

BWT MONO SOFT



Operation & Installation Instructions

Unit: BWT MONO SOFT

Part no.: 421106132

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1. SAFETY INSTRUCTIONS

To install and operate the softener safely and securely please follow the safety instructions listed here.

1.1 Intended use:

- The softener is a device designed to soften mains water for use in multiple applications.
- The design of the softener focuses on rigidity and reliability and is designed for commercial application
- Water to be treated must be microbiologically safe.

1.2 Safety instructions for maintenance and repairs:

- Maintenance and repairs should only be carried out by a qualified installer or technician.
- Faulty maintenance or repairs can result in incorrect operation making the unit not perform correctly.
- For maintenance and repairs, only original spare parts may be used.

1.3 General safety instructions:

- Carefully read all the safety and operating instructions contained in these operating instructions. Keep the operating instructions for later reference.
- If the safety and operating instructions are not followed, all liability and warranty claims are forfeited.
- Only use the softener after you have read and understood the operating instructions. Ask for technical support in case of any questions. Operate the Softener only as described in these operating instructions.

2. PRODUCT DESCRIPTION

- The softener consists of a plastic container with a removable lid. The container holds the salt used for regeneration.
- The cylinder in the container is filled with ion exchange resin media.
- The capacity of the resin is limited. It depends on the general hardness of the mains water. The resin must be regenerated when it has lost its effectiveness.
- The non-electric control head on the cylinder controls the regeneration depending on the set water hardness. If during regeneration water is needed mains hard water is supplied.

3. SETTING UP AND CONNECTING

3.1 Installation site requirements:

- The space must be frost-free, or the softener protected from frost.
- There must be a waste-water drain and access to an overflow located near to the softener installation point. The overflow pipe must not be higher than the side overflow of the softener.
- Ensure that the unit will be placed on a flat surface.
- The Softener is preferably installed on the floor. If the Softener is installed on a base, then care must be taken to ensure the unit is secure as it rests on wheels.
- Adequate space must be available for the the lid to be removable to refill the regeneration salt.
- Connections for the water supply and water outlet can be found in the connection diagram.

NB! All local regulations must be adhered to.

- Resin in the softener comes precharged and ready to be used.
- Water pressure should be min. 2 bar & max. 8 bar. In case of higher pressure, a pressure reducing valve will need to be fitted.

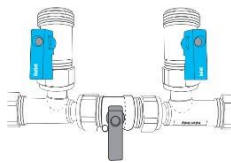
3.2 Unpacking:

- Remove the Softener from the box. Ensuring that all parts are included- See section 8.
- Remove the lid and the cardboard packing.

3.3 TYPICAL INSTALLATION

A typical Softener installation consists of the following components. Please note, your installation may vary according to local regulations. See section 9 for general installation schematic.

1. A non-return valve may be required on the water main supply to the softener.
2. A pressure regulating valve may be required on the water supply to the softener.
3. A drain line from the softener must be plumbed through an appropriate air gap.
4. A bypass will need to be installed for service & maintenance. Following are two examples:



3.4 INSTALLATION INSTRUCTIONS

3.4.1 Locate:

- Determine location to install equipment. Make sure that the unit will be on a flat surface.
- If the unit is sited in a warm environment or next to a heat-generating appliance, you may experience salt build up on the inside of the cabinet and lid. This may need to be periodically cleaned with water and a wet rag; alternatively, site the unit in cooler ventilated position.
- If sand, silt, or turbidity is present in the water supply, a separate prefilter should be installed.

3.4.2 Test pressure:

- Test incoming pressure to the unit min. should be 2 bar. A pressure limiting valve will be required if the pressure is above 8 bar.
- Ensure that the minimum pressure is consistent even at times of full operation at the installation site.

3.4.3 Install:

- Plumb pipe work as necessary to accommodate a by-pass valve, see section 9.

CAUTION: Do not solder any fitting whilst connected to the unit adaptors. Excessive heat may result in damage to the plastic and rubber parts. The materials used in the soldering process may attack certain types of plastics. Care should be taken during the installation process to assure that solder and flux do not come in contact with media tanks, the control module and related plastic components.

NOTE: Verify installation complies with local regulations before continuing.

3.4.4 Flush:

- After all the plumbing has been completed, but before connecting the water softener, flush both inlet and outlet lines allowing water to rinse out any debris in the lines.

3.4.5 Connect adapters:

- Install the o-rings onto the adapters and use the silicone to grease them.
- Connect the inlet/outlet adapters to the hoses prior to fitting them into the control valve.
- Install adapters into control valve in/out ports, ensuring that they are fitted into the correct openings (see arrows on valve for reference). Install the retaining bracket and pin to the control valve.



3.4.6 Drain line:

- Run a drain line to discharge point, checking for any obstructions or possible kinks.
- Push the drain line onto the barbed fitting ensuring that it is tight.

