

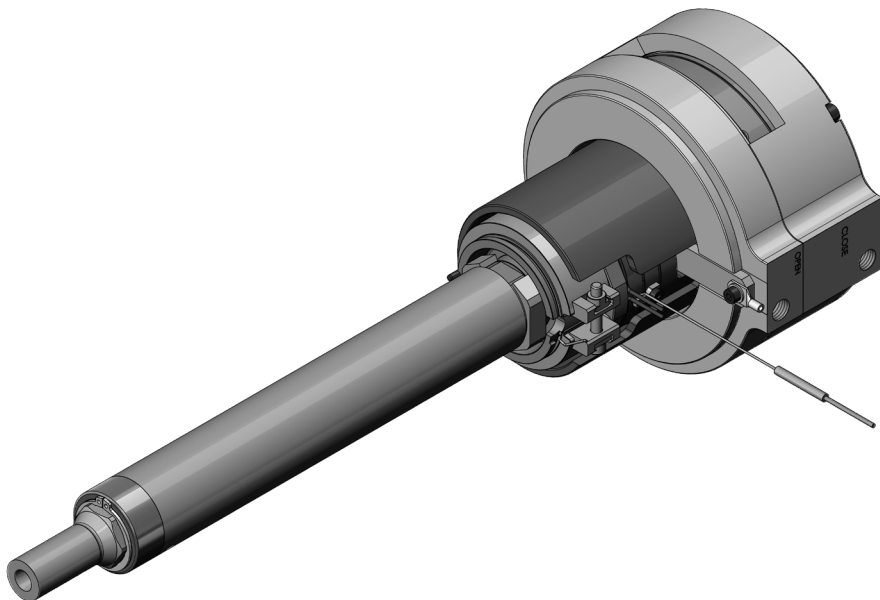


BARNES™
MOLDING SOLUTIONS

HOT RUNNER TECHNOLOGY

16SVP-06 Single Axis Valve Gate Nozzle Pneumatic

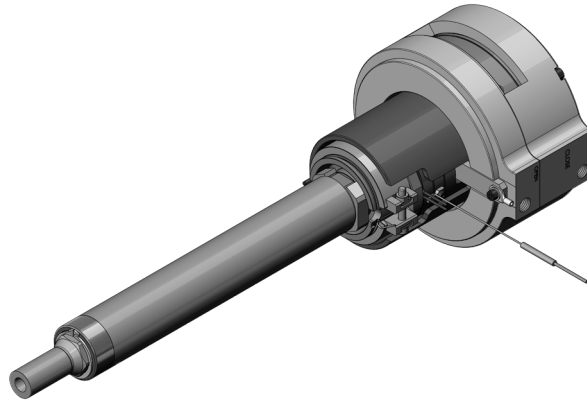
Product Catalog



**16SVP-06**

System Information / Product Description - Technical Data

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



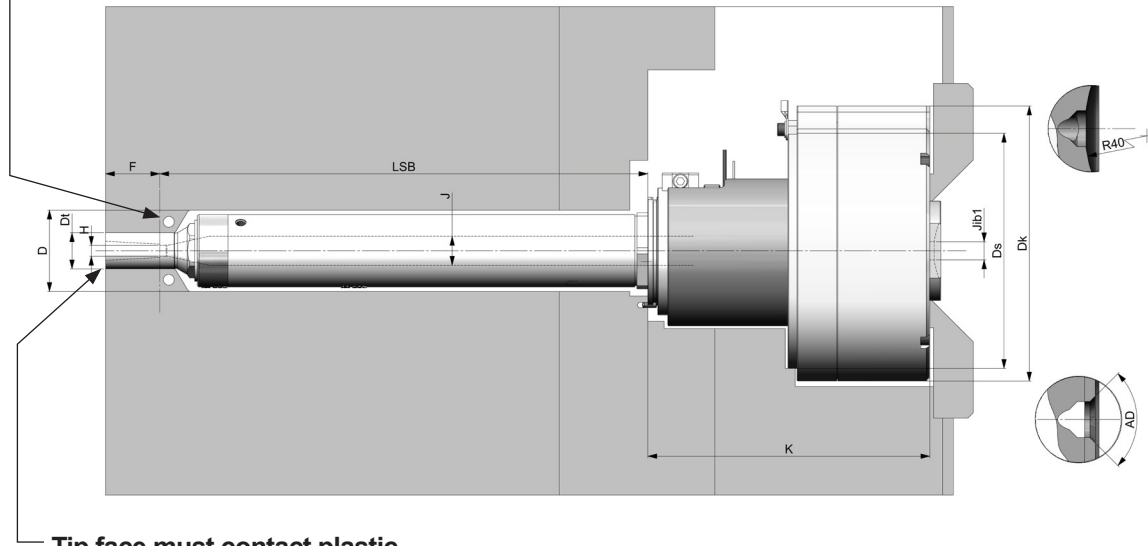
Valve Pin Operation	
Operation medium	pneumatic
Pressure range	5 - 10 bar (72.5 - 145 psi)
Flowrate	10 l/min / 5 bar (72.5 psi)
Reaction time	~1,2 s
Valve pin stroke	14 mm
Adjustment	± 1.5 mm Via adjustment threads from outside.
Closing force	3579 N / 6 bar (87 psi)
Opening force	3579 N / 6 bar (87 psi)
Connection	M12x1,5 (8-L)
Valve pin	
Valve pin diameter	Ø 8 mm
Attachment	Quick coupling, anti-rotation
Cooling	Without being directly cooled the single axis valve gate nozzles 16SVP-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 90 mm)	285 - 450 Watt
Zone 2 (From a nozzle length of 225 mm)	735 - 785 Watt
Head	800 plus 680 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): → 1500 (low viscosity)	

