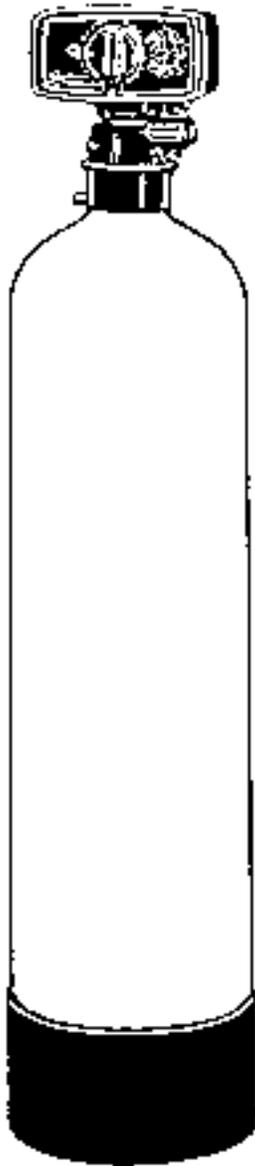


# INSTALLATION INSTRUCTIONS

## Fully Automatic Water Filters



**AUTOMATIC MODELS**  
**07AF-10**

### INSTALLATION INFORMATION

Model No. \_\_\_\_\_

Unit Date Code \_\_\_\_\_

Date Installed \_\_\_\_\_

### WATER ANALYSIS RECORD

Hardness \_\_\_\_\_ GPG      Sulfur \_\_\_\_\_ PPM

Iron \_\_\_\_\_ PPM      pH \_\_\_\_\_

Manganese \_\_\_\_\_ PPM      Tannins \_\_\_\_\_ PPM

Turbidity \_\_\_\_\_ FTU

Other:

Other Water Treatment Equipment Installed:

Installed By:

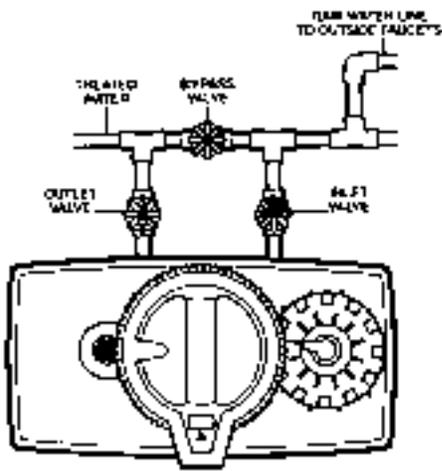
For Service Call:

## WATER FILTER SPECIFICATIONS (Figure 1)

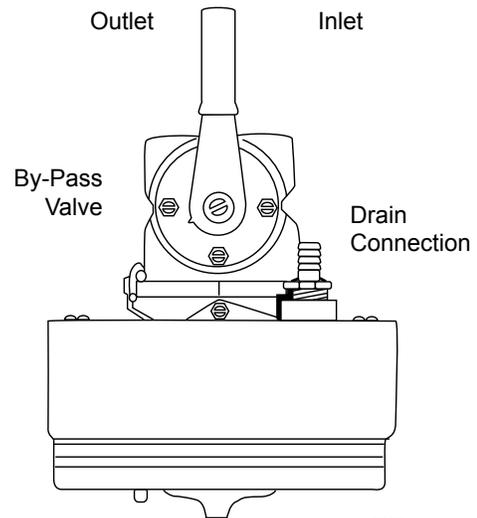
APPLICATION	FILTER BED
Neutralizing Acid Water, 6.0 to 7.0 pH	1 cu. ft. Neutralizing Mineral and 20 lbs.* "D" Gravel (Underbed)
Taste and Odor Removal, Wide Application	1 cu. ft. Activated Carbon and 20 lbs.* "D" Gravel (Underbed)
Remove up to 10 PPM Iron	1 cu. ft. Birm and 20 lbs.* "D" Gravel (Underbed)
Remove fine suspended matter and turbidity up to 125 PPM	1 cu. ft. Filter-Ag and 20 lbs.* "D" Gravel (Underbed)