3.4.7 Overflow line

- An overflow line will need to be attached to the barbed fitting on the side of the cabinet. This line will in case of malfunction serve as protection against water flowing over the sides of the cabinet onto the floor.

NOTE: Drain & overflow lines should not be more than 2 meters long and should not be kinked in any way.



4. INSTALLATION REVIEW/COMMISSIONING

4.1 Test pressure:

- Test incoming pressure to the unit min. 2 bar and adjust pressure limiting valve if the pressure is above 8 bar.

4.2 Test incoming hardness:

- Using either a hard water test kit or information supplied by your water board, note the incoming Total Hardness (as CaCo3).

4.3 Secure drain line:

- Make sure the drain line is secure, uses an airgap and is fully compliant.

4.4 Setting the brine valve:

- Remove the brine valve.
- Ensure that the distance between the bottom of the float cup and the bottom of the valve is 124 mm.
- Reinstall the brine valve, ensuring it is secured in it's housing.

4.5 Initial fill:

- Add 5 litres of mains water to the softener cabinet, and a quantity of tablet salt ensuring it is above the waterline. Do not use rock or salt granules.

4.6 Main inlet valve:

- With the unit already in bypass (inlet closed, outlet closed, bypass open), open the main inlet valve slowly and check for leaks in the plumbing.

4.7 Pressurising:

- With the inlet valve open, allow the softener to pressurise. Water may run to drain until the unit is fully pressurised.

4.8 Manual regeneration:

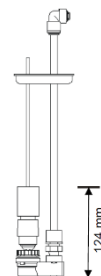
- Using a #2 Phillips screwdriver, push down firmly on the actuator and slowly turn clockwise, listening for four (4) clicks to start the regeneration. At this point you should hear water begin to run through the system. If you do not hear water running through the system, the disc has not been advanced far enough.
- At the end of the regeneration the Accudial arrow will reset to the 6 o'clock position.

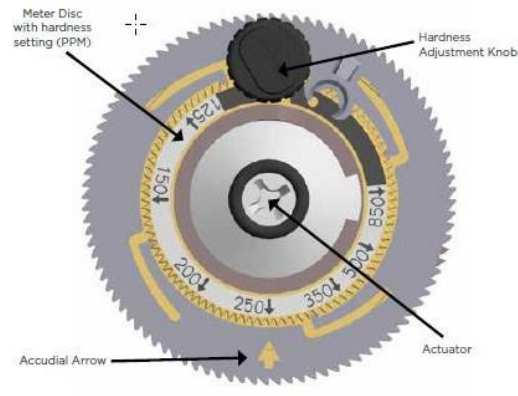
4.9 Set regeneration frequency/hardness:

- With the in/out ports at 12 o'clock, ensure the Accudial arrow has reset and is at 6 o'clock. Please see beneath for correct position of Accudial Arrow.

Note: Pushing the hardness adjustment knob should only be done when the Accudial Arrow is at 6 o'clock position. Only at this position can the hardness and regeneration frequency be adjusted.

- Pushing down on the Adjustment Knob, turn until the Accudial Arrow points to the correct Total Hardness value. Please see section 7 for correct setting.
- After the system has finished, open the outlet to release trapped air from the lines.





4.9 Put unit into service:

- Open the outlet valve and ensure the bypass valve is closed.

4.10 Check for leaks:

- Before leaving the installation site, check plumbing for leaks.
- Test the water at a softened water tap. Explain the system to the user including the by-pass and how to load salt.

5. OPERATION

- The Softener works automatically after commissioning.

Warning

Only use tablet salt that is labelled as 'salt for softeners'. Do not use any other salt such as granular or road salt. Refill the regeneration salt as soon as the water is above the salt in the container.

6. CARE

Warning

Possible damage from chemicals. Do not clean the inside of the container with cleaning agents or other chemicals. Clean the inside of the container with water only.

Clean the outside of the Softener with domestically available hygiene products for plastics.

7. TECHNICAL SPECIFICATIONS

Design Specifications

Flow Rate 1 Δ bar	20 Lpm
Pressure Range	1.0 – 8.6 bar Dynamic Pressure
Temperature Range	2 – 49°C
Min. Flow Rate	1,1 Lpm
pH Range	5 – 10 SU
Free Chlorine Cl ₂ (Max.)	2.0 mg/L
Hardness as CaCO ₃ (Max.)	555 mg/L
Meter setting	AccuDial

System Components

Media Vessel (Qty.) Size	(1) 152 x 330 mm
Media Vessel Construction	Fiberglass Wrapped Polypropylene
Empty Bed Volume	4,5 liters
Media Type	High Capacity Fine Mesh Cation Resin
Media Volume	4,5 liters
Bed Depth	Packed
Free Board	None
Riser Tube	25 mm ABS
Upper Distributor	0.30 mm Slots, Engineered Plastic Basket
Lower Distributor	0.23 mm Slots, Engineered Plastic Basket
Under bedding	None
Regeneration Control	AccuDial Meter
Regeneration Type	Countercurrent
Salt Capacity (Pellets)	10 kg

