

Culligan®



REFERENCE BOOK



Culligan®

Culligan, the water treatment professionals



Culligan, was founded in 1936, and is a global leader in water treatment for homes, offices and industries. Culligan designs, engineers and manufactures water treatment equipment and formulates and blends water treatment chemicals to create pure, safe, healthy water for every need.

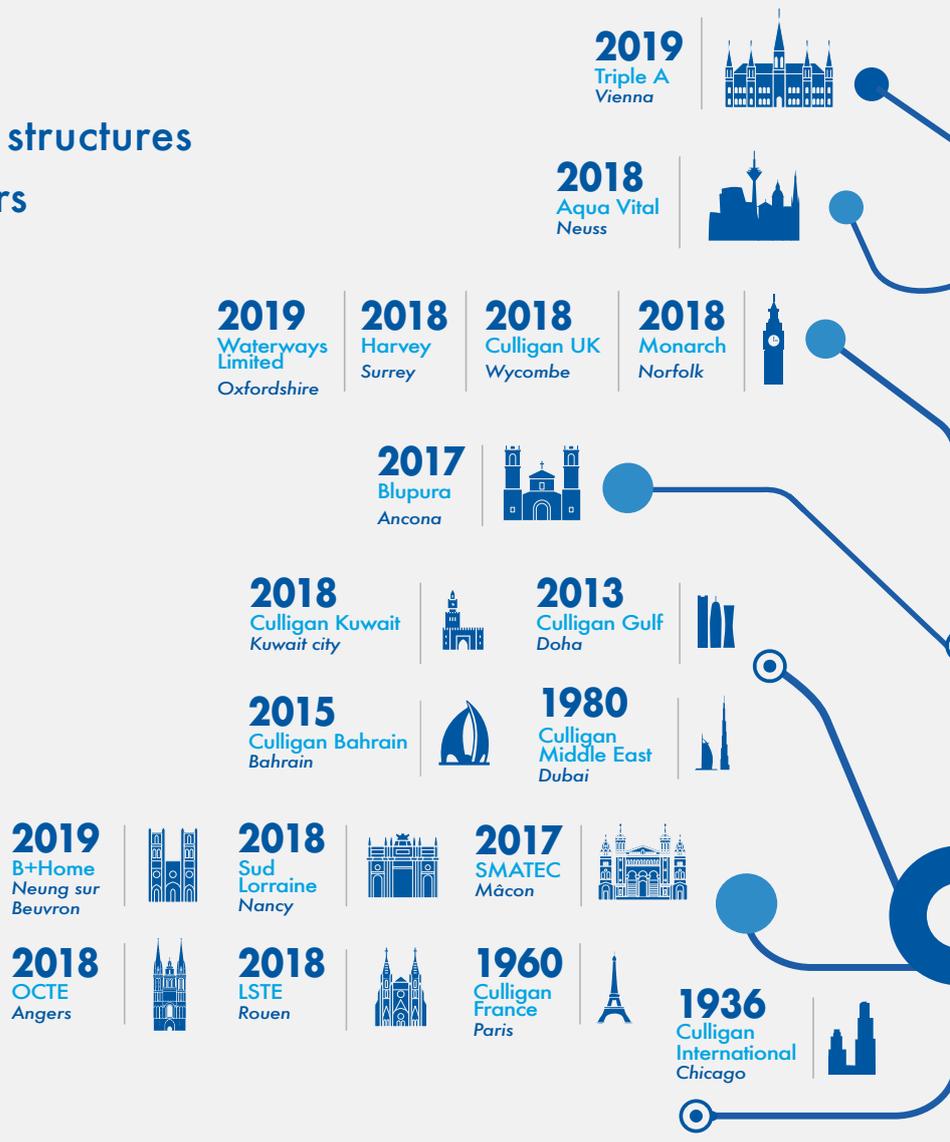


Whether it is for soft water for your shower, pure drinking water from your kitchen or office tap, carafes of purified water in your favourite restaurant, and, all the way through to ultra pure water for medical use or water used as part of the product in the food and beverage industry – Culligan has a solution.

In Culligan, we love water since 1936.

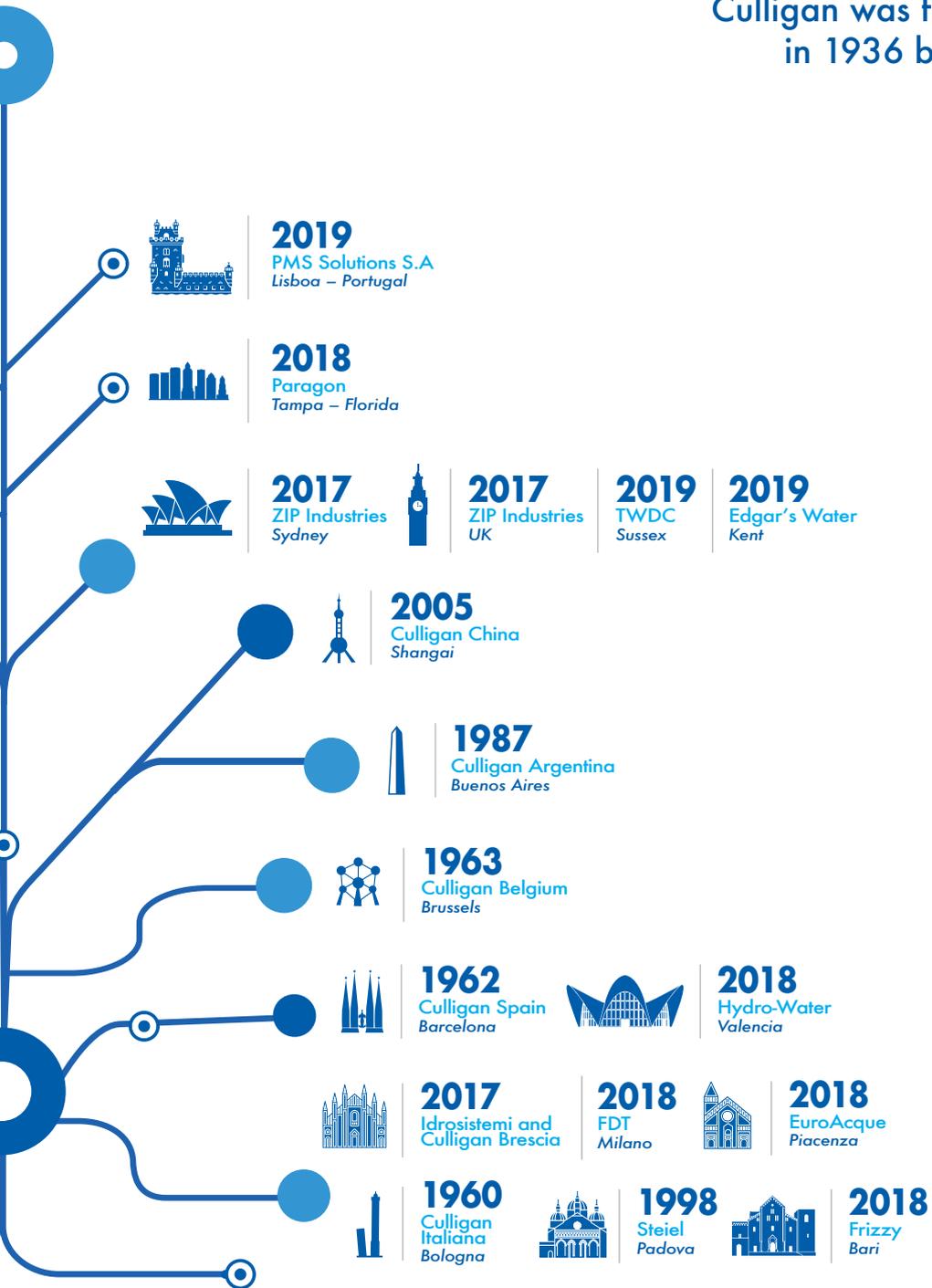
Culligan international

90 Countries
900 Dealerships
15 Direct company structures
3 Million Customers



Culligan is a truly global company that prides itself on providing consistent high quality water across the world. Whether you are drinking tea made from a Zip instant boiling Hydrotap in Australia, pure office water from a

Culligan was founded in Illinois, USA
in 1936 by Emmett Culligan



cooler in Argentina or drinking water through the municipal pipe network in Kigali, Rwanda, you are guaranteed the same high quality and renowned Culligan service. Culligan technicians serve over 3 million customers worldwide.

Sectors We are Serving

Culligan, the water treatment professionals

Culligan, was founded in 1936, and is a global leader in water treatment for homes, offices and industries. Culligan designs, engineers and manufactures water treatment equipment. Culligan formulates and blends water treatment chemicals to create pure, safe, healthy water for every need.



WATER FOR THE HOME

Culligan supplies softened water and high purity drinking water to millions of homes worldwide. Culligan supplies under sink drinking water systems to give pure water from the tap. Chilled, sparkling and instant boiling water straight from your kitchen tap. Then, the china and glasses will sparkle and the hair and skin will feel amazing.



WATER AT WORK

The employees can have access to high quality drinking water every day. Culligan has a full range of drinking water solutions all designed, engineered and manufactured in-house. Culligan manufactures high quality units to ensure the best quality of chilled, sparkling and boiled water constantly available. Backed up by Culligan's worldwide service network.



WATER FOR RESTAURANTS

Culligan Water on tap in the restaurant is an ideal way to service the valued customers, save cost and protect the environment. Great tasting water, pure clear ice, reduced scale and iron build up, easier cleaning, less detergents usage and softer brighter linens— a total Culligan water solution.



WATER FOR LEISURE

Culligan designs, engineers and produces systems for public pools, private pools, spas and resorts. Culligan invented the HCF filter that cleans the water 20/30x greater than a traditional sand filter with no backwashing, saving energy, water usage and chemicals.

Sectors We are Serving

90 Countries
900 Dealerships
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3 Million Customers



WATER FOR CRUISE SHIPS

Culligan designs, engineers and produces custom water treatment solutions which are installed in over 160 cruise ships like the largest cruise ship in the world. Culligan provides the entire ship water system. Whatever the use, wherever in the world, the water quality on the cruise will be to Culligan standards. Cruises are more relaxing and enjoyable.



WATER FOR HOTELS

Culligan customers in the hospitality industry can realize substantial benefits by using treated water in boilers, hot water heaters, cooling towers, food service, laundry, and services. Culligan's water treatment systems help uphold quality standards, while adding value to the business.



WATER FOR INDUSTRY

Water impacts every part of the industrial value chain. In the beverage industry, water of different qualities is required for cooling water, boilers for steam generation, bottle washing, machine sanitization and water to be part of the product. From oil refineries, to breweries which use water for the product composition as well as washing and sanitisation, Culligan has the full range of equipment and speciality chemicals to cover every application.



WATER FOR HEALTHCARE

Doctors, nurses and patients, get more than just great-tasting water from Culligan systems. Culligan supplies and services every water need of hospitals - cooling water, boiler water, water for hydrotherapy pools, full solutions for restaurant and canteen, drinking water, treatment and recycling for laundry and all the clinical needs.



WATER FOR VILLAGES, TOWNS, CITIES

Hundreds of municipalities have chosen Culligan filtration systems. Culligan has unique high rate reactor filters called OFSY, which are able to reliably treat highly variable turbid river water, with a significantly reduced footprint and limited civil construction.

Some of Our References



Industrial



Municipal



Containerized
Solutions



Healthcare



Hospitality



Marine



WATER FOR INDUSTRY

Water impacts every part of the industrial value chain. In the beverage industry, water of different qualities is required for cooling water, boilers for steam generation, bottle washing, machine sanitization and water to be part of the product. From oil refineries, which will process more water than oil, to breweries which use water for the product composition as well as washing and sanitisation, Culligan has the full range of equipment and speciality chemicals to cover every application. Culligan services, operates and maintains all water assets ensuring maximum productivity and enabling the meeting of sustainability goals.

Culligan Water will meet your highest expectations.



1

INLET WATER TREATMENT

2

WASTE WATER TREATMENT

3

WASTE WATER REUSE

4

PRE-TREATMENT OF COOLING WATER AND BOILERS

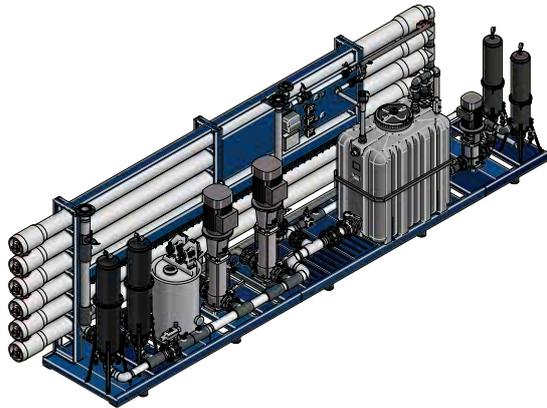
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PROCESS WATER TREATMENT

6

FOOD SERVICE

RECYCLING WATER



PROJECT DETAILS

CUSTOMER	Tobacco Company
LOCATION	Bologna, Italy
APPLICATION	Recycling water
TREATMENT PROCESS	Reverse Osmosis
CAPACITY	1200 m ³ /day
RAW WATER SOURCE	Waste Water
PROJECT CONTENT	2x Hi-Flo 9 UF 54" 2x Hi-Flo 9 UR 54" 1x IW-EVO 40

A very important tobacco company with the highest priority to reduce the impact on the environment has decided to improve the water circle in the production plant to minimize water consumption. This multinational corporation works with a green approach and, therefore, water is one of the most important matters to be addressed. **The equipment supplied by Culligan treats the wastewater coming from an existing MBR plant (Membrane Bio Reactor).** Designed to handle approx. 50 m³/h of water deriving from biological treatment, the plant produces 37.5 m³/h of osmotic water, with a recovery of 75% and a salts reduction in conductivity and TDS of about 97%. The plant works 24/7 and consists of a multimedia sand filtration section, Hi-Flo 9 UF 54" in parallel, to remove suspended solids after coagulant injection; a section with granular active carbon filters, Hi-Flo 9 UR 54" in parallel, for chlorine and organic matter residuals removal; a special two-stage IW-EVO reverse osmosis system with installed 36 membranes in each train. The process is controlled with on line enabled instruments, measuring and monitoring the main operating parameters (hardness, conductivity, pH, chlorine.); a control panel with power board and 15" graphic operator panel complete the supply. **The treated water feeds technical utilities like cooling towers, steam boilers, etc., thus allowing water reuse in the production cycle.** The project has met the customer's needs of reducing environmental impact and **confirms Culligan ability to carry out important projects in water reuse.**



180 - 288 M³/DAY



PROJECT DETAILS

CUSTOMER	Spa Trebon
LOCATION	Trebon, Czech Republic
APPLICATION	Recycling Water
TREATMENT PROCESS	Filtration, Ultrafiltration, Carbon, UV sterilization
CAPACITY	180 - 288 m ³ /day
RAW WATER SOURCE	Swimming Pool Salt Water
PROJECT CONTENT	2x Pump Grundfos CRTE 2x sand filters 30" FRP 1x ULF Culligan 30, 2x activated carbon filter 24" FRP 1x UV 40 S

25.000 M³/DAY



PROJECT DETAILS

CUSTOMER	Municipal Sewage Treatment Station
LOCATION	Chernyahovsk, Kliningrad region, Russian Federation
APPLICATION	Post Treatment after Biological Treatment of Sewage
TREATMENT PROCESS	Filtration
CAPACITY	25.000 m ³ /day
RAW WATER SOURCE	Municipal Sewage
PROJECT CONTENT	6 X HMS A 220 Basic c.No. 761716 2 X PCD 761554

300 M³/DAY



PROJECT DETAILS

CUSTOMER	Binghatti Beverages
LOCATION	UAE
APPLICATION	Process water, Water for catering, Effluent recycling
TREATMENT PROCESS	Filtration, Steam sterilization, Reverse Osmosis, Membrane BioReactor (MBR), Chemicals
CAPACITY	300 m ³ /day
RAW WATER SOURCE	Municipal Water
PROJECT CONTENT	Auto Screen - Odor control dosing sytem - DAF Feed Pump - pH correction Dosing sytem - Coagulant Dosing System - Flocculant Dosing Sytem - Nutrient Dosing Sytem - DAF unit - Aeration Blower - MBR unit - MBR Permeate pump - Sludge transfer pump - Ro unit

BOILER AND CHILLED WATER



PROJECT DETAILS	
CUSTOMER	SKD SpA
LOCATION	Algeria
APPLICATION	Boiler and Chilled Water
TREATMENT PROCESS	Filtration, Reverse Osmosis
CAPACITY	500 m ³ /day
RAW WATER SOURCE	Sea Water
PROJECT CONTENT	2X Containerized Seawater RO Plant (1st Stage SW 20 EVO + 2nd Stage IW24 EVO with PLC)

In September 2017, the Culligan dealer in Algeria, Aquatec, won a public tender to supply to containerised seawater RO units of 500 m³/day each.

