

ZERO B™
PURE WATER SOLUTIONS

**ZERO B
SOFTENIZER**
Automatic Water Conditioner
Model 8AS

**USER
MANUAL**





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INTRODUCTION

The all new Zero B Softener - automatic water conditioners from Ion Exchange India Limited is meant to serve our customers with an experience of enhanced performance, User friendliness and assurance on the quality of treated water.

The primary function of the Zero B softener is to condition the incoming hard water to a softer form which improves experience in bathing, washing, laundering and eliminates the scum formation and scaling effects of hard water on appliances and bathroom accessories.

An automatic softener valve, the softener resin media, a media holding vessel and a salt holding tank are the key components of this softener

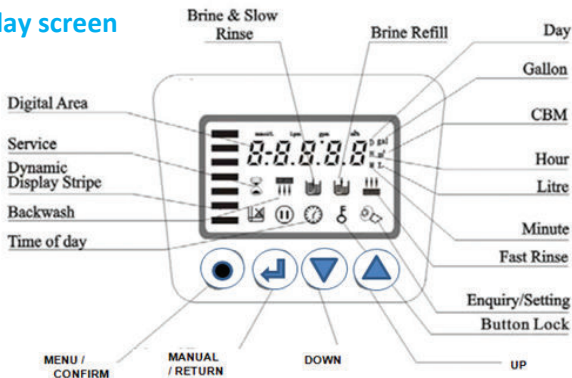
Another aspect of the Zero B softener is that, while installing and using, the automatic softener equipment complements well with the existing plumbing and electrical setup of the user.

Last but not the least, A robust and reliable automatic valve and a proprietary tamper proof Softening media delivers soft and safe conditioned water.

The proprietary food grade Zero B softener resin is marked with a unique purple colour to prevent entry of spurious and harmful replacement media whenever it is replaced after its life cycle.

KNOW YOUR ZERO B WATER SOFTENIZER

1. The display screen



The above display screen communicates the status of the softener.

The softener process stages such as Service, Backwash, Brine, Slow Rinse, Fast Rinse and Brine refill are indicated with appropriate icons as shown above.

Most of the key pads are for the service technician to input data on site situation such as hardness of water, water consumption etc.

The user's keys are limited and to be explained by the technician while installing.

The indications for the users to understand is as follows

☰ This barograph icon indicates that the auto valve is in service mode or softening mode.

After some time, the valve will display the following in sequence:

- a. Remaining output of the softener
- b. Flow rate of treated water
- c. Real time
- d. Regeneration trigger time

2. How to manually recharge the softener?

The option of manual regeneration is also available. This forced regeneration is recommended under following conditions

1. Power failure during auto recharging (If you have doubts of an incomplete recharging)
2. Unit is stagnant for more than one month or you don't get the quality of water.

3. Steps to recharge the softener

- For recharging always use white, clear and commercial grade/khadi salt (common salt) or tablet salt.
- Kindly get advice from the technician about when to refill the brine tank. (This advice is based on your raw water hardness, water consumption and the softener model).
- Ensure to fill at least 100 -120 kg of salt every time.
- To fill the salt: Open the brine tank top lid. Pour the salt inside the



brine tank surrounding the brine well. (Refer component identification diagram).

- Ensure that the salt is not spilled inside the brine well.

4. Be Aware

- Based on the set program by days or volume base delay program by the technician during installation, the auto softener recharges on that midnight using the treated water.
- Ensure that treated water tank is completely filled with soft water around midnight for the scheduled recharging.
- Ensure the main switch of auto valve is always ON.
- Ensure the switch of the relay box is also ON.
- Salt level – Ensure the salt level in the brine tank is as per advice.
- The auto valve saves the set data for up to 3 days without power. When there is no main power continuously for 3 days or more, a '12:12' flash may occur on display screen – This is to remind to reset the real time – Ask for service help.



CAUTION

For drinking - The Zero B softener only conditions the water for bathing, washing and laundering.

This water may not be microbially safe for direct drinking. Always use a point of use water purifier for drinking. Please take advice from our visiting personnel.

For replacement of media after expiry –

The food grade softener media is purple colored to ensure that the media, when replaced, is taken from our genuine source. (Other industrial grade softener media have a specific yellow brown colour – These medias leach out harmful chemicals unsafe for skin and indirect drinking).

Note that the softener media used in this product has a life of several years (subject to damages caused by adverse raw water quality changes, incorrect recharging, fouling due to Iron, Manganese and turbidity).



