

# Finned Strip Heater: Installation Information

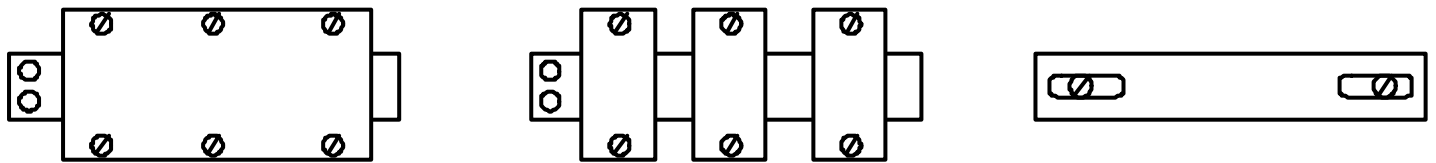
This type of heater is primarily designed for the heating of air and is, therefore, designed to be mounted clear of the mounting surface and for this reason, are provided with end tabs. The heater should be mounted firmly and at a height that permits a clear air flow over both sets of fins.

## Mounting Requirements

Proper clamping is important in the use of all strip heaters. Please read the following recommendations regarding the mounting of strip and finned strip heaters.

The preferred clamping method are :-

- 1: Cover the whole of the heater with a clamping plate at least 6mm (1/4 inches) thick, securely bolted to the heated block at 75mm - 100mm (3 - 4 inch) intervals on both sides of the heaters.
- 2: Use 25mm (1 inch) wide, 6mm (1.4 inch) thick clamping bars bolted across the heater at 75 - 100mm (3 - 4 inch) intervals.
- 3: In applications where it is required to heat air, heaters with mounting slots or tabs can be used. However, high watt densities should be avoided as this can lead to hot spots on the heater and possible failure. Long heaters should also be avoided as they can bend, this also causing hot spots. For higher efficiency and higher wattage's in this type of application, it is recommended that finned strip heaters are used.
- 4: It is possible to use heaters with mounting tabs or slots in the end to fit the heater to a heated block. As this does not give a firm contact with the heated block (contact pressure only being applied at each end) It is not recommended that long heaters or heaters with high wattage's are used as the poor thermal contact can lead to hot spots and premature failure.



**Mounting Arrangements :Cover Plate (Left), Mounting Strips (Middle) & End Tabs (Right),**

Wiring	As a general rule, all power leads should be routed away from low voltage signal leads e.g. thermocouple and serial communication cables.
Fixed Leads	Leads should be routed to avoid sharp corners which may damage the insulation.
Terminals	To withstand the high temperatures associated with fixing cables to terminals on strip heaters, Monel lugs should be used. Cable with insulation capable of withstanding high temperatures should also be used. Fibreglass insulation will withstand temperatures up to 200C. For higher temperatures, Mica tape should be used.
Environment	Whilst strip and finned strip heaters will operate reliably for many years, it is recommended that the heater is mounted such that liquid contaminants are prevented from falling on to the heater. Infra-Kote compound can be used to improve the thermal conductivity of the heated surfaces and, thus reduce failure due to overheating.

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