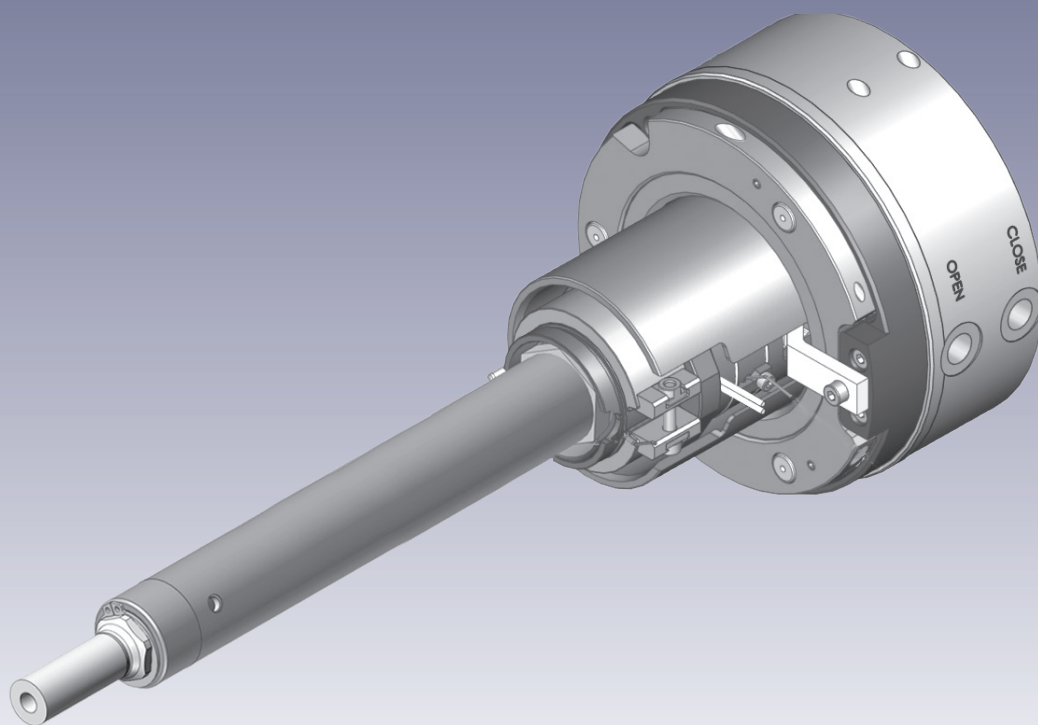


Series 12SVH-06

Single Axis Valve Gate Nozzle

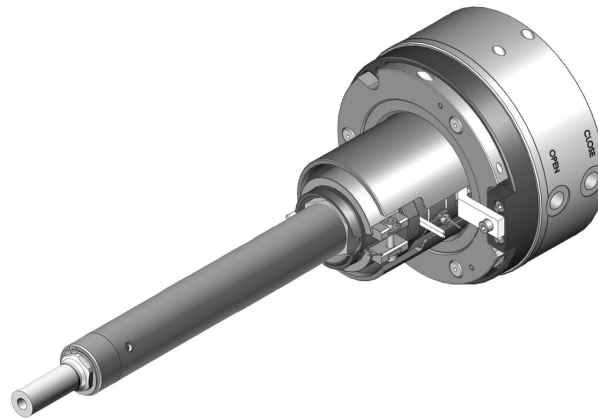


Stabilize your Process _____

CAT-01-0092_EN-Rev02 (EN) 05 / 2021

**12SVH-06 Single Axis Valve Gate Nozzle, hydraulic****Product Description - Technical Data**

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



Valve Pin Operation	
Operation medium	hydraulic
Pressure range	40 - 60 bar (580 - 870 psi)
Flowrate	2.5 l/min
Reaction time	~0,5 s
Valve pin stroke:	13 mm
Adjustment	± 1 mm Via adjustment threads from outside.
Closing force	3770 N / 40 bar (87 psi)
Opening force	2825 N / 40 bar (87 psi)
Connection	M12x1,5 (8-L)
Valve pin	
Valve pin diameter	Ø 6 mm
Attachment	Quick coupling, anti-rotation
Cooling	Without being directly cooled the single axis valve gate nozzles 12SVH-06 can be used up to a mold temperature of 80 °C (176 °F).
Heating Power	The numbering of the heating zones starts at the nozzle tip and ends at the nozzle head.
externally heated, 230 V AC	
Zone 1 (From a nozzle length of 50 mm)	195 - 290 Watt
Zone 1 plus 2 (From a nozzle length of 190 mm)	480 - 800 Watt
Head	630 plus 650 Watt
Thermocouple	
EN 60584 Fe-CuNi 0 = Typ J; NiCr-Ni = Typ K	
The heater & thermocouple are replaceable.	
Application	
For all usual thermoplastics Max. shot weight per nozzle (g): → 300 (low viscosity)	

