

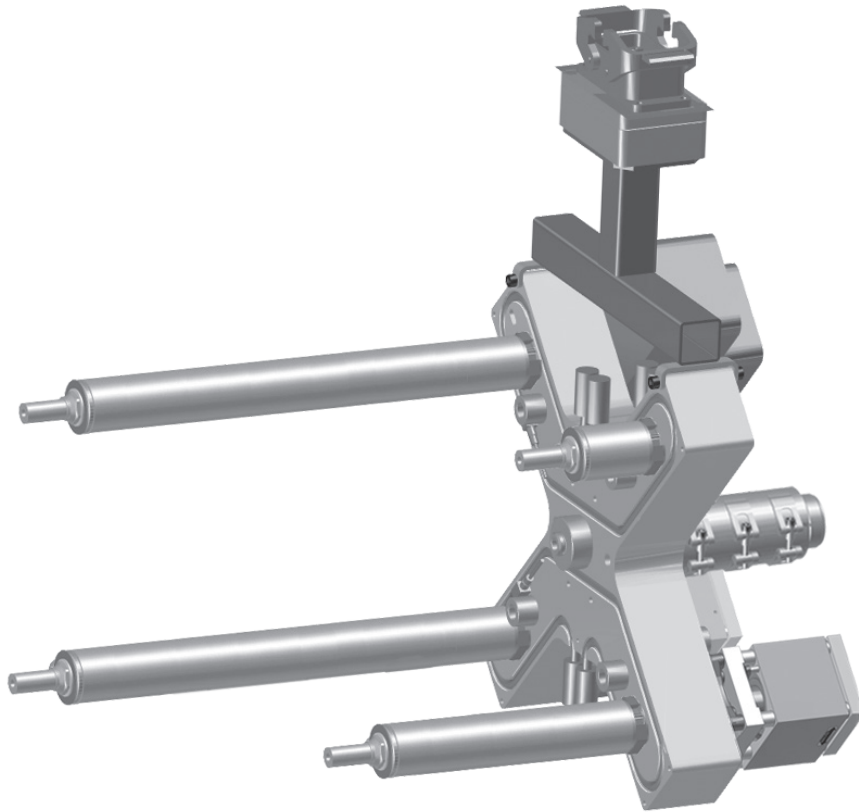


BARNES™
MOLDING SOLUTIONS

HOT RUNNER TECHNOLOGY

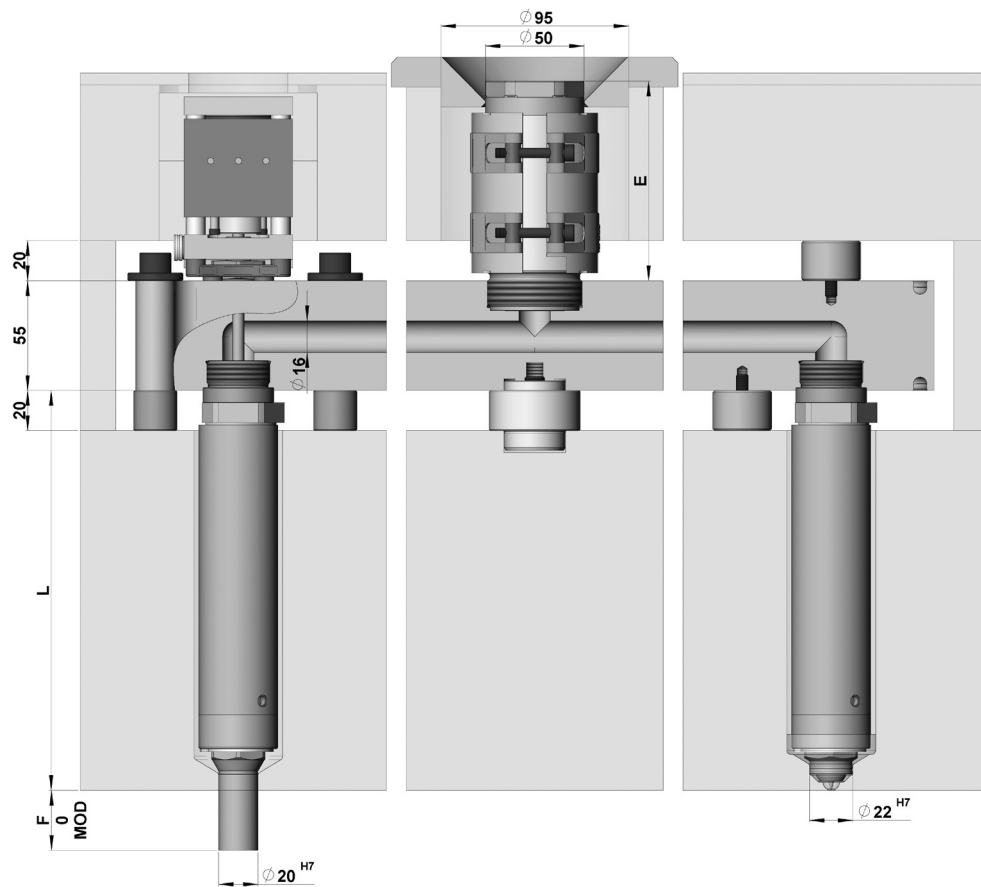
16E-06 Threaded Nozzles

