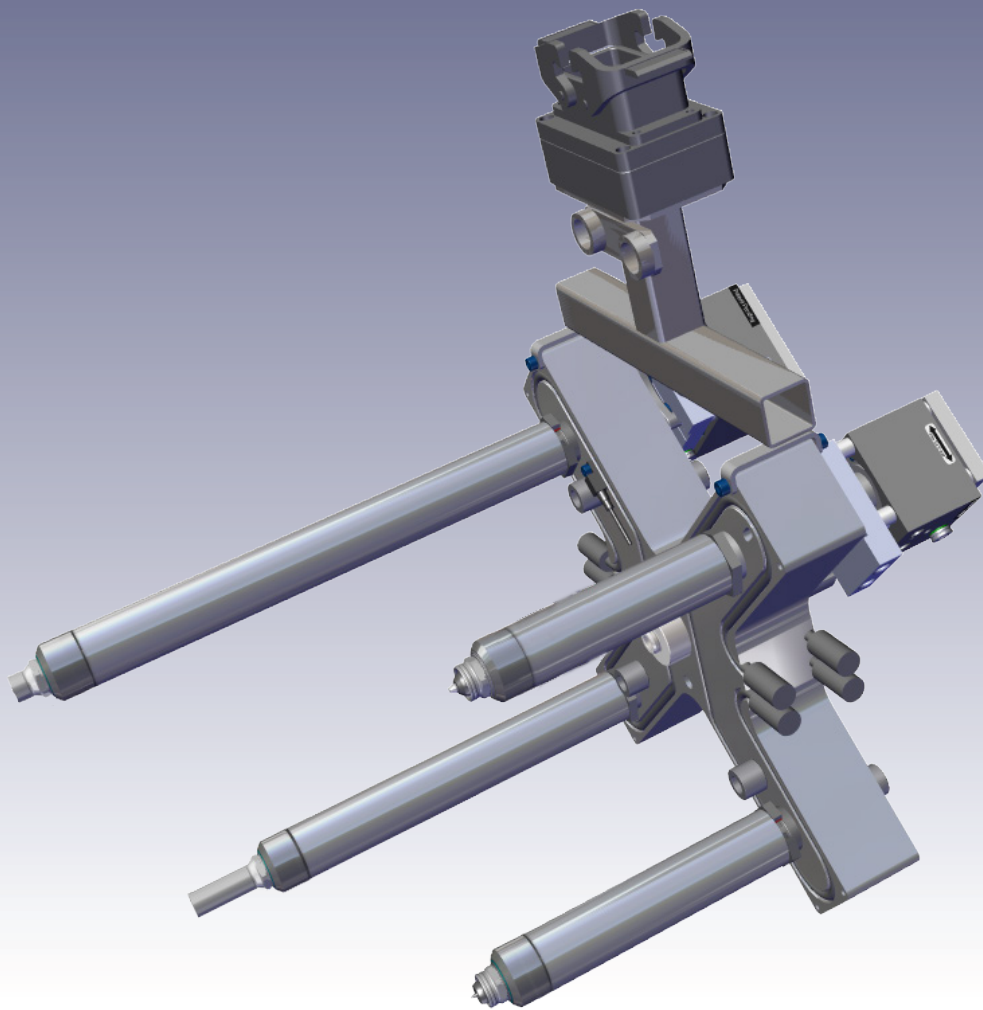


12E-06 Product Catalog

Threaded Nozzles Hot Runner Series

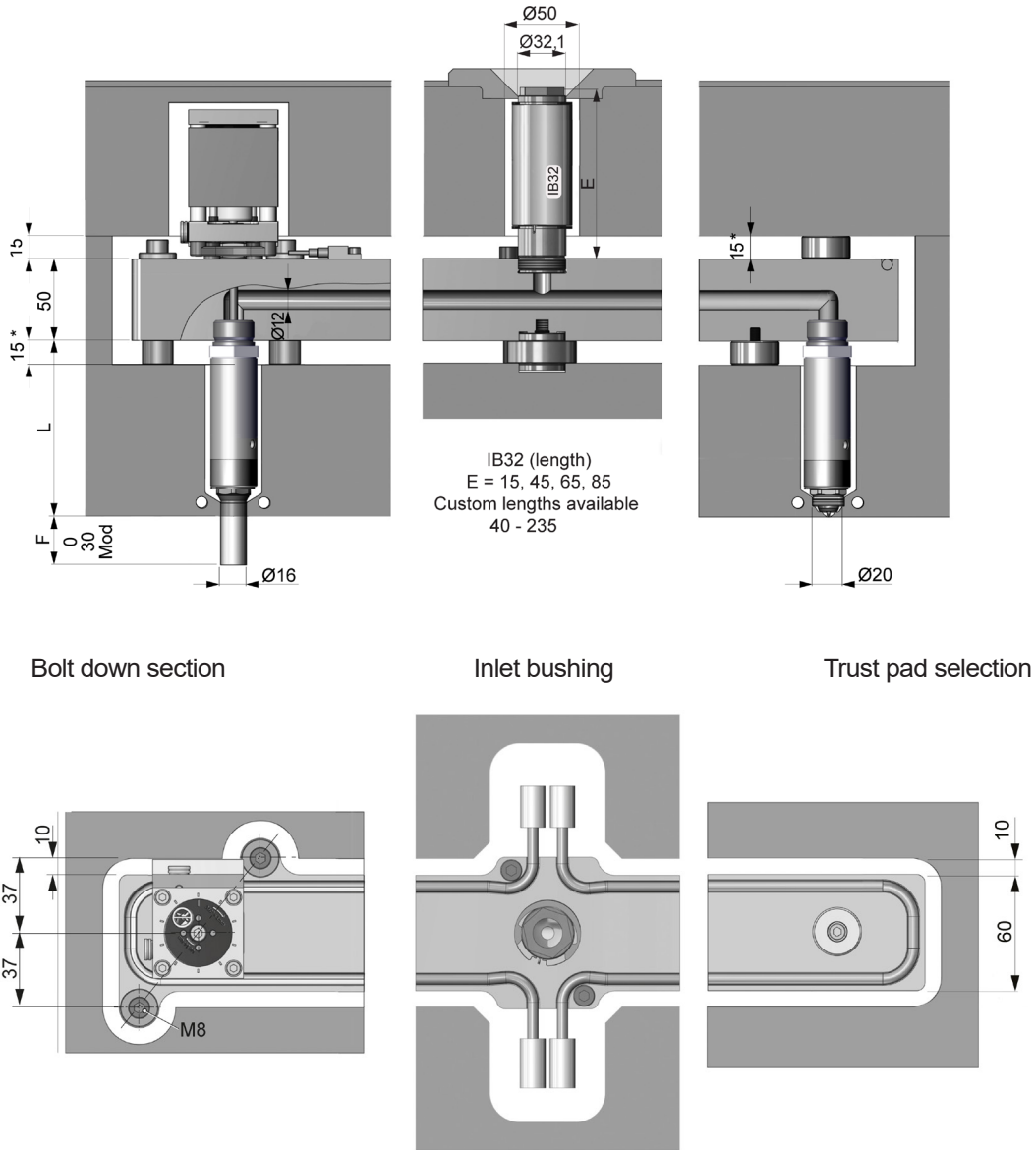


Stabilize your Process _____



Hot Runner System - Thrust Pad / Bolt Down Manifold

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

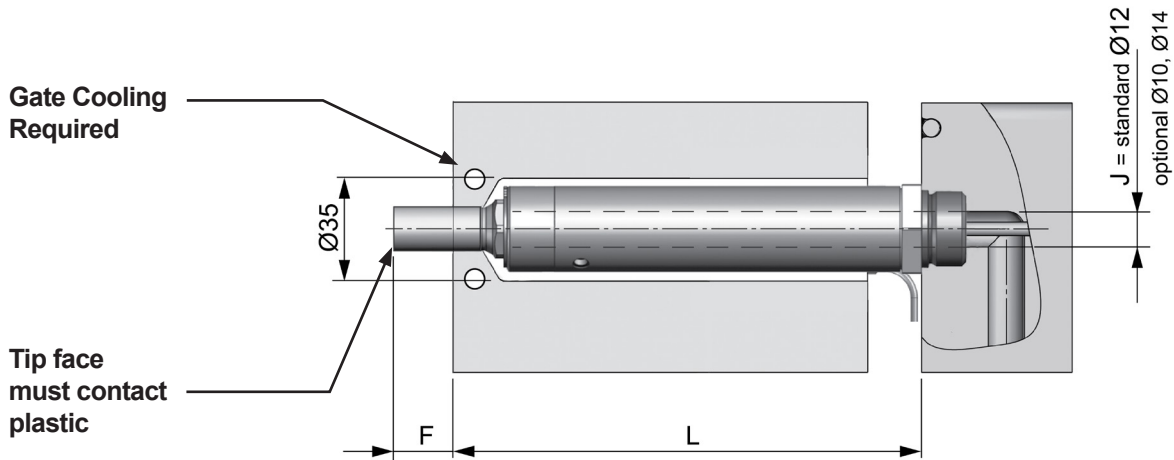


*min.10¹⁾ For a specific application, please consult Synventive



Nozzle Lengths

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



L (mm)	Heater zone power (Watt)		L (mm)	Heater zone power ¹⁾ (Watt)		
	Power1			Power 1	Power 2	Power 3
