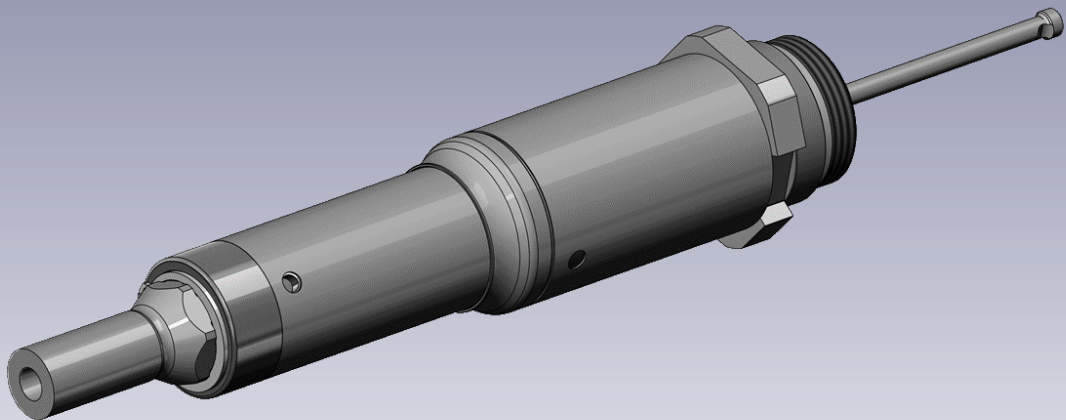


# 16EX22-03 Product Catalog

Threaded Nozzles Hot Runner Series



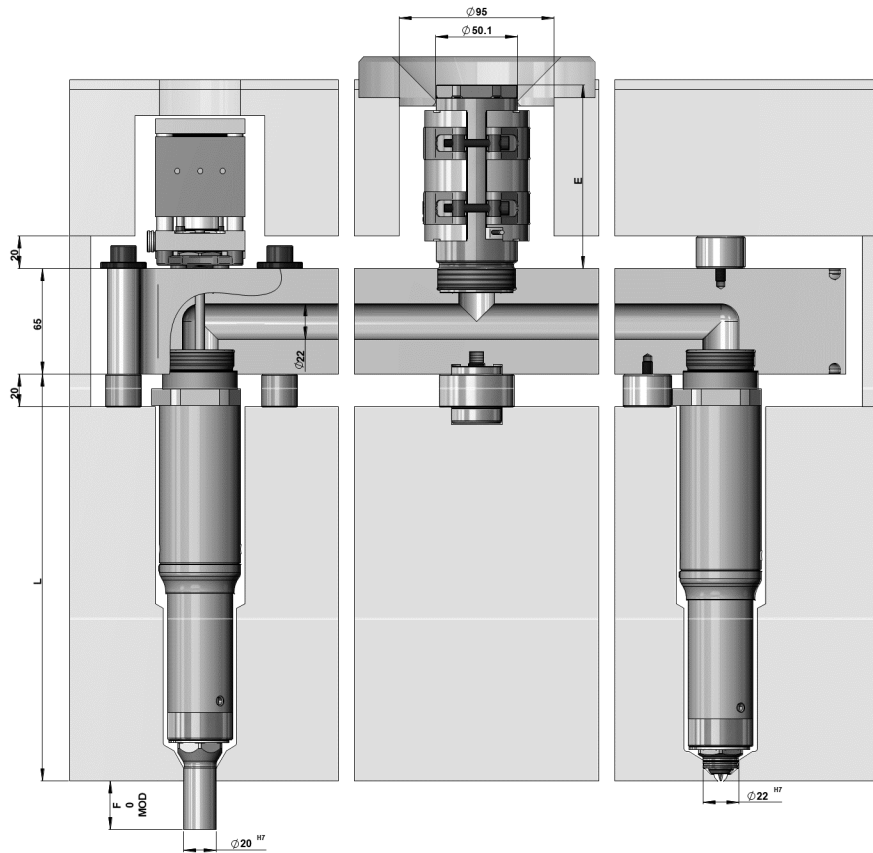
Stabilize your Process \_\_\_\_\_

CAT-10-0034\_EN-REV01 (EN) 03 / 2022



Hot Runner System - Thrust Pad / Bolt Down Manifold

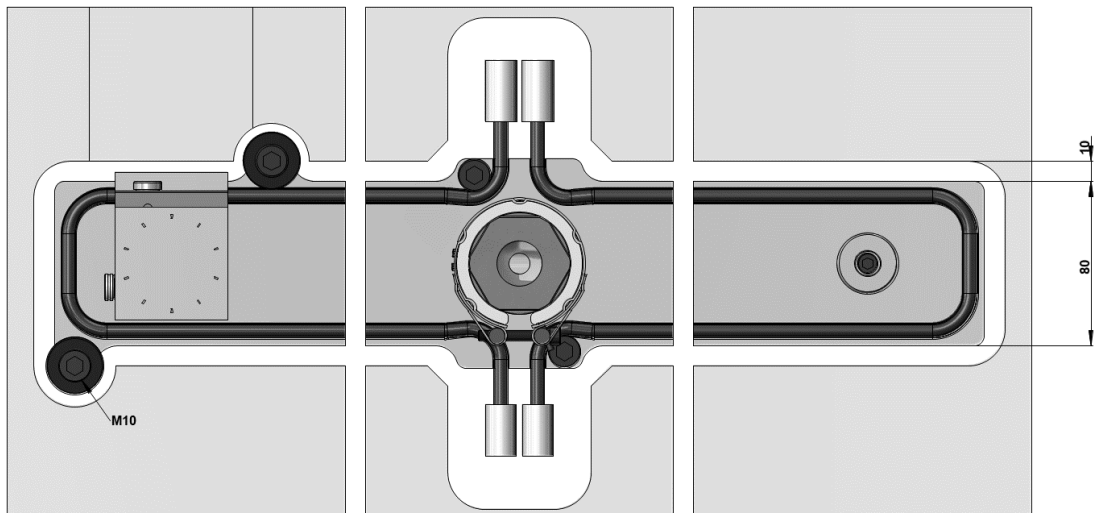
Illustrations simplified, schematically drawn and not to scale. All dimensions in mm.