PROCESS AND FEATURES

Principle of Working

1. The softener converts the hard water into soft water with the process of Ion Exchange.
2. In the softening cycle the softener resin media exchanges the hard ions of calcium and magnesium for sodium ions.
3. When the softener resin is exhausted the auto valve recharges the resin media (The output given by your softener depends on the hardness of the raw water and your softener model).
4. In the Recharge cycle, salt water (brine) is prepared and sent (injected) to the media for recharging.
5. In the Recharge process the hard ions are released in exchange for sodium ions from the brine.
6. The charged softener resin again delivers soft water.
7. The automatic valve facilitates the changes in porting internally and directs the water based on the program.

Process Cycles

1. **Softening cycle** converts hard water to soft water.
2. **Backwash cycle** cleans the softener media completely of mud and debris that comes from inlet water during service.
3. In the **Brine injection cycle** the softener will be recharged with common salt.
4. A **slow rinse** ensures efficient charging of softening media.
5. **Fill cycle** fills water in brine tank to prepare brine for next recharge.
6. **Fast rinse** cycle ensures that the softener is cleared of all salts and set for softening once again.

The Service cycle durations depend on the raw water hardness, daily consumption and the softener model.

The Backwash, Injection, Slow Rinse, Fast Rinse and Fill cycles are termed as the recharge cycle.

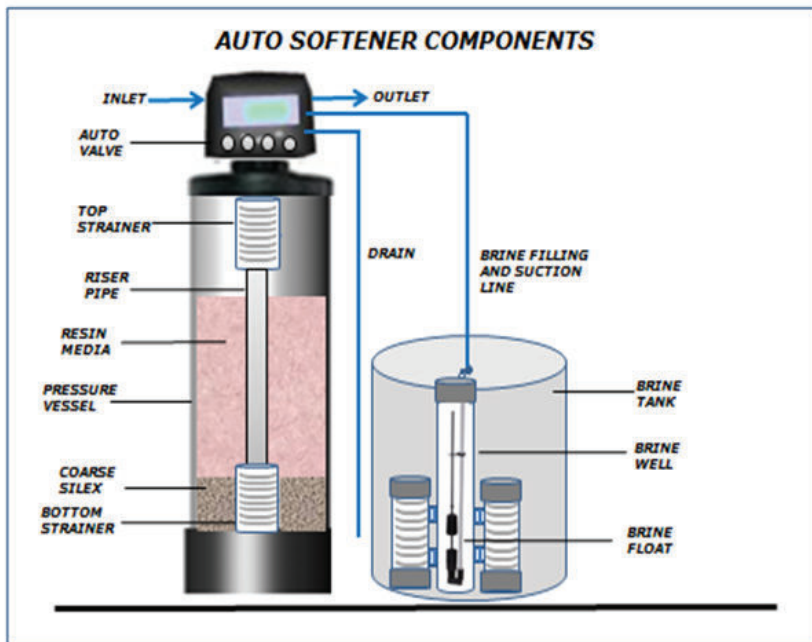
For model AS8 the total recharge time is around 112 minutes.



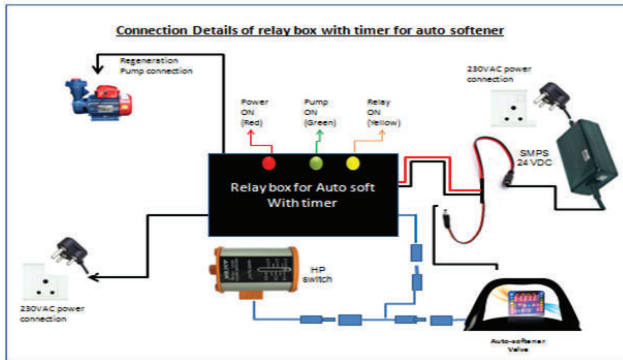
SPECIAL FEATURES

- A robust and reliable 6 stage fully automatic valve.
- Corrosion proof resin and salt tanks for longer life.
- User-friendly auto valve screen shows process stages and output alerts.
- Built-in no hard water bypass valve (NHBV) during recharging (Most softeners do not have a NHBV or have externally).
- An auto linked additional low power pump for recharging at night. (Other brand companies, do not provide raw water pump. The customer then uses his pump, causing huge power consumption for almost 110 minutes.
- Food grade tamperproof softening resin – colored resin to classify (Most softeners use industrial grade resin – unsafe for consumption).
- Elegant styled softener vessel body.

