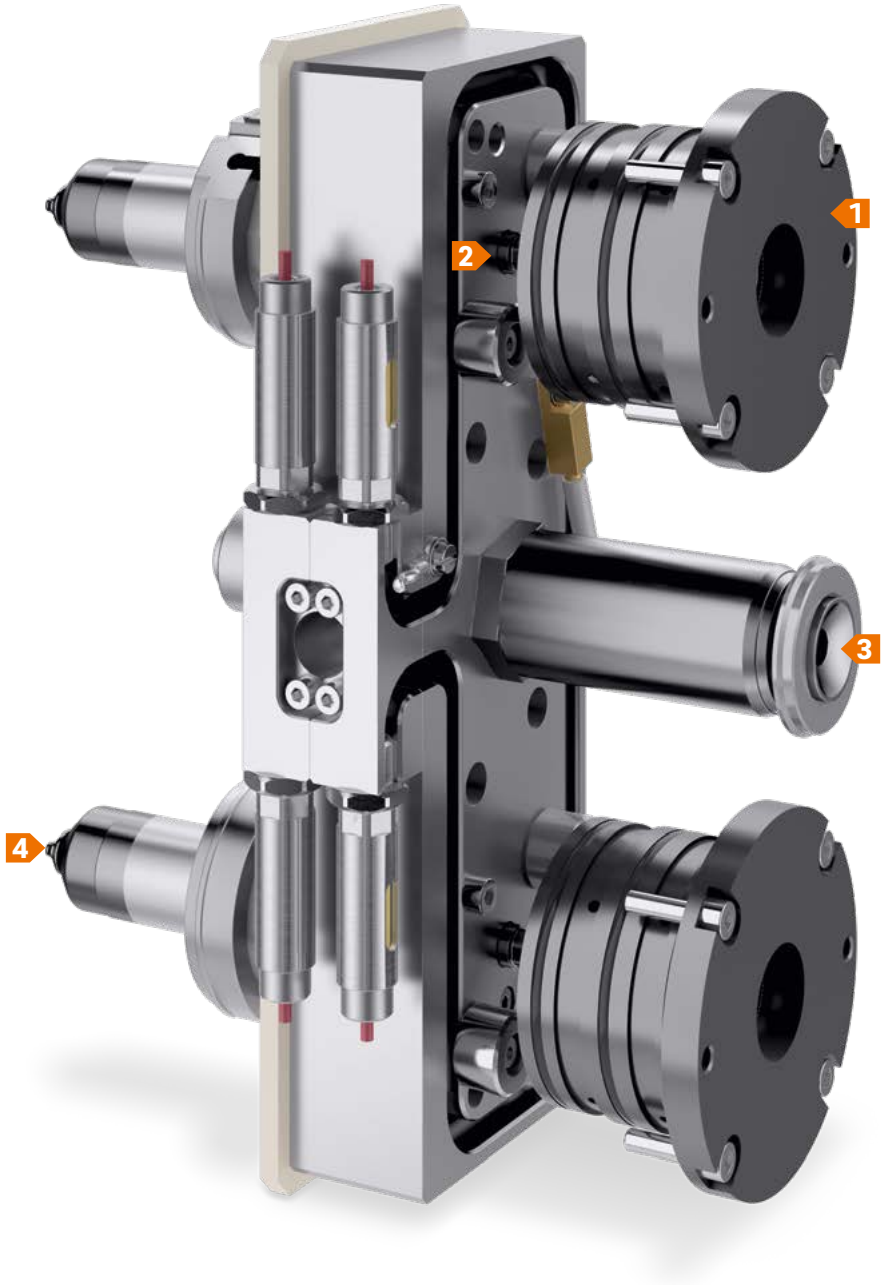
GÜNTHER®
HOT RUNNER TECHNOLOGY

Valve gate systems

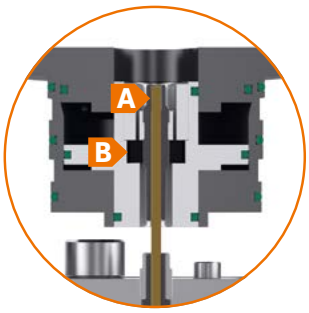
Valve gate technology

High visual requirements, a variety of applications, minimal shear stress, variable gate diameters and high process reliability. These are just a few of the requirements for which GÜNTHER valve gate technology has the right answer.



GÜNTHER's portfolio includes a variety of valve gate nozzles and needle actuation options. This enables perfect application-specific adaptation to the mould concept, both technically and financially. Both the smallest and large shot volumes and gate diameters from 0.8 to 4.0 mm can be implemented with valve gate technology.

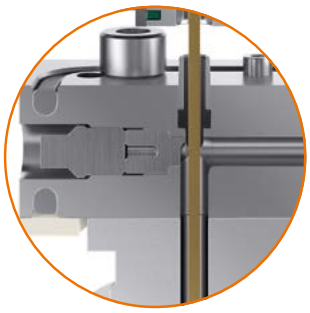
The innovative design of the needle guide and the optimised shut-off needle enable low-wear operation. During the shut-off movement, the needle is first led over a cone up to the cylindrical pre-centring device for precise immersion into the cylindrical gate point. The needle guide is supported floating in the melt channel. In case of wear, the needle guide can be changed with minimal effort. Special openings in the mould clamping plate enable individual adjustment of the immersion depth of the shut-off needle from the outside. Depending on the application, highly filled plastics can be processed.



1 **ENV single-needle valve**

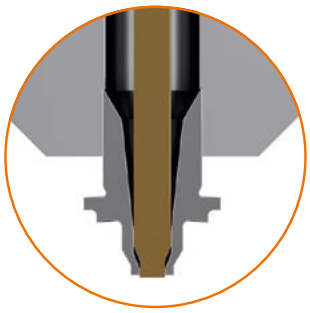
A **Adjustment of the needle position**

B **Installation independent of heat expansion**



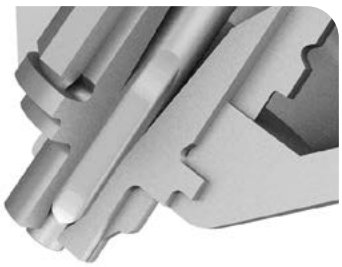
2 **Needle guide and sealing in the manifold**

3 **Heated connecting nozzle**



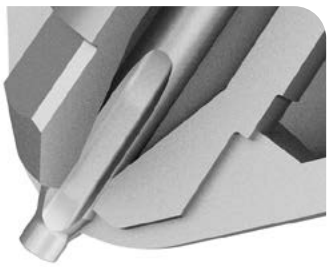
4 **Needle guide in the nozzle**

POSSIBLE NEEDLE GUIDE DESIGNS



LA NEEDLE GUIDE

Second mark on the part



KA NEEDLE GUIDE

Application-dependent use

THE ADVANTAGES AT A GLANCE

- **Unambiguous opening behaviour**
- **Consistent gate point quality**
- **Sequential injection**
- **Long needle guide service life**
- **Time and cost savings**
- **Wear parts are easy to replace**

Needle actuator

GÜNTHER needle actuators enable precise and intelligent needle control with simple installation and connection technology. Uniform opening of the individual valve gate nozzles enables a reliable injection moulding process, even with the smallest shot weights.

1 **Fast and powerful servo drive**
For valve gate systems, up to 24 drops per sliding mechanism. Needle adjustment in the µ range. Needles close in less than 0.2 s. Can be used in clean rooms.

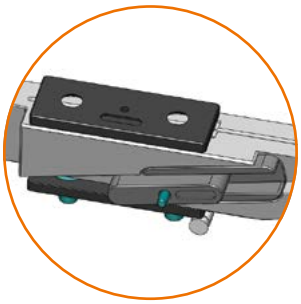
2 **Sliding components with special coating**
Protected against wear, can be replaced by the customer.

ANES SLIDING MECHANISM

If a large number of closely positioned nozzles are being operated, a sliding mechanism is to be provided as the drive. Design of moulds with a high number of drops with small mould dimensions. High product quality, as all cavities are filled evenly through the synchronised opening and closing of the needles. Adjustment of the needle position when mounted on the machine.

Possible drive types:

Electrical Hydraulic Pneumatic



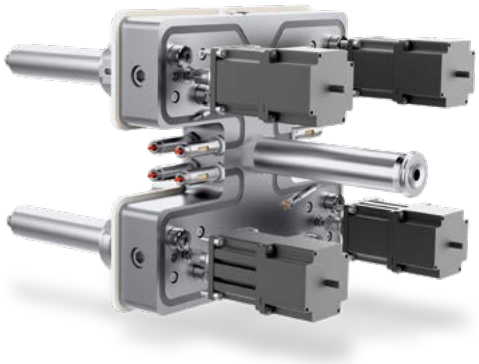
THE ADVANTAGES AT A GLANCE

- **Precise opening and closing**
- **Reliable injection process**
- **Individual cavities can be shut off**
- **Optimally adjusted needle**
- **Precise and intelligent needle control**
- **All moving parts can be replaced by the customer**
- **Saves time**

ENV AND EEV SINGLE-NEEDLE VALVE

Single-needle actuation on single- and multi-drop nozzle systems. Cascade injection moulding through the sequential opening and closing of needles is possible. Single-needle valve is mounted with the housing in the clamping plate.
ENV single-needle valve: Minimum cavity spacing with hydraulic drive: 48 mm, with pneumatic drive: 69 mm. Needle adjustment or needle replacement without removing the mould.
EEV single-needle valve: Minimum cavity spacing with hydraulic drive: 40 mm, with pneumatic drive: 57 mm. Due to a fixed needle length, needle adjustment is only possible with the mould disassembled.

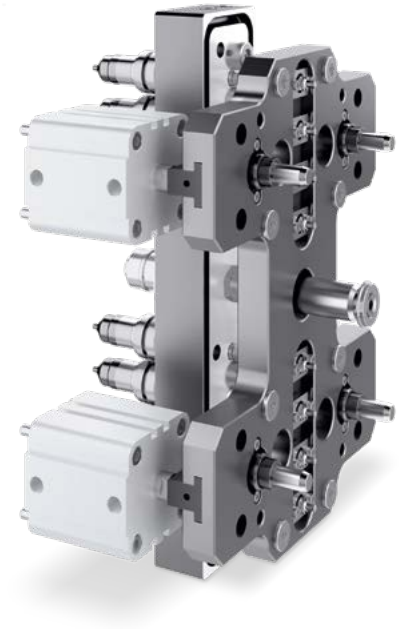
Possible drive types: Hydraulic Pneumatic



SMA 10 STEPPER MOTOR

Electric drive for complex applications with up to four different needle positions per cycle. Up to 16 SMA 10 stepper motors can be controlled with extreme precision using the DPE control unit. Using the DPE control unit, the position of each individual shut-off needle in the mould can be set individually. Needle adjustment in the range of 1/100 mm. Can be used in clean rooms.

Drive type: Electrical



ANEH STROKE MECHANISM

Reliable injection process, even with small shot weights thanks to uniform opening and closing of the needles. Replacement of the external cylinder without removal of the mould. Adjustment of the needle position in the assembled mould.

Possible drive types: Hydraulic Pneumatic Electrical

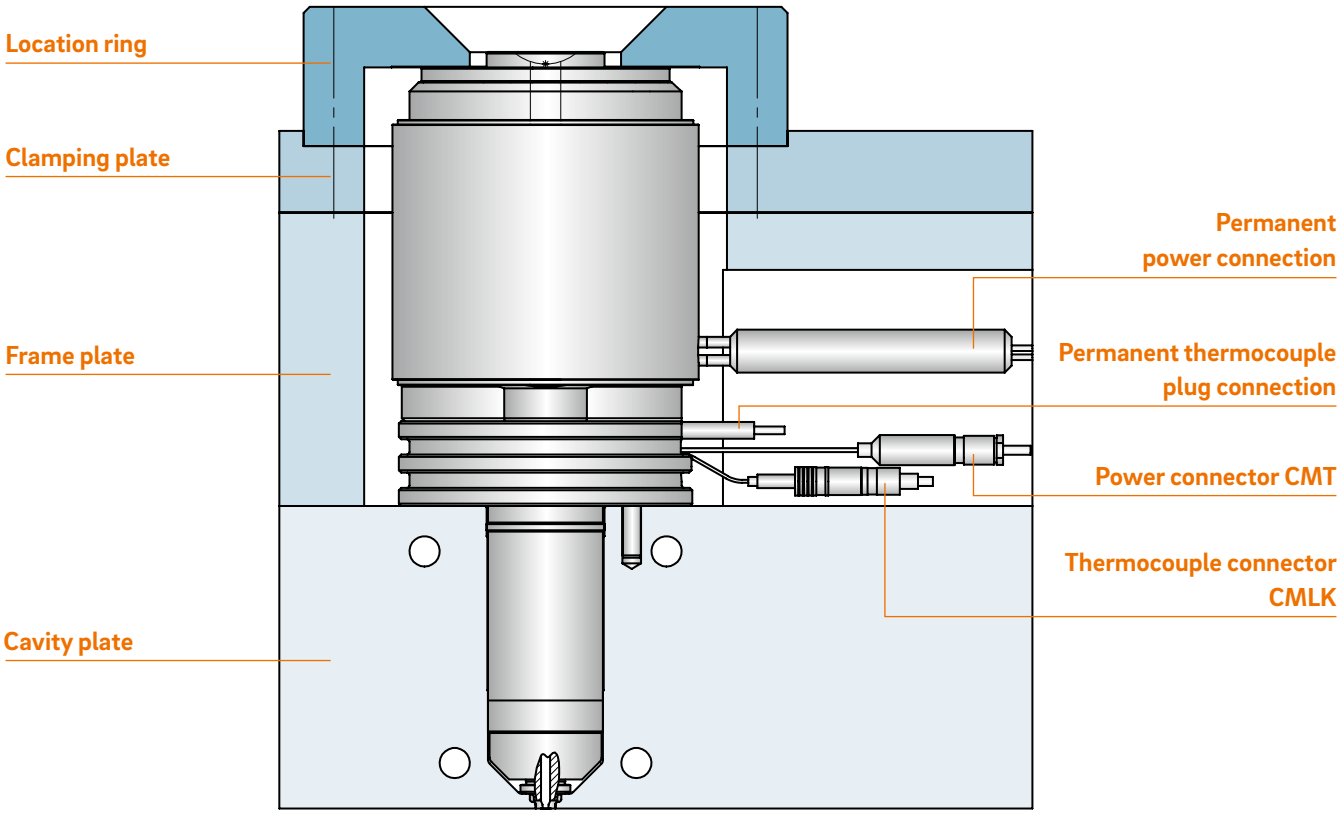
NEST SINGLE VALVE GATE NOZZLE

The pneumatically driven NEST valve gate nozzle offers optimum process reliability when processing high-quality, demanding materials. Melt channel diameters from 5 to 12 mm and a length of up to 250 mm enable a variety of different injection moulded part and mould designs.

Drive type: Pneumatic

Overview of overall design

Single valve gate nozzles



3.1 Single valve gate nozzles

Valve gate nozzle type 8NEST

Single nozzle with conventional heating element

TECHNICAL DATA

8NEST

Needle Ød	3 mm
Melt channel Ød	7.5 mm
Gate point Ød	1.6, 2.0 or 2.5 mm
Operating pressure	10 bar
Operating voltage	230 V_{AC}*

Nominal length of the nozzle (L) in mm

50	60	80	100	120	150	200	250
□	■	■	■	□	□	□	□

*Volts alternating current

■ *available* □ *on request*

NOTE

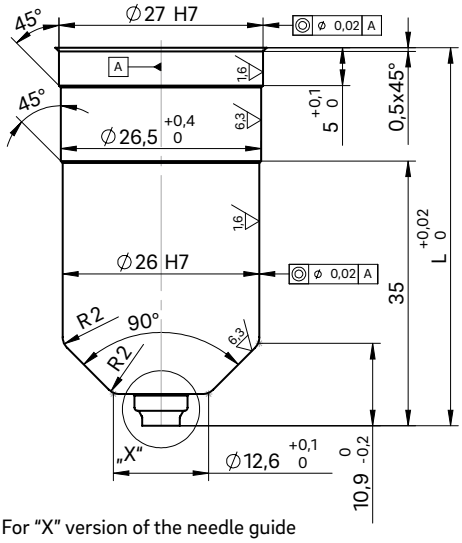
Power connector CMT and thermocouple connector CMLK are to be ordered separately.

Feed and discharge lines for operating the needle

Preferably, channels with a minimum dia. of 6 mm and a minimum length of 200 mm are to be used. Feed/discharge lines are to be placed in the heated mould plate to prevent overheating of the compressed air. The temperature should lie between 40 °C and 70 °C.
In the case of mould temperatures exceeding the thermal stress limit of the pneumatic valves, a separate air cooler is to be installed. Pneumatic hose inner dia. of 8 mm. Pneumatic valve size of 2000 l/min to 3000 l/min.

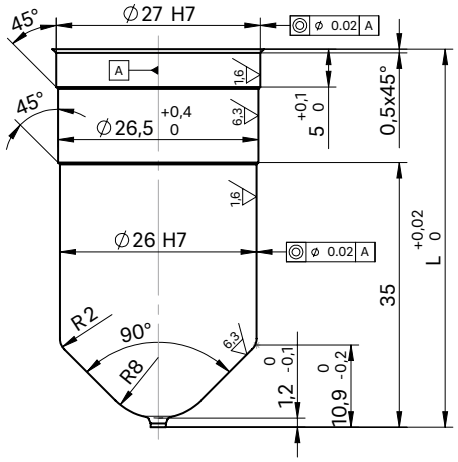
WEBCODE
31010

Nozzle with needle guide
antechamber design LA

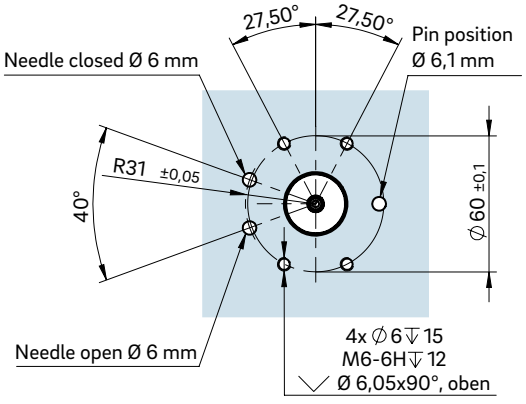


For "X" version of the needle guide
see following page

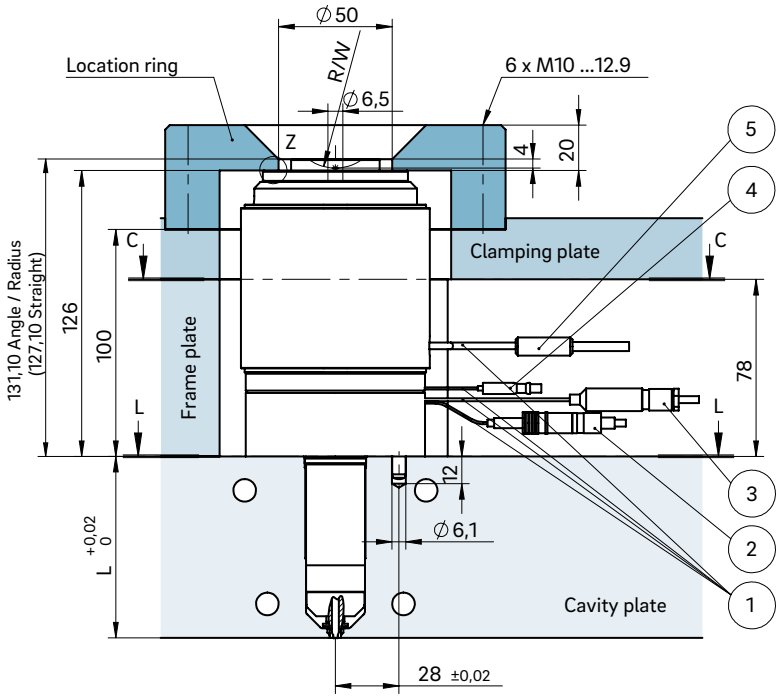
Nozzle with needle guide
antechamber design KA



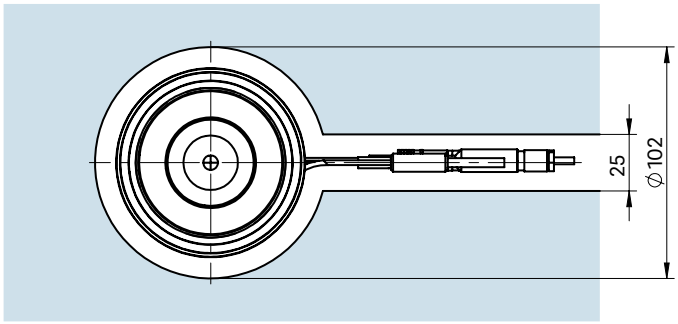
Cross-section L-L: Hole for feed/discharge air,
fastening thread and centring/positioning pin



INSTALLATION

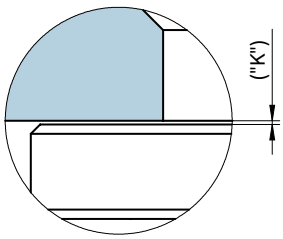


Cross-section C-C: Cutout for nozzle head, power and thermocouple plug connections



① Power and thermocouple plug connections in this area can be bent once; minimum radius: R8
② Thermocouple connector CMLK
③ Power connector CMT
④ Permanent thermocouple plug connection
⑤ Permanent power connection

Detail "Z"



Dimension "K" required for heat expansion is to be ensured by grinding the location ring! Determine the difference between the height of the nozzle (with mount) and the height of the structure when installed! ΔT specifies the temperature differential between the processing temperature and the mould temperature!
A pre-tension of 0.03 mm is taken into account for the K dimensions.

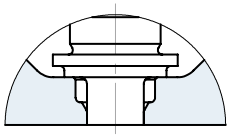
ΔT (°C)	100	150	200	250	300	350
K (mm)	0.09	0.16	0.23	0.29	0.36	0.42

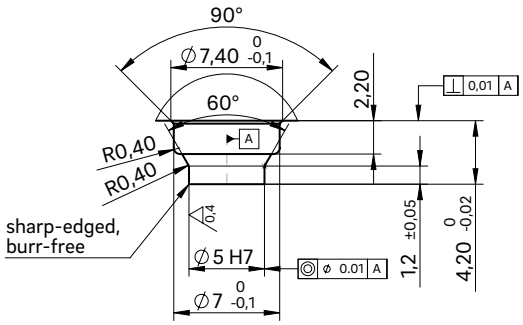
Valve gate nozzle type 8NEST

Needle guide versions LA, LA with titanium ring, LAZ and KA

NEEDLE GUIDE VERSIONS

Needle guide version
Antechamber version LA



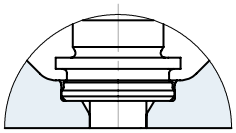


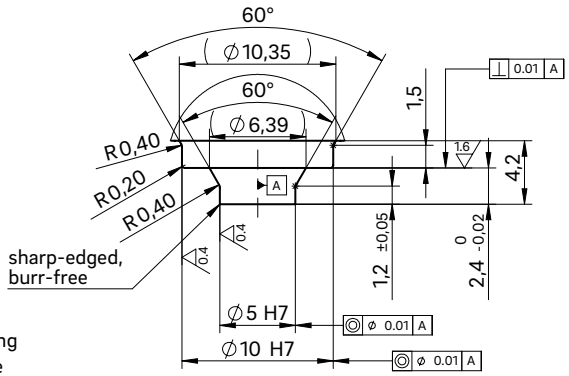
Needle guide LA
Made of powder-metallurgical steel

If necessary, the needle guide can be changed without great effort. By replacing the needle guide and needle, the gate point diameter can be made larger or smaller without subsequent reworking of the mould cavity. Thanks to a precise needle guide, the clean gate point can be closed with nearly no wear or burring.

