THERMOSTATS

The heaters use a number of thermostats to measure the fresh air stream at different locations. These thermostats have various functions such as safeguarding against freezing discharge air conditions and protecting against an uncontrollable flame. These thermostats are also utilized to make the heaters more fuel efficient and a bit more intelligent. They are described below:

INTAKE AIR THERMOSTAT (OUTSIDE AIR OVERIDE)

The Honeywell model T675A intake air thermostat is a temperature switch that measures the air stream on the inlet of the heater, before the blower and burner. Currently, **the default set-point for this device is 40° F**. This means that the heat functionality of the heater will not initiate until the outside air temperature falls below 40° F. Since the default Maxitrol set-point temperature is 55° F, the heater will then begin to discharge air at 55° F. This saves the end user fuel consumption costs because the heater would normally be in a heating mode continuously. This thermostat also works in conjunction with the remote panel option. When the remote panel MANUAL/OFF/AUTO switch is in the "AUTO" position, the heater "decides" whether or not to heat the incoming air stream. When the remote panel is in the "MANUAL" position, this thermostat can be bypassed with the "HEAT" position of the HEAT/VENT switch, locking the heater into a heating mode. The intake air thermostat is available on direct fired heaters only.

HIGH TEMPERATURE LIMIT THERMOSTAT

The Honeywell model L4008E high temperature limit thermostat is a temperature switch that protects the heater against an uncontrollable flame. It measures the temperature of the air stream just downstream of the burner. In the event that the modulating system were to fail or the flame safety were to fail, and the flame would grow very large, the high temperature limit thermostat will completely shut the gas valves. This will cause gas to stop flowing to the burner and extinguish the flame. This thermostat is a manual reset thermostat in the direct fired heater and an automatic reset type switch in the indirect fired heater. The high temperature limit thermostat is factory set at **170° F** for direct fired heaters and should never be adjusted. The indirect fired heater high temperature limit is a non-adjustable switch set at 150° F.

LOW TEMPERATURE THERMOSTAT (FREEZSTAT)

The Antunes model TCF low temperature thermostat is a timed temperature switch that protects against delivering freezing air into a space. It measures the temperature of the air stream just downstream of the burner. The default settings for this thermostat are **35° F and 5 minutes**. In the event that there is a failure to establish a flame and the heater is delivering air below 35° F into the building for more than 5 minutes, the low temperature thermostat will act to shut down the blower. The unit must be powered down and serviced to reset this device.