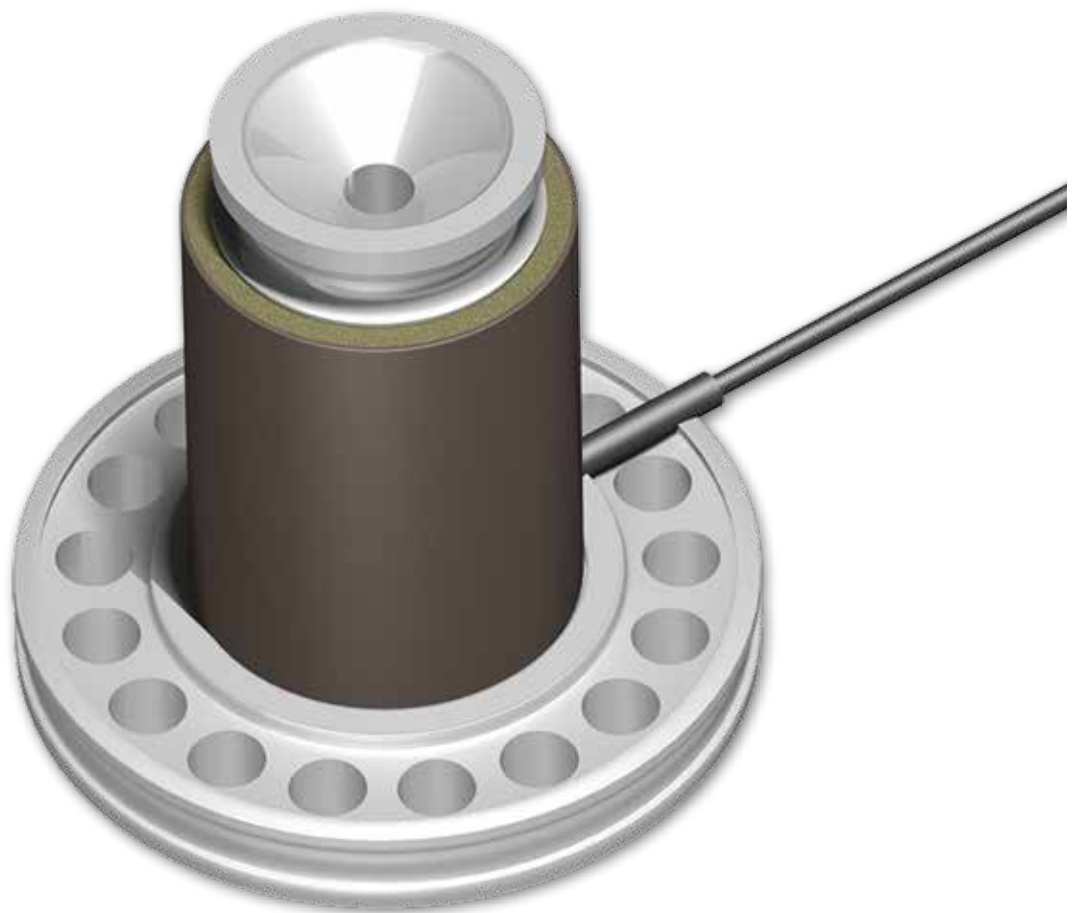


# hotcast Sprue Nozzle

ZD 50/80 and ZD 125 for zinc die-casting application



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## Components and Systems

Heating elements, thermal sensors and process control – hotset is your partner for the realization of intelligent product and service solutions in the field of industrial heat technology. Based on our international presence and our own production sites, we operate as a component supplier and development service provider for customers in all industries.

We supply you with components for your series production, we implement complex system solutions for you or we take over entire value chains: your requirements, your goals and your wishes always form the centre of our actions. You benefit from flexible production and logistics structures, an interdisciplinary engineering and over four decades of technology experience.

hotset – components. systems. projects.

- Improves cycle time and part quality
- Reduces porosity and eliminates costly sprue cone
- Decreases tool costs
- Traditional cold plug designs can be replaced by the hotcast sprue nozzle
- Improved mold design options
- Reduced scrap after electro-plating process
- Continuous heating from goose neck to the mold
- Integrates into 50 t, 80 t and 125 t die-casting machines