Culligan has more than **a dozen fully operational plants** in Algeria and a **strong reputation for quality and service**. So when the power plant operator was having problems with their existing seawater treatment plant, they turned to Culligan, through Aquatec for a solution. Due to space constraints, **Culligan’s expertise in containerised solutions** was required, designing a double pass RO turning seawater into high purity power station grade boiler feed water.



960 M³/DAY



PROJECT DETAILS

CUSTOMER	Endesa
LOCATION	Chile
APPLICATION	Boiler and Chilled Water
TREATMENT PROCESS	Filtration, Demineralization
CAPACITY	960 m ³ /day
RAW WATER SOURCE	Well Water
PROJECT CONTENT	2x NRC 100 2x AMB 80

1.344 M³/DAY



PROJECT DETAILS

CUSTOMER	Hilla Karbala - Ministry of Electricity
LOCATION	Iraq
APPLICATION	Boiler and Chilled Water
TREATMENT PROCESS	Filtration, Reverse Osmosis, EDI
CAPACITY	1.344 m ³ /day
RAW WATER SOURCE	Well Water
PROJECT CONTENT	4x HI-FLO UF 72 2x IW 59 K 2x EDI 56 PLC/SCADA control panel

480 M³/DAY



PROJECT DETAILS

CUSTOMER	Acegas Aps
LOCATION	Trieste, Italy
APPLICATION	Boiler Water for Steam Turbine
TREATMENT PROCESS	Filtration, Ro ² , EDI
CAPACITY	480 m ³ /day
RAW WATER SOURCE	Public Water
PROJECT CONTENT	3x HF9 UF 48 2x IW ² 10 2x EDI 100

DRINKING WATER



PROJECT DETAILS

CUSTOMER	Louvre Museum
LOCATION	Abu Dhabi, UAE
APPLICATION	Drinking Water
TREATMENT PROCESS	Filtration through sediment filter and activated carbon
CAPACITY	30.000 l/year
RAW WATER SOURCE	Municipal Water
PROJECT CONTENT	3x biorefreshes hot cold and ambient 3x sediment filter with activated carbon

The Louvre Abu Dhabi was inaugurated in November 2017. Culligan was appointed to **supply water treatment systems for domestic water, chilled water and brackish water**. The installation was completed in about 3 months but was not done by Culligan who acted as the equipment supplier and supervised the installation by the main contractor. Since its beginning in 1993, Culligan’s reputation in the Middle East has only grown. The **quality of our products**, our **reliable after-sale service** and our **competitive price** played an important role in Culligan appointment to this project. Culligan also provided the Louvre Abu Dhabi museum a **service contract** to maintain the equipment in good condition and ensure the quality of the water. The Bio-Refresh water dispensers were provided after the museum opening, at the end of 2018.

The 3 Bio-Refresh units were installed for employees – one in the basement parking, one in the security guards office and one in the staff entrance. However, Culligan also provided: Domestic Water Filtration & UV Disinfection, Chlorine Dioxide Disinfection System, Chilled Water Chemical Treatment, Condenser Water Chemical Treatment, Brackish Water RO system (430 m³/d).



7.680 M³/DAY



PROJECT DETAILS

CUSTOMER	ABB - Saipem / Sonatrach
LOCATION	Algeria
APPLICATION	Drinking Water
TREATMENT PROCESS	Reverse Osmosis, Demineralization
CAPACITY	7.680 m ³ /day
RAW WATER SOURCE	Well Water
PROJECT CONTENT	4x IW 100

336 M³/DAY



PROJECT DETAILS

CUSTOMER	Oil and Gas Company
LOCATION	Libya
APPLICATION	Drinking Water
TREATMENT PROCESS	Filtration - Reverse Osmosis
CAPACITY	136 m ³ /day + 27 m ³ /day
RAW WATER SOURCE	Sea Water
PROJECT CONTENT	2x ROSW SKID

1.200 M³/DAY



PROJECT DETAILS

CUSTOMER	Soft Drink Company
LOCATION	Italy
APPLICATION	Drinking Water - Process Water
TREATMENT PROCESS	Filtration, Bio Filtration, Reverse Osmosis
CAPACITY	1.200 m ³ /day
RAW WATER SOURCE	Well Water
PROJECT CONTENT	2x BF 80 2x UFP 54 2x IW 20

WASTE WATER



PROJECT DETAILS

CUSTOMER	Large Distribution Company
LOCATION	Italy
APPLICATION	Waste Water
TREATMENT PROCESS	MBR
CAPACITY	60 m ³ /day
RAW WATER SOURCE	Waste Water
PROJECT CONTENT	MBR 60

Wastewater brought within the limits of the law to be used in irrigation.

One of our historic large-scale retail trade Client in Tuscany, Italy had a problem with wastewater values above the legal limits. The Tuscany region is particularly sensitive to environmental problems deriving from industrial discharges so this socio-cultural context brought the Client decide to invest to solve the problem. The customer required a **solution to reuse wastewater for irrigation purposes**. However, wastewater values were well above the legal limits on suspended solids, BOD5, COD, ammonia nitrogen, animal and vegetable fats. Our project manager, Fabrizio Lazzarini, proposed installing a **total oxidation biological treatment plant** with final treatment by means of a **membrane bioreactor (MBR)**. Such solution **reduced pollutants** output by more than 90% and made water reusable for irrigation. The plant is able to **treat up to 60m³/day** of wastewater with a **contaminant removal efficiency of 99% for suspended solids, 95% for BOD5 and COD, ammonia nitrogen and fats**. The installation of the MBR has produced a benefit not only for the customer but also for the social context of the area: now the sewage system will receive a smaller amount of polluting and hydraulic load. This experience proved that technology aimed at reusing water is becoming more and more achievable and interesting, paving the way to similar projects in the future.



240 M³/DAY



PROJECT DETAILS

CUSTOMER	Novotel Hotel
LOCATION	Dubai
APPLICATION	Grey Water Recovery
TREATMENT PROCESS	Filtration, Ultrafiltration, Reverse Osmosis
CAPACITY	240 m ³ /day
RAW WATER SOURCE	Grey Water
PROJECT CONTENT	1 x OFSY 48 1 x UR 48 1 x ULF 5 1 x IW 20 S

170 M³/DAY



PROJECT DETAILS

CUSTOMER	Albatha Group
LOCATION	UAE
APPLICATION	Waste Water
TREATMENT PROCESS	MBR
CAPACITY	170 m ³ /day
RAW WATER SOURCE	Waste Water
PROJECT CONTENT	Automatic coarse screen Coarse screen chamber DAF feed pumps and sludge pump Pipe flocculator Separator Anoxic tank Recirculation pump Aeration Tank 1 Aeration Tank 2 MBR MBR tank and product transfer pump Treated water storage tank MBR sludge transfer pump Filter feed pump sand filter and carbon filter Air blower for new aeration tank and MBR Air blower for anoxic and equalization tank Coagulant dosing tank and pump Caustic dosing tank and pump Polymer dosing tank Hypochlorite dosing tank and pump Odour control dosing tank and pump Nutrition dosing tank and pump Sludge collection transfer pump for biological and chemical Common control panel CIP pump and tank Alr compressor

PRODUCTION WATER



PROJECT DETAILS	
CUSTOMER	Milk Powder Products Company
LOCATION	Netherlands
APPLICATION	Production Water
TREATMENT PROCESS	Reverse Osmosis
CAPACITY	840 m ³ /day
RAW WATER SOURCE	Municipal Water
PROJECT CONTENT	2x IW 35 2x IW 7

Multinational Milk Powder Products Company in Borculo. The Netherlands RO systems for water recovery with a green solution.

Culligan’s franchisee in The Netherlands, RWB, was asked to join in the agreement initially via one of the employees network. The milk company has been investing in huge production capacity expansion for special milk products, hence demand for **low salinity water for utilities, boilers and production facilities** increased as well. The customer asked for two main targets. First, to be **as green as possible**, reducing water footprint in any possible way. Secondly, there are drinking water supply constraints from the main net. RWB and Culligan started the first solution concept in Los Angeles during Culligan 80th year Anniversary Convention. Client decided to invest in a secondary RO unit, which is processing the concentrate from the main unit. Now, **water recovery yield up to 93% is achieved**. The installation of **two RO system for 35 m³/h each** solved the customer’s problem **giving a high water yield, low concentrate to sewer and better water footprint**.



1.200 M³/DAY



PROJECT DETAILS

CUSTOMER	Refriango
LOCATION	Angola
APPLICATION	Production Water
TREATMENT PROCESS	Ultrafiltration, Reverse Osmosis
CAPACITY	1.200 m ³ /day
RAW WATER SOURCE	Well Water
PROJECT CONTENT	1x ULF 50 1x GAC 90

1.920 M³/DAY



PROJECT DETAILS

CUSTOMER	Rekitt Benckiser
LOCATION	Mira (VE), Italy
APPLICATION	Production Water
TREATMENT PROCESS	Filtration, GAC, Reverse Osmosis
CAPACITY	1920 m ³ /day
RAW WATER SOURCE	Surface Water (River)
PROJECT CONTENT	3x HF9 UF 88 1x GAC 100 1x IW 80

2.040 + 1.656 M³/DAY



PROJECT DETAILS

CUSTOMER	Coca-Cola (Dubai) Arena
LOCATION	City Walk, Dubai
APPLICATION	Domestic water, Storm water treatment
TREATMENT PROCESS	Filtration, Softening, Chemicals dosing system
CAPACITY	Domestic: 2.040 m ³ /day Storm Water: 1.656 m ³ /day
RAW WATER SOURCE	Municipal Water
PROJECT CONTENT	1x GAC 84 1x IW 50 1x IW 10

PROCESS WATER



PROJECT DETAILS

CUSTOMER	Sofidel
LOCATION	Spain
APPLICATION	Process Water
TREATMENT PROCESS	Filtration, Reverse Osmosis
CAPACITY	2160 m ³ /day
RAW WATER SOURCE	Well Water
PROJECT CONTENT	2x HF9 UF 120" 1x HF9 UR 120" 1x IW 50 EVO Special 1x IW 16 EVO Special Drain 1x CIP

Sofidel is a leading producer of tissue paper and finished products for the consumer market.

Culligan Spain was already a trusted supplier of Sofidel, having a **maintenance contract** at their facility. So when Sofidel's expansion plans meant they **needed to double the water treatment plant capacity**, Culligan was the obvious choice. They needed a **treatment plant for surface water with problems related to turbidity and salinity**. Culligan solutions includes a double stage pretreatment composed of by 2 x HF9 UF 120 in series and one HF9 UR 120 followed by a IW 50 EVO Special RO unit. In addition, a second RO unit (IW16 EVO Special) has been used to treat reject of main RO recovering 50% of it for industrial uses. Sofidel was delighted with the Culligan solution, not only receiving **high quality water** for their process, but also **saving costs and waste** by recovering the RO reject.



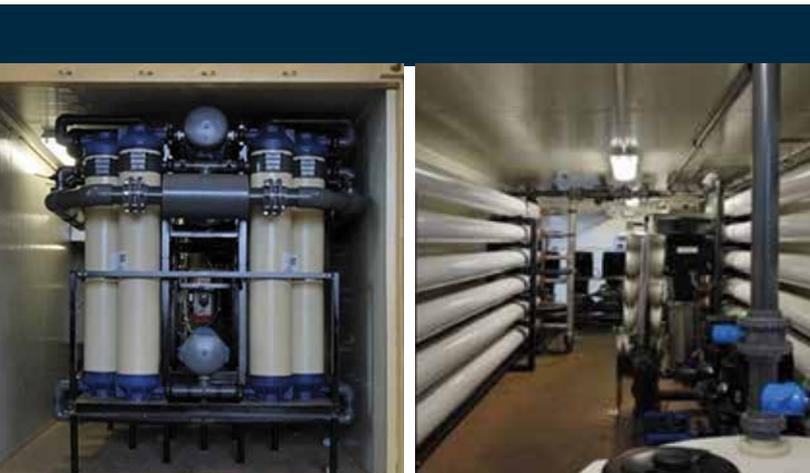
240 M³/DAY



PROJECT DETAILS

CUSTOMER	Isir
LOCATION	Caspian Sea, Kazakhstan
APPLICATION	Process Water
TREATMENT PROCESS	Chemical Conditioning, Reverse Osmosis
CAPACITY	480 m ³ /day
RAW WATER SOURCE	Surface Water
PROJECT CONTENT	2 x IW 10

4.320 M³/DAY



PROJECT DETAILS

CUSTOMER	Steel Production
LOCATION	France
APPLICATION	Process Water
TREATMENT PROCESS	Ultrafiltration, Reverse Osmosis
CAPACITY	4.320 m ³ /day
RAW WATER SOURCE	Surface Water (Lake)
PROJECT CONTENT	2x ULF 180 6x IWE 30

528 M³/DAY



PROJECT DETAILS

CUSTOMER	Uhdenora
LOCATION	Kazakhstan
APPLICATION	Process Water
TREATMENT PROCESS	Filtration, Demineralization
CAPACITY	528 m ³ /day
RAW WATER SOURCE	Well Water
PROJECT CONTENT	1x NRC 80 1x AMB 50 1x HI-FLO 9 UF 90

ULTRA PURE WATER



PROJECT DETAILS

CUSTOMER	HERA
LOCATION	Coriano, Italy
APPLICATION	Ultra-pure Water
TREATMENT PROCESS	Electrodeionization
CAPACITY	96 m ³ /day
RAW WATER SOURCE	Well Water
PROJECT CONTENT	2x ULF 60 2x GAC 36 2x IW ² 6 2x EDI 40

By providing the water treatment package for its boiler plant at Coriano, Italy, Culligan helped HERA ensure the generation of electricity for their waste to energy programme. The Hera Group is **one of the largest multi-utility companies** in Italy and is responsible for the distribution of Water, Gas & Electricity for most of the Italian territory of Emilia-Romagna. Hera operate a series of waste to energy plants that currently service more than 2.7 million residents in the Emilia-Romagna region. Waste to energy plants work by generating electricity by utilising the heat that comes from the waste incineration process to produce steam in high pressure boilers. The high-pressure steam is used to drive large turbines which generate electricity. The specifications for water supply to these high-pressure boilers are very exacting and provide many challenges, in particularly if the raw water source is either well or surface water. Hera’s Engineering team challenged Culligan to **reduce the mains water consumption costs of their Waste to Energy plant in Coriano, Italy by providing a system capable of producing 3,000 L/hr of water - from the local well water site - of a quality suitable for their high-pressure boilers.**

By using its expertise in the treatment of well water supplies Culligan was able to provide Hera with an **innovative water treatment package which met their exact needs.**



480 M³/DAY



PROJECT DETAILS

CUSTOMER	X-Group
LOCATION	Italy
APPLICATION	Ultra-Pure Water
TREATMENT PROCESS	Filtration, Reverse Osmosis, Electrodeionization
CAPACITY	480 m ³ /day
RAW WATER SOURCE	Well Water
PROJECT CONTENT	3x HF9 UF 48 3x UR 48 2x IW ² 10 2x EDI 100

280 M³/DAY



PROJECT DETAILS

CUSTOMER	Delta T Impianti (per Officine Maserati)
LOCATION	Italy
APPLICATION	Ultra Pure Water
TREATMENT PROCESS	Reverse Osmosis, Demineralization
CAPACITY	280 m ³ /day
RAW WATER SOURCE	Public Water
PROJECT CONTENT	2x IW 6 2x AMB 100

2.160 M³/DAY



PROJECT DETAILS

CUSTOMER	Danieli
LOCATION	Egypt
APPLICATION	Ultra-Pure Water
TREATMENT PROCESS	Ultrafiltration, Reverse Osmosis, Demineralization
CAPACITY	2.160 m ³ /day
RAW WATER SOURCE	Well Water
PROJECT CONTENT	2x ULF 100 2x IW 100 2x NRC 600

PHARMA WATER



PROJECT DETAILS

CUSTOMER	Menarini S.p.A.
LOCATION	Italy
APPLICATION	Production Water
TREATMENT PROCESS	Reverse Osmosis, Electrodeionization
CAPACITY	144 m3/day
RAW WATER SOURCE	Filling Machines Discharge
PROJECT CONTENT	1x MFP 1600 1x EDI 10

The customer was looking for a valid solution because it had to replace an old mixed bed resin demineralization system as it was obsolete. Following a market research, he came into contact with the Culligan branch in Florence. The customer was looking for a partner capable of proposing the right water treatment technology, but also capable of designing, implementing, installing and maintaining a **customized system** that met the qualitative and documentary requirements of a pharmaceutical industry. Culligan has created a **reverse osmosis and electrodeionization system, completely preassembled on a skid, complete with a PLC electrical panel, analysis and control instrumentation for a complete remotization of the system status.**

Culligan has therefore **carried out all the phases of the order**, from the design, installation, up to the rigorous FAT and SAT control protocols for the validation of the plant. Thanks to the new Culligan plant, the customer has obtained a **better quality of water**, a **new-generation plant** that is **completely remote-controlled**, more **environmentally friendly** and **safer** as no dangerous chemical reagents are used such as caustic soda and hydrochloric acid.