\*Gravel installed in mineral tank at factory

## INSTALLATION ILLUSTRATIONS (Figure 2)



**3-VALVE BY-PASS SYSTEM**



**INCLUDED BY-PASS VALVE**

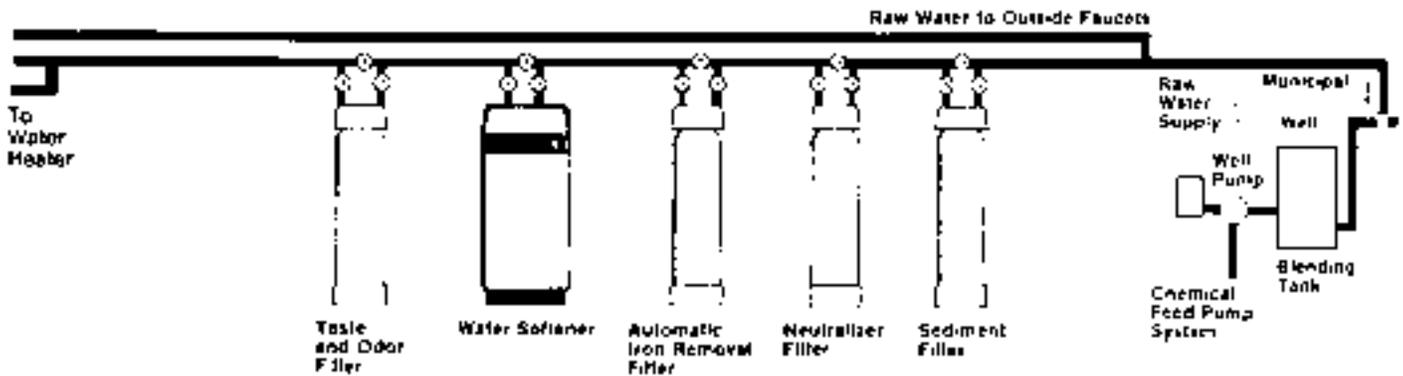


Diagram A Sequence of specialized water conditioning equipment

## FILTER INSTRUCTIONS

These instructions cover fully automatic filters. Read thoroughly before proceeding with the installation. Check to be sure water is available in sufficient volume and pressure to adequately backwash the equipment at the specified rate. When higher service flow rates are required or water for backwash is limited, two units should be installed in parallel. Such an installation doubles the service flow rate without increasing the backwash requirement. Naturally, they should be set to backwash at different times - at least two hours apart.

**Filter Operation** - During "Service" the water flows down through the mineral bed and out to service lines. Collected turbidity and sediment must be regularly removed from a filter by reversing the flow of water through the filter and running to drain. Called "backwashing", and lasting 15 minutes, this process expands the mineral bed, freeing the turbidity - which is then washed out to drain.

Normally, the units should be set to backwash twice every 12 days. Where conditions are extreme a more frequent backwash schedule will be required to assure the maintenance of a clean filter bed.

A 46 minute setting period follows the backwashing where no flow to drain will be observed. Then a down flow rinse to drain follows to purge untreated water from bottom of filter bed and to settle the bed before returning to service.

During backwashing and rinsing, untreated water is by-passed to the service lines so that uninterrupted water service is maintained.

### 1. UNPACKING

Check packing list located on outside of tank carton against cartons received. The large carton contains the filter tank, main control valve and underbed gravel. Filter mineral is available and is packaged separately.

### 2. LOCATION

For complete customer satisfaction, all water in the home should be filtered with the exception of the outside faucets. Select a location near the water service inlet and near a floor drain. Be certain that all sides of the filter are easily accessible for service and maintenance. On a private water system, locate filter as shown in Diagram A. An uninterrupted 115 volt circuit must be nearby for automatic units.

