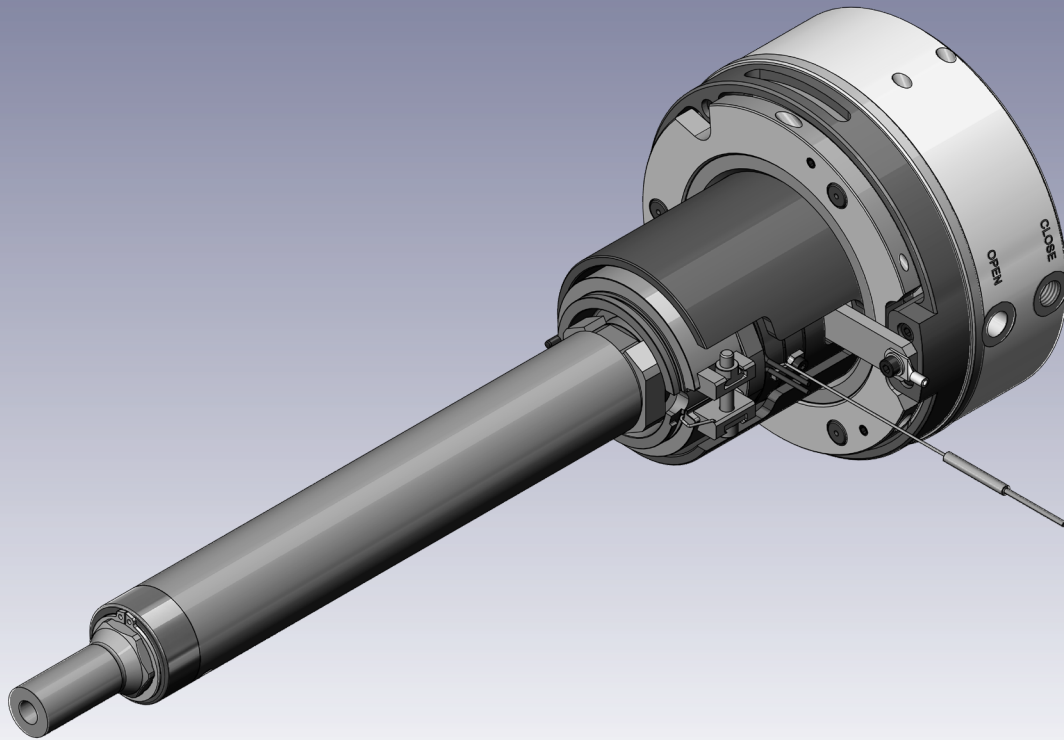


# Series 16SVH-06

## Single Axis Valve Gate Nozzle

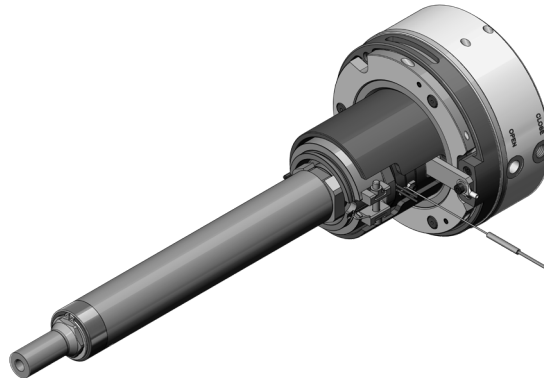


Stabilize your Process \_\_\_\_\_

CAT-01-0098\_EN-REV01 (EN) 10 / 2021

**Product Description - Technical Data**

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



<b>Valve Pin Operation</b>	
Operation medium	hydraulic
Pressure range	40 - 60 bar (580 - 870 psi)
Flowrate	2,5 l/min
Reaction time	~0,5 s
Valve pin stroke:	14 mm
Adjustment	± 1 mm Via adjustment threads from outside.
Closing force	4984 N / 40 bar (580 psi)
Opening force	4043 N / 40 bar (580 psi)
Connection	M12x1,5 (8-L)
<b>Valve pin</b>	
Valve pin diameter	Ø 8 mm
Attachment	Quick coupling, anti-rotation
<b>Cooling</b>	
	Without being directly cooled the single axis valve gate nozzles 16SVH-06 can be used up to a mold temperature of 80 °C (176 °F).
<b>Heating Power</b>	
externally heated, 230 V AC	The numbering of the heating zones starts at the nozzle tip and ends at the nozzle head.
Zone 1 (From a nozzle length of 90 mm)	285 - 450 Watt
Zone 2 (From a nozzle length of 225 mm)	735 - 785 Watt
