

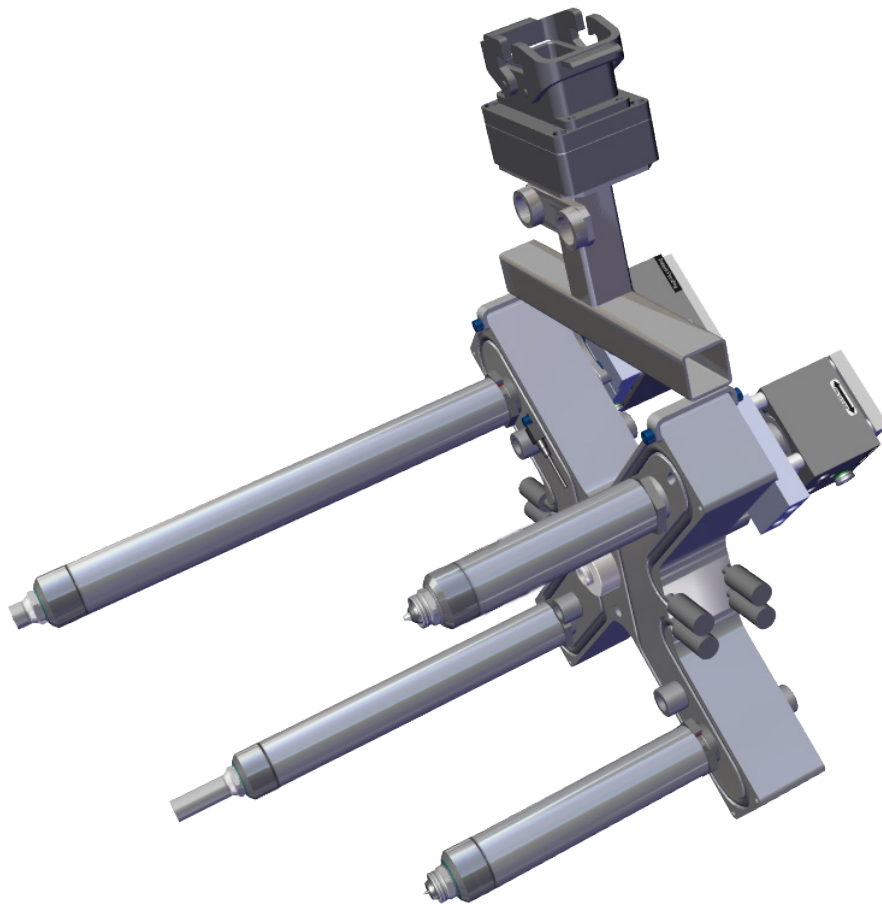


**BARNES™**  
MOLDING SOLUTIONS

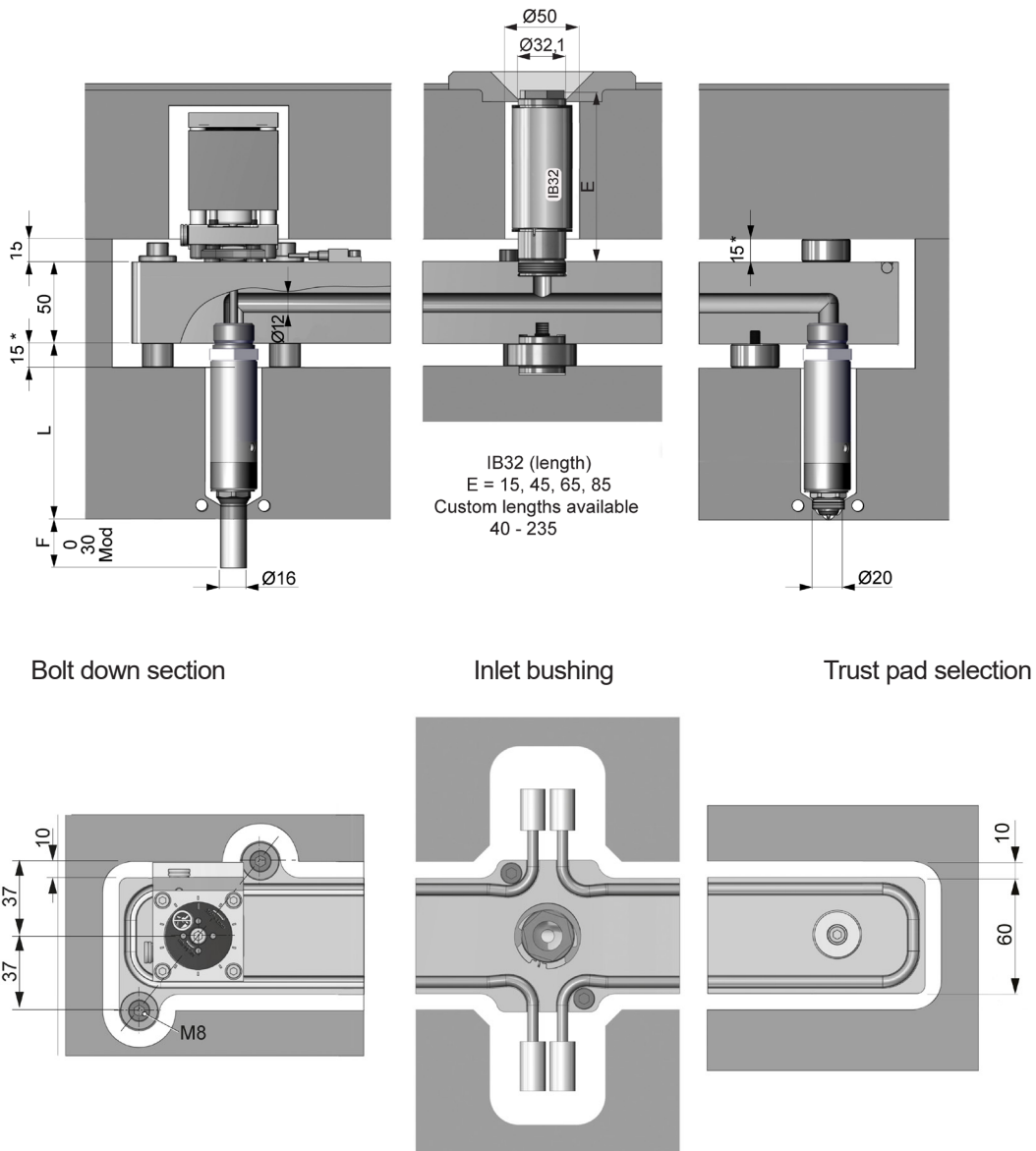
HOT RUNNER TECHNOLOGY