Advantages:
- Long service life and wear-resistance
- Wear parts are easy to replace
- Outstanding and flash-free gate point quality
- Very good visual surface quality
- No replacement or subsequent reworking of the mould inserts required
- Minimal shear stress

Needle guide version
Antechamber version LA
with titanium ring





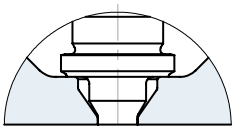
Needle guide LA
Special version with titanium ring

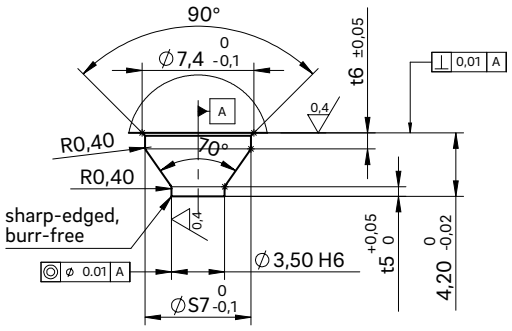
Thermal insulation of the needle guide using a titanium ring expands the area of use of the valve gate nozzle to include the following plastics:
- Polyamides (PA4.6, PA6.6 and HTN)
- Thermoplastic polyesters (PBT and PET)
- Liquid crystalline polymers (LCP)
- Polyether ether ketones (PEEK)

Installation dimensions of needle guide version LAZ

ØD	ØS7	t5	t6
1.6	3.0	0.63	0.77
2.0	3.5	0.63	1.07
2.5	4.0	0.58	1.43

Needle guide version
Antechamber version LAZ



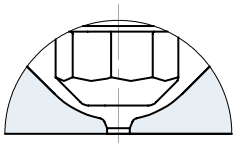


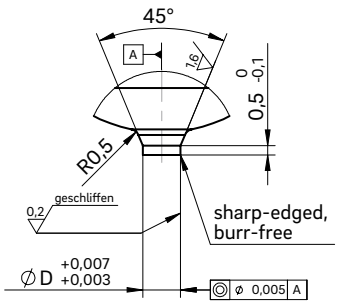
Needle guide LAZ
Made of powder-metallurgical steel

If necessary, the needle guide can be changed without great effort. By replacing the needle guide and needle, the gate point diameter can be made larger or smaller without subsequent reworking of the mould cavity. Thanks to a precise needle guide, the clean gate point can be closed with nearly no wear or burring. Needle guide type LAZ has a tapered shape with a smaller contact surface which creates a smaller impression. This version is suitable for items with a minimal wall thickness and part geometries not permitting a larger impression.

Advantages:
- Long service life and wear-resistance
- Wear parts are easy to replace
- Outstanding and flash-free gate point quality
- Very good visual surface quality
- No replacement or subsequent reworking of the mould inserts required
- Minimal shear stress

Needle guide version
Antechamber version KA





Needle guide KA
This is used when a second marking on the part is not permissible.

When selecting the material to be used, the needle hardness of 64 ±2 HRC is to be taken into account!

Valve gate nozzle type 12NEST

Single nozzle with conventional heating element

TECHNICAL DATA

12NEST

Needle Ød	5 mm
Melt channel Ød	12 mm
Gate point Ød	3.0, 3.5 or 4.0 mm
Operating pressure	10 bar
Operating voltage	230 V_{AC}*

Nominal length of the nozzle (L) in mm

60	80	100	120	150	200	250
■	■	■	□	□	□	□

*Volts alternating current

■ *available* □ *on request*

NOTE

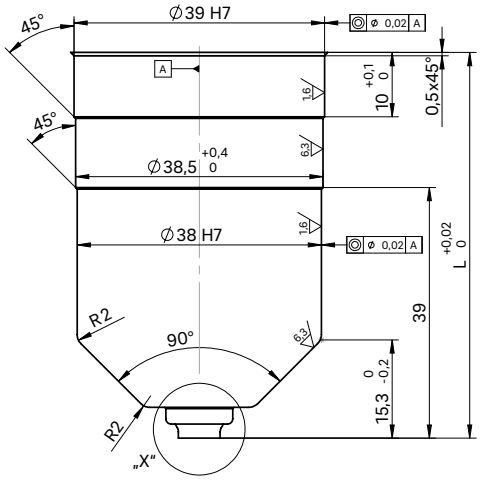
Power connector CMT and thermocouple connector CMLK are to be ordered separately.

Feed and discharge lines for operating the needle

Preferably, channels with a minimum dia. of 6 mm and a minimum length of 200 mm are to be used. Feed/discharge lines are to be placed in the heated mould plate to prevent overheating of the compressed air. The temperature should lie between 40 °C and 70 °C.
In the case of mould temperatures exceeding the thermal stress limit of the pneumatic valves, a separate air cooler is to be installed. Pneumatic hose inner dia. of 8 mm. Pneumatic valve size of 2000 l/min to 3000 l/min.

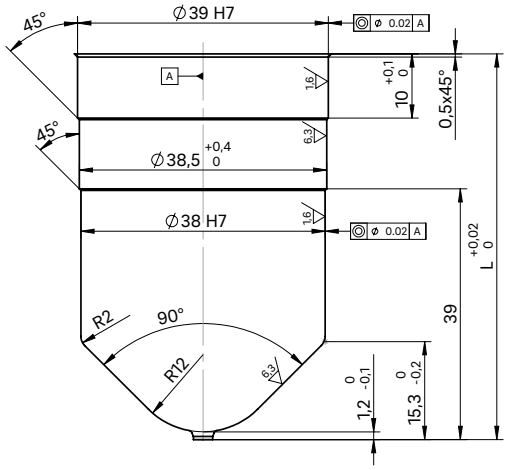
WEBCODE
31030

Nozzle with needle guide
antechamber design LA

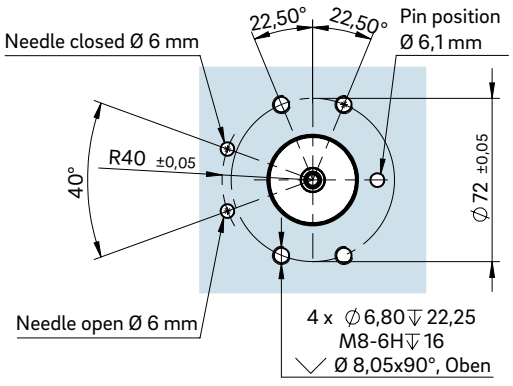


For "X" version of the needle guide
see following page

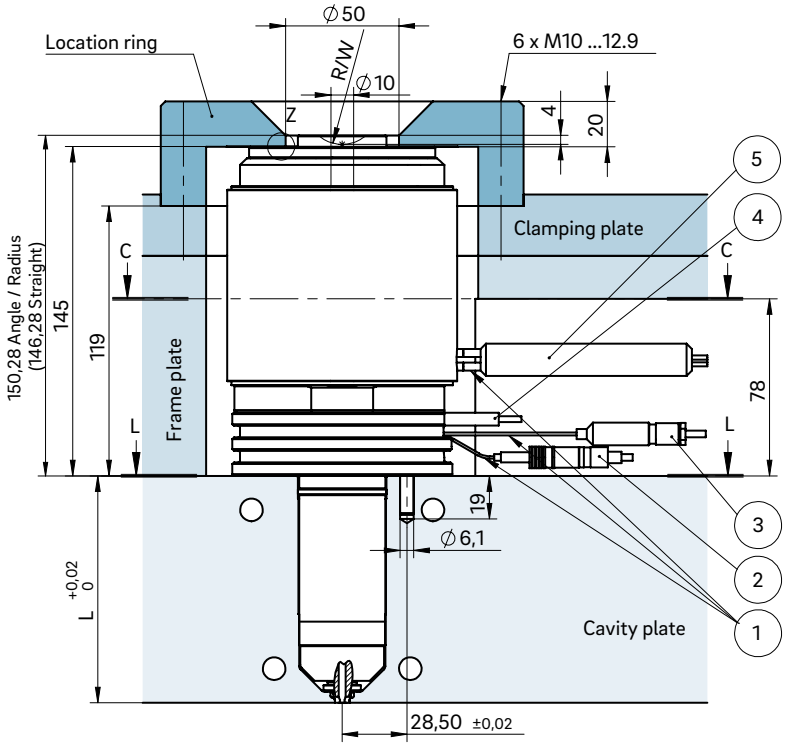
Nozzle with needle guide
antechamber design KA



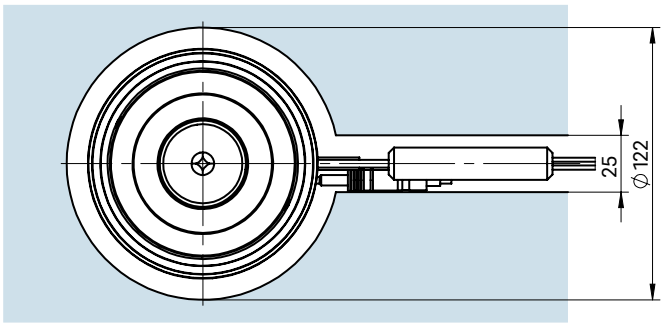
Cross-section L-L: Hole for feed/discharge air, fastening thread and centring/positioning pin



INSTALLATION



View C-C: Cutout for nozzle head, power and thermocouple plug connections



① Power and thermocouple plug connections in this area can be bent once; minimum radius: R8
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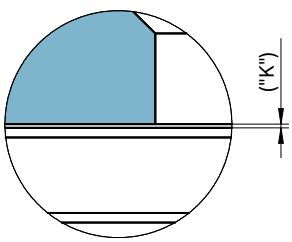
Detail "Z"



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A pretension of 0.03 mm is taken into account for the K dimensions.

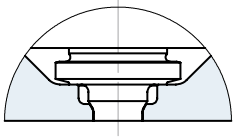
ΔT (°C)	100	150	200	250	300	350
K (mm)	0.11	0.19	0.26	0.33	0.41	0.48

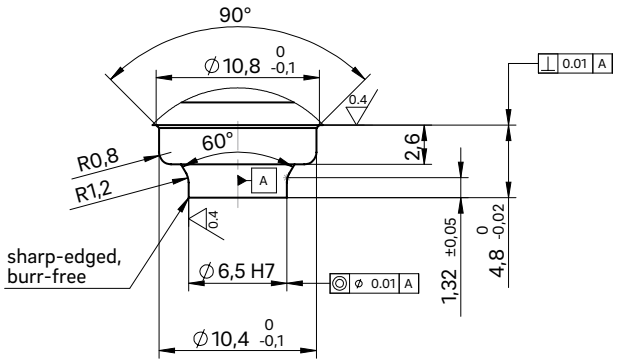
Valve gate nozzle type 12NEST

Needle guide versions LA, LA with titanium ring and KA

NEEDLE GUIDE VERSIONS

Needle guide version
Antechamber version LA



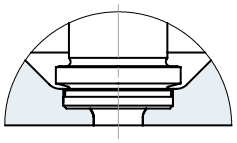


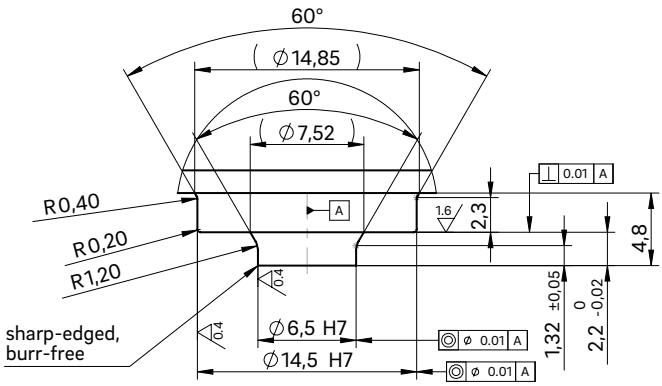
Needle guide LA
Made of powder-metallurgical steel

If necessary, the needle guide can be changed without great effort. By replacing the needle guide and needle, the gate point diameter can be made larger or smaller without subsequent reworking of the mould cavity. Thanks to a precise needle guide, the clean gate point can be closed with nearly no wear or burring.

Advantages:
- Long service life and wear-resistance
- Wear parts are easy to replace
- Outstanding and flash-free gate point quality
- Very good visual surface quality
- No replacement or subsequent reworking of the mould inserts required
- Minimal shear stress

Needle guide version
Antechamber version LA
with titanium ring





Needle guide LA
Special version with titanium ring

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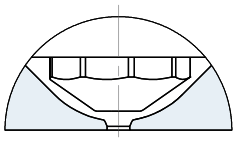
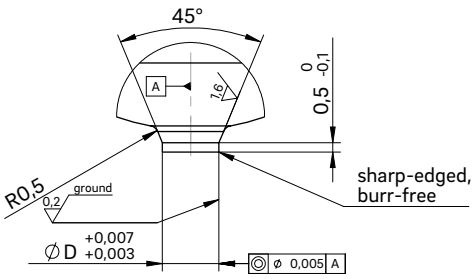
- Polyamides (PA4.6, PA6.6 and HTN)
- Thermoplastic polyesters (PBT and PET)
- Liquid crystalline polymers (LCP)
- Polyether ether ketones (PEEK)

Needle guide version
Antechamber version KA





Needle guide KA
This is used when a second marking on the part is not permissible.

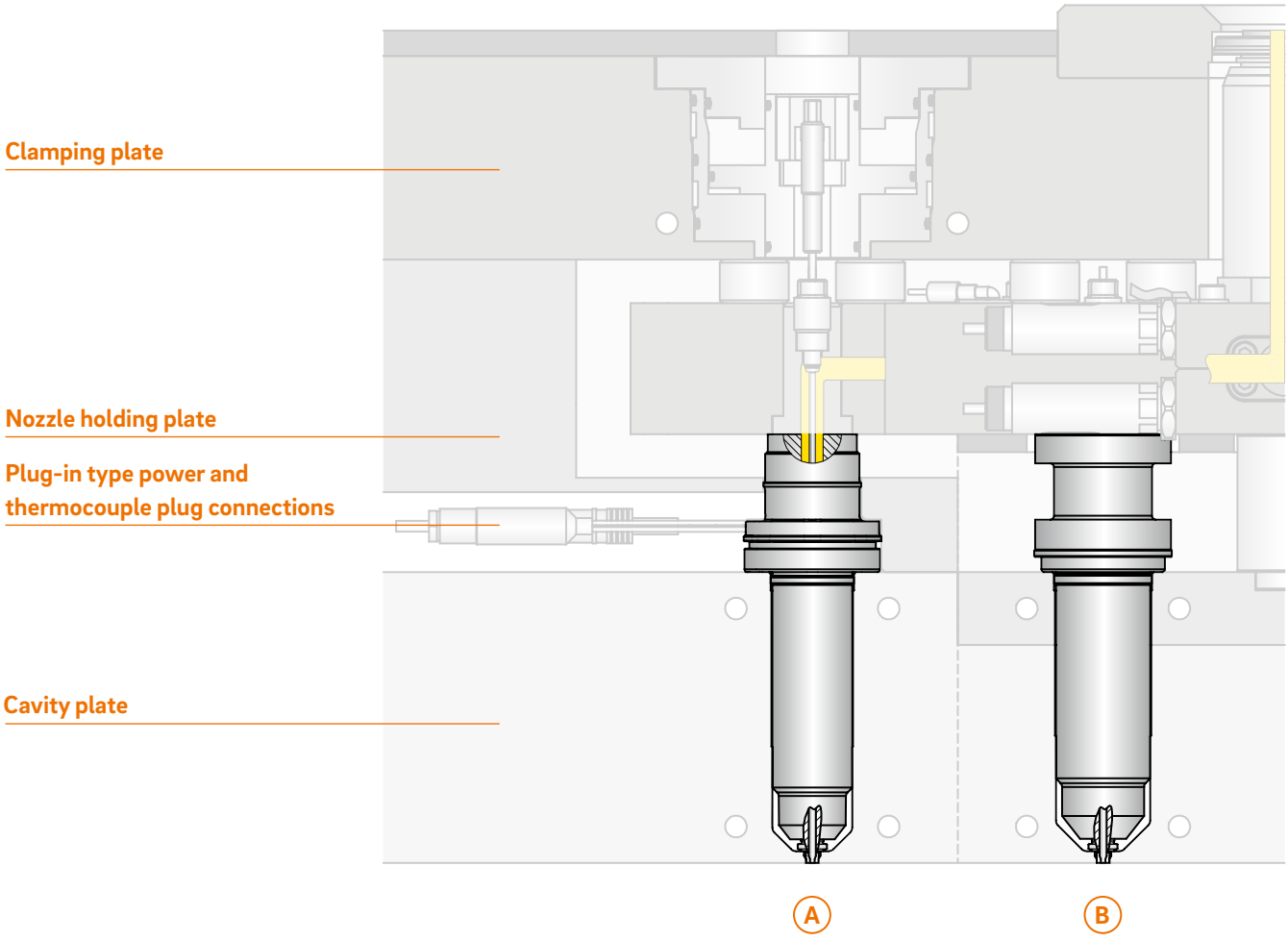
When selecting the material to be used, the needle hardness of 64 ±2 HRC is to be taken into account!

3.2 System valve gate nozzles

SINGLE VALVE GATE NOZZLES

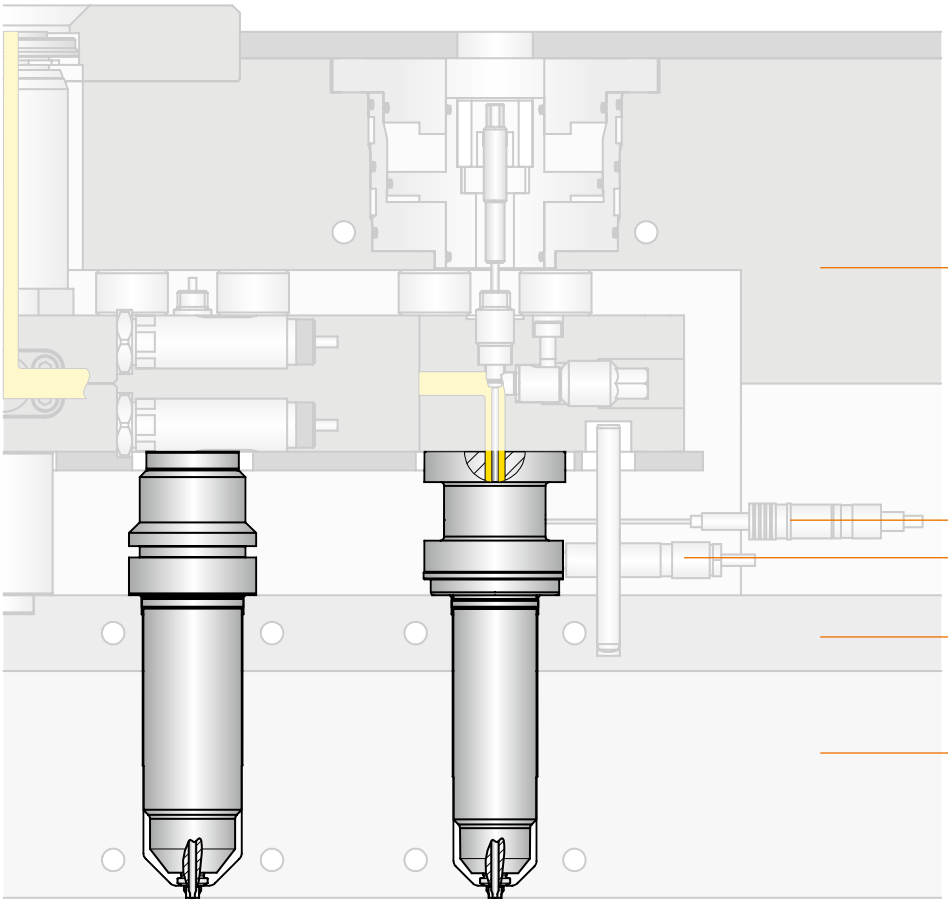
Overview of overall design

System valve gate nozzles



A
Valve gate nozzle type NTT
- With shaft
- Screwed from the parting line

B
Valve gate nozzle type NHT
- With shaft
- Screwed to the manifold



C

Valve gate nozzle type NMT
- With shaft
- For minimal spacing
- Not screwed to the manifold

D

BlueFlow® valve gate nozzle type NHF
- With shaft
- Thick-film heating element (BlueFlow®)
- Screwed to the manifold

Valve gate nozzle type 4NHF

System nozzle with thick-film heating element (BlueFlow®), screwed to the manifold

TECHNICAL DATA

4NHF

Needle Ød	2 mm
Melt channel Ød	3.8 mm
Gate point Ød	0.8, 1.0, 1.2 or 1.4 mm
Operating voltage	230 V_{AC}*

Nominal length of the nozzle (L) in mm

50	60	80	100	120	150	180
■	■	■	■	■	□	□

Contact us for other nozzle lengths!

*Volts alternating current

■ *available* □ *on request*

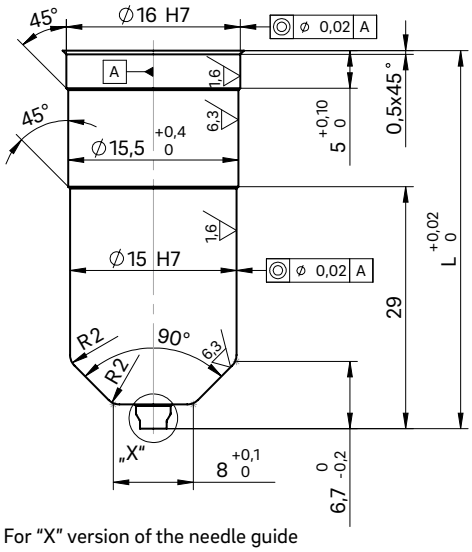
NOTE

Power connector CHF and thermocouple connector CMLK are to be ordered separately.

BlueFlow® hot runner nozzle type NHF is not intended for sale or use in the USA or Canada!

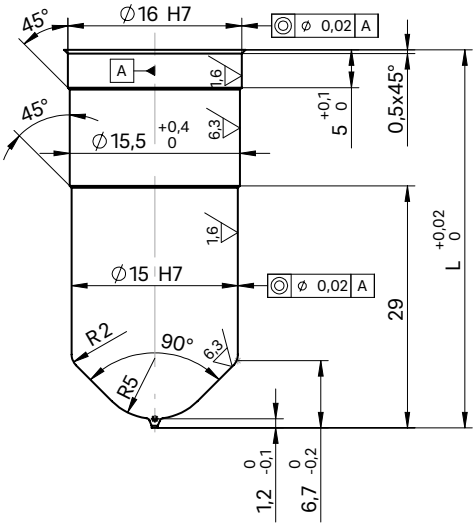
WEBCODE
32010

Nozzle with needle guide
antechamber design LA



For "X" version of the needle guide
see following page

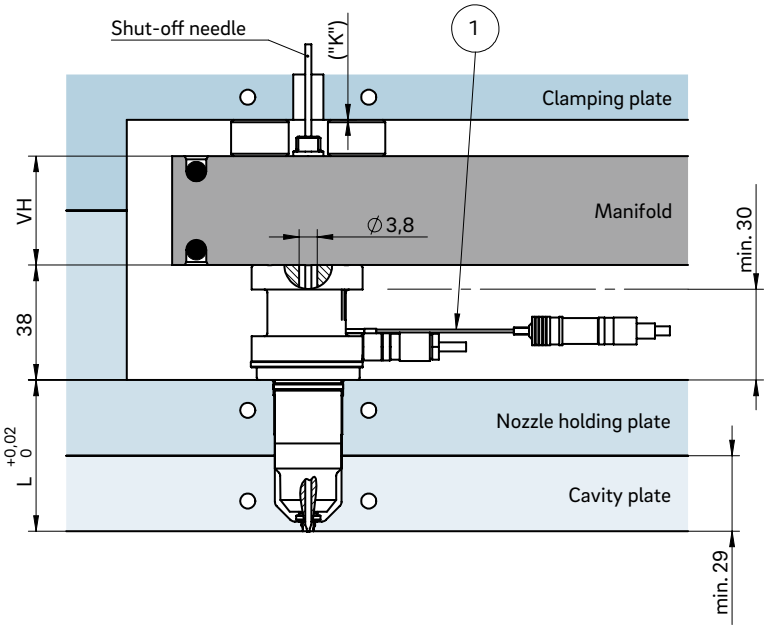
Nozzle with needle guide
antechamber design KA



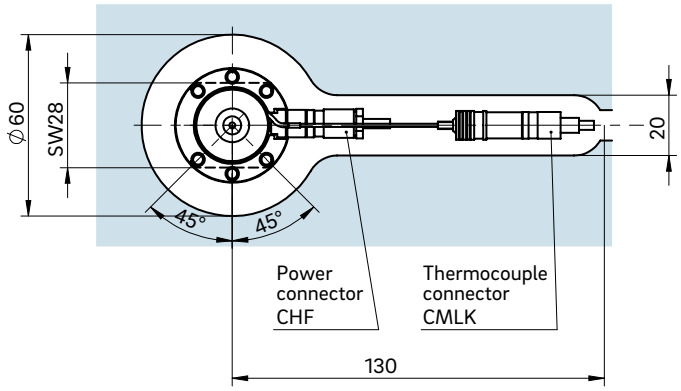
Dimension "K" required for heat expansion is to be ensured by grinding the pressure pad (12 + 0.1 mm)! Determine the difference between the height of the manifold system and the height of the frame plate when installed! ΔT specifies the temperature differential between the processing temperature and the mould temperature!

