



Cabinet Panel Coolers

Streamtek Cabinet Panel Coolers are an affordable, low maintenance, and easy to install alternative for thermal management of control panels and electrical cabinets. These panel cooling systems incorporate a vortex tube to produce cold air from compressed air – with no moving parts.

What is a Cabinet Cooler?



Powered only by compressed air, Streamtek's Cabinet Cooler is an ideal solution to keep your electrical components from overheating in seconds. It incorporates our reliable Vortex Tube to separate the compressed air into hot and cold air streams.

The hot air is exhausted into the atmosphere through a muffler to reduce noise, while the cold air enters the electrical cabinet. The filtered air that enters electrical control panel cabinets is up to 70°F colder than the compressed air supply.

A purge built into the Cabinet Cooler eliminates hot air from the cabinet even as the cooler simultaneously supplies clean, cold air to keep your systems working as intended. Our Cabinet Coolers are ideal for all NEMA 4/4X (IP66) and NEMA 12 (IP54) rated panels. They can be easily mounted in minutes.

Cabinet Panel Cooler Features

- ✓ Quiet and affordable
- ✓ Stainless steel construction
- ✓ Fast installation
- ✓ No moving parts
- ✓ Compact/lightweight
- ✓ No fans or filters
- ✓ No CFC's
- ✓ Mounts through standard knockout
- ✓ Stabilize temperature/humidity

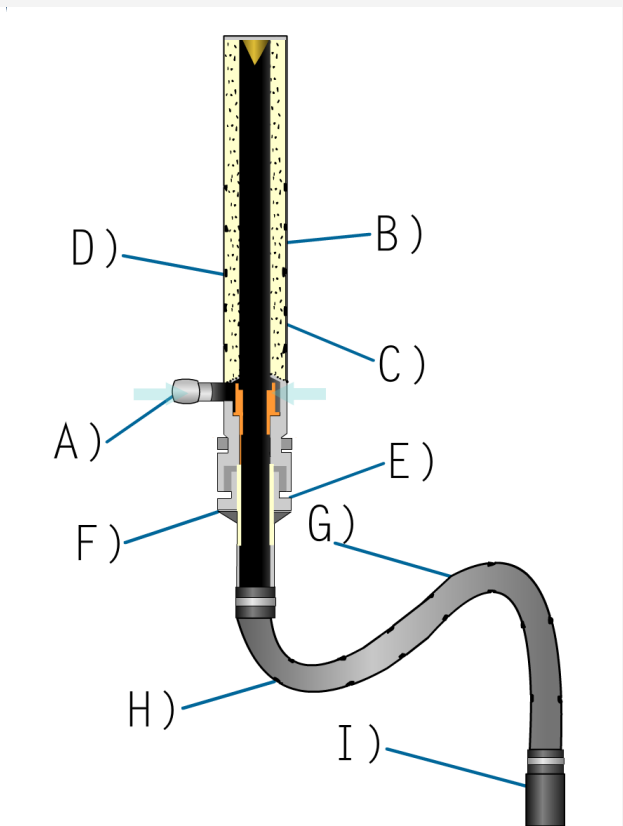


Streamtek is using the internet as a venue to showcase its ongoing environmental commitment to inspire everyone around the world to be more environmentally-friendly.

Streamtek will profile its environmental practices in an aggressive manner to demonstrate first-hand how companies and individuals alike can take proactive steps to reduce their carbon footprint.

How Do Cabinet Panel Coolers Work?

- Compressed air enters the vortex tube powered Cabinet Panel Cooler through a standard NPTM inlet.
- The vortex tube separates the compressed air into cold and hot air streams
- The hot air from the vortex tube is exhausted into the atmosphere after being muffled to keep noise levels down.
- As the hot air from within the cabinet enclosure cooler, it exhausts through the cabinet air exhaust at a slight positive pressure.
- The cold air enters the cabinet enclosure cooler via the cold air distribution kit. Holes are drilled into the tube to supply cold air where required.



What is the force of air inside the cabinet enclosure?

The pressure within the cabinet can build up to approximately 2 PSIG, depending on how tightly sealed the cabinet is.

What type of Cabinet Coolers do we carry?