### Advantages

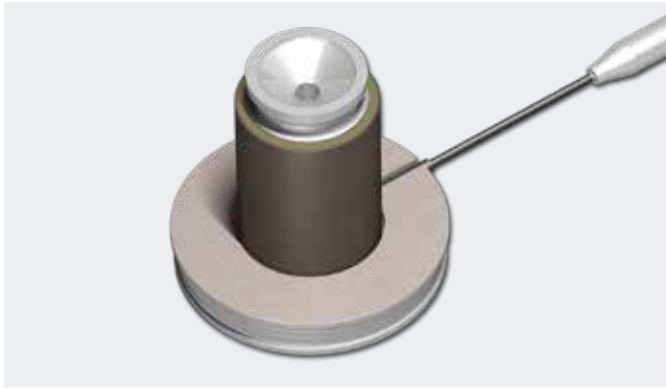
- Up to 40% reduced cycle time
- Up to 30% less shot weight
- Up to 7% more part weight due to higher microstructure density



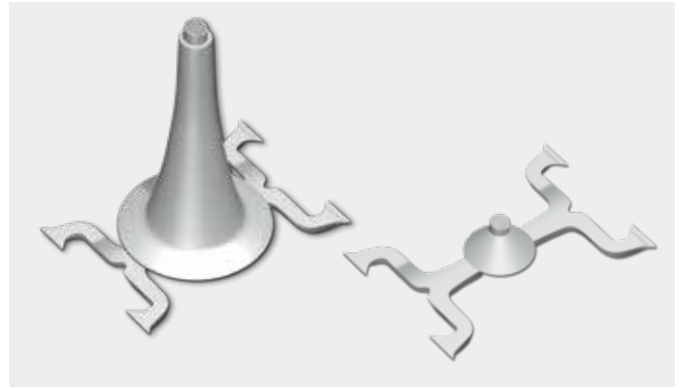
#### Technical features

|                                     |                                                              |
|-------------------------------------|--------------------------------------------------------------|
| Standard connection voltage         | 230 V                                                        |
| Temperature sensor                  | type K (NiCr-Ni), internal                                   |
| Max temp. insulation ring           | 800 °C / 1470 °F (short term)<br>500 °C / 930 °F (long term) |
| Pressure resistance insulation ring | 330 N/mm <sup>2</sup>                                        |
| Heater                              | hotspring classic, brass                                     |
| Insulation resistance*              | ≥ 5 MOhm at 500 V DC                                         |
| High voltage test*                  | min. 800 V AC                                                |
| Leakage current*                    | ≤ 0.5 mA at 253 V AC                                         |
| Connection lead                     | PTFE insulated, CU nickel with stainless steel sleeving      |
| Max. lead temperature               | 260 °C / 500 °F                                              |

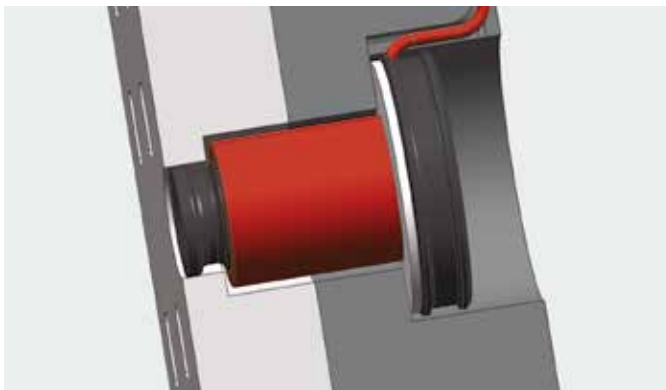
\* tested at environmental temperature



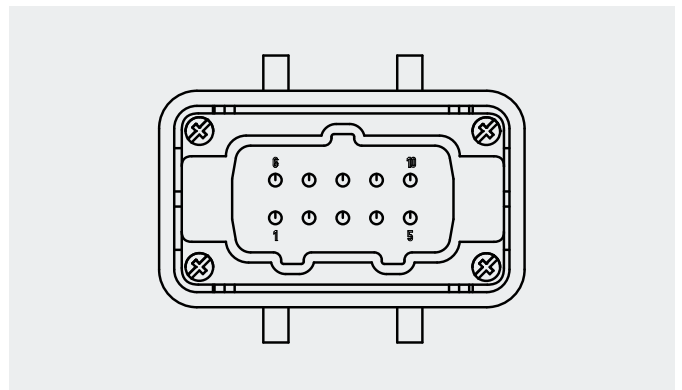
Nozzle with insulation ring



Classic and optimized sprue



Mounted nozzle



Pin configuration  
 1: Sensor -    2: Sensor +  
 3: Heater L    4: Heater N

## Performance Range

|                        | ZD 50/80    | ZD 125      |
|------------------------|-------------|-------------|
| Machine pressure       | 50 / 80 t   | 125 t       |
| Power                  | 1000 W ±10% | 1250 W ±10% |
| Connection lead length | 1500 mm     | 3000 mm     |