One control area (thermocouple) Standard lengths		Two control areas (thermocouple) Custom lengths				
60	195W	200	215W	265W	-	
80	215W	225	215W	305W	-	
100	230W	250	215W	345W	-	
125	250W	275	215W	385W	-	
150	270W	300	215W	425W	-	
175	290W	325	215W	465W	-	
		350	215W	505W	-	
		375	215W	545W	-	
Custom lengths		400	215W	585W	-	
>60-<100	300W	425	215W	625W	-	
>100-<150	337W	450	215W	665W	-	
>150-<200	375W	475	215W	705W	-	
>200-<250	417W	500	215W	745W	-	
		525	215W	785W	-	
		550	215W	825W	-	
		575	215W	865W	-	
		600	215W	905W	-	
		625	215W	945W	-	
		650	215W	985W	-	
		675	215W	825W	265W	
		700	215W	825W	305W	
		725	215W	825W	345W	
		750	215W	825W	385W	
		775	215W	825W	425W	
		800	215W	825W	465W	
		825	215W	825W	505W	
		850	215W	825W	545W	
		875	215W	825W	585W	
		900	215W	825W	625W	
		915	215W	825W	665W	

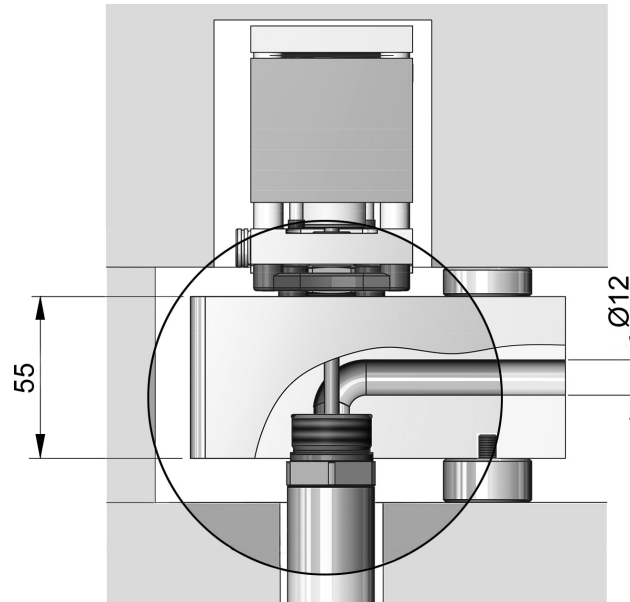
¹⁾ The numbering of the heating zones starts at the nozzle tip and ends at the nozzle head



Optional Features

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

Smooth Flow

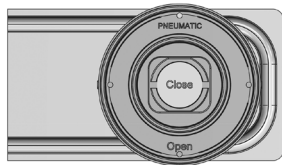
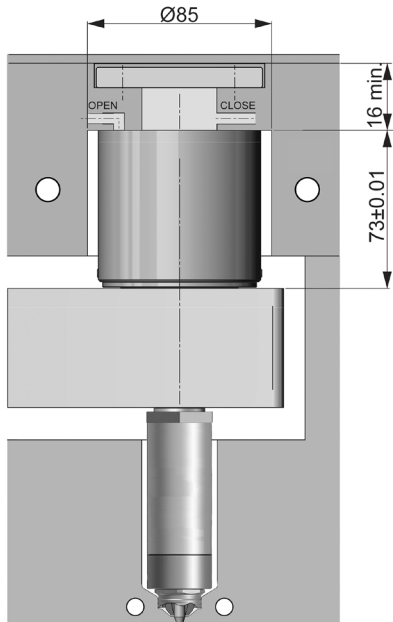




