

HELIOS STRIP HEATERS

METAL SHEATHED - MICA INSULATED STRIP HEATERS

Helios manufacture a wide range of metal sheathed mica insulated strip heaters, with unlimited variations of design.

APPLICATION

As with the ST type, these heaters provide a versatile robust and dependable conductive heat source ideally suited for clamp-on applications where an even spread of heat is required over any area.

E.g. Platens, dies, mould, tanks, sealing and packaging machinery, plastic and rubber moulding machinery etc.

CONSTRUCTION

Durable nickel-chrome resistance wire is wound on a former of high grade mica shaped to suit any physical dimension (see illustrations) sandwiched between mica sheet, and permanently enclosed in a metal sheath. This assembly provides a compact, thin, and light-weight heating source with a fast heat transfer, maximum efficiency, and responds quickly to control.

SHEATH MATERIALS

Available in metal sheaths of steel, stainless steel or copper, dependant upon application.

TERMINATION

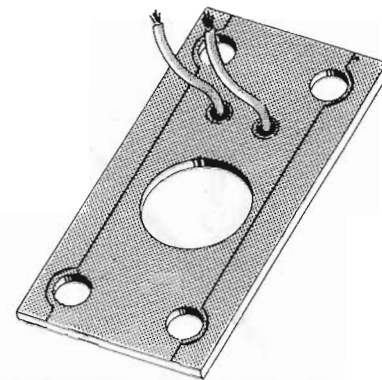
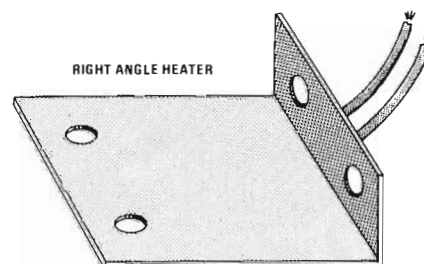
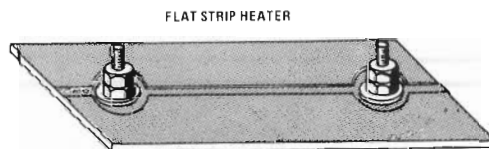
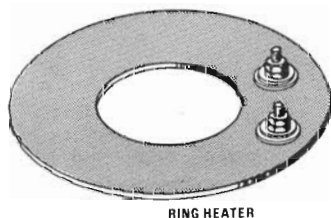
These can be provided either in screw connections, standard or high temperature plugall receptacle, flexible leads, protected leads or other types as specified.

ORDERING

When ordering, specify, size, shape, sheath material, volts, watts, type and termination required.

NOTE Details of your proposed application and a sketch of the heater required will ensure correctly designed units for your particular problem.

TYPICAL FORMS



INSTALLATION

(Good surface contact essential)

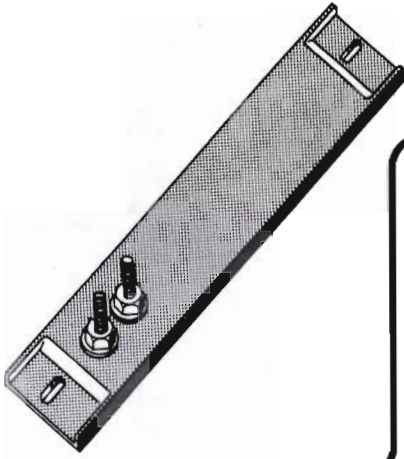
Wherever mica insulated strip heaters are used for heating metals or other solid objects, to ensure long life and maximum efficiency it is essential that good permanent contact be maintained between the heater and heated surface. Metal clamp plates secured by bolts or screws, so that the strip heater cannot expand away from the surface being heated are required.

It must cover the heating area and be of adequate strength and thickness to prevent buckling when tightened and after heat is applied.

LAGGING

When insulation is used with these heaters it should be separated by an air space of at least 13 mm (½"), to prevent the possible formation of 'Hotspots' which would reduce heater life.