VH	ΔT (°C)	100	150	200	250	300	350
36 mm	K (mm)	0.021	0.059	0.098	0.137	0.177	0.217
46 mm	K (mm)	0.033	0.078	0.124	0.170	0.218	0.264
56 mm	K (mm)	0.046	0.097	0.150	0.203	0.258	0.311

INSTALLATION



Example cutout for nozzle head, power and thermocouple plug connections



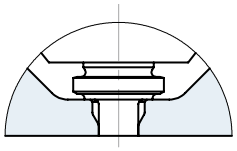
① Power plug connection in this area can be bent once; minimum radius: R8
SW = flat area on nozzle head

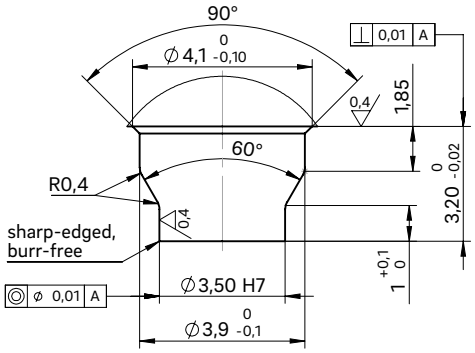
Valve gate nozzle type 4NHF

Needle guide versions LA, LA with titanium ring, LAZ and KA

NEEDLE GUIDE VERSIONS

Needle guide version
Antechamber version LA



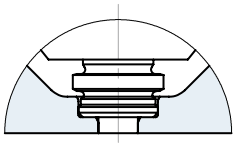


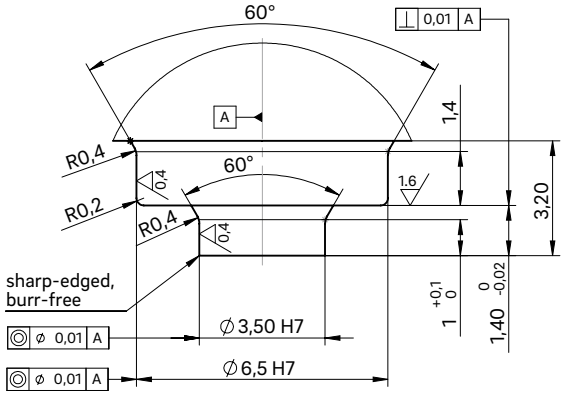
Needle guide LA
Made of powder-metallurgical steel

If necessary, the needle guide can be changed without great effort. By replacing the needle guide and needle, the gate point diameter can be made larger or smaller without subsequent reworking of the mould cavity. Thanks to a precise needle guide, the clean gate point can be closed with nearly no wear or burring.

Advantages:
- Long service life and wear-resistance
- Wear parts are easy to replace
- Outstanding and flash-free gate point quality
- Very good visual surface quality
- No replacement or subsequent reworking of the mould inserts required
- Minimal shear stress

Needle guide version
Antechamber version LA
with titanium ring





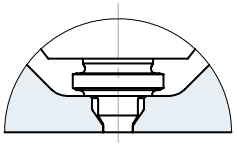
Needle guide LA
Special version with titanium ring

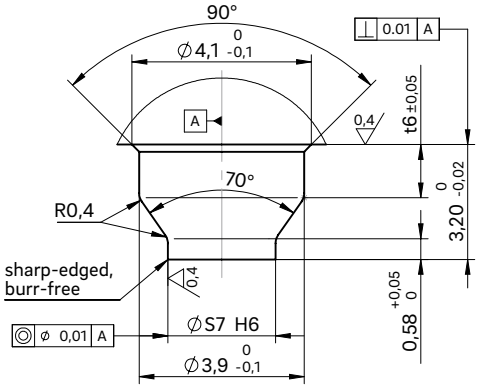
Thermal insulation of the needle guide using a titanium ring expands the area of use of the valve gate nozzle to include the following plastics:
- Polyamides (PA4.6, PA6.6 and HTN)
- Thermoplastic polyesters (PBT and PET)
- Liquid crystalline polymers (LCP)
- Polyether ether ketones (PEEK)

Installation dimensions of needle guide version LAZ

ØD	ØS7	t6
0.8	2.2	1.41
1.0	2.4	1.55
1.2	2.6	1.70
1.4	2.8	1.84

Needle guide version
Antechamber version LAZ



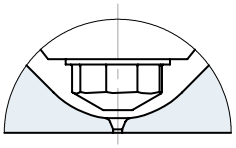


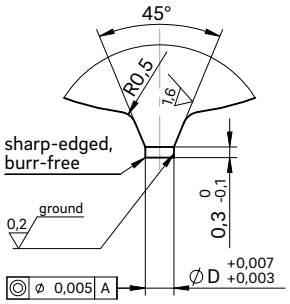
Needle guide LAZ
Made of powder-metallurgical steel

If necessary, the needle guide can be changed without great effort. By replacing the needle guide and needle, the gate point diameter can be made larger or smaller without subsequent reworking of the mould cavity. Thanks to a precise needle guide, the clean gate point can be closed with nearly no wear or burring. Needle guide type LAZ has a tapered shape with a smaller contact surface which creates a smaller impression. This version is suitable for items with a minimal wall thickness and part geometries not permitting a larger impression.

Advantages:
- Long service life and wear-resistance
- Wear parts are easy to replace
- Outstanding and flash-free gate point quality
- Very good visual surface quality
- No replacement or subsequent reworking of the mould inserts required
- Minimal shear stress

Needle guide version
Antechamber version KA





Needle guide KA
This is used when a second marking on the part is not permissible.

When selecting the material to be used, the needle hardness of 64 ±2 HRC is to be taken into account!

Valve gate nozzle type 5NHF

System nozzle with thick-film heating element (BlueFlow®), screwed to the manifold

TECHNICAL DATA

5NHF

Needle Ød	3 mm
Melt channel Ød	4.8 mm
Gate point Ød	0.8, 1.0, 1.2 or 1.4 mm
Operating voltage	230 V_{AC}*

Nominal length of the nozzle (L) in mm

50	60	80	100	120	150	180
■	■	■	■	■	□	□

Contact us for other nozzle lengths!

*Volts alternating current

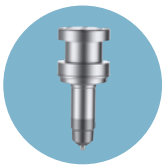
■ *available* □ *on request*

NOTE

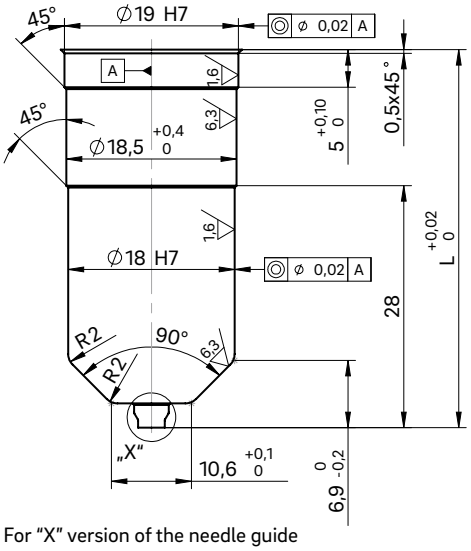
Power connector CHF and thermocouple connector CMLK are to be ordered separately.

BlueFlow® hot runner nozzle type NHF is not intended for sale or use in the USA or Canada!

WEBCODE
32020

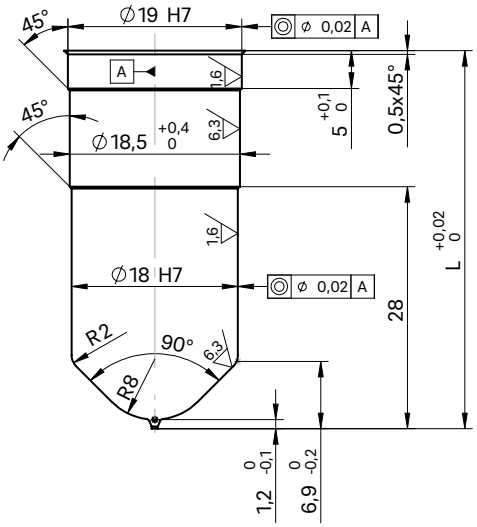


Nozzle with needle guide
antechamber design LA



For "X" version of the needle guide
see following page

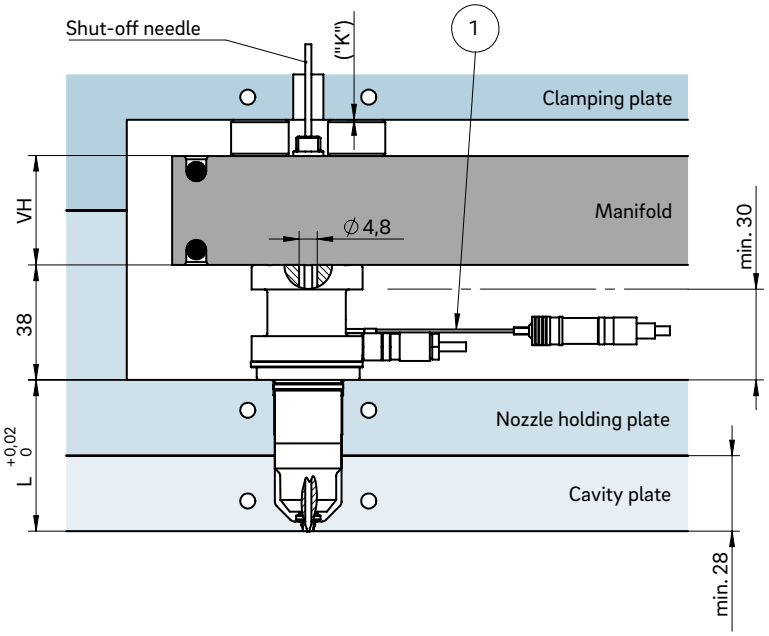
Nozzle with needle guide
antechamber design KA



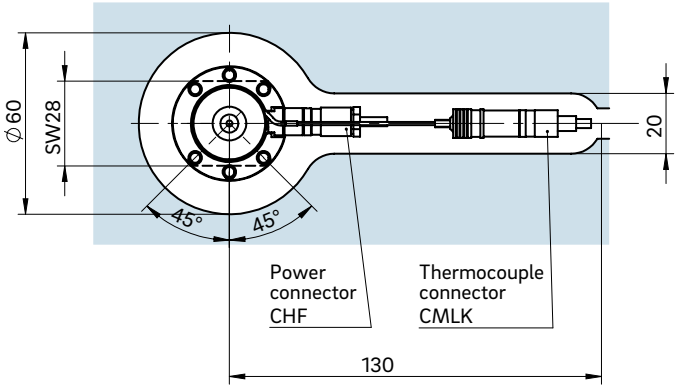
Dimension "K" required for heat expansion is to be ensured by grinding the pressure pad (12 + 0.1 mm)! Determine the difference between the height of the manifold system and the height of the frame plate when installed! ΔT specifies the temperature differential between the processing temperature and the mould temperature!

VH	ΔT (°C)	100	150	200	250	300	350
36 mm	K (mm)	0.021	0.059	0.098	0.137	0.177	0.217
46 mm	K (mm)	0.033	0.078	0.124	0.170	0.218	0.264
56 mm	K (mm)	0.046	0.097	0.150	0.203	0.258	0.311

INSTALLATION



Example cutout for nozzle head, power and thermocouple plug connections



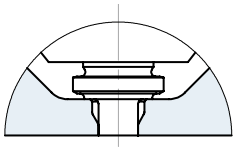
① Thermocouple plug connection in this area can be bent once; minimum radius: R8
SW = flat area on nozzle head

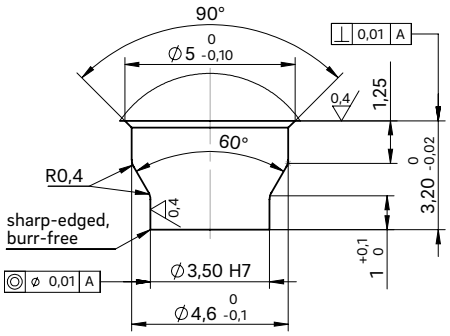
Valve gate nozzle type 5NHF

Needle guide versions LA, LA with titanium ring, LAZ and KA

NEEDLE GUIDE VERSIONS

Needle guide version
Antechamber version LA



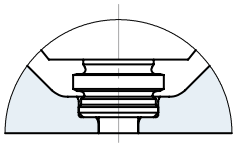


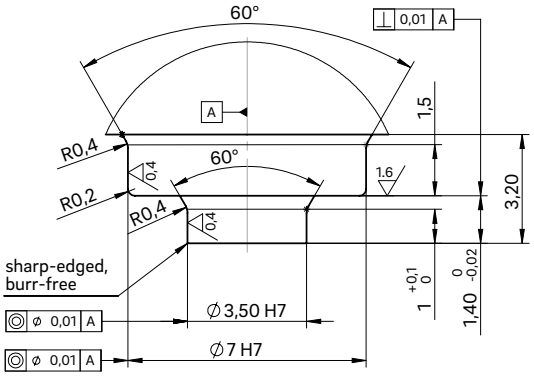
Needle guide LA
Made of powder-metallurgical steel

If necessary, the needle guide can be changed without great effort. By replacing the needle guide and needle, the gate point diameter can be made larger or smaller without subsequent reworking of the mould cavity. Thanks to a precise needle guide, the clean gate point can be closed with nearly no wear or burring.

Advantages:
- Long service life and wear-resistance
- Wear parts are easy to replace
- Outstanding and flash-free gate point quality
- Very good visual surface quality
- No replacement or subsequent reworking of the mould inserts required
- Minimal shear stress

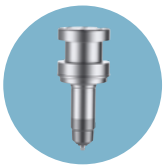
Needle guide version
Antechamber version LA
with titanium ring





Needle guide LA
Special version with titanium ring

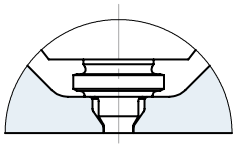
Thermal insulation of the needle guide using a titanium ring expands the area of use of the valve gate nozzle to include the following plastics:
- Polyamides (PA4.6, PA6.6 and HTN)
- Thermoplastic polyesters (PBT and PET)
- Liquid crystalline polymers (LCP)
- Polyether ether ketones (PEEK)

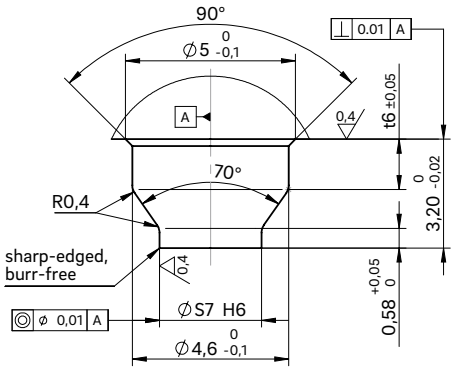


Installation dimensions of needle guide version LAZ

ØD	ØS7	t6
0.8	2.2	0.91
1.0	2.4	1.05
1.2	2.6	1.20
1.4	2.8	1.34

Needle guide version
Antechamber version LAZ



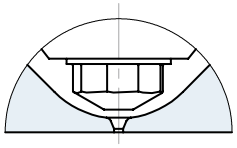


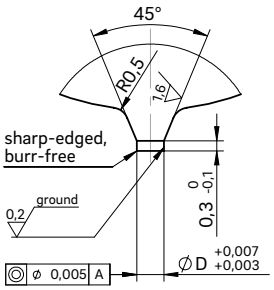
Needle guide LAZ
Made of powder-metallurgical steel

If necessary, the needle guide can be changed without great effort. By replacing the needle guide and needle, the gate point diameter can be made larger or smaller without subsequent reworking of the mould cavity. Thanks to a precise needle guide, the clean gate point can be closed with nearly no wear or burring. Needle guide type LAZ has a tapered shape with a smaller contact surface which creates a smaller impression. This version is suitable for items with a minimal wall thickness and part geometries not permitting a larger impression.

Advantages:
- Long service life and wear-resistance
- Wear parts are easy to replace
- Outstanding and flash-free gate point quality
- Very good visual surface quality
- No replacement or subsequent reworking of the mould inserts required
- Minimal shear stress

Needle guide version
Antechamber version KA





Needle guide KA
This is used when a second marking on the part is not permissible.

When selecting the material to be used, the needle hardness of 64 ±2 HRC is to be taken into account!

Valve gate nozzle type 6NHF

System nozzle with thick-film heating element (BlueFlow®), screwed to the manifold

TECHNICAL DATA

6NHF

Needle Ød	3 mm
Melt channel Ød	6 mm
Gate point Ød	0.8, 1.0, 1.2 or 1.4 mm
Operating voltage	230 V_{AC}*

Nominal length of the nozzle (L) in mm

50	60	80	100	120	150
■	■	■	■	■	□

Contact us for other nozzle lengths!

*Volts alternating current

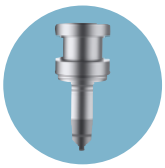
■ *available* □ *on request*

NOTE

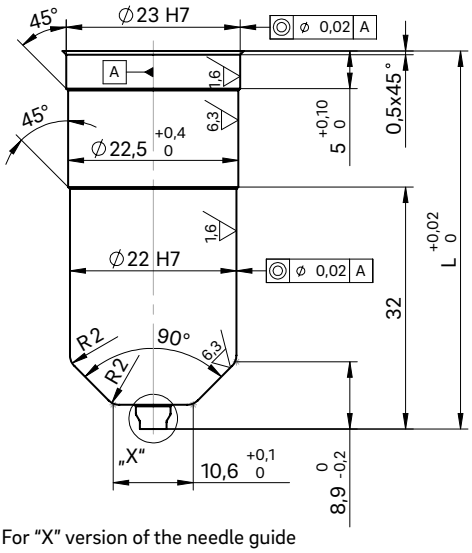
Power connector CHF and thermocouple connector CMLK are to be ordered separately.

BlueFlow® hot runner nozzle type NHF is not intended for sale or use in the USA or Canada!

WEBCODE
32030

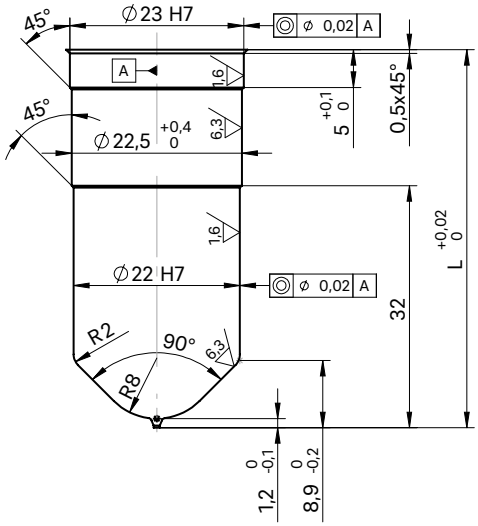


Nozzle with needle guide
antechamber design LA



For "X" version of the needle guide
see following page

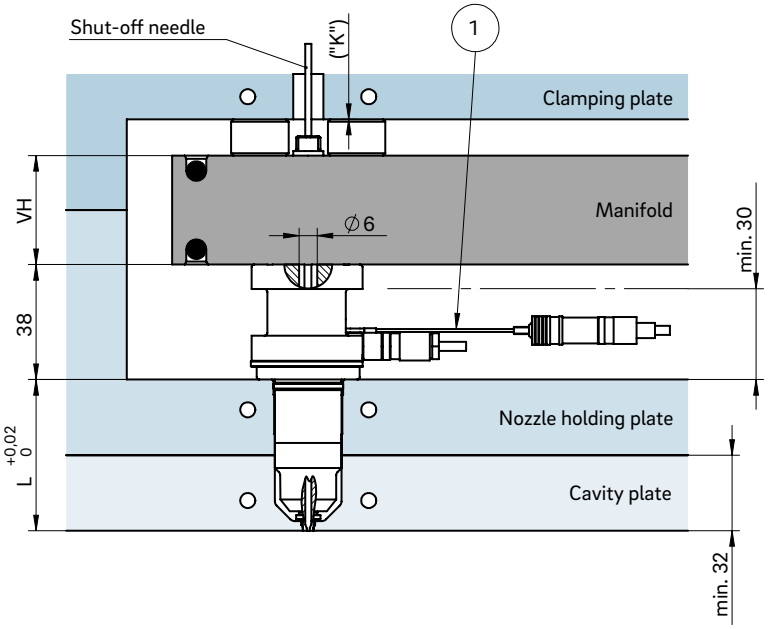
Nozzle with needle guide
antechamber design KA



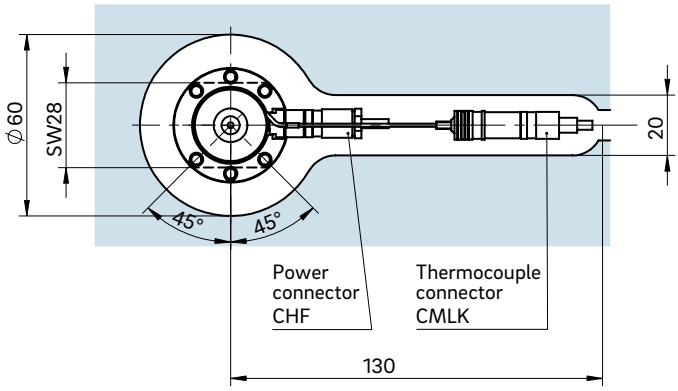
Dimension "K" required for heat expansion is to be ensured by grinding the pressure pad (12 + 0.1 mm)! Determine the difference between the height of the manifold system and the height of the frame plate when installed! ΔT specifies the temperature differential between the processing temperature and the mould temperature!

VH	ΔT (°C)	100	150	200	250	300	350
36 mm	K (mm)	0.021	0.059	0.098	0.137	0.177	0.217
46 mm	K (mm)	0.033	0.078	0.124	0.170	0.218	0.264
56 mm	K (mm)	0.046	0.097	0.150	0.203	0.258	0.311

INSTALLATION



Example cutout for nozzle head, power and thermocouple plug connections



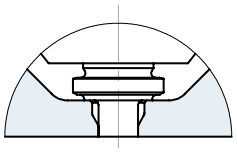
① Thermocouple plug connection in this area can be bent once; minimum radius: R8
SW = flat area on nozzle head

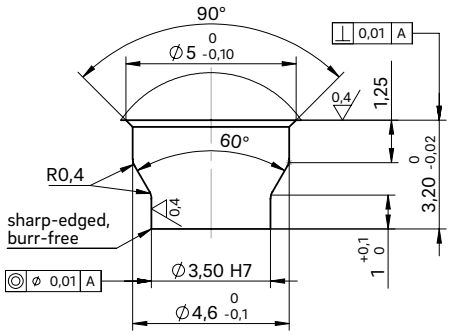
Valve gate nozzle type 6NHF

Needle guide versions LA, LA with titanium ring, LAZ and KA

NEEDLE GUIDE VERSIONS

Needle guide version
Antechamber version LA



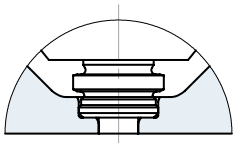


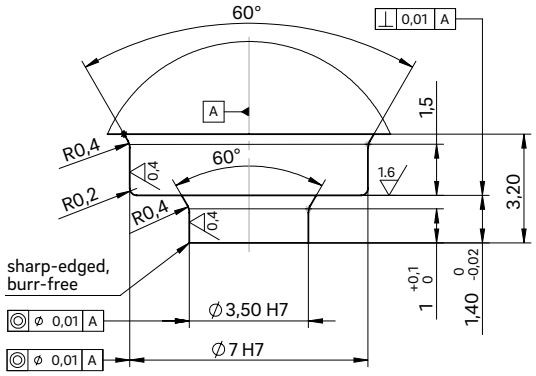
Needle guide LA
Made of powder-metallurgical steel

If necessary, the needle guide can be changed without great effort. By replacing the needle guide and needle, the gate point diameter can be made larger or smaller without subsequent reworking of the mould cavity. Thanks to a precise needle guide, the clean gate point can be closed with nearly no wear or burring.