Available Actuators

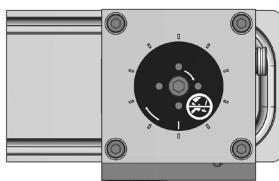
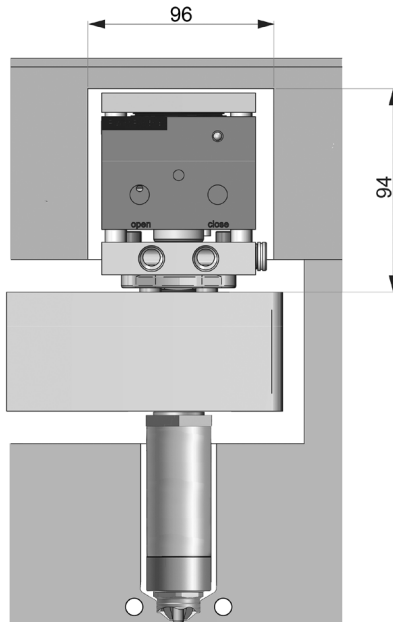
Illustrations simplified, schematically drawn and not to scale. All dimensions in mm.

**PNC6018B
(pneumatic)**



Pressure range:
6 - 12 bar (87 - 174 psi)
Min/Max Close Forces:
1696 N / 3393 N

**PB6016
(pneumatic)**

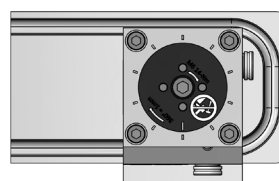
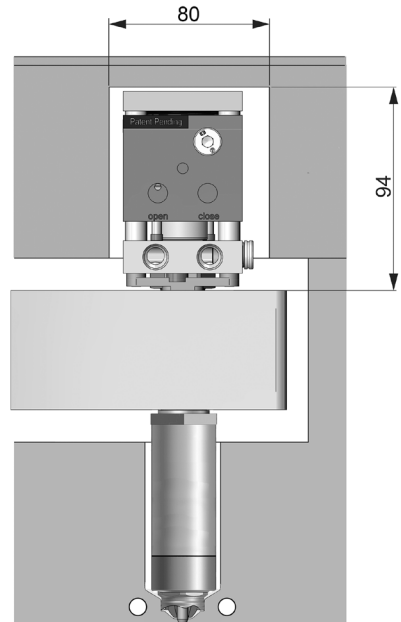


Pressure range:
6 - 12 bar (87 - 174 psi)
Min/Max Close Forces:
1696 N / 3393 N

Available features:

- ◆ Position Sensor
- ◆ SynCool®

**HB4016
(hydraulic)**



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

Available features:

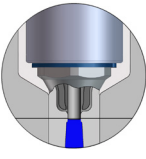
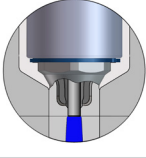
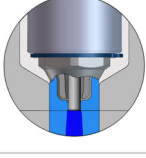
- ◆ Position Sensor
- ◆ SynCool®



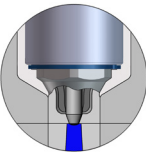
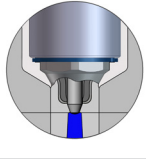
Nozzle Tip Styles

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 = Ø16 F = 0, 30, Mod	
			H=4.0	H=5.0
	VSP	Standard	✓	(✓)
	VSP-SC	Color Seal	✓	(✓)
	VSP-WC	Wear C	(✓)	✓

VTP Valve Gate - Tapered Pin - Plunged Through

Tip Style		Description	Dt = Ø16 F = 0, 30, Mod	
			H=3.0	H=3.5
	VTP	Standard	✓	(✓)
	VTP-SC	Color Seal	✓	(✓)

