

Frigid-X™ Low Cost Air Conditioners for Electrical and Electronic Control Panels

Nex Flow™ Frigid-X™ air conditioners for control panels are **UL Component Recognized** and provide a low cost method of both purging and cooling electrical and electronic control panels by using a stainless steel vortex tube to create cold air from ordinary compressed air. There are virtually no moving parts. These units are compact and can be installed in minutes through a standard electrical knockout. These units are available for NEMA Type 12, NEMA Type 3R, NEMA Type 4-4X rated panels.



Advantages

- Low in cost
- Compact
- No CFC's
- Fast installation
- Stabilize enclosure temperature and humidity
- Virtually maintenance free (No Moving Parts)
- Mounts in a standard electrical knockout
- Stops heat damage and nuisance tripping
- Eliminates fans and filters
- Prevents dirt contamination by keeping enclosure at positive pressure
- Units applicable to all environments including high temperature to 200°F

Applications

- Computer Enclosures
- Frequency Drives
- CCTV Cameras
- NC/CNC Systems
- Scanners

Operation

Filtered, compressed air enters the Frigid-X™ Air Conditioner and through the vortex tube component. The air is split into two streams, one hot and one cold. The muffled hot air from the vortex tube is expelled through the top of the air conditioner. The cold air is directed into the enclosure through the cold air distribution hose. Hot air inside the enclosure rises and exits to atmosphere via the air exhaust at a slight positive pressure. The enclosure is both purged and cooled with clean air. No outside air enters the enclosure.

Selecting The Right Frigid-X™ Air Conditioner

The Nex Flow™ Frigid-X™ systems come with a 5 micron filter with an automatic drain for the compressed air supply to insure clean, dry air and an air distribution kit to circulate the cold air inside the enclosure for even cooling.

Nex Flow™ Frigid-X™ Air Conditioners are available with or without thermostat control. When constant cooling and a constant positive purge is required we recommend the continuous operating version without the thermostat and solenoid valve. The cooling effect can be controlled by adding a regulator in line to reduce pressure for reduced cooling when it is not required and to conserve energy. Systems utilizing a thermostat and solenoid valve saves air by activating the air conditioner only when the internal temperature reaches a critical level. The adjustable thermostat is factory set at 95°F but can be readjusted on site. Thermostat and solenoid valve systems are recommended where the heat load can fluctuate (such as for frequency drives) and where a continual purge is not required. The thermostat and solenoid "package" can also be added at a later date to a continuous system.

NEMA Type 3R SPECIFICATIONS

Model Number	Version	BTU/Hr. cooling* (WATTS)
61008R	NEMA Type 3R Continuous Operation	580 (170)
61015R	NEMA Type 3R Continuous Operation	1100 (322)
61025R	NEMA Type 3R Continuous Operation	1800 (527)
61030R	NEMA Type 3R Continuous Operation	2100 (615)
61040R	NEMA Type 3R Continuous Operation	2900 (849)
63008R	NEMA Type 3R on-off control	580 (170)
63015R	NEMA Type 3R on-off control	1100 (322)
63025R	NEMA Type 3R on-off control	1800 (527)
63030R	NEMA Type 3R on-off control	2100 (615)
63040R	NEMA Type 3R on-off control	2900 (849)

NEMA Type 4-4X SPECIFICATIONS

Model Number	Version	BTU/Hr. cooling* (WATTS)
61108X	NEMA Type 4-4X Continuous Operation	580 (170)
61115X	NEMA Type 4-4X Continuous Operation	1100 (322)
61125X	NEMA Type 4-4X Continuous Operation	1800 (527)
61130X	NEMA Type 4-4X Continuous Operation	2100 (615)
61140X	NEMA Type 4-4X Continuous Operation	2900 (849)
63108X	NEMA Type 4-4X on-off control	580 (170)
63115X	NEMA Type 4-4X on-off control	1100 (322)
63125X	NEMA Type 4-4X on-off control	1800 (527)
63130X	NEMA Type 4-4X on-off control	2100 (615)
63140X	NEMA Type 4-4X on-off control	2900 (849)

NEMA Type 12 SPECIFICATIONS

Model Number	Version	BTU/Hr. cooling* (WATTS)
61008A	NEMA Type 12 Continuous Operation	580 (170)
61015A	NEMA Type 12 Continuous Operation	1100 (322)
61025A	NEMA Type 12 Continuous Operation	1800 (527)
61030A	NEMA Type 12 Continuous Operation	2100 (615)
61040A	NEMA Type 12 Continuous Operation	2900 (849)
63008A	NEMA Type 12 on-off control	580 (170)
63015A	NEMA Type 12 on-off control	1100 (322)
63025A	NEMA Type 12 on-off control	1800 (527)
63030A	NEMA Type 12 on-off control	2100 (615)
63040A	NEMA Type 12 on-off control	2900 (849)

* Cooling effect based on 95 degrees temperature inside cabinet, 100 PSIG (6.9 BAR) compressor inlet pressure, and 70°F (21°C) inlet temperature. BTU/hr. figures rounded to nearest 100 BTU/hr (1 WATT).

SIZING A SYSTEM

Contact Nex Flow™ Air Products Corp., for assistance in sizing.