### 3. MINERAL

The tank must be loaded with mineral after the tank has been placed at the desired location. Remove the valve by unscrewing from the mineral tank. Leave distributor tube in the tank while filling. Cover top of distributor tube to prevent mineral from entering tube while filling. Place funnel in hole. Pour several gallons of water in the tank then pour in the filter mineral.

The required quantity of each type of filter mineral is shown under specifications, Figure 1. When filled, the tank should be approximately two thirds full. As a check, measure distance from top of filling port to the mineral bed surface. This distance should be approximately 18 inches.

Fill tank with water by using a garden hose or several buckets of fresh water. This will permit the filtering material to become soaked while preparing the installation and will prevent the control valve from being plugged with floating mineral on initial backwash. Remove funnel and the plastic plug from the distributor tube. Replace the valve, while being careful to position the distributor tube into the distributor pilot tube in the adapter.

## 4. WATER SUPPLY CONNECTIONS

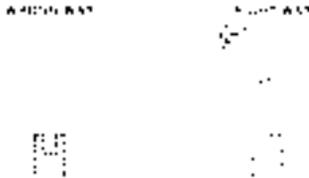
Figure 2 shows typical installations. Inlet and outlet connections are 3/4 inch pipe size and are marked with raised arrows on the sides of the plastic valve. Turn off main water supply and connect the pipes, valves and fittings.

CAUTION: IF COPPER PIPING WITH SWEAT FITTINGS IS USED, DO NOT SWEAT DIRECTLY INTO THE IN/OUT MANIFOLD OF FILTER VALVE OR BY-PASS VALVE. HEAT WILL DAMAGE RUBBER AND PLASTIC PARTS.

## 5. DRAIN LINE CONNECTIONS

Install 1/2" I.D. plastic pipe or tubing from the hose barb located on right side of main control valve to an open drain. Do not connect the drain line directly to a sewer as this would violate sanitary codes. A 4 inch gap between the end of the drain line and a sewer is recommended. Keep drain line as short as possible. An overhead drain line can be used if necessary, but should discharge below the main control valve if possible.

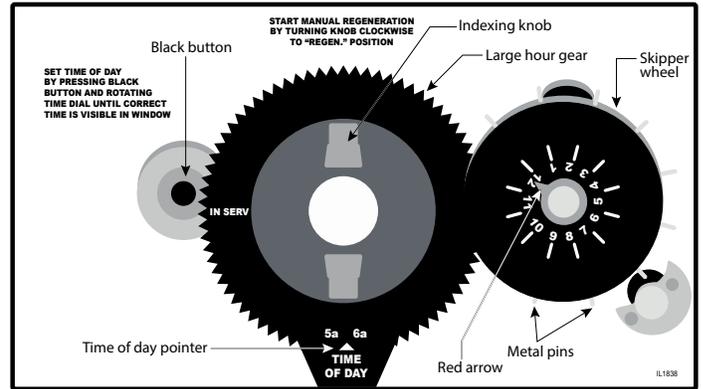
CAUTION: NEVER CONNECT DRAIN LINE INTO A DRAIN, SEWER LINE OR TRAP. ALWAYS ALLOW AN AIR GAP BETWEEN THE DRAIN LINE AND THE WASTE WATER TO PREVENT THE POSSIBILITY OF SEWAGE BEING BACK SIPHONED.



## 6. ELECTRICAL CONNECTIONS

Automatic filters are equipped with a 6 ft., 115 volt, grounded power cord. When the plug is inserted into a properly grounded receptacle, it will guard the user against electrical shock if the unit insulation should fail for any reason.

Do not plug into an outlet controlled by a wall switch or a pull chain that could be inadvertently turned off.



## AUTOMATIC CONTROL VALVE

### 7. SETTING THE TIME CONTROL

**Time of Day** - Depress the black button, disengaging the large gear. Turn the large gear until the actual time of day appears at the Time of Day arrow. Note "AM" and "PM" selections on the large gear and set the time accordingly. Release the black button, making sure the gear is engaged.