Product Catalog





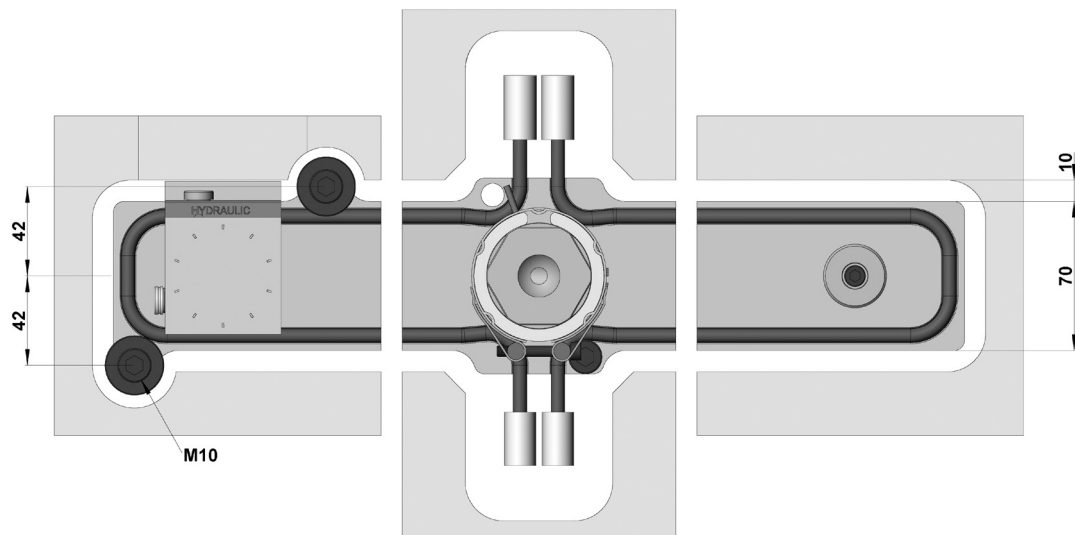
Illustrations simplified, schematically drawn and not to scale. All dimensions in mm.



