EXAIR® Corporation

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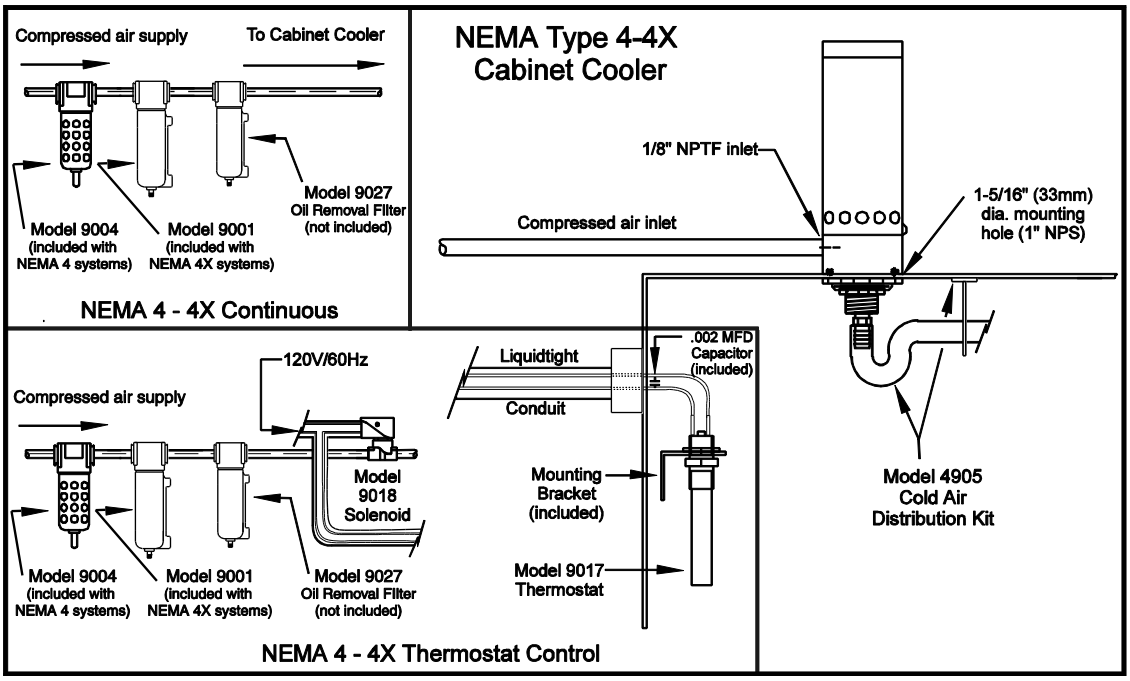
NEMA 4-4X MICRO CABINET COOLER® INSTALLATION & MAINTENANCE

Models: 4602 through 4608, 4702 through 4708, 4802 through 4808
4602SS through 4608SS, 4702SS through 4708SS, 4802SS through 4808SS



COMPRESSED AIR LINE SIZES

Compressed air lines should be sized to hold pressure drops to a minimum. When installing supply lines, use 1/8" pipe for runs up to 10' (3m). Use 1/4" pipe for runs up to 25' (7.6m), and 3/8" pipe for runs over 25' (7.6m). If using compressed air hose, consider 3/8" I.D. hose to be the same as 1/4" pipe and 1/2" I.D. hose to be the same as 3/8" pipe. Do not use restrictive fittings such as quick connects. They can "starve" the NEMA 4-4X Cabinet Cooler by causing excessive line pressure drop.

COMPRESSED AIR SUPPLY

With proper filtration and separation of dirt, moisture and oil from the compressed air supply, the NEMA 4-4X Cabinet Cooler will run for years with no maintenance required. Filtering for contaminants and separation of moisture is required for all NEMA 4-4X Cabinet Coolers.

All NEMA 4 Cabinet Cooler Systems include a Model 9004 Automatic Drain Filter Separator (NEMA 4X Cabinet Cooler Systems include Model 9001) which provide 5 micron filtration. The automatic drain is float actuated to eliminate the possibility of passing water into the enclosure, even during continuous operation. **(Impulse-type automatic drains must not be used. They may allow water to pass through the filter during continuous operation.)**

To prevent problems associated with oil, use an oil removal filter (Model 9027 Oil Removal Filter not included). The oil removal filter should be used downstream from the automatic drain filter separator. Filters should be used close to each NEMA 4-4X Cabinet Cooler, within 10 to 15' (3 to 4.6m) is best.

