

SEA FROST®

Special Instructions for **Charging a Twin Valve DC 5000** System.

It is important to measure the refrigerant charge to avoid overcharge. Overcharge will overload the compressor and may cause the system to trip the high pressure cut out when operating on refrigerator only. It will also overload the motor causing motor damage.

Maximum charge should be 24 oz of refrigerant.

If charging with a bulk cylinder of refrigerant, **vapor charge** with the freezer only operating. Add refrigerant slowly and intermittently letting the system operate with no charge being added for several minutes between top ups. Observe the sight glass and at the point where the cold plates drop below 32 F. (freezing) the glass should be cleared. Add a bit more to finish the charging, guess at 2 to 3 oz. Low side gauge pressure should be perhaps 10 PSI. as the plates start to freeze. High side gauge pressure in 80 degree F. water should be 100 to 125 PSI.

Continue to operate the freezer only. The low side should continue to drop slowly to about 0 PSI.

Next, switch to refrigerator only by turning off the freezer thermostat and turning on the refrigerator thermostat. Observe cooling and gauge pressures. Low side should drop slowly to 0 PSI.

Operate both zones observing the sight glass. The glass may foam for some time but will be clear when both the freezer and the refrigerator come into normal operating temps.

High side gauge pressure should not rise when both zones operate.

A warm system will show a foamy sight glass for some time after start up.

Overcharge will show as excessive high pressure and high amp draw on the motor especially when both zones are on. Switching from one zone to the other or to both should not change the high pressure readings. Allow 10 minutes on each zone after the plates pull down to temperature to verify proper charge.

Checking the Charge

Always check with the freezer zone on. The glass should be mostly clear with slow moving bubbles on occasion. Switching to both zones may make the glass foam until the thermostat expansion valves start to meter. Touch and hold the blue RFD. It should always be cool. Typically cooling water temp.