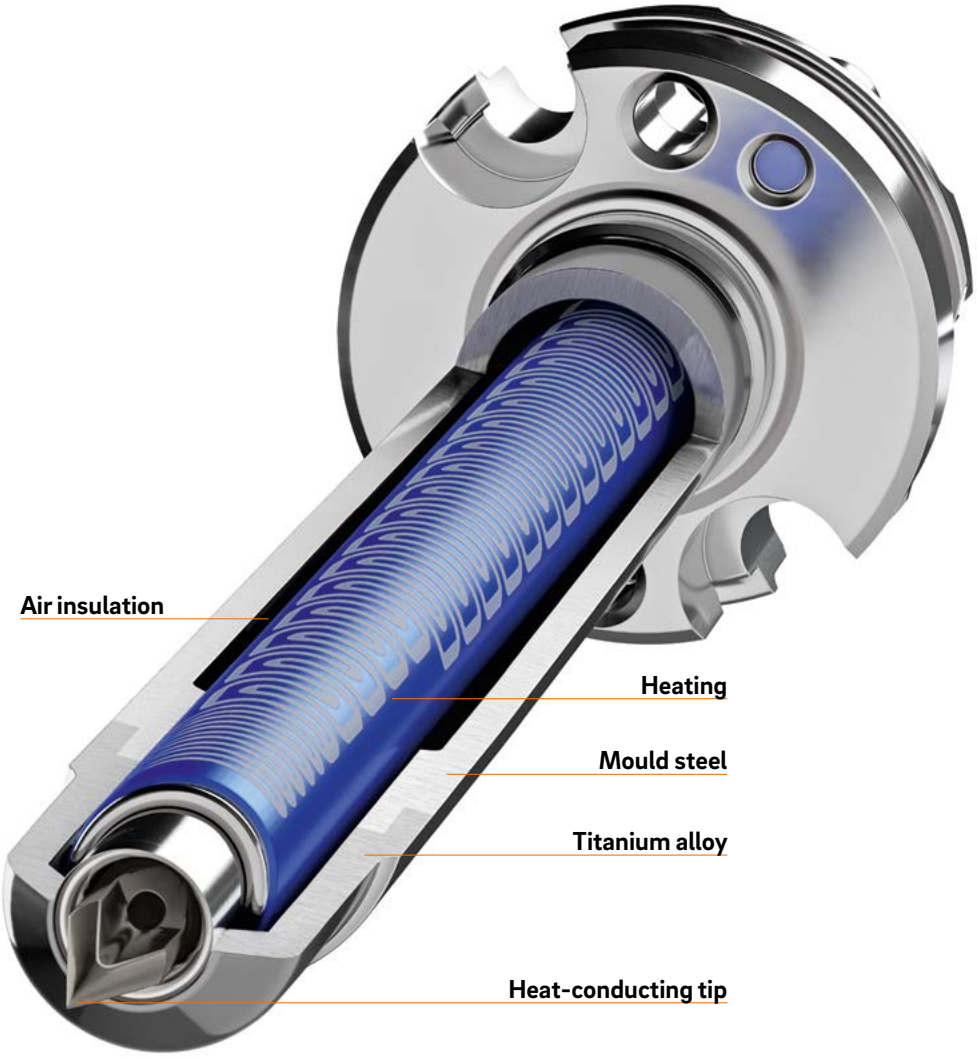
GÜNTHER®
HOT RUNNER TECHNOLOGY

Open hot runner systems

2 Open hot runner systems

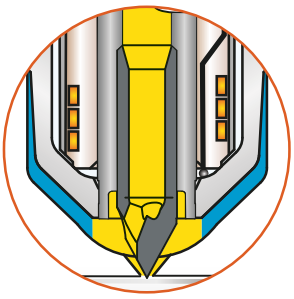
Hot runner nozzles

With their large variety of melt channel diameters, nozzle lengths and gate geometries, the GÜNTHER hot runner nozzle range offers solutions for all the requirements of modern injection moulding technology.

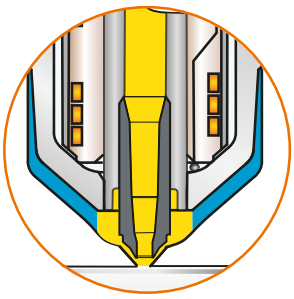


GATE GEOMETRY

A variety of different kinds of gating fulfil complex requirements, such as compliance with special cavity spacing, direct gating with a wide range of different part weights and the implementation of a variety of different nozzle lengths and melt channel diameters.



Open nozzle with tip



Open nozzle with straight outlet

OPEN HOT RUNNER NOZZLES

The various different nozzle types used as a single nozzle or as a nozzle for multi-drop nozzle systems enable the implementation of a very broad range of applications. Thanks to the modular design used, individual components like heaters, sensors, melt channels and nozzle tips can be exchanged. This provides advantages when carrying out repair and maintenance work (time savings, lower repair costs and shorter downtimes).

Thanks to their two part shaft, the outstanding thermal separation of GÜNTHER hot runner nozzles is truly impressive. This ensures outstanding insulation in the front shaft area and therefore extremely minimal heat loss between the hot runner nozzle and the cavity in the mould. This is why GÜNTHER hot runner nozzles are especially suitable for processing thermally sensitive materials, technical plastics and high-temperature-resistant polymers. For filled materials, wear-protected heat-conducting tips provide the best possible protection against mechanical and chemical attack (e.g. glass fibers with heat stabilisers). 3D CAD models of the hot runner nozzles are available in the CADHOC® library.

THE ADVANTAGES AT A GLANCE

- **Homogeneous temperature management**
- **Optimum thermal separation**
- **Easy installation and protection against leaks**
- **Outstanding insulation in the front nozzle area**
- **Very good vestige quality**
- **Installation-friendly plug-in type power and thermocouple plug connections**
- **Applications up to a process temperature of 450 °C**
- **BlueFlow®: hermetically sealed, up to 50% energy savings possible**

BLUEFLOW® THICK-FILM HEATING ELEMENT

The BlueFlow® hot runner nozzle sets new standards in the quality and design of moulded parts made of thermally sensitive plastics. It features an especially slim nozzle design with a small outer diameter, but the same melt channel diameter. The heating output in every section of the nozzle is precisely adapted to meet the respective need. This results in a homogeneous temperature profile across the entire nozzle.

The plastic in the melt channel is hardly thermally stressed at all. The physical properties of the end product are also reliably attainable with thermally sensitive plastics and for very small plastic items.

Conventional heating element | BlueFlow®

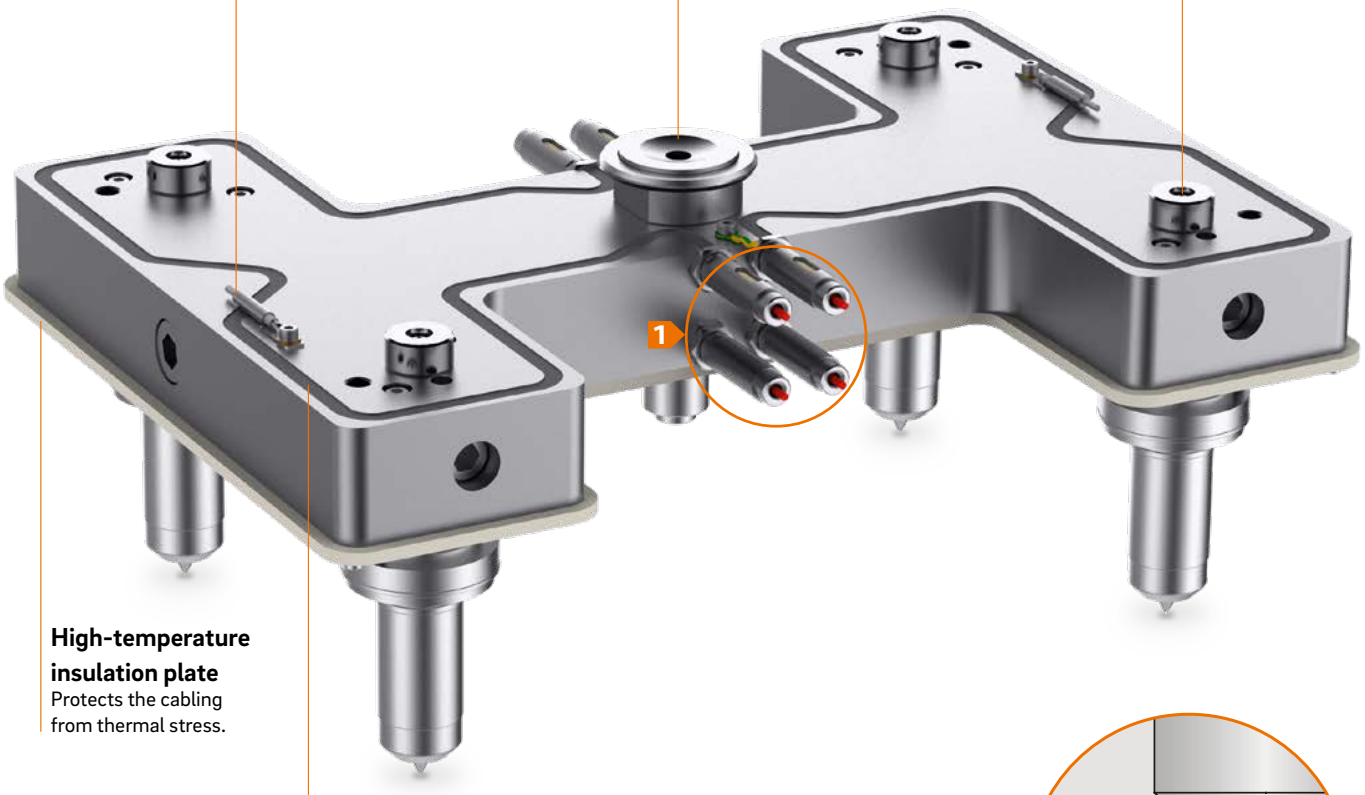
Manifold systems

Different manifold versions can be selected for different applications, from partially or fully balanced to customer-specific special solutions. Flexible positioning of hot runner nozzles with a manifold make individualised mould design possible.

Connection piece
Heating is carried out via manifolds or separate heaters.

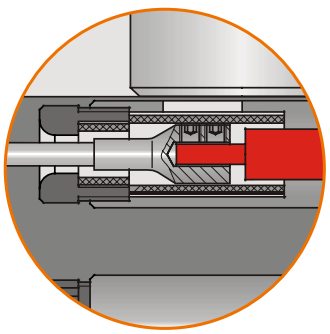
Contact thermocouple
Guarantees precise temperature measurement.

Pressure pieces
With minimal heat conductivity.



High-temperature insulation plate
Protects the cabling from thermal stress.

Pressed-in heaters on both sides
Guarantees optimum heat transfer to the manifold and thus homogeneous temperature distribution.



1 **Protected heating connections**

HOMOGENEOUS TEMPERATURE MANAGEMENT THANKS TO PRESSED-IN HEATERS

All melt-conducting components are heated externally, which ensures optimum plastic flow with the smallest possible pressure loss. Pressed-in heaters on both sides guarantee optimum heat transfer to the manifold block. This results in homogeneous temperature distribution.

PROTECTED POWER PLUG CONNECTIONS – HIGHLY MAINTENANCE FRIENDLY

Steel and ceramic sleeves protect the power connections from damage. Mechanical cleaning of the manifold channels is easy and fast. Cleaning in the fluid bed bath and oven is also possible. The model data in the CADHOC® System Designer library can be configured (and are thus quickly available) for both individual and standard manifolds.

THE ADVANTAGES AT A GLANCE

- **Homogeneous temperature distribution**
- **Variable nozzle positions**
- **Power connections with external damage protection**
- **Easy and fast cleaning**
- **Model data is stored in the CADHOC® online library**

CADHOC® SYSTEM DESIGNER – TOP-NOTCH SOFTWARE PROVIDED FOR YOUR SUPPORT

CADHOC® System Designer enables us to meet your needs for fast provision of product data on everything from individual components to complete hot runner systems, including negative volume.

Among other things, CADHOC® System Designer enables you to:
- Design nozzle sizes in an optimum way
- Select plastic types from a comprehensive list
- Make a direct configuration without any specifications of the processing parameters
- Make an application-based configuration with specifications of the processing parameters

3D CAD models on every hot runner system are available for download in a variety of different data formats. After entering your configuration parameters, you will receive an email with a link to the product data of the configured hot runner system.

WEBCODE 91890

RAPID SYSTEMS FROM GÜNTHER

Rapid systems and BlueFlow® nozzles are stored in the CADHOC® System Designer library and are quickly accessible. They enable you as a registered user to configure your rapid system in a very short period of time. You can immediately download all relevant 3D data – including negative volume and price information – quickly, easily and securely. Information on our rapid systems can be found **starting on Page 2.4.140**.

WEBCODE 25120

2.1 Single hot runner nozzles

Hot runner nozzle type 5SEF/5DEF

Open single nozzle with thick-film heating element (BlueFlow®)

TECHNICAL DATA

5SEF/5DEF

Melt channel Ød	4.8 mm
Nozzle type	SEF – open with tip DEF – open with straight outlet
Operating voltage	230 V_{AC}*

Nominal length of the nozzle (L) in mm

50	60	80
■	■	■

Adapter	straight (G)/radius (R)/ angle (W)

Contact us for other nozzle lengths!

*Volts alternating current

■ *available*

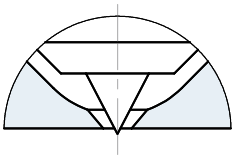
NOTE

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

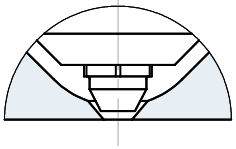
BlueFlow® hot runner nozzle type SEF/DEF is not intended for sale or use in the USA or Canada!

WEBCODE
21010

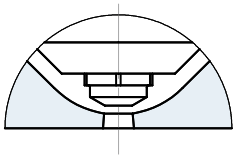
SEF – open nozzle with tip
version "Tip"
Antechamber version A



DEF – open nozzle with straight outlet
version C
Antechamber version A

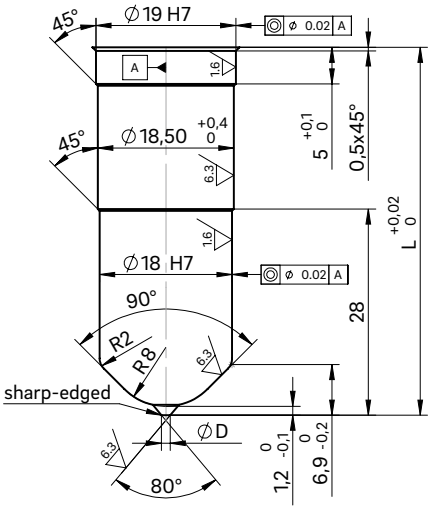


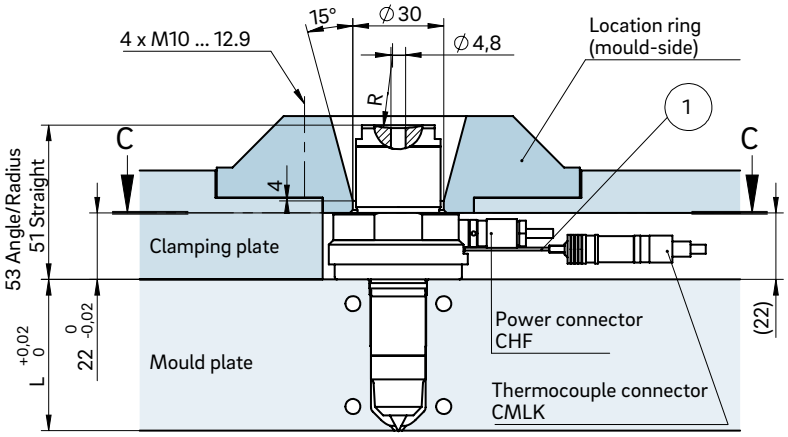
DEF – open nozzle with straight outlet
version A
Antechamber version C



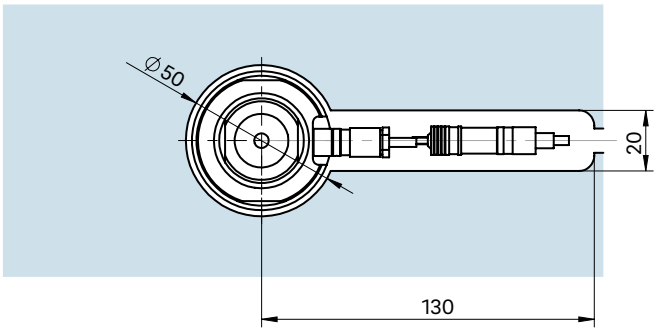
INSTALLATION

Open nozzle with tip
Nozzle type version C
Antechamber version A

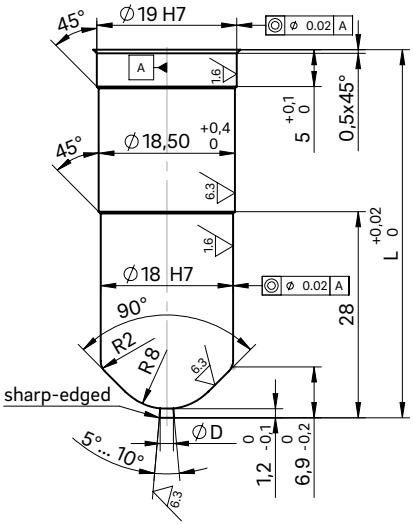




Cross-section C-C: Cutout for nozzle head, power and thermocouple plug connections



Open nozzle with straight outlet
Nozzle type version A
Antechamber version C



① Thermocouple plug connection in this area can be bent once; minimum radius: R8

Hot runner nozzle type 8SET/8DET

Open single nozzle with conventional heating element

TECHNICAL DATA

8SET/8DET

Melt channel Ød	7.5 mm
Nozzle type	SET – open with tip DET – open with straight outlet
Operating voltage	230 V_{AC}*

Nominal length of the nozzle (L) in mm

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

Adapter	straight (G)/radius (R)/ angle (W)

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.

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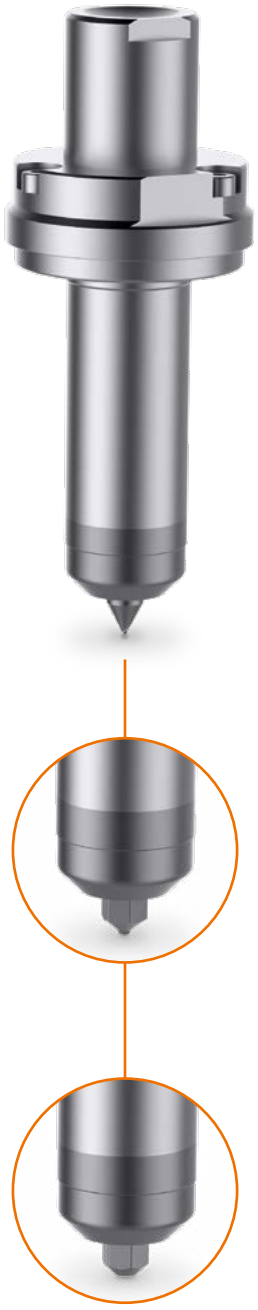
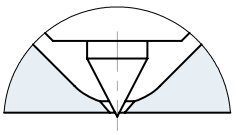
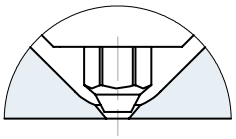


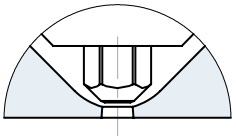
SET – open nozzle with tip
version "Tip"
Antechamber version A



DET – open nozzle with straight outlet
version C
Antechamber version A

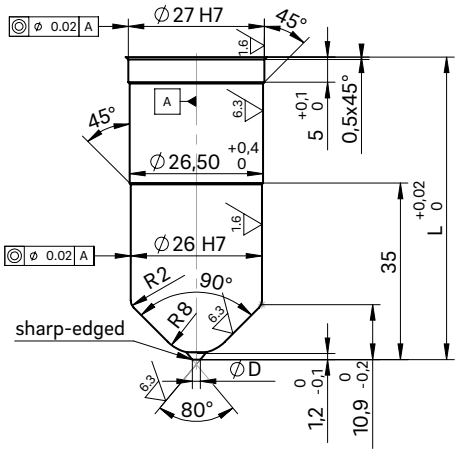


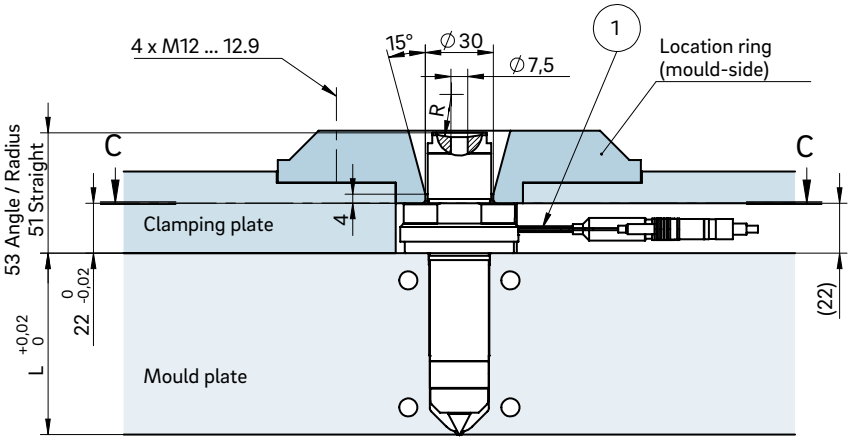
DET – open nozzle with straight outlet
version A
Antechamber version C



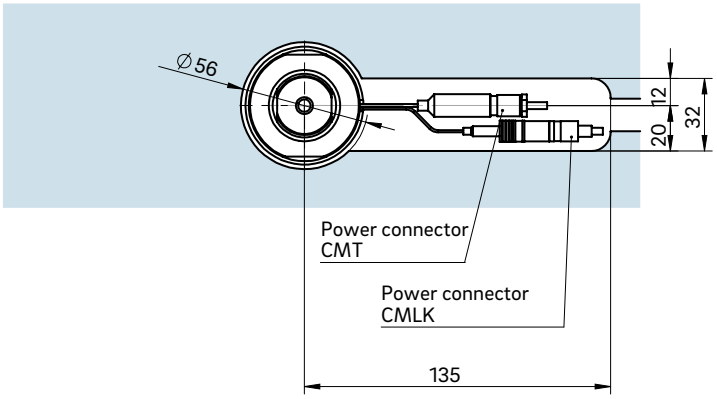
INSTALLATION

Open nozzle with tip
Nozzle type version C
Antechamber version A

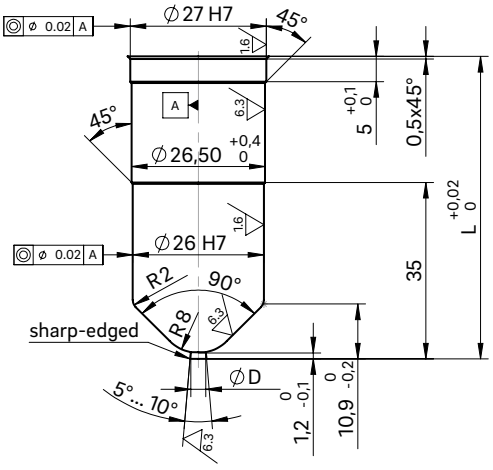




Cross-section C-C: Cutout for nozzle head, power and thermocouple plug connections



Open nozzle with straight outlet
Nozzle type version A
Antechamber version C



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

Hot runner nozzle type 12SET/12DET

Open single nozzle with conventional heating element

TECHNICAL DATA

12SET/12DET

Melt channel Ød	12.0 mm
Nozzle type	SET – open with tip DET – open with straight outlet
Operating voltage	230 V_{AC}*

Nominal length of the nozzle (L) in mm

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

Adapter	straight (G)/radius (R)/ angle (W)

Contact us for other nozzle lengths!

*Volts alternating current

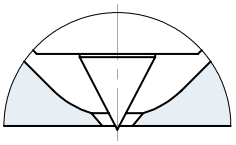
■ *available* □ *on request*

NOTE

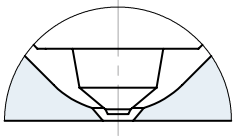
Power connector CMT and thermocouple connector CMLK are to be ordered separately.

WEBCODE
21030

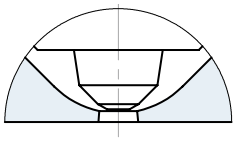
SET – open nozzle with tip
version "Tip"
Antechamber version A

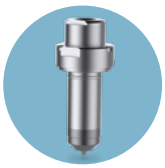


DET – open nozzle with straight outlet
version C
Antechamber version A



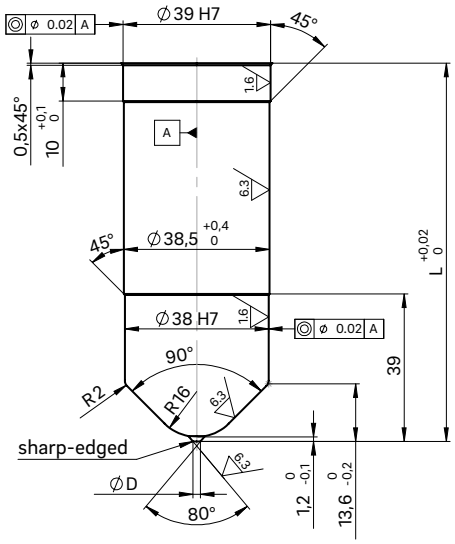
DET – open nozzle with straight outlet
version A
Antechamber version C

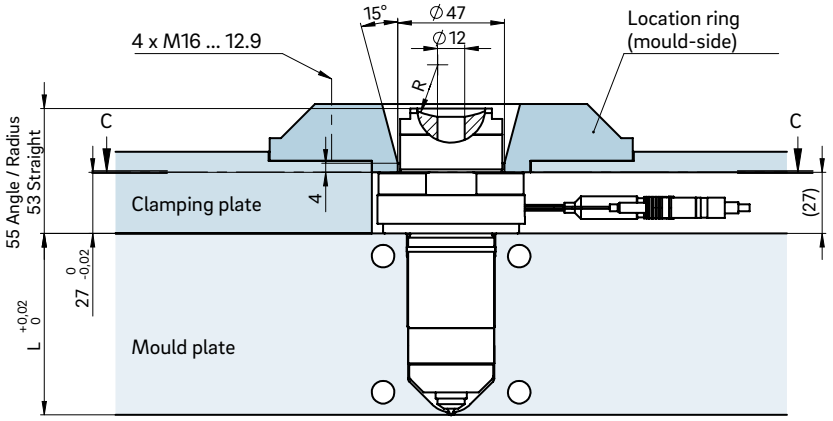




INSTALLATION

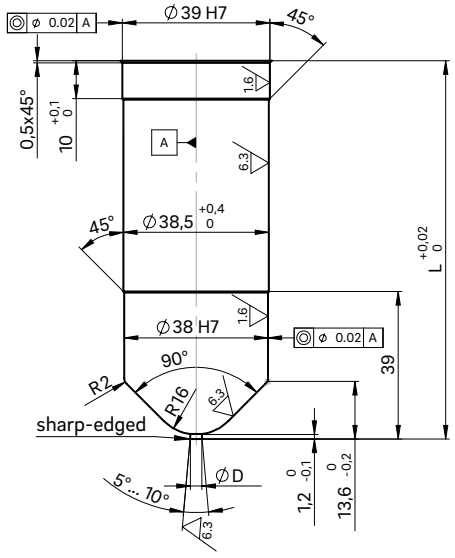
Open nozzle with tip
Nozzle type version C
Antechamber version A

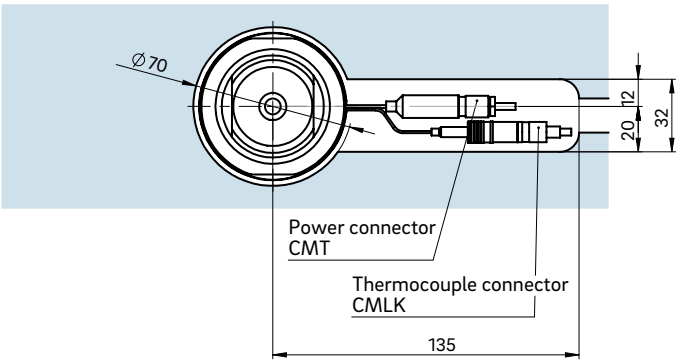




Cross-section C-C: Cutout for nozzle head, power and thermocouple plug connections

Open nozzle with straight outlet
Nozzle type version A
Antechamber version C





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

Hot runner nozzle type 4SHF/4DHF with AHJ4

Open single nozzle with thick-film heating element (BlueFlow®) and heated adapter AHJ4

TECHNICAL DATA

4SHF/4DHF

Melt channel Ød	3.8 mm
Nozzle type	SHF – open with tip DHF – open with straight outlet
Operating voltage	230 V_{AC}*

Nominal length of the nozzle (L) in mm

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

AHJ4

Melt channel Ød	4.0 mm
Operating voltage	230 V_{AC}*
Adapter	straight (G)/radius (R)/ angle (W)

Contact us for other nozzle lengths!

*Volts alternating current

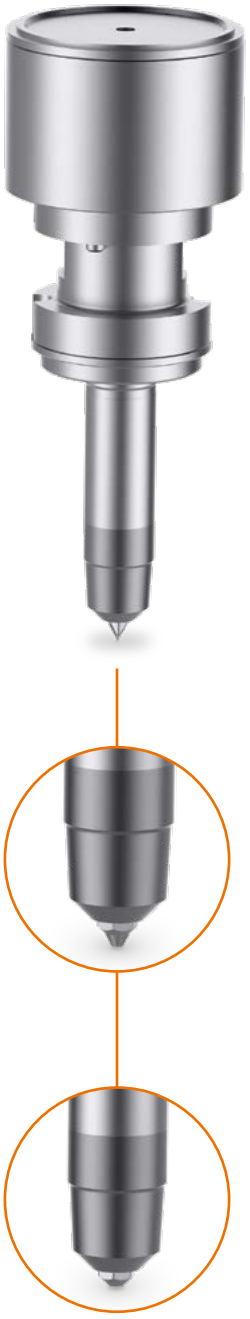
■ *available* □ *on request*

NOTE

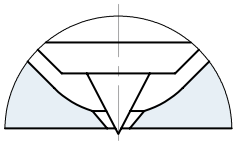
Power connector CHF and thermocouple connector CMLK are to be ordered separately.

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

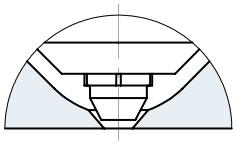
WEBCODE
21040



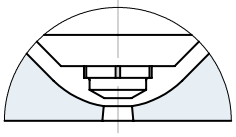
SHF – open nozzle with tip
version "Tip"
Antechamber version A



DHF – open nozzle with straight outlet
version C
Antechamber version A

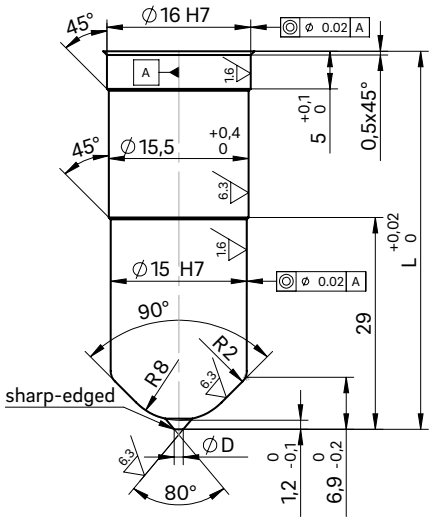


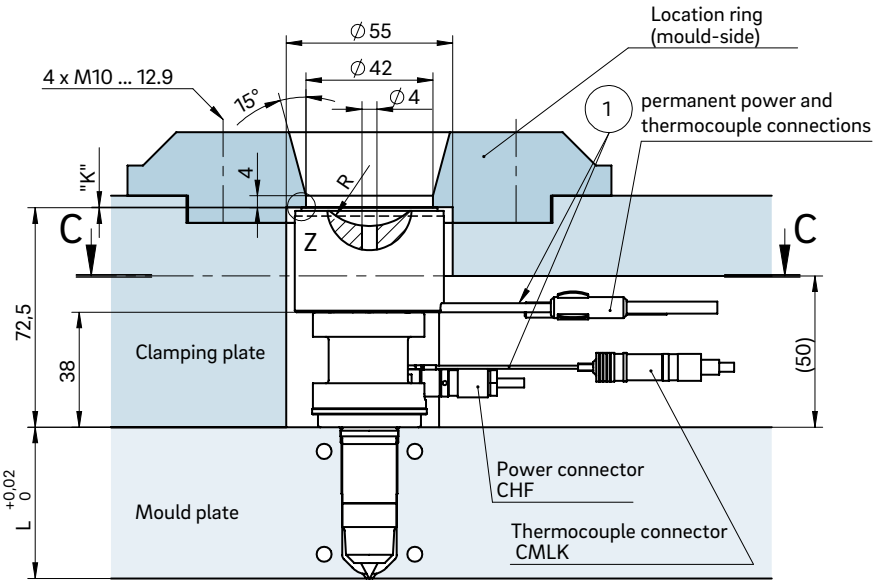
DHF – open nozzle with straight outlet
version A
Antechamber version C



INSTALLATION

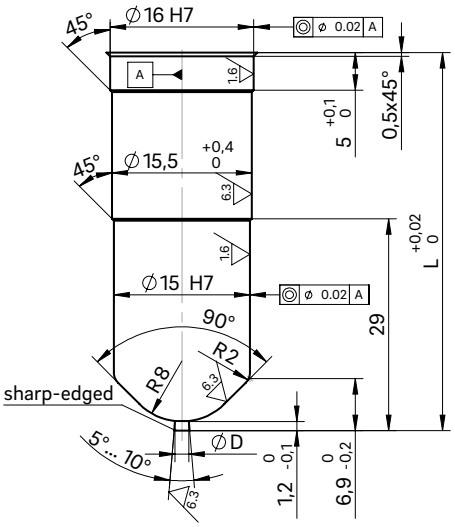
Open nozzle with tip
Nozzle type version C
Antechamber version A

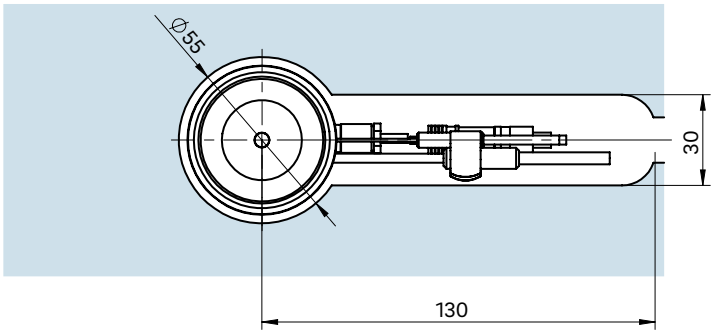




Cross-section C-C: Cutout for nozzle head, power and thermocouple plug connections

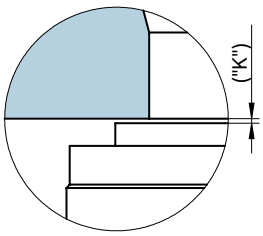
Open nozzle with straight outlet
Nozzle type version A
Antechamber version C





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

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!

ΔT (°C)	100	150	200	250	300	350
K (mm)	0.06	0.08	0.09	0.11	0.13	0.16

Hot runner nozzle type 5SHF/5DHF with AHJ5

Open single nozzle with thick-film heating element (BlueFlow®) and heated adapter AHJ5

TECHNICAL DATA

5SHF/5DHF

Melt channel Ød	4.8 mm
Nozzle type	SHF – open with tip DHF – open with straight outlet
Operating voltage	230 V_{AC}*

Nominal length of the nozzle (L) in mm

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

AHJ5

Melt channel Ød	5.0 mm
Operating voltage	230 V_{AC}*
Adapter	straight (G)/radius (R)/ angle (W)

Contact us for other nozzle lengths!

*Volts alternating current

■ *available* □ *on request*

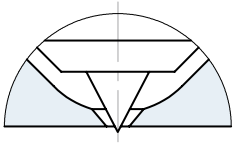
NOTE

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

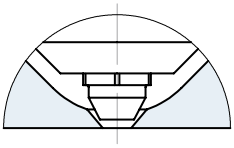
BlueFlow® hot runner nozzle type SHF/DHF is not intended for sale or use in the USA or Canada!

WEBCODE
21050

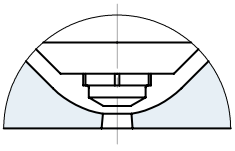
SHF – open nozzle with tip
version "Tip"
Antechamber version A



DHF – open nozzle with straight outlet
version C
Antechamber version A

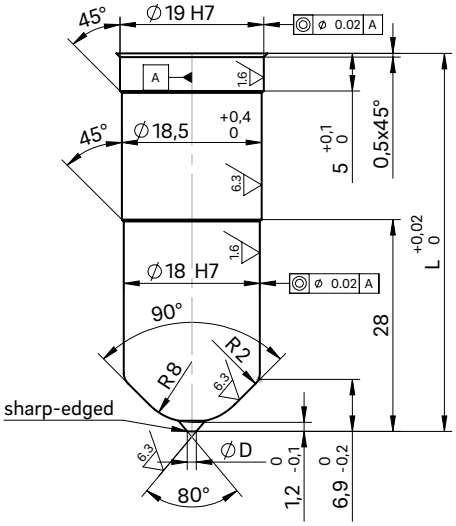


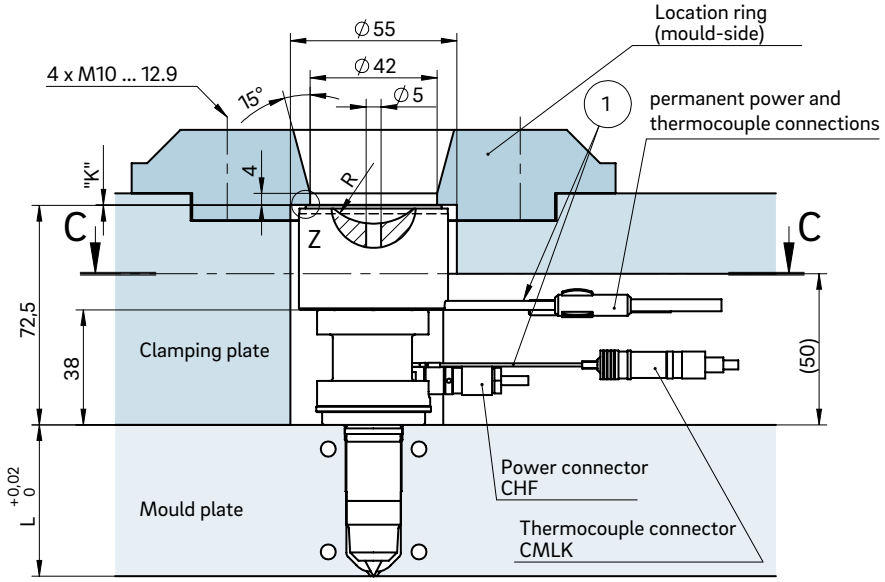
DHF – open nozzle with straight outlet
version A
Antechamber version C



INSTALLATION

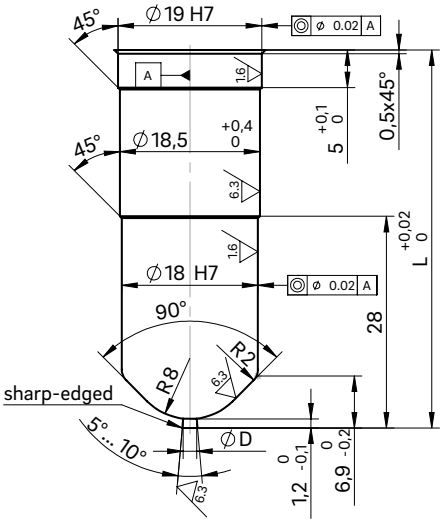
Open nozzle with tip
Nozzle type version C
Antechamber version A

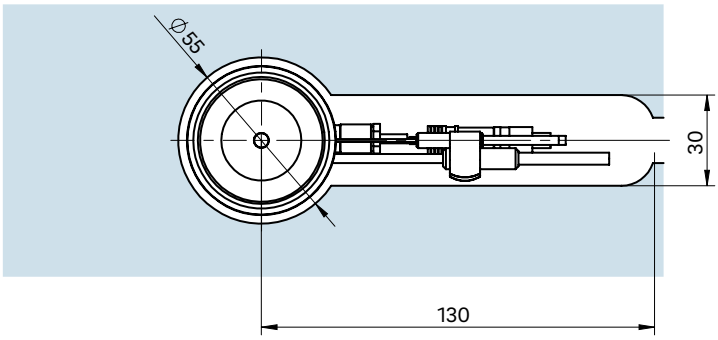




Cross-section C-C: Cutout for nozzle head, power and thermocouple plug connections

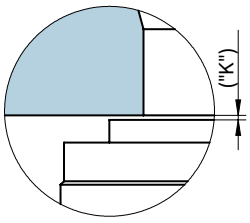
Open nozzle with straight outlet
Nozzle type version A
Antechamber version C





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

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!

ΔT (°C)	100	150	200	250	300	350
K (mm)	0.06	0.08	0.09	0.11	0.13	0.16

Hot runner nozzle type 6SHF/6DHF with AHJ6

Open single nozzle with thick-film heating element (BlueFlow®) and heated adapter AHJ6

TECHNICAL DATA

6SHF/6DHF

Melt channel Ød	6.0 mm
Nozzle type	SHF – open with tip DHF – open with straight outlet
Operating voltage	230 V_{AC}*

Nominal length of the nozzle (L) in mm

50	60	80	100	120	150
■	■	■	■	■	□

AHJ6

Melt channel Ød	6.0 mm
Operating voltage	230 V_{AC}*
Adapter	straight (G)/radius (R)/ angle (W)

Contact us for other nozzle lengths!

*Volts alternating current

■ *available* □ *on request*

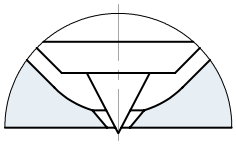
NOTE

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

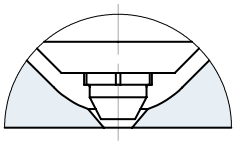
BlueFlow® hot runner nozzle type SHF/DHF is not intended for sale or use in the USA or Canada!