Bolt down selection

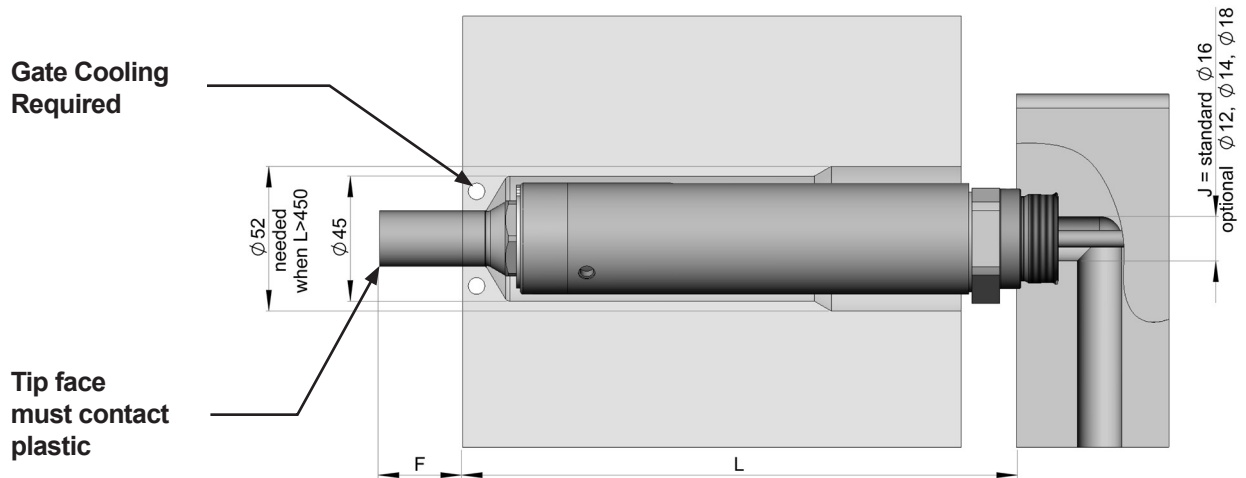
Inlet bushing

Thrust pad selection





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



L (mm)	Heater zone power ¹⁾ (Watt)			
	Power 1	Power 2	Power 3	Power 1-3
090 - 109,99	285 W	-	-	285 W
110 - 134,99	305 W	-	-	305 W
135 - 159,99	380 W	-	-	380 W
160 - 184,99	395 W	-	-	395 W
185 - 209,99	410 W	-	-	410 W
210 - 234,99	430 W	-	-	430 W
235 - 259,99	450 W	-	-	450 W
260 - 284,99	285 W	450 W	-	735 W
285 - 309,99	285 W	500 W	-	785 W
310 - 334,99	285 W	545 W	-	970 W
335 - 359,99	285 W	595 W	-	880 W
360 - 384,99	285 W	640 W	-	925 W
385 - 409,99	285 W	685 W	-	970 W
410 - 434,99	285 W	735 W	-	1020 W
435 - 459,99	285 W	780 W	-	1065 W
460 - 484,99	285 W	830 W	-	1115 W



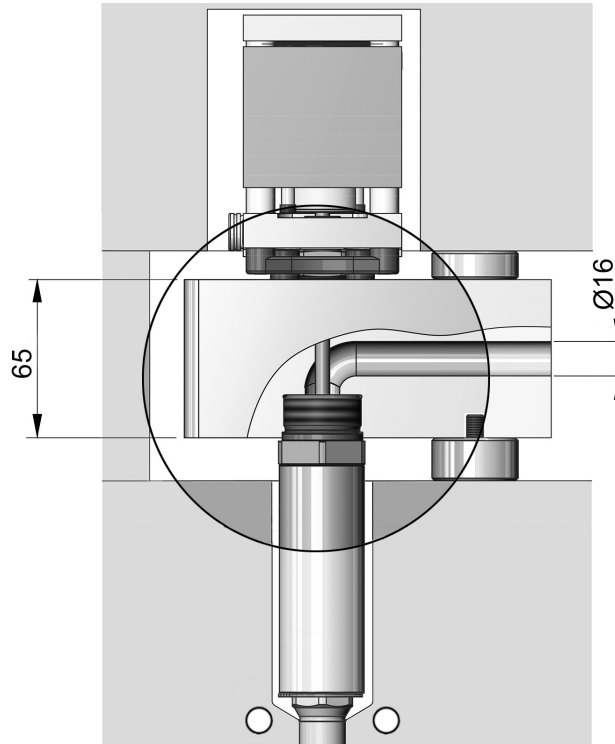
Illustrations simplified, schematically drawn and not to scale. All dimensions in mm.

485 - 509,99	285 W	875 W	-	1160 W
510 - 534,99	285 W	925 W	-	1210 W
535 - 559,99	285 W	970 W	-	1255 W
560 - 584,99	285 W	1020 W	-	1305 W
585 - 609,99	285 W	1065 W	-	1350 W
610 - 634,99	285 W	1155 W	-	1400 W
635 - 659,99	285 W	1160 W	-	1445 W
660 - 684,99	285 W	1205 W	-	1490 W
¹⁾ 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.

