

HydroION® VAD 50-CS1B



ITEM	RATING
Regulatory Approval	WRAS
Standards Compliance	BS EN 14743:2005+A1:2007
	DIN 1936-100:2008-02
Performance Data	
Nominal flow rate	0.97l/s (3.5m ³ /h)
Flow rate at blending to 60ppm	1.22l/s (4.4m ³ /h)
Operating pressure	2 – 8bar
Pressure loss at nom. flow	0.79bar
Water temperature	5 – 30°C
Ambient temperature	5 – 40°C
Inlet/outlet connections	25mm (1 ½")
Drain line (min.)	50mm (2")
Power supply	230V/1ph/50Hz
Secondary electrical connection	12V AC/500mA
Power consumption	12W
Capacity and Consumption Data	
Capacity*	7.8m ³
Salt consumption per regen	4kg
Waste water per regen	0.31m ³
Volumes and Weights	
Resin volume	2 x 50l
Resin vessel volume	2 x 80l
Brine tank volume	190l
Regeneration salt stock	75kg
Shipping weight (complete unit) ca.	70kg
Operational weight (complete unit) ca.	350kg

*Assumes a mains water hardness of 300ppm total hardness (as CaCO₃)

Scale Control by Water Softening

For the removal of the water hardness salts (calcium and magnesium) a base exchange water softener shall be employed.

The system should be WRAS approved.

Unit size is dependent on water flow rate, water hardness and volume requirement. The capacity and location for the installation of the HydroION® water softener should be determined by the review of the system design by Hydrotec.

The softener will employ a high efficiency strong acid cation exchange resin of high quality mono-spherical grade to ensure optimum performance at very low brining rates (80g/l). This will minimise salt use and environmental impact.

To maintain biological integrity of the water softener system, HydroION® water softeners, as standard, employ an anti-stagnation regeneration facility (typically 4 days) which is further supported by the Water-Refresh mode which enables a brief period of operation in the offline vessel, to eliminate possibility of stagnation. Moreover, an automatic disinfection of the resin bed is performed by the integrated chlorinator at every regeneration cycle.

Typically, the HydroION® CS softener is controlled by a water meter. As standard this can be adjusted to time control and as an option a water hardness monitoring system can be fitted to control the hardness level.

The duplex unit comprises two resin vessels and a brine tank. It is controlled by an electronic control head with an integrated water meter.

All HydroION® CS units have an optional hard water blending system.

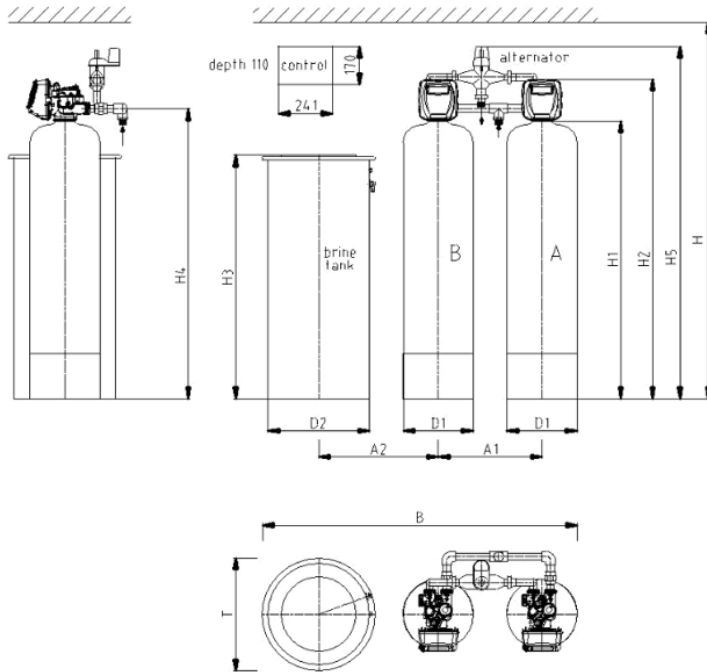
An LCD display indicates operational and fault status. Volt free connections to a BMS system are provided.

Power is to be provided through a 3A fused spur.

The unit is to be a HydroION® VAD 50-CS1B as detailed in the adjacent technical data table.



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HydroION VAD 50-CS1B		
Control box with mounting board ca.	B x H x T	330 x 220 x 130 mm
Block Dimensions		
Height (min.)	H	1920mm
Width (min.)	B	1430mm
Depth (min.)	T	600mm
Clearance tank/tank ca.	A1	460mm
Clearance brine tank/tank ca.	A2	530mm
Diameter pressure tank	D1	310mm
Diameter brine tank	D2	565mm
Height pressure tank (incl. foot)	H1	1232 ± 6mm
Height top control valve	H2	1420mm
Height brine tank	H3	1123mm
Height inlet/outlet	H4	1295mm
Height VAD incl. alternator	H5	1600mm

Subject to technical revisions and modifications

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