COMPONENT IDENTIFICATION



WIRING SCHEMATIC



Sr. No.	Parameter	Specifications
1	Inlet water hardness	800 ppm max.
2	Oil & Greece	nil
3	Turbidity	1 NTU
4	Chlorine	Nil
5	Heavy metals	Less than 0.1 ppm
6	Inlet water pressure	1.5- 3.5 kg/cm ² max.




TECHNICAL SPECIFICATIONS


Model	8AS
Flow Rates Up to	*8m3/h
Output/Regeneration(m3) Based on feed water hardness 200PPM CaCO3	50
Purple Resin Quantity(liters) Zr NaF	200
Coarse Silex (Kg)	20
Cabinet Salt Capacity in kgs Maximum	200
Salt Per Recharge in kgs	30
Brine Volume (Liter)	100
Brine Float Setting (mm)	420
Process Valve	Fully Automatic Programmable
Softener Vessel & Brine Tank	FRP composite vessel tank & HDPE brine tank
Vessel Size	21" dia. x 62" Height, 4" Top Opening
Regeneration Pump	Centrifugal mono block pump
Installation Footprint	6 x 6 sq. ft.
Electric Supply Requirements	230VAC, 6Amp = 2 Points

NOTE: a. Pressure drop of the softener system at specified flow rate is around 0.8 kg/cm²