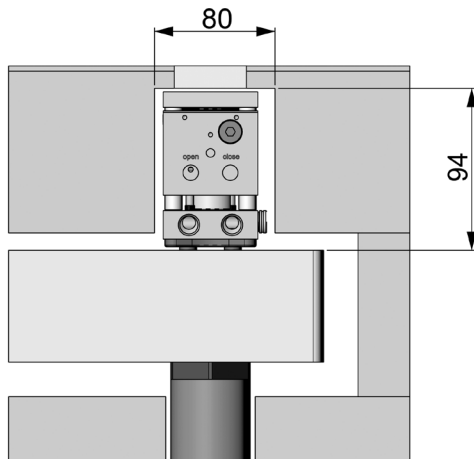
Smooth flow



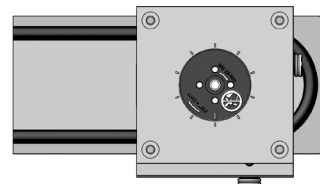
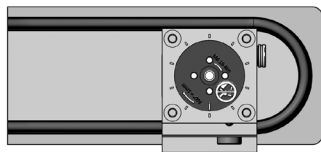
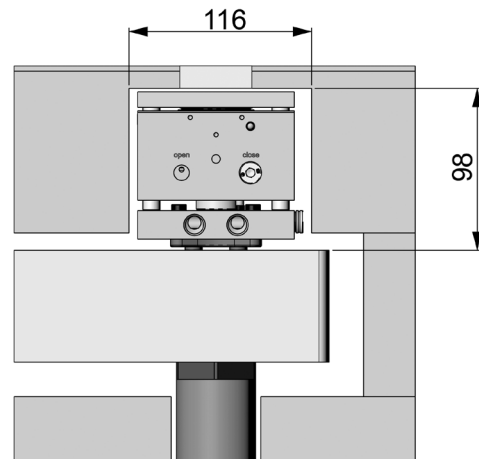


Illustrations simplified, schematically drawn and not to scale. All dimensions in mm.

**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:

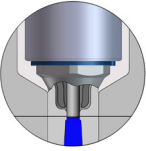
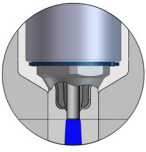
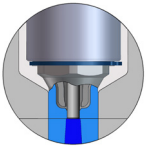
- ◆ Position Sensor
- ◆ SynCool®

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

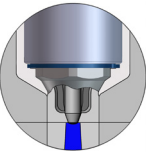
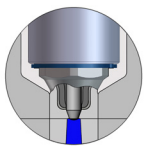


Illustrations simplified, schematically drawn and not to scale. All dimensions in mm.
H = Gate orifice diameter, F = Tip extension, Dt = Tip Diameter, Mod = Modifiable

VSP Valve Gate - Straight Pin - Plunged Through

Tip Style		Description	Dt = Ø20 F = 0, 30, Mod	
			H=5.0	H=6.0
	VSP	Standard	✓	(✓)
	VSP-SC	Color Seal	✓	(✓)
	VSP-WC	Wear C	(✓)	✓

VTP Valve Gate - Tapered Pin - Plunged Through

Tip Style		Description	Dt = Ø20 F = 0, 30, Mod H=4.5
	VTP	Standard	✓
	VTP-SC	Color Seal	✓

✓ Preferred

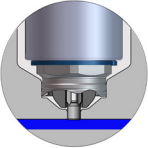
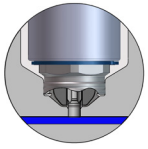
(✓) Available

✗ Not Available

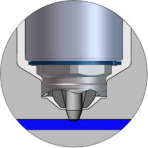
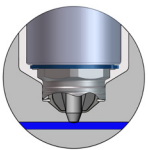


Illustrations simplified, schematically drawn and not to scale. All dimensions in mm.
H = Gate orifice diameter, F = Tip extension, Dt = Tip Diameter, Mod = Modifiable

VSW Valve Gate - Straight Pin - Blind

Tip Style	Description	Dt = Ø22		
		H=3.0	H=4.0	H=5.0
	VSW Standard	✓	(✓)	✓
	VSW-SC Color Seal	✓	(✓)	✓

VTW Valve Gate - Tapered Pin - Blind

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



Preferred



(✓) Available

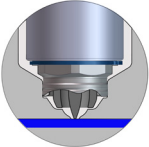
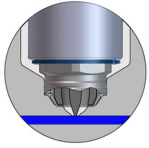


✗ Not Available

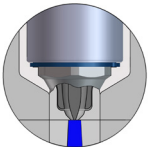
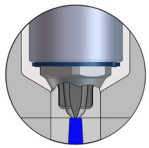