Bolt down selection

Inlet bushing

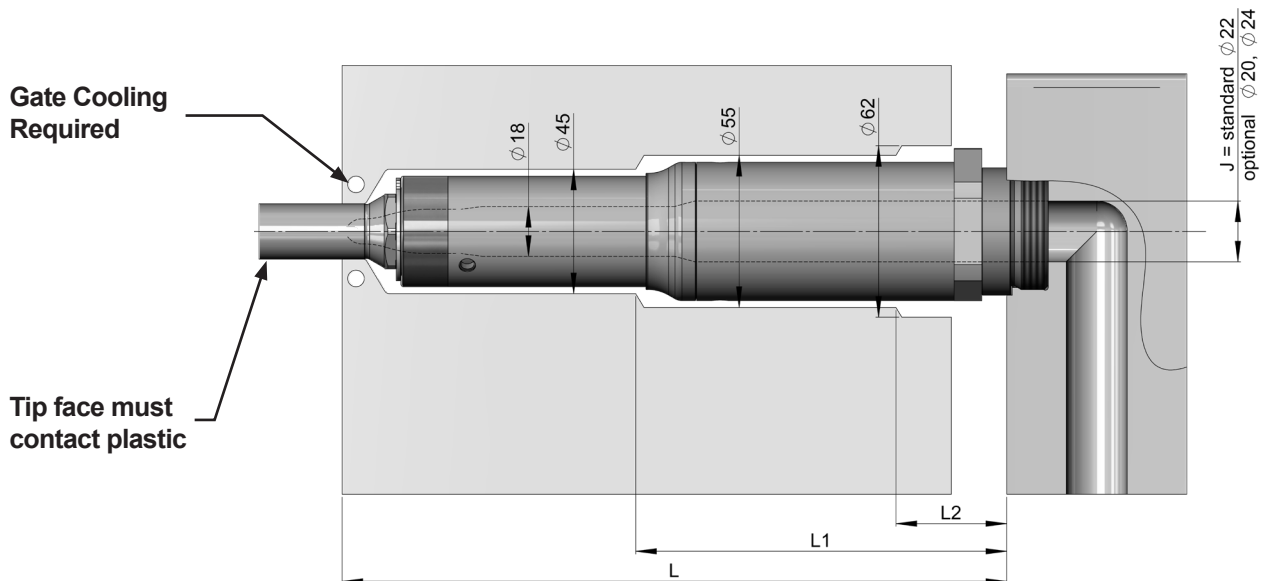
Thrust pad selection





Nozzle Lengths

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



L (mm)	L1	L2	Heater zone power <sup>1)</sup> (Watt)	
			Power 1	Power 2
205 - < 230	L-106	-	380 W	250 W
230 - < 255	L-106	-	380 W	300 W
255 - < 280	L-106	-	380 W	350 W
280 - < 305	L-106	-	380 W	400 W
305 - < 330	L-106	-	380 W	450 W
330 - < 355	L-106	-	380 W	500 W
355 - < 380	L-106	-	380 W	550 W
380 - < 405	L-106	-	380 W	600 W
405 - < 430	L-106	L-400	380 W	650 W
430 - < 455	L-106	L-400	380 W	700 W
455 - < 480	L-106	L-400	380 W	750 W
480 - < 505	L-106	L-400	380 W	800 W
505 - < 530	L-106	L-400	380 W	850 W
530 - < 555	L-106	L-400	380 W	900 W
555 - < 580	L-106	L-400	380 W	950 W
580 - < 605	L-106	L-400	380 W	1000 W
605 - < 630	L-106	L-400	380 W	1050 W
630 - < 655	L-106	L-400	380 W	1100 W
655 - < 680	L-106	L-400	380 W	1150 W
680 - < 705	L-106	L-400	380 W	1200 W
705 - < 730	L-106	L-400	380 W	1250 W

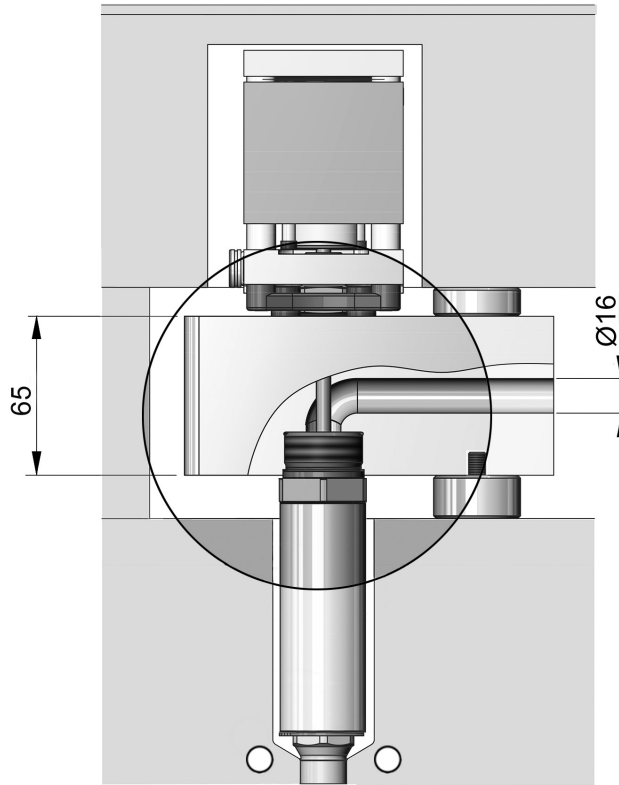
<sup>1)</sup> The numbering of the heating zones starts at the nozzle tip and ends at the nozzle head.



