











## REFERENCE BOOK CONTAINERIZED SOLUTIONS









## 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.

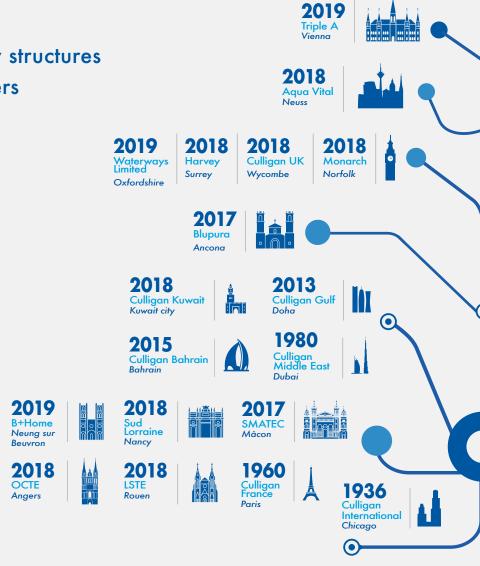


Whether it is for soft water for your shower, pure drinking water from your kitchen or office tap, carafes of purified water in your favourite restaurant, and, all the way through to ultra pure water for medical use or water used as part of the product in the food and beverage industry – Culligan has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

In Culligan, we love water since 1936.

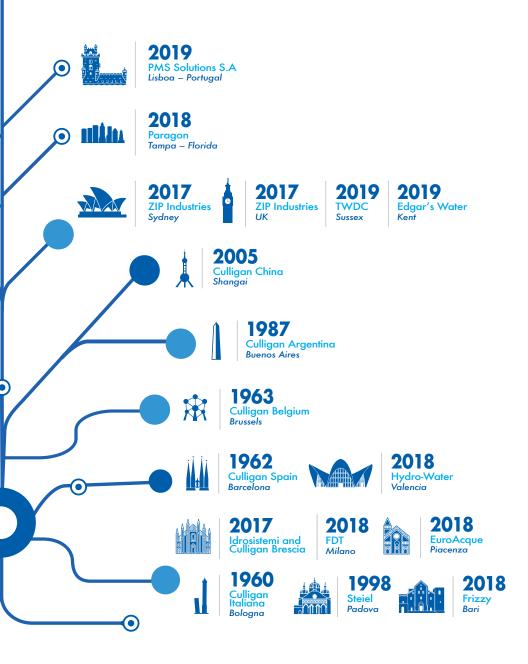


90 Countries
900 Dealerships
15 Direct company structures
3 Million Customers



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

X

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.

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 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
15 Direct company structures
3 Million Customers



### 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 HEALTHCARE

Doctors, nurses and patients, get more than just greattasting 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 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. Crusies are more relaxing and enjoyable.

### 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 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



\*\*\*\*





Hospitality



Containerized Solutions



Marine

## **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 01
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 waterStorm water



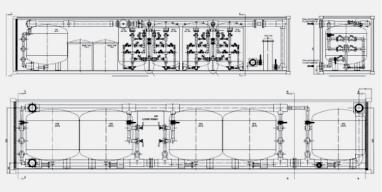


## CONTAINER



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.

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 <sup>3</sup> /h)	
CAPACITY	25.000 m³/day	
RAW WATER SOURCE	Well Water	
MARKET	Municipal	
NAME OF	TREATMENT	
THE PLANT	TECHNOLOGIES USED	CAPACITY
Pierwomajski	filtration, softening, carbon filtration	1.200 m³/day
Kamienka	softening, carbon filtration	156 m³/day
Rogowo	filtration, microfiltration, reverse osmosis	200 m³/day
Zarecznoje	filtration, softening	2.880 m³/day
Remzawod	filtration	2.880 m³/day
Znamia Oktiabria	microfiltration, softening, carbon filtration	6.816 m³/day
Woronowo	filtration, microfiltration, reverse osmosis	1.800 m³/day
Ostafiewo	microfiltration, reverse osmosis	1.800 m³/day
Hutor Iliczewka	microfiltration, reverse osmosis	600 m³/day
Szczerbinka	filtration, microfiltration, reverse osmosis	480 m³/day
Jakowlewe	filtration, microfiltration, reverse osmosis	720 m³/day
Fabrika 1 Maja	filtration, microfiltration, reverse osmosis	840 m³/day