## Stock Range

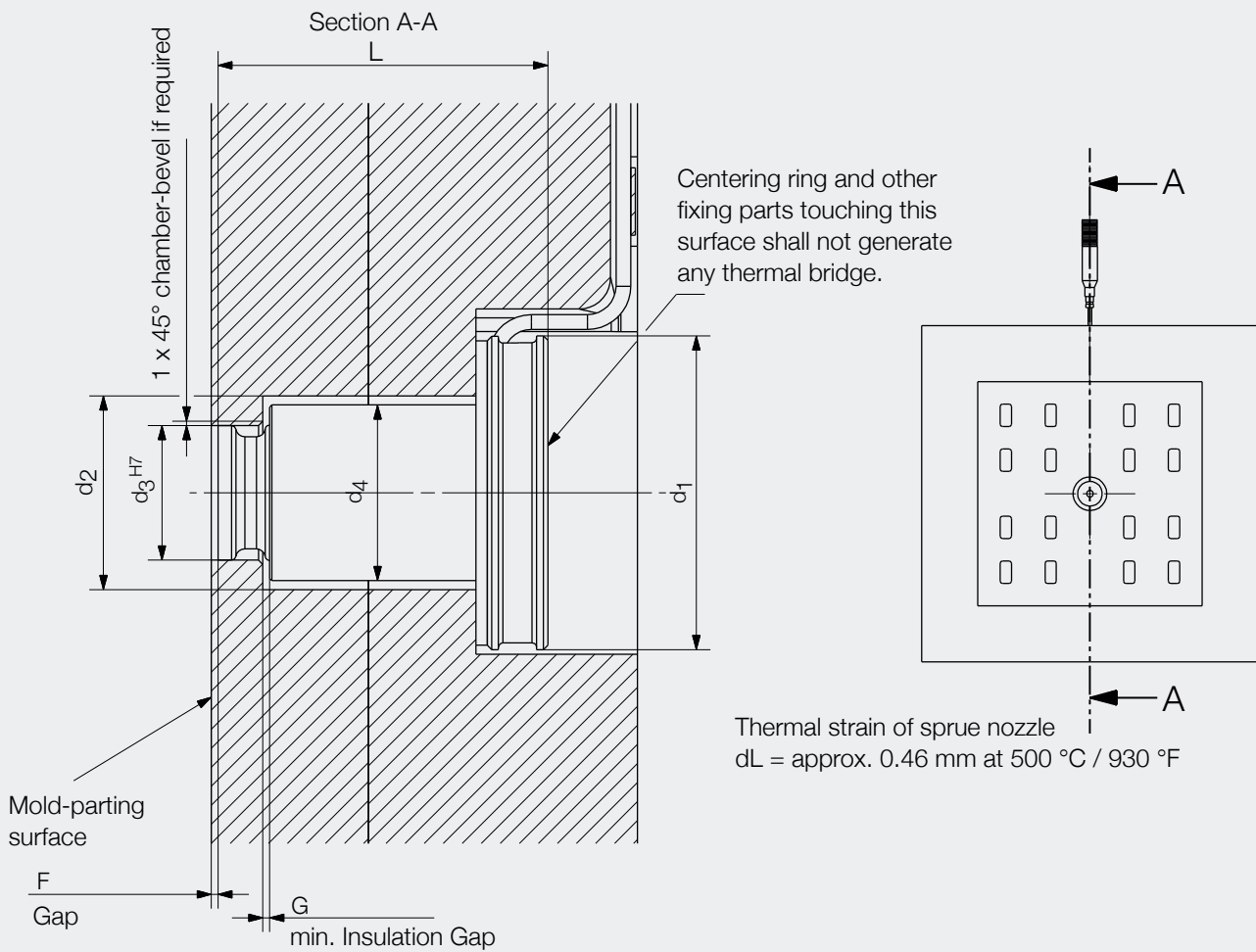
| Stock-ID   | Description                                        |
|------------|----------------------------------------------------|
| MI5660000  | ZD 50/80 with insulation ring                      |
| MI5660000R | ZD 50/80 with insulation ring and hotcontrol c448* |
| MI5660001  | ZD 125 with insulation ring                        |
| MI5660001R | ZD 125 with insulation ring and hotcontrol c448*   |

\*Thermocouple input suitable for type K

## Options

- Compatible hotcast Sealed Heater (GMH)
- hotrod die-casting cartridge heaters (HHP/G)
- Temperature control unit hotcontrol C448
- hotcast Set sprue nozzle + control unit
- hotcast Set sprue nozzle, GMH, HHP/G, control unit