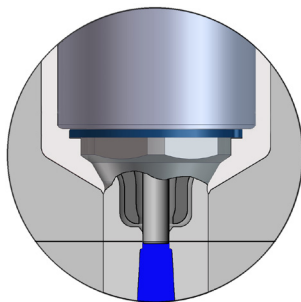
Optional Features

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

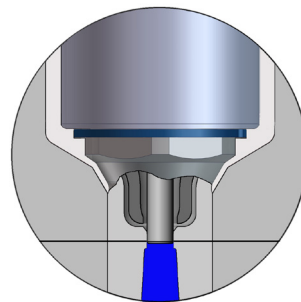
Smooth flow



Mold strenghts



Standard



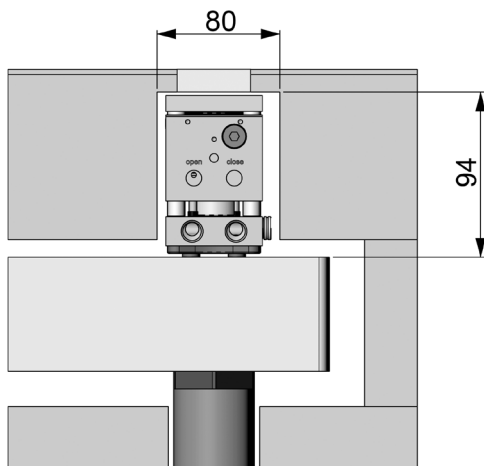
Reduced



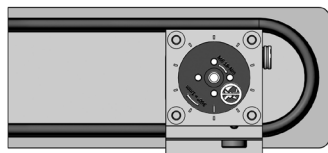
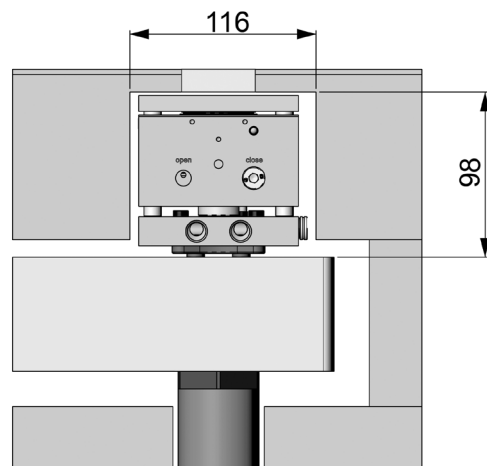
Available Actuators

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

**HB4016  
(hydraulic)**



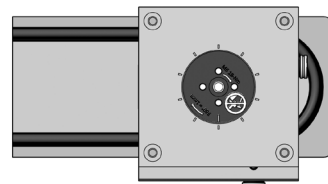
**PB8016  
(pneumatic)**



Pressure range:  
40 - 60 bar (600 - 870 psi)  
Min/Max Close Forces:  
5027 N / 7540 N

Available features:

- ◆ Position Sensor
- ◆ SynCool®



Pressure range:  
6 - 12 bar (87 - 174 psi)  
Min/Max Close Forces:  
3016 N / 6032 N

Available features:

- ◆ Position Sensor
- ◆ SynCool®

For additional specification and requirements see the actuator catalog CAT-03-0001\_EN-REV##

The pneumatic actuator series VP8016, mounted in the back plate, is also available for the 16EX22-03 nozzle. See the actuator catalog CAT-03-0001\_EN-REV##



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	Dt = Ø20 F = 0, 30, Mod	
			H=5.0	H=6.0
	<b>VSP</b>	Standard	✓	(✓)
	<b>VSP-SC</b>	Color Seal	✓	(✓)
	<b>VSP-WC</b>	Wear C	(✓)	✓

**VTP** Valve Gate - Tapered Pin - Plunged Through

Tip Style		Description	Dt = Ø20 F = 0, 30, Mod H=4.5
			
	<b>VTP-SC</b>	Color Seal	✓

✓ Preferred

(✓) Available

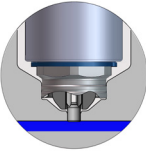
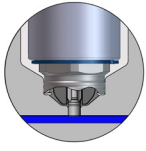
✗ Not Available



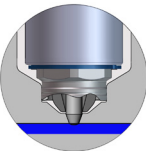
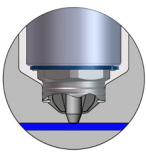
Nozzle Tip Styles

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

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

Tip Style	Description	Dt = Ø22	
		H=4.0	H=5.0
 <b>VSW</b>	Standard	(✓)	✓
 <b>VSW-SC</b>	Color Seal	(✓)	✓

**VTW** Valve Gate - Tapered Pin - Blind

Tip Style	Description	Dt = Ø22	
		H=4.0	H=4.5
 <b>VTW</b>	Standard	(✓)	✓
 <b>VTW-SC</b>	Color Seal	(✓)	✓

✓ Preferred

(✓) Available

✗ Not Available



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

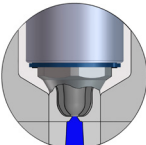
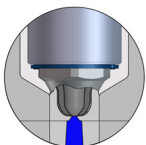
**TTW** Thermal Gate – Torpedo - Blind

Tip Style	Description	Dt = Ø22			
		H=2.5	H=3.0	H=3.5	H=4.0
 <b>TTW</b>	Standard	✓	✓	✓	✓
 <b>TTW-SC</b>	Color Seal	✓	✓	✓	✓

**TTP** Thermal Gate – Torpedo - Plunged Through

Tip Style	Description	Dt = Ø20 F = 0, 30, Mod			
		H=2.5	H=3.0	H=3.5	H=4.0
 <b>TTP</b>	Standard	✓	✓	✓	✓
 <b>TTP-SC</b>	Color Seal	✓	✓	✓	✓