# 12E-06 Threaded Nozzles

Product Catalog

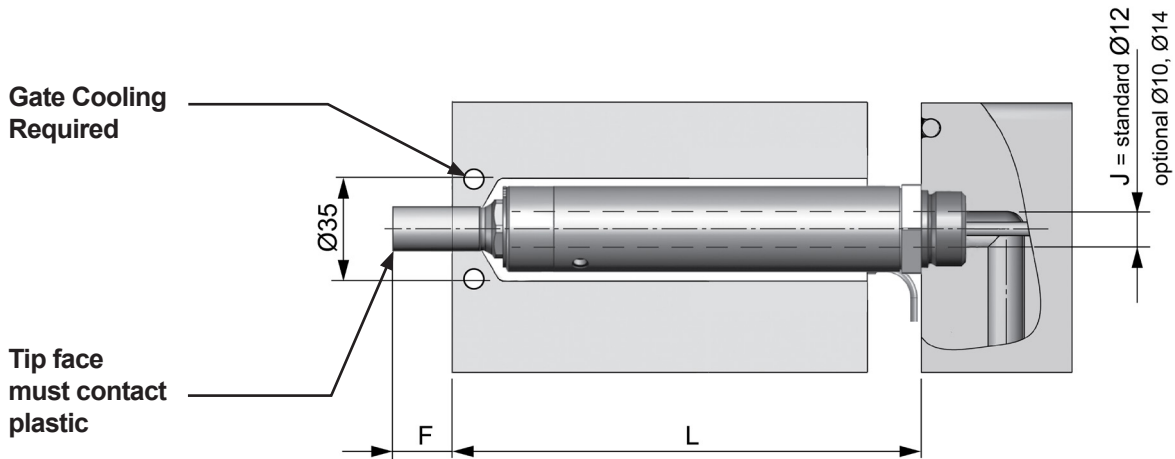


Illustrations simplified, schematically drawn and not to scale. All dimensions in mm.



