



WADIM<sub>PLAST</sub>



shaping  
progress

# Hot runner systems

Catalogue 2023/2024  
[wadim.com.pl](http://wadim.com.pl)

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# General nozzle selection table

**Attention**

## Index for maximum shot weights in [g] per nozzle

The above data are estimates. If you are choosing a hot runner system, please contact with WADIM PLAST specialists.

Index for maximum shot weights in [g] per nozzle based on an average flow-length - wall-thickness - relation

Nozzle series	Type of nozzle tip Ring gate CP	Shot weight [g] PE, PP, PS		Shot weight [g] ABS, POM kop., PBT		Shot weight [g] PA+WS, PBT+WS, PMMA, PT		Nozzle length [mm]	
		min.	max.	min.	max.	min.	max.	min.	maks.
WP 16	CP 3, CP 5, AP 3	0,5	50,0	0,5	25,0	0,5	12,0	54,0	194,0
WP 20	CP 3, CP 4, CP 5, AP 3	3,0	250,0	3,0	150,0	3,0	70,0	63,0	183,0
WP 29	CP 3, CP 4, CP 5, AP 3	20,0	2000,0	20,0	1000,0	20,0	400,0	65,0	265,0
WP 22	CP 3, CP 5	0,5	50,0	0,5	25,0	0,5	12,0	56,0	76,0
WP 26	CP 3, CP 5	3,0	250,0	3,0	150,0	3,0	70,0	61,0	101,0
WP 40	CP 3, CP 5	20,0	2000,0	20,0	1000,0	20,0	400,0	61,0	101,0

In case of reinforced plastics with 20% of the maximum shot weight, the total shot weight will be reduced by 20%. This nozzle selection table includes only general recommendations based on our stress analysis and years of experiences. For this data we can't give a guarantee because our products are just a part of the manufacturing process. Please contact with our technicians in borderline cases: [michal.kurleto@wadim.com.pl](mailto:michal.kurleto@wadim.com.pl), [ula.skłodowska@wadim.com.pl](mailto:ula.skłodowska@wadim.com.pl), [karol.dryk@wadim.com.pl](mailto:karol.dryk@wadim.com.pl), [adrian.klimek@wadim.com.pl](mailto:adrian.klimek@wadim.com.pl).

## Selection of gate's diameter:

The graphs are used to determine the diameter of the gate in the admissible range shear rates for different materials.

### Example:

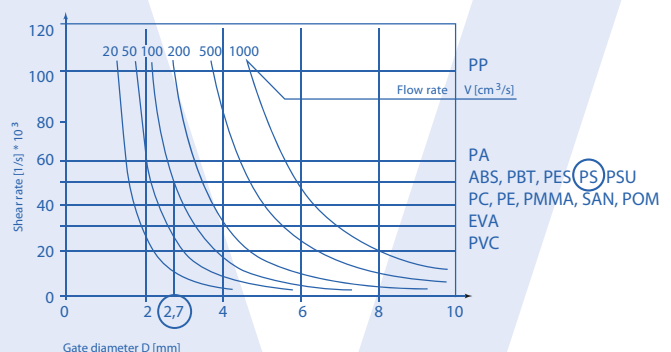
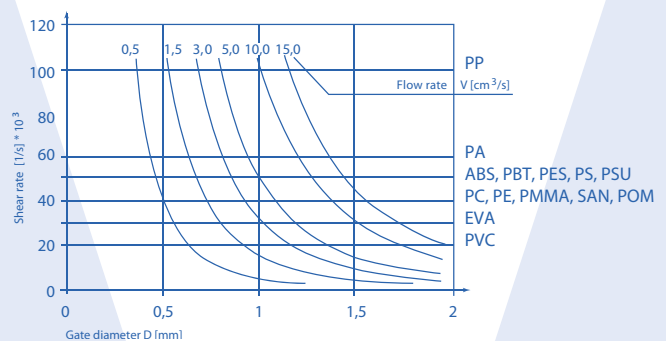
- part of polystyrene with weight 220 g
- injection time: 2 s
- max shear rate for PS: 50000 1/s
- volumetric flow V

$$V = \frac{\text{part weight}}{\text{density} * \text{injection time}}$$

$$V = \frac{220}{1,1 * 2} = 100 \text{ cm}^3/\text{s}$$

- gate diameter read from the chart: 2,7 mm

**Advice:** start from a smaller diameter and if need be a larger adjust it in corection loop.

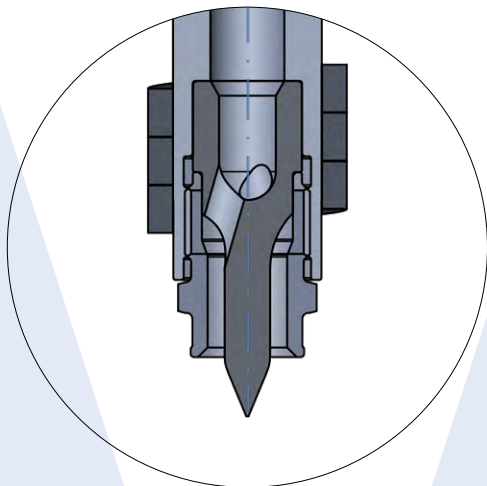




# Nozzle tip selection tabel

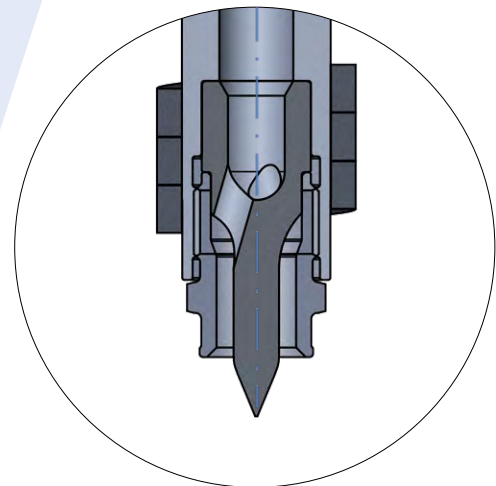
Nozzle tip / Nozzle	WP 16	WP 20	WP 29	WP 22	WP 26	WP 40
CP 3	●	●	●	●	●	●
CP 4		●	●			
CP 5	●	●	●	●	●	●
AP 3	●	●	●	●	●	●
TP 3 / TP 3W		●	●			
TP 4 / TP 4W		●	●			
TO / TOW		●	●			
TZO		●	●			
ZI	●	●	●			
TZI / TZIW		●	●			

Based on its many years of experience, Wadim Plast has developed many solutions that allow for adjusting the nozzle to a specific project. The company's offer includes the following solutions:



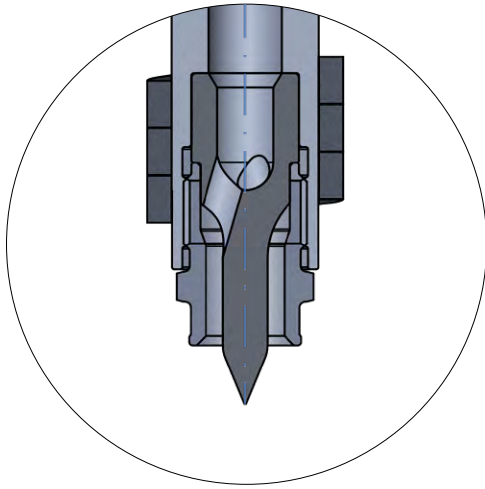
## CP 3

The most popular nozzle tip used in Wadim Plast's hot runner systems. Its solid construction and excellent thermal conductivity allow for the use of this solution in the processing of various materials, including PP, ABS, PC, and TPE.



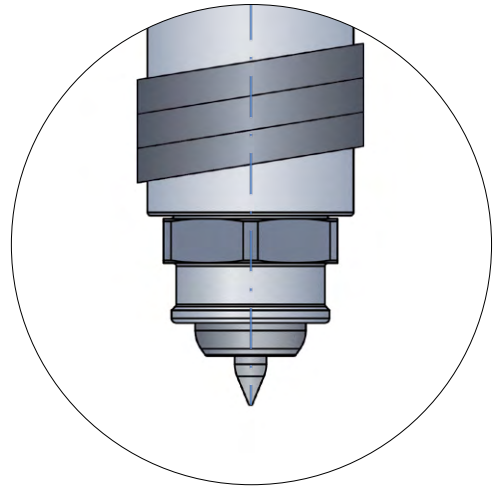
## CP 4

The changing market increasingly demands that manufacturers use reinforced materials, such as glass fiber. With them in mind, Wadim Plast has developed a carbide nozzle, which allows for processing materials enriched with over 30%.



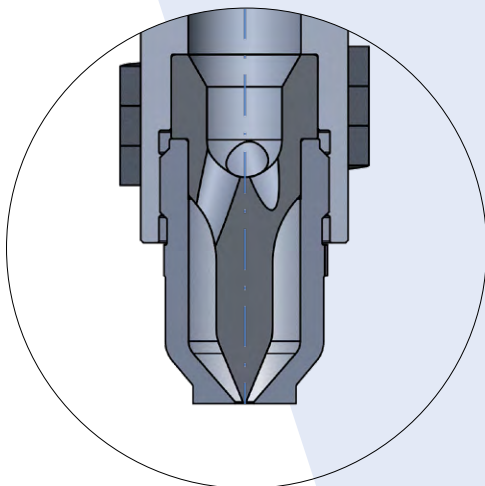
**CP 5**

Solution developed for temperature-sensitive plastics in the tip of the nozzle gate. The use of copper in the tip ensures very high thermal conductivity.



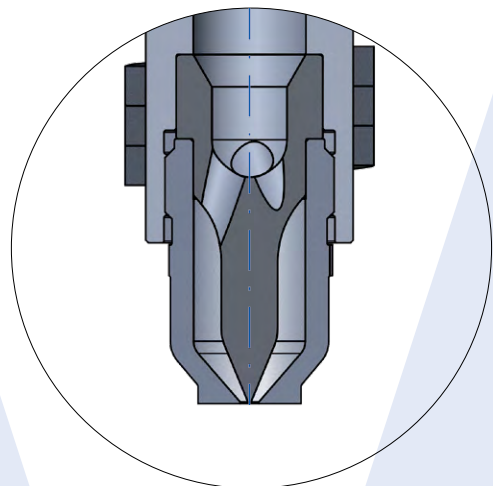
**AP 3**

The latest solution from the Wadim Plast nozzle tip's family. Its special geometry allows for unprecedented ease of color change, which is so important in many projects. The nozzle can be used for the same materials as the CP3 nozzle.



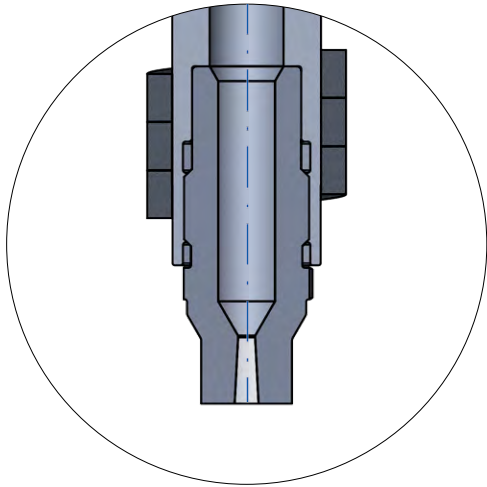
**TP 3 / TP 3W**

Solution designed for injection via a cold runner. The constriction of gate in the nozzle tip makes that making of chamber is easier and provides improved thermal properties. The nozzle tip includes the CP3 torpedo and is available in the TP3W version, which features a 30 mm extension.



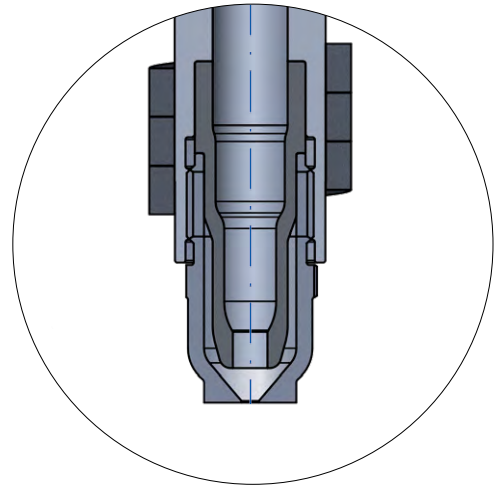
**TP 4 / TP 4W**

An analogous solution to TP3 utilizing the CP4 torpedo created for materials enriched with e.g. glass fibre.



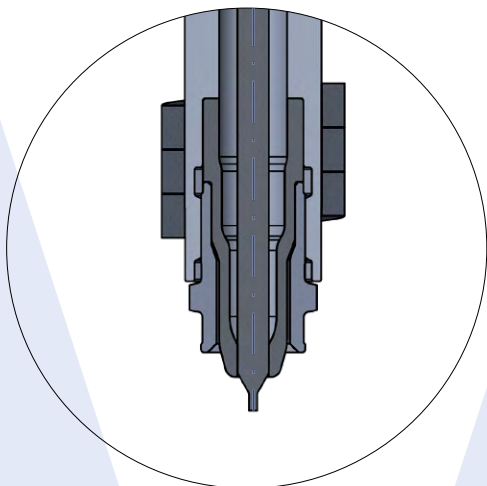
### TO / TOW

On the market, manufacturers often have to deal with the processing of regrind plastics. Wadim Plast has prepared for them a solution that does not include a torpedo, which significantly improves nozzle throughput. The use of this type of nozzle may be associated with thread pull-out from the gates, freezing, or dripping of the gates. It is also available in the TOW version with an extension of W=30 mm



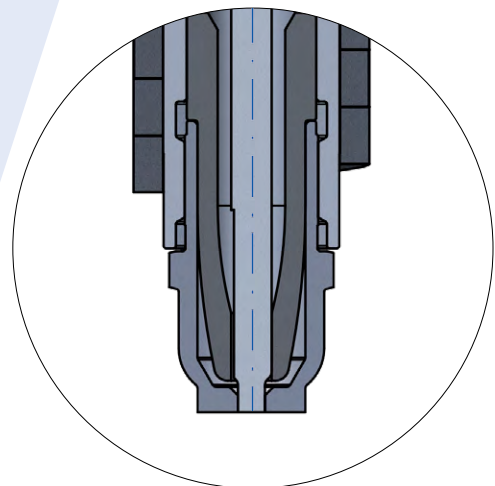
### TZO

A nozzle tip with a similar application as the TO, but designed to avoid the occurrence of a high cone at the injection point. However, the use of this solution may still be associated with phenomena such as leave thread.



### ZI

For customers who require a minimal mark after the injection point, either for technological or aesthetic reasons, Wadim Plast has prepared a valve-gated nozzle tip. This solution allows for a cosmetic quality of the injection point trace.



### TZI

A solution analogous to the TP nozzle tip, i.e. with a gate in the tip, but simultaneously valve-gated. This option simplifies the assembly of the nozzle while maintaining a very aesthetic injection point mark.

# Types of solutions

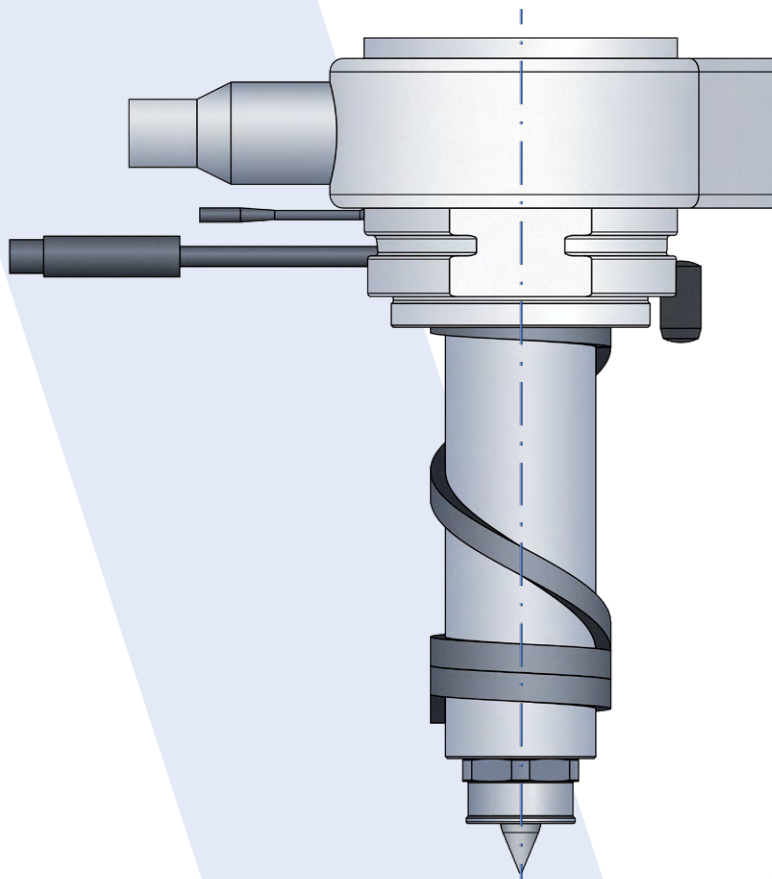
Responding to the needs of the market, Wadim Plast has prepared a series of solutions that take into account the different requirements of customers.

The company's hot runner offer includes, among others:

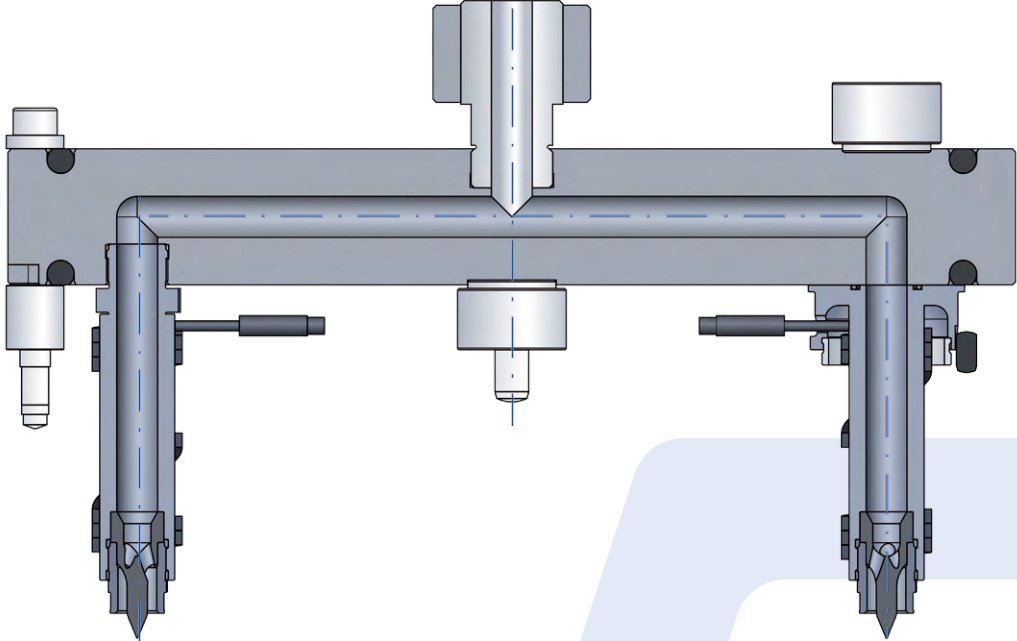
- single nozzles,
- open systems,
- valve gate systems.

The aforementioned systems can be sealed as the floated and by screwing.

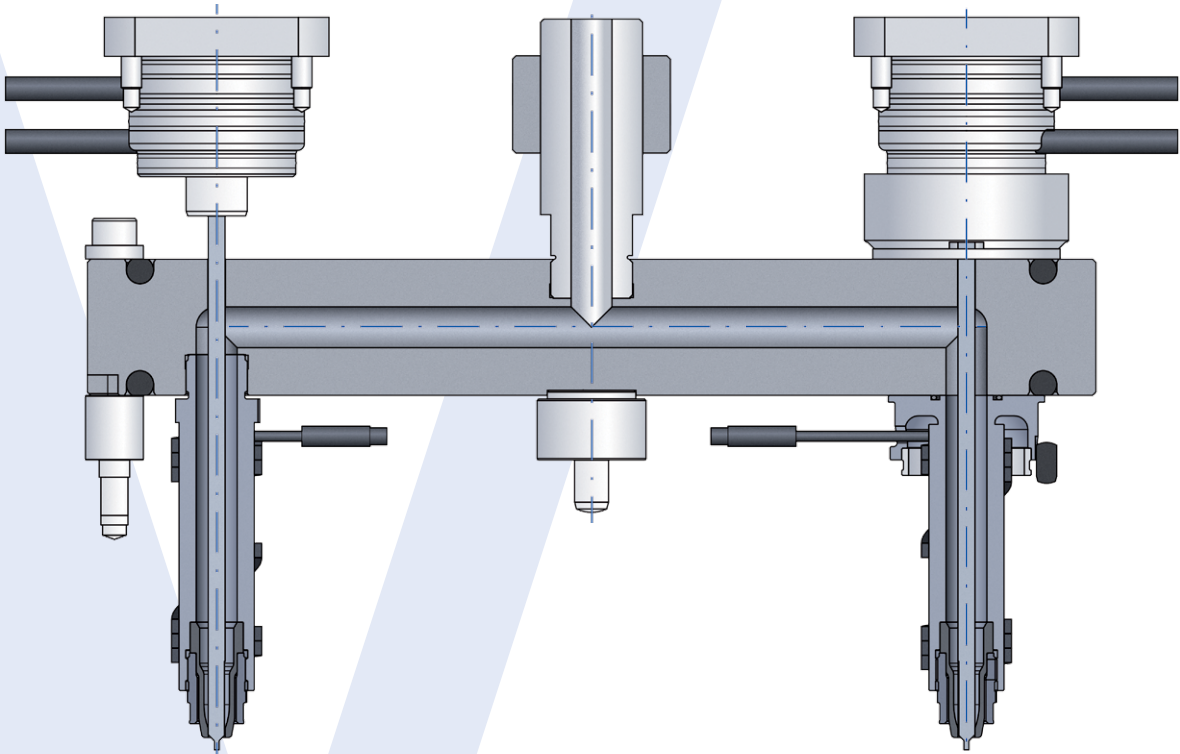
## Single nozzle



### Open HR system



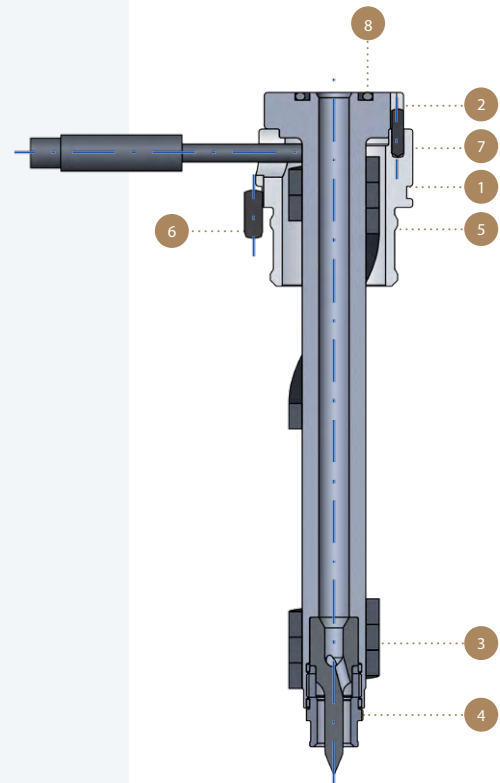
### Valve gate HR system



# CP Ring gate Nozzle WP 16

## Technical Data

Electrical Data	230 V
Thermocouple	Fe-CuNi (type J)
Cable length	2000 mm
Max. injection pressure	1800 bar
Nozzle body, case	Work hardened tempered steel
Gate insert	CP 5 = Cu+Ni-alloy CP 3 = Mo-alloy AP 3 = Mo-alloy



## Features

- Very small dimensions
- Screwed gate tip
- All operating parts are exchangeable
- Efficient thermal separation
- Homogeneous temperature profile
- External heating
- Direct temperature measurement nearby gate tip
- Module structure, can be used as single nozzle

## Advantages

- CP3 gate insert: high protection against wear
- Low energy requirement
- Plastic processing without degradation
- Possible cosmetic injection point
- Short cycle times
- Compact nozzle
- Small chamber advisable to color change

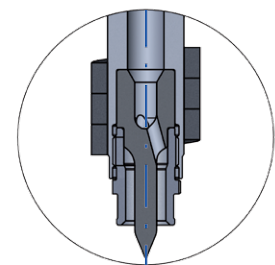
## Nozzle selection advice

Maximum shot weight in [g] per nozzle

Type	Viscosity		
	Low	Middle	High
WP 16, CP	50	25	12
e. g.	PE, PP, PS	ABS POM kop. PA, PBT	PA+WS PBT+WS PMMA, PC

## Part list

1. Case
2. Nozzle body
3. Gate insert
4. Insulation sleeve
5. Heater
6. Anti-rotation dowel pin  
Ø3x8
7. Dowel pin Ø2x8
8. O-ring



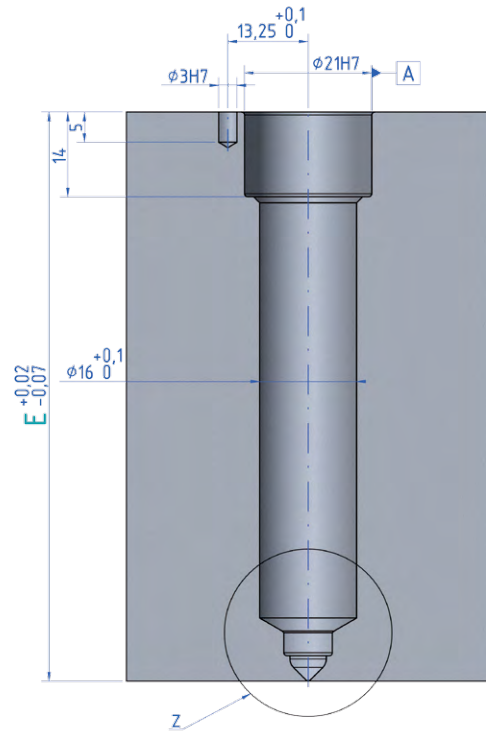
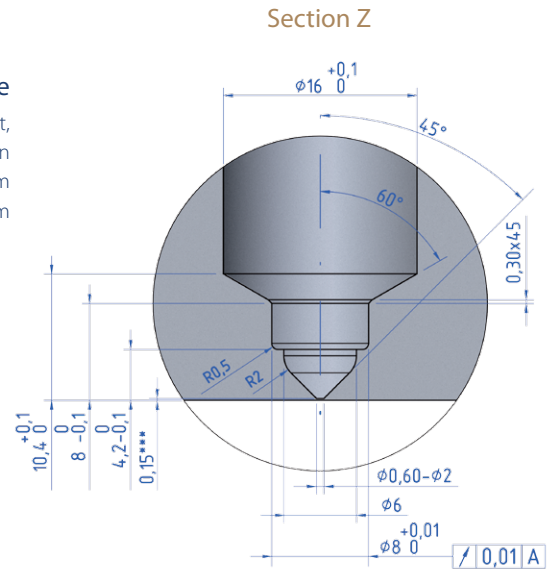
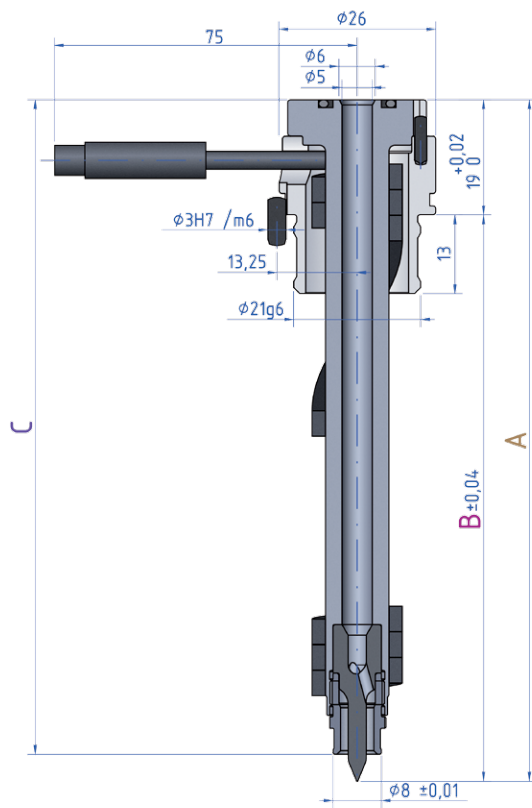
## Gate tip CP 3/5

- Gate insert 16 CP 3/5
- Insulation sleeve 16

Nozzle  
Chamber nozzle

Execution note

\*\*\* For lower pin height, the measure 0,15 can be reduced to 0,05 mm or can be 0 mm



Nozzle	Type of nozzle tip	Article No.	A	B	C	E
WP 16x054	CP/AP	16054-00-X	72,60	53,60	68,15	54,00
WP 16x074	CP/AP	16074-00-X	92,55	73,55	88,10	74,00
WP 16x094	CP/AP	16094-00-X	112,50	93,50	108,05	94,00
WP 16x114	CP/AP	16114-00-X	132,45	113,45	128,00	114,00
WP 16x134	CP/AP	16134-00-X	152,40	133,40	147,95	134,00
WP 16x154	CP/AP	16154-00-X	172,35	153,35	167,90	154,00
WP 16x174	CP/AP	16174-00-X	192,30	173,30	187,85	174,00
WP 16x194	CP/AP	16194-00-X	212,25	193,25	207,8	194,00

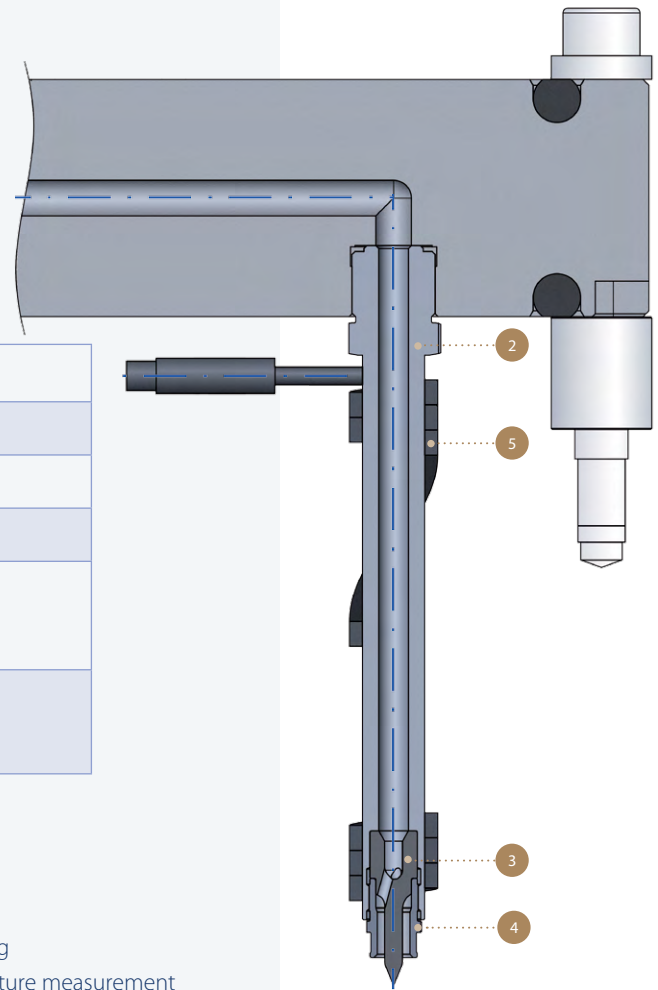
X = 1 for CP 5 gate insert, X = 2 for CP 3 gate insert, X = 6 for AP 3 gate insert



# CP Ring gate Nozzle WPW16

## Technical Data

Electrical Data	230 V
Thermocouple	Fe-CuNi (type J)
Cable length	2000 mm
Max. injection pressure	1800 bar
Nozzle body, case	Work hardened tempered steel
Gate insert	CP5 = Cu+Ni-alloy CP3 = Mo-alloy AP3 = Mo-alloy



## Features

- Very small dimensions
- Screwed gate tip
- All operating parts are exchangeable
- Efficient thermal separation
- Homogeneous temperature profile
- External heating
- Direct temperature measurement nearby gate tip
- Module structure

## Advantages

- CP3 gate insert: high protection against wear
- Low energy requirement
- Plastic processing without degradation
- Possible cosmetic injection point
- Short cycle times
- Compact nozzle
- Small chamber advisable to color change

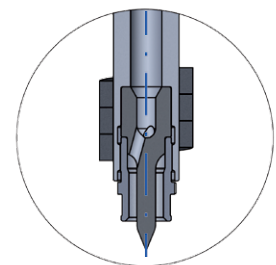
## Nozzle selection advice

Maximum shot weight in [g] per nozzle

Type	Viscosity		
	Low	Middle	High
WPW 16, CP	50	25	12
e.g.	PE, PP, PS	ABS POM kop. PA, PBT	PA+WS PBT+WS PMMA, PC

## Part list

2. Nozzle body
3. Gate insert
4. Insulation sleeve
5. Heater

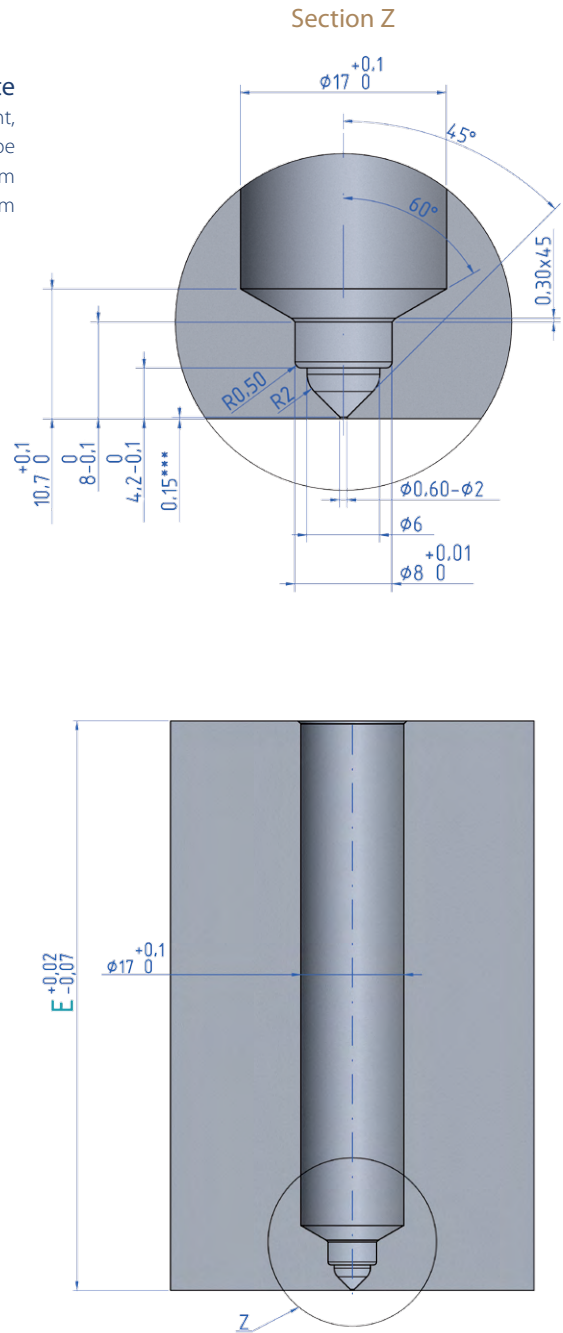
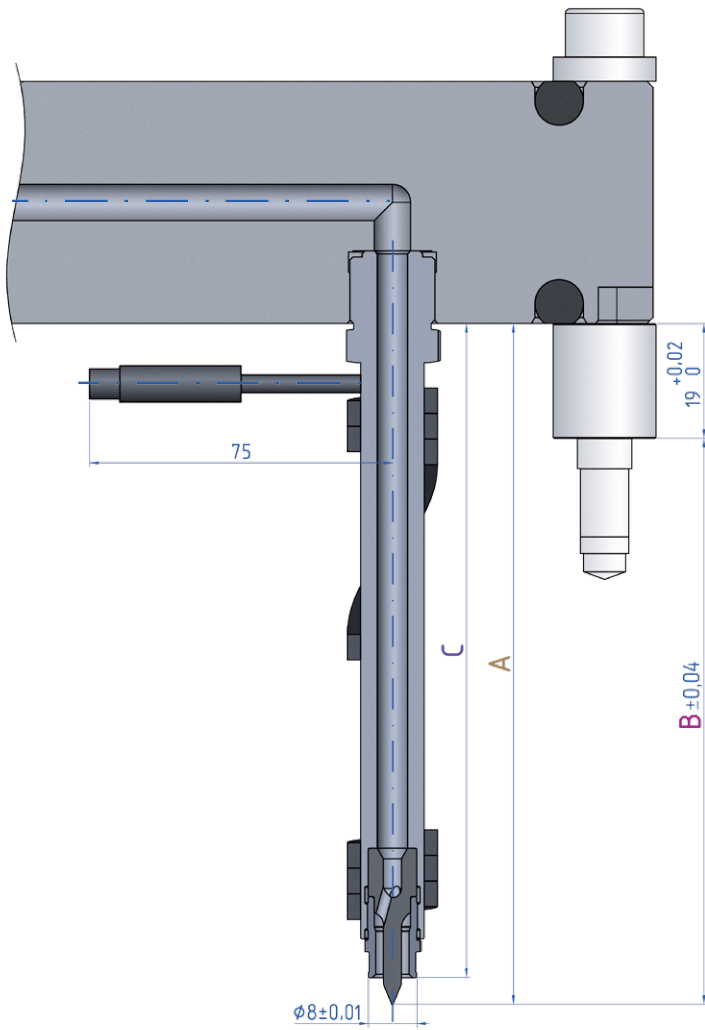