**TFP** Thermal Gate – Full Flow - Plunged Through

Tip Style	Description	Dt = Ø20 F = 0, 30, Mod			
		H=2.0	H=2.5	H=3.0	H=3.5
 <b>TFP</b>	Standard	✓	✓	✓	✓
 <b>TFP-SC</b>	Color Seal	✓	✓	✓	✓

✓ Preferred      (✓) Available      ✗ Not Available

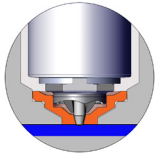
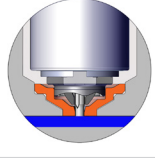
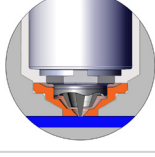




Wear Inserts / Cooling Bushings

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

Wear Insert

Part	Description	F = 0, 30, Mod					
		H=2.5	H=3.0	H=3.5	H=4.0	H=4.5	H=5.0
	<b>WI-VTW</b> Wear Insert for VTW Nozzle tips	✗	✗	✗	✓	✓	✗
	<b>WI-VSW</b> Wear Insert for VSW Nozzle tips	✗	✗	✗	✓	✗	✓
	<b>WI-TTW</b> Wear Insert for TTW Nozzle tips	✓	✓	✓	✓	✗	✗

Cooling Bushing

Part	Description	VSP	VTP	VSW	VTW	TTP	TTW	TFP
	<b>NC</b> Nozzle Cooling Bushing for Nozzle Tips, Blind and Plunged Through	✓	✓	✓	✓	✓	✓	✓
								

Wear Insert and Cooling Bushing

Part	Description	VSW	VTW	TTW
	<b>NC + WI</b> Wear Insert combined with Nozzle Cooling Bushing for Nozzle Tip Blind	✓	✓	✓

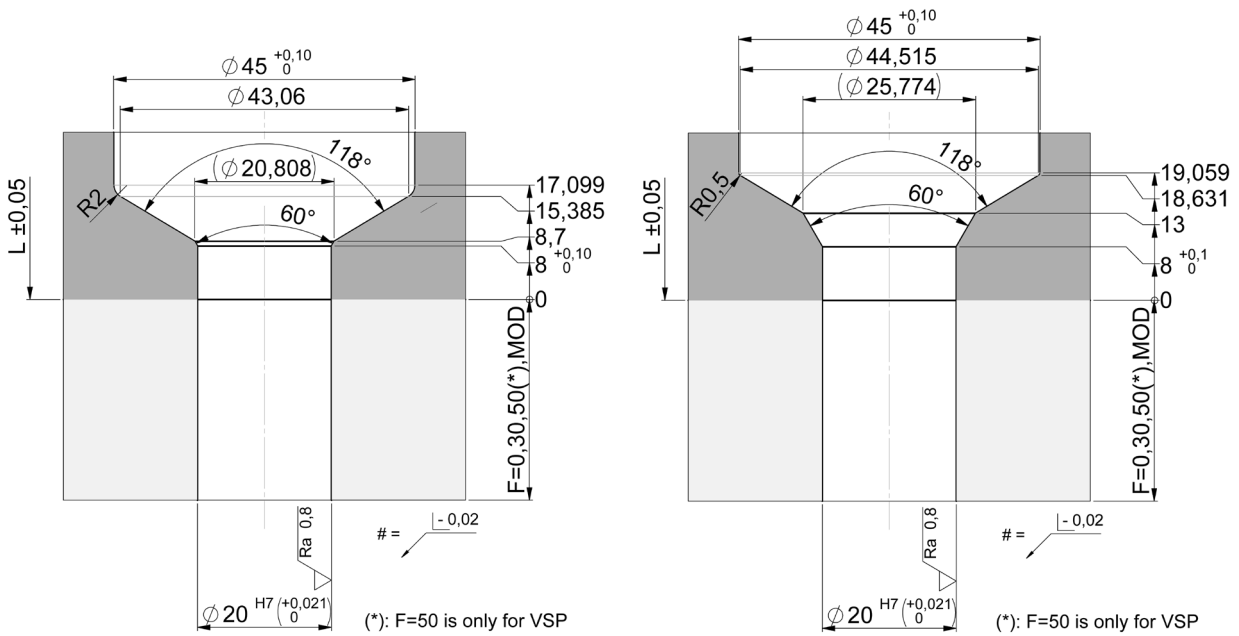
✓ Preferred      (✓) Available      ✗ Not Available



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.

