Vietnam 2017, 1,400 m³/d RO
China 2017, 1,360 m³/d RO
China 2017, 1,360 m³/d RO
China 2017, 1,310 m³/d RO
China 2017, 1,310 m³/d RO
Tokushima, Japan 2017, 1,200 m³/d RO
Asan, South Korea 2017, 1,150 m³/d RO
Canary Islands, Fuerteventura, Spain 2017, 1,100 m³/d RO
Canary Islands, Fuerteventura, Spain 2017, 1,100 m³/d RO
Taiwan 2017, 1,080 m³/d RO
Gunma, Japan 2017, 1,000 m³/d RO
Gunma, Japan 2017, 960 m³/d RO
Some Countryside Water treatment, China 2017, 890 m³/d RO
Yeongheung, South Korea 2017, 840 m³/d RO
Some Power Plant, China 2017, 756 m³/d RO
Saitama, Japan 2017, 720 m³/d RO
Kumamoto, Japan 2017, 700 m³/d RO
2017, 700 m³/d RO
Some Biotechnology Co, Ltd, China 2017, 691 m³/d RO
Hiroshima, Japan 2017, 600 m³/d RO
Shizuoka, Japan 2017, 550 m³/d RO
Nigeria 2017, 480 m³/d RO
Kanagawa, Japan 2017, 480 m³/d RO
Shiga, Japan 2017, 480 m³/d RO
Kanagawa, Japan 2017, 400 m³/d RO
Miyagi, Japan 2017, 360 m³/d RO
Japan 2017, 360 m³/d RO
Ehime, Japan 2017, 360 m³/d RO
Fukushima, Japan 2017, 360 m³/d RO
Philippines 2017, 360 m³/d RO
Toyama, Japan 2017, 360 m³/d RO
Philippines 2017, 360 m³/d RO
Some Textile Plant, China 2017, 360 m³/d RO
Ibaragi, Japan 2017, 330 m³/d RO
Japan 2017, 300 m³/d RO
Shizuoka, Japan 2017, 300 m³/d RO
Kumamoto, Japan 2017, 300 m³/d RO

'TORAY'

In 1967 TORAY began our membrane development program for water treatment. 50 years later, the name endures as a leading supplier of membrane technologies continuing to add new solutions for a sustainable future. This constant pursuit of technological innovation has enabled us to strengthen our core assets: R&D know-how, strong customer and supplier bases and the dedicated people that stand behind our products and services. To experience lasting growth, partner with a company that has, for decades, adapted to the changing needs of the market and looks to the horizon for the next big challenge.

TORAY, A NAME YOU CAN TRUST.



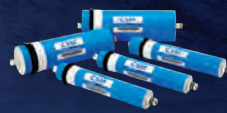
Spiral-wound RO/NF
ROMEMBRA™
and **CSM™**



Hollow-fiber PVDF
UF/MF **TORAYFIL™**



Plate & frame and
Flat-sheet MBR
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'TORAY'

Innovation by Chemistry

Shimane, Japan 2017, 300 m³/d RO
Miyazaki, Japan 2017, 240 m³/d RO
Fukui, Japan 2017, 240 m³/d RO
Tokyo, Japan 2017, 240 m³/d RO
Aichi, Japan 2017, 240 m³/d RO
Shizuoka, Japan 2017, 240 m³/d RO
Tochigi, Japan 2017, 180 m³/d RO
Ibaragi, Japan 2017, 120 m³/d RO
Buenos Aires, Argentina 2017, RO
Al Khafji SWRO, Khafji, KSA 2016, 60,000 m³/d RO
Wajeed, KSA 2016, 60,000 m³/d RO
South Korea 2016, 58,000 m³/d RO
South Korea 2016, 58,000 m³/d RO
Asan, South Korea 2016, 28,000 m³/d RO
Ain Salah, Algeria - Ain Salah 2016, 26,500 m³/d RO
Foshan, China 2016, 25,872 m³/d RO
King Khaled International Airport, Riyadh, KSA 2016, 25,000 m³/d RO
Ningbo, China 2016, 24,969 m³/d RO
Dongming, China 2016, 23,011 m³/d RO
Vietnam 2016, 15,000 m³/d RO
Yancheng, China 2016, 14,918 m³/d RO
China 2016, 14,136 m³/d RO
Plock, Poland 2016, 13,500 m³/d RO
Plock, Poland 2016, 13,500 m³/d RO
Panzhihua, China 2016, 13,219 m³/d RO
China 2016, 12,028 m³/d RO
China 2016, 11,913 m³/d RO
Lu'an, China 2016, 11,810 m³/d RO
Handan, China 2016, 10,886 m³/d RO
Nanjing, China 2016, 10,886 m³/d RO
Datang Lin Qing, China 2016, 10,752 m³/d RO
Singapore 2016, 9,600 m³/d RO
Aspire, Qatar 2016, 9,500 m³/d RO
China 2016, 9,180 m³/d RO
Yili, China 2016, 8,812 m³/d RO
China 2016, 8,248 m³/d RO
China 2016, 7,588 m³/d RO
South Korea 2016, 7,500 m³/d RO
China 2016, 7,257 m³/d RO
China 2016, 6,854 m³/d RO
South Korea 2016, 6,000 m³/d RO
Shaoxing, China 2016, 5,875 m³/d RO
China 2016, 5,630 m³/d RO
Dongguan, China 2016, 5,406 m³/d RO
Boise City, United States of America 2016, 4,900 m³/d RO
Chongqing, China 2016, 4,500 m³/d RO
Qingdao, China 2016, 4,406 m³/d RO
China 2016, 4,401 m³/d RO
Thailand 2016, 4,291 m³/d RO
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China 2016, 4,032 m³/d RO
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Batan, Vietnam 2016, 4,000 m³/d RO
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Xiaoshan, China 2016, 3,672 m³/d RO
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Zeitz, Germany 2016, 3,600 m³/d RO
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China 2016, 3,023 m³/d RO
Germany 2016, 3,000 m³/d RO
Romania 2016, 2,880 m³/d RO
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Akita, Japan 2016, 2,800 m³/d RO
Thailand 2016, 2,620 m³/d RO
China 2016, 2,570 m³/d RO
Shenzhen, China 2016, 2,550 m³/d RO
Shanghai, China 2016, 2,509 m³/d RO
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Basel, Switzerland 2016, 2,500 m³/d RO
Basel, Switzerland 2016, 2,500 m³/d RO
Gunsan, South Korea 2016, 2,500 m³/d RO
Qingyang, China 2016, 2,448 m³/d RO
China 2016, 2,436 m³/d RO
Tianjin, China 2016, 2,419 m³/d RO
Belarus 2016, 2,400 m³/d RO
China 2016, 2,385 m³/d RO
Junnan, China 2016, 2,203 m³/d RO
China 2016, 2,203 m³/d RO
Donguan, China 2016, 2,162 m³/d RO
Datteln, Germany 2016, 2,112 m³/d RO
Yiwu, China 2016, 2,016 m³/d RO
South Korea 2016, 2,000 m³/d RO
Murcia, Cartagena, Spain 2016, 2,000 m³/d RO
South Korea 2016, 2,000 m³/d RO
Kumamoto, Japan 2016, 2,000 m³/d RO
Kouchi, Japan 2016, 2,000 m³/d RO
Luoyang, China 2016, 1,958 m³/d RO
China 2016, 1,958 m³/d RO
Lithuania 2016, 1,920 m³/d RO
Ehime, Japan 2016, 1,800 m³/d RO
North Mexico, Mexico 2016, 1,680 m³/d RO
China 2016, 1,612 m³/d RO
Ningxia, China 2016, 1,611 m³/d RO
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Ochsenfurt, Germany 2016, 1,440 m³/d RO
Kenya 2016, 1,416 m³/d RO
China 2016, 1,243 m³/d RO
Russian Federation 2016, 1,200 m³/d RO
Morocco 2016, 1,200 m³/d RO

