

SEQUENCE OF OPERATION COOLERS AND FREEZERS

COOLERS

All standard units are equipped with an adjustable thermostat located on the lower right hand side of the evaporator coil, on the inside of the walk-in. All units are set at the factory to the temperature requested by the customer. Minor adjustments in operating temperature may be made to suit your needs by a qualified refrigeration technician. Polar King recommends that you do not set the temperature colder than required, as this will cause unnecessary power consumption. Recommended temperature for a cooler ranges from +34° to +37° F, unless specified otherwise for special applications.

Refrigeration - Initial Start-Up

When starting up the cooler refrigeration system for the first time, the following events occur.

The operating sequence is as follows:

- (1) Thermostat calls for refrigerant.
- (2) Liquid line solenoid valve opens, allowing refrigerant to flow.
- (3) Pressure control makes the control circuit and the condensing unit operates.
- (4) When the room thermostat is satisfied, the liquid line solenoid will close, and the compressor will pump down and turn off. (Fan on unit cooler will continue to run.)

These units are designed for application conditions 33°F and above.

CAUTION: DO NOT SET A COOLER BELOW 32°F OR DAMAGE MAY OCCUR.

Defrost

Defrost is accomplished during refrigeration off cycle. Four defrost cycles per day are programmed at the factory (4 a.m., 10 a.m., 4 p.m., and 10:00 p.m.). It may be necessary to change the defrost cycle times to fit your work schedule.

The interior temperature may rise slightly during the defrost cycle. Do not be alarmed. Soon after the cycle is complete, the unit will return to proper temperature.

FREEZERS

All standard units are equipped with an adjustable thermostat located on the lower right hand side of the evaporator coil, on the inside of the walk-in. All units are set at the factory to the temperature requested by the customer. Minor adjustments in operating temperature may be made to suit your needs. Polar King recommends that you do not set the walk-in temperature colder than required, as this will cause unnecessary power consumption. Recommended temperature on a freezer ranges from 0 to -10° F for frozen food, and -10° to -15° F for ice cream.

Refrigeration - Initial Start-Up

When starting the system up for the first time, the fans will be delayed by the defrost termination thermostat and will not operate until the coil temperature is approximately +20° F.

The operating sequence is as follows:

- (1) Thermostat calls for refrigerant.
- (2) Liquid line solenoid valve opens, allowing refrigerant to flow.
- (3) Pressure control makes the control circuit and the condensing unit operates.
- (4) The coil temperature falls to approximately 20°F and the evaporator fans come on. (Note: The fans may cycle two or three times until the room temperature is stabilized.)
- (5) When the room thermostat is satisfied, the liquid line solenoid will close, and the compressor will pump down and turn off. (Fan on unit cooler will continue to run.)