

Tubular Heaters for Manifolds

Formed Tubular Heaters is supplied in Chrome Nickel Steel with nominal sheath diameter of 6.50mm and 8.00mm. Standard elements have a terminal post which gives a cold section of approx 30mm for 6.50mm and 35mm for 8.00mm.

Features

- Available in Chrome Nickel Steel
- Sealed Edges to prevent from Moisture
- Superior Grade Magnesium Oxide Insulation
- Swaged for Good Electrical Insulation & Heat Transfer
- Available in Dia 8.5 mm, 8 mm, 6.5 mm & square section 6 mm x 6 mm

Applications

- Hot Runner Manifolds

The helical wound heating wire is made of a high temperature resistant NiCr alloy. And the insulation consists of superior grade of magnesium oxide (MgO). As the heaters are swaged, even at high sheath temperature they have excellent electrical insulation and a high heat transfer. To prevent the heater from moisture the connection ends are sealed with sealing components.

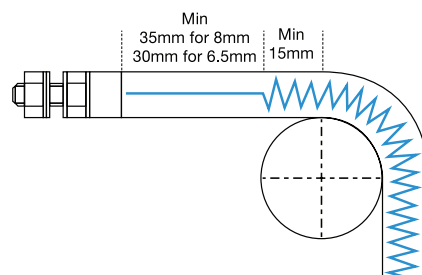
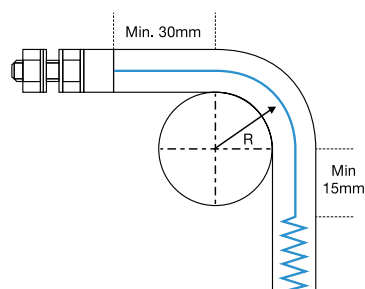
For manufacturing formed elements it is necessary to have an accurate dimensional sketch showing all the centre distances, radius and degrees.

Technical Data

Length	300 - 1550mm	400 - 2100mm
Maximum Current	12 A	15 A
Nominal Voltage:	< 230V	< 400V
Wattage:	±10%	±10%
Dielectric Strength:	1.5HV	1.5 HV
Insulation $M\Omega$:	>5 $M\Omega$	>5 $M\Omega$
Leakage Current	<0.5 mA	<0.5 mA
Minimum Unheated:	30mm	35mm
Terminal Pins:	M3 x .50mm /plain post	M4 x .70mm

While placing the order for Formed Tubular Heaters, consider the following:

The minimum radius for \varnothing 6.5mm is 12mm and for \varnothing 8mm is 15mm.



Dimensional Data

Diameter	Length	Watts	Voltage
Dia 6.5mm +0.05/-0.10mm	300	450	230
	325	500	230
	350	550	230
	375	600	230
Square section 6mm x 6mm +0.05/-0.10mm	400	650	230
	425	700	230
	450	750	230
	475	750	230
	500	800	230
	525	850	230
	550	900	230
	575	950	230
	600	1000	230
	625	1050	230
	650	1100	230
	675	1150	230
	700	1200	230
	725	1250	230
	750	1300	230
	775	1300	230
	800	1350	230
	825	1400	230
	850	1450	230
	875	1500	230
	900	1550	230
	925	1600	230
	950	1650	230
	975	1700	230
	1000	1750	230
	1025	1800	230
	1050	1850	230
	1075	1900	230
	1100	1950	230
	1275	2250	230
	1300	2300	230
	1325	2350	230
	1350	2400	230
	1375	2450	230
	1400	2500	230
	1425	2550	230
	1450	2600	230
	1475	2650	230
	1500	2700	230
	1525	2750	230
	1550	2800	230