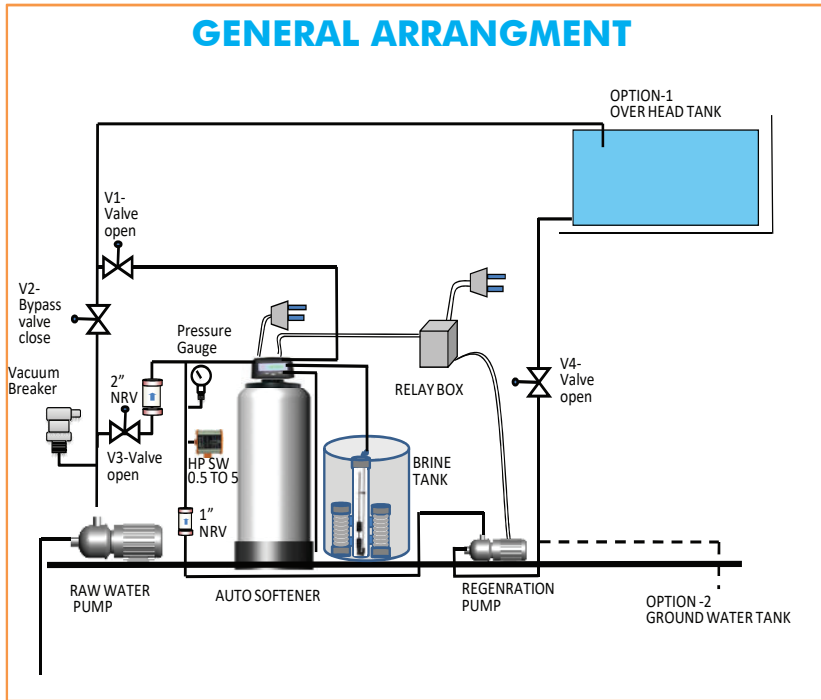


START UP OF THE SOFTENIZER

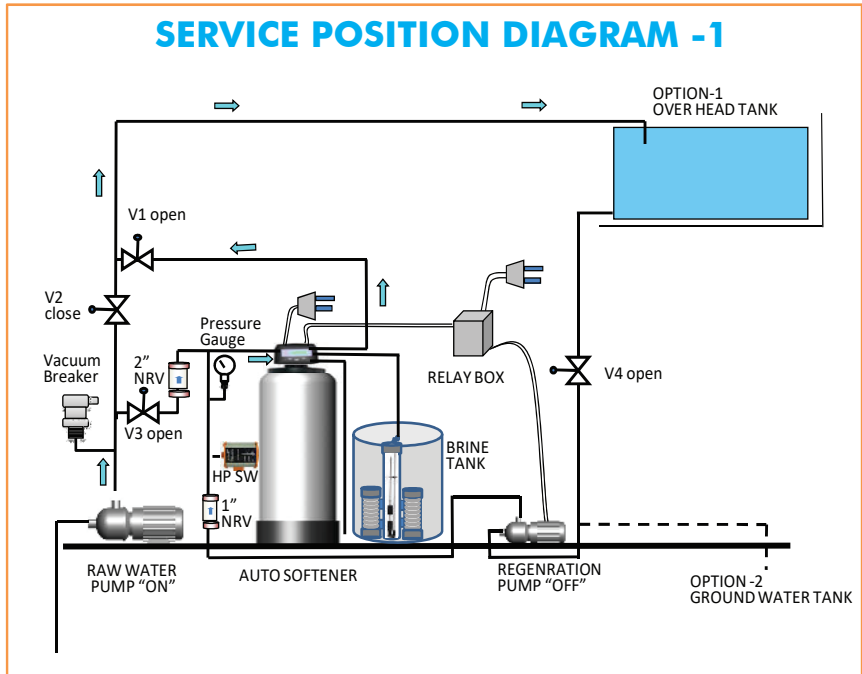
1. Ensure that the softener is installed by the authorized service technician as per recommended procedures for softener assembly and auto valve programming.
2. Ensure that sufficient inlet water supply and pressure is available as specified.
3. Ensure correct voltage- the softener requires a 230VAC, 50Hz supply.
4. Please check that the required amount of salt is filled in the brine tank.
5. Switch “ON” the power supply of auto valve and relay box of regeneration pump. Service bar graph icon and remaining capacity of treated water will become  active. This indicates that the auto valve is in service mode.
6. Now Switch “ON” the power supply of service pump. (Pump used for raw water).

7. Treated water tank starts getting filled up with soft water. After activation of the above icon, the flow rate of the treated water will be displayed, but when service pump is "OFF" the flow rate of the treated water will not be displayed.
8. As the treated water tank gets filled up, switch "OFF" the service pump. (If service pump is operated manually. In case of Auto tank level controllers, raw water pump will shut off automatically.)
9. As per the programmed schedule of regeneration (Based on Hardness of raw water and consumption), the regeneration of the softener will be carried out at night 2:00 AM automatically. The regeneration pump will be active only during regeneration cycle.
10. Option of manual regeneration button  is also available. The switch for manual regeneration is provided on the auto valve.

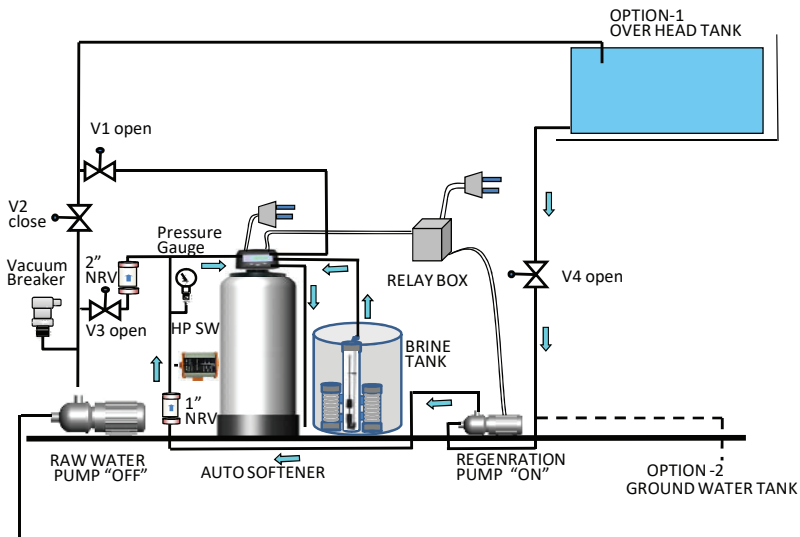
GENERAL ARRANGMENT



SERVICE POSITION DIAGRAM - 1



REGENERATION POSITION DIAGRAM -2



DO'S AND DON'TS

Do's

- Ensure that the product is installed inside the building or a shed.
- As per the schedule please insure that the brine tank is filled with salt.
- For recharging, use clean and white Khadi salt.
- Always use genuine spares and resin media (Purple colored resin media).
- Keep an 'Air gap' between drain line and drainage sump.
- On power outage for more than 3 days or more, a 12:12 flash may occur on the valve screen. Recharge set time (midnight) will be offset if the real time is not corrected – Correct the real time settings.