3,5 M³/DAY



PROJECT DETAILS

CUSTOMER	Valpharma
LOCATION	S. Marino
APPLICATION	Purified Water
TREATMENT PROCESS	Reverse Osmosis, EDI
CAPACITY	3,5 m ³ /day
RAW WATER SOURCE	Public Water
PROJECT CONTENT	1x IW 1 1x EDI 1

36 M³/DAY



PROJECT DETAILS

CUSTOMER	Oftalmi
LOCATION	Venezuela
APPLICATION	Purified Water
TREATMENT PROCESS	Reverse Osmosis, EDI
CAPACITY	36 m ³ /day
RAW WATER SOURCE	Municipal Water
PROJECT CONTENT	1x Skid Pretreatment and Softener 2,5 m ³ /h + Skid RO +EDI 1,5 m ³ /h

50 M³/DAY



PROJECT DETAILS

CUSTOMER	Sieg
LOCATION	Sudan
APPLICATION	WFI
TREATMENT PROCESS	Reverse Osmosis, EDI
CAPACITY	50 m ³ /day
RAW WATER SOURCE	Public Water
PROJECT CONTENT	1x IW 3 1x EDI 3

OTHER PROJECTS

PROJECT	COUNTRY	SECTOR	APPLICATION	VALUE RANGE (K€)
ALYOUM BAKERY (SAMA JORDAN)	JORDAN	Food Beverage Manufacturing	Process Water	50 - 250
AMITEC OY	FINLAND	Manufacturing	Boiler Water	500 - 1000
MAERSK	NORTH SEA (Oil Platform)	Industrial	Drinking Water	60 m3/day
BLACKFOREST	UAE	Industrial	Process Water	500 - 1000
CONSUMER PRODUCTS	ITALY	Industrial	Waste Water	250 - 500
CROWN	TUNISIA	Manufacturing	Production Water	50 - 250
DAIRYGOLD	IRELAND	Food & Beverage	Production Water	50 - 250
DIFRAMA	FRANCE	Consumer products	Process Water	50 - 250
DUBAI HEALTH AUTHORITY (DHA) CLINICS – Umm Suqeim	UAE	Healthcare – Public Government	Boiler and Chilled Water	250 - 500
EQUINIX FRNKFURT	GERMANY	Commercial	Boiler and Chilled Water	50 - 250
GLOBAL WATER	EGYPT	Food & Beverage	Production Water	50 - 250
GLOD MINE	ARMENIA	Mining	Drinking Water	50 - 250
ISIR	KAZAKISTAN (Oil Platform)	Industrial	Drinking Water	50 - 250
AQUALUX	UKRAINE	Food & Beverage	Drinking Water	50 - 250
MANN PROJECT	NIGERIA	Petrochemical and Refining	Drinking Water	500 - 1000

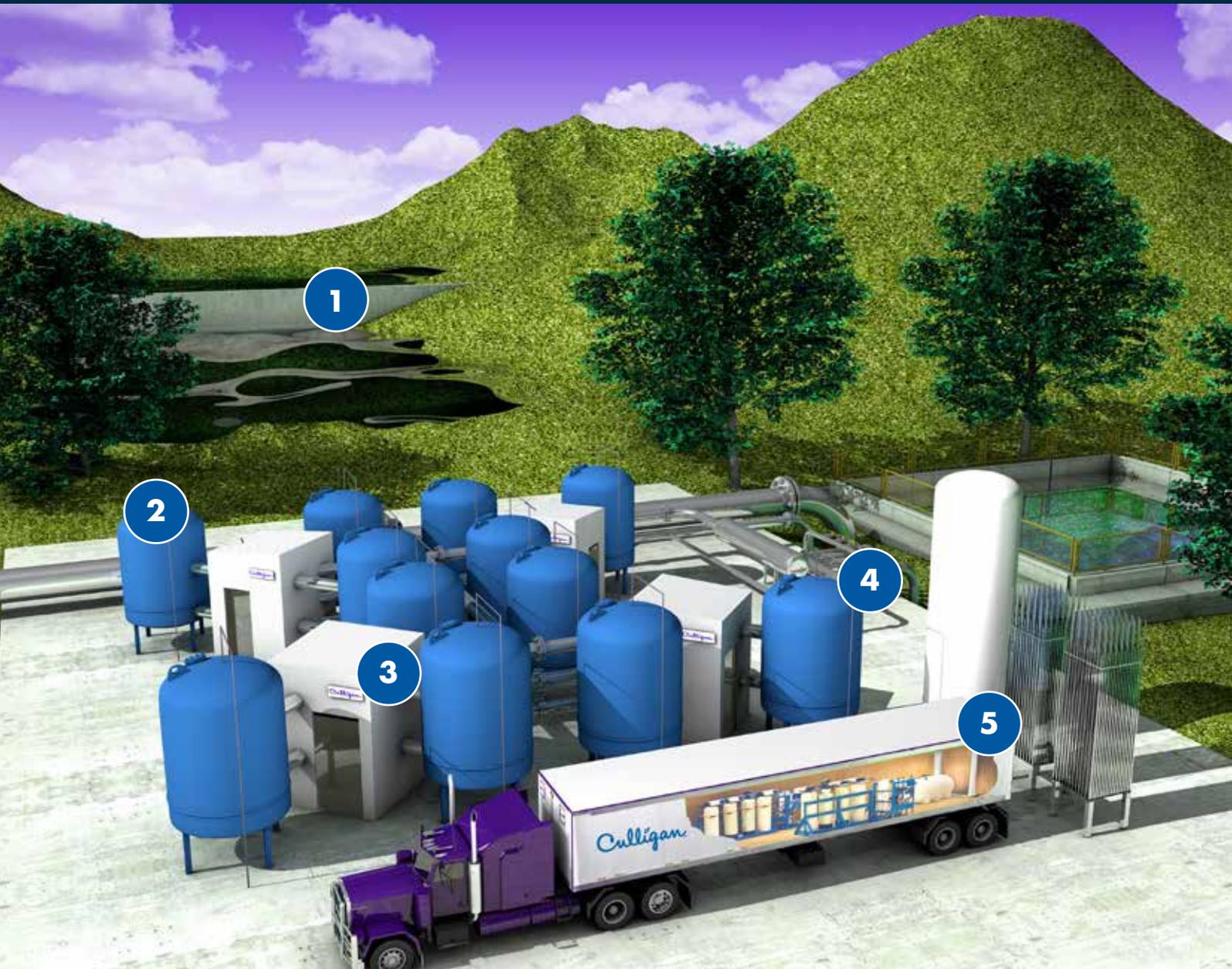
PROJECT	COUNTRY	SECTOR	APPLICATION	VALUE RANGE (K€)
HODDESDON POWER	UK	Power Plant	Ultra-Pure Water	50 - 250
IBERTISSUE SOFIDEL	SPAIN	Pulp and Paper	Production Water	50 - 250
MEDICLINIC HOSPITAL (Barsha)	UAE	Healthcare - Private Hospital	Boiler and Chilled Water	50 - 250
MERCK SANTE	FRANCE	Pharmaceutical	Ultra-Pure Water	50 - 250
NATIONAL DAIRY PLANT (HAYATNA)	UAE	Industrial	Process and Recycling Water	1000 +
NOVROROSS-PINO	RUSSIA	Food & Beverage	Production Water	50 - 250
SC JOHNSON JOHNSON	RUSSIA	Chemical	Boiler and Chilled and Production Water	50 - 250
SKD SPA	ALGERIA	Power Plant	Boiler and Chilled Water	500 - 1000
TEXALG - TEXTIL INDUSTRY	ALGERIA	Textile	Process Water	50 - 100
THYSSEN	FRANCE	Manufacturing	Ultra-Pure Water	50 - 250
ENKROTT / PORTUCEL CO.	PORTUGAL	Industrial	Process Water	250 - 500
Cabot S.pA	ITALY	Industrial	Ultra pure water (Filtration - Reverse Osmosis - Electro deionization)	50 - 250
FILTER TECHNOLOGIES PSC	RUSSIA	POWER PLANT	Drinking Water	250 - 500
HABIBO	MADAGASCAR	FOOD & BEVERAGE	Production Water	50 - 250
KAIKO OY	ALGERIA	Manufacturing	Boiler Water	50 - 250



WATER FOR VILLAGES, TOWNS, CITIES

Hundreds of municipalities have chosen Culligan filtration systems. Culligan has unique high rate reactor filters called OFSY, which are able to reliably treat highly variable turbid river water, with a significantly reduced footprint and limited civil construction. Culligan also designs and constructs water treatment and effluent plants inside shipping containers which are ideal for remote small communities. Fully factory tested and shipped directly to site for easy and fast installation.

Improved drinking water for all, with Culligan Water.



- 1** WATER SOURCES
- 2** FILTRATION TECHNOLOGY
- 3** MODULAR DESIGN
- 4** FULL RANGE OF MEDIA
- 5** CONTAINERISED WATER SYSTEMS

WELL WATER



PROJECT DETAILS

CUSTOMER	ARIN S.p.A. - Casoria Municipality
LOCATION	Casoria, Italy
APPLICATION	Drinking Water
TREATMENT PROCESS	Filtration
CAPACITY	76.800 m ³ /day
RAW WATER SOURCE	Well Water
PROJECT CONTENT	16x UFP 480 12x GAC 480

Casoria is an Italian town of 77,357 inhabitants in the province of Naples, in the Campania region. It is part of the coastal hills of Naples, and located in the middle of ancient reclaimed swamps. The aqueduct that brings water to the city was inaugurated in 1885 and has been managed for more than 20 years by ARIN, the client who commissioned the Culligan water treatment plant. The application of a **specific treatment system** was required by the company **to reduce pollutants in water**. In 2010, after three years of work, the treatment plant developed by Culligan was inaugurated. The plant's purpose was to **bring manganese values below 10 ppb and of Trichloroethylene and Tetrachloroethylene below 5 ppb**. In the last twenty years, groundwater used as drinking water showed growing levels of pollutants, due to increase in consumption (lowering of groundwater levels) and the presence of anthropogenic pollution, resulting from human activity. Until 2009, drinking water supplied locally presented values of manganese, Trichloroethylene and Tetrachloroethylene above the legal limit (50 ppb of manganese and 10 ppb Tri + Tetrachloroethylene), levels that prevented water distribution to local utilities. The turnkey solution developed by Culligan, namely, from preliminary design to testing, consists of a **pressurized filtration system that relies on two-stage filtration**: the first uses catalytic material for the removal of manganese, with previous disinfection with sodium hypochlorite, and subsequent filtration through granular activated carbon for the adsorption and removal of Tri and Tetrachloroethylene.



270.000 M³/DAY

*THE LARGEST ARSENIC REMOVAL PLANT IN THE WORLD.



PROJECT DETAILS

CUSTOMER	IZSU - Water and Sanitation Administration
LOCATION	Izmir, Turkey
APPLICATION	Drinking Water
TREATMENT PROCESS	Filtration, Arsenic Removal Treatment
CAPACITY	270.000 m ³ /day
RAW WATER SOURCE	Well Water
PROJECT CONTENT	RO Water Tank 5000 m ³ 32x HI-FLO 9 UFP 480 Treatment Water Tank 3000 m ³ Sedimentation System 2x HI-FLO 9 UF 360

82.000 M³/DAY



PROJECT DETAILS

CUSTOMER	Acqualatina
LOCATION	Aprilia, Italy
APPLICATION	Drinking Water
TREATMENT PROCESS	Filtration, Arsenic Removal Treatment
CAPACITY	Carano Giannettola: 51.800 m ³ /day Sorgenti del carano: 22.400 m ³ /day Dante Alighieri Station: 7.800 m ³ /day
RAW WATER SOURCE	Well Water
PROJECT CONTENT	6x UFX 560

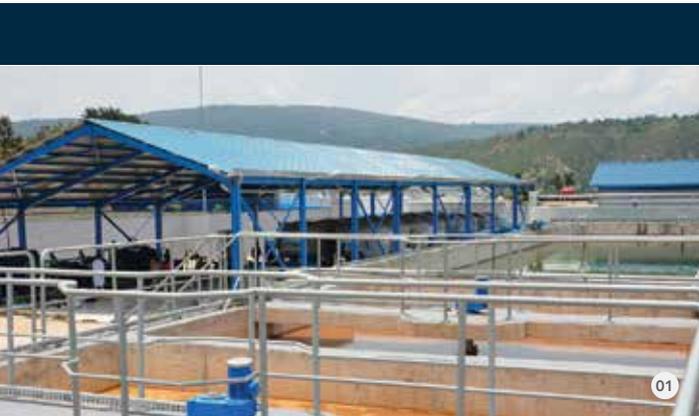
40.000 M³/DAY



PROJECT DETAILS

CUSTOMER	WTP Zabrowo
LOCATION	Poland
APPLICATION	Drinking Water
TREATMENT PROCESS	Biological Filtration For Municipality
CAPACITY	40.000 m ³ /day
RAW WATER SOURCE	Well Water
PROJECT CONTENT	5x BF480

SURFACE WATER



01



02

Kigali is the capital City of Rwanda with a population over 1 million. Nyabarongo River is one of the main water sources of the city for drinking water. Water shortage is one of the main issues for the city. Nyabarongo River water has a main **problem of high content of iron and manganese besides high turbidity and suspended solids**. Culligan built a pilot plant to test best technology for treating iron and manganese and turbidity in 2014. After the successful test results process designed accordingly and modified according to treat high iron and manganese content. Due to high water demand, **first phase of the project completed within 6 months** and inaugurated in 2016. Second phase inauguration projected for July 2017.

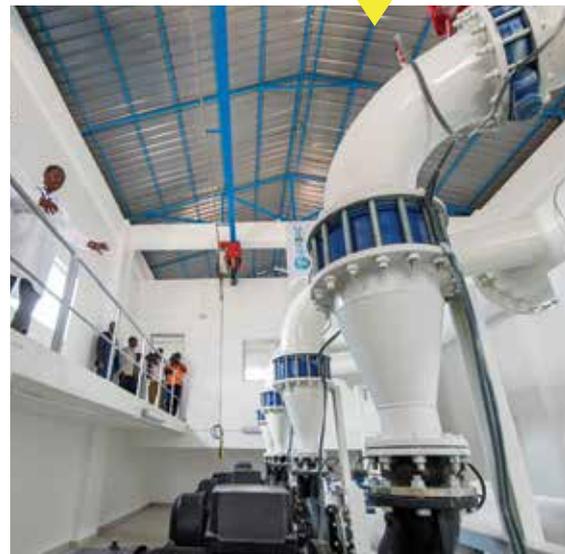
PROJECT DETAILS

CUSTOMER	WASAC Water and Sanitation Corporation of Rwanda
LOCATION	Rwanda
APPLICATION	Drinking Water
TREATMENT PROCESS	Sedimentation, Disinfection, Culligan OFSY Filtration
CAPACITY	First Phase: 40.000 m ³ /day Second Phase: 65.000 m ³ /day
RAW WATER SOURCE	Nyabarongo River

PROJECT CONTENT	Water Intake Intake pump station: 1.750 m ³ /h+4.565 m ³ /h Sedimentation OFSY 480 Treated Water reservoirs 1 x 1.000 m ³ 2 x 2.000 m ³ 1 x 5.000 m ³ Treated Water Pump Stations 1 x 4.565 m ³ /h 1 x 1.750 m ³ /h Hypochlorite Production Plant Main water supply pipeline 7.5 km (0400-0600) PLC&SCADA System
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CONTENT OF NZOVE-2 PROJECT	<ul style="list-style-type: none"> • Extending the capacity of Nzove-1 Plant from 25.000 m³/day to 40.000 m³/day • OFSY Treatment Plant 65.000 m³/day • Raw water intake from Nyabarongo river • Pre-treatment - sedimentation • 2.000 m³ Nzove treated water reservoir • 2.000 m³ Karama Hill treated water reservoir • 5.000 m³ Mount Kigali treated water reservoir • 5 km NO 600 steel pipe line • 2.8 km NO 400 steel pipe line • 2 x High Pressure pump stations • Hypochlorite production plant • Administration building • PLC & SCAOA System
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01. Pretreatment and OFSY Filtration Building. Nzove-1 Plant.
02. OFSY Filtration Building. Nzove-1 Plant.