Advantages:
- Long service life and wear-resistance
- Wear parts are easy to replace
- Outstanding and flash-free gate point quality
- Very good visual surface quality
- No replacement or subsequent reworking of the mould inserts required
- Minimal shear stress

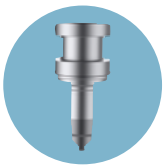
Needle guide version
Antechamber version LA
with titanium ring





Needle guide LA
Special version with titanium ring

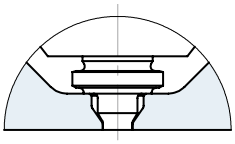
Thermal insulation of the needle guide using a titanium ring expands the area of use of the valve gate nozzle to include the following plastics:
- Polyamides (PA4.6, PA6.6 and HTN)
- Thermoplastic polyesters (PBT and PET)
- Liquid crystalline polymers (LCP)
- Polyether ether ketones (PEEK)

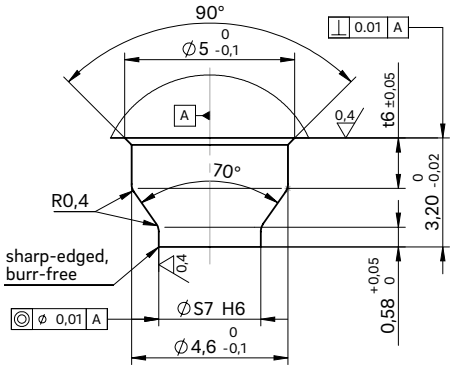


Installation dimensions of needle guide version LAZ

ØD	ØS7	t6
0.8	2.2	0.91
1.0	2.4	1.05
1.2	2.6	1.20
1.4	2.8	1.34

Needle guide version
Antechamber version LAZ



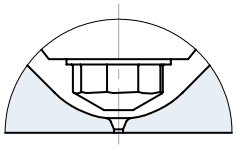


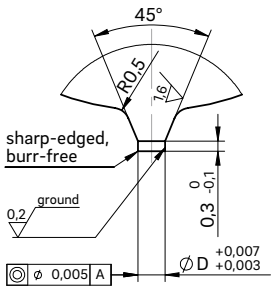
Needle guide LAZ
Made of powder-metallurgical steel

If necessary, the needle guide can be changed without great effort. By replacing the needle guide and needle, the gate point diameter can be made larger or smaller without subsequent reworking of the mould cavity. Thanks to a precise needle guide, the clean gate point can be closed with nearly no wear or burring. Needle guide type LAZ has a tapered shape with a smaller contact surface which creates a smaller impression. This version is suitable for items with a minimal wall thickness and part geometries not permitting a larger impression.

Advantages:
- Long service life and wear-resistance
- Wear parts are easy to replace
- Outstanding and flash-free gate point quality
- Very good visual surface quality
- No replacement or subsequent reworking of the mould inserts required
- Minimal shear stress

Needle guide version
Antechamber version KA





Needle guide KA
This is used when a second marking on the part is not permissible.

When selecting the material to be used, the needle hardness of 64 ±2 HRC is to be taken into account!

Valve gate nozzle type 5NHT

System nozzle with conventional heating element, screwed to the manifold

TECHNICAL DATA

5NHT

Needle Ød	3 mm
Melt channel Ød	4.8 mm
Gate point Ød	0.8, 1.0, 1.2 or 1.4 mm
Operating voltage	230 V_{AC}*

Nominal length of the nozzle (L) in mm

50	60	80	100
■	■	■	■

Contact us for other nozzle lengths!

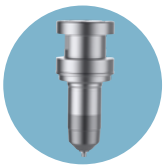
*Volts alternating current

■ *available*

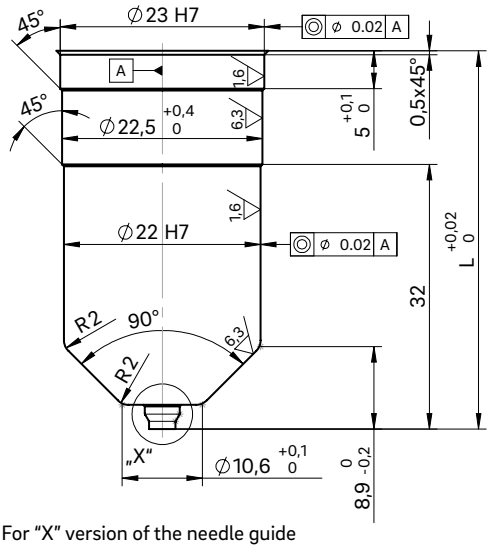
NOTE

Power connector CMT and thermocouple connector CMLK are to be ordered separately.

WEBCODE
32040

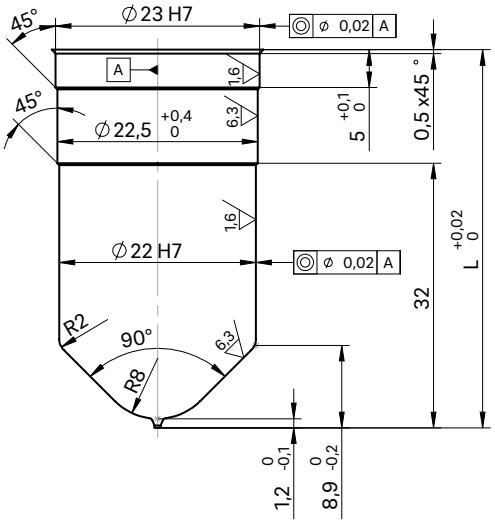


Nozzle with needle guide
antechamber design LA



For "X" version of the needle guide
see following page

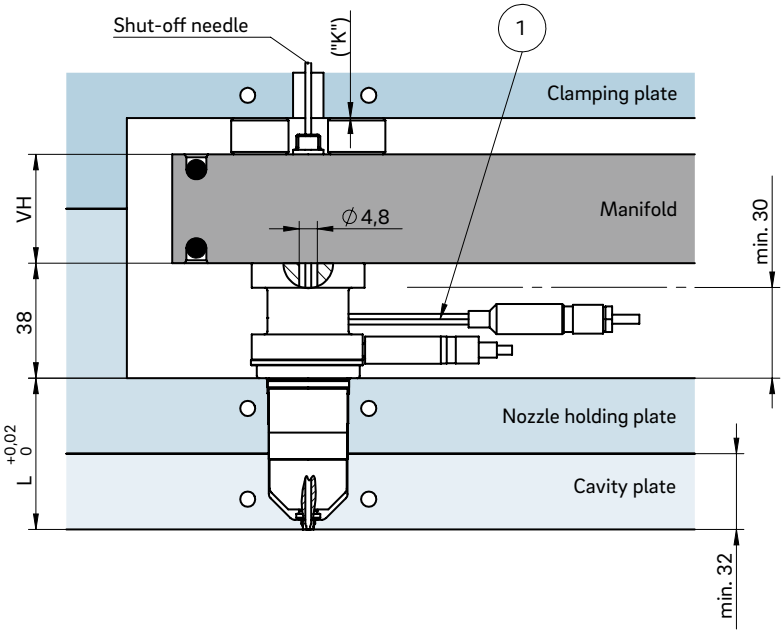
Nozzle with needle guide
antechamber design KA



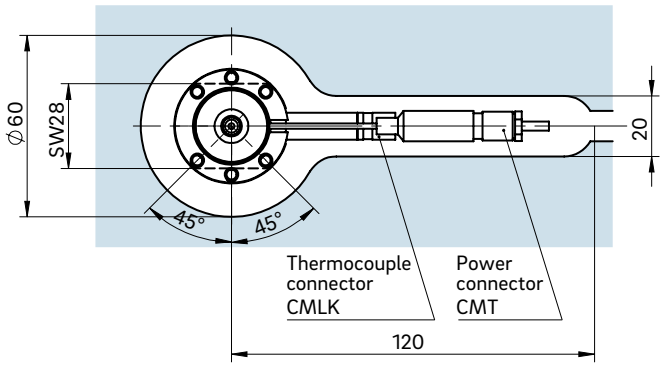
Dimension "K" required for heat expansion is to be ensured by grinding the pressure pad (12 + 0.1 mm)! Determine the difference between the height of the manifold system and the height of the frame plate when installed! ΔT specifies the temperature differential between the processing temperature and the mould temperature!

VH	ΔT (°C)	100	150	200	250	300	350
36 mm	K (mm)	0.021	0.059	0.098	0.137	0.177	0.217
46 mm	K (mm)	0.033	0.078	0.124	0.170	0.218	0.264
56 mm	K (mm)	0.046	0.097	0.150	0.203	0.258	0.311

INSTALLATION



Example cutout for nozzle head, power and thermocouple plug connections



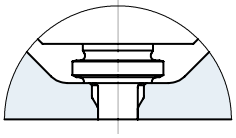
① Power plug connection in this area can be bent once; minimum radius: R8
SW = flat area on nozzle head

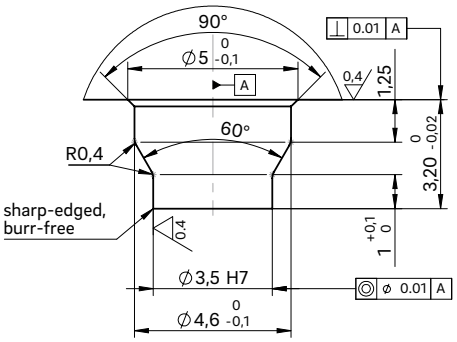
Valve gate nozzle type 5NHT

Needle guide versions LA, LA with titanium ring, LAZ and KA

NEEDLE GUIDE VERSIONS

Needle guide version
Antechamber version LA



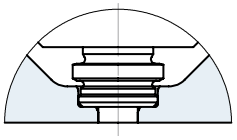


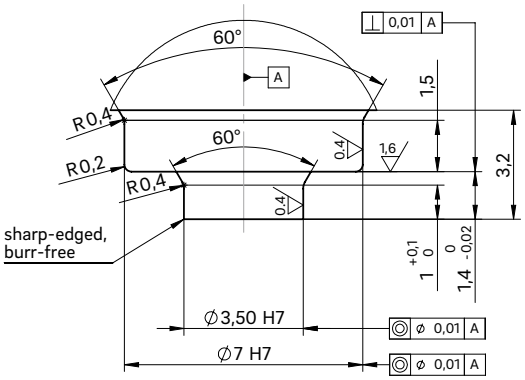
Needle guide LA
Made of powder-metallurgical steel

If necessary, the needle guide can be changed without great effort. By replacing the needle guide and needle, the gate point diameter can be made larger or smaller without subsequent reworking of the mould cavity. Thanks to a precise needle guide, the clean gate point can be closed with nearly no wear or burring.

Advantages:
- Long service life and wear-resistance
- Wear parts are easy to replace
- Outstanding and flash-free gate point quality
- Very good visual surface quality
- No replacement or subsequent reworking of the mould inserts required
- Minimal shear stress

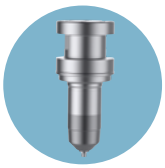
Needle guide version
Antechamber version LA
with titanium ring





Needle guide LA
Special version with titanium ring

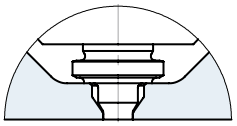
Thermal insulation of the needle guide using a titanium ring expands the area of use of the valve gate nozzle to include the following plastics:
- Polyamides (PA4.6, PA6.6 and HTN)
- Thermoplastic polyesters (PBT and PET)
- Liquid crystalline polymers (LCP)
- Polyether ether ketones (PEEK)

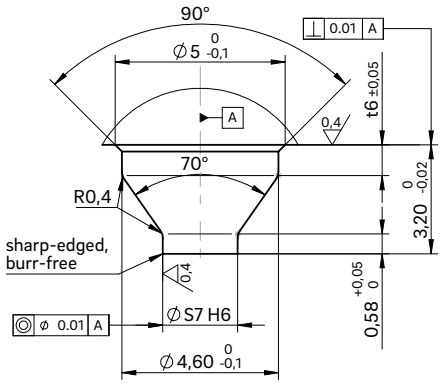


Installation dimensions of needle guide version LAZ

ØD	ØS7	t6
0.8	2.2	0.91
1.0	2.4	1.05
1.2	2.6	1.20
1.4	2.8	1.34

Needle guide version
Antechamber version LAZ

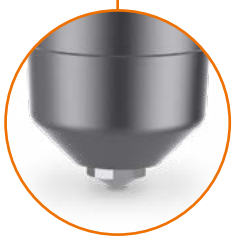




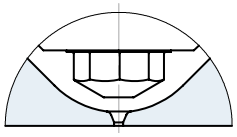
Needle guide LAZ
Made of powder-metallurgical steel

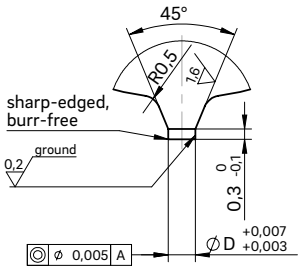
If necessary, the needle guide can be changed without great effort. By replacing the needle guide and needle, the gate point diameter can be made larger or smaller without subsequent reworking of the mould cavity. Thanks to a precise needle guide, the clean gate point can be closed with nearly no wear or burring. Needle guide type LAZ has a tapered shape with a smaller contact surface which creates a smaller impression. This version is suitable for items with a minimal wall thickness and part geometries not permitting a larger impression.

Advantages:
- Long service life and wear-resistance
- Wear parts are easy to replace
- Outstanding and flash-free gate point quality
- Very good visual surface quality
- No replacement or subsequent reworking of the mould inserts required
- Minimal shear stress



Needle guide version
Antechamber version KA





Needle guide KA
This is used when a second marking on the part is not permissible.

When selecting the material to be used, the needle hardness of 64 ±2 HRC is to be taken into account!

Valve gate nozzle type 6NHT

System nozzle with conventional heating element, screwed to the manifold

TECHNICAL DATA

6NHT

Needle Ød	3 mm
Melt channel Ød	6 mm
Gate point Ød	0.8, 1.0, 1.2 or 1.4 mm
Operating voltage	230 V_{AC}*

Nominal length of the nozzle (L) in mm

50	60	80	100	120	150	200
■	■	■	■	■	□	□

Contact us for other nozzle lengths!

*Volts alternating current

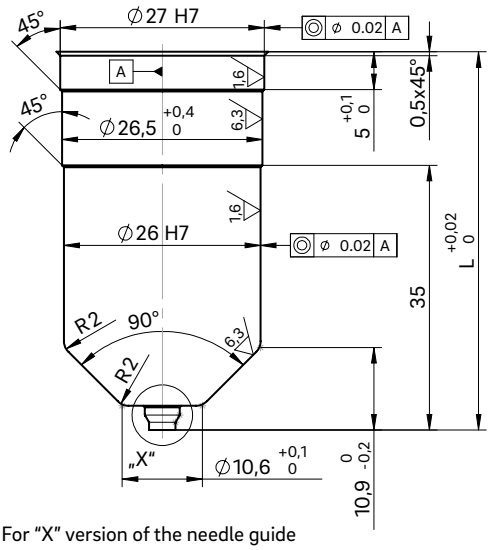
■ *available* □ *on request*

NOTE

Power connector CMT and thermocouple connector CMLK are to be ordered separately.

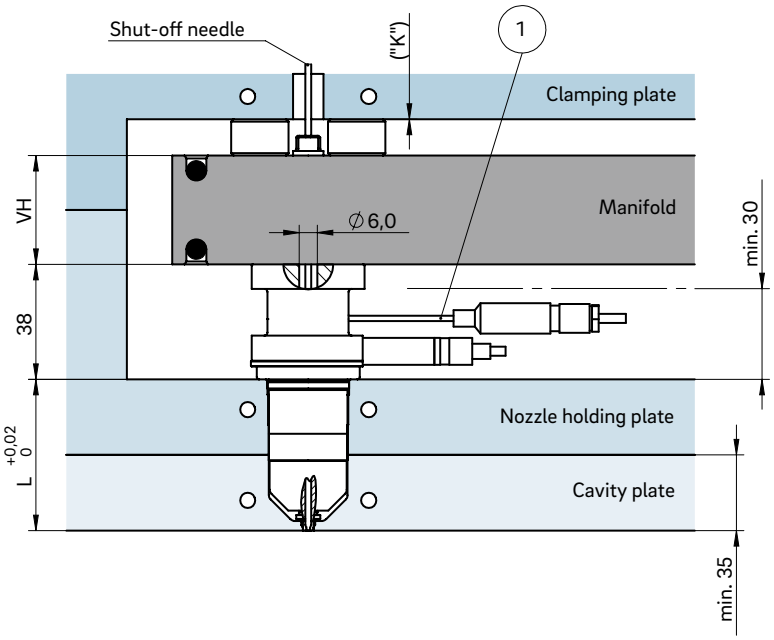
WEBCODE
32050

Nozzle with needle guide
antechamber design LA

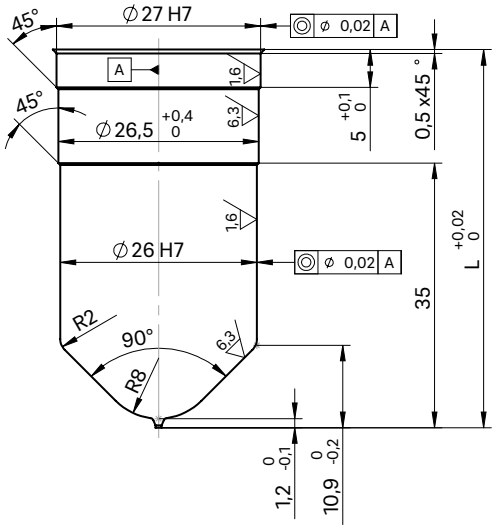


For "X" version of the needle guide
see following page

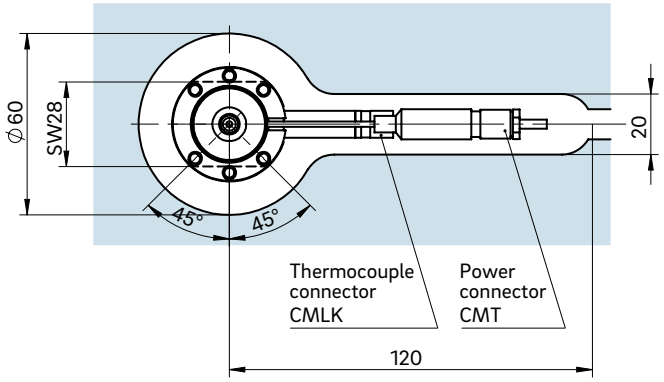
INSTALLATION



Nozzle with needle guide
antechamber design KA



Example cutout for nozzle head, power and thermocouple plug connections



① Power plug connection in this area can be bent once; minimum radius: R8
SW = flat area on nozzle head

Dimension "K" required for heat expansion is to be ensured by grinding the pressure pad (12 + 0.1 mm)! Determine the difference between the height of the manifold system and the height of the frame plate when installed! ΔT specifies the temperature differential between the processing temperature and the mould temperature!

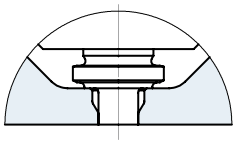
VH	ΔT (°C)	100	150	200	250	300	350
36 mm	K (mm)	0.021	0.059	0.098	0.137	0.177	0.217
46 mm	K (mm)	0.033	0.078	0.124	0.170	0.218	0.264
56 mm	K (mm)	0.046	0.097	0.150	0.203	0.258	0.311

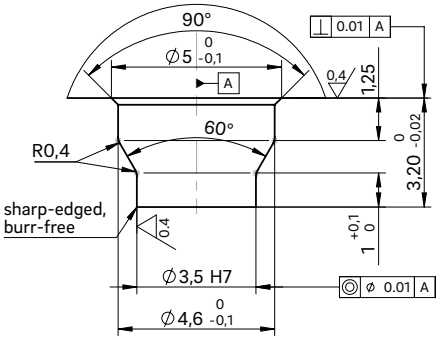
Valve gate nozzle type 6NHT

Needle guide versions LA, LA with titanium ring, LAZ and KA

NEEDLE GUIDE VERSIONS

Needle guide version
Antechamber version LA



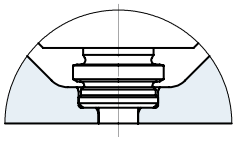


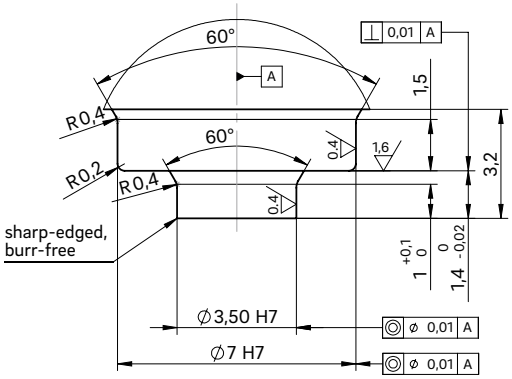
Needle guide LA
Made of powder-metallurgical steel

If necessary, the needle guide can be changed without great effort. By replacing the needle guide and needle, the gate point diameter can be made larger or smaller without subsequent reworking of the mould cavity. Thanks to a precise needle guide, the clean gate point can be closed with nearly no wear or burring.

Advantages:
- Long service life and wear-resistance
- Wear parts are easy to replace
- Outstanding and flash-free gate point quality
- Very good visual surface quality
- No replacement or subsequent reworking of the mould inserts required
- Minimal shear stress

Needle guide version
Antechamber version LA
with titanium ring





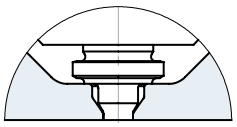
Needle guide LA
Special version with titanium ring

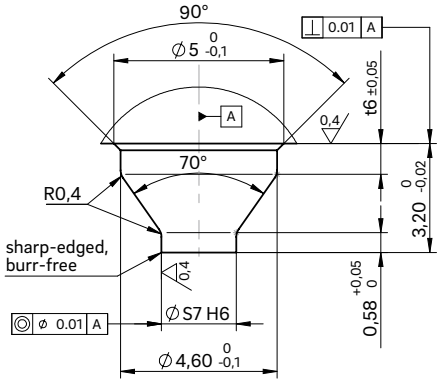
Thermal insulation of the needle guide using a titanium ring expands the area of use of the valve gate nozzle to include the following plastics:
- Polyamides (PA4.6, PA6.6 and HTN)
- Thermoplastic polyesters (PBT and PET)
- Liquid crystalline polymers (LCP)
- Polyether ether ketones (PEEK)

Installation dimensions of needle guide version LAZ

ØD	ØS7	t6
0.8	2.2	0.91
1.0	2.4	1.05
1.2	2.6	1.20
1.4	2.8	1.34

Needle guide version
Antechamber version LAZ

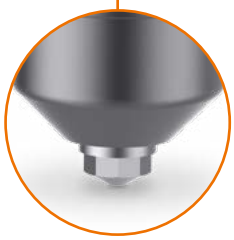




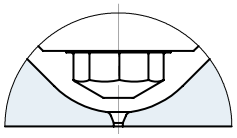
Needle guide LAZ
Made of powder-metallurgical steel

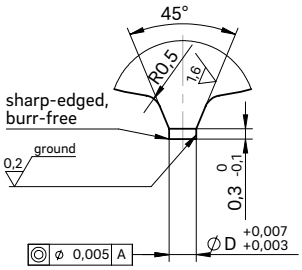
If necessary, the needle guide can be changed without great effort. By replacing the needle guide and needle, the gate point diameter can be made larger or smaller without subsequent reworking of the mould cavity. Thanks to a precise needle guide, the clean gate point can be closed with nearly no wear or burring. Needle guide type LAZ has a tapered shape with a smaller contact surface which creates a smaller impression. This version is suitable for items with a minimal wall thickness and part geometries not permitting a larger impression.