## Gate tip CP 3/5

- Gate insert 16 CP 3/5
- Insulation sleeve 16

Nozzle  
Chamber nozzle

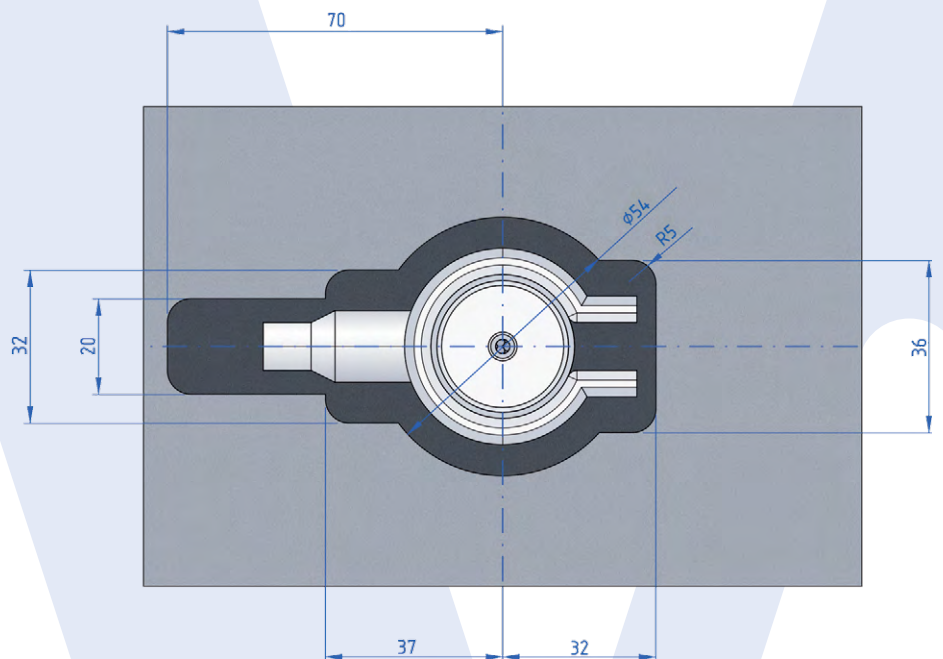
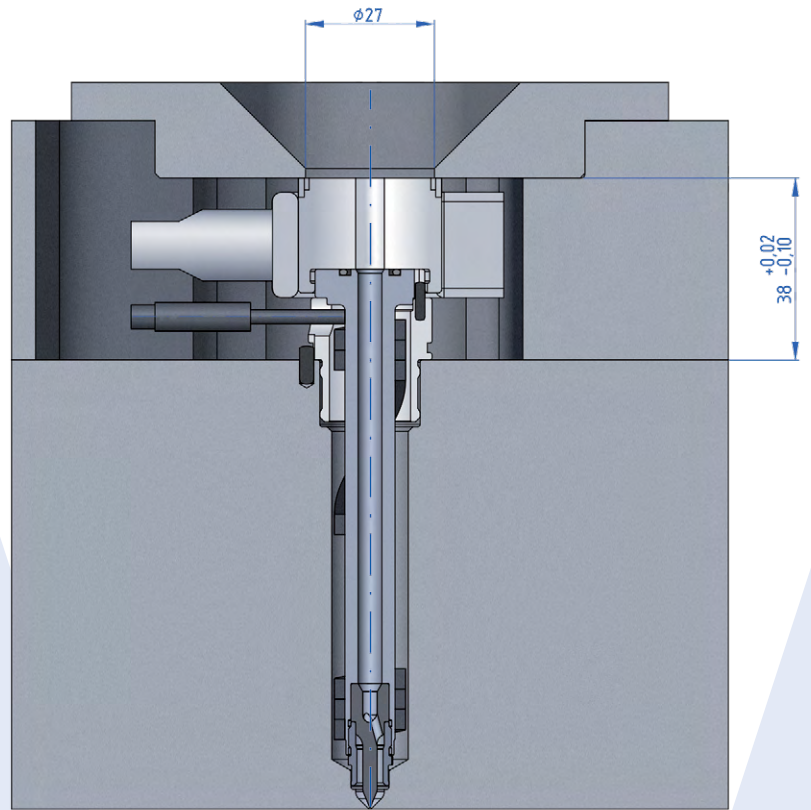
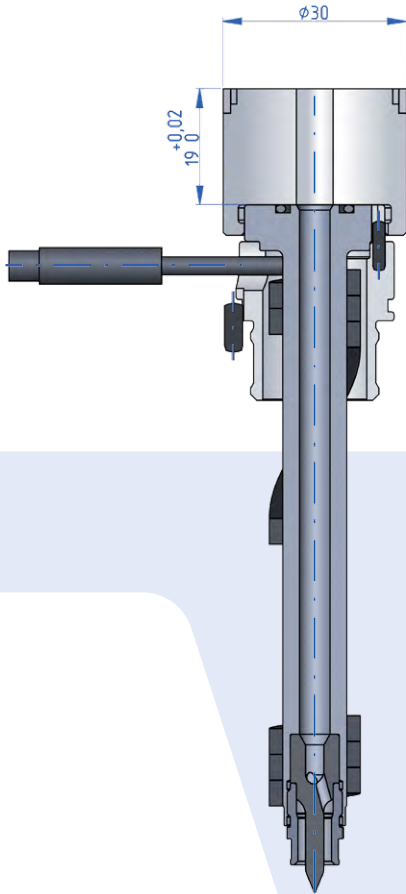
**Execution note**  
\*\*\* For lower pin height, the measure 0,15 can be reduced to 0,05 mm or can be 0 mm



Nozzle	Type of nozzle tip	Article No.	A	B	C	E	Max. spacing
WPW 16x054	CP/AP	16054-00-X	72,60	53,60	68,15	54,00	108,00
WPW 16x074	CP/AP	16074-00-X	92,55	73,55	88,10	74,00	148,00
WPW 16x094	CP/AP	16094-00-X	112,50	93,50	108,05	94,00	188,00
WPW 16x114	CP/AP	16114-00-X	132,45	113,45	128,00	114,00	228,00
WPW 16x134	CP/AP	16134-00-X	152,40	133,40	147,95	134,00	268,00
WPW 16x154	CP/AP	16154-00-X	172,35	153,35	167,90	154,00	308,00
WPW 16x174	CP/AP	16174-00-X	192,30	173,30	187,85	174,00	348,00
WPW 16x194	CP/AP	16194-00-X	212,25	193,25	207,80	194,00	388,00

X = 1 for CP 5 gate insert, X = 2 for CP 3 gate insert, X = 6 for AP 3 gate insert

Single nozzle  
Chamber nozzle



Maximum nozzle contact pressure 60 kN

Locating ring should be screwed  
minimum by 3 - M12 screw  
or 4 - M10 screw 10.9 grade

Spare parts, order examples

- 2
- 5
- 1
- 3
- 3
- 3
- 4
- 8
- 7
- 6
- 11
- 9
- 10

Nozzle type / Part	Nozzle body	Heater	Case	CP 5 gate insert	CP 3 gate insert	AP 3 gate insert	Insulation sleeve	O-ring	Dowel ø2x8	Dowel ø3x8	Single nozzle support	Heater band 200 W	Thermocouple of single nozzle support
WP 16x054	22056-02	22056-05	16000-01	16000-03-1	16000-03-2	16000-03-6	16000-04	22000-08	22000-07	22000-06	22000-11	22000-09	22000-10
WP 16x074	22076-02	22076-05											
WP 16x094	16094-02	16094-05											
WP 16x114	16114-02	16114-05											
WP 16x134	16134-02	16134-05											
WP 16x154	16154-02	16154-05											
WP 16x174	16174-02	16174-05											
WP 16x194	16194-02	16194-05											

Order example

Type	Article No.
WP 16 - 054 - CP 3	16054-00-2



Single nozzle support

Name	Type	Article No.
Single nozzle support	EA-WP 16 / R ...	22000-11
Heater band 200 W		22000-09
Thermocouple of single nozzle		22000-10

Explanation of nozzle code:

**AABBB-00-CC**

where:

- AA = diameter
- BBB = lenght
- 00 = complete nozzle
- CC = gate insert type

- 1 for CP 5 gate insert
- 2 for CP 3 gate insert
- 6 for AP 3 gate insert

**Example:**

nozzle WP16x054 CP 3  
16054-00-2

# CP Ring gate Nozzle WP 20

## Technical Data

Electrical Data	230 V
Thermocouple	Fe-CuNi (type J)
Cable length	2000 mm
Max. injection pressure	1800 bar
Nozzle body, case	Work hardened tempered steel
Gate insert	CP 5 = stop Cu + Ni CP 4 = kompozyt Mo + WC CP 3 = stop Mo AP 3 = stop Mo

## Features

- Screwed gate tip
- All operating parts are exchangeable
- Efficient thermal separation
- Homogeneous temperature profile
- External heating
- Direct temperature measurement nearby gate tip
- Module structure, can be used as single nozzle

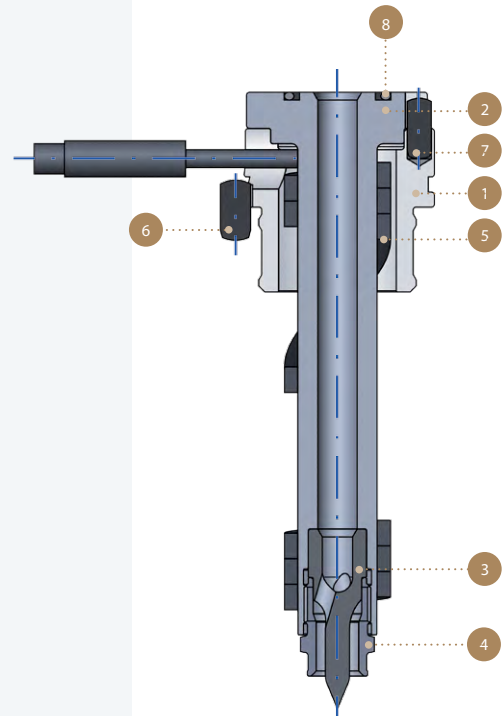
## Advantages

- CP3 gate insert: high protection against wear
- Low energy requirement
- Plastic processing without degradation
- Possible cosmetic injection point
- Short cycle times
- Compact nozzle
- Small chamber advisable to color change

## Nozzle selection advice

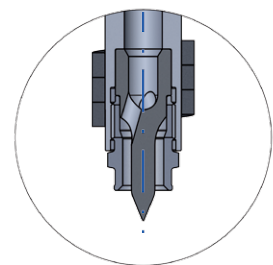
Maximum shot weight in [g] per nozzle

Type	Viscosity		
	Low	Middle	High
WP 20, CP	250	150	70
e.g.	PE, PP, PS	ABS POM kop. PA, PBT	PA+WS PBT+WS PMMA, PC



## Part list

1. Case
2. Nozzle body
3. Gate insert
4. Insulation sleeve
5. Heater
6. Anti-rotation dowel pin Ø5x10
7. Dowel pin Ø4x10
8. O-ring



## Gate tip CP 3/4/5

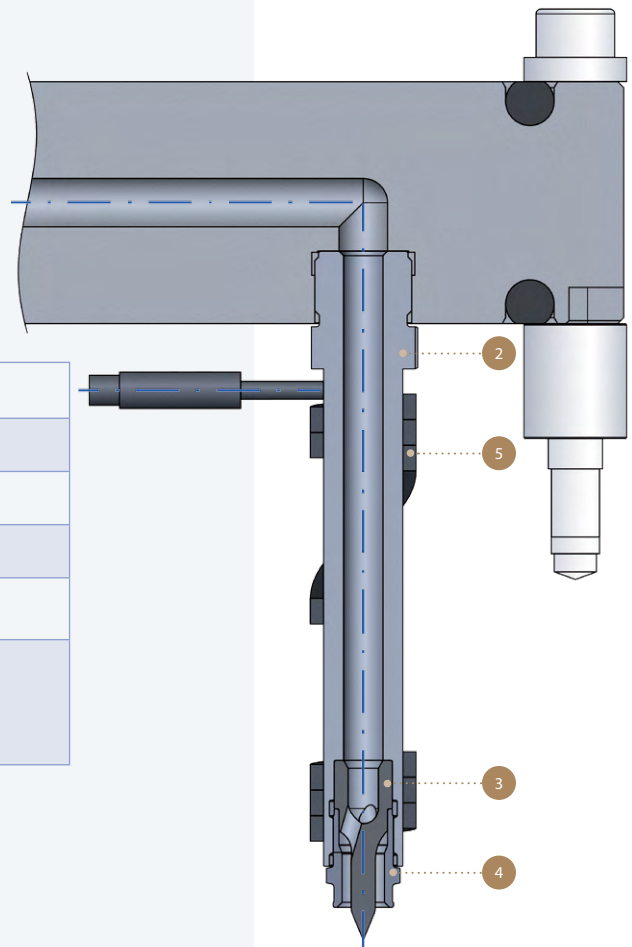
- Gate insert 20 CP 3/4/5
- Insulation sleeve 20



# CP Ring gate Nozzle WPW 20

## Technical data

Electrical Data	230 V
Thermocouple	Fe-CuNi (type J)
Cable length	2000 mm
Max. injection pressure	1800 bar
Nozzle body, case	Work hardened tempered steel
Gate insert	CP 5 = Cu+Ni-alloy CP 4 = composite Mo-alloy + WC CP 3 = Mo-alloy AP 3 = Mo-alloy



## Features

- Screwed gate tip
- All operating parts are exchangeable
- Efficient thermal separation
- Homogeneous temperature profile
- External heating
- Direct temperature measurement nearby gate tip

## Advantages

- CP3 gate insert: high protection against wear
- Low energy requirement
- Plastic processing without degradation
- Possible cosmetic injection point
- Short cycle times
- Compact nozzle
- Small chamber advisable to color change

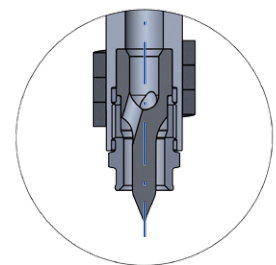
## Nozzle selection advice

Maximum shot weight in [g] per nozzle

Type	Viscosity		
	Low	Middle	High
WPW 20, CP	250	150	70
e.g.	PE, PP, PS	ABS POM kop. PA, PBT	PA+WS PBT+WS PMMA, PC

## Part list

2. Nozzle body
3. Gate insert
4. Insulation sleeve
5. Heater



## Gate tip CP 3/4/5

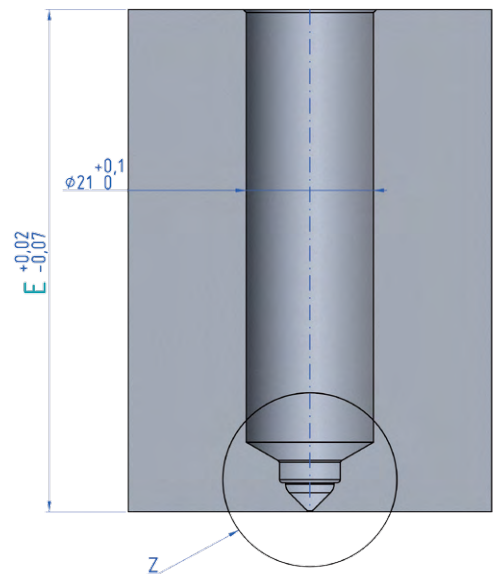
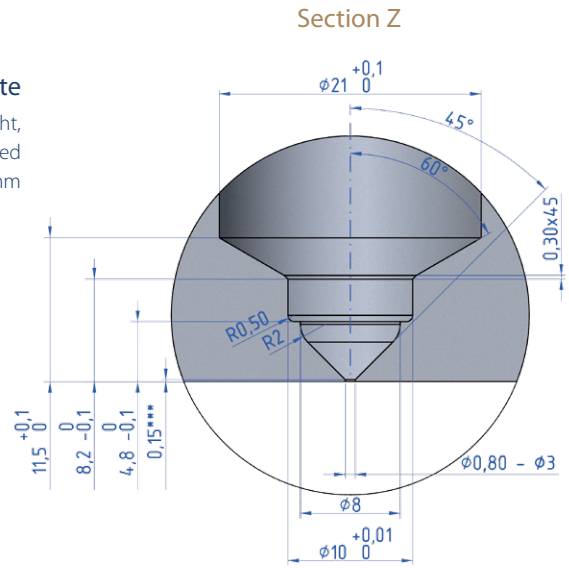
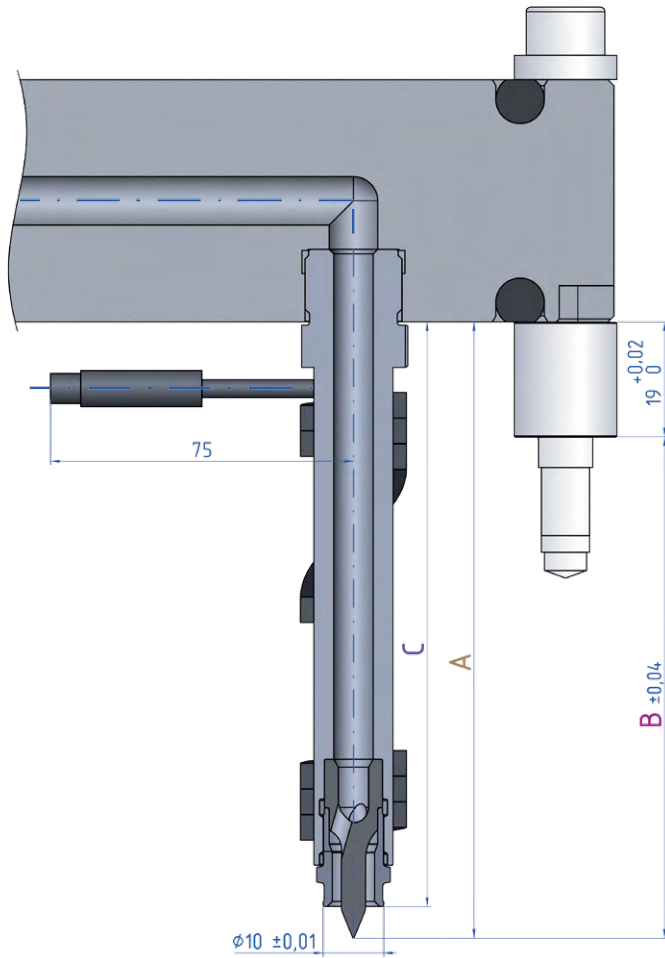
- Gate insert 20 CP 3/4/5
- Insulation sleeve 20



Nozzle  
Chamber nozzle

Execution note

\*\*\* For lower pin height, the measure 0,15 can be reduced to 0,05 mm or can be 0 mm



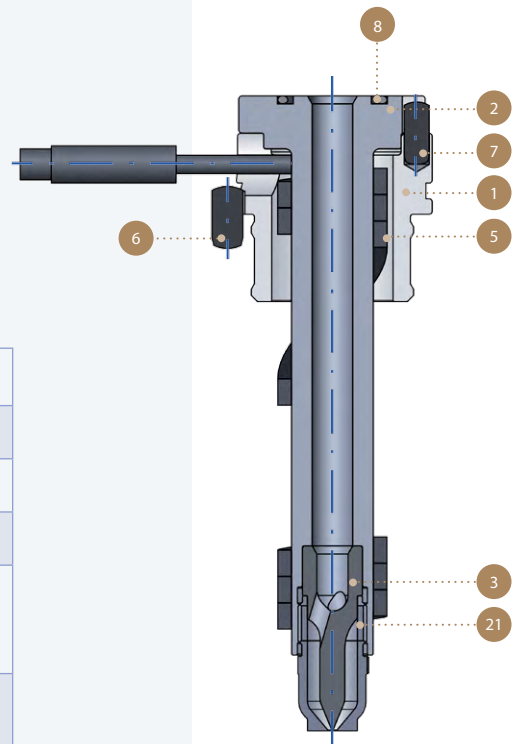
Nozzle	Type of nozzle tip	Article No.	A	B	C	E	Max. spacing
WPW 20x063	CP/AP	20063-00-X	81,68	62,68	76,50	63,00	126,00
WPW 20x083	CP/AP	20083-00-X	101,63	82,63	96,45	83,00	166,00
WPW 20x103	CP/AP	20103-00-X	121,58	102,58	116,40	103,00	206,00
WPW 20x123	CP/AP	20123-00-X	141,53	122,53	136,35	123,00	246,00
WPW 20x143	CP/AP	20143-00-X	161,48	142,48	156,30	143,00	286,00
WPW 20x163	CP/AP	20163-00-X	181,43	162,43	176,25	163,00	326,00
WPW 20x183	CP/AP	20183-00-X	201,38	182,38	196,20	183,00	366,00

X = 1 for CP 5 gate insert, X = 2 for CP 3 gate insert, X = 6 for AP 3 gate insert, X = 7 for CP 4 gate insert

# TP Nozzle head ring gate Nozzle WP 20

## Technical data

Electrical Data	230 V
Thermocouple	Fe-CuNi (type J)
Cable length	2000 mm
Max. injection pressure	1800 bar
Nozzle body, case	Work hardened tempered steel
Gate insert	CP4 = composite Mo-alloy + WC CP3 = Mo-alloy



## Features

- Gate made in nozzle head
- Screwed gate tip
- TPW nozzle head can be adapted to cavity geometry
- All operating parts are exchangeable
- Efficient thermal separation
- Homogeneous temperature profile
- External heating
- Direct temperature measurement nearby gate tip
- Module structure, can be used as single nozzle

## Advantages

- Easy in made nozzle chamber
- Compact nozzle
- CP3 gate insert - high protection against wear
- CP4 gate insert - excellent thermal conductivity and high toughness
- Low energy requirement
- Plastic processing without degradation
- -hort cycle times
- Small chamber advisable to color change

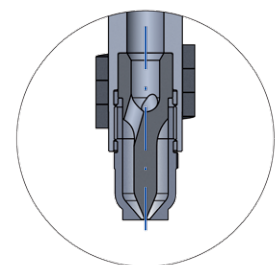
## Nozzle selection advice

Maximum shot weight in [g] per nozzle

Type	Viscosity		
	Low	Middle	High
WP 20, TP	250	150	70
e.g.	PE, PP, PS	ABS POM kop. PA, PBT	PA+WS PBT+WS PMMA, PC

## Part list

1. Case
2. Nozzle body
3. Gate insert
4. Insulation sleeve
5. Heater
6. Anti-rotation dowel pin Ø5x10
7. Dowel pin Ø4x10
8. O-ring
21. Nozzle head TP/TPW



## Gate tip TP 3/4

- Gate insert 20 CP 3/4
- Nozzle head TP/TPW



# TP Nozzle head ring gate Nozzle WPW 20

## Technical data

Electrical Data	230 V
Thermocouple	Fe-CuNi (type J)
Cable length	2000 mm
Max. injection pressure	1800 bar
Nozzle body, case	Work hardened tempered steel
Gate insert	CP4 = composite Mo-alloy + WC CP3 = Mo-alloy

## Features

- Gate made in nozzle head
- Screwed gate tip
- TPW nozzle head can be adapted to cavity geometry
- All operating parts are exchangeable
- Efficient thermal separation
- Homogeneous temperature profile
- External heating
- Direct temperature measurement nearby gate tip

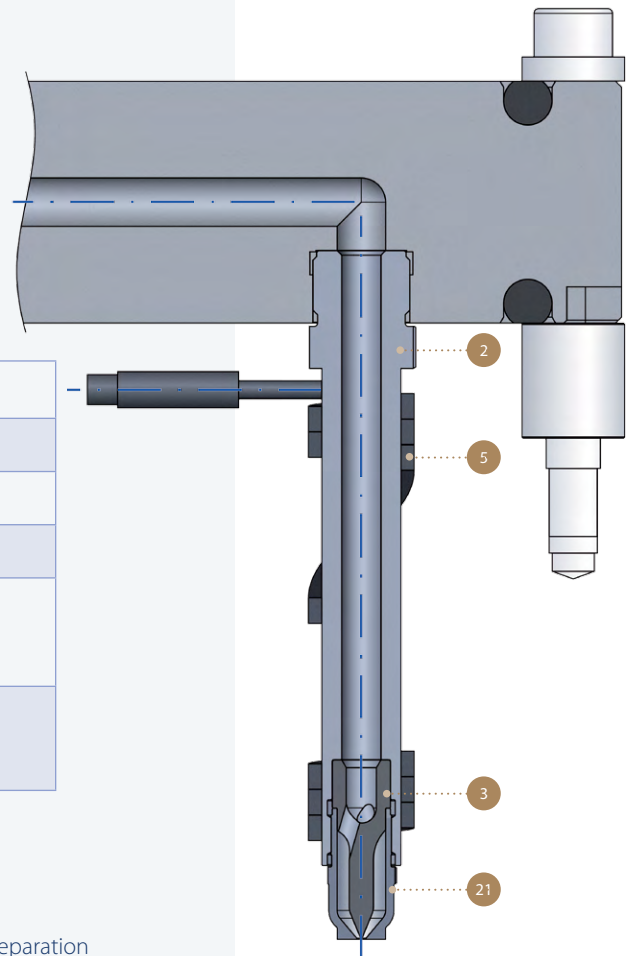
## Advantages

- Easy in made nozzle chamber
- Compact nozzle
- CP3 gate insert - high protection against wear
- CP4 gate insert - excellent thermal conductivity and high toughness
- Low energy requirement
- Plastic processing without degradation
- Short cycle times
- Small chamber advisable to color change

## Nozzle selection advice

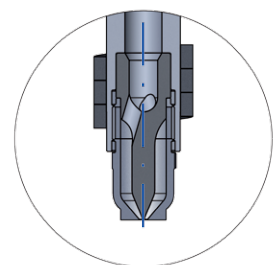
Maximum shot weight in [g] per nozzle

Type	Viscosity		
	Low	Middle	High
WPW 20, TP	250	150	70
e.g.	PE, PP, PS	ABS POM kop. PA, PBT	PA+WS PBT+WS PMMA, PC



## Part list

- 2. Nozzle body
- 3. Gate insert
- 5. Heater
- 21. Nozzle head TP/TPW



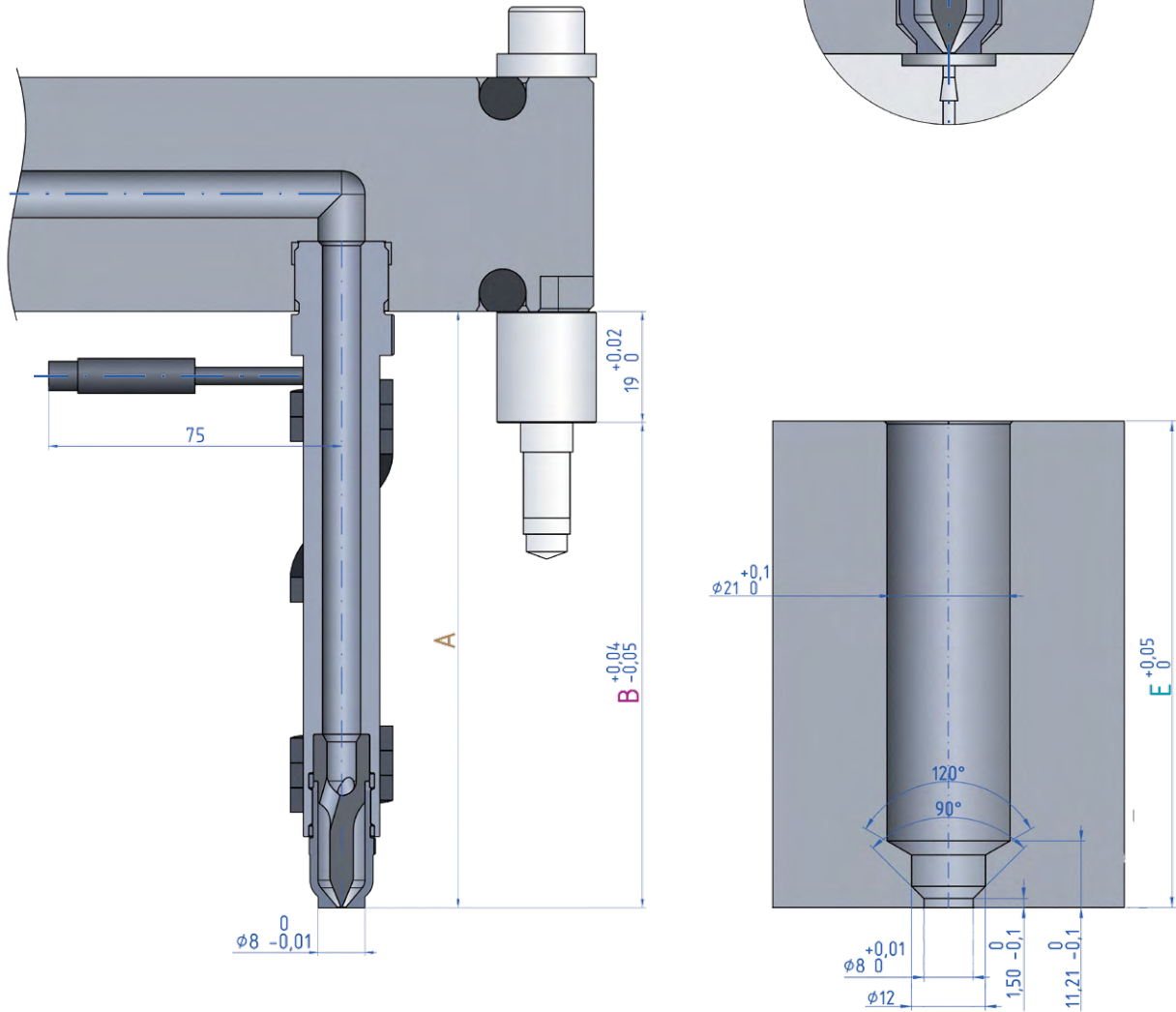
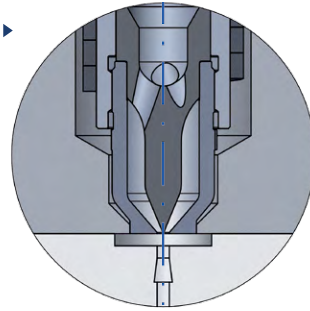
## Gate tip TP 3/4

- Gate insert 20 CP 3/4
- Nozzle head TP/TPW

Nozzle  
Chamber nozzle

Attention ▶

Where the gate is on a sub runner, a thin-insulation disc must be molded in front of the nozzle



Nozzle	Type of nozzle tip	Article No.	A	B	E	Max. spacing	øO
WPW 20x063	TP	20063-00-X0-00	81,85	62,85	63,00	126,00	1,5*/2,0/2,5
	TPW	20063-00-X0-30					
WPW 20x083	TP	20083-00-X0-00	101,80	82,80	83,00	166,00	1,5*/2,0/2,5
	TPW	20083-00-X0-30					
WPW 20x103	TP	20103-00-X0-00	121,75	102,75	103,00	206,00	1,5*/2,0/2,5
	TPW	20103-00-X0-30					
WPW 20x123	TP	20123-00-X0-00	141,70	122,70	123,00	246,00	1,5*/2,0/2,5
	TPW	20123-00-X0-30					
WPW 20x143	TP	20143-00-X0-00	161,65	142,65	143,00	286,00	1,5*/2,0/2,5
	TPW	20143-00-X0-30					
WPW 20x163	TP	20163-00-X0-00	181,60	162,60	163,00	326,00	1,5*/2,0/2,5
	TPW	20163-00-X0-30					
WPW 20x183	TP	20183-00-X0-00	201,55	182,55	183,00	366,00	1,5*/2,0/2,5
	TPW	20183-00-X0-30					

\* standard gate diameter

**X = 2** for CP 3 gate insert, **X = 7** for CP 4 gate insert

# TO Nozzle head open gate

## Nozzle WP 20

### Technical data

Electrical Data	230 V
Thermocouple	Fe-CuNi (type J)
Cable length	2000 mm
Max. injection pressure	1800 bar
Nozzle body, case	Work hardened tempered steel

### Features

- Gate made in nozzle head
- Screwed gate tip
- TOW nozzle head can be adapted to cavity geometry
- All operating parts are exchangeable
- Efficient thermal separation
- Homogeneous temperature profile
- External heating
- Module structure, can be used as single nozzle
- For molded parts without small tear-off required
- Suitable for materials that do not leave threads upon mold opening
- Suitable to cold runner inject

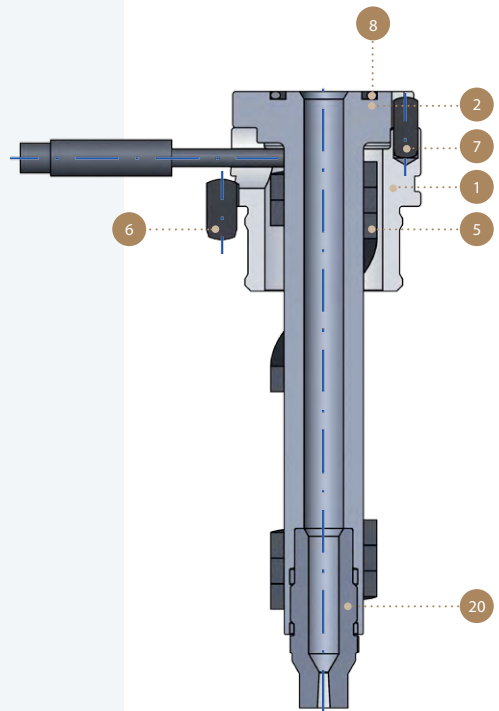
### Advantages

- Easy in made nozzle chamber
- Compact nozzle
- The possibility of injection regrauated material
- Fast color change
- Low energy requirement
- Plastic processing without degradation
- Short cycle times

### Nozzle selection advice

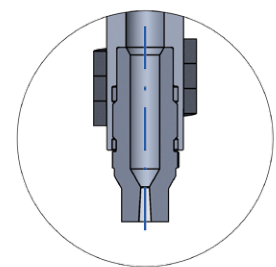
Maximum shot weight in [g] per nozzle

Type	Viscosity		
	Low	Middle	High
WP 20, TO	250	150	70
e.g.	PE, PP, PS	ABS POM kop. PA, PBT	PA+WS PBT+WS PMMA, PC



### Part list

1. Case
2. Nozzle body
5. Heater
6. Anti-rotation dowel pin Ø5x10
7. Dowel pin Ø4x10
8. O-ring
20. Nozzle head TO/TOW



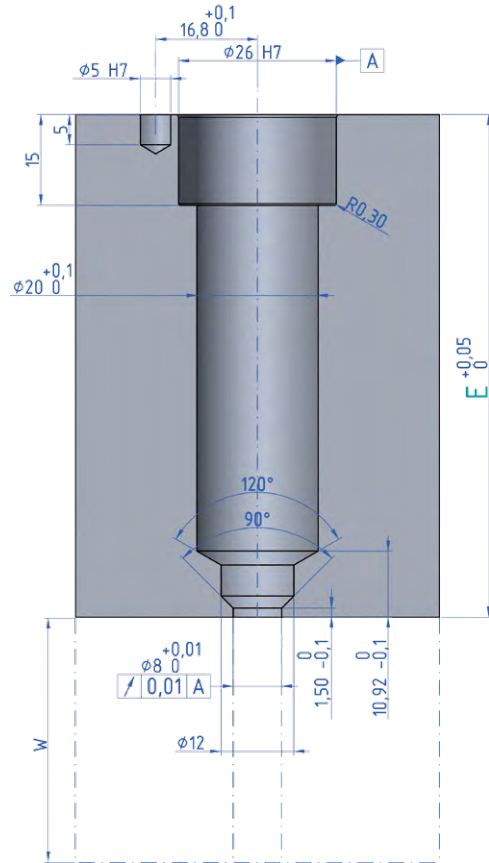
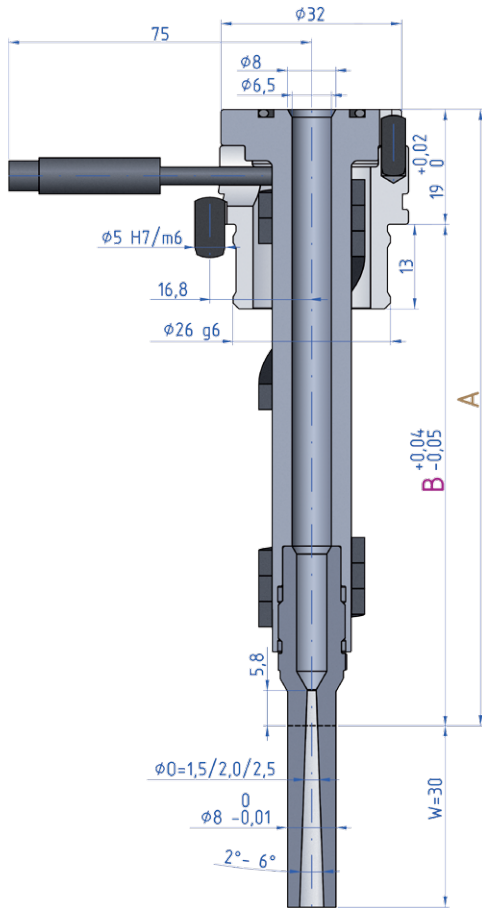
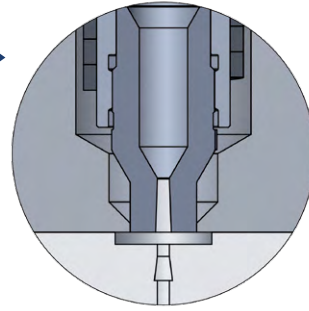
### Gate tip TO/TOW

