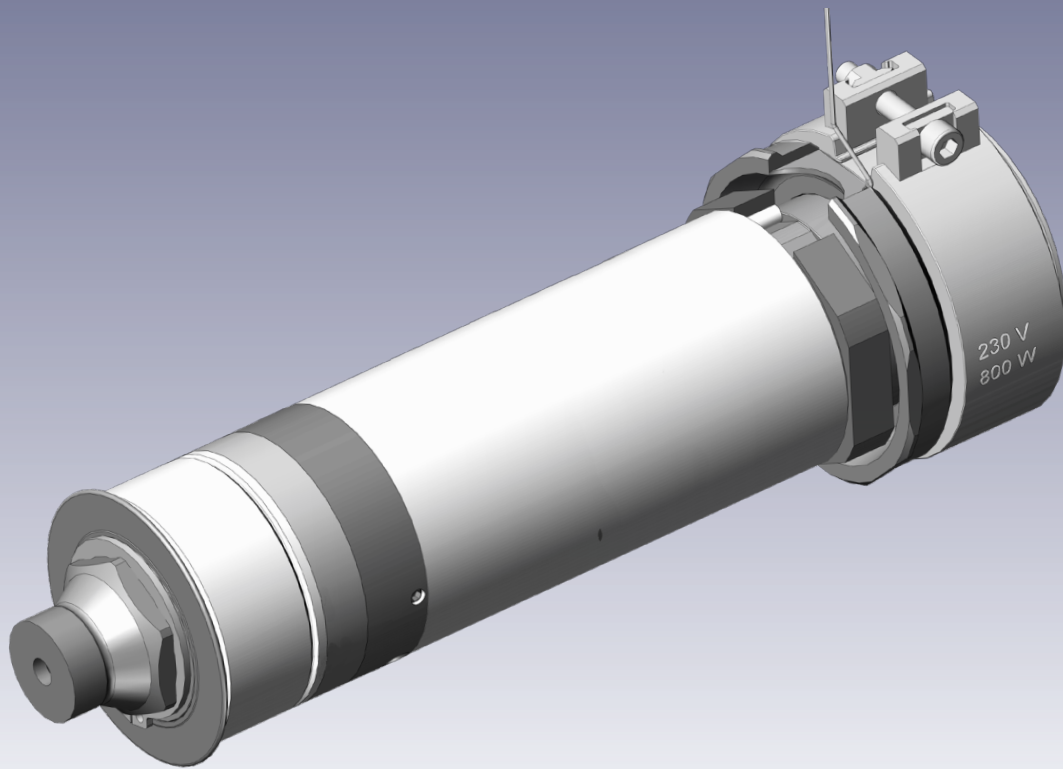


22S Product Catalog

S p r u e B u s h i n g s



Stabilize your Process _____



Product Description

Product Type

- Hot runner nozzles in the 22 S range;
→ Nozzle size 22: Flow bore - Ø 22 mm
→ Nozzle style S: Sprue bushing

Different gate options can be implemented, see table on page 4.

Major Dimensions (mm)

J	Flow bore	Ø 22 ¹⁾
Jib1	Flow bore inlet bushing	Ø 18
Lsb	Nozzle length	100...640
F	Tip Extension	see page 4
D	Cutout	Ø 60
Dt	Tip Ø	see page 4
H	Gate Orifice	see page 4
K	Head height	45
Dk	Head diameter	Ø 72
Ls	Depth of head centring	8
Ds	Diameter of head centering	Ø 72
R	Nozzle contact radius	0...40
AD	Nozzle contact angle	90°...120°

Application

For all usual thermoplastics Max. shot weight per nozzle (g):

