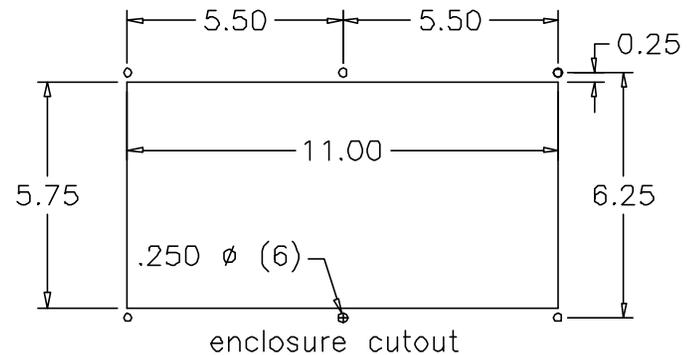


#10-32 threads (6 places)  
insert #10-32 machine screw  
from inside enclosure



# VC2000 VORTEX COOLING

## Installation, Operation, and Maintenance

This VORTEX COOLING UNIT is designed for use in ICE/STATION enclosures, and can also be mounted to any similar enclosure with adequate mounting space. The VC2000 is not position sensitive and can be mounted to the side of an enclosure; however the top of the space being cooled is preferable to aid exhausting of heated air, and allow appropriate placement of the thermostat. .

The cooling unit is operated by a thermostat controlled 120VAC solenoid, which is powered from inside the enclosure. The vortex housing seals against the enclosure top, placing all electrical connections within the sealed enclosure. The standard connection to power is via a 3-prong plug NEMA 5-15 into the enclosures available internal power.

### INSTALLATION

The pre-configured unit is installed in the standard heat exchanger cutout on top of the ICE/STATION product line. A cutout as illustrated on the spec sheet will permit installation to any enclosure with sufficient mounting space.

A sintered metal pressure relief vent is included.

**WARNING: Do not install or operate this vortex cooling assembly on an enclosure without some means to relieve the extra air pressure created by the vortex tube.**

### **OVER-PRESSURIZATION OF AN ENCLOSURE CAN CAUSE INJURY OR DAMAGE.**

The use of clean dry air is essential, to a minimum recommended filtration of 25 microns, regulated to between 80 and 110 psi. The 25-micron recommendation is the minimum requirement for the vortex tube; the equipment in the enclosure may require that filtration be to a smaller particle size. The air inlet opening is 3/8" NPT female, located on top of the vortex housing, and should be connected to a maximum of 10 feet of 3/8 " diameter pipe. Longer runs will "starve" the vortex tube from line pressure loss.

The vortex tube is rated for 2000 BTU's/hr. using 30 SCFM delivered at 100 psi. At this setting the approximate volume of air injected into the enclosure during operation is 24 SCFM. The balance of the air is exhausted into the atmosphere above the enclosure with removed heat

**WARNING: This vortex cooling contains electrical devices that can cause electrical shock or injury. Disconnect before servicing.**

The systems thermostat is adjusted to energize the normally closed solenoid at an enclosure interior temperature of from 90° to 92° F. The thermo-switch that controls the power to the solenoid can be adjusted. **Disconnect power** and remove electrical box cover for access to adjustment screw. Rotating the screw counter clockwise will lower the temperature setting, see note.

NOTE: *The manufactures directions (ref. Fenwal thermo-switch Cat. No. 18021-0) indicate that one full rotation of the adjusting sleeve will change the setting 70° to 130° F. Make your adjustments in 1/16 turns or less.*

OPERATION

**WARNING:** The vortex tube hot end exhaust can reach 295° Fahrenheit.

After the vortex cooling is installed and the air and power supplies are connected the system will require minimal regular maintenance. *The most important operational requirement is maintaining a clean dry air supply.*

MAINTENANCE

**WARNING: This vortex cooling contains electrical devices that can cause electrical shock or injury. Disconnect before servicing.**

Do not obstruct or alter pressure relief vents openings.

During system or maintenance shut downs; inspect and secure any loose hardware. Check and service any regulators and or filters servicing the vortex tube.