Advantages:
- Long service life and wear-resistance
- Wear parts are easy to replace
- Outstanding and flash-free gate point quality
- Very good visual surface quality
- No replacement or subsequent reworking of the mould inserts required
- Minimal shear stress



Needle guide version
Antechamber version KA





Needle guide KA
This is used when a second marking on the part is not permissible.

When selecting the material to be used, the needle hardness of 64 ±2 HRC is to be taken into account!

Valve gate nozzle type 8NHT

System nozzle with conventional heating element, screwed to the manifold

TECHNICAL DATA

8NHT

Needle Ød	3 mm
Melt channel Ød	7.5 mm
Gate point Ød	1.6, 2.0 or 2.5 mm
Operating voltage	230 V_{AC}*

Nominal length of the nozzle (L) in mm

50	60	80	100	120	150	200	250
■	■	■	■	■	■	□	□

Contact us for other nozzle lengths!

*Volts alternating current

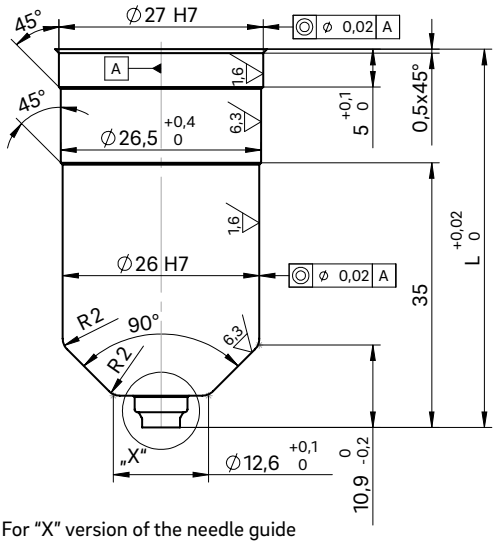
■ *available* □ *on request*

NOTE

Power connector CMT and thermocouple connector CMLK are to be ordered separately.

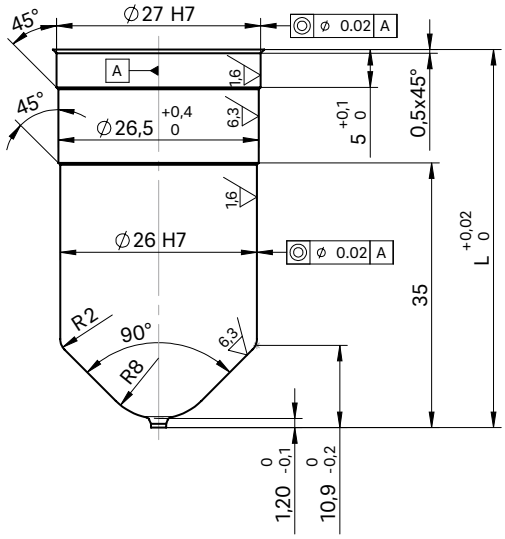
WEBCODE
32060

Nozzle with needle guide
antechamber design LA



For "X" version of the needle guide
see following page

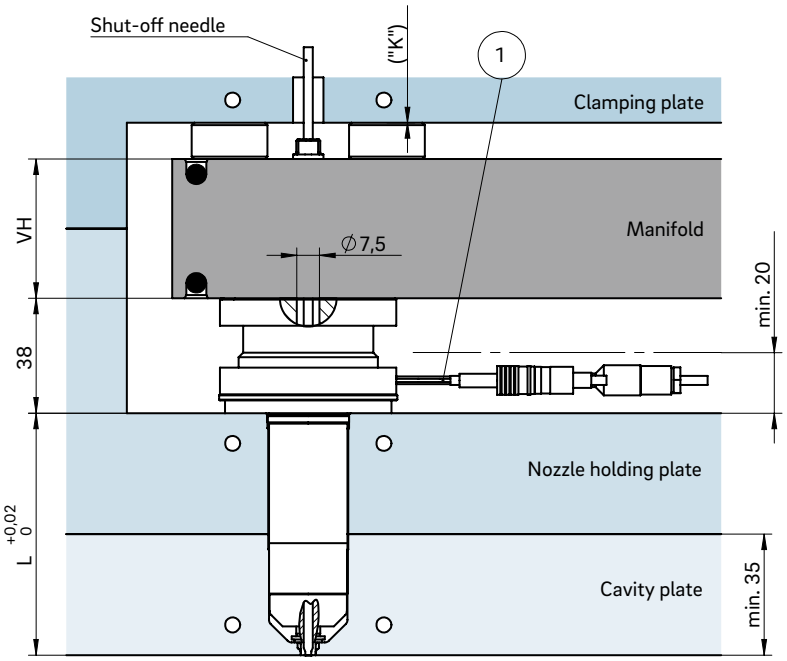
Nozzle with needle guide
antechamber design KA



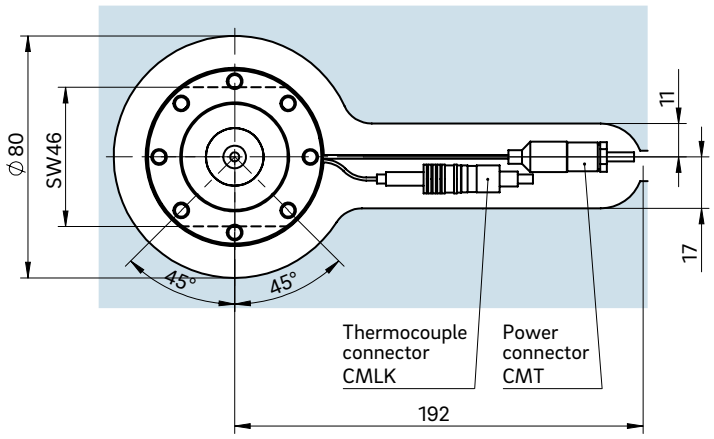
Dimension "K" required for heat expansion is to be ensured by grinding the pressure pad (12 + 0.1 mm)! Determine the difference between the height of the manifold system and the height of the frame plate when installed! ΔT specifies the temperature differential between the processing temperature and the mould temperature!

VH	ΔT (°C)	100	150	200	250	300	350
36 mm	K (mm)	0.021	0.059	0.098	0.137	0.177	0.217
46 mm	K (mm)	0.033	0.078	0.124	0.170	0.218	0.264
56 mm	K (mm)	0.046	0.097	0.150	0.203	0.258	0.311

INSTALLATION



Example cutout for nozzle head, power and thermocouple plug connections



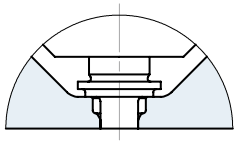
① Power and thermocouple plug connections in this area can be bent once; minimum radius: R8
SW = flat area on nozzle head

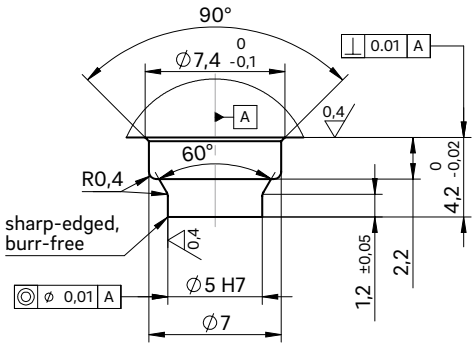
Valve gate nozzle type 8NHT

Needle guide versions LA, LA with titanium ring, LAZ and KA

NEEDLE GUIDE VERSIONS

Needle guide version
Antechamber version LA



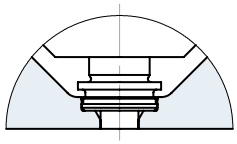


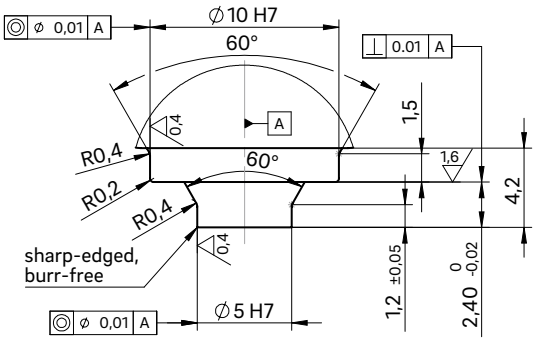
Needle guide LA
Made of powder-metallurgical steel

If necessary, the needle guide can be changed without great effort. By replacing the needle guide and needle, the gate point diameter can be made larger or smaller without subsequent reworking of the mould cavity. Thanks to a precise needle guide, the clean gate point can be closed with nearly no wear or burring.

Advantages:
- Long service life and wear-resistance
- Wear parts are easy to replace
- Outstanding and flash-free gate point quality
- Very good visual surface quality
- No replacement or subsequent reworking of the mould inserts required
- Minimal shear stress

Needle guide version
Antechamber version LA
with titanium ring





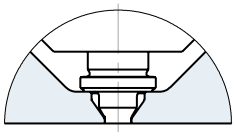
Needle guide LA
Special version with titanium ring

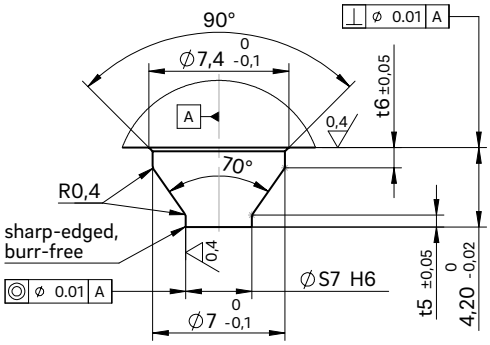
Thermal insulation of the needle guide using a titanium ring expands the area of use of the valve gate nozzle to include the following plastics:
- Polyamides (PA4.6, PA6.6 and HTN)
- Thermoplastic polyesters (PBT and PET)
- Liquid crystalline polymers (LCP)
- Polyether ether ketones (PEEK)

Installation dimensions of needle guide version LAZ

ØD	ØS7	t5	t6
1.6	3.0	0.63	0.77
2.0	3.5	0.63	1.07
2.5	4.0	0.58	1.43

Needle guide version
Antechamber version LAZ



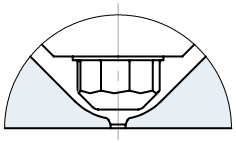


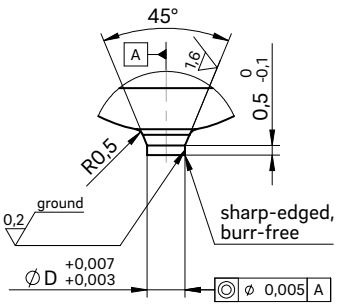
Needle guide LAZ
Made of powder-metallurgical steel

If necessary, the needle guide can be changed without great effort. By replacing the needle guide and needle, the gate point diameter can be made larger or smaller without subsequent reworking of the mould cavity. Thanks to a precise needle guide, the clean gate point can be closed with nearly no wear or burring. Needle guide type LAZ has a tapered shape with a smaller contact surface which creates a smaller impression. This version is suitable for items with a minimal wall thickness and part geometries not permitting a larger impression.

Advantages:
- Long service life and wear-resistance
- Wear parts are easy to replace
- Outstanding and flash-free gate point quality
- Very good visual surface quality
- No replacement or subsequent reworking of the mould inserts required
- Minimal shear stress

Needle guide version
Antechamber version KA





Needle guide KA
This is used when a second marking on the part is not permissible.

When selecting the material to be used, the needle hardness of 64 ±2 HRC is to be taken into account!

Valve gate nozzle type 10NHT

System nozzle with conventional heating element, screwed to the manifold

TECHNICAL DATA

10NHT

Needle Ød	3 mm
Melt channel Ød	10 mm
Gate point Ød	2.0 or 2.5 mm
Needle Ød	5 mm
Melt channel Ød	10 mm
Gate point Ød	3.0, 3.5 or 4.0 mm
Operating voltage	230 V_{AC}*

Nominal length of the nozzle (L) in mm

60	80	100	120	150	200	250
■	■	■	■	■	□	□

Contact us for other nozzle lengths!

*Volts alternating current

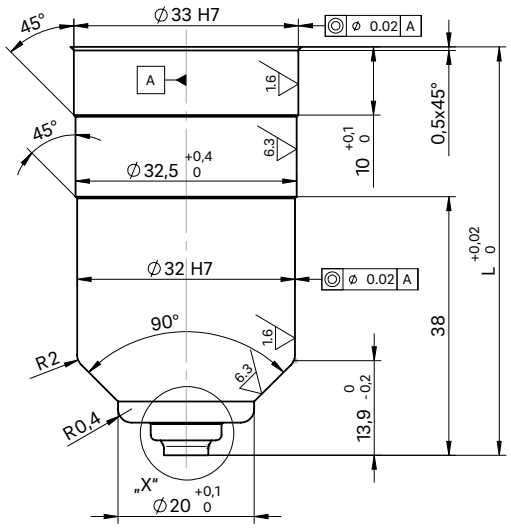
■ *available* □ *on request*

NOTE

Power connector CMT and thermocouple connector CMLK are to be ordered separately.

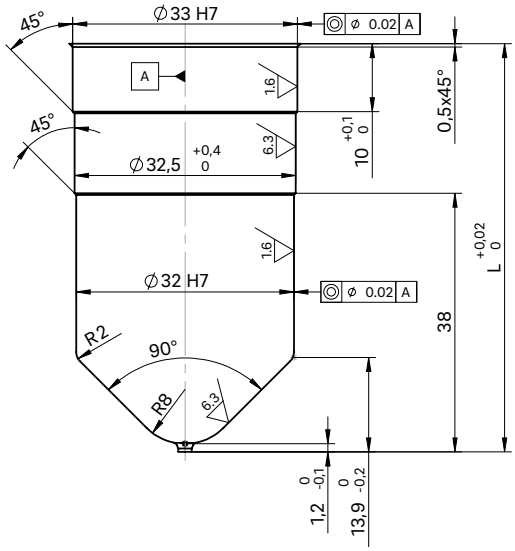
WEBCODE
32070

Nozzle with needle guide
antechamber design LA



For "X" version of the needle guide
see following page

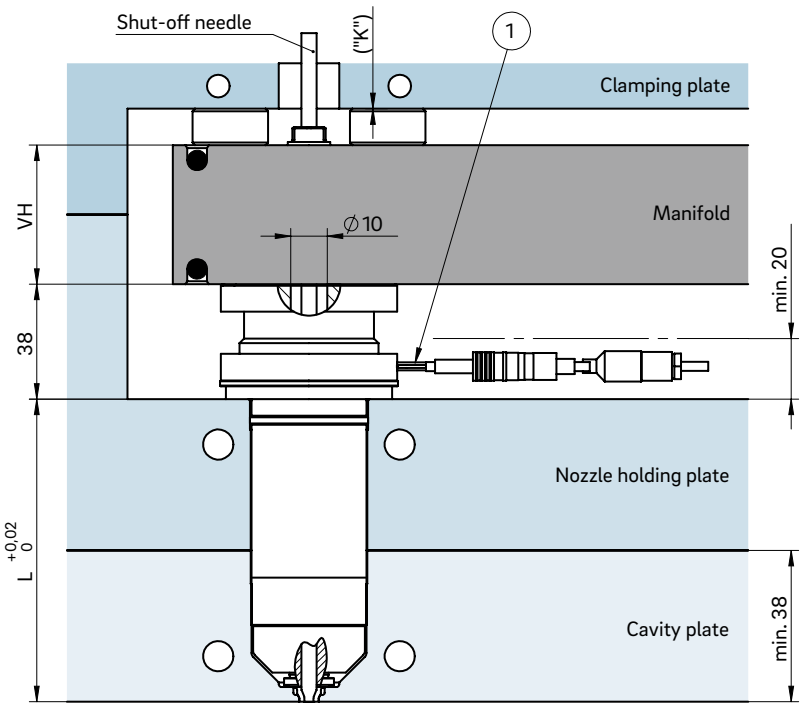
Nozzle with needle guide
antechamber design KA



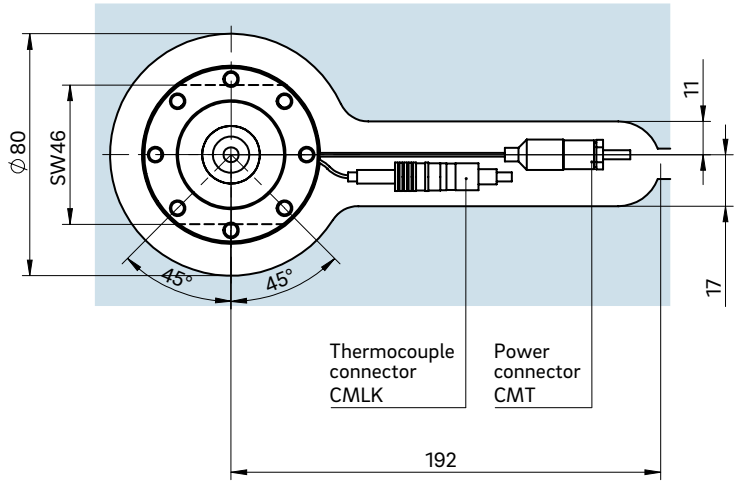
Dimension "K" required for heat expansion is to be ensured by grinding the pressure pad (12 + 0.1 mm)! Determine the difference between the height of the manifold system and the height of the frame plate when installed! ΔT specifies the temperature differential between the processing temperature and the mould temperature!

VH	ΔT (°C)	100	150	200	250	300	350
36 mm	K (mm)	0.021	0.059	0.098	0.137	0.177	0.217
46 mm	K (mm)	0.033	0.078	0.124	0.170	0.218	0.264
56 mm	K (mm)	0.046	0.097	0.150	0.203	0.258	0.311

INSTALLATION



Example cutout for nozzle head, power and thermocouple plug connections



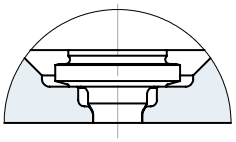
① Power and thermocouple plug connections in this area can be bent once; minimum radius: R8
SW = flat area on nozzle head

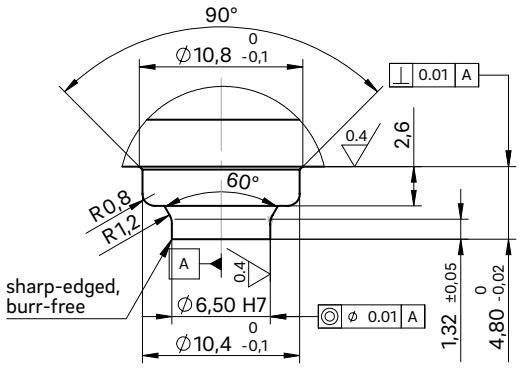
Valve gate nozzle type 10NHT

Needle guide versions LA, LA with titanium ring and KA

NEEDLE GUIDE VERSIONS

Needle guide version
Antechamber version LA



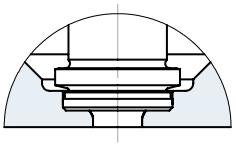


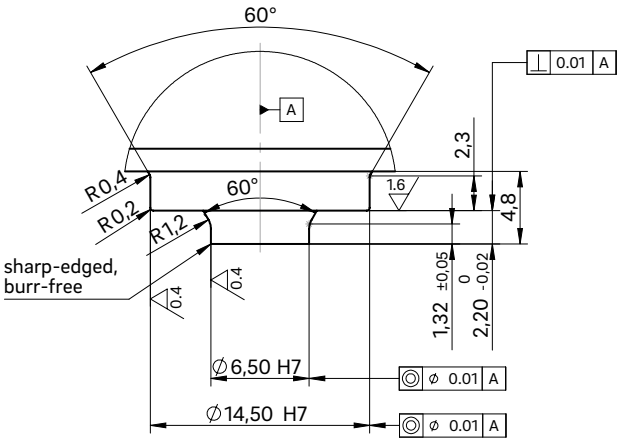
Needle guide LA
Made of powder-metallurgical steel

If necessary, the needle guide can be changed without great effort. By replacing the needle guide and needle, the gate point diameter can be made larger or smaller without subsequent reworking of the mould cavity. Thanks to a precise needle guide, the clean gate point can be closed with nearly no wear or burring.

Advantages:
- Long service life and wear-resistance
- Wear parts are easy to replace
- Outstanding and flash-free gate point quality
- Very good visual surface quality
- No replacement or subsequent reworking of the mould inserts required
- Minimal shear stress

Needle guide version
Antechamber version LA
with titanium ring

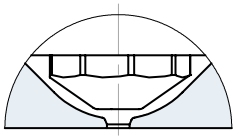


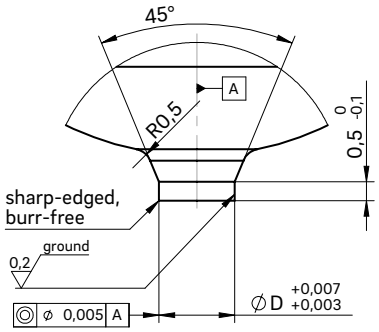


Needle guide LA
Special version with titanium ring

Thermal insulation of the needle guide using a titanium ring expands the area of use of the valve gate nozzle to include the following plastics:
- Polyamides (PA4.6, PA6.6 and HTN)
- Thermoplastic polyesters (PBT and PET)
- Liquid crystalline polymers (LCP)
- Polyether ether ketones (PEEK)

Needle guide version
Antechamber version KA





Needle guide KA
This is used when a second marking on the part is not permissible.

When selecting the material to be used, the needle hardness of 64 ±2 HRC is to be taken into account!

Valve gate nozzle type 12NHT

System nozzle with conventional heating element, screwed to the manifold

TECHNICAL DATA

12NHT

Needle Ød	5 mm
Melt channel Ød	12 mm
Gate point Ød	3.0, 3.5 or 4.0 mm
Operating voltage	230 V_{AC}*

Nominal length of the nozzle (L) in mm

60	80	100	120	150	200	250
■	■	■	□	■	□	□

Contact us for other nozzle lengths!

*Volts alternating current

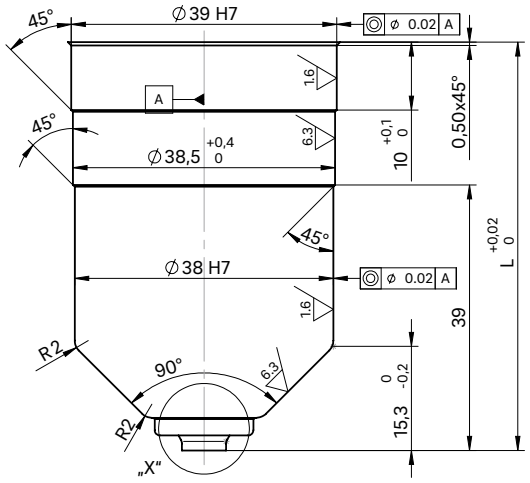
■ *available* □ *on request*

NOTE

Power connector CMT and thermocouple connector CMLK are to be ordered separately.