\*min.10 <sup>1)</sup> For a specific application, please consult Synventive

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



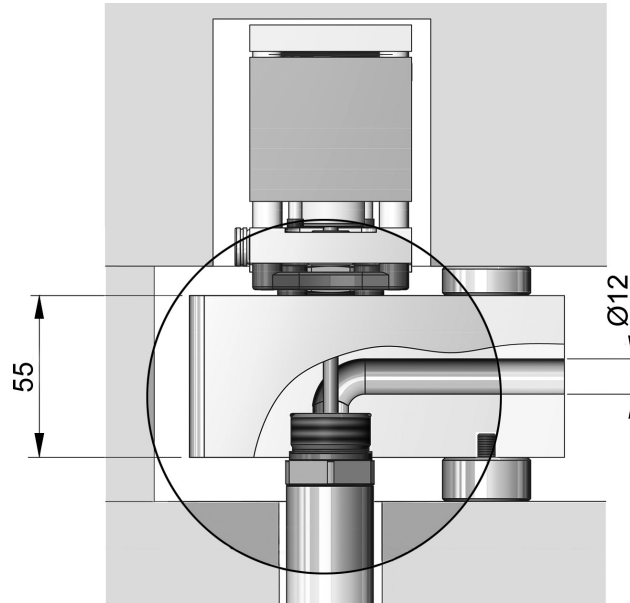
L (mm)	Heater zone power (Watt)		L (mm)	Heater zone power <sup>1)</sup> (Watt)		
	Power1			Power 1	Power 2	Power 3
One control area (thermocouple) Standard lengths			Two control areas (thermocouple) Custom lengths			
60	195W		200	215W	265W	-
80	215W		225	215W	305W	-
100	230W		250	215W	345W	-
125	250W		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

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



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

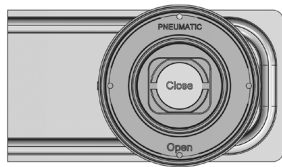
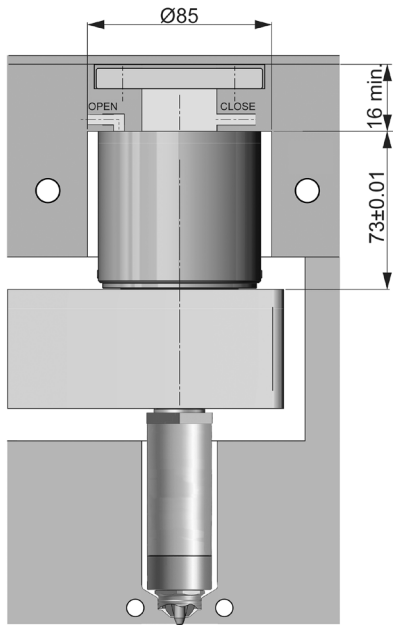
## Smooth Flow





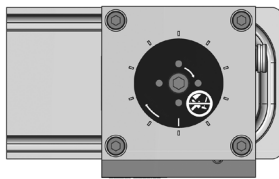
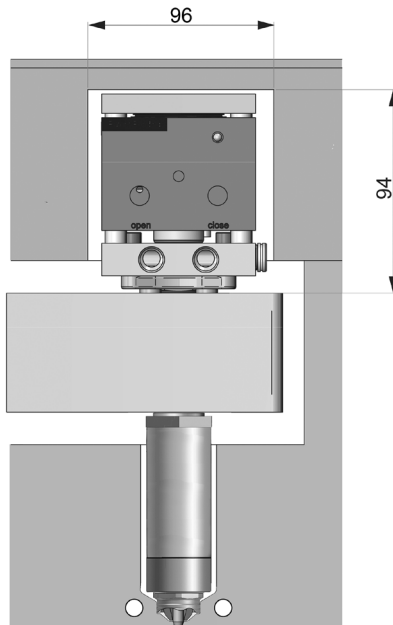
Illustrations simplified, schematically drawn and not to scale. All dimensions in mm.