Huludao, China 2016, 1,081 m³/d RO
 China 2016, 1,020 m³/d RO
 China 2016, 1,008 m³/d RO
 Kyoto, Japan 2016, 1,000 m³/d RO
 Anyang, South Korea 2016, 1,000 m³/d RO
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 Ukraine 2016, 900 m³/d RO
 Sumatra, Indonesia 2016, 860 m³/d RO
 Donguan, China 2016, 856 m³/d RO
 China 2016, 816 m³/d RO
 Romania 2016, 720 m³/d RO
 Tochigi, Japan 2016, 600 m³/d RO
 Romania 2016, 528 m³/d RO
 Hyogo, Japan 2016, 480 m³/d RO
 Tokyo, Japan 2016, 480 m³/d RO
 Shiga, Japan 2016, 480 m³/d RO
 Tokyo, Japan 2016, 480 m³/d RO
 Ibaragi, Japan 2016, 430 m³/d RO
 Osaka, Japan 2016, 420 m³/d RO
 Saitama, Japan 2016, 400 m³/d RO
 Osaka, Japan 2016, 400 m³/d RO
 Miyagi, Japan 2016, 300 m³/d RO
 China 2016, 183 m³/d RO
 Tonga 2016, 120 m³/d RO
 Germany 2016, RO
 Odessa, Ukraine 2016, RO
 Al Ghubra, Oman 2015, 201,600 m³/d RO
 Fujairah, United Arab Emirates 2015, 145,472 m³/d RO
 Cheongju, South Korea 2015, 30,000 m³/d RO
 Suwon, South Korea 2015, 30,000 m³/d RO
 Suzhou, China 2015, 24,000 m³/d RO
 Wei Qiao Indonesia project, Indonesia 2015, 23,040 m³/d RO
 Wuhan, China 2015, 20,000 m³/d RO
 Vietnam 2015, 20,000 m³/d RO
 Vietnam 2015, 17,000 m³/d RO
 Kunshan, China 2015, 16,000 m³/d RO
 Newman, Australia 2015, 16,000 m³/d RO
 BHP Newman, Newman, Australia 2015, 16,000 m³/d RO
 Yongqin, Yongin, South Korea 2015, 15,000 m³/d RO
 Tenerife - Oeste, Spain 2015, 14,000 m³/d RO
 Tenerife Oeste, Arona, Spain 2015, 14,000 m³/d RO
 Jersey, United Kingdom 2015, 13,200 m³/d RO
 Printing and Dyeing Mill, Malaysia 2015, 12,960 m³/d RO
 Zhong Tian He Chuang, China 2015, 12,432 m³/d RO
 Yanshan Steel, Yanshan, China 2015, 11,376 m³/d RO
 Foxconn, Shenzhen, China 2015, 10,224 m³/d RO
 Guangzhou, China 2015, 10,000 m³/d RO
 Gumi, South Korea 2015, 8,000 m³/d RO
 Russia 2015, 7,000 m³/d RO
 Paju, South Korea 2015, 6,400 m³/d RO
 Xiamen, China 2015, 6,000 m³/d RO
 Seat, Spain 2015, 5,500 m³/d RO
 Krasnodar Power Plant, Krasnodar, Russia, Lithuania 2015, 5,060 m³/d RO
 Chongqing, China 2015, 5,000 m³/d RO
 Russia 2015, 5,000 m³/d RO
 Buzau, Romania 2015, 4,000 m³/d RO

Nicaragua 2015, 3,500 m³/d RO
 Russia 2015, 3,000 m³/d RO
 Suez Fertilizers Co., Suez, Egypt 2015, 3,000 m³/d RO
 Renningen-Mönchshöh, Germany 2015, 2,500 m³/d RO
 WW Lüssow, Lüssow, Germany 2015, 2,500 m³/d RO
 WW Renningen, Renningen, Baden Württemberg, Germany 2015, 2,400 m³/d RO
 Russia 2015, 2,300 m³/d RO
 Russia 2015, 2,200 m³/d RO
 Richter Gedeon, Budapest, Hungary 2015, 2,160 m³/d RO
 Miyagi, Japan 2015, 2,000 m³/d RO
 Xian, China 2015, 2,000 m³/d RO
 Chongqing, China 2015, 2,000 m³/d RO
 Kouchi, Japan 2015, 2,000 m³/d RO
 Coca Cola, Spain 2015, 1,800 m³/d RO
 Playas de Jandia, Spain 2015, 1,700 m³/d RO
 Kazakhstan 2015, 1,700 m³/d RO
 WW Venningen, Venningen, Rheinland Pfalz, Germany 2015, 1,680 m³/d RO
 WWBT, Marsa Alam, Egypt 2015, 1,500 m³/d RO
 Marsellia Beach 4, North coast, Egypt 2015, 1,500 m³/d RO
 Austria 2015, 1,440 m³/d RO
 Villach, Germany 2015, 1,440 m³/d RO
 Ingolstadt, Germany 2015, 1,440 m³/d RO
 Kocaeli, Turkey 2015, 1,440 m³/d RO
 Netherlands 2015, 1,248 m³/d RO
 Grawla, North coast, Egypt 2015, 1,000 m³/d RO
 Blue Bay, Ein El Sokhna, Egypt 2015, 750 m³/d RO
 El Narges, North coast, Egypt 2015, 500 m³/d RO
 Marsellia Beach, North coast, Egypt 2015, 500 m³/d RO
 Nice 3, North coast, Egypt 2015, 500 m³/d RO
 Nice 4, North coast, Egypt 2015, 500 m³/d RO
 Jiangsu, China 2015, 478 m³/d RO
 Shanghai, China 2015, 329 m³/d RO
 Guizhou, China 2015, 328 m³/d RO
 Beijing, China 2015, 318 m³/d RO
 Shandong, China 2015, 199 m³/d RO
 Shandong, China 2015, 188 m³/d RO
 Zhejiang, China 2015, 152 m³/d RO
 Jiangsu, China 2015, 117 m³/d RO
 Chongqing, China 2015, 116 m³/d RO
 Nanjing, China 2014, 45,000 m³/d RO
 Korea (South) 2014, 38,000 m³/d RO
 Touggout, Algeria 2014, 34,560 m³/d RO
 Dahej, India 2014, 25,000 m³/d RO
 Zhong Sha CoalChemical, Tianjin, China 2014, 20,736 m³/d RO
 Xi'an, China 2014, 17,000 m³/d RO
 Inner Mongolia, China 2014, 16,000 m³/d RO
 Gaiziantep, Turkey 2014, 14,163 m³/d RO
 Granadilla, Granadilla de Abona, Spain 2014, 14,000 m³/d RO
 Basra, Iraq 2014, 13,500 m³/d RO
 Dammam, Saudi Arabia 2014, 11,636 m³/d RO
 Rajpura, India 2014, 11,000 m³/d RO
 Jhajjar, India 2014, 11,000 m³/d RO
 Nellore, India 2014, 10,000 m³/d RO
 Cilacap, Indonesia 2014, 7,800 m³/d RO
 Sierra Gorda Enlargement, Sierra Gorda, Chile 2014, 7,400 m³/d RO

Vietnam 2014, 7,200 m³/d RO
Aragua, Gáldar, Spain 2014, 5,000 m³/d RO
Marassi, North coast, Egypt 2014, 5,000 m³/d RO
Nanjing, China 2014, 4,600 m³/d RO
Kharji, Saudi Arabia 2014, 4,411 m³/d RO
Nuclear Power Plant , Paks, Hungary 2014, 3,600 m³/d RO
Anhui, China 2014, 3,200 m³/d RO
Xinjiang, China 2014, 3,200 m³/d RO
Nicaragua, Managua 2014, 2,800 m³/d RO
Henan, China 2014, 2,500 m³/d RO
Jiangsu, China 2014, 2,500 m³/d RO
Ningxia, China 2014, 2,500 m³/d RO
Jiangsu, China 2014, 2,470 m³/d RO
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Indonesia 2014, 2,400 m³/d RO
Yamaguchi, Japan 2014, 2,400 m³/d RO
Suzhou, China 2014, 2,000 m³/d RO
Xi'an, China 2014, 2,000 m³/d RO
Zhejiang, China 2014, 2,000 m³/d RO
Baiji, Iraq 2014, 1,728 m³/d RO
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Heilongjiang, China 2014, 1,600 m³/d RO
Fuerteventura, Jandía, Spain 2014, 1,600 m³/d RO
Shanghai, China 2014, 1,518 m³/d RO
Jiangsu, China 2014, 1,464 m³/d RO
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Hebei, China 2014, 1,400 m³/d RO
Korea (South) 2014, 1,300 m³/d RO
Guangzhou, China 2014, 1,300 m³/d RO
Kanagawa, Japan 2014, 1,300 m³/d RO
WW Lüssow , Lüssow, Mecklenburg Vorpommern, Germany 2014, 1,300 m³/d RO
Tokushima, Japan 2014, 1,300 m³/d RO
WW Finnentrop, Finnentrop, NRW, Germany 2014, 1,150 m³/d RO
Hebei, China 2014, 1,000 m³/d RO
Kiriazy, Obour, Egypt 2014, 1,000 m³/d RO
Yamagata, Japan 2014, 1,000 m³/d RO
Ningxia, China 2014, 941 m³/d RO
Ningxia, China 2014, 891 m³/d RO
Kumamoto, Japan 2014, 800 m³/d RO
Guangdong, China 2014, 796 m³/d RO
Jiangsu, China 2014, 796 m³/d RO
Jiangsu, China 2014, 737 m³/d RO
Shenzhen, China 2014, 720 m³/d RO
Shanghai, China 2014, 707 m³/d RO
Jiangsu, China 2014, 701 m³/d RO
Miyagi, Japan 2014, 700 m³/d RO
Shanghai, China 2014, 648 m³/d RO
Shanghai, China 2014, 582 m³/d RO
Jiangsu, China 2014, 537 m³/d RO
Shanghai, China 2014, 517 m³/d RO
Shanghai, China 2014, 511 m³/d RO
Arla Foods Deutschland GmbH , Pronsfeld, Germany 2014, 500 m³/d Other
Indonesia 2014, 479 m³/d RO
Shanghai, China 2014, 476 m³/d RO
Shanghai, China 2014, 464 m³/d RO
Jiangsu, China 2014, 454 m³/d RO