Illustrations simplified, schematically drawn and not to scale. All dimensions in mm.
H = Gate orifice diameter, F = Tip extension, Dt = Tip Diameter, Mod = Modifiable

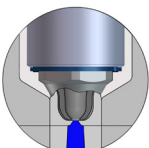
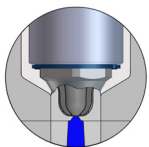
TTW Thermal Gate – Torpedo - Blind

Tip Style	Description	Dt = Ø22			
		H=2.5	H=3.0	H=3.5	H=4.0
	TTW Standard	✓	✓	✓	✓
	TTW-SC 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
	TTP Standard	✓	✓	✓	✓
	TTP-SC 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
	TFP Standard	✓	✓	✓	✓
	TFP-SC Color Seal	✓	✓	✓	✓

✓ Preferred

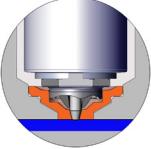
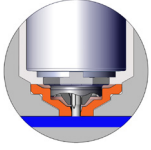
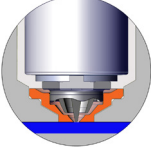
(✓) Available

✗ Not Available

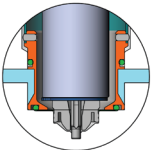
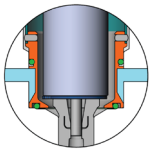


Illustrations simplified, schematically drawn and not to scale. All dimensions in mm.
H = Gate orifice diameter, F = Tip extension, Dt = Tip Diameter, Mod = Modifiable

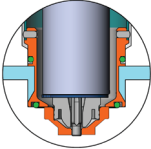
Wear Insert

Part	Description	F = 0, 30, Mod					
		H=2.5	H=3.0	H=3.5	H=4.0	H=4.5	H=5.0
	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	Description	VSP	VTP	VSW	VTW	TTP	TTW	TFP
	NC Nozzle Cooling Bushing for Nozzle Tips, Blind and Plunged Through	✓	✓	✓	✓	✓	✓	✓
								

Wear Insert and Cooling Bushing

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

✓ Preferred

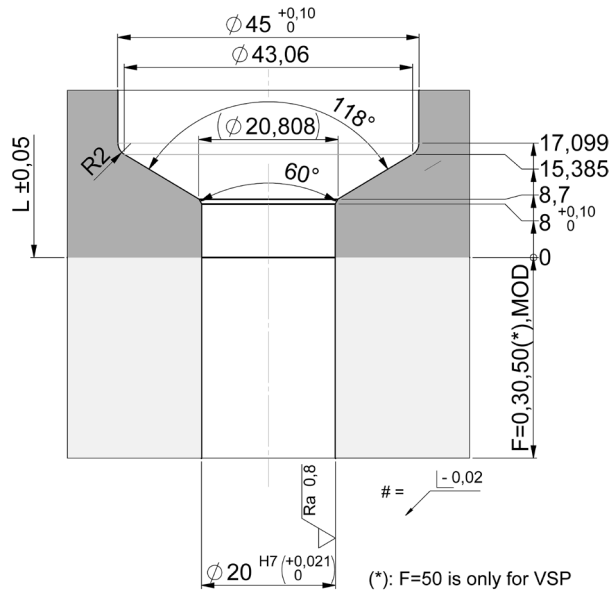
(✓) Available

✗ 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.