**PNC6018B  
(pneumatic)**



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

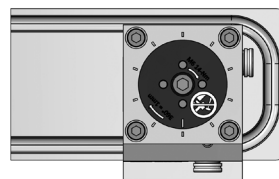
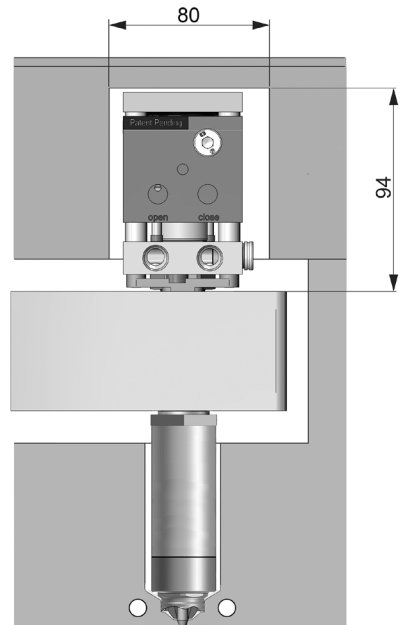
**PB6016  
(pneumatic)**



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

Available features:  
◆ Position Sensor  
◆ SynCool®

**HB4016  
(hydraulic)**

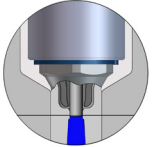
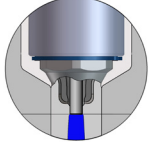
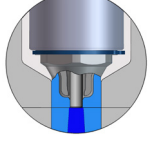


Pressure range:  
40 - 60 bar (600 - 870 psi)  
Min/Max Close Forces:  
5027 N / 7540 N

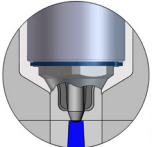
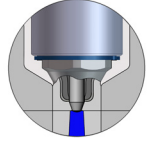
Available features:  
◆ Position Sensor  
◆ SynCool®

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
	<b>VSP</b>	Standard	✓	(✓)
	<b>VSP-SC</b>	Color Seal	✓	(✓)
	<b>VSP-WC</b>	Wear C	(✓)	✓

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

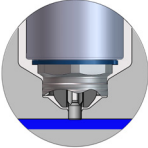
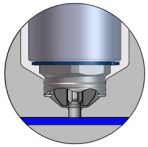
Tip Style		Description	Dt = Ø16 F = 0, 30, Mod	
			H=3.0	H=3.5
	<b>VTP</b>	Standard	✓	(✓)
	<b>VTP-SC</b>	Color Seal	✓	(✓)

 Preferred     
  Available     
  Not Available

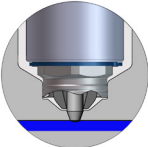
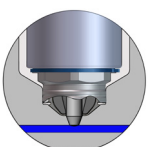


Illustrations simplified, schematically drawn and not to scale. All dimensions in mm.  
H = Gate orifice diameter, F = Tip extension, Dt = Tip Diameter, Mod = Modifiable

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

Tip Style		Description	Dt = Ø20		
			H=2.5	H=3.0	H=4.0
	<b>VSW</b>	Standard	✓	✓	(✓)
	<b>VSW-SC</b>	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
	<b>VTW</b>	Standard	(✓)	(✓)	✓	(✓)
	<b>VTW-SC</b>	Color Seal	(✓)	(✓)	✓	(✓)

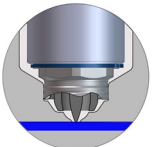
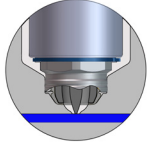
✓ Preferred

(✓) Available

✗ Not Available

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

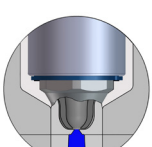
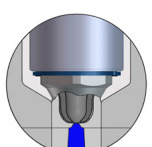
**TTW** Thermal Gate – Torpedo - Blind