✓ Preferred

(✓) Available

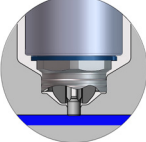
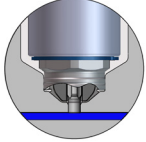
✗ Not Available



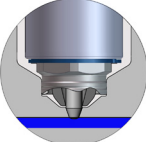
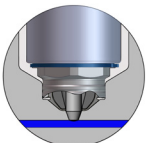
Nozzle Tip Styles

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 = Ø20	
			H=3.0	H=4.0
	VSW	Standard	✓	(✓)
	VSW-SC	Color Seal	✓	(✓)

VTW Valve Gate - Tapered Pin - Blind

Tip Style		Description	Dt = Ø20			
			H=2.0	H=2.5	H=3.0	H=3.5
	VTW	Standard	(✓)	(✓)	✓	(✓)
	VTW-SC	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 = Ø20			
		H=2.0	H=2.5	H=3.0	H=3.5
 TTW	Standard	✓	✓	✓	✓
 TTW-SC	Color Seal	✓	✓	✓	✓

TTP Thermal Gate – Torpedo - Plunged Through

Tip Style	Description	Dt = Ø16 F = 0, 30, Mod			
		H=2.0	H=2.5	H=3.0	H=3.5
 TTP	Standard	✓	✓	✓	✓
 TTP-SC	Color Seal	✓	✓	✓	✓

TFP Thermal Gate – Full Flow - Plunged Through

Tip Style	Description	Dt = Ø16 F = 0, 30, Mod			
		H=1.5	H=2.0	H=2.5	H=3.0
 TFP	Standard	✓	✓	✓	✓
 TFP-SC	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

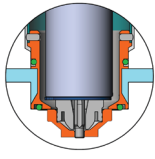
Wear Insert

Part		Description	F = 0, 30, Mod				
			H=2.0	H=2.5	H=3.0	H=3.5	H=4.0
	WI-VTW	Wear Insert for VTW Nozzle tips	✓	✓	✓	✓	✗
	WI-VSW	Wear Insert for VSW Nozzle tips	✗	✗	✓	✗	✓
	WI-TTW	Wear Insert for TTW Nozzle tips	✓	✓	✓	✓	✗

Cooling Bushing

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

Wear Insert and Cooling Bushing

Part	VSW	VTW	TTW
			
NC + WI Wear Insert combined with Nozzle Cooling Bushing for Nozzle Tip Blind	✓	✓	✓