Shanghai, China 2014, 432 m³/d RO
Shanghai, China 2014, 431 m³/d RO
Neimenggu, China 2014, 418 m³/d RO
Shanghai , China 2014, 418 m³/d RO
Henan, China 2014, 415 m³/d RO
Miyagi, Japan 2014, 400 m³/d RO
Shandong , China 2014, 398 m³/d RO
Tianjin, China 2014, 358 m³/d RO
Shanghai, China 2014, 348 m³/d RO
Shanxi, China 2014, 348 m³/d RO
Shanghai, China 2014, 325 m³/d RO
Niigata, Japan 2014, 320 m³/d RO
Korea (South) 2014, 320 m³/d RO
Australia 2014, 315 m³/d RO
Shanghai, China 2014, 315 m³/d RO
Shandong, China 2014, 313 m³/d RO
Osaka, Japan 2014, 300 m³/d RO
Zhejiang, China 2014, 285 m³/d RO
Shandong , China 2014, 268 m³/d RO
Shanghai, China 2014, 263 m³/d RO
Shandong, China 2014, 244 m³/d RO
Shanghai, China 2014, 232 m³/d RO
Beijing, China 2014, 229 m³/d RO
Shanghai, China 2014, 223 m³/d RO
Shanghai, China 2014, 220 m³/d RO
Shandong , China 2014, 219 m³/d RO
Shanghai, China 2014, 219 m³/d RO
Jiangsu, China 2014, 214 m³/d RO
Beijing, China 2014, 209 m³/d RO
Shanghai, China 2014, 205 m³/d RO
Hebei, China 2014, 199 m³/d RO
Shandong, China 2014, 194 m³/d RO
Beijing, China 2014, 179 m³/d RO
Shanghai , China 2014, 174 m³/d RO
Tianjin, China 2014, 174 m³/d RO
Shandong, China 2014, 164 m³/d RO
Shandong, China 2014, 156 m³/d RO
Anhui, China 2014, 151 m³/d RO
Shanghai, China 2014, 149 m³/d RO
Zhejiang, China 2014, 149 m³/d RO
Shanghai, China 2014, 139 m³/d RO
Shandong, China 2014, 134 m³/d RO
Shanghai, China 2014, 127 m³/d RO
Shanghai, China 2014, 124 m³/d RO
Shanghai, China 2014, 122 m³/d RO
Shanghai, China 2014, 119 m³/d RO
Shanghai, China 2014, 116 m³/d RO
Yinchuan, China 2014, 116 m³/d RO
Jiangsu, China 2014, 109 m³/d RO
Tianjin, China 2014, 104 m³/d RO
City of Odessa, Texas, U.S.A. 2014, 1.5 MGD RO
Ciy of Bushnell, Illinois, U.S.A. 2014, 0.5 MGD RO
Datang Waste water treatment plant, Foshan, China 2013, 468,816 m³/d RO
Jubail-4, Jubail , Saudi Arabia 2013, 100,000 m³/d RO
Suzhou, China 2013, 70,000 m³/d RO
Korea (South) 2013, 56,000 m³/d RO

Saudi Arabia 2013, 53,000 m³/d
 India 2013, 40,000 m³/d RO
 Ningmei Alkene, Ningxia, China 2013, 39,000 m³/d RO
 Yantai Laishan Waterworks, Shandong, China 2013, 37,000 m³/d RO
 Shaanxi, China 2013, 37,000 m³/d RO
 Shandong, China 2013, 36,000 m³/d RO
 ChinaCoal Yulin Resue Water, Shaanxi, China 2013, 32,000 m³/d RO
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 Ningmei Alkene, Ningxia, China 2013, 22,000 m³/d RO
 Korea (South) 2013, 20,000 m³/d RO
 Ningxia, China 2013, 16,000 m³/d RO
 Liuheng Power Plant, Zhejiang, China 2013, 12,000 m³/d RO
 Cuddalore, India 2013, 10,600 m³/d RO
 Guangzhou, China 2013, 9,000 m³/d RO
 Paju, Korea (South) 2013, 7,500 m³/d RO
 Liaoning, China 2013, 7,400 m³/d RO
 Saudi Arabia 2013, 7,200 m³/d RO
 Inner Mongolia, China 2013, 5,000 m³/d RO
 Chung Ching, China 2013, 4,500 m³/d RO
 Zhejiang Xiushan, Zhejiang, China 2013, 3,000 m³/d RO
 Liaoning, China 2013, 3,000 m³/d RO
 Hebei, China 2013, 2,700 m³/d RO
 Tianjin, China 2013, 2,200 m³/d RO
 Ichon, Korea (South) 2013, 2,000 m³/d RO
 Xi'an, China 2013, 2,000 m³/d RO
 Neimenggu, China 2013, 627 m³/d RO
 Hiroshima, Japan 2013, 540 m³/d RO
 Ibaragi, Japan 2013, 540 m³/d RO
 Yamagata, Japan 2013, 400 m³/d RO
 Kanagawa, Japan 2013, 400 m³/d RO
 Kagawa, Japan 2013, 400 m³/d RO
 Tochigi, Japan 2013, 320 m³/d RO
 Shanghai, China 2013, 313 m³/d RO
 Miyagi, Japan 2013, 300 m³/d RO
 Shiga, Japan 2013, 300 m³/d RO
 Shimane, Japan 2013, 300 m³/d RO
 Neimenggu, China 2013, 298 m³/d RO
 Tokushima, Japan 2013, 250 m³/d RO
 Guangzhou, China 2013, 199 m³/d RO
 Shanghai, China 2013, 194 m³/d RO
 Shandong, China 2013, 180 m³/d RO
 China 2013, 159 m³/d RO
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 Hangzhou, China 2013, 140 m³/d RO
 China 2013, 133 m³/d RO
 Neimenggu, China 2013, 119 m³/d RO
 Al Gubra, Muscat, Oman 2013, 42.0 MGD RO
 North Springs, Florida, U.S.A. 2013, 6.75 MGD RO
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 Comperj, Rio de Janeiro, Brazil 2012, 24,080 m³/d RO
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 Singapore 2012, 7,000 m³/d RO
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 Otagua, Canary Islands, Spain 2012, 4,440 m³/d RO
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 N/A, Tunisia 2012, 2,700 m³/d RO
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Ibiza, Spain 2010, 18,000 m³/d RO
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Baghdad, AZ, U.S.A. 2010, 9,464 m³/d RO
Osaka, Japan 2010, 8,640 m³/d RO
TX, U.S.A. 2010, 8,400 m³/d RO
Korea 2010, 8,000 m³/d RO
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Shenzhen, China 2010, 8,000 m³/d RO
Dare County, NC, U.S.A. 2010, 7,571 m³/d RO
Qingyang Chemical, Gansu, China 2010, 7,200 m³/d RO
Hyogo, Japan 2010, 6,000 m³/d RO
Wuxi, China 2010, 5,760 m³/d RO
North Alamo WD Victoria, TX, U.S.A. 2010, 5,648 m³/d RO
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Roque Prieto, Gran Canaria, Spain 2010, 5,000 m³/d RO
ECI, MD, U.S.A. 2010, 4,921 m³/d RO
Kagoshima, Japan 2010, 4,800 m³/d RO
Zhenghe Petrochemical, Shandong, China 2010, 4,800 m³/d RO
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Taiwan 2010, 4,320 m³/d RO
Hyogo, Japan 2010, 3,600 m³/d RO
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Zhenghe Power Station, Shandong, China 2010, 3,600 m³/d RO
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Pembroke, U.K. 2010, 3,264 m³/d RO
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Miller's View – Doole, TX, U.S.A. 2010, 2,332 m³/d RO
Colusa Indian Community, Sacramento, U.S.A. 2010, 1,892 m³/d RO
Brazos Electric, TX, U.S.A. 2010, 1,878 m³/d RO
Pepsi, MD, U.S.A. 2010, 1,825 m³/d RO
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Kagawa, Japan 2010, 1,200 m³/d RO
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Nagasaki, Japan 2010, 1,000 m³/d RO
Firelake, OK, U.S.A. 2010, 818 m³/d RO
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Hyogo, Japan 2010, 800 m³/d RO
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Aichi, Japan 2010, 720 m³/d RO