Tip Style	Description	Dt = Ø20			
		H=2.0	H=2.5	H=3.0	H=3.5
 <b>TTW</b>	Standard	✓	✓	✓	✓
 <b>TTW-SC</b>	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
 <b>TTP</b>	Standard	✓	✓	✓	✓
 <b>TTP-SC</b>	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
 <b>TFP</b>	Standard	✓	✓	✓	✓
 <b>TFP-SC</b>	Color Seal	✓	✓	✓	✓

✓ Preferred     
 (✓) Available     
 ✗ Not Available



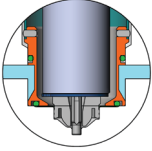


Illustrations simplified, schematically drawn and not to scale. All dimensions in mm.  
H = Gate orifice diameter, F = Tip extension, Dt = Tip Diameter, Mod = Modifiable

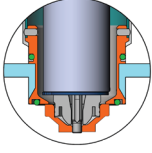
**Wear Insert**

Part	Description	F = 0, 30, Mod				
		H=2.0	H=2.5	H=3.0	H=3.5	H=4.0
 <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	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	VSW	VTW	TTW
 <b>NC + WI</b>			
Wear Insert combined with Nozzle Cooling Bushing for Nozzle Tip Blind	✓	✓	✓

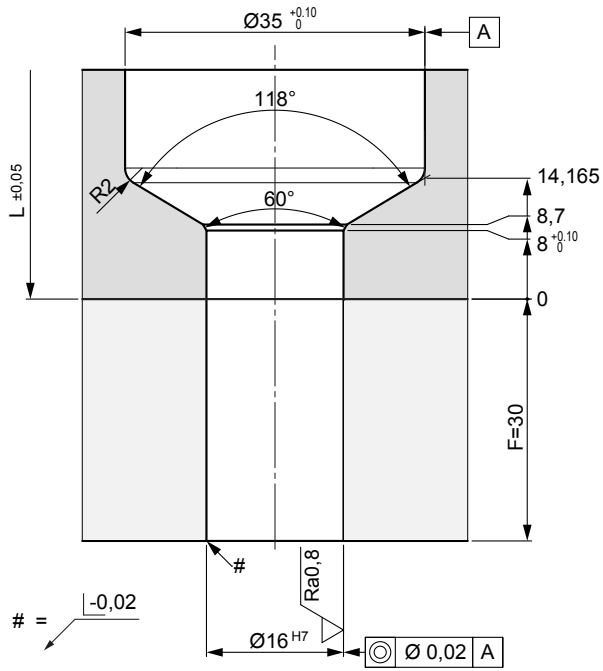
✓ Preferred

(✓) Available

✗ Not Available

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.