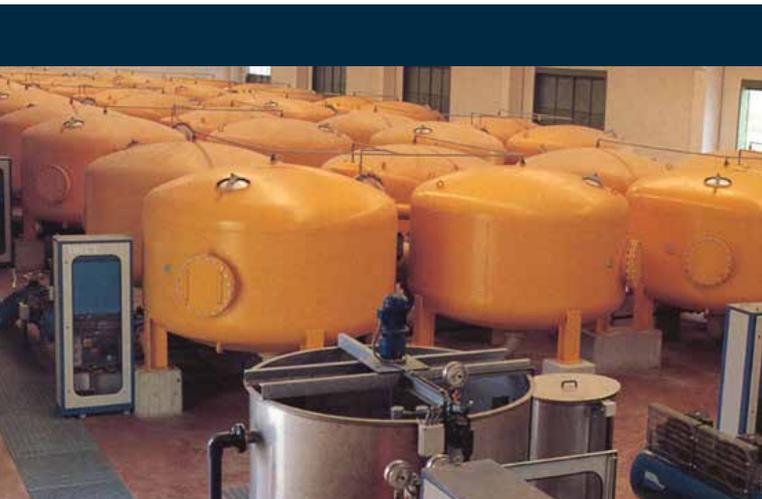
340.000 M³/DAY



PROJECT DETAILS

CUSTOMER	Aguas do Douro e Paiva SA
LOCATION	Oporto City, Portugal
APPLICATION	Drinking Water
TREATMENT PROCESS	Filtration
CAPACITY	340.000 m ³ /day
RAW WATER SOURCE	River - Douro
PROJECT CONTENT	River Water Intake HF9 UFP480 MCC Filter Feed Pump Station PLC&SCADA Sytem

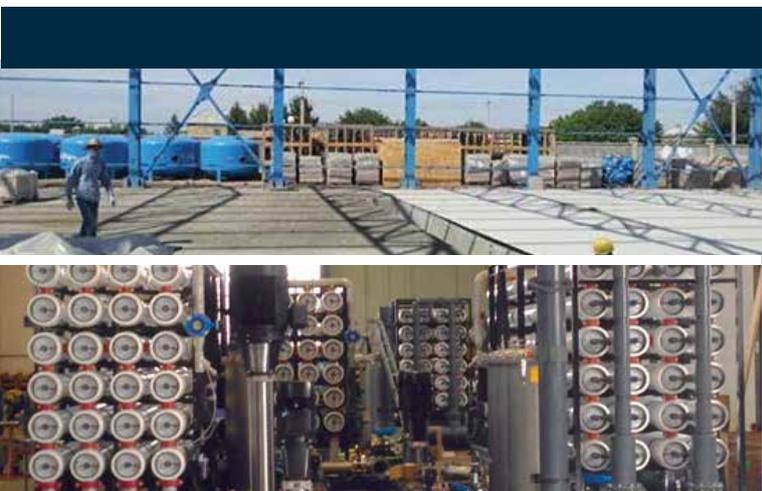
128.000 M³/DAY



PROJECT DETAILS

CUSTOMER	AGAC Water and Gas Consortium of Reggio Emilia
LOCATION	Reggio Emilia, Italy
APPLICATION	Drinking Water
TREATMENT PROCESS	Filtration
CAPACITY	128.000 m ³ /day
RAW WATER SOURCE	Secchia River
PROJECT CONTENT	Pre-treatment, sedimentation OFSY 560 GAC 100 PLCSystem

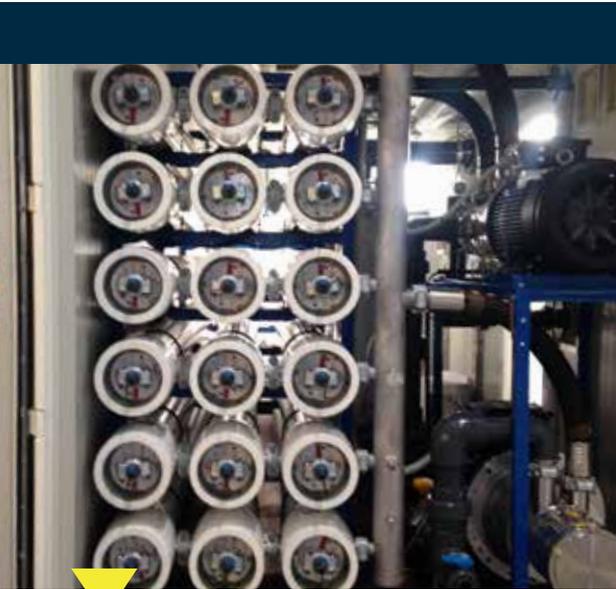
30.000 M³/DAY



PROJECT DETAILS

CUSTOMER	Ushak Leather Industrial Zone
LOCATION	Turkmenistan
APPLICATION	Drinking Water
TREATMENT PROCESS	Filtration, Reverse Osmosis
CAPACITY	30.000 m ³ /day
RAW WATER SOURCE	Murghab River
PROJECT CONTENT	OFSV 480 IW RO Treated Water Reservoir: 3.000 m ³ On-site Hypochlorite Manufacturing Plant PLC&SCADA System

SEA WATER



PROJECT DETAILS

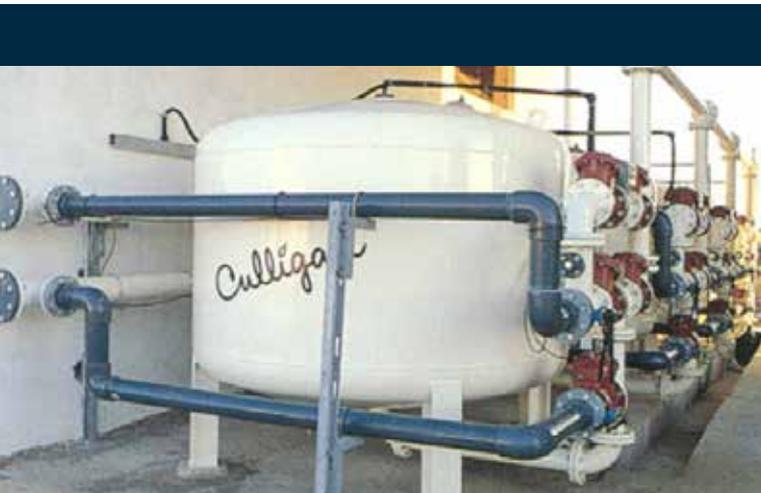
CUSTOMER	IDAAN
LOCATION	Isla Contadora, Panama
APPLICATION	Drinking Water
TREATMENT PROCESS	Filtration, Sea Water Reverse Osmosis
CAPACITY	960 m ³ /day
RAW WATER SOURCE	Sea Water
PROJECT CONTENT	2 x HI FLO 9 60'' PA-PE 1 x SW40 EVO

Study, Design and Construction of the Supply System of Potable Water of Contadora Island - Panama

A couple of hours away from Panama by ferry, there's an island of a few square kilometres where the Spaniards once counted the pearls before sending them to Europe, and where the rich Panamanians now move to for the weekend, servants and food in tow. The luxurious and hidden houses in the rich vegetation are visible only from the sea: the road that would lead to the numerous small bays, on which they are built, always ends at the gate of their driveway. This fabulous island, surrounded by beautiful beaches, had a big problem: **lack of the public water distribution network**. The Institute of National Aqueducts and Sewers, IDAAN, made a tender to study, design and construct of the supply system of potable water. Prodim S.A, dealer of Culligan International, decided to participate offering a Sea Water System, launched by Culligan Italy in US market in April 2016, during the 80th Anniversary Convention. The particularity of the island and the difficulties of transport and installation, led to the decision to provide a **seawater desalination plant built in a container**. The solution, manufactured in Cadriano, led to a **considerable reduction in construction and assembly work on site**, meeting the needs of the customer. The plant, with a **production of 40 m³/h**, has given the possibility to the inhabitants of the island to **have drinking water**, before then always supplied by transport in tanks.



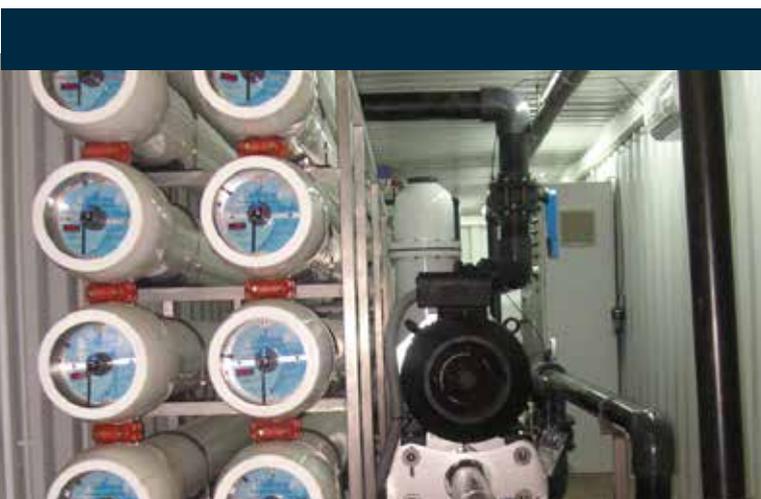
500 M³/DAY



PROJECT DETAILS

CUSTOMER	Sardinia Municipality
LOCATION	Sardegna, Italy
APPLICATION	Drinking Water
TREATMENT PROCESS	Filtration, Reverse Osmosis
CAPACITY	500 m ³ /day
RAW WATER SOURCE	Sea Water
PROJECT CONTENT	Hi-Flo 6 UF Hi-Flo 6 UR RO Plant

2.000 M³/DAY



PROJECT DETAILS

CUSTOMER	Tinos Municipality
LOCATION	Tinos, Greece
APPLICATION	Drinking Water
TREATMENT PROCESS	Filtration, Reverse Osmosis
CAPACITY	2000 m ³ /day
RAW WATER SOURCE	Sea Water
PROJECT CONTENT	4x SW 22K

6.500 M³/DAY



PROJECT DETAILS

CUSTOMER	Mykonos Municipality
LOCATION	Mykonos, Greece
APPLICATION	Drinking Water
TREATMENT PROCESS	Filtration, Chemical Conditioning, Reverse Osmosis
CAPACITY	6.500 m ³ /day
RAW WATER SOURCE	Sea Water
PROJECT CONTENT	3 x SW 90K special

OTHER PROJECTS

PROJECT	COUNTRY	APPLICATION	VALUE RANGE (K€)
ARCHIDONA FRESNO	SPAIN	Drinking Water	50 - 250
BENMANSOUR GENERAL SERVICES - STATION	ALGERIA	Drinking Water	50 - 250
CINQUE BOTTINI - ALLUMIERE	ITALY	Drinking Water	50 - 250
FORMIA SOCCORSO	ITALY	Drinking Water	50 - 250
KUNST	CZECH REPUBLIC	Biological Equipment	500 - 1000
LANDSTEJN WTP	CZECH REPUBLIC	Filtration	250 - 500
CINQUE BOTTINI - ALLUMIERE	ITALY	Drinking Water	50 - 250
LIFE SINAI	EGYPT	Drinking Water	50 - 250
DOBRANY WTP	CZECH REPUBLIC	Building Mains Water	50 - 250
PODEBRADY	CZECH REPUBLIC	Building Mains Water	50 - 250
SIA UZTICIBA UN PARNERATTIECIBAS	LATVIA	Drinking Water	50 - 250
DEFENCE HEAD QUARTERS (DHQ) LAGON NIGERIAN ARMY	NIGERIA	Drinking Water	50 - 250
LUHANSK PROJECT	UKRAINE	Drinking Water	250 - 500
PROSINE PROJECT	CROATIA	Drinking Water	50 - 250
SOCIETE NATIONALE DE GENIE CIVILE ET BATIMENT	ALGERIA	Drinking Water	50 - 250
ZWARA HOSPITAL	LIBYA	Drinking Water	250 - 500

PROJECT	COUNTRY	APPLICATION	VALUE RANGE (K€)
MAGRI AUTOADESIVI	ITALY	Production Water	50 - 250
SADE	FRANCE	Drinking Water	50 - 250
SADE	FRANCE	Drinking Water	50 - 250
THE GREAT MOSQUE	ALGERIA	Softener - Disinfection	250 - 500
WTP STEFANOV	POLAND	Drinking Water	500 - 1000
WATERWORKS COMPANY	ITALY	Potabilisation	500 - 1000
BIALOBRZEGI	POLAND	Drinking Water	50 - 250
DEFENCE HEADQUARTERS - MIN. FO DEFENCE	NIGERIA	Drinking Water	50 - 250
LEAD CONTRACTING & TRADING	ALGERIA	Effluent Treatment	50 - 250
DELEGAT ENTERPRISES LIMITED THE BUSINESS CENTRE - RIGA	LATVIA	Drinking Water	50 - 250
IBALEX NIGERIA LIMITED	LIBYA	Building Mains Water	50 - 250
PALACKEHO ULICE	CZECH REPUBLIC	Drinking Water	50 - 250
PROJ WATERWORKS DEBRECEN SZEKELYUDVARHELYI	HUNGARY	Drinking Water	250 - 500
GHADEER PROJECT	UAE	Drinking Water	50 - 250
KERRY COUTY COUNCIL	IRELAND	Drinking Water	50 - 250
MARY MUNICIPALITY PROJECT	TURKMENISTAN	Production Water	500 - 1000

CULLIGAN CONTAINERIZED WATER TREATMENT UNITS FOR CHALLENGING ENVIRONMENTS

Improved drinking water for all, with Culligan Water.

Culligan's water treatment systems can be installed into containers to create self-contained water treatment systems. Thanks to Culligan's modular equipment designs entire water treatment systems can be installed that are tailored to your feed water parameters.

Culligan Container Systems are ideal for:

- Water treatment for drinking water in remote locations where municipal supplies are not available. Up to 20.000 population.
- Providing drinking water and sanitization for camps of workers building large industrial plants.
- Emergency response in areas hit by natural disasters where the water network has been damaged
- Army Camps
- Mobile drinking water units for Refugee Camps, Red Cross and other institutions
- Temporary water treatment during plant shutdowns or emergency repairs
- Wastewater treatment systems for small communities, hospitals, hotels, commercial complexes, etc.
- Industrial process water treatment plants



Customized solutions

DISINFECTION	Chlorine, C102, Ozone etc
FILTRATION	Micro, Multi-Media, Ultrafiltration
REVERSE OSMOSIS	Brackish Water, Sea Water
DEIONISATION	PEDI, CEDI, Automatic O1
ORGANIC MATTER, TASTE, ODOR	Activated Carbon, GAC
SOFTENING	Cationic Resin
WASTEWATER TREATMENT	Biological, Chemical, BOD, COD
WASTE WATER REUSE	MBR

Perfect for all kind of water source

Culligan Containerized Water Treatment Units can be designed for any raw water sources such as:

- River
- Dam
- Lake
- Sea
- Underground water
- Storm water



CONTAINER

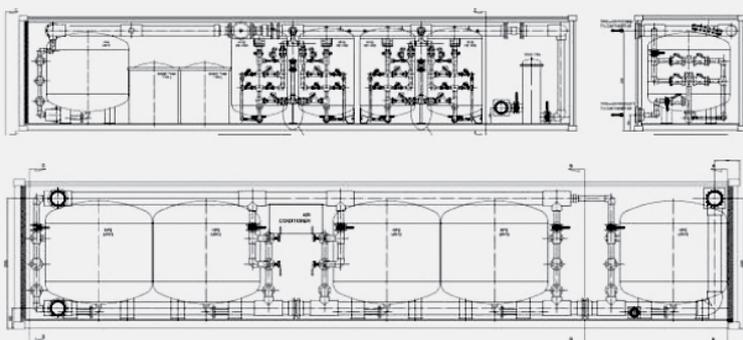


PROJECT DETAILS

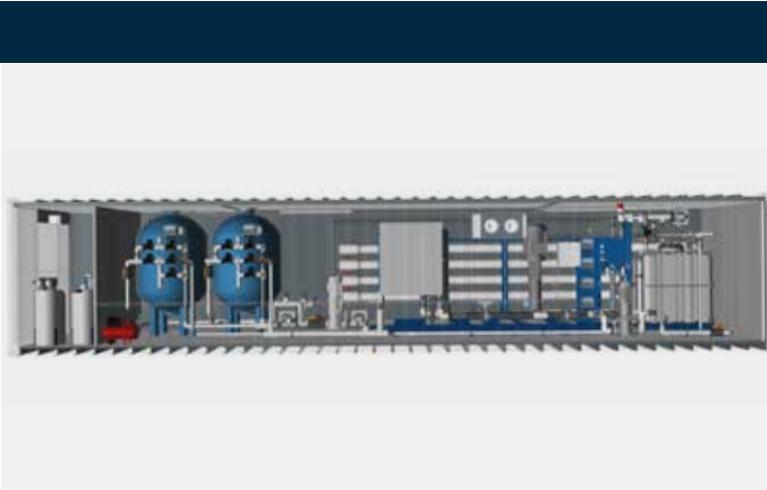
CUSTOMER	Mosvodokanal
LOCATION	Mosco, Russia
APPLICATION	Drinking Water
TREATMENT PROCESS	Pressure Filters, Softeners, Reverse Osmosis, Disinfection, Remote Monitoring
QUANTITY	12x Containerized Treatment Plants (20-284 m ³ /h)
CAPACITY	25.000 m ³ /day
RAW WATER SOURCE	Well Water
MARKET	Municipal