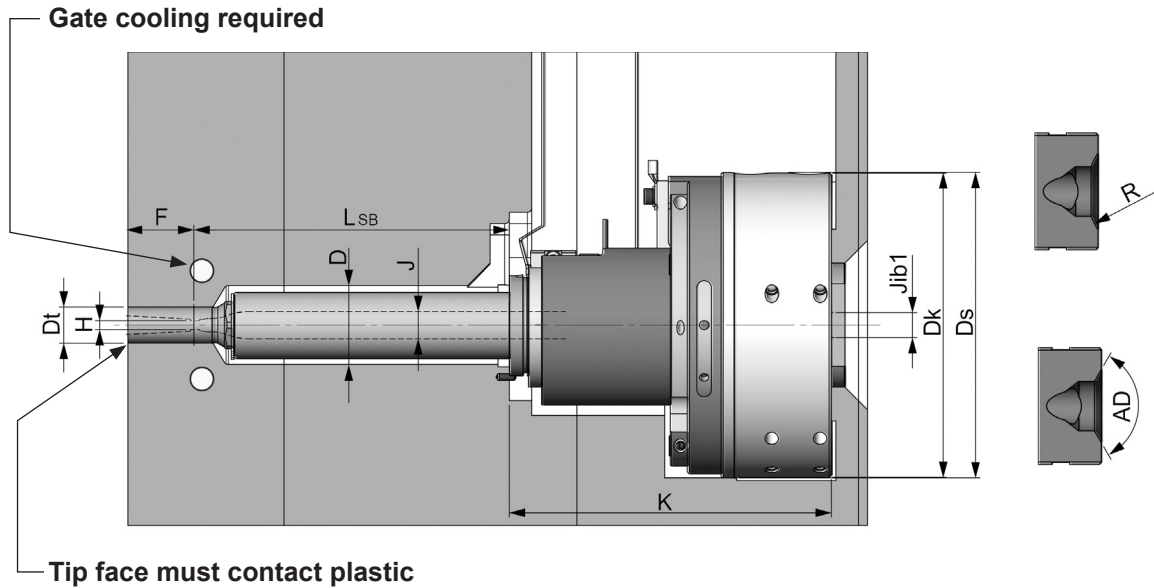
NOTICE

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 12 ¹⁾	H	Gate orifice	see page 7
Jib1	Flow bore inlet bushing	Ø 11	K	Head height	143
LSB	Nozzle length	50...390 ²⁾	Dk	Head diameter	Ø 135
F	Tip extension	see page 7	Ds	Diameter of head centering	Ø 135,5
D	Cutout	Ø 35	R	Nozzle contact radius	0...40
Dt	Tip Ø	see page 7	AD	Nozzle contact angle	90°...120°

- 1) Standard flow bore value = Ø 12
consult Synventive for custom dimensions Ø 8, Ø 10, Ø 14
- 2) Standard lengths shown, consult Synventive for custom lengths.

LSB (mm)	Nozzle Heater zone power (Watt)		Adapter Head Power	Head Bottom Power
	Power1	Power2		
50	195W		630W	650W
70	215W		630W	650W
90	230W		630W	650W
115	250W		630W	650W
140	270W		630W	650W
165	290W		630W	650W
190	215W	265W	630W	650W
215	215W	305W	630W	650W
240	215W	345W	630W	650W
265	215W	385W	630W	650W
290	215W	425W	630W	650W
315	215W	465W	630W	650W
340	215W	505W	630W	650W
365	215W	545W	630W	650W
390	215W	585W	630W	650W

