

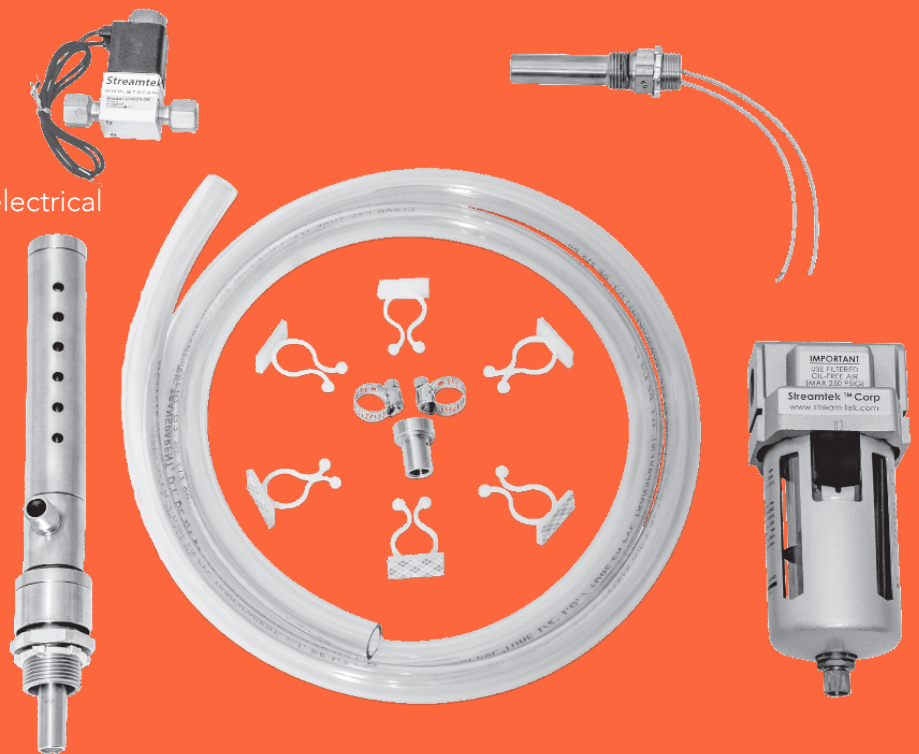


Streamtek Corp. brings you solutions for a new economy.

Cabinet Panel Cooler

Technical Guide

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.



Version 1.0



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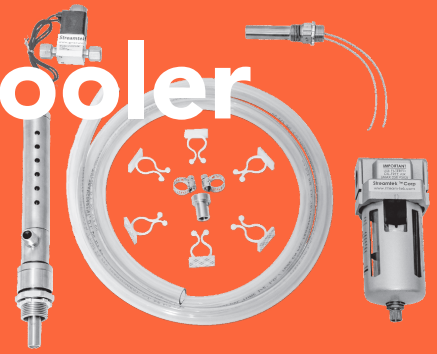
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1 Cabinet Panel Cooler

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 through a knockout or drilled hole and are secured by a locking ring.

Humidity:

It's important to close off any openings and vents that may bring in ambient air, especially in warm/hot or highly humid environments. The relative humidity inside

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:

We recommend using a Streamtek 5 Micron Auto Drain Filter with all Cabinet Coolers. As most compressed air lines contain water, using a filter is imperative to prevent any accidental moisture flowing into the enclosure. If oil is present in the compressed air supply, use a Streamtek Auto Drain Oil Filter.

Environmental Considerations:

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 Vortex Tube Panel Cooler is not operating, a low-pressure relief valve closes and seals to maintain the integrity of your NEMA 4 cabinet enclosure. It is constructed of Stainless Steel (Type 303) for long life in wet environments.

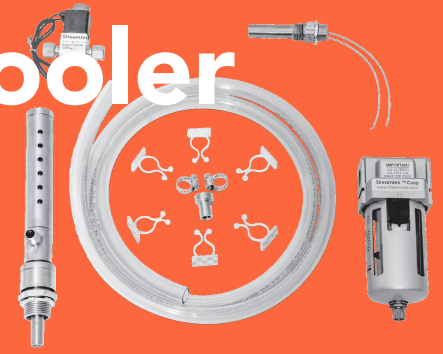
NEMA 12 (IP52) – Cabinet Panel Coolers (oil-tight, dust-tight) are used in industrial environments where no liquids can come into contact with the unit. It is constructed of Stainless Steel (Type 303) to withstand harsh corrosive environments.