- Nozzle head TO/TOW

Nozzle  
Chamber nozzle

Attention ▶

Where the gate is on a sub runner, a thin-insulation disc must be molded in front of the nozzle



Nozzle	Type of nozzle tip	Article No.	A	B	E	∅O
WP 20x063	TO	20063-00-00-00	81,85	62,85	63,00	1,5*/2,0/2,5
	TOW	20063-00-00-30				
WP 20x083	TO	20083-00-00-00	101,80	82,80	83,00	1,5*/2,0/2,5
	TOW	20083-00-00-30				
WP 20x103	TO	20103-00-00-00	121,75	102,75	103,00	1,5*/2,0/2,5
	TOW	20103-00-00-30				
WP 20x123	TO	20123-00-00-00	141,70	122,70	123,00	1,5*/2,0/2,5
	TOW	20123-00-00-30				
WP 20x143	TO	20143-00-00-00	161,65	142,65	143,00	1,5*/2,0/2,5
	TOW	20143-00-00-30				
WP 20x163	TO	20163-00-00-00	181,60	162,60	163,00	1,5*/2,0/2,5
	TOW	20163-00-00-30				
WP 20x183	TO	20183-00-00-00	201,55	182,55	183,00	1,5*/2,0/2,5
	TOW	20183-00-00-30				

\* standard gate diameter



# TO Nozzle head open gate Nozzle WPW 20

## Technical data

Electrical Data	230 V
Thermocouple	Fe-CuNi (type J)
Cable length	2000 mm
Max. injection pressure	1800 bar
Nozzle body, case	Work hardened tempered steel

## Features

- Gate made in nozzle head
- Screwed gate tip
- TOW nozzle head can be adapted to cavity geometry
- All operating parts are exchangeable
- Efficient thermal separation
- Homogeneous temperature profile
- External heating
- For molded parts without small tear-off required
- Suitable for materials that do not leave threads upon mold opening
- Suitable to cold runner inject

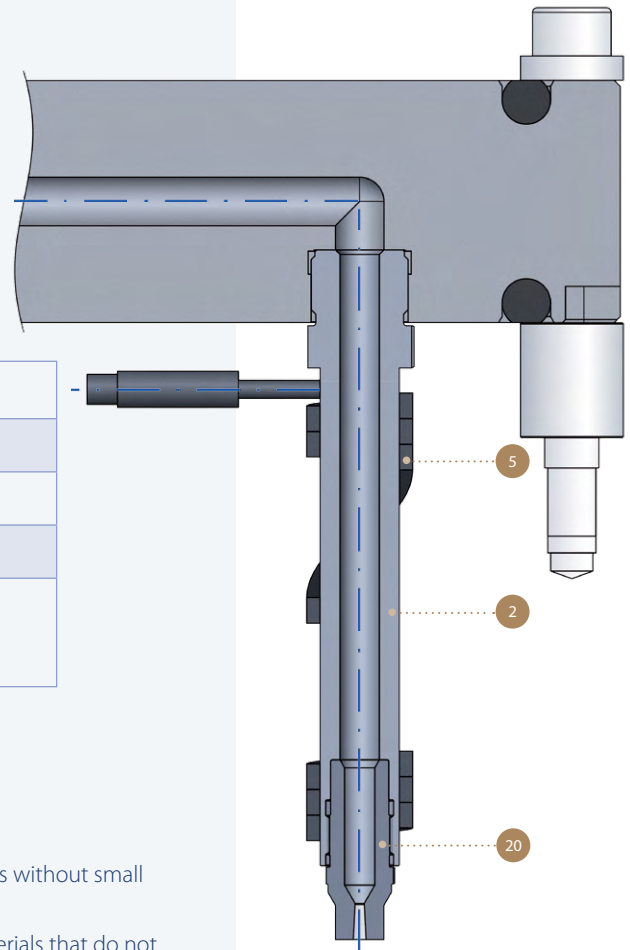
## Advantages

- Easy in made nozzle chamber
- Compact nozzle
- The possibility of injection regrauated material
- Fast color change
- Low energy requirement
- Plastic processing without degradation
- Short cycle times

## Nozzle selection advice

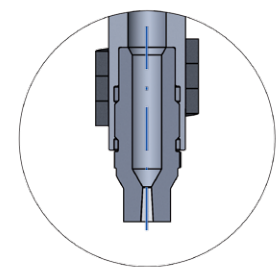
Maximum shot weight in [g] per nozzle

Type	Viscosity		
	Low	Middle	High
WPW 20, TO	250	150	70
e.g.	PE, PP, PS	ABS POM kop. PA, PBT	PA+WS PBT+WS PMMA, PC



## Part list

- 2. Nozzle body
- 5. Heater
- 20. Nozzle head TO/TOW



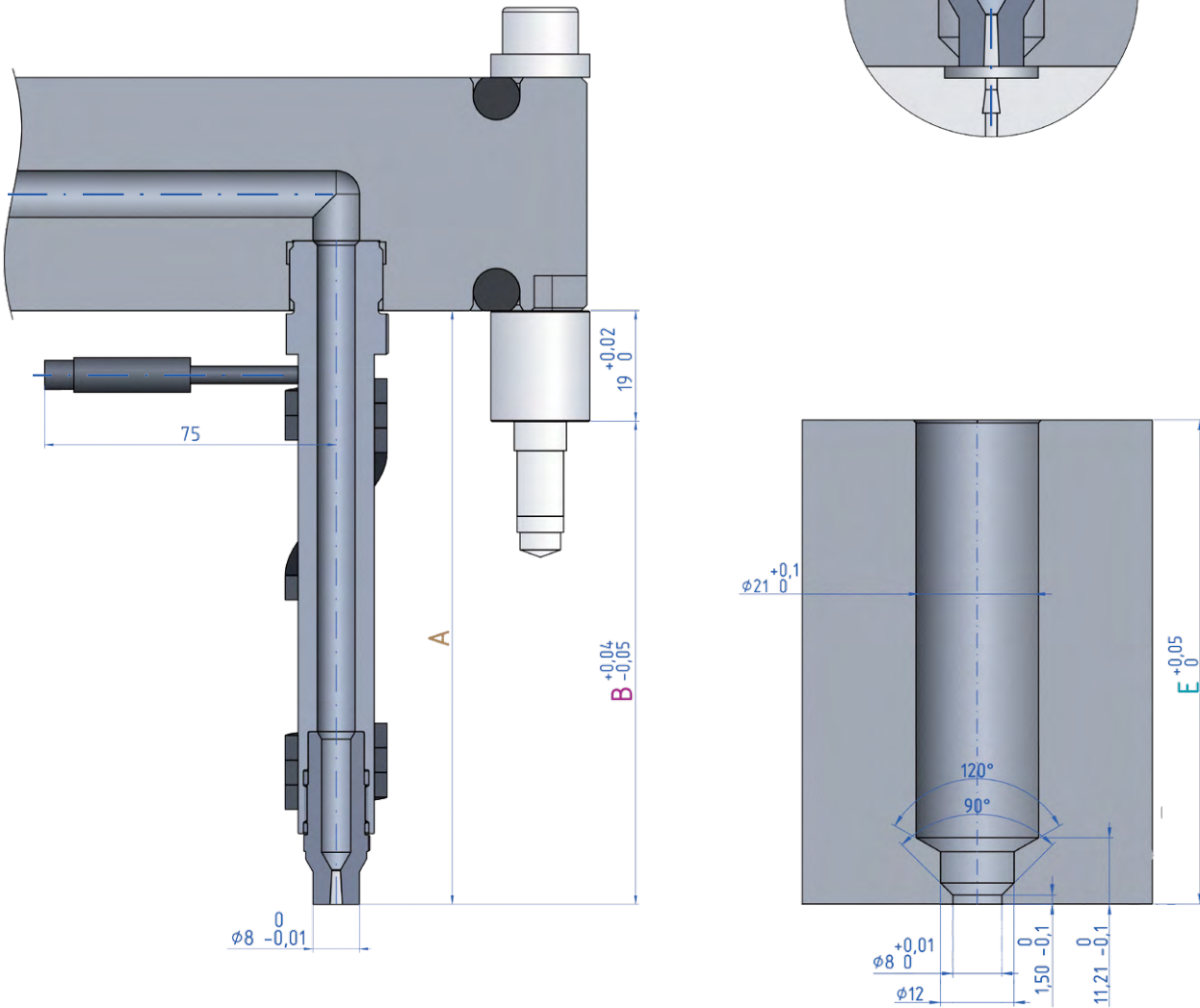
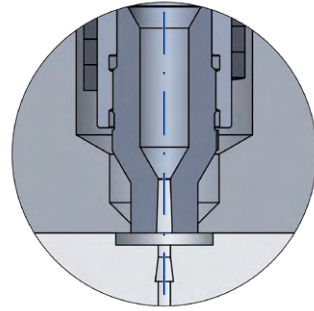
## Gate tip TO/TOW

- Nozzle head TO/TOW

TO Nozzle head open gate  
Chamber nozzle

**Attention** ▶

Where the gate is on a sub runner, a thin-insulation disc must be molded in front of the nozzle



Nozzle	Type of nozzle tip	Article No.	A	B	E	Max. spacing	øO
WPW 20x063	TO	20063-00-00-00	81,85	62,85	63,00	126,00	1,5*/2,0/2,5
	TOW	20063-00-00-30					
WPW 20x083	TO	20083-00-00-00	101,80	82,80	83,00	166,00	1,5*/2,0/2,5
	TOW	20083-00-00-30					
WPW 20x103	TO	20103-00-00-00	121,75	102,75	103,00	206,00	1,5*/2,0/2,5
	TOW	20103-00-00-30					
WPW 20x123	TO	20123-00-00-00	141,70	122,70	123,00	246,00	1,5*/2,0/2,5
	TOW	20123-00-00-30					
WPW 20x143	TO	20143-00-00-00	161,65	142,65	143,00	286,00	1,5*/2,0/2,5
	TOW	20143-00-00-30					
WPW 20x163	TO	20163-00-00-00	181,60	162,60	163,00	326,00	1,5*/2,0/2,5
	TOW	20163-00-00-30					
WPW 20x183	TO	20183-00-00-00	201,55	182,55	183,00	366,00	1,5*/2,0/2,5
	TOW	20183-00-00-30					

\* standard gate diameter

# TZO Nozzle head open gate

## Nozzle WP 20

### Technical data

Electrical Data	230 V
Thermocouple	Fe-CuNi (type J)
Cable length	2000 mm
Max. injection pressure	1800 bar
Nozzle body, case	Work hardened tempered steel

### Features

- Gate made in nozzle head
- Screwed gate tip
- TOW nozzle head can be adapted to cavity geometry
- All operating parts are exchangeable
- Efficient thermal separation
- Homogeneous temperature profile
- External heating
- Module structure, can be used as single nozzle
- For molded parts without small tear-off required
- Suitable for materials that do not leave threads upon mold opening
- Suitable to cold runner inject

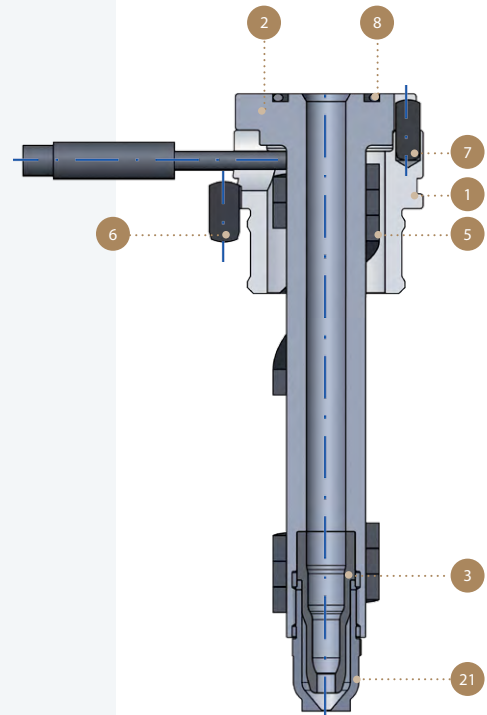
### Advantages

- Easy in made nozzle chamber
- Compact nozzle
- The possibility of injection regrauated material
- Fast color change
- Low energy requirement
- Plastic processing without degradation
- Short cycle times

### Nozzle selection advice

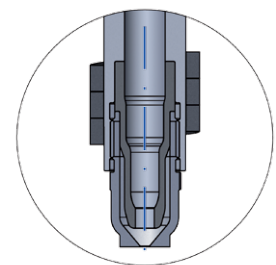
Maximum shot weight in [g] per nozzle

Type	Viscosity		
	Low	Middle	High
WP 20, TZO	250	150	70
e.g.	PE, PP, PS	ABS POM kop. PA, PBT	PA+WS PBT+WS PMMA, PC



### Part list

1. Case
2. Nozzle body
3. Gate insert
4. Heater
5. Anti-rotation dowel pin Ø5x10
6. Dowel pin Ø4x10
7. O-ring
8. Nozzle head TZO/TZOW



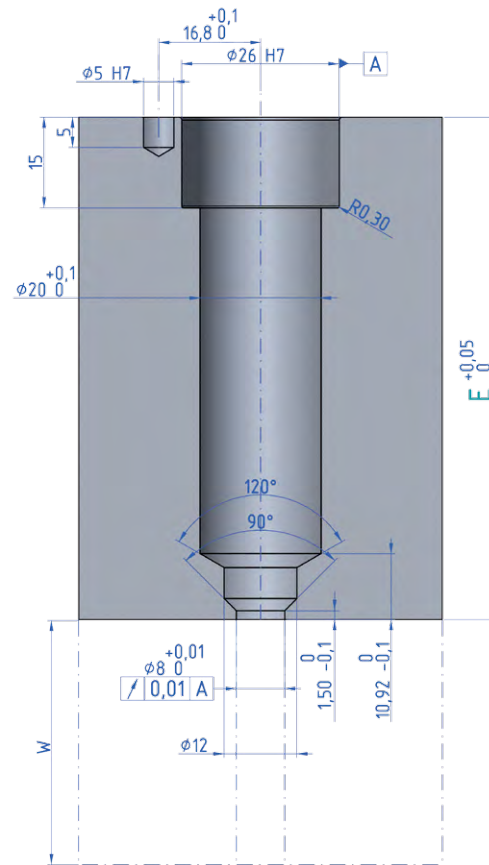
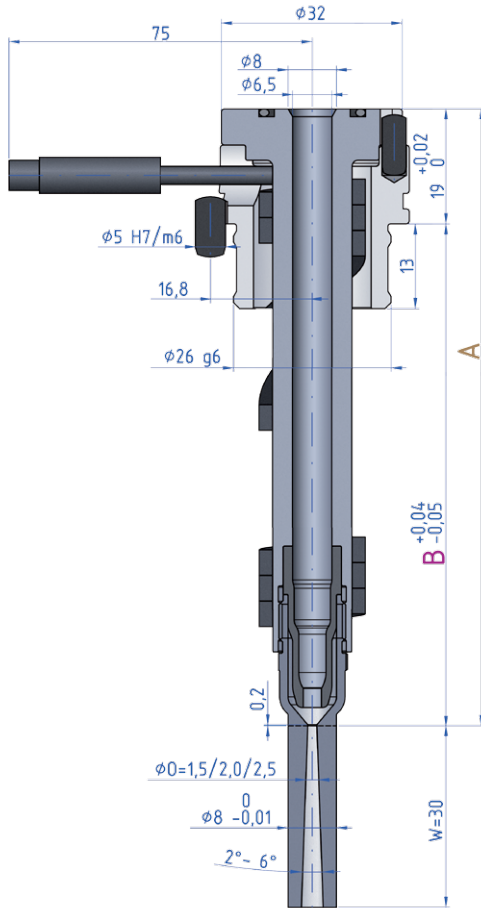
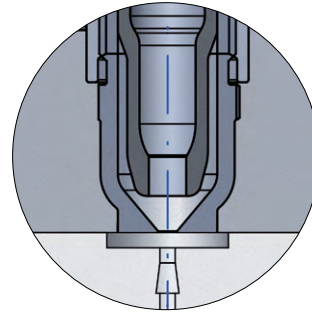
### Gate tip TZO/TZOW

- Gate insert ZO
- Nozzle head TZO/TZOW

Nozzle  
Chamber nozzle

**Attention**

Where the gate is on a sub runner, a thin-insulation disc must be molded in front of the nozzle



Nozzle	Type of nozzle tip	Article No.	A	B	E	øO
WP 20x063	TZO	20063-00-40-00	81,85	62,85	63,00	1,5*/2,0/2,5
	TZOW	20063-00-40-30				
WP 20x083	TZO	20083-00-40-00	101,80	82,80	83,00	1,5*/2,0/2,5
	TZOW	20083-00-40-30				
WP 20x103	TZO	20103-00-40-00	121,75	102,75	103,00	1,5*/2,0/2,5
	TZOW	20103-00-40-30				
WP 20x123	TZO	20123-00-40-00	141,70	122,70	123,00	1,5*/2,0/2,5
	TZOW	20123-00-40-30				
WP 20x143	TZO	20143-00-40-00	161,65	142,65	143,00	1,5*/2,0/2,5
	TZOW	20143-00-40-30				
WP 20x163	TZO	20163-00-40-00	181,60	162,60	163,00	1,5*/2,0/2,5
	TZOW	20163-00-40-30				
WP 20x183	TZO	20183-00-40-00	201,55	182,55	183,00	1,5*/2,0/2,5
	TZOW	20183-00-40-30				

\* standard gate diameter

# TZO Nozzle head open gate Nozzle WPW 20

## Technical data

Electrical Data	230 V
Thermocouple	Fe-CuNi (type J)
Cable length	2000 mm
Max. injection pressure	1800 bar
Nozzle body, case	Work hardened tempered steel

## Features

- Gate made in nozzle head
- Screwed gate tip
- TOW nozzle head can be adapted to cavity geometry
- All operating parts are exchangeable
- Efficient thermal separation
- Homogeneous temperature profile
- External heating
- For molded parts without small tear-off required
- Suitable for materials that do not leave threads upon mold opening
- Suitable to cold runner inject

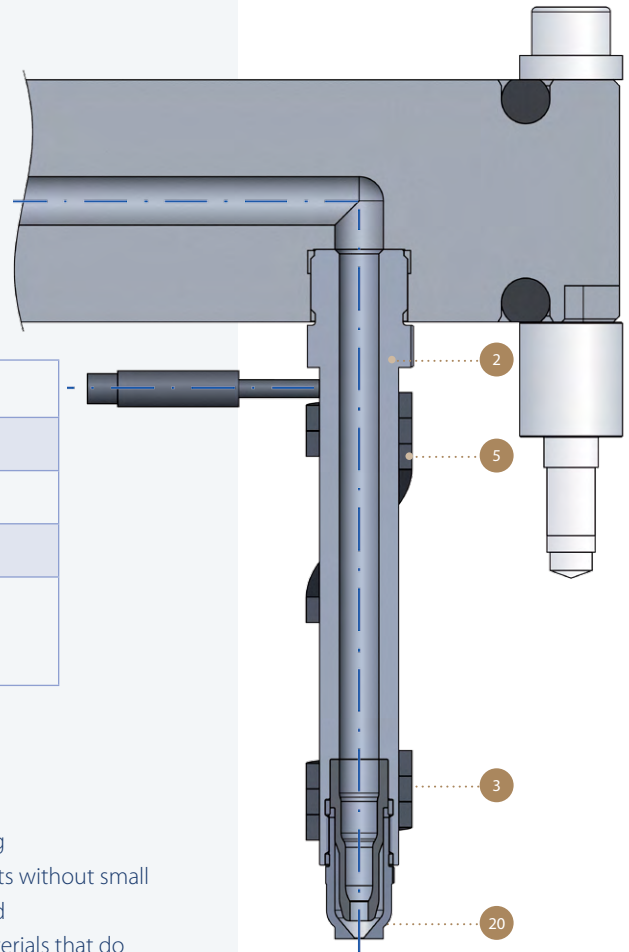
## Advantages

- Easy in made nozzle chamber
- Compact nozzle
- The possibility of injection regrauated material
- Fast color change
- Low energy requirement
- Plastic processing without degradation
- Short cycle times

## Nozzle selection advice

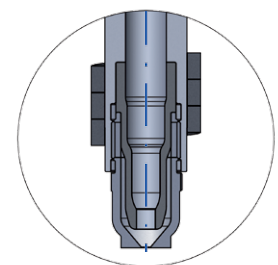
Maximum shot weight in [g] per nozzle

Type	Viscosity		
	Low	Middle	High
WPW 20, TZO	250	150	70
e.g.	PE, PP, PS	ABS POM kop. PA, PBT	PA+WS PBT+WS PMMA, PC



## Part list

- 2. Nozzle body
- 3. Gate insert
- 5. Heater
- 20. Nozzle head TZO/TZOW



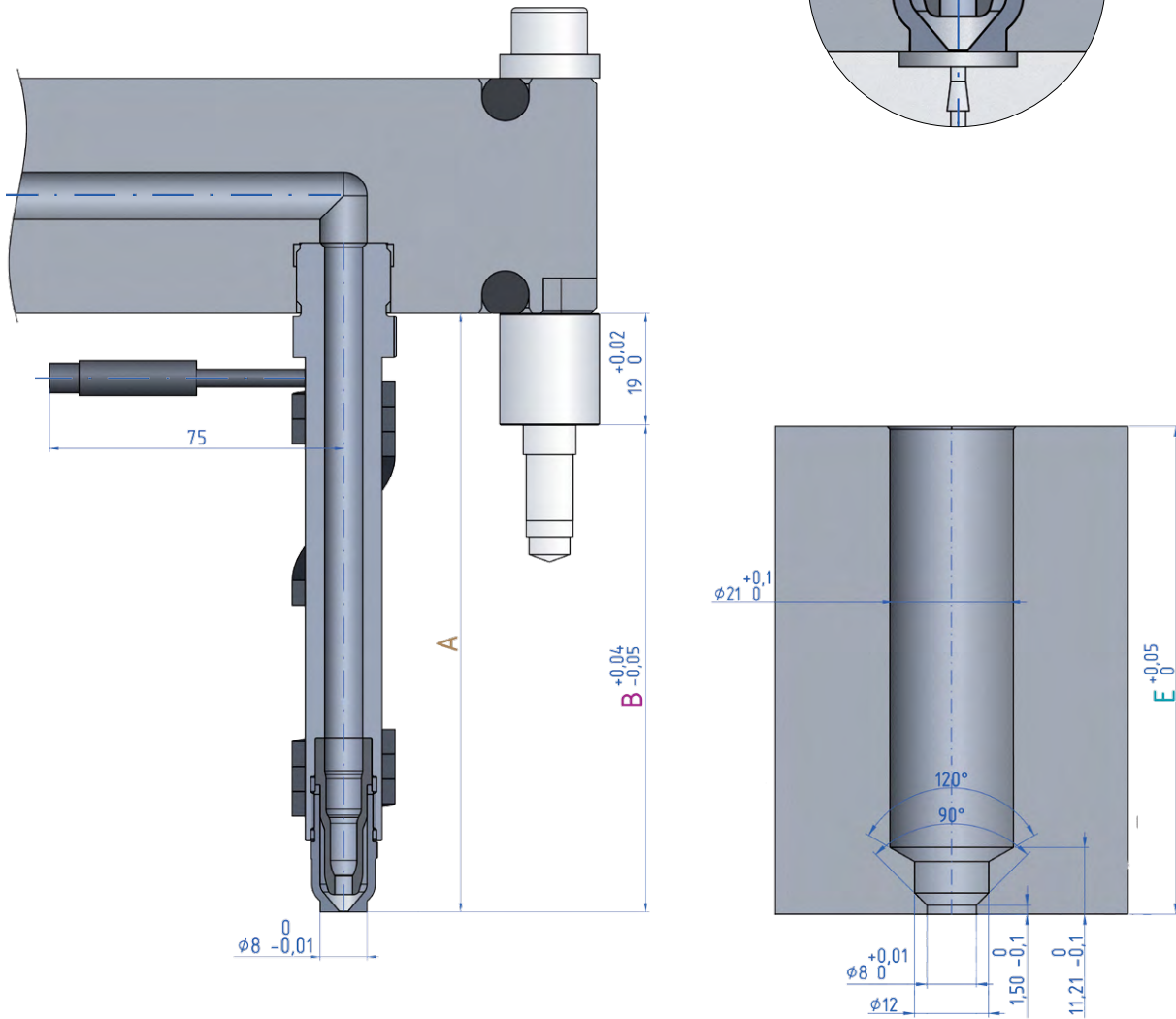
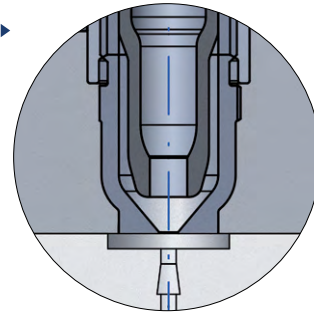
## Gate tip TZO/TZOW

- Gate insert ZO
- Nozzle head TZO/TZOW

Nozzle  
Chamber nozzle

Attention ▶

Where the gate is on a sub runner, a thin-insulation disc must be molded in front of the nozzle



Nozzle	Type of nozzle tip	Article No.	A	B	E	Max. spacing	øO
WPW 20x063	TZO	20063-00-40-00	81,85	62,85	63,00	126,00	1,5*/2,0/2,5
	TZOW	20063-00-40-30					
WPW 20x083	TZO	20083-00-40-00	101,80	82,80	83,00	166,00	1,5*/2,0/2,5
	TZOW	20083-00-40-30					
WPW 20x103	TZO	20103-00-40-00	121,75	102,75	103,00	206,00	1,5*/2,0/2,5
	TZOW	20103-00-40-30					
WPW 20x123	TZO	20123-00-40-00	141,70	122,70	123,00	246,00	1,5*/2,0/2,5
	TZOW	20123-00-40-30					
WPW 20x143	TZO	20143-00-40-00	161,65	142,65	143,00	286,00	1,5*/2,0/2,5
	TZOW	20143-00-40-30					
WPW 20x163	TZO	20163-00-40-00	181,60	162,60	163,00	326,00	1,5*/2,0/2,5
	TZOW	20163-00-40-30					
WPW 20x183	TZO	20183-00-40-00	201,55	182,55	183,00	366,00	1,5*/2,0/2,5
	TZOW	20183-00-40-30					

\* standard gate diameter







Spare parts, order examples

- 2 5 1 3 3 3 3 4 8 7 6 11 9 10 20 20 21 21

Nozzle type/part	Nozzle body	Heater	Case	CP5 gate insert	CP4 gate insert	CP3 gate insert	AP3 gate insert	Insulation sleeve	O-ring	Dowel ø4x10	Dowel ø5x10	Single nozzle support	Heater band 300W	Thermocouple of single nozzle support	Nozzle head TO	Nozzle head TOW	Nozzle head TP	Nozzle head TPW
WP 20x063	26061-02	26061-05	20000-01	20000-03-1	20000-03-7	20000-03-2	20000-03-6	20000-04	26000-08	26000-07	26000-06	26000-11	26000-09	26000-10	20000-20-1	20000-20-2	20000-21-1	20000-21-2
WP 20x083	26081-02	26081-05																
WP 20x103	26101-02	26101-05																
WP 20x123	20123-02	20123-05																
WP 20x143	20143-02	20143-05																
WP 20x163	20163-02	20163-05																
WP 20x183	20183-02	20183-05																

Order example

Type	Article No.
WP 20 - 063 - CP 3	20063-00-2



Single nozzle support

Name	Type	Article No.
Single nozzle support	EA-WP 20 / R ...	26000-11
Heater band 300 W		26000-09
Thermocouple of single nozzle		26000-10

Explanation of nozzle code:

AABBB-00-CC

where:

- AA = diameter
- BBB = length
- 00 = complete nozzle
- CC - gate insert type

- 1 for CP5 gate insert
- 2 for CP3 gate insert
- 6 for AP3 gate insert
- 7 for CP4 gate insert
- 20 for nozzle head TP3
- 00 for nozzle head TPO
- DD = elongation (only for TP and TO)

Example:

nozzle WP 20x063 TP3  
20 063-00-20-30

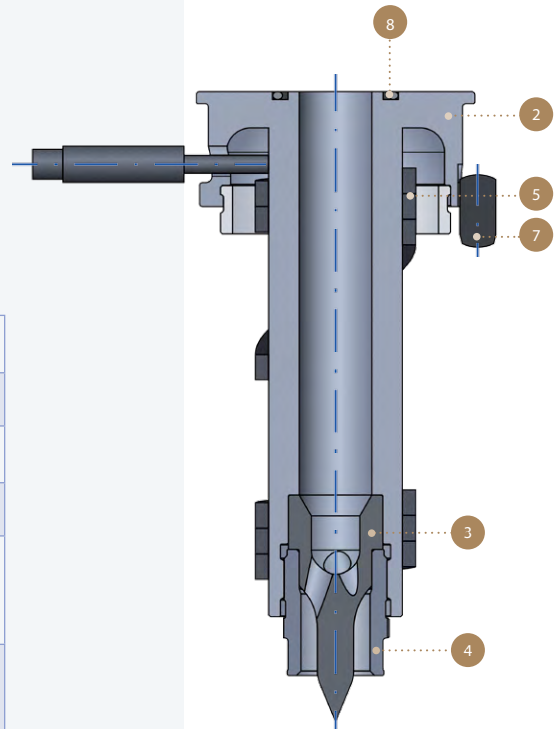
nozzle WP20x143 CP5  
20 143-00-1

nozzle WP20x063 TOW  
20 063-00-00-30

# CP Ring gate Nozzle WP 29

## Technical data

Electrical Data	230 V
Thermocouple	Fe-CuNi (type J)
Cable length	2000 mm
Max. injection pressure	1800 bar
Nozzle body, case	Work hardened tempered steel
Gate insert	CP5 = Cu+Ni-alloy CP4 = composite Mo-alloy + WC CP3 = Mo-alloy AP3 = Mo-alloy



## Features

- Screwed gate tip
- All operating parts are exchangeable
- Efficient thermal separation
- Homogeneous temperature profile
- External heating
- Direct temperature measurement nearby gate tip
- Module structure, can be used as single nozzle

## Advantages

- CP3 gate insert: high protection against wear
- Low energy requirement
- Plastic processing without degradation
- Possible cosmetic injection point
- Short cycle times
- Compact nozzle
- Small chamber advisable to color change

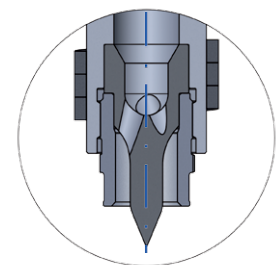
## Nozzle selection advice

Maximum shot weight in [g] per nozzle

Type	Viscosity		
	Low	Middle	High
WP 29, CP	2000	1000	400
e.g.	PE, PP, PS	ABS POM kop. PA, PBT	PA+WS PBT+WS PMMA, PC

## Part list

2. Nozzle body
3. Gate insert
4. Insulation sleeve
5. Heater
7. Dowel pin Ø6x12
8. O-ring



## Gate tip CP 3/4/5

- Gate insert 29 CP 3/4/5
- Insulation sleeve 29



# CP Ring gate Nozzle WPW 29

## Technical data

Electrical Data	230 V
Thermocouple	Fe-CuNi (type J)
Cable length	2000 mm
Max. injection pressure	1800 bar
Nozzle body, case	Work hardened tempered steel
Gate insert	CP5 = Cu+Ni-alloy CP4 = composite Mo-alloy + WC CP3 = Mo-alloy AP3 = Mo-alloy

## Features

- Screwed gate tip
- All operating parts are exchangeable
- Efficient thermal separation
- Homogeneous temperature profile
- External heating
- Direct temperature measurement nearby gate tip
- Module structure, can be used as single nozzle

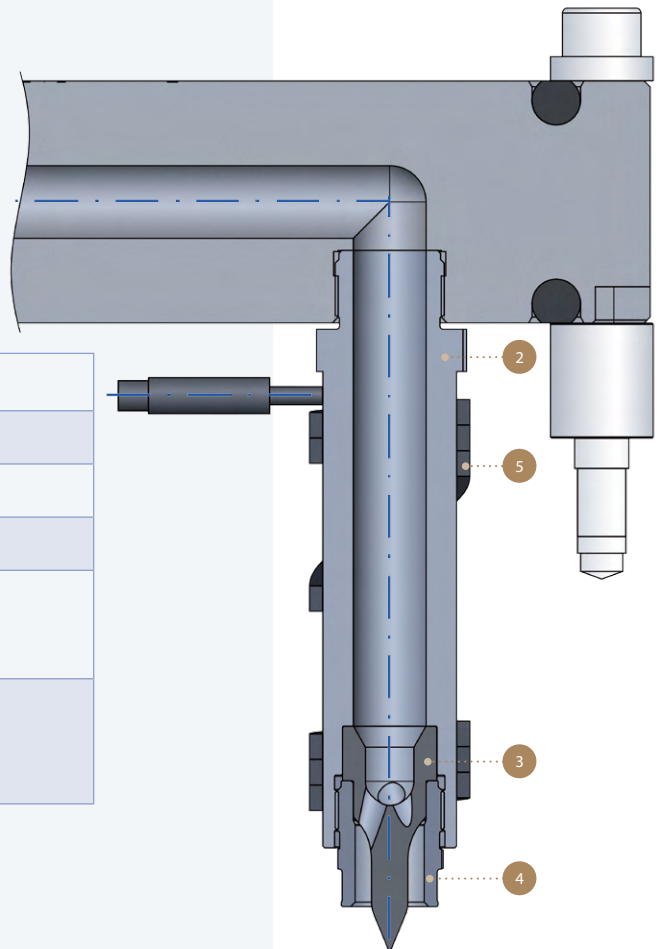
## Advantages

- CP3 gate insert: high protection against wear
- Low energy requirement
- Plastic processing without degradation
- Possible cosmetic injection point
- Short cycle times
- Compact nozzle
- Small chamber advisable to color change

## Nozzle selection advice

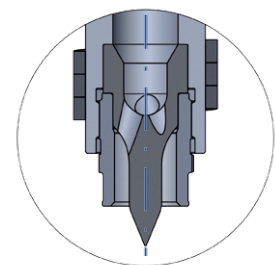
Maximum shot weight in [g] per nozzle

Type	Viscosity		
	Low	Middle	High
WPW 29, CP	2000	1000	400
e.g.	PE, PP, PS	ABS POM kop. PA, PBT	PA+WS PBT+WS PMMA, PC



## Part list

2. Nozzle body
3. Gate insert
4. Insulation sleeve
5. Heater



## Gate tip CP 3/4/5

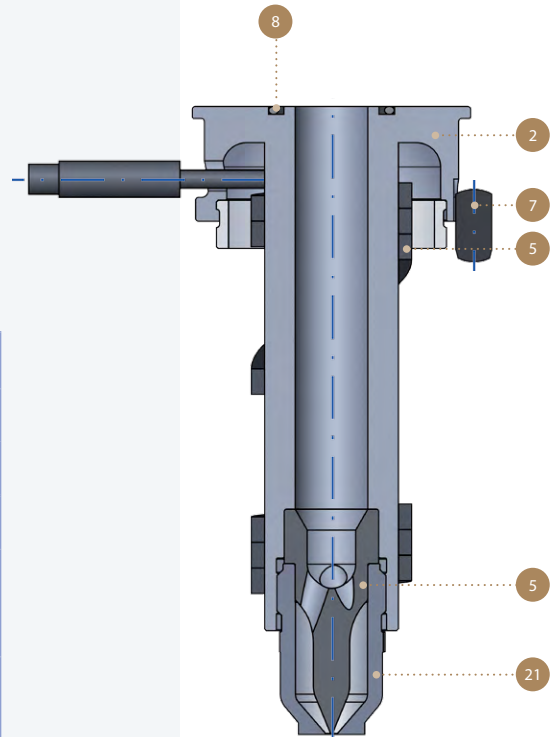
- Gate insert 29 CP 3/4/5
- Insulation sleeve 29



# TP Nozzle head ring gate Nozzle WP 29

## Technical data

Electrical Data	230 V
Thermocouple	Fe-CuNi (type J)
Cable length	2000 mm
Max. injection pressure	1800 bar
Nozzle body, case	Work hardened tempered steel
Gate insert	CP4 = composite Mo-alloy + WC CP3 = Mo-alloy



## Features

- Gate made in nozzle head
- Screwed gate tip
- TPW nozzle head can be adapted to cavity geometry
- All operating parts are exchangeable
- Efficient thermal separation
- Homogeneous temperature profile
- External heating
- Direct temperature measurement nearby gate tip
- Module structure, can be used as single nozzle