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 Coca Cola, CO, U.S.A. 2010, 511 m³/d RO
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 Fukuoka, Japan 2010, 500 m³/d RO
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 Long Da, Nantong, China, 5,760 m³/d RO
 Tai Da Xin Shui Yuan, Tianjin, China, 5,712 m³/d RO
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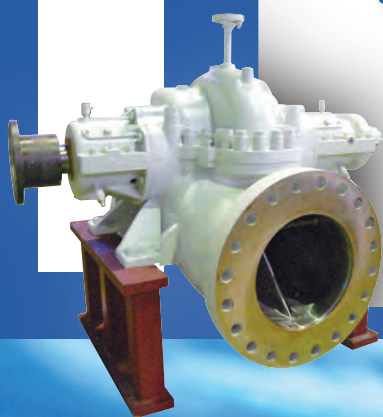
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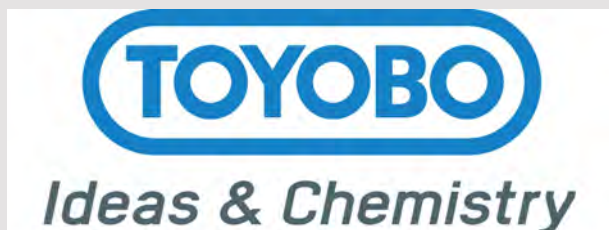


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Toyobo, a leader in Fibers, Textiles and Polymer chemistry over more than a century of operations is now the worldwide leader in seawater RO by its hollow fiber membrane technology. Toyobo's RO membrane "HOLLOSEP" has unique characteristics that eliminate bio-fouling, provide higher availability, deliver excellent reliability, and allow the highest recovery of product water. Toyobo "HOLLOSEP" has proven its higher quality in performance and cost competitiveness in the large commercial desalination plants in the Middle East and around the world. By way of example, Toyobo "HOLLOSEP" was introduced to the largest Seawater Desalination Plant in the Middle East, Ras Al Khair Plant (Capacity: 345,000 m³/d) which was awarded "Desalination Plant of the Year" at the 2015 Global Water Award.

In 2010, Toyobo established Arabian Japanese Membrane Company (AJMC) in Saudi Arabia with ACWA Power and ITOCHU. AJMC, the first Saudi Arabian local RO membrane manufacturer has been contributing to meeting the needs of people in the Middle East countries.

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Membrane Supplier

RABIGH IWSPH PHASE-II, Rabigh, Saudi Arabia 2015 108,000 m³/d RO

Ras Al Khair, Saudi Arabia 2014 345,000 m³/d RO

Jeddah 3, Saudi Arabia 2013 260,000 m³/d RO

Ras Abu Jarjur, Bahrain 2012 7,200 m³/d RO

Manifa, Saudi Arabia 2011 27,000 m³/d RO

Shuqaiq, Saudi Arabia 2010 240,000 m³/d RO

Trility Pty. Ltd.

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SELECTED REFERENCES

EPC, O&M

Agnes Water Desalination, Agnes Waters/1770, Q. 4670, Australia 2012, 1,500 m³/d RO

Yabulu Reuse Plant, Townsville, Queensland, Australia, 10,000 m³/d RO

Campaspe Water Reclamation Scheme - Echuca Reclamation Plant, Echuca, Victoria, Australia, 8,000 m³/d Anaerobic Sequencing Batch Treatment

O&M

ADP, Port Stanvac, Adelaide, SA, Australia 2011, 300,000 m³/d RO

Lion Co. Australia Wastewater Recycling Plant, Milton, Queensland, Australia, 3,800 m³/d RO

Mangawhai Reclamation Plant, Mangawhai, New Zealand, 3,000 m³/d Sequencing Batch Reactor

Trimble Water

SELECTED REFERENCES

Advanced metering infrastructure (AMI) supplier

City of Sacramento, Sacramento, U.S.A.

Smart network management system supplier

City of Fort Wayne, Indiana, Fort Wayne, U.S.A.

Software supplier for NRW reduction

Los Angeles Department of Water and Power (LADWP), Los Angeles, U.S.A.

United Utilities, NW, U.K.

Orange County Sanitation District (OCSD), Orange County, CA, U.S.A.

Brunswick & Topsham Water District, Brunswick, U.S.A.

Sutton & East Surrey Water (SESU), Surrey, U.K.

Trojan Technologies

SELECTED REFERENCES

UV equipment supplier

RWPF Big Spring, Big Spring, Texas, U.S.A., 6,814 m³/d RO

Trunz Water Systems AG

📍 Steinach, Switzerland

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www.trunzwatersystems.com

SELECTED REFERENCES

Desalination equipment supplier

TSB, Isla, Mexico 2018, 6 m³/d RO
 TBB, Solomon Islands 2017, 15 m³/d RO
 TSB, Mystery Island, Vanuatu 2017, 6 m³/d RO
 TSB, Tarawa, Kiribati 2017, 6 m³/d RO
 Survivor RO, Fouzhou, China 2017, 1 m³/d RO
 TSB, Spratly Island, Vietnam 2016, 6 m³/d RO

Typsa Group

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SELECTED REFERENCES

Engineering consultancy

AL KHAFJI DESALINATION PLANT (SAUDI ARABIA), Al-Khafji,
 Saudi Arabia 2015, 1,440,000 m³/d RO
 NIKSIC TREATMENT PLANT (MONTENEGRO), Niksic,
 Montenegro, 18,864 m³/d Other/Unknown

UES Holdings Pte

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EPC Contractor

Jurong Water Reclamation Plant, Singapore 2015, 59,000 m³/d MBR
 Chesnut Avenue Water Work, Singapore 2015, 60.0 MIDG UF
 Changji Water Reclamation Plant, Singapore 2012, 60.0 MIDG MBR

EPC, O&M

Second Changi NEWater Plant, Singapore 2014, 50.0 MIDG RO

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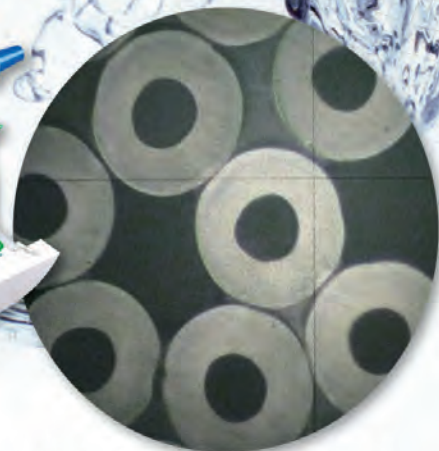
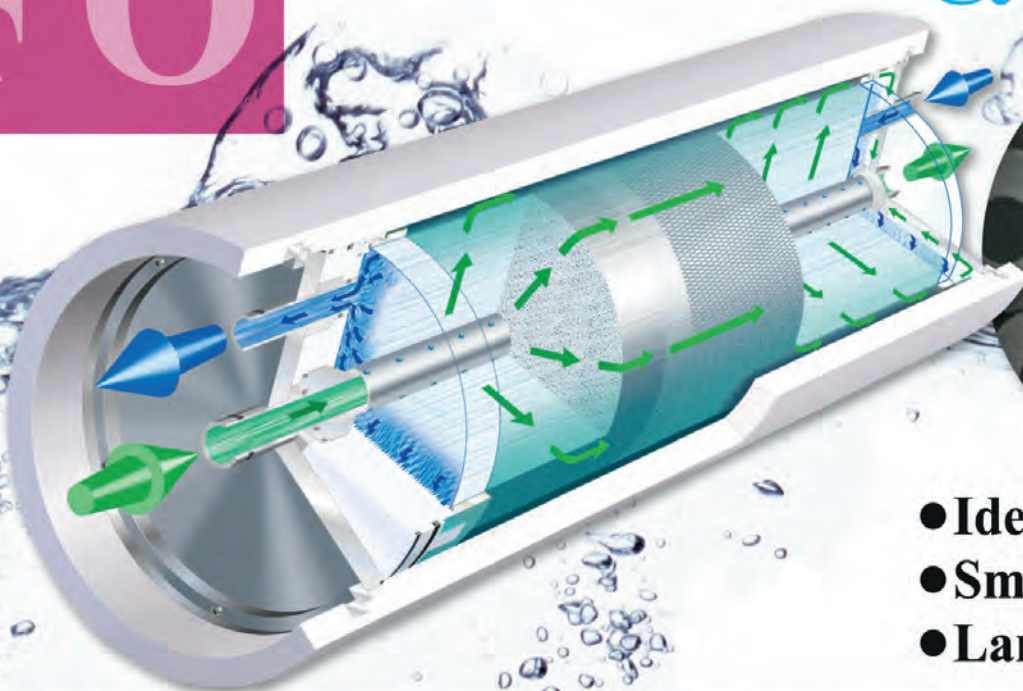
www.uniha.at

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Plant supplier

HOLLOSEP®
 Forward Osmosis
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**The Best Solution
 for Low Energy System**



- Ideal Flow Pattern
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Portugal 2012, 5,000 m³/d RO
North Africa 2011, 12,000 m³/d RO
Atlantic Ocean 2011, 10,000 m³/d RO
North Africa 2011, 5,000 m³/d RO
Persian Gulf 2010, 5,000 m³/d RO
Praia, Santiago, Cape Verde, 10,000 m³/d RO
El Arish, El Arish, Sinai, Egypt, 5,000 m³/d RO
North Africa, 12,000 m³/d RO
North Africa, 5,000 m³/d RO