## Installation instruction

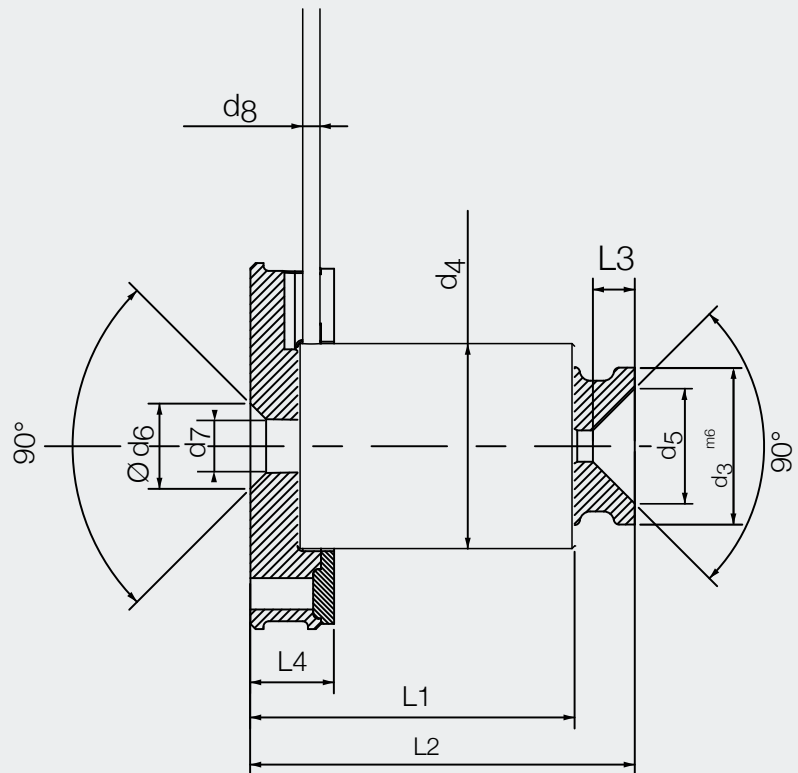
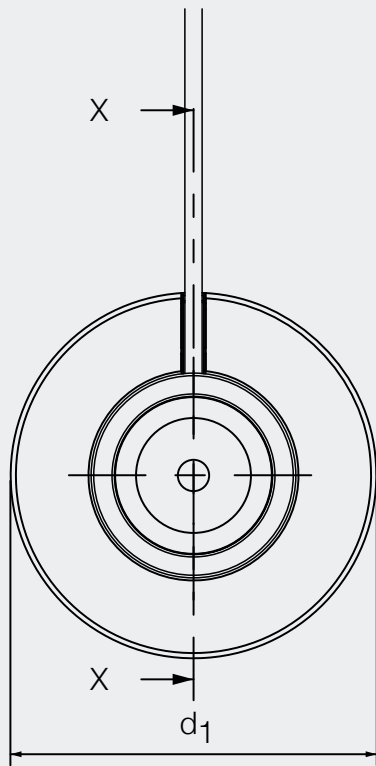


## Remarks

- Observe minimum inner bending radius: 4 mm / 0.16 inch.
- Do not bend the unheated areas back and forth.
- Do not bend the heater within 5 mm from the connection head.
- The connection head of the hotspring must not be used as a handle / lever
- During the complete cycle time the hotcast sprue nozzle should be in permanent contact with the hotcast die-casting nozzle heater (GMH).

|          | ZD 50/80   | ZD 125     |
|----------|------------|------------|
| Length L | 73.5       | 95.0       |
| d1 [mm]  | 70.0       | 96.0       |
| d2 [mm]  | 43.2       | 54.0       |
| d3 [mm]  | 30.0       | 42.0       |
| d4 [mm]  | 39.2       | 52.0       |
| F        | 0.7 to 1.5 | 1.5 to 2.0 |
| G        | 0.7 to 1.5 | 1.5 to 2.0 |

General tolerance due to ISO 2768-m



|                | ZD 50/80 | ZD 125 |
|----------------|----------|--------|
| L1             | 62.0     | 78.5   |
| L2             | 73.5     | 95.0   |
| L3             | 8.0      | 12.5   |
| L4             | 16.0     | 18.0   |
| d <sub>1</sub> | 70.0     | 96.0   |
| d <sub>3</sub> | 30.0     | 42.0   |
| d <sub>4</sub> | 39.2     | 52.0   |
| d <sub>5</sub> | 22.0     | 34.4   |
| d <sub>6</sub> | 16.3     | 24.4   |
| d <sub>7</sub> | 10.3     | 15.4   |
| d <sub>8</sub> | 3.3      | 3.3    |



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