Don'ts

- Install the softener in direct sunlight.
- Switch "ON" the raw water pump when regeneration is in progress.
- Do not install on freezing temperatures or water over 40Deg.centigrade
- Ensure a nearby drain for the softener and do not land the drain line in the drain sump – keep an air gap



UNPACKING CHECK LIST

- Automatic valve with top strainer and fittings
- SMPS for AV
- CPVC fittings with NRV and vacuum breaker
- Brine tank with float valve and brine well assembly
- Riser pipe with bottom strainer
- Regeneration pump with pipes and fittings
- Relay box for regeneration pump
- Softener vessel
- Resin bags
- Coarse Silex bag

WARRANTY CARD

(To be filled in by the sales representative and retained by the customer for reference)

Unit Serial No. : Model : **Zero B SOFTENIZER, Model 8AS**

Invoice No. : Product Serial No. :

Dated : Date of Expiry of Warranty :

Customer's Name and Address :

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Tel.(Resi.) : (Off.) :

Fax No. : Email ID :

Customer's Signature :

(I accept the terms and conditions warranty)

Company's Stamp & Signature

WARRANTY INFORMATION CARD

Please preserve this warranty information card and ensure that this is duly stamped and signed by the Company Official / Authorized Dealer / Authorized Retailer of Ion Exchange (India) Limited. ZeroB Product is warranted throughout India only by Ion Exchange (India) Limited (herein referred to as the company) as per the conditions printed herein.

TERMS & CONDITIONS OF WARRANTY:

We hereby warrant that the unit / equipment shall be free from defective material and faulty workmanship, subject to the following clauses:

Our liability in respect of any defect or failure of any equipment supplied by us or any loss, injury or damage attributable thereto is limited to making good by way of replacement or rectification, defects which show up under proper use, provided the equipment is operated and maintained strictly in accordance with our instructions and arise entirely from proven faulty design, material or workmanship, within a period of 12 months from the date of commissioning of equipment. At the end of this period all our liabilities will cease under this warranty. We shall have the right to make any replacement of spares or repairs that is required at site. In case of replacement, buyer shall return the replaced part / component to us immediate / on repair completion.

The warranty period on the replaced / repaired part will be limited to the remaining, unexpired portion of the total warranty period. Electrical components are covered under this warranty.

When equipment is ready to be dispatched but cannot be dispatched due to reasons attributable to the buyers, the warranty period will be 18 months from the date of readiness for dispatch as notified by us in writing.

No other party or agency may carry out replacements or repairs unless authorized by us in writing.

If a part / component are to be replaced or repaired under this warranty, there will be no charge for the replacement. However, the travel and conveyance as well as boarding & lodging expenses incurred by our representative reputed for his work will be charged to the buyer at actual.

This warranty does not cover replacement / repairs required as a result of normal wear & tear, accidents or damages / defects caused by misuse / maloperation of the equipment by the buyer.

Ion Exchange (India) Limited shall be excused from any delay or failure in performance required hereunder if caused by reason of any occurrence or contingency beyond its reasonable control, including, but not limited to, acts of God, acts of war, fire, laws, proclamations, edicts, ordinances or regulations, riots, earthquakes, floods, explosions or other acts of nature. The obligations and rights of the party so excused shall be extended on a day-to-day basis for the time period equal to the period of such excusable interruption.

Consumable such as filters / cartridge would be on chargeable basis.

Warranty is applicable in standard rated water conditions only.

This warranty is void if:-

(a) The unit/ equipment is put to wrong use / application (b) The unit/ equipment installed / commissioned by any person / agency not authorized by us. (c) The unit is not installed / operated / maintained as per instructions given in our operation manual and / or those given by our authorized representative. (d) The operating conditions and influent water quality are other than those for which the unit / equipment was supplied. (e) The agreed / contract price and installation charges, if any, has to be paid to us / our dealer / our retailer.

Ion Exchange (India) Ltd. is a leader in the business of water treatment and solutions that are so vital to people's lives and the environment.

For more than five decades, Ion Exchange (India) Ltd., has pioneered many path-breaking innovations in the field of engineering and marketing to provide a one-stop solution for industry, homes and communities. Bearing testimony to this are more than 35,000 water treatment installations worldwide. Our plant have been exported to USA, UK, South East Asia, Japan, Middle East, Far East as well as neighbouring countries like Bangladesh, Nepal, Mauritius and Sri Lanka.

In the consumer market, under the flagship of the ZeroB Brand, the company has introduced products catering to every need of the customer.

From Online Water Purifiers to the most advanced Reverse Osmosis Water Purifiers, from drinking water vending machines to bottled packaged water, to name a few.

Ion Exchange (India) Ltd. has led virtually every breakthrough in the Indian market fulfilling the company's vision: "To be a leader in our business which is so vital to people's lives and the environment".

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