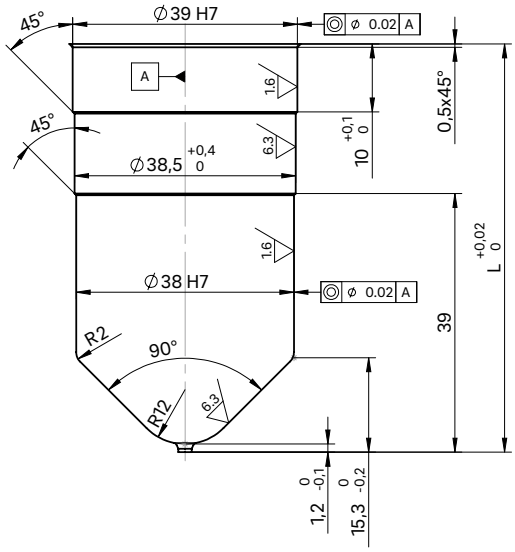
WEBCODE
32080

Nozzle with needle guide
antechamber design LA



For "X" version of the needle guide
see following page

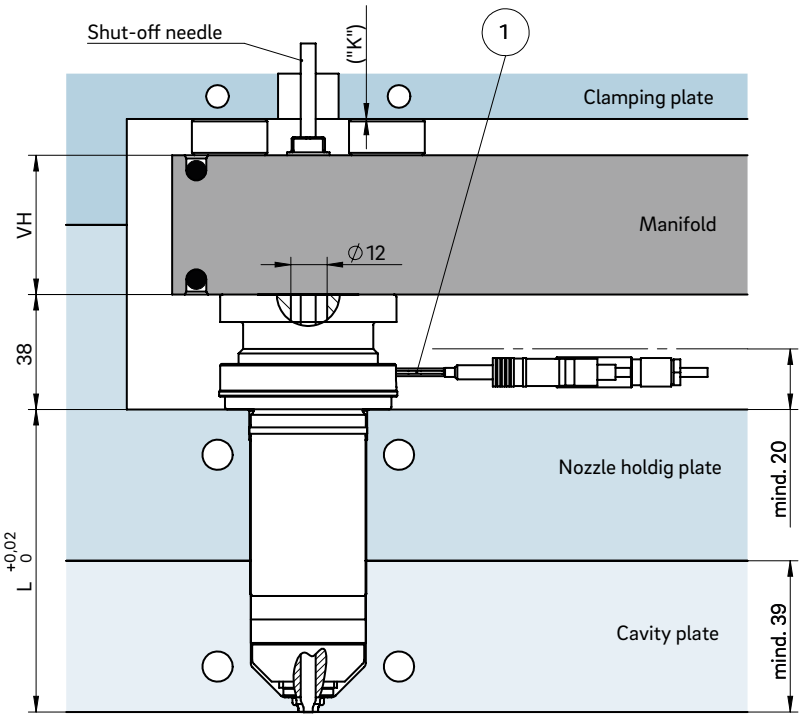
Nozzle with needle guide
antechamber design KA



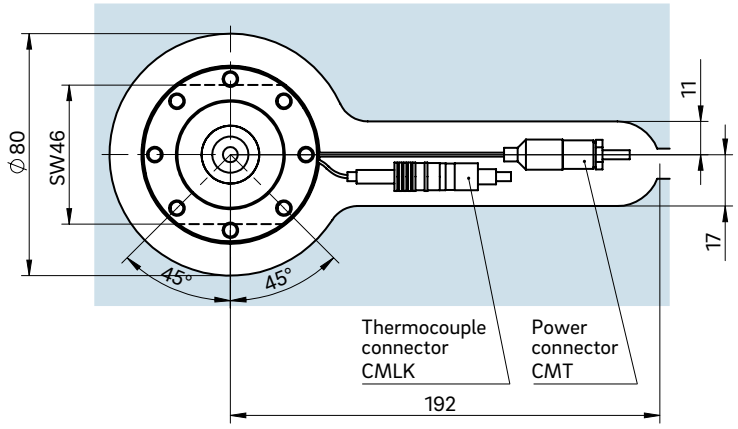
Dimension "K" required for heat expansion is to be ensured by grinding the pressure pad (12 + 0.1 mm)! Determine the difference between the height of the manifold system and the height of the frame plate when installed! ΔT specifies the temperature differential between the processing temperature and the mould temperature!

VH	ΔT (°C)	100	150	200	250	300	350
36 mm	K (mm)	0.021	0.059	0.098	0.137	0.177	0.217
46 mm	K (mm)	0.033	0.078	0.124	0.170	0.218	0.264
56 mm	K (mm)	0.046	0.097	0.150	0.203	0.258	0.311

INSTALLATION



Example cutout for nozzle head, power and thermocouple plug connections



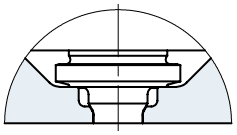
① Power and thermocouple plug connections in this area can be bent once; minimum radius: R8
SW = flat area on nozzle head

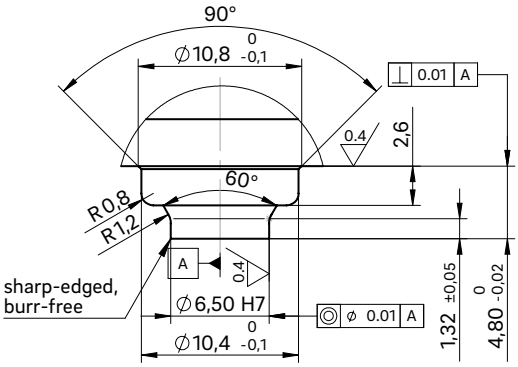
Valve gate nozzle type 12NHT

Needle guide versions LA, LA with titanium ring and KA

NEEDLE GUIDE VERSIONS

Needle guide version
Antechamber version LA



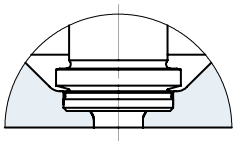


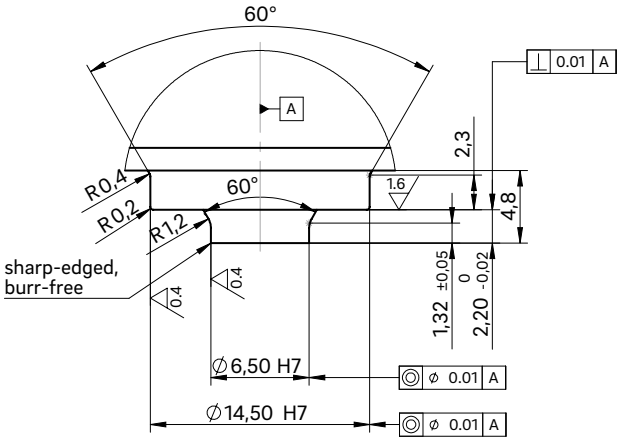
Needle guide LA
Made of powder-metallurgical steel

If necessary, the needle guide can be changed without great effort. By replacing the needle guide and needle, the gate point diameter can be made larger or smaller without subsequent reworking of the mould cavity. Thanks to a precise needle guide, the clean gate point can be closed with nearly no wear or burring.

Advantages:
- Long service life and wear-resistance
- Wear parts are easy to replace
- Outstanding and flash-free gate point quality
- Very good visual surface quality
- No replacement or subsequent reworking of the mould inserts required
- Minimal shear stress

Needle guide version
Antechamber version LA
with titanium ring

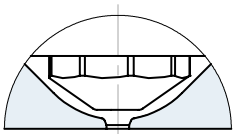


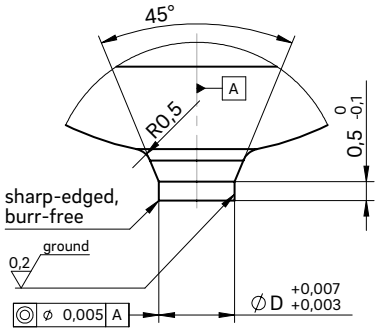


Needle guide LA
Special version with titanium ring

Thermal insulation of the needle guide using a titanium ring expands the area of use of the valve gate nozzle to include the following plastics:
- Polyamides (PA4.6, PA6.6 and HTN)
- Thermoplastic polyesters (PBT and PET)
- Liquid crystalline polymers (LCP)
- Polyether ether ketones (PEEK)

Needle guide version
Antechamber version KA





Needle guide KA
This is used when a second marking on the part is not permissible.

When selecting the material to be used, the needle hardness of 64 ±2 HRC is to be taken into account!

Valve gate nozzle type 5NMT

System nozzle with conventional heating element, for minimal spacing, not screwed to the manifold

TECHNICAL DATA

5NMT

Needle Ød	3 mm
Melt channel Ød	4.8 mm
Gate point Ød	0.8, 1.0, 1.2 or 1.4 mm
Operating voltage	230 V_{AC}*

Nominal length of the nozzle (L) in mm

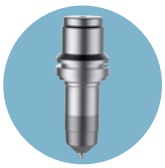
50	60	80	100	120	150
■	■	■	■	■	□

Contact us for other nozzle lengths!

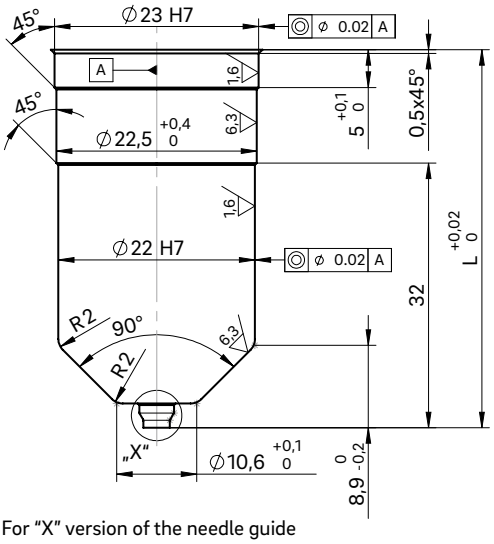
*Volts alternating current

■ *available* □ *on request*

WEBCODE
32090

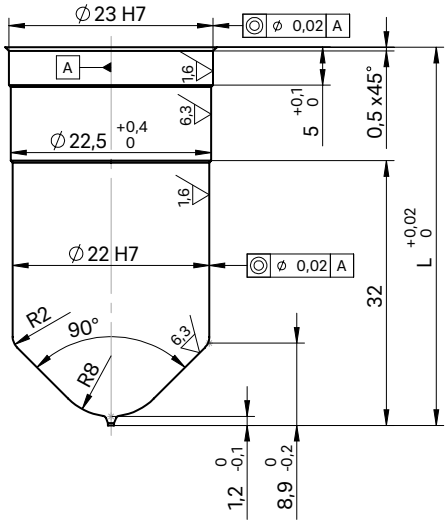


Nozzle with needle guide
antechamber design LA



For "X" version of the needle guide
see following page

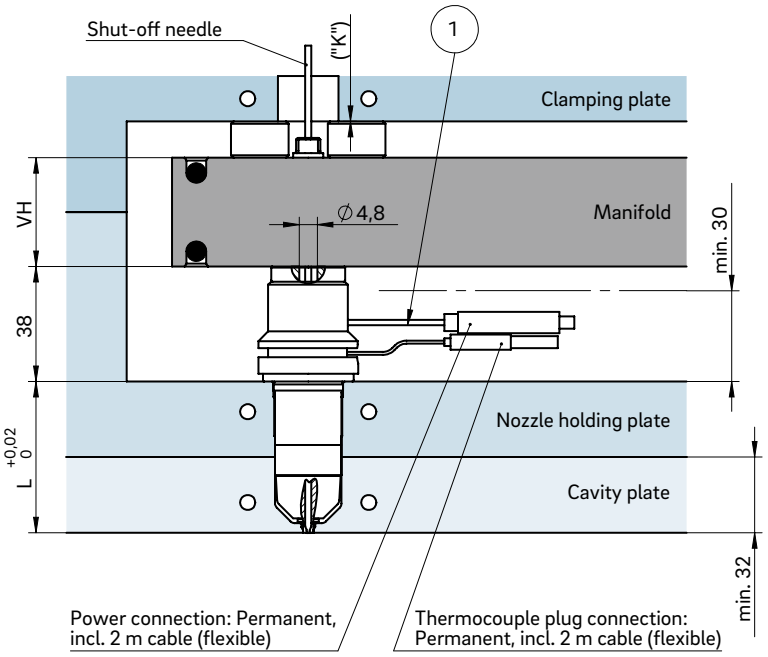
Nozzle with needle guide
antechamber design KA



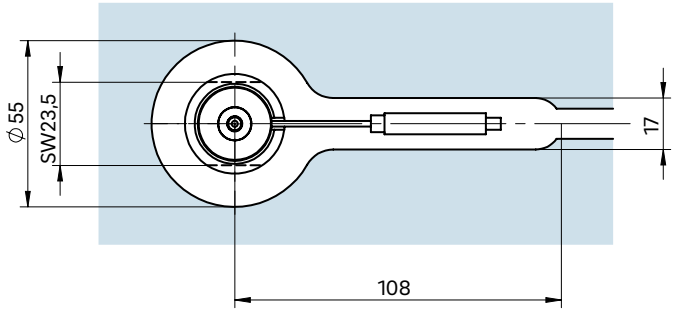
Dimension "K" required for heat expansion is to be ensured by grinding the pressure pad (12 + 0.1 mm)! Determine the difference between the height of the manifold system and the height of the frame plate when installed! ΔT specifies the temperature differential between the processing temperature and the mould temperature!

VH	ΔT (°C)	100	150	200	250	300	350
36 mm	K (mm)	0.021	0.059	0.098	0.137	0.177	0.217
46 mm	K (mm)	0.033	0.078	0.124	0.170	0.218	0.264
56 mm	K (mm)	0.046	0.097	0.150	0.203	0.258	0.311

INSTALLATION



Example cutout for nozzle head, power and thermocouple plug connections



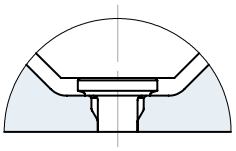
① Power and thermocouple plug connections in this area can be bent once; minimum radius: R8
SW = flat area on nozzle head

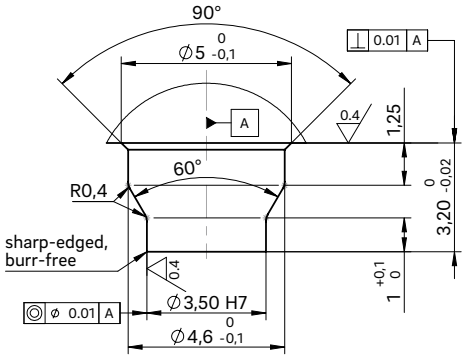
Valve gate nozzle type 5NMT

Needle guide versions LA, LA with titanium ring, LAZ and KA

NEEDLE GUIDE VERSIONS

Needle guide version
Antechamber version LA



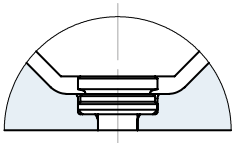


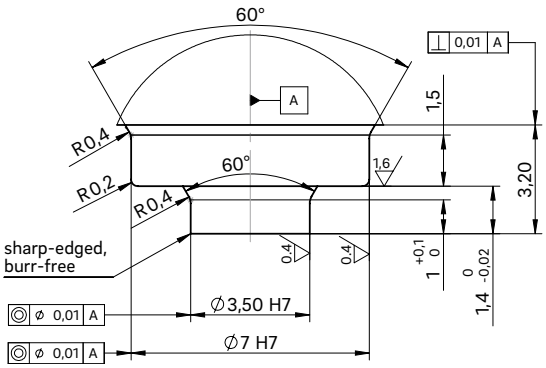
Needle guide LA
Made of powder-metallurgical steel

If necessary, the needle guide can be changed without great effort. By replacing the needle guide and needle, the gate point diameter can be made larger or smaller without subsequent reworking of the mould cavity. Thanks to a precise needle guide, the clean gate point can be closed with nearly no wear or burring.

Advantages:
- Long service life and wear-resistance
- Wear parts are easy to replace
- Outstanding and flash-free gate point quality
- Very good visual surface quality
- No replacement or subsequent reworking of the mould inserts required
- Minimal shear stress

Needle guide version
Antechamber version LA
with titanium ring





Needle guide LA
Special version with titanium ring

Thermal insulation of the needle guide using a titanium ring expands the area of use of the valve gate nozzle to include the following plastics:
- Polyamides (PA4.6, PA6.6 and HTN)
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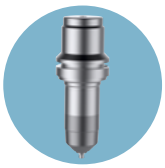
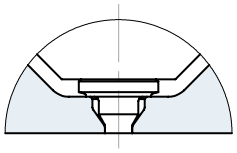
- Liquid crystalline polymers (LCP)
- Polyether ether ketones (PEEK)

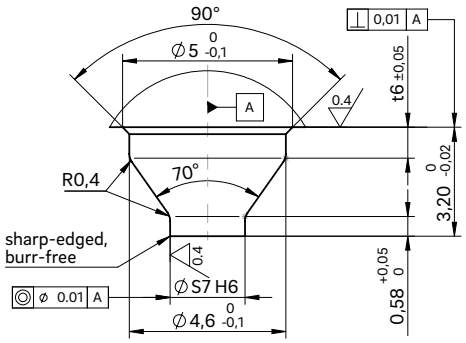


Installation dimensions of needle guide version LAZ

ØD	ØS7	t6
0.8	2.2	0.91
1.0	2.4	1.05
1.2	2.6	1.20
1.4	2.8	1.34

Needle guide version
Antechamber version LAZ

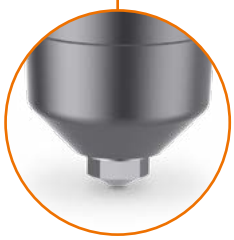




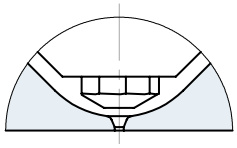
Needle guide LAZ
Made of powder-metallurgical steel

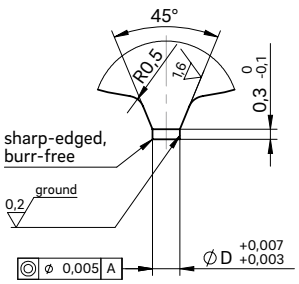
If necessary, the needle guide can be changed without great effort. By replacing the needle guide and needle, the gate point diameter can be made larger or smaller without subsequent reworking of the mould cavity. Thanks to a precise needle guide, the clean gate point can be closed with nearly no wear or burring. Needle guide type LAZ has a tapered shape with a smaller contact surface which creates a smaller impression. This version is suitable for items with a minimal wall thickness and part geometries not permitting a larger impression.

Advantages:
- Long service life and wear-resistance
- Wear parts are easy to replace
- Outstanding and flash-free gate point quality
- Very good visual surface quality
- No replacement or subsequent reworking of the mould inserts required
- Minimal shear stress



Needle guide version
Antechamber version KA





Needle guide KA
This is used when a second marking on the part is not permissible.

When selecting the material to be used, the needle hardness of 64 ±2 HRC is to be taken into account!

Valve gate nozzle type 6NMT

System nozzle with conventional heating element, for minimal spacing, not screwed to the manifold

TECHNICAL DATA

6NMT

Needle Ød	3 mm
Melt channel Ød	6 mm
Gate point Ød	0.8, 1.0, 1.2 or 1.4 mm
Operating voltage	230 V_{AC}*

Nominal length of the nozzle (L) in mm

50	60	80	100	120	150	200
■	■	■	■	□	□	□

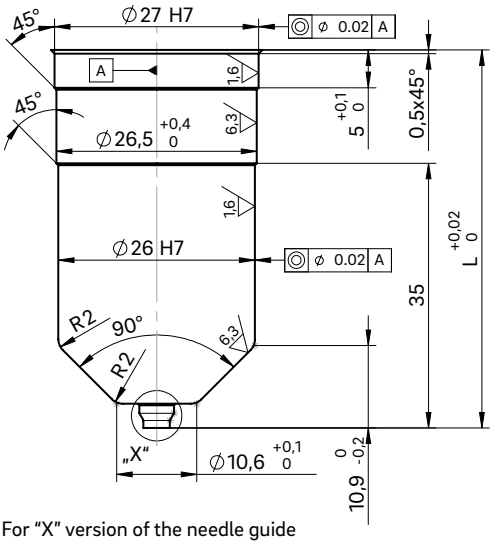
Contact us for other nozzle lengths!

*Volts alternating current

■ *available* □ *on request*

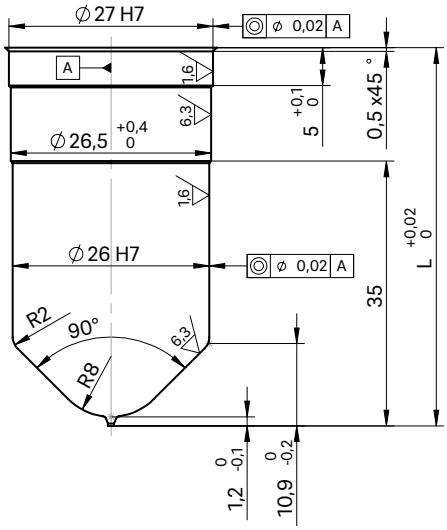
WEBCODE
32100

Nozzle with needle guide
antechamber design LA



For "X" version of the needle guide
see following page

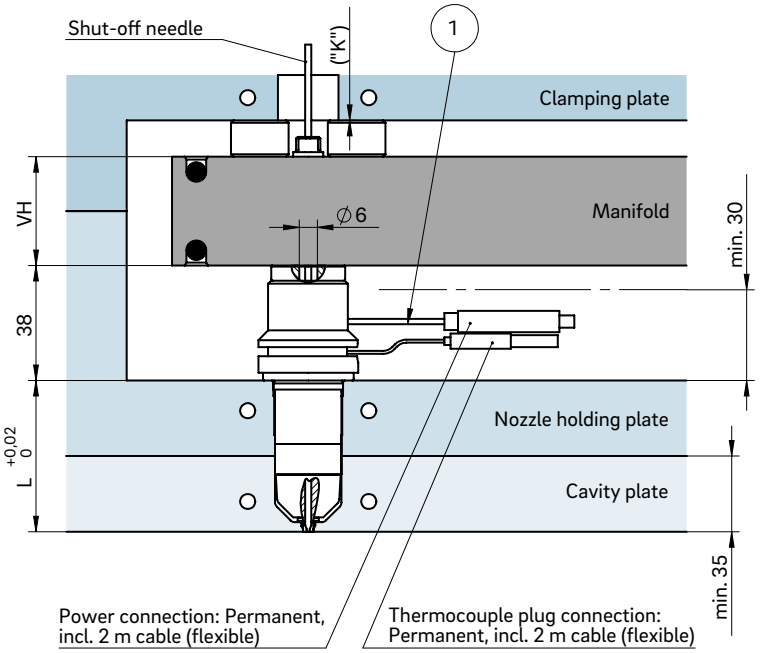
Nozzle with needle guide
antechamber design KA



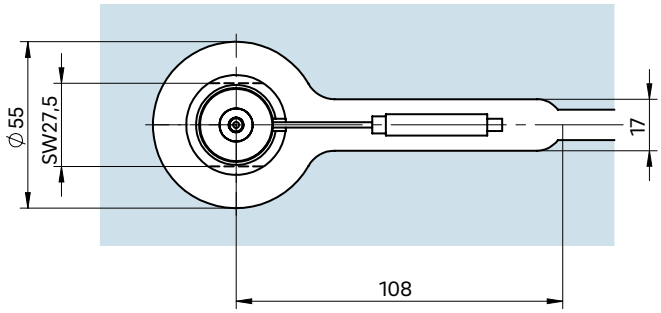
Dimension "K" required for heat expansion is to be ensured by grinding the pressure pad (12 + 0.1 mm)! Determine the difference between the height of the manifold system and the height of the frame plate when installed! ΔT specifies the temperature differential between the processing temperature and the mould temperature!

VH	ΔT (°C)	100	150	200	250	300	350
36 mm	K (mm)	0.021	0.059	0.098	0.137	0.177	0.217
46 mm	K (mm)	0.033	0.078	0.124	0.170	0.218	0.264
56 mm	K (mm)	0.046	0.097	0.150	0.203	0.258	0.311

INSTALLATION



Example cutout for nozzle head, power and thermocouple plug connections



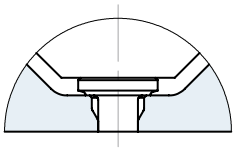
① Power and thermocouple plug connections in this area can be bent once; minimum radius: R8
SW = flat area on nozzle head

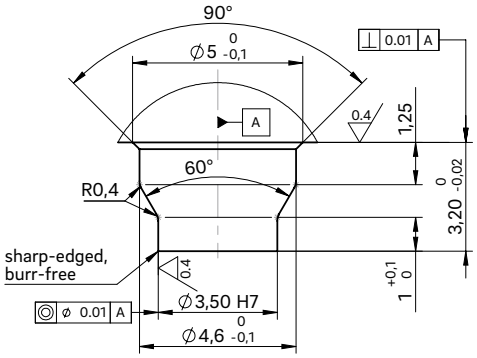
Valve gate nozzle type 6NMT

Needle guide versions LA, LA with titanium ring, LAZ and KA

NEEDLE GUIDE VERSIONS

Needle guide version
Antechamber version LA



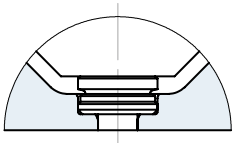


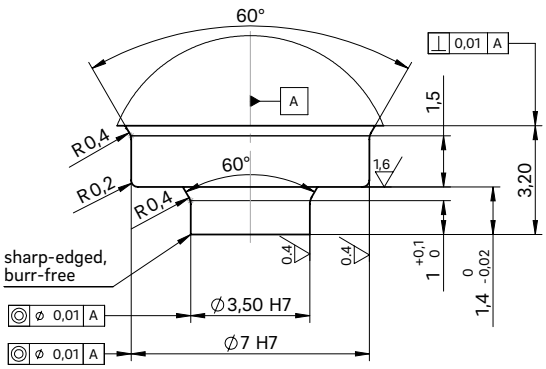
Needle guide LA
Made of powder-metallurgical steel

If necessary, the needle guide can be changed without great effort. By replacing the needle guide and needle, the gate point diameter can be made larger or smaller without subsequent reworking of the mould cavity. Thanks to a precise needle guide, the clean gate point can be closed with nearly no wear or burring.