	NEMA 12 (IP54)	NEMA 4 (IP66)	NEMA 4x (IP66)
Material	Stainless Steel (Type 303)	Stainless Steel (Type 303)	Stainless Steel (Type 316)
Rating	Indoor Dust/Oil Protection	Indoor/Outdoor Dust/Oil/Splash Tight	Indoor/Outdoor Dust/Oil/Splash Tight Corrosion Resistant
Capacity BTU/Hr	550 BTU up to 5600 BTU	550 BTU up to 5600 BTU	550 BTU up to 5600 BTU
Noise level	Low	Low	Low

Cabinet Panel Coolers Specifications

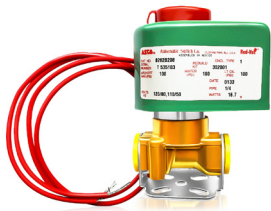
Mounting: Streamtek Cabinet Coolers must be vertically mounted, usually on top of the electrical cabinet. The Cabinet Cooler system is easy to install through a standard electrical knockout or drilled hole. We offer optional side mount kits if mounting on top is not an option. Side mount kits allow for Cabinet Cooler installation along the side of the cabinet while keeping it vertical. Side mounts also install though a knockout or drilled hole and are secured by a locking ring.

Humidity: It's important to close off any openings and any vents that may bring in ambient air, especially in warm/hot or high humidity environments. The relative humidity inside the enclosure stabilizes at 45% for all continuous operating Cabinet Panel Coolers.

Cold Air Distribution Kit:Our cold air distribution kit consists of a clear vinyl tube, self-adhesive clips, and hose clamps. This allows the user to direct the cold airflow to any hotspot within the cabinet. the enclosure stabilizes at 45% for all continuous operating Cabinet Coolers.

Thermostat Control Kit:If air consumption is a concern, we recommend using a Cabinet Cooler Thermostat Control Kit. Our kits include a normally closed solenoid valve (available in 24V, 120V and 240V) and a thermostat. The adjustable thermostat is pre-set to 95°F – 35°C. Once the temperature reaches 95°F – 35°C the solenoid valve will open and allow the air to flow into the cooler. Once the temperature in the cabinet cools, the solenoid valve will close and stop the flow to the cooler. This will save on compressed air consumption.

Filtration: All Streamtek Cabinet Panel Cooler kits include an auto drain 5 micron dirt and water filter. This filter is imperative to prevent any accidental water flow into the enclosure. If oil is present in the compressed air supply, use an oil filter within at least .3 micron rating.



SPECIFICATIONS

Model No.	Capacity Btu/hr.	Capacity Watt/hr.	Air Consumption SCFM @ 100 PSI	Air Consumption SLPM @ 6.9 Bar	Sound Level
CC1204-1 CC404-1 CC4X04-1	275	80	4	113	59*
CC1208-1 CC408-1 CC4X08-1	550	161	8	226	67*
CC1210-1 CC410-1 CC4X10-1	700	205	10	283	69*
CC1215-1 CC415-1 CC4X15-1	1,100	322	15	425	73*
CC1225-1 CC425-1 CC4X25-1	1,800	528	25	708	74*
CC1230-1 CC430-1 CC4X30-1	2,060	603	30	849	74*
CC1240-1 CC440-1 CC4X40-1	2,800	821	40	1,132	79*
CC1250-1 CC450-1 CC4X50-1	3,400	996	50	1,415	74*
CC1260-1 CC460-1 CC4X60-1	4,000	1,171	60	1,698	76*
CC1270-1 CC470-1 CC4X70-1	4,800	1,406	70	1,981	76*
CC1280-1 CC480-1 CC4X80-1	5,600	1,640	80	2,264	77*

NEMA 4/4X (IP56) - Designed for Electronic Control Panels – Splash resistant, oil-tight, and dust-tight for use in washdown environments as well as outdoor use. When the Cabinet Cooler is not operating, a low-pressure relief valve closes and seals to maintain the integrity of your NEMA 4/4X cabinet enclosure. Our NEMA 4 Cabinet Cooler is constructed of Stainless Steel (Type 303) for long life in wet environments meanwhile NEMA 4X is constructed from Stainless Steel (Type 316) for protection against corrosive environments.

NEMA 12 (IP52) - Cabinet Panel Coolers (oil-tight, dust-tight) are used in industrial environments where no liquids can come into contact with the unit. It is constructed of Stainless Steel (Type 303) to withstand harsh corrosive environments.