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SELECTED REFERENCES

Build, Own, Operate, Maintain, Design, EPC

Khorkhwair, Ras Al Khaimah, United Arab Emirates 2012, 45,000 m³/d RO
Private, Ras Al Khaimah, United Arab Emirates, 1,500 m³/d RO
Private, Abu Dhabi, United Arab Emirates, 180 m³/d RO

EPC & developer, service provider

RAK-Al Hamra, 110,000 m³/d RO
Al Hamra - RAK, 22,500 m³/d RO
Khor Khawir- RAK, 10,000 m³/d RO
Private Farm, Fujairah, United Arab Emirates, 2,000 m³/d RO

IWP Developer EPC Contractor O&M Contractor

Utico IWP1, Al Hamra, Ras Al Khaimah, UAE, Dubai, United Arab Emirates 2018, 10,000 m³/d RO
Utico IWP-03, Al Hamra, Ras Al Khaimah, UAE, Dubai, United Arab Emirates 2017, 48,000 m³/d RO
Utico IWP-01, Al Hamra, Ras Al Khaimah, UAE, Dubai, United Arab Emirates 2017, 16,000 m³/d RO
Utico IWP-Augmentation RAKIA, Al Hamra, Ras Al Khaimah, UAE, Dubai, United Arab Emirates 2017, 1,000 m³/d RO

Turnkey Project

Al Hamra Water IWPP, Ras Al Khaimah, Al Hamra, Ras Al Khaimah, United Arab Emirates 2016, 100,921 m³/d RO

Utilis

SELECTED REFERENCES

Satellite leak detection services

City of Albstadt, Albstadt, Germany 2017
S.C. Raja S.A., Constanta, Romania 2017
East Bay Municipal Utility District (EBMUD), San Francisco, U.S.A. 2016
HERA Group, Ferrara, Italy 2016
Kolektor Sisteh, Porec, Croatia
Aquasave, Mitrovica, Kosovo
INASAT South Africa, Tshwane, South Africa

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VA TECH WABAG is a pure play water technology multinational with presence in 4 continents and over 20 countries. Markets with WABAG presence include countries in Europe, Africa, Latin America, Middle East, South East Asia and the Indian subcontinent.

As a technology integrator with proven expertise in water, wastewater and desalination treatment field, WABAG has developed a wealth of experience over the last 9 decades. WABAG's service 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.

Desalination solutions:

In the desalination segment, WABAG offers a range of technologies: reverse osmosis (RO), thermal desalination technologies (MED, MVC, TVC, MSF), ion exchange (IX) and electro-dialysis processes (ED), including all pre- and post-treatment technologies. WABAG's global references bear ample testimony to the company's expertise with each of the technologies.

Over the years, WABAG has kept abreast with the trends in the desalination sector and is a major global player in offering reverse osmosis (RO) technology for the desalination of sea and brackish water, as well as for industrial effluent treatment, with a focus on water recycling and reuse.

Special emphasis is placed on efficient pre-treatment systems which employ highly effective ultra-and microfiltration systems apart from conventional filtration and clarification.

Equipped with comprehensive process know how, WABAG provides tailor-made solutions which are innovative, eco-friendly and cost-effective with minimal area footprint to suit client requirements and address new challenges

These value propositions validate the brand's tagline:

sustainable solutions. for a better life.

SELECTED REFERENCES

EPC Contractor

Koyambedu, Chennai, India 2018, 45,000 m³/d RO
 Yunus Emre PP, Turkey 2018, 960 m³/d RO
 Dangote Fertilizer, Nigeria 2017, 60,000 m³/d RO
 Dahej Refinery, India 2017, 4,800 m³/d RO
 Jamnagar, Gujarat, India 2016, 24,000 m³/d RO
 Al Ghubrah IWP, Muscat, Oman 2015, 190,932 m³/d RO
 QSTec Polysilicon Project, Qatar 2015, 12,480 m³/d RO
 NCC Power Project Nellore, India 2014, 13,248 m³/d RO
 Nemmeli Desalination Plant, India 2013, 100,000 m³/d RO
 Sohar Industrial Port Area, Muscat, Oman 2013, 20,000 m³/d RO
 APPDCL, Krishnapatnam, Andhra Pradesh, India 2012, 6,000 m³/d RO
 Essar Oil, India 2011, 12,960 m³/d
 Muaratawar Power Plant, Indonesia 2011, 500 m³/d RO
 Al Wasia, Saudi Arabia 2010, 200,000 m³/d RO
 Mundra Port SEZ, Gujarat, India 2010, 21,000 m³/d RO
 Adani, Mundra, India 2010, 20,000 m³/d RO
 Duqm, Oman 2010, 6,000 m³/d SWRO
 Suralaya, Indonesia 2010, 6,000 m³/d MED
 Rembang, Indonesia 2010, 6,000 m³/d MED
 Cirebon Power Plant, Indonesia 2010, 2,181 m³/d RO

Main Contractor

Dangote petrochemical refinery , RWTP Package, Lagos, Nigeria 2019, 110,040 m³/d RO
 Dangote petrochemical refinery , LFZ-RO-DM, CPU & ETP Package, Lagos , Nigeria 2019, 26,400 m³/d RO
 Additional module for SWRO Plant, J3 Program, India 2017, 24,000 m³/d RO

Sub-contractor

Long Phu 1, Thermal Power Plant - Desalination, Vietnam 2019, 7,200 m³/d RO
 Long Phu 1, Thermal Power Plant - Demineralisation, Vietnam 2019, 3,600 m³/d RO
 Complete reconstruction of Power station Prunerov II, Czech Republic 2016, 1,920 m³/d RO

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Veolia group is the global leader in optimized resource management. With nearly 169,000 employees worldwide, the Group designs and provides water, waste and energy management solutions that contribute to the sustainable development of communities and industries. Through its three complementary business activities, Veolia helps to develop access to resources, preserve available resources, and to replenish them. In 2017, the Veolia group supplied 96 million people with drinking water and 62 million people with wastewater service, produced nearly 55 million megawatt hours of energy and converted 47 million metric tons of waste into new materials and energy. Veolia Environnement (listed on Paris Euronext: VIE) recorded consolidated revenue of €25.12 billion in 2017 (USD 30.1 billion).

SIDEM, part of Veolia Water Technologies, focuses on large scale desalination projects and leverages innovative Reverse Osmosis solutions, such as advanced pre-treatment technologies. Together with its subsidiary Entropie, SIDEM is the world leader in thermal desalination.

SELECTED REFERENCES

Thermal desalination - Design & Build - ENTROPIE / SIDEM / Veolia Water Technologies

Ras Tanura, Saudi Arabia 2018, 6,268 m³/d MED
 Adnoc CFP, UAE 2018, 16,800 m³/d MED
 Tangguh, Indonesia 2017, 1,344 m³/d MVC
 Burrup Fertiliser Plant II, Australia 2017, 1,500 m³/d MED
 Shougang - Unit 5, Caofeidian, China 2016, 35,000 m³/d MED
 Liwa, Oman 2016, 8,800 m³/d MED
 Lontar, Indonesia 2016, 3,500 m³/d MED
 Red Dragon / PIEM, Chile 2016, 3,000 m³/d MED
 Zouk, Lebanon 2016, 1,440 m³/d MED
 Az Zour North 1 IWPP, Kuwait 2013, 490,970 m³/d MED
 MAEK Kazatomprom, Aktau, Kazakhstan 2013, 24,000 m³/d MED
 Tripoli West, Tripoli, Libya 2013, 7,200 m³/d MED
 Moron Planta Centro, Venezuela 2013, 5,362 m³/d MED
 Zwitina, Libya 2013, 5,000 m³/d MED
 Cochrane Thermoelectric Power Plant, Chile 2013, 5,000 m³/d MED
 Petron, Philippines 2012, 16,167 m³/d MED
 Suez Thermal Power Plant, Egypt 2012, 6,000 m³/d MED
 Yanbu 2, Yanbu, Saudi Arabia 2011, 63,348 m³/d MED

Membrane desalination - Design & Build - SIDEM / Veolia Water Technologies

BP Mad Dog Phase 2 LoSal System, Gulf of Mexico, USA (off shore) 2017, 22,300 m³/d RO
Humaimah Water Treatment Plant, Hail, Saudi Arabia 2017, 10,500 m³/d RO
Rizal Drinking Water Treatment Plant, Manila, Philippines 2016, 50,000 m³/d RO
Woodside Greater Enfield Sulphate Removal System, Australia (off shore) 2016, 12,720 m³/d NF (Sulphate Removal)
Sharqiyah Desalination - Expansion, Sur, Oman 2015, 48,000 m³/d RO
BWSIP P3 & P4, Basrah, Iraq 2014, 199,000 m³/d RO
Egina, Nigeria (off shore) 2014, 85,625 m³/d UF (Sulphate Removal)
WTP for Wajeed Wells Project, Wajeed, Saudi Arabia 2014, 62,712 m³/d RO
Moho Nord, Ghana (off shore) 2014, 20,668 m³/d UF (Sulphate Removal)
East Hub, Angola (off shore) 2014, 20,032 m³/d UF (Sulphate Removal)
Masdar - Renewable Energy Desalination Program, Abu Dhabi, UAE 2014, 300 m³/d RO (Advanced technology pilot)
Sadara (Marafiq) SWRO, Al Jubail, Saudi Arabia 2013, 178,800 m³/d RO
Quwaieiah WTP Expansion Project, Quwaieiah, Saudi Arabia 2013, 25,000 m³/d RO
Maraba (Asir) WTP Expansion, Asir, Saudi Arabia 2012, 50,000 m³/d RO
Aruba desalination plant, Aruba 2012, 24,000 m³/d RO
Az Zour South SWRO, Az Zour, Kuwait 2011, 136,000 m³/d RO
Campo de Tarragona, Tarragona, Spain 2010, 20,000 m³/d RO

