



Thermal Management Products
for Industrial Enclosure Systems



**ALLIED
MOULDED
PRODUCTS, Inc.**

Life insurance for your electronics

The formation of condensation is one of the biggest dangers for electrical enclosures. As long as they are working under load, their own warmth prevents water from condensing. If the process is switched off, the electronics cool down. This is precisely where the function of our control cabinet heaters (radiant heaters and fan heaters) begins to protect.

We offer a wide variety of performance classes of FLH control cabinet heaters, which are complemented by thermostats and hygrostats from the FLZ series. As a team, they ensure that the temperature inside the control cabinet is always correct and that the formation of condensation is prevented.

The control of filter fans by thermostats from the FLZ series represents an intelligent

use of filter fans for control cabinet air cooling to suit individual needs. It increases energy efficiency, reduces CO₂ emissions and reduces filter maintenance levels.

Accordingly, the combination with thermostats and hygrostats from the FLZ series offers a better environmental balance through higher energy efficiency. It also results in greater reliability of your production process:

- Pinpoint distribution and constant temperature in the control cabinet.
- Reduced energy consumption and optimization of the efficiency of the heaters.
- Additional savings on energy, materials and time.

Allied Moulded heaters, thermostats and hygrostats perfectly complement filter fans.

Filter fans

You can save energy, resources and valuable assembly time through the use of Allied Moulded filter fans.

They provide for more reliability in the production process, because innovative filter fans and filter mats enable an increase in the air flow while maintaining Type 12 integrity.

Practical tests under the toughest conditions in the woodworking industry, for example, showed that service intervals were prolonged by one to three weeks. The design features a patented "Click & Fit" latching design for a hardware-free installation and a simple to operate hinge system for easy insertion of the pre-cut and sized filter mat. The fluted filter mats are easy to clean providing for a longer use life and shorter service times.

Extra service-friendly filter fan

The Allied Moulded filter fan offers an enormous degree of service, mounting and maintenance-friendliness due to:



Installation compatibility

- ability to be mounted in rows matched to customer application



Easier, variable electrical connection

- more secure, faster connection using spring-type terminals
- optimum adaptation to electronic assembly concepts



Tool-free mounting

- fastening without screws
- patented 4-corner latching



Faster filter mat replacement

- patented hinge system for simplest possible handling
- easy to insert filter mat



Modular structure

- variable air flow direction
- toolless mounting of accessories and additional components

Heaters and Thermostats



FLH Radiant Heaters

Radiant heaters are built very compactly and cover a wide operating range. They are used in combination with a thermostat or hygrostat, predominantly for the avoidance of excessively low temperatures or excessively high humidity in the control cabinet and, last but not least, help to avoid the formation of corrosion.

The mini-heaters and surface temperature-limited heaters are particularly suitable for use in small housings or for the heating of isolated spots in sensitive areas.



FLH Fan Heaters

This type of heating is ideal for use in larger electrical enclosure. They have an integrated fan that assists the natural convection and provides fast and even distribution of the heat in the electrical enclosure.

The fan heaters are used in combination with a thermostat or hygrostat, for the avoidance of excessively low temperatures or excessively high humidity in the electrical enclosure and also help to avoid the formation of corrosion.



FLH -TF Fan Heaters with Thermostat

The FLH-TF fan heater with thermostat is designed to protect electronics from the effects of low temperatures such as corrosion, freezing or condensation, which can damage critical components within a control enclosure.



FLZ Thermostats

Thermostats are used as temperature controllers and, therefore, for the control of filterfans or electrical enclosure heaters. They are available with N.C. (normally closed) / N.O. (normally open) and changeover contacts. In combination with control cabinet heaters you can ensure, besides temperature control, that the control cabinet is 'artificially' dehumidified, in particular in outdoor applications. That means that the temperature is kept above the dew point so that no water condenses out of the air, which could lead to short circuits due to the formation of condensation.



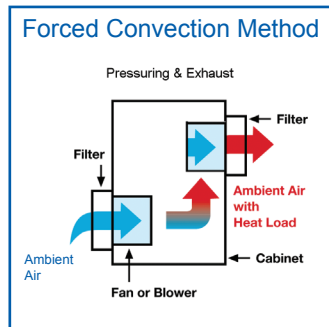
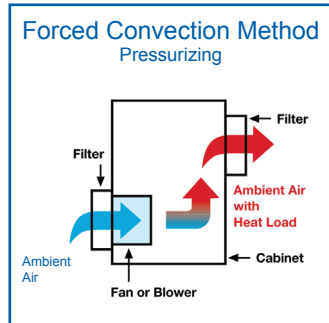
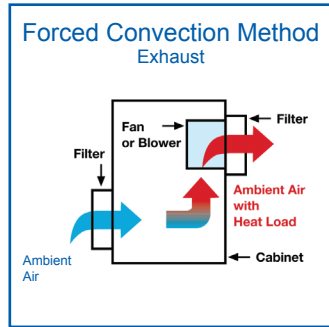
Hygrostats switch on electrical enclosure heaters or filterfans when a preset relative humidity is exceeded. The relative humidity is kept above the dew point and the condensation of water on electrical components and the corrosion of unprotected sheet metal is prevented. A new electronic combination device unites thermostat and hygrostat in one housing.

When using filter fans

Always use the filter fan to propel the cool ambient air into the enclosure. This ensures that slight positive pressure builds up inside the electronic cabinet in comparison to the ambience, and that only air filtered by the filter fan flows into the enclosure. The air propelled into the cabinet displaces the warm air, which exits through the exhaust filter. If, however, the air is drawn out of the electronic cabinet by suction power, unfiltered air can also enter through poor seals and cable entries.

If you install a combination of filter fan/exhaust filter, fit the filter fan in the lower third of the electronic cabinet if possible. The exhaust filter must be installed as near to the top as possible to prevent heat pockets in the upper part of the cabinet.

Install a FLZ 530 thermostat to control your filter fan. This will increase the life of the fan and decrease the amount of maintenance required to clean the filters.



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