WEBCODE
21070

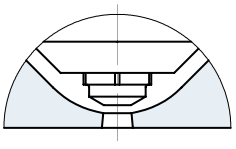
SHF – open nozzle with tip
version "Tip"
Antechamber version A



DHF – open nozzle with straight outlet
version C
Antechamber version A

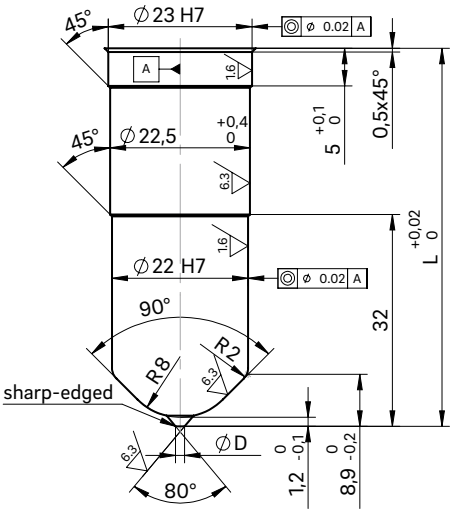


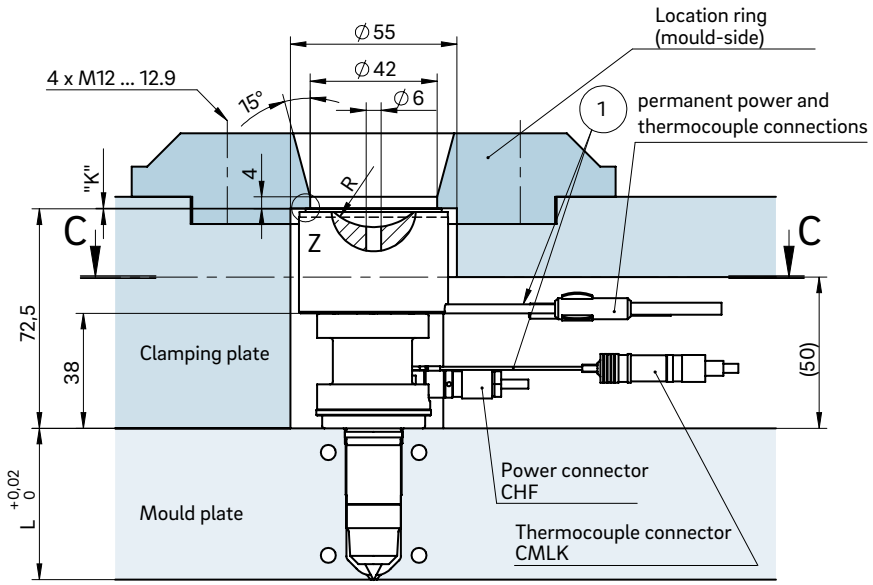
DHF – open nozzle with straight outlet
version A
Antechamber version C



INSTALLATION

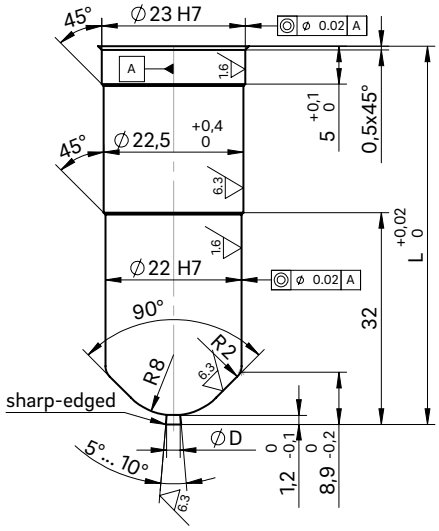
Open nozzle with tip
Nozzle type version C
Antechamber version A

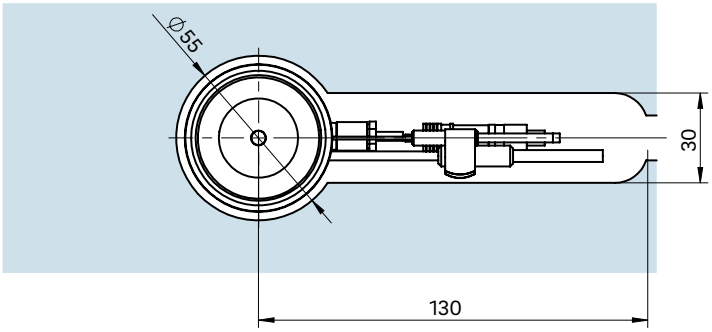




Cross-section C-C: Cutout for nozzle head, power and thermocouple plug connections

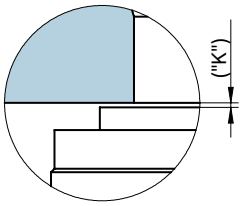
Open nozzle with straight outlet
Nozzle type version A
Antechamber version C





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

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!

ΔT (°C)	100	150	200	250	300	350
K (mm)	0.06	0.08	0.09	0.11	0.13	0.16

Hot runner nozzle type 5SHT/5DHT with AHJ5

Open single nozzle with conventional heating element
and heated adapter AHJ5

TECHNICAL DATA

5SHT/5DHT

Melt channel Ød	4.8 mm
Nozzle type	SHT – open with tip DHT – open with straight outlet
Operating voltage	230 V_{AC}*

Nominal length of the nozzle (L) in mm

50	60	80	100
■	■	■	■

AHJ5

Melt channel Ød	5.0 mm
Operating voltage	230 V_{AC}*
Adapter	straight (G)/radius (R)/ angle (W)

Contact us for other nozzle lengths!

*Volts alternating current

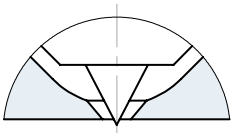
■ *available*

NOTE

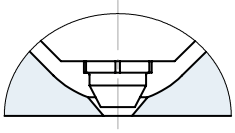
Power connector CMT and thermocouple connector CMLK are to be ordered separately.

WEBCODE
21060

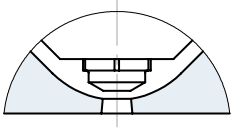
SHT – open nozzle with tip
version "Tip"
Antechamber version A



DHT – open nozzle with straight outlet
version C
Antechamber version A

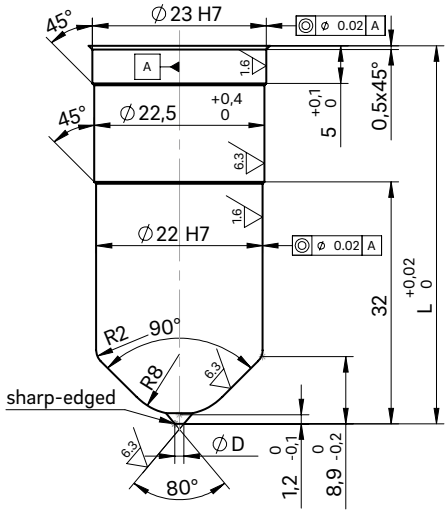


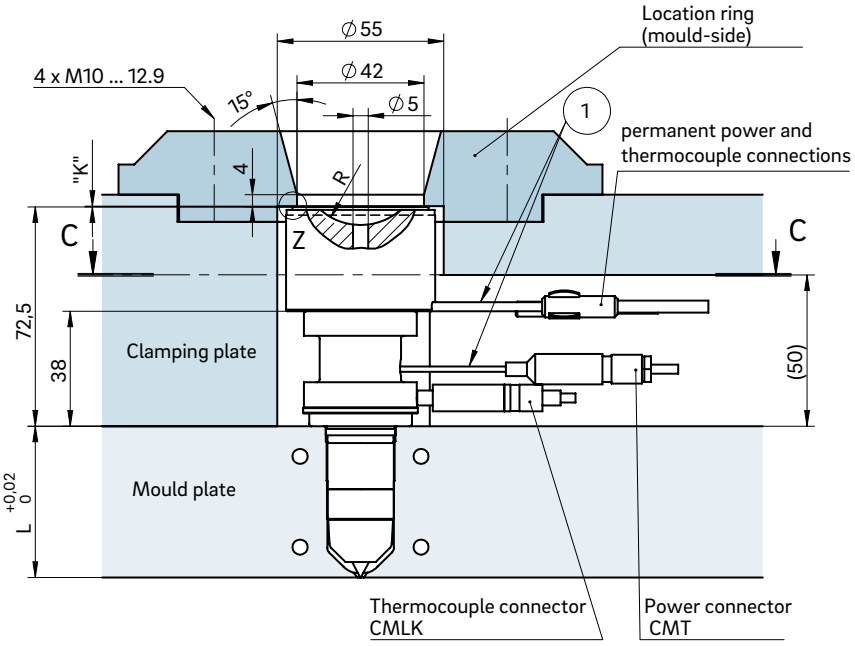
DHT – open nozzle with straight outlet
version A
Antechamber version C



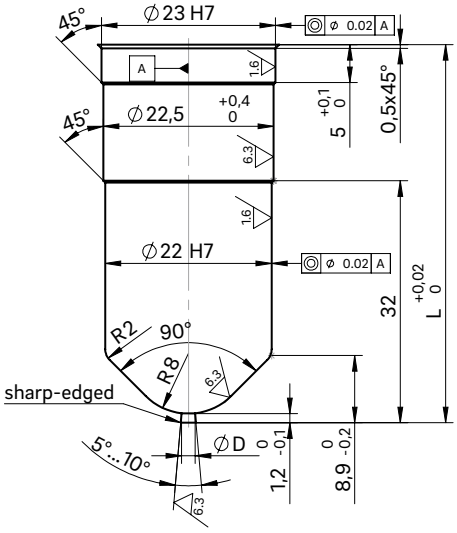
INSTALLATION

Open nozzle with tip
Nozzle type version C
Antechamber version A

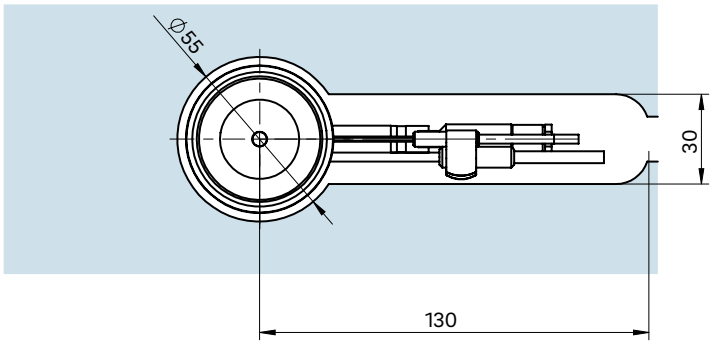




Open nozzle with straight outlet
Nozzle type version A
Antechamber version C

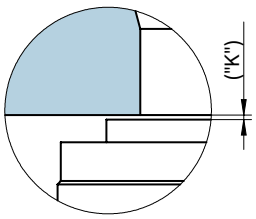


Cross-section C-C: Cutout for nozzle head, power and thermocouple plug connections



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

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!

ΔT (°C)	100	150	200	250	300	350
K (mm)	0.06	0.08	0.09	0.11	0.13	0.16

Hot runner nozzle type 6SHT/6DHT with AHJ6

Open single nozzle with conventional heating element
and heated adapter AHJ6

TECHNICAL DATA

6SHT/6DHT

Melt channel Ød	6.0 mm
Nozzle type	SHT – open with tip DHT – open with straight outlet
Operating voltage	230 V_{AC}*

Nominal length of the nozzle (L) in mm

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

AHJ6

Melt channel Ød	6.0 mm
Operating voltage	230 V_{AC}*
Adapter	straight (G)/radius (R)/ angle (W)

Contact us for other nozzle lengths!

*Volts alternating current

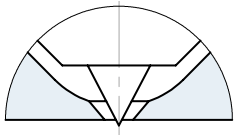
■ *available* □ *on request*

NOTE

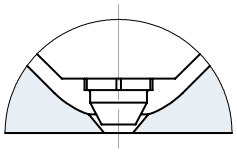
Power connector CMT and thermocouple connector CMLK are to be ordered separately.

WEBCODE
21080

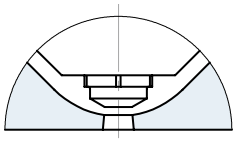
SHT – open nozzle with tip
version "Tip"
Antechamber version A



DHT – open nozzle with straight outlet
version C
Antechamber version A

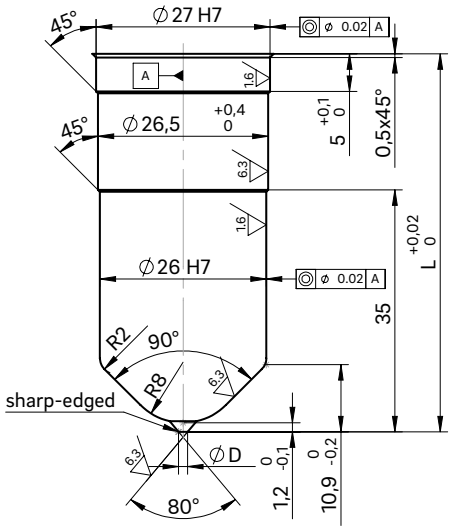


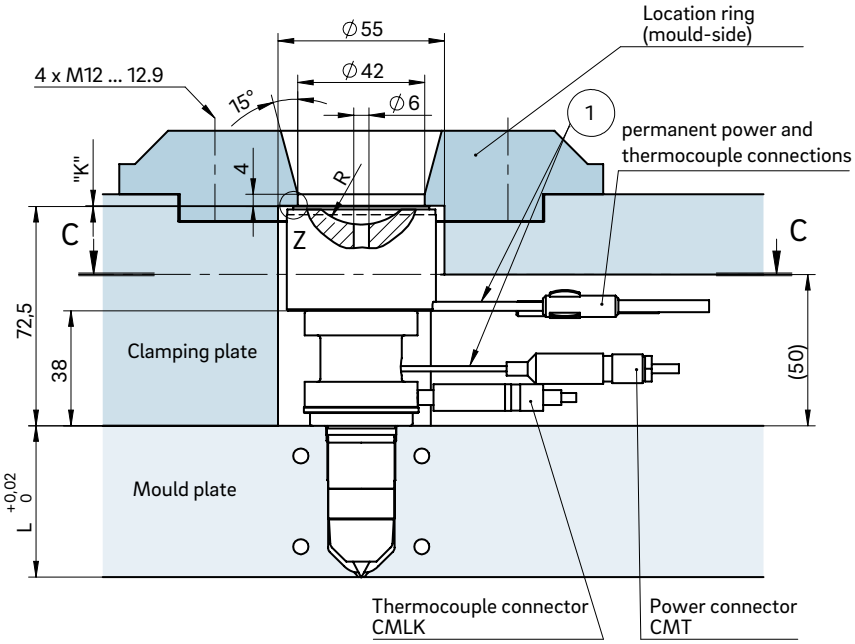
DHT – open nozzle with straight outlet
version A
Antechamber version C



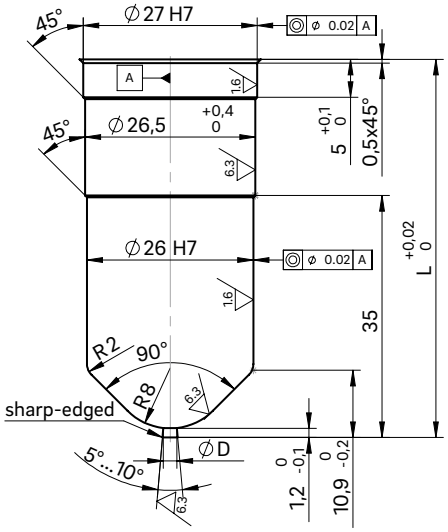
INSTALLATION

Open nozzle with tip
Nozzle type version C
Antechamber version A

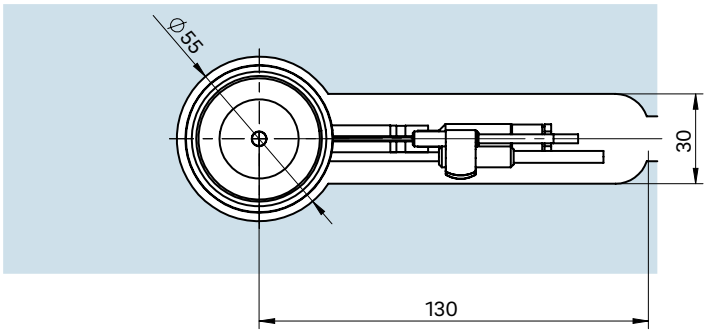




Open nozzle with straight outlet
Nozzle type version A
Antechamber version C

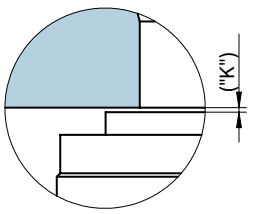


Cross-section C-C: Cutout for nozzle head, power and thermocouple plug connections



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

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!

ΔT (°C)	100	150	200	250	300	350
K (mm)	0.06	0.08	0.09	0.11	0.13	0.16

Hot runner nozzle type 8SHT/8DHT with AHJ8

Open single nozzle with conventional heating element
and heated adapter AHJ8

TECHNICAL DATA

8SHT/8DHT

Melt channel Ød	7.5 mm
Nozzle type	SHT – open with tip DHT – open with straight outlet
Operating voltage	230 V_{AC}*

Nominal length of the nozzle (L) in mm

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

AHJ8

Melt channel Ød	6.0 mm
Operating voltage	230 V_{AC}*
Adapter	straight (G)/radius (R)/ angle (W)

Contact us for other nozzle lengths!

*Volts alternating current

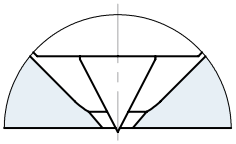
■ *available* □ *on request*

NOTE

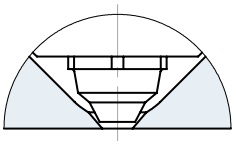
Power connector CMT and thermocouple connector CMLK are to be ordered separately.

WEBCODE
21090

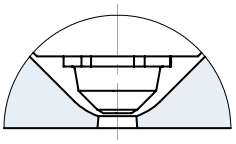
SHT – open nozzle with tip
version "Tip"
Antechamber version A

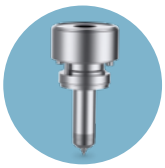


DHT – open nozzle with straight outlet
version C
Antechamber version A



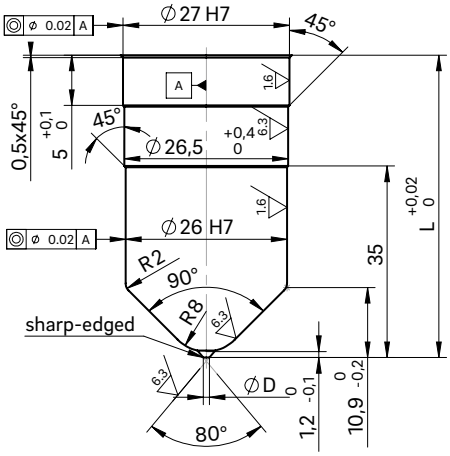
DHT – open nozzle with straight outlet
version A
Antechamber version C



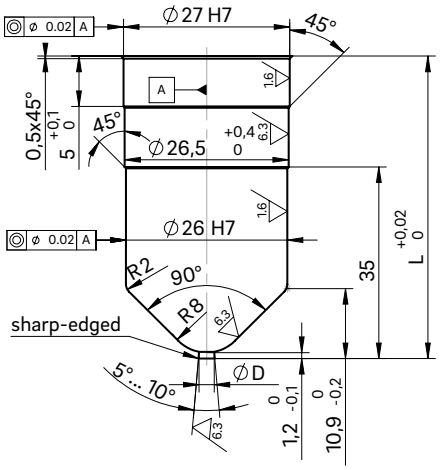


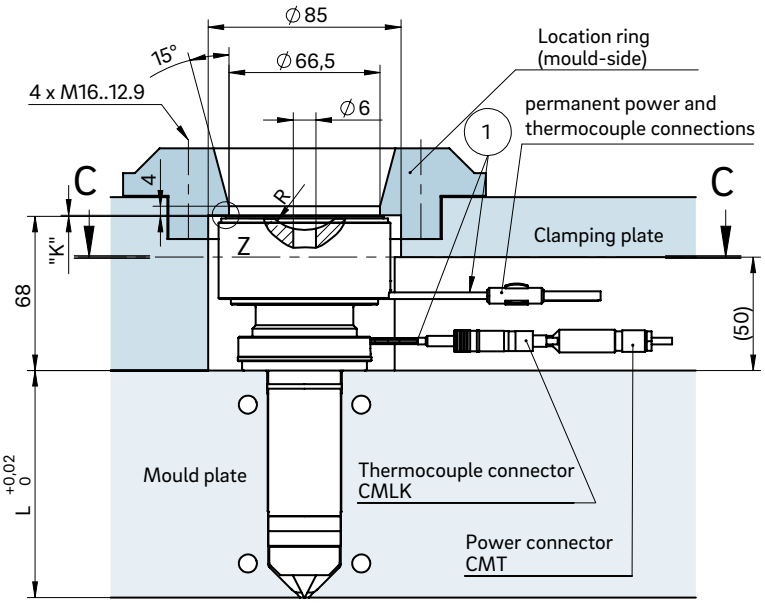
INSTALLATION

Open nozzle with tip
Nozzle type version C
Antechamber version A

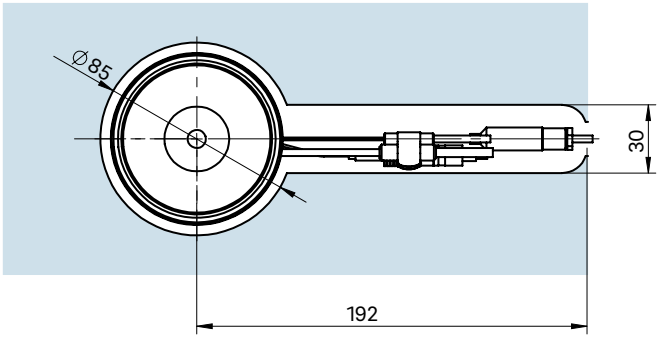


Open nozzle with straight outlet
Nozzle type version A
Antechamber version C





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

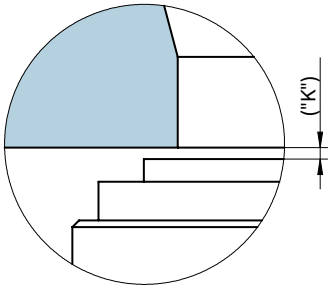


① Power and thermocouple plug connections in this area can be bent once; minimum radius: R8

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!

ΔT (°C)	100	150	200	250	300	350
K (mm)	0.04	0.08	0.12	0.16	0.20	0.25

Detail "Z"



Hot runner nozzle type 10SHT/10DHT with AHJ10

Open single nozzle with conventional heating element
and heated adapter AHJ10

TECHNICAL DATA

10SHT/10DHT

Melt channel Ød	10.0 mm
Nozzle type	SHT – open with tip DHT – open with straight outlet
Operating voltage	230 V_{AC}*

Nominal length of the nozzle (L) in mm

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

AHJ10

Melt channel Ød	8.0 mm
Operating voltage	230 V_{AC}*
Adapter	straight (G)/radius (R)/ angle (W)

Contact us for other nozzle lengths!

*Volts alternating current

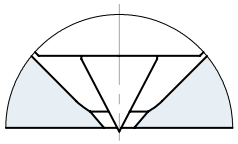
■ *available* □ *on request*

NOTE

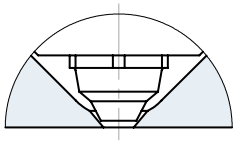
Power connector CMT and thermocouple connector CMLK are to be ordered separately.

WEBCODE
21100

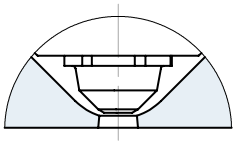
SHT – open nozzle with tip
version "Tip"
Antechamber version A



DHT – open nozzle with straight outlet
version C
Antechamber version A

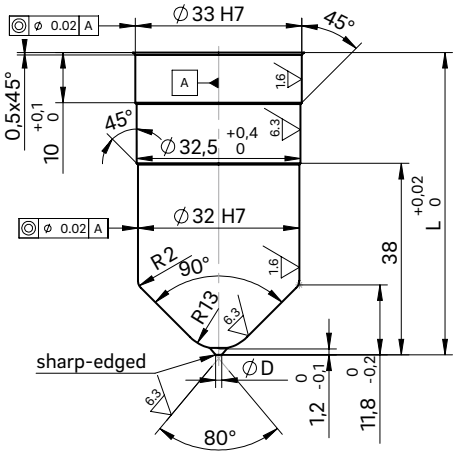


DHT – open nozzle with straight outlet
version A
Antechamber version C

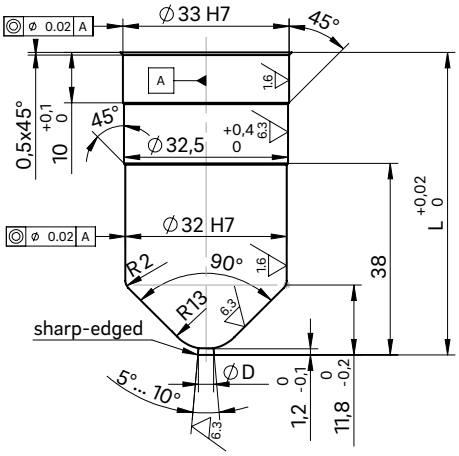


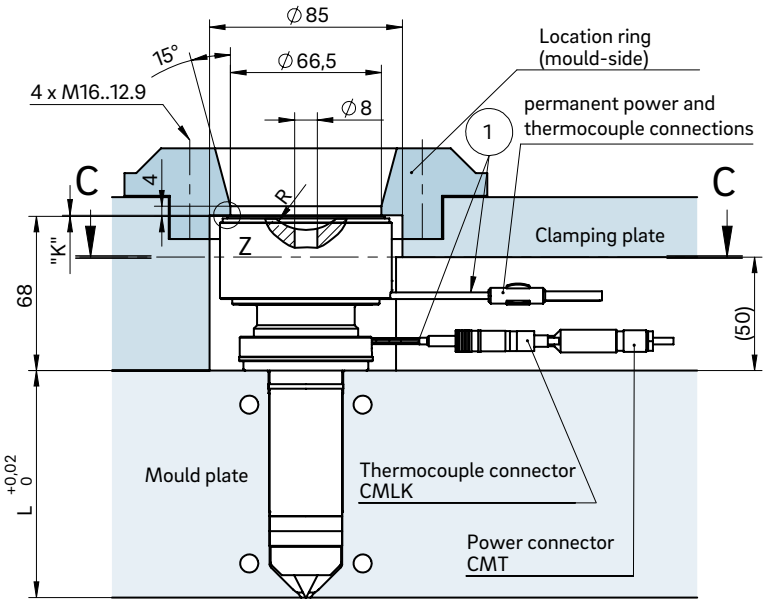
INSTALLATION

Open nozzle with tip
Nozzle type version C
Antechamber version A

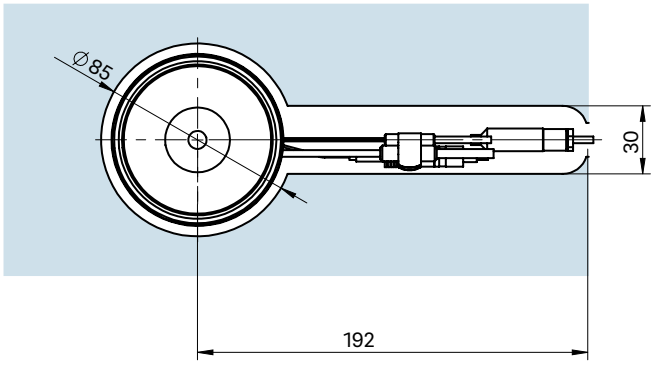


Open nozzle with straight outlet
Nozzle type version A
Antechamber version C



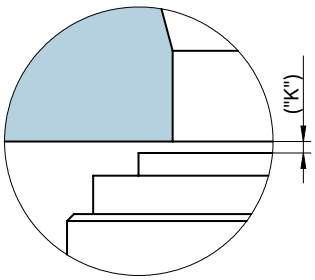


Cross-section C-C: Cutout for nozzle head, power and thermocouple plug connections



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

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!

ΔT (°C)	100	150	200	250	300	350
K (mm)	0.04	0.08	0.12	0.16	0.20	0.25

Hot runner nozzle type 12SHT/12DHT with AHJ12

Open single nozzle with conventional heating element
and heated adapter AHJ12

TECHNICAL DATA

12SHT/12DHT

Melt channel Ød	12.0 mm
Nozzle type	SHT – open with tip DHT – open with straight outlet
Operating voltage	230 V_{AC}*

Nominal length of the nozzle (L) in mm

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

AHJ12

Melt channel Ød	10.0 mm
Operating voltage	230 V_{AC}*
Adapter	straight (G)/radius (R)/ angle (W)

Contact us for other nozzle lengths!

*Volts alternating current

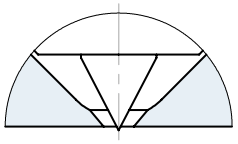
■ *available* □ *on request*

NOTE

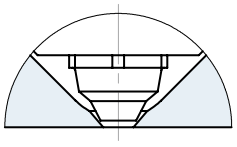
Power connector CMT and thermocouple connector CMLK are to be ordered separately.

WEBCODE
21110

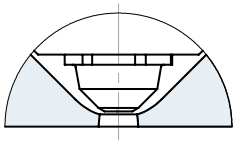
SHT – open nozzle with tip
version "Tip"
Antechamber version A



DHT – open nozzle with straight outlet
version C
Antechamber version A

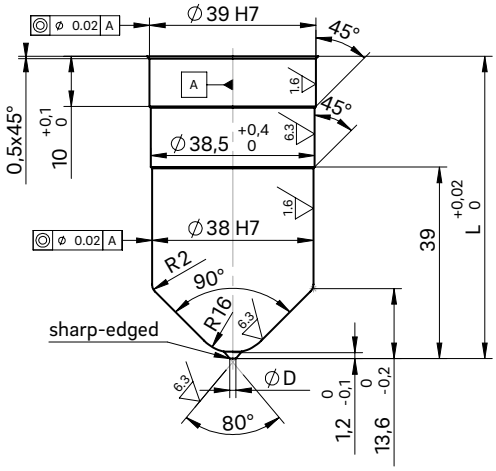


DHT – open nozzle with straight outlet
version A
Antechamber version C

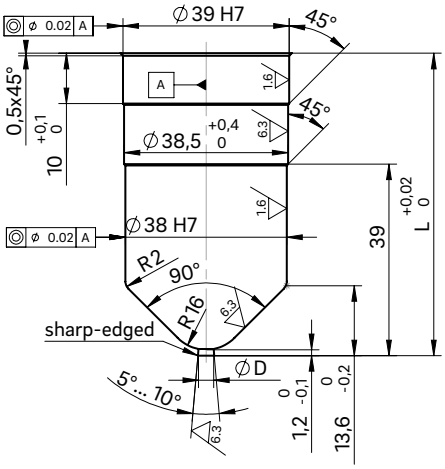


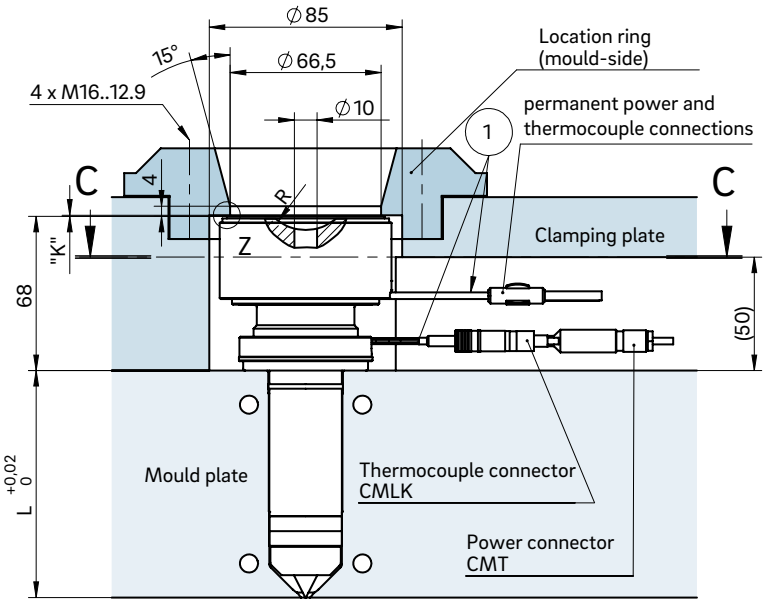
INSTALLATION

Open nozzle with tip
Nozzle type version C
Antechamber version A

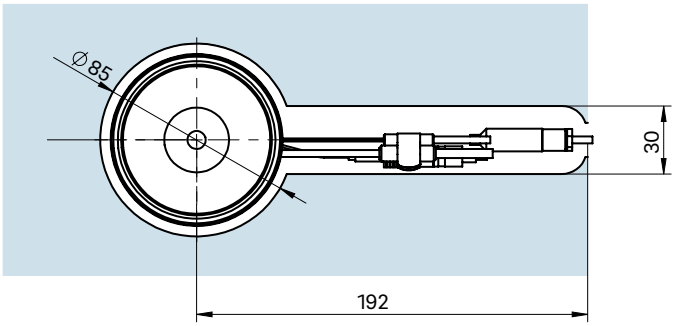


Open nozzle with straight outlet
Nozzle type version A
Antechamber version C





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

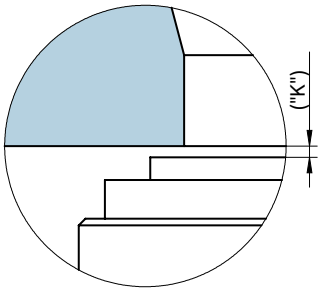


① Power and thermocouple plug connections in this area can be bent once; minimum radius: R8

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!

ΔT (°C)	100	150	200	250	300	350
K (mm)	0.04	0.08	0.12	0.16	0.20	0.25

Detail "Z"

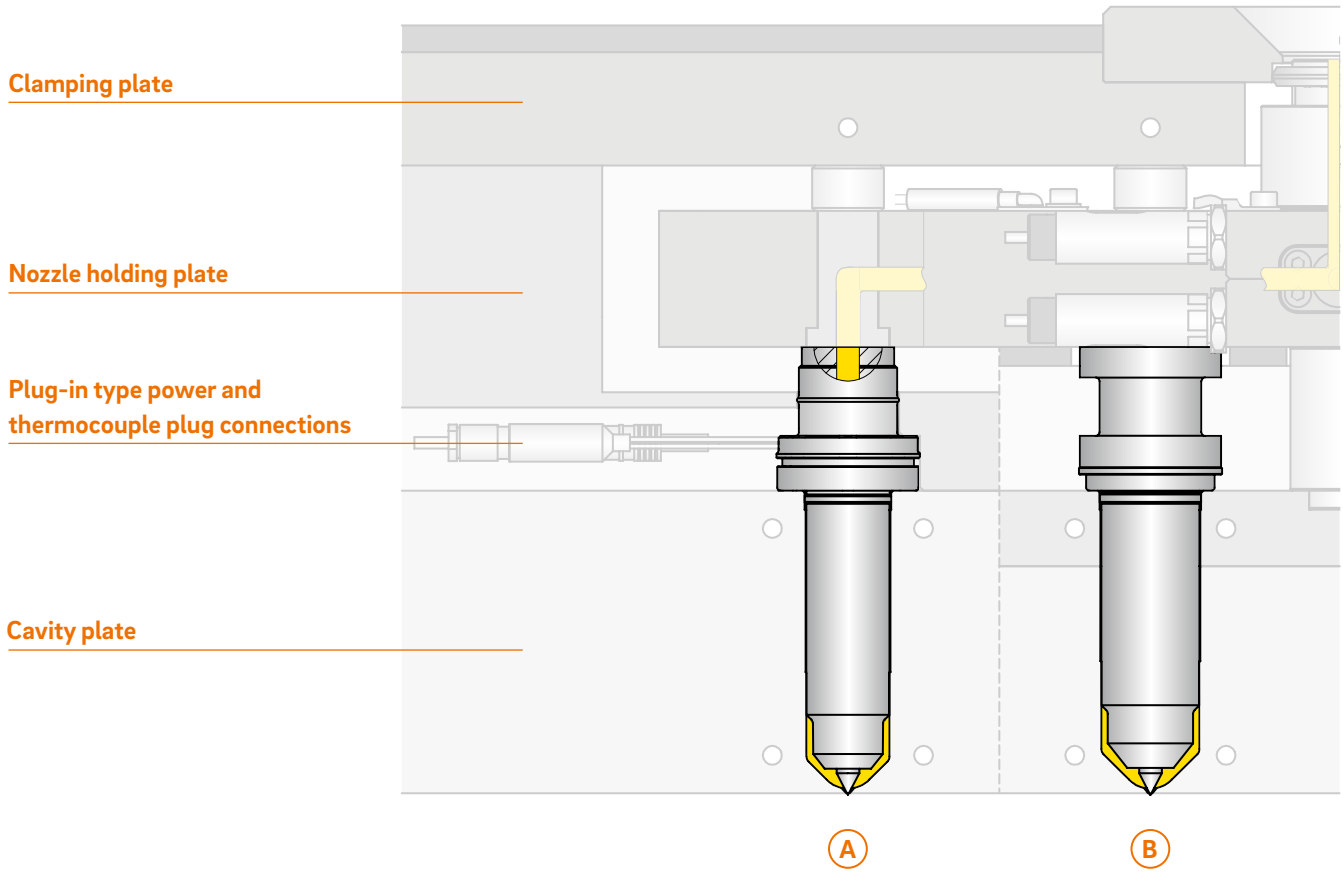


2.2 System hot runner nozzles

SYSTEM HOT RUNNER NOZZLES – OPEN SYSTEM

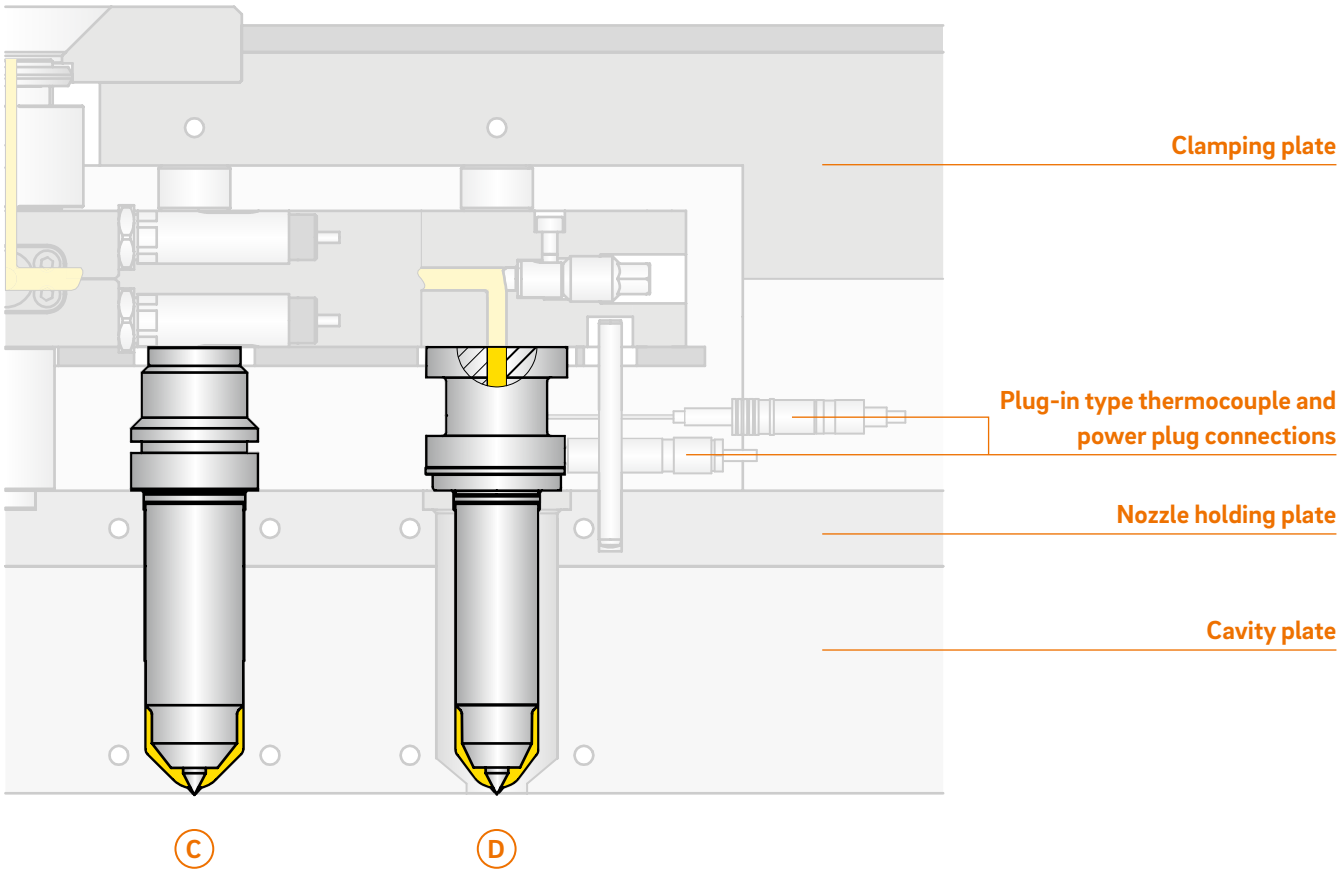
Overview of overall design

System hot runner nozzles



A
Nozzle type STT
- With shaft
- Screwed from the parting line

B
Nozzle type SHT
- With shaft
- Screwed to the manifold



C
Nozzle type SMT
- With shaft
- For minimal spacing
- Not screwed to the manifold

D
BlueFlow® nozzle type SHF
- With shaft
- Thick-film heating element
- Screwed to the manifold

Hot runner nozzle type 4SHF/4DHF

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

TECHNICAL DATA

4SHF/4DHF

Melt channel Ød	3.8 mm
Nozzle type	SHF – open with tip DHF – open with straight outlet
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

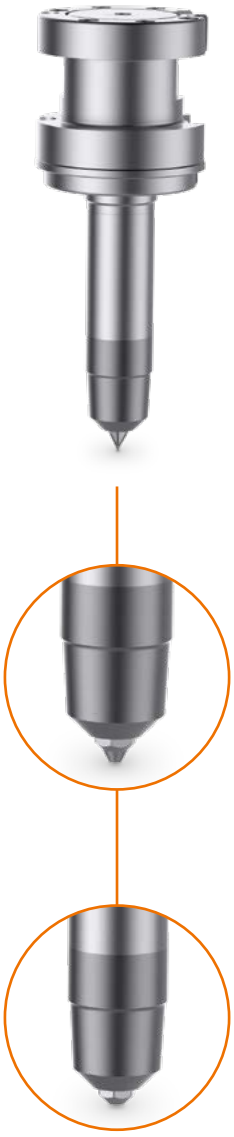
■ *available* □ *on request*

NOTE

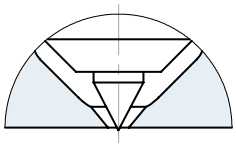
Power connector CHF and thermocouple connector CMLK are to be ordered separately.