NEMA 4-4X Cabinet Coolers are designed to use normal shop air supplies of 80 to 100 PSIG (5.5 to 6.9 BAR). Thermostat control can minimize compressed air usage and should be used whenever possible.

USING THE NEMA 4-4X CABINET COOLER

For Use On A Flat Surface Of A NEMA Type 4/4X Enclosure.

The NEMA 4-4X Cabinet Cooler mounts to the enclosure thru a 1-5/16" (33mm) 1" NPS diameter hole. A nut is supplied to lock it in place. The cooler should be mounted on the top only (vertically). Side mounting is possible with use of a Model 4906 90° Side Mount Kit.

EXAIR Cabinet Coolers are UL Listed to U.S. and Canadian safety standards.

USING THE NEMA 4-4X CABINET COOLER (con't)

The NEMA 4-4X Cabinet Cooler will provide a 54°F temperature drop from supply air temperature at 100 PSIG (6.9 BAR). An elevated inlet temperature will produce a corresponding rise in cold air temperature and reduction in cooling capacity.

COLD AIR DISTRIBUTION KIT

The Model 4905 Cold Air Distribution Kit includes 4' (1.2m) of flexible (3/8" I.D.) vinyl tubing, (4) adhesive backed clips to hold the tubing in place, (1) elbow and (1) end plug. The tubing is used to direct the cold air for circulation or to hot spots, as needed. Holes may be drilled or cut ("V" shaped) in the tubing. If the end is plugged, use at least (4) 1/8" (3.2mm) diameter holes in tube to eliminate excessive back pressure on the NEMA 4-4X Cabinet Cooler.

HUMIDITY

The NEMA 4-4X Cabinet Cooler incorporates a low pressure relief valve for both the vortex tube and cabinet air exhaust. This valve closes and seals when the cooler is not operating to maintain the integrity of the NEMA 4-4X enclosure. During continuous operation, relative humidity inside the enclosure stabilizes at 45%. No moisture condenses inside the enclosure.

THERMOSTAT

Some NEMA 4-4X Cabinet Cooler Systems are supplied with thermostat control. The Model 9017 Thermostat should be located inside the enclosure using the mounting bracket (included). The thermostat is not position sensitive and should be mounted in a hot area inside the enclosure.

The electrical requirement is 120V/60Hz, 100V/50Hz or 240V, 50/60Hz, and should be connected to the hot line supplying the solenoid valve. It is normally open, actuated closed, when the temperature rises. The thermostat is preset at 95°F (35°C). It will normally hold that setting within + or - 2°F (1°C) inside the cabinet.

To change the temperature setting:

Use a cup, thermometer and meter to check continuity. Using the cup, mix hot and cold water until the thermometer shows the desired temperature for the enclosure. Insert the plain end (not the threaded end) of the thermostat into the water and check continuity across the leads. Adjust screw until switching occurs (slight turn of the adjusting screw). The thermostat will be set to actuate at the temperature of the water.

If the temperature at the mounting location of the thermostat changes very slowly, the solenoid valve may chatter. This can be corrected by changing the thermostat location or by adding the Model 4519 .002 Microfarad Capacitor across the leads (included).

SOLENOID VALVE

Systems with thermostat control include the Model 9018 or 9024 NEMA 4-4X Solenoid Valve. Mount the solenoid valve on the compressed air line between the filter and the NEMA 4-4X Cabinet Cooler. The solenoid valve requires 120V/60Hz, 110V/50Hz or 240V, 50/60Hz supply. A green ground wire has been provided for grounding. All wiring should be installed in liquid-tight conduit. The valve is normally closed, actuated open. In most cases, it is controlled by the thermostat.

TROUBLESHOOTING & MAINTENANCE

If The NEMA 4-4X Cabinet Cooler Is Not Producing Cold Air, check the pressure by installing a gauge at the compressed air inlet of the cooler. Large pressure drops are possible due to undersized lines, restrictive fittings and clogged filter elements.

For replacement or repair filter and regulator parts, contact EPUTEC at +49 8191 91 51 19 0 or info@eputec.de.

NOISE MUFFLING

All Cabinet Cooler Systems are equipped with sound muffling. In most applications, the noise level is less than 74 dBA. A cold muffler (Model 4902 Cold Muffler not included) can be easily retrofitted to the cold air discharge.

If you have any questions or problems, please contact:

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