HydroION®
Water softener
Type: VAK IP

Application

HydroION® water softener used to soften/ partly soften cold drinking water.

Version according to DIN EN 14743 and DIN 19636-100. Quantity-controlled regeneration in proportional mode with reduced salt volume. All connections on the input side must be secured by spring-loaded check valves. This eliminates the need to install a pipe and system separator.

Designed as a single system in compact design for supplying subsequent consumers with soft water.

Function

The operation of our HydroION® water softener is according to the ion exchange process.

HydroION® VAK IP water softener is designed as a cabinet system in a compact design.
The system has a modern microprocessor control. The self-learning control system monitors the current water consumption situation and plans automatic regeneration at night. The device adapts optimally to the mode of operation in the object.

Regeneration occurs when the actual reserve capacity is less than the remaining volume capacity. The reserve capacity is automatically calculated by the controller per day of the week, based on the consumption values from the history data storage. Forced regeneration is provided for plant hygienization after 4 days at the latest with little water withdrawal.

Menu-guided control with the following displays and functions:

- Manual regeneration start
- Diagnostic mode
- Electronic salt consumption monitoring with deficiency notification (optional)
- Proportional salinization / proportional regeneration
- Error detection in the display
- Residual capacity and current flow indicator
- History data storage

Description / scope of supply

HydroION® water softener consisting of:

1 x Pressure tank
1 x Ion exchange resin food-grade
1 x Noryl Central Control Valve (1”)
with integrated intersection
1 x Power Supply
1 x Cabinet container
1 x Brine safety valve
1 x Turbine water meter
1 x Germ protection device integrated
1 x Relay output (12 V DC) - fault message
1 x User manual

