

# Culligan®

## ION EXCHANGE WATER SOFTENERS

FOR COMMERCIAL AND INDUSTRIAL USE



CULLIGAN: WORLD LEADER IN THE WATER TREATMENT

CE *Designed and manufactured according to CE Directives in force*

# ION EXCHANGE WATER SOFTENERS

## COMMERCIAL AND INDUSTRIAL USE

Water softening is the process of removing the hardness, caused by Calcium and Magnesium salts, and exchanging them with Sodium salts, which do not deposit scale.

To obtain the exchange the water flows through a bed of resin that has been previously charged with Sodium Chloride (table salt).

The Culligan Culligan exchange resin is suitable for contact with food, has high resistance to mechanical shock, long life, high exchange capacity and low consumption of salt.

The closely controlled resin bead size minimises the pressure loss.

All Culligan softeners are completely auto-matic, and the different working phases (service, backwash and regeneration) are controlled by an electro-mechanical or electronic control board, that activates a valve or a group of valves, depending on the model.

The automatic phases may also be controlled by a metering device (optional) that activates the regeneration phase according to the quantity of water dispensed. In the "Duplex" version the stand-by softener is automatically connected to service when the first softener exhausts its exchange capacity, allowing it to regenerate, while the combined unit provides a continuous flow of softened water.

The "Extra Recharge" device makes it possible to manually activate the recharge without disturbing the automatic phases of the working cycle.

Each Culligan softener may be equipped on request with an automatic disinfection system.

**NOTE:** with the use of appropriate selective resins, the Ultra Line softener may be converted into a Nitrate removal unit, whose choice and size must be decided at the headquarters.

## MAIN APPLICATIONS

- cooling systems
- textile industry
- food industry
- ceramic industry
- pharmaceutical industry
- professional kitchens
- hotels
- restaurants
- bakeries
- professional cleaners
- low pressure boilers
- car washes
- chicken breeding
- animal breeding

## GOLD



For large household, professional and light industrial uses.

The Gold series of water softeners are electronic, fully automatic and equipped with a motorized control valve. The fully programmable Accusoft® microprocessor offers easy data entry performance options, to meet individual needs. The Gold series features an exclusive "Quadra-Hull®" vessel for protection, consisting of four layers: a food-grade liner, a composite shell, reinforced with two-component epoxy resin, a lightweight carbon material, exceeding in strength the existing metal materials and the tank jacket, which is corrosion-proof and U.V. resistant. The electronic board allows for easy set up and flexible operation, as well as the set up and retrieval of important information about the operation of the unit. The built-in by-pass makes the installation easier, and the water meter kit (optional) allows volumetric regeneration, saving salt and water.

## WATER SYSTEM



For professional and light industrial uses.

The unit is equipped with an electronic controller allowing simple time-clock or volumetric regeneration. In the duplex operation, a stand-by softener is automatically started when the first starts regeneration. The cycles are controlled by a motorized valve. The electronic board allows an easy and flexible operation, as well as storage and retrieval of important information about the operation of the unit.

## ULTRA LINE HA/HB



For industrial use.

The tank is made of steel and it is protected internally by a food-grade layer of epoxy resins of controlled thickness and covered externally by a layer of enamel paint. The harness is in corrosion-proof PVC Noryl. Ultra Line HA softeners are available in tanks ranging from 200 to 1400 mm in diameter. For tanks with diameter 770 to 1550 mm, it is available also a HB version, with a larger harness, in order to facilitate higher service flow rates.

## ULTRA LINE HB



For industrial use.

The tank is made of steel and it is protected internally by a food-grade layer of epoxy resins of controlled thickness and covered externally by a layer of enamel paint. The cycles are controlled by diaphragm valves, made of epoxy painted cast-iron. Ultra Line HB softeners are available in tanks ranging from 1700 to 6600 mm in diameter.

## ACCESSORIES



The regeneration can be programmed either on a time-clock or on a volume basis. In volumetric mode a water meter measures the volume of treated water, and an electronic control board starts regeneration once the pre-set volume is reached. Two control boards are available: one for the control of a single softener (PLF 2K Model) and the other for the control of two alternating softeners (PLM 2K Model).