## Part list

- 2. Nozzle body
- 3. Gate insert
- 5. Heater
- 7. Dowel pin  $\varnothing 6 \times 12$
- 8. O-ring
- 21. Nozzle head TP/TPW

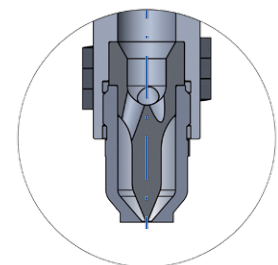
## Advantages

- Easy in made nozzle chamber
- Compact nozzle
- CP3 gate insert - high protection against wear
- CP4 gate insert - excellent thermal conductivity and high toughness
- Low energy requirement
- Plastic processing without degradation
- Short cycle times
- Small chamber advisable to color change

## Nozzle selection advice

Maximum shot weight in [g] per nozzle

Type	Viscosity		
	Low	Middle	High
WP 29, TP	2000	1000	400
e.g.	PE, PP, PS	ABS POM kop. PA, PBT	PA+WS PBT+WS PMMA, PC



## Gate tip TP 3/4

- Gate insert 29 CP 3/4
- Nozzle head TP/TPW



# TP Nozzle head ring gate Nozzle WPW 29

## Technical data

Electrical Data	230 V
Thermocouple	Fe-CuNi (type J)
Cable length	2000 mm
Max. injection pressure	1800 bar
Nozzle body, case	Work hardened tempered steel
Gate insert	CP4 = composite Mo-alloy + WC CP3 = Mo-alloy

## Features

- Gate made in nozzle head
- Screwed gate tip
- TPW nozzle head can be adapted to cavity geometry
- All operating parts are exchangeable
- Efficient thermal separation
- Homogeneous temperature profile
- External heating
- Direct temperature measurement nearby gate tip
- Module structure, can be used as single nozzle

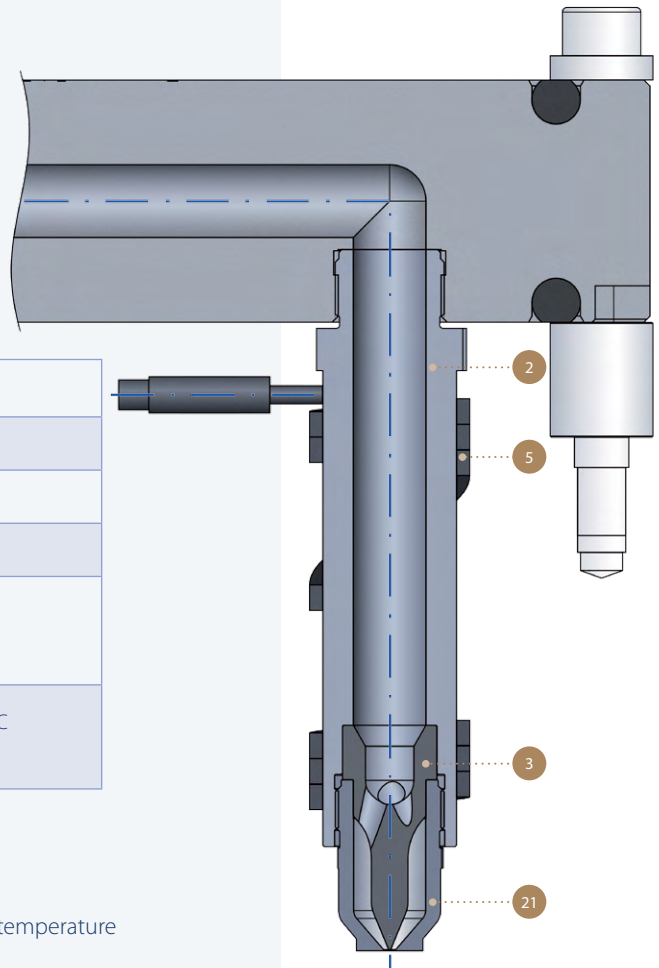
## Advantages

- Easy in made nozzle chamber
- Compact nozzle
- CP3 gate insert - high protection against wear
- CP4 gate insert - excellent thermal conductivity and high toughness
- Low energy requirement
- Plastic processing without degradation
- Short cycle times
- Small chamber advisable to color change

## Nozzle selection advice

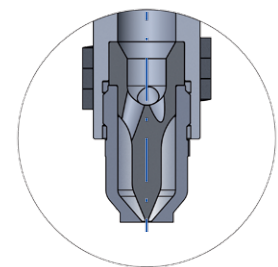
Maximum shot weight in [g] per nozzle

Type	Viscosity		
	Low	Middle	High
WPW 29, TP	2000	1000	400
e.g.	PE, PP, PS	ABS POM kop. PA, PBT	PA+WS PBT+WS PMMA, PC



## Part list

- 2. Nozzle body
- 3. Gate insert
- 5. Heater
- 21. Nozzle head TP/TPW

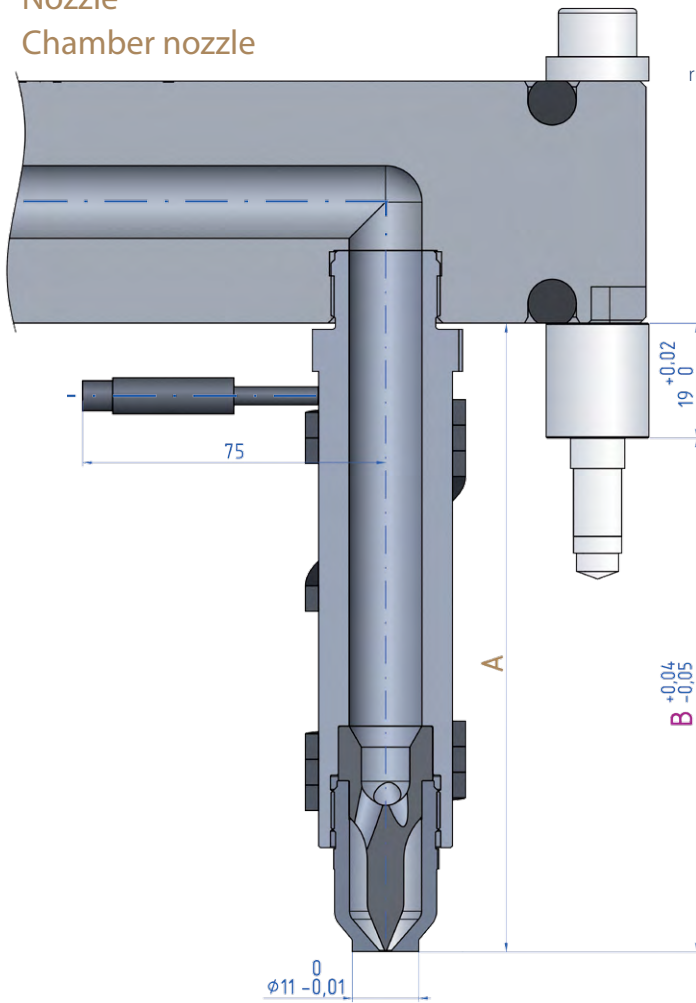


## Gate tip TP 3/4

- Gate insert 29 CP 3/4
- Nozzle head TP/TPW

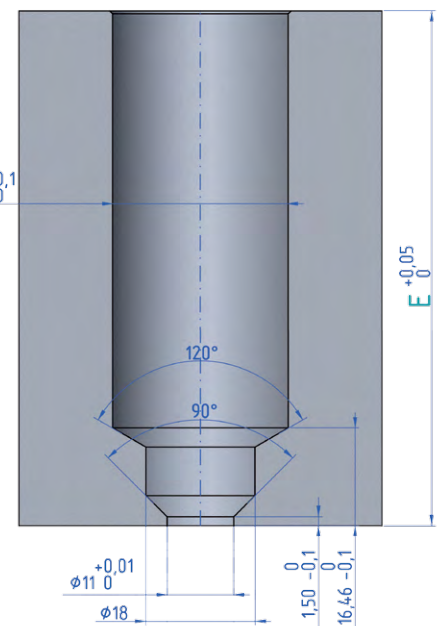
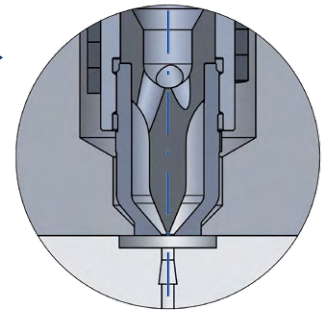


Nozzle  
Chamber nozzle



ⓘ Attention ▶

Where the gate is on a sub runner, a thin-insulation disc must be molded in front of the nozzle



Nozzle	Type of nozzle tip	Article No.	A	B	E	Max. spacing	øO
WPW 29x065	TP	29065-00-X0-00	83,85	64,85	65,00	130,00	2,0*/3,0/4,0
	TPW	29065-00-X0-30					
WPW 29x085	TP	29085-00-X0-00	103,80	84,80	85,00	170,00	2,0*/3,0/4,0
	TPW	29085-00-X0-30					
WPW 29x105	TP	29105-00-X0-00	123,75	104,75	105,00	210,00	2,0*/3,0/4,0
	TPW	29105-00-X0-30					
WPW 29x125	TP	29125-00-X0-00	143,70	124,70	125,00	250,00	2,0*/3,0/4,0
	TPW	29125-00-X0-30					
WPW 29x145	TP	29145-00-X0-00	163,65	144,65	145,00	290,00	2,0*/3,0/4,0
	TPW	29145-00-X0-30					
WPW 29x165	TP	29165-00-X0-00	183,60	164,60	165,00	330,00	2,0*/3,0/4,0
	TPW	29165-00-X0-30					
WPW 29x185	TP	29185-00-X0-00	203,55	184,55	185,00	370,00	2,0*/3,0/4,0
	TPW	29185-00-X0-30					
WPW 29x225	TP	29225-00-X0-00	243,45	224,45	225,00	450,00	2,0*/3,0/4,0
	TPW	29225-00-X0-30					
WPW 29x265	TP	29265-00-X0-00	283,35	264,35	265,00	530,00	2,0*/3,0/4,0
	TPW	29265-00-X0-30					

\* standard gate diameter

X = 2 for CP3 gate insert, X = 7 for CP4 gate insert

# TO Open gate Nozzle WP 29

## Technical data

Electrical Data	230 V
Thermocouple	Fe-CuNi (type J)
Cable length	2000 mm
Max. injection pressure	1800 bar
Nozzle body, case	Work hardened tempered steel

## Features

- Gate made in nozzle head
- Screwed gate tip
- TOW nozzle head can be adapted to cavity geometry
- All operating parts are exchangeable
- Efficient thermal separation
- Homogeneous temperature profile
- External heating
- Module structure, can be used as single nozzle
- For molded parts without small tear-off required
- Suitable for materials that do not leave threads upon mold opening
- Suitable to cold runner inject

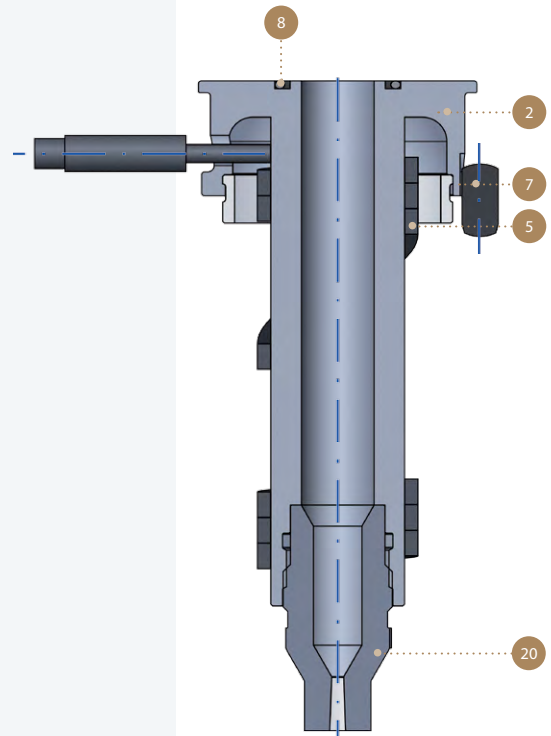
## Advantages

- Easy in made nozzle chamber
- Compact nozzle
- The possibility of injection regranulated material
- Fast color change
- Low energy requirement
- Plastic processing without degradation
- Short cycle times

## Nozzle selection advice

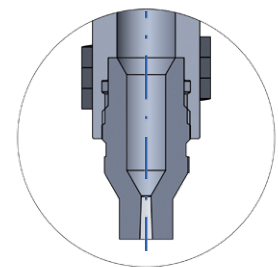
Maximum shot weight in [g] per nozzle

Type	Viscosity		
	Low	Middle	High
WP 29, TO	2000	1000	400
e.g.	PE, PP, PS	ABS POM kop. PA, PBT	PA+WS PBT+WS PMMA, PC



## Part list

- 2. Nozzle body
- 5. Heater
- 7. Dowel pin Ø6x12
- 8. O-ring
- 20. Nozzle head TO/TOW



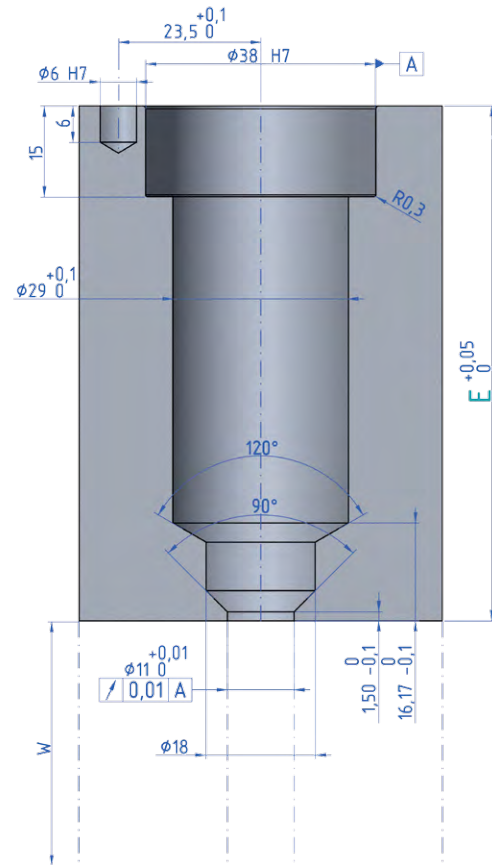
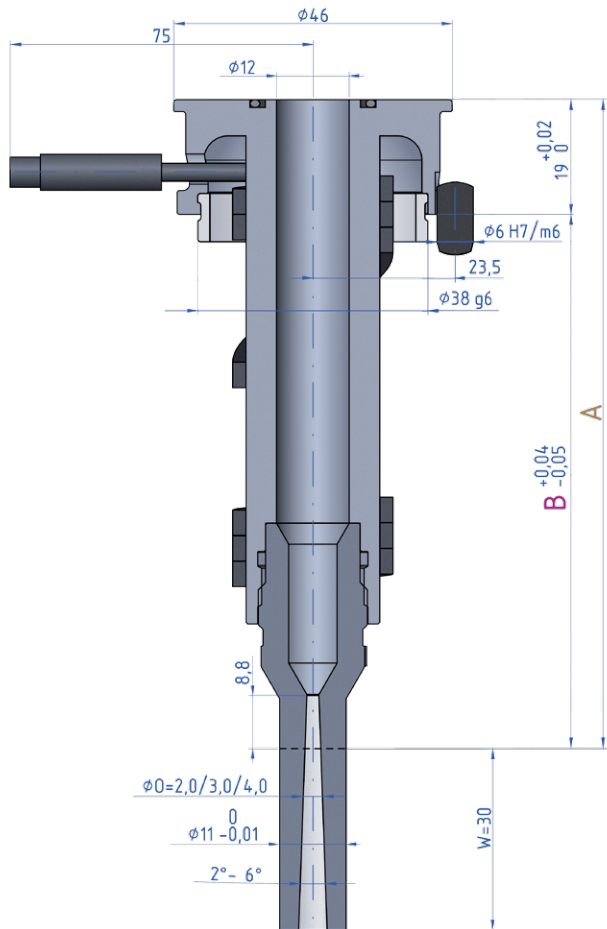
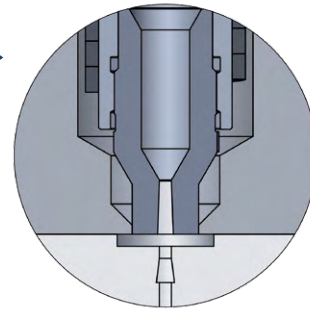
## Gate tip TO/TOW

- Nozzle head TO/TOW

Nozzle  
Chamber nozzle

ⓘ Attention ▶

Where the gate is on a sub runner, a thin-insulation disc must be molded in front of the nozzle



Nozzle	Type of nozzle tip	Article No.	A	B	E	øO
WP 29x065	TO	29065-00-00-00	83,85	64,85	65,00	2,0*/3,0/4,0
	TOW	29065-00-00-30				
WP 29x085	TO	29085-00-00-00	103,80	84,80	85,00	2,0*/3,0/4,0
	TOW	29085-00-00-30				
WP 29x105	TO	29105-00-00-00	123,75	104,75	105,00	2,0*/3,0/4,0
	TOW	29105-00-00-30				
WP 29x125	TO	29125-00-00-00	143,70	124,70	125,00	2,0*/3,0/4,0
	TOW	29125-00-00-30				
WP 29x145	TO	29145-00-00-00	163,65	144,65	145,00	2,0*/3,0/4,0
	TOW	29145-00-00-30				
WP 29x165	TO	29165-00-00-00	183,60	164,60	165,00	2,0*/3,0/4,0
	TOW	29165-00-00-30				
WP 29x185	TO	29185-00-00-00	203,55	184,55	185,00	2,0*/3,0/4,0
	TOW	29185-00-00-30				
WP 29x225	TO	29225-00-00-00	243,45	224,45	225,00	2,0*/3,0/4,0
	TOW	29225-00-00-30				
WP 29x265	TO	29265-00-00-00	283,35	264,35	265,00	2,0*/3,0/4,0
	TOW	29265-00-00-30				

\* standard gate diameter

# TO Nozzle head open gate Nozzle WPW 29

## Technical data

Electrical Data	230 V
Thermocouple	Fe-CuNi (type J)
Cable length	2000 mm
Max. injection pressure	1800 bar
Nozzle body, case	Work hardened tempered steel

## Features

- Gate made in nozzle head
- Screwed gate tip
- TOW nozzle head can be adapted to cavity geometry
- All operating parts are exchangeable
- Efficient thermal separation
- Homogeneous temperature profile
- External heating
- Module structure, can be used as single nozzle
- For molded parts without small tear-off required
- Suitable for materials that do not leave threads upon mold opening
- Suitable to cold runner inject

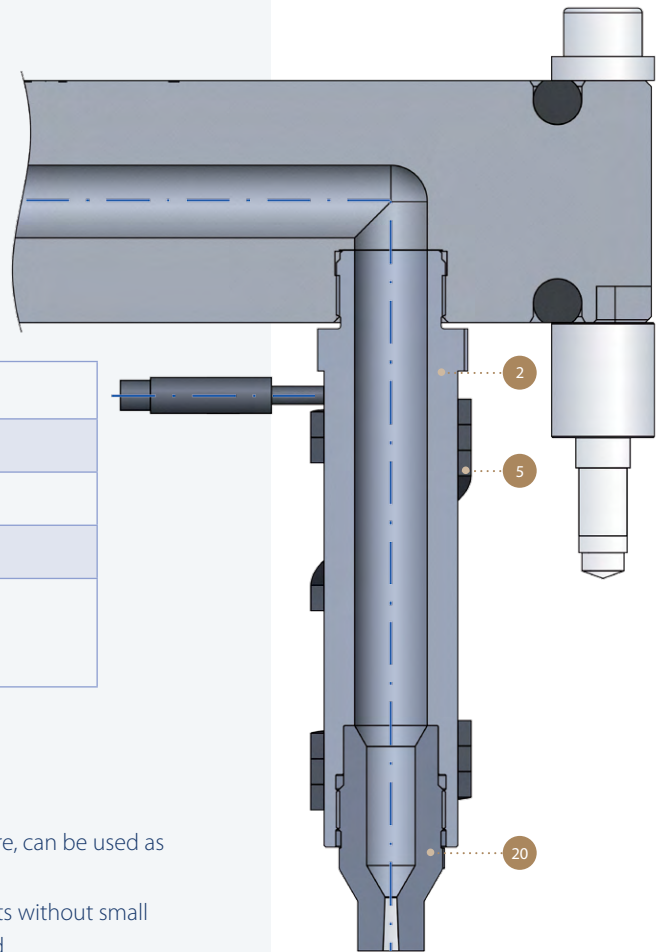
## Advantages

- Easy in made nozzle chamber
- Compact nozzle
- The possibility of injection regrauated material
- Fast color change
- Low energy requirement
- Plastic processing without degradation
- Short cycle times

## Nozzle selection advice

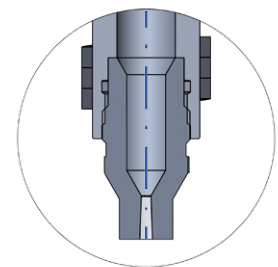
Maximum shot weight in [g] per nozzle

Type	Viscosity		
	Low	Middle	High
WPW 29, TO	2000	1000	400
e.g.	PE, PP, PS	ABS POM kop. PA, PBT	PA+WS PBT+WS PMMA, PC



## Part list

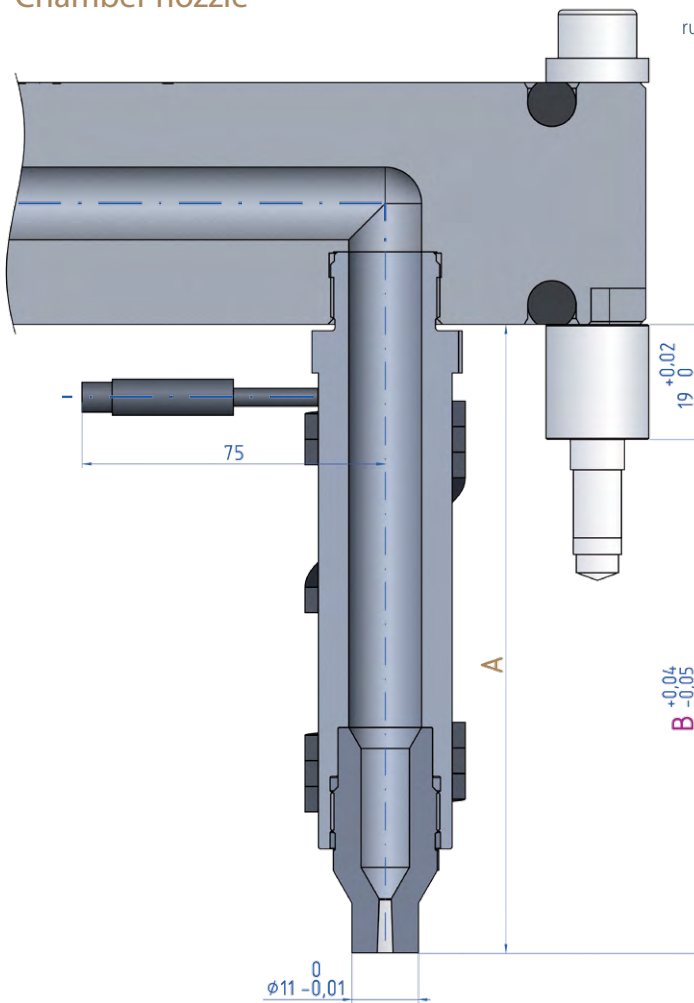
- 2. Nozzle body
- 5. Heater
- 20. Nozzle head TO/TOW



## Gate tip TO/TOW

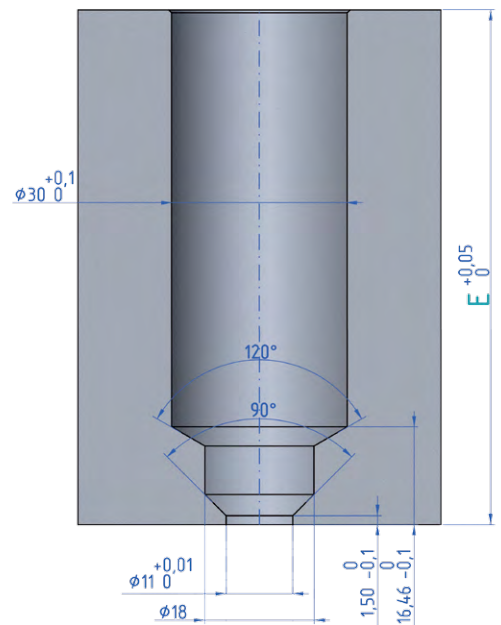
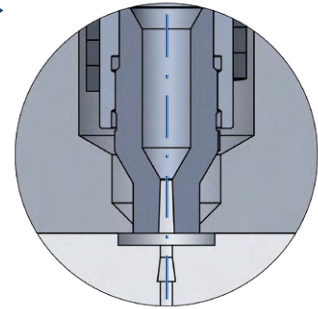
- Nozzle head TO/TOW

Nozzle  
Chamber nozzle



ⓘ Attention ▶

Where the gate is on a sub runner, a thin-insulation disc must be molded in front of the nozzle



Nozzle	Type of nozzle tip	Article No.	A	B	E	Max. spacing	øO
WPW 29x065	TO	29065-00-00-00	83,85	64,85	65,00	130,00	2,0*/3,0/4,0
	TOW	29065-00-00-30					
WPW 29x085	TO	29085-00-00-00	103,80	84,80	85,00	170,00	2,0*/3,0/4,0
	TOW	29085-00-00-30					
WPW 29x105	TO	29105-00-00-00	123,75	104,75	105,00	210,00	2,0*/3,0/4,0
	TOW	29105-00-00-30					
WPW 29x125	TO	29125-00-00-00	143,70	124,70	125,00	250,00	2,0*/3,0/4,0
	TOW	29125-00-00-30					
WPW 29x145	TO	29145-00-00-00	163,65	144,65	145,00	290,00	2,0*/3,0/4,0
	TOW	29145-00-00-30					
WPW 29x165	TO	29165-00-00-00	183,60	164,60	165,00	330,00	2,0*/3,0/4,0
	TOW	29165-00-00-30					
WPW 29x185	TO	29185-00-00-00	203,55	184,55	185,00	370,00	2,0*/3,0/4,0
	TOW	29185-00-00-30					
WPW 29x225	TO	29225-00-00-00	243,45	224,45	225,00	450,00	2,0*/3,0/4,0
	TOW	29225-00-00-30					
WPW 29x265	TO	29265-00-00-00	283,35	264,35	265,00	530,00	2,0*/3,0/4,0
	TOW	29265-00-00-30					

\* standard gate diameter

# TZO Nozzle head open gate

## Nozzle WP 29

### Technical data

Electrical Data	230 V
Thermocouple	Fe-CuNi (type J)
Cable length	2000 mm
Max. injection pressure	1800 bar
Nozzle body, case	Work hardened tempered steel

### Features

- Gate made in nozzle head
- Screwed gate tip
- TOW nozzle head can be adapted to cavity geometry
- All operating parts are exchangeable
- Efficient thermal separation
- Homogeneous temperature profile
- External heating
- Module structure, can be used as single nozzle
- For molded parts without small tear-off required
- Suitable for materials that do not leave threads upon mold opening
- Suitable to cold runner inject

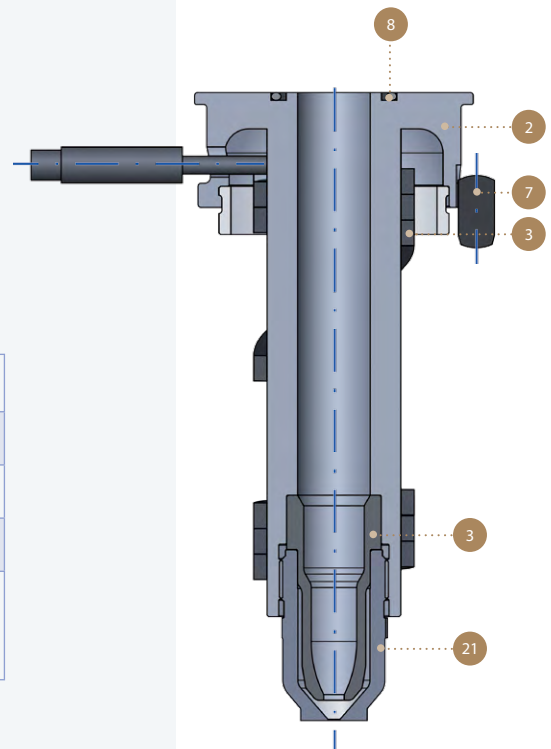
### Advantages

- Easy in made nozzle chamber
- Compact nozzle
- The possibility of injection regrunuated material
- Fast color change
- Low energy requirement
- Plastic processing without degradation
- Short cycle times

### Nozzle selection advice

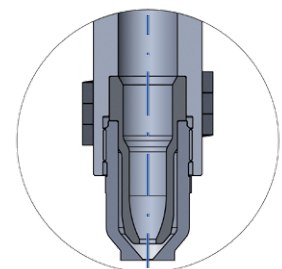
Maximum shot weight in [g] per nozzle

Type	Viscosity		
	Low	Middle	High
WP 29, TZO	2000	1000	400
e.g.	PE, PP, PS	ABS POM kop. PA, PBT	PA+WS PBT+WS PMMA, PC



### Part list

- 2. Nozzle body
- 3. Gate insert
- 5. Heater
- 7. Dowel pin Ø6x12
- 8. O-ring
- 20. Nozzle head TZO/TZOW



### Gate tip TZO/TZOW

- Gate insert ZO
- Nozzle head TZO/TZOW





# TZO Nozzle head open gate Nozzle WPW 29

## Technical data

Electrical Data	230 V
Thermocouple	Fe-CuNi (type J)
Cable length	2000 mm
Max. injection pressure	1800 bar
Nozzle body, case	Work hardened tempered steel

## Features

- Gate made in nozzle head
- Screwed gate tip
- TOW nozzle head can be adapted to cavity geometry
- All operating parts are exchangeable
- Efficient thermal separation
- Homogeneous temperature profile
- External heating
- Module structure, can be used as single nozzle
- For molded parts without small tear-off required
- Suitable for materials that do not leave threads upon mold opening
- Suitable to cold runner inject

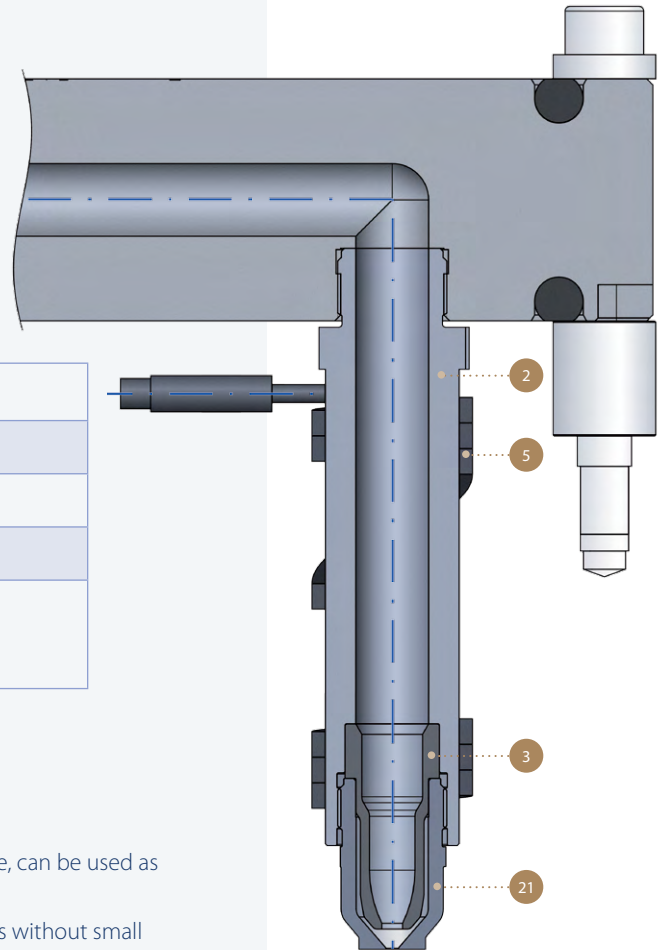
## Advantages

- Easy in made nozzle chamber
- Compact nozzle
- The possibility of injection regrained material
- Fast color change
- Low energy requirement
- Plastic processing without degradation
- Short cycle times

## Nozzle selection advice

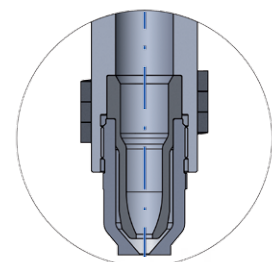
Maximum shot weight in [g] per nozzle

Type	Viscosity		
	Low	Middle	High
WPW 29, TZO	2000	1000	400
e.g.	PE, PP, PS	ABS POM kop. PA, PBT	PA+WS PBT+WS PMMA, PC



## Part list

- 2. Nozzle body
- 3. Gate insert
- 5. Heater
- 20. Nozzle head TZO/TZOW



## Gate tip TZO/TZOW

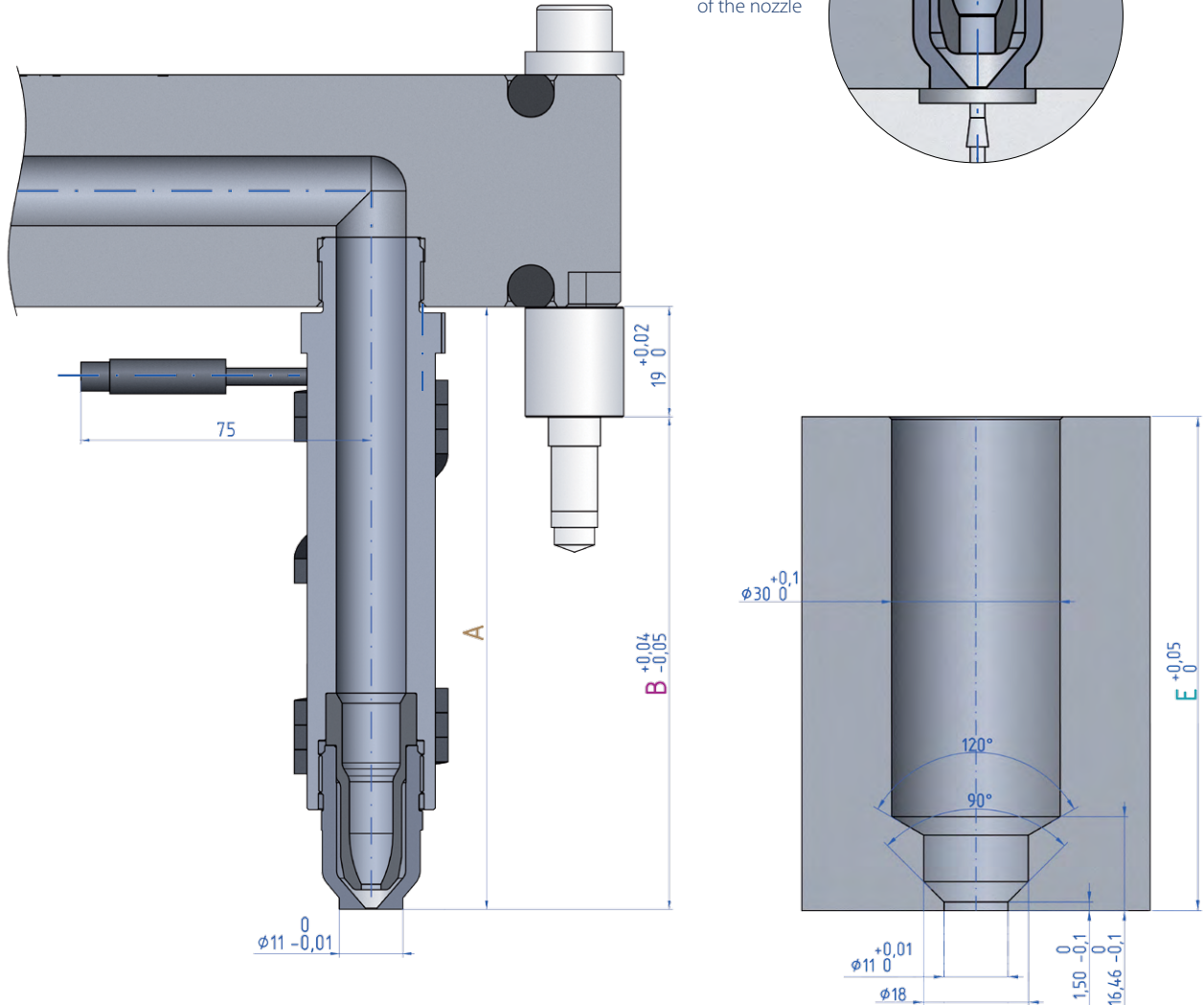
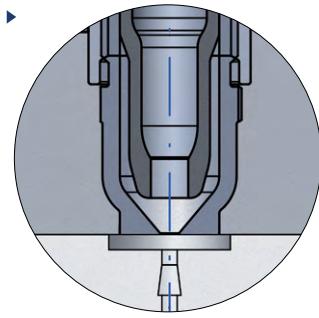
- Gate insert ZO
- Nozzle head TZO/TZOW