VSP, VTP, TTP, TFP - Nozzle tip cutout dimensions



Standard Cutout

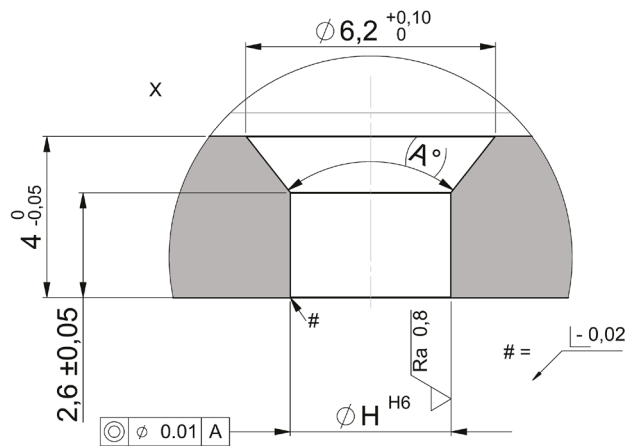
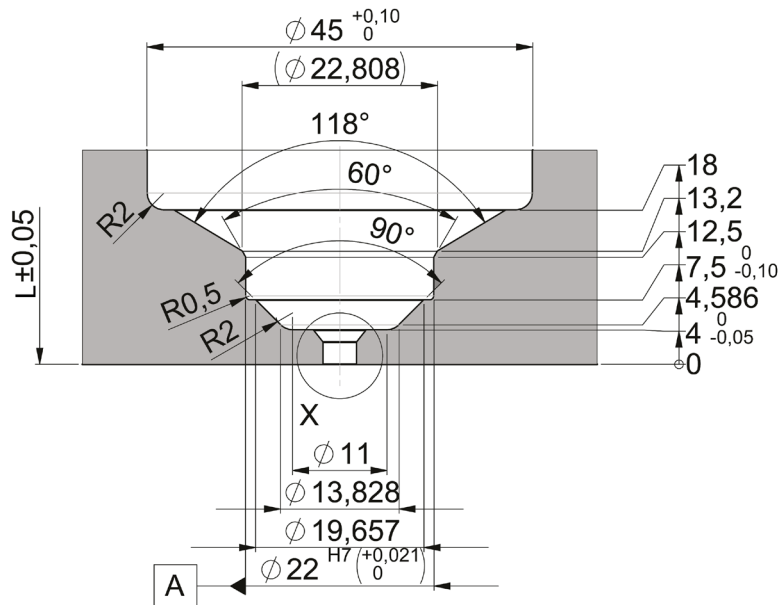
Reduced Cutout



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



ØH H6	(A°)
4,0 <sup>+0,008</sup> / <sub>0</sub>	76,31
5,0 <sup>+0,008</sup> / <sub>0</sub>	46,4