# TECHNICAL SPECIFICATIONS: GOLD • WATER SYSTEM • ULTRA LINE

MODEL	PIPE FITTINGS in-out diameter ins	OPERATING PRESSURE max bar	EXCHANGE CAPACITY max* m <sup>3</sup> • °f	SERVICE FLOW RATE max m <sup>3</sup> /h	OVERALL DIMENSIONS			SHIPPING WEIGHT kg
					Resin tank		Salt tank	
					diameter mm	height mm	diameter mm	
<b>GOLD</b>								
GOLD 45	1 <sup>1</sup> / <sub>4</sub>	8.5	291	3,6	300	1300	610	105
GOLD 60	1 <sup>1</sup> / <sub>4</sub>	8.5	389	3,6	300	1300	610	160
GOLD 90	1 <sup>1</sup> / <sub>4</sub>	8.5	580	3,6	350	1625	610	200
<b>WATER SYSTEM</b>								
WS 60	1 <sup>1</sup> / <sub>2</sub>	8.5	389	8.4	356	1194	610	115
WS 90	1 <sup>1</sup> / <sub>2</sub>	8.5	580	8.4	406	1346	610	170
WS 120	1 <sup>1</sup> / <sub>2</sub>	8.5	778	8.4	406	1651	610	210
WS 150	1 <sup>1</sup> / <sub>2</sub>	8.5	972	9.9	533	1372	715	250
WS 210	1 <sup>1</sup> / <sub>2</sub>	8.5	1360	9.9	533	1753	715	250
<b>ULTRA LINE HA</b>								
HA 200 Δ	1 <sup>1</sup> / <sub>2</sub>	7	1188	18	500	1915	715	395
HA 230 Δ	1 <sup>1</sup> / <sub>2</sub>	7	1359	18	500	1915	715	425
HA 290 Δ	2	7	1698	26	600	1930	850	570
HA 320 Δ	2	7	1869	26	600	1930	850	600
HA 430 Δ	2	7	2550	30	750	1980	1025	860
HA 510 Δ	2	7	3060	30	750	1980	1025	930
HA 770 Δ	2	7	4587	34	950	2056	1070	1470
HA 850 Δ	2	7	5097	34	950	2056	1070	1560
HA 1200 Δ	2	7	7136	34	1200	2172	1580	2250
HA 1400 Δ	2	7	8325	34	1200	2172	1580	2430
<b>ULTRA LINE HB</b>								
HB 770 Δ	2 <sup>1</sup> / <sub>2</sub>	7	4587	50	950	2056	1070	1470
HB 850 Δ	2 <sup>1</sup> / <sub>2</sub>	7	5097	50	950	2056	1070	1560
HB 1200 Δ	2 <sup>1</sup> / <sub>2</sub>	7	7136	50	1200	2172	1580	2250
HB 1400 Δ	2 <sup>1</sup> / <sub>2</sub>	7	8325	50	1200	2172	1580	2430
HB 1550 Δ	2 <sup>1</sup> / <sub>2</sub>	7	8825	60	1400	2392	1580	2580
HB 1700	4	7	10430	114	1500	2620	1580	3355
HB 2100	4	7	11390	114	1500	2620	1580	3644
HB 2500	4	5	16050	114	1800	2660	BRINE MAKER ▲	4500
HB 3000	4	5	18480	114	1800	2660		4790
HB 4500	6	5	28500	227	2100	3030		7300
HB 6600	6	5	42900	227	2500	3100		10485

\* The exchange capacity is measured on the treatment of water having 40 °f (400 ppmCaCO<sub>3</sub>) total hardness and 500 ppm salinity, oil-free, transparent, without turbidity, and dispensed with the expected capacity for continuous service; it may vary depending on other parameters, such as Chloride content, the hydraulic pressure available, the discontinuous drawing of treated water, the purity and type of regenerant used.

Δ Models with plastic material harness.

▲ Brine Maker dimensions are indicated on the drawings.

Operating temperature: 2-40 °C

Power supply: 24 or 230 V / 50 Hz;

Installed power: 20 W.

## Quality Systems certified according to UNI ISO:9001