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SELECTED REFERENCES

Design, equipment supply, installation and start-up

Valparaiso, Chile 2017, 10 m³/d RO
Coquimbo, Chile 2017, 8.0 m³/d RO
Chile, Antofagasta 2016, 132 m³/d RO
Iquique, Chile 2015, 120 m³/d RO
Santiago, Chile 2015, 33 m³/d RO
Valparaiso, Chile 2015, 28 m³/d RO
Antofagasta, Chile 2014, 408 m³/d RO

Design, equipment supply, installation, start-up

Coquimbo, Chile 2017, 8.0 I.O RO

Design, manufacture and start-up

Antofagasta, Chile 2014, 144 m³/d RO
Perú, Chile 2014, 120 m³/d RO
Endesa Bocamina II, Coronel, Chile 2012, 1,200 m³/d RO

Design, manufacture, installation and start-up

Santiago, Chile 2017, 864.0 I.O RO
Santiago, Chile 2017, 480.0 I.O RO
Arica, Chile 2017, 480.0 I.O RO
Santiago, Chile 2017, 384.0 I.O UF
Santiago, Chile 2017, 240.0 I.O RO
Chile, Valparaiso 2016, 12,960 m³/d RO
Valparaiso, Chile 2016, 5,352.0 I.O RO
Santiago, Chile 2016, 1,440.0 I.O RO
Chile, Coquimbo 2016, 840 m³/d RO
Chile, Valparaiso 2016, 720 m³/d RO
Santiago, Chile 2016, 360.0 I.O RO
Chile, Valparaiso 2016, 360 m³/d RO
Santiago, Chile 2016, 288.0 I.O RO
Chile, Antofagasta 2016, 288 m³/d RO
Chile, Puerto Montt 2016, 160 m³/d RO
Santiago, Chile 2016, 48.0 I.O UF
Chile, Mobile 2016, 24 m³/d RO
Chile, Iquique 2016, 12 m³/d RO
Atacama, Chile 2015, 600 m³/d RO
Valparaiso, Chile 2015, 600 m³/d RO
Bio-Bio, Chile 2015, 480 m³/d RO
Bio-Bio, Chile 2015, 120 m³/d RO
Coquimbo, Chile 2014, 552 m³/d RO
Santiago, Chile 2014, 480 m³/d RO
Santiago, Chile 2014, 216 m³/d RO
Santiago, Chile 2014, 48 m³/d RO
Cerro Negro Norte, Copiapó, Chile 2013, 168 m³/d RO
Clorox, Santiago, Chile 2013, 57 m³/d RO
Syngenta Arica, Arica, Chile 2013, 5 m³/d RO
Marina Vichuquén, Sexta Región, Chile 2013, 4 m³/d RO
Coca-Cola Andina, Santiago, Chile 2012, 480 m³/d RO
Coca-Cola Embonor, Valparaiso, Chile 2012, 240 m³/d RO
Capel, Ovalle, Chile 2012, 72 m³/d RO
SUN, Santiago, Chile 2012, 38 m³/d RO
Coca-Cola Embonor, Valparaiso, Chile 2012, 4 m³/d Other
Vital, Santiago, Chile 2011, 600 m³/d RO
Watts, Santiago, Chile 2011, 480 m³/d RO
Rockwood Lithium, Antofagasta, Chile 2011, 360 m³/d RO
Coca-Cola Andina, Santiago, Chile 2011, 288 m³/d RO
Carozzi Jugos, Santiago, Chile 2011, 240 m³/d RO
Capel, Coquimbo, Chile 2011, 144 m³/d RO
Golden Omega, Arica, Chile 2011, 120 m³/d RO
Capel, Coquimbo, Chile 2011, 80 m³/d RO
Las Tacas II, Coquimbo, Chile 2011, 48 m³/d RO
E-CL, Iquique, Chile 2011, 48 m³/d RO
Viveros Hijuelas, Valparaiso, Chile 2011, 40 m³/d RO
Cloramon, Santiago, Chile 2011, 36 m³/d RO
Hemosur, Puerto Montt, Chile 2011, 34 m³/d RO
Hotel Don Tomás, S. Pedro Atacama, Chile 2011, 34 m³/d RO
SAG, Arica, Chile 2011, 34 m³/d RO
Clínica Universidad Católica, Santiago, Chile 2011, 24 m³/d RO

Enami, Vallenar, Chile 2011, 24 m³/d RO
 UAP, Iquique, Chile 2011, 11 m³/d RO
 Syngenta Arica, Arica, Chile 2011, 3 m³/d RO
 Clariant, Santiago, Chile 2010, 240 m³/d RO
 Ingemace, La Serena, Chile 2010, 144 m³/d RO
 Cloramon, Santiago, Chile 2010, 30 m³/d RO

Equipment supplier

Sexta Región, Chile 2013, 108 m³/d RO

Installation

Isla Damas, La Serena, Chile 2012, 2 m³/d RO

Installation and start-up

Santa Beatriz, Antofagasta, Chile 2013, 120 m³/d Other

Plant manufacture and installation

Hosmet, Santiago, Chile 2010, 20 m³/d RO

Vishvaraj Infrastructure

SELECTED REFERENCES

Developer

Bhandewadi - Nagpur (Maharashtra) Waste Treatment Plant with reuse (Phase I, II & III), Nagpur, Maharashtra, India, 300,000 m³/d

Von-Roll Hydro

SELECTED REFERENCES

Noise and pressure monitoring for smart leak detection

Pruntrut Municipality, Pruntrut, Switzerland

Online platform for smart monitoring with automatic leak reporting

IBC Energie Wasser Chur, Chur, Switzerland

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Vontron Membrane Technology Co., Ltd is a state wholly owned subsidiary of CRRC Cooperation Limited, it is committed to the R&D, manufacturing and technical service of reverse osmosis membrane, nanofiltration membrane and ultrafiltration membrane. The company has the core technology of membrane manufacturing and the production capacity of membrane sheet is 30 million square meters annually.

As one of the global scale separation spiral-wound membrane manufacturer, Vontron provided customers with high quality application technology support services and a complete solution of membrane water treatment system.

Vontron has developed various specifications of compound RO membranes covering 12 series and over 60 models. All product series adopt the state-of-the-art fouling-resistant technology, and reached the international standard in quality. Certified to NSF/ANSI 58 & NSF/ANSI 61 Standards, VONTRONTM membranes have been broadly applied to seawater desalination, purification of drinking water, sewage treatment and concentration/abstraction, and well sold to USA, India, Italy, Spain, Germany, Turkey, Korea, Japan, Vietnam, Malaysia, Thailand, Singapore, Brazil, etc.

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Municipal Supply Water Project, China, 300,000 m³/d RO
 Boiler Replenishment Water Project, China, 144,000 m³/d RO
 Seawater Desalination Project, China, 100,000 m³/d RO
 Ultrapure Water Project, China, 35,000 m³/d RO
 Process Water Project, China, 30,000 m³/d RO
 Reclaimed Water Project, China, 24,000 m³/d RO
 Boiler Replenishment Water Project, China, 24,000 m³/d RO
 Beverage Water Project, China, 20,000 m³/d RO
 Boiler Replenishment Water Project, China, 20,000 m³/d RO
 Boiler Replenishment Water Project, China, 16,800 m³/d RO
 Process Water Project, China, 11,520 m³/d RO
 Ultrapure Water Project, China, 10,000 m³/d RO
 Process Water Project, China, 9,600 m³/d RO
 Shanghai Coking & Chemical Co., Ltd., Boiler Replenishment Water Project, China, 8,640 m³/d RO

Boiler Replenishment Water Project, China, 7,200 m³/d RO
Replenishment Water Project, China, 7,200 m³/d RO
Drink Water Project, China, 7,200 m³/d RO
Reclaimed Water Project, China, 6,000 m³/d RO
Boiler Replenishment Water Project, China, 5,000 m³/d RO
Process Water Project, China, 5,000 m³/d RO
Process Water Project, China, 3,000 m³/d RO
Process Water Project, China, 2,400 m³/d RO
Electroplating Wastewater Treatment Project, China, 1,500 m³/d RO

