

Cabinet Cooler® System Advantages



EXAIR Cabinet Cooler® Systems stop electronic control downtime due to heat, dirt and moisture! There are many advantages to using these low cost and reliable systems.

Construction

EXAIR Cabinet Cooler Systems are engineered around a Vortex Tube and produce cold air from a source of compressed air. Vortex tubes possess some inherently beneficial construction qualities which stack up very well when compared to other technologies.

EXAIR Cabinet Coolers can last 20+ years with a source of filtered compressed air.

Vortex Tubes use no moving parts to generate the cold air which cools your cabinet electronics. Without any fans, condenser motors, evaporator blowers or compressors, the

potential for parts to wear out or break is eliminated. Since Cabinet Coolers do not have moving parts, they are unaffected by vibration or harsh conditions which could cause refrigerant leaks and component failures in traditional air conditioners or heat exchangers.

EXAIR Cabinet Coolers are covered by a **5 Year Built to Last warranty** and can last 20+ years with a source of filtered compressed air. Coolant based air conditioners and heat exchangers typically carry 2 year or less warranties. Since reliability is increased, Cabinet Coolers remain worry free even when mounted remotely. Cabinet Cooler Systems can operate effectively in environments up to 200°F (93°C).

Installation

Many alternatives to EXAIR Cabinet Cooler systems require large windows to be cut into your electrical cabinet and require many hours for installation. This requires additional time, work and resources upon installation and could also permanently damage your cabinet if it is not done correctly. EXAIR Cabinet Coolers use a standard electrical knockout for mounting and can be completely installed and operating in one hour or less.

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Continued Manufacturers of coolant based air conditioners recommend a wait period after shipping so the internal oils and lubricants can settle back into their proper reservoirs and prevent damage from occurring to the internal parts before operating. This simply causes further delay of cooling your electronics. Cabinet Coolers are ready to install the instant they arrive at your location.



Operation

Using clean compressed air, simply supplied by a water/dirt filter separator on your compressed air supply, Cabinet Coolers introduce clean, cold air into your cabinet. This cold air purges the internal hot air out of the cabinet at a slight positive pressure. This slight pressure helps keep dirt and debris from entering the cabinet through any other small cracks or openings which may be found around conduit fittings or poor seals in the cabinet door. No filtered ambient air is required to use with EXAIR's Cabinet Coolers.

Air conditioners and heat exchangers both utilize ambient air to circulate through an enclosure. This air must pass through a filter which becomes problematic when the ambient air is dirty, dusty or filled with debris. Changing filter elements for these products becomes a regular habit which increases maintenance time and cost. In many cases these filters are neglected altogether which degrades the performance of these coolers and places your electronics in jeopardy.

Since EXAIR's Cabinet Coolers rely upon a source of compressed air, they are not affected by the constantly changing ambient conditions in the same way as coolant based air conditioners and heat exchangers. As the ambient air temperatures rise an air conditioner and heat exchanger continue to produce less and less cooling and become less effective at protecting your expensive electrical components. Just when you need these products the most (in the hot summertime conditions), they degrade and underperform.



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Operating Cost Comparison to Coolant Based Air Conditioner

	EXAIR CABINET COOLER NEMA 12 1,700 BTU/HR. WITH 115 VAC THERMOSTAT CONTROL	FREON AIR CONDITIONER 1,700 BTU* 115 VAC, 60 Hz., 5.7 AMPS
INITIAL UNIT COST	\$696.00 (20 YEAR LIFE) \$32.20/YEAR	\$2,500.00 (5 YEAR LIFE) \$500.00/YEAR
INSTALLATION	1 HOUR INSTALLATION TIME X \$80/ HOUR ÷ 20 YEARS = \$4.00/YEAR	3 HOURS MINIMUM INSTALLATION TIME X \$80/HOUR ÷ 5 years = \$48.00/year
MAINTENANCE	No MAINTENANCE, NO DOWNTIME	4 HOURS/YEAR (ONCE PER QUARTER) FOR CHANGING FREON, CLEANING AND REPLACING FILTERS, LEAK CHECKS \$320.00/YEAR @ \$80.00/HOUR
OPERATION	5 HOURS/DAY, 5 DAYS/WEEK, 9 MONTHS/YEAR @ \$0.25/1,000 CU. FT OF AIR \$338.00/YEAR	5 HOURS/DAY, 5 DAYS/WEEK, 9 MONTHS/ YEAR @ \$.0955/KW.HR = \$56.38/YEAR
TOTAL OPERATION COST	\$374.20/YEAR	\$924.38/YEAR (NOT INCLUDING DOWNTIME FOR REPAIRS)
*FREON AIR CONDITIONERS MUST BE DE-RATED BY 65% AT 90°F AND 95% AT 115°F. THEREFORE, THE FREON AIR CONDITIONERS MUST OPERATE LONGER THAN THE CABINET COOLER OR BE OVERSIZED TO PROVIDE THE SAME AMOUNT OF COOLING DURING WARMER WEATHER WHEN THE AMBIENT TEMPERATURE IS HIGHER.		

