

# ECOTROL-D HF Duplex softeners

The duplex softener is used for automatic and continuous water softening in industrial applications. It is equipped with one Clack main control valve per pressure tank, one brine tank and monodisperse quality exchanger resin. The industrial controller ICI provides an integrated Modbus RTU interface. The regeneration is time or quantity controlled, optionally a quality controlled operation is possible by combination with an online measurement of the water hardness.

## BENEFITS

- High-quality controller in industry standard
- Softening to  $< 0.1$  °dH with full brining
- Continuous soft water supply
- High operational safety due to robust, independent central control valves (operation in single mode possible in case of failure)
- Modbus RTU interface already integrated

## APPLICATIONS

- For continuous soft water supply at high flow rates
- With online hardness measurement suitable for fluctuating raw water quality and particularly safe against hardness breakthrough
- Due to integrated Modbus RTU interface ideal for industrial applications



ECOTROL-D 3700 HF

# ECOTROL-D HF

## Duplex softeners

### DESCRIPTION

#### Softener

- Two pressure tanks made of GRP with PE inliner and internals (nozzle star top and bottom)
- Epoxy coated central control valves Clack WS2HF made of lead free brass
- Microprocessor controller industrial standard incl. display and 5 buttons
- Monodisperse exchange resin and quartz gravel as supporting medium (filling on-site)
- Brine tank with brine valve and salt tray (size 2900 one piece, size 3700 two pieces)
- 3/2-way service valve BV and two multifunction valves for shutting off each pressure tank
- Manometer in inflow and outflow, water meter in soft water line, vent valve per tank
- Central control valves, other valves and piping mounted on frame (side-mount)
- Unit complete with internal piping and wiring

#### Clack HF controller

- Fully automatic operation
- Regeneration either time- or volume-controlled, initiated by external signal or Modbus
- Display shows: Time and date, current flow rate, volume consumed, volume remaining
- Three LEDs for status display (standby / operation / regeneration)
- Permanent storage of settings via battery in case of power failure
- Modbus RTU interface for data exchange with CCS
- Several pressure tanks can be connected together via communication cable
- In the event of failure of a central control valve, the system can continue to operate as an individual system

#### Optionally available

- Blending device VSE (for setting the residual hardness) and bypass section (for bypassing the softening)
- Salt alarm switch SMS (change-over contact for alarm signal in case of salt deficiency)

### CONDITIONS OF USE

The unit may only be used for softening feed water of drinking water quality or appropriately pre-treated well or surface water. The following parameters must be maintained in the feed water:

Free chlorine	not detectable
Iron	< 0.2 mg/l
Manganese	< 0.05 mg/l

### TECHNICAL DATA OF SERIES

Controller	Clack
Operating pressure	3 – 8 bar
Pressure fluctuation	± 0.5 bar
Operating temperature	5 – 35 °C

# ECOTROL-D HF Duplex softeners

Product name capacity m <sup>3</sup> x°dH	Hydr. capacity m <sup>3</sup> /h min. / max.	Hydraulic connection RW / SW / WW	Dimensions in mm W x D x H	Item number
ECOTROL-D 2900 HF	3.70 / 28.0	DN 100 flange / DN 80 flange / DN 50	3,711 x 1,984 x 2,762	360 592
ECOTROL-D 3700 HF	5.00 / 37.0	DN 100 flange / DN 80 flange / DN 50	5,290 x 2,084 x 2,834	360 593