Equipment Supplier - Membrane

Tianjin, China 2014, 33,600 m³/d RO
Binzhou, Shandong, China 2014, 28,800 m³/d RO
Binzhou, Shandong, China 2014, 24,000 m³/d RO
Chengdu, Sichuan, China 2014, 20,000 m³/d RO
Cangzhou, Hebei, China 2014, 16,800 m³/d RO
Binzhou, Shandong, China 2014, 9,600 m³/d RO
Tangshan, Hebei, China 2014, 9,600 m³/d RO
Cangzhou, Hebei, China 2014, 7,200 m³/d RO
Guiyang, Guizhou, China 2014, 7,200 m³/d RO
Fuzhou, Fujian, China 2014, 7,000 m³/d RO
Tangshan, Hebei, China 2014, 5,280 m³/d RO
Dalate, Inner Mongolia, China 2014, 5,000 m³/d RO
Tangshan, Hebei, China 2014, 5,000 m³/d RO
Shenzhen, Guangdong, China 2014, 5,000 m³/d RO
Linyi, Shandong, China 2014, 4,800 m³/d RO
Hengshui, Hebei, China 2014, 4,800 m³/d RO
Ordos, Inner Mongolia, China 2014, 3,840 m³/d RO
Tianjin, China 2014, 3,000 m³/d RO
Jining, Shandong, China 2014, 2,400 m³/d RO
Chaoyang, Liaoning, China 2014, 2,400 m³/d RO
Chongqing, China 2014, 2,400 m³/d RO
Jiangmen, Guangdong, China 2014, 2,200 m³/d RO
Hengshui, Hebei, China 2014, 2,160 m³/d RO
Guangzhou, Guangdong, China 2014, 2,000 m³/d RO
Pakistan 2014, 1,920 m³/d RO
Tianjin, China 2014, 1,152 m³/d RO
Huanghua, Cangzhou, Hebei, China 2014, 840 m³/d RO
Zibo, Shandong, China 2014, 400 m³/d RO
Sansha, Hainan, China 2014, 400 m³/d RO
Jinan, Shandong, China 2014, 360 m³/d RO
Heze, Shandong, China 2014, NF

Al Mesiab Military Camp RO Desalination Plant, Iraq, 1,749 m³/d RO
Al-Shurah RO Desalination Plant, Iraq, 1,439 m³/d RO
Two River Brackish RO Desalination Plant, Nigeria, 1,399 m³/d RO
Bay Clean C. Water Company - Seawater RO Desalination Plant, Lebanon, 999 m³/d RO
Al Abaichi Brackish Water RO Desalination Plant, Iraq, 750 m³/d RO
Chandria Industries RO Desalination Plant, Kenya, 650 m³/d RO
Bectra Seawater RO Desalination Plant, Portugal, 400 m³/d RO
Sonatrach - Hassi Messaoud Containerized RO Desalination Plant, Algeria, 195 m³/d RO
Arbat RO Desalination Plant, Iraq, RO

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SELECTED REFERENCES

Desalination plant supplier

Rodos Village, Rhodes island, Greece 2015, 600 m³/d RO
Rodos Marine, Rhodes island, Greece 2015, 600 m³/d RO
Vitom SA, Thessaloniki, Greece 2015, 460 m³/d RO
Creta star, Creta island, Greece 2015, 300 m³/d RO
EQOS Energie, Opava, Czech Republic 2015, 300 m³/d RO
ELVAL SA, Inofyta, Greece 2015, 290 m³/d RO
Rhodes Horizon Resort, Rhodes island, Greece 2015, 250 m³/d RO
Notos Beach Resort, Rhodes island, Greece 2015, 220 m³/d RO
Loux Marlafekas SA, Patra, Greece 2015, 160 m³/d RO
Municipality of Mykonos, Mykonos island, Greece 2014, 2,500 m³/d RO
Municipality of Mykonos, Mykonos island, Greece 2014, 2,000 m³/d RO
Agroinvest SA, Lamia, Greece 2014, 700 m³/d RO
Municipality, Kithnos island, Greece 2014, 600 m³/d RO
Municipality of Tinos, Tinos island, Greece 2014, 600 m³/d RO
Lindos Imperial, Rhodes island, Greece 2014, 550 m³/d RO
Caldera Palace, Creta Island, Greece 2014, 450 m³/d RO
Olympic Palace, Rhodes island, Greece 2014, 410 m³/d RO
Akti Beach, Kos Island, Greece 2014, 300 m³/d RO
Kougios SA, Rhodes island, Greece 2014, 300 m³/d RO
EAS Argolidas, Argolida, Greece 2014, 300 m³/d RO
Eureka Hellas SA, Volos, Greece 2014, 270 m³/d RO
Fulgor SA, Korinthos, Greece 2014, 210 m³/d RO
Kitantzis SA, Athens, Greece 2014, 165 m³/d RO
Municipality - Greece, Patmos Island, Greece 2013, 1,200 m³/d RO
Municipality, Agkistri Island, Greece 2013, 1,200 m³/d RO
Ibese Plant, Slovakia 2013, 1,080 m³/d RO
Municipality, Tinos Island, Greece 2013, 720 m³/d RO
Diagoras SA, Rhodes Island, Greece 2013, 700 m³/d RO
MITAS SA, Otrokovice, Czech Republic 2013, 480 m³/d RO
Del Monte Hellas SA, Larisa, Greece 2013, 470 m³/d RO
Christodoulou SA, Argolida, Greece 2013, 365 m³/d RO
Xanthiako Co. Ltd., Porto Cheli, Greece 2013, 360 m³/d RO
Municipality, Folegandros Island, Greece 2013, 360 m³/d RO
Krestenitis SA, Rhodes Island, Greece 2013, 200 m³/d RO

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SELECTED REFERENCES

Desalination system supplier

Al Dagharah factory RO Desalination Plant, Iraq, 5,181 m³/d RO
Naamanja RO Desalination Plant, Iraq, 4,317 m³/d RO
Nawperdan RO Desalination Plant Extension, Iraq, 2,998 m³/d RO
Al Khudor RO Desalination Plant, Iraq, 1,999 m³/d RO

Skouras, Sofiko, Greece 2013, 180 m³/d RO
 Municipality, Kalamata, Greece 2013, 150 m³/d RO
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 MITAS SA, Otrokovice, Czech Republic 2013, 130 m³/d RO
 Tria, Faliro, Greece 2013, 100 m³/d RO
 Foundation Propondis, Folegandros Island, Greece 2012, 720 m³/d RO
 Colgate Palmolive, Athens, Greece 2012, 690 m³/d RO
 META SA, Salonica, Greece 2012, 570 m³/d RO
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 Villaz SA, Kos Island, Greece 2012, 325 m³/d RO
 Zacharakis-Ziganitidis, Chalkidiki, Greece 2012, 300 m³/d RO
 Langlev, Kranidi, Greece 2012, 165 m³/d RO
 Ekte SA, Salonica, Greece 2012, 120 m³/d RO
 Costa Navarino Resort Hotel, Messinia, Greece 2011, 1,500 m³/d RO
 Blue Lagoon Village, Kos, Greece 2011, 1,300 m³/d RO
 Sovel SA, Volos, Greece 2011, 1,200 m³/d RO
 Public Power Corporation of Agios Georgios, Attica, Greece 2011, 1,000 m³/d RO
 Rodopi SA, Xanthi, Greece 2011, 750 m³/d RO
 Laguna Resort Hotel, Crete, Greece 2011, 720 m³/d RO
 Paneuropa SA, Crete, Greece 2011, 700 m³/d RO
 Lindos Imperial Hotel, Rhodes, Greece 2011, 400 m³/d RO
 Atrium Platinum Hotel, Rhodes, Greece 2011, 300 m³/d RO
 Kalithea Mare, Rhodes, Greece 2011, 300 m³/d RO
 Kresten Palace Hotel, Rhodes, Greece 2011, 300 m³/d RO
 Sunshine Vacation Hotel, Crete, Greece 2011, 300 m³/d RO
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 Atrium Palace Hotel, Rhodes, Greece 2011, 200 m³/d RO
 Johnson & Johnson, Attica, Greece 2011, 200 m³/d RO
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 Nonivar Trading, Legrainia, Greece 2011, 100 m³/d RO
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 Municipality - Greece, Ios, Greece 2010, 1,000 m³/d RO
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 Xanthia Company, Argolida, Greece 2010, 300 m³/d RO
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 Aquis Hotel and Resort, Crete, Greece 2010, 200 m³/d RO
 Ali Mouda Mare Hotel, Karpachos, Greece 2010, 200 m³/d RO
 Patmos Aktis Hotel, Patmos, Greece 2010, 120 m³/d RO
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 Kioumbekon SA, Koufonisia Island, Greece 2010, 100 m³/d RO

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 Prefecture, Greece, 5,000 m³/d RO

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 Madinaty Desalination Plant, Madinaty, Egypt, 10,000 m³/d RO
 Petrochemical Company Desalination Plant, Antwerp, Belgium, 2,280 m³/d RO
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 Textile Factory, Peronnes-lez-Binche, Belgium, 240 m³/d MBR

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Construction

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As a leading desalination, water and wastewater treatment company, Water & Environment Technologies Co. Ltd. (WETICO) has managed to dominate the Saudi market as the EPC of choice. By combining leading edge technologies and high quality products with a strong manufacturing and project execution capabilities, WETICO has set itself apart from its competitors by earning customer respect and appreciation.