Head	800 plus 680 Watt
<b>Thermocouple</b>	
EN 60584 Fe-CuNi 0 = Typ J; NiCr-Ni = Typ K	
The heater & thermocouple are replaceable.	
<b>Application</b>	
For all usual thermoplastics Max. shot weight per nozzle (g): → 1500 (low viscosity)	

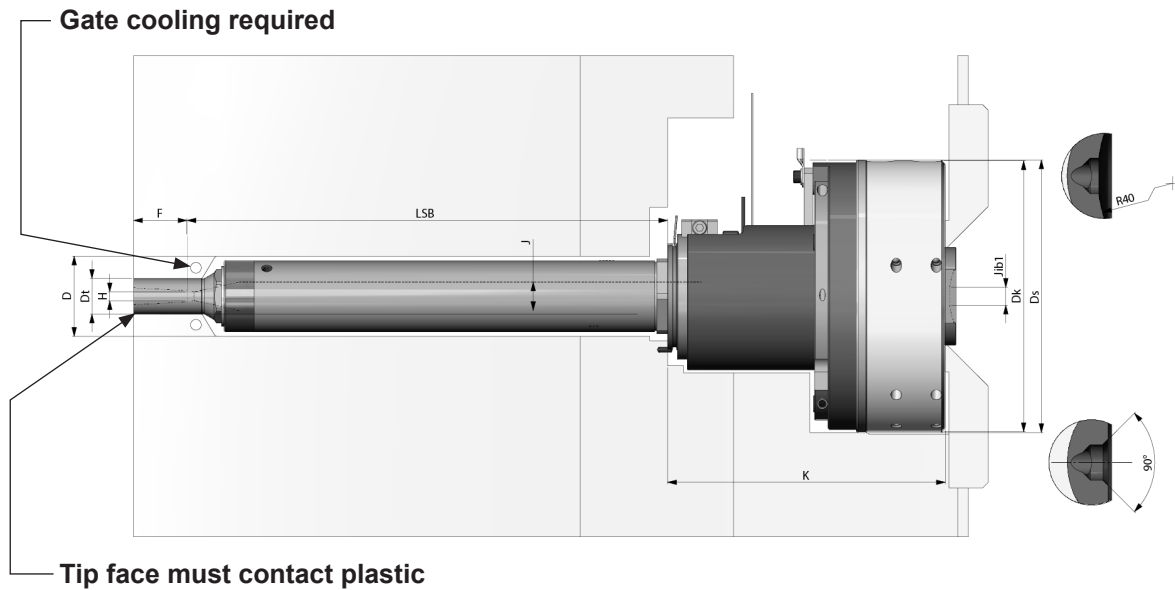
**NOTICE**

To ensure long life and continued flawless operation of the actuator, we recommend using a service medium that complies with the requirements of classification 21/18/13 pursuant to ISO 4406.



Product Description - Dimensions - Heater Zones Power

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



J	Flow bore	Ø 16 <sup>1)</sup>	H	Gate orifice	see page 7
Jib1	Flow bore inlet bushing	Ø 10	K	Head height	156
LSB	Nozzle length	100...395 <sup>2)</sup>	Dk	Head diameter	Ø 152
F	Tip extension	see page 7	Ds	Diameter of head centering	Ø 153
D	Cutout	Ø 45	R	Nozzle contact radius	0...40
Dt	Tip Ø	see page 7	AD	Nozzle contact angle	90°...120°

- <sup>1)</sup> Standard flow bore value = Ø 16  
consult Synventive for custom dimensions Ø 14, Ø 18
- <sup>2)</sup> Standard lengths shown, consult Synventive for custom lengths.