NAME OF THE PLANT	TREATMENT TECHNOLOGIES USED	CAPACITY
Pierwomajski	filtration, softening, carbon filtration	1.200 m ³ /day
Kamienka	softening, carbon filtration	156 m ³ /day
Rogowo	filtration, microfiltration, reverse osmosis	200 m ³ /day
Zarecznoje	filtration, softening	2.880 m ³ /day
Remzawod	filtration	2.880 m ³ /day
Znamia Oktiabria	microfiltration, softening, carbon filtration	6.816 m ³ /day
Woronowo	filtration, microfiltration, reverse osmosis	1.800 m ³ /day
Ostafiewo	microfiltration, reverse osmosis	1.800 m ³ /day
Hutor Illiczewka	microfiltration, reverse osmosis	600 m ³ /day
Szczerbinka	filtration, microfiltration, reverse osmosis	480 m ³ /day
Jakowlewe	filtration, microfiltration, reverse osmosis	720 m ³ /day
Fabrika 1 Maja	filtration, microfiltration, reverse osmosis	840 m ³ /day

In 2012, Moscow expanded into a new administrative area "Novomoskovsky Okrug". Territorial expansion required the need to **modernize water treatment and distribution systems** in the new territory with an area of 1500 kmq. The main critical points of the project were related to the **complexity** of building infrastructures in the country due to the **climatic conditions** and the need to provide services in a **short time**. The request of the Moscow municipality was to finish the project in **16 months**. Culligan's solution was therefore the supply of **containerized and pre-installed systems**, each designed to meet the specific needs of each installation point, since the quality of the water to be treated was different. Culligan was able to respond to customer requests by **designing, building and operating the 12 treatment plants installed on 15 containers in just 12 months**.



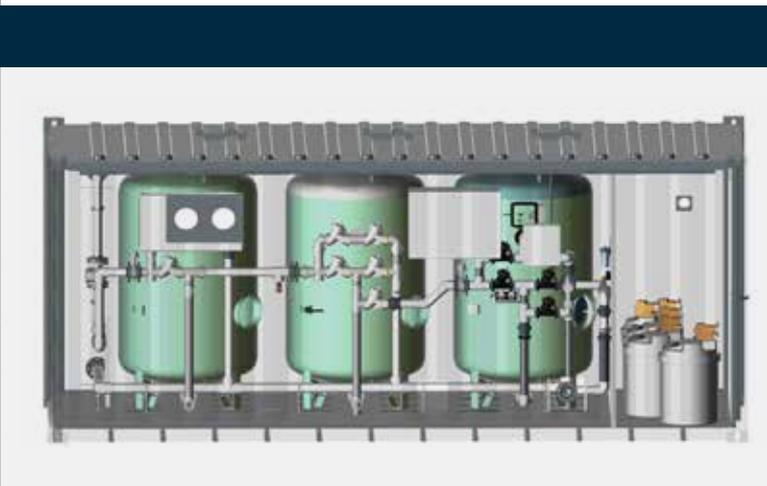
576 M³/DAY



PROJECT DETAILS

CUSTOMER	Oil and Gas Company
LOCATION	Libya
APPLICATION	Process Water
TREATMENT PROCESS	Filtration, Desalination
CAPACITY	576 m ³ /day
RAW WATER SOURCE	Well Water
PROJECT CONTENT	2x HI-FLO 9 UF 48 PA 1x IW 32

1.056 M³/DAY



PROJECT DETAILS

CUSTOMER	IREN for Civil Protection
LOCATION	Italy
APPLICATION	Drinking Water for emergency
TREATMENT PROCESS	Filtration
CAPACITY	1.056 m ³ /day
RAW WATER SOURCE	Surface/Well Water
PROJECT CONTENT	Chemical Dosing 1x OFSY 72 1x HI-FLO 6 UR 72 special

3.629 M³/DAY



PROJECT DETAILS

CUSTOMER	Culligan Rwanda
LOCATION	Rwanda
APPLICATION	Potabilization Plant
TREATMENT PROCESS	Filtration and Ultraviolet System
CAPACITY	150 m ³ /day
RAW WATER SOURCE	Surface Water
PROJECT CONTENT	2x UF24 FRP 3.2 m ³ /h 2x UFP24 FRP 3.2 m ³ /h 2x UR24 FRP 3.2 m ³ /h 2x ULTRAVIOLET 40S 2x PUMPING SYSTEM HYDROBOXES

SKID PLANT



PROJECT DETAILS

CUSTOMER	Tetra Pak
LOCATION	Worldwide
APPLICATION	Skid Plant, Water recycling
TREATMENT PROCESS	Filtration, GAC, UV
CAPACITY	144 m ³ /day
RAW WATER SOURCE	Filling Machines Discharge
PROJECT CONTENT	WFS - Water Filtering Station

Innovative recycling water process

Tetra Pak, a Swedish company that produces food packaging equipment, turned to Culligan for the construction of an ad hoc plant capable of **reducing the consumption of water used in its production process**. The water, used by the Tetra Pak filling machines for cooling during the packaging filling phase, was continuously discharged (10-30 l / min for each machine) at high temperatures (50°) with a high peroxide content of hydrogen, oils and fats.

Water Filtering Station (WFS) is the plant designed by Culligan that can **reuse the rejection water of filling machines, recovering from 95% to 100% of the discharged water**, equal to **22 million litres per year**. WFS is also able to **remove up to 100 ppm of oils and 10,000 ppm of hydrogen peroxide**.

The systems, made with different stages of filtration, mechanical and activated carbon, have an automatic control system capable of interfacing with the filling machines.

Water Filtering Station, developed in 3 years with 1 year of field tests, is the plant that helps to save large amounts of water and has been designed to improve the future of the planet.



1.400 M³/DAY



PROJECT DETAILS

CUSTOMER	Bonatti
LOCATION	Algeria
APPLICATION	Drinking Water
TREATMENT PROCESS	Filtration
CAPACITY	1.400 m ³ /day
RAW WATER SOURCE	Well Water
PROJECT CONTENT	2x HF9 UFP 84s

720 M³/DAY



PROJECT DETAILS

CUSTOMER	Food&Beverage Industry
LOCATION	Italy
APPLICATION	Production Water
TREATMENT PROCESS	Reverse Osmosis - UV
CAPACITY	720 m ³ /day
RAW WATER SOURCE	Well Water
PROJECT CONTENT	1x IW EVO 40s

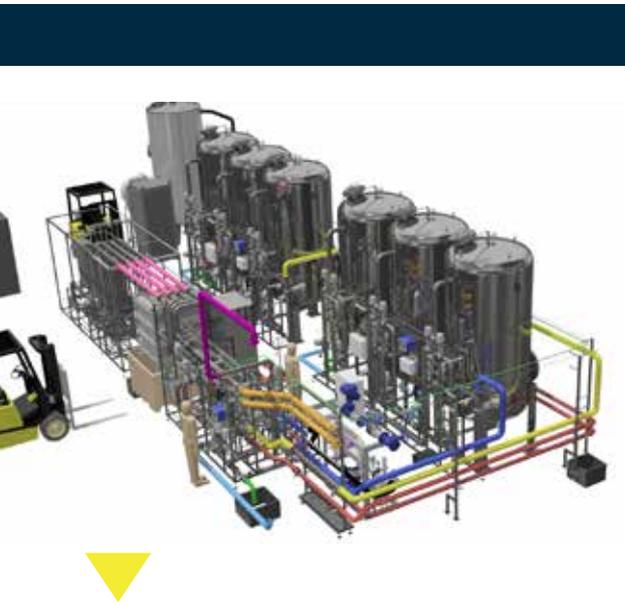
3.200 M³/DAY



PROJECT DETAILS

CUSTOMER	Manufacturing Industry
LOCATION	Italy
APPLICATION	Cooling Water
TREATMENT PROCESS	Softening
CAPACITY	3.200 m ³ /day
RAW WATER SOURCE	Well Water
PROJECT CONTENT	3x ULTRALINE HB 2500s

TURN KEY PROJECT



PROJECT DETAILS

CUSTOMER	Mineral Water Company
LOCATION	Poland
APPLICATION	Unstable Elements Removal
TREATMENT PROCESS	Filtration
CAPACITY	2.880 m ³ /day
RAW WATER SOURCE	Well Water
PROJECT CONTENT	6x HI-FLO 9 UFP 60" 1x CIP

The bottling water industry needs to have good water treatment systems to be sure to bottle safe water.

The bottling water industry needs **superior water treatment systems to bottle safe water**. All large bottling companies rely on systems to filter or sanitize the water before filling it into PET bottles. An Italian large mineral water company, no longer satisfied with its existing supplier, called Culligan to supply a **complete turn-key solution** composed of **stripping towers, pyrolusite filtering and CIP systems, all in AISI 316** to be compliant with the mineral water requirements.



940 M³/DAY



PROJECT DETAILS

CUSTOMER	ACEA
LOCATION	Italy
APPLICATION	Potabilization
TREATMENT PROCESS	Reverse Osmosis
CAPACITY	940 m ³ /day
RAW WATER SOURCE	Well Water
PROJECT CONTENT	IW EVO 40

940 M³/DAY



PROJECT DETAILS

CUSTOMER	Pharmaceutical Industry
LOCATION	Italy
APPLICATION	Potabilization
TREATMENT PROCESS	Filtration, Reverse Osmosis
CAPACITY	940 m ³ /day
RAW WATER SOURCE	Well Water
PROJECT CONTENT	3 x HF9 UF48 2x HF9 UR 48 2x HF9 UFX 48 2x IW EVO 12

1.200 M³/DAY



PROJECT DETAILS

CUSTOMER	Food&Beverage Industry
LOCATION	Italy
APPLICATION	Potabilization for bottled mineral water
TREATMENT PROCESS	Filtration
CAPACITY	1.200 m ³ /day
RAW WATER SOURCE	Well Water
PROJECT CONTENT	2x HF9 UFP 72S 1x regeneration system



WATER FOR HEALTHCARE

Doctors, nurses and patients, get more than just great-tasting water from Culligan systems. Culligan supplies and services every water need of hospitals - cooling water, boiler water, water for hydrotherapy pools, full solutions for restaurant and canteen, drinking water, treatment and recycling for laundry and all the clinical needs. Culligan was the first company to use reverse osmosis for hemodialysis systems. Culligan has developed the latest solutions for double pass RO with options for heat sanitisation of the membranes and the dialysis loop, and also offers ultra pure water for heat sterilization and cleaning of clinical instruments - CSSD.

**You can rely on Culligan Water,
especially when safety is crucial.**



1

PATIENTS ROOMS

5

LAUNDRY

2

COOLING SYSTEMS

6

BOILER ROOM

3

HEMODIALYSIS

7

REHABILITATION CENTRE

4

FOOD SERVICE

8

HYDROTHERAPY

WATER FOR HEMODIALYSIS



PROJECT DETAILS

CUSTOMER	Bologna AUSL
LOCATION	Ospedale Maggiore - Bologna, Italy
APPLICATION	Hemodialysis
TREATMENT PROCESS	Filtration, Reverse Osmosis
CAPACITY	36.000 l/day
RAW WATER SOURCE	Drinking Water
PROJECT CONTENT	Aqua-Clear RO ² MD BiO 2E

In 2018, the Bologna AUSL needed a technological update of the acute dialysis center at the Maggiore hospital in Bologna. Before the technological upgrade, the Acute Dialysis Center performed dialysis treatments with osmotic water through 3 portable devices. The technological aging of the equipment in use, as well as the precariousness of the distribution lines, could no longer guarantee the correct execution of treatments from a technical and microbiological safety point of view. Culligan thus provided:

- the realization of a **new water pretreatment system** in the technical rooms
- the installation and testing of a **new centralized bi-osmosis system** in the technical room (mod. BIO 2E)
- the creation and testing of a **new distribution line in PEX material to serve 15 dialysis stations simultaneously**
- the **chemical/microbiological checks** according to the standards indicated in the SIN 2005 guidelines in order to validate the entire plant
- the activation of the **service contract**

In addition to the specific requests for specifications, Culligan has provided further improvement by installing a **remote control system** in the treatment room in order to allow operators to correctly display the functional parameters of the system without having to leave the dialysis room, as the system room is located at a lower level than the department.



60.000 L/DAY



PROJECT DETAILS

CUSTOMER	Hospital Joan XXIII
LOCATION	Catalunya, Spain
APPLICATION	Hemodialysis
TREATMENT PROCESS	Filtration, Reverse Osmosis, Thermal Sanitization
CAPACITY	60.000 l/day
RAW WATER SOURCE	Public Water
PROJECT CONTENT	1x RO BIO 3T Inline Thermal Cabinet

24.000 - 36.000 L/DAY



PROJECT DETAILS

CUSTOMER	Tunisian Ministry of Health
LOCATION	Tunisia
APPLICATION	Hemodialysis
TREATMENT PROCESS	Filtration, Reverse Osmosis
CAPACITY	24.000 - 36.000 l/day
RAW WATER SOURCE	Public Water
PROJECT CONTENT	7 x BIO 1E 4 x BIO 2E

60.000 L/DAY



PROJECT DETAILS

CUSTOMER	ASL 5 Spezzino
LOCATION	Sarzana, Italy
APPLICATION	Hemodialysis
TREATMENT PROCESS	Reverse Osmosis
CAPACITY	60.000 l/day
RAW WATER SOURCE	Drinking Water
PROJECT CONTENT	RO BIO 3E

WATER FOR HOSPITAL



PROJECT DETAILS

CUSTOMER	Cleveland Clinic
LOCATION	Abu Dhabi, UAE
APPLICATION	Domestic water, Process water, Haemodialysis and CSSD water, Chilled water
TREATMENT PROCESS	Filtration, Softening, Reverse osmosis, UV disinfection, Chemicals dosing system, Chlorine dioxide, Demineralization
CAPACITY	Chlorine Dioxide Generation: 360 grams/day Condensate Water Recovery: 180 m ³ /day Grey Water Treatment: 150m ³ /day CSSD Use: 20 m ³ /day Dialysis: 6 m ³ /day
RAW WATER SOURCE	Municipal Water
PROJECT CONTENT	Chlorine Dioxide Generating equipment (3x CDP40), Acid Neutralization Cullnu Filters, 1x HF9UF36, 1x MFP4 800, 1x MFP4 1200

Cleveland Clinic Abu Dhabi is a world-class hospital with state-of-the-art amenities and services, and unique in the UAE. The hospital aims to deal with the specific needs of Abu Dhabi’s population and it does so by providing care in more than 30 medical and surgical specialties. Specialised healthcare demands **specific equipments** along with the **highest quality**. This is why, when it was time to **update the hemodialysis water treatment equipment and process**, **Culligan world renowned water quality and expertise** was the perfect match for Cleveland Clinic Abu Dhabi high requirements.