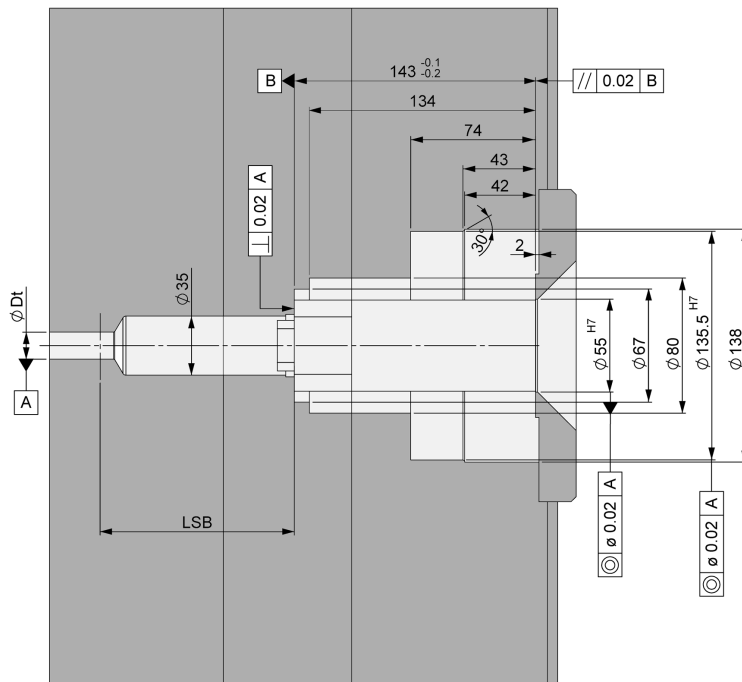
- 3) The numbering of the heating zones starts at the nozzle tip and ends at the nozzle head.



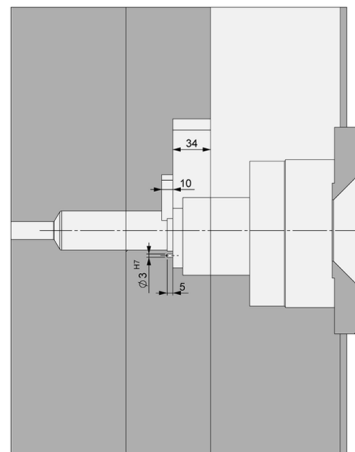
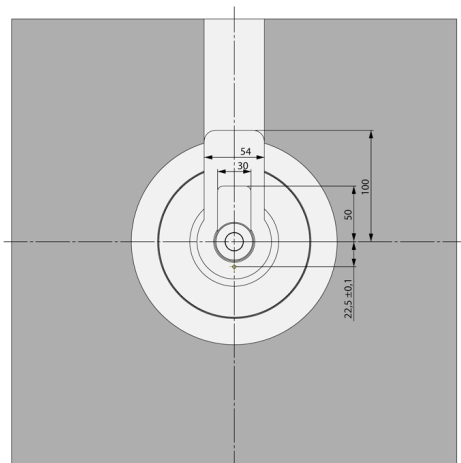
Cutout in Mold Plate for Nozzle and Connections

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.