NOTICE

To ensure long life and continued flawless operation of the actuator, we recommend using filtered compressed air.



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

Gate cooling required**Tip face must contact plastic**

J	Flow bore	Ø 16 ¹⁾	H	Gate orifice	see page 7
Jib1	Flow bore inlet bushing	Ø 10	K	Head height	156
LSB	Nozzle length	50...395 ²⁾	Dk	Head diameter	Ø 144
F	Tip extension	see page 7	Ds	Diameter of head centering	Ø 130
D	Cutout	Ø 45	R	Nozzle contact radius	0...40
Dt	Tip Ø	see page 7	AD	Nozzle contact angle	90°...120°

¹⁾ Standard flow bore value = Ø 16

consult Synventive for custom dimensions Ø 14, Ø 18

²⁾ Standard lengths shown, consult Synventive for custom lengths.

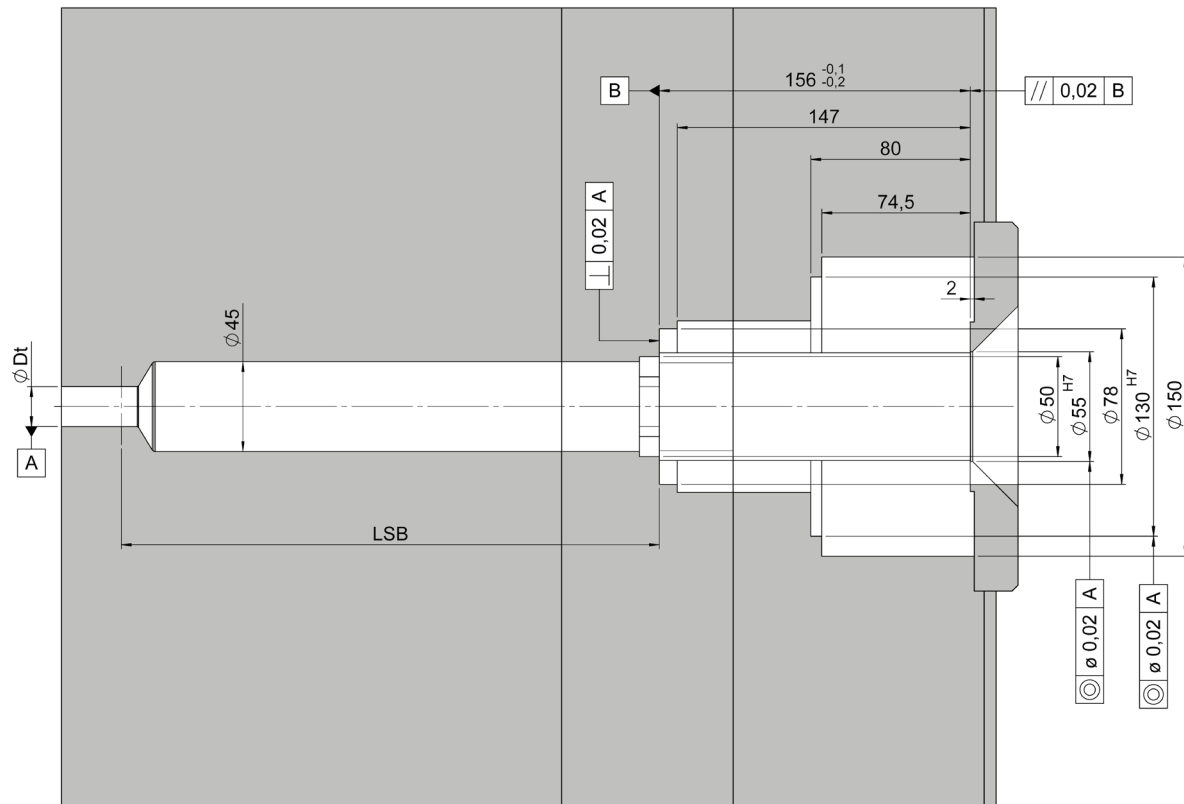
LSB (mm) Custom lengths	Nozzle Heater zones power ³⁾ (Watt)		Adapter Head	Head Bottom
	Power 1	Power 2	Power	Power
90 ... < 100	285W		800W	680W
100 ... < 125	305W		800W	680W
125 ... < 150	380W		800W	680W
150 ... < 175	395W		800W	680W
175 ... < 200	410W		800W	680W
200 ... < 225	430W		800W	680W
225 ... < 250	450W		800W	680W
250 ... < 275	285W	450W	800W	680W
275 ... < 300	285W	500W	800W	680W