Flexibility

EXAIR Cabinet Coolers are also a very flexible product to suit your specific needs. They are available in **NEMA 12**, **NEMA 4** and **NEMA 4X** and are UL Listed to maintain your enclosure's rating. They offer a wide cooling capacity range from 275 Btu/hr through 5,600 Btu/hr.

Thermostat controlled systems operate most efficiently by turning the cooler on and off only as needed to maintain a good internal temperature for your electronics. If you are experiencing summertime or seasonal heat problems, a Cabinet Cooler with thermostat control is the best option because it will turn off in colder temperatures and return to cooling your electronics once the temperatures begin to rise.

Non Hazardous Purge (NHP) models provide a continuous flow of air to create



Cabinet Coolers End Costly Shutdowns

Continued a slight positive purge in order to prevent dust and debris from entering the cabinet when they are mounted in dirty environments. You may choose to purchase a **high temperature Cabinet Cooler** when they are placed close to ovens, boilers, or hot processing areas. High temperature models operate up to 200°F (93°C).

Type 316SS Cabinet Coolers are available to resist the most corrosive environments.

Summary and Additional Benefits of EXAIR Cabinet Coolers

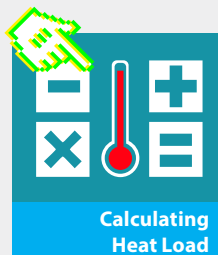
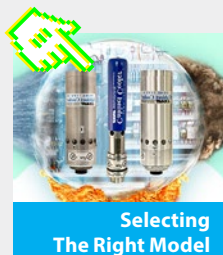
- Less time to install
- No Freon Leaks
- No costly repair calls
- No maintenance when installed according to manufacturer recommendation.
- Provide longer life to expensive controls
- No lost production time waiting for repairs
- Cabinet Coolers are available from stock to ship same day (when ordered by 2:00 pm Eastern) and have your overheating problem solved the next day.
- UL listed to maintain your enclosures NEMA integrity, they are available in NEMA 12, NEMA 4 and NEMA 4X.
- CE compliant for EU safety standards
- Inexpensive to purchase and operate
- Cooling capacities up to 5,600 Btu/Hr.

[Click here to learn more about EXAIR's Cabinet Coolers.](#)

[Click here to learn more about EXAIR's Cabinet Cooler Promotion.](#)



Select from the options on the right to learn more





Select from the products below to learn more



What are some of the other Intelligent Compressed Air products that EXAIR manufactures?

EXAIR's Air Knives produce a quiet, hard-hitting curtain of air for blowoff, cleaning, drying and cooling. Air Amplifiers are very good at venting and exhausting fumes, cooling and drying. Cabinet Coolers stop electronic control downtime due to heat, dirt and moisture. And that's just the beginning. Check out the links below to learn more about EXAIR's wide selection of products.



Cooling



Drying



Blowoff



Cleaning



Ventilating



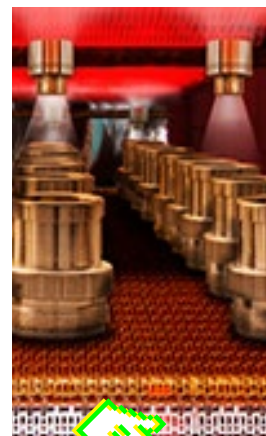
Environmental Separation



Part Ejection



Part Manipulation



Air Circulation

Technical Support

EXAIR has a staff of application engineers ready to assist you in selecting the appropriate model for your application.

They can be contacted at **1-800-903-9247**.

Or you can email them at **techhelp@exair.com**

EXAIR.com®

Manufacturing Intelligent Compressed Air® Products Since 1983

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