Cabinet Cooler Designs

Our Cabinet Panel Coolers make innovative use of compressed air technology to help you save power and take your productivity from good to great. When you use our Cabinet Coolers in electrical panel cooling operations, you stand to benefit from the following advantages:

- Quiet & Affordable
- Fast Installation
- Stainless steel construction
- No moving parts
- Compact/Lightweight
- No fans or filters
- No CFC's
- Mounts through standard knockout
- Stabilize temperature/humidity



Cabinet Cooler Application Examples

Here is a list of Cabinet Cooler Application examples:

- Cooling electronic controls
- Cooling machining operations
- Setting hot melts
- Cooling soldered parts
- Cooling gas samples
- Electronic component cooling
- Cooling heat seals
- Cooling environmental chambers

Are Cabinet coolers OSHA and CE Compliant?



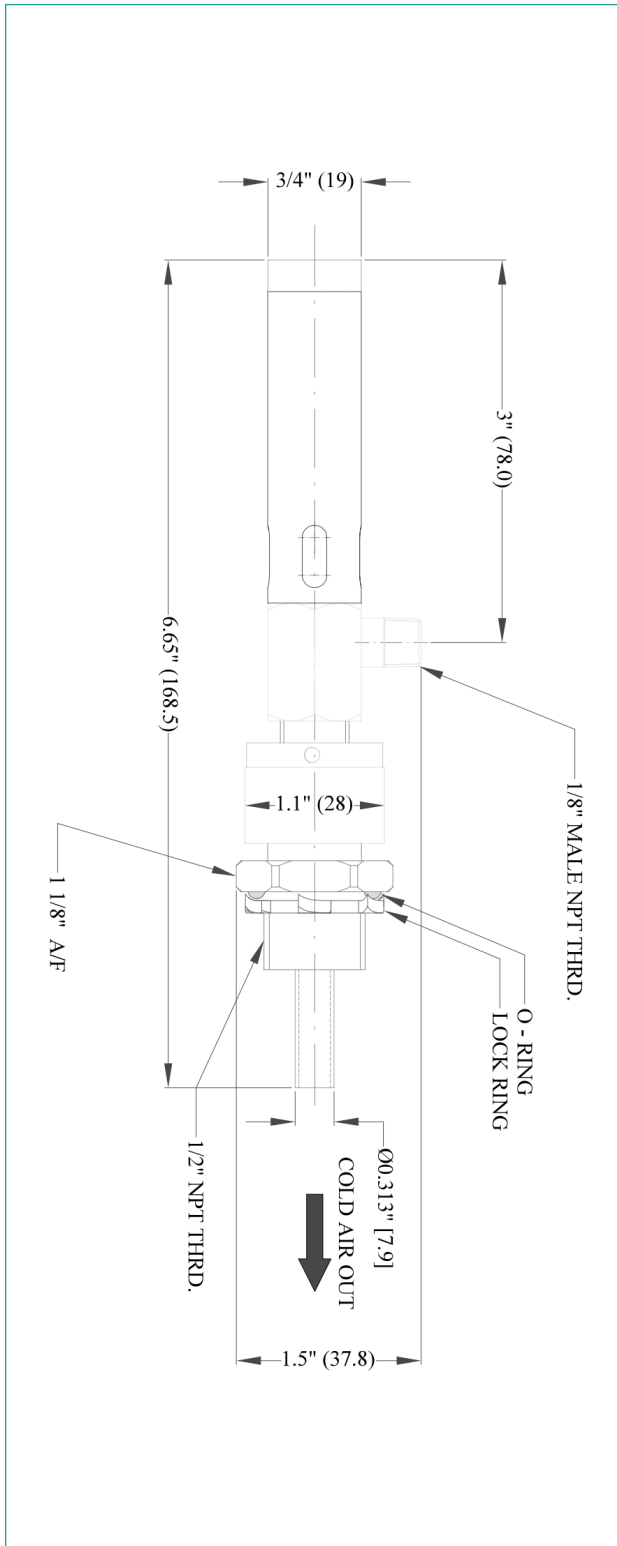
Yes, Streamtek Cabinet Coolers meet OSHA standards for occupational safety (29 CFR 1910.242(b) for compressed air and 29 CFR 1910.95 for noise exposure) and are CE directive compliant as Machinery (2006/42/EC), Pressure Equipment (2014/68/EU), and Low Voltage (2014/35/EU) as applicable. With 67-79 dB noise emissions (lower than OSHA's 90 dBA requirement), low-pressure relief valves for safe operation at 80-100 PSIG, and NEMA 4/4X (IP66) or NEMA 12 (IP54) ratings for ingress protection, our vortex tube-based cooling systems are hazard-free, moving-part-free, electricity-free, and refrigerant-free cooling of electrical enclosures.

