

HVD Softening plants



80% lower water consumption

50 % lower salt consumption

Vastly improved water quality

PLC control for monitoring the Softener units including options



Quantity - controlled HVD plants

This series of volume-controlled Counter Current Water Softening plants are selected specifically for reliable and economical operation. The advantage of using volume controlled plants is that the resins are used to their full capacity before an automatic regeneration takes place. The systems are designed as fully automatic duty and standby units providing 100% duty 24 hours per day. The advantage of operating the softener units Counter Current, service and regeneration flows in opposing directions is that salt usage is minimised, water quality can be maintained between regenerations and water consumption can be reduced by up to 80% when compared with a conventional water softener.

Plant configuration can be flexible to suit the plant area available and the plant is controlled via an on board PLC where all plant functions can be monitored.

Options:

Conductivity sensing during regeneration. By installing a conductivity meter to monitor the rinse stages water wastage can be reduced by 25-35 %. The conductivity meter will measure the rinse water quality and will halt the rinse cycle when the conductivity meter reads a pre set value, normally set at worst case inlet water quality. Hardness Monitoring - To measure the quality of the soft water a Testomat can be installed. This can be set to trigger and alarm if the water hardness increases above a pre set value. In addition the read out on the monitor will indicate the hardness of the water in the display of the control panel.

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Environmental Water Systems (UK) Ltd
Total Capability in Water Purification and Water Treatment



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HVD Softening Plants

Technical data

| Quantity-controlled/Duplex | HVD 300 | HVD 450 | HVD 650 | HVD 900 | HVD 1200 |
|--|---------|---------|---------|---------|----------|
| Max. flow rate, m ³ /h* | 10/15 | 18/21 | 25/30 | 32/39 | 41/50 |
| Pressure loss at max flow, bar | 1.1/1.5 | 1.1/1.5 | 1.1/1.5 | 1.1/1.5 | 1.1/1.5 |
| Capacity at 50ppm CaCo ₃ , m ³ | 300 | 446 | 652 | 906 | 1200 |
| Capacity at 100ppm CaCo ₃ , m ³ | 151 | 223 | 327 | 453 | 600 |
| Capacity at 200ppm CaCo ₃ , m ³ | 75 | 112 | 163 | 225 | 300 |
| Capacity at 300ppm CaCo ₃ , m ³ | 50 | 75 | 110 | 150 | 200 |
| Salt consumption per regeneration, kg. | 24 | 36 | 52 | 72 | 96 |
| Regeneration time, minutes | 50 | 55 | 60 | 65 | 70 |
| Temperature max., °C | 35 | 35 | 35 | 35 | 35 |
| Water Pressure max., bar | 10 | 10 | 10 | 10 | 10 |
| Pipe connection, DN | 65 | 65 | 65 | 80 | 100 |
| Outlet connection, DN | 40 | 40 | 40 | 40 | 40 |
| Plant height, mm | 2450 | 2500 | 2550 | 2600 | 2650 |
| Plant width, mm | 2800 | 3000 | 3120 | 3550 | 4000 |
| Plant depth, mm | 1400 | 1500 | 1600 | 1800 | 1900 |
| Salt tank height, mm | 1550 | 1550 | 1550 | 1550 | 1550 |
| Salt tank diameter, mm | 1040 | 1040 | 1040 | 1040 | 1040 |
| Content of salt tank, litres | 1150 | 1150 | 1150 | 1150 | 1150 |
| Consumption of water during regeneration, m ³ | 0.8 | 1.1 | 1.6 | 2.2 | 3.0 |
| Consumption of water during regeneration with conductivity meter, m ³ | 0.5 | 0.7 | 1 | 1.4 | 1.9 |

*At 15°C, 3.0 bar pressure, inlet softening plant (Regenerated state).

In certain instances the capacity indicated below may need to be reduced based on the total hardness, iron content and other contaminants.

06/09

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