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

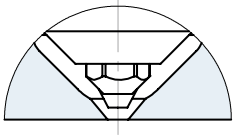
WEBCODE
22010



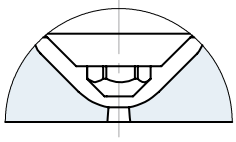
SHF – open nozzle with tip
version "Tip"
Antechamber version A



DHF – open nozzle with straight outlet
version C
Antechamber version A

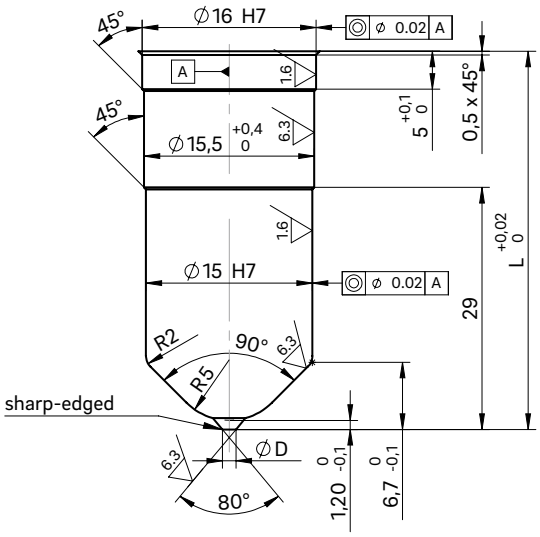


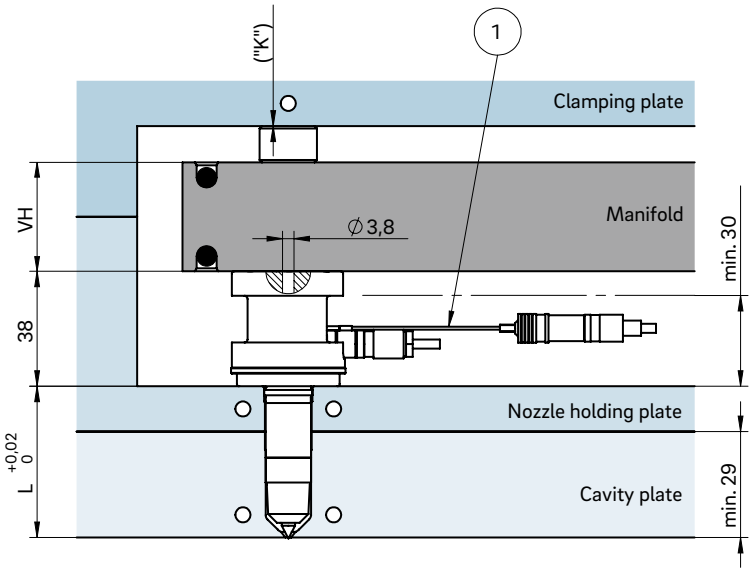
DHF – open nozzle with straight outlet
version A
Antechamber version C



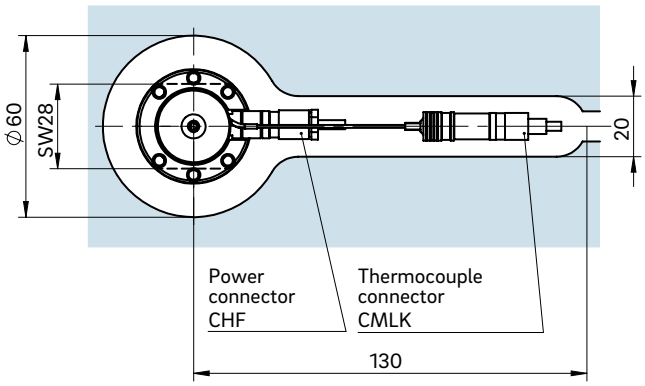
INSTALLATION

Open nozzle with tip
Nozzle type version C
Antechamber version A

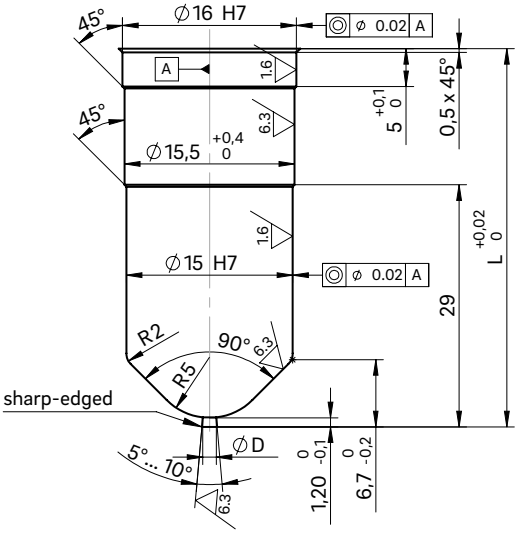




Example cutout for nozzle head, power and thermocouple plug connections



Open nozzle with straight outlet
Nozzle type version A
Antechamber version C



① Thermocouple plug connection in this area can only 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 clamping 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

Hot runner nozzle type 5SHF/5DHF

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

TECHNICAL DATA

5SHF/5DHF

Melt channel Ød	4.8 mm
Nozzle type	SHF – open with tip DHF – open with straight outlet
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

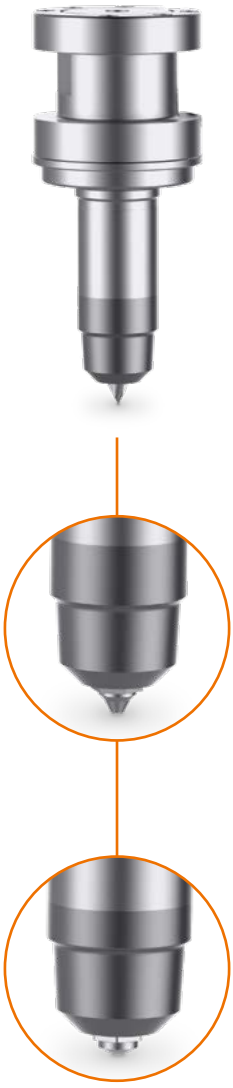
■ *available* □ *on request*

NOTE

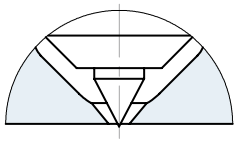
Power connector CHF and thermocouple connector CMLK are to be ordered separately.

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

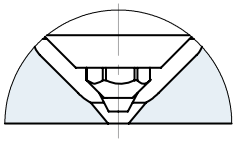
WEBCODE
22020



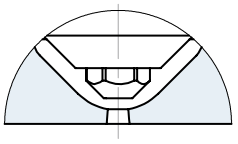
SHF – open nozzle with tip
"Tip" version
Antechamber version A

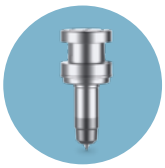


DHF – open nozzle with straight outlet
version C
Antechamber version A



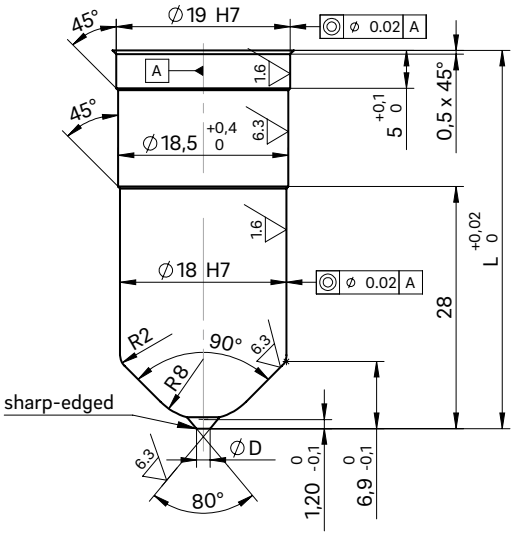
DHF – open nozzle with straight outlet
version A
Antechamber version C

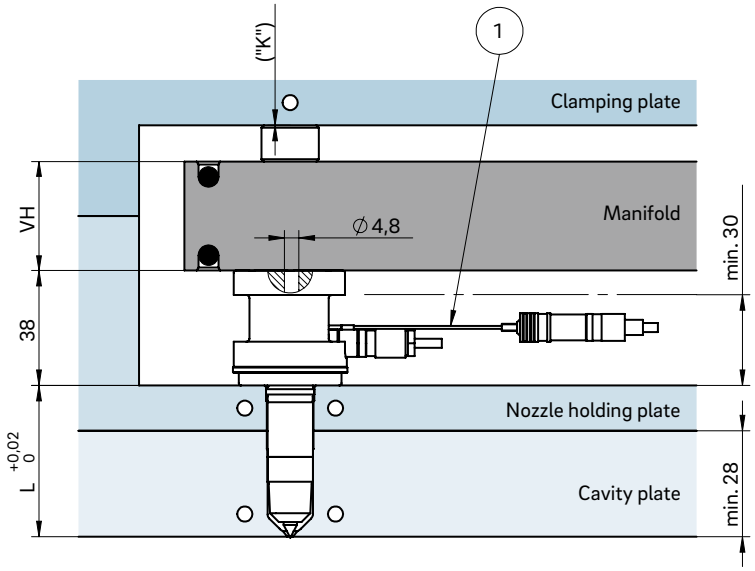




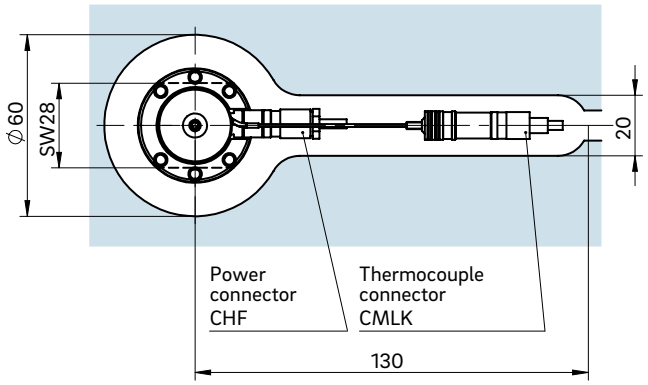
INSTALLATION

Open nozzle with tip
Nozzle type version C
Antechamber version A

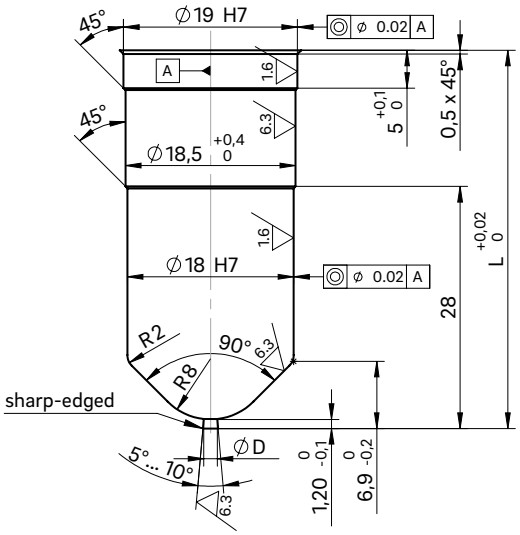




Example cutout for nozzle head, power and thermocouple plug connections



Open nozzle with straight outlet
Nozzle type version A
Antechamber version C



① Thermocouple plug connection in this area can only 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 clamping 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

Hot runner nozzle type 6SHF/6DHF

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

TECHNICAL DATA

6SHF/6DHF

Melt channel Ød	6.0 mm
Nozzle type	SHF – open with tip DHF – open with straight outlet
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

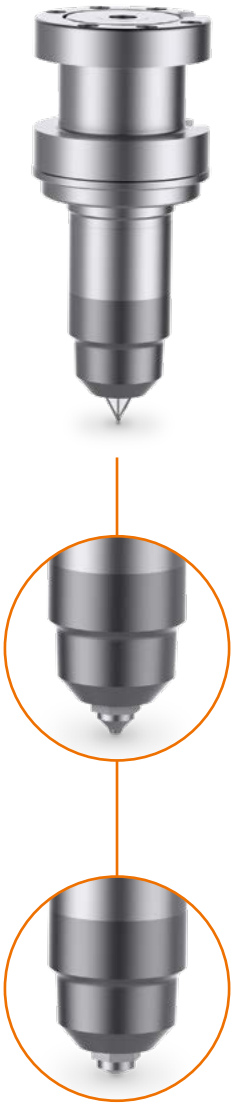
■ *available* □ *on request*

NOTE

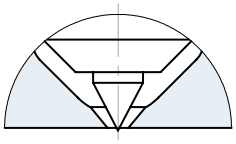
Power connector CHF and thermocouple connector CMLK are to be ordered separately.

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

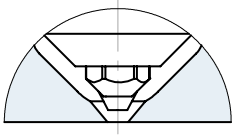
WEBCODE
22030



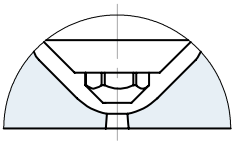
SHF – open nozzle with tip
version "Tip"
Antechamber version A

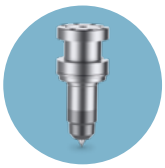


DHF – open nozzle with straight outlet
version C
Antechamber version A



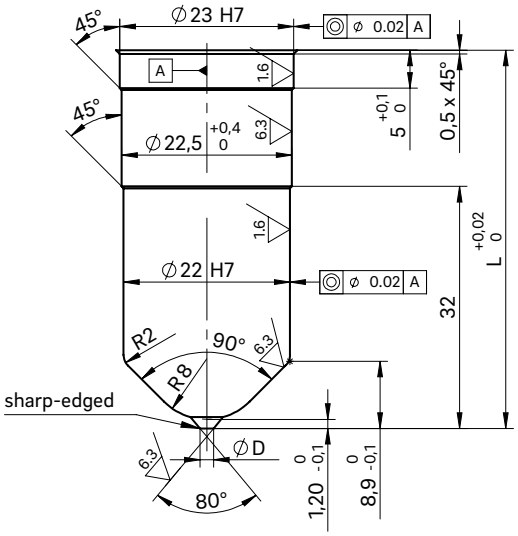
DHF – open nozzle with straight outlet
version A
Antechamber version C



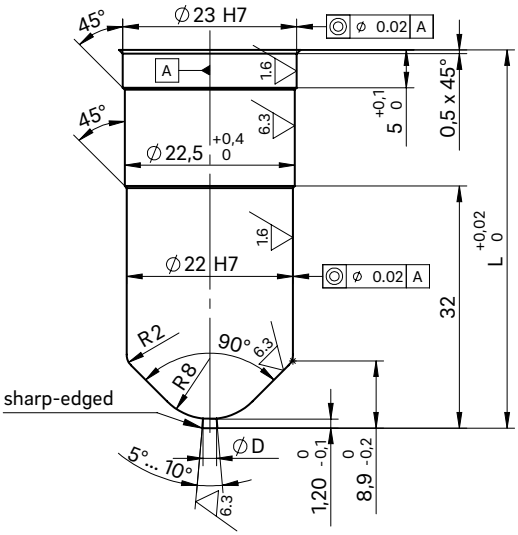


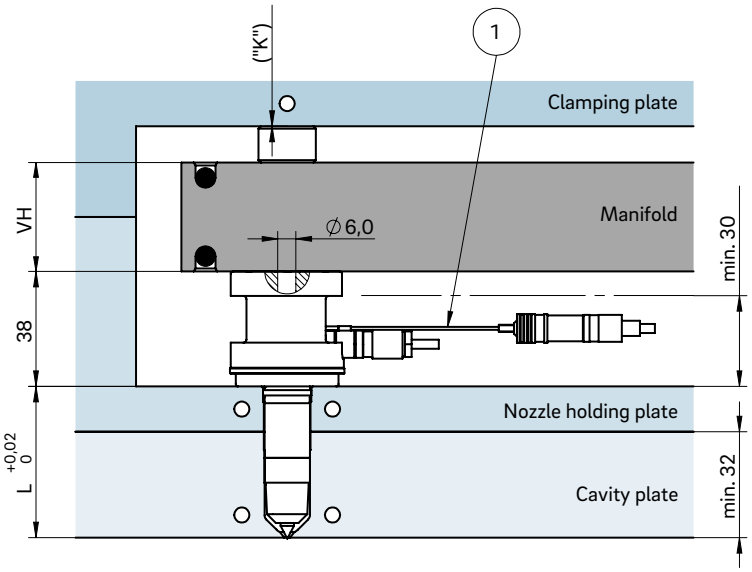
INSTALLATION

Open nozzle with tip
Nozzle type version C
Antechamber version A

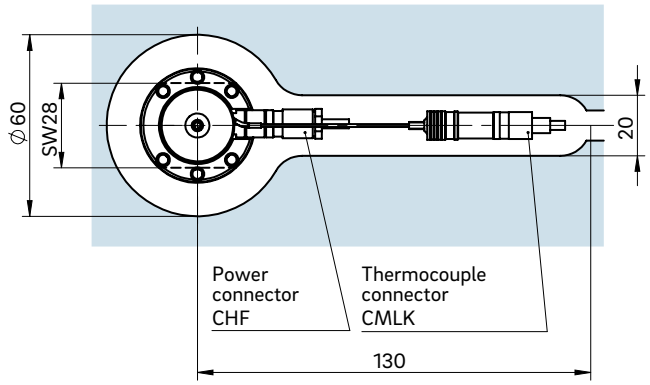


Open nozzle with straight outlet
Nozzle type version A
Antechamber version C





Example cutout for nozzle head, power and thermocouple plug connections



① Thermocouple plug connection in this area can only 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 clamping 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

Hot runner nozzle type 5SHT/5DHT

Open system nozzle with conventional heating element, screwed to the manifold

TECHNICAL DATA

5SHT/5DHT

Melt channel Ød	4.8 mm
Nozzle type	SHT – open with tip DHT – open with straight outlet
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

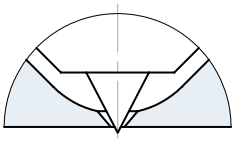
■ *available*

NOTE

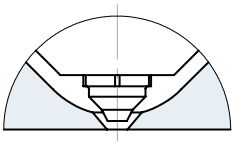
Power connector CMT and thermocouple connector CMLK are to be ordered separately.

WEBCODE
22040

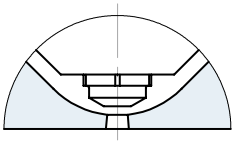
SHT – open nozzle with tip
version "Tip"
Antechamber version A

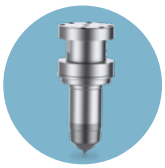


DHT – open nozzle with straight outlet
version C
Antechamber version A



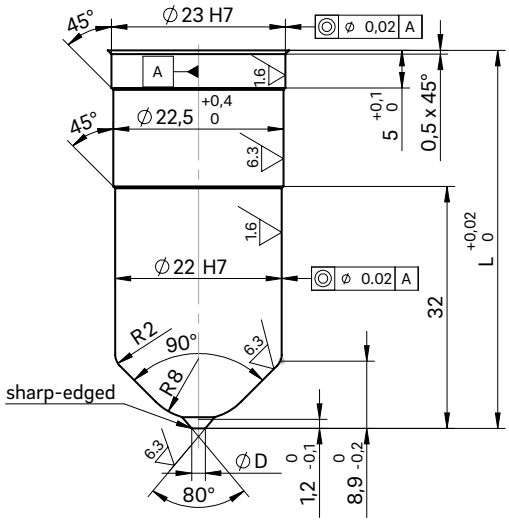
DHT – open nozzle with straight outlet
version A
Antechamber version C

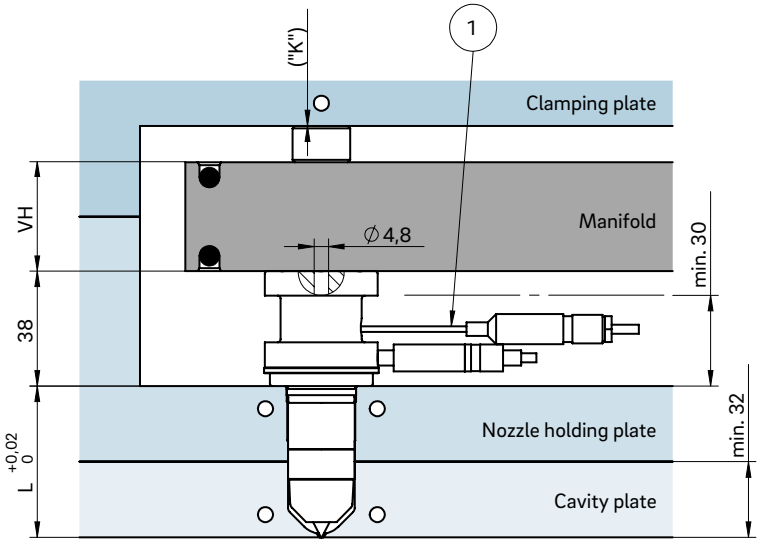




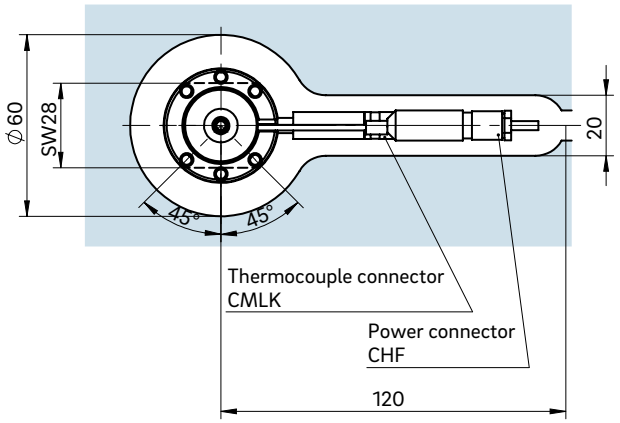
INSTALLATION

Open nozzle with tip
Nozzle type version C
Antechamber version A

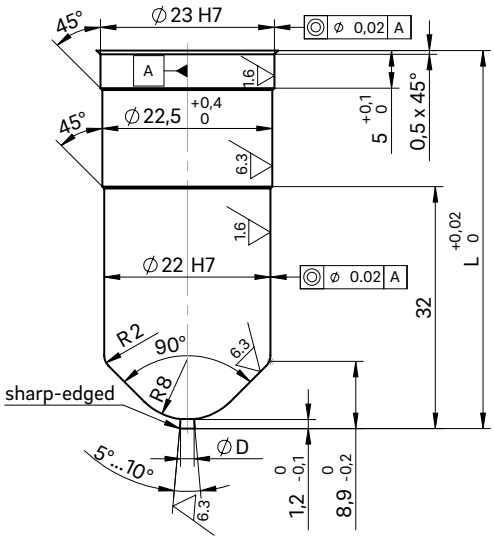




Example cutout for nozzle head, power and thermocouple plug connections



Open nozzle with straight outlet
Nozzle type version A
Antechamber version C



① Power plug connection in this area can only 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 clamping 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

Hot runner nozzle type 6SHT/6DHT

Open system nozzle with conventional heating element, screwed to the manifold

TECHNICAL DATA

6SHT/6DHT

Melt channel Ød	6.0 mm
Nozzle type	SHT – open with tip DHT – open with straight outlet
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

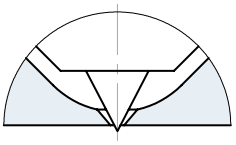
■ *available* □ *on request*

NOTE

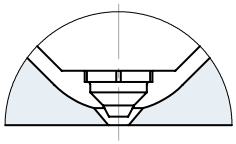
Power connector CMT and thermocouple connector CMLK are to be ordered separately.

WEBCODE
22050

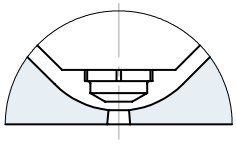
SHT – open nozzle with tip
version "Tip"
Antechamber version A

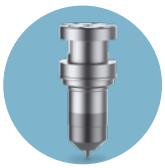


DHT – open nozzle with straight outlet
version C
Antechamber version A



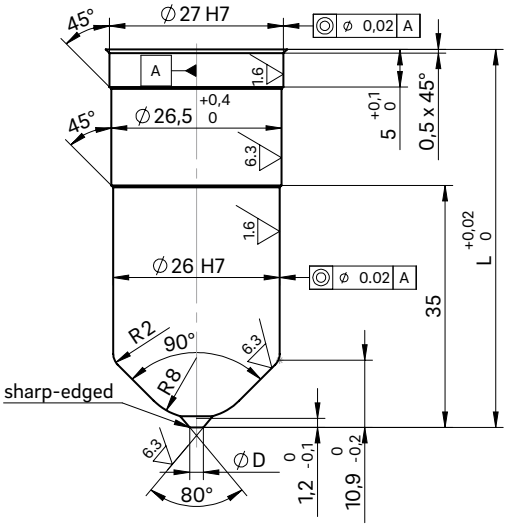
DHT – open nozzle with straight outlet
version A
Antechamber version C

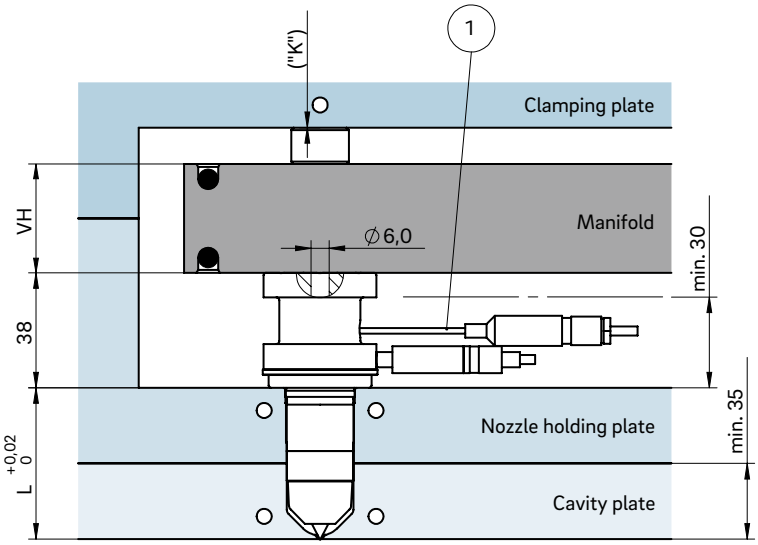




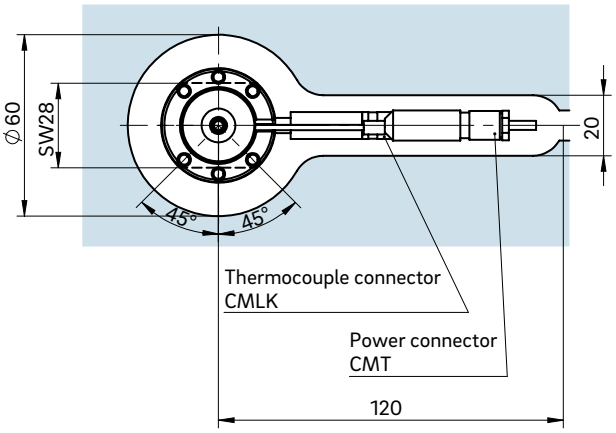
INSTALLATION

Open nozzle with tip
Nozzle type version C
Antechamber version A

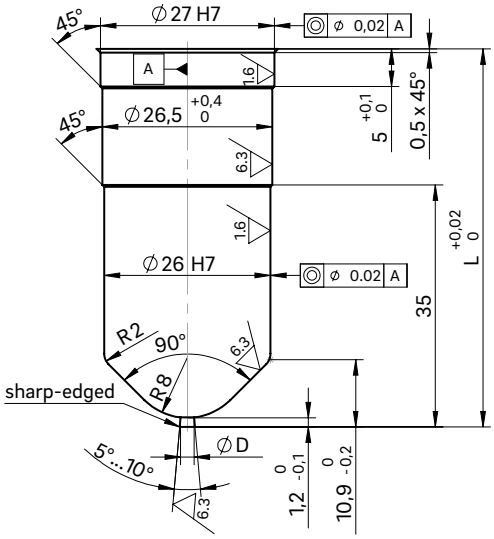




Example cutout for nozzle head, power and thermocouple plug connections



Open nozzle with straight outlet
Nozzle type version A
Antechamber version C



① Power plug connection in this area can only 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 clamping 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

Hot runner nozzle type 8SHF/8DHF

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

TECHNICAL DATA

8SHF/8DHF

Melt channel Ød	7.5 mm
Nozzle type	SHF – open with tip DHF – open with straight outlet
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

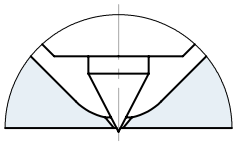
■ *available*

NOTE

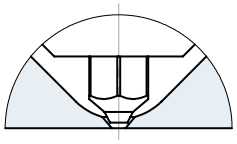
Power connector CHF and thermocouple connector CMLK are to be ordered separately.

WEBCODE
22055

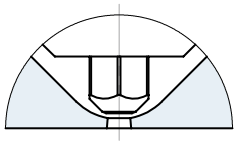
SHF – open nozzle with tip
version "Tip"
Antechamber version A



DHF – open nozzle with straight outlet
version C
Antechamber version A

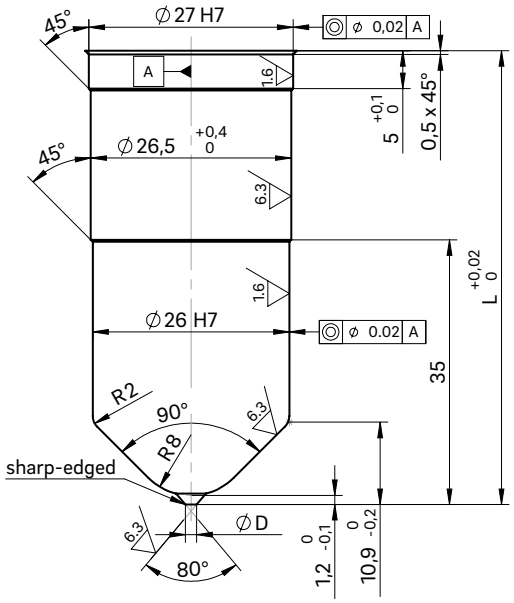


DHF – open nozzle with straight outlet
version A
Antechamber version C

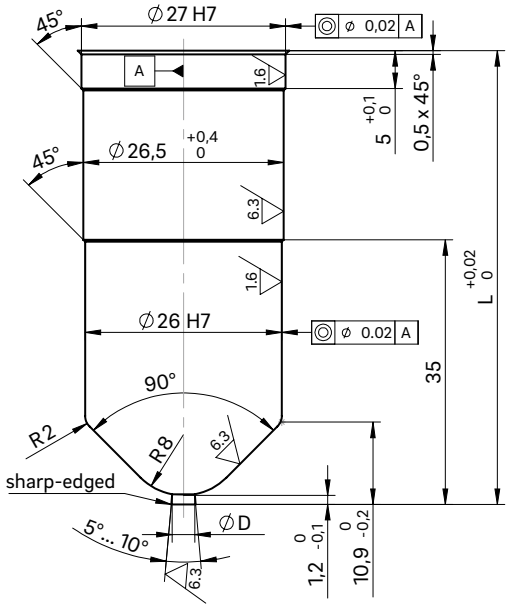


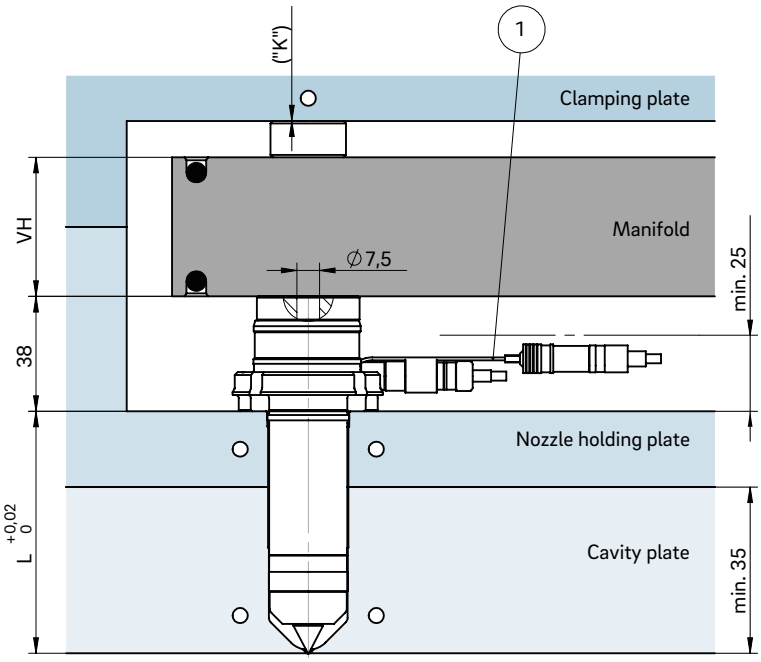
INSTALLATION

Open nozzle with tip
Nozzle type version C
Antechamber version A

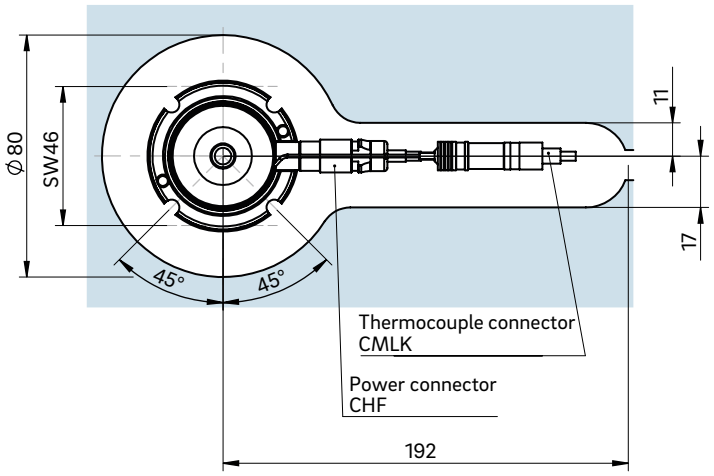


Open nozzle with straight outlet
Nozzle type version A
Antechamber version C





Example cutout for nozzle head, power and thermocouple plug connections



① Thermocouple plug connections in this area can only 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 clamping 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

Hot runner nozzle type 8SHT/8DHT

Open system nozzle with conventional heating element, screwed to the manifold

TECHNICAL DATA

8SHT/8DHT

Melt channel Ød	7.5 mm
Nozzle type	SHT – open with tip DHT – open with straight outlet
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

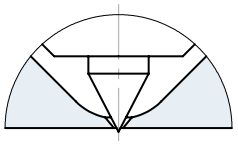
■ *available* □ *on request*

NOTE

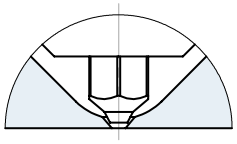
Power connector CMT and thermocouple connector CMLK are to be ordered separately.

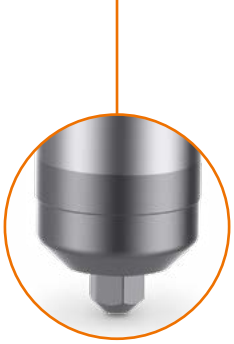
WEBCODE
22060

SHT – open nozzle with tip
version "Tip"
Antechamber version A

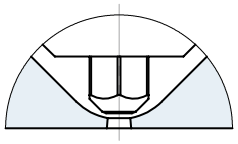


DHT – open nozzle with straight outlet
version C
Antechamber version A



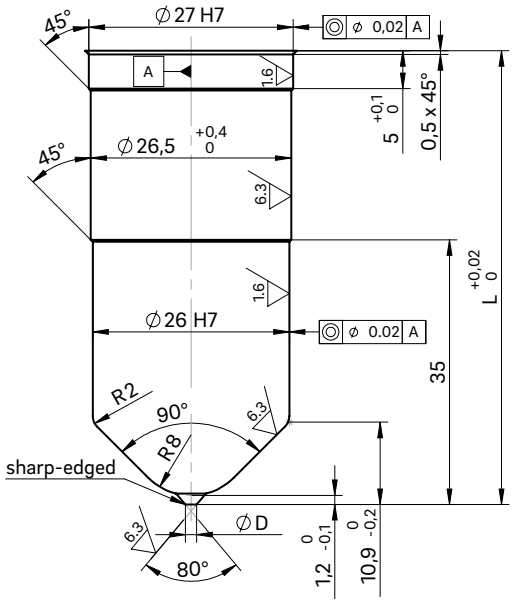


DHT – open nozzle with straight outlet
version A
Antechamber version C

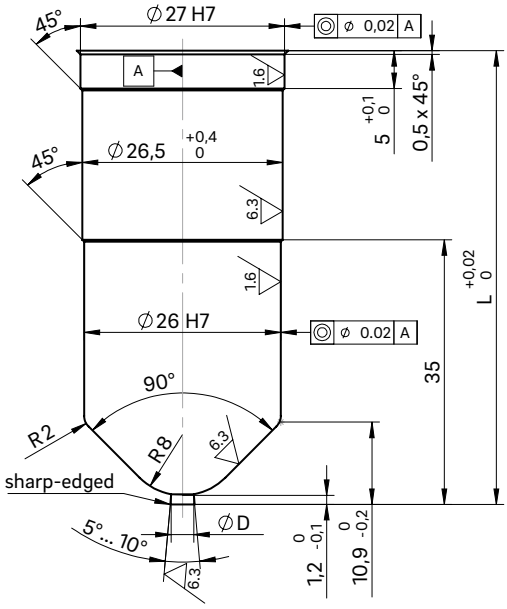


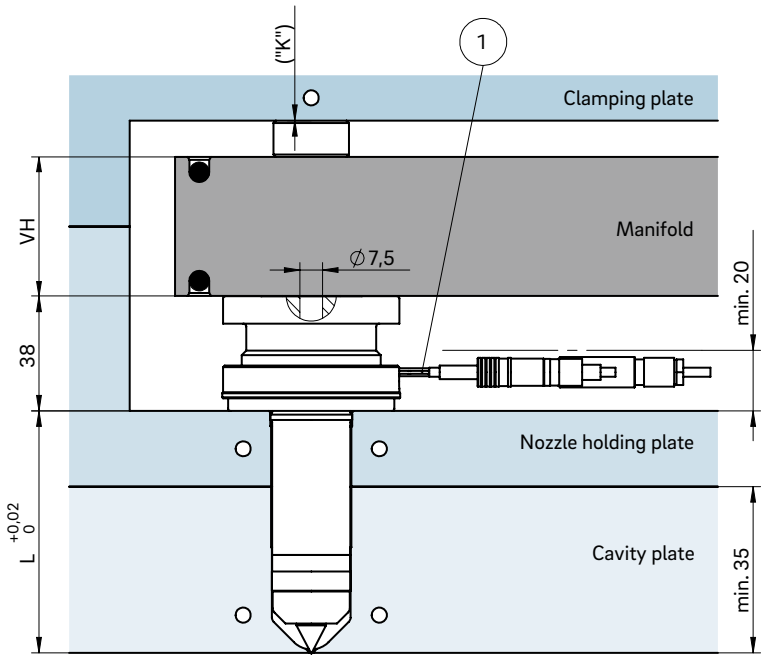
INSTALLATION

Open nozzle with tip
Nozzle type version C
Antechamber version A

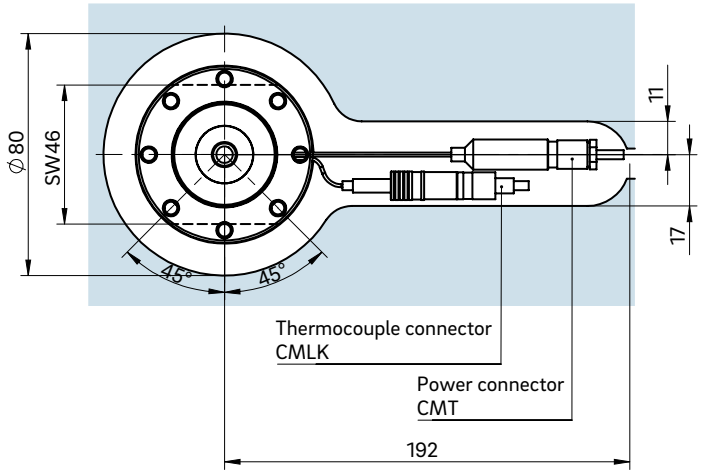


Open nozzle with straight outlet
Nozzle type version A
Antechamber version C





Example cutout for nozzle head, power and thermocouple plug connections



① Power and thermocouple plug connections in this area can only 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 clamping 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

Hot runner nozzle type 10SHT/10DHT

Open system nozzle with conventional heating element, screwed to the manifold

TECHNICAL DATA

10SHT/10DHT

Melt channel Ød	10.0 mm
Nozzle type	SHT – open with tip DHT – open with straight outlet
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

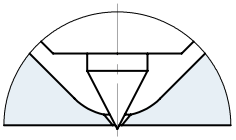
■ *available* □ *on request*

NOTE

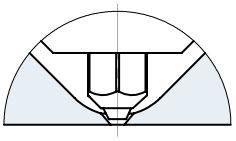
Power connector CMT and thermocouple connector CMLK are to be ordered separately.

WEBCODE
22070

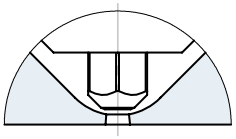
SHT – open nozzle with tip
version "Tip"
Antechamber version A



DHT – open nozzle with straight outlet
version C
Antechamber version A

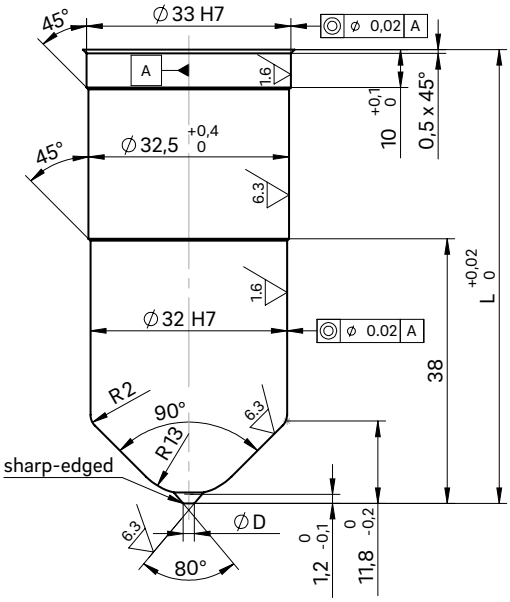


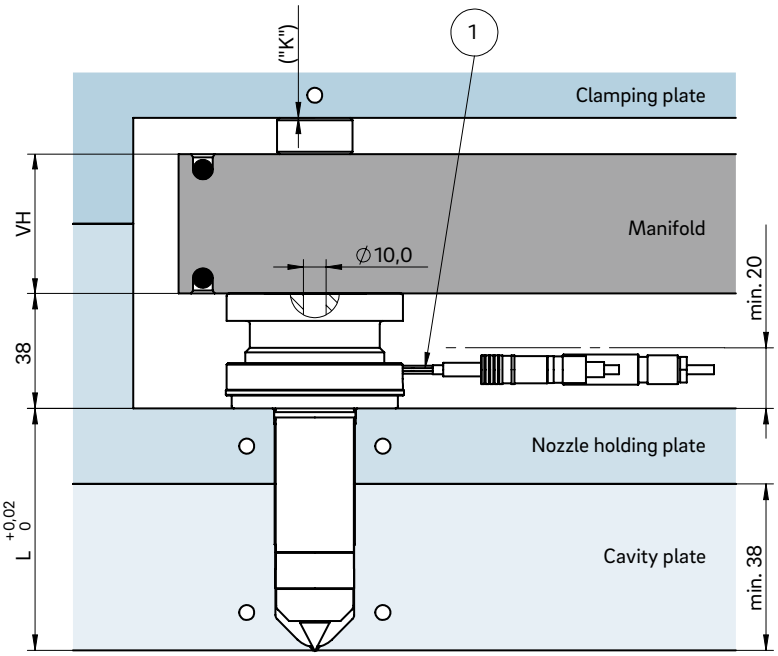
DHT – open nozzle with straight outlet
version A
Antechamber version C



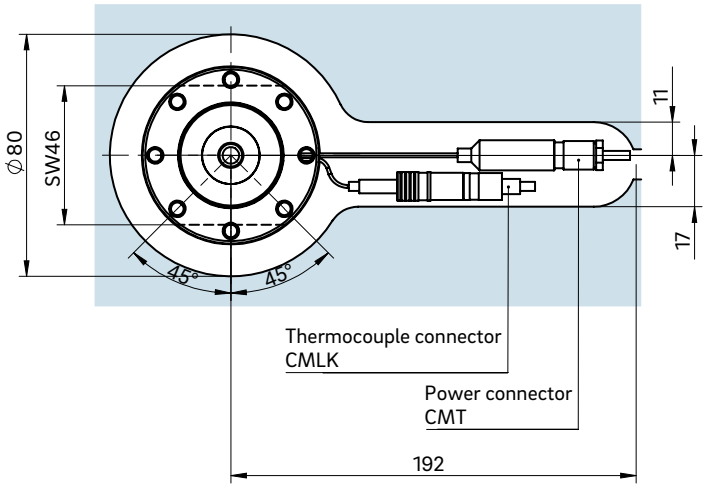
INSTALLATION

Open nozzle with tip
Nozzle type version C
Antechamber version A

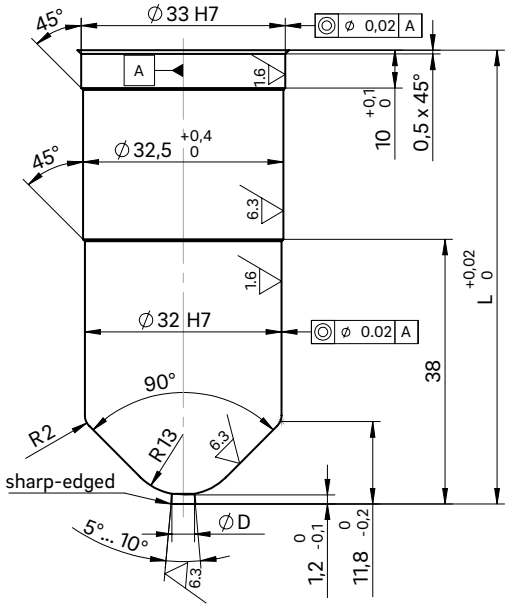




Example cutout for nozzle head, power and thermocouple plug connections



Open nozzle with straight outlet
Nozzle type version A
Antechamber version C



① Power and thermocouple plug connections in this area can only 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 clamping 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

Hot runner nozzle type 12SHT/12DHT

Open system nozzle with conventional heating element, screwed to the manifold

TECHNICAL DATA

12SHT/12DHT

Melt channel Ød	12.0 mm
Nozzle type	SHT – open with tip DHT – open with straight outlet
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!