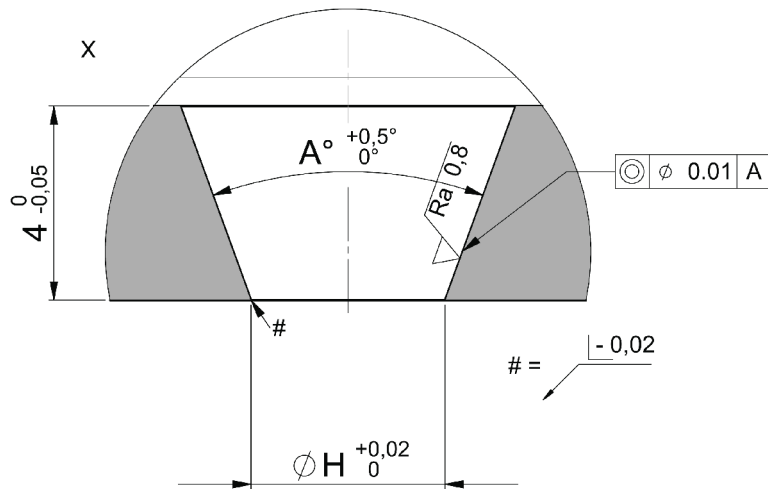
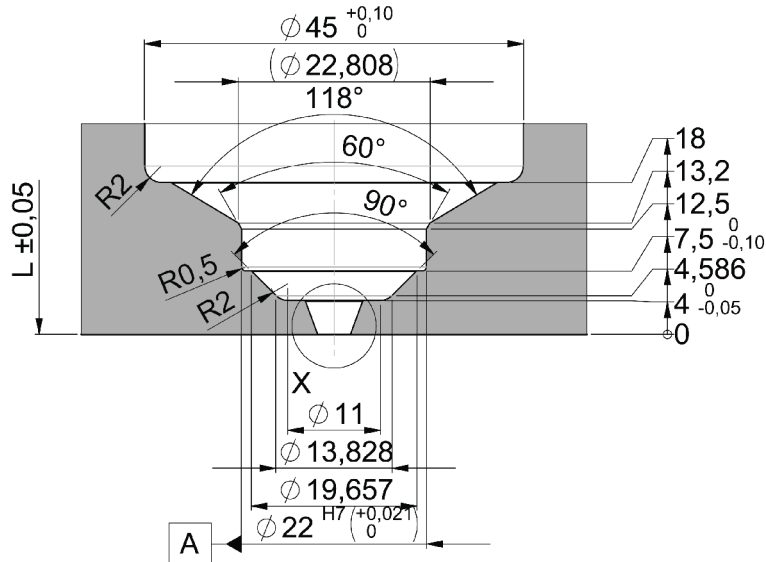
1. At the area of the nozzle gate replaceable, hardened (52 +2/-1HRC) inserts are recommended by Synventive.
2. Synventive recommends that the gate area geometry is manufactured by grinding and not EDM with a surface quality of  $\sqrt{Ra0,8}$



Nozzle Tip Cutout Dimensions

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.

