

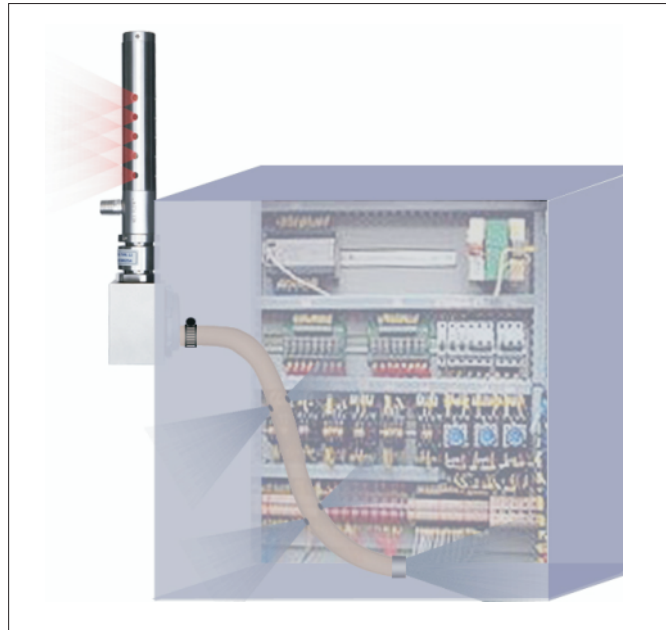


## FRIGID-X™ PANEL COOLER

Prevent downtime due to overheating electric and electronic control panels and cabinets. FRIGID-X™ Panel Coolers maintain NEMA Type 12 (IP 52), NEMA Type 3R (IP 14) and Patented\* NEMA Type 4-4X (IP 66) integrity and are ULC Listed.

### WHAT ARE THEY - REASONS TO USE

Frigid-X™ Panel Cooler and Cabinet Enclosure Cooler for electronic control panels 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. Unlike many competitors - all of our coolers are stainless steel, not just the vortex tube, for longer life and flexible use. Frigid-X™ Panel Coolers are compact and can be installed in minutes through a standard electrical knockout. There are virtually no moving parts. Cabinet Enclosure Cooler - Frigid-X™ series are ideal for all NEMA Type 12 (IP 52), NEMA Type 3R (IP 14) and Patented\* NEMA Type 4-4X (IP 66) rated panels.



### FRIGID-X™ PANEL COOLER ADVANTAGES :

- ▶ No moving parts.
- ▶ Quiet
- ▶ Eliminate fans and blowers and filters
- ▶ Low in cost compared to most others
- ▶ Superior design and performance
- ▶ Maintenance free operation
- ▶ Made of durable stainless steel and metal parts -no cheap plastic parts
- ▶ Cooling capacities to 2800 BTU/Hr per unit.
- ▶ Maintain NEMA 12, NEMA 3R and Patented\* NEMA 4-4X integrity (IP 52, IP 14 and IP 66)
- ▶ Control and stabilize the temperature and humidity Inside the enclosure
- ▶ No CFC's or HCFC's
- ▶ Mount in a standard electrical knockout
- ▶ Eliminate circuit drift, nuisance tripping and dirt Contamination
- ▶ Provide wash down protection ( Patented\*NEMA 4-4X (IP 66) )

### WHY THE FRIGID-X™ PANEL COOLER OVER OTHERS :

All Metal Parts, Stainless Steel Body, Quiet, Tests Show Frigid-X™ Panel Cooler Constantly Quieter Than Competition! Our Standard units are good in ambient temperatures up to 150° F (67° C). High temperatures units are available to 200° F (93° C) and higher. Non Hazardous purge units are also available where constant flow is required to purge a control panel but maintain on-off operation to conserve energy. Contact Nex Flow™ or your local representative for details.

### FRIGID-X™ PANEL COOLER APPLICATIONS :

- ▶ Programmable controllers
- ▶ System Control Cabinets
- ▶ CCTV Cameras
- ▶ Motor Control Centers
- ▶ Relay Panels
- ▶ CNC Machine controls
- ▶ Computer Panels
- ▶ Laser Housing enclosure cooling
- ▶ Electronic scale cooling
- ▶ Modular Control Centers
- ▶ Food Service Equipment Controls

\*US patent number 8,616,010. Other countries: Patented or Patent Pending.