7.200 L/DAY



PROJECT DETAILS

CUSTOMER	Clinica La Maddalena
LOCATION	Palermo, Italy
APPLICATION	Steril Service
TREATMENT PROCESS	Reverse Osmosis
CAPACITY	7,2 m ³ /day
RAW WATER SOURCE	Public Water
PROJECT CONTENT	HE - UR21 - MFP 4-44 400 - QE

72 M³/DAY



PROJECT DETAILS

CUSTOMER	Antercare HK
LOCATION	Hong Kong
APPLICATION	Steril service
TREATMENT PROCESS	Reverse Osmosis
CAPACITY	72 m ³ /day
RAW WATER SOURCE	Public Water
PROJECT CONTENT	RO BIO 4T

1.200 M³/DAY



PROJECT DETAILS

CUSTOMER	Ospedale Borgo Trento
LOCATION	Verona, Italy
APPLICATION	Drinking Water, Boiler Water
TREATMENT PROCESS	Filtration, Reverse Osmosis
CAPACITY	1.200 m ³ /day
RAW WATER SOURCE	Public Water
PROJECT CONTENT	HI FLO FRP 36 Ultraline FRP HB1200 MFP 4-44 1200 ULTRALINE HB200

OTHER PROJECTS

PROJECT	COUNTRY	SECTOR	APPLICATION	VALUE RANGE (K€)
DUBAI HEALTH AUTHORITY (DHA) CLINICS – Umm Suqeim	UAE	Healthcare – Public Government	Domestic Water Filtration & Softening, Treatment for CSSD (RO), Lab Effluent Neutralisation, Chilled Water Treatment	250-500
MEDICLINIC HOSPITAL (Barsha)	UAE	Healthcare - Private Hospital	Domestic Water Filtration & Softening, Disinfection (Chlorine Dioxide Generator), CSSD water treatment, Water treatment for Dialysis (23 beds), Lab Effluent Neutralisation, Chilled Water Treatment	50-250
FAKEEH ACADEMY MEDICAL CITY	UAE	Hospital	Central Filtration & Disinfection, Softener, CSSD, Dialysis, Lab Waste Water Neutralisation, Grey water Recycling	500-1000
CAI - ASL N5 SPEZZINO	ITALY	Healthcare	Hemodialysis	50-250
VETERINARY PRODUCTION FACTORY	SUDAN	Electronics	Ultra Pure	250-500
BETTIOL - OSPEDALE SS. GIOVANNI E PAOLO VENEZIA	ITALY	Healthcare	Hemodialysis	50-150
DIAGNOSTICA MEDICA AVELLINO	ITALY	Healthcare	Hemodialysis	50-250
HELSINKI UNIVERSITY HOSPITAL	FINLAND	Healthcare - Public Hospital	Hemodialysis	50-250
CENTRO DIALISI DOTT. MUCARIA PALERMO	ITALY	Healthcare	Hemodialysis	50-250
SUEZ UK- ANTERCARE HONG KONG	ITALY	Healthcare	Hospital	50-250
CHULALONKORN HOSPITAL	THAILAND	Healthcare - Private Hospital	Hemodialysis	50-250

PROJECT	COUNTRY	SECTOR	APPLICATION	VALUE RANGE (K€)
SUEZ UK - JALO SOUTH AFRICA	ITALY	Healthcare	Hemodialysis	50-250
SUEZ UK - ORKNEY ISLAND	ITALY	Healthcare	Hemodialysis	50-250
POLICLINICO TOR VERGATA ROMA	ITALY	Healthcare	Hospital	50-250
ASST GRANDE OSPEDALE METROPOLITANO NIGUARDA MILANO	ITALY	Healthcare	Hemodialysis	50-250
SPINDIAL c/o ASL MATERA NUOVO CENTRO DIALISI DI TINCHI	ITALY	Healthcare	Hemodialysis	50-250
OSPDAL PEDIATRICO MAYER FIRENZE	ITALY	Healthcare	Hemodialysis	50-250
AL MAFRAQ HOSPITAL	UAE	Healthcare - Private Hospital	Hemodialysis	50-250
INSO SPA - OSPEDALE DI SULMONA	ITALY	Healthcare	Hospital	50-250
ECF GROUP - OSPEDALE S.M NUOVA FIRENZE	ITALY	Healthcare	Hospital	50-250
MERCK SANTE	FRANCE	Pharmaceutical	Pure water storage system + stainless steel distribution loop	50-250
IBI FARMACEUTIC	ITALY	Pharmaceutical	RO + GFH	250-500
MALIHA MILITARY HOSPITAL	UAE	Healthcare - Public Hospital	Hemodialysis	50-250



WATER FOR HOSPITALITY

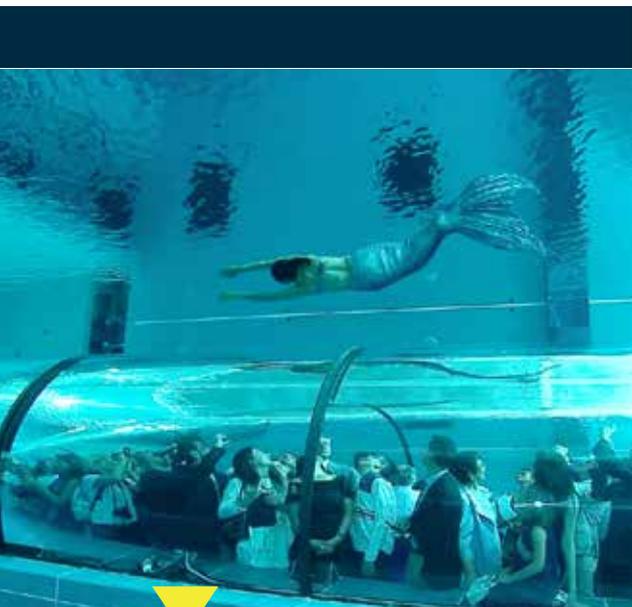
Culligan customers in the hospitality industry can realize substantial benefits by using treated water in boilers, hot water heaters, cooling towers, food service, laundry, and services. Culligan's water treatment systems help uphold quality standards, while adding value to your business. Bad water sends guests packing: win them over with exceptional, quality water that can transform everything from spa experiences to linens and morning coffee. From food services and laundry equipments to cooling towers and hot water heater pre-treatment, from swimming pools and spas to recycling shower and basin water for irrigation, the applications for hospitality and hotel water treatment touch every part of your customer's experience. Culligan has systems and speciality chemicals for every application and backs it up with a one stop shop for service and support. Whether you are in Dubai, New York, Milan, Warsaw or Lagos, your customers expect the same standards regardless of local conditions.

One Four Seasons hotel reduced the use of detergent and chemicals by 30-35% by utilizing a Culligan solution in their facility.



- 1** COOLING TOWERS
- 2** HOTEL ROOMS
- 3** RESTAURANTS
- 4** FOOD SERVICE
- 5** BEAUTY SALONS
- 6** SPAS
- 7** HEALTH CLUB
- 8** LAUNDRY
- 9** BOILER ROOM
- 10** WASTE WATER
- 11** WATER REUSE
- 12** SWIMMING POOLS

PUBLIC SWIMMING POOL



DETTAGLI PROGETTO

CUSTOMER	Y-40
LOCATION	Montegrotto Terme (PD), Italy
TREATMENT PROCESS	HMS (Multi-Media Filtration), Plants suitable for thermal waters
RECIRCULATION TYPE	Overflow
LIGHTS	Monochromatic Led
ACCESSORIES	Inox Accessories

Y-40, the deepest pool in the world, is signed Culligan!

Strongly wanted by the Boaretto family from Montegrotto (PD) this ambitious all-Italian project, with its **42 meters of depth**, establishes the new world record, being the only one with **thermal water** variable between 32 and 34 ° C! As have established the likes of Enzo Maiorca and Umberto Pellizzari, diving for the official measurement, Y-40 will become a paradise for divers, coming from all over Europe and surely also from overseas, recording the passage of thousands of users who will be able to admire our plant room, which - contrary to other realities in which it is found in narrow environments and hidden - Y-40 owners wanted to make it visible to everyone: the **Culligan filters (these are 4 HMS Plus A180 Special for one course total of 720 m³/h) are “in the window” overlooking the meeting room**, just for the pride of showing the “beating heart” that guarantees a beautiful water, treated by Culligan! A **beautiful and pure water**, which guarantees **perfect visibility** up to 42 meters and which impressed all those very positively who have tested it. We would also like to point out that the Hotel Millepini, which hosts Y-40, yes is completely entrusted to Culligan for the entire treatment water. In addition to the pool, we have installed **drinking water treatment plants, softening and reverse osmosis** to best use the water of the well, for all hygienic and thermo-sanitary uses. The “Goccione” Culligan completes our 360° service in the world of water!



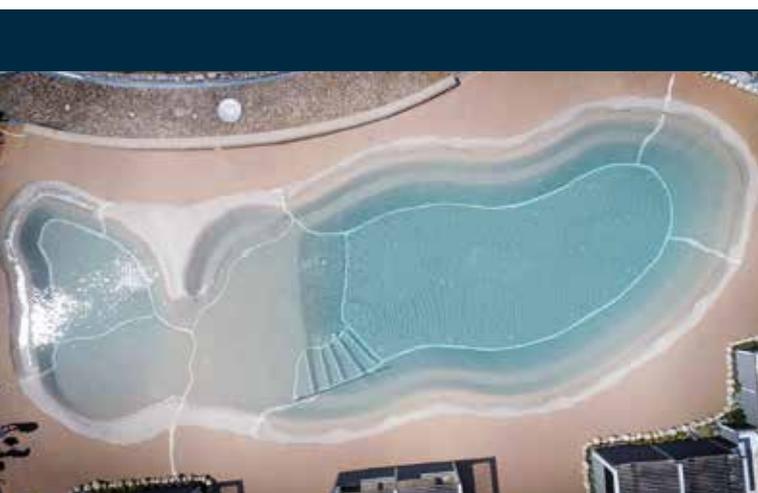
FEDERAZIONE ITALIANA PENTATHLON - PESARO - ITALY



PROJECT DETAILS

CUSTOMER	Federazione Italiana Pentathlon Moderno
LOCATION	Pesaro, Italy
TREATMENT PROCESS	HMS (Multi-Media Filtration)
RECIRCULATION TYPE	Overflow
LIGHTS	Halogen
ACCESSORIES	Inox Accessories

LE SPIAGGE DI VENERE - MISANO (RN) - ITALY



PROJECT DETAILS

CUSTOMER	Le Spiagge di Venere
LOCATION	Misano Adriatico (RN), Italy
TREATMENT PROCESS	HCF Diatomaceous Filters
RECIRCULATION TYPE	Overflow
LIGHTS	RGB Led
ACCESSORIES	Inox Accessories

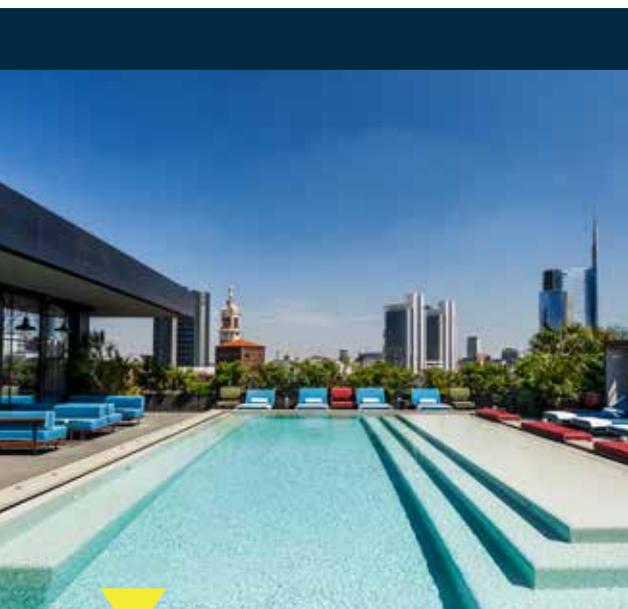
CENTRO UNIVERSO - SILVI MARINA (TE) - ITALY



PROJECT DETAILS

CUSTOMER	Centro Universo
LOCATION	Silvi Marina (TE), Italy
TREATMENT PROCESS	HMS (Multi-Media Filtration)
RECIRCULATION TYPE	Overflow
LIGHTS	RGB Led
ACCESSORIES	Inox Accessories

PRIVATE SWIMMING POOL



DETTAGLI PROGETTO

CUSTOMER	Ceresio 7
LOCATION	Milano, Italy
TREATMENT PROCESS	HCF Diatomaceous Filters
RECIRCULATION TYPE	Overflow
LIGHTS	Monochromatic Led
ACCESSORIES	Inox Accessories - Lumbar whirlpools - Heating system

Dsquared² is an Italian fashion house founded in 1996 by twins Canadians Dean and Dan Caten (real surname Catenacci) who work in international fashion since 1984. In 1991 they came to Italy where in 1994, after numerous collaborations with the most important fashion houses, they made their first male collection, which is the first step towards a long series of fashion shows-events, destined to capture the attention of journalists and buyers thanks to their clever combination of style, music and entertainment. The intelligent mix of irreverent Canadian and refined irony Italian tailoring, combined with obsessive attention to detail, represent the basis of today's Dsquared2 philosophy, which has given life to a unique concept of alternative luxury. Dean and Dan share their life and their work between Milan and London, but they create their collections always in Italy: "Born in Canada, living in London, made in Italy".

Right in the **headquarters of the company in Milan**, when it was decided to enrich the top floor of the building with a **luxury restaurant** (info@ceresio7.com) overlooking the city skyline and **two swimming pools**, Culligan has been selected to take care of the technological part of the pools that rise on the penthouse floor of the building; below them they live daily the garments of the future collections of the fashion house in offices and showrooms. Each of the two tubs, really elegant for shapes and choice of materials, measures approx. 11 x m. 5.5, is equipped with **prestigious accessories**, it has **4 hydromassage stations** and is lit by **8 LED headlights** of 3 watts each. To obtain the maximum possible result, **diatom dust filtration** could not be missing: in fact in each of the technical rooms serving the pools, **2 HCFs of 20 cubic meters stand out**.



MASSAROSA (LU) - ITALY



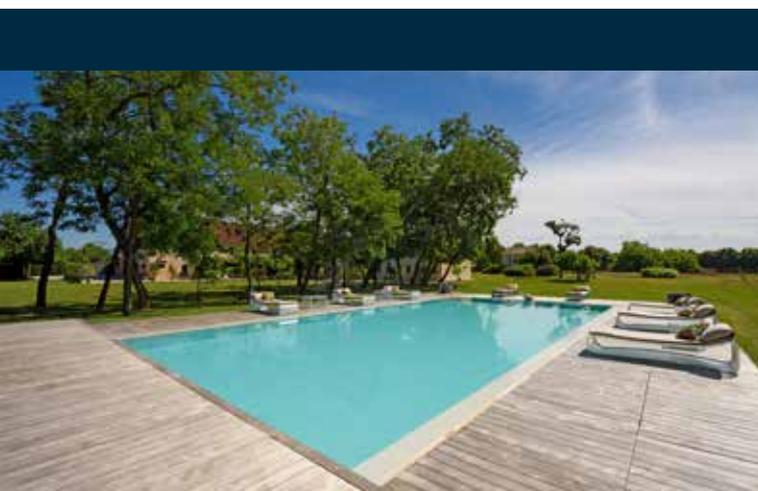
PROJECT DETAILS	
CUSTOMER	Private
LOCATION	Massarosa (LU) - Italy
TREATMENT PROCESS	HCF Diatomaceous Filters
RECIRCULATION TYPE	Skimmer
LIGHTS	Halogen
ACCESSORIES	Inox Accessories

FORTE DEI MARMI (LU) - ITALY



PROJECT DETAILS	
CUSTOMER	Private
LOCATION	Forte dei Marmi (LU), Italy
TREATMENT PROCESS	HCF Diatomaceous Filters
RECIRCULATION TYPE	Overflow
LIGHTS	RGB Led
ACCESSORIES	Whirlpool - Inox Accessories

RIESE PIO X (TV) - ITALY



PROJECT DETAILS	
CUSTOMER	Private
LOCATION	Riese Pio X (TV), Italy
TREATMENT PROCESS	HCF Diatomaceous Filters
RECIRCULATION TYPE	Overflow
LIGHTS	RGB Led
ACCESSORIES	LAPITEC® Coating - Automatic pool covers

WELLNESS WATER



DETTAGLI PROGETTO

CUSTOMER	Excelsior Hotel Gallia
LOCATION	Milan, Italy
TREATMENT PROCESS	HCF Diatomaceous Filters
RECIRCULATION TYPE	Overflow
LIGHTS	Monochromatic Led
ACCESSORIES	Inox Accessories - Hydromassage pool

The Excelsior Hotel Gallia reflects the glittering essence of the charm of a city like Milan. Originally inaugurated in 1932, the hotel was completely renovated by the famous Milanese Architect, Marco Piva. Starting from an authentic jewel of the architecture of the Belle Époque, an extraordinary place has been recreated reflecting the style of the capital of design. The Excelsior Hotel Gallia is the access point to Milan, the city where fashion, design and good food meet and contribute to making it famous for its creativity.

Culligan was chosen, along with many other excellent companies, for the construction of swimming pools that stand on the top floor of the hotel.

The construction, with synthetic polyester expanded structures has solved the loading problems, also thanks to the **insertion of pipes and accessories** inside it at the factory during the cutting, preassembly and first sealing phases.