HELIOS STRIP HEATERS



ST TYPE STRIP HEATERS

Helios stainless strip heaters provide a versatile, robust, and dependable conductive heat source which is ideally suited for clamp-on applications where an even spread of heat is required over any area. With a lower watt density these heaters can also be applied to many air heating situations.

CONSTRUCTION

Helios strip heaters consist of a seamless stainless steel sheath, housing high quality nickel-chrome resistance wire which is insulated by a refractory material selected for best thermal conduction and stability at elevated temperatures. This construction provides fast heat transfer and maximum efficiency. Termination is located at one end, consisting of corrosion resistant studs with washers and lock nuts and can be protected by a standard junction box if required. Mounting lugs are slotted either end.

APPLICATION

The Helios strip heater is utilized by many industrial users to apply heat to a wide variety of heating problems. This is due to its easy and economical installation, wide temperature range and dependability.

SURFACE HEATING

Clamped on platens, moulds, sealing bars, hot plates, and other heat-transferring metal parts: e.g. tanks, kettles, autoclaves, cutting knives etc.

PROCESS AIR HEATING

Drying cabinets, ovens and rooms, moisture protection for motors, controls, switchboard cubicles etc.

INSTALLATION

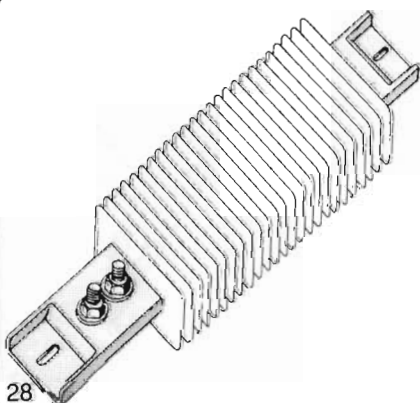
- Milled Plate** Heaters may be held in position in platens and similar installations with a steel plate recessed to the heaters width and thickness, minimum 39.7 mm (1 9/16") x 8.73 mm (11/32") and shim if necessary, then fastened to the working plate.
- Clamping** Position clamping bars or plates with firm even contact over full effective heating area without being too tight to restrict expansion. Contact areas must be flat and smooth.
- Expansion Allowance** For the lower watts density heater suitable for installation in air, they may be supported by the mounting lugs either end with the terminal end fixed firmly, the other slackened in the slotted hole to allow for expansion.
- Lagging** Should lagging be used (eg. in an oven application) it must be separated by a minimum 12.7 mm (1/2") air gap as this eliminates 'HOTSPOTS' and prolongs element life.

STF TYPE FINNED STRIP HEATER

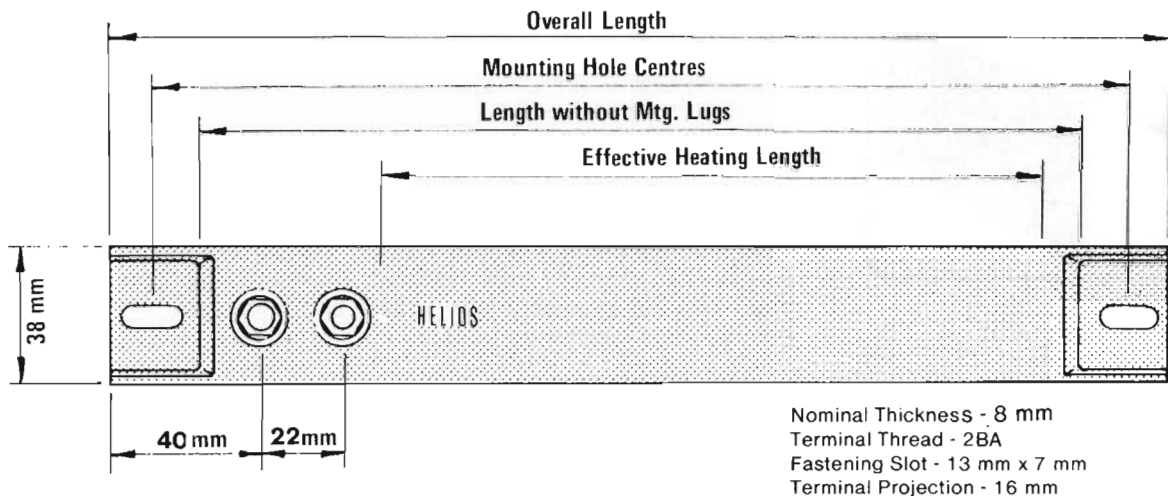
These heaters are of the same basic design and manufacture as the standard ST but are fitted with Nickel Plated fins to give greater heat dissipating area, generally used in a moving air application.
Fin dimensions 50 x 35mm