✓ Preferred

(✓) Available

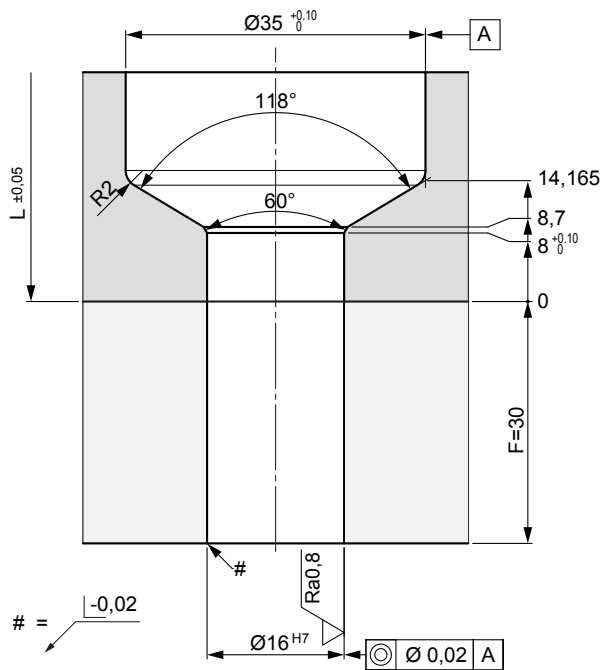
✗ Not Available



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

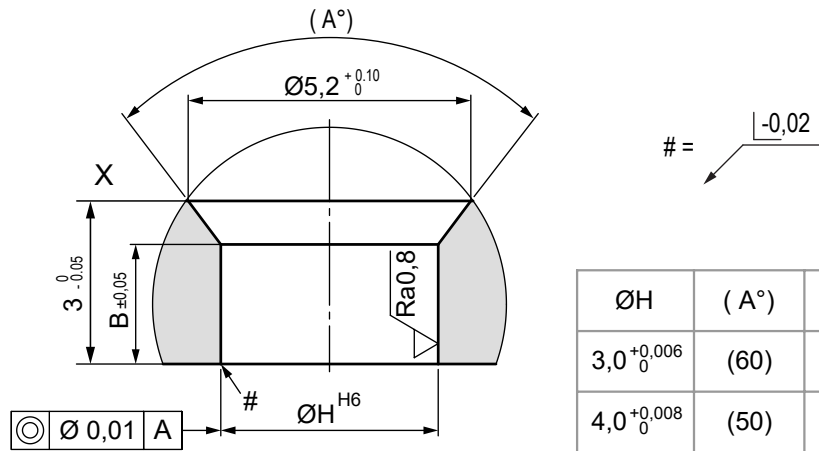
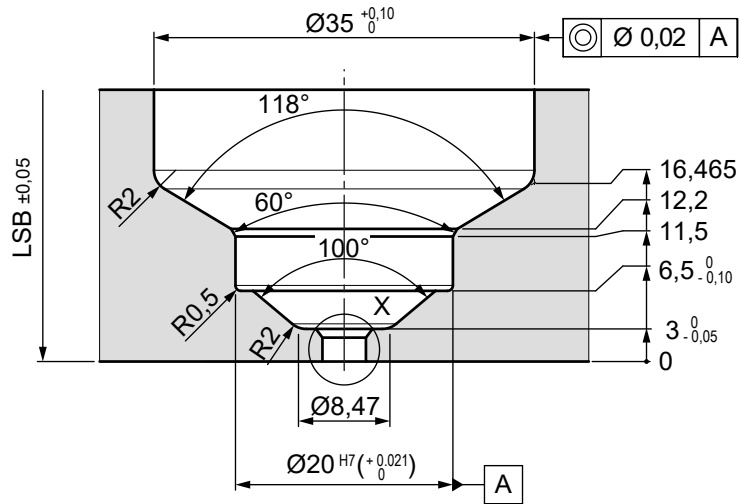




Nozzle Tip Cutout Dimensions

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	(A°)	B
3,0 ^{+0.006} ₀	(60)	1.27
4,0 ^{+0.008} ₀	(50)	1.72

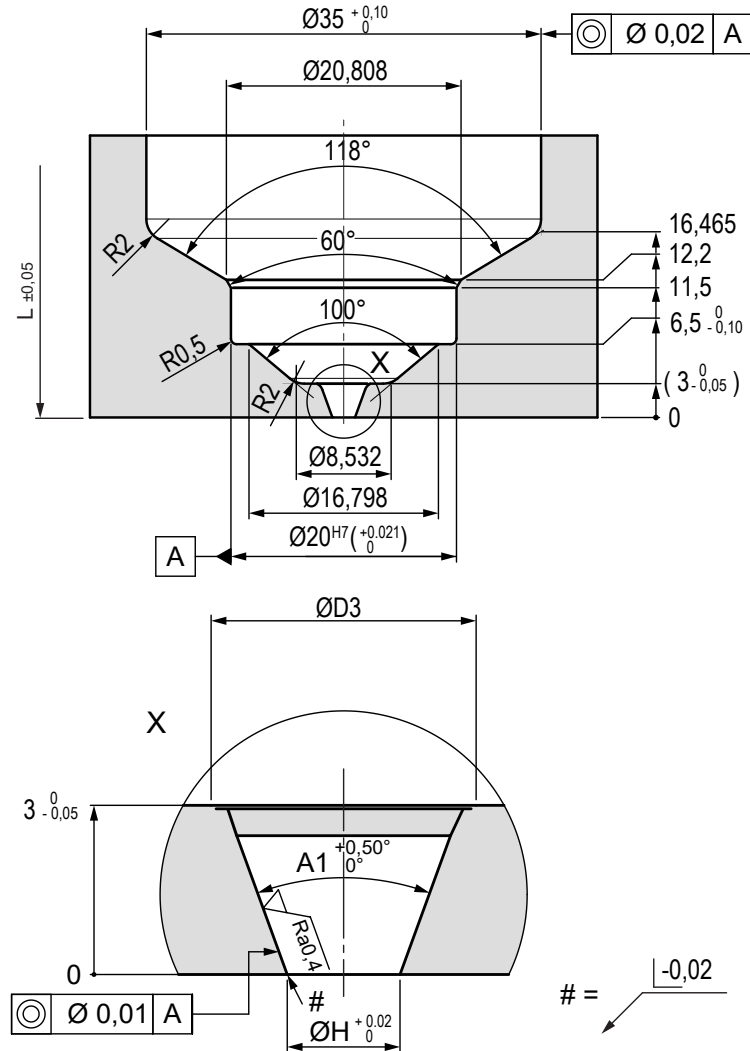
1. At the area of the nozzle gate replaceable, hardened (52 +2/-1HRC) inserts are recommended by Synventive.
2. Synventive recommends that the gate area geometry is manufactured by grinding and not EDM with a surface quality of $\sqrt{Ra0.8}$



