

hotcast Sprue Nozzle

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

- 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 key features

| | |
|-------------------------------------|--|
| Standard connection voltage | 230 V |
| Temperature sensor | type K (NiCr-Ni), internal |
| Max temp. insulation ring | 800 °C / 1470 °F (short term) 500 °C / 930 °F (long term) |
| Pressure resistance insulation ring | 330 N/mm ² |
| 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 |

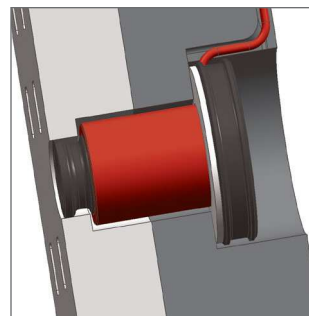
* tested at environmental temperature



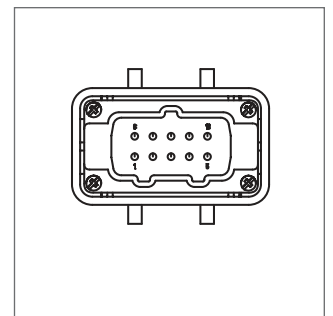
Nozzle with insulation ring



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 |

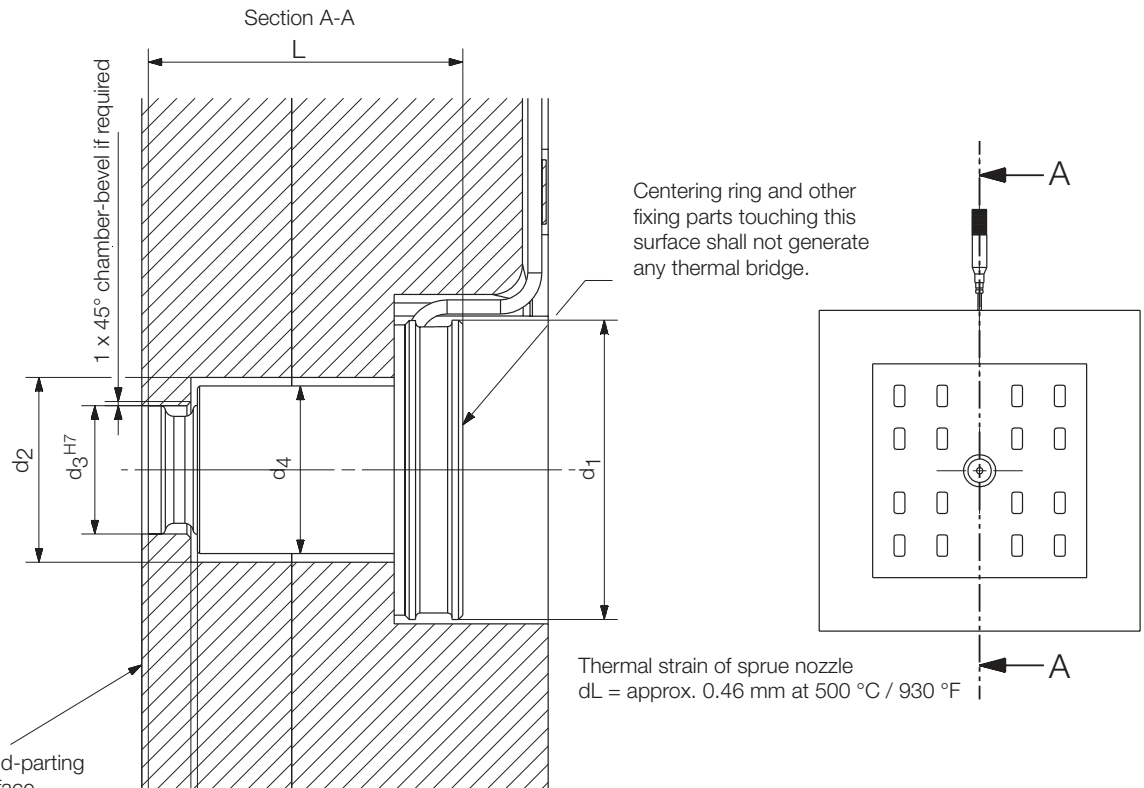
Options

- 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

Stock Range

| Stock-ID | Description |
|----------|--|
| 5660000 | ZD 50/80 with insulation ring |
| 5660000R | ZD 50/80 with insulation ring and hotcontrol c448* |
| 5660001 | ZD 125 with insulation ring |
| 5660001R | ZD 125 with insulation ring and hotcontrol c448* |

* Thermocouple input suitable for type K



Section A-A

Centering ring and other fixing parts touching this surface shall not generate any thermal bridge.

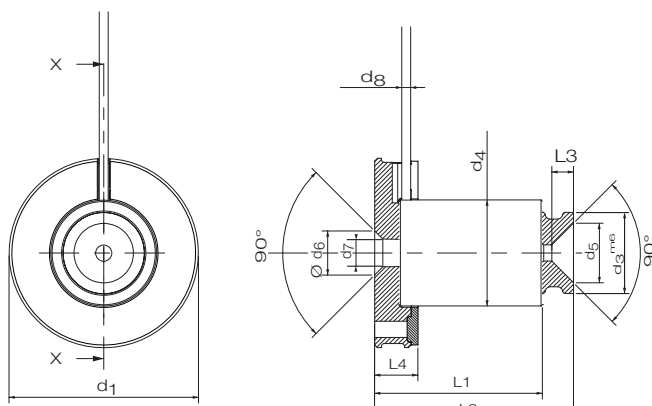
Thermal strain of sprue nozzle
 $dL = \text{approx. } 0.46 \text{ mm at } 500 \text{ } ^\circ\text{C} / 930 \text{ } ^\circ\text{F}$

| | ZD 50/80 | ZD 125 |
|------------|------------|------------|
| Length L | 73.5 | 95.0 |
| d_1 [mm] | 70.0 | 96.0 |
| d_2 [mm] | 43.2 | 54.0 |
| d_3 [mm] | 30.0 | 42.0 |
| d_4 [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 |

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



| | 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_1 | 70.0 | 96.0 |
| d_3 | 30.0 | 42.0 |
| d_4 | 39.2 | 52.0 |
| d_5 | 22.0 | 34.4 |
| d_6 | 16.3 | 24.4 |
| d_7 | 10.3 | 15.4 |
| d_8 | 3.3 | 3.3 |

General tolerance due to ISO 2768-m