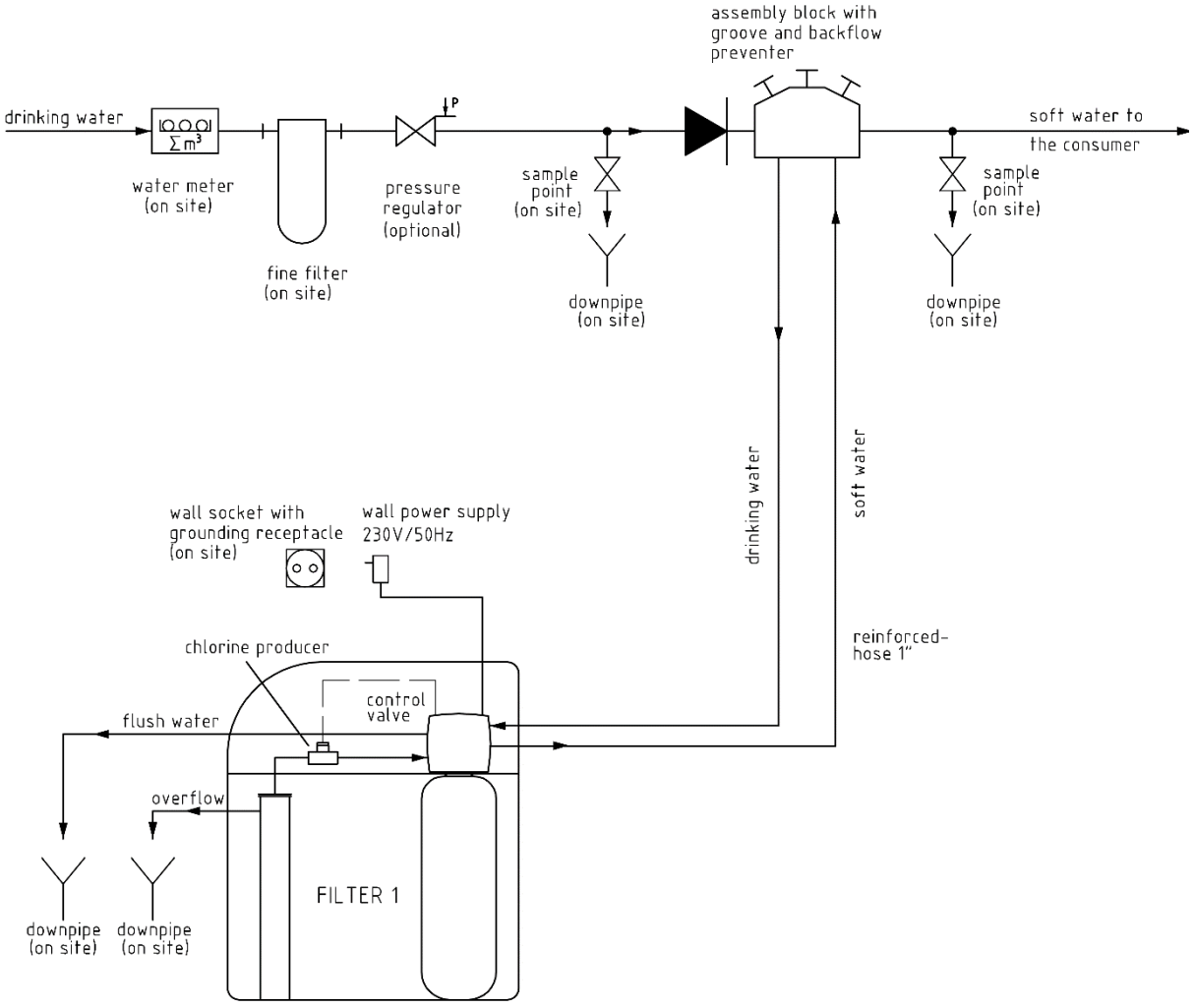
Accessories

- Mounting block with intersection and reflux preventer DN 32	Art.-No: 511.109
- reinforced hose 1” (2 x 1” ÜM)	Art.-No: 001.034
- Measuring cutlery total hardness	Art.-No: 600.100

Notes / Installation Conditions

- Technical data and general technical guidelines as well as the local installation regulations must be observed.
- According to the regulations of DIN 1988, protection against suction back (system separation) must be carried out.
- To protect the system from flushing from the upstream pipeline network, a fine filter must always be provided.
- The ambient temperature according to DIN 1988-200 may not exceed 25 °C.
- The installation location must be frost-proof.
- The installation space must be free of solvent, paint, varnish and chemical vapours.
- Sockets (230 V / 50 Hz) for the softening system and disinfection device must be provided in the immediate vicinity of the system.
- A sewer connection (at least DN 50) must be available to drain rinsing water.
- When using a lifting system, it must be saltwater-resistant.

Installation schematics



Technical data HydroION® VAK IP

Technical data			HYDROION® VAK			
System name			**6-IP**	**10-IP**	**15-IP**	**25-IP**
Mains / discharge water connection			DN 25 (1“)			
Min. drain			DN 50			
Power supply			230 V / 50 Hz			
Electric connection (secondary)			14 V DC			
Min. / max. water temperature			5 °C / 30 °C			
Min. / max. ambient temperature			5 °C / 25 °C			
Min. / max. operating pressure [2)]			2 bar / 8 bar			
Performance data						
Nom. flow [1)]		m³/h	1,4	1,4	1,5	2,5
Peak flow at Intersection to 8,5 °dH (Raw water hardness 20 °dH)		m³/h	2,4	2,4	2,6	4,3
Pressure loss at nominal flow [1)]		bar	0,22	0,31	0,47	0,55
Low salt use (DIN EN 14743)						
Nom. capacity at < 0,5 °dH [1)]		m³x°dH	10	18	35	58
Salt consumption per regeneration		kg	0,5	0,8	1,2	2,0
Amount of waste water per regeneration		m³	0,04	0,06	0,09	0,15
Volume and weights						
Pressure vessel volume		Ltr.	8,3	19	19	31,6
Resign volume		Ltr.	6	10	15	25
Regeneration salt storage		kg	25	50	50	50
Operating weight max.		kg	60	105	115	135
Dimensions						
Height (mind.)	H	mm	670	1140	1140	1140
Width (max.)	B	mm	320	320	320	320
Depth (max.)	T	mm	500	500	500	500
Diameter pressure vessel	D	mm	182	182	182	233
Height pressure vessel (max.)	H1	mm	430 ± 4	898 ± 4	898 ± 4	898 ± 4
Height input / output control valve	H2	mm	486	946	946	946