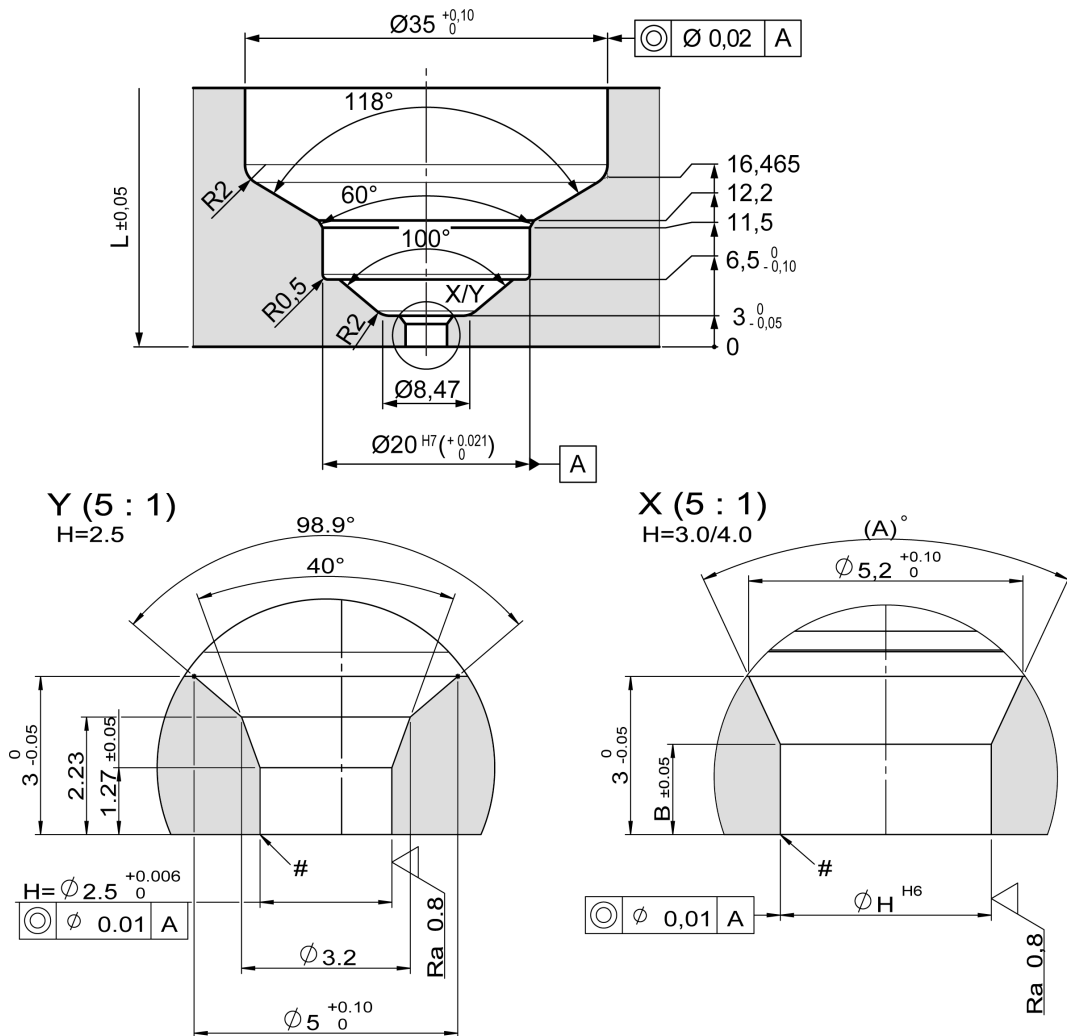
### VSP, VTP, TTP, TFP Nozzle tip cutout dimensions



