

## Master Controller Reverse Cycle Defrost 2.0 Startup Guide

### Installation Requirements:

- Reverse Cycle Defrost (RCD) requires liquid line one size larger than standard, insulated
- RCD requires two pairs low voltage wire evaporator to condensing unit
- Coil Outlet Probe mounts 6" from evaporator on suction line, well insulated
- Refrigerant charge must be measured, charge to superheat set-point readout (SH), and the subcooling of the condenser at 1 to 5F when condensing temperature at 110F. Using block-fan technique to gain the condensing temperature when ambient temperature is lower than 90F.
- Break vacuum with drum on scale

### Charging Procedure:

- ½ - 1½ HP: Initial Charge: 1lb., Additional Incremental Charge(s): 8 oz.
- 2 - 4 HP: Initial Charge: 2lb., Additional Incremental Charge(s): 8 oz.
- 5 HP and Larger: Initial Charge: 3lb., Additional Incremental Charge(s): 1 lb.
- Allow (5) minutes between Initial Charge and subsequent Incremental Charge(s) to observe reduction and stabilization of Superheat (SUPH)
- When Superheat reaches 20-24° stop charging for (30) minutes, then observe (SH) at reduced space temperature
- If Superheat (SUPH) is 8-12°F no additional Incremental Charge is required
- Target Superheat readout at (SUPH) is 10°F, same as (SHSP) setpoint

NOTE: For locations with extreme low ambient temperatures it may be advisable to increase the final refrigerant charge amount, determined by the above method, by 20%.

Record the final charge amount on the evaporator coil end panel behind the controller and conspicuously on the condensing unit. A permanent marker or printed strip label (Dymo, PTouch) is best.

### Final Checks:

- Check all factory default set points per list on Page 30 of *Condensing Unit Installation and Operations Manual*
- Adjust Room Temperature Cut Out at (RMSP) if required, defaults +35 cooler, -10° freezer
- Adjust Temperature Differential to Cut In at (ADIF) if required, defaults 3° cooler, 5° freezer
- Adjust condensing unit Low Pressure Control to (2lb.) cut-out and (25lb.) cut-in by gauge for R404A
- Adjust condensing unit Low Pressure Control to (2lb.) cut-out and (20lb.) cut-in by gauge for R448A/R449A