Established in the early 90's, WETICO built its capabilities and reputation over the following decade. In the year 2000 the company started acquiring a major portion of the Saudi Wastewater treatment plant market while maintaining a strong hold on the Reverse Osmosis segment. In 2009, WETICO was recognized globally for its Barge based desalination plant and was ranked as the 18th largest supplier of desalination plants in the world by IDA. In 2013 WETICO became one of the top 10th largest desalination plants suppliers in the world.

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Taif, Saudi Arabia 2017, 2,136 m³/d RO
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Ocrim Spa Medinah, Medinah 2017, 225 m³/d RO
Marvella Riyadh, Riyadh 2017, 210 m³/d RO
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Al Kharj Farms, Al Kharj, Saudi Arabia 2016, 5,000 m³/d RO
Riyadh, Saudi Arabia 2016, 4,500 m³/d RO
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Airport Hotel Riyadh, Riyadh 2016, 250 m³/d RO
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King Fahd Medical City, Dammam 2016, 120 m³/d RO
Nobu Hospital Riyadh, Riyadh 2016, 110 m³/d RO
Faisal Bin Turki, Riyadh 2016, 100 m³/d RO
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Saleh Almohana RO, Riyadh, Saudi Arabia 2015, 250 m³/d RO

Iman Hospital, Riyadh, Saudi Arabia 2015, 126 m³/d RO

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Icdoc RO Plant, Dammam, Saudi Arabia 2014, 5,000 m³/d RO

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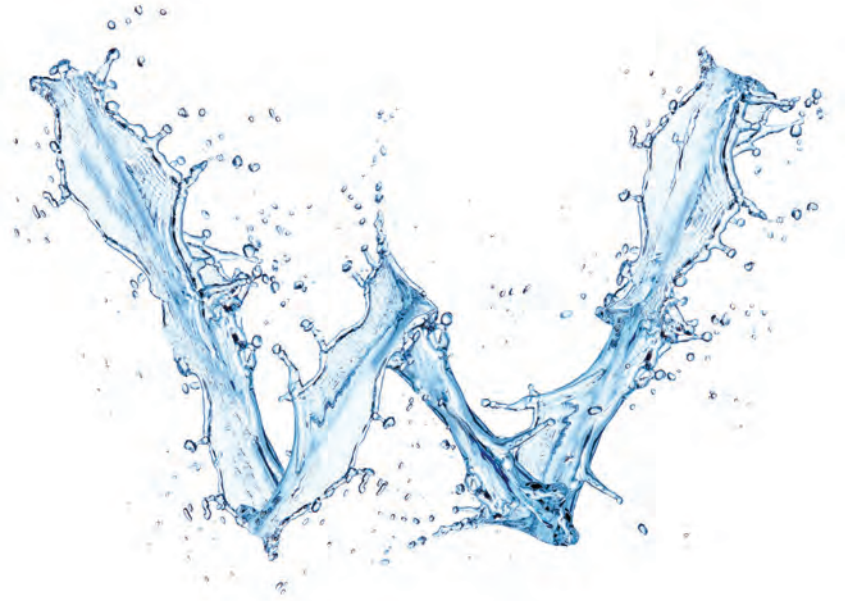
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Hail, Saudi Arabia 2014, 1,500 m³/d RO



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Construction of Infantry Bridge Al Nariyah Phase I, Nariyah, Saudi Arabia 2014, 1,320 m³/d RO

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Shafia Water Factory, Medina, Saudi Arabia 2014, 1,000 m³/d RO

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Golden Chicken RO, Riyadh, Saudi Arabia 2014, 700 m³/d RO

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Sultan Al Saadi 500 Cmd With Gls Tank, Duba, Saudi Arabia 2014, 500 m³/d RO

Project Star RO, Riyadh, Saudi Arabia 2014, 400 m³/d RO

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Al-Qurayyat RO, Qurayyat, Saudi Arabia 2014, 50 m³/d RO

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Ghodaf, Tabuk, Saudi Arabia 2013, 980 m³/d RO

Municipality of Deba, Saudi Arabia 2013, 500 m³/d RO

Sabt Al Alaya Hospital, Saudi Arabia 2013, 260 m³/d RO

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Al Badiah farm, Al Kharj, Saudi Arabia 2012, 4,000 m³/d RO

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Armed force hospital BWRO 500 m³/d, Najran, Saudi Arabia 2012, 500 m³/d RO

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AL Kharj PSY hospital, Al Kharj, Saudi Arabia 2012, 100 m³/d RO

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Prainsa, Dammam, Saudi Arabia 2012, 100 m³/d RO

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 Dammam, Saudi Arabia, 1,920 m³/d RO
 Al Dura, Saudi Arabia, 1,000 m³/d RO
 Madina, Saudi Arabia, 912 m³/d RO
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 Jizan, Saudi Arabia, 400 m³/d RO
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 RO, 2x 750 m³/d Naseer al hajri, (cs-0197), Fadhili, Saudi Arabia 2017, 1,500 m³/d RO
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Freeport, TX, U.S.A. 2014, 87,064 m³/d UF
Ferndale, WA, U.S.A. 2014, 8,139 m³/d RO
Lake Andes, SD, U.S.A. 2012, 15,142 m³/d UF
Paulding, OH, U.S.A. 2012, 4,921 m³/d RO
Lakin, KS, U.S.A. 2011, 6,814 m³/d NF
Oliver Mercer North Dunn WTP, Zap, ND, U.S.A. 2010, 28,391 m³/d RO
Oliver Mercer North Dunn WTP, Zap, ND, U.S.A. 2010, 11,924 m³/d RO
Pickerington, OH, U.S.A. 2010, 11,356 m³/d NF

Xylem

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Existing Xylem AMI leveraged to monitor reclaimed water system pressure

Loudoun Water, Ashburn, VA, U.S.A. 2017

Installation of AMI and iPERL smart meters for NRW reduction

City of Dallas, Dallas, GA, U.S.A. 2014

Installation of AMI with iPERL and OMNI smart meters for NRW reduction

Loudoun Water, Ashburn, VA, U.S.A. 2012

Installation of FlexNet communications network and complete range of water meters for NRW reduction and network management

Thames Water, London, U.K. 2015

Supplied PipeDiver electromagnetic condition assessment and smart leak detection for NRW reduction; same distance of pipe covered in 1 day as usually covered in 5 months over 5 years

Homestake Water Services, CO, U.S.A. 2018

Supplied SmartBall inline leak detection services and condition assessment for NRW reduction

Metropolitan Milanese, Milan, Italy 2014

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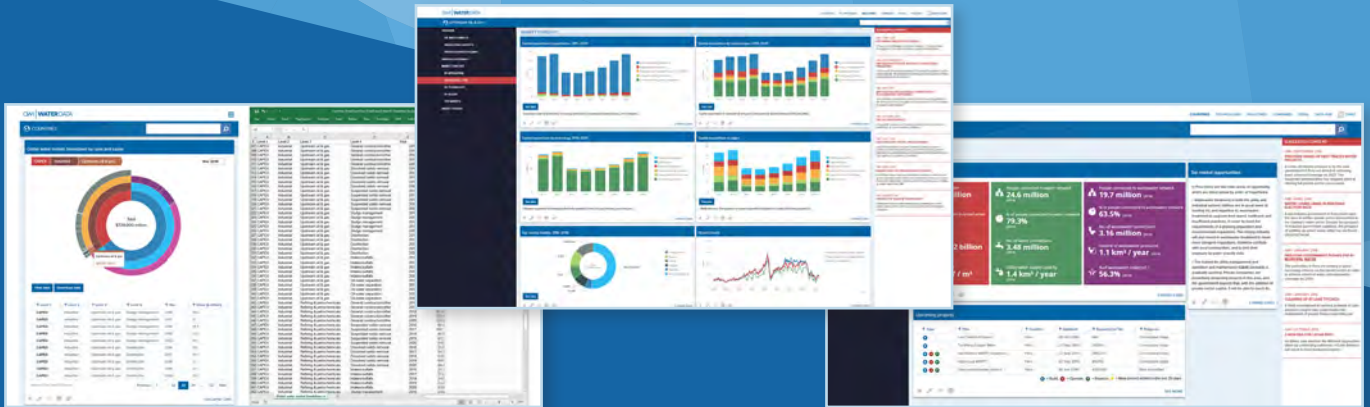
Desalination plant supplier

Vee Shaka Pat Nangang , India 2014, 16,000 m³/d RO
Zhejiang Province, Zhoushan, China 2014, 12,000 m³/d MED

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