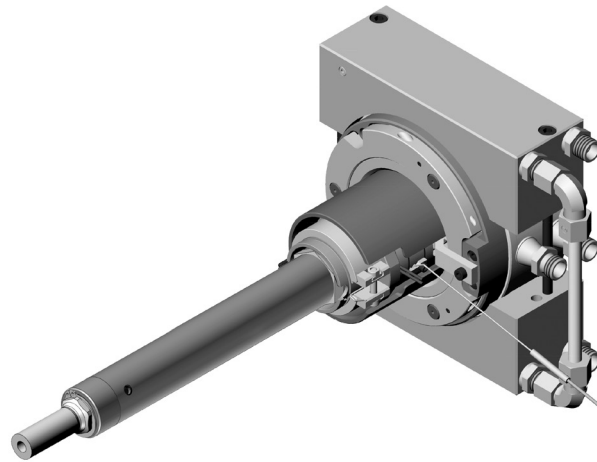


Product Description - Cooling Unit CU12SVH01

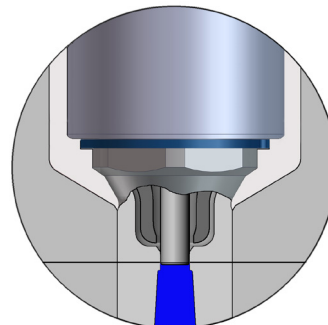
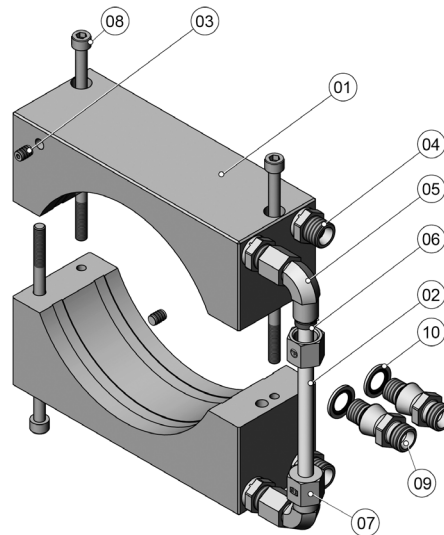
Illustrations simplified, schematically drawn and not to scale. All dimensions in mm.

**CU12SVH01 mounted on
Single Axis Valve Gate
Nozzle 12SVH-06**

CU12SVH01 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**

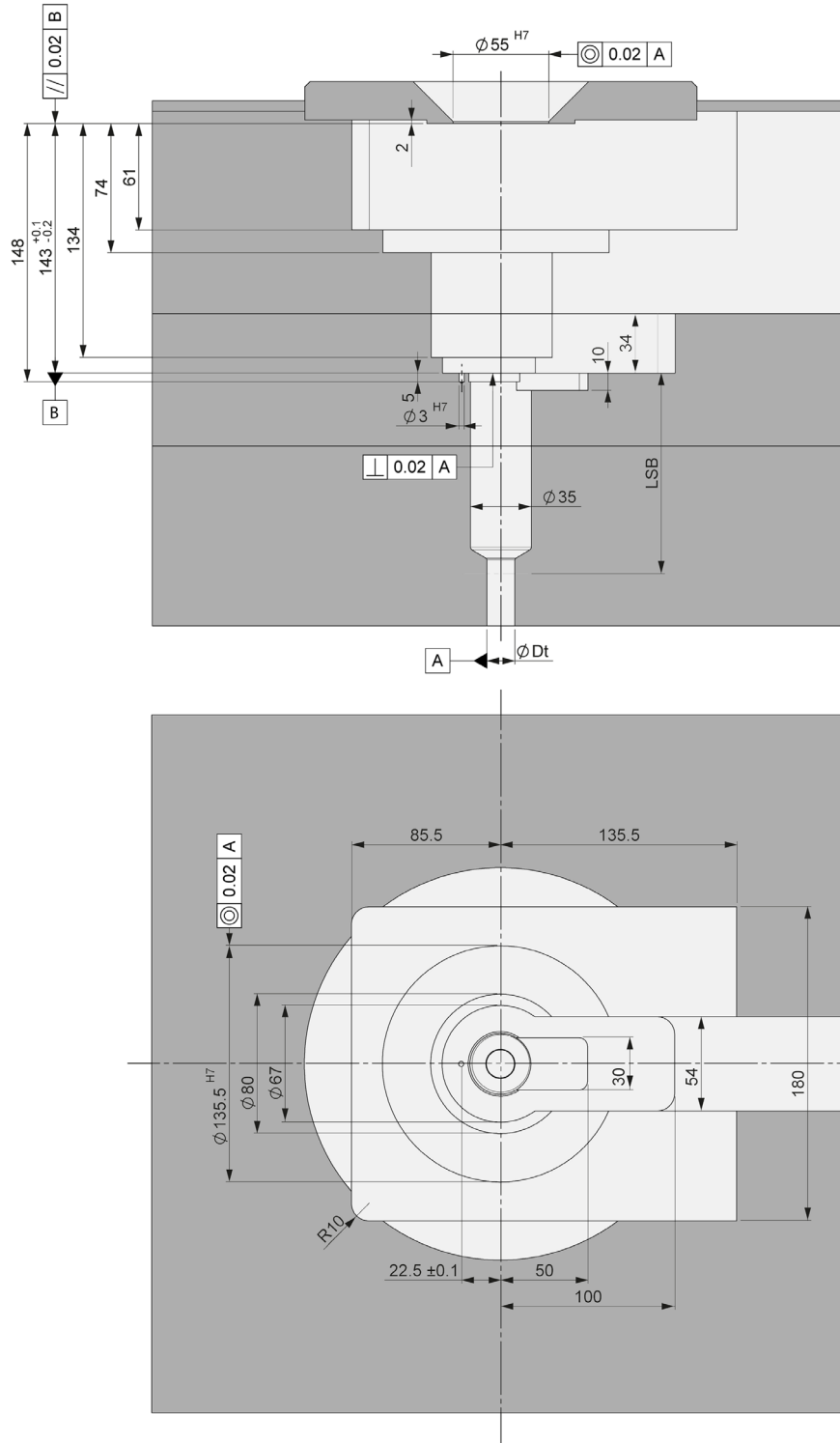
Pos.	Qty.	Description/ Part Number
01	2	Cooling Sleeve / CU12SVHCS01
02	1	Connecting Tube / CU12SVHCT01
03	2	Sealing Plug / Z942/6
04	4	Straight Coupling / GE08LMEDVITOMDCF
05	2	Elbow Coupling / EW08LVITOMDCF
06	2	Cutting Ring / PSR08LX
07	2	Nut / M08LCFX
08	3	Hexagon Socket Cap Screw / DIN912-M6x120-12.9
09	2	Straight Coupling / XAA01201401
10	2	Bonded Seal / 12.7X18X1.5USSFPM