Streamtek cabinet panel cooler products utilize innovative compressed air technologies to enhance productivity, boost equipment efficiency, and prevent overheating and thermal damage, ensuring smooth and reliable operation. If you don't find a solution and/or idea for your application, or if you want additional details, call our factory at 1-705-770-4455 or email an Application Engineer at support@streamtek.com.

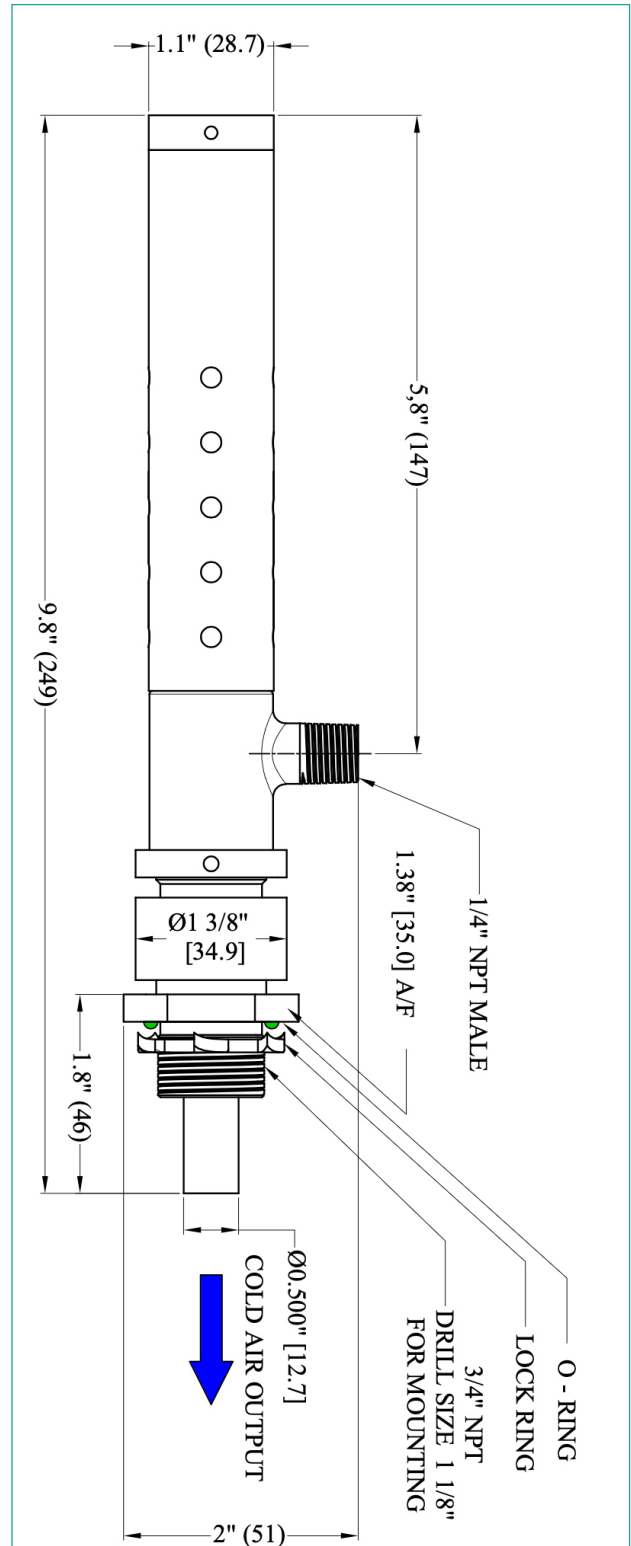
Cabinet Panel Coolers Dimensions

- No Freon or refrigerants used
- Small, lightweight, and portable
- Easy installation through standard electrical knockout
- **Lowest Price in the industry!** Find a competitor's equivalent industrial vortex tube panel Cabinet Enclosure Cooler for less? Contact us and we will beat it by 20%.