**CABINET ENCLOSURE TEMPERATURE WARNING LABEL**

For Qualitative Warning of Possible Over Heating of Electrical and Electronic Enclosures, by Nex Flow™ Air Products Corp. www.nexflow.com or www.nex-flow.com

**95°F or 35°C**  
WARNING  
HIGH TEMPERATURE

If this label turns ORANGE, it is very hot inside the control panel and this heat may cause damage to electrical and electronic components inside. Please check and correct as soon as possible to avoid potential damage.

**106°F or 41°C**  
DANGER  
EXTREME HIGH TEMPERATURE

If this label turns RED, then the heat inside the panel is extreme and can cause serious damage to electrical and electronic components inside. Please check and correct without delay to avoid potential damage.

Temperature indicated to warn the outside surface of the panel and temperature inside may actually be slightly more or less. If label indicates warning please check the inside for overheating controls that may cause damage. If label indicates danger level or possible very hot temperatures please address the problem immediately. Please contact Nex Flow™ Air Products Corp. or their local representative to address Cabinet Enclosure Cooling needs.

Web Site: www.nexflow.com or www.nex-flow.com

USA AND CANADA: 1-877-797-2777 INTERNATIONAL: +1 416 410-1313

NOTE: This Label is designed to indicate surface temperature only and only to be used as a guide. Proper instrumentation should be used to verify inside temperatures.

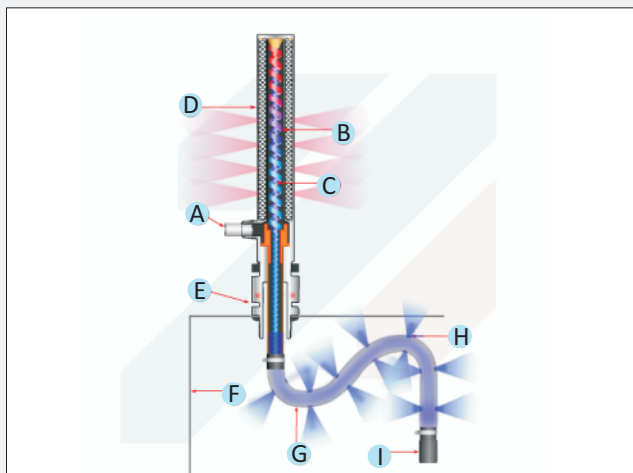
**With every Panel Cooler you receive a Free Panel Cooler Temperature Warning Indicator Sticker. It will provide a dual qualitative warning level and danger level if the temperature inside your control cabinet is too high. Use on any control panels you wish to monitor. Extra stickers may be purchased from NexFlow - Part Number 69600.**

**FRIGID-X™ PANEL COOLER**

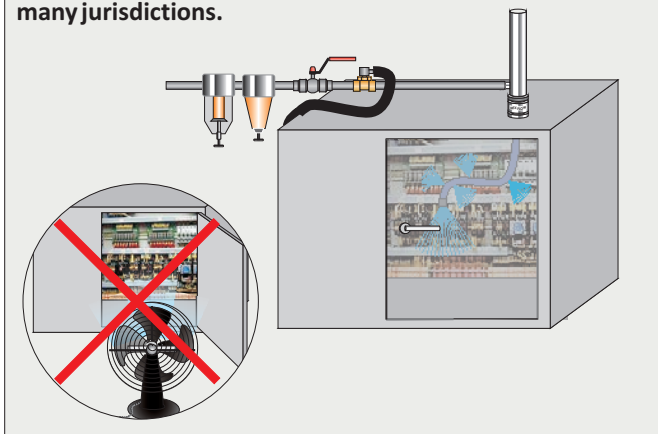


**FRIGID-X™ PANEL COOLER SYSTEM - HOW IT WORKS**

Compressed air enters at point (A) into the vortex tube component of the panel cooler. The vortex tube splits the compressed air into a hot (B) and cold (C) stream of air. The hot air from the vortex tube is vented to the atmosphere at point (D) after being muffled to reduce noise. Hot air displaced from inside the control panel or cabinet is exhausted through point (E). Cold air enters into the panel (F) via the cold distribution hose (G). Holes (H) are punched into the hose kit to deliver the cold air inside the panel where required. A muffler (I) further reduces the noise level of the exhausting air.



**Leaving a control panel door open to let a fan blow dirty hot air on to the control is hazardous and even illegal in many jurisdictions.**



When you find control panel doors open it is a sure sign that you need Frigid-X™ Panel Cooler. Open doors are not only dangerous but also creates dirt buildup on electronics shortening their life.