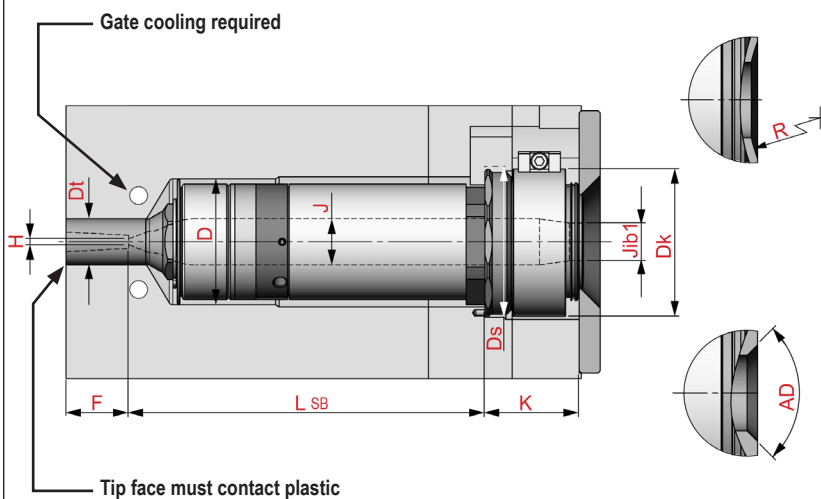
- 5000 (open, low viscosity)

Heating

- externally heated, 230 V AC
→ replaceable heater
→ Nozzle heater zones, 500...2560 W
→ Head heater, 800 W
Thermocouples, EN 60584
Fe-CuNi 0 = Typ J; NiCr-Ni = Typ K

¹⁾ Standard flow bore value = Ø 22, consult Synventive for custom dimensions Ø 18, Ø 20.

Illustrations simplified, schematically drawn and not to scale. All dimensions in mm.



LSB (mm)	Heater zone power ²⁾ (Watt)			
	Power 1	Power 2	Power 3	Power Head
100-<120	500W			800
120-<140	500W	200W		800
140-<175	500W	315W		800
175-<255	500W	400W		800
255-<295	500W	500W		800
295-<370	500W	630W		800
370-<380	500W	630W	200W	800
380-<420	500W	630W	315W	800
420-<500	500W	630W	400W	800
500-<540	500W	630W	500W	800
540-640	500W	630W	630W	800

²⁾ The numbering of the heating zones starts at the nozzle tip and ends at the nozzle head



Cutout in Mold Plate for Nozzle and Connections

1. Cutout for the nozzle

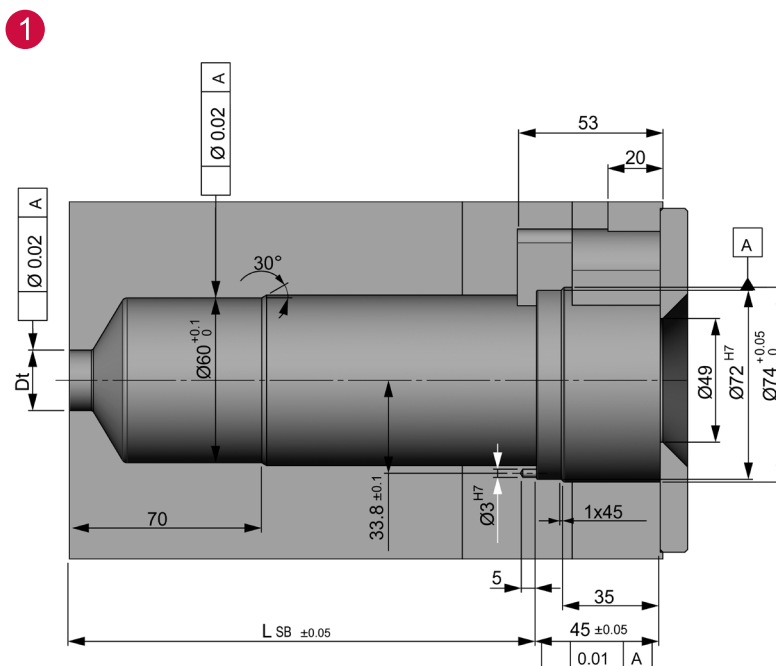
LSB Nozzle length

General tolerances: DIN ISO 2768-mK

Surfaces: $\sqrt{Ra\ 3.2}$ ($\sqrt{Ra\ 1.6}$ $\sqrt{Ra\ 0.8}$)