Advantages:
- Long service life and wear-resistance
- Wear parts are easy to replace
- Outstanding and flash-free gate point quality
- Very good visual surface quality
- No replacement or subsequent reworking of the mould inserts required
- Minimal shear stress

Needle guide version
Antechamber version LA
with titanium ring





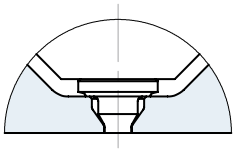
Needle guide LA
Special version with titanium ring

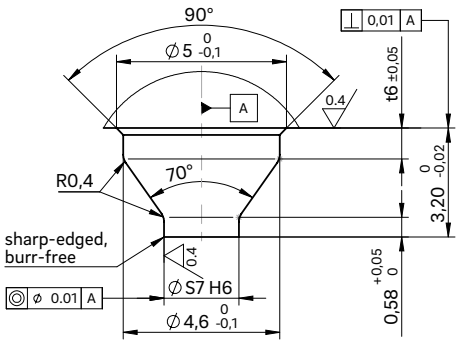
Thermal insulation of the needle guide using a titanium ring expands the area of use of the valve gate nozzle to include the following plastics:
- Polyamides (PA4.6, PA6.6 and HTN)
- Thermoplastic polyesters (PBT and PET)
- Liquid crystalline polymers (LCP)
- Polyether ether ketones (PEEK)

Installation dimensions of needle guide version LAZ

ØD	ØS7	t6
0.8	2.2	0.91
1.0	2.4	1.05
1.2	2.6	1.20
1.4	2.8	1.34

Needle guide version
Antechamber version LAZ





Needle guide LAZ
Made of powder-metallurgical steel

If necessary, the needle guide can be changed without great effort. By replacing the needle guide and needle, the gate point diameter can be made larger or smaller without subsequent reworking of the mould cavity. Thanks to a precise needle guide, the clean gate point can be closed with nearly no wear or burring. Needle guide type LAZ has a tapered shape with a smaller contact surface which creates a smaller impression. This version is suitable for items with a minimal wall thickness and part geometries not permitting a larger impression.

Advantages:
- Long service life and wear-resistance
- Wear parts are easy to replace
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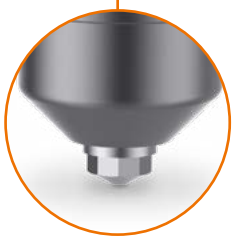
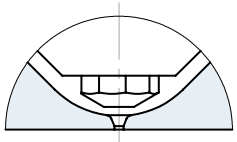
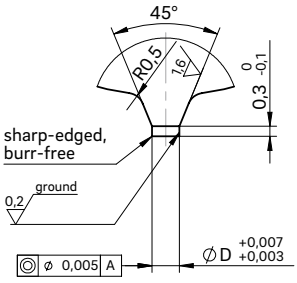
- Very good visual surface quality
- No replacement or subsequent reworking of the mould inserts required
- Minimal shear stress



Needle guide version
Antechamber version KA





Needle guide KA
This is used when a second marking on the part is not permissible.

When selecting the material to be used, the needle hardness of 64 ±2 HRC is to be taken into account!

Valve gate nozzle type 8NMT

System nozzle with conventional heating element, screwed to the manifold

TECHNICAL DATA

8NMT

Needle Ød	3 mm
Melt channel Ød	7.5 mm
Gate point Ød	1.6, 2.0 or 2.5 mm
Operating voltage	230 V_{AC}*

Nominal length of the nozzle (L) in mm

50	60	80	100	120	150	200
■	■	■	■	■	■	□

Contact us for other nozzle lengths!

*Volts alternating current

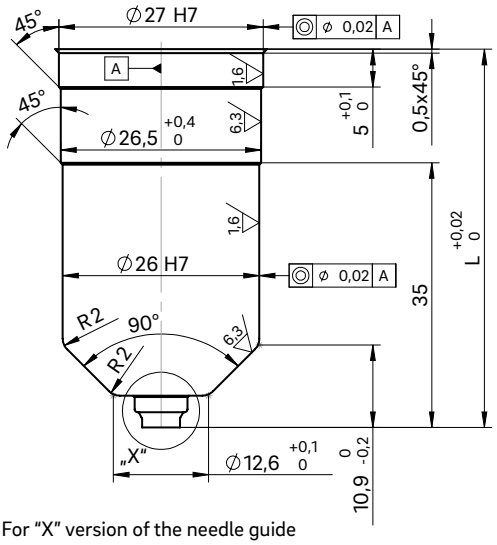
■ *available* □ *on request*

NOTE

Fixed power and thermocouple connection.

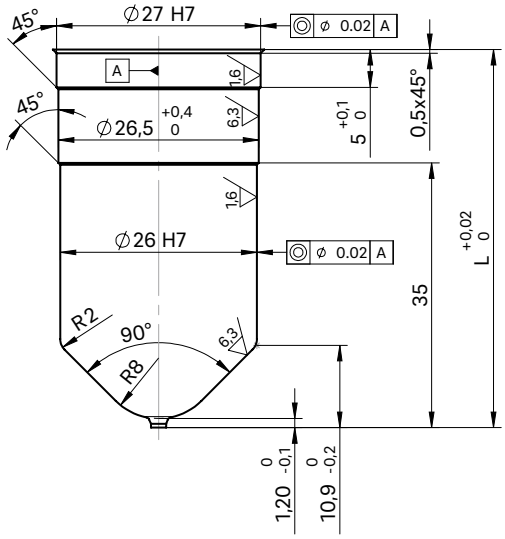
WEBCODE
32101

Nozzle with needle guide
antechamber design LA



For "X" version of the needle guide
see following page

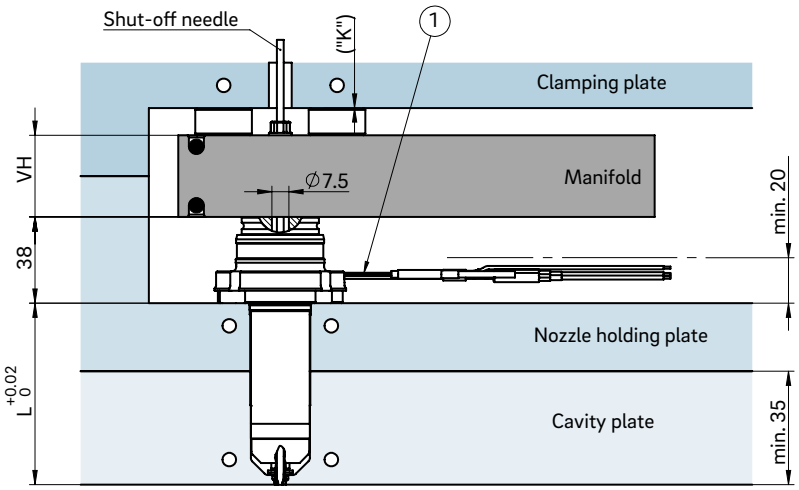
Nozzle with needle guide
antechamber design KA



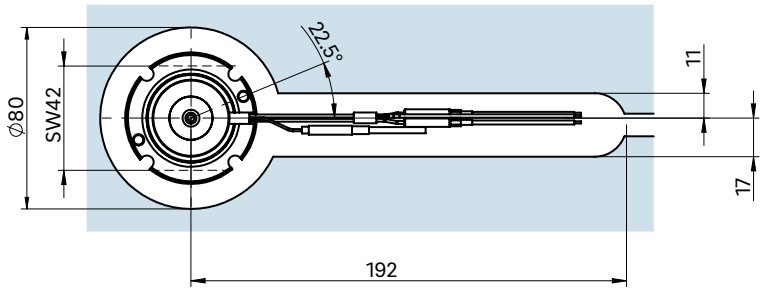
Dimension "K" required for heat expansion is to be ensured by grinding the pressure pad (12 + 0.1 mm)! Determine the difference between the height of the manifold system and the height of the frame plate when installed! ΔT specifies the temperature differential between the processing temperature and the mould temperature!

VH	ΔT (°C)	100	150	200	250	300	350
36 mm	K (mm)	0.021	0.059	0.098	0.137	0.177	0.217
46 mm	K (mm)	0.033	0.078	0.124	0.170	0.218	0.264
56 mm	K (mm)	0.046	0.097	0.150	0.203	0.258	0.311

INSTALLATION



Example cutout for nozzle head, power and thermocouple plug connections



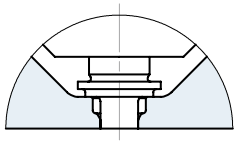
① Power and thermocouple plug connections in this area can be bent once; minimum radius: R8
SW = flat area on nozzle head

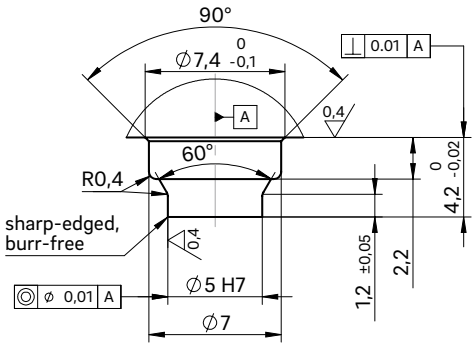
Valve gate nozzle type 8NMT

Needle guide versions LA, LA with titanium ring, LAZ and KA

NEEDLE GUIDE VERSIONS

Needle guide version
Antechamber version LA



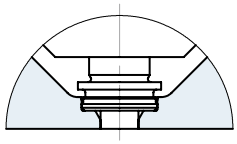


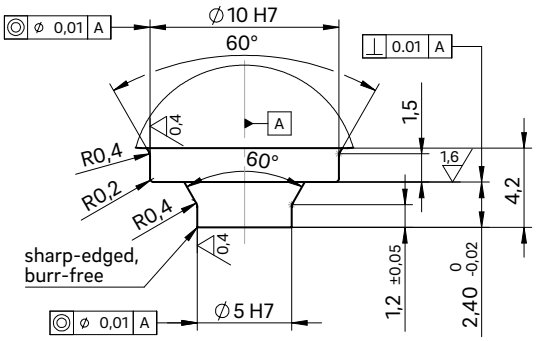
Needle guide LA
Made of powder-metallurgical steel

If necessary, the needle guide can be changed without great effort. By replacing the needle guide and needle, the gate point diameter can be made larger or smaller without subsequent reworking of the mould cavity. Thanks to a precise needle guide, the clean gate point can be closed with nearly no wear or burring.

Advantages:
- Long service life and wear-resistance
- Wear parts are easy to replace
- Outstanding and flash-free gate point quality
- Very good visual surface quality
- No replacement or subsequent reworking of the mould inserts required
- Minimal shear stress

Needle guide version
Antechamber version LA
with titanium ring





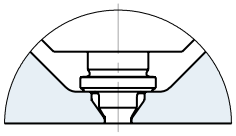
Needle guide LA
Special version with titanium ring

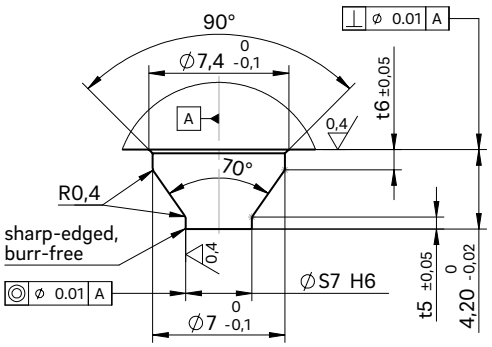
Thermal insulation of the needle guide using a titanium ring expands the area of use of the valve gate nozzle to include the following plastics:
- Polyamides (PA4.6, PA6.6 and HTN)
- Thermoplastic polyesters (PBT and PET)
- Liquid crystalline polymers (LCP)
- Polyether ether ketones (PEEK)

Installation dimensions of needle guide version LAZ

ØD	ØS7	t5	t6
1.6	3.0	0.63	0.77
2.0	3.5	0.63	1.07
2.5	4.0	0.58	1.43

Needle guide version
Antechamber version LAZ



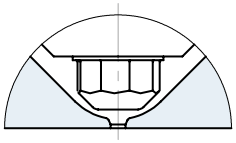


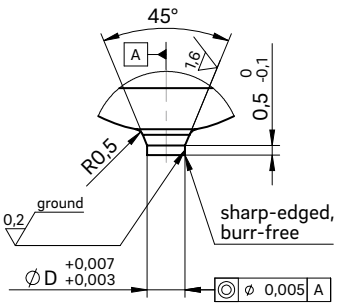
Needle guide LAZ
Made of powder-metallurgical steel

If necessary, the needle guide can be changed without great effort. By replacing the needle guide and needle, the gate point diameter can be made larger or smaller without subsequent reworking of the mould cavity. Thanks to a precise needle guide, the clean gate point can be closed with nearly no wear or burring. Needle guide type LAZ has a tapered shape with a smaller contact surface which creates a smaller impression. This version is suitable for items with a minimal wall thickness and part geometries not permitting a larger impression.

Advantages:
- Long service life and wear-resistance
- Wear parts are easy to replace
- Outstanding and flash-free gate point quality
- Very good visual surface quality
- No replacement or subsequent reworking of the mould inserts required
- Minimal shear stress

Needle guide version
Antechamber version KA





Needle guide KA
This is used when a second marking on the part is not permissible.

When selecting the material to be used, the needle hardness of 64 ±2 HRC is to be taken into account!

Valve gate nozzle type 4NTT

System nozzle with conventional heating element, screwed from the parting line

TECHNICAL DATA

4NTT

Needle Ød	2 mm
Melt channel Ød	3.8 mm
Gate point Ød	0.8, 1.0, 1.2 or 1.4 mm
Operating voltage	230 V_{AC}*

Nominal length of the nozzle (L) in mm

50	60	80
■	■	■

Contact us for other nozzle lengths!

*Volts alternating current

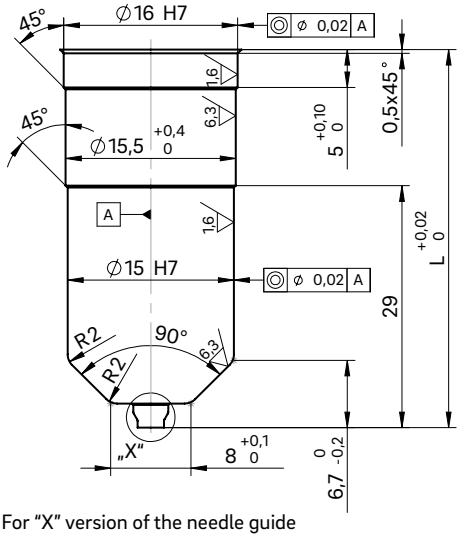
■ *available*

NOTE

Power connector CMT and thermocouple connector CMLK are to be ordered separately.

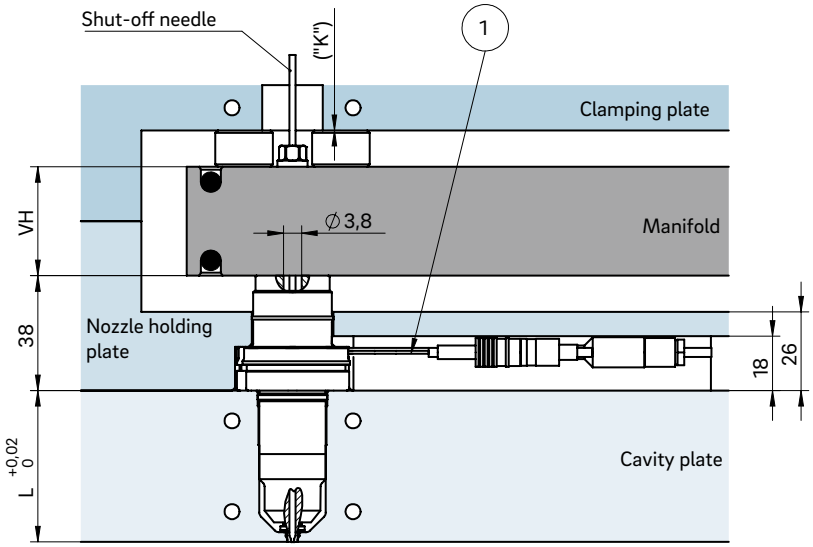
WEBCODE
32110

Nozzle with needle guide
antechamber design LA

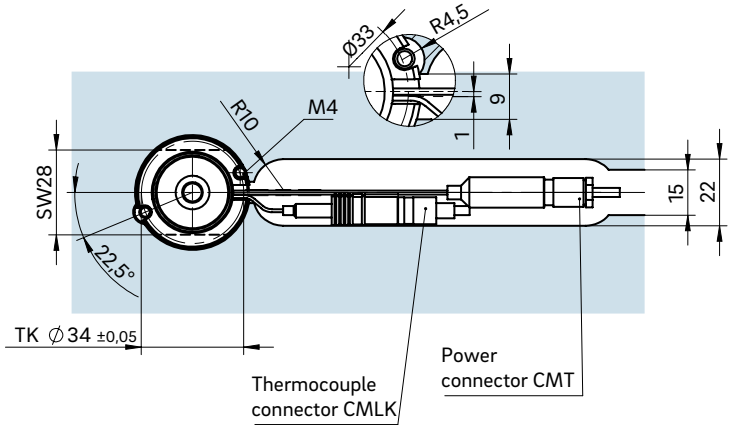


For "X" version of the needle guide
see following page

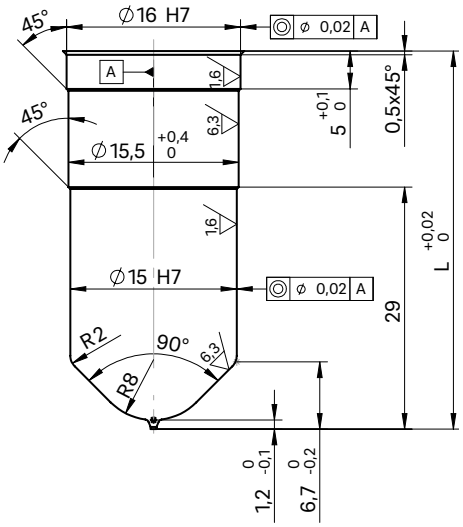
INSTALLATION

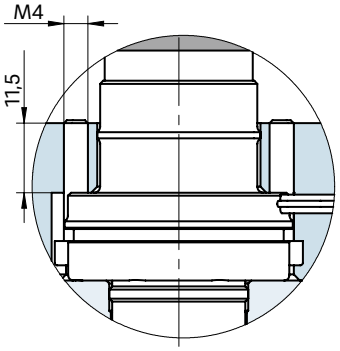


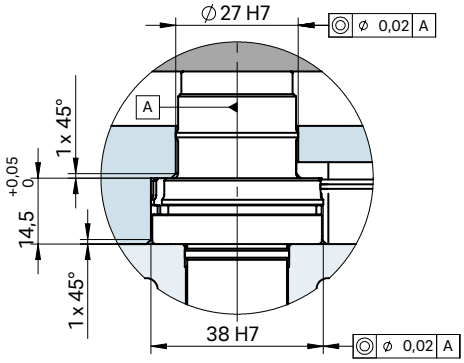
Example cutout for nozzle head, power and thermocouple plug connections



Nozzle with needle guide
antechamber design KA







Dimension "K" required for heat expansion is to be ensured by grinding the pressure pad (12 + 0.1 mm)! Determine the difference between the height of the manifold system and the height of the frame plate when installed! ΔT specifies the temperature differential between the processing temperature and the mould temperature!

VH	ΔT (°C)	100	150	200	250	300	350
36 mm	K (mm)	0.021	0.059	0.098	0.137	0.177	0.217
46 mm	K (mm)	0.033	0.078	0.124	0.170	0.218	0.264
56 mm	K (mm)	0.046	0.097	0.150	0.203	0.258	0.311

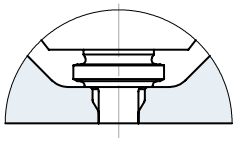
① Power and thermocouple plug connections in this area can be bent once; minimum radius: R8
SW = flat area on nozzle head

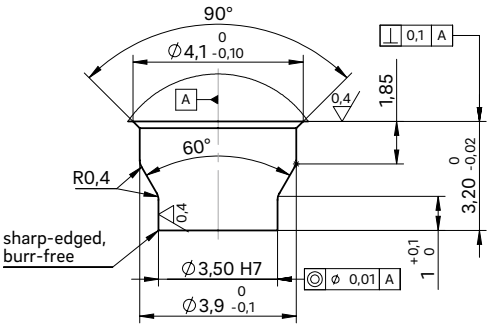
Valve gate nozzle type 4NTT

Needle guide versions LA, LA with titanium ring, LAZ and KA

NEEDLE GUIDE VERSIONS

Needle guide version
Antechamber version LA



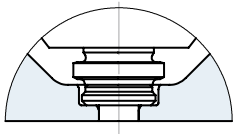


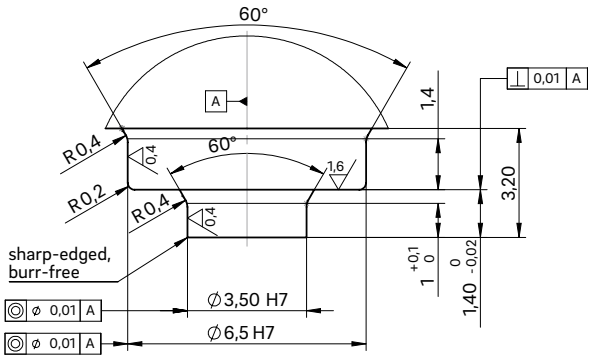
Needle guide LA
Made of powder-metallurgical steel

If necessary, the needle guide can be changed without great effort. By replacing the needle guide and needle, the gate point diameter can be made larger or smaller without subsequent reworking of the mould cavity. Thanks to a precise needle guide, the clean gate point can be closed with nearly no wear or burring.

Advantages:
- Long service life and wear-resistance
- Wear parts are easy to replace
- Outstanding and flash-free gate point quality
- Very good visual surface quality
- No replacement or subsequent reworking of the mould inserts required
- Minimal shear stress

Needle guide version
Antechamber version LA
with titanium ring





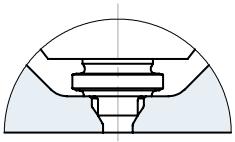
Needle guide LA
Special version with titanium ring

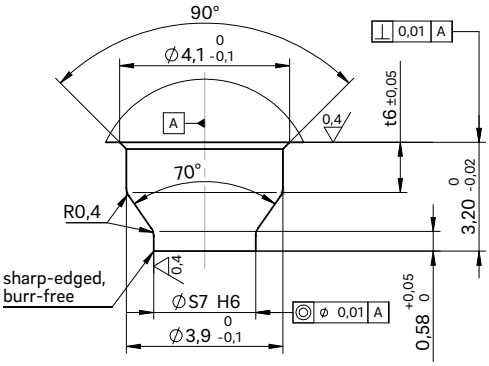
Thermal insulation of the needle guide using a titanium ring expands the area of use of the valve gate nozzle to include the following plastics:
- Polyamides (PA4.6, PA6.6 and HTN)
- Thermoplastic polyesters (PBT and PET)
- Liquid crystalline polymers (LCP)
- Polyether ether ketones (PEEK)

Installation dimensions of needle guide version LAZ

ØD	ØS7	t6
0.8	2.2	1.41
1.0	2.4	1.55
1.2	2.6	1.70
1.4	2.8	1.84

Needle guide version
Antechamber version LAZ



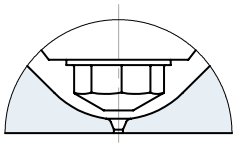


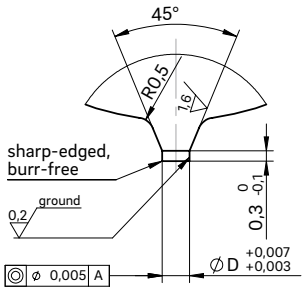
Needle guide LAZ
Made of powder-metallurgical steel

If necessary, the needle guide can be changed without great effort. By replacing the needle guide and needle, the gate point diameter can be made larger or smaller without subsequent reworking of the mould cavity. Thanks to a precise needle guide, the clean gate point can be closed with nearly no wear or burring. Needle guide type LAZ has a tapered shape with a smaller contact surface which creates a smaller impression. This version is suitable for items with a minimal wall thickness and part geometries not permitting a larger impression.