Nozzle  
Chamber nozzle

⚠ Attention ▶

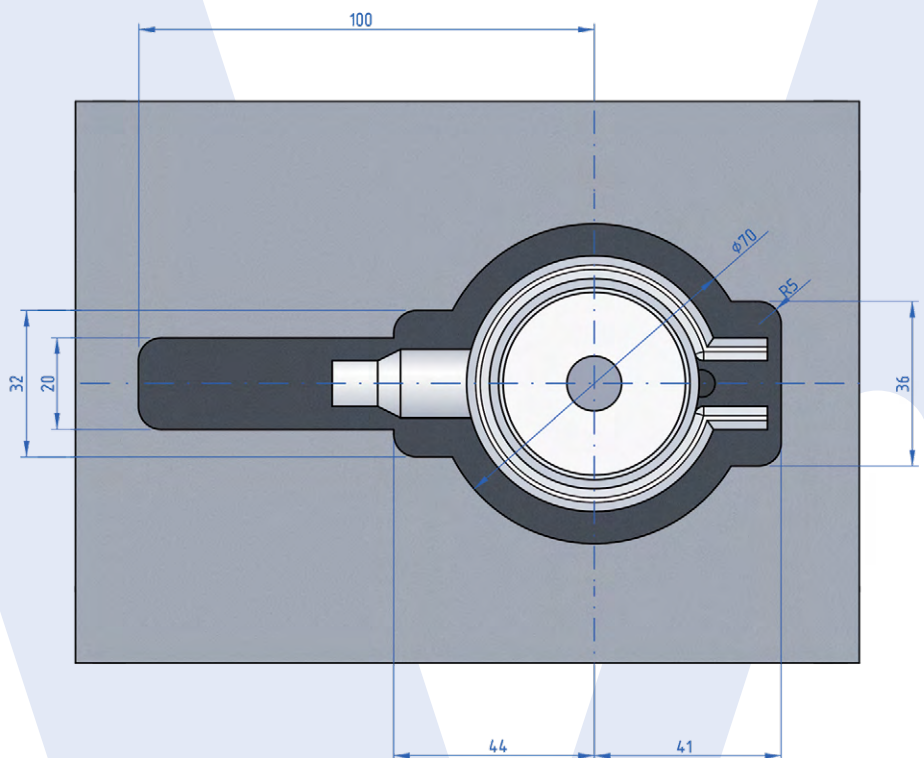
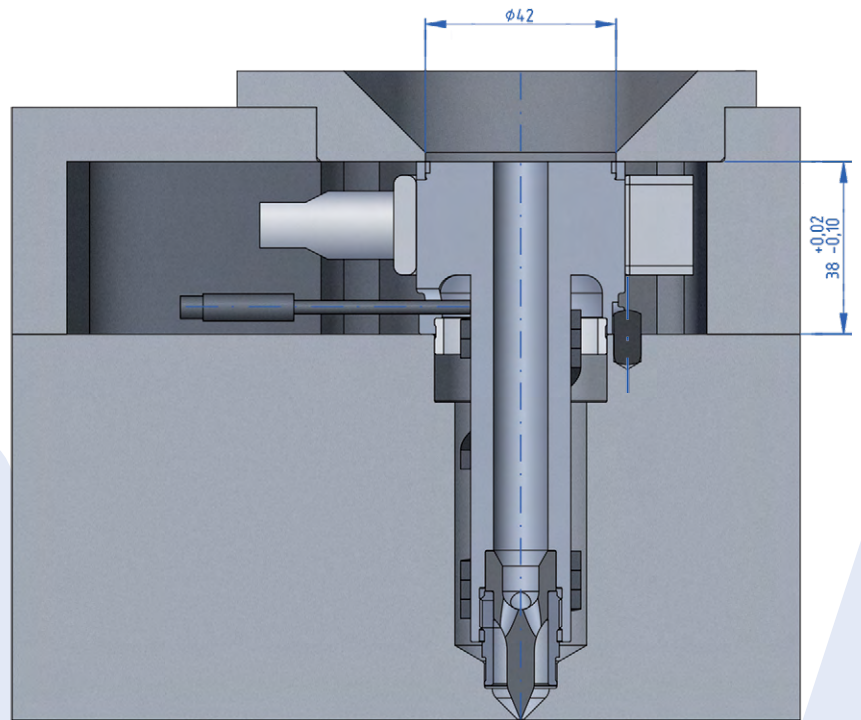
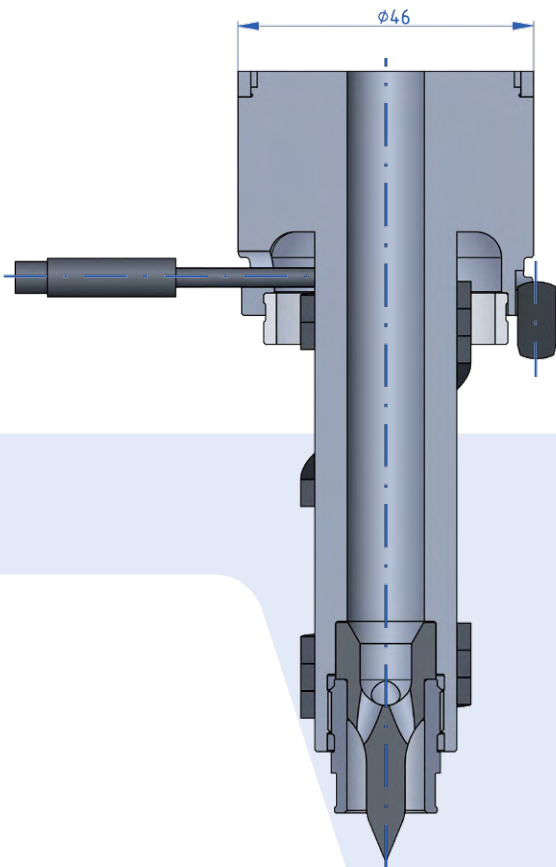
Where the gate is on a sub runner, a thin-insulation disc must be molded in front of the nozzle



Nozzle	Type of nozzle tip	Article No.	A	B	E	Max. spacing	∅O
WPW 29x065	TZO	29065-00-40-00	83,85	64,85	65,00	130,00	2,0*/3,0/4,0
	TZOW	29065-00-40-30					
WPW 29x085	TZO	29085-00-40-00	103,80	84,80	85,00	170,00	2,0*/3,0/4,0
	TZOW	29085-00-40-30					
WPW 29x105	TZO	29105-00-40-00	123,75	104,75	105,00	210,00	2,0*/3,0/4,0
	TZOW	29105-00-40-30					
WPW 29x125	TZO	29125-00-40-00	143,70	124,70	125,00	250,00	2,0*/3,0/4,0
	TZOW	29125-00-40-30					
WPW 29x145	TZO	29145-00-40-00	163,65	144,65	145,00	290,00	2,0*/3,0/4,0
	TZOW	29145-00-40-30					
WPW 29x165	TZO	29165-00-40-00	183,60	164,60	165,00	330,00	2,0*/3,0/4,0
	TZOW	29165-00-40-30					
WPW 29x185	TZO	29185-00-40-00	203,55	184,55	185,00	370,00	2,0*/3,0/4,0
	TZOW	29185-00-40-30					
WPW 29x225	TZO	29225-00-40-00	243,45	224,45	225,00	450,00	2,0*/3,0/4,0
	TZOW	29225-00-40-30					
WPW 29x265	TZO	29265-00-40-00	283,35	264,35	265,00	530,00	2,0*/3,0/4,0
	TZOW	20265-00-40-30					

\* standard gate diameter

Nozzle  
Chamber nozzle



Maximum nozzle contact pressure **170kN**

Locating ring should be  
screwed minimum  
by **3 - M12 screw or 4 - M10 screw 10.9 grade**



# CP Ring gate Nozzle WP 22

## Technical data

Electrical Data	230 V
Thermocouple	Fe-CuNi (type J)
Cable length	2000 mm
Max. injection pressure	1800 bar
Nozzle body, case	Work hardened tempered steel
Gate insert	CP5 = Cu+Ni-alloy CP3 = Mo-alloy

## Features

- Screwed gate tip
- All operating parts are exchangeable
- Efficient thermal separation
- Homogeneous temperature profile
- External heating
- Direct temperature measurement nearby gate tip
- Module structure, can be used as single nozzle

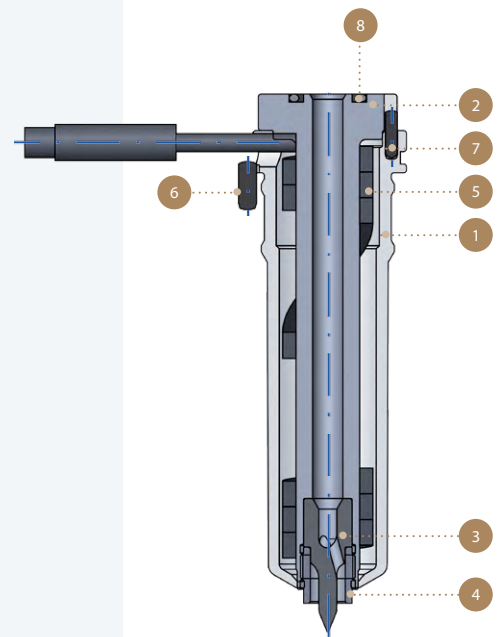
## Advantages

- CP3 gate insert: high protection against wear
- Low energy requirement
- Plastic processing without degradation
- Possible cosmetic injection point
- Short cycle times

## Nozzle selection advice

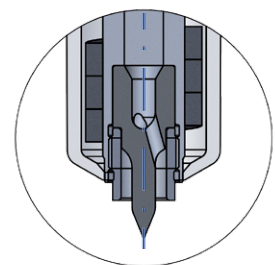
Maximum shot weight in [g] per nozzle

Typev	Viscosity		
	Low	Middle	High
WP 22, CP	50	25	12
e.g.	PE, PP, PS	ABS POM kop. PA, PBT	PA+WS PBT+WS PMMA, PC



## Part list

1. Case
2. Nozzle body
3. Gate insert
4. Insulation sleeve
5. Heater
6. Anti-rotation dowel pin Ø3x8
7. Dowel pin Ø2x8
8. O-ring

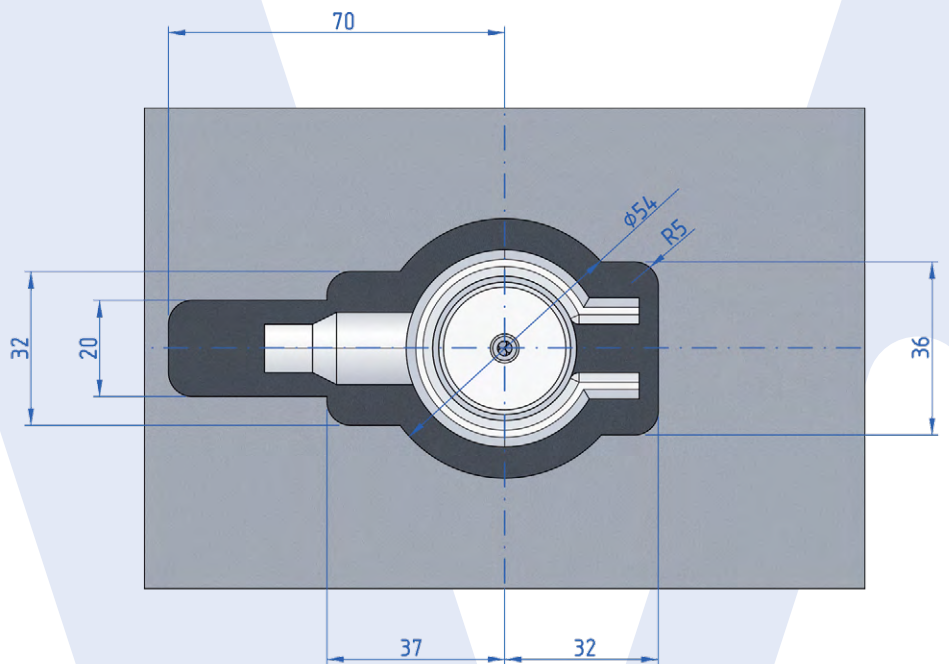
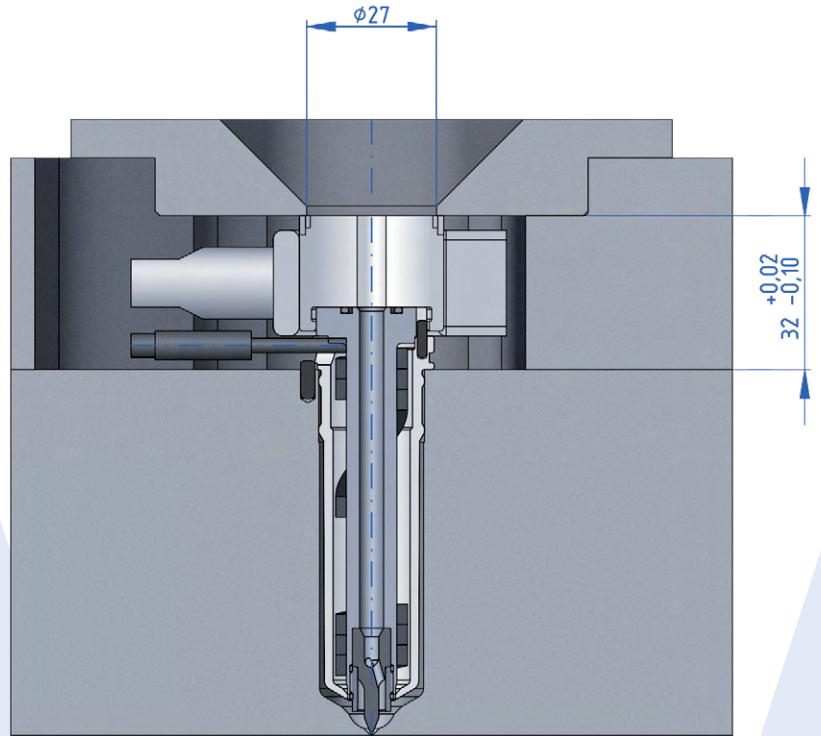
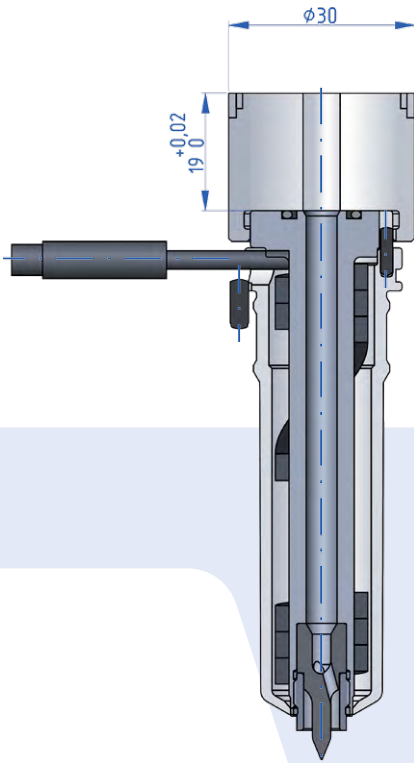


## Gate tip CP 3/5

- Gate insert 22 CP 3/5
- Insulation sleeve 22



Single nozzle  
Chamber nozzle



Maximum nozzle contact pressure **60kN**  
Locating ring should be screwed minimum by  
**3 - M12 screw or 4 - M10 screw 10.9 grade**



### Spare parts, order examples

- 1
- 2
- 5
- 3
- 3
- 4
- 8
- 7
- 6
- 11
- 9
- 10

Nozzle type/part	Case	Nozzle body	Heater	CP5 gate insert	CP3 gate insert	Insulation sleeve	O-ring	Dowel ø2x8	Dowel ø3x8	Single nozzle support	Heater band 200W	Thermocouple of single nozzle support
WP 22x056	22056-01	22056-02	22056-05	22000-03-1	22000-03-2	22000-04	22000-08	22000-07	22000-06	22000-11	22000-09	22000-10
WP 22x076	22076-01	22076-02	22076-05									

### Order example

#### Nozzle

Type	Article No.
WP 22 - 056 - CP 3	22056-00-2



#### Single nozzle support

Name	Type	Article No.
Single nozzle support	EA-WP 22 / R ...	22000-11
Heater band 200W		22000-09
Thermocouple of single nozzle		22000-10

### Explanation of nozzle code:

#### AABBB-00-CC

where:

- AA = diameter
- BBB = length
- 00 = complete nozzle
- CC - gate insert type

- 1 for CP5 gate insert
- 2 for CP3 gate insert

#### Example:

Nozzle WP 22x056 CP3  
22056-00-2

# CP Ring gate Nozzle WP 26

## Technical data

Electrical Data	230 V
Thermocouple	Fe-CuNi (type J)
Cable length	2000 mm
Max. injection pressure	1800 bar
Nozzle body, case	Work hardened tempered steel
Gate insert	CP5 = Cu+Ni-alloy CP3 = Mo-alloy

## Features

- Screwed gate tip
- All operating parts are exchangeable
- Efficient thermal separation
- Homogeneous temperature profile
- External heating
- Direct temperature measurement nearby gate tip
- Module structure, can be used as single nozzle

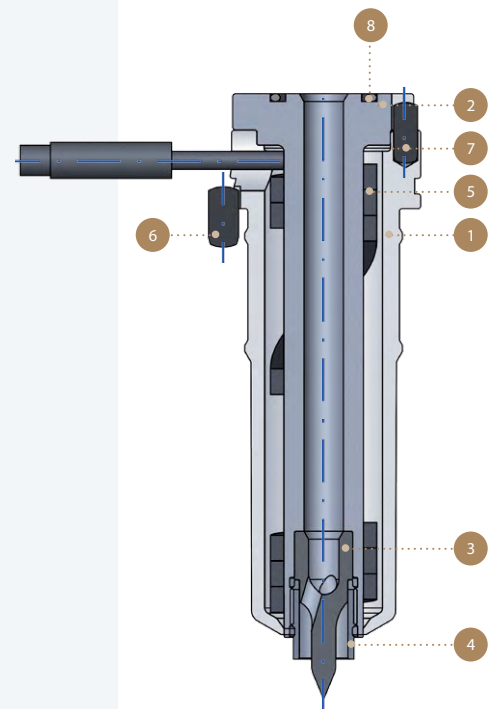
## Advantages

- CP3 gate insert: high protection against wear
- Low energy requirement
- Plastic processing without degradation
- Possible cosmetic injection point
- Short cycle times

## Nozzle selection advice

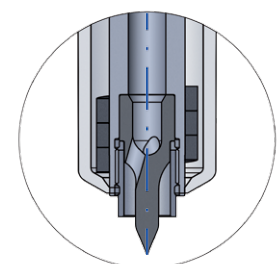
Maximum shot weight in [g] per nozzle

Type	Viscosity		
	Low	Middle	High
WP 26, CP	250	150	70
e.g.	PE, PP, PS	ABS POM kop. PA, PBT	PA+WS PBT+WS PMMA, PC



## Part list

1. Case
2. Nozzle body
3. Gate insert
4. Insulation sleeve
5. Heater
6. Anti-rotation dowel pin Ø5x10
7. Dowel pin Ø4x10
8. O-ring



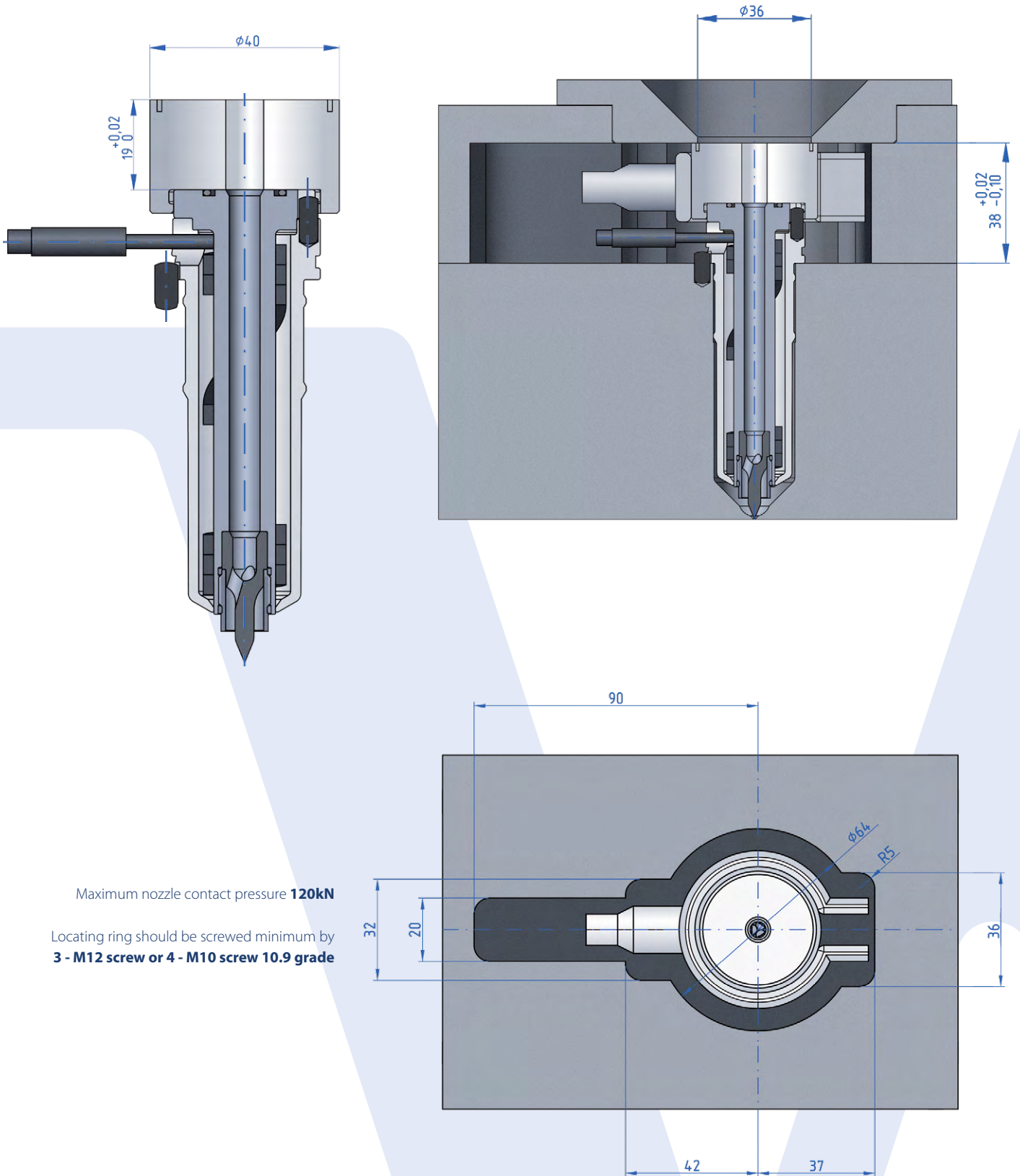
## Gate tip CP 3/5

- Gate insert 26 CP 3/5
- Insulation sleeve 26





Single nozzle  
Chamber nozzle



Maximum nozzle contact pressure **120kN**

Locating ring should be screwed minimum by **3 - M12 screw or 4 - M10 screw 10.9 grade**

Spare parts/order examples

- 1
- 2
- 5
- 3
- 3
- 4
- 8
- 7
- 6
- 11
- 9
- 10

Nozzle type/part	Case	Nozzle body	Heater	CP5 gate insert	CP3 gate insert	Insulation sleeve	O-ring	Dowel ø4x10	Dowel ø5x10	Single nozzle support	Heater band 300W	Thermocouple of single nozzle support
WP 26x061	26061-01	26061-02	26061-05	26000-03-01	26000-03-2	26000-04	26000-08	26000-07	26000-06	26000-11	26000-09	26000-10
WP 26x081	26081-01	26081-02	26081-05									
WP 26x101	26101-01	26101-02	26101-05									

Order example

Nozzle

Type	Article No.
WP 26 - 061 - CP 3	26061-00-2

Series
Dimension E
Gate insert type

Single nozzle support

Name	Type	Article No.
Single nozzle support	EA-WP 26 / R ...	26000-11
Heater band 300W		26000-09
Thermocouple of single nozzle		26000-10

Explanation of nozzle code:

AABBB-00-CC

where:

- AA = diameter
- BBB = length
- 00 = complete nozzle
- CC - gate insert type

- 1 - for CP5 gate insert
- 2 - for CP3 gate insert

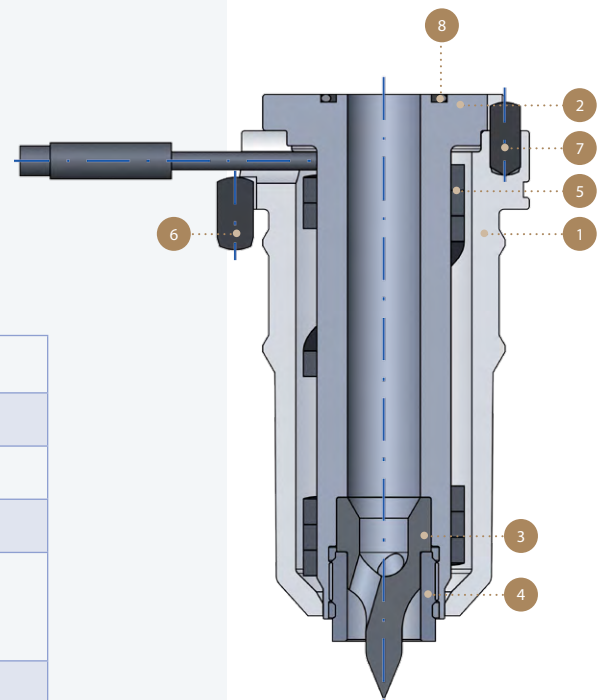
Example:

Nozzle WP 26x101 CP3  
26101-00-2

# CP Ring gate Nozzle WP 40

## Technical data

Electrical Data	230 V
Thermocouple	Fe-CuNi (type J)
Cable length	2000 mm
Max. injection pressure	1800 bar
Nozzle body, case	Work hardened tempered steel
Gate insert	CP5 = Cu+Ni-alloy CP3 = Mo-alloy



## Features

- Screwed gate tip
- All operating parts are exchangeable
- Efficient thermal separation
- Homogeneous temperature profile
- External heating
- Direct temperature measurement nearby gate tip
- Module structure, can be used as single nozzle

## Part list

1. Case
2. Nozzle body
3. Gate insert
4. Insulation sleeve
5. Heater
6. Anti-rotation dowel pin Ø6x12
7. Dowel pin Ø5x12
8. O-ring

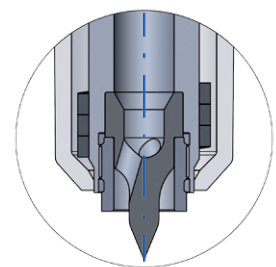
## Advantages

- CP3 gate insert: high protection against wear
- Low energy requirement
- Plastic processing without degradation
- Possible cosmetic injection point
- Short cycle times

## Nozzle selection advice

Maximum shot weight in [g] per nozzle

Type	Viscosity		
	Low	Middle	High
WP 40, CP	2000	1000	400
e.g.	PE, PP, PS	ABS POM kop. PA, PBT	PA+WS PBT+WS PMMA, PC

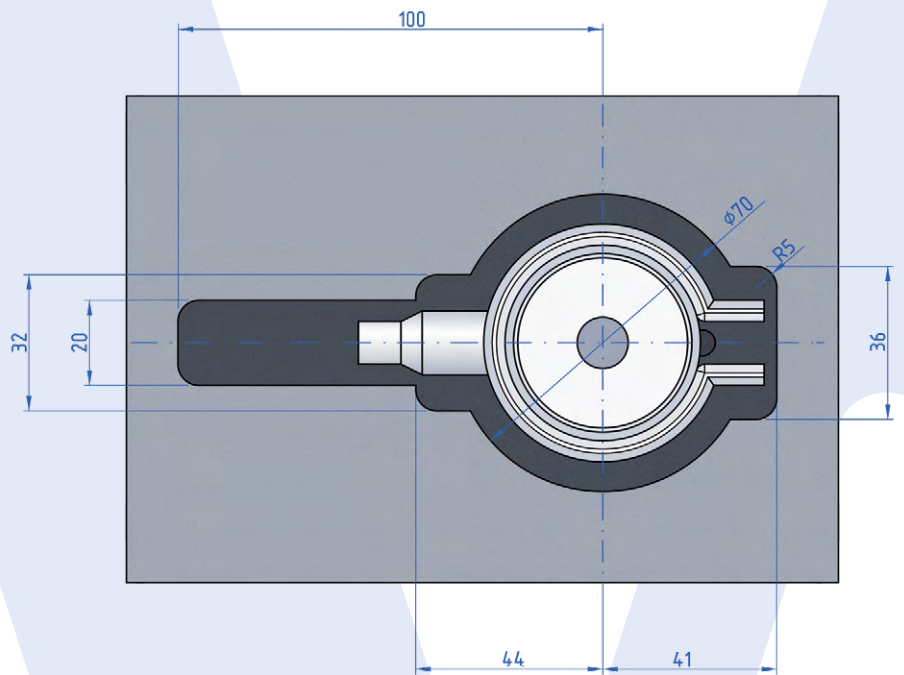
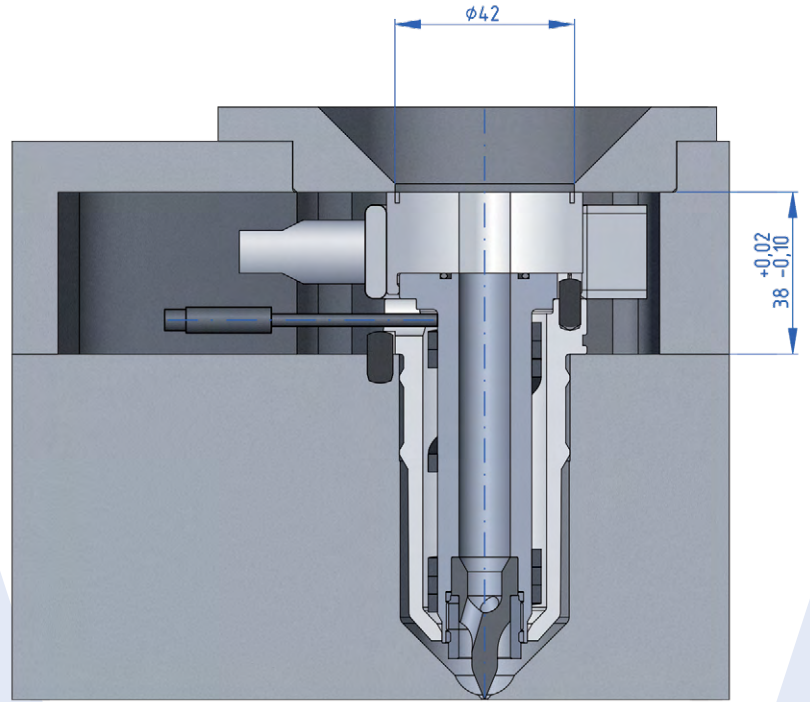
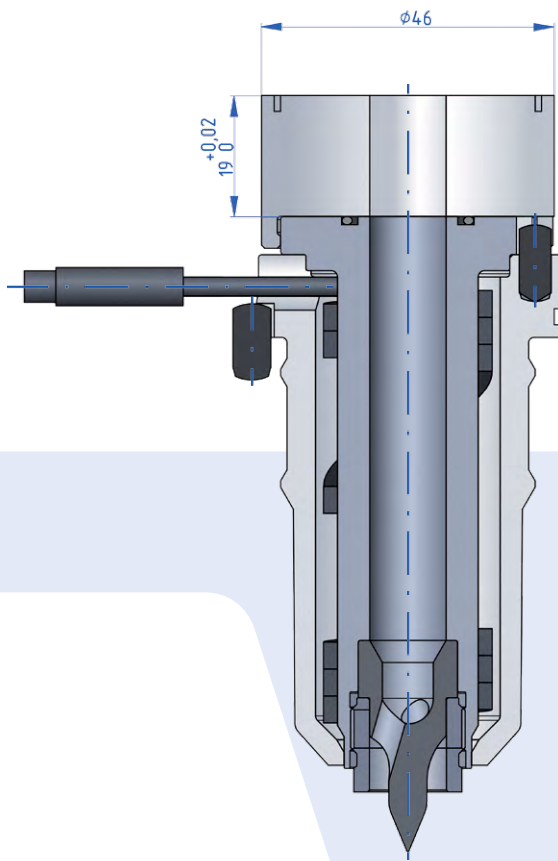


## Gate tip CP 3/5

- Gate insert 40 CP 3/5
- Insulation sleeve 40



### Nozzle Chamber nozzle



Maximum nozzle contact pressure **170kN**

Locating ring should be screwed minimum by **3 - M12 screw or 4 - M10 screw 10.9 grade**

Spare parts/order examples

- 1
- 2
- 5
- 3
- 3
- 4
- 8
- 7
- 6
- 11
- 9
- 10

Nozzle type/part	Case	Nozzle body	Heater	CP5 gate insert	CP3 gate insert	Insulation sleeve	O-ring	Dowel ø5x12	Dowel ø6x12	Single nozzle support	Heater band 300W	Thermocouple of single nozzle support
WP 40x061	40061-01	40061-02	40061-05	40000-03-1	40000-03-2	40000-04	40000-08	40000-07	40000-06	40000-11	40000-09	40000-10
WP 40x081	40081-01	40081-02	40081-05									
WP 40x101	40101-01	40101-02	40101-05									

Order example

Nozzle

Type	Article No.
WP 40 - 061 - CP 3	40061-00-2



Single nozzle support

Name	Type	Article No.
Single nozzle support	EA-WP 40 / R ...	40000-11
Heater band 300W		40000-09
Thermocouple of single nozzle		40000-10

Explanation of nozzle code:

AABBB-00-CC

where:

- AA = diameter
- BBB = length
- 00 = complete nozzle
- CC - gate insert type

- 1 - for CP5 gate insert
- 2 - for CP3 gate insert

Example:

Nozzle WP40x061 CP3  
40061-00-2



# ZI Valve gate

## Nozzle WP 16

### Technical data

Electrical Data	230 V
Thermocouple	Fe-CuNi (type J)
Cable length	2000 mm
Max. injection pressure	1800 bar
Nozzle body, case	Work hardened tempered steel

### Features

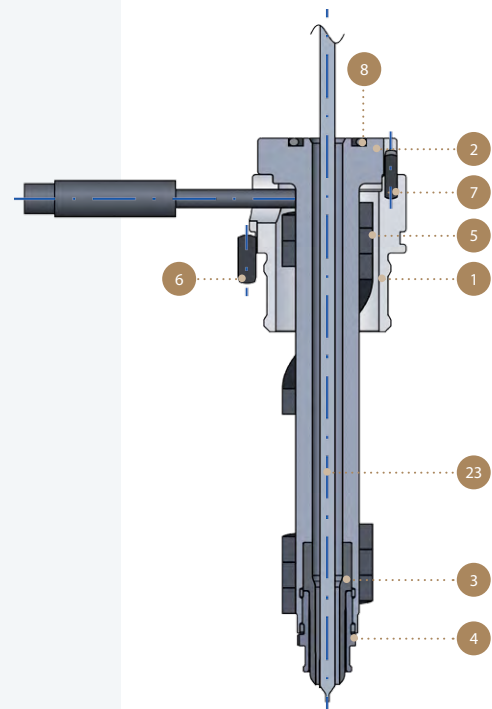
- Screwed gate tip
- All operating parts are exchangeable
- Efficient thermal separation
- Homogeneous temperature profile
- External heating
- Direct temperature measurement nearby gate tip

### Advantages

- Low energy requirement
- Plastic processing without degradation
- Possible cosmetic injection point
- Short cycle times

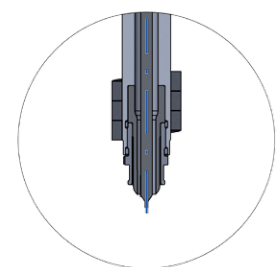
### Nozzle selection advice

\* The nozzle size is individually determined during the selection of the hot runner system.