CABINET COOLERS 550 BTU AND BELOW



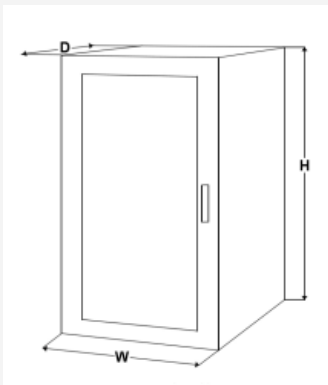
CABINET COOLERS ABOVE 550 BTU



Cabinet Cooler Sizing

Temperature Difference (°F)	Btu/hr./sq. ft.	How to Determine Size Requirements of the Cabinet Enclosure Cooler?
5	1.5	Determine the watts of heat generated inside the enclosure. Watts x 3.41 = (W) Btu/hr.
10	3.3	Determine the area in square feet that is exposed to the air, not including the top of the cabinet. [2 x {Width} + 2 x {Depth}] {Height} = (S) Square feet of cabinet
15	5.1	Determine the temperature difference between the desired internal temperature and the maximum expected external temperature. Now you can use the below chart to determine the Btu/hr./sq. ft., for this differential (B) .
20	7.1	Determine the external heat load (H) . (S) x (B) = (H) Btu/hr.
25	9.1	Now take (W) and add (H) to get the total heat load or Btu/hr. refrigeration required to maintain desired temperature and choose the correct one using the chart below.
30	11.3	
35	13.8	
40	16.2	

CABINET COOLERS SIZING GUIDE



EMAIL US THE FACTS:
sales@stream-tek.com

Streamtek Corp.
6-295 Queen Street
East Suite 384
Brampton, Ontario
L6W 4S6, Canada

Toll Free (US/CA): 1-888-218-6548
International: 1-705-770-4455
Fax: 1-705-252-6343
E-mail: sales@stream-tek.com
Web: <https://stream-tek.com>

Let Us Do The Calculation

To: Engineering Department, Streamtek Corp
From: Name _____
Company _____
FAX # _____
Phone # _____
Email _____

I would like to know which Streamtek Cabinet Panel Cooler is the ideal choice for my control panel.

- Height _____ 2. Width _____ 3. Depth _____
- Internal temperature now? _____
- Maximum internal temperature possible? _____
- External temperature now _____
- Maximum external temperature possible? _____

8. My cabinet rating is:

- ☐ NEMA 4 - Splash Resistant
☐ NEMA 4X - Corrosion Resistant
☐ NEMA 12 - Dust, oil resistant

9. My cabinet is (check all that apply):

- ☐ Vented - Outside air circulates through the cabinet. ☐ Free standing
☐ Not Vented - Outside air does NOT circulate through the cabinet. ☐ Wall mounted
☐ Fan(s) ** Indicate diameter or SCFM, and number of Fans:

Cabinet Panel Coolera NEMA 4 (IP56) Description

NEMA 4 (IP56): Unit Only			
	Model #	Capacity Btu/hr.	Material
	CC408-1	550	Stainless 303
	CC415-1	1100	Stainless 303
	CC425-1	1800	Stainless 303
	CC430-1	2060	Stainless 303
	CC440-1	2800	Stainless 303
	CC450-1	3400	Stainless 303
	CC460-1	4000	Stainless 303
	CC470-1	4800	Stainless 303
	CC480-1	5600	Stainless 303

NEMA 4 (IP56): Thermostat Control		
	Model #	Description
	CC408-3	NEMA 4, with Thermostat Control, 550 Btu/hr.
	CC415-3	NEMA 4, with Thermostat Control, 1100 Btu/hr.
	CC425-3	NEMA 4, with Thermostat Control, 1800 Btu/hr.
	CC430-3	NEMA 4, with Thermostat Control, 2060 Btu/hr.
	CC440-3	NEMA 4, with Thermostat Control, 2800 Btu/hr.
	CC450-3	NEMA 4, with Thermostat Control, 3400 Btu/hr.
	CC460-3	NEMA 4, with Thermostat Control, 4000 Btu/hr.
	CC470-3	NEMA 4, with Thermostat Control, 4800 Btu/hr.
	CC480-3	NEMA 4, with Thermostat Control, 5600 Btu/hr.

