

Operational Modes Of Regeneration

1. Parallel Delayed (1" and 2" valves) -- Parallel delayed consists of 1,2,3 or 4 valve and tank units. All units in the system are treated as if they are pieces of one unit. The need to recharge is based on the capacity of the entire system. When needed all units are recharged and returned to service one after another. The recharge time is set during the initial setup sequence. Bypass water is prevented by the use a 2" normally open diaphragm valve. The controller will not allow more than one unit to recharge at a time.

2.Parallel Immediate (1" and 2" valves) – Parallel immediate consists of 2, 3, 4 valve and tank units. All units are in service simultaneously. A unit enters the recharge cycle as soon as the capacity is exhausted. When a unit is recharged it is returned directly to service. Bypass water is prevented by the use of the 2"normally open diaphragm valve. The controller will not allow more than one unit to recharge at a time.

3. Alternating Immediate (2" Valve) – Alternate immediate systems consist of 2, 3 or 4 valve and tank units. One of the units is either in regeneration or standby mode. When a unit is exhausted, the standby unit first enters service and then the exhausted unit recharges. After recharging the full capacity unit is held in standby. The valve prevents water flow, bypass water is prevented by the use of a 2" normally open diaphragm valve.

4. Peak Flow (2" valve) – Peak flow systems consist of 2, 3, or 4 valve and tank units. The number of tanks in service based on actual flow of the water system and the minimum tanks in service setting. The operator sets the peak flow trip point. If the flow rate reaches the peak flow trip point an available unit is brought on line. After the service flow drops from the peak flow trip point for 30 minutes, the control will drop off units in the same sequence they were brought on line. Regeneration bypass water is prevented by the use of a 2" normally open diaphragm valve. Returned directly to service. Bypass water is prevented by the use of the 2"normally open diaphragm valve. The controller will not allow more than one unit to recharge at a time.

Salt Usage Modes

This display is only shown if the System Type is set to "Softener". The UP key presents the choices " Actual Dose" , "Auto Adjusting", "Boiler Option" and "Salt Efficient".

1. Actual Dose – Salt dose is the one selected by the user. The salt dosage is set from 4 – 15 lbs per cubic foot of resin.

2. Auto Adjust – The unit will adjust to the water use patterns, similar to the residential units. Salt dose is chosen from the list of five capacity values by the recharge algorithm.

3. Boiler Option – Salt dose is 12% greater than the selected value. When Boiler Option is selected, the unit will adjust the salt dose to provide less than 1ppm hard water bleed

4. Salt Efficient – Salt dose is chosen as in the "Auto adjust" method except that only those capacities that provide 4000 grain/lb efficiencies are allowed. This mode is not available for downflow systems due to their inherent inefficiency.

Salt Dose

This display is only shown if the System Type is set to "Softener". It is not shown for Parallel Delayed systems in which the Efficiency Mode is set to either "Auto Adjusting" or "Salt Efficient". The salt dosage is adjustable from 4 (lbs) to 15 lbs per cubic foot of resin by 1 lb increments. Exception: If the Efficiency Mode is set to "Salt Efficient", the maximum salt dose is 5 lbs per ft³.