Connections

Inlet / Outlet Connections	Custom Adapter and Bracket
Drain Connection	0.375" Tube
Brine Line Connection	0.375" Tube (Internal)
Overflow Connection	0.625" Tube
Power	None

Part Numbers

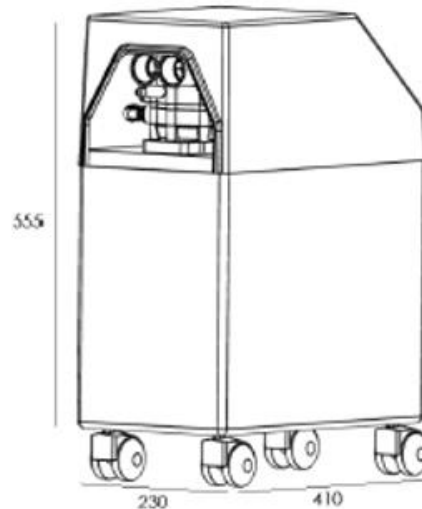
Kinetico Simplex	#100060
Module	#16028

Dimensions and Weight

Height	555 mm
Width	230 mm
Depth	410 mm
Shipping Weight	10 kg
Operating Weight	25 kg

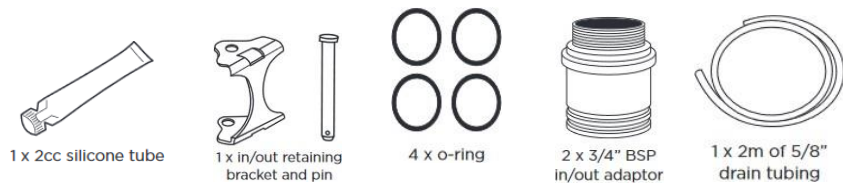
Regeneration Specifications @ 2bar

Regeneration Volume	25 liters
Regeneration Time	11 minutes
Backwash Flow Control	3,79 Lpm #4409
Brine Refill Flow Control	0,76 Lpm #9183B

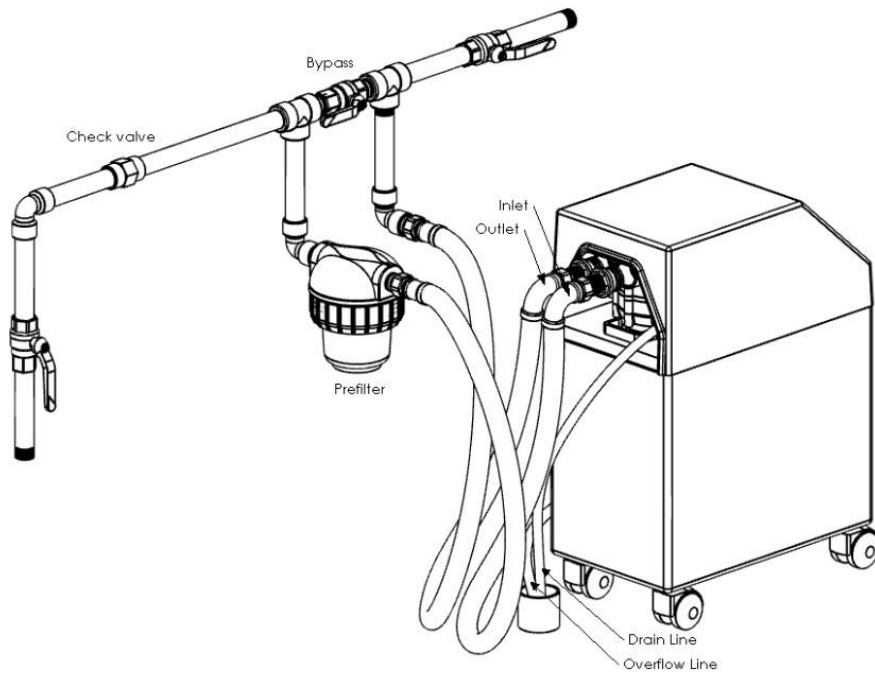


Salt setting	Dosing	Setting	Hardness settings						
			100	125	150	200	250	350	525
0,27 kg	0,06 kg/l	PPM	101	126	150	206	252	370	555
		°dH	6	7	8	11	14	20	30
		°f	10	13	15	21	25	37	55
		Liters/Reg.	1083	866	728	531	433	295	197

8. ACCESSORIES WITH THE UNIT



9. GENERAL INSTALLATION SCHEMATIC





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FOR YOU AND PLANET BLUE