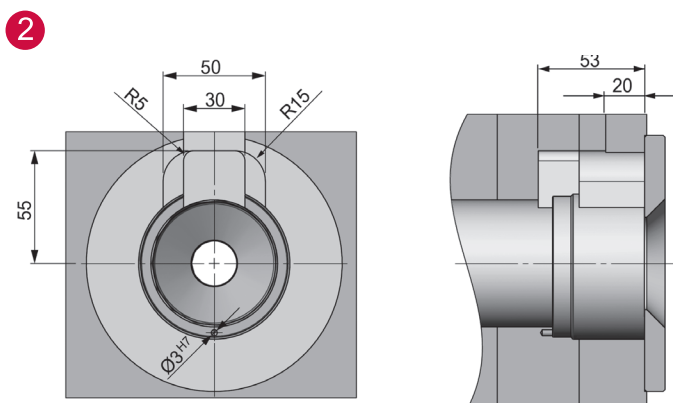
Values of the dimension LSB can be found in the data sheet on page 2.

Illustrations simplified, schematically drawn and not to scale. All dimensions in mm.



2. Cutout for connections

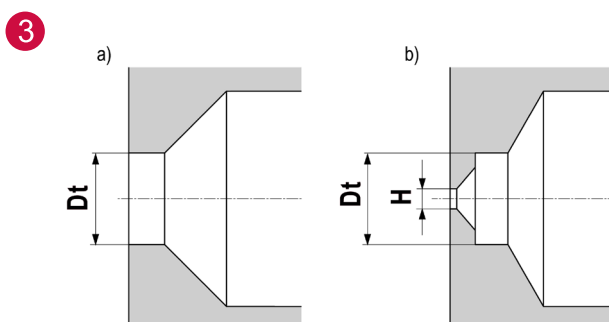
- Electrical power
- Thermocouple



3. Cutout for the nozzle tip

- a) Plunged Through nozzle tip (TFP, TTP)
- b) Blind bore nozzle tip (TTW)
- Dt Tip Ø
- H Gate orifice Ø

Depending on the selected nozzle type, different cutouts are required for the nozzle tip.

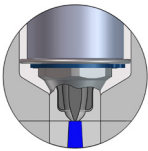
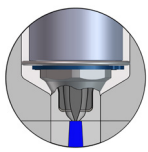




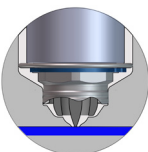
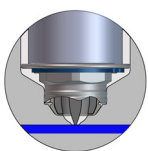
Nozzle Tip Styles

Illustrations simplified, schematically drawn and not to scale. All dimensions in mm
H = Gate orifice diameter, F = Tip extension, Dt = Tip Diameter, Mod = Modifiable

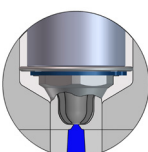
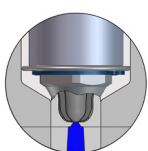
TTP Thermal Gate – Torpedo - Plunged Through

Tip Style		Description	Application range	Dt = 22 F = 0, 30, Mod			
				H=3.0	H=3.5	H=4.0	H=4.5
	TTP	Universal	for all common plastics	✓	✓	✓	✓
	TTP-SC	Seal cap	for color change	✓	✓	✓	✓

TTW Thermal Gate – Torpedo - Blind

Tip Style		Description	Application range	Dt = 28			
				H=3.0	H=3.5	H=4.0	H=4.5
	TTW	Universal	for all common plastics	✓	✓	✓	✓
	TTW-SC	Seal cap	for color change	✓	✓	✓	✓