NEMA 4 (IP56): Continuous Operation		
	Model #	Description
	CC408-2	NEMA 4, Continuous Operation, 550 Btu/hr.
	CC415-2	NEMA 4, Continuous Operation, 1100 Btu/hr.
	CC425-2	NEMA 4, Continuous Operation, 1800 Btu/hr.
	CC430-2	NEMA 4, Continuous Operation, 2060 Btu/hr.
	CC440-2	NEMA 4, Continuous Operation, 2800 Btu/hr.
	CC450-2	NEMA 4, Continuous Operation, 3400 Btu/hr.
	CC460-2	NEMA 4, Continuous Operation, 4000 Btu/hr.
	CC470-2	NEMA 4, Continuous Operation, 4800 Btu/hr.
	CC480-2	NEMA 4, Continuous Operation, 5600 Btu/hr.

Cabinet Panel Coolera NEMA 4X (IP56) Description

NEMA 4X (IP56): Unit Only			
	Model #	Capacity Btu/hr.	Material
	CC4X08-1	550	Stainless 316
	CC4X15-1	1100	Stainless 316
	CC4X25-1	1800	Stainless 316
	CC4X30-1	2060	Stainless 316
	CC4X40-1	2800	Stainless 316
	CC4X50-1	3400	Stainless 316
	CC4X60-1	4000	Stainless 316
	CC4X70-1	4800	Stainless 316
	CC4X80-1	5600	Stainless 316

NEMA 4X (IP56): Thermostat Control		
	Model #	Description
	CC4X08-3	NEMA 4X, with Thermostat Control, 550 Btu/hr.
	CC4X15-3	NEMA 4X, with Thermostat Control, 1100 Btu/hr.
	CC4X25-3	NEMA 4X, with Thermostat Control, 1800 Btu/hr.
	CC4X30-3	NEMA 4X, with Thermostat Control, 2060 Btu/hr.
	CC4X40-3	NEMA 4X, with Thermostat Control, 2800 Btu/hr.
	CC4X50-3	NEMA 4X, with Thermostat Control, 3400 Btu/hr.
	CC4X60-3	NEMA 4X, with Thermostat Control, 4000 Btu/hr.
	CC4X70-3	NEMA 4X, with Thermostat Control, 4800 Btu/hr.
	CC4X80-3	NEMA 4X, with Thermostat Control, 5600 Btu/hr.

NEMA 4X (IP56): Continuous Operation		
	Model #	Description
	CC4X08-2	NEMA 4X, Continuous Operation, 550 Btu/hr.
	CC4X15-2	NEMA 4X, Continuous Operation, 1100 Btu/hr.
	CC4X25-2	NEMA 4X, Continuous Operation, 1800 Btu/hr.
	CC4X30-2	NEMA 4X, Continuous Operation, 2060 Btu/hr.
	CC4X40-2	NEMA 4X, Continuous Operation, 2800 Btu/hr.
	CC4X50-2	NEMA 4X, Continuous Operation, 3400 Btu/hr.
	CC4X60-2	NEMA 4X, Continuous Operation, 4000 Btu/hr.
	CC4X70-2	NEMA 4X, Continuous Operation, 4800 Btu/hr.
	CC4X80-2	NEMA 4X, Continuous Operation, 5600 Btu/hr.

Cabinet Panel Cooler NEMA 12 (IP52) Description

NEMA 12 (IP52): Unit Only			
	Model #	Capacity Btu/hr.	Material
	CC1208-1	550	Stainless 303
	CC1215-1	1100	Stainless 303
	CC1225-1	1800	Stainless 303
	CC1230-1	2060	Stainless 303
	CC1240-1	2800	Stainless 303
	CC1250-1	3400	Stainless 303
	CC1260-1	4000	Stainless 303
	CC1270-1	4800	Stainless 303
	CC1280-1	5600	Stainless 303

NEMA 12 (IP52): Thermostat Control		
	Model #	Description
	CC1208-3	NEMA 12, with Thermostat Control, 550 Btu/hr.
	CC1215-3	NEMA 12, with Thermostat Control, 1100 Btu/hr.
	CC1225-3	NEMA 12, with Thermostat Control, 1800 Btu/hr.
	CC1230-3	NEMA 12, with Thermostat Control, 2060 Btu/hr.
	CC1240-3	NEMA 12, with Thermostat Control, 2800 Btu/hr.
	CC1250-3	NEMA 12, with Thermostat Control, 3400 Btu/hr.
	CC1260-3	NEMA 12, with Thermostat Control, 4000 Btu/hr.
	CC1270-3	NEMA 12, with Thermostat Control, 4600 Btu/hr.
	CC1280-3	NEMA 12, with Thermostat Control, 5200 Btu/hr.