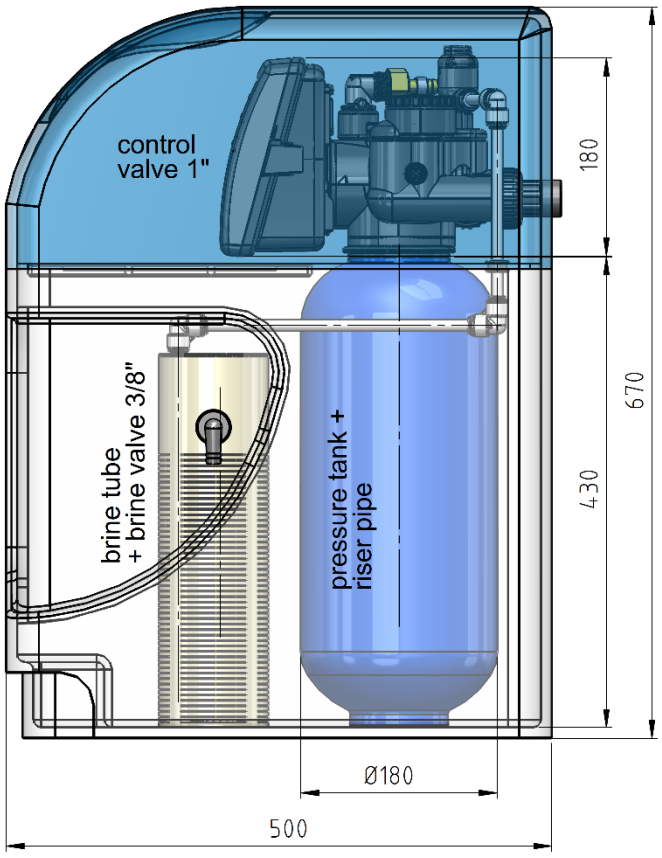
1) The values are dependent on the operating mode and the mains water quality.

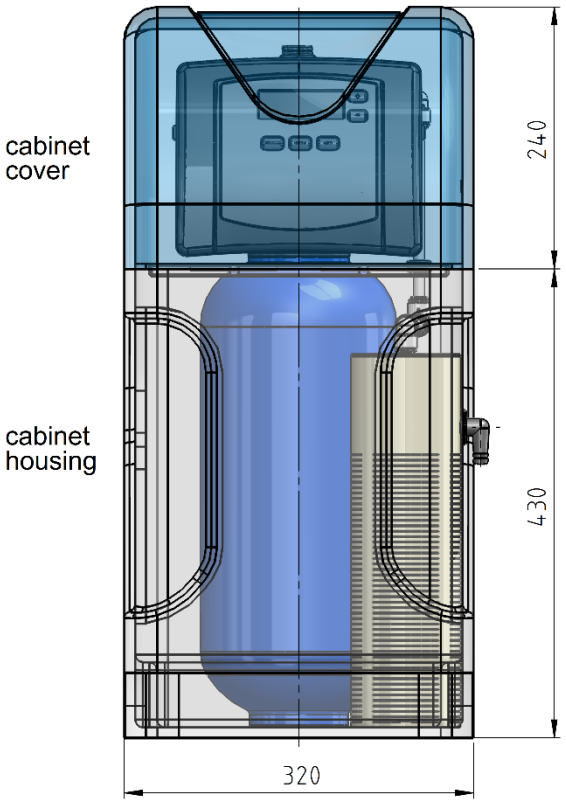
2) Important point for the min. operating pressure is the flow pressure and for the max. operating pressure the pressure in rest position.

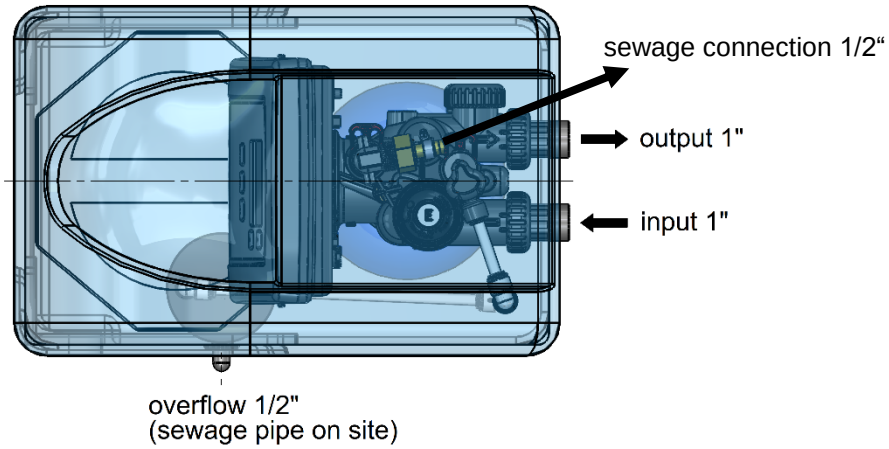
The plants with low salt use are usually used for

- Drinking water applications according to DIN 19636-100 / EN 14743
- Treatment of cooling water in accordance with VDI 3803

Set up graph – VAK 6-IP







Set up graph – VAK 10 / 15 / 25-IP