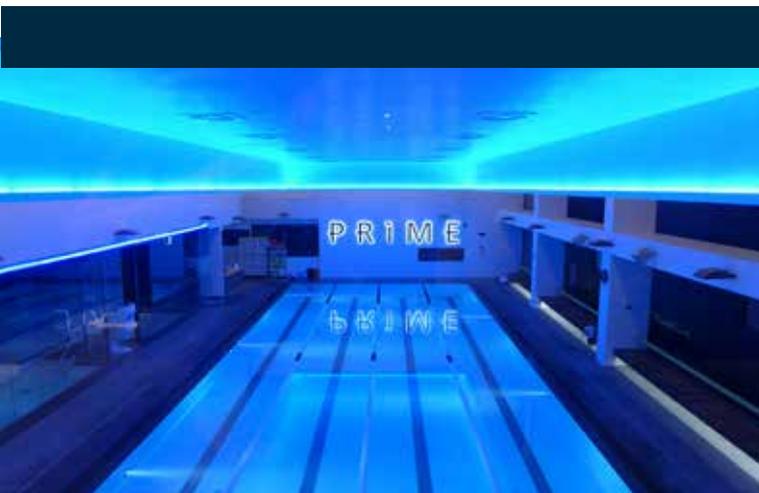
Furthermore, differentiated movements of the pool were considered with respect to the original structure, with attention to waterproofing arranged on several levels with a **dedicated condensate water collection system**.

The realization of prestige led to an executive site interface between over 10 companies operating in this area, with **details of millimetric precision** to be shared and respected to guarantee the success of the work and not compromise the subsequent work: the coordination was possible thanks to an accurate work direction, a strong spirit of constructive collaboration between the companies and their technical managers and the realization of technical drawings "to the truth" for each operational phase of the site.

Finally, the installation of the **Culligan diatom HCF filters** has guaranteed the **crystallinity** of the pool water of this prestigious hotel.



CENTRO FITNESS PRIME - TORRE UNIPOL BOLOGNA (IT)



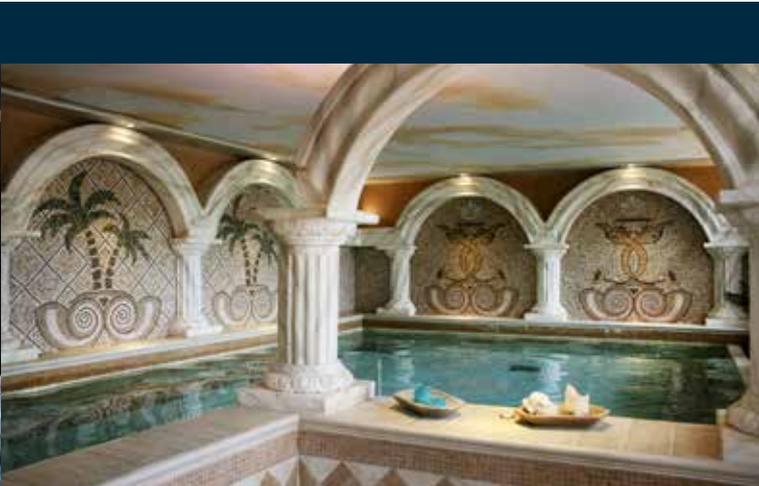
PROJECT DETAILS	
CUSTOMER	Centro Fitness Prime
LOCATION	Bologna, Italy
TREATMENT PROCESS	HCF Diatomaceous Filters
RECIRCULATION TYPE	Overflow
LIGHTS	RGB Led
ACCESSORIES	Dorsal, lumbar and plantar hydromassages - Heated pool - Inox Accessories - Overflow grid with custom RAL colour

HOTEL PRINCIPE - FORTE DEI MARMI (IT)



PROJECT DETAILS	
CUSTOMER	Hotel Principe
LOCATION	Forte dei Marmi (LU), Italy
TREATMENT PROCESS	HCF Diatomaceous Filters
RECIRCULATION TYPE	Overflow
LIGHTS	Halogen
ACCESSORIES	Inox Accessories - 4 hydromassage beds and seats - Water blade waterfall - Floor geyser

RESIDENZA LA RUGEA - PRATO (IT)



PROJECT DETAILS	
CUSTOMER	Residenza La Rugea
LOCATION	Prato, Italy
TREATMENT PROCESS	HCF Diatomaceous Filters
RECIRCULATION TYPE	Overflow
LIGHTS	Monochromatic Led
ACCESSORIES	Lumbar and cervical hydromassage - Air bed hydromassage - Plantar hydromassage

WATERPARK



PROJECT DETAILS

CUSTOMER	Proud Real Estate
LOCATION	Vana Nava Jungle Resort - Hua Hin, Thailand
TREATMENT PROCESS	HCF Diatomaceous Filters
RECIRCULATION TYPE	Skimmer/Overflow

Vana Nava Water Jungle, Asia's First Water Jungle, is located in Thailand's most beloved resort town of **Hua Hin**. As the first ecologically aware community water park in the region, Vana Nava Water Jungle has literally transformed an empty plot of land into a tropical jungle, with over 200.000 plants and trees delivered from across Thailand in its 3.2 hectares property. Combining state-of-the-art technology and modern facilities with **20 attractions** comprising of signature rides, exciting slides, as well as **Thailand's First Professional Underwater Studio**. The project for the construction of the **first ecological swimming pool** was commissioned at Proud Real Estate in Thailand, a community aware water park with 19 rides and slides. The construction involved the **largest and longest water slide in Thailand** and the **tallest man-made mountain with waterfall in Asia**. The water used to fill the swimming pool came from the main river of the city and was yellow and cloudy with a lot of turbidity. The customer's consultant specified that **they needed specific filters to have crystal water** and with the help of our local dealer S. NAPA we provide to the resort **10 Culligan HCF Diatomaceous Earth Filters of different capacities** that solved the customer's problem with the result of a **crystal-clear water**.

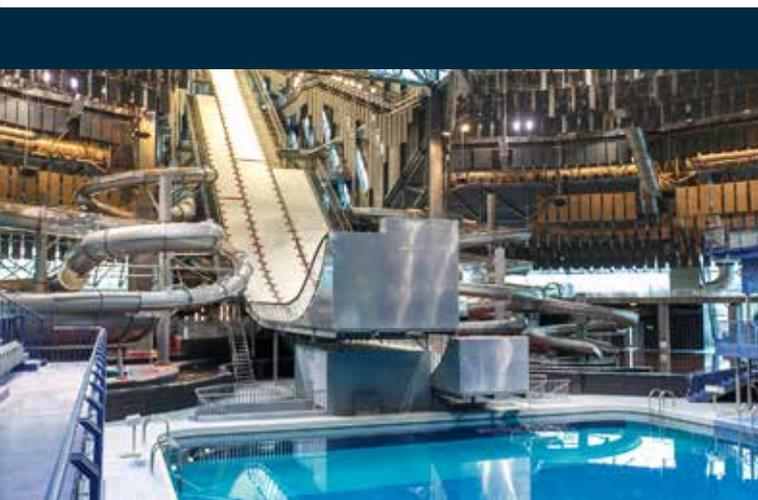


CAVOUR WATERPARK VALEGGIO SUL MINCIO (VR)



PROJECT DETAILS	
CUSTOMER	Parco Acquatico Cavour
LOCATION	Valeggio sul Mincio (VR), Italy
TREATMENT PROCESS	HMS (Multi-Media Filtration)
RECIRCULATION TYPE	Overflow
LIGHTS	Monochromatic Led
ACCESSORIES	Water features

WATERPARK IN MINSK



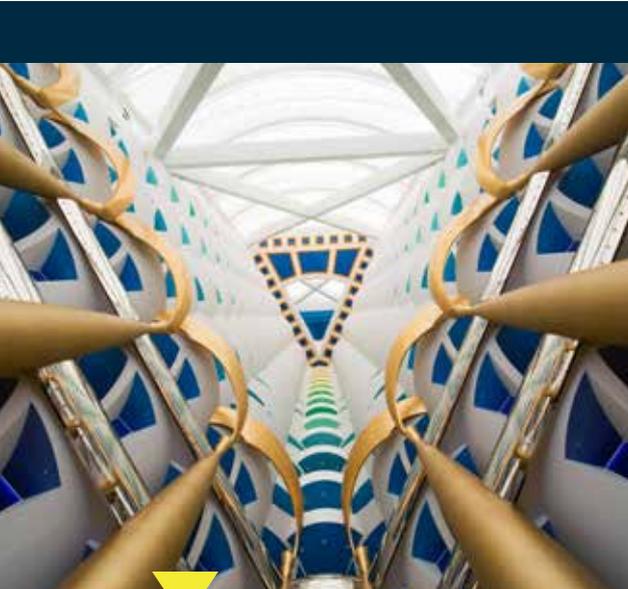
PROJECT DETAILS	
CUSTOMER	Taurus Group Limited
LOCATION	Minsk
TREATMENT PROCESS	HMS (Multi-Media Filtration)
RECIRCULATION TYPE	Overflow

WATERPARK ON A CRUISE SHIP



PROJECT DETAILS	
CUSTOMER	Cruise Line
TREATMENT PROCESS	Filtration - Chemical Conditioning
CAPACITY	6.816 + 2.760 m ³ /day
RAW WATER SOURCE	Potable Water
PROJECT CONTENT	4 + 2 Cartridge filter UV Disinfection Automatic Bromine and pH control

WATER FOR HOTEL



PROJECT DETAILS

CUSTOMER	Burj Al Arab
LOCATION	Dubai, UAE
APPLICATION	Domestic water, Technical water
TREATMENT PROCESS	Filtration, Softening, Reverse osmosis, Disinfection
CAPACITY	Domestic Water Filter Disinfection: 1000 m ³ /day Laundry Water Treatment: 10 m ³ /day
RAW WATER SOURCE	Municipal Water
PROJECT CONTENT	2x HF6 UF 84 2x HF 6 UR 84 1x Ultraline HB 1700 Duplex

The Burj Al Arab hotel is one of the most iconic and luxurious hotels in Dubai. The Burj Al Arab construction started in 1996 and was completed in 1999. Culligan was appointed to provide **filtration systems for domestic and laundry water** for both the **Burj Al Arab hotel and Jumeirah Beach Hotel** which is located on the beach opposite to the Burj Al Arab. Since the Burj Al Arab sit on reclaimed land, it was impossible to install the water filtration system on the small island. Consequently, **the plant was positioned close to the Jumeirah Beach Hotel from where the water is pumped to the Burj Al Arab**. Back in 1996, in addition to its reputation for quality products and reliable service, Culligan was already a global leader in water treatment. Furthermore, a good relationship with the contractor as well as competitive prices made possible for Culligan to participate in this prestigious project.



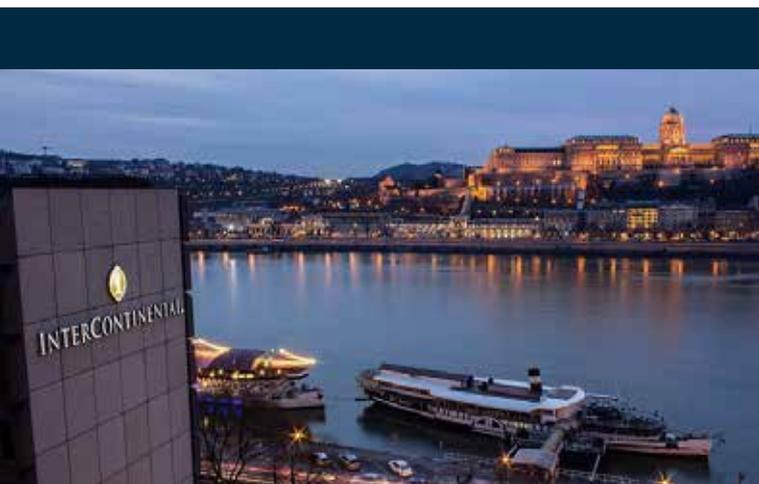
2.500 M³/DAY



PROJECT DETAILS

CUSTOMER	Burj Khalifa
LOCATION	Dubai, UAE
APPLICATION	Domestic water
TREATMENT PROCESS	Filtration, Chemicals dosing system, UV disinfection
CAPACITY	2.500 m ³ /day
RAW WATER SOURCE	Public Water
PROJECT CONTENT	6x HF6 UF 60 SP in SS ASME Coded

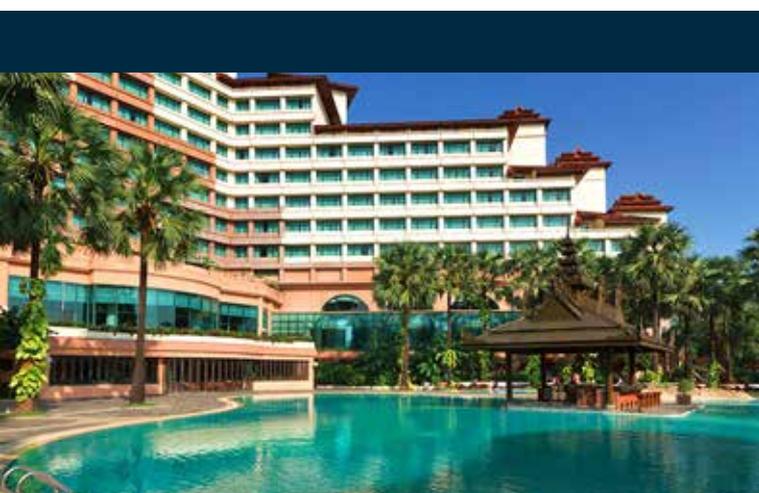
25 M³/DAY



PROJECT DETAILS

CUSTOMER	Hotel Intercontinental
LOCATION	Budapest, Hungary
APPLICATION	Production Water
TREATMENT PROCESS	Softening
CAPACITY	25 m ³ /day
RAW WATER SOURCE	Public Water
PROJECT CONTENT	U.L.HA320 Special PN10

864 M³/DAY



PROJECT DETAILS

CUSTOMER	Sedona Hotel
LOCATION	Mynmar
APPLICATION	Production Water
TREATMENT PROCESS	Softening
CAPACITY	864 m ³ /day
RAW WATER SOURCE	Public Water
PROJECT CONTENT	HA290 Duplex Softener

DRINKING WATER FOR HOSPITALITY



PROJECT DETAILS

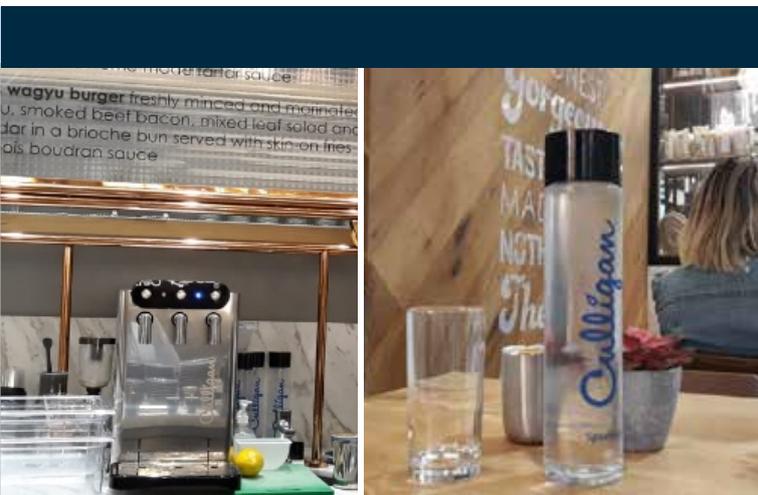
CUSTOMER	Mandarin Oriental Jumeirah
LOCATION	Dubai, UAE
APPLICATION	Drinking Water
TREATMENT PROCESS	Filtration through sediment filter and activated carbon
CAPACITY	225.000 l/year
RAW WATER SOURCE	Municipal Water
PROJECT CONTENT	7x ZIP HydroTap Boiling 1x ZIP Hydrotap Boiling Chilled 7x ZIP Hydroboil 25 lt 1x ZIP Hydroboil electronic 25 lt 16x sediment filter with activated carbon

The units were installed throughout the hotel to **provide instant boiling water**. They have been installed sometime in restaurants and coffee shops either in the back of house or front of house, sometime in areas where guests can use them.

- **A Zip HydroTap boiling** was installed in the **Mandarin Cake Shop**, located on the ground floor, near the main entrance.
- **Two Zip HydroTap boiling** have been provided to **The Bay restaurant**, located on the ground floor.
- **Two Zip HydroTap boiling** have been installed inside the **ballroom**. They are both behind cupboard doors which are opened during events so that guests can get instant boiling water for tea.
- **A Zip HydroBoil and a Zip HydroTap boiling and chilled with high capacity** have been installed in the back house of the ballroom.
- **A Zip HydroTap boiling** has been installed in the **Club Lounge**.
- **An HydroBoil** has been installed in the backhouse of **Tasca, a Portuguese restaurant**.