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

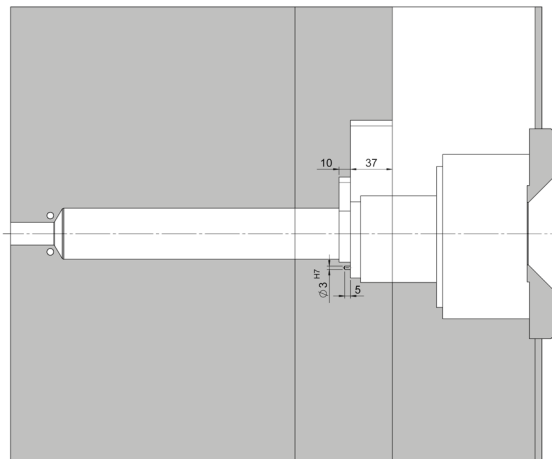
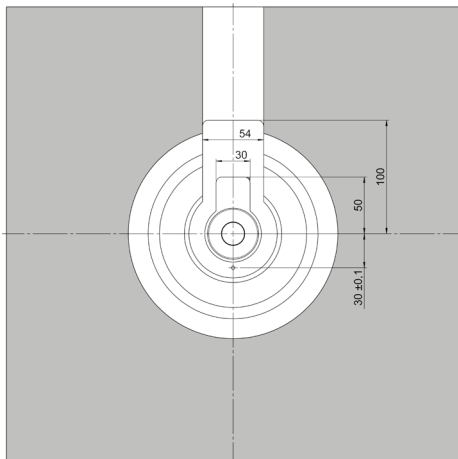


Illustrations simplified, schematically drawn and not to scale. All dimensions in mm.

Cutout for the Nozzle



Cutout for Connections (Electrical power and Thermocouple)

**General tolerances: DIN ISO 2768-mK**Surfaces: $\sqrt{Ra\ 3.2}$ ($\sqrt{Ra\ 1.6}$ $\sqrt{Ra\ 0.8}$)

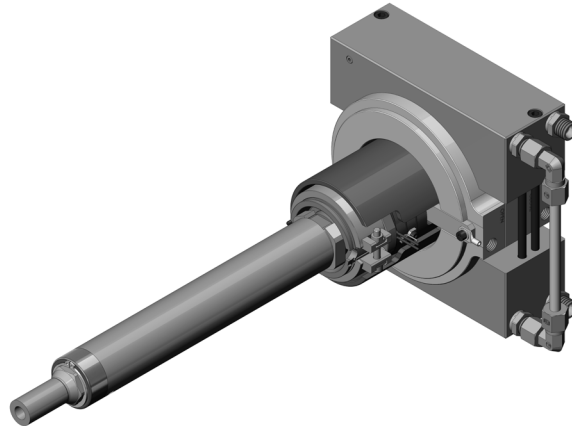
Values of the dimension LSB can be found in the data sheet on page 3.