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

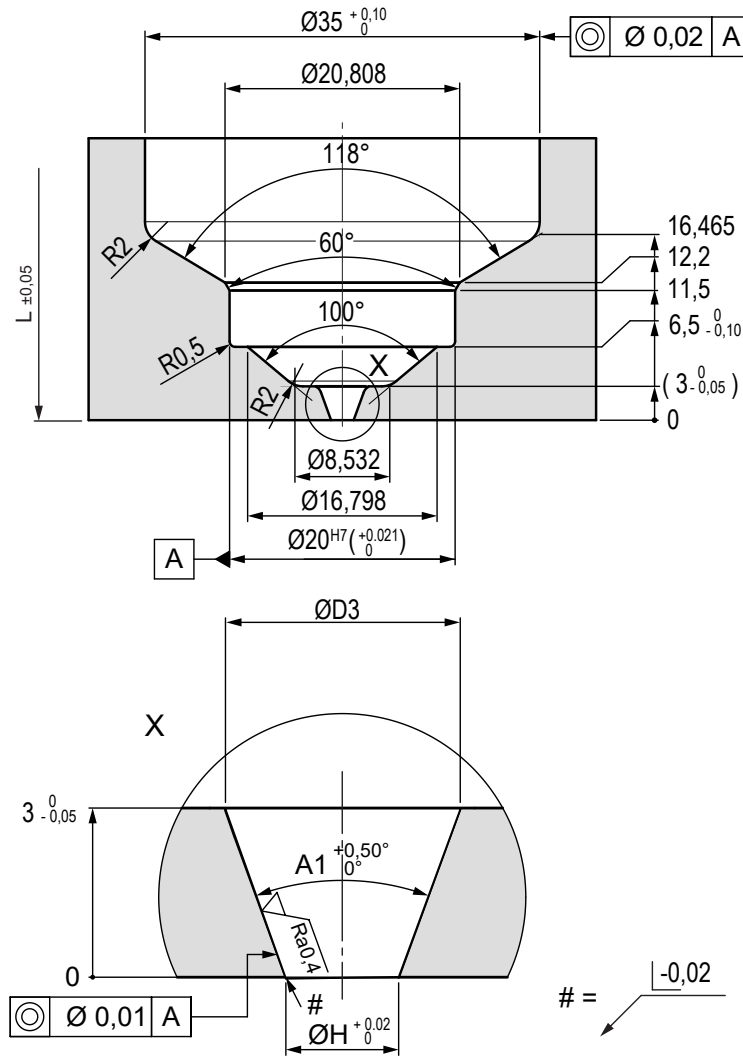


# =

1. At the area of the nozzle gate replaceable, hardened (52 +2/-1 HRC) Inserts are recommended by Synventive.
2. Synventive recommends that the gate area geometrie is manufactured by grinding and not EDM with a surface quality of  $\sqrt{Ra\ 0,8}$