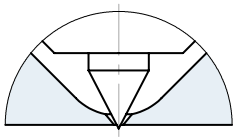
*Volts alternating current

■ *available* □ *on request*

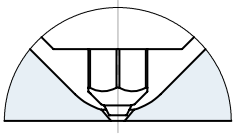
NOTE

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

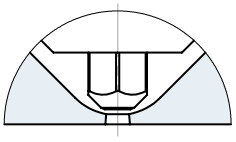
SHT – open nozzle with tip
version "Tip"
Antechamber version A



DHT – open nozzle with straight outlet
version C
Antechamber version A



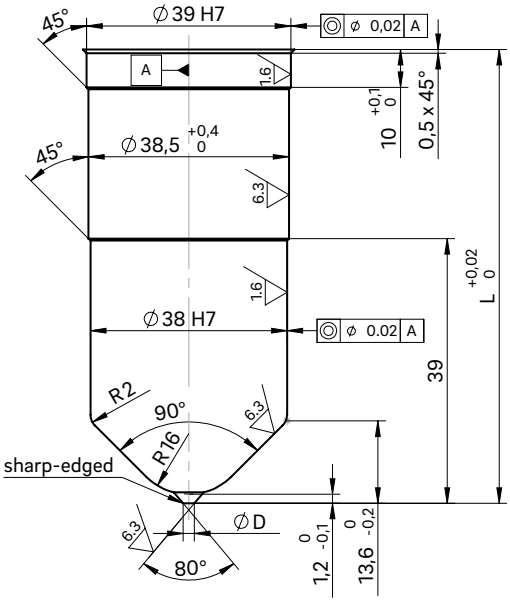
DHT – open nozzle with straight outlet
version A
Antechamber version C



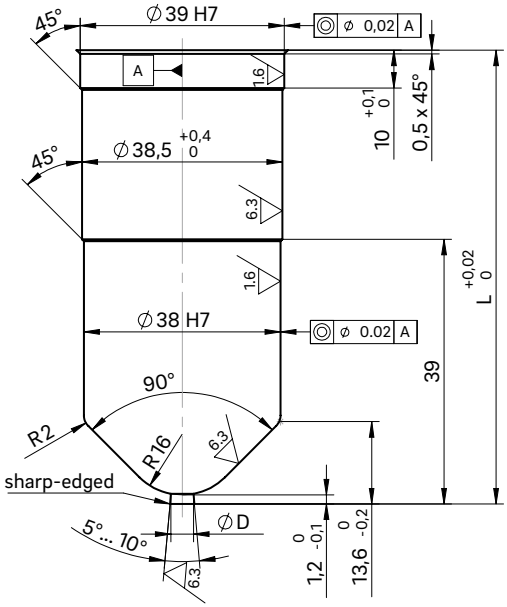
WEBCODE
22080

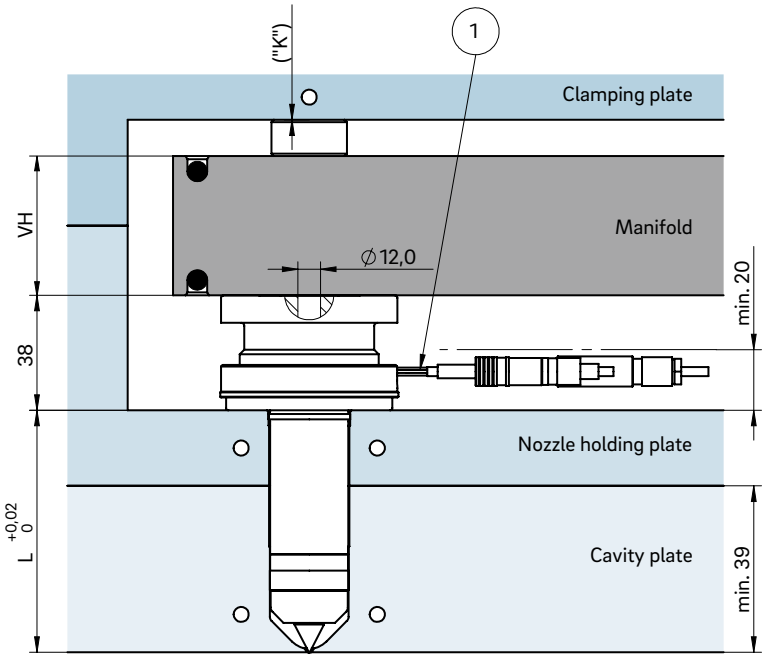
INSTALLATION

Open nozzle with tip
Nozzle type version C
Antechamber version A

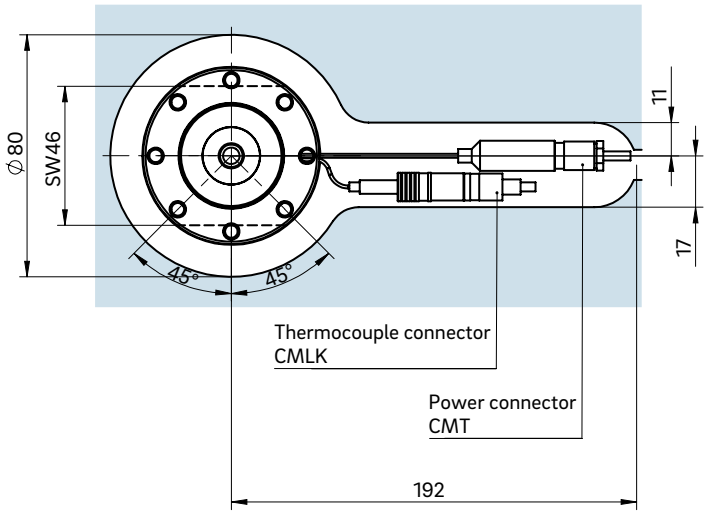


Open nozzle with straight outlet
Nozzle type version A
Antechamber version C





Example cutout for nozzle head, power and thermocouple plug connections



① Power and thermocouple plug connections in this area can only 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 clamping 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

Hot runner nozzle type 4SMT/4DMT

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

TECHNICAL DATA

4SMT/4DMT

Melt channel Ød	3.8 mm
Nozzle type	SMT – open with tip DMT – open with straight outlet
Operating voltage	230 V_{AC}*

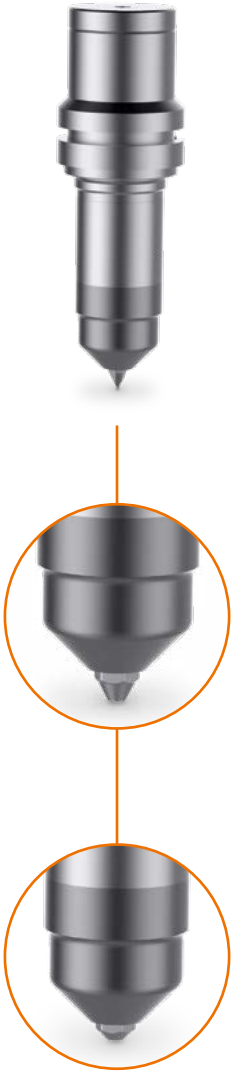
Nominal length of the nozzle (L) in mm

50	60	80	100
■	■	■	■

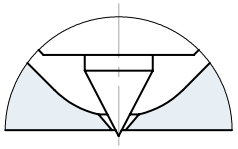
Contact us for other nozzle lengths!

*Volts alternating current

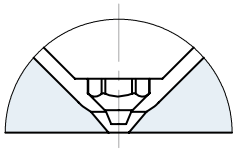
■ *available*



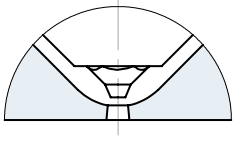
SMT – open nozzle with tip
version "Tip"
Antechamber version A



DMT – open nozzle with straight outlet
version C
Antechamber version A



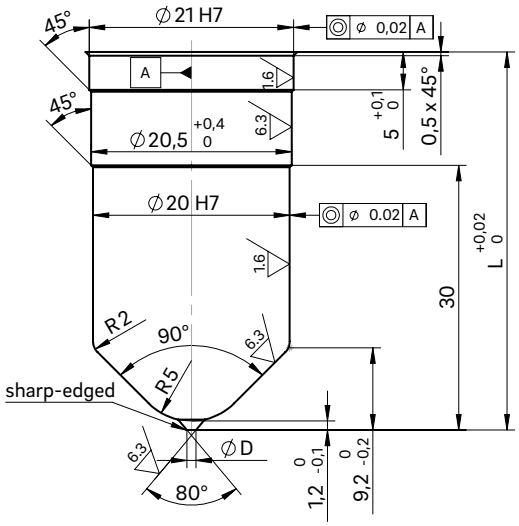
DMT – open nozzle with straight outlet
version A
Antechamber version C

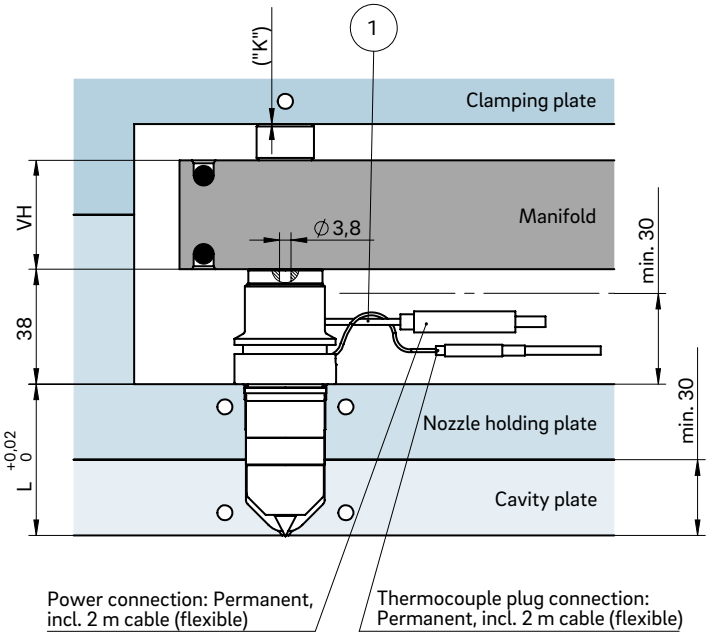


WEBCODE
22090

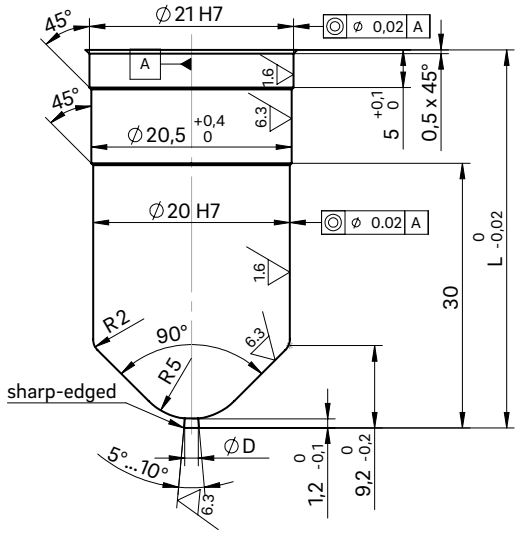
INSTALLATION

Open nozzle with tip
Nozzle type version C
Antechamber version A

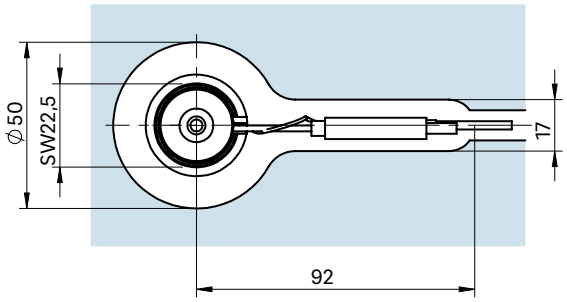




Open nozzle with straight outlet
Nozzle type version A
Antechamber version C



Example cutout for nozzle head, power and thermocouple plug connections



① Power and thermocouple plug connections in this area can only 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 clamping 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

Hot runner nozzle type 5SMT/5DMT

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

TECHNICAL DATA

5SMT/5DMT

Melt channel Ød	4.8 mm
Nozzle type	SMT – open with tip DMT – open with straight outlet
Operating voltage	230 V_{AC}*

Nominal length of the nozzle (L) in mm

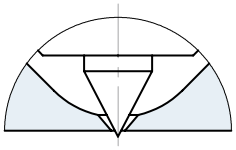
50	60	80	100	120	150
■	■	■	■	■	□

Contact us for other nozzle lengths!

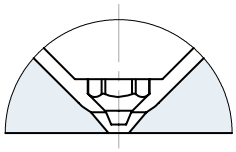
*Volts alternating current

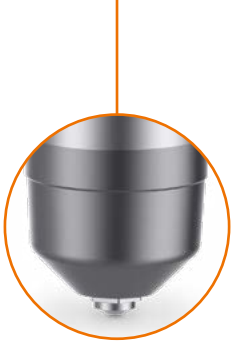
■ *available* □ *on request*

SMT – open nozzle with tip
version "Tip"
Antechamber version A

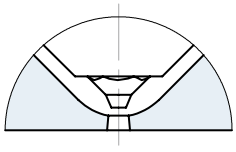


DMT – open nozzle with straight outlet
version C
Antechamber version A

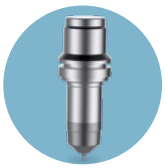




DMT – open nozzle with straight outlet
version A
Antechamber version C

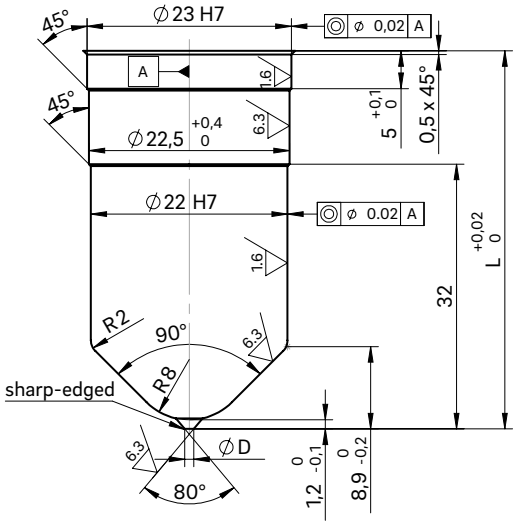


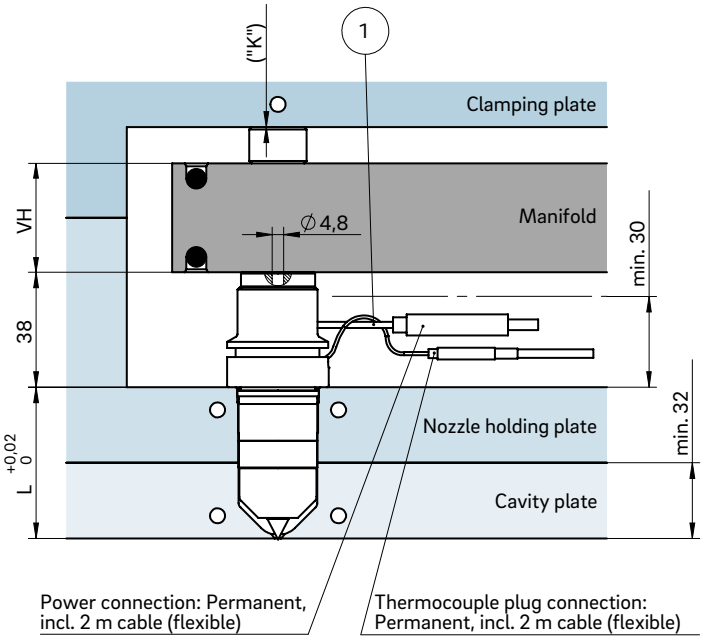
WEBCODE
22100



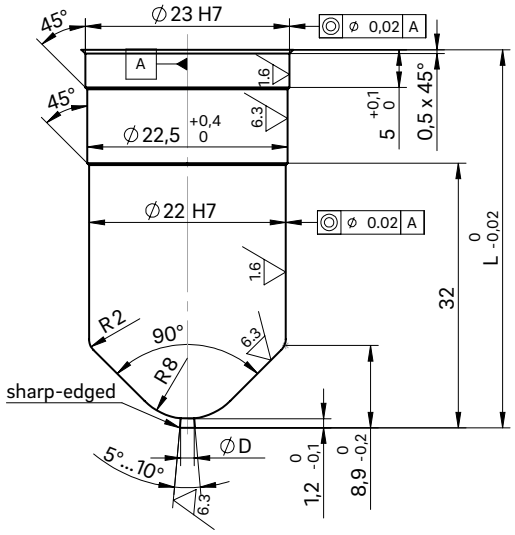
INSTALLATION

Open nozzle with tip
Nozzle type version C
Antechamber version A

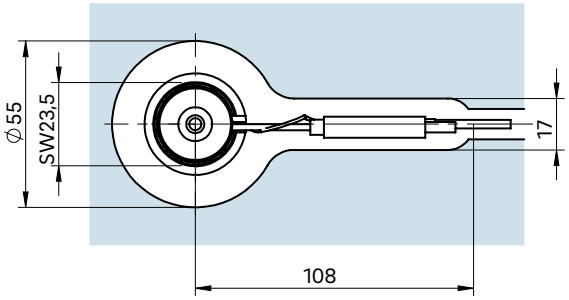




Open nozzle with straight outlet
Nozzle type version A
Antechamber version C



Example cutout for nozzle head, power and thermocouple plug connections



① Power and thermocouple plug connections in this area can only 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 clamping 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

Hot runner nozzle type 6SMT/6DMT

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

TECHNICAL DATA

6SMT/6DMT

Melt channel Ød	6.0 mm
Nozzle type	SMT – open with tip DMT – open with straight outlet
Operating voltage	230 V_{AC}*

Nominal length of the nozzle (L) in mm

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

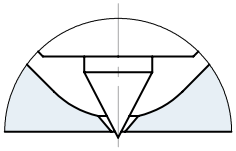
Contact us for other nozzle lengths!

*Volts alternating current

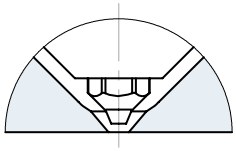
■ *available* □ *on request*

WEBCODE
22150

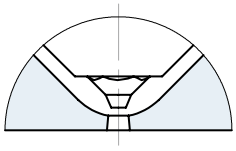
SMT – open nozzle with tip
version "Tip"
Antechamber version A



DMT – open nozzle with straight outlet
version C
Antechamber version A

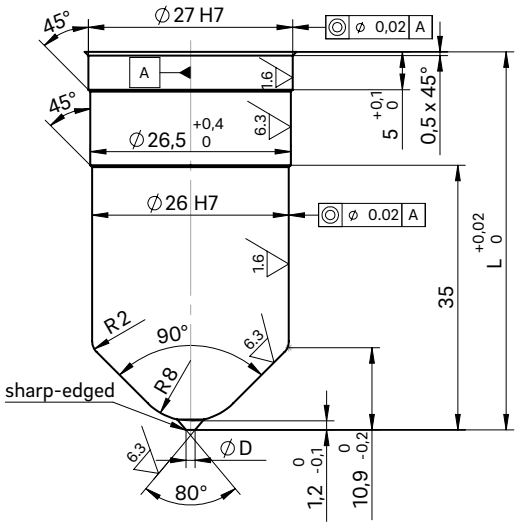


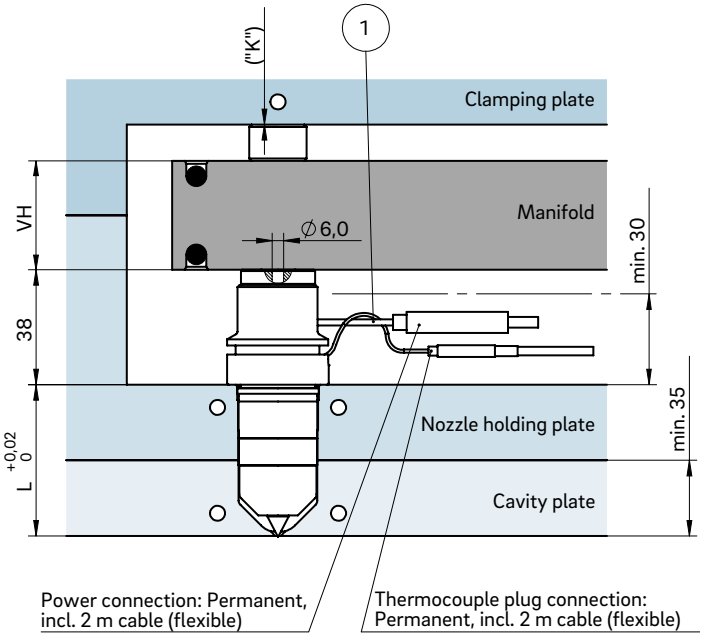
DMT – open nozzle with straight outlet
version A
Antechamber version C



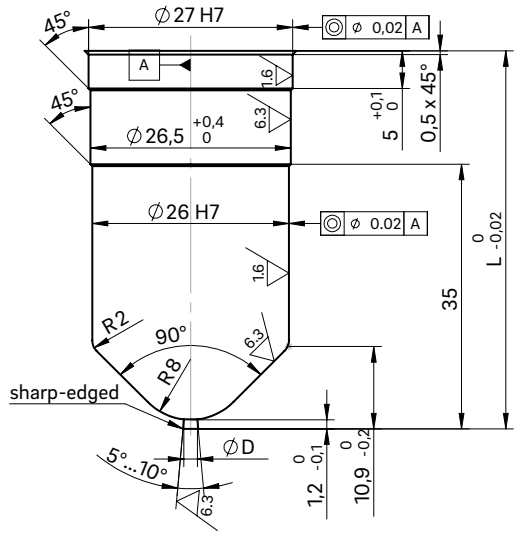
INSTALLATION

Open nozzle with tip
Nozzle type version C
Antechamber version A

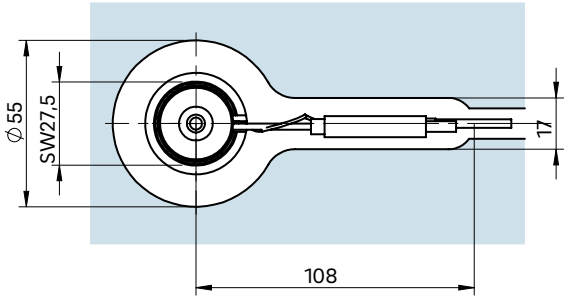




Open nozzle with straight outlet
Nozzle type version A
Antechamber version C



Example cutout for nozzle head, power and thermocouple plug connections



① Power and thermocouple plug connections in this area can only 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 clamping 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

Hot runner nozzle type 3SMF-K/3DMF-K

Open system nozzle with thick-film heating element (BlueFlow®), not screwed to the manifold

TECHNICAL DATA

3SMF-K/3DMF-K

Melt channel Ød	2.8 mm
Nozzle type	SMF – open with tip DMF – open with straight outlet
Operating voltage	230 V_{AC}*

Nominal length of the nozzle (L): 30 mm

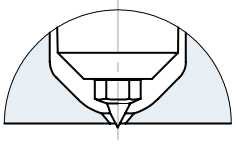
*Volts alternating current

NOTE

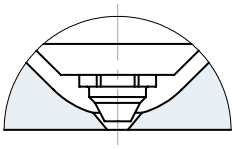
Can **also** be used laterally.

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

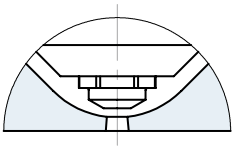
SMF – open nozzle with tip
version "Tip"
Antechamber version A



DMF – open nozzle with straight outlet
version C
Antechamber version A



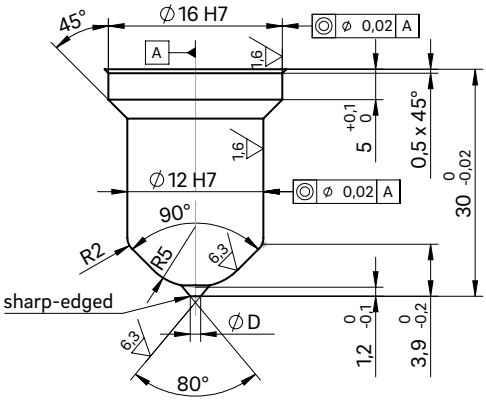
DMF – open nozzle with straight outlet
version A
Antechamber version C

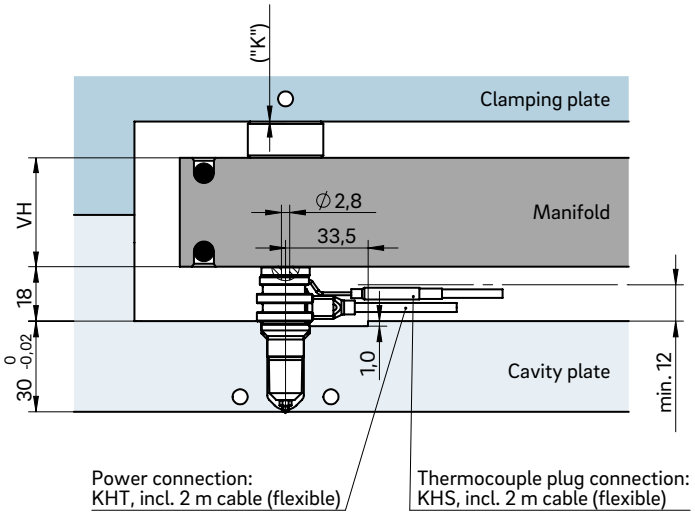


WEBCODE
22110

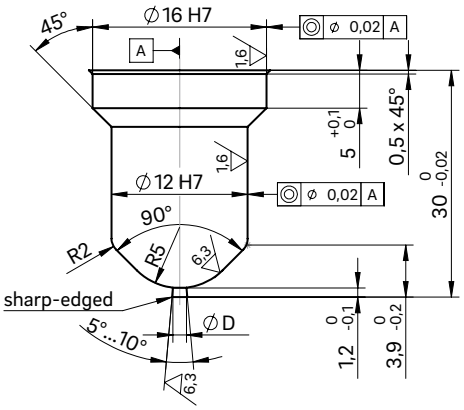
INSTALLATION

Open nozzle with tip
Nozzle type version C
Antechamber version A

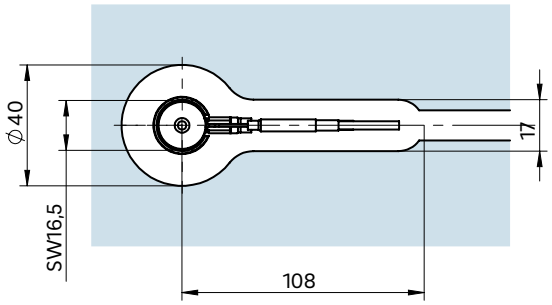




Open nozzle with straight outlet
Nozzle type version A
Antechamber version C



Example cutout for nozzle head, power and thermocouple plug connections



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 clamping 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

Hot runner nozzle type 5SMF-K/5DMF-K

Open system nozzle with thick-film heating element (BlueFlow®), not screwed to the manifold

TECHNICAL DATA

5SMF-K/5DMF-K

Melt channel Ød	4.8 mm
Nozzle type	SMF – open with tip DMF – open with straight outlet
Operating voltage	230 V_{AC}*

Nominal length of the nozzle (L): 30 mm

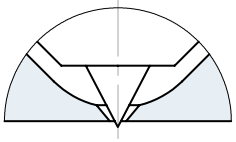
*Volts alternating current

NOTE

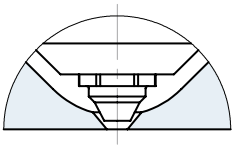
Can **also** be used laterally.

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

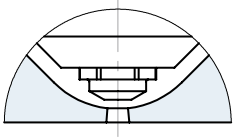
SMF – open nozzle with tip
version "Tip"
Antechamber version A



DMF – open nozzle with straight outlet
version C
Antechamber version A



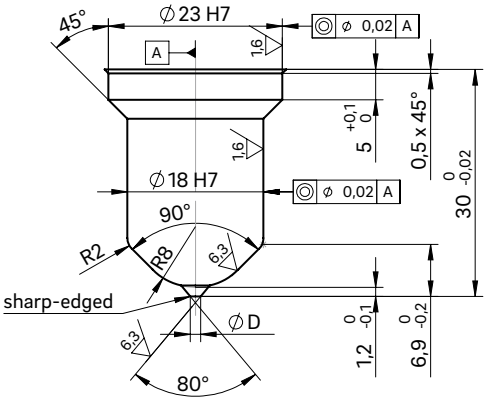
DMF – open nozzle with straight outlet
version A
Antechamber version C

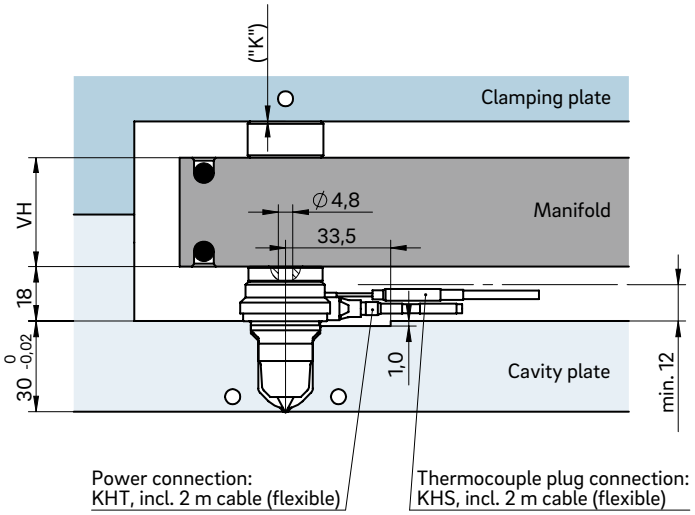


WEBCODE
22120

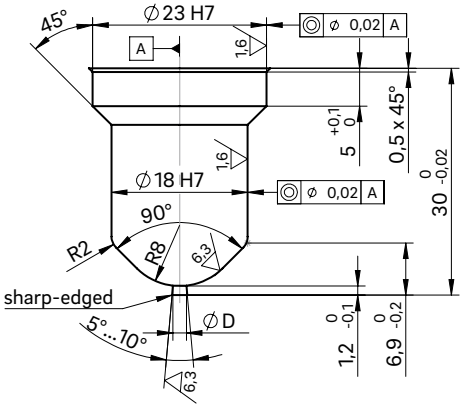
INSTALLATION

Open nozzle with tip
Nozzle type version C
Antechamber version A

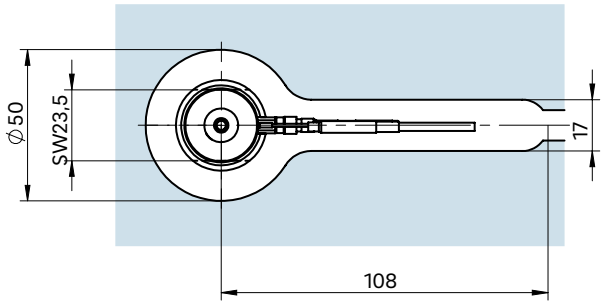




Open nozzle with straight outlet
Nozzle type version A
Antechamber version C



Example cutout for nozzle head, power and thermocouple plug connections



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 clamping 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

Hot runner nozzle type 8SMF-K/8DMF-K

Open system nozzle with thick-film heating element (BlueFlow®), not screwed to the manifold

TECHNICAL DATA

8SMF-K/8DMF-K

Melt channel Ød	7.5 mm
Nozzle type	SMF – open with tip DMF – open with straight outlet
Operating voltage	230 V_{AC}*

Nominal length of the nozzle (L): 30 mm

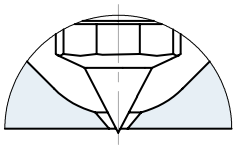
*Volts alternating current

NOTE

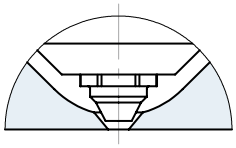
Can **also** be used laterally.

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

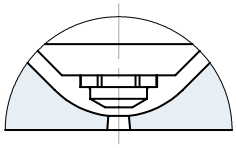
SMF – open nozzle with tip
version "Tip"
Antechamber version A



DMF – open nozzle with straight outlet
version C
Antechamber version A



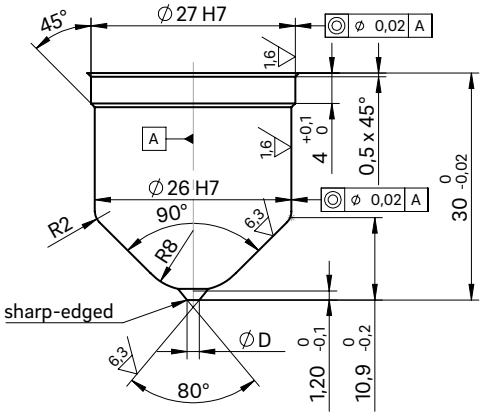
DMF – open nozzle with straight outlet
version A
Antechamber version C

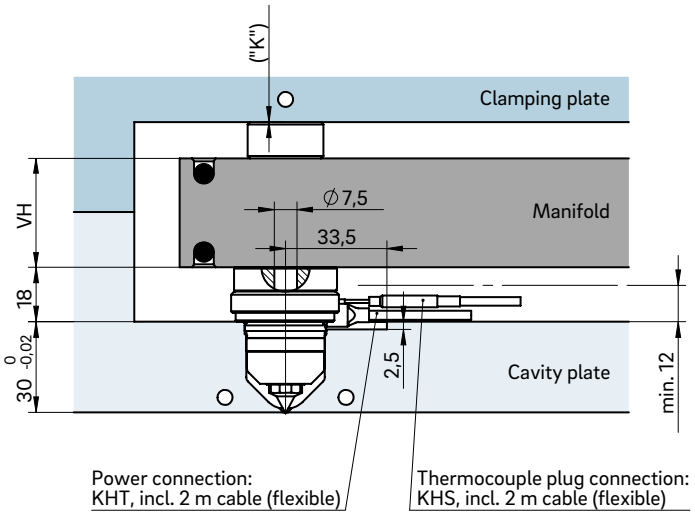


WEBCODE
22130

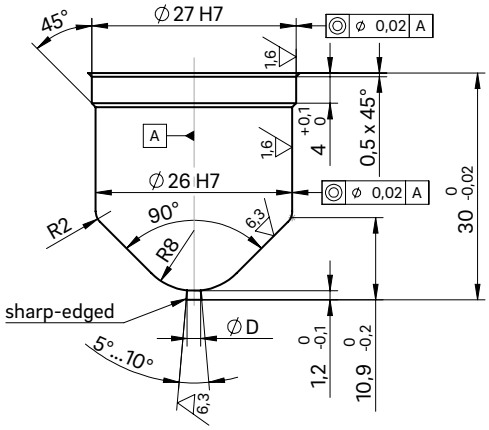
INSTALLATION

Open nozzle with tip
Nozzle type version C
Antechamber version A

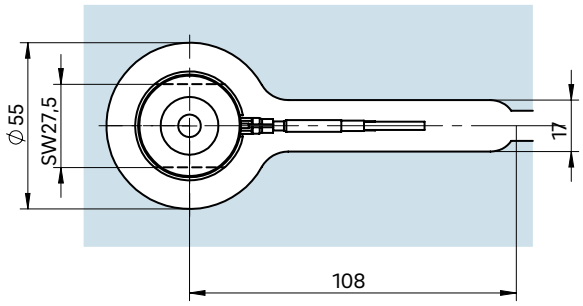




Open nozzle with straight outlet
Nozzle type version A
Antechamber version C



Example cutout for nozzle head, power and thermocouple plug connections



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 clamping 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

Hot runner nozzle type 5SMT-K/5DMT-K

Open system nozzle with conventional heating element, not screwed to the manifold

TECHNICAL DATA

5SMT-K/5DMT-K

Melt channel Ød	4.8 mm
Nozzle type	SMT – open with tip DMT – open with straight outlet
Operating voltage	230 V_{AC}*

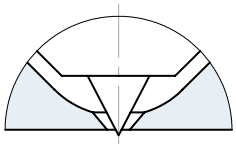
Nominal length of the nozzle (L): 30 mm

*Volts alternating current

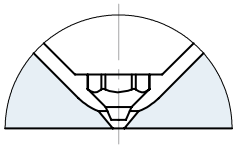
NOTE

Can **also** be used laterally.

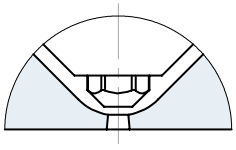
SMT – open nozzle with tip
version "Tip"
Antechamber version A



DMT – open nozzle with straight outlet
version C
Antechamber version A



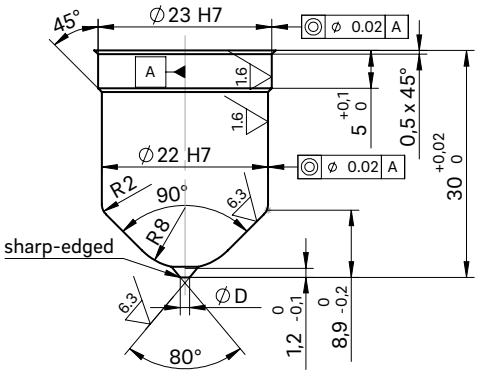
DMT – open nozzle with straight outlet
version A
Antechamber version C

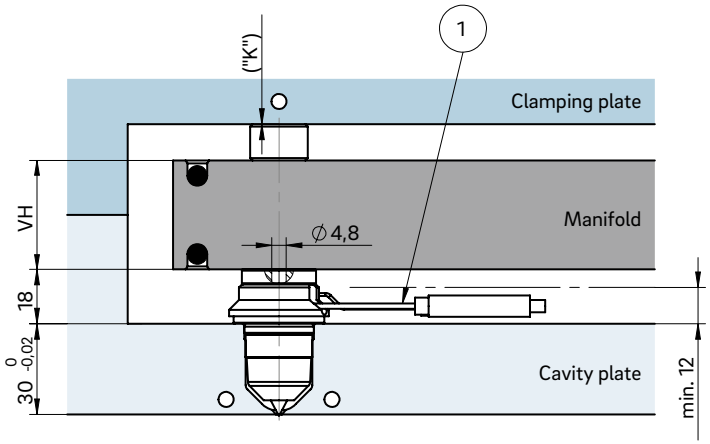


WEBCODE
22140

INSTALLATION

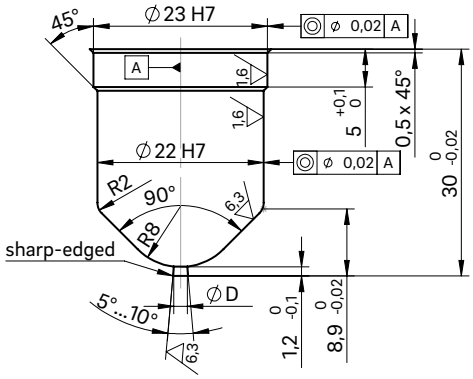
Open nozzle with tip
Nozzle type version C
Antechamber version A

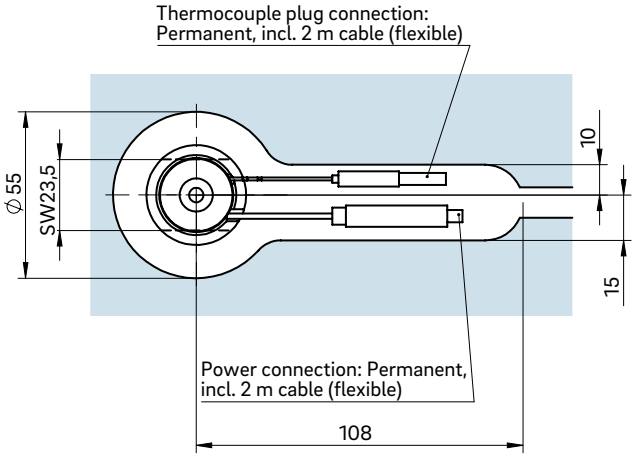




Example cutout for nozzle head, power and thermocouple plug connections

Open nozzle with straight outlet
Nozzle type version A
Antechamber version C





① Power and thermocouple plug connections in this area can only 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 clamping 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

Hot runner nozzle type 3STF/3DTF

Open system nozzle with thick-film heating element (BlueFlow®), front-loading

TECHNICAL DATA

3STF/3DTF

Melt channel Ød	2.8 mm
Nozzle type	STF – open with tip DTF – open with straight outlet
Operating voltage	230 V_{AC}*

Nominal length of the nozzle (L) in mm

50	80	120
■	■	■

Contact us for other nozzle lengths!

