High Performance Heaters for Machine Nozzles

A coil heater is mounted onto a Brass Collet which is designed and machined to high accuracy for better heat transfer and covered with a Chrome Nickel Steel clamping band. Upon tightening the clamping band, brass collet firms its grip over the nozzle, resulting in a very even fit for efficient performance.

Coil Heaters, which are designed for use in hot-runner molds, when applied in such conditions works wonders.

Features

- Higher Operating Temperature 400ºC
- Available with built in Thermocouple
- Negligible Effect of Material Spillage
- Very Robust Design
- Delivers Better & Even Heat Transfer
- Available with built in Thermocouple
- Good for processing engineering plastics(nylon66, glass polyfill)

Applications

- Extended Nozzles
- Injection & Blow Moulding

Advantages

- Quick ramp up of temperature due to higher watt density
- Negligible effect of material spillage
- Efficient heat transfer due to inner Brass Collet
- Accurate Temperature Control at the nozzle tip
- Higher operating temperature (400ºC max) compared to conventional Mica Band Heaters (250ºC max)

Compared to conventional method of heating machine nozzles with Mica Band Nozzle Heaters, PHP offers a High Performance Heater which has many advantages. This product has evolved out of experience and regular heater failure complains of plastic processor around the globe.

It has a very robust design and can perform efficiently even where polymer spillage is a regular feature.

They can be manufactured with built-in thermocouple, thus can be controlled very accurately while processing sensitive materials e.g. Nylon 66 with 40% glass filled.

Standard Sizes

Following standard sizes are available, others can be ordered as per requirement.

Size	Watts	Volts
25 mm x 25 mm	250	240
25 mm x 38 mm	250	240
25 mm x 50 mm	330	240
25 mm x 75 mm	400	240
38 mm x 25 mm	250	240
38 mm x 38 mm	330	240
38 mm x 50 mm	400	240
38 mm x 75 mm	550	240
25 mm x 25 mm	250	120
38 mm x 38 mm	330	120

All the above heaters are fitted with 39.37" (1000mm) long wires and "J" type built in Thermocouple. The lead wires have a protective cover of Stainless Steel flexible conduit.

Caution For Best Results

These heaters should be controlled with any reputed make Hot Runner controller and not by machine controllers. If a proper controller is not used, heater failure can be regular.

Precautions & Installation

1. High Performance Heaters are hygroscopic in nature due to Mgo contents. If kept unused for longer period, there is moisture deposition on the terminals. Therefore we recommend you to de-moisturise the heaters prior to installation by heating them at 100 - 120 Degree Centigrade in an oven for Approximately 1 to 2 hours or use controllers with soft start function. This will help evaporate any moisture present inside.
2. While installing High Performance Heaters on to the nozzle care should be taken that they should be tight fit for even heat transfer. There should not be air gaps between the heater and the nozzle. Never open the ID of the heater by twisting as it will not fit tight which leads to premature heater failure.
3. Due to high watt densities per cm/sq, High Performance Heaters require precise temperature controllers. PHP strongly recommends to use good quality soft start Hot Runner controllers.
4. Lead ends (Non Heating) once bent should not be re-bent / de-coiled. This could lead to breakage. Sharp edges along the lead wire path should be avoided. Connection lead areas should be protected from cumbustable gases & liquid to avoid short-circuits.
5. Adapter area should be kept under 150 Degree Centigrade. (Junction between Heater & Lead wires)
6. Stabilized Voltage supply increases the life of the heater as well as increases the wattage output.