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

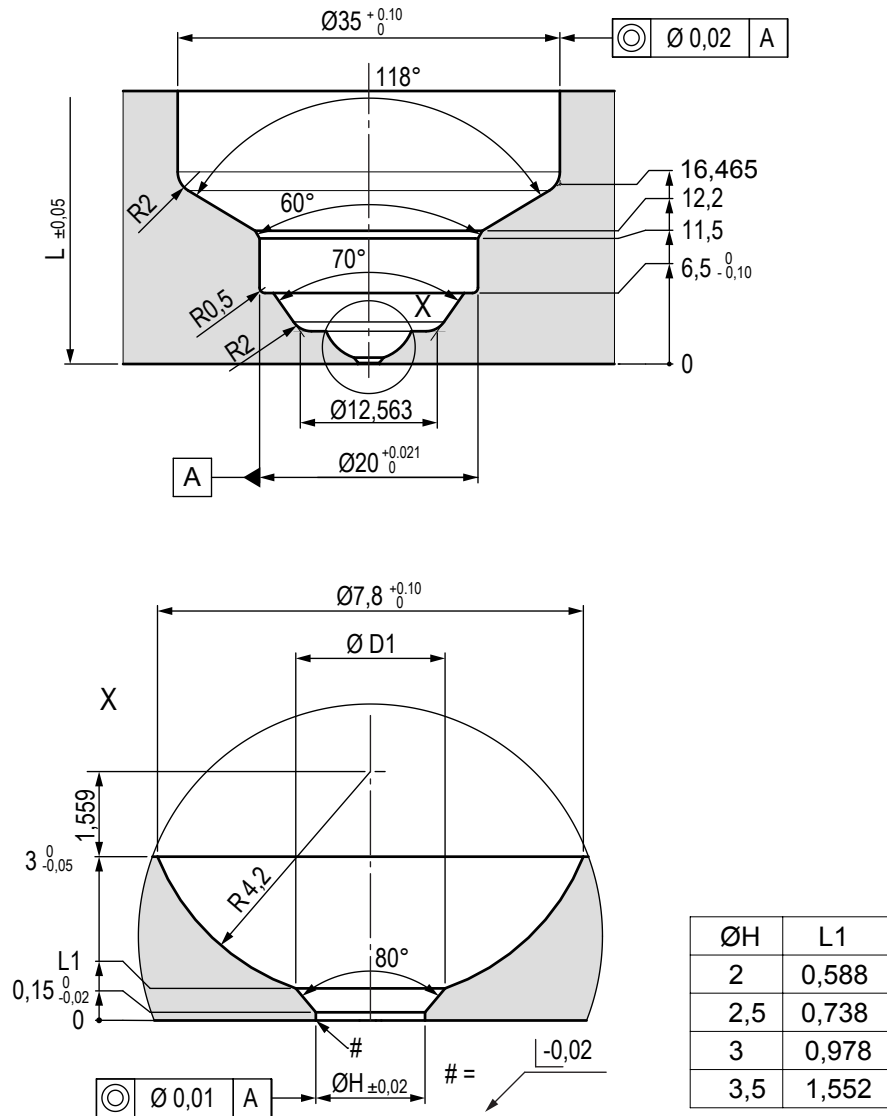


ØH	A1	D3
2,0	40°	4,18
2,5	30°	4,11
3,0	40°	5,18
3,5	30°	5,11

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  $\sqrt{Ra0,4}$

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



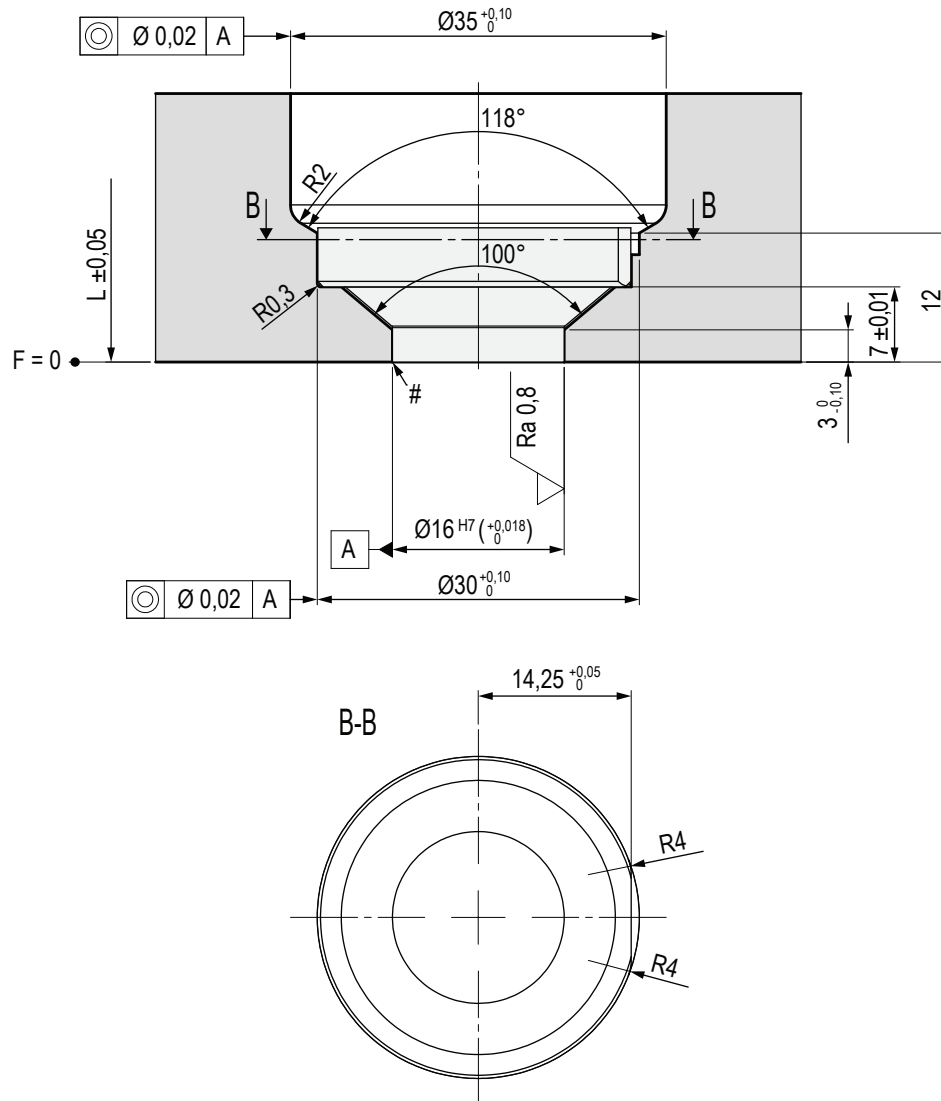
1. At the area of the nozzle gate replaceable, hardened (52 +2/-1HRC) inserts are recommended by Synventive.
2. Synventive recommends that the gate area geometry is manufactured by grinding and not EDM with a surface quality of  $\sqrt{Ra0,8}$





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**







**BARNES™**  
MOLDING SOLUTIONS



Barnes Molding Solutions is the expert cluster for molds, hot runners, and controls for industrial plastic injection molding. Our brands Fobooha, Männer, Synventive, Thermoplay, Priamus and Gammaflux are leaders in their field. We have a comprehensive and in-depth understanding of the automotive, medical, packaging and electronics industries. We support our customers with sophisticated high-performance technologies through to customized turnkey solutions.



[barnesmoldingsolutions.com](http://barnesmoldingsolutions.com)