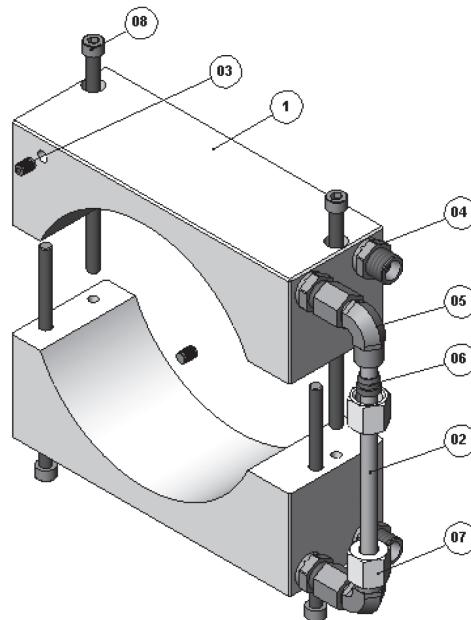
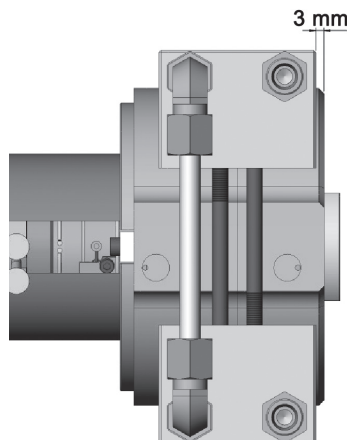
Illustrations simplified, schematically drawn and not to scale. All dimensions in mm.

**CU16SVP01 mounted on
Single Axis Valve Gate
Nozzle 16SVP-06****CU16SVP01 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**

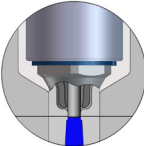
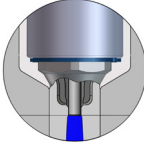
Pos.	Qty.	Description/ Part Number
01	2	Cooling Sleeve / CU16SVPCS01
02	1	Connecting Tube / CU16SVPCT01
03	2	Sealing Plug / Z942/6
04	4	Straight Coupling / GE08LMEDVITOMDCF
05	2	Elbow Coupling / EW08LVITOMDCF
06	2	Cutting Ring / PSR08LX
07	2	Nut / M08LCFX
08	3	Hexagon Socket Cap Screw / DIN912-M6x110-12.9

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

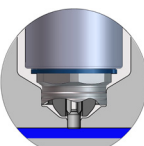
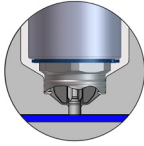


Illustrations simplified, schematically drawn and not to scale. All dimensions in mm.
H = Gate orifice diameter, F = Tip extension, Dt = Tip Diameter, Mod = Modifiable

VSP Valve Gate - Straight Pin - Plunged Through

Tip Style		Description	Application range	Dt = Ø20 F = 0, 30, Mod	
				H=5.0	H=6.0
	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 = Ø22		
				H=3.0	H=4.0	H=5.0
	VSW	Universal	for all common plastics	✓	(✓)	✓
	VSW-SC	Seal cap	for color change	✓	(✓)	✓