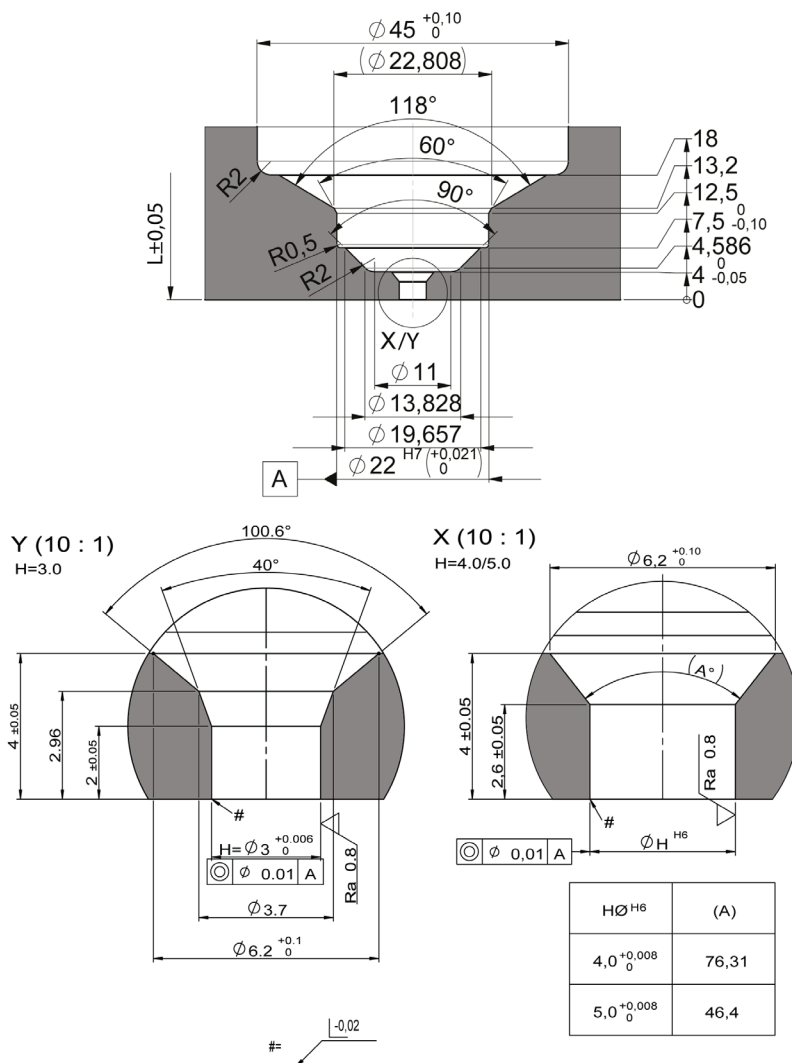
VSP, VTP, TTP, TFP - Nozzle tip cutout dimensions





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

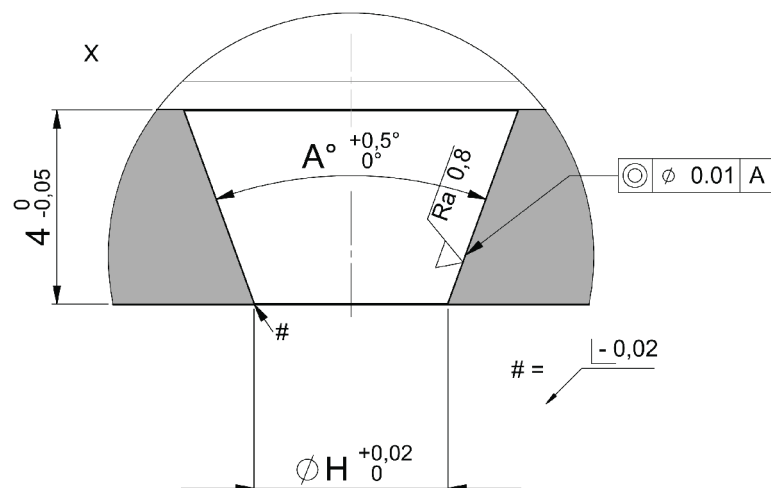
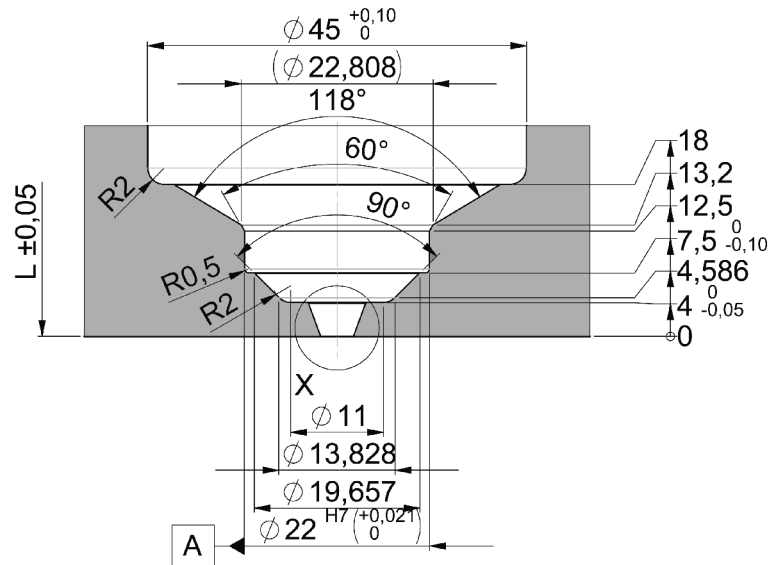