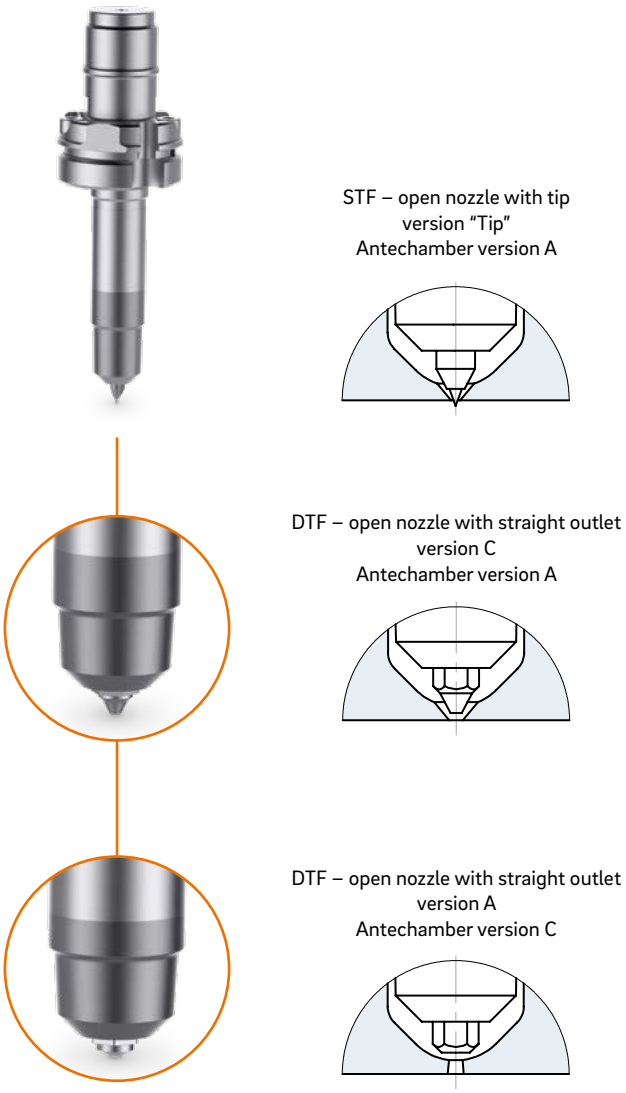
*Volts alternating current

■ *available*

NOTE

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

WEBCODE
22160



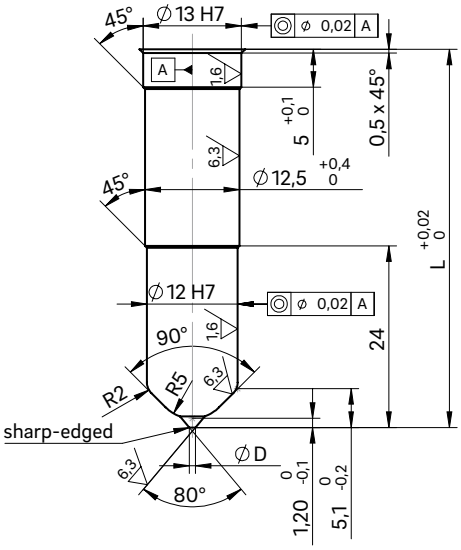
STF – open nozzle with tip
version "Tip"
Antechamber version A

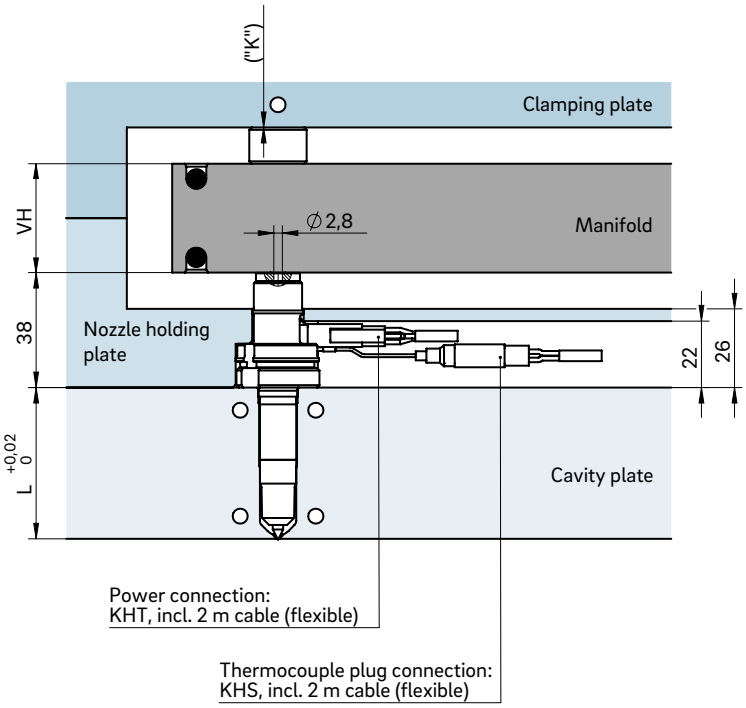
DTF – open nozzle with straight outlet
version C
Antechamber version A

DTF – open nozzle with straight outlet
version A
Antechamber version C

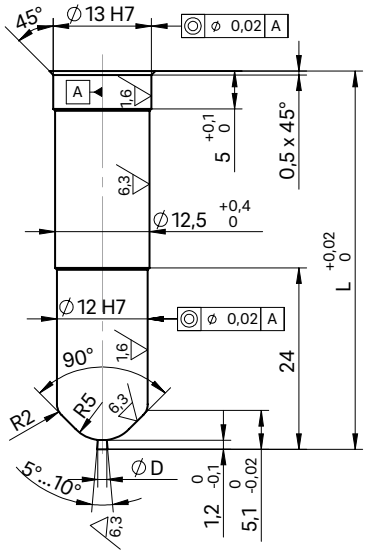
INSTALLATION

Open nozzle with tip
Nozzle type version C
Antechamber version A

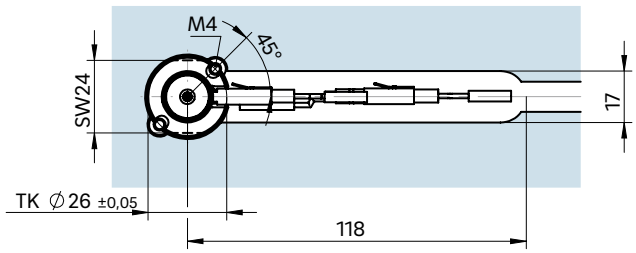


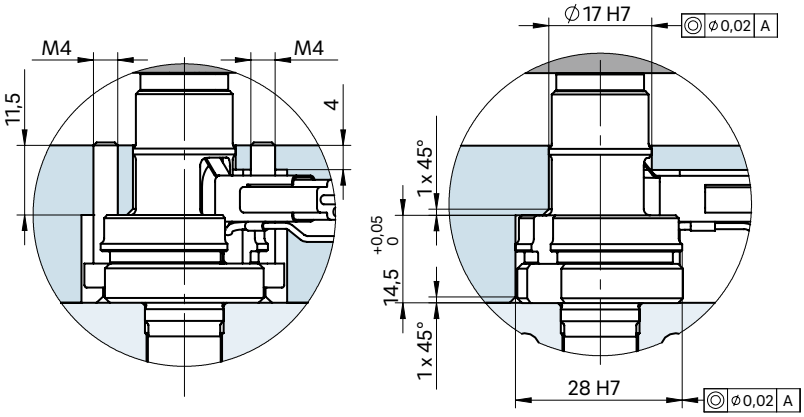


Open nozzle with tip
Nozzle type version C
Antechamber version A



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 clamping 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

SW = flat area on nozzle head

Hot runner nozzle type 4STT/4DTT

Open system nozzle with conventional heating element, front-loading

TECHNICAL DATA

4STT/4DTT

Melt channel Ød	3.8 mm
Nozzle type	STT – open with tip DTT – open with straight outlet
Operating voltage	230 V_{AC}*

Nominal length of the nozzle (L) in mm

50	60	80
■	■	■

Contact us for other nozzle lengths!

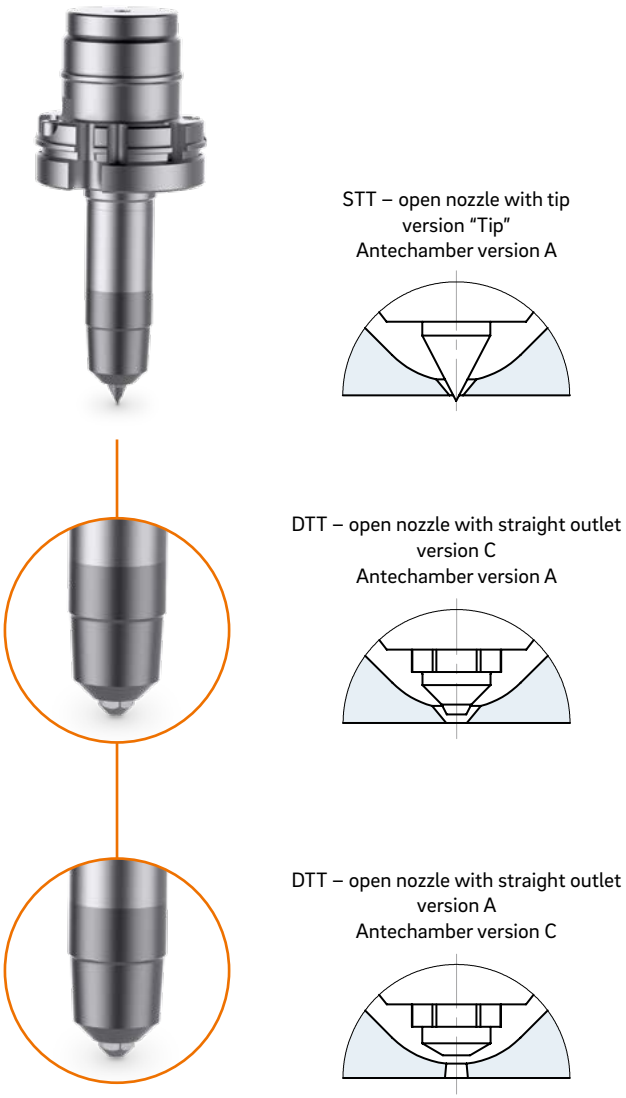
*Volts alternating current

■ *available*

NOTE

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

WEBCODE
22180



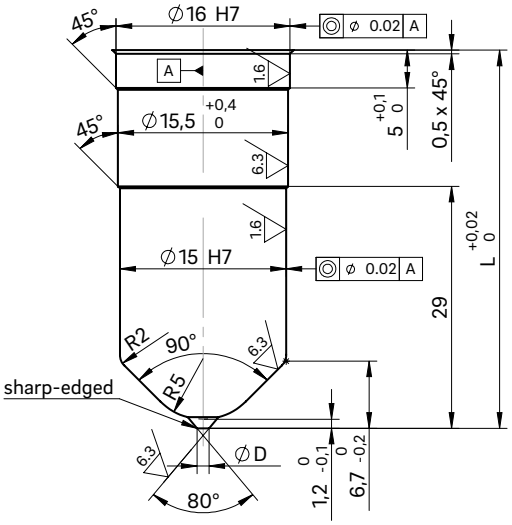
STT – open nozzle with tip
version "Tip"
Antechamber version A

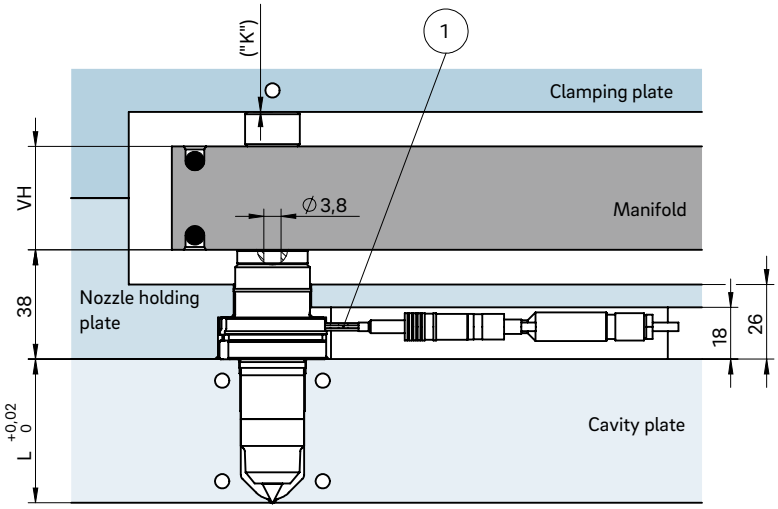
DTT – open nozzle with straight outlet
version C
Antechamber version A

DTT – open nozzle with straight outlet
version A
Antechamber version C

INSTALLATION

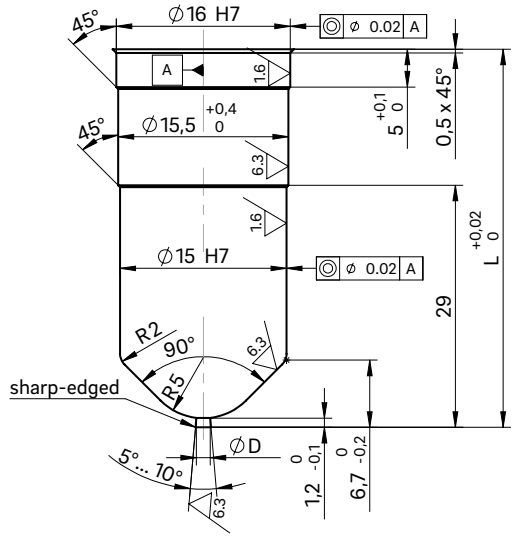
Open nozzle with tip
Nozzle type version C
Antechamber version A

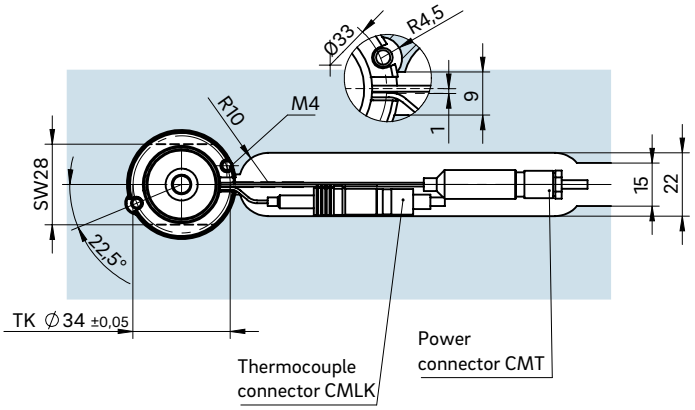


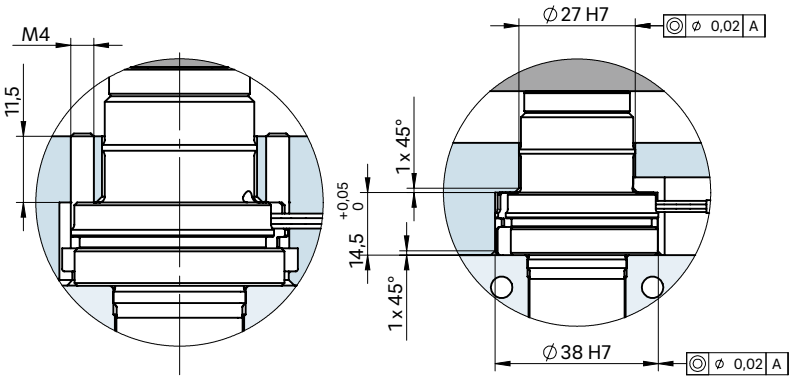


Example cutout for nozzle head, power and thermocouple plug connections

Open nozzle with straight outlet
Nozzle type version A
Antechamber version C







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 clamping 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 only be bent once; minimum radius: R8
SW = flat area on nozzle head

Hot runner nozzle type 5STT/5DTT

Open system nozzle with conventional heating element, front-loading

TECHNICAL DATA

5STT/5DTT

Melt channel Ød	4.8 mm
Nozzle type	STT – open with tip DTT – open with straight outlet
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

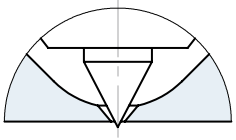
■ *available*

NOTE

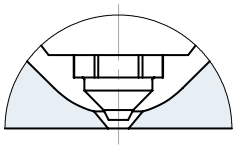
Power connector CMT and thermocouple connector CMLK are to be ordered separately.

WEBCODE
22190

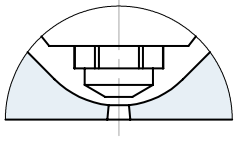
STT – open nozzle with tip
version "Tip"
Antechamber version A



DTT – open nozzle with straight outlet
version C
Antechamber version A

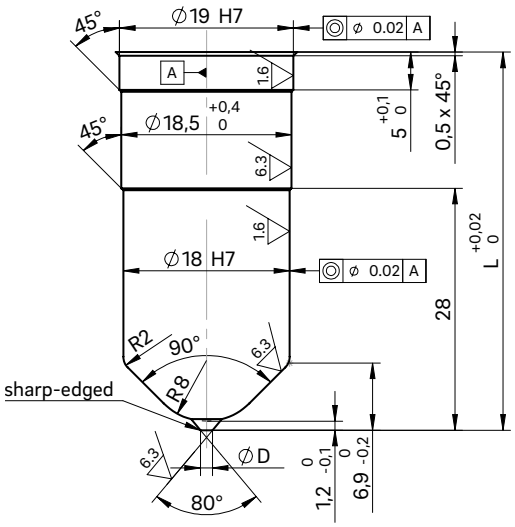


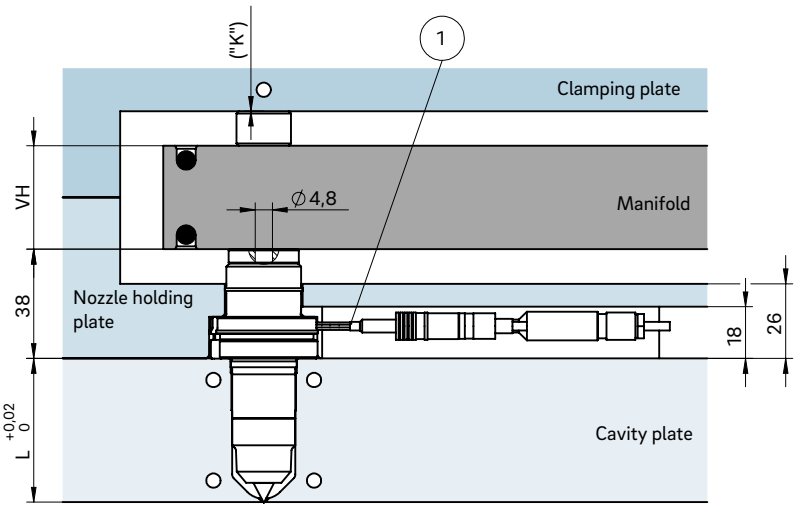
DTT – open nozzle with straight outlet
version A
Antechamber version C



INSTALLATION

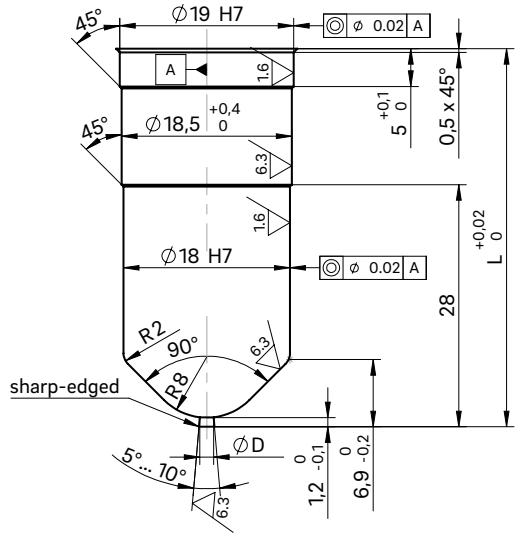
Open nozzle with tip
Nozzle type version C
Antechamber version A

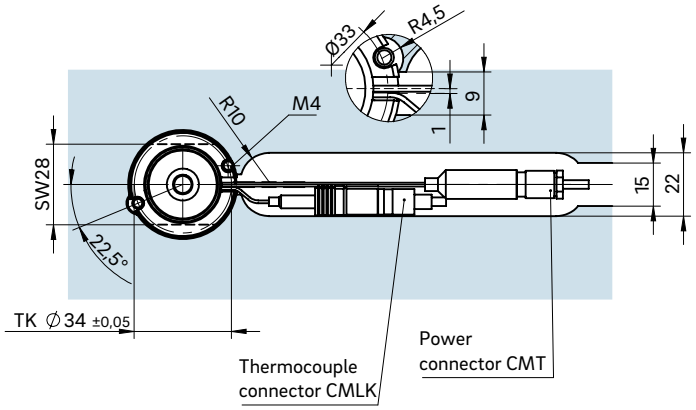


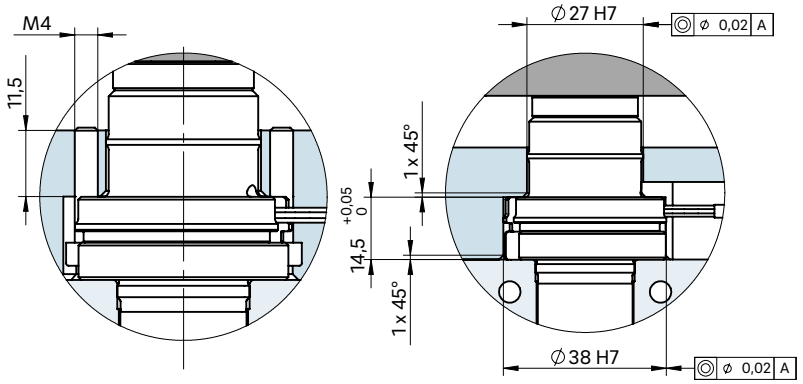


Example cutout for nozzle head, power and thermocouple plug connections

Open nozzle with straight outlet
Nozzle type version A
Antechamber version C







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 clamping 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 only be bent once; minimum radius: R8
SW = flat area on nozzle head

Hot runner nozzle type 6STT/6DTT

Open system nozzle with conventional heating element, front-loading

TECHNICAL DATA

6STT/6DTT

Melt channel Ød	6.0 mm
Nozzle type	STT – open with tip DTT – open with straight outlet
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

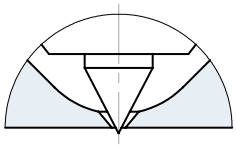
■ *available*

NOTE

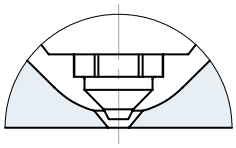
Power connector CMT and thermocouple connector CMLK are to be ordered separately.

WEBCODE
22200

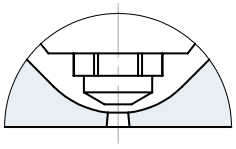
STT – open nozzle with tip
"Tip" version
Antechamber version A



DTT – open nozzle with straight outlet
version C
Antechamber version A

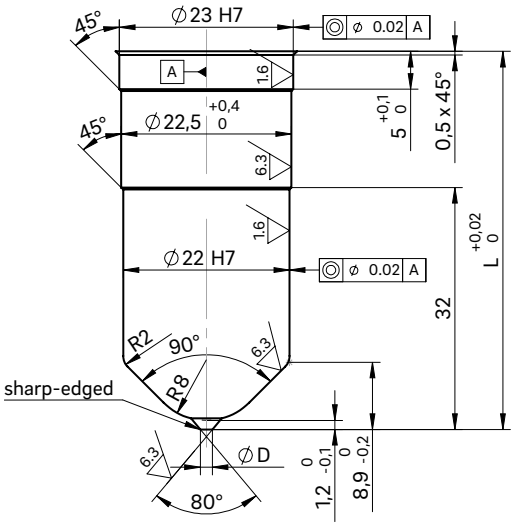


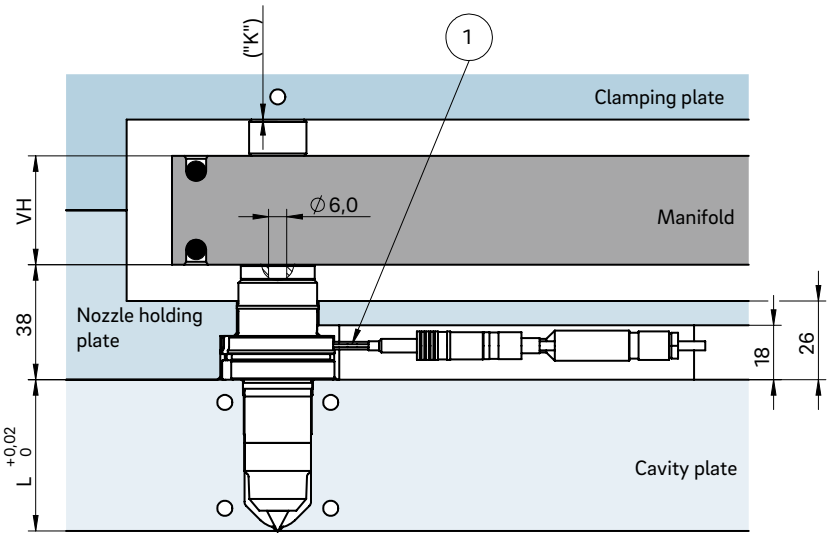
DTT – open nozzle with straight outlet
version A
Antechamber version C



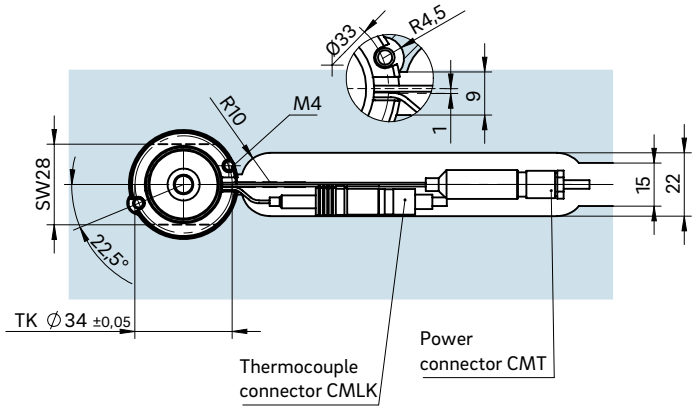
INSTALLATION

Open nozzle with tip
Nozzle type version C
Antechamber version A

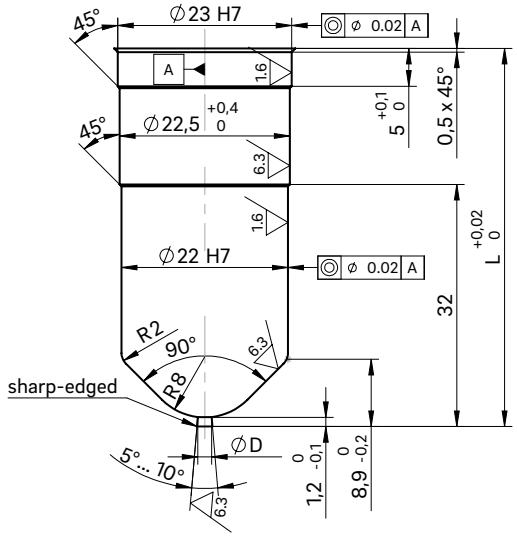


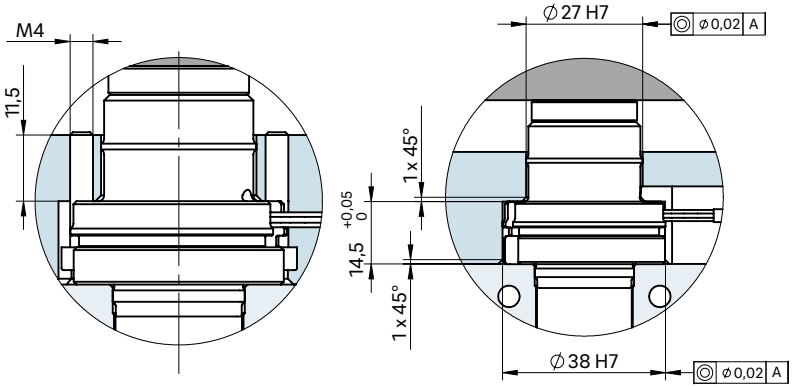


Example cutout for nozzle head, power and thermocouple plug connections



Open nozzle with straight outlet
Nozzle type version A
Antechamber version C





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 clamping plate when installed! ΔT specifies the temperature differential between the processing temperature and the mould temperature!

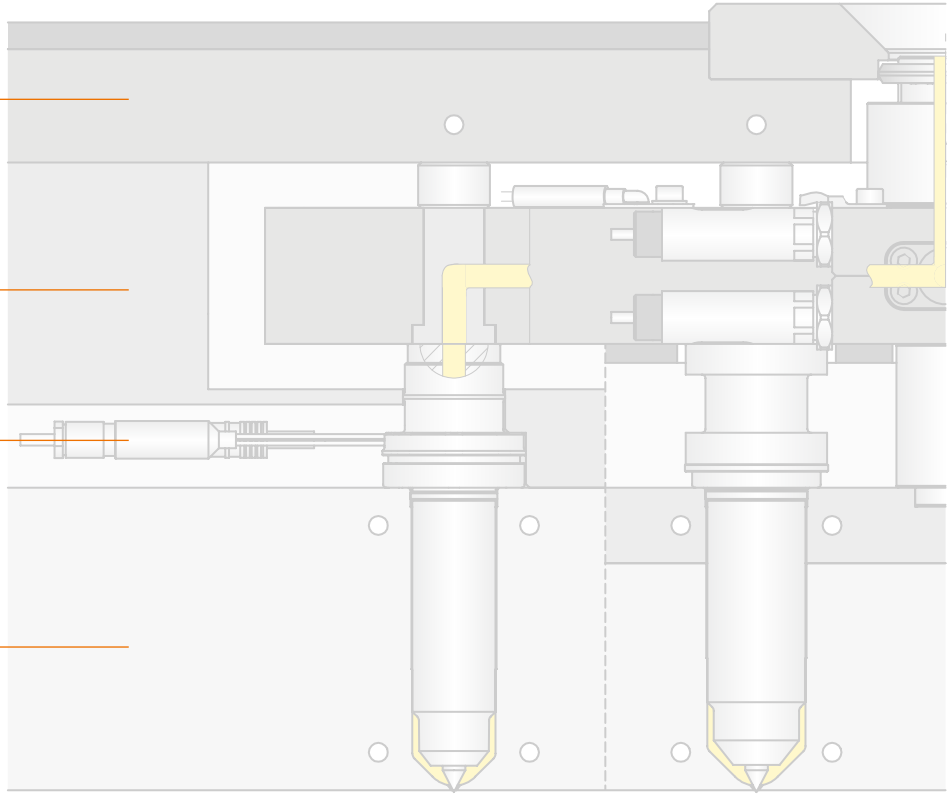
VH	ΔT (°C)	100	150	200	250	300	350
36 mm	K (mm)	0.021	0.059	0.098	0.137	0.177	0.217
46 mm	K (mm)	0.033	0.078	0.124	0.170	0.218	0.264
56 mm	K (mm)	0.046	0.097	0.150	0.203	0.258	0.311

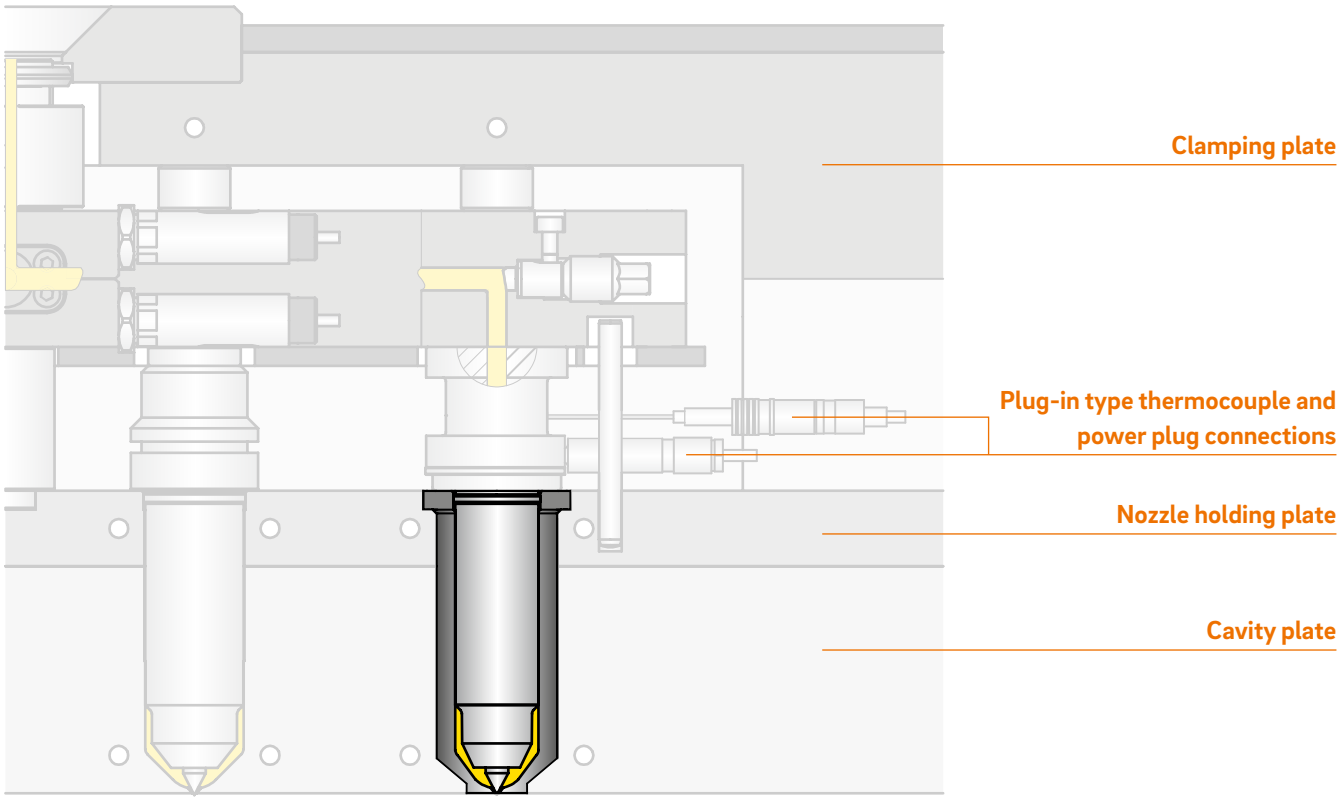
① Power and thermocouple plug connections in this area can only be bent once; minimum radius: R8
SW = flat area on nozzle head

2.3 Gate bushings

Overview of overall design

Gate bushings




Clamping plate
Plug-in type thermocouple and power plug connections
Nozzle holding plate
Cavity plate

Gate bushing type LA/LAV

Version LA with extended length and
version LAV with extended length and wear protection

TECHNICAL DATA

Dimensions

	Version (mm)						
	ØA	ØS	$ØT_1$	s	u	$ØA_1$	R
15LA	35	15	22	5	5	36	5
20LA	35	20	28	5	15	36	5
22LA/LAV	38	22	32	5	15	39	8
26LA/LAV	45	26	36	5	15	46[1, 2]	8
32LA/LAV	50	32	42	9	15	56	13
38LA/LAV	59	38	48	12	20	60	16

[1] *$ØA_1$ = 49 mm with nozzle type 8SET/8DET*

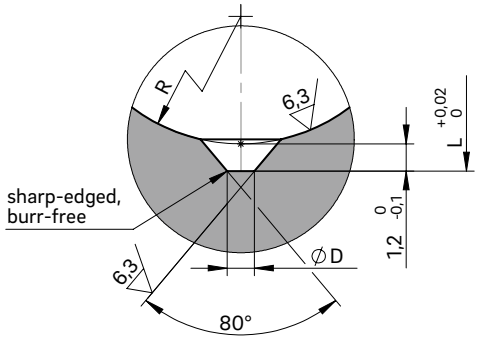
[2] *$ØA_1$ = 56 mm with nozzle type 8SHT*

NOTE

When using a gate bushing of size ØS = 26 mm, ØS = 32 mm or ØS = 38 mm in conjunction with nozzle types _ET and _HT, we recommend consulting with the engineers.

After eroding the gate bushing, it must be annealed to remove stress (1 hour at 470 °C).

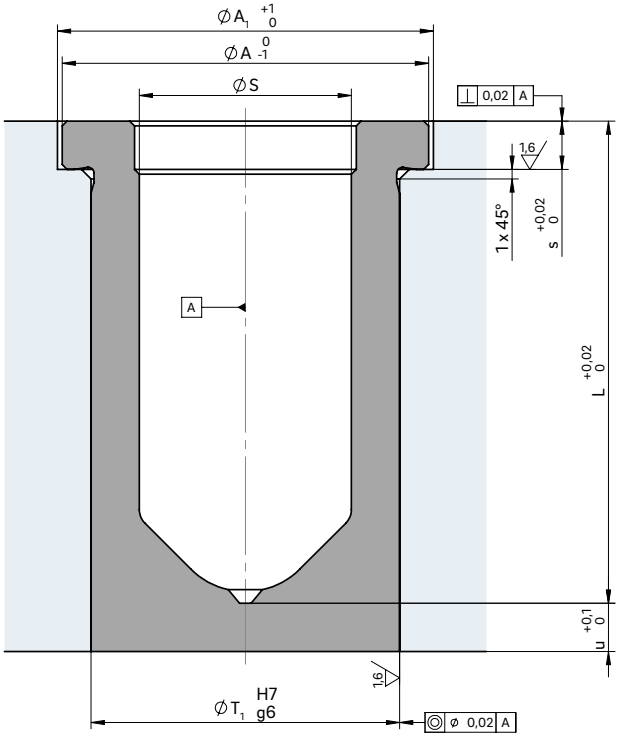
ANTECHAMBER VERSIONS A/B



For open nozzles with a tip/open nozzles with a straight outlet for antechamber versions A/B and nozzle piece C

WEBCODE
23010

GATE BUSHING INSTALLATION



For gate bushings with an extended length, the gate contour goes through dimension "L"

Nozzle type designation	Gate bushing type/length (mm)																			
	L = 50				L = 60				L = 80				L = 100				L = 120			
4SHF/4DHF	■	15LA			■	15LA			■	15LA										
4STT/4DTT	■	15LA			■	15LA			■	15LA										
4SMT/4DMT	■	20LA			■	20LA			■	20LA			■	20LA						
5SHT/5DHT	■	22LA	□	22LAV	■	22LA	□	22LAV	■	22LA	□	22LAV	■	22LA	□	22LAV				
5SMT/5DMT	■	22LA	□	22LAV	■	22LA	□	22LAV	■	22LA	□	22LAV	■	22LA	□	22LAV	■	22LA	□	22LAV
6SHF/6DHF	■	22LA	□	22LAV	■	22LA	□	22LAV	■	22LA	□	22LAV	■	22LA	□	22LAV	■	22LA	□	22LAV
6STT/6DTT	■	22LA	□	22LAV	■	22LA	□	22LAV	■	22LA	□	22LAV	■	22LA	□	22LAV	■	22LA	□	22LAV
6SHT/6DHT	■	26LA	□	26LAV	■	26LA	□	26LAV	■	26LA	□	26LAV	■	26LA	□	26LAV	■	26LA	□	26LAV
6SMT/6DMT	■	26LA	□	26LAV	■	26LA	□	26LAV	■	26LA	□	26LAV	■	26LA	□	26LAV	■	26LA	□	26LAV
8SET/8DET	■	26LA	□	26LAV	■	26LA	□	26LAV	■	26LA	□	26LAV	■	26LA	□	26LAV	■	26LA	□	26LAV
8SHF/8DHF	■	26LA	□	26LAV	■	26LA	□	26LAV	■	26LA	□	26LAV	■	26LA	□	26LAV	■	26LA	□	26LAV
8SHT/8DHT	■	26LA	□	26LAV	■	26LA	□	26LAV	■	26LA	□	26LAV	■	26LA	□	26LAV	■	26LA	□	26LAV
10SHT/10DHT					■	32LA	□	32LAV	■	32LA	□	32LAV	■	32LA	□	32LAV	■	32LA	□	32LAV
12SET/12DET					■	38LA	□	38LAV	■	38LA	□	38LAV	■	38LA	□	38LAV	■	38LA	□	38LAV
12SHT/12DHT					■	38LA	□	38LAV	■	38LA	□	38LAV	■	38LA	□	38LAV	■	38LA	□	38LAV

■ available □ on request

Gate bushing type LB

Version LB with extended length

TECHNICAL DATA

Dimensions

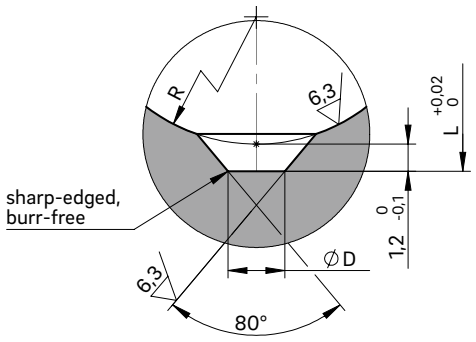
	Version (mm)						
	ØA	ØS	$ØT_1$	s	u	$ØA_1$	R
18LB	38	18	26	5	6	39[1]	8

[1] *$ØA_1$ = 43 mm with nozzle type 5SEF/5DEF*

NOTE

After eroding the gate bushing, it must be annealed to remove stress (1 hour at 470 °C).

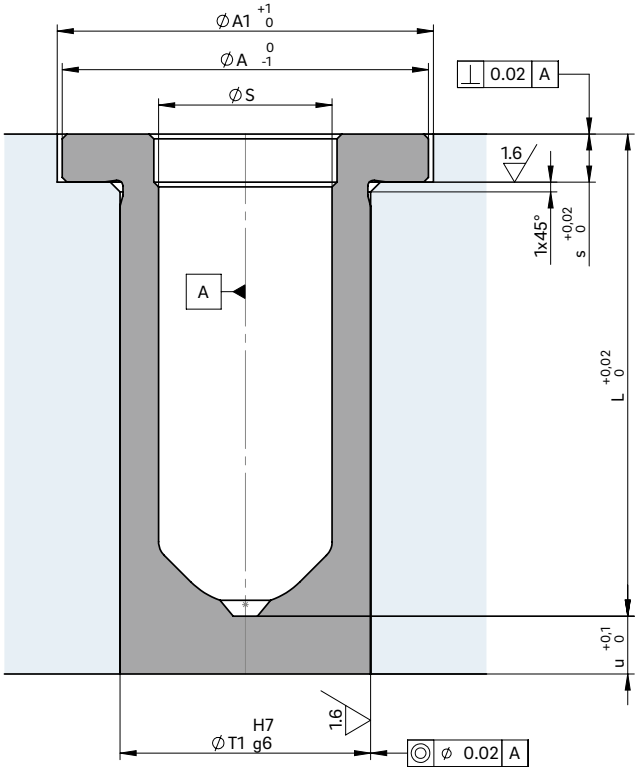
ANTECHAMBER VERSIONS A/B



For open nozzles with a tip/open nozzles with a straight outlet for antechamber versions A/B and nozzle piece C

WEBCODE
23020

GATE BUSHING INSTALLATION



For gate bushings with an extended length, the gate contour goes through dimension "L"

Nozzle type designation	Gate bushing type/length (mm)			
	L = 50	L = 60	L = 80	L = 100
5SEF/5DEF	■ 18LB	■ 18LB	■ 18LB	
5SHF/5DHF	■ 18LB	■ 18LB	■ 18LB	■ 18LB
5STT/5DTT	■ 18LB	■ 18LB	■ 18LB	■ 18LB

■ available

Gate bushing type LC/LCV

Version LC with extended length and
version LCV with extended length and wear protection

TECHNICAL DATA

Dimensions

	Version (mm)						
	ØA	ØS	$ØT_1$	s	u	$ØA_1$	R
15LC	35	15	22	5	5	36	5
20LC	35	20	28	5	15	36	5
22LC/LCV	38	22	32	5	15	39	8
26LC/LCV	45	26	36	5	15	46[1, 2]	8
32LC/LCV	50	32	42	9	15	56	13
38LC/LCV	59	38	48	12	20	60	16

[1] *$ØA_1$ = 49 mm with nozzle type 8DET*

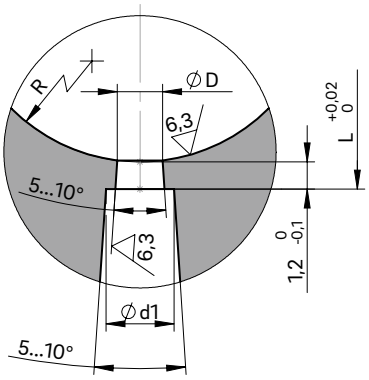
[2] *$ØA_1$ = 56 mm with nozzle type 8DHT*

NOTE

When using a gate bushing of size ØS = 26 mm, ØS = 32 mm or ØS = 38 mm in conjunction with nozzle types _ET and _HT, we recommend consulting with the engineers.

After eroding the gate bushing, it must be annealed to remove stress (1 hour at 470 °C).