PROJECT DETAILS	
CUSTOMER	Oil and Gas Company
LOCATION	Libya
APPLICATION	Process Water
TREATMENT PROCESS	Filtration, Desalination
CAPACITY	576 m³/day
RAW WATER SOURCE	Well Water
PROJECT CONTENT	2x HI-FLO 9 UF 48 PA 1x IW 32

## 1.056 M<sup>3</sup>/DAY



PROJECT DETAILS	
CUSTOMER	IREN for Civil Protection
LOCATION	Italy
APPLICATION	Drinking Water for emergency
TREATMENT PROCESS	Filtration
CAPACITY	1.056 m³/day
RAW WATER SOURCE	Surface/Well Water
PROJECT CONTENT	Chemical Dosing 1x OFSY 72 1x HI-FLO 6 UR 72 special

## 3.629 M<sup>3</sup>/DAY



#### **PROJECT DETAILS** CUSTOMER Culligan Rwanda LOCATION Rwanda APPLICATION **Potabilization Plant TREATMENT PROCESS** Filtration and Ultraviolet System CAPACITY 150 m<sup>3</sup>/day **RAW WATER SOURCE** Surface Water 2x UF24 FRP 3.2 m<sup>3</sup>/h 2x UFP24 FRP 3.2 m<sup>3</sup>/h 2x UR24 FRP 3.2 m<sup>3</sup>/h **PROJECT CONTENT** 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 m³/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 I / 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 M<sup>3</sup>/DAY



PROJECT DETAILS	
CUSTOMER	Bonatti
LOCATION	Algeria
APPLICATION	Drinking Water
TREATMENT PROCESS	Filtration
CAPACITY	1.400 m³/day
RAW WATER SOURCE	Well Water
PROJECT CONTENT	2x HF9 UFP 84s

## 720 M<sup>3</sup>/DAY



PROJECT DETAILS	
CUSTOMER	Food&Beverage Industry
LOCATION	Italy
APPLICATION	Production Water
TREATMENT PROCESS	Reverse Osmosis - UV
CAPACITY	720 m³/day
RAW WATER SOURCE	Well Water
PROJECT CONTENT	1x IW EVO 40s

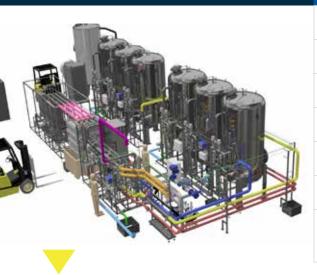
## 3.200 M<sup>3</sup>/DAY



### PROJECT DETAILS

CUSTOMER	Manufacturing Industry
LOCATION	Italy
APPLICATION	Cooling Water
TREATMENT PROCESS	Softening
CAPACITY	3.200 m³/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 m³/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 striping tours, pyrolusite filtering and CIP systems, all in AISI 316 to be compliant with the mineral water requirements.



## 940 M<sup>3</sup>/DAY



## 940 M<sup>3</sup>/DAY



PROJECT DETAILS	
CUSTOMER	Pharmaceutical Industry
LOCATION	Italy
APPLICATION	Potabilzation
TREATMENT PROCESS	Filtration, Reverse Osmosis
CAPACITY	940 m³/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 M<sup>3</sup>/DAY



### PROJECT DETAILS

CUSTOMER	Food&Beverage Industry
LOCATION	Italy
APPLICATION	Potabilzation for bottled mineral water
TREATMENT PROCESS	Filtration
CAPACITY	1.200 m³/day
RAW WATER SOURCE	Well Water
PROJECT CONTENT	2x HF9 UFP 72S 1x regeneration system



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 international**

Address Via Gandolfi 6 - 40057 Cadriano di Granarolo Emilia (BO) - Italy Phone +39 0516017111 Websites www.culligan.com - www.culligan.it - www.export.culligan.it

#### Worldwide Corporate Headquarter 9399 W. Higgins Road - Suite 1100

Rosemont, IL 60018 U.S.A