**Backwash Frequency** - Set the days you want regeneration to occur by pulling tabs on the skipper wheel outward to expose fingers. By pulling one tab, the filter will backwash every 12 days. Pull tabs 1 and 7 to backwash every 6 days.

**Other Settings** - The starting time of backwash is preset for 1:00 A.M. on each day for which skipper wheel tab is slid out. All other settings such as Backwash, Rinse, and Fast Rinse have been preset.

### 8. CONTROL VALVE POSITIONS

**AUTOMATIC FILTER** - The automatic control valve **must be started in service position!** The words "In Service" are imprinted in the manual regeneration knob dial. Rotating the manual knob **CLOCKWISE** will place the unit in the various positions printed on the dial.

The positions printed on the dial and cycle times are as follows:

DIAL READING	CYCLE TIME
1. In Service	
2. Regeneration	
3. Rinse	5 Min. Rinse
4. Backwash	12 Min. Backwash
5. Pause	46 Min. Settling period
6. Rapid Rinse	12 Min. Backwash
7. Settle Rinse	5 Min. Rinse

## 9. STARTING THE UNIT

Place the control valve in the SERVICE POSITION and follow these steps:

- (a) Place the by-pass valve (valves) to SERVICE position and allow water to flow into the mineral tank. On a 3-valve system (Figure 2) open the inlet and outlet valves and close the by-pass valve.
- (b) When the water stops flowing, open a treated water tap until all air is released from the lines, then close the tap.
- (c) Manually index knob to the BACK WASH POSITION. (Clockwise rotation.)
- (d) Plug in the electrical cord. Set the days of backwash desired. Set the time of day as also noted in Section 7.

On all units except carbon filters, allow the unit to backwash 15 minutes or until the water becomes clear at drain. This will wash out the fine material from the mineral. Check water at drain to be certain large quantities of mineral are not being lost. If so, return valve to IN SERVICE position and allow mineral to soak longer before being backwashed.

NOTE: WHEN INSTALLING A CARBON FILTER, IT IS BEST TO ALLOW AT LEAST 3 HOURS OR PREFERABLY OVERNIGHT FOR CARBON TO SOAK BEFORE ATTEMPTING TO BACKWASH. TO SPEED WETTING, OPEN THE FAUCET OF THE TREATED SUPPLY AND ALLOW TO RUN 5 MINUTES OR LONGER OR UNTIL WATER IS CLEAR. IF CONSIDERABLE CARBON IS STILL BEING LOST WHEN BACKWASHING, LEAVE IT SOAK FOR A DAY OR TWO LONGER.

- (e) Position to RAPID RINSE. The automatic valve will automatically return to IN SERVICE after approximately 17 minutes.

## 10. BACKWASH

Units will now Backwash on a frequency as established in Step 7 "Setting the Time Control."

## 11. EXTRA BACKWASH

Valve can be manually regenerated by turning the control knob to the Backwash position. The unit will automatically continue through the regeneration cycle and return to the SERVICE position when regeneration is complete.

## 12. TO SKIP BACKWASH

For vacations or extended periods of absence, the timer cord plug can be pulled out of receptacle. Upon return, plug in timer, reset the time of day (Section 7-A) and backwashing will resume as normal.

## 13. FINAL CHECKOUT

- (a) Be certain by-pass valve is closed and inlet and outlet valves are fully open.
- (b) Check electrical supply to be certain cord is connected to an uninterrupted 115 volt outlet.
- (c) Be certain warranty card is filled out and mailed in.

## 14. ADDITIONAL INFORMATION

- (a) Carbon filter mineral must be replaced periodically to ensure filter effectiveness. Maximum carbon life is three years.
- (b) Calcite filter mineral dissolves slowly. Therefore, it will be necessary to add calcite to the unit from time to time.