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



$\varnothing H$	A1	D3
2,0	40°	4,18
2,5	30°	4,11
3,0	40°	5,18
3,5	30°	5,11

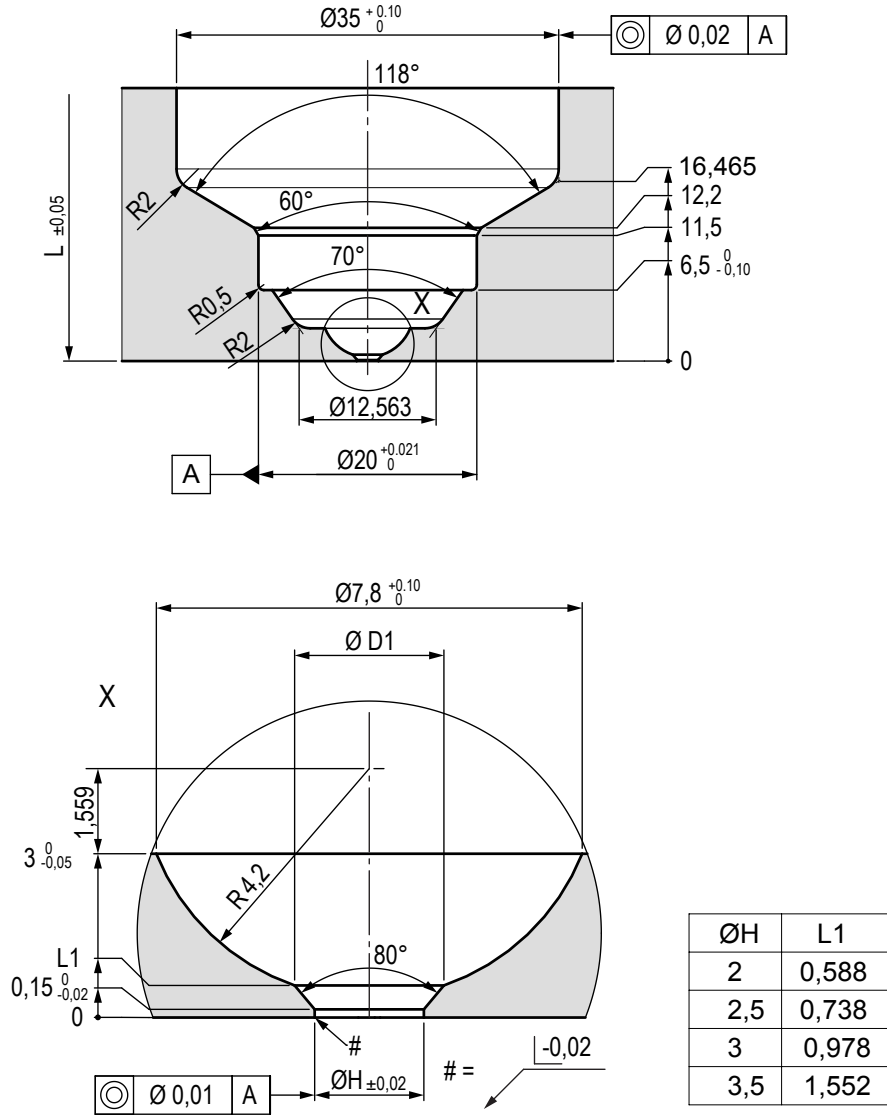
1. At the area of the nozzle gate replaceable, hardened (52 +2/-1HRC) inserts are recommended by Synventive.
2. Synventive recommends that the gate area geometry is manufactured by grinding and not EDM with a surface quality of $\sqrt{Ra0,4}$