### Part list

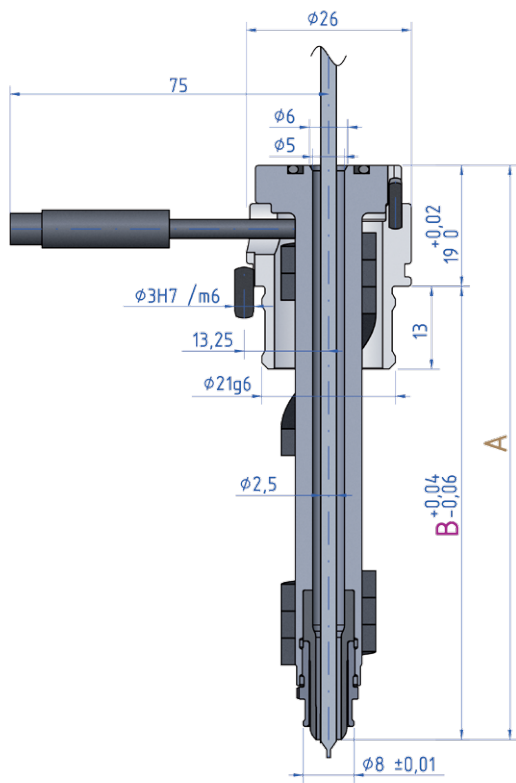
1. Case
2. Nozzle body
3. Gate insert
4. Insulation sleeve
5. Heater
6. Anti-rotation dowel pin Ø3x8
7. Dowel pin Ø2x8
8. O-ring
23. Valve pin



### Gate tip ZI

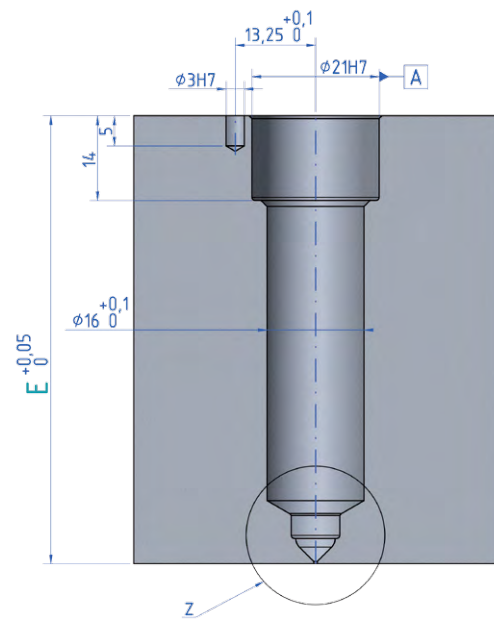
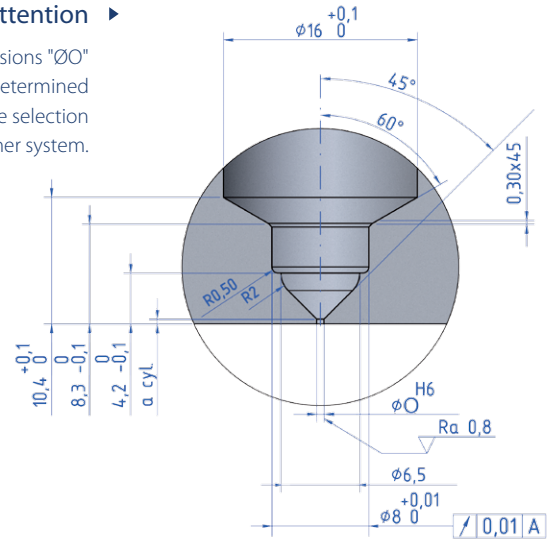
- Gate insert 16 ZI
- Insulation sleeve 16

Nozzle  
Chamber nozzle



Attention ▶

The dimensions "ØO" and "a cyl." are determined individually during the selection of the hot runner system.



Nozzle	Type of nozzle tip	Article No.	A	B	E
WP 16x054	ZI	16054-00-4	70,75	51,75	54,00
WP 16x074	ZI	16074-00-4	90,70	71,70	74,00
WP 16x094	ZI	16094-00-4	110,65	91,65	94,00
WP 16x114	ZI	16114-00-4	130,60	111,60	114,00
WP 16x134	ZI	16134-00-4	150,55	131,55	134,00
WP 16x154	ZI	16154-00-4	170,50	151,50	154,00
WP 16x174	ZI	16174-00-4	190,45	171,45	174,00
WP 16x194	ZI	16194-00-4	210,40	191,40	194,00

# ZI Valve gate

## Nozzle WPW 16

### Technical data

Electrical Data	230 V
Thermocouple	Fe-CuNi (type J)
Cable length	2000 mm
Max. injection pressure	1800 bar
Nozzle body, case	Work hardened tempered steel

### Features

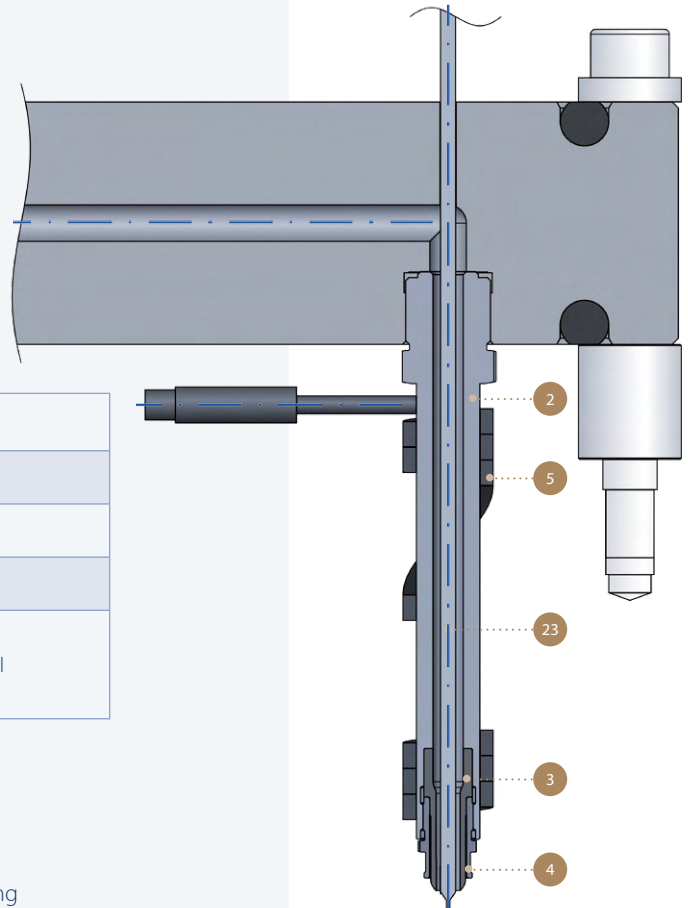
- Screwed gate tip
- All operating parts are exchangeable
- Efficient thermal separation
- Homogeneous temperature profile
- External heating
- Direct temperature measurement nearby gate tip

### Advantages

- Low energy requirement
- Plastic processing without degradation
- - Possible cosmetic injection point
- - Short cycle times

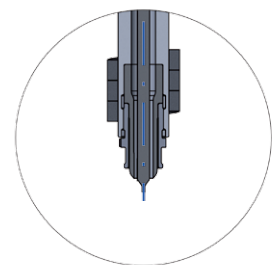
### Nozzle selection advice

\* The nozzle size is individually determined during the selection of the hot runner system.



### Part list

- 2. Nozzle body
- 3. Gate insert
- 4. Insulation sleeve
- 5. Heater
- 23. Valve pin



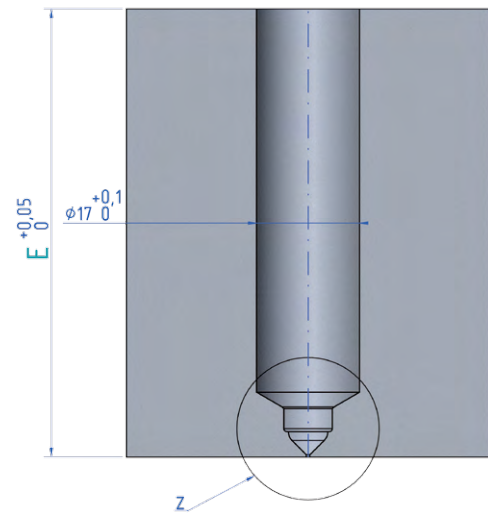
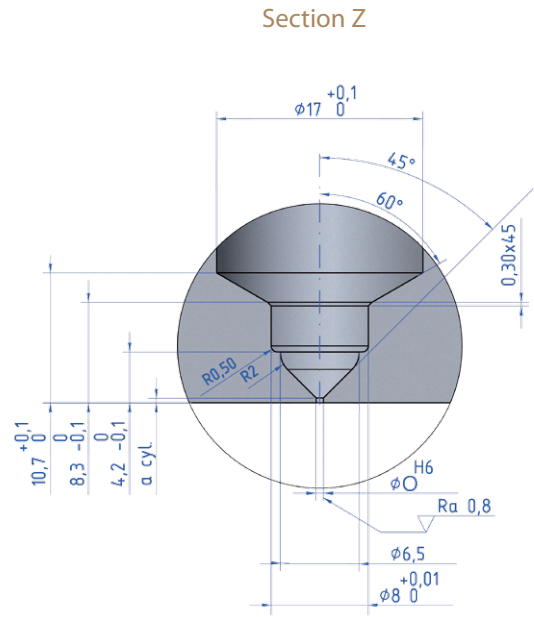
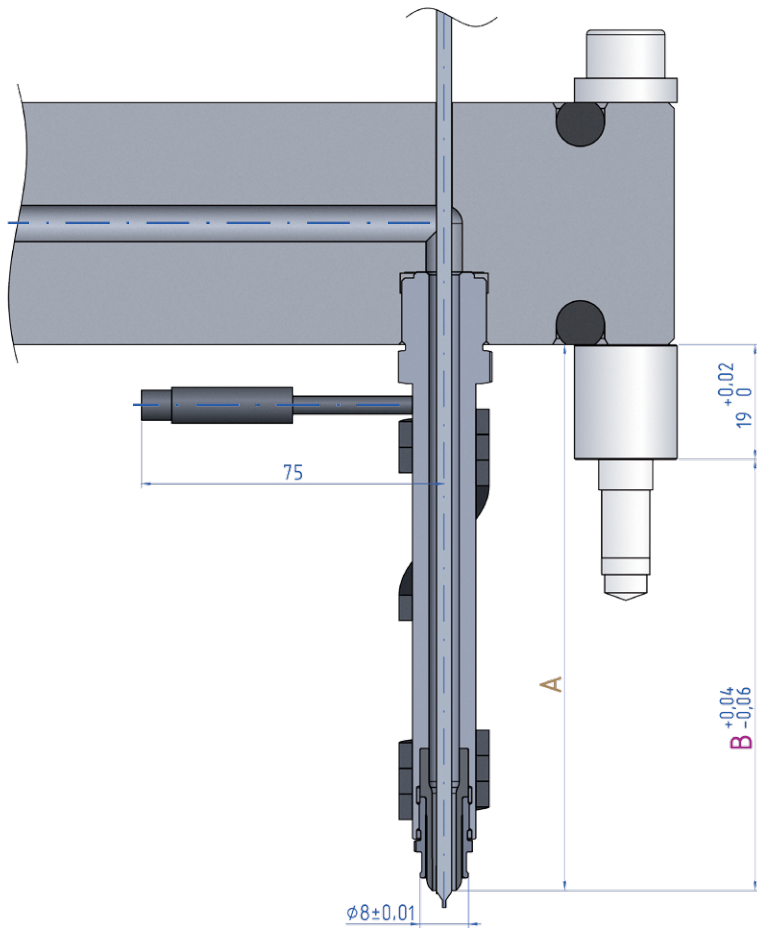
### Gate tip ZI

- Gate insert 16 ZI
- Insulation sleeve 16

**Nozzle Chamber nozzle**

**Attention**

The dimensions "øO" and "a cyl." are determined individually during the selection of the hot runner system.



Nozzle	Type of nozzle tip	Article No.	A	B	E	Max. spacing
WPW 16x054	ZI	16054-00-4	70,75	51,75	54,00	108,00
WPW 16x074	ZI	16074-00-4	90,70	71,70	74,00	148,00
WPW 16x094	ZI	16094-00-4	110,65	91,65	94,00	188,00
WPW 16x114	ZI	16114-00-4	130,60	111,60	114,00	228,00
WPW 16x134	ZI	16134-00-4	150,55	131,55	134,00	268,00
WPW 16x154	ZI	16154-00-4	170,50	151,50	154,00	308,00
WPW 16x174	ZI	16174-00-4	190,45	171,45	174,00	348,00
WPW 16x194	ZI	16194-00-4	210,40	191,40	194,00	388,00

Spare parts, order examples

- 2
- 5
- 1
- 3
- 4
- 8
- 7
- 6
- 23

Nozzle type/part	Nozzle body	Heater	Case	ZI gate insert	Insulation sleeve	O-ring	Dowel ø2x8	Dowel ø3x8	Valve pin
WP 16x054	22056-02	22056-05	16000-01	16000-03-4	16000-04	22000-08	22000-07	22000-06	16000-23
WP 16x074	22076-02	22076-05							
WP 16x094	16094-02	16094-05							
WP 16x114	16114-02	16114-05							
WP 16x134	16134-02	16134-05							
WP 16x154	16154-02	16154-05							
WP 16x174	16174-02	16174-05							
WP 16x194	16194-02	16194-05							

Order example

Type	Article No.
WP 16 - 054 - ZI	16054-00-4



Explanation of nozzle code:

**AABBB-00-CC**

where:

- AA = diameter
- BBB = length
- 00 = complete nozzle
- CC - gate insert type

**Example:**

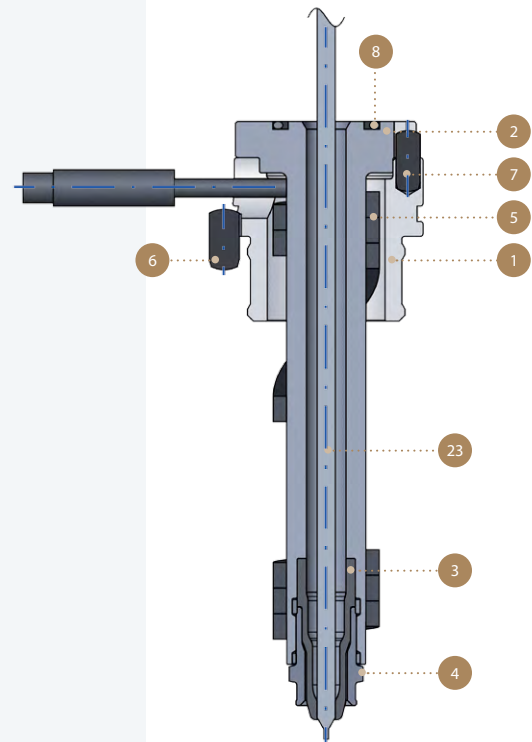
Nozzle WP16x054 ZI  
16054-00-4

# ZI Valve gate

## Nozzle WP 20

### Technical data

Electrical Data	230 V
Thermocouple	Fe-CuNi (type J)
Cable length	2000 mm
Max. injection pressure	1800 bar
Nozzle body, case	Work hardened tempered steel



### Features

- Screwed gate tip
- All operating parts are exchangeable
- Efficient thermal separation
- Homogeneous temperature profile
- External heating
- Direct temperature measurement nearby gate tip

### Advantages

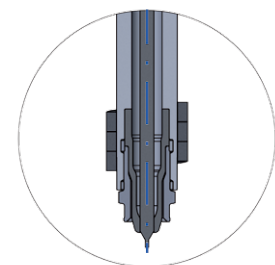
- Low energy requirement
- Plastic processing without degradation
- Possible cosmetic injection point
- Short cycle times

### Nozzle selection advice

\* The nozzle size is individually determined during the selection of the hot runner system.

### Part list

1. Case
2. Nozzle body
3. Gate insert
4. Insulation sleeve
5. Heater
6. Anti-rotation dowel pin Ø5x10
7. Dowel pin Ø4x10
8. O-ring
23. Valve pin



### Gate tip ZI

- Gate insert 20 ZI
- Insulation sleeve 20





# ZI Valve gate

## Nozzle WPW 20

### Technical data

Electrical Data	230 V
Thermocouple	Fe-CuNi (type J)
Cable length	2000 mm
Max. injection pressure	1800 bar
Nozzle body, case	Work hardened tempered steel

### Features

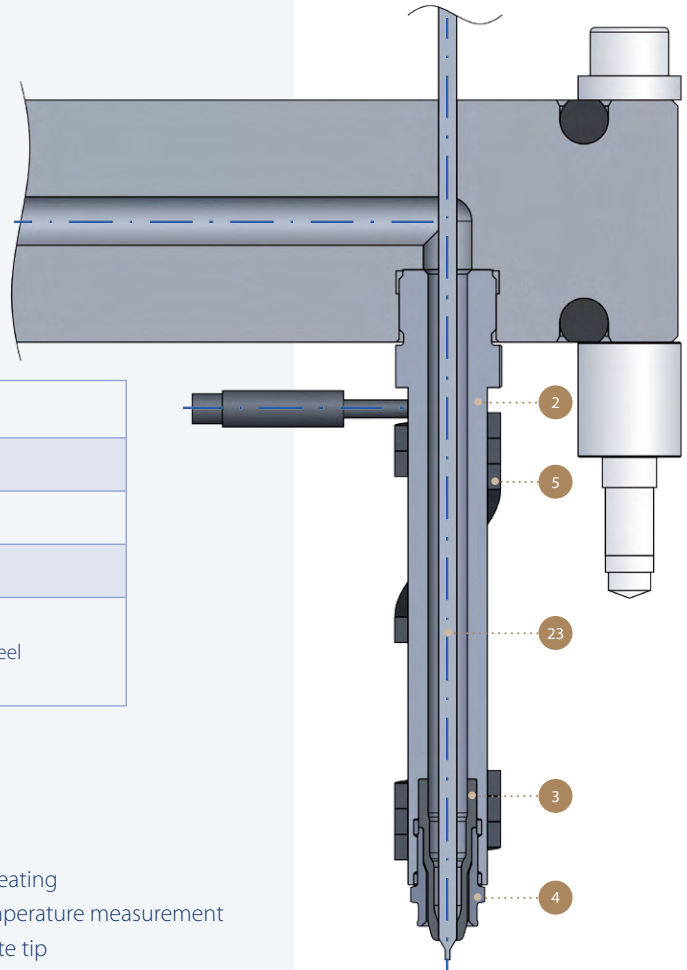
- Screwed gate tip
- All operating parts are exchangeable
- Efficient thermal separation
- Homogeneous temperature profile
- External heating
- Direct temperature measurement nearby gate tip

### Advantages

- Low energy requirement
- Plastic processing without degradation
- Possible cosmetic injection point
- Short cycle times

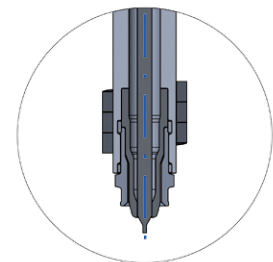
### Nozzle selection advice

\* The nozzle size is individually determined during the selection of the hot runner system.



### Part list

- 2. Nozzle body
- 3. Gate insert
- 4. Insulation sleeve
- 5. Heater
- 23. Valve pin



### Gate tip ZI

- Gate insert 20 ZI
- Insulation sleeve 20



# TZI Nozzle head valve gate

## Nozzle WP 20

### Technical data

Electrical Data	230 V
Thermocouple	Fe-CuNi (type J)
Cable length	2000 mm
Max. injection pressure	1800 bar
Nozzle body, case	Work hardened tempered steel

### Features

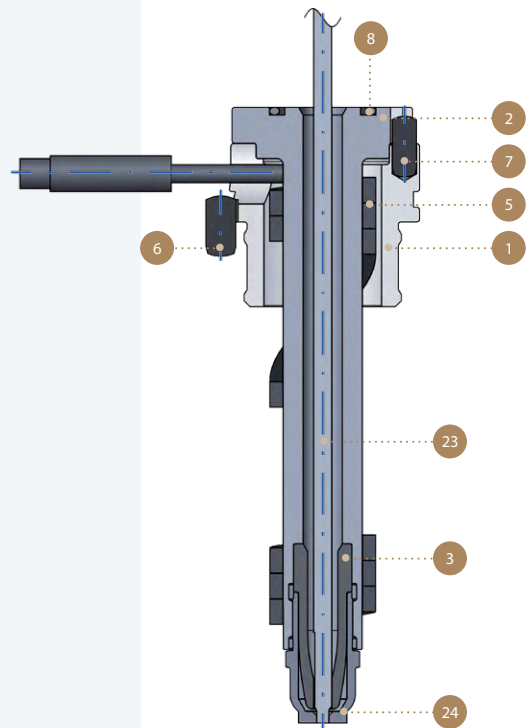
- Screwed gate tip
- All operating parts are exchangeable
- Efficient thermal separation
- Homogeneous temperature profile
- External heating
- Direct temperature measurement nearby gate tip

### Advantages

- Low energy requirement
- Plastic processing without degradation
- Possible cosmetic injection point
- Short cycle times

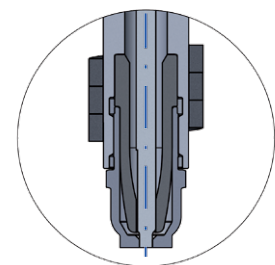
### Nozzle selection advice

\* The nozzle size is individually determined during the selection of the hot runner system.



### Part list

1. Case
2. Nozzle body
3. Gate insert
4. Heater
5. Heater
6. Anti-rotation dowel pin Ø5x10
7. Dowel pin Ø4x10
8. O-ring
23. Valve pin
24. Nozzle head TZI



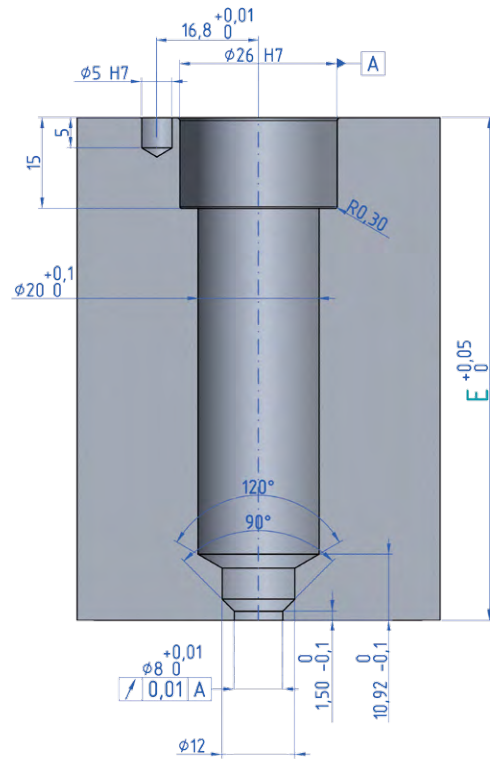
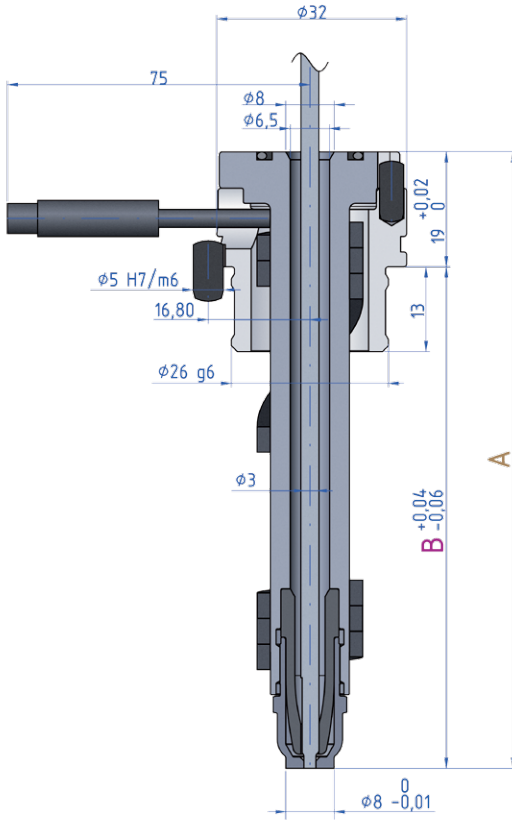
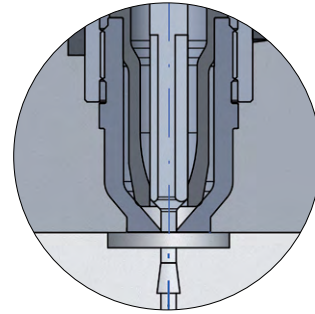
### Gate tip ZI

- Gate insert 20 ZI
- Nozzle head TZI

Nozzle  
Chamber nozzle

⚠ Attention ▶

Where the gate is on a sub runner, a thin-insulation disc must be molded in front of the nozzle



Nozzle	Type of nozzle tip	Article No.	A	B	E
WP 20x063	TZI	20063-00-4-00	81,85	62,85	63,00
WP 20x083	TZI	20083-00-4-00	101,80	82,80	83,00
WP 20x103	TZI	20103-00-4-00	121,75	102,75	103,00
WP 20x123	TZI	20123-00-4-00	141,70	122,70	123,00
WP 20x143	TZI	20143-00-4-00	161,65	142,65	143,00
WP 20x163	TZI	20163-00-4-00	181,60	162,60	163,00
WP 20x183	TZI	20183-00-4-00	201,55	182,55	183,00

# TZI Nozzle head valve gate

## Nozzle WPW 20

### Technical data

Electrical Data	230 V
Thermocouple	Fe-CuNi (type J)
Cable length	2000 mm
Max. injection pressure	1800 bar
Nozzle body, case	Work hardened tempered steel

### Features

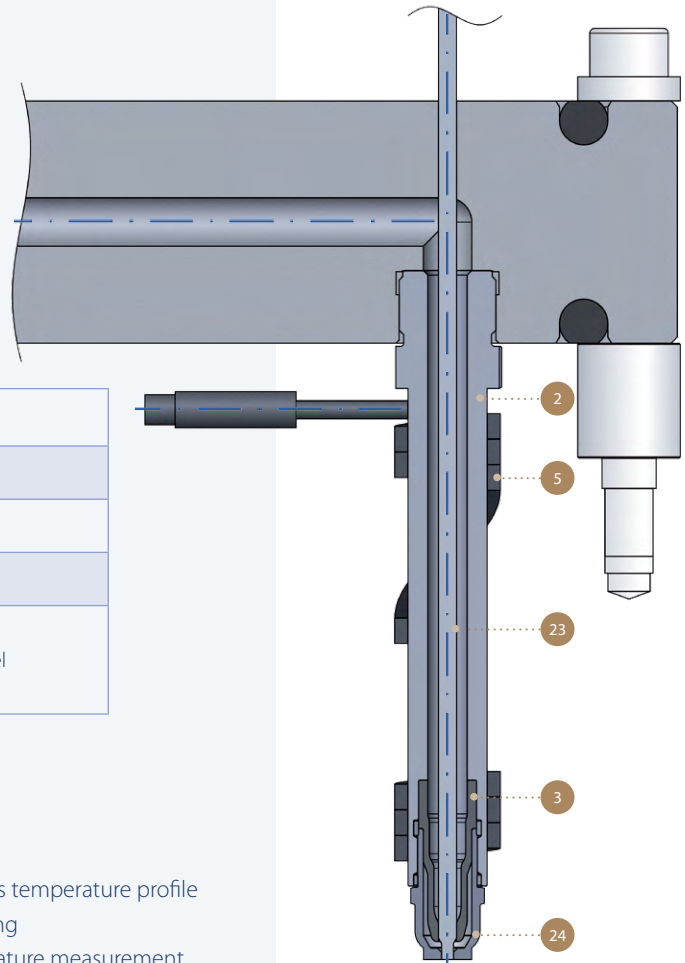
- Screwed gate tip
- All operating parts are exchangeable
- Efficient thermal separation
- Homogeneous temperature profile
- External heating
- Direct temperature measurement nearby gate tip

### Advantages

- Low energy requirement
- Plastic processing without degradation
- Possible cosmetic injection point
- Short cycle times

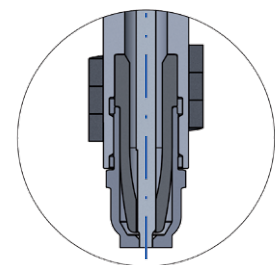
### Nozzle selection advice

\* The nozzle size is individually determined during the selection of the hot runner system.



### Part list

- 2. Nozzle body
- 3. Gate insert
- 5. Heater
- 23. Valve pin
- 24. Nozzle head TZI



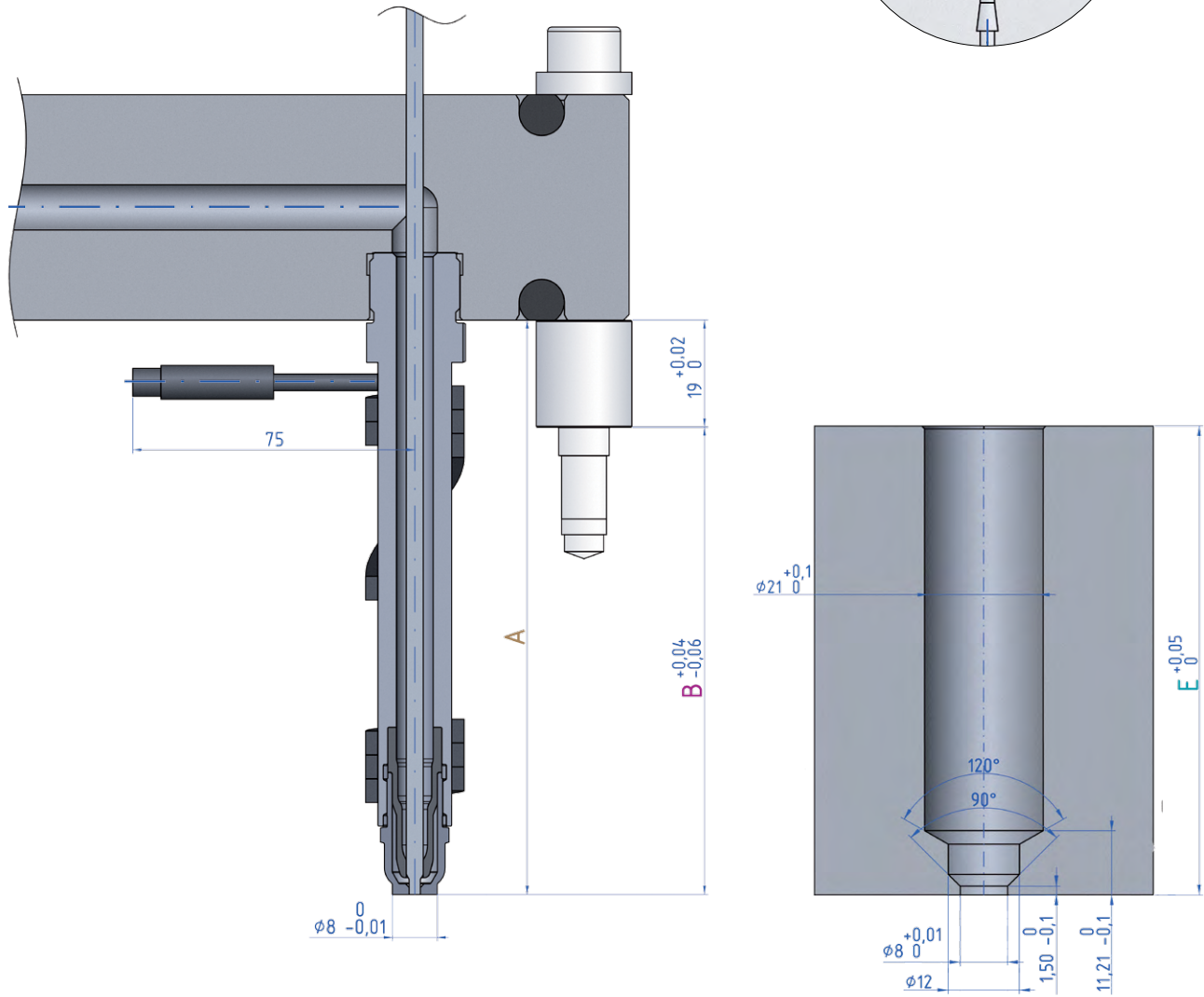
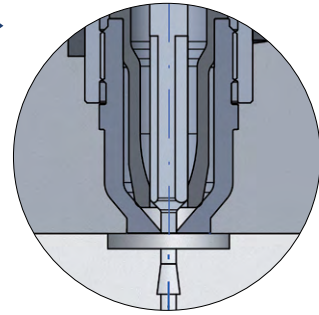
### Gate tip ZI

- Gate insert 20 ZI
- Nozzle head TZI

Nozzle  
Chamber nozzle

**Attention** ▶

Where the gate is on a sub runner, a thin-insulation disc must be molded in front of the nozzle



Nozzle	Type of nozzle tip	Article No.	A	B	E	Max. spacing
WPW 20x063	TZI	20063-00-4-00	81,85	62,85	63,00	126,00
WPW 20x083	TZI	20083-00-4-00	101,80	82,80	83,00	166,00
WPW 20x103	TZI	20103-00-4-00	121,75	102,75	103,00	206,00
WPW 20x123	TZI	20123-00-4-00	141,70	122,70	123,00	246,00
WPW 20x143	TZI	20143-00-4-00	161,65	142,65	143,00	286,00
WPW 20x163	TZI	20163-00-4-00	181,60	162,60	163,00	326,00
WPW 20x183	TZI	20183-00-4-00	201,55	182,55	183,00	366,00

Spare parts, order examples

2

5

1

3

4

8

7

6

23

Nozzle type/part	Nozzle body	Heater	Case	ZI gate insert	Insulation sleeve	O-ring	Dowel ø4x10	Dowel ø5x10	Valve pin
WP 20x063	26061-02	26061-05	20000-01	20000-03-4	20000-04	26000-08	26000-07	26000-06	20000-23
WP 20x083	26081-02	26081-05							
WP 20x103	26101-02	26101-05							
WP 20x123	20123-02	20123-05							
WP 20x143	20143-02	20143-05							
WP 20x163	20163-02	20163-05							
WP 20x183	20183-02	20183-05							

Order example

Type	Article No.
WP 20 - 063 - ZI	20063-00-4



Explanation of nozzle code:

**AABBB-00-CC**

where:

- AA = diameter
- BBB = length
- 00 = complete nozzle
- CC - gate insert type

**Example:**

Nozzle WP 20x063 ZI  
20063-00-4



# ZI Valve gate

## Nozzle WP 29

### Technical data

Electrical Data	230 V
Thermocouple	Fe-CuNi (type J)
Cable length	2000 mm
Max. injection pressure	1800 bar
Nozzle body, case	Work hardened tempered steel

### Features

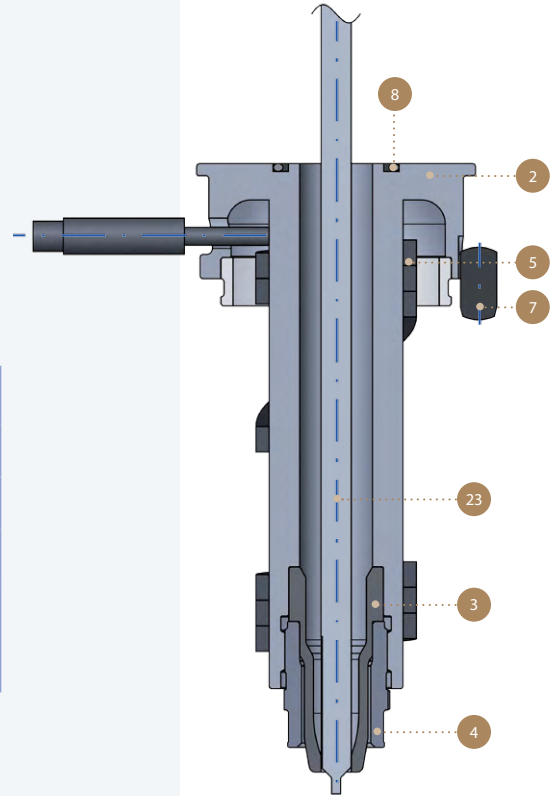
- Screwed gate tip
- All operating parts are exchangeable
- Efficient thermal separation
- Homogeneous temperature profile
- External heating
- Direct temperature measurement nearby gate tip

### Advantages

- Low energy requirement
- Plastic processing without degradation
- Possible cosmetic injection point
- Short cycle times

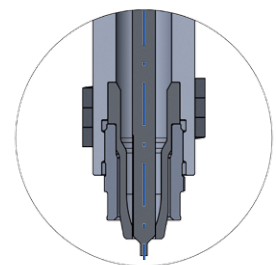
### Nozzle selection advice

\* The nozzle size is individually determined during the selection of the hot runner system.