LSB (mm) Custom lengths	Nozzle Heater zones power <sup>3)</sup> (Watt)		Adapter Head	Head Bottom
	Power 1	Power 2	Power	Power
90 ... < 100	285W		800W	680W
100 ... < 125	305W		800W	680W
125 ... < 150	380W		800W	680W
150 ... < 175	395W		800W	680W
175 ... < 200	410W		800W	680W
200 ... < 225	430W		800W	680W
225 ... < 250	450W		800W	680W
250 ... < 275	285W	450W	800W	680W
275 ... < 300	285W	500W	800W	680W

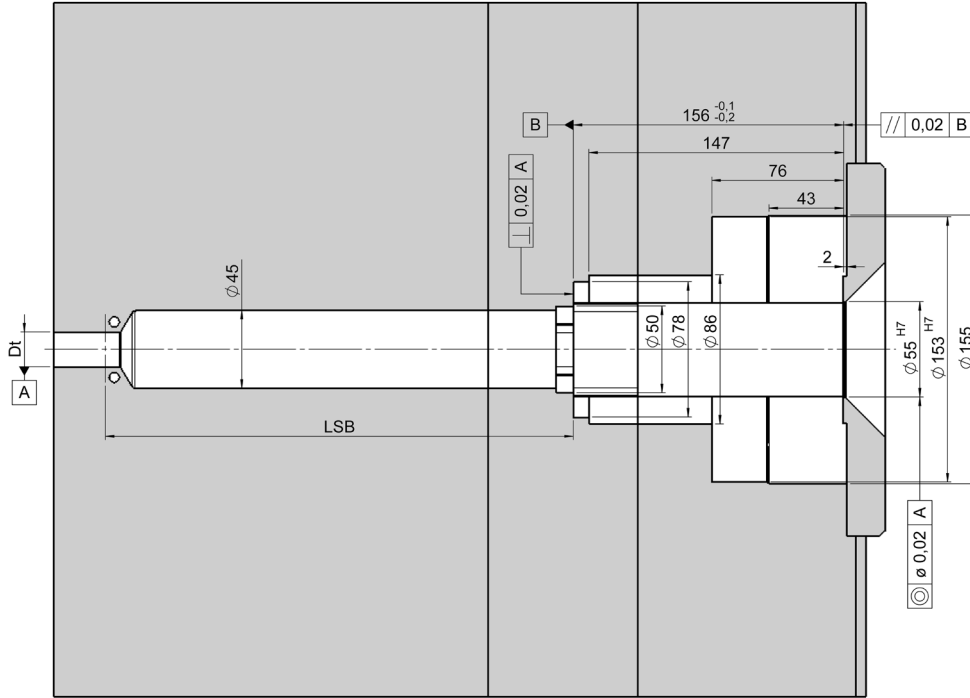
<sup>3)</sup> The numbering of the heating zones starts at the nozzle tip and ends at the nozzle head.



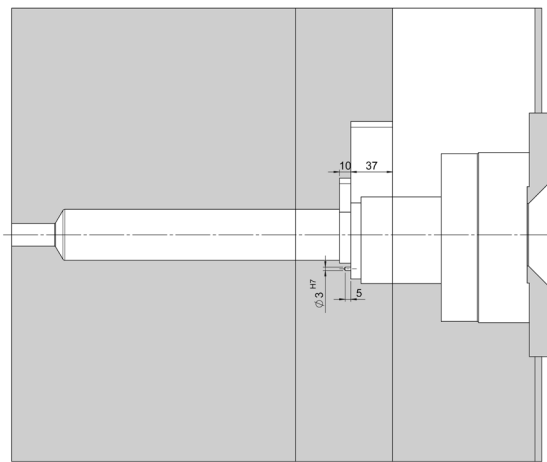
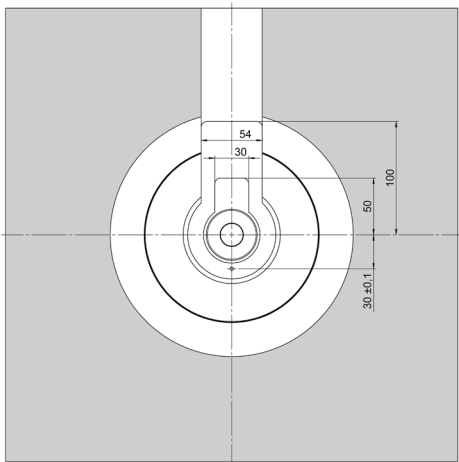
Cutout in Mold Plate for Nozzle and Connections

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

Cutout for the Nozzle



Cutout for Connections (Electrical power and Thermocouple)



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 3.