VTW - Nozzle tip cutout dimensions



# =  $-0,02$

$\phi H$	A
4,0	$40^\circ$
4,5	$30^\circ$

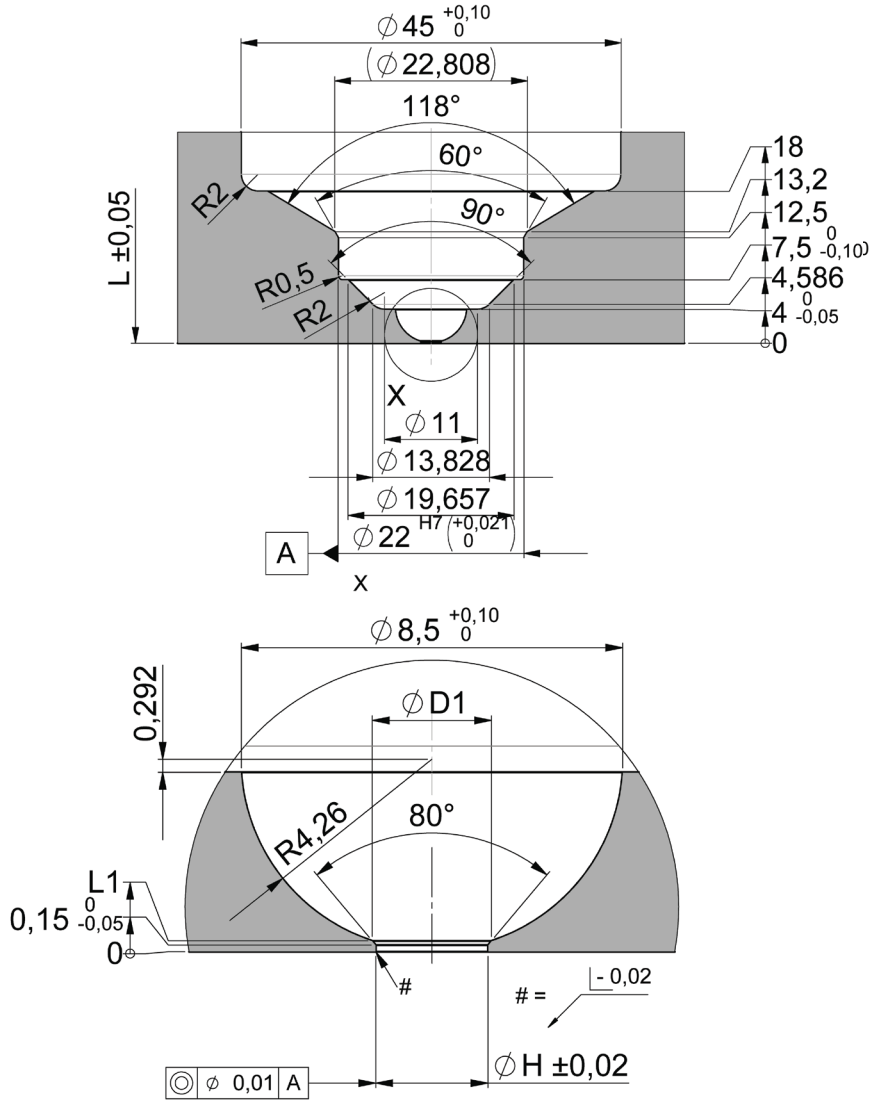
1. At the area of the nozzle gate replaceable, hardened ( $52 \pm 2/-1HRC$ ) inserts are recommended by Synventive.
2. Synventive recommends that the gate area geometry is manufactured by grinding and not EDM with a surface quality of  $\sqrt{Ra0,4}$



