Which Thermostat?

A thermostat is a device that senses the temperature of the evaporator plate or the air and tells the compressor when to turn on and off. Two types are available from Frigoboat. Both types are designed to keep box temperatures within the range of 2 degrees Fahrenheit of the set point entered by the operator.

Mechanical Thermostat

Mechanical Thermostats operate on the principle that gas in a sealed capillary tube expands and contracts with temperature. One end of the tube is attached with good thermal contact to a mounting point on the evaporator, and the pressure expands or contracts bellows within the thermostat. The bellows then act on a switch to open or close the thermostat contacts. The setting is made on a knob that is graduated 0 through 7, with 7 being coldest. The Mechanical Thermostat must be mounted at a location that is within the scope of the capillary tube, which is approximately 5' long. This tube cannot be lengthened or shortened, and so this usually dictates that the thermostat be mounted within the box itself, which is typically a humid environment. In these conditions, Mechanical Thermostats tend to have a short life span. Mechanical Thermostats are designated as either Refrigerator (white housing), or Freezer (blue housing). When using a Bin (B) or Horizontal (H) evaporator, the Refrigerator Thermostat is used.



Mechanical Refrigerator Thermostat



Mechanical Freezer Thermostat

Digital Thermostat/Thermometer

As opposed to the Mechanical Thermostats, the Digital versions sense air temperatures inside the box, not evaporator temperature. A thermocouple sensor is mounted in a location within the box where it will pick up average air temperature, and convey this information to a remote digital display. The display and keypad of the Digital Thermostat/Thermometers allow the user to monitor box temperatures as well as set the desired box temperature and range (differential). There is also provision for setting audible and visual high and low temperature alarms. With these models, very accurate and steady temperatures can be achieved without the guesswork associated with Mechanical Thermostats, and the digital read-out of box temperature is a convenient and popular feature.



Coastal MK3

The Coastal MK3 comprises of a thermostat unit mounted in a plastic mounting plate measuring 3.5" x 2.25". The front panel incorporates a three-digit red LED display with five-button control panel, plus a diagnostic "Fault" LED. The display shows degrees and tenths of degrees, and can be set to work in either Fahrenheit or Celsius. The assembly is pre-wired with a fused 10' cable harness and push-on connectors to facilitate easy installation. A 10' temperature sensor probe is pre-wired, and the mounting plate is drilled for the black screws provided, to aid mounting into a vertical bulkhead. This thermostat requires a dedicated 12v power supply.

Coastal Climate Control, Inc.
www.CoastalClimateControl.com - info@CoastalClimateControl.com
301-352-5738 - Annapolis MD USA