TFP Thermal Gate – Full Flow - Plunged Through

Tip Style		Description	Application range	Dt = 22 F = 0, 30, Mod			
				H=2.5	H=3.0	H=3.5	H=4.0
	TFP	Universal	for all common plastics	✓	✓	✓	✓
	TFP-SC	Seal cap	for color change	✓	✓	✓	✓



Preferred



Available

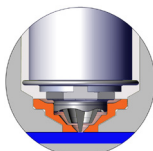


Not Available



Wear Insert

Illustrations simplified, schematically drawn and not to scale. All dimensions in mm
H = Gate orifice diameter, F = Tip extension, Dt = Tip Diameter, Mod = Modifiable

Part		Description	F = 0, 30, Mod			
			H=3.0	H=3.5	H=4.0	H=4.5
	WI-TTW	Wear Insert (without Dimple)	✓	✓	✓	✓

✓ Preferred

(✓) Available

✗ Not Available

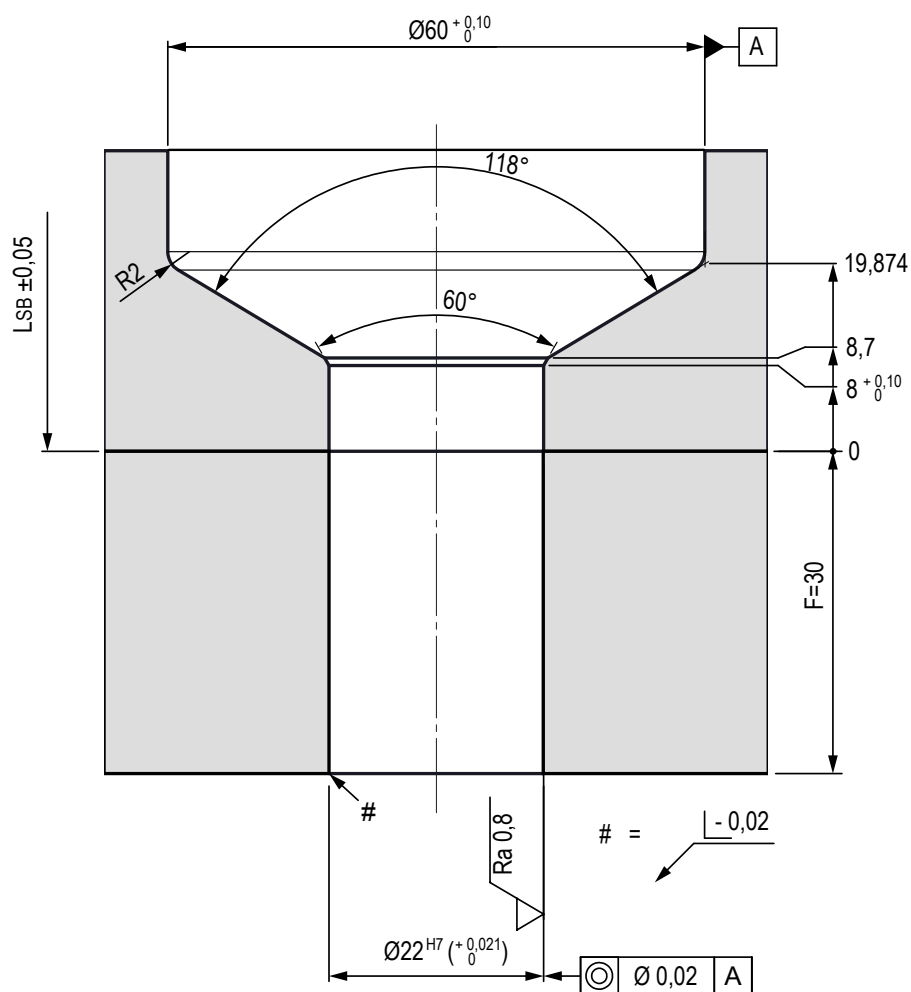


Nozzle Tip Cutout Dimensions

Illustrations simplified, schematically drawn and not to scale. All dimensions in mm.