Advantages:
- Long service life and wear-resistance
- Wear parts are easy to replace
- Outstanding and flash-free gate point quality
- Very good visual surface quality
- No replacement or subsequent reworking of the mould inserts required
- Minimal shear stress

Needle guide version
Antechamber version KA





Needle guide KA
This is used when a second marking on the part is not permissible.

When selecting the material to be used, the needle hardness of 64 ±2 HRC is to be taken into account!

Valve gate nozzle type 5NTT

System nozzle with conventional heating element, screwed from the parting line

TECHNICAL DATA

5NTT

Needle Ød	3 mm
Melt channel Ød	4.8 mm
Gate point Ød	0.8, 1.0, 1.2 or 1.4 mm
Operating voltage	230 V_{AC}*

Nominal length of the nozzle (L) in mm

50	60	80	100	120
■	■	■	■	■

Contact us for other nozzle lengths!

*Volts alternating current

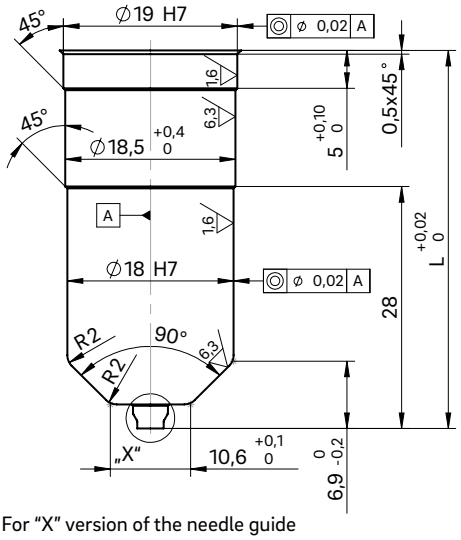
■ *available*

NOTE

Power connector CMT and thermocouple connector CMLK are to be ordered separately.

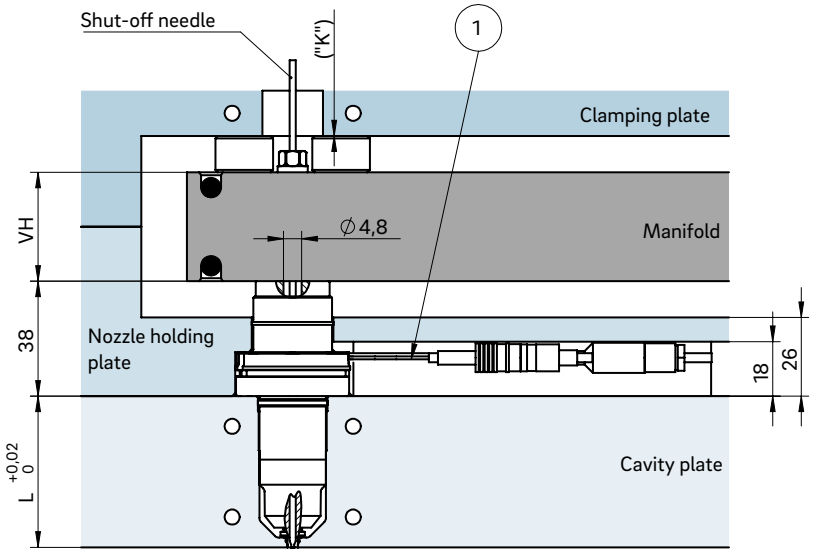
WEBCODE
32120

Nozzle with needle guide
antechamber design LA

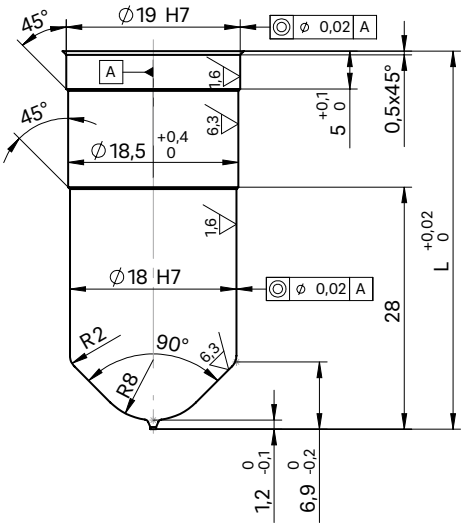


For "X" version of the needle guide
see following page

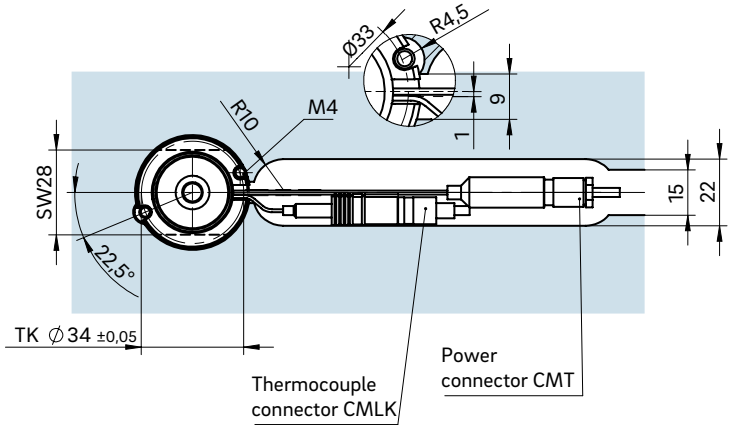
INSTALLATION

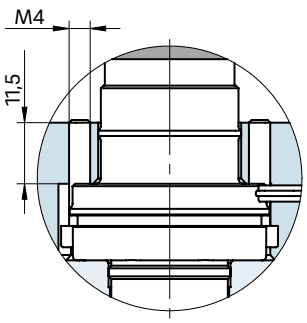


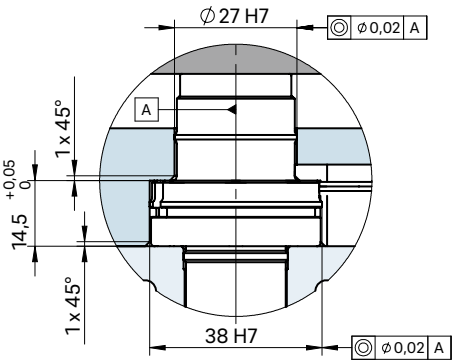
Nozzle with needle guide
antechamber design KA



Example cutout for nozzle head, power and thermocouple plug connections







Dimension "K" required for heat expansion is to be ensured by grinding the pressure pad (12 + 0.1 mm)! Determine the difference between the height of the manifold system and the height of the frame plate when installed! ΔT specifies the temperature differential between the processing temperature and the mould temperature!

VH	ΔT (°C)	100	150	200	250	300	350
36 mm	K (mm)	0.021	0.059	0.098	0.137	0.177	0.217
46 mm	K (mm)	0.033	0.078	0.124	0.170	0.218	0.264
56 mm	K (mm)	0.046	0.097	0.150	0.203	0.258	0.311

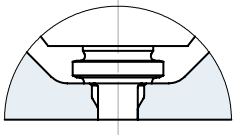
① Power and thermocouple plug connections in this area can be bent once; minimum radius: R8
SW = flat area on nozzle head

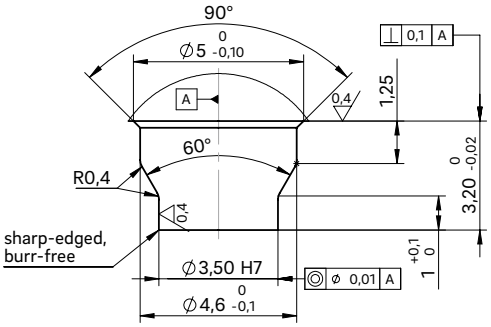
Valve gate nozzle type 5NTT

Needle guide versions LA, LA with titanium ring, LAZ and KA

NEEDLE GUIDE VERSIONS

Needle guide version
Antechamber version LA



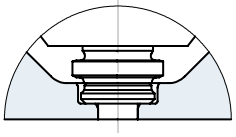


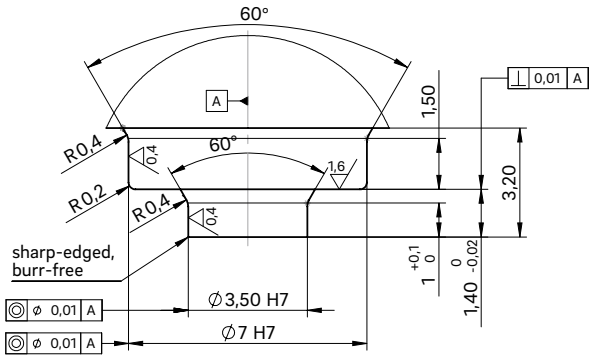
Needle guide LA
Made of powder-metallurgical steel

If necessary, the needle guide can be changed without great effort. By replacing the needle guide and needle, the gate point diameter can be made larger or smaller without subsequent reworking of the mould cavity. Thanks to a precise needle guide, the clean gate point can be closed with nearly no wear or burring.

Advantages:
- Long service life and wear-resistance
- Wear parts are easy to replace
- Outstanding and flash-free gate point quality
- Very good visual surface quality
- No replacement or subsequent reworking of the mould inserts required
- Minimal shear stress

Needle guide version
Antechamber version LA
with titanium ring





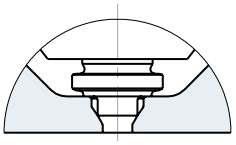
Needle guide LA
Special version with titanium ring

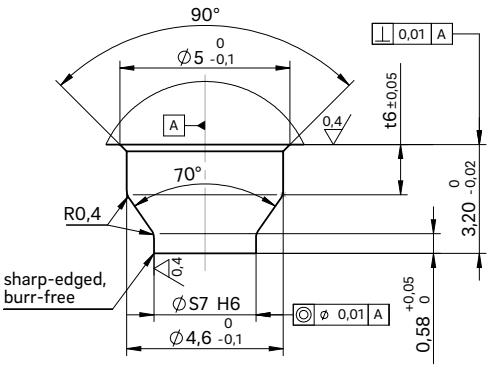
Thermal insulation of the needle guide using a titanium ring expands the area of use of the valve gate nozzle to include the following plastics:
- Polyamides (PA4.6, PA6.6 and HTN)
- Thermoplastic polyesters (PBT and PET)
- Liquid crystalline polymers (LCP)
- Polyether ether ketones (PEEK)

Installation dimensions of needle guide version LAZ

ØD	ØS7	t6
0.8	2.2	0.91
1.0	2.4	1.05
1.2	2.6	1.20
1.4	2.8	1.34

Needle guide version
Antechamber version LAZ



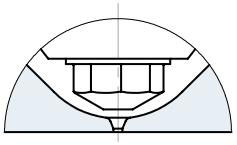


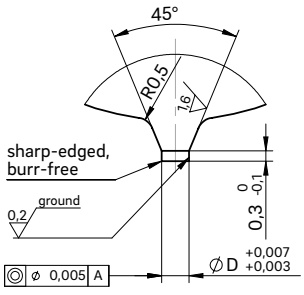
Needle guide LAZ
Made of powder-metallurgical steel

If necessary, the needle guide can be changed without great effort. By replacing the needle guide and needle, the gate point diameter can be made larger or smaller without subsequent reworking of the mould cavity. Thanks to a precise needle guide, the clean gate point can be closed with nearly no wear or burring. Needle guide type LAZ has a tapered shape with a smaller contact surface which creates a smaller impression. This version is suitable for items with a minimal wall thickness and part geometries not permitting a larger impression.

Advantages:
- Long service life and wear-resistance
- Wear parts are easy to replace
- Outstanding and flash-free gate point quality
- Very good visual surface quality
- No replacement or subsequent reworking of the mould inserts required
- Minimal shear stress

Needle guide version
Antechamber version KA





Needle guide KA
This is used when a second marking on the part is not permissible.

When selecting the material to be used, the needle hardness of 64 ±2 HRC is to be taken into account!

Valve gate nozzle type 6NTT

System nozzle with conventional heating element, screwed from the parting line

TECHNICAL DATA

6NTT

Needle Ød	3 mm
Melt channel Ød	6 mm
Gate point Ød	0.8, 1.0, 1.2 or 1.4 mm
Operating voltage	230 V_{AC}*

Nominal length of the nozzle (L) in mm

50	60	80	100	120
■	■	■	■	■

Contact us for other nozzle lengths!

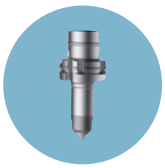
*Volts alternating current

■ *available*

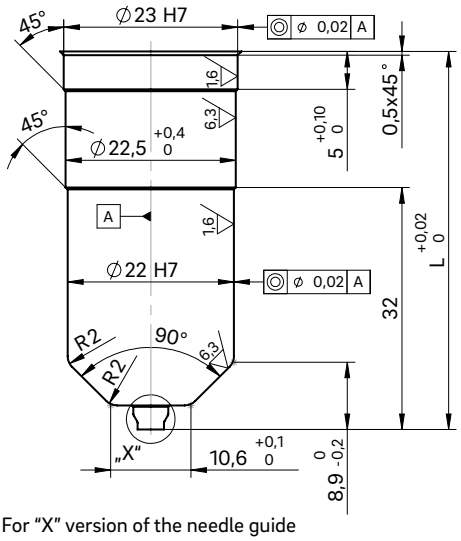
NOTE

Power connector CMT and thermocouple connector CMLK are to be ordered separately.

WEBCODE
32130

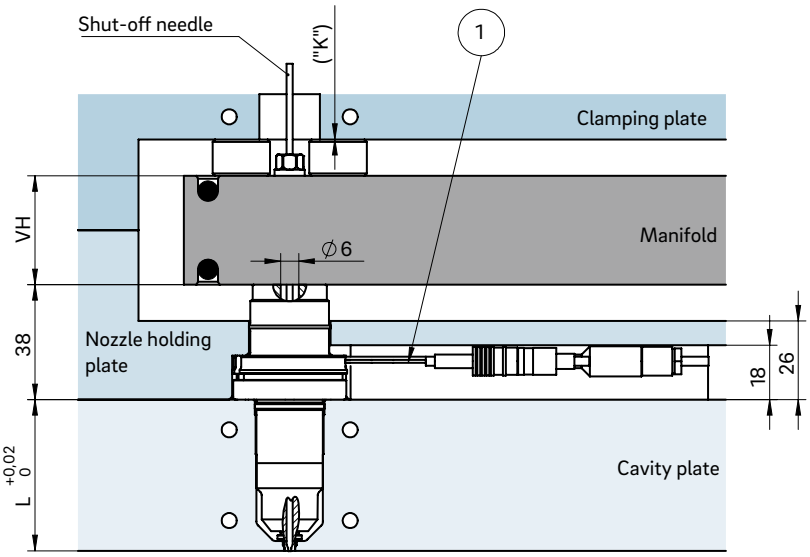


Nozzle with needle guide
antechamber design LA

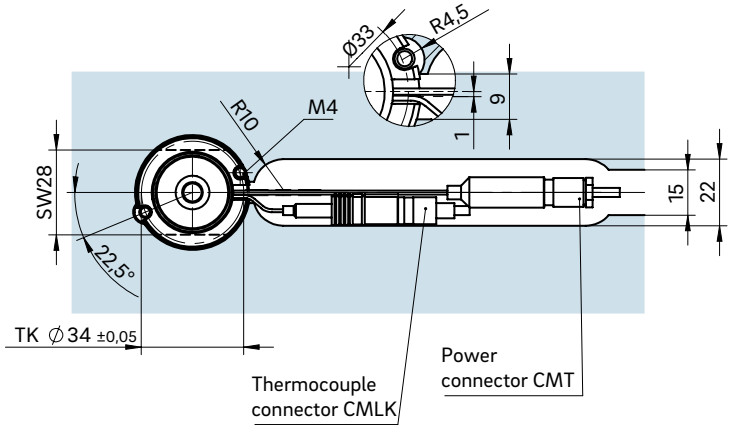


For "X" version of the needle guide
see following page

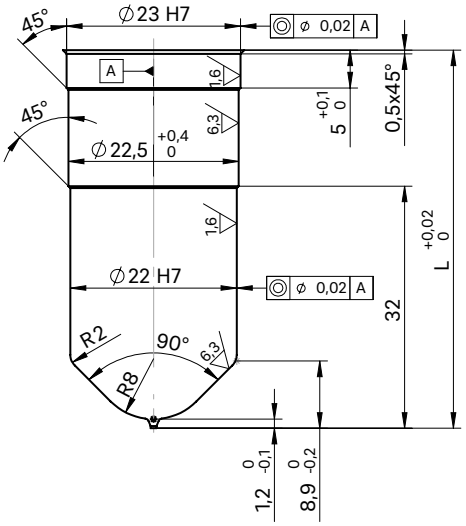
INSTALLATION

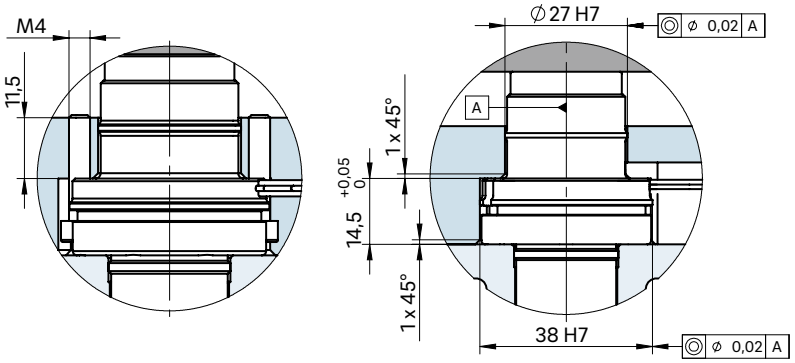


Example cutout for nozzle head, power and thermocouple plug connections



Nozzle with needle guide
antechamber design KA





Dimension "K" required for heat expansion is to be ensured by grinding the pressure pad (12 + 0.1 mm)! Determine the difference between the height of the manifold system and the height of the frame plate when installed! ΔT specifies the temperature differential between the processing temperature and the mould temperature!

VH	ΔT (°C)	100	150	200	250	300	350
36 mm	K (mm)	0.021	0.059	0.098	0.137	0.177	0.217
46 mm	K (mm)	0.033	0.078	0.124	0.170	0.218	0.264
56 mm	K (mm)	0.046	0.097	0.150	0.203	0.258	0.311

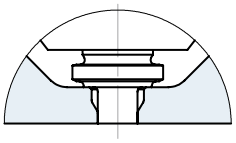
① Power and thermocouple plug connections in this area can be bent once; minimum radius: R8
SW = flat area on nozzle head

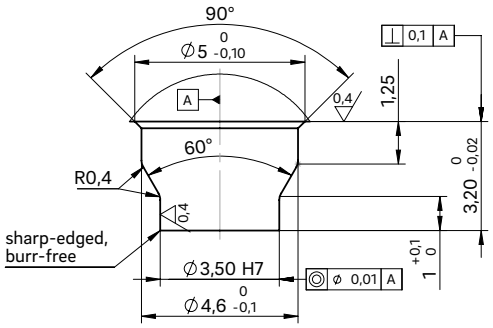
Valve gate nozzle type 6NTT

Needle guide versions LA, LA with titanium ring, LAZ and KA

NEEDLE GUIDE VERSIONS

Needle guide version
Antechamber version LA



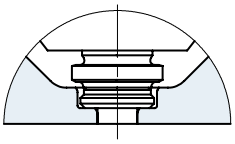


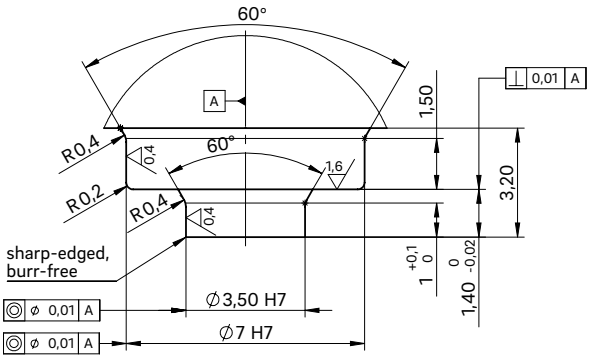
Needle guide LA
Made of powder-metallurgical steel

If necessary, the needle guide can be changed without great effort. By replacing the needle guide and needle, the gate point diameter can be made larger or smaller without subsequent reworking of the mould cavity. Thanks to a precise needle guide, the clean gate point can be closed with nearly no wear or burring.

Advantages:
- Long service life and wear-resistance
- Wear parts are easy to replace
- Outstanding and flash-free gate point quality
- Very good visual surface quality
- No replacement or subsequent reworking of the mould inserts required
- Minimal shear stress

Needle guide version
Antechamber version LA
with titanium ring





Needle guide LA
Special version with titanium ring

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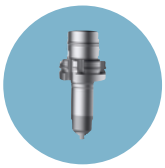
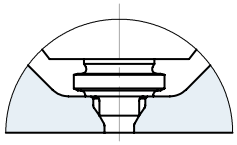
- Polyamides (PA4.6, PA6.6 and HTN)
- Thermoplastic polyesters (PBT and PET)
- Liquid crystalline polymers (LCP)
- Polyether ether ketones (PEEK)

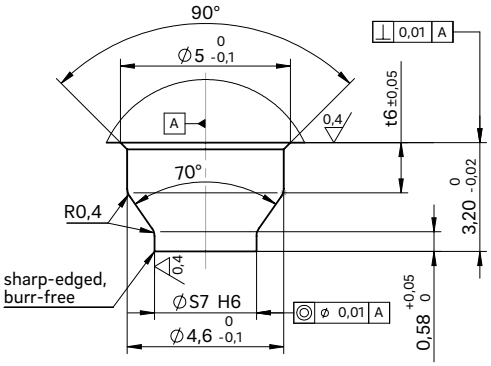


Installation dimensions of needle guide version LAZ

ØD	ØS7	t6
0.8	2.2	0.91
1.0	2.4	1.05
1.2	2.6	1.20
1.4	2.8	1.34

Needle guide version
Antechamber version LAZ





Needle guide LAZ
Made of powder-metallurgical steel

If necessary, the needle guide can be changed without great effort. By replacing the needle guide and needle, the gate point diameter can be made larger or smaller without subsequent reworking of the mould cavity. Thanks to a precise needle guide, the clean gate point can be closed with nearly no wear or burring. Needle guide type LAZ has a tapered shape with a smaller contact surface which creates a smaller impression. This version is suitable for items with a minimal wall thickness and part geometries not permitting a larger impression.

Advantages:
- Long service life and wear-resistance
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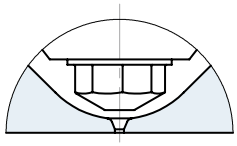
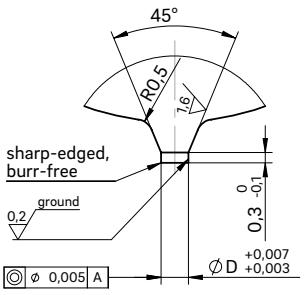
- Outstanding and flash-free gate point quality
- Very good visual surface quality
- No replacement or subsequent reworking of t he mould inserts required
- Minimal shear stress

Needle guide version
Antechamber version KA





Needle guide KA
This is used when a second marking on the part is not permissible.

When selecting the material to be used, the needle hardness of 64 ±2 HRC is to be taken into account!