**FRIGID-X™ PANEL COOLER SYSTEMS VERSES OTHER OPTIONS**

- ▶ Heat Pipes and air to air heat Exchangers cannot cool below ambient limiting cooling effect. Filters require Monitoring and change to prevent failure.
- ▶ Water cooled heat Exchangers use water which is not compatible with electrics. In addition scale buildup can cause reduced effectiveness over time and downtime for descaling.
- ▶ Refrigerant CFC or HCFC Heat Exchangers are more costly with higher installation cost and lower life expectancy Installation requires a floor drain for condensate. Machine vibration can cause loss of refrigerant and component failure. Average replacement cost of a compressor can be High. Filters require monitoring and change to prevent failure.
- ▶ Frigid-X™ Panel Cooler is low cost, with NEMA Type 12 (IP 52), NEMA Type 3R(IP 14 ) and Patented\* NEMA Type 4-4X (IP 66) Models available. They are compact, easy and fast to install. Thermostatic control minimizes air use to only when needed

**FRIGID-X™ PANEL COOLER SELECTION**

Nex Flow™ Frigid-X™ Panel Coolers are available with thermostat control (on-off units) or continuous operation. Continuous systems are best when constant cooling and/or a positive purge of the panel is required. On-off control saves air by activating the unit when the internal temperature approaches a critical level. The adjustable thermostat is factory set at 95 degrees F (35 degrees C). They are best used in applications where heat may fluctuate as in variable speed drives and where a continuous purge is not required. ALL OF OUR UNITS ARE STAINLESS STEEL for long life and flexible environments.

If a constant positive pressure is required with on-off control (Non-hazardous Purge Units) a special solenoid valve can be supplied to allow a small amount if air flow into the control panel when in the closed position. High temperature units for ambient in excess of 150° F (67° C) to 200° F (93° C) and higher are available.

**Frigid-X™ Panel Coolers are approved by Underwriters Laboratory (ULC Component Recognized) to meet USA and Canadian Standards, and meet CE Regulations and necessary international standards.**



\*US patent number 8,616,010. Other countries: Patented or Patent Pending.