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



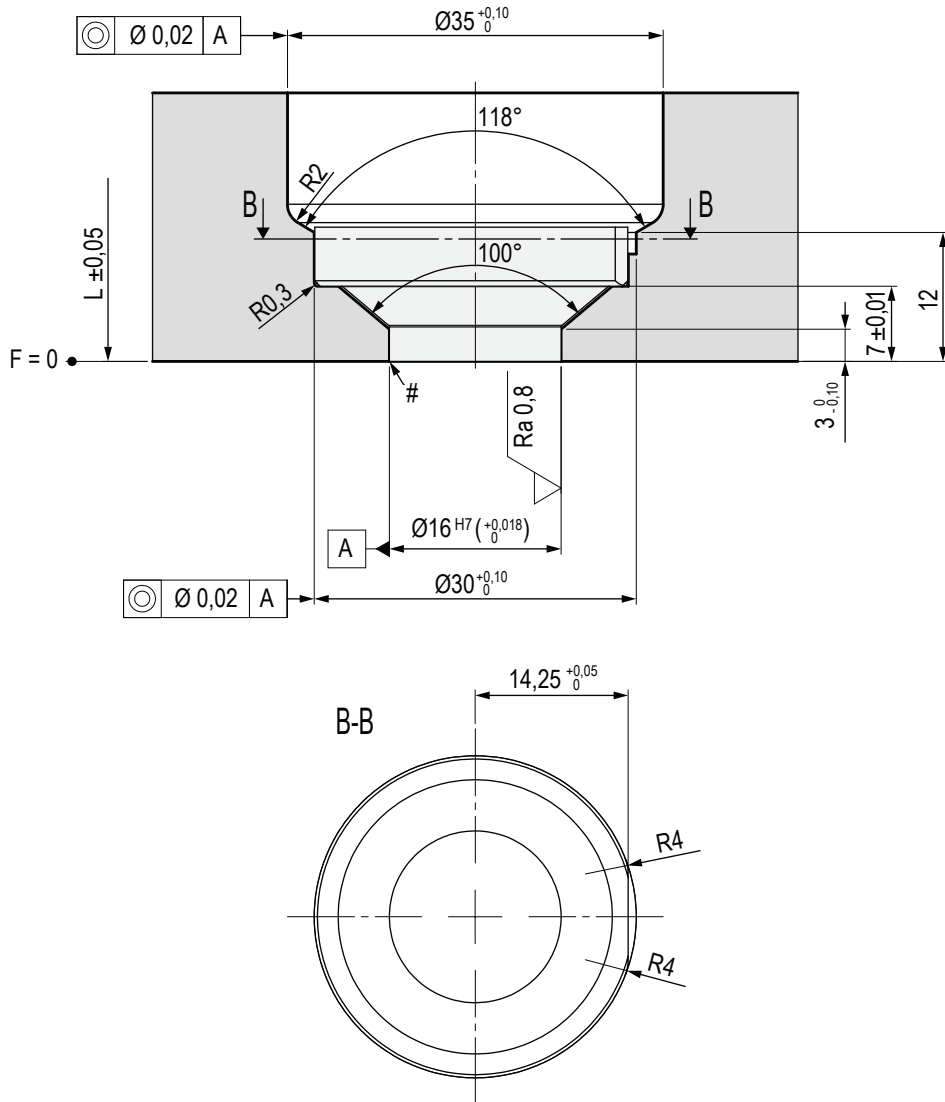
1. At the area of the nozzle gate replaceable, hardened (52 +2/-1HRC) inserts are recommended by Synventive.
2. Synventive recommends that the gate area geometry is manufactured by grinding and not EDM with a surface quality of $\sqrt{Ra0,8}$



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





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

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