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



Cutout in Mold Plate for Nozzle with Cooling Unit CU12SVH01

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



General tolerances: DIN ISO 2768-mK

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

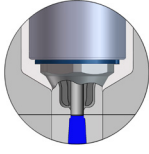
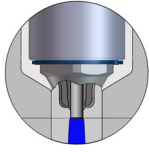
Values of the dimension LSB can be found in the data sheet on page 3.



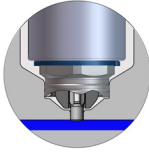
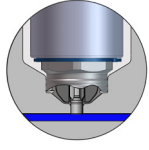
Nozzle Tip Styles

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 = Ø16 F = 0, 30, Mod	
				H=4.0	H=5.0
	VSP	Universal	for all common plastics	✓	(✓)
	VSP-SC	Seal cap	for color change	✓	(✓)

VSW Valve Gate - Straight Pin - Blind

Tip Style		Description	Application range	Dt = Ø20	
				H=3.0	H=4.0
	VSW	Universal	for all common plastics	✓	(✓)
	VSW-SC	Seal cap	for color change	✓	(✓)

✓ Preferred

(✓) Available

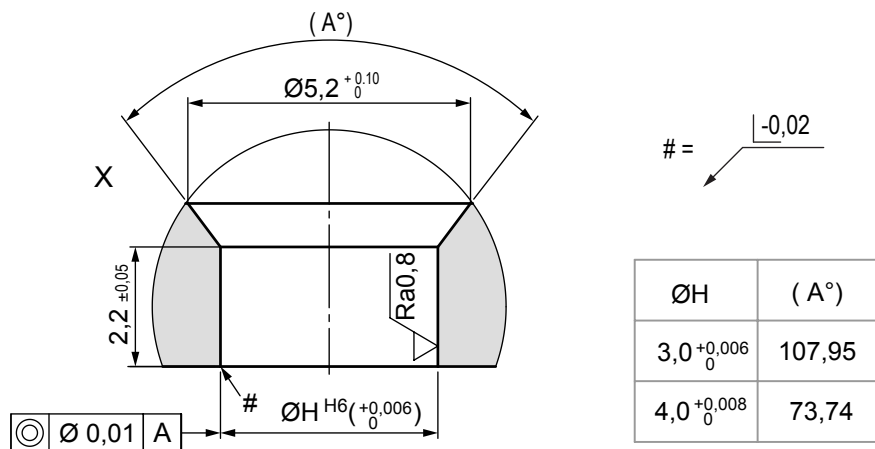
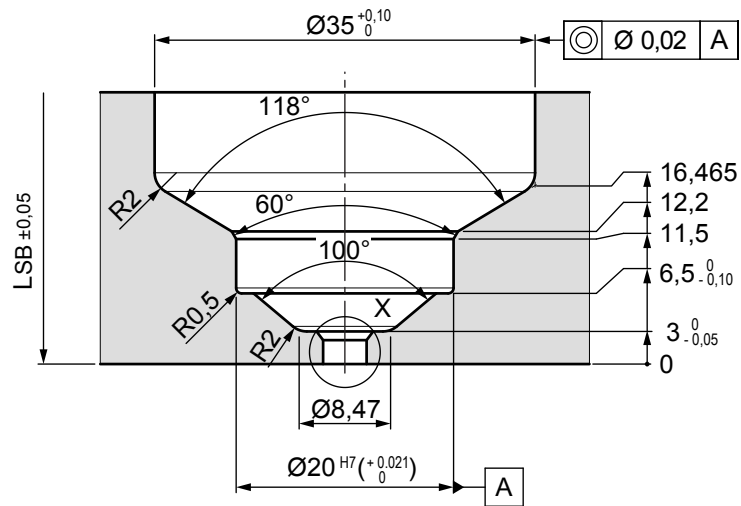
✗ Not Available