**FRIGID-X PANEL COOLER SYSTEMS SPECIFICATIONS**

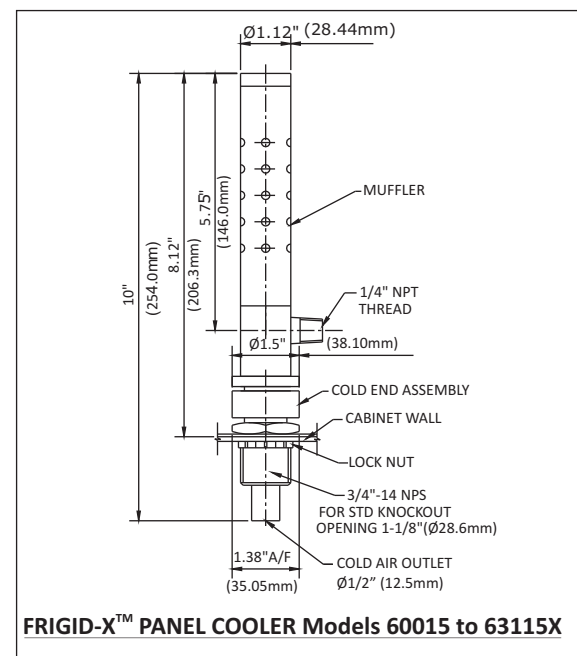
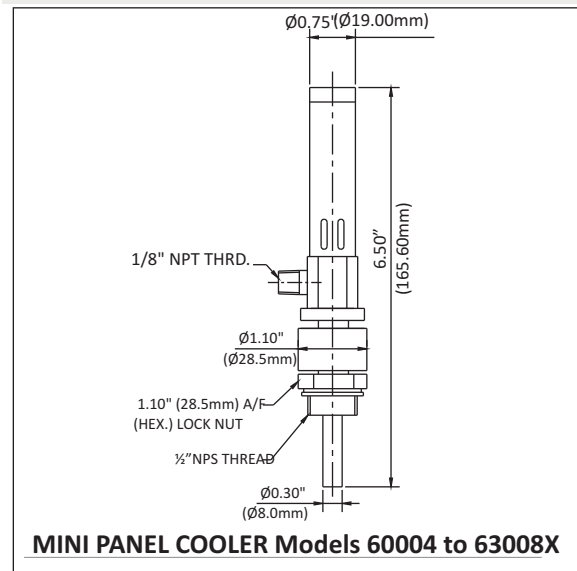
TYPE	MODEL	CAPACITY BTU/hr (Watts)*	Thermostat Control	Sound Level dBA
NEMA TYPE 12 (IP 52)	61004A	290 (85)	Not included	64
NEMA TYPE 12 (IP 52)	61008A	580 (170)	Not included	66
NEMA TYPE 12 (IP 52)	61015A	1100 (322)	Not included	72
NEMA TYPE 12 (IP 52)	61025A	1800 (527)	Not included	73
NEMA TYPE 12 (IP 52)	61030A	2100 (615)	Not included	74
NEMA TYPE 12 (IP 52)	61040A	2900 (849)	Not included	76
NEMA TYPE 12 (IP 52)	63004A	290 (85)	Included	64
NEMA TYPE 12 (IP 52)	63008A	580(170)	Included	66
NEMA TYPE 12 (IP 52)	63015A	1100 (322)	Included	72
NEMA TYPE 12 (IP 52)	63025A	1800 (527)	Included	73
NEMA TYPE 12 (IP 52)	63030A	2100 (615)	Included	74
NEMA TYPE 12 (IP 52)	63040A	2900 (849)	Included	76
NEMA TYPE 3R (IP 14)	61004R	290 (85)	Not included	64
NEMA TYPE 3R (IP 14)	61008R	580(170)	Not included	66
NEMA TYPE 3R (IP 14)	61015R	1100 (322)	Not included	72
NEMA TYPE 3R (IP 14)	61025R	1800 (527)	Not included	73
NEMA TYPE 3R (IP 14)	61030R	2100 (615)	Not included	74
NEMA TYPE 3R (IP 14)	61040R	2900 (849)	Not included	76
NEMA TYPE 3R (IP 14)	63004R	290 (85)	Included	64
NEMA TYPE 3R (IP 14)	63008R	580(170)	Included	66
NEMA TYPE 3R (IP 14)	63015R	1100 (322)	Included	72
NEMA TYPE 3R (IP 14)	63025R	1800 (527)	Included	73
NEMA TYPE 3R (IP 14)	63030R	2100 (615)	Included	74
NEMA TYPE 3R (IP 14)	63040R	2900 (849)	Included	76
Patented*NEMA TYPE 4-4X (IP 66)	61104X	290 (85)	Not included	64
Patented*NEMA TYPE 4-4X (IP 66)	61108X	580(170)	Not included	66
Patented*NEMA TYPE 4-4X (IP 66)	61115X	1100 (322)	Not included	72
Patented*NEMA TYPE 4-4X (IP 66)	61125X	1800 (527)	Not included	73
Patented*NEMA TYPE 4-4X (IP 66)	61130X	2100 (615)	Not included	74
Patented*NEMA TYPE 4-4X (IP 66)	61140X	2900 (849)	Not included	76
Patented*NEMA TYPE 4-4X (IP 66)	63104X	290 (85)	Included	64
Patented*NEMA TYPE 4-4X (IP 66)	63108X	580(170)	Included	66
Patented*NEMA TYPE 4-4X (IP 66)	63115X	1100 (322)	Included	72
Patented*NEMA TYPE 4-4X (IP 66)	63125X	1800 (527)	Included	73
Patented*NEMA TYPE 4-4X (IP 66)	63130X	2100 (615)	Included	74
Patented*NEMA TYPE 4-4X (IP 66)	63140X	2900 (849)	Included	76

**RATINGS EXPLANATION**

**NEMA TYPE 12 (IP 52)** Frigid-X™ Panel Cooler is dust tight and oil tight and used in general industrial environments.

**Patented\* NEMA TYPE 4-4X (IP 66)** Frigid-X™ Panel Cooler is dust, oil-tight, spray resistant and used in environments where there are liquids and for food service and corrosive environments.

**NEMA TYPE 3R (IP 14)** Frigid-X™ Panel Cooler is used in outdoor service.



\* A) The BTU/hr (wattage) is calculated with air at 100 PSIG (6.9 Bar) and 70°F (21°C)  
 B) For temperatures of compressed air between 90°F (32°C) to 100°F (38°C) de-rate the cooling effect by 20% at 100°F (38°C) & above de-rate by 30%

\*US patent number 8,616,010. Other countries: Patented or Patent Pending.