Preferred



Available

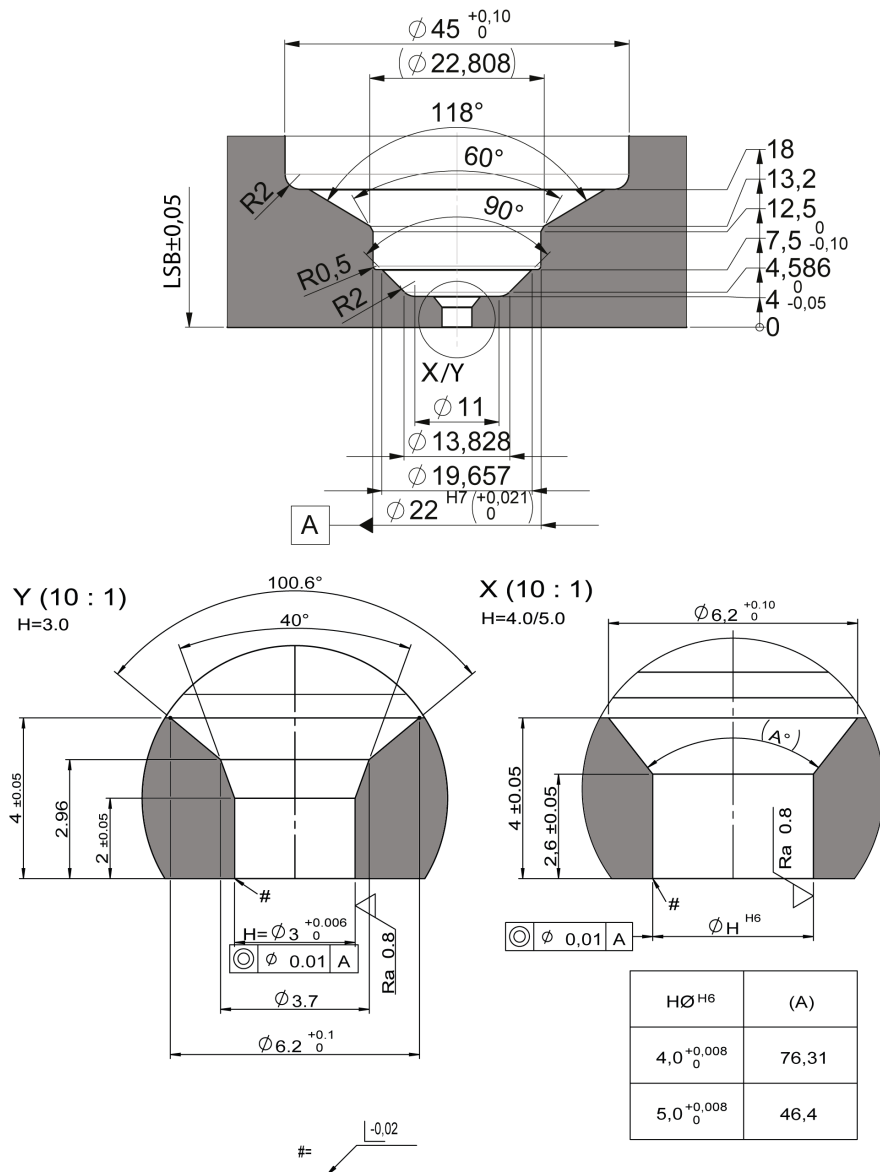


Not Available



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.

VSW - Nozzle tip cutout dimensions

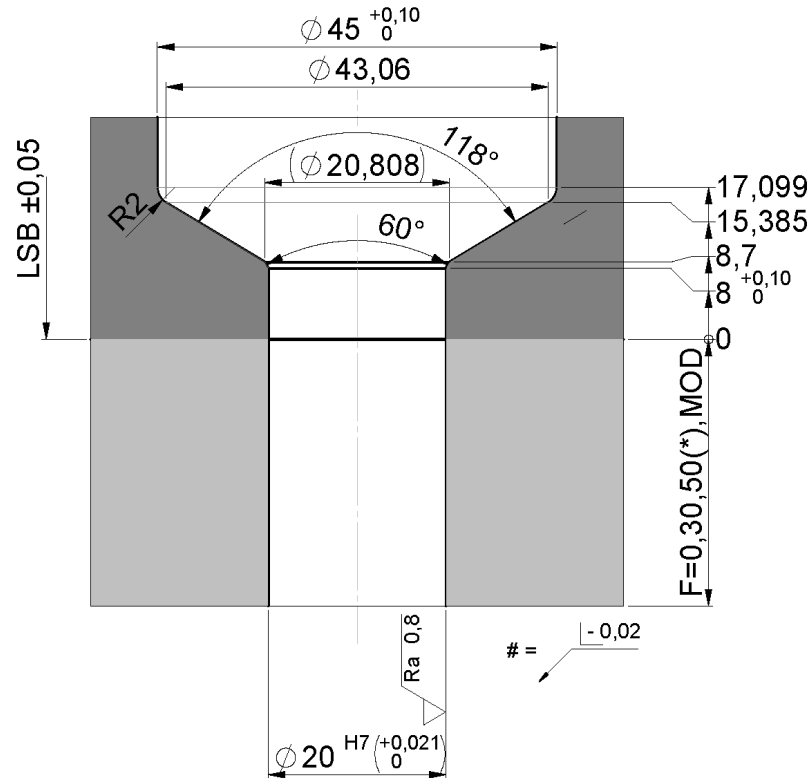


- At the area of the nozzle gate replaceable, hardened (52 +2/-1HRC) inserts are recommended by Synventive.
- Synventive recommends that the gate area geometry is manufactured by grinding and not EDM with a surface quality of $\sqrt{Ra0,8}$



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.

VSP - Nozzle tip 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®