### Part list

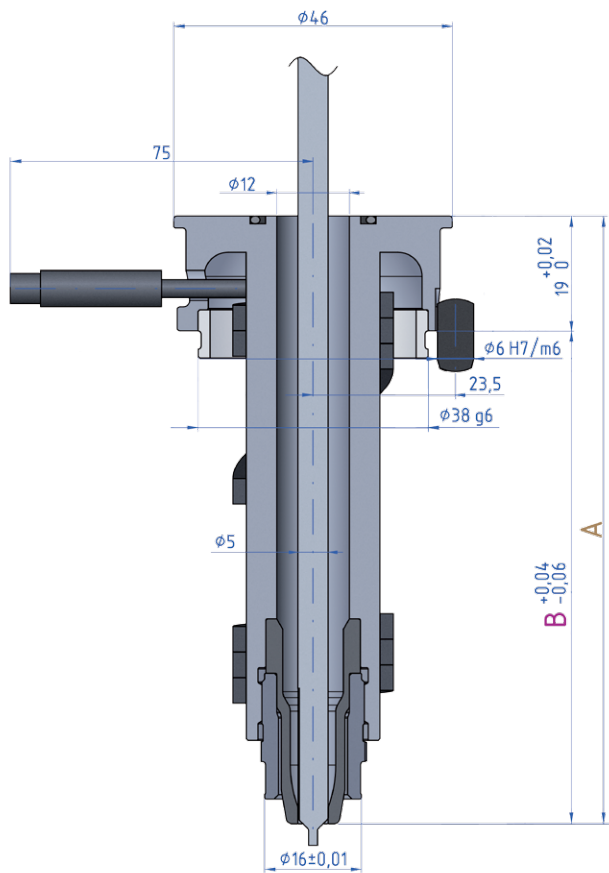
2. Nozzle body
3. Gate insert
4. Insulation sleeve
5. Heater
7. Dowel pin Ø6x12
8. O-ring
23. Valve pin



### Gate tip ZI

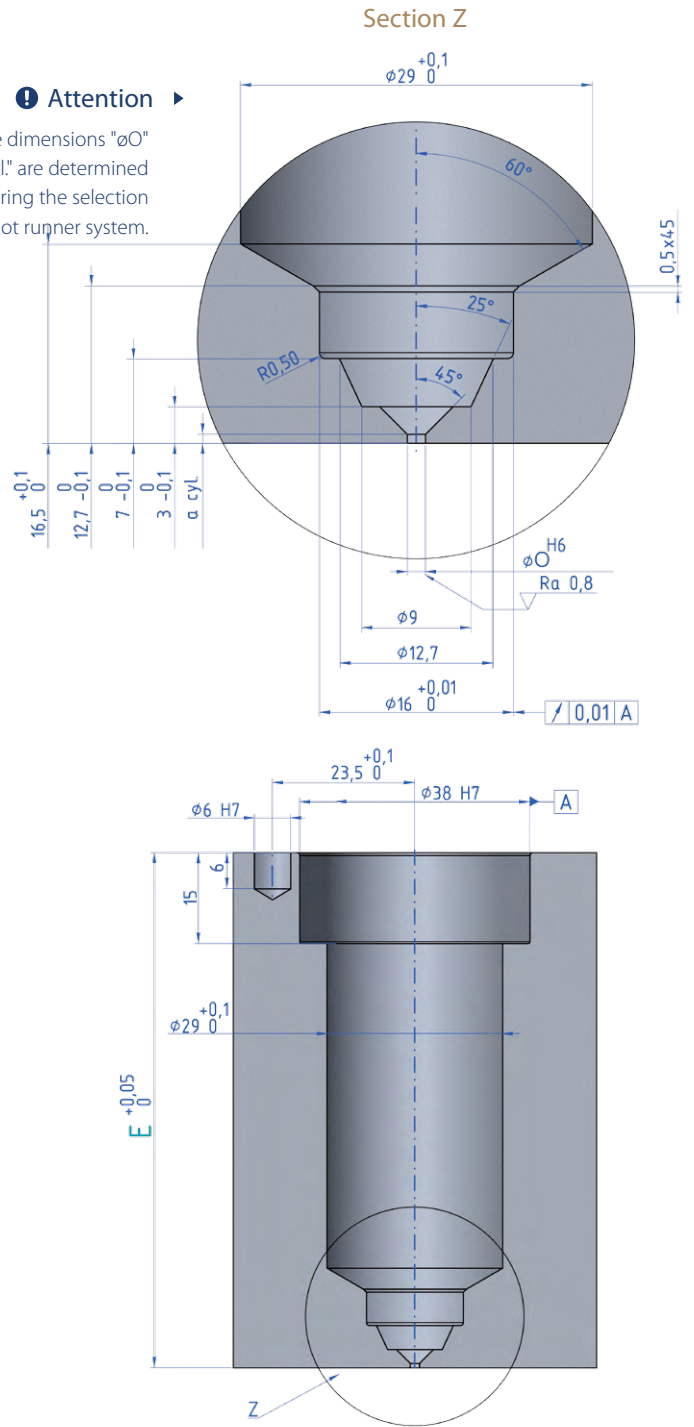
- Gate insert 29 ZI
- Insulation sleeve 29

Nozzle  
Chamber nozzle



**Attention**

The dimensions "øO" and "a cyl." are determined individually during the selection of the hot runner system.



Nozzle	Type of nozzle tip	Article No.	A	B	E
WP 29x065	ZI	29065-00-4	80,47	61,47	65,00
WP 29x085	ZI	29085-00-4	100,42	81,42	85,00
WP 29x105	ZI	29105-00-4	120,37	101,37	105,00
WP 29x125	ZI	29125-00-4	140,32	121,32	125,00
WP 29x145	ZI	29145-00-4	160,27	141,27	145,00
WP 29x165	ZI	29165-00-4	180,22	161,22	165,00
WP 29x185	ZI	29185-00-4	200,17	181,17	185,00
WP 29x225	ZI	29225-00-4	240,07	221,07	225,00
WP 29x265	ZI	29265-00-4	279,97	260,97	265,00

# ZI Valve gate

## Nozzle WPW 29

### Technical data

Electrical Data	230 V
Thermocouple	Fe-CuNi (type J)
Cable length	2000 mm
Max. injection pressure	1800 bar
Nozzle body, case	Work hardened tempered steel

### Features

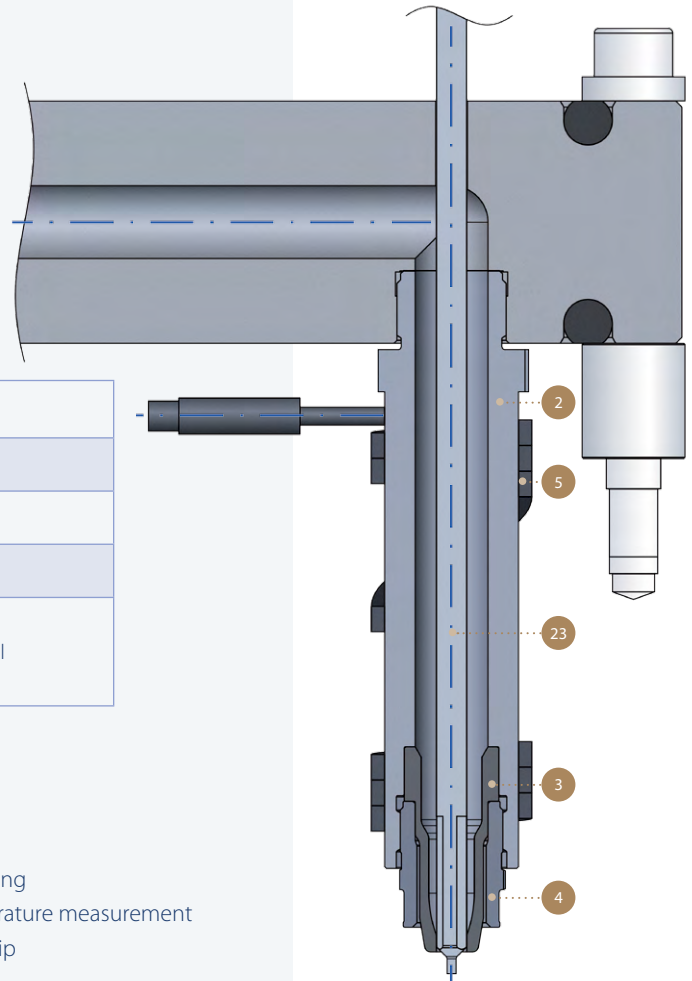
- Screwed gate tip
- All operating parts are exchangeable
- Efficient thermal separation
- Homogeneous temperature profile
- External heating
- Direct temperature measurement nearby gate tip

### Advantages

- Low energy requirement
- Plastic processing without degradation
- Possible cosmetic injection point
- Short cycle times

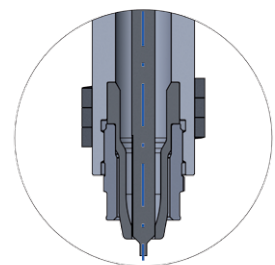
### Nozzle selection advice

\* The nozzle size is individually determined during the selection of the hot runner system.



### Part list

- 2. Nozzle body
- 3. Gate insert
- 4. Insulation sleeve
- 5. Heater
- 23. Valve pin



### Gate tip ZI

- Gate insert 29 ZI
- Insulation sleeve 29



# TZI Nozzle head valve gate

## Nozzle WP 29

### Technical data

Electrical Data	230 V
Thermocouple	Fe-CuNi (type J)
Cable length	2000 mm
Max. injection pressure	1800 bar
Nozzle body, case	Work hardened tempered steel

### Features

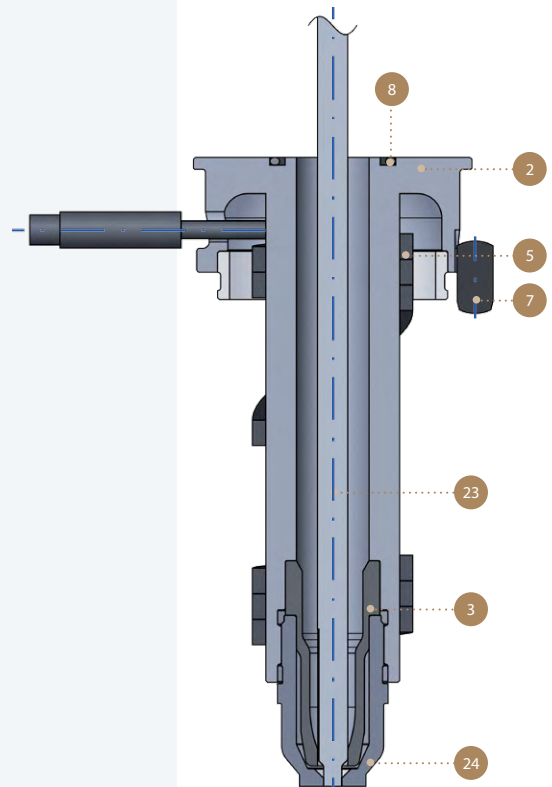
- Screwed gate tip
- All operating parts are exchangeable
- Efficient thermal separation
- Homogeneous temperature profile
- External heating
- Direct temperature measurement nearby gate tip

### Advantages

- Low energy requirement
- Plastic processing without degradation
- Possible cosmetic injection point
- Short cycle times

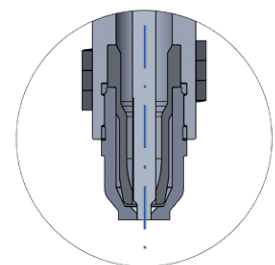
### Nozzle selection advice

\* The nozzle size is individually determined during the selection of the hot runner system.



### Part list

- 2. Nozzle body
- 3. Gate insert
- 5. Heater
- 7. Dowel pin Ø6x12
- 8. O-ring
- 23. Valve pin
- 24. Nozzle head TZI



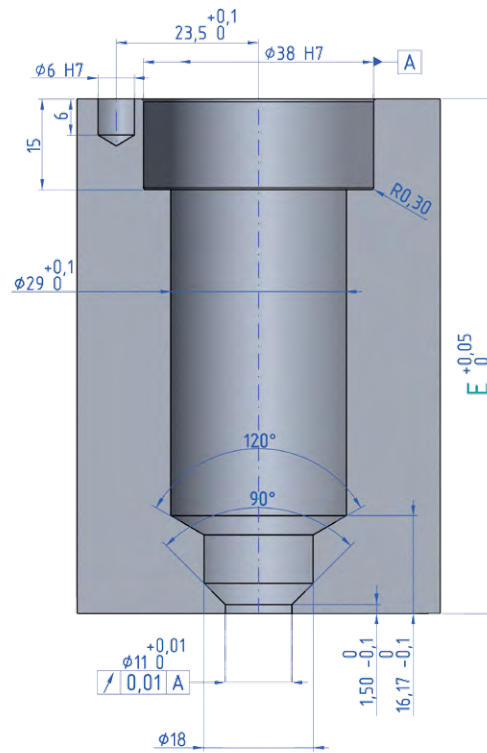
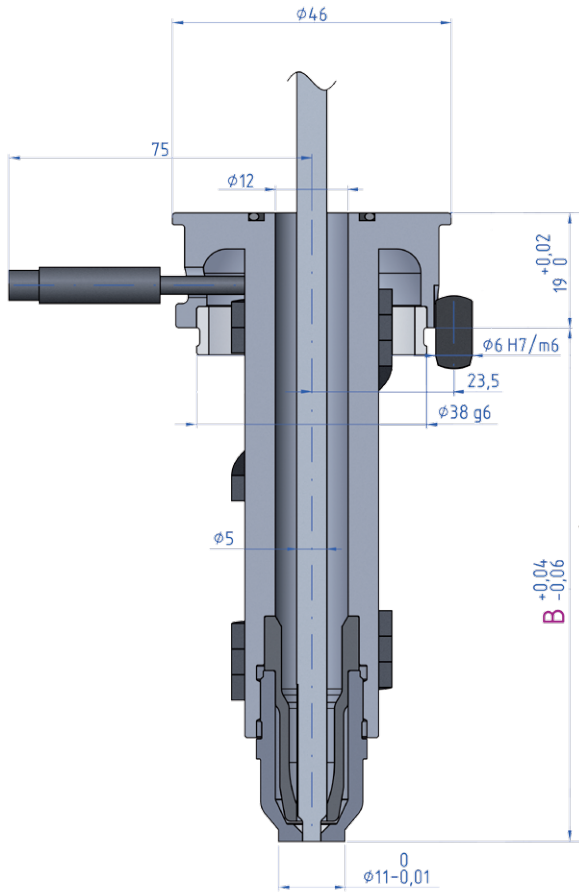
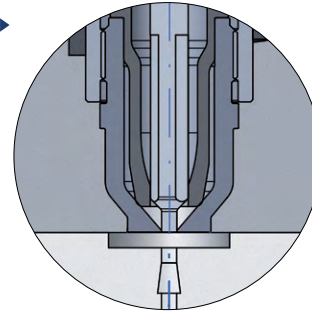
### Gate tip ZI

- Gate insert 29 ZI
- Nozzle head TZI

Nozzle  
Chamber nozzle

⚠ Attention ▶

Where the gate is on a sub runner, a thin-insulation disc must be molded in front of the nozzle



Nozzle	Type of nozzle tip	Article No.	A	B	E
WP 29x065	TZI	29065-00-4-00	83,85	64,85	65,00
WP 29x085	TZI	29085-00-4-00	103,80	84,80	85,00
WP 29x105	TZI	29105-00-4-00	123,75	104,75	105,00
WP 29x125	TZI	29125-00-4-00	143,70	124,70	125,00
WP 29x145	TZI	29145-00-4-00	163,65	144,65	145,00
WP 29x165	TZI	29165-00-4-00	183,60	164,60	165,00
WP 29x185	TZI	29185-00-4-00	203,55	184,55	185,00
WP 29x225	TZI	29225-00-4-00	243,45	224,45	225,00
WP 29x265	TZI	29265-00-4-00	283,35	264,35	265,00

# TZI Nozzle head valve gate Nozzle WPW 29

## Technical data

Electrical Data	230 V
Thermocouple	Fe-CuNi (type J)
Cable length	2000 mm
Max. injection pressure	1800 bar
Nozzle body, case	Work hardened tempered steel

## Features

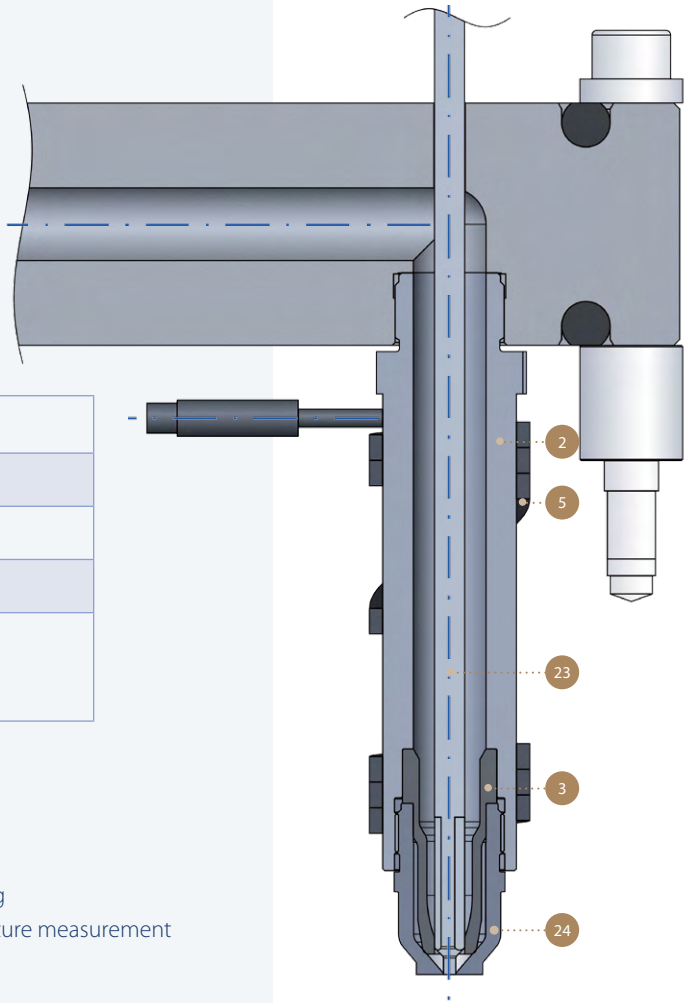
- Screwed gate tip
- All operating parts are exchangeable
- Efficient thermal separation
- Homogeneous temperature profile
- External heating
- Direct temperature measurement nearby gate tip

## Advantages

- Low energy requirement
- Plastic processing without degradation
- Possible cosmetic injection point
- Short cycle times

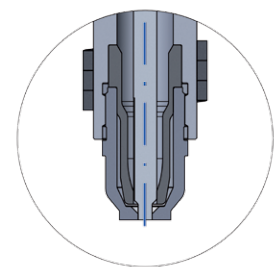
## Nozzle selection advice

\* The nozzle size is individually determined during the selection of the hot runner system.



## Part list

- 2. Nozzle body
- 3. Gate insert
- 5. Heater
- 23. Valve pin
- 24. Nozzle head TZI



## Gate tip ZI

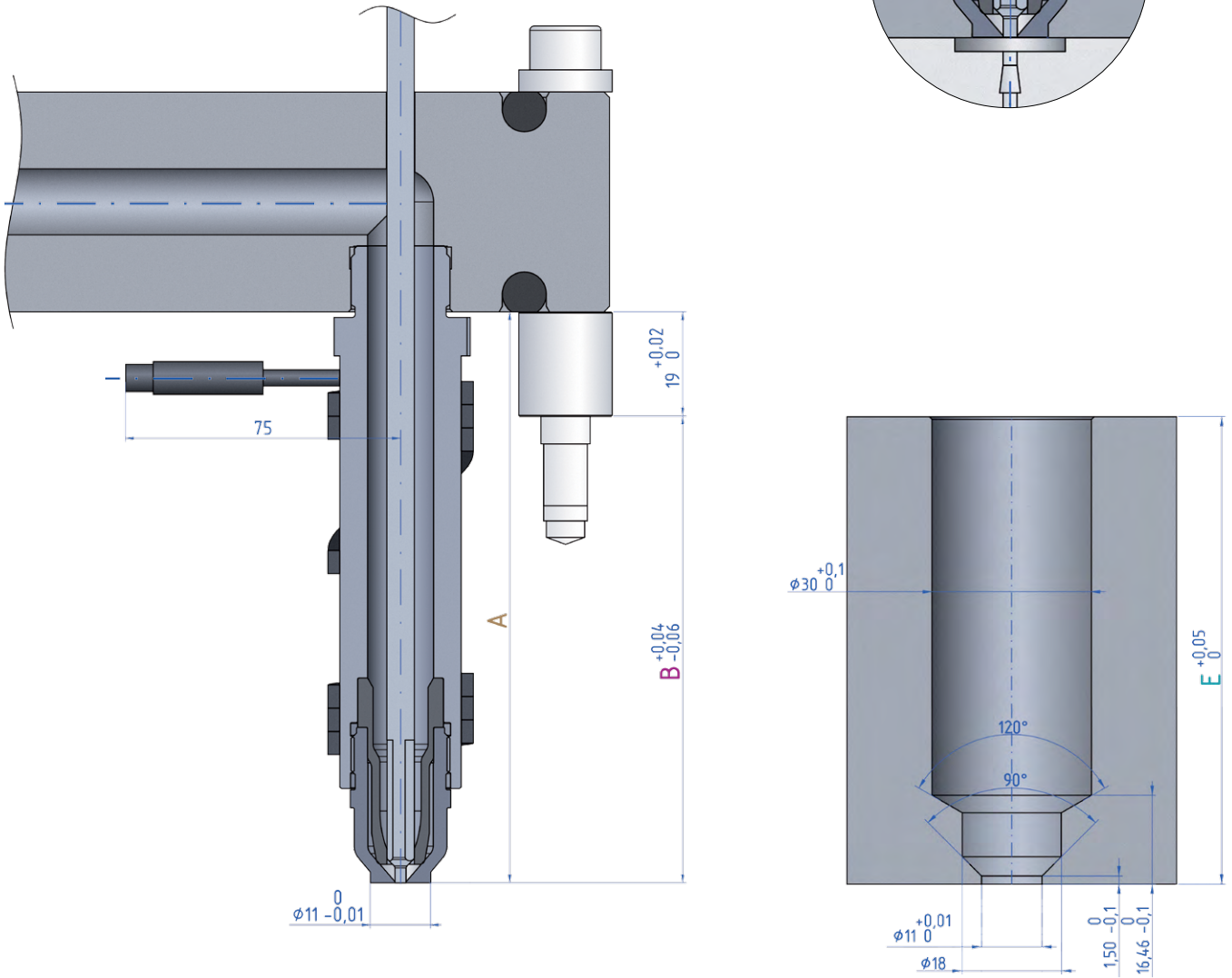
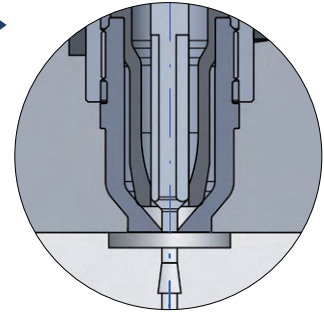
- Gate insert 29 ZI
- Nozzle head TZI



Nozzle  
Chamber nozzle

⚠ Attention ▶

Where the gate is on a sub runner, a thin-insulation disc must be molded in front of the nozzle



Nozzle	Type of nozzle tip	Article No.	A	B	E	Max. spacing
WPW 29x065	TZI	29065-00-4-00	83,85	64,85	65	130,00
WPW 29x085	TZI	29085-00-4-00	103,80	84,80	85	170,00
WPW 29x105	TZI	29105-00-4-00	123,75	104,75	105	210,00
WPW 29x125	TZI	29125-00-4-00	143,70	124,70	125	250,00
WPW 29x145	TZI	29145-00-4-00	163,65	144,65	145	290,00
WPW 29x165	TZI	29165-00-4-00	183,60	164,60	165	330,00
WPW 29x185	TZI	29185-00-4-00	203,55	184,55	185	370,00
WPW 29x225	TZI	29225-00-4-00	243,45	224,45	225	450,00
WPW 29x265	TZI	29265-00-4-00	283,35	264,35	265	530,00

### Spare parts, order examples

- 2
5
1
3
4
8
7
6
23

Nozzle type/part	Nozzle body	Heater	Case	ZI gate insert	Insulation sleeve	O-ring	Dowel ø5x12	Dowel ø6x12	Valve pin
WP 29x065 ZI	40061-02	40061-05	29000-01	29000-03-4	29000-04	40000-08	40000-07	40000-06	29000-23
WP 29x085 ZI	40081-02	40081-05							
WP 29x105 ZI	40101-02	40101-05							
WP 29x125 ZI	29125-02	29125-05							
WP 29x145 ZI	29145-02	29145-05							
WP 29x165 ZI	29165-02	29165-05							
WP 29x185 ZI	29185-02	29185-05							
WP 29x225 ZI	29225-02	29225-05							
WP 29x265 ZI	29265-02	29265-05							

### Order example

Type	Article No.
WP 29 - 065 - ZI	29065-00-4



### Explanation of nozzle code:

**AABBB-00-CC**

where:

- AA = diameter
- BBB = length
- 00 = complete nozzle
- CC - gate insert type

**Example:**

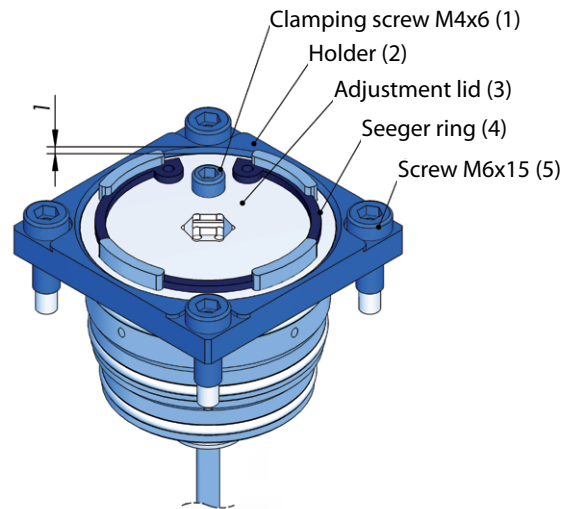
Nozzle WP 29x065 ZI  
29065-00-4

# Operating Unit - Pneumatic

## SP 61x46

### Technical data

Hydraulic pressure	min. 6 bar - max. 10 bar
Stroke	10 mm
Regulacja iglicy	± 1,0 mm



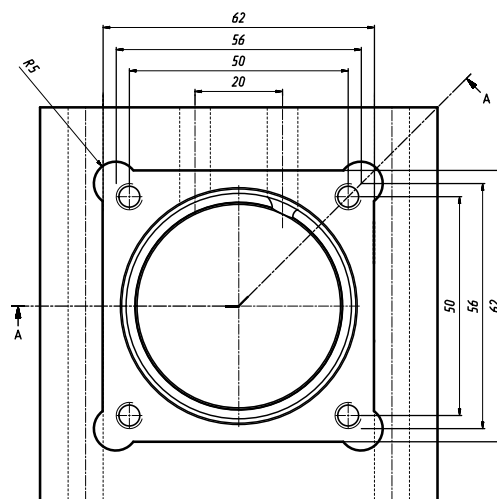
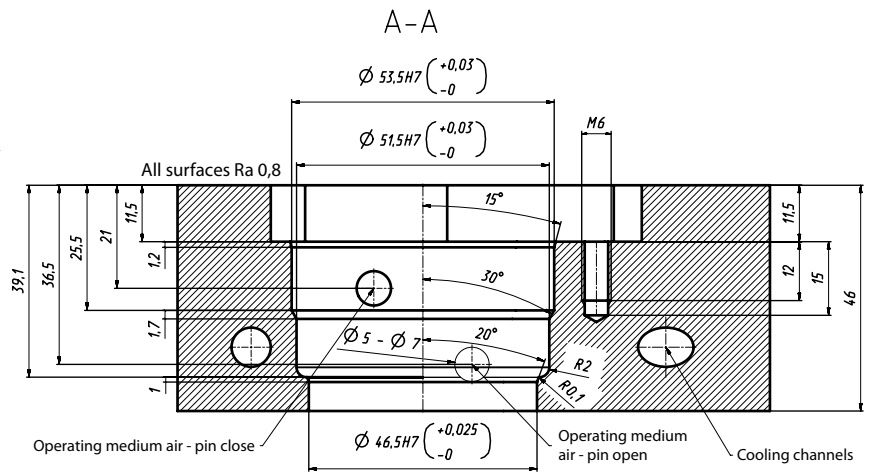
### Installation and base setting

- Pneumatic cylinder and valve pin should install with manifold warmed to the working temperature.
- Check initial position of the adjustment lid (3) - the surface of the adjustment lid should be located 1,0 mm below the surface of the holder (2)
- Install pneumatic cylinder with valve pin, checking the location of the valve pin face in the cavity plate
- Screw pneumatic cylinder into the mold plate using screw M6x15 (5)
- Applying lower pressure then the working pressure to the pneumatic cylinder, set valve pin in closed position and measure valve pin position relative to the face of the gate

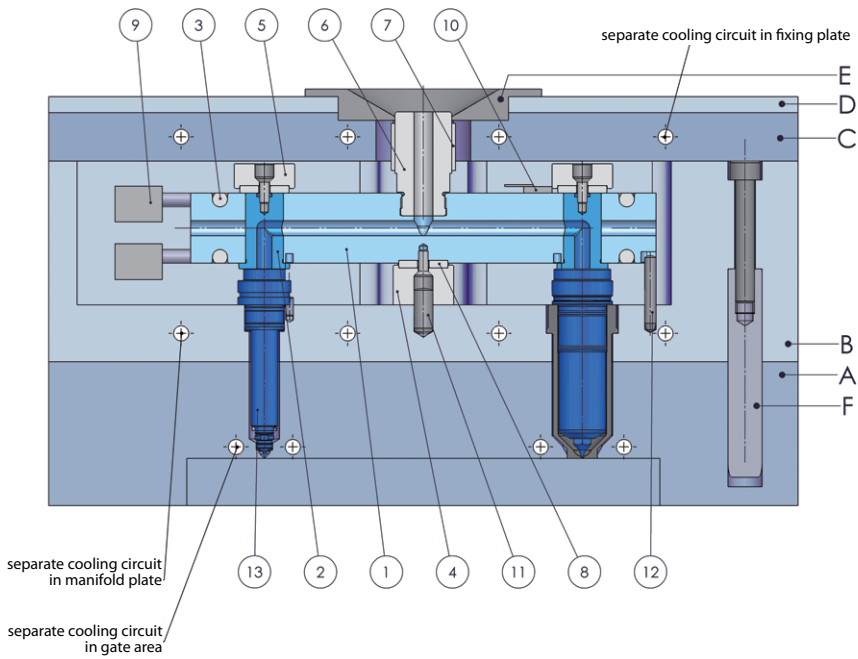
### Final setting (pin adjustment)

- The adjustment should be done with hot runner system warmed to the working temperature and valve pin in closed position.
- Loose the clamping screw M4x6 (1).
- Turning the adjustment lid set the position of valve pin (possible in the range +/- 1.0 mm). Turn the cover clockwise - valve pin forward Turn the cover counter-clockwise - valve pin return
- Lock the adjustment lid by screwing the clamping screw and we check the position of the valve pin face relative to the gate (check should be done with connected working pressure)
- If necessary, repeat the above steps
- Tighten the clamping screw and connect the pressure for pneumatic cylinder.

### Installation dimensions



**ATTENTION!**  
Installation of the valve gate system according to the individual system documentation



List of hot runner system pices:

1. manifold
2. directing bush (TR)
3. tubular heater
4. location piece (ZSK)
5. distance piece (DSK)
6. sprue-bush
7. heater band
8. ceramic disc
9. connection clamp
10. thermocouple
11. centering dowel pin
12. anti-rotation dowel pin
13. nozzle

Attention

1. Directing bush(2) and tubular heater(3) are permanently connected with manifold
2. Location piece(4) and distance piece(5) are oversized, it is nessesery to adapt them to proper dimension.
3. The "k" dimension (the height of the bush flange) should be measured to calculate b1 dimension.
4. Minimum value of b2 dimension is 8 mm.
5. The instalation gap "s" must be matched without situated o-rings.

List of hot half pices:

- A. cavity plate
- B. manifold plate
- C. fixing plate
- D. insulation plate
- E. centering ring
- F. supporting pillars

Recommended steps during assembly Wadim Plast hot runner system:

1. Match of location pieces high

$$b1 = (H + k)_{-0,02}$$

(H + k) = the height of the nozzle flange + the height of the directing bush flange

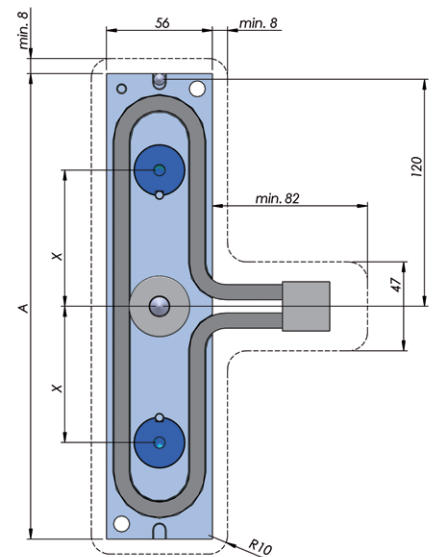
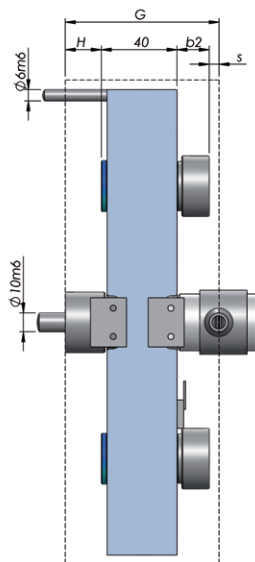
2. Establishing of distance pieces high

Installation gap "s"= heat extension of the manifold and nozzle's flange - less the clamp

a = linear extension coefficient (for steel: 12 x ...)  
 T = temperature difference between the Hot Runner and tool  
 b= manifold height (cold stage)  
 H = Nozzle flange height (cold stage)  
 0,05mm = necessary initial stress in hot condition  
 G = Frame plate height resp. reinforce height

$$s = \Delta L - 0,05 \text{ mm}$$

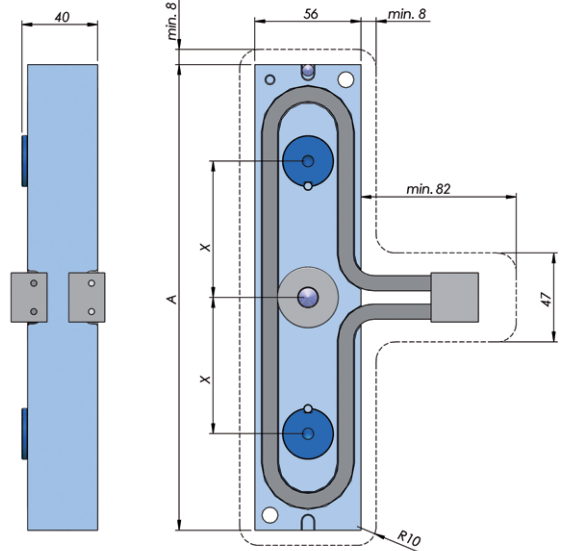
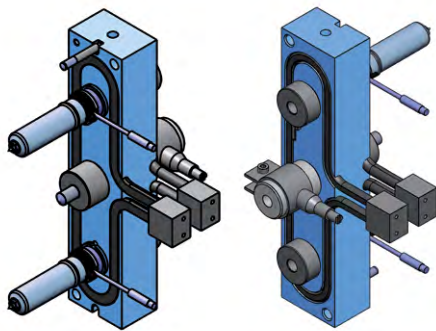
$$\Delta L = ax (b + H) x \Delta T \text{ (mm)}$$



# Beam - Manifold BV

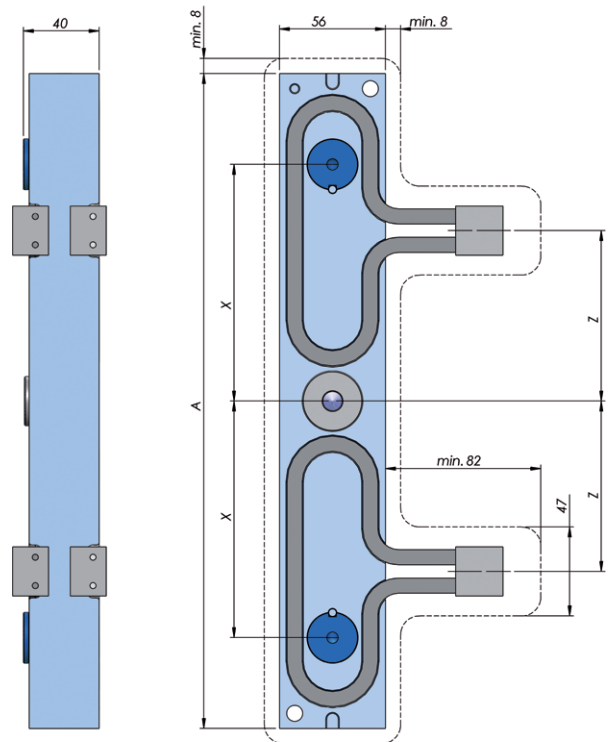
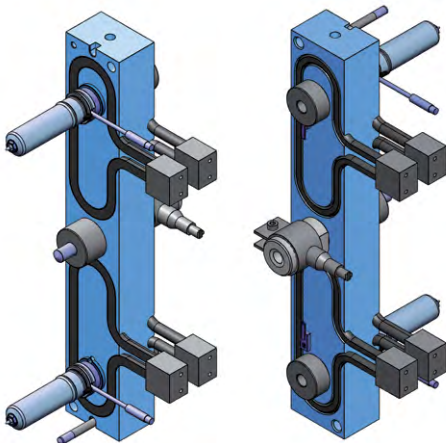
## I temperature control zone

Manifold Type	X min.	X max.	A	Power[W] per zone by 230[V]
BV 50	37,5	62,5	196	900
BV 75	62,5	87,5	246	1100
BV 100	87,5	112,5	296	1370



