



Installation and Operation Instructions for Residential Automatic Filters

MBA-AC-10/13

MBA-AN-10/13

MBA-FE-10/13

MBA-S-10/13

MBA-AC-10/13 Carbon Filter Consists of one fiberglass tank with internal distributor, gravel, automatic control valve and boxes of Activated Carbon. It is designed to remove the chlorine and earthy taste and odors from the water supply.

MBA-AN-10/13 Neutralizer Consists of one fiberglass tank with dome hole, plug, internal distributor and gravel, automatic control valve, and boxes of Calcite and/or NS Mix. It is designed to increase the pH of the water supply which eliminates the corrosive water.

MBA-FE-10/13 Iron Filter Consists of one fiberglass tank with internal distributor, gravel, automatic control valve and boxes of Birm or Manganese Greensand. It is designed to remove cloudy water iron from the water supply, but can only be used on water with a 7.0 pH or greater. This conditioner can be supplied with Birm, which needs no chemicals for regeneration, or Manganese Greensand, which is regenerated with Potassium Permanganate.

MBA-S-10/13 Sediment Filter Consists of one fiberglass tank with internal distributor, gravel, automatic control valve and boxes of Filter-Ag. It is designed to remove particles from the water supply. It will filter out particles as small as 20 microns.

These filters are designed to operate on water pressures of 30-100 PSI with maximum water temperature of 100° F.

Installation Instructions

Filter Positioning:

Place conditioner in desired position, keeping conditioner away from walls and other obstructions to allow ample room for servicing the unit.

Filter Tank Loading:

1. Remove the yellow plug from the top of the blue mineral tank.
2. Cover the 1" distributor pipe with tape.
3. Empty the box or boxes of filter material into the tank via the 2 ½" top opening.
4. Remove the tape from the 1" distributor and clean tank threads.

The mineral tank is now properly loaded and ready for installation.

MODEL NUMBER	FREEBOARD	FILTER MEDIA (CU. FT.)
MBA-AN-10	14 IN.	1 CALCITE 1/2 NS-MIX
MBA-AN-13	24 IN.	2 CALCITE
MBA-FE-10B	14 IN.	1 & 1/2 BIRM
MBA-FE-13B	24 IN.	2 BIRM
MBA-FE-10G	14 IN.	1 & 1/2 GREENSAND
MBA-FE-13G	24 IN.	2 GREENSAND
MBA-AC-10	14 IN.	1 & 1/2 CARBON
MBA-AC-13	24 IN.	2 CARBON
MBA-S-10	14 IN.	1 & 1/2 FILTER AG
MBA-S-13	24 IN.	2 FILTER AG

255 Control Valve:

WARNING: Use only silicone lubricant on the control valve parts. Using petroleum lubricant will destroy the control valve.

Install the control valve onto the top of the blue mineral tank, making sure the distributor pipe inserts into the bottom of the control valve. Tighten control valve onto mineral tank.

Service and Drain Piping:

1. Pipe conditioner into service lines as shown in Figure 1. Use a union on the drain piping in case the valve must be removed from mineral tank for servicing. When using sweat fittings, be careful not to put heat directly against the mineral tank or the control valve. When looking at the front of the control valve, the inlet piping is on the left side of the bypass valve and the outlet is on the right side of the bypass valve.

2. In making drain line connections, keep the following items in mind:
 - A. Recommended pipe length less than 20 feet and a pipe diameter greater than $\frac{1}{2}$ inch (inside diameter).
 - B. Use hard copper or plastic for drain line.
 - C. The drain line must be piped in accordance to local plumbing codes. When piping the drain to your sewage facility, always use an indirect connection (open drain), but, under no circumstances, should there be a direct connection with sanitary sewage facilities (Figure 2).
 - D. See Drain Line Connection section in valve booklet.

Figure 1

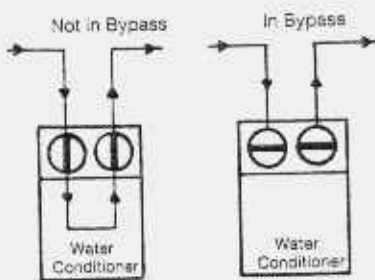
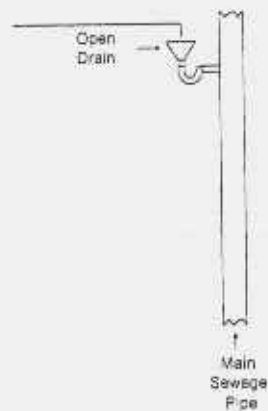


Figure 2



Filling Filter with Water:

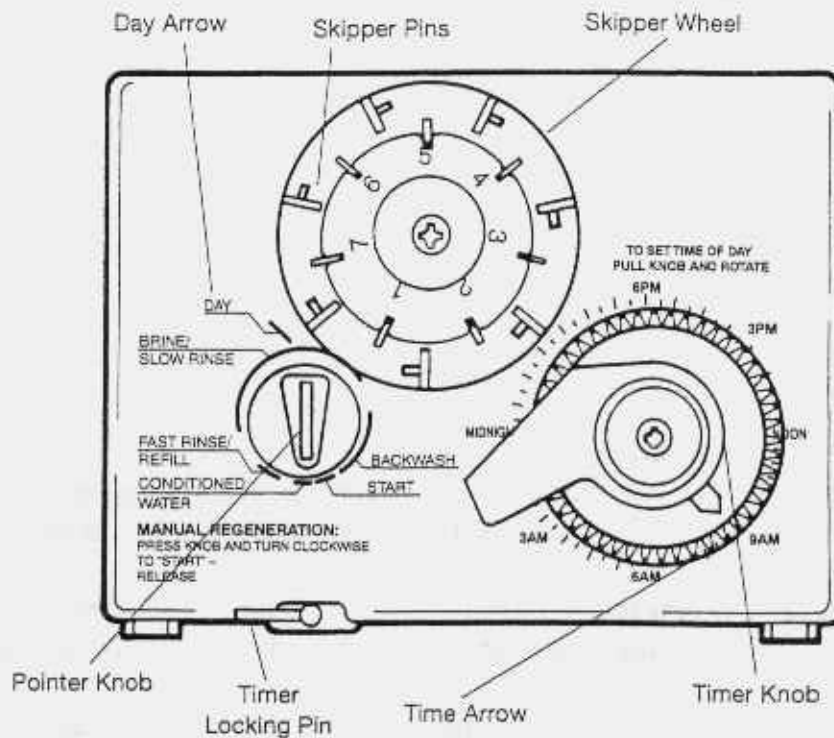
1. Remove plastic lid from control valve.
2. Depress pointer knob located on face of timer assembly and turn in a counterclockwise direction until arrow points to the BACKWASH position. Filling tank in this position allows air to escape from drain.
3. Open the bypass inlet valve $\frac{1}{4}$ turn and allow water to flow into the mineral tank at a slow rate.
4. When water is running steadily at the drain, open the bypass valve's inlet and outlet to their maximum position.
5. Plug timer assembly into 120v/60 Hz outlet. Outlet must be within 10 feet of unit. If additional wire is needed, use 18 AWG solid or stranded wire with splice connectors. Refer to Page 6 of manual. Make sure the electrical service provides power 24 hours per day. Depress pointer knob located on face of timer assembly and turn counterclockwise to the beginning of the FAST RINSE cycle. The arrow should be in the 8 o'clock position. Allow timer to move knob from 8 o'clock position to CONDITIONED WATER position electrically (approximately 15 minutes) to rinse out the media fines.

255 Control Valve Timer Programming:

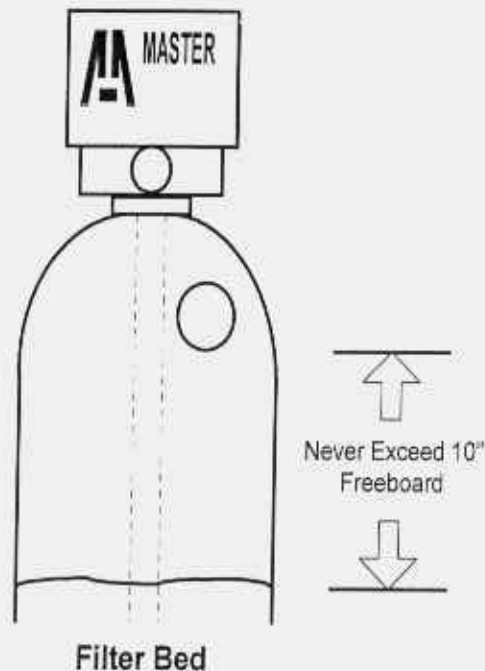
The automatic filters should regenerate once every 6 days. To set the unit for this frequency of regeneration, program timer assembly by these steps, following Figure 3.

1. Pull out all the pins located on Skipper Wheel.
2. Push in the #1 pin.
3. Rotate skipper wheel until Day Arrow points to #1 pin located on the skipper wheel.
4. Pull out Timer Knob and rotate until the arrow on timer knob is pointing to the correct time of day on face of timer assembly.
5. Timer assembly will now automatically initiate a regeneration on the preset day at 2:30 AM.

Figure 3



IMPORTANT ACID NEUTRALIZER RECHARGING INSTRUCTIONS



MBA-AN-10 and MBA-AN-13 units must be recharged with NS-Mix.

NS-Mix is a mixture of Calcite and Mag Oxide, which is used to increase the pH of the water supply. NS-Mix is shipped in 50 pound boxes.

INSTRUCTIONS

1. Close inlet and outlet stop valves located on conditioner's service piping.
2. Depress pointer knob on timer assembly and turn counter-clockwise to the BACKWASH position.
3. Remove gray, PVC dome plug located near the top of the tank. (See Drawing)
4. Use 5/8" syphon hose (provided with unit) to remove water from dome hole.
5. If a layer of dirt or oxidized iron is directly on top of mineral bed, try to remove with syphon hose or wet-dry vac.
6. Insert yard stick into dome hole and force through the bed. This will reduce the chance of channeling.
7. Insert funnel into dome hole and pour NS-Mix into tank until the filter bed is 10" below the dome hole.
8. Open inlet stop valve and allow water to flow into the tank until water level reaches the dome hole. Close inlet stop valve.
9. Be sure dome hole threads are clean. Replace dome plug into dome hole and tighten.
10. Open inlet and outlet stop valves **slowly** to their maximum position.
11. Depress pointer knob and turn counter-clockwise to the START position. The unit will regenerate and return to the CONDITIONED WATER position automatically.

Recharging Neutralizers should be done at least once a year.