DIMENSIONS: Regular Air Knife					
Model No.	Capacity Btu/hr.	Capacity Watt/hr.	Air Consumption SCFM @ 80 PSI	Air Consumption SLPM @ 5.5 Bar	Sound Level
CC1208-1	550	161	8	226	67*
CC1215-1	1,100	322	15	425	73*
CC1225-1	1,800	528	25	708	74*
CC1230-1	2,060	603	30	849	74*
CC1240-1	2,800	821	40	1,132	79*
CC1250-1	3,400	996	50	1,415	74*
CC1260-1	4,000	1,171	60	1,698	76*
CC1270-1	4,800	1,406	70	1,981	76*
CC1280-1	5,600	1,640	80	2,264	77*

*With Optional Cold Muffler installed

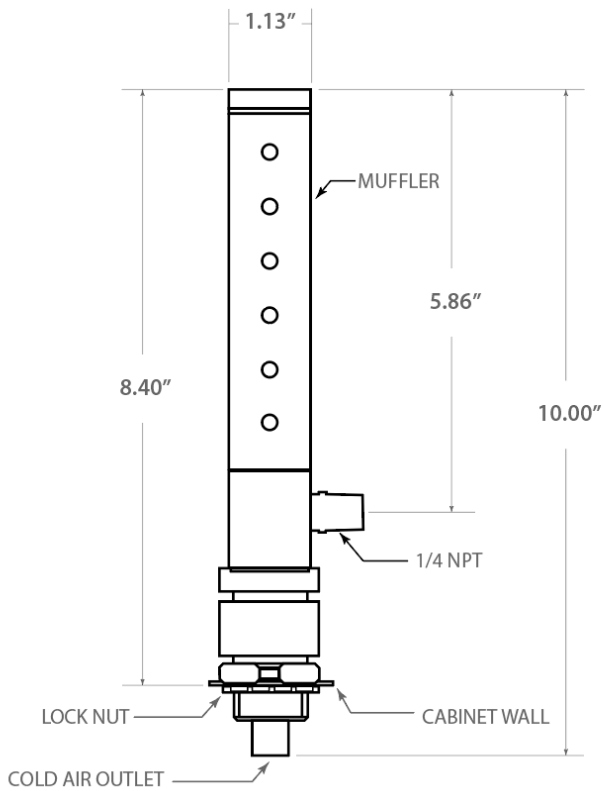
2 Cabinet Panel Cooler

Dimensions

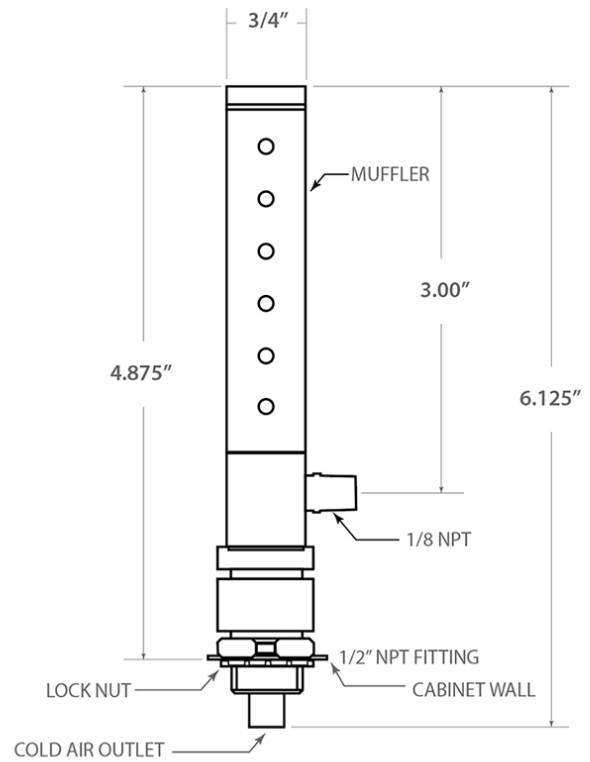


- No Freon or refrigerants used.
- Small and lightweight – portable.
- Easy installation through standard electrical knockout.

ALL CABINET COOLERS ABOVE 550 BTU

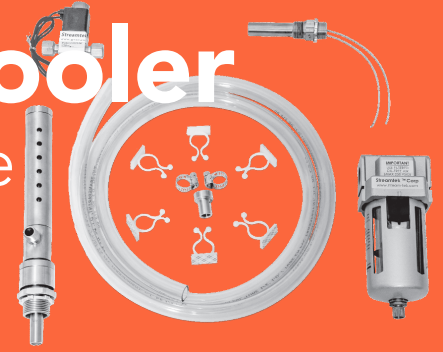


550 BTU CABINET COOLER ONLY



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Installation & Maintenance



01 Recommended Hose Runs

** Do not use restrictive fittings such as quick couplings/connects. They can “starve” your Cabinet Panel Cooler by causing excessive line pressure drop.

LENGTH OF RUN	SIZE OF PIPE/HOSE
1 - 25ft	Use 1/4" pipe or 3/8" air hose
26 - 50ft	Use 3/8" pipe or 1/2" air hose
51ft and above	Use 1/2" pipe or larger

02 Compressed Air Supply

ALWAYS USE a minimum 5 micron filter with a float type auto drain. All Streamtek™ auto drain air filters are float actuated to eliminate the possibility of water flow into the enclosure, even during continuous operation. To prevent problems associated with oil, use a properly sized oil removal filter with at least a .3 micron rating. This should be installed downstream from automatic drain filter separator. Install ALL filters within 10 to 15 feet (3 to 4.6m) of the cooling unit.