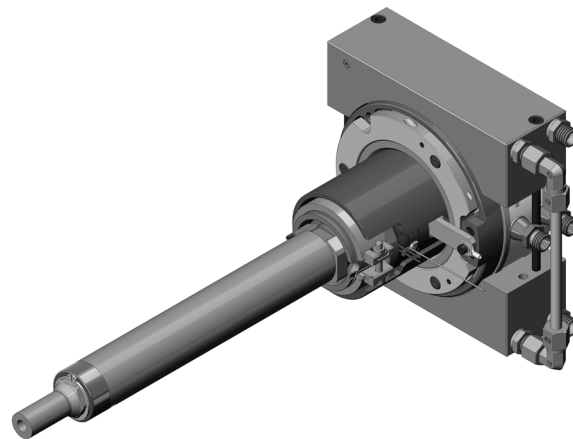


## Product Description - Cooling Unit CU16SVH01

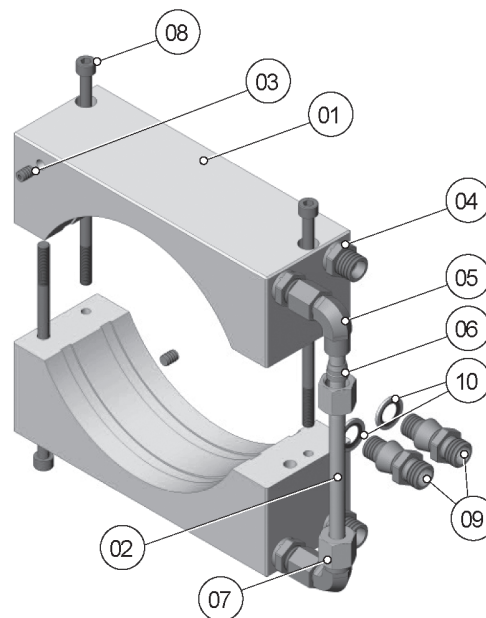
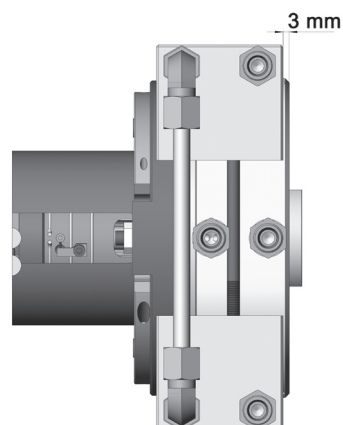
Illustrations simplified, schematically drawn and not to scale. All dimensions in mm.

**CU16SVH01 mounted on  
Single Axis Valve Gate  
Nozzle 16SVH-06**

CU16SVH01 Technical Data	
Medium	Cooling water
Flow rate	4 l/min
Pressure	max. 8 bar (116 psi)
Temperature	30...60 °C (86 - 140 °F)
Connections	M14x1.5

**Parts List**

Pos.	Qty.	Description/ Part Number
01	2	Cooling Sleeve / CU16SVHCS01
02	1	Connecting Tube / CU16SVHCT01
03	2	Sealing Plug / Z942/6
04	4	Straight Coupling / GE08LMEDVITOMDCF
05	2	Elbow Coupling / EW08LVITOMDCF
06	2	Cutting Ring / PSR08LX
07	2	Nut / M08LCFX
08	3	Hexagon Socket Cap Screw / DIN912-M6x120-12.9
09	2	Straight Coupling / XAA01201401
10	2	Bonded Seal / 12.7X18X1.5USSFPM