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.

TTW - Nozzle tip cutout dimensions



$\phi H$	L1	D1
2,5	0,244	2,658
3	0,384	3,393
3,5	0,602	4,259
4	1,025	5,468

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  $\sqrt{Ra0,8}$



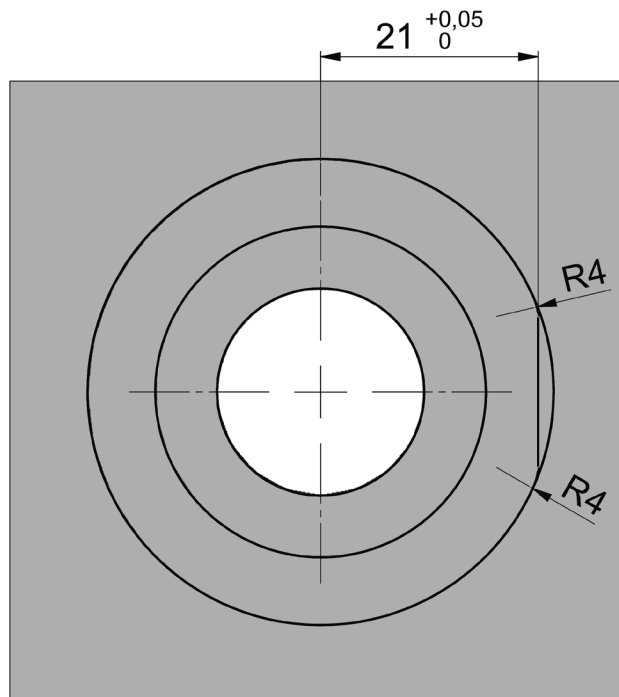
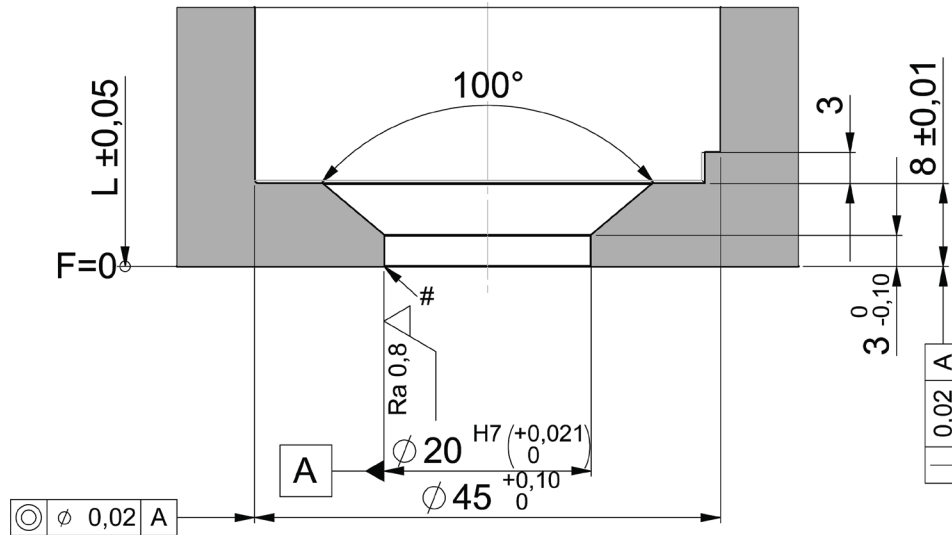




Wear Insert Cutout Dimensions

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.

VSW, VTW, TTW - Wear insert cutout dimensions





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