ASSEMBLY INSTRUCTIONS - FLECK SIMPLEX INDUSTRIAL SOFTENERS

Valves covered: 5600/4600 Time Clock, 5600 Econominder,

This water softener has been shipped in kit form to facilitate easier transport and installation. It has been broken down into four (4) main components:

1) Valve with top distributor fitted. Regeneration has been pre-set in our factory. You will need to set frequency of regeneration on time clock valves, or the capacity less a suitable reserve on Econominder valve. A Fleck instruction manual is included with the valve. If a low voltage valve has been specified, the appropriate transformer will be packed with the valve.

2) Pressure vessel with riser tube and distributor cut to length and chamfered. The top of the tube will have a slip on cover to prevent resin falling inside the distributor when the pressure vessel is filled. The riser tube is approximately 10mm longer than the vessel.

3) Brine tank complete with brine well and brine pick up. Brine line is cut to length and is packed in the brine tank.

4) Resin packed in 25 litre sacks plus one smaller bag to balance resin volume if necessary.

ASSEMBLY

Locate the component parts of the softener, and check that everything required has been delivered. Ensure installation site is clear and level.

If possible, place the pressure vessel in its final location before filling. Check that the distributor tube with the slip on cover is in place. Using a hose, 1/3 fill the pressure vessel with water then using the funnel, slowly pour in the resin taking care not spill any on the floor. Ensure that the distributor tube remains central in the vessel during filling. After emptying all the bags, the vessel should be at most 75-80% full. This is to allow rising space for the resin during backwashing. Once the vessel is filled, immediately sweep up any spilled resin. Remove the cover from distributor tube, and brush any resin beads out of the threads in the neck of the pressure vessel.

Unpack valve and slip down over the distributor tube. You will feel slight resistance as the riser tube is forced through the internal sealing 'O' ring. Screw the valve in to the resin vessel, taking care not to cross the

threads. Excessive force should not be needed as the valve is running in to the vessel. Finally tighten to approximately 20 ft.lbs. torque. Adjust the position of the vessel to line up pipework connections, not the position of the valve on the vessel.

Position the brine tank and connect brine line to the bulkhead connector above the overflow (3/8" brine line) Ensure that a brass insert is placed inside the brine line before connecting.

INSTALLATION

There must be a minumum water pressure of 20 psi (1.4 Bar) in order to draw brine during regeneration. Fit a pressure booster set if necessary.

Maximum water pressure must not exceed 125 psi (8.5 Bar). Fit a pressure reducing valve if necessary.

Install a three valve bypass system in to the water line to allow the unit be isolated during routine servicing.

Connect inlet and outlet pipework to valve using flexible connections or plastic high pressure piping. It is essential to prevent stress on the vessel as it cycles during service, since it will expand and contract longitudinally. Connect water inlet and outlet using flexible hose. Looking at the control valve from behind, the inlet is on the left and the outlet is on the right.

The drain line connection is a rearwards pointing 1/2" (12.5mm) hose barb on the left hand side of the valve head. There is a 1/2" (12.5mm) overflow connection on the side of the brine tank. This a security overflow in the unlikely event of the brine tank overflowing. It is recommended that this overflow is also connected to the waste drain.

A waste outlet or gulley is also required to carry away the water used during regeneration. Connect drain line to the outlet from the drain line. Ensure that there is an air break in the drain at the same height as the valve to prevent negative pressure on the vessel.

Connect brine line to the elbow on the clear aircheck assembly on the main valve. Again, ensure that a brass insert is placed inside the brine line before connecting.

A continuous 240 volt 50Hz power supply is required adjacent to the unit, fused 1 amp preferably unswitched. Connect power supply to valve and commission.

COMMISSIONING

The objective of commissioning is to fill the softener and brine tank with water, check for leaks and prepare it for service. The simplest way to commission the unit is to initiate a regeneration. This will eliminate the air from the system and flush the resin prior to use.

Add water to the brine tank until it is filled approximately 6" (100mm) from the bottom of the tank.

After 10 minutes, turn on the power supply and inlet water supply. Turn the main control knob approximately 45º clockwise to initiate a regeneneration. The full cycle driven by the timer motor will take 180 minutes on softeners 25 litres and above, or 90 minutes on softeners 20 litres and below. During regeneration check that brine is drawn in from the brine tank during 'Brine & Rinse' and that water returns to the brine tank during 'Brine Refill'. The level the water will reach depends on the type of salt used and the resin volume of the softener.

When the regeneration is completed, open the outlet hose connection tap and ensure that the bypass is closed in the plumbing system.

Set the blender on side of valve to required level (not fitted to time clock units of 20 litres and below). Unless blending is required and the level checked downstream of the unit at normal service flows, it is recommended that the blender is set to 0%.

Set the capacity of the system on metered units (see manual and addendum sheets 'Fleckcal') or frequency of regeneration on time clock units (see manual). Set the current time of day for regeneration to occur at 2:00AM. If another regeneration time is required then offset the current time.

The softener will now be commissioned.

Open the outlet from the softener to run water to service.