ANTECHAMBER VERSIONS C AND D

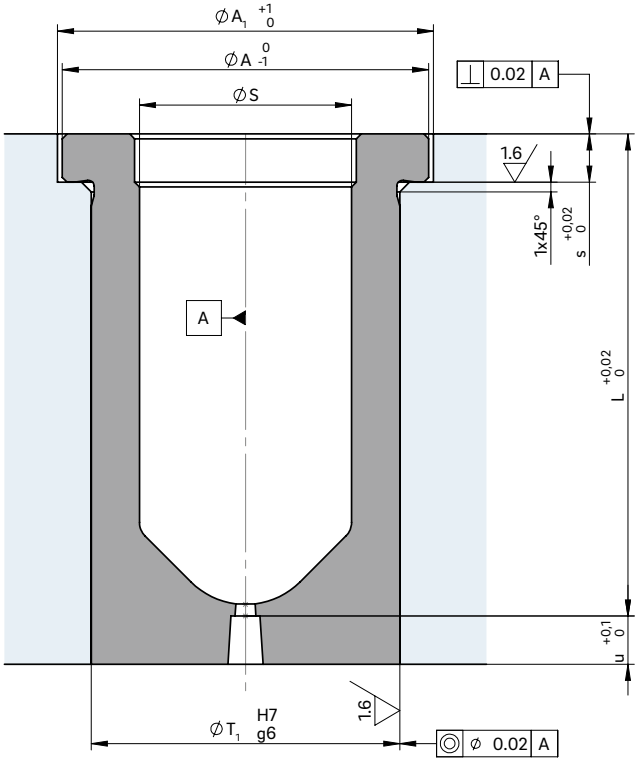


Ød1 0.5 mm larger than ØD

For open nozzles with a straight outlet for antechamber version C and D and nozzle piece A

WEBCODE
23030

GATE BUSHING INSTALLATION



For gate bushings with an extended length, the gate contour goes through dimension "L"

Nozzle type designation	Gate bushing type/length (mm)																			
	L = 50				L = 60				L = 80				L = 100				L = 120			
4DHF	■	15LC			■	15LC			■	15LC										
4DTT	■	15LC			■	15LC			■	15LC										
4DMT	■	20LC			■	20LC			■	20LC			■	20LC						
5DHT	■	22LC	□	22LCV	■	22LC	□	22LCV	■	22LC	□	22LCV	■	22LC	□	22LCV				
5DMT	■	22LC	□	22LCV	■	22LC	□	22LCV	■	22LC	□	22LCV	■	22LC	□	22LCV	■	22LC	□	22LCV
6DHF	■	22LC	□	22LCV	■	22LC	□	22LCV	■	22LC	□	22LCV	■	22LC	□	22LCV	■	22LC	□	22LCV
6DTT	■	22LC	□	22LCV	■	22LC	□	22LCV	■	22LC	□	22LCV	■	22LC	□	22LCV	■	22LC	□	22LCV
6DHT	■	26LC	□	26LCV	■	26LC	□	26LCV	■	26LC	□	26LCV	■	26LC	□	26LCV	■	26LC	□	26LCV
6DMT	■	26LC	□	26LCV	■	26LC	□	26LCV	■	26LC	□	26LCV	■	26LC	□	26LCV	■	26LC	□	26LCV
8DET	■	26LC	□	26LCV	■	26LC	□	26LCV	■	26LC	□	26LCV	■	26LC	□	26LCV	■	26LC	□	26LCV
8DHF	■	26LC	□	26LCV	■	26LC	□	26LCV	■	26LC	□	26LCV	■	26LC	□	26LCV	■	26LC	□	26LCV
8DHT	■	26LC	□	26LCV	■	26LC	□	26LCV	■	26LC	□	26LCV	■	26LC	□	26LCV	■	26LC	□	26LCV
10DHT					■	32LC	□	32LCV	■	32LC	□	32LCV	■	32LC	□	32LCV	■	32LC	□	32LCV
12DET					■	38LC	□	38LCV	■	38LC	□	38LCV	■	38LC	□	38LCV	■	38LC	□	38LCV
12DHT					■	38LC	□	38LCV	■	38LC	□	38LCV	■	38LC	□	38LCV	■	38LC	□	38LCV

■ available □ on request

Gate bushing type LD

Version LD with extended length

TECHNICAL DATA

Dimensions

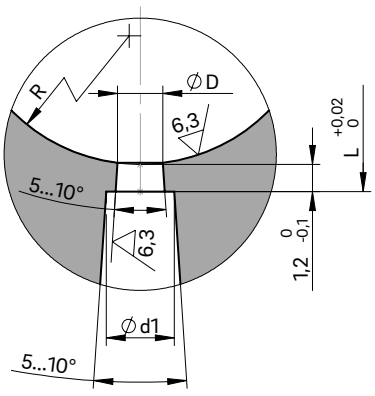
	Version (mm)						
	ØA	ØS	$ØT_1$	s	u	$ØA_1$	R
18LD	38	18	26	5	6	39[1]	8

[1] *$ØA_1$ = 43 mm with nozzle type 5DEF*

NOTE

After eroding the gate bushing, it must be annealed to remove stress (1 hour at 470 °C).

ANTECHAMBER VERSIONS C AND D

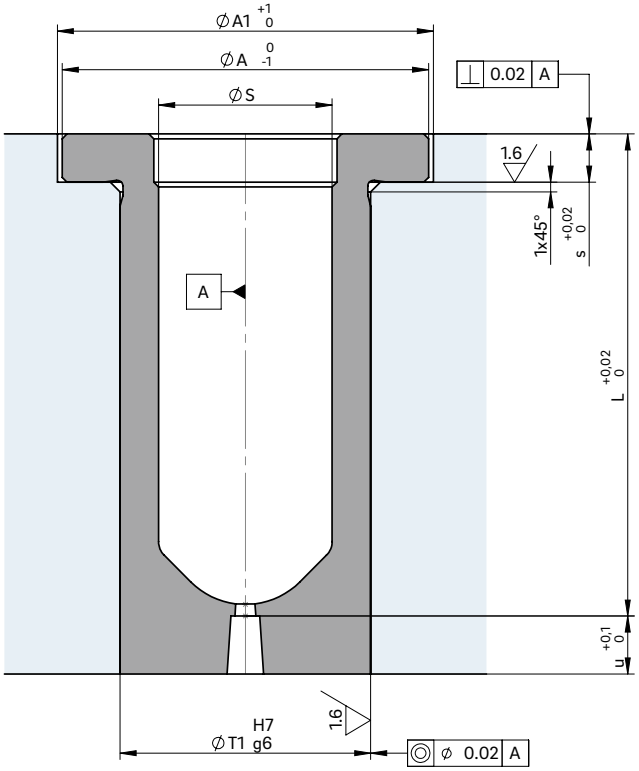


Ød1 0.5 mm larger than ØD

For open nozzles with a straight outlet for antechamber version C and D and nozzle piece A

WEBCODE
23040

GATE BUSHING INSTALLATION



For gate bushings with an extended length, the gate contour goes through dimension "L"

Nozzle type designation	Gate bushing type/length (mm)							
	50		60		80		100	
5DEF	■	18LD	■	18LD	■	18LD		
5DHF	■	18LD	■	18LD	■	18LD	■	18LD
5DTT	■	18LD	■	18LD	■	18LD	■	18LD

■ available

Gate bushing type VA/VAV

Versions VA and VAV with wear protection

TECHNICAL DATA

Dimensions

	Version (mm)								
	ØA	ØS	$ØT_1$	s	$ØA_1$	R	ØP	t_1	t
15VA	35	15	22	5	36	5	12	2.3	2.5
20VA	35	20	28	5	36	5	16	2.3	2.5
22VA/VAV	38	22	32	5	39	8	16	2.3	2.5
26VA/VAV	45	26	36	5	46[1, 2]	8	16	2.3	2.5
32VA/VAV	50	32	42	9	56	13	20	3.3	3.5
38VA/VAV	59	38	48	12	60	16	26	4.3	4.5

[1] $ØA_1$ = 49 mm with nozzle type 8SET/8DET

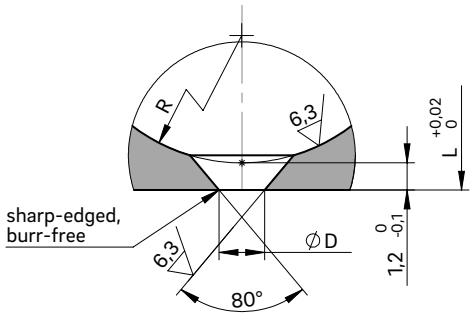
[2] $ØA_1$ = 56 mm with nozzle type 8SHT

NOTE

When using a gate bushing of size ØS = 26 mm, ØS = 32 mm or ØS = 38 mm in conjunction with nozzle types _ET and _HT, we recommend consulting with the engineers.

After eroding the gate bushing, it must be annealed to remove stress (1 hour at 470 °C).

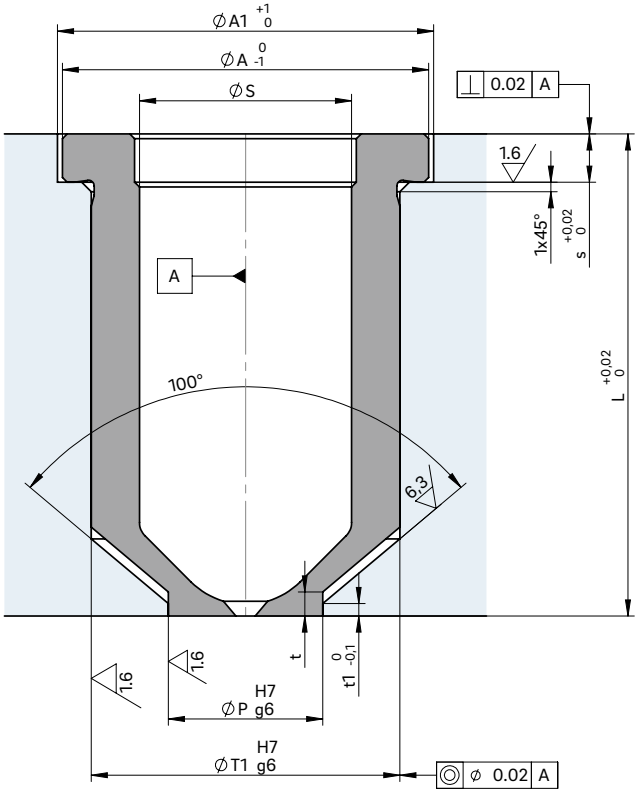
ANTECHAMBER VERSIONS A/B



For open nozzles with a tip/open nozzles with a straight outlet for antechamber versions A/B and nozzle piece C

WEBCODE
23050

GATE BUSHING INSTALLATION



Nozzle type designation	Gate bushing type/length (mm)																			
	L = 50				L = 60				L = 80				L = 100				L = 120			
4SHF/4DHF	■	15VA			■	15VA			■	15VA										
4STT/4DTT	■	15VA			■	15VA			■	15VA										
4SMT/4DMT	■	20VA			■	20VA			■	20VA			■	20VA						
5SHT/5DHT	■	22VA	□	22VAV	■	22VA	□	22VAV	■	22VA	□	22VAV	■	22VA	□	22VAV				
5SMT/5DMT	■	22VA	□	22VAV	■	22VA	□	22VAV	■	22VA	□	22VAV	■	22VA	□	22VAV	■	22VA	□	22VAV
6SHF/6DHF	■	22VA	□	22VAV	■	22VA	□	22VAV	■	22VA	□	22VAV	■	22VA	□	22VAV	■	22VA	□	22VAV
6STT/6DTT	■	22VA	□	22VAV	■	22VA	□	22VAV	■	22VA	□	22VAV	■	22VA	□	22VAV	■	22VA	□	22VAV
6SHT/6DHT	■	26VA	□	26VAV	■	26VA	□	26VAV	■	26VA	□	26VAV	■	26VA	□	26VAV	■	26VA	□	26VAV
6SMT/6DMT	■	26VA	□	26VAV	■	26VA	□	26VAV	■	26VA	□	26VAV	■	26VA	□	26VAV	■	26VA	□	26VAV
8SET/8DET	■	26VA	□	26VAV	■	26VA	□	26VAV	■	26VA	□	26VAV	■	26VA	□	26VAV	■	26VA	□	26VAV
8SHF/8DHF	■	26VA	□	26VAV	■	26VA	□	26VAV	■	26VA	□	26VAV	■	26VA	□	26VAV	■	26VA	□	26VAV
8SHT/8DHT	■	26VA	□	26VAV	■	26VA	□	26VAV	■	26VA	□	26VAV	■	26VA	□	26VAV	■	26VA	□	26VAV
10SHT/10DHT					■	32VA	□	32VAV	■	32VA	□	32VAV	■	32VA	□	32VAV	■	32VA	□	32VAV
12SET/12DET					■	38VA	□	38VAV	■	38VA	□	38VAV	■	38VA	□	38VAV	■	38VA	□	38VAV
12SHT/12DHT					■	38VA	□	38VAV	■	38VA	□	38VAV	■	38VA	□	38VAV	■	38VA	□	38VAV

■ available □ on request

Gate bushing type VB

Versions VB

TECHNICAL DATA

Dimensions

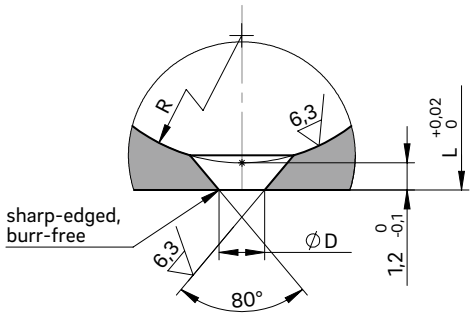
	Version (mm)								
	ØA	ØS	$ØT_1$	s	$ØA_1$	R	ØP	t_1	t
18VB	38	18	26	5	39[1]	8	16	2.3	2.5

[1] *$ØA_1$ = 43 mm with nozzle type 5SEF/5DEF*

NOTE

After eroding the gate bushing, it must be annealed to remove stress (1 hour at 470 °C).

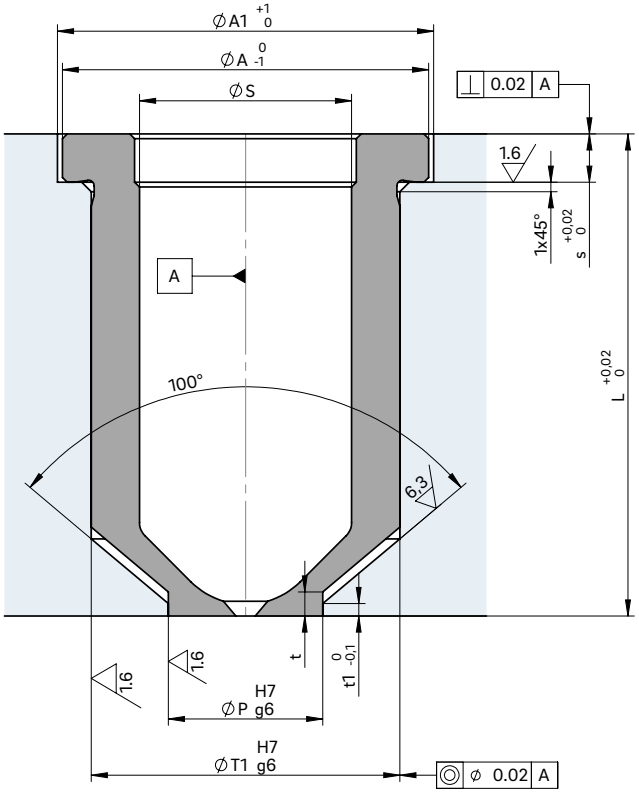
ANTECHAMBER VERSIONS A/B



For open nozzles with a tip/open nozzles with a straight outlet for antechamber versions A/B and nozzle piece C

WEBCODE
23055

GATE BUSHING INSTALLATION



Nozzle type designation	Gate bushing type/length (mm)							
	L = 50		L = 60		L = 80		L = 100	
5SEF/5DEF	■	18VB	■	18VB	■	18VB		
5SHF/5DHF	■	18VB	■	18VB	■	18VB	■	18VB
5STT/5DTT	■	18VB	■	18VB	■	18VB	■	18VB

■ available

Gate bushing type VC/VCV

Versions VC and VCV with wear protection

TECHNICAL DATA

Dimensions

	Version (mm)								
	ØA	ØS	$ØT_1$	s	$ØA_1$	R	ØP	t_1	t
15VC	35	15	22	5	36	5	12	2.3	2.5
20VC	35	20	28	5	36	5	16	2.3	2.5
22VC/VCV	38	22	32	5	39	8	16	2.3	2.5
26VC/VCV	45	26	36	5	46[1, 2]	8	16	2.3	2.5
32VC/VCV	50	32	42	9	56	13	20	3.3	3.5
38VC/VCV	59	38	48	12	60	16	26	4.3	4.5

[1] $ØA_1$ = 49 mm with nozzle type 8DET

[2] $ØA_1$ = 56 mm with nozzle type 8DHT

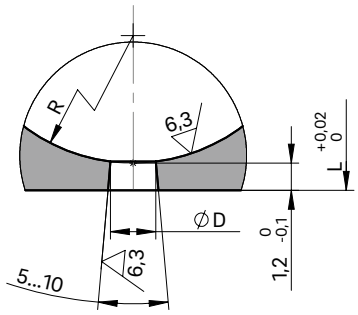
NOTE

When using a gate bushing of size ØS = 26 mm, ØS = 32 mm or ØS = 38 mm in conjunction with nozzle types _ET and _HT, we recommend consulting with the engineers.

After eroding the gate bushing, it must be annealed to remove stress (1 hour at 470 °C).

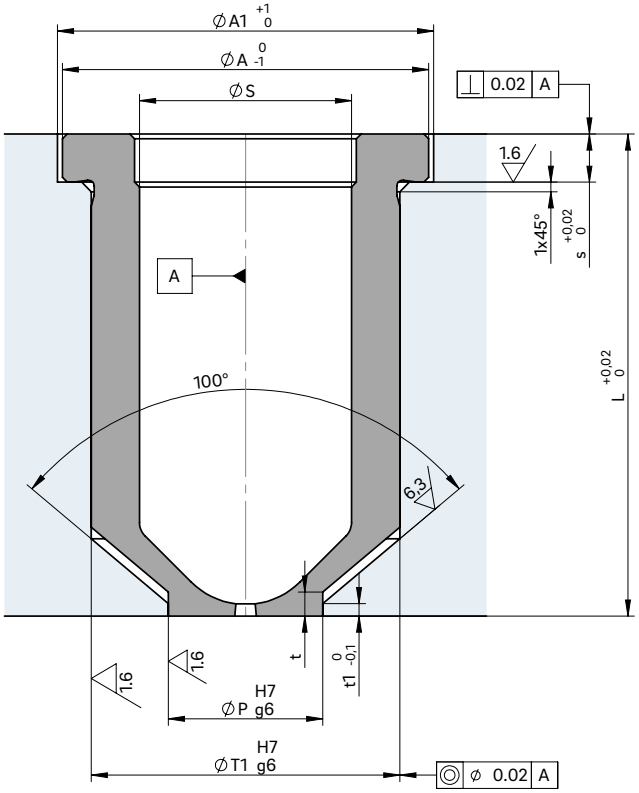
WEBCODE
23060

ANTECHAMBER VERSIONS C AND D



For open nozzles with a straight outlet for antechamber version C and D and nozzle piece A

GATE BUSHING INSTALLATION



Nozzle type designation	Gate bushing type/length (mm)																	
	L = 50				L = 60				L = 80				L = 100				L = 120			
4DHF	■	15VC			■	15VC			■	15VC										
4DTT	■	15VC			■	15VC			■	15VC										
4DMT	■	20VC			■	20VC			■	20VC			■	20VC						
5DHT	■	22VC	□	22VCV	■	22VC	□	22VCV	■	22VC	□	22VCV	■	22VC	□	22VCV				
5DMT	■	22VC	□	22VCV	■	22VC	□	22VCV	■	22VC	□	22VCV	■	22VC	□	22VCV	■	22VC	□	22VCV
6DHF	■	22VC	□	22VCV	■	22VC	□	22VCV	■	22VC	□	22VCV	■	22VC	□	22VCV	■	22VC	□	22VCV
6DTT	■	22VC	□	22VCV	■	22VC	□	22VCV	■	22VC	□	22VCV	■	22VC	□	22VCV	■	22VC	□	22VCV
6DHT	■	26VC	□	26VCV	■	26VC	□	26VCV	■	26VC	□	26VCV	■	26VC	□	26VCV	■	26VC	□	26VCV
6DMT	■	26VC	□	26VCV	■	26VC	□	26VCV	■	26VC	□	26VCV	■	26VC	□	26VCV	■	26VC	□	26VCV
8DET	■	26VC	□	26VCV	■	26VC	□	26VCV	■	26VC	□	26VCV	■	26VC	□	26VCV	■	26VC	□	26VCV
8DHF	■	26VC	□	26VCV	■	26VC	□	26VCV	■	26VC	□	26VCV	■	26VC	□	26VCV	■	26VC	□	26VCV
8DHT	■	26VC	□	26VCV	■	26VC	□	26VCV	■	26VC	□	26VCV	■	26VC	□	26VCV	■	26VC	□	26VCV
10DHT					■	32VC	□	32VCV	■	32VC	□	32VCV	■	32VC	□	32VCV	■	32VC	□	32VCV
12DET					■	38VC	□	38VCV	■	38VC	□	38VCV	■	38VC	□	38VCV	■	38VC	□	38VCV
12DHT					■	38VC	□	38VCV	■	38VC	□	38VCV	■	38VC	□	38VCV	■	38VC	□	38VCV

■ available □ on request

Gate bushing type VD

Versions VD

TECHNICAL DATA

Dimensions

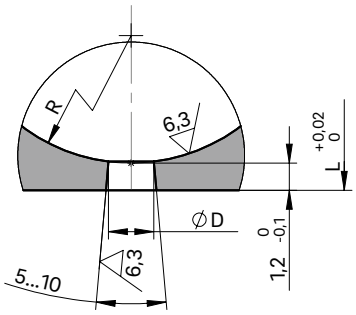
	Version (mm)								
	ØA	ØS	$ØT_1$	s	$ØA_1$	R	ØP	t_1	t
18VD	38	18	26	5	39[1]	8	16	2.3	2.5

[1] *$ØA_1$ = 43 mm with nozzle type 5DEF*

NOTE

After eroding the gate bushing, it must be annealed to remove stress (1 hour at 470 °C).

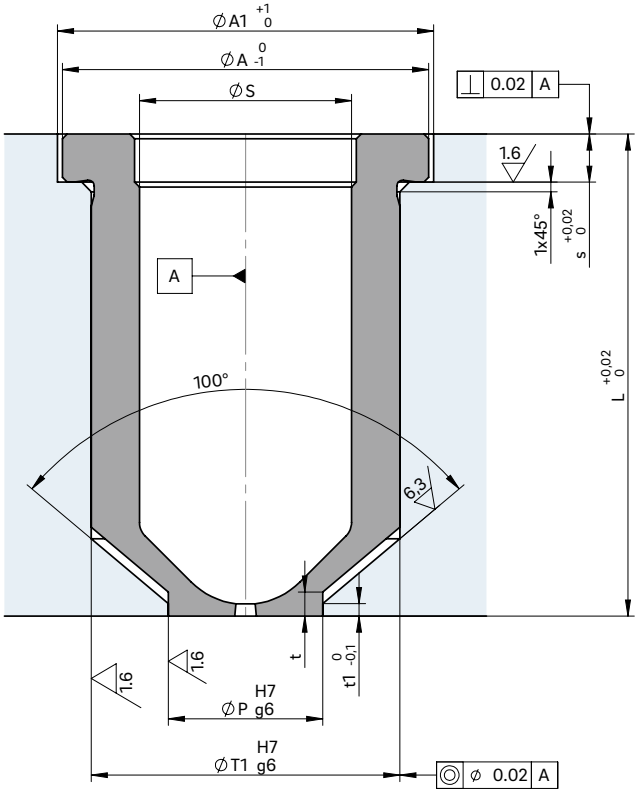
ANTECHAMBER VERSIONS C AND D



For open nozzles with a straight outlet for antechamber version C and D and nozzle piece A

WEBCODE
23065

GATE BUSHING INSTALLATION



Nozzle type designation	Gate bushing type/length (mm)							
	L = 50		L = 60		L = 80		L = 100	
5DEF	■	18VD	■	18VD	■	18VD		
5DHF	■	18VD	■	18VD	■	18VD	■	18VD
5DTT	■	18VD	■	18VD	■	18VD	■	18VD

■ available

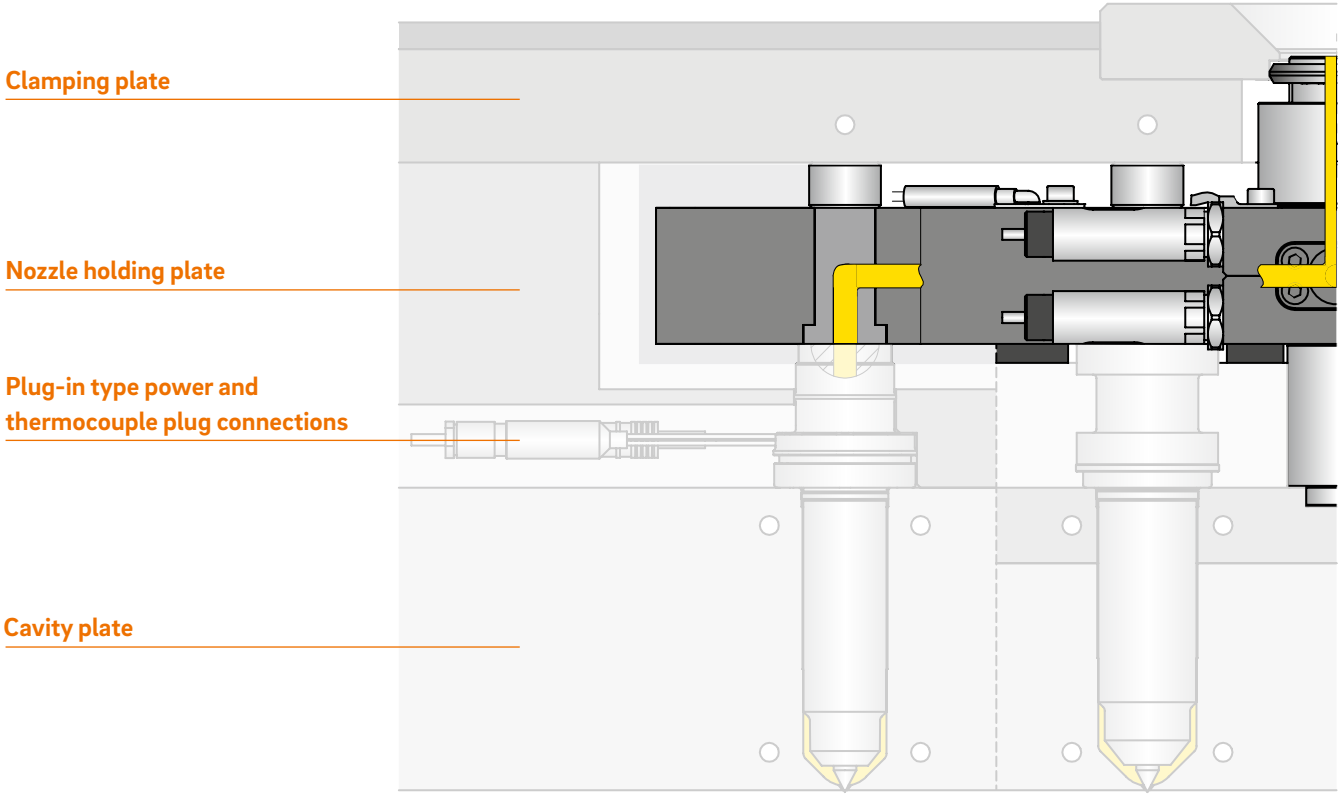
2.4 Hot runner manifolds/Rapid systems

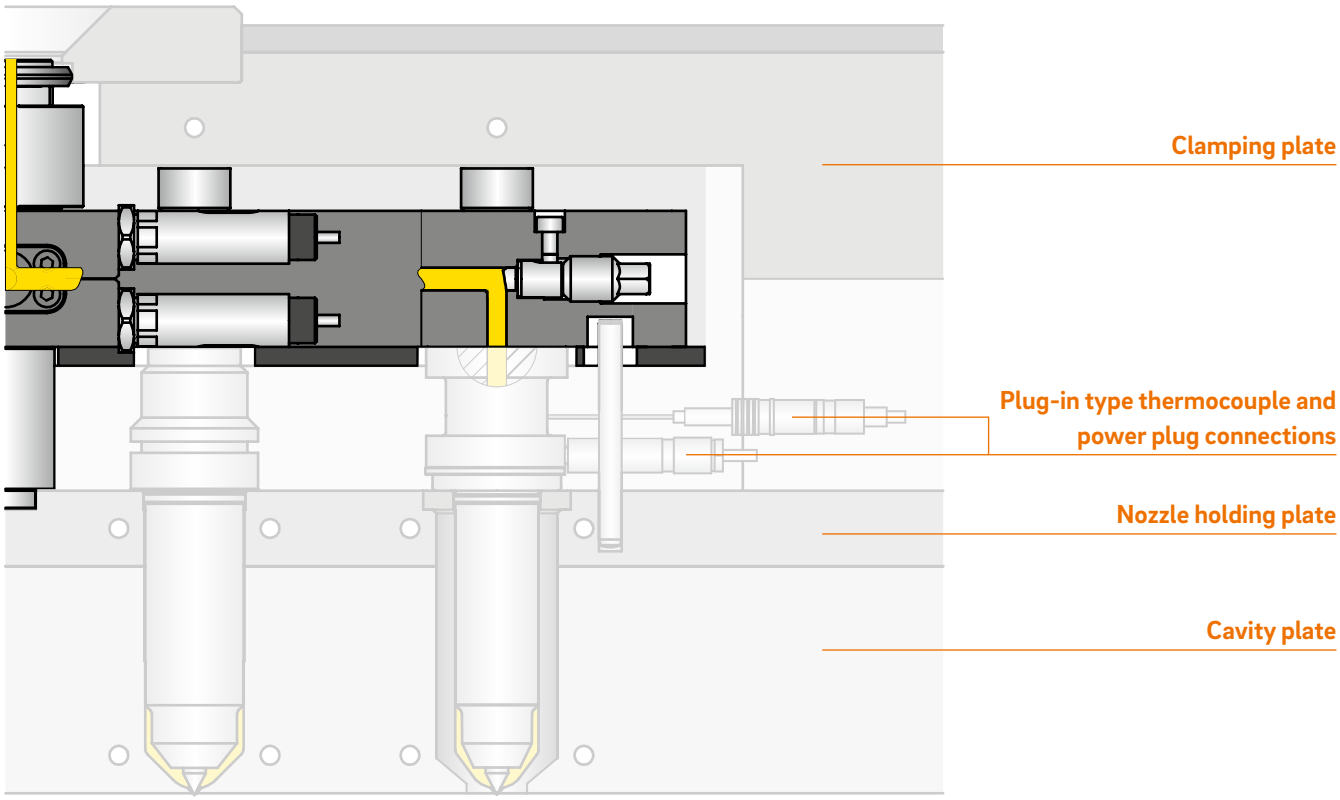
Manifolds

Rapid systems

Overview of overall design

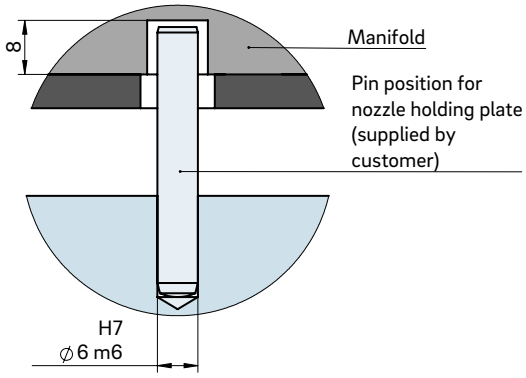
Hot runner manifold

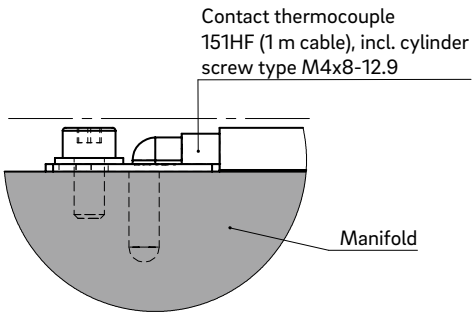


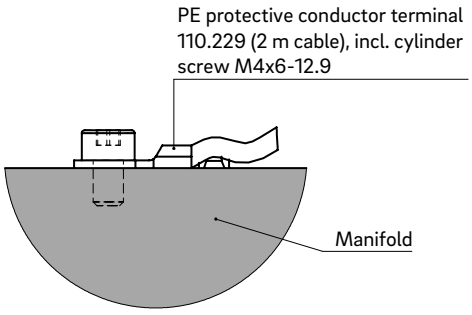

Clamping plate
Plug-in type thermocouple and power plug connections
Nozzle holding plate
Cavity plate

Straight manifold type GCP

Manifold length (VL) 160-360







TECHNICAL DATA

GCP VL 160–360

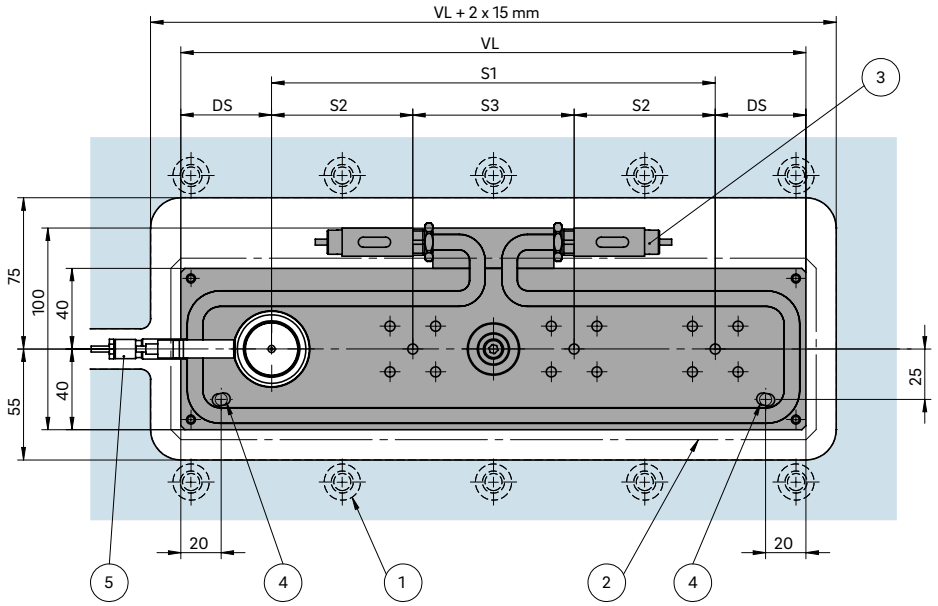
Manifold height (VH)	36 mm				
Operating voltage	230 V_{AC}*				
Manifold length (VL)	160	210	260	310	360
Control circuits	1	1	1	1	1
Power (watts) per control circuit	2 × 750	2 × 950	2 × 1000	2 × 1350	2 × 1500

*Volts alternating current

WEBCODE
25010

INSTALLATION

Nozzle tip view

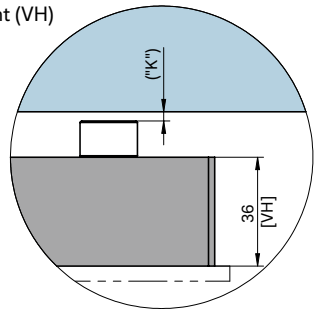


DS Edge distance:
a. min. 35.0 with nozzle size ≤ 6
b. min. 45.0 with nozzle size 8

S1 Largest pitch (max. pitch)
S2 Pitch between the nozzles (min./max. pitch)
S3 Pitch between the nozzles, taking connecting element and spacer into account (min./max. pitch)

① Screw connection close to manifold
② High-temperature insulation plate
③ Heating connections
④ Possible pin position
⑤ Opening and plug location dependent upon nozzle type

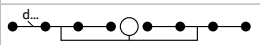
Manifold height (VH)



Dimension "K" required for heat expansion is to be ensured by grinding the pressure piece (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

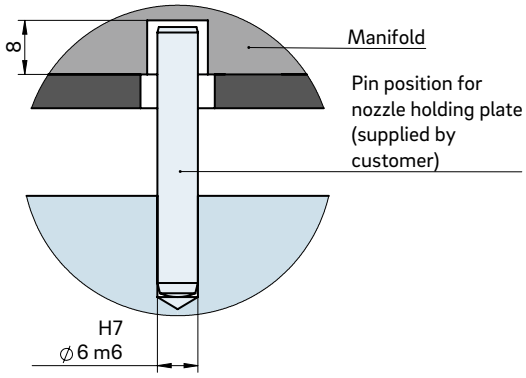
Design examples/Balancing

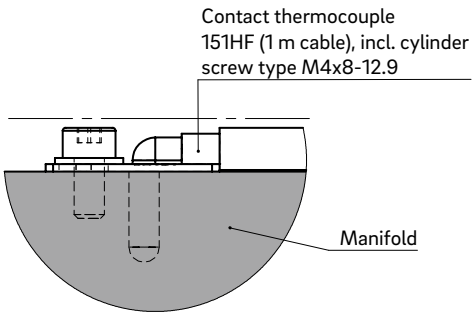
Type		Melt channel Ød in mm	Number of drops
GCP1B		≤ 10	1
GCP2B		≤ 10	2
GCP3–		≤ 10	3
GCP4B		≤ 8	4
GCP8T		≤ 8	8

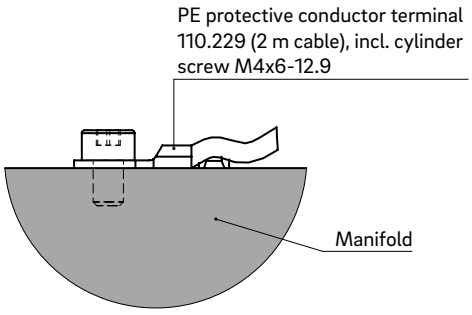
B = balanced T = partially balanced – = not balanced

Straight manifold type GCP

Manifold length (VL) 410-510







TECHNICAL DATA

GCP VL 410-510

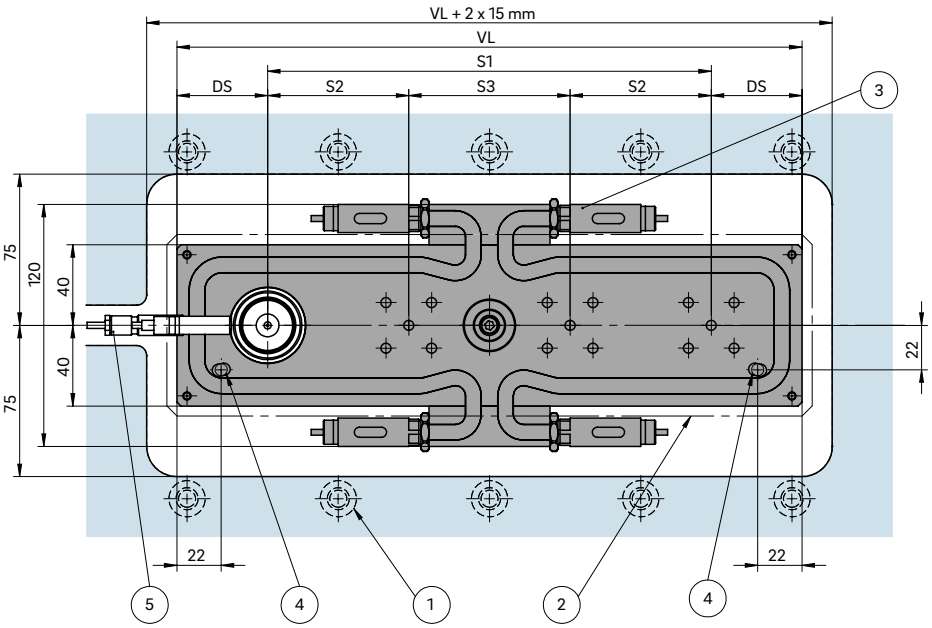
Manifold height (VH)	36 mm		
Operating voltage	230 V_{AC}*		
Manifold length (VL)	410	460	510
Control circuits	2	2	2
Power (watts) per control circuit	2 × 850	2 × 950	2 × 1000

*Volts alternating current

WEBCODE
25020

INSTALLATION

Nozzle tip view

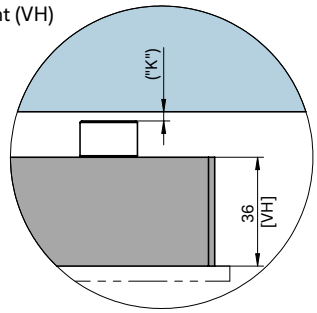


DS Edge distance:
a. min. 35.0 with nozzle size ≤ 6
b. min. 45.0 with nozzle size 8

S1 Largest pitch (max. pitch)
S2 Pitch between the nozzles (min./max. pitch)
S3 Pitch between the nozzles, taking connecting element and spacer into account (min./max. pitch)

① Screw connection close to manifold
② High-temperature insulation plate
③ Heating connections
④ Possible pin position
⑤ Opening and plug location dependent upon nozzle type

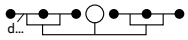
Manifold height (VH)



Dimension "K" required for heat expansion is to be ensured by grinding the pressure piece (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

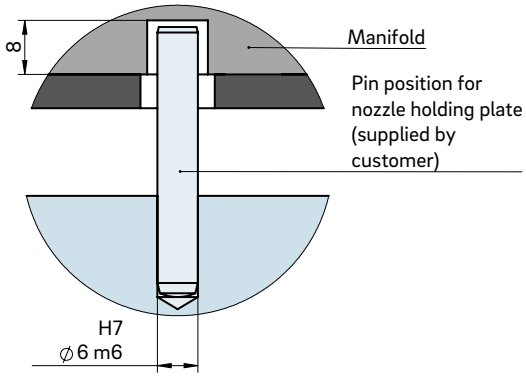
Design examples/Balancing

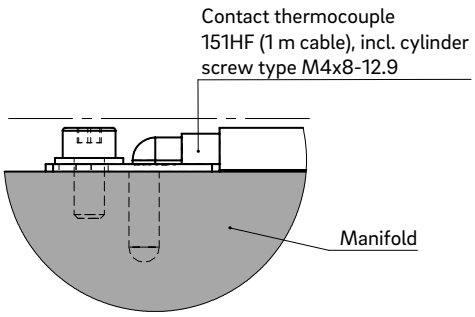
Type		Melt channel Ød in mm	Number of drops
GCP1B		≤ 10	1
GCP2B		≤ 10	2
GCP3–		≤ 10	3
GCP4B		≤ 8	4
GCP6T		≤ 8	6
GCP8T		≤ 8	8

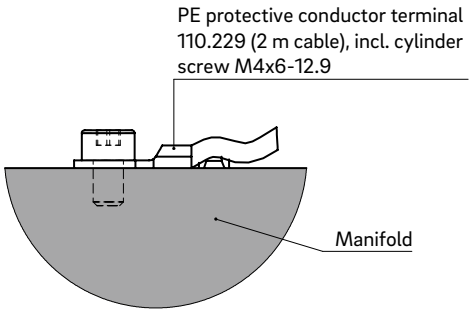
B = balanced T = partially balanced – = not balanced

Straight manifold type GDP

Manifold length (VL) 160-360







TECHNICAL DATA

GDP VL 160-360

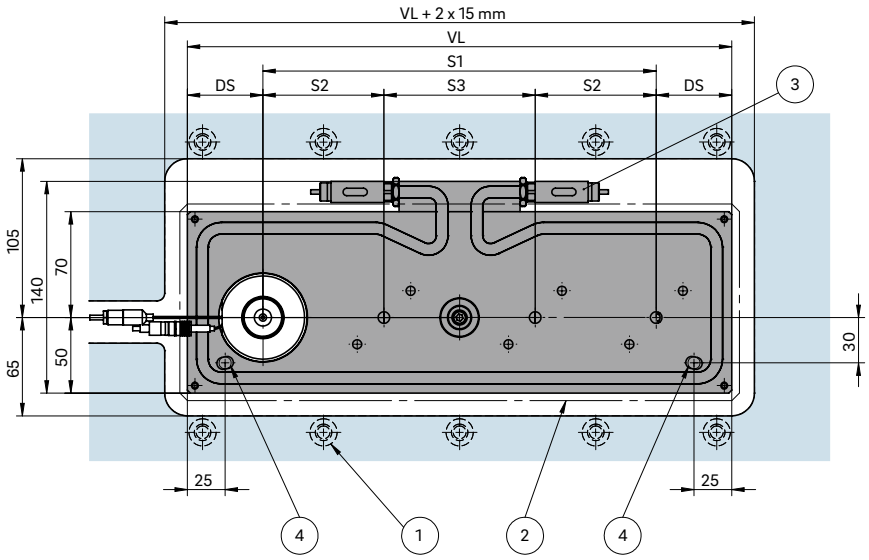
Manifold height (VH)	46 mm				
Operating voltage	230 V_{AC}*				
Manifold length (VL)	160	210	260	310	360
Control circuits	1	1	1	1	1
Power (watts) per control circuit	2 × 750	2 × 950	2 × 1000	2 × 1350	2 × 1500

*Volts alternating current

WEBCODE
25030

INSTALLATION

Nozzle tip view

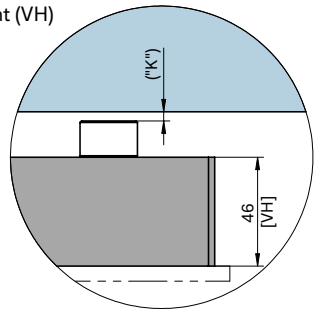


DS Edge distance:
a. min. 35.0 with nozzle size ≤ 6
b. min. 45.0 with nozzle size 8 or 10
c. min. 50.0 with nozzle size ≥ 12

S1 Largest pitch (max. pitch)
S2 Pitch between the nozzles (min./max. pitch)
S3 Pitch between the nozzles, taking connecting element and spacer into account (min./max. pitch)

① Screw connection close to manifold
② High-temperature insulation plate
③ Heating connections
④ Possible pin position
⑤ Opening and plug location dependent upon nozzle type

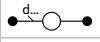
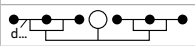
Manifold height (VH)



Dimension "K" required for heat expansion is to be ensured by grinding the pressure piece (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
46 mm	K (mm)	0.033	0.078	0.124	0.170	0.218	0.264

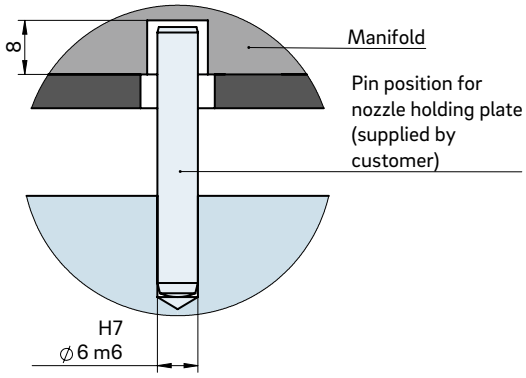
Design examples/Balancing

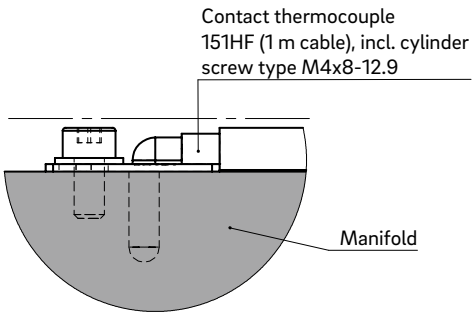
Type		Melt channel Ød in mm	Number of drops
GDP1B		≥ 12 to 16	1
GDP2B		≥ 12 to 16	2
GDP3–		≥ 12 to 16	3
GDP3T		≤ 6	3
GDP4B		≤ 12 to 16	4
GDP6T		≤ 8	6

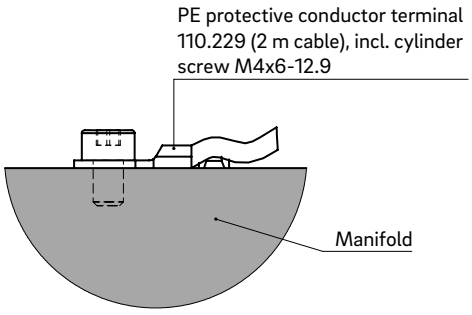
B = balanced T = partially balanced – = not balanced

Straight manifold type GDP

Manifold length (VL) 410-510







TECHNICAL DATA

GDP VL 410-510

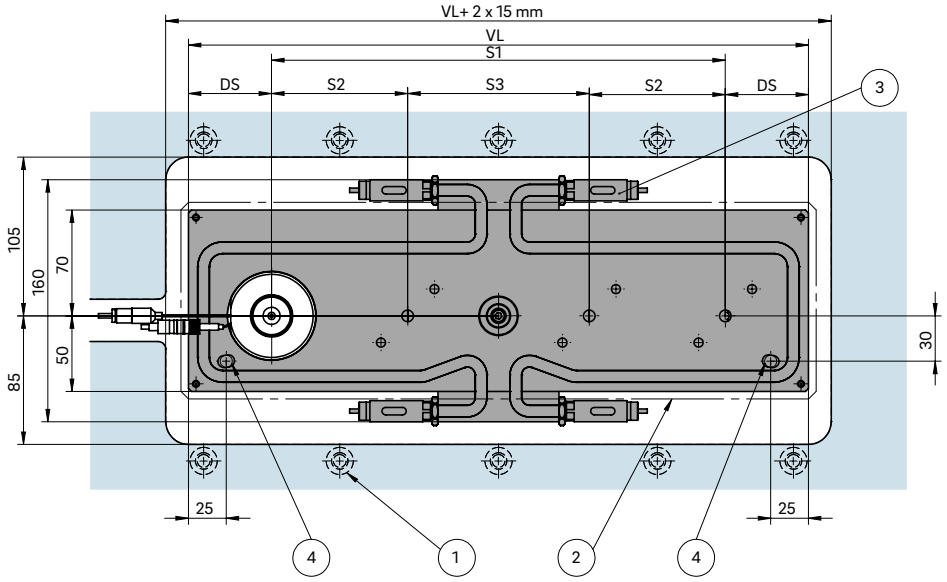
Manifold height (VH)	46 mm		
Operating voltage	230 V_{AC}*		
Manifold length (VL)	410	460	510
Control circuits	2	2	2
Power (watts) per control circuit	2 × 850	2 × 950	2 × 1000

*Volts alternating current

WEBCODE
25040

INSTALLATION

Nozzle tip view

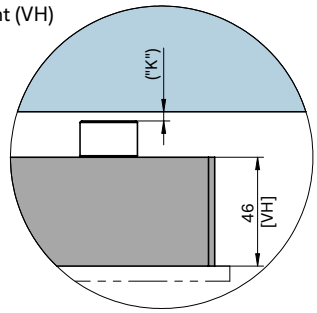


DS Edge distance:
a. min. 35.0 with nozzle size ≤ 6
b. min. 45.0 with nozzle size 8 or 10
c. min. 50.0 with nozzle size ≥ 12

S1 Largest pitch (max. pitch)
S2 Pitch between the nozzles (min./max. pitch)
S3 Pitch between the nozzles, taking connecting element and spacer into account (min./max. pitch)

① Screw connection close to manifold
② High-temperature insulation plate
③ Heating connections
④ Possible pin position
⑤ Opening and plug location dependent upon nozzle type

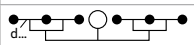
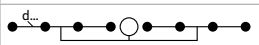
Manifold height (VH)



Dimension "K" required for heat expansion is to be ensured by grinding the pressure piece (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!

