

HYDRO ION®
Water softener
Type: VAK - C

Application

HYDRO ION® VAK - C water softener system for softening / partial softening of cold drinking and industrial water.

Simplex water softener in compact design for the supply of the following consumers with soft water.

Design with standard salt volume

- Use: - boiler feed water
- pre-treatment reverse osmosis systems
- process water

Design with reduced salt volume

- Use: - cooling and air-conditioner water
- drinking water according to DIN 19636-100 and DIN EN 14743



Function

The HYDRO ION® VAK - C water softener system operates by the method of ion exchange.

The HYDRO ION® VAK - C water softener designed as a cabinet system. The regeneration of the system starts fully automatically by the microprocessor control. Monitoring of the produced soft water quantity, different operating modes (time, volume control or volume control with time priority).

If the set modes are reached, the regeneration starts. In case of small water removal and for the purpose of system hygiene, a forced regeneration is initiated after 4 days at the latest.

Menu guided control with display of residual capacity, actual flow, diagnostic mode, error detection.

Description / Scope of supply

HYDRO ION® VAK - C water softener consisting of:

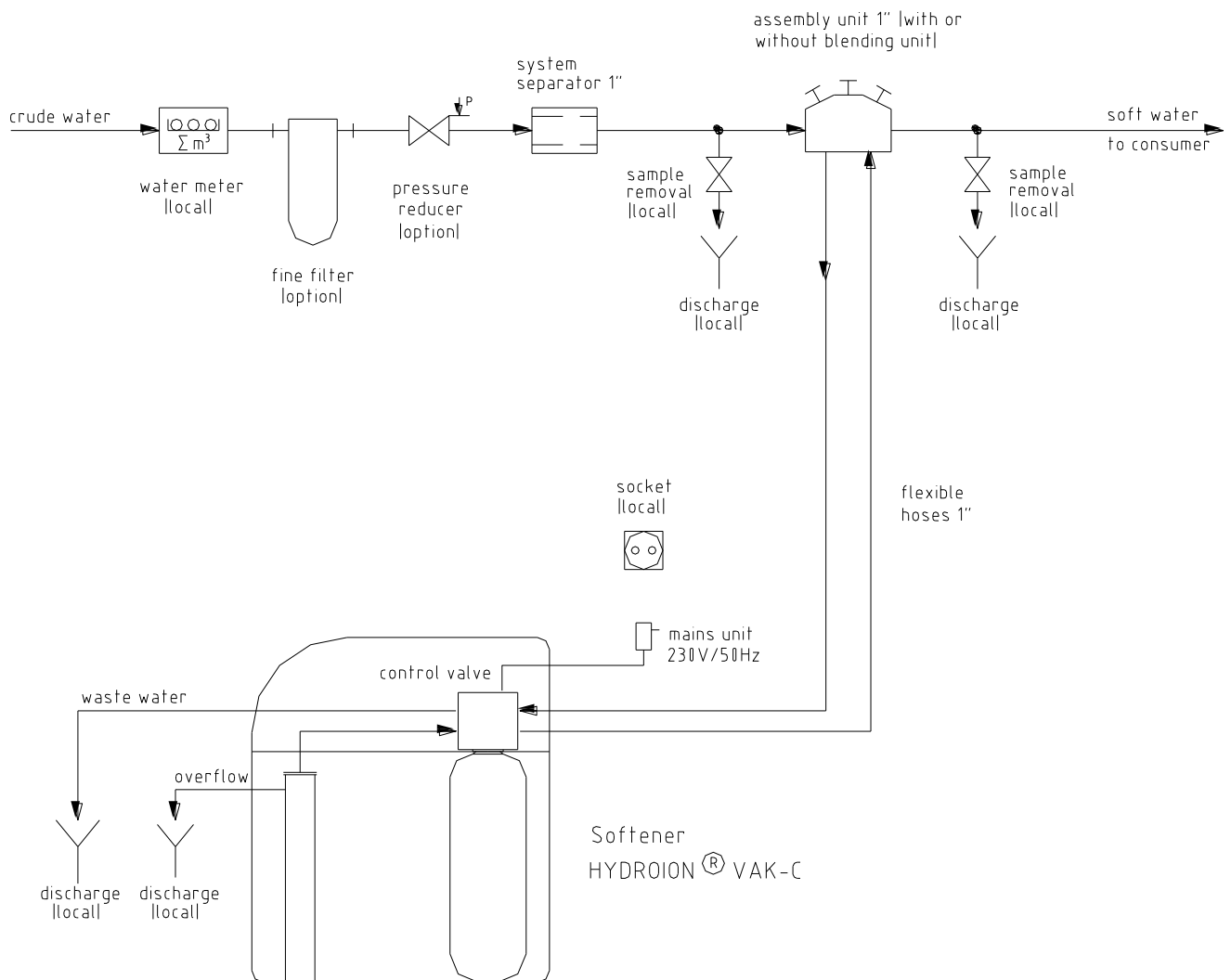
- 1 x pressure vessel
- 1 x ion exchange resin (food qualified)
- 1 x central control valve made of Noryl
incl. integrated blending
- 1 x cabinet tank
- 1 x brine safety valve
- 1 x turbine water meter
- 1 x mains unit
- 1 x operation manual