NOTE: All Streamtek™ Cabinet Panel Coolers are designed to use normal shop air supplies of 80 to 100 PSIG (5.5 to 6.9 BAR). Our *Adjustable Thermostat* paired with a Solenoid can drastically minimize your compressed air usage and should be used whenever possible.

03 Using the Streamtek Cabinet Panel Cooler

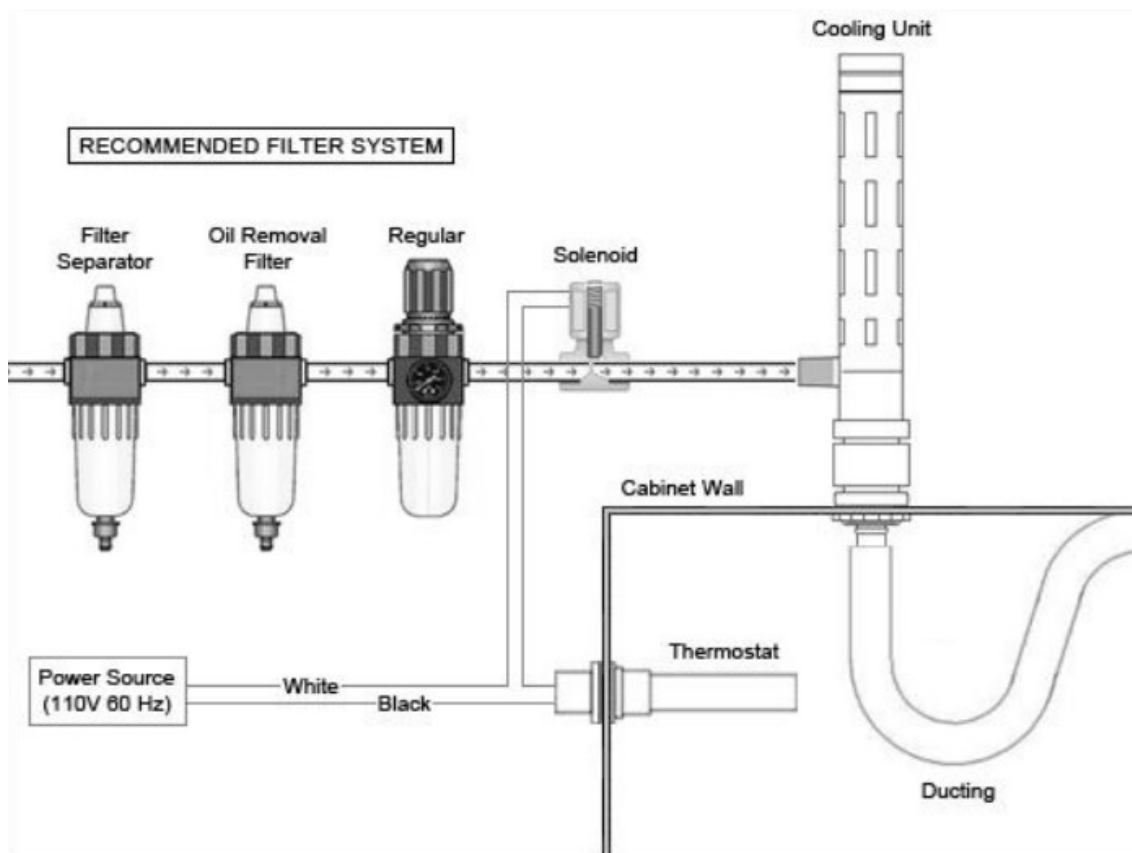
Your Streamtek™ Cabinet Panel Cooler MUST be mounted on the top only (vertically). The Streamtek™ Cabinet Panel Cooler is very easy to install through a 1-1/8" diameter hole in the enclosure.

Close off all vents or other openings that may draw in surrounding air, this is especially important in warm or hot high humidity environments. Your Cabinet Panel Cooler incorporates a low pressure relief valve for both the cabinet air exhaust and vortex tube. This valve closes and seals when your cooler is not operating to maintain the integrity of your enclosure. Relocate any external fans inside the enclosure to help circulate the internal cooled air.

04 Thermostat / Solenoid Valve

The Streamtek Cabinet Panel Cooler may be either run constantly or, can use on-off control with an adjustable thermostat and solenoid. The thermostat that is available from Streamtek can be mounted on a bracket inside the enclosure or through the enclosure wall. The thermostat is not position sensitive and should be mounted in a hot area inside the enclosure. The thermostat should be connected to the hot line supplying the solenoid valve. It is normally open, and closed when actuated (when temperature rises). In turn, all Solenoids that are available from Streamtek have a valve which is normally closed, and open when actuated. Please refer to Thermostat/Solenoid instructions for additional detailed information.

05 Cabinet Panel Cooler Application



06 Troubleshooting & Maintenance

There are many factors that can cause the reduction in flow or force. Undersized airlines, restrictive fittings, or clogged filter elements are common areas to check. If you suspect below average performance, install a pressure gage at the inlet of the Cabinet Panel Cooler.

** For replacement or repair filter and regulator parts, contact STREAMTEK™ at +1(705)770-4455 or sales@stream-tek.com.