Dimensions for reference only. Reference system drawing for complete dimensions prior to machining gate detail in mold.

TTP, TFP- Nozzle tip cutout dimensions

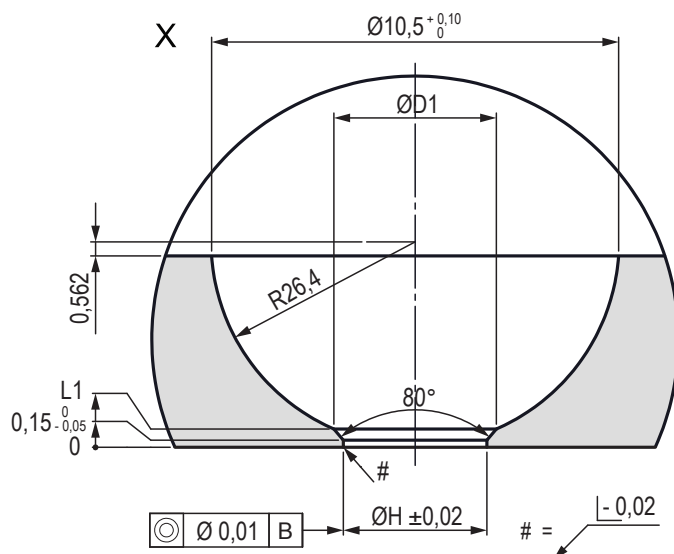
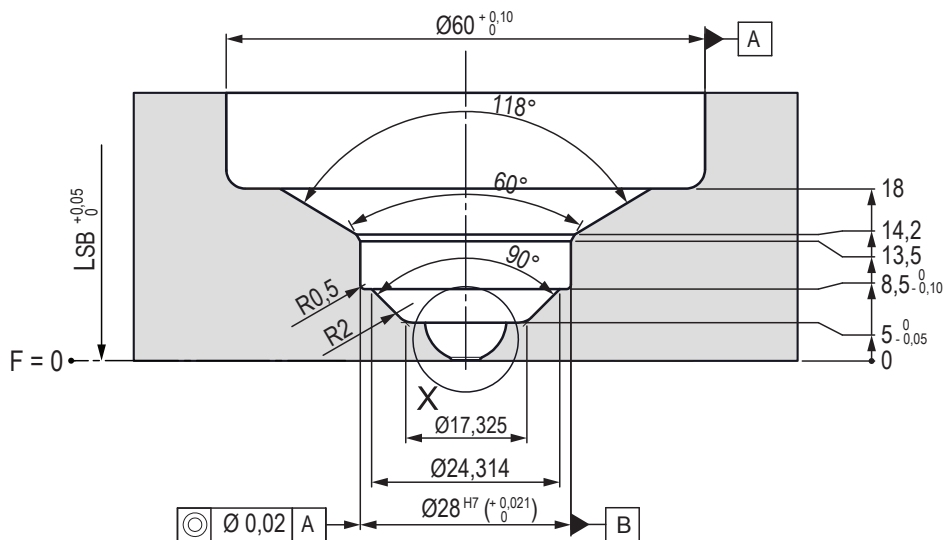


Nozzle Tip Cutout Dimensions

Illustrations simplified, schematically drawn and not to scale. All dimensions in mm.

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TTW - Nozzle tip cutout dimensions