10.000 L/YEAR



PROJECT DETAILS

CUSTOMER	Jones the Grocer
LOCATION	Dubai, UAE
APPLICATION	Drinking Water
TREATMENT PROCESS	Filtration through sediment filter and activated carbon
CAPACITY	10.000 l/year
RAW WATER SOURCE	Municipal Water
PROJECT CONTENT	1x Aquabar Ambient Chilled and Sparkling with UV out 1x sediment filter with activated carbon

34.000 L/YEAR



PROJECT DETAILS

CUSTOMER	Movenpick Grand Plaza
LOCATION	Dubai, UAE
APPLICATION	Drinking Water
TREATMENT PROCESS	Filtration through sediment filter and activated carbon
CAPACITY	34.000 l/year
RAW WATER SOURCE	Municipal Water
PROJECT CONTENT	1x Aquabar Ambient Chilled and Sparkling with UV out 1x Zip Hydrotap boiling 3x sediment filter with activated carbon

70.000 L/YEAR



PROJECT DETAILS

CUSTOMER	Cupagahwa
LOCATION	UAE- 5 locations (3 in Dubai, 1 in Al Ain, 1 in Abu Dhabi)
APPLICATION	Drinking Water
TREATMENT PROCESS	Filtration through sediment filter and activated carbon
CAPACITY	70.000 l/year
RAW WATER SOURCE	Municipal Water
PROJECT CONTENT	5x Zip Hydrotap 5x sediment filter with activated carbon

OTHER PROJECTS

PROJECT	COUNTRY	SECTOR	APPLICATION	VALUE RANGE (K€)
JUMEIRAH RESORT BALI	INDONESIA	Hospitality and leisure	Drinking Water	50 - 250
DAI QUANG MINH DISTRICT 2 PRJ.	VIETNAM	Hospitality and leisure	Swimming Pool	0 - 50
PALM HEIGHTS	VIETNAM	Hospitality and leisure	Swimming Pool	0 - 50
LUANDA	ANGOLA	Hospitality and leisure	Drinking Water	50 - 250
GOLDEN HOTELS DE SALOU	SPAIN	Hospitality and leisure	Drinking Water	0 - 50
ROYAL COURT	UAE	Hospitality and leisure	Drinking Water	0 - 50
HOTELLERIE ET TOURISME SAHARIENNE TUNISIE	TUNISIA	Hospitality and leisure	Drinking Water	50 - 250
DEDEMAN HOTEL	SYRIA	Hospitality and leisure	Drinking Water	50 - 250
SEDONA HOTEL	MYNMAR	Hospitality and leisure	Production Water	0 - 50
AL RUWAIS PRESIDENTIAL PALACE	UAE	Hospitality and leisure	Drinking Water	50 - 250
HOTEL BANADER PROJECT	UAE	Hospitality and leisure	Drinking Water	0 - 50
WARSAW POLICE RESORT	POLAND	Hospitality and leisure	Drinking Water	0 - 50
HOTEL HASDRUBAL -SOUSSE	TUNISIA	Hospitality and leisure	Drinking Water	50 - 250

PROJECT	COUNTRY	SECTOR	APPLICATION	VALUE RANGE (K€)
STOCK	NIGERIA	Hospitality and leisure	Drinking Water	50 - 250
LE FALAIS	ALGERIA	Hospitality and leisure	Chilled Water	50 - 250
CSCEC HOTEL COSTANTINE	ALGERIA	Hospitality and leisure	Drinking Water	0 - 50
HOTEL SHERATON CAIRO	EGYPT	Hospitality and leisure	Drinking Water	50 - 250
HOTEL JANDIA	FUERTEVENTURA	Hospitality and leisure	Drinking Water	50 - 250
SURELINE	PHILIPPINES	Hospitality and leisure	Drinking Water	0 - 50
KOLAM RENANG PROYEK BIDURI - PERMATA HIJAU	INDONESIA	Hospitality and leisure	Swimming Pool	0 - 50
CAMMO TRADING - HOTEL ARCADE	CAMEROON	Hospitality and leisure	Drinking Water	0 - 50
SHAIKH KHALIFA RECREATION PARK PROJ, BAHRAIN	UAE	Hospitality and leisure	Drinking Water	50 - 250
NILE DAIRY	UAE	Hospitality and leisure	Drinking Water	50 - 250
SHARM EL-SHEIKH	EGYPT	Hospitality and leisure	Drinking Water	0 - 50
ZOO DI PRAGA	CZECH REPUBLIC	Hospitality and leisure	Drinking Water	50 - 250
PALMIR DUBAI AL SHAFFAR - HABTOOR	UAE	Hospitality and leisure	Drinking Water	50 - 250



WATER FOR CRUISE SHIPS

Culligan designs, engineers and produces custom water treatment solutions which are installed in over 160 cruise ships like Symphony of the Seas, the largest cruise ships in the world. Modern cruise ships are self contained "floating cities" that require water for drinking, cooking, showering and leisure. Culligan provides the entire ship water system. Whatever the use, wherever in the world, the water quality on your cruise will be to Culligan standards.

So you can relax and enjoy your cruise.



- 1** KIDS PLAYGROUND POOLS
- 2** SWIMMING POOLS
- 3** WHIRLPOOL SYSTEMS
- 4** WHIRLPOOL TUBS
- 5** SALT WATER REVERSE OSMOSIS
- 6** FRESH WATER DISINFECTION
- 7** REMINERALISATION SYSTEMS

CULLIGAN ON BOARD

THE HARMONY OF THE SEAS, THE LARGEST CRUISE SHIP IN THE WORLD...

The Harmony of the Seas made by Royal Caribbean is the **largest cruise ship in the world**. It set sail from Saint Nazaire, France, for first acceptance tests with 500 people on board, although it can carry up to 6.300 passengers with 2.200 crew members. On board of the Harmony of the Seas, Culligan has provided all facilities for the **treatment of the pools and whirlpools** for a total of **23 plants**, including 12 whirlpools whose shapes and patterns have been researched and produced by Culligan specifically for this ship. Harmony of the Seas joins three other ships of the Royal Caribbean fleet which are equipped with **water treatment systems supplied by Culligan**, the ships were built in the Meyer Werftshipyard in Germany and the third,

Ovation of the Seas, is going to be delivered to the Ship-owner. Even if smaller than Harmony of the Seas, with their 180,000 tons, they are still among the largest cruise ships ever built. Culligan has already won the contract for the Harmony II and the Culligan Marine Division department is in process of closing the contract even for Harmony III. Another record for Culligan's board. After the tallest building in the world Burj Kyhalifa and the deepest pool of the world Y-40, once again the **Culligan's technology and know-how** are a key of another world record, ensuring that passengers of the largest ship of the world can enjoy their holidays immersed in swimming pools and whirlpools not only pleasant but **totally safe**.



SEA WATER RO SYSTEM



Modernization and enlargement of cruise ships

The **Renaissance Project**, started from MSC in 2014, **involved 4 of the 12 ships that make up the MSC fleet**, ARMONIA, SINFONIA, OPERA and LIRICA. The ships renovated and expanded 24 meters long at Fincantieri shipyards in Palermo, thanks to the inclusion of a new section, now have new cabins and new spaces for relax and fun on board. The expansion increases the capacity of the cruises and the possibility to carry **500 more passengers**. The enlargement of the ships required an **increase in water production capacity** and, therefore, the replacement of the plants of competitors, previously installed.

The main difficulty in the Renaissance Project for the ARMONIA and SINFONIA, already equipped with Culligan's pools and water parks, was that the overall dimensions of the system did not allow to pass between the already existing spaces. After an analysis of the spaces on board, Culligan's Marine Division dept. proposed to the client to install the seawater equipment normally pre-assembled in the factory by reassembling it on board. The biggest benefit for the customers was that he could have innovative plants mounted without substantial cuts in the hull. The retrofit of an existing desalination plant is a new opportunity for the Marine Division sector as all the ships built in the past start a phase of modernization after 15-20 years of service.



WATER PARK SP + WHIRLPOOL



The largest cruise ship in the world

Symphony of the Seas took the sea on March 31st in Barcelona. This is the 26th ship of the Royal Caribbean fleet, now its flagship and the largest cruise ship in the world, with 230 thousand tons and a maximum **capacity of 6,680 passengers**, as well as a **2,200 person crew**, surpassing her sister Harmony of the Seas. Symphony of the Seas was built in the Chantier de l'Atlantiques shipyard in Saint Nazaire, France. It is the fourth ship in its Oasis-class series. For the first season, this summer, it will be cruising in the Mediterranean Sea, with home port Barcelona and then, from October, the ship will be based in Miami for cruises in the Caribbean. The largest cruise ship in the world is equipped with **11 whirlpools, 1 beach pool, 5 main pools, 1 children pool, 1 toddler pool, 2 water Slides, 1 Slide Bowl and 2 Surf pool**. We have won this customer in recent years, becoming the supplier of Pools and Whirlpools water treatments on board of the Quantum project, made up today by 4 Ships built at the Meyer Werft Ship Yards in Germany. Thanks to this project, we have been able to consolidate our relationship with Royal Caribbean and succeed in becoming the Supplier also for the Harmony and Symphony projects built in Saint Nazaire. Moreover, we just recently received a great piece of news: Culligan will be the supplier of the pools and whirlpools water treatments on board of the third sister of the Harmony project delivered in 2021 always in Saint Nazaire!



DRINKING WATER POTABLE WATER TREATMENT



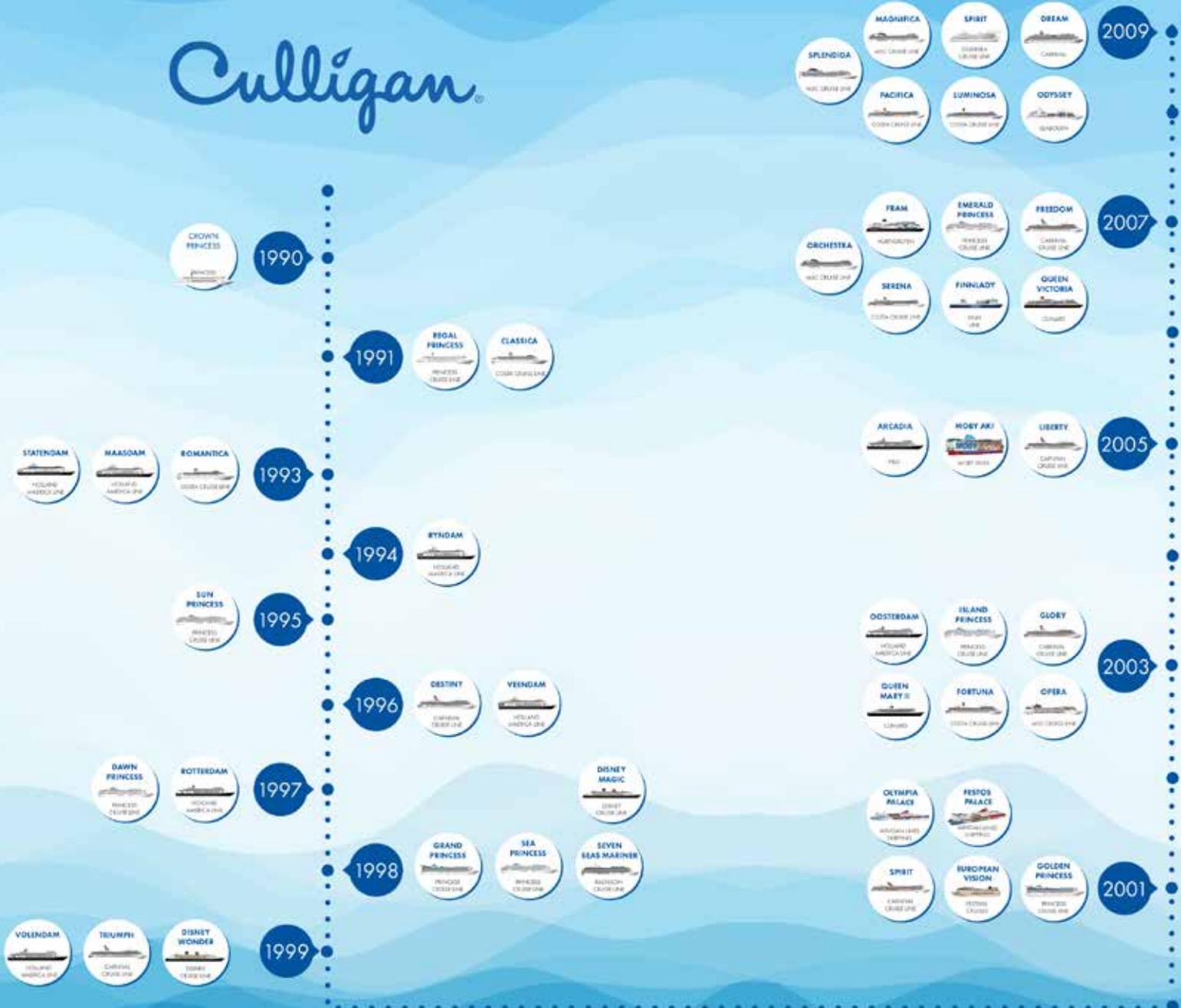
Culligan builds it's largest ever seawater ROs for a cruise ship.

Culligan has built **two seawater ROs on a single skid** making it **the largest seawater plant** produced by the Italian factory for a cruise ship. This landmark project is part of an order including 4 previous ships for the MSC group. The MSC group plans to build one new cruise ship per year for the next ten years and Culligan's aim is to be on board all. The ships are built at the Fincantieri Group's yard in Italy where Culligan has been a **partner for over 30 years**.



OTHER PROJECTS

Culligan.



1990 • 1999

2000 •



SERVICE

Culligan will install, commission and maintain your water systems in the most efficient way possible, providing you innovative technology, water testing, consumables and virtually everything else that you need in order to manage your water system safely and effectively. Customer service is a key differentiator for Culligan. Providing customized technological and tailored service solutions is what Culligan do best.

Culligan service above and beyond.

INSTALLATION, MAINTENANCE AND COMMISSIONING

Culligan's service specialists undergo in-depth training to ensure they are the water experts who can efficiently troubleshoot and fix any issue that arises on site.

With experience working in all industries and all areas of the world, Culligan service specialists will install, commission and then maintain your water treatment plant in the most efficient way possible.

ORIGINAL CULLIGAN SPARE PARTS & CONSUMABLES

Designed and built to the highest possible quality standards, and incorporating the latest improvements in technology Culligan genuine spare parts will keep your plant running at peak performance without interruption.

All Culligan consumables – resin, membranes, media, filters – are designed to enhance the performance of Culligan water treatment equipment, allowing longer operation, and lower operational costs.

With a dedicated 10,000m² facility in Technopark Dubai, including warehouse and chemical production, spare parts and consumables are kept in stock, ready for immediate delivery to site.

REPAIR FACILITIES BY SKILLED TECHNICIANS

Wherever possible repair of Culligan installations will be carried out on site by our highly qualified technicians, but in the case of more complex repairs these will be checked and repaired at one of our local service centres.

Our aim is to offer our customers a repair that is as economical and fast as possible, to ensure the best performance and efficiency of the plant when it will be put into operation again.

The Culligan service team of over 50 Culligan qualified water treatment technicians is one of the largest Service Teams in the Gulf region.

CHEMICAL SOLUTIONS

Culligan offers a complete range of water treatment chemical solutions, designed specifically to enhance the operation of Culligan equipment, protect your equipment and ensure the safety of your employees and customers.

Our range of chemical treatment solutions are manufactured locally in our Technopark facility. As well as offering our range of standard chemical solutions, the chemical team in our Technopark facility can create bespoke treatment solutions specific to your needs.

All of our chemicals are manufactured to the highest quality standards and comply with all relevant local and international regulations.

WATER ANALYSIS & HYGIENE SERVICES

Culligan can carry out routine monitoring and analysis using accredited laboratories as well as other Hygiene services such as Legionella Site surveys and Risk Assessments to help you ensure your water systems are safe and your management system is fully compliant with local regulations

PRE-COMMISSION CLEANING SERVICES

Culligan are experts in the region for the pre-commission cleaning, flushing, disinfection and chemical treatment of building utility water systems.

With a dedicated Pre-commission Cleaning Services team of engineers, technicians and all the necessary pumps, and pipework necessary to address any systems need Culligan are uniquely placed in the Gulf region to quickly and efficiently carry out your pre-commission flushing.

Culligan[®]

Culligan international

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