

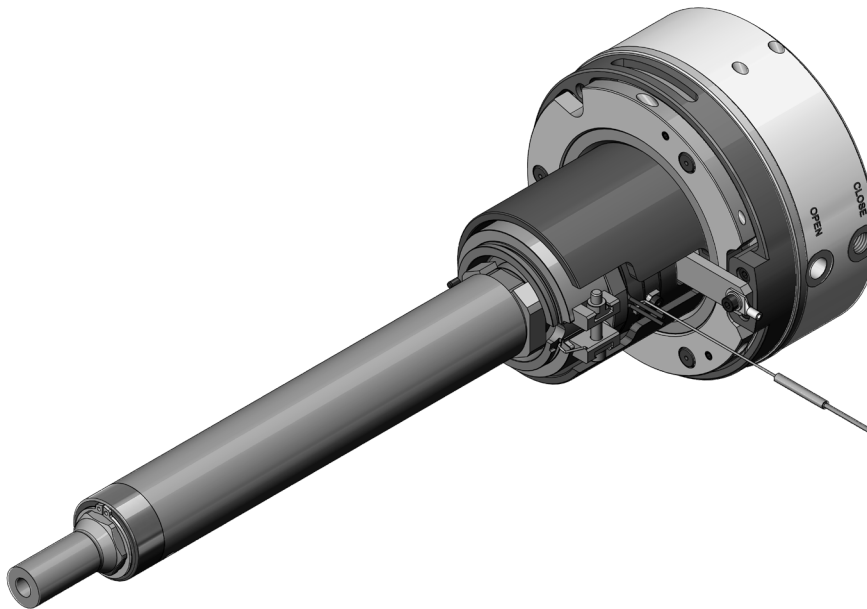


BARNES™
MOLDING SOLUTIONS

HOT RUNNER TECHNOLOGY

16SVH-06 Single Axis Valve Gate Nozzle Hydraulic

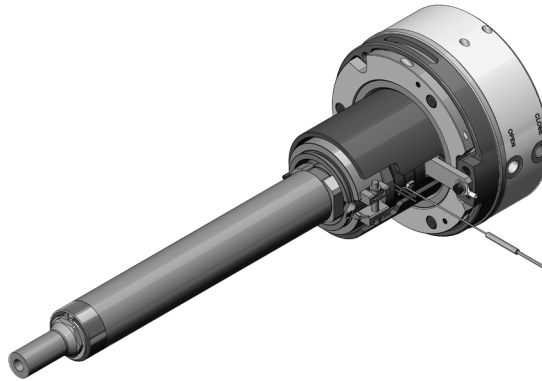
Product Catalog



**16SVH-06**

System Information / Product Description - Technical Data

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



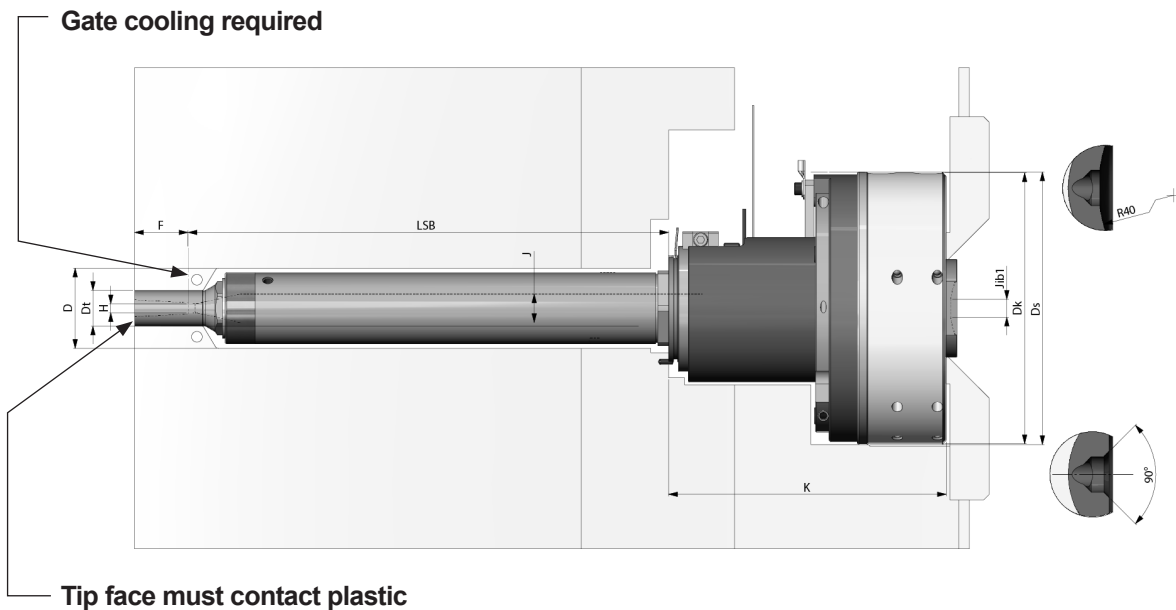
Valve Pin Operation	
Operation medium	hydraulic
Pressure range	40 - 60 bar (580 - 870 psi)
Flowrate	2,5 l/min
Reaction time	~0,5 s
Valve pin stroke	14 mm
Adjustment	± 1 mm Via adjustment threads from outside.
Closing force	4984 N / 40 bar (580 psi)
Opening force	4043 N / 40 bar (580 psi)
Connection	M12x1,5 (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 16SVH-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 a service medium that complies with the requirements of classification 21/18/13 pursuant to ISO 4406.



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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	100...395 ²⁾	Dk	Head diameter	Ø 152
F	Tip extension	see page 7	Ds	Diameter of head centering	Ø 153
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.



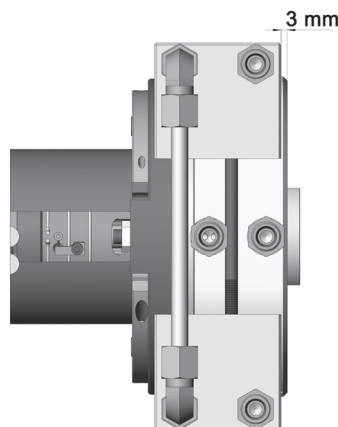
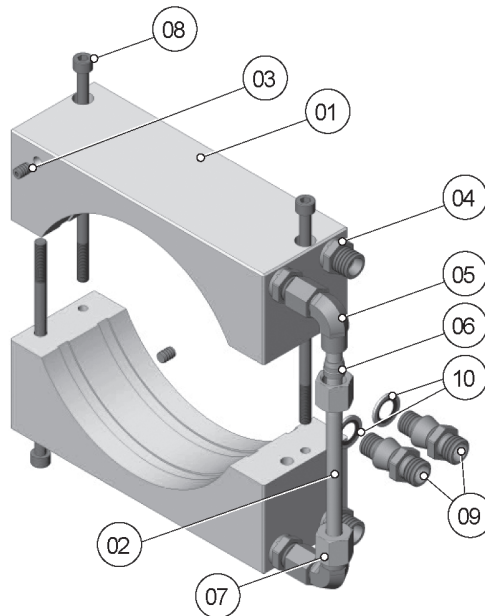