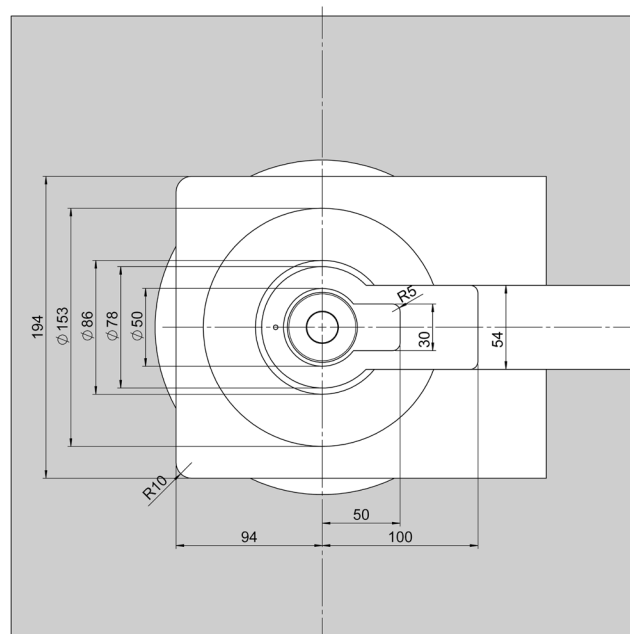
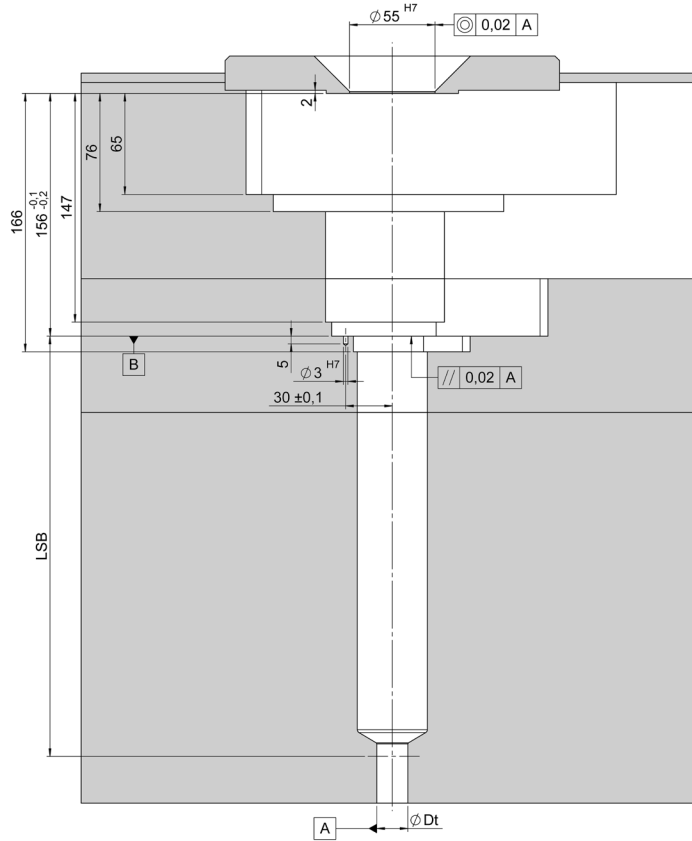
**Position of the cooling  
unit on  
the Single Axis Valve  
Gate Nozzle**



16SVH-06 Single Axis Valve Gate Nozzle, hydraulic

Cutout in Mold Plate for Nozzle with Cooling Unit CU16SVH01

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



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 3.



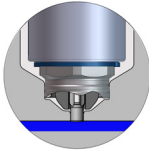
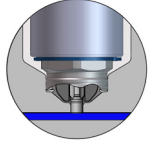
Nozzle Tip Styles

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

**VSP** Valve Gate - Straight Pin - Plunged Through

Tip Style		Description	Application range	Dt = Ø20 F = 0, 30, Mod	
				H=5.0	H=6.0
	<b>VSP</b>	Universal	for all common plastics	✓	✓
	<b>VSP-SC</b>	Seal cap	for color change	✓	✓

**VSW** Valve Gate - Straight Pin - Blind

Tip Style		Description	Application range	Dt = Ø22	
				H=4.0	H=5.0
	<b>VSW</b>	Universal	for all common plastics	(✓)	✓
	<b>VSW-SC</b>	Seal cap	for color change	(✓)	✓