ØH	L1	D1
3	0,64	3,822
3,5	0,812	4,611
4	1,066	5,538
4,5	1,527	6,811

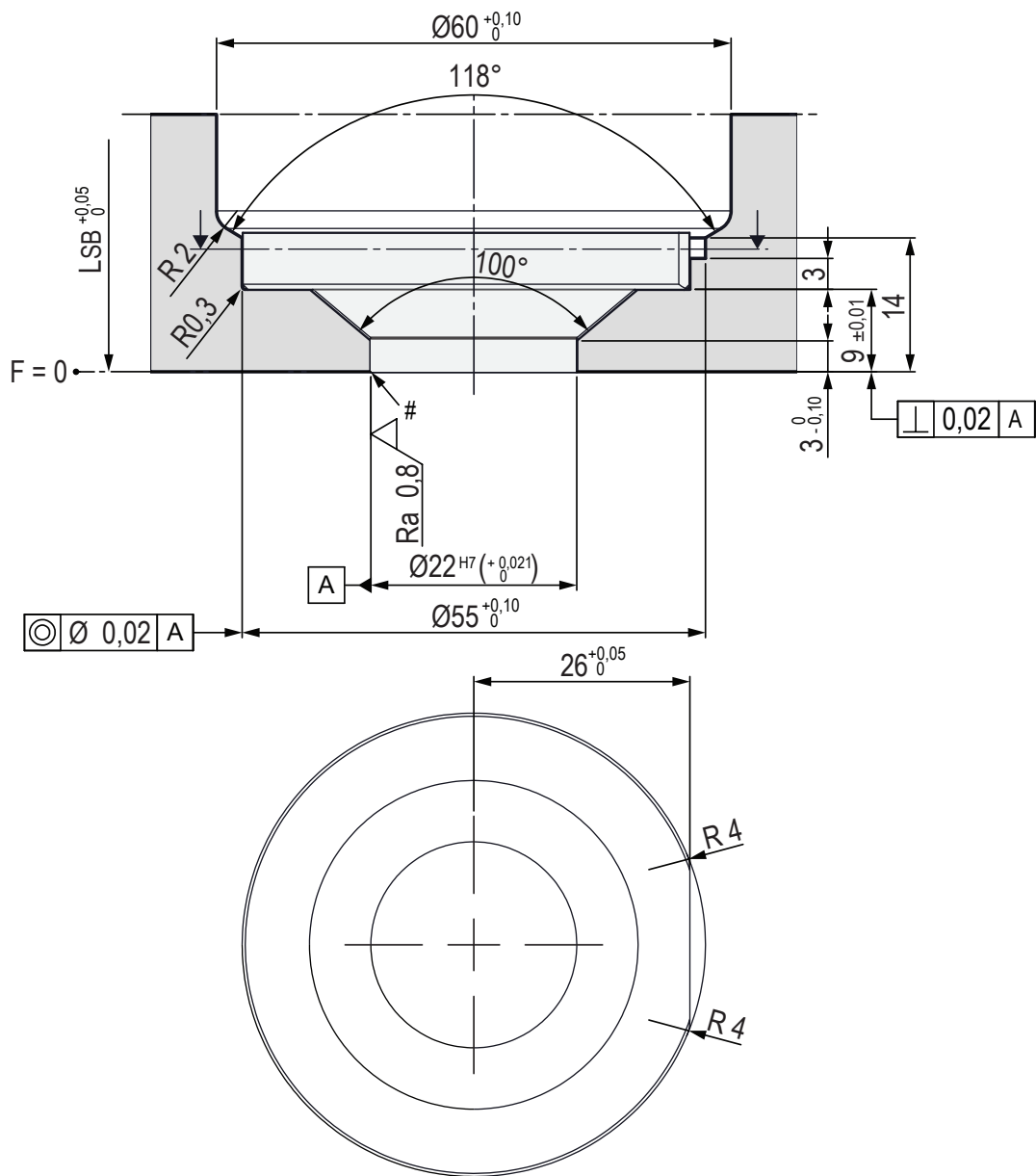
- At the area of the nozzle gate replaceable, hardened (52 +2/-1HRC) inserts are recommended by Synventive.
- Synventive recommends that the gate area geometry is manufactured by grinding and not EDM with a surface quality of $\sqrt{Ra0,8}$

Wear Insert Cutout Dimensions

Illustrations simplified, schematically drawn and not to scale. All dimensions in mm.

Dimensions for reference only. Reference system drawing for complete dimensions prior to machining gate detail in mold.

WI-TTW - Wear insert cutout dimensions



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