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



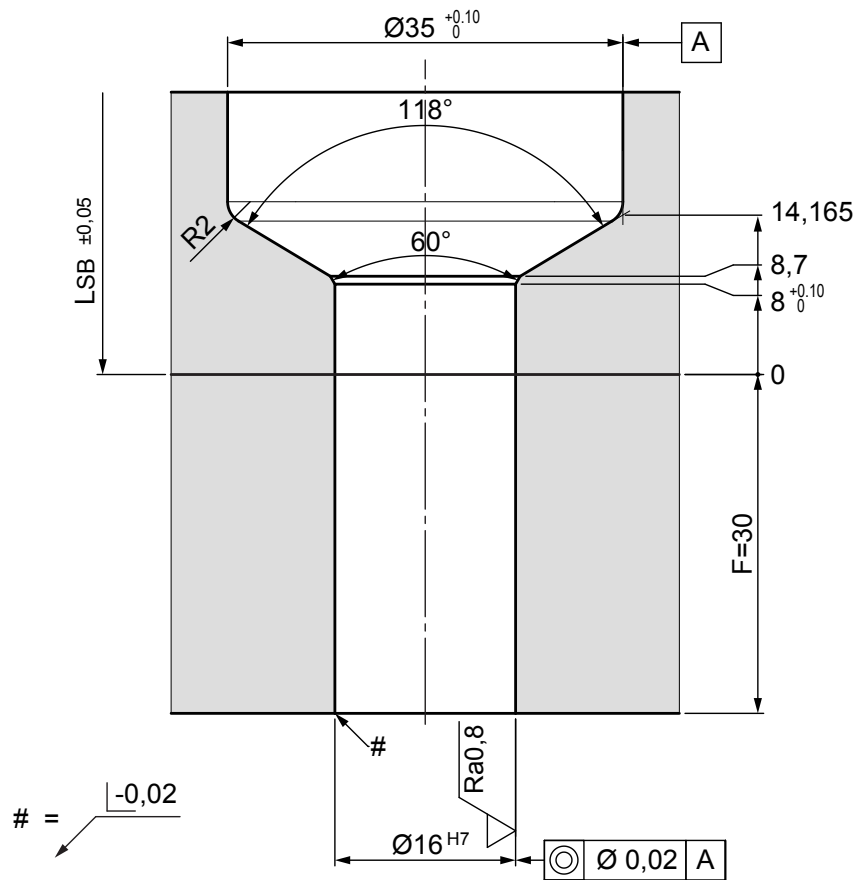
1. At the area of the nozzle gate replaceable, hardened (52 +2/-1HRC) inserts are recommended by Synventive.
2. Synventive recommends that the gate area geometry is manufactured by grinding and not EDM with a surface quality of $\sqrt{Ra0,8}$



Nozzle Tip Cutout Dimensions

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.

VSP - Nozzle tip cutout dimensions



The Americas

Synventive Molding Solutions Inc.
10 Centennial Drive
Peabody, MA 01960
Tel.: +1 978 750 8065
Fax: +1 978 646 3600
Email: info@synventive.com

Europe

Synventive Molding Solutions GmbH
Heimrodstraße 10
Postfach 3123
64625 Bensheim
Tel. :+49 (0)6251 9332-0
Fax :+49 (0)6251 9332-90
Email: infohrde@synventive.com

Asia

Synventive Molding Solutions (Suzhou) Co. Ltd.
12B Gang Tian Industrial Square
Suzhou Industrial Park, China 215021
Tel.: +86 512 6283 8870
Fax: +86 512 6283 8890
Email: infohrcn@synventive.com