✓ Preferred

(✓) Available

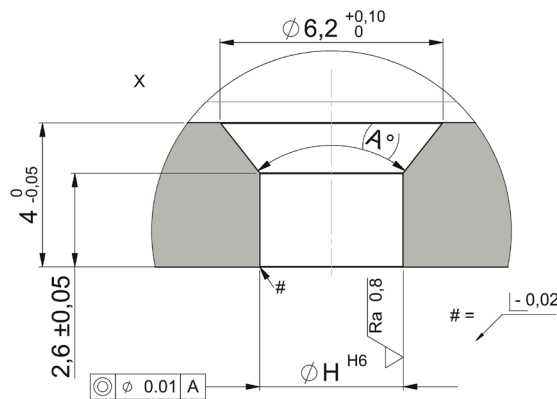
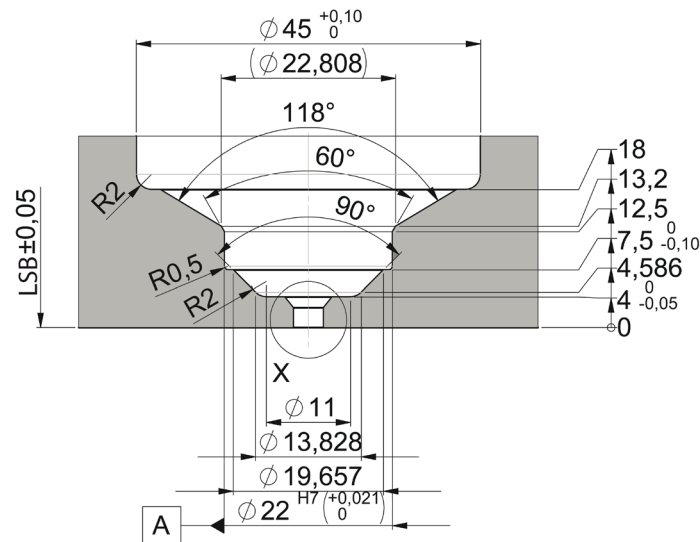
✗ Not Available



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.

VSW - Nozzle tip cutout dimensions



$\varnothing H^{H6}$	(A°)
$4,0^{+0,008}_0$	76,31
$5,0^{+0,008}_0$	46,4

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

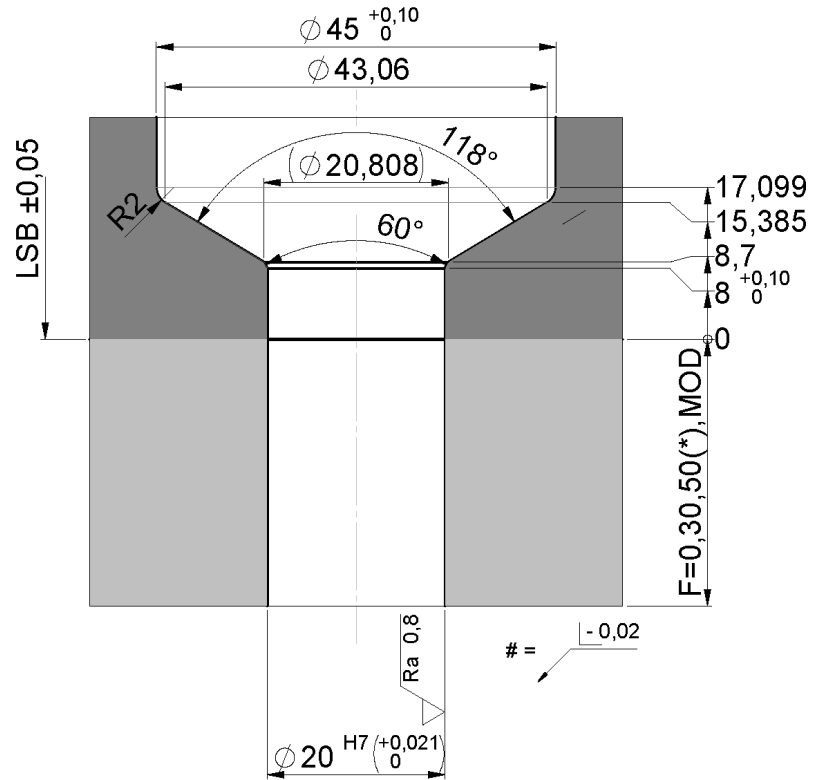




Nozzle Tip Cutout Dimensions

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

VSP - Nozzle tip cutout dimensions



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