Accessories

- Mounting unit DN 25 (excluding blending) Art.-No. 510.016
- Mounting unit DN 25 (incl. blending) Art.-No. 511.000
- Flexible hoses 1" Art.-No. 001.034
- Disinfection unit 3/8" Art.-No. 554.350
- Measuring kit total (permanent) hardness Art.-No. 600.160

Information / Installation conditions

- Technical data and general technical guidelines as well as all local installation regulations shall be guaranteed.
- The regulations as per DIN 1988 require a safety stop against backflow (system separation).
- A fine filter shall be installed before the softener to prevent particles penetrating the pipeline.
- The ambient temperature shall not exceed 40°C. Any possible radiation heat shall not exceed a temperature of 40°C.
- The installation site shall be protected against frost.
- The installation area shall be free from vapor from solvents, color, lacquer and chemicals.
- A mains socket (230 V / 50 Hz) shall be provided adjacent to the plant.
- A drain (min. DN50) shall be provided to discharge the wash water into channel.
- Any lifting appliance used shall be resistant against salt water.



Technical data		HYDROION				
Type		VAK 6-C	VAK 10-C	VAK 15-C	VAK 25-C	
Connection mains / soft water line		DN 25 (1")				
Drain line (min.)		DN 50				
Mains electrical connection		230 V / 50 Hz				
Electrical connection		12 V AC / 500 mA				
Water temperature (min./max.)		5 °C / 30 °C				
Ambient temperature (min./max.)		5 °C / 40 °C				
Operational pressure (min./max.) ²⁾		2 bar / 8 bar				
Performance data						
Flow rate ^{1), 3)}	m ³ /h	1,4	1,4	1,5	2,5	
Flow rate at blending (300 ppm to 60 ppm) max.	m ³ /h	1,7	1,7	1,9	3,1	
Nom. capacity at 300 ppm - standard salt volume ¹⁾	m ³	0,9	1,5	3,0	5,4	
Salt consumption - standard salt volume	kg	1,2	2,0	3,0	5,0	
Waste water volume - standard salt volume	m ³	0,05	0,07	0,11	0,18	
Nom. capacity at 300 ppm - reduced salt (DIN EN 14743)	m ³	0,6	1,0	2,3	3,9	
Salt consumption - reduced salt	kg	0,5	0,8	1,2	2,0	
Waste water volume - reduced salt	m ³	0,04	0,06	0,09	0,15	
Volume and weights						
Resin vessel volume	Ltr.	8,3	19,1	19,1	31,6	
Resin volume	Ltr.	6	10	15	25	
Regeneration salt supply	kg	50	90	90	90	
Operational weight max.	kg	80	135	140	155	
Dimensions						
Height	H	mm	670	1140	1140	1140
Width	B	mm	320	320	320	320
Depth	T	mm	500	500	500	500
Diameter pressure vessel	D	mm	182	182	182	232
Height pressure vessel	H1	mm	431	891	891	891
Height feed (mains water) / discharge (soft water)	H2	mm	486	946	946	946

- 1) Parameters dependent on operation and feed water quality
- 2) The flow pressure is important for the min. operation pressure and the static pressure for the max. operation pressure
- 3) Nom. flow – standard salt volume at < 0,2 ppm
Nom. flow – reduced salt volume at < 10 ppm