APPLICATION

Used in ovens and cabinets for drying, baking, preheating and melting, hot cupboards, food trolleys, incubators, as anti-condensation heaters for electric motors, switchboard cubicles, and in duct heating and load banks.



HELIOS STRIP HEATERS

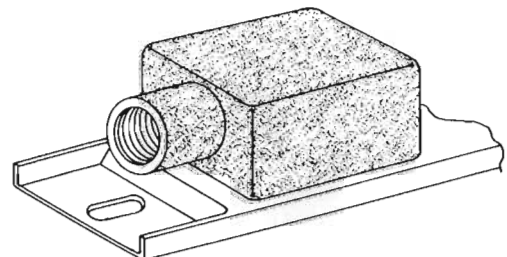


'ST' TYPE STRIP HEATERS

Catalogue Number	Wattage Range of Ratings					Dimensions							
						Overall Length		Mtg. Hole Centres		Length Without Mtg. Lugs		Effective Heating Length	
	mm.	ins.	mm.	ins.	mm.	ins.	mm.	ins.					
ST 8	150	*175	200	*275	350	203	8	178	7	165	6 1/2	102	4
ST12	250	*350	475	*600	700	305	12	279	11	267	10 1/2	203	8
ST15	350	*500	650	*850	1000	387	15 1/4	362	14 1/4	349	13 3/4	286	11 1/4
ST17	500	*650	825	*1000	1250	454	17 7/8	429	16 7/8	416	16 3/8	352	13 7/8
ST19	550	*700	900	*1100	1300	495	19 1/2	470	18 1/2	457	18	394	15 1/2
ST21	600	*750	1000	*1200	1500	533	21	508	20	495	19 1/2	432	17
ST23	650	*825	1200	*1450	1750	603	23 3/4	578	22 3/4	565	22 1/4	502	19 3/4
ST26	750	1000	1250	1600	1900	673	26 1/2	648	25 1/2	635	25	572	22 1/2
ST30	1000	1200	1500	1800	2200	775	30 1/2	749	29 1/2	737	29	673	26 1/2
ST36	1150	1500	1700	2200	2500	914	36	889	35	876	34 1/2	813	32
ST42	1300	1700	2100	2500	3000	1083	42 5/8	1057	41 5/8	1045	41 1/8	981	38 5/8
kW/m ²	15.5	19.5	25	31	38.75	* AVAILABLE EX STOCK							
W/in ²	10.0	12.5	16	20	25.								

ANTI-CONDENSATION ST STRIP HEATERS Standard Sizes and Ratings

Catalogue Number	Wattage Range of Ratings					Dimensions
	ST 8	25	50	60	80	
ST12	60	80	120	-	-	



**J. BOX
AVAILABLE
IF REQUIRED**

WATT DENSITY DATA

PLATEN HEATING		VESSEL HEATING	
150°C	31 kW/m ²	Low Viscosity	25 kW/m ²
315°C	25 kW/m ²	High Viscosity	10 - 20 kW/m ²
425°C	15.5 kW/m ²	Semi Solids	7 - 10 kW/m ²