1. At the area of the nozzle gate replaceable, hardened (52 $\pm$ 2/-1HRC) inserts are recommended by Synventive.
2. Synventive recommends that the gate area geometry is manufactured by grinding and not EDM with a surface quality of $\sqrt{Ra0,8}$



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



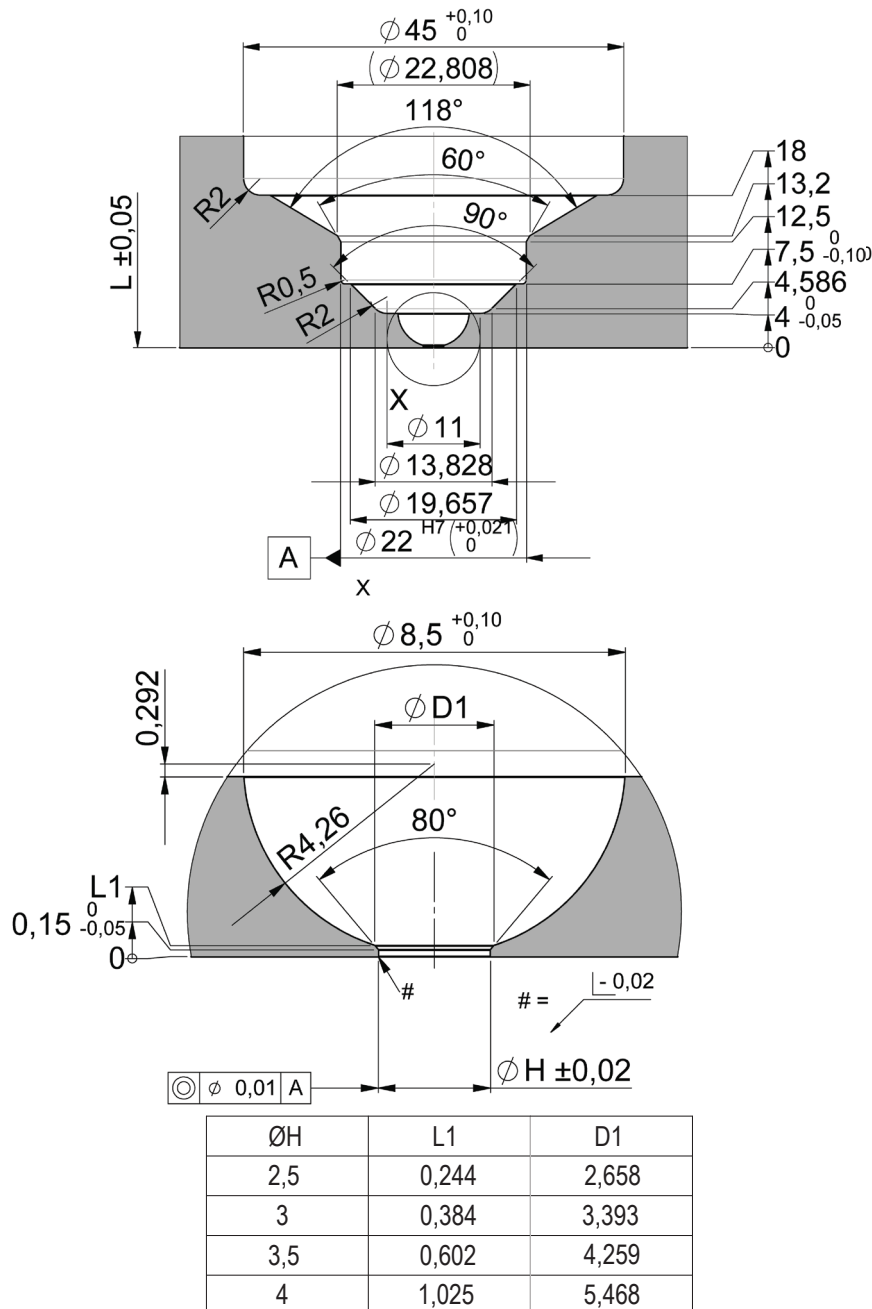
ØH	A
4,0	40°
4,5	30°

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

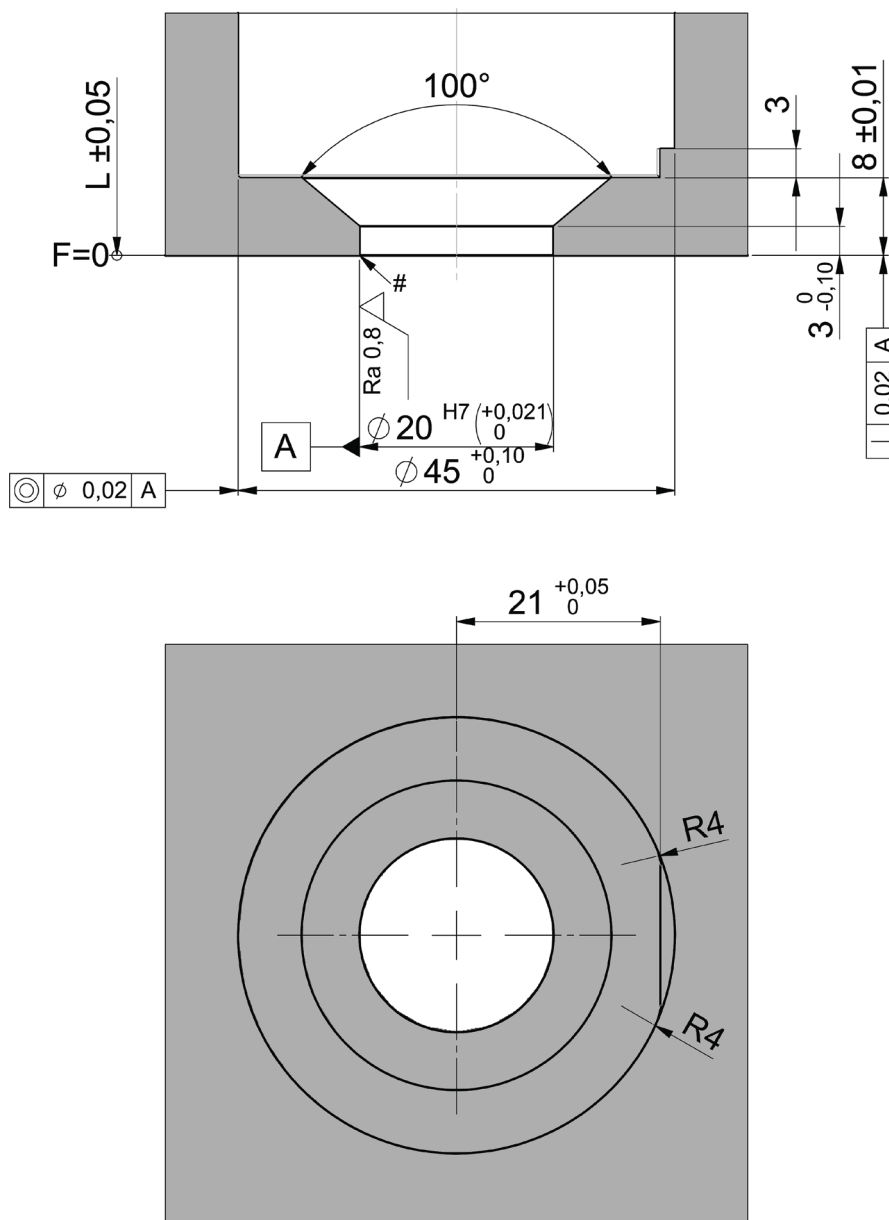


1. At the area of the nozzle gate replaceable, hardened ($52 \pm 2/-1\text{HRC}$) inserts are recommended by Synventive.
2. Synventive recommends that the gate area geometry is manufactured by grinding and not EDM with a surface quality of $\sqrt{Ra0,8}$



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 Foboha, 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

Synventive®
molding solutions

THERMOPLAY®
HotRunnerSystems

männer®
SOLUTIONS FOR PLASTICS

FOBOHA®

PRIAMUS®

Gammaflux®