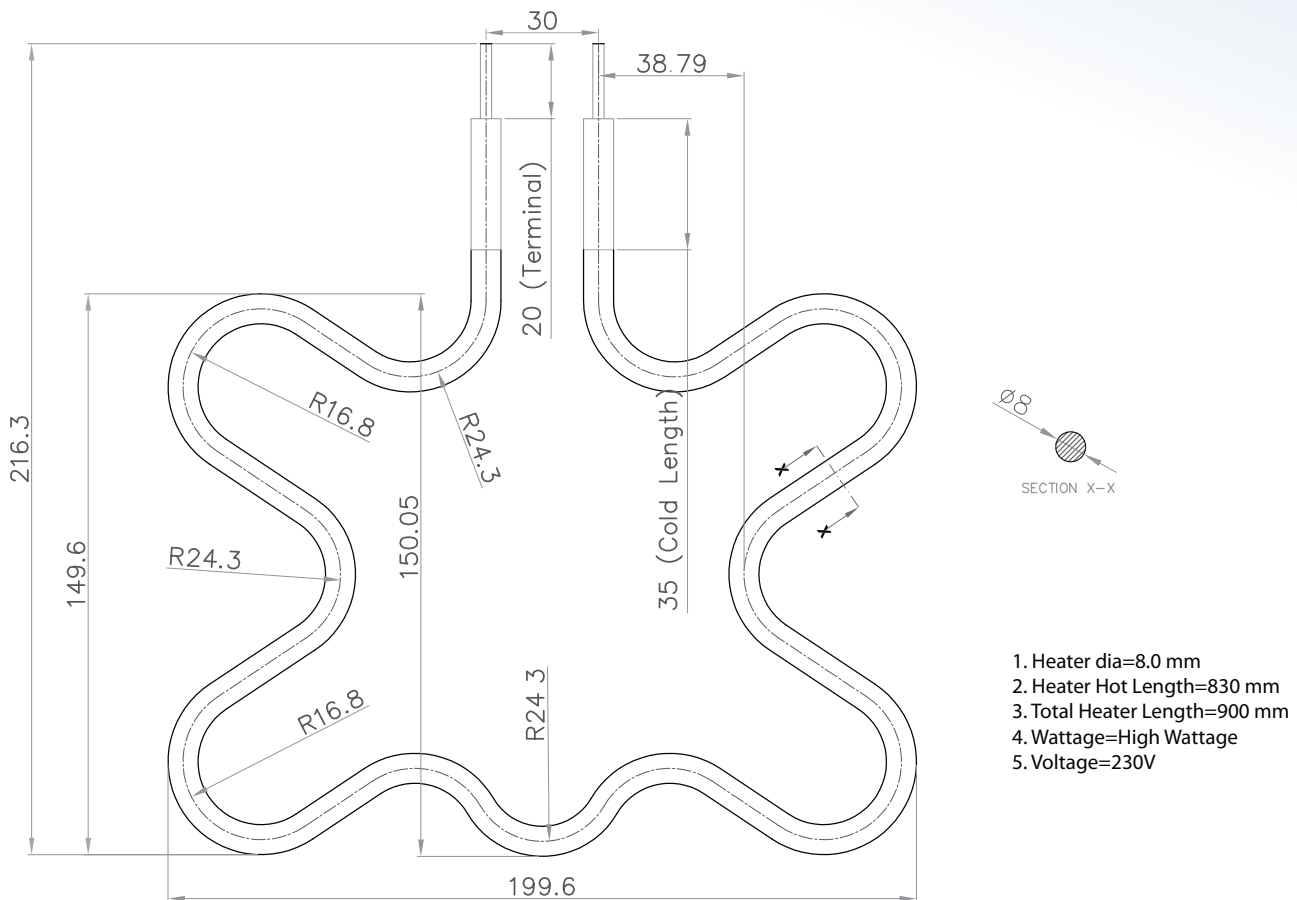
Diameter	Length	Watts	Volts
Dia 8mm +0.05/-0.10	400	800	230
	450	900	230
	500	1000	230
	550	1150	230
	600	1250	230
	650	1400	230
	700	1500	230
	750	1600	230
	800	1750	230
	850	1850	230
	900	1950	230
	950	2100	230
	1000	2200	230
	1050	2300	230
	1100	2450	230
	1150	2550	230
	1200	2650	230
	1250	2800	230
	1300	2900	230
	1350	3000	230
	1400	3150	230
	1450	3250	230
	1500	3350	230
	1550	3500	230
	1600	3600	230
	1650	3600	230
	1700	3600	230
	1750	3600	230
	1800	3600	230
	1850	3600	230
	1900	3600	230
	1950	3600	230
	2000	3600	230

$KW = \frac{Wt \text{ of metal/plastic in kgs} \times Sp \text{ heat} \times \text{temp rise in celsius (final-ambient)}}{560 \times \text{heat up time in Hrs}}$

Add 20% heat loss to the total KW

How to Order

Please send a detailed dimensional drawing file (example given below for your reference) showing all center distances along with ● Total Path Length ● Wattage ● Voltage ● Required quantity



Precautions & Installation

1. Incorrect wiring and loose contacts leads to sparks resulting in fire or heater failure. Keep all electrical connections properly protected to avoid electrical hazards to machine operators.
2. Use of voltage stabilizers and Circuit breakers ensures smooth supply of voltage to heaters resulting a longer life.
3. Ensure that the terminal junction is technically engineered to withstand the ampere load as well as the shocks and jerks due to movements. Appropriate connection leads (insulated) to withstand the required ampere load also reduce the risk of heater failure.
4. Ensure that the terminals are well insulated and protected since the heater terminals are prone to attracting moisture. Combustable gases & vapours also leads to deposits of carbon on the terminals resulting in failure of heaters.
5. Raw materials (polymers) spilling on the terminals & contamination (oil/grease) penetrating the heaters. Prior to installation, the area must be cleaned & should be free of all contamination that might liquefy under heat and penetrate into the heaters thereby carbonizes & becomes conductive. The smallest amount of contamination can cause electrical shorts and result to heater failure.
6. In case of immersion heaters we recommend you to clean (De-scale) the heaters on regular intervals. This helps increase life of heaters as well as optimum achievement of temperature in a shorter period, there by saves power.
7. Overheating that leads the heater to operate beyond the maximum capacity can be a cause for destroying an entire heating zone, defect temperature sensors and controllers. The wattage should be calculated as close as possible to operating wattage to minimize on-off cycle resulting to power saving. Ensure that the tips of the sensors (Thermocouples) are clean and free from any contamination and should be checked for good response to temperature changes.
8. Use of substandard raw materials & manufacturing defects is also one of the common cause of heater failure.



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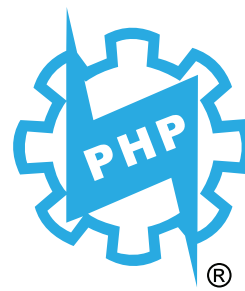
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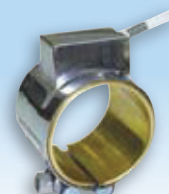
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