## II temperature control zones

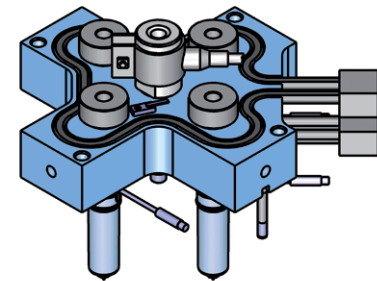
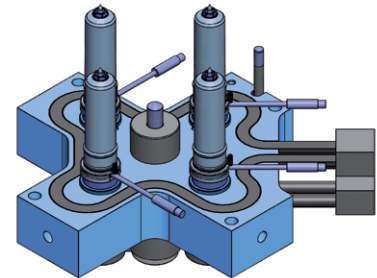
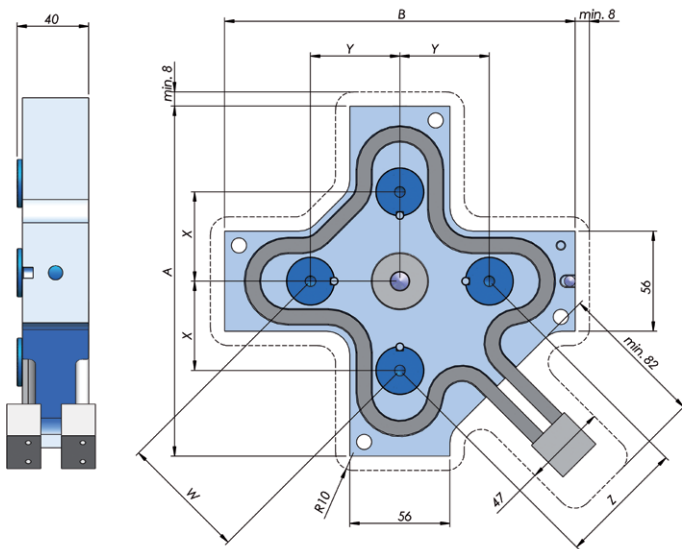
Manifold Type	X min.	X max.	A	Z	Power[W] per zone by 230[V]
BV 125	112,5	137,5	346	90	840
BV 150	137,5	162,5	400	102	900
BV 175	162,5	187,5	446	115	960
BV 200	187,5	212,5	500	127	1100



# Cross - Manifold KV

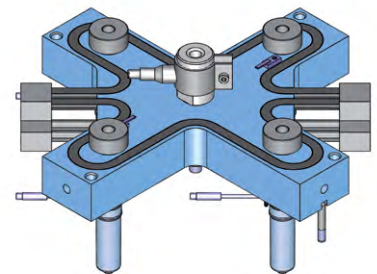
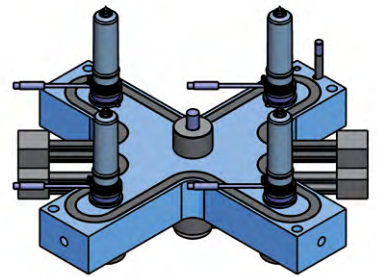
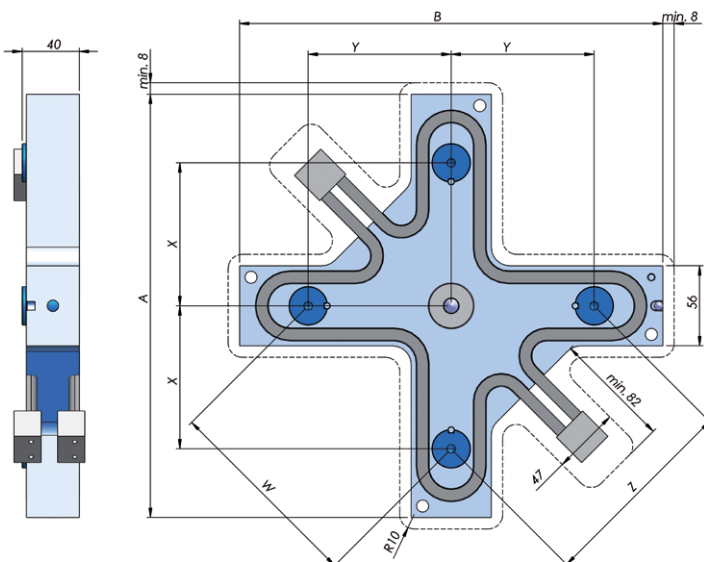
## I temperature control zone

Manifold Type	X/Y min.	X/Y max.	W/Z min.	W/Z max.	A/B	Power[W] per zone by 230[V]
KV 50	37,5	62,5	53	88,4	196	1500
KV 75	62,5	87,5	88,4	123,7	246	2200



## II temperature control zones

Manifold Type	X/Y min.	X/Y max.	W/Z min.	W/Z max.	A/B	Power[W] per zone by 230[V]
KV 100	87,5	112,5	123,7	159,1	296	1160
KV 125	112,5	137,5	159,1	194,5	346	1360
KV 150	137,5	162,5	194,5	229,8	396	1560
KV 175	162,5	187,5	229,8	265,2	446	1760
KV 200	187,5	212,5	265,2	300,5	496	1960

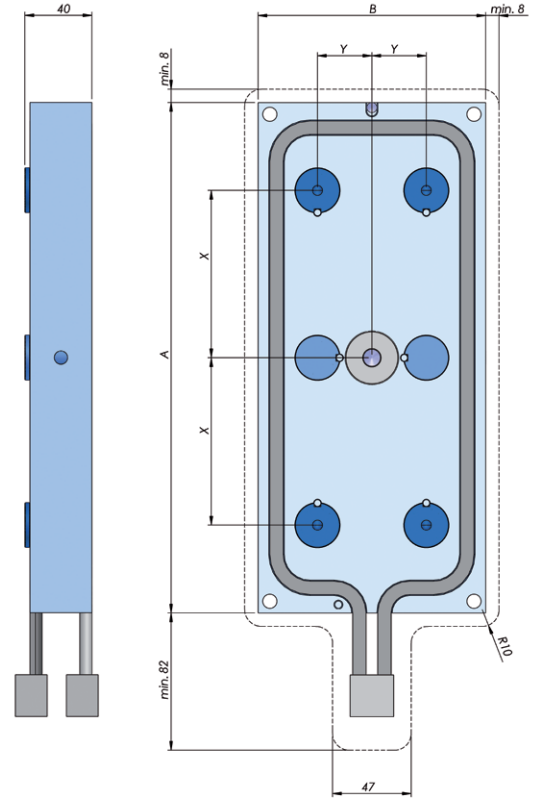
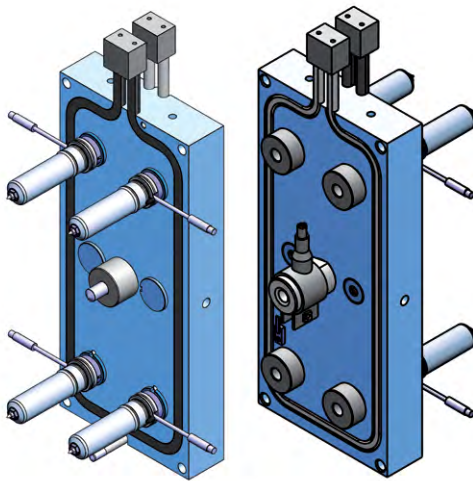




# H-shape - Manifold HV

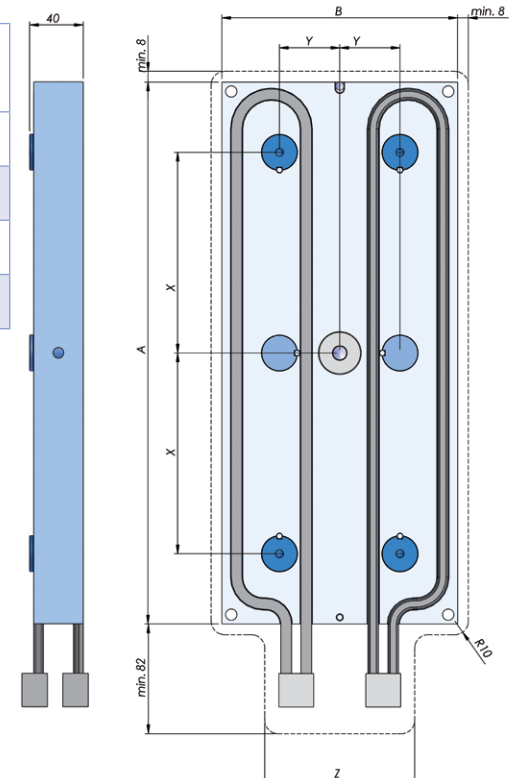
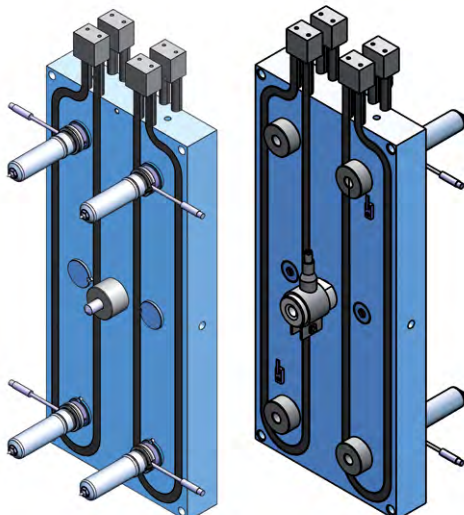
## I temperature control zone

Manifold Type	X min.	X max.	Y min.	Y max.	A	B	Power[W] per zone by 230[V]
HV 32,5/75	62,5	87,5	30	35	255	136	2600
HV 32,5/100	87,5	112,5	30	35	305	136	2800



## II temperature control zones

Manifold Type	X min.	X max.	Y min.	Y max.	A	B	Z	Power[W] per zone by 230[V]
HV 50/150	137,5	162,5	45	55	405	176	112	2800
HV 50/175	162,5	187,5	45	55	455	176	112	3200
HV 60/150	137,5	162,5	55	65	405	196	132	2800
HV 60/175	162,5	187,5	55	65	455	196	132	3200



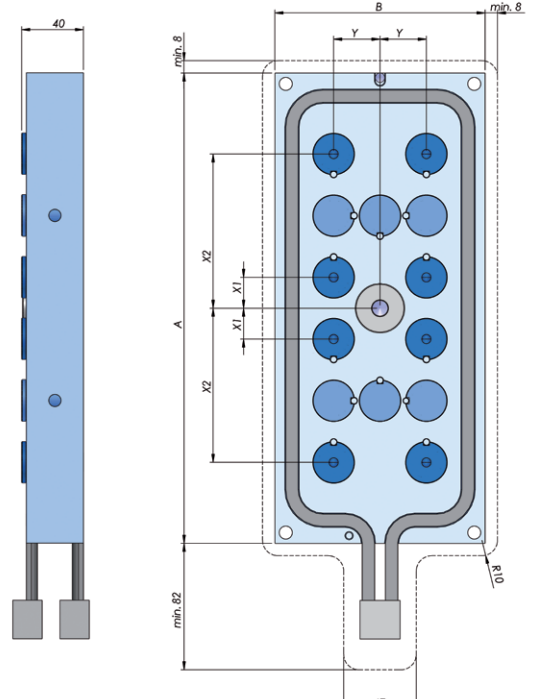
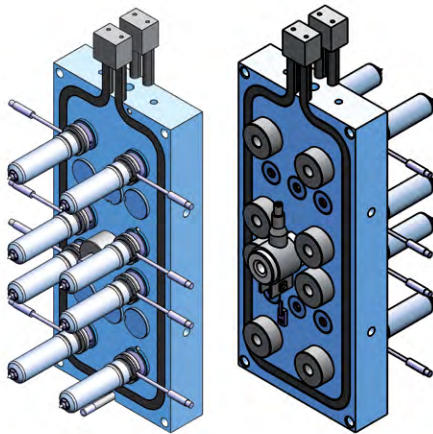


# Double H shape - Manifold DHV

## I temperature control zones

Manifold Type	X2 min.	X2 max.	Y min.	Y max.	A	B	Power[W] per zone by 230[V]
DHV 32,5/100	87,5	112,5	30	35	305	136	2800

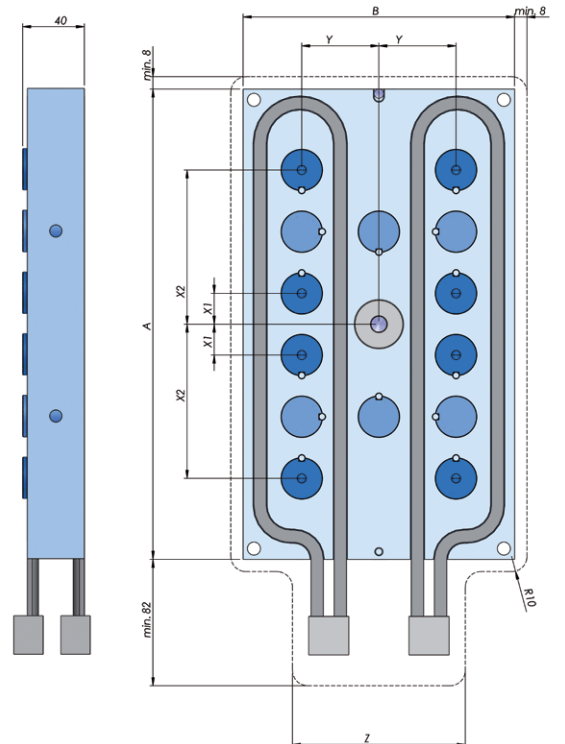
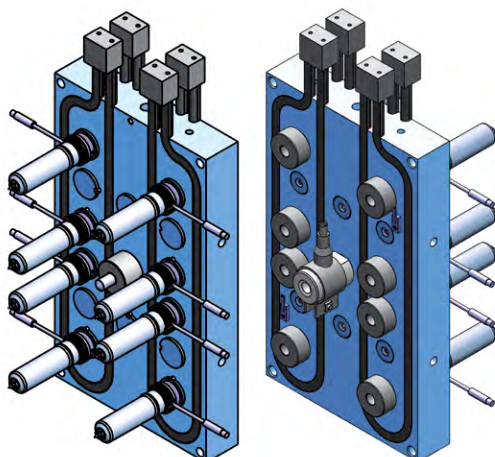
Attention! X1 = min. 20 mm



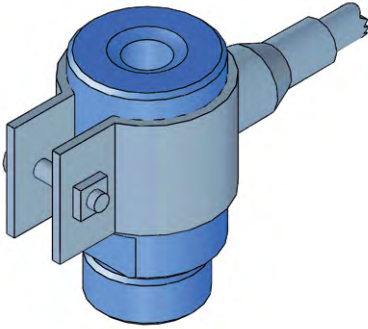
## II temperature control zones

Manifold Type	X2 min.	X2 max.	Y min.	Y max.	A	B	Z	Power[W] per zone by 230[V]
DHV 50/100	87,5	112,5	45	55	305	176	112	2400
DHV 50/125	112,5	137,5	45	55	355	176	112	2600
DHV 50/150	137,5	162,5	45	55	405	176	112	2800
DHV 50/175	162,5	187,5	45	55	455	176	112	3200
DHV 60/150	137,5	162,5	55	65	405	196	132	2800
DHV 60/175	162,5	187,5	55	65	455	196	132	3200

Attention! X1 = min. 20 mm

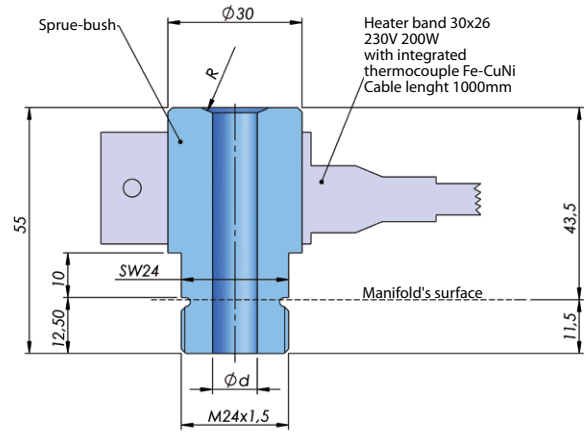






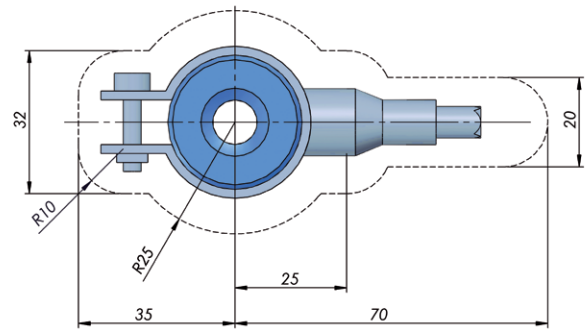
**Sprue-bush**

mat. 1.2316  
48-52 HRC



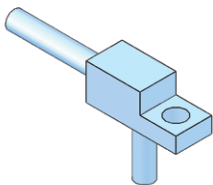
**Heater band for sprue bush**

TW-CK-30x26, 230V, 200W  
With integrated thermocouple  
Cable lenght 1000 mm

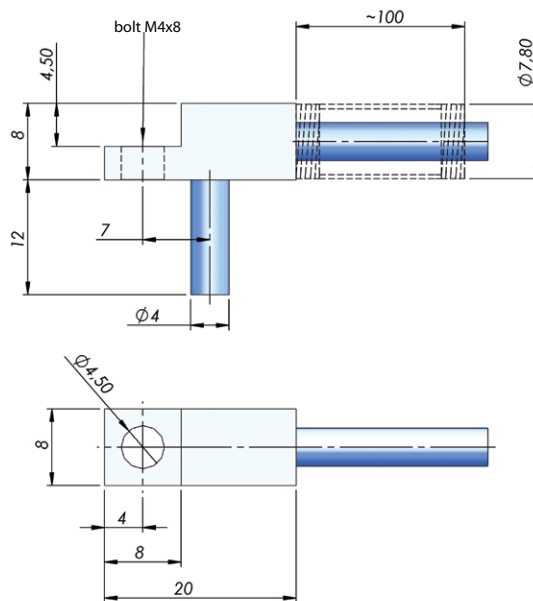


**Thermocouple**

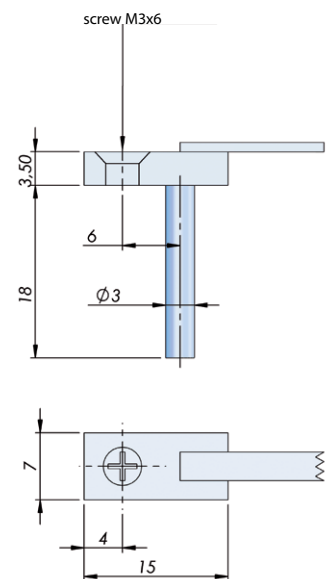
TEF/V Fe-CuNi  
cable lenght 2000 mm



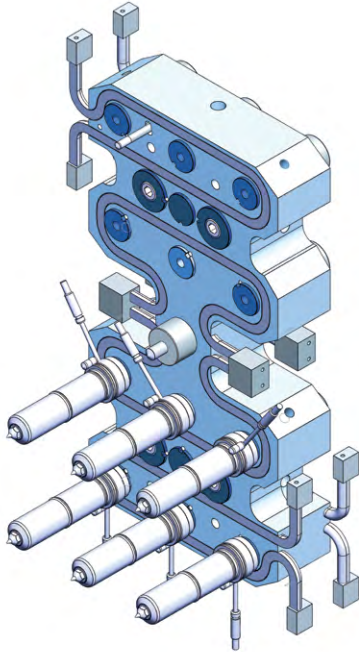
**New version**



**End of the series**



## Examples of special manifolds

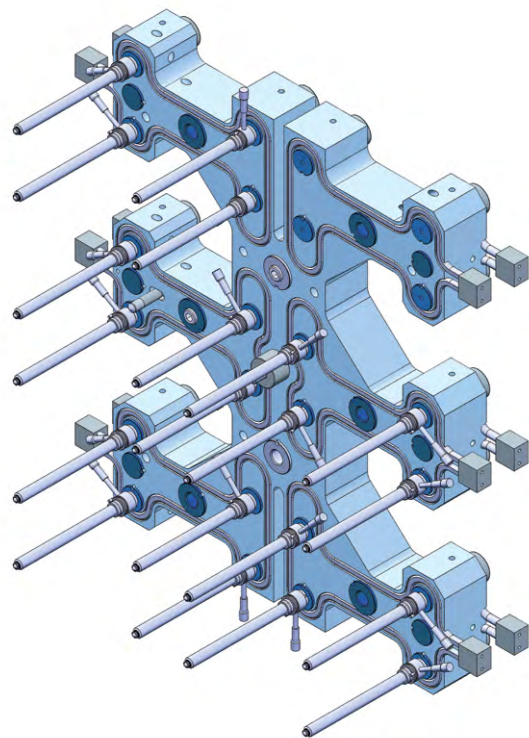
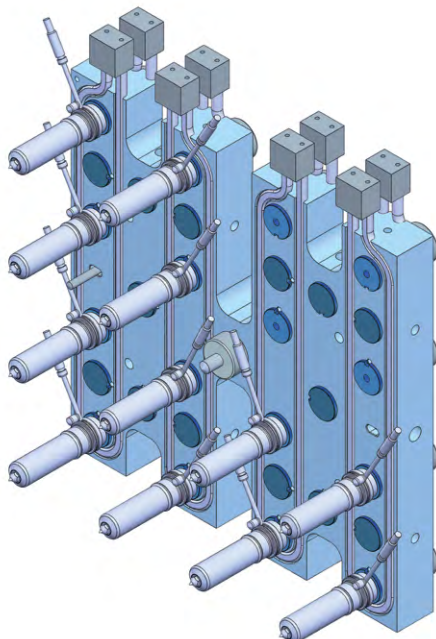


### SV 12

Manifold 12-drop in arrangement 4x3.  
 Dimensions of manifold: 396x206x60.  
 Manifold mechanical balanced on two layers  
 of runners, with four temperature control zones.

### SV 24

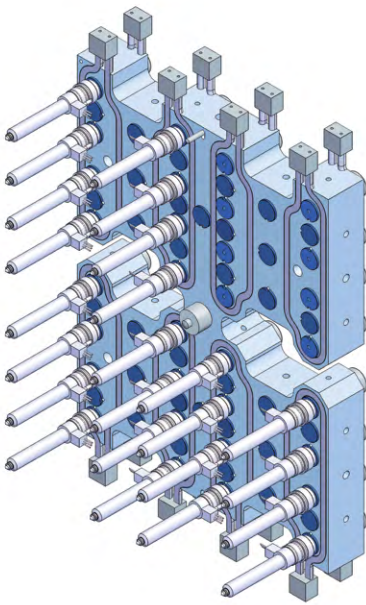
Manifold 24-drop in arrangement 6x4.  
 Dimensions of manifold: 566x448x60.  
 Manifold mechanical balanced on two layers  
 of runners, with six temperature control  
 zones.



### SV 16

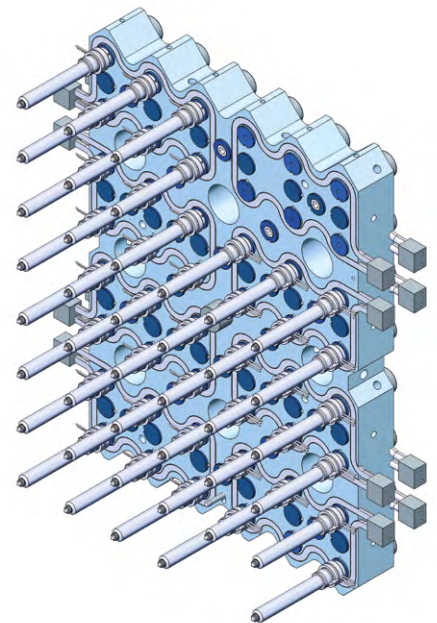
Manifold 16-drop in arrangement 4x4.  
 Dimensions of manifold: 332x332x40.  
 Manifold mechanical balanced on one layer  
 of runners, with four temperature control zones.





**SV 32**

Manifold 32-drop in arrangement 8x4.  
 Dimensions of manifold: 520x402x60.  
 Manifold mechanical balanced on one layer of runners, with eight temperature control zones.



**SV 48**

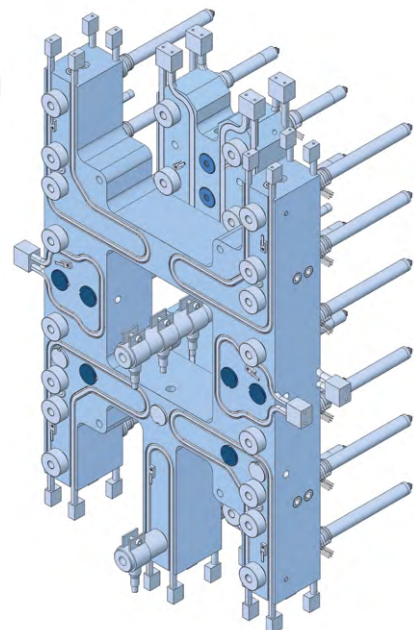
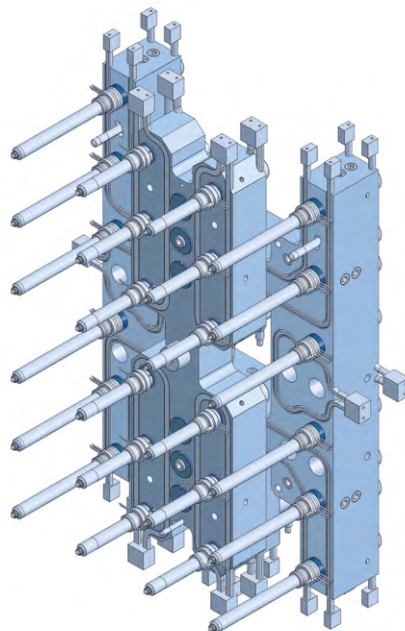
Manifold 48-drop in arrangement 8x4.  
 Dimensions of manifold: 596x431x60.  
 Manifold mechanical balanced on two layers of runners, with eight temperature control zones.

**Wadim Plast hot runner system to 2K inject**

Two manifold each 12-drop in arrangement 6x2, to inject two components.

**Manifold to first component** - dimensions: 596x172x60. Manifold mechanical balanced on two layers of supply channels, with four temperature control zones.

**Manifold to second component** - dimensions: 596x392x77. Manifold mechanical balanced on three layers of supply channels, with seven temperature control zones.

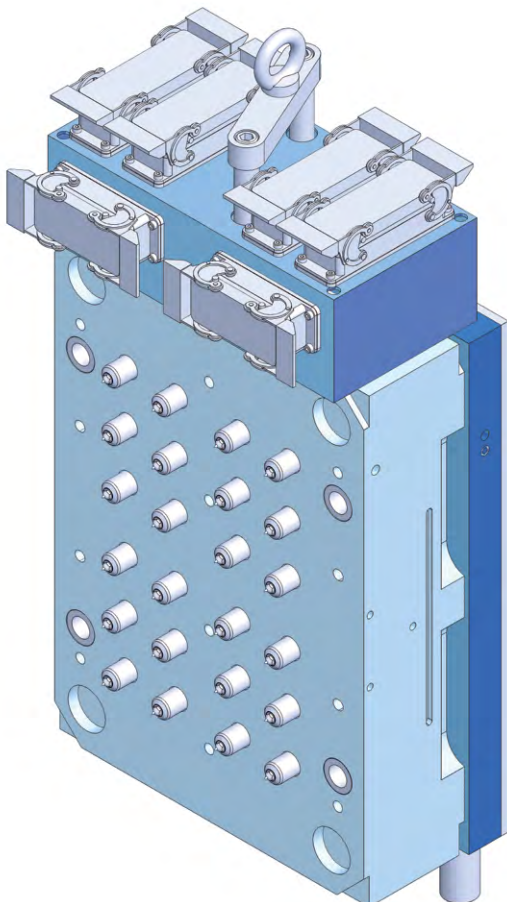


## Hot halves

The Wadim Plast company offers complete assembly of hot runner systems in the hot half. Wadim Plast hot half is a comprehensive construction taking into account the requirements of the client's tool concept, conditions for thermostating the area of the hot runner system and stiffness of the hot runner system.

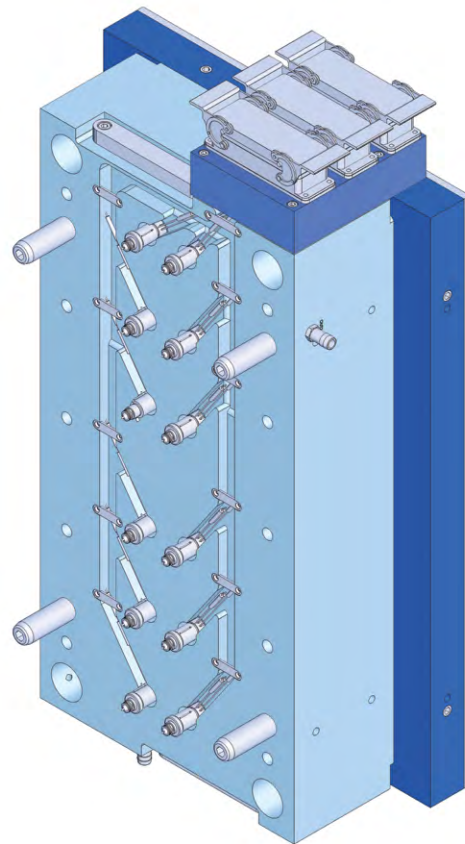
We ensure the highest precision of closing the hot runner system, guaranteeing the correctness and tightness of the hot runner system installation. Hot halves are made on the basis of our own and transmitted mold corps. System power connections are in accordance with the customer's specification.

Hot halves save time both in the tool shop and in the injection room by simplifying the servicing of the mold.



### HH1

Hot half with 12-drop hot runner system.  
Dimension of the plate: 696x346x190.



### HH2

Hot half with 24-drop hot runner system.  
Dimension of the plate: 496x346x157.

# Inquiry hot runner system

## General information

Company\* \_\_\_\_\_  
 Phone\* \_\_\_\_\_  
 E-mail\* \_\_\_\_\_  
 Location\* \_\_\_\_\_  
 Contact person\* \_\_\_\_\_

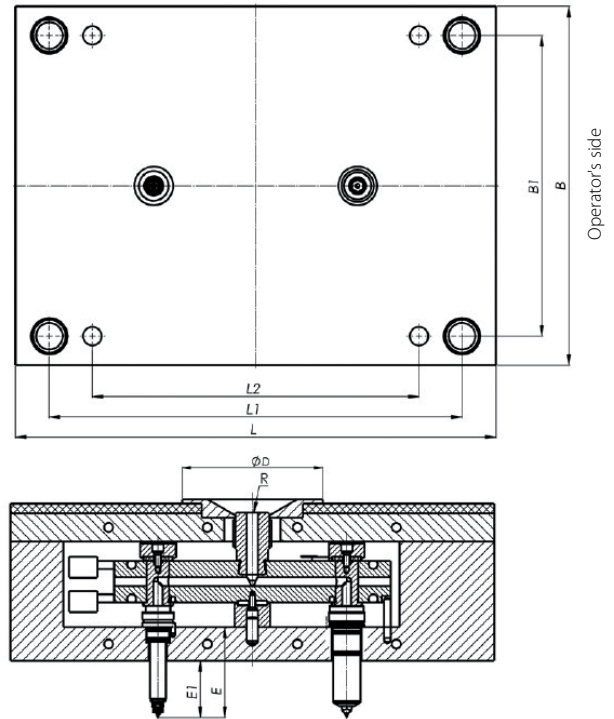
## Part

Attached  2D drawing  3D geometry  
 Shot weight per part\* \_\_\_\_\_  
 Max. lenght of flow path\* \_\_\_\_\_  
 Wall thickness in gate area\* \_\_\_\_\_  
 Wall thickness general\* \_\_\_\_\_  
 Injection time \* \_\_\_\_\_  
 Allowed pip height \_\_\_\_\_  
 Materialtype\* \_\_\_\_\_  
 Exact description or meltindex (MFI)\* \_\_\_\_\_  
 With additive\* \_\_\_\_\_  
 Often colorchange\*  YES  NO  
 If yes, how often \_\_\_\_\_

## Information about the tool

Gate\*  Direct  Cold runner  
 Required design of hotrunner\*  
 Mechanical balanced  Heological balanced  
 Numer of cavities\* \_\_\_\_\_  
 Numer of gates\* \_\_\_\_\_  
 Numer of gates per part \_\_\_\_\_  
 Position of injection point\* \_\_\_\_\_  
 X1 \_\_\_\_\_ [mm] Y1 \_\_\_\_\_ [mm]  
 X2 \_\_\_\_\_ [mm] Y2 \_\_\_\_\_ [mm]  
 X3 \_\_\_\_\_ [mm] Y3 \_\_\_\_\_ [mm]  
 X4 \_\_\_\_\_ [mm] Y4 \_\_\_\_\_ [mm]

The top of the mold

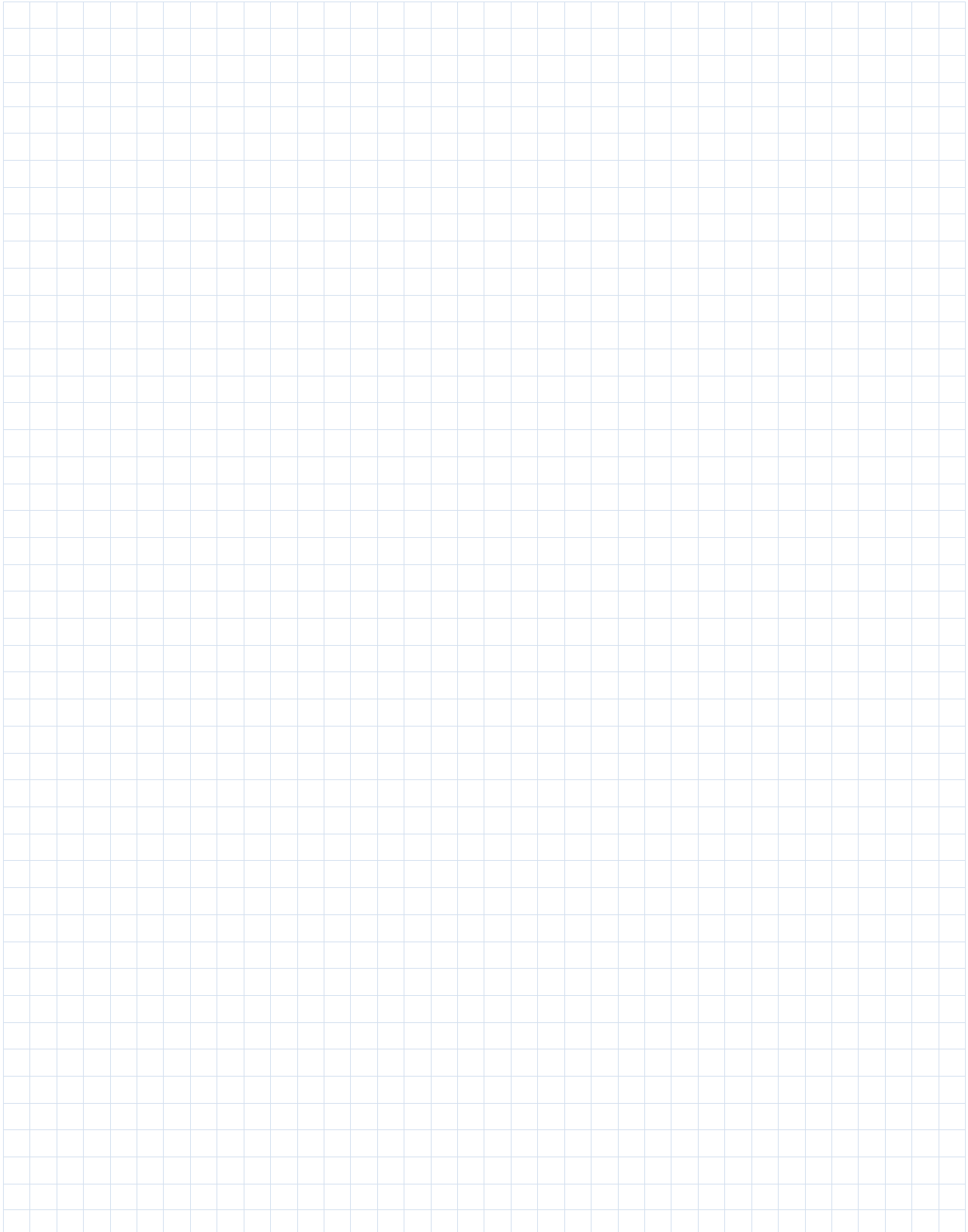


## Hot runner system casing

Materials using for mold construction  
 Strack  Hasco  FCPK  Other  
 Mold corps supplier: \*  Wadim Plast  Customer  
 Maximum dimension of mold corps\*  
 [BxL] \_\_\_\_\_ [mm]  
 Arrangement of screw and supporting hole  
 [B1] \_\_\_\_\_ [mm] [L1/L2] \_\_\_\_\_ [mm]  
 Required nozzle length\*[E] \_\_\_\_\_ [mm]  
 Nozzle lenght outside hot half GP[E1] \_\_\_\_\_ [mm]  
 Diameter of centering flange\*[D] \_\_\_\_\_ [mm]  
 Radius in sprue-bush [R] \_\_\_\_\_ [mm]  
 Thread on cooling connectors \_\_\_\_\_  
 Location the junction box  
 Operator's side  Top of the mold  
 The other side of the operator  Other

\* Necessary information to offer preparation

# Notes







**Wadim Plast Sp. z o.o.**  
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[www.wadim.com.pl](http://www.wadim.com.pl)