NEMA 12 (IP52): Continuous Operation		
	Model #	Description
	CC1208-2	NEMA 12, Continuous Operation, 550 Btu/hr.
	CC1215-2	NEMA 12, Continuous Operation, 1100 Btu/hr.
	CC1225-2	NEMA 12, Continuous Operation, 1800 Btu/hr.
	CC1230-2	NEMA 12, Continuous Operation, 2060 Btu/hr.
	CC1240-2	NEMA 12, Continuous Operation, 2800 Btu/hr.
	CC1250-2	NEMA 12, Continuous Operation, 3400 Btu/hr.
	CC1260-2	NEMA 12, Continuous Operation, 4000 Btu/hr.
	CC1270-2	NEMA 12, Continuous Operation, 4800 Btu/hr.
	CC1280-2	NEMA 12, Continuous Operation, 5600 Btu/hr.

Cabinet Panel Coolers FAQs

Can condensation occur within our control panels when using STREAMTEK™ Cabinet Panel Coolers?

No. The Streamtek Cabinet Panel Cooler will purge warm/moist air from inside your enclosure. The cool air that is being injected into the cabinet will then start to pick up heat, which in-turn causes the humidity to drop. A continuous operation Cabinet Panel Cooler will keep the relative humidity at about 45%. It is imperative that all openings in your panel are closed off, as humidity from the ambient air could cause condensation within your

How do I stop the thermostat from chattering.

A .002 microfarad capacitor can be wired across the leads on the thermostat to stop it from chattering. This chattering can sometimes occur by a very slow temperature change. The capacitor simply desensitizes the thermostat to stop the chattering effect. The capacitor is available FREE OF CHARGE at special request.

What is the cooling capacity (BTU/Hr.) of your Cabinet Panel Coolers?

Streamtek manufactures Cabinet Panel Coolers which produce 550 – 2,800 BTU/Hr. from a single unit. If you require additional cooling, we have dual cooler units from 3,600 – 5,600 BTU/Hr.

Can I use a Vortex Tube to cool my electrical enclosure instead of the Cabinet Panel Cooler?

Yes, however there are clear-cut advantages to using the Streamtek Cabinet Panel Cooler for this application.

- Cabinet Panel Coolers have a pressure release valve to allow warm air from the electrical enclosure to escape the cabinet.
- Cabinet Panel Coolers have been fine tuned to achieve maximum refrigeration; this cannot be adjusted. Vortex Tubes, on the other hand, can be adjusted by the user, leaving them open to poor operation and miss-adjustment.
- Cabinet Panel Coolers have been engineered to reduce noise levels drastically from that of the sole Vortex Tube.

Where should the Cabinet Panel Cooler and Thermostat be installed?

The Streamtek Cabinet Panel Cooler must be installed at the top of the cabinet through standard knockout, and secured with locking nut. A thermostat at the top of the cabinet is best (but not required), as this is the hottest spot due to the rising hot air.

What is the air consumption?

Each application will have a different heat load, which will determine the air consumption of your cooler. Generally you can expect from 4 to 80 SCFM @ 100 PSIG. This will provide cooling from 550 – 5,600 BTU/Hr. Please refer to Specifications chart above for models numbers and consumption rate.



Cooling Pharmaceutical Panels

Pharmaceutical Control Cabinets can easily become overheated in the summer time, which could shut down pharmaceutical processing lines. By removing the heat problem within the control panel with

a Model CC1230-1 Panel Cooler, it can save thousands of dollars from the cost of down-time and maintenance.

Let Us Help You

For assistance with application engineering, call our factory at 1-705-770-4455 or email an Application Engineer at support@stream-tek.com. With round-the-clock customer support in USA, Canada, and Europe, STREAMTEK™ representatives can give you a feasible recommendation within 12 hours.