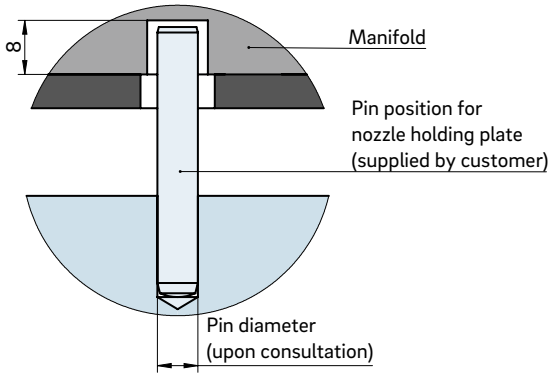
VH	ΔT (°C)	100	150	200	250	300	350
46 mm	K (mm)	0.033	0.078	0.124	0.170	0.218	0.264

Design examples/Balancing

Type		Melt channel Ød in mm	Number of drops
GDP1B		≥ 12 to 16	1
GDP2B		≥ 12 to 16	2
GDP3–		≥ 12 to 16	3
GDP3T		≤ 6	3
GDP4B		≥ 12 to 16	4
GDP6T		≤ 8	6
GDP8T		≥ 12 to 16	8

B = balanced T = partially balanced – = not balanced

H-manifold type HCP/HDP/HEP



TECHNICAL DATA

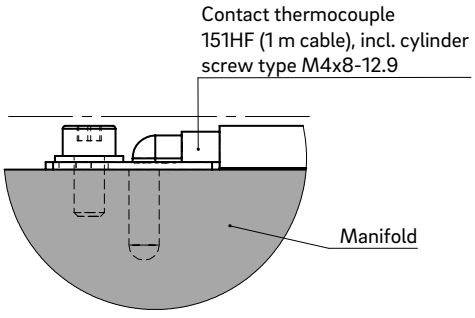
HCP/HDP/HEP

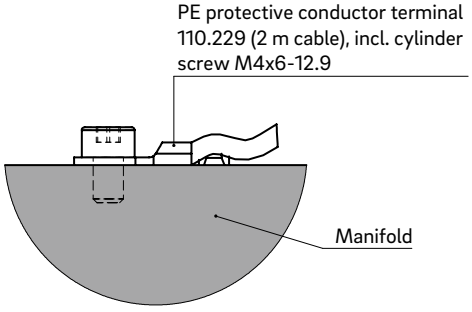
Manifold height (VH)	**HCP:** 36 mm **HDP:** 46 mm **HEP:** 56 mm
Operating voltage	230 V_{AC}*
Manifold length (VL)	H + 2 × DS
Manifold width (VB)	B + 2 × DS

The heating output of each control circuit is calculated individually.

*Volts alternating current

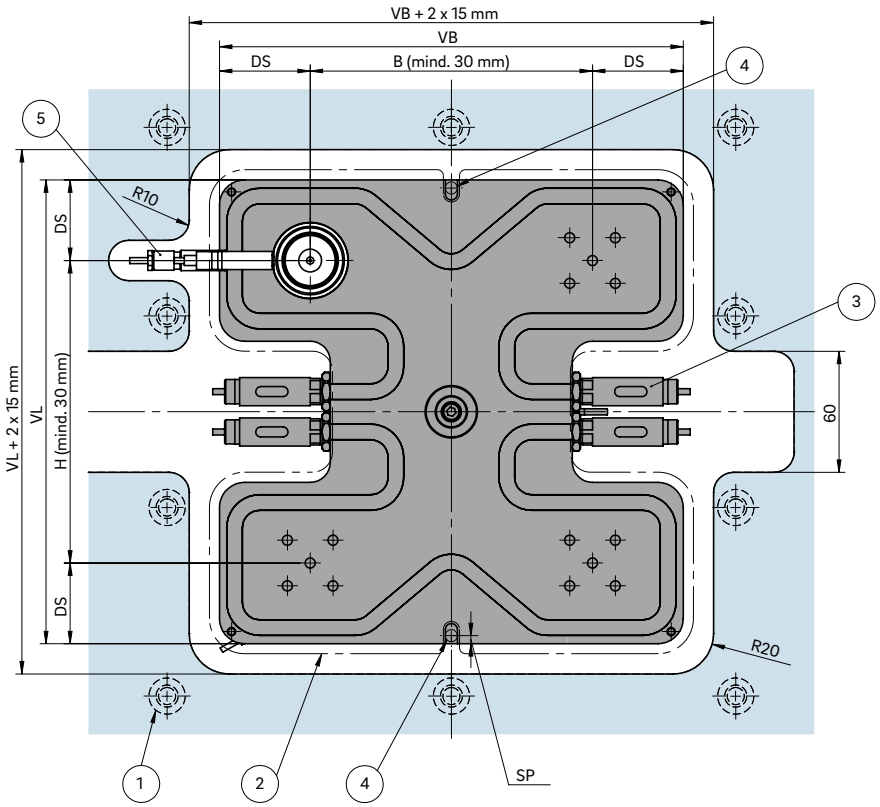
WEBCODE
25050





INSTALLATION

Nozzle tip view

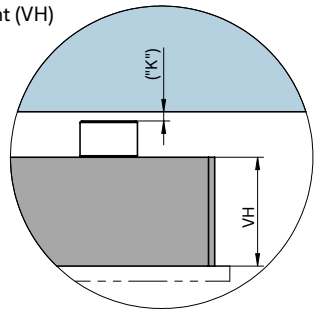


DS Edge distance:
a. min. 35.0 with nozzle size ≤ 6
b. min. 45.0 with nozzle size 8 or 10
c. min. 50.0 with nozzle size ≥ 12

H Pitch between the nozzles
B Pitch between the nozzles

① Screw connection close to manifold
② High-temperature insulation plate
③ Heating connections
④ Possible pin position
"SP" = d/2 + 1 mm
⑤ Opening and plug location
dependent upon nozzle type

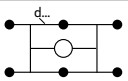
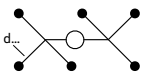
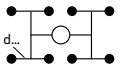
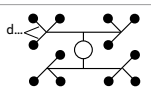
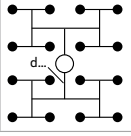
Manifold height (VH)



Dimension "K" required for heat expansion is to be ensured by grinding the pressure piece (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

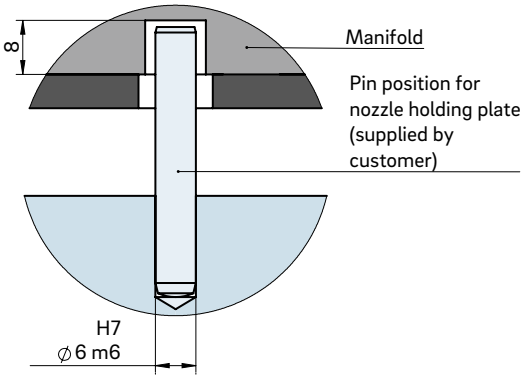
Design examples/Balancing

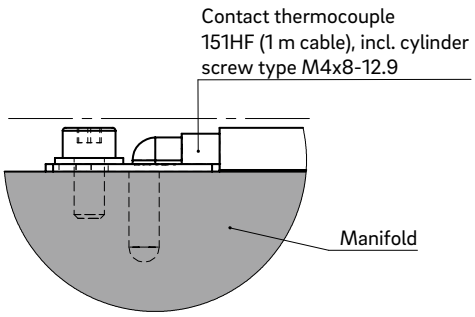
Type		HCP = 36 (VH) Melt channel Ød in mm	HDP = 46 (VH) Melt channel Ød in mm	HEP = 56 (VH) Melt channel Ød in mm	Number of drops
H_P4B		≤ 10	≥ 12 to 16	> 16	4
H_P6T		≤ 10	≥ 12 to 16	> 16	6
H_P6B			≤ 8	≤ 10	6
H_P8B		≤ 10	≥ 12 to 16	> 16	8
H_P12B			≤ 8	≤ 10	12
H_P16B		≤ 10	≥ 12 to 16	> 16	16

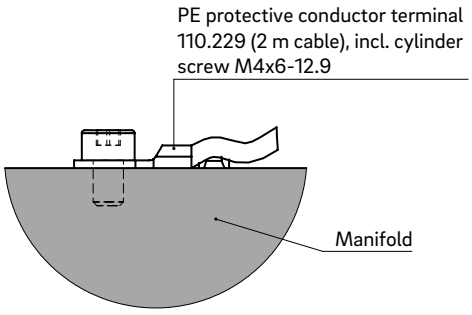
B = balanced T = partially balanced

Cross manifold type KCP4/KDP4

Manifold length (VL) 135-165







TECHNICAL DATA

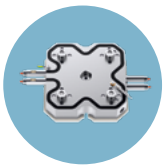
KCP4/KDP4 135/165

Manifold height (VH)	**KCP:** 36 mm **KDP:** 46 mm
Operating voltage	230 V_{AC}*

Manifold length (VL)	135	165
Pin position (SP)	63.5	68.0
Control circuits	1	1
Power (watts) per control circuit	2 × 850	2 × 1000

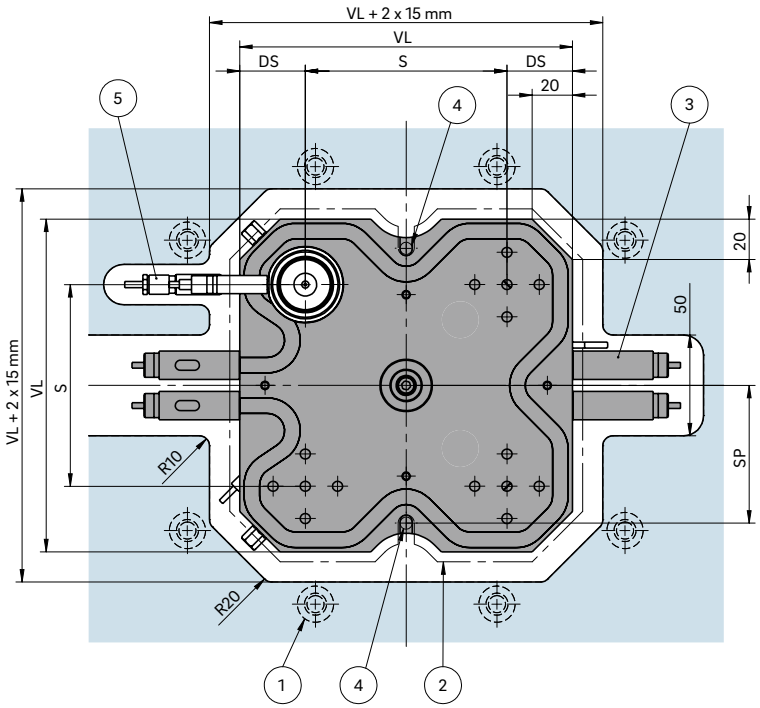
*Volts alternating current

WEBCODE
25060



INSTALLATION

Nozzle tip view

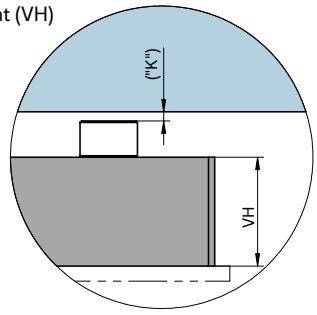


DS Edge distance:
a. min. 35.0 with nozzle size ≤ 6
b. min. 45.0 with nozzle size 8 or 10
c. min. 50.0 with nozzle size ≥ 12

S Pitch between the nozzles

① Screw connection close to manifold
② High-temperature insulation plate
③ Heating connections
④ Possible pin position
⑤ Opening and plug location dependent upon nozzle type

Manifold height (VH)



Dimension "K" required for heat expansion is to be ensured by grinding the pressure piece (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

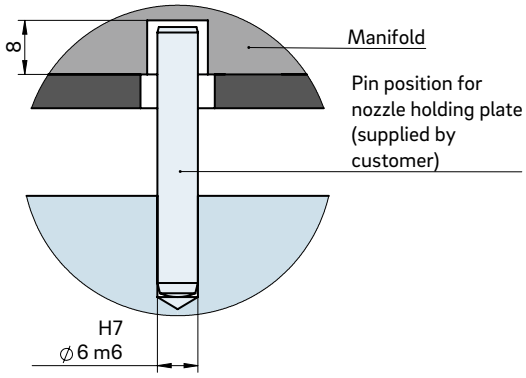
Design examples/Balancing

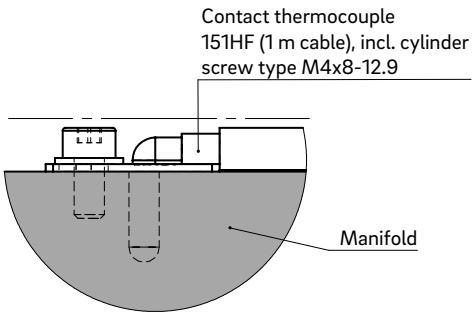
Type		KCP = 36 (VH) Melt channel Ød in mm	KDP = 46 (VH) Melt channel Ød in mm	Number of drops
K_P4B		≤ 10	≥ 12 to 16	4
		DS min. 35	DS min. 50	

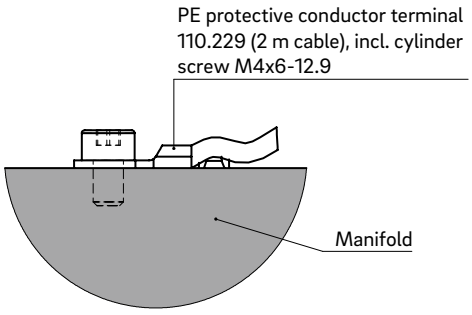
B = balanced

Cross manifold type KCP4/KDP4

Manifold length (VL) 180







TECHNICAL DATA

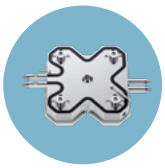
KCP4/KDP4 180

Manifold height (VH)	**KCP:** 36 mm **KDP:** 46 mm
Operating voltage	230 V_{AC}*

Manifold length (VL)	180
Pin position (SP)	59.0
Control circuits	1
Power (watts) per control circuit	2 × 1000

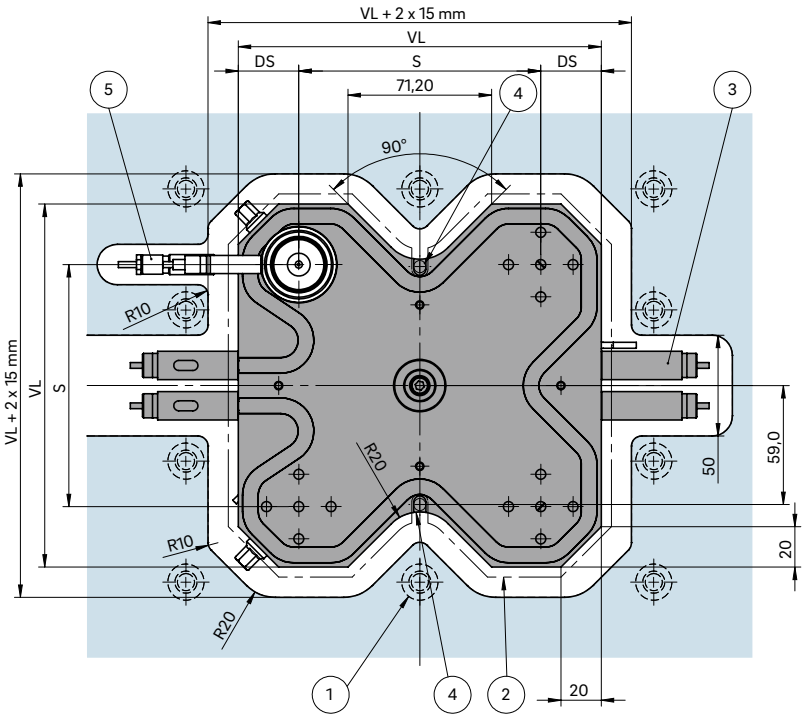
*Volts alternating current

WEBCODE
25070



INSTALLATION

Nozzle tip view

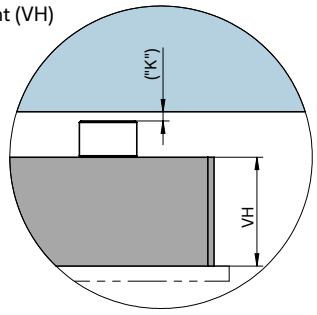


DS Edge distance:
a. min. 35.0 with nozzle size ≤ 6
b. min. 45.0 with nozzle size 8 or 10
c. min. 50.0 with nozzle size ≥ 12

S Pitch between the nozzles

① Screw connection close to manifold
② High-temperature insulation plate
③ Heating connections
④ Possible pin position
⑤ Opening and plug location dependent upon nozzle type

Manifold height (VH)



Dimension "K" required for heat expansion is to be ensured by grinding the pressure piece (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

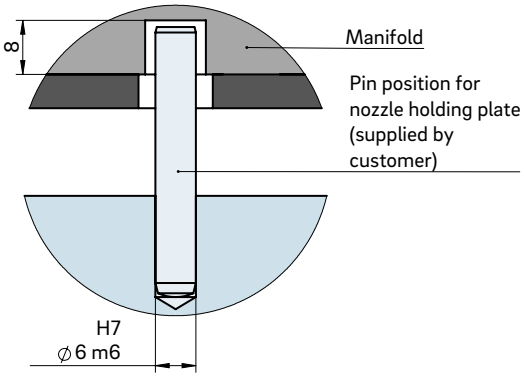
Design examples/Balancing

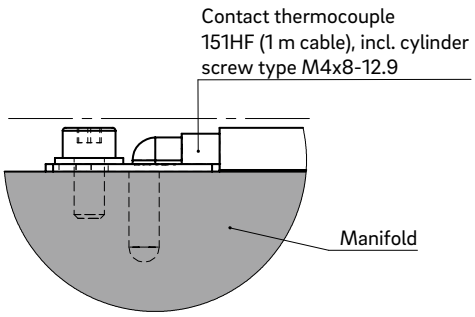
Type		KCP = 36 (VH) Melt channel Ød in mm	KDP = 46 (VH) Melt channel Ød in mm	Number of drops
K_P4B		≤ 10	≥ 12 to 16	4
		DS min. 35	DS min. 50	

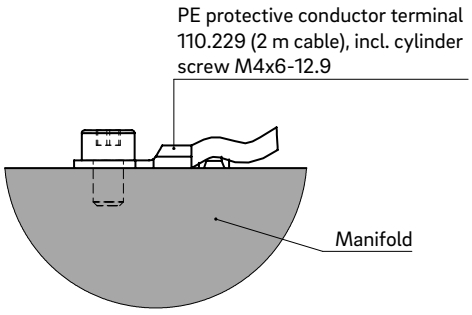
B = balanced

Cross manifold type KCP4/KDP4

Manifold length (VL) 210







TECHNICAL DATA

KCP4/KDP4 210

Manifold height (VH)	**KCP:** 36 mm **KDP:** 46 mm
Operating voltage	230 V_{AC}*

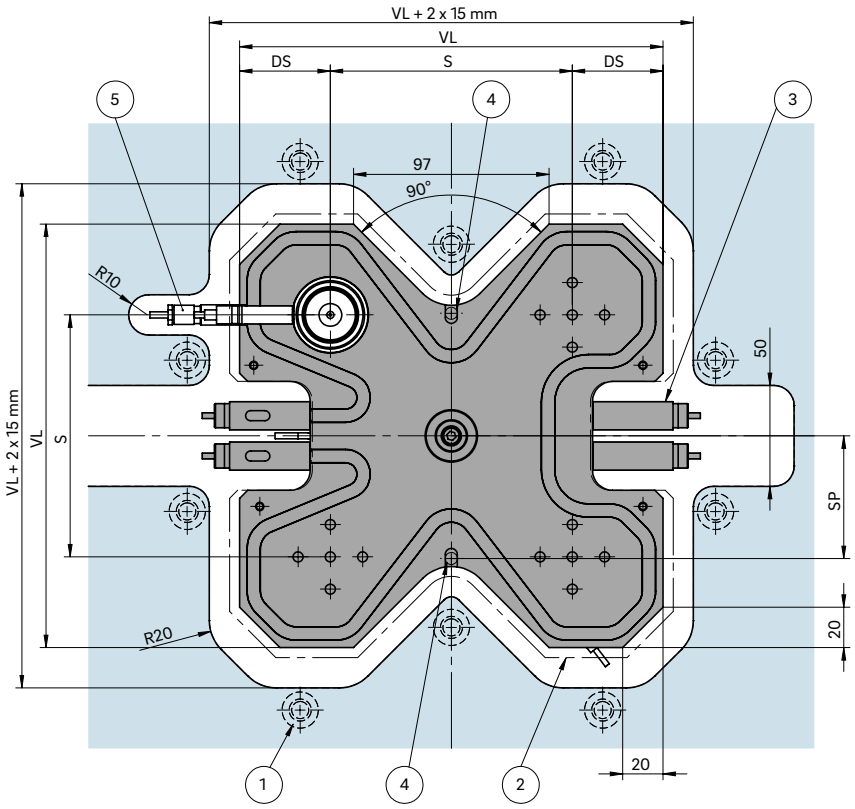
Manifold length (VL)	210
Pin position (SP)	60.8
Control circuits	1
Power (watts) per control circuit	2 × 1000

*Volts alternating current

WEBCODE
25080

INSTALLATION

Nozzle tip view

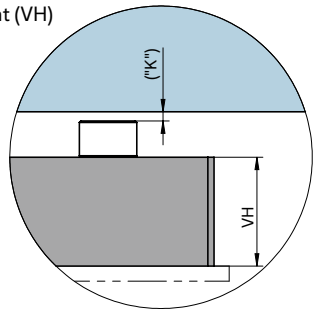


DS Edge distance:
a. min. 35.0 with nozzle size ≤ 6
b. min. 45.0 with nozzle size 8 or 10
c. min. 50.0 with nozzle size ≥ 12

S Pitch between the nozzles

① Screw connection close to manifold
② High-temperature insulation plate
③ Heating connections
④ Possible pin position
⑤ Opening and plug location dependent upon nozzle type

Manifold height (VH)



Dimension "K" required for heat expansion is to be ensured by grinding the pressure piece (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

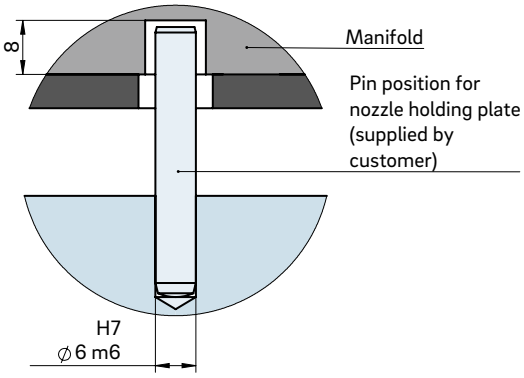
Design examples/Balancing

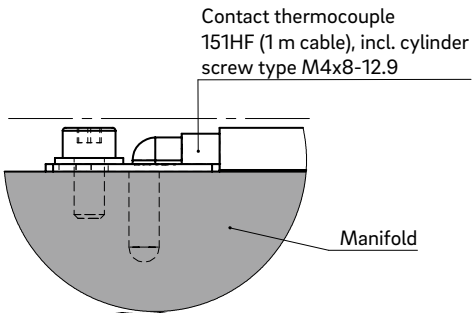
Type		KCP = 36 (VH) Melt channel Ød in mm	KDP = 46 (VH) Melt channel Ød in mm	Number of drops
K_P4B		≤ 10	≥ 12 to 16	4
		DS min. 35	DS min. 50	

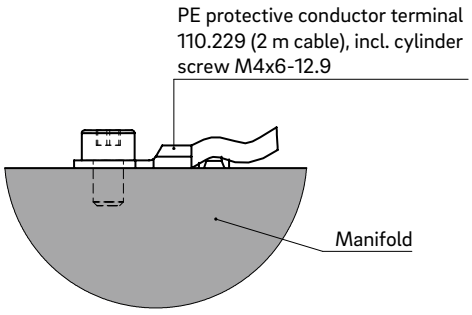
B = balanced

Cross manifold type KCP4/KDP4

Manifold length (VL) 240/270/300







TECHNICAL DATA

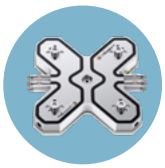
KCP4/KDP4 240/270/300

Manifold height (VH)	**KCP:** 36 mm **KDP:** 46 mm
Operating voltage	230 V_{AC}*

Manifold length (VL)	240	270	300
Pin position (SP)	81.0	87.5	101.0
Dimension B	127.0	156.6	187.0
Control circuits	2	2	2
Power (watts) per control circuit	2 × 1000	2 × 1350	2 × 1500

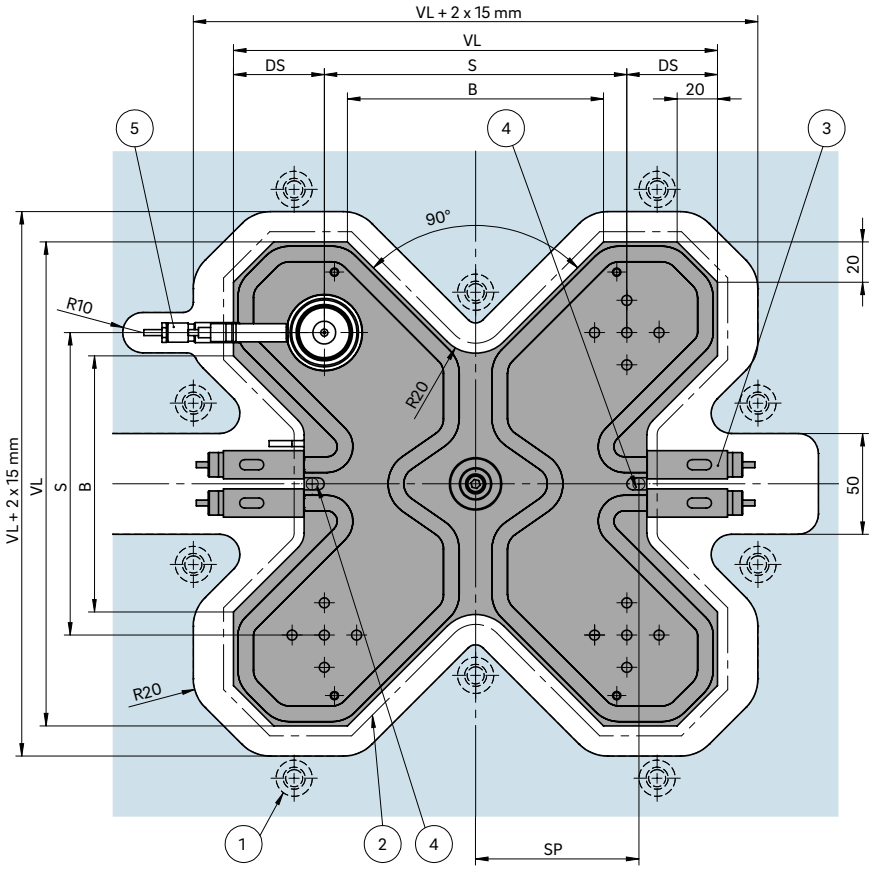
*Volts alternating current

WEBCODE
25090



INSTALLATION

Nozzle tip view

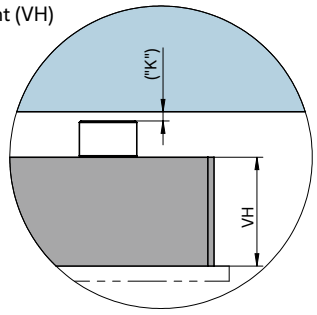


DS Edge distance:
a. min. 35.0 with nozzle size ≤ 6
b. min. 45.0 with nozzle size 8 or 10
c. min. 50.0 with nozzle size ≥ 12

S Pitch between the nozzles

① Screw connection close to manifold
② High-temperature insulation plate
③ Heating connections
④ Possible pin position
⑤ Opening and plug location dependent upon nozzle type

Manifold height (VH)



Design examples/Balancing

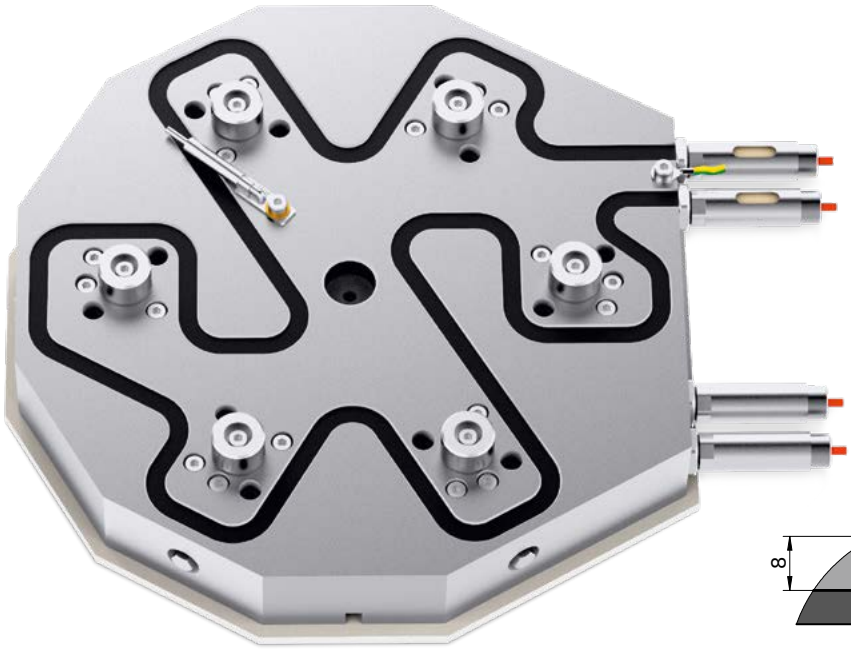
Type		KCP = 36 (VH) Melt channel Ød in mm	KDP = 46 (VH) Melt channel Ød in mm	Number of drops
K_P4B		≤ 10	≥ 12 to 16	4
		DS min. 35	DS min. 50	

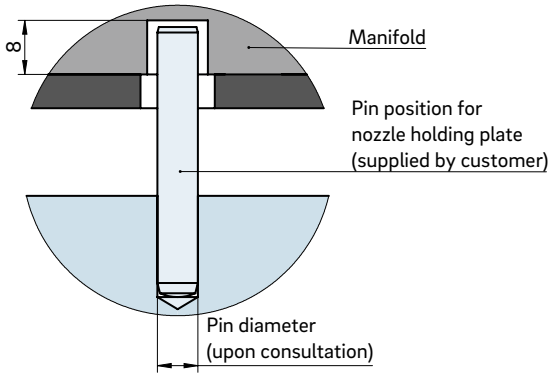
B = balanced

Dimension "K" required for heat expansion is to be ensured by grinding the pressure piece (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

Star manifold type SCP/SDP/SEP





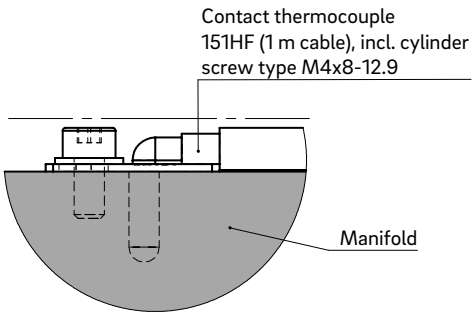
TECHNICAL DATA

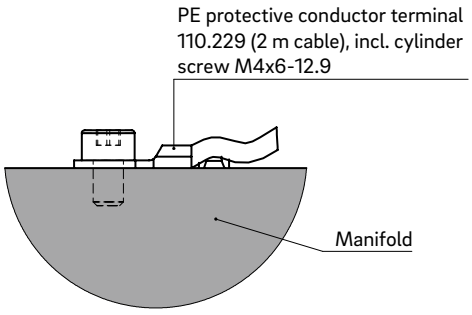
SCP/SDP/SEP

Manifold height (VH)	**SCP:** 36 mm **SDP:** 46 mm **SEP:** 56 mm
Operating voltage	230 V_{AC}*
Manifold length (VL)	ØTK + 2 × DS

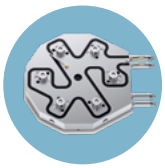
The heating output of each control circuit is calculated individually.

*Volts alternating current



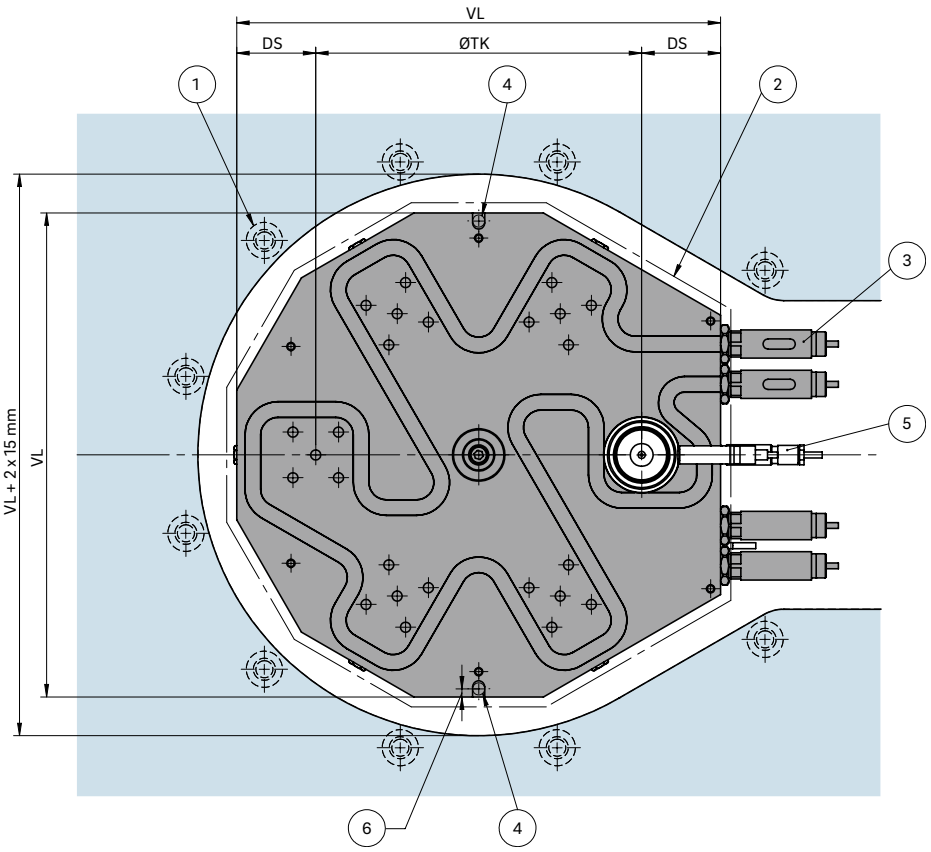


WEBCODE
25100



INSTALLATION

Nozzle tip view

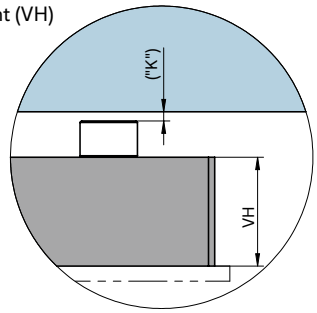


DS Edge distance:
a. min. 35.0 with nozzle size ≤ 6
b. min. 45.0 with nozzle size 8 or 10
c. min. 50.0 with nozzle size ≥ 12

ØTK Pitch circle diameter

① Screw connection close to manifold
② High-temperature insulation plate
③ Heating connections
④ Possible pin position
⑤ Opening and plug location dependent upon nozzle type

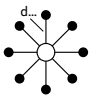
Manifold height (VH)



Dimension "K" required for heat expansion is to be ensured by grinding the pressure piece (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!

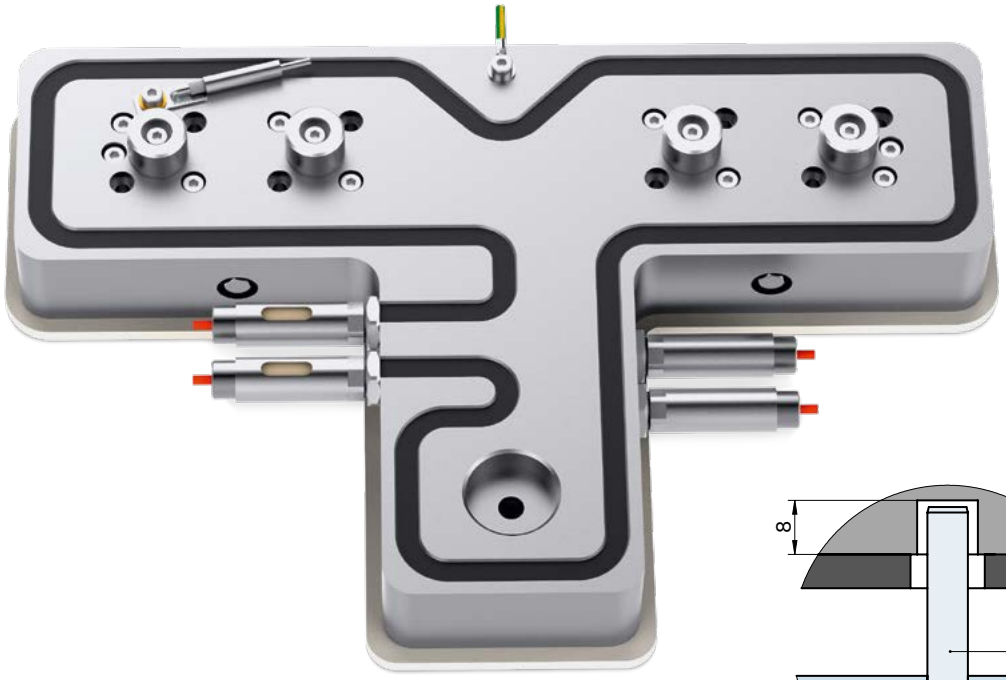
VH	ΔT (°C)	100	150	200	250	300	350
36 mm	K (mm)	0.021	0.059	0.098	0.137	0.177	0.217
46 mm	K (mm)	0.033	0.078	0.124	0.170	0.218	0.264
56 mm	K (mm)	0.046	0.097	0.150	0.203	0.258	0.311

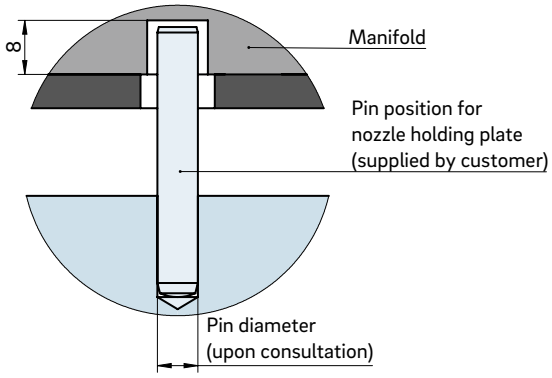
Design examples/Balancing

Type		SCP = 36 (VH) Melt channel Ød in mm	SDP = 46 (VH) Melt channel Ød in mm	SEP = 56 (VH) Melt channel Ød in mm	Number of drops
S_P3B		≤ 10	≥ 12 to 16	≥ 16	3
S_P6B			≤ 8	≤ 10	6
S_P8B			≤ 8	≤ 10	8

B = balanced

T-manifold type TCP/TDP/TEP





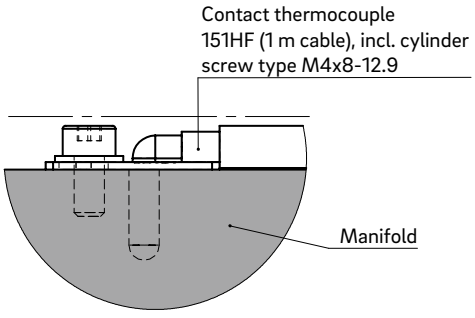
TECHNICAL DATA

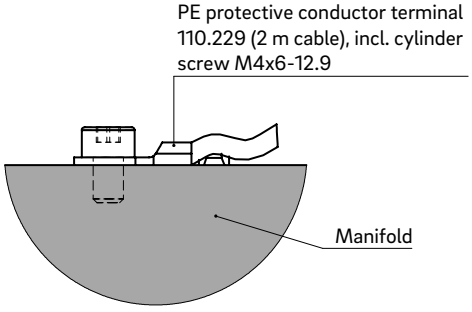
TCP/TDP/TEP

Manifold height (VH)	**TCP:** 36 mm **TDP:** 46 mm **TEP:** 56 mm
Operating voltage	230 V_{AC}*
Manifold length (VL)	S1 + 2 × DS
Manifold width (VB)	T + 2 × 40 mm

The heating output of each control circuit is calculated individually.

*Volts alternating current

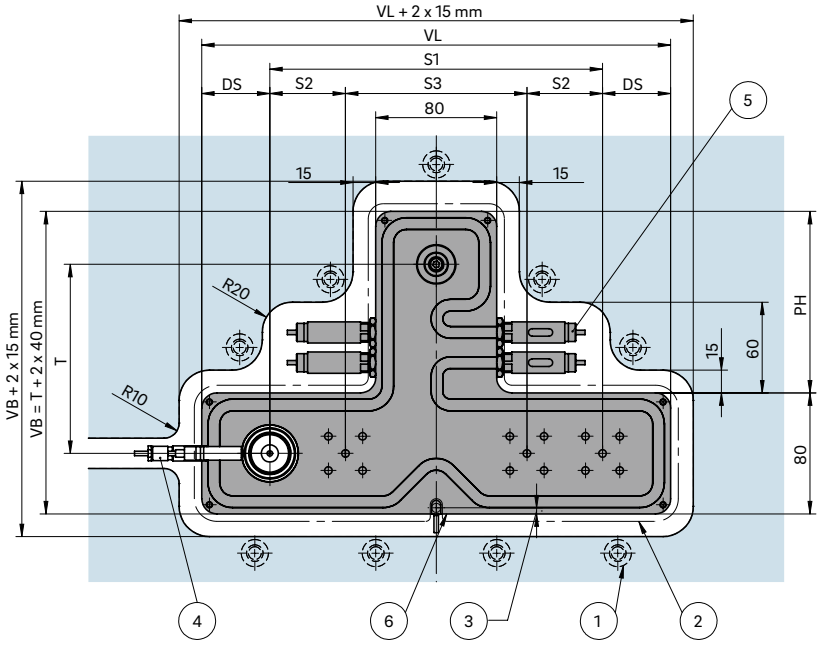




WEBCODE
25110

INSTALLATION

Nozzle tip view

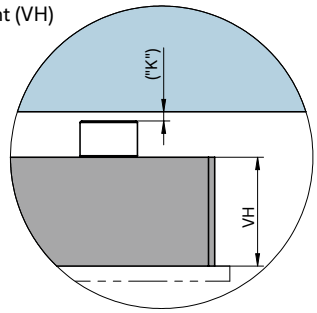


DS Edge distance:
a. min. 35.0 with nozzle size ≤ 6
b. min. 45.0 with nozzle size 8 or 10
c. min. 50.0 with nozzle size ≥ 12

T Distance from the connecting nozzle to the nozzle row

① Screw connection close to manifold
② High-temperature insulation plate
③ Heating connections
④ Possible pin position
"SP" = d/2 + 1 mm
⑤ Opening and plug location
dependent upon nozzle type

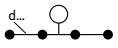
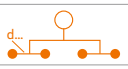
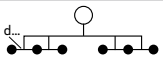
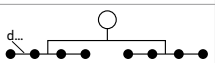
Manifold height (VH)



Dimension "K" required for heat expansion is to be ensured by grinding the pressure piece (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

Design examples/Balancing

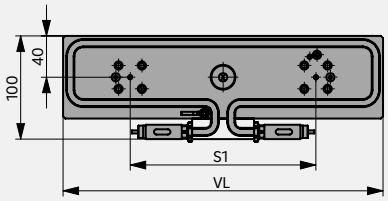
Type		TCP = 36 (VH) Melt channel dia in mm	TDP = 46 (VH) Melt channel dia in mm	TEP = 56 (VH) Melt channel dia in mm	Number of drops
T_P2B		≤ 10	≥ 12 to 16	> 16	2
T_P4–		≤ 10	≥ 12 to 16	> 16	4
T_P4B		≤ 10	≥ 12 to 16	> 16	4
T_P6T		≤ 10	≥ 12 to 16	> 16	6
T_P8T		≤ 10	≥ 12 to 16	> 16	8

B = balanced T = partially balanced – = not balanced

Rapid systems

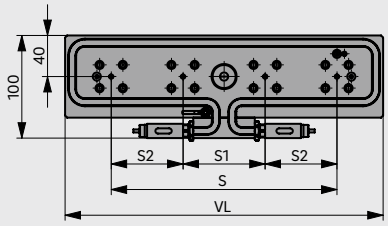
Fully configured hot runner system comprised of manifolds, nozzles and accessories
Delivery time: 2 business weeks.

GCP2 SERIES



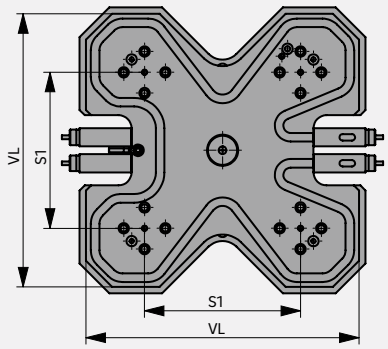
Length (VL)	Pitch (S1 mm) for nozzle type SHF/SMT	Pitch (S1 mm) for nozzle type SHT
160	≥ 58 to 90 (SMT)	
160	≥ 67 to 90 (SHF)	
210	> 90 to 140	> 90 to 120
260	> 140 to 190	> 120 to 170
310	> 190 to 240	> 170 to 220
360	> 240 to 290	> 220 to 270

GCP4B SERIES

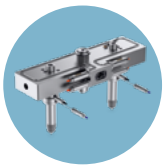


Length (VL)	S = total (min. to max.) mm
260	≥ 130 to 190 (SMT)
260	≥ 145 to 190 (SHF)
310	> 190 to 240
360	> 240 to 290

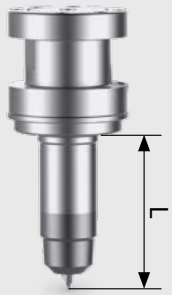
KCP4 SERIES



Length (VL)	S1 mm
135	≥ 44 to 65 (SMT)
135	≥ 47 to 65 (SHF)
165	> 65 to 95
180	> 95 to 110
210	> 110 to 140
240	> 140 to 170



NOZZLE TYPE SHF[1]



Melt channel -Ø (mm) / Nozzle length (L mm)

4.8 / 50, 60, 80, 100

6 / 50, 60, 80

Smallest pitch S1 ≥ 67

Melt channel -Ø (mm) / Nozzle length (L mm)

4.8 / 50, 60, 80, 100

6 / 50, 60, 80

Smallest pitch S1 ≥ 67
Smallest pitch S2 ≥ 39

Melt channel -Ø (mm) / Nozzle length (L mm)

4.8 / 50, 60, 80, 100

6 / 50, 60, 80

Smallest pitch S1 ≥ 47

NOZZLE TYPE SHT

Melt channel -Ø (mm) / Nozzle length (L mm)

7.5 / 60, 80, 100

Smallest pitch S1 ≥ 90
Connection piece typ AK10 or AKV10/40

NOZZLE TYPE SMT

Melt channel -Ø (mm) / Nozzle length (L mm)

3.8 / 50, 60, 80, 100

4.8 / 50, 60, 80, 100

6 / 50, 80

Smallest pitch S1
Melt channel-Ø 3.8 = S1 ≥ 58
Melt channel-Ø 4.8 = S1 ≥ 62
Melt channel-Ø 6 = S1 ≥ 63

Melt channel -Ø (mm) / Nozzle length (L mm)

3.8 / 50, 60, 80, 100

4.8 / 50, 60, 80, 100

6 / 50, 80

Smallest pitch S1
Melt channel-Ø 3.8 = S1 ≥ 58
Melt channel-Ø 4.8 = S1 ≥ 62
Melt channel-Ø 6 = S1 ≥ 63
Smallest pitch S2
Melt channel-Ø 3.8 = S2 ≥ 30
Melt channel-Ø 4.8 = S2 ≥ 32
Melt channel-Ø 6 = S2 ≥ 35

Melt channel -Ø (mm) / Nozzle length (L mm)

3.8 / 50, 60, 80, 100

4.8 / 50, 60, 80, 100

6 / 50, 80

Smallest pitch S1
Melt channel-Ø 3.8 = S1 ≥ 44
Melt channel-Ø 4.8 = S1 ≥ 44
Melt channel-Ø 6 = S1 ≥ 45

RAPID SYSTEM

Comprised of:

1 Connection piece type AKV6/40, AKV8/40, AK10, AKV10/40 incl. titanium ring
2/4 Pressure piece
1 Manifold – insulation plate optional
1 Contact thermocouple 151 HF
2/4 Nozzle type SHF, SHT, SMT
2/4 Power connector CHF (SHF), CMT (SHT), permanent power connection (SMT)
2/4 Thermocouple connector CMLK (SHF, SHT), permanent thermocouple plug connection (SMT)
1 Spacer

Cylinder pin for turning prevention is not included in the scope of supply.

ORDER

Please use the enquiry fax template on the following page.

[1] BlueFlow® hot runner nozzle type SHF is not intended for sale or use in the USA or Canada!

Enquiry fax number: +49 6451 5008-59

Rapid system application information

CUSTOMER INFORMATION

Customer number:	Contact partner:	End customer:
Company:	Telephone:	Target date:
Street:	E-mail:	Other information:
City and post code:	Date:	

REQUIRED INFORMATION ON THE APPLICATION

Item designation	
Industry	☐ Car ☐ Electronics ☐ Packaging ☐ Consumer goods ☐ Medical technology
Material designation (trade name)	
Shot weight per hot runner nozzle (g)	
Type of gating (direct or indirect)	
Wall thickness (mm)	

REQUIRED INFORMATION ON THE MOULD

Series	☐ GCP2 ☐ GCP4B ☐ KCP4
Manifold length	VL _____ mm
Melt channel Ø	☐ 3.8 mm ☐ 4.8 mm ☐ 6 mm ☐ 7.5 mm
Nozzle type	☐ SHF ☐ SHT ☐ SMT
Nozzle length	L _____ mm
Pitch	S1 _____ mm S2 _____ mm (only GCP4B)
Connecting element	☐ AK ☐ AKV6/40 ☐ AKV8/40 ☐ AK10 (SHT) ☐ AKV10/40 (SHT)
Radius	R _____ mm
Angle	W _____ °
Order quantity	
Delivery date	

2.5 Connecting elements

Heated adapter type AHJ4-6

Heated adapter for using system nozzles as single nozzles

TECHNICAL DATA

AHJ4-6

Operating voltage	230 V_{AC}*
Adapter	straight (G)/radius (R)/ angle (W)

Can be used with nozzle type/Delivery times:

Type	4SHF/DHF	5SHF/DHF 5SHT/DHT	6SHF/DHF 6SHT/DHT
AHJ4	■		
AHJ5		■	
AHJ6			■

*Volts alternating current

■ *available*

NOTE

Recommended for processing thermally sensitive plastics.

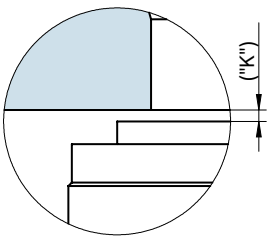
Using a heated adapter, the nozzle types specified above can also be used as single nozzles.

Specify the machine nozzle version when ordering.

WEBCODE 24010

Heated adapter (mm)			Installation (mm)	
			A	B
Type	Ød1	Ød	Strength class 12.9 (DIN EN ISO 4762) Screw size	Strength class 12.9 (DIN EN ISO 4762) Screw size
AHJ4	4.0	3.8	4 x M10 x ...	2 x M5 x 16
AHJ5	5.0	4.8	4 x M10 x ...	2 x M5 x 16
AHJ6	6.0	6.0	4 x M12 x ...	2 x M5 x 16

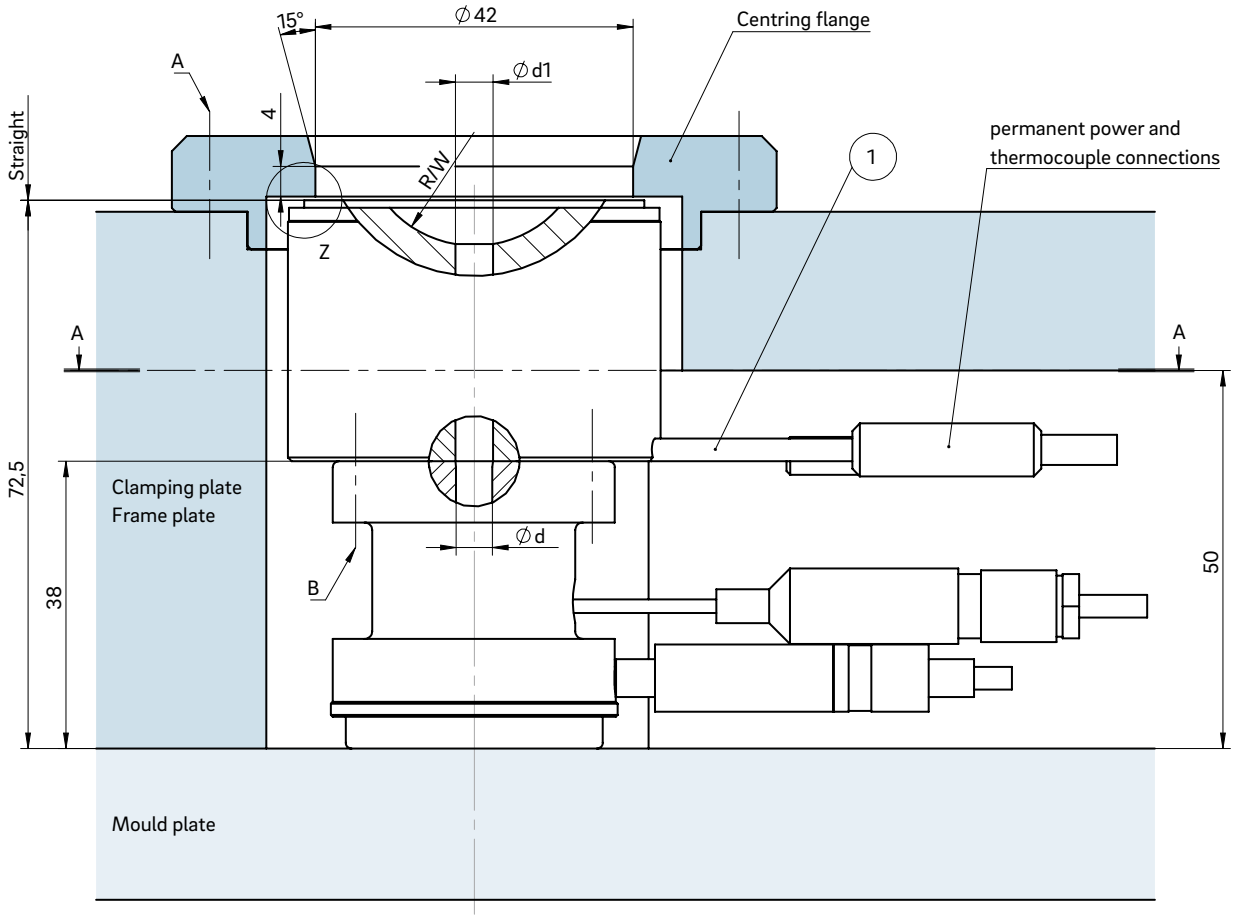
Detail "Z"



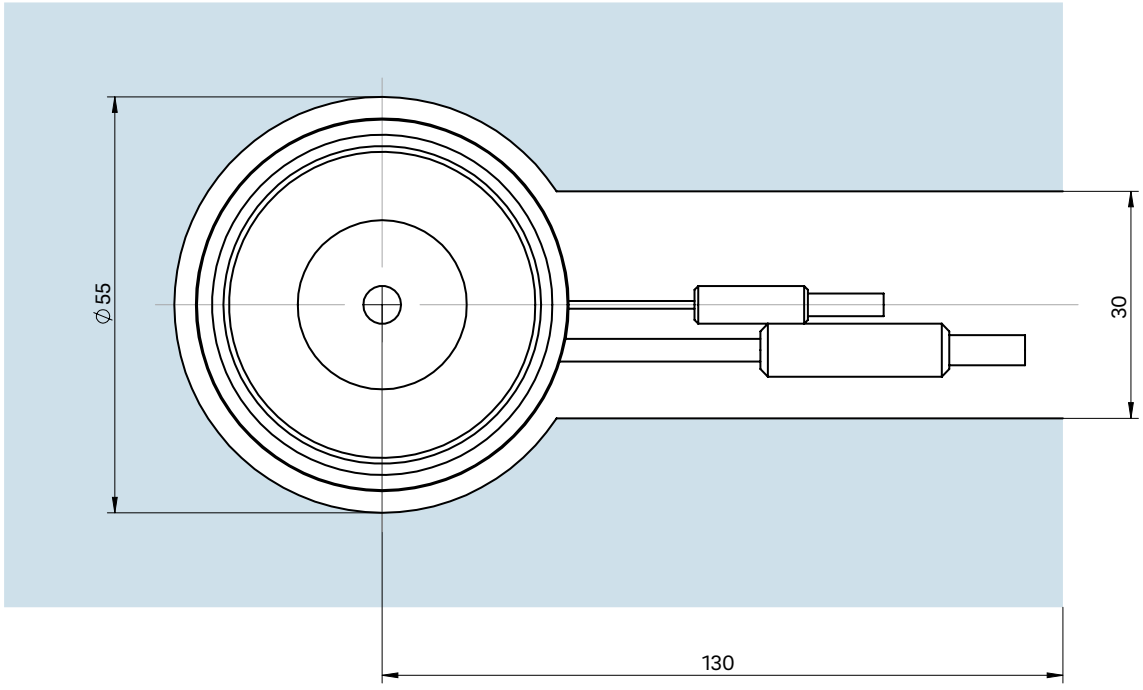
Dimension "K" required for heat expansion is to be ensured by grinding the locating ring! Determine the difference between the height of the nozzle (with adapter) and the height of the structure when installed! ΔT specifies the temperature differential between the processing temperature and the mould temperature!

ΔT (°C)	100	150	200	250	300	350
K (mm)	0.06	0.08	0.09	0.11	0.13	0.16

INSTALLATION



Cross-section A-A: Cutout for heated adapter AHJ4-6



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

Heated adapter type AHJ8-12

Heated adapter for using system nozzles as single nozzles

TECHNICAL DATA

AHJ8-12

Operating voltage	230 V_{AC}*
Adapter	straight (G)/radius (R)/ angle (W)

Can be used with nozzle type/Delivery times:

Type	8SHT/DHT	10SHT/DHT	12SHT/DHT
AHJ8	■		
AHJ10		■	
AHJ12			■

*Volts alternating current

■ *available*

NOTE

Recommended for processing thermally sensitive plastics.

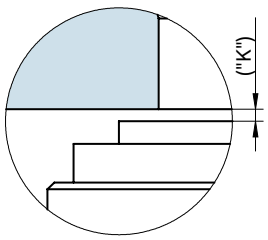
Using a heated adapter, the nozzle types specified above can also be used as single nozzles.

Specify the machine nozzle version when ordering.

WEBCODE
24020

Heated adapter (mm)			Installation (mm)	
			A	B
Type	Ød1	Ød	Strength class 12.9 (DIN EN ISO 4762) Screw size	Strength class 12.9 (DIN EN ISO 4762) Screw size
AHJ8	6.0	7.5	4 x M12 x ...	2 x M5 x 25
AHJ10	8.0	10.0	4 x M12 x ...	2 x M5 x 25
AHJ12	10.0	12.0	4 x M16 x ...	2 x M5 x 25

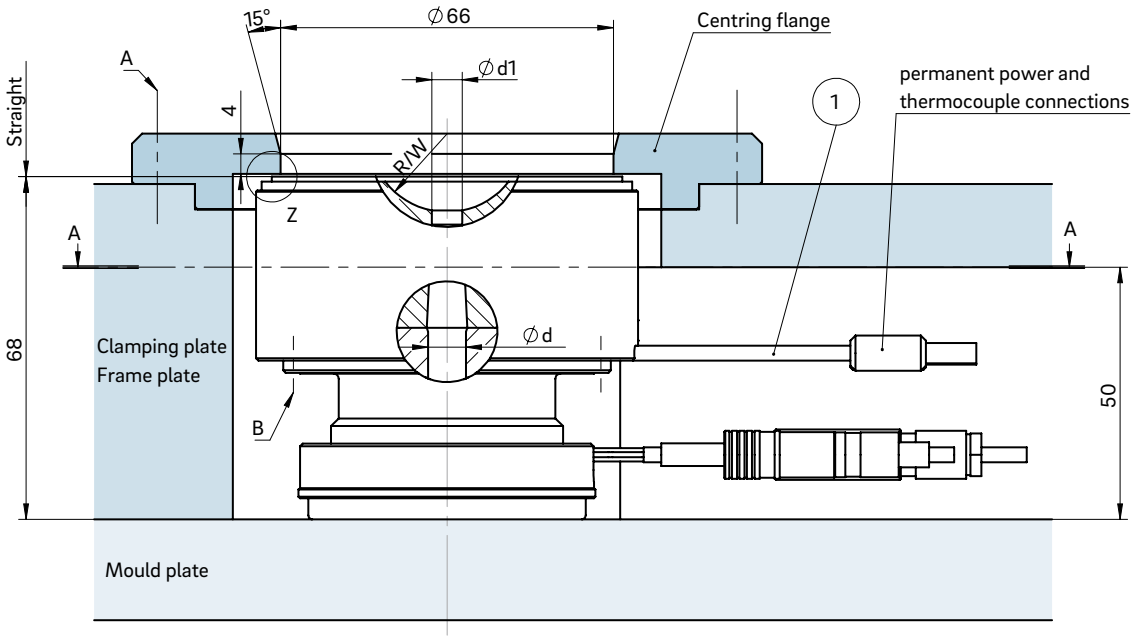
Detail "Z"



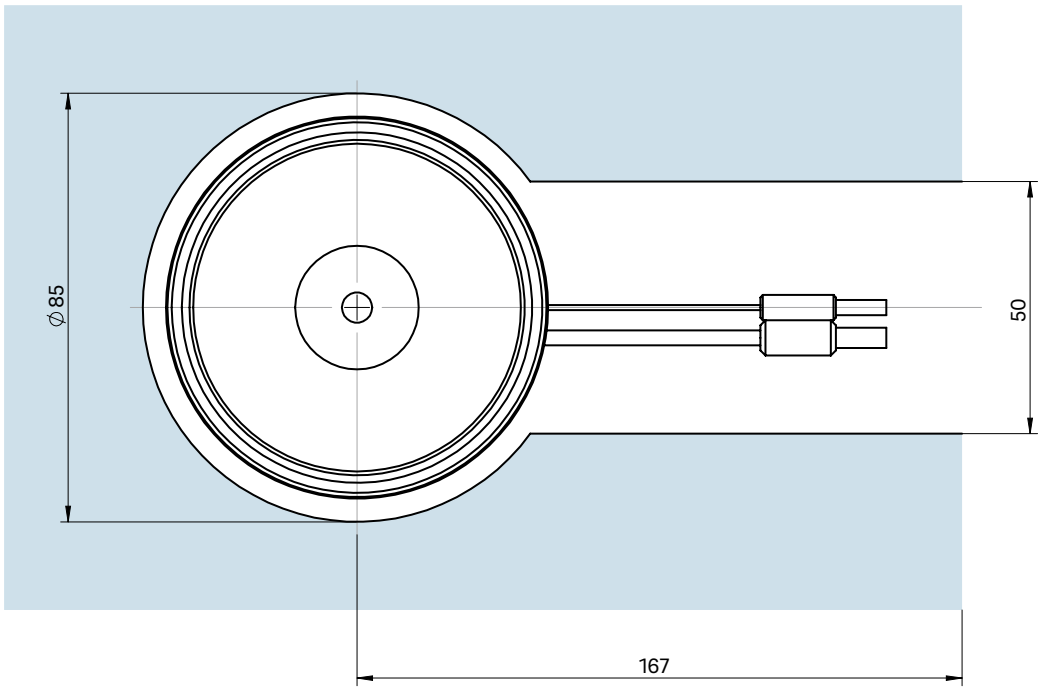
Dimension "K" required for heat expansion is to be ensured by grinding the locating ring! Determine the difference between the height of the nozzle (with adapter) and the height of the structure when installed! ΔT specifies the temperature differential between the processing temperature and the mould temperature!

ΔT (°C)	100	150	200	250	300	350
K (mm)	0.04	0.08	0.12	0.16	0.20	0.25

INSTALLATION



Cross-section A-A: Cutout for heated adapter AHJ8-12



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

Connection piece type AK

Connection piece linking the machine nozzle and manifold

TECHNICAL DATA

AK

Adapter	straight (G)/radius (R)/ angle (W)

Connection piece (mm):

Type	Ød1	Ød2	
AK3	3	3	■
AK4	4	4	■
AK5	5	5	■
AK6	6	6	■
AK8	6	8	■
AK10	8	10	■

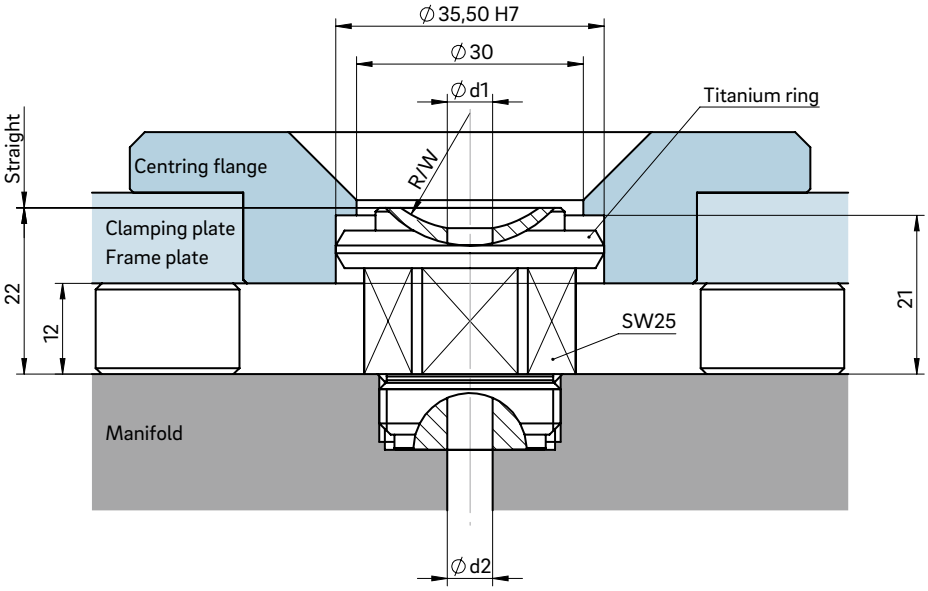
■ *available*

NOTE

Specify the machine nozzle version when ordering.

WEBCODE
24110

INSTALLATION



Connection piece type AKV

Connection piece linking the machine nozzle and manifold

TECHNICAL DATA

AKV

Operating voltage	230 V_{AC}*
Adapter	straight (G)/radius (R)/ angle (W)

Nominal length L (mm) of the connection piece/ Delivery times:

Type	40	50	60
AKV3	■	■	■
AKV4	■	■	■
AKV5	■	■	■
AKV6	■	■	■
AKV8	■	■	■
AKV10	■	■	■

*Volts alternating current

■ *available*

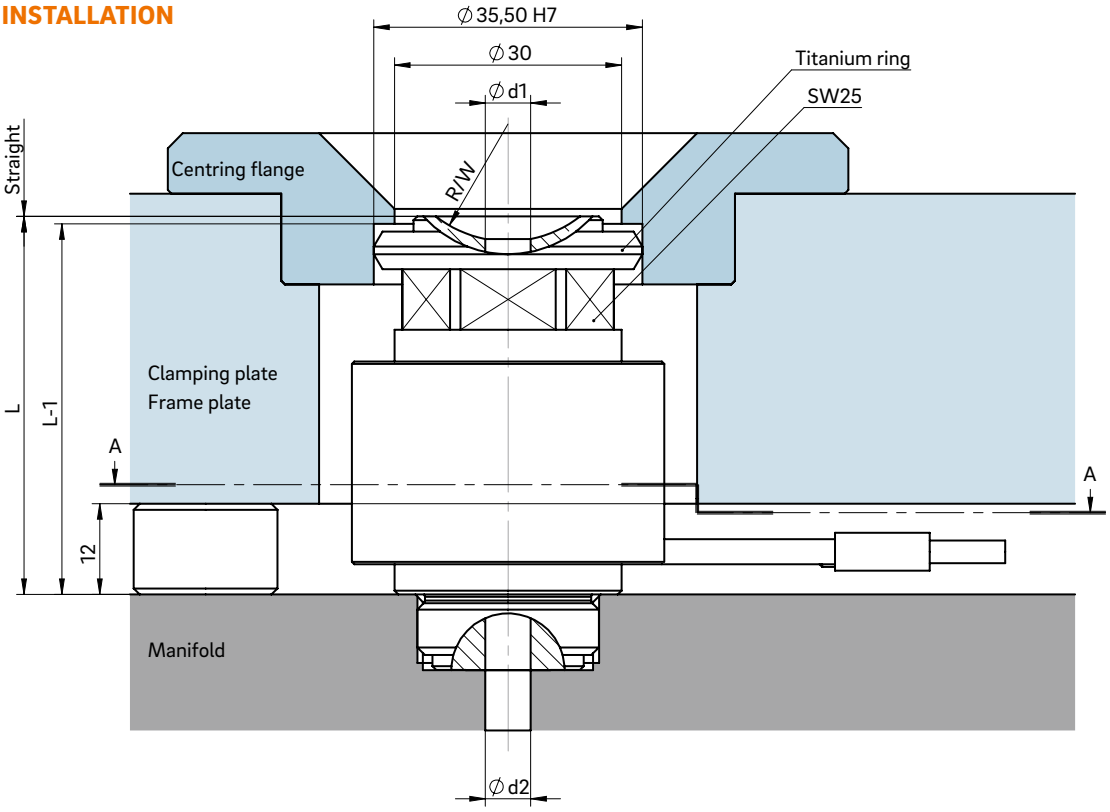
NOTE

Specify the machine nozzle version when ordering.

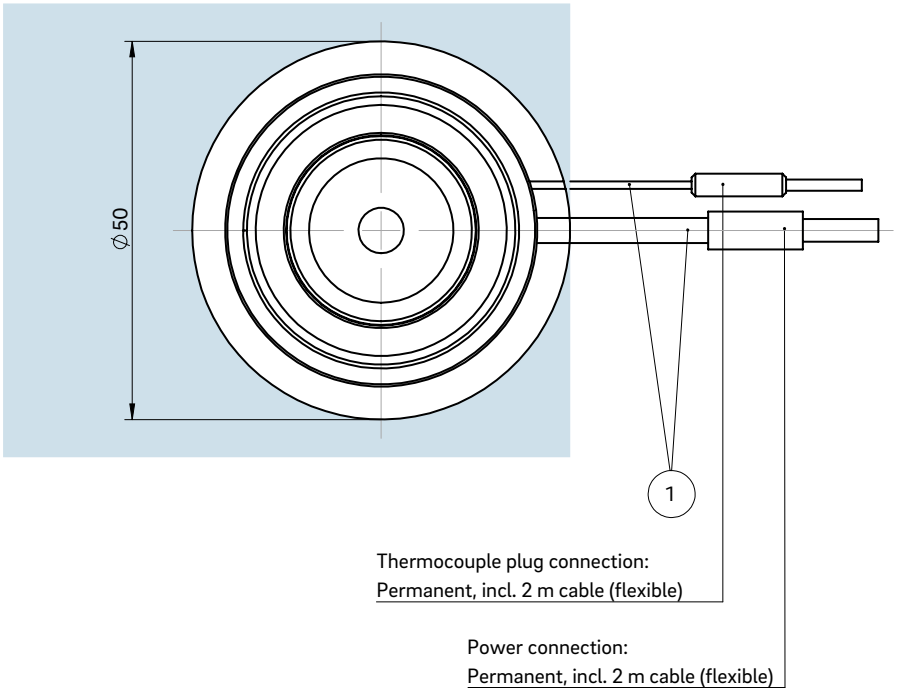
	Connecting nozzle (mm)	
Type	**Ød1**	**Ød2**
AKV3	3	3
AKV4	4	4
AKV5	5	5
AKV6	6	6
AKV8	6	8
AKV10	8	10

WEBCODE
24120

INSTALLATION



Cross-section A-A: Cutout for connection piece, power and thermocouple cables



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

Connection piece type AS

Connection piece linking the machine nozzle and manifold

TECHNICAL DATA

AS

Adapter straight (G)/radius (R)/ angle (W)

Connection piece (mm):

Type	Ød1	Ød2	
AS12	10	12	■
AS14	12	14	■
AS16	14	16	■

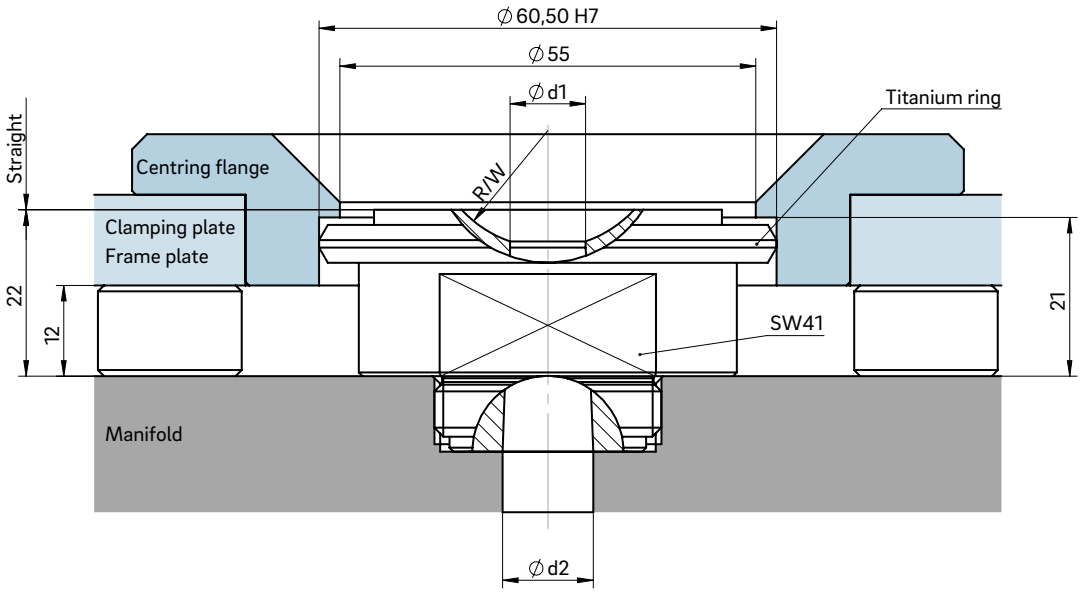
■ *available*

NOTE

Specify the machine nozzle version when ordering.

WEBCODE
24130

INSTALLATION



Connection piece type ASV

Connection piece linking the machine nozzle and manifold

TECHNICAL DATA

ASV

Operating voltage	230 V_{AC}*
Adapter	straight (G)/radius (R)/ angle (W)

Nominal length L (mm) of the connection piece/ Delivery times:

Type	40	50	60
ASV12	■	■	■
ASV14	■	■	■
ASV16	■	■	■

*Volts alternating current

■ *available*

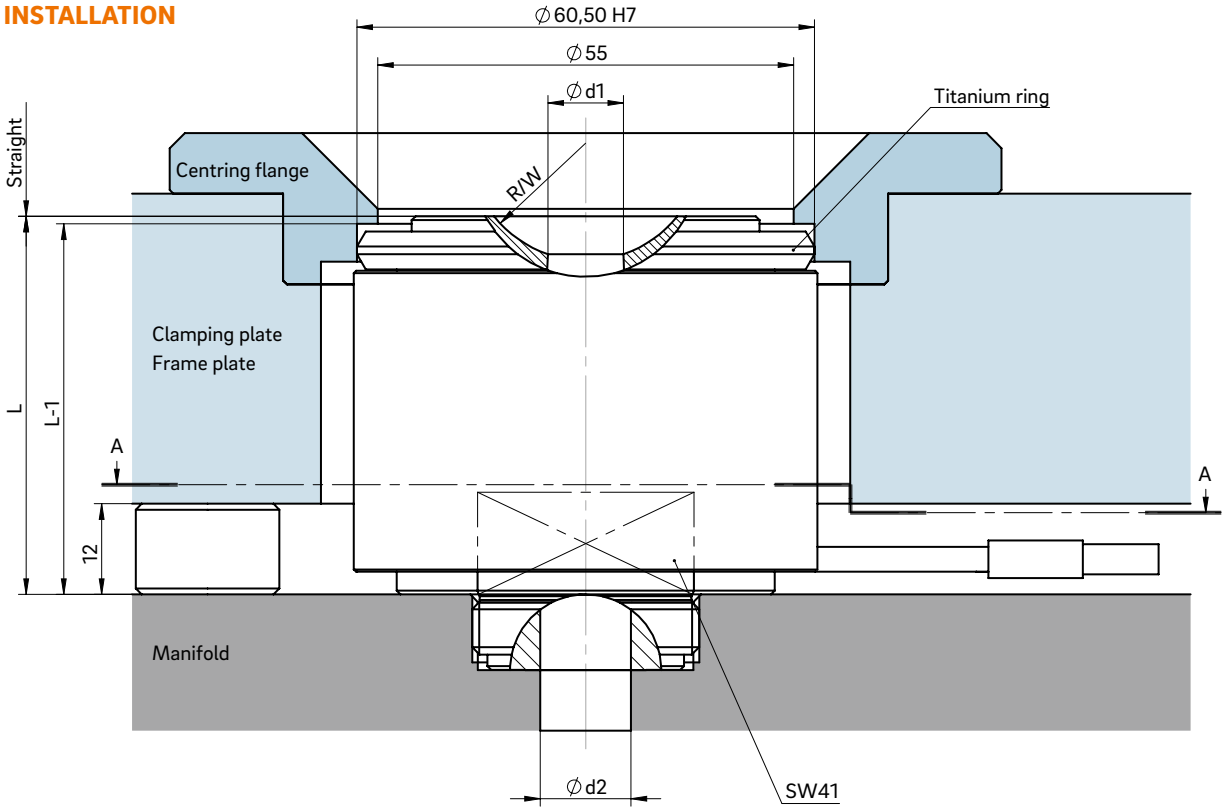
NOTE

Specify the machine nozzle version when ordering.

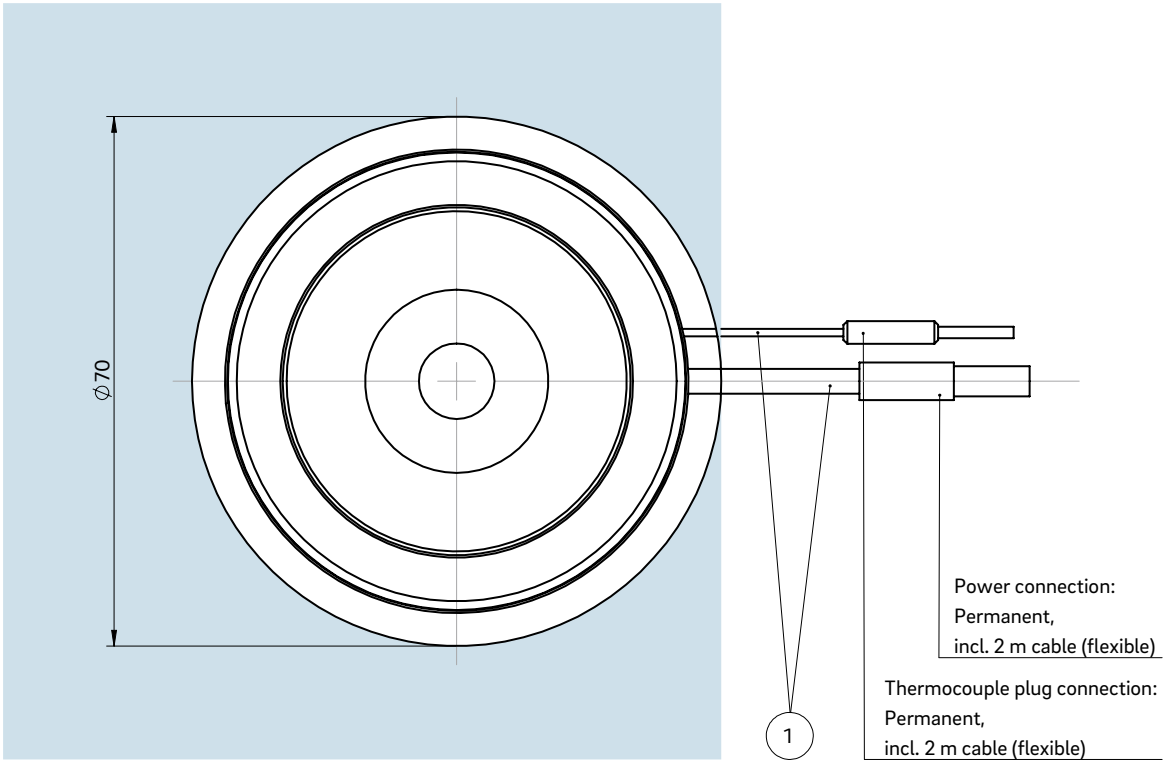
Type	Connecting nozzle (mm) Ød1	Ød2
ASV12	10	12
ASV14	12	14
ASV16	14	16

WEBCODE 24140

INSTALLATION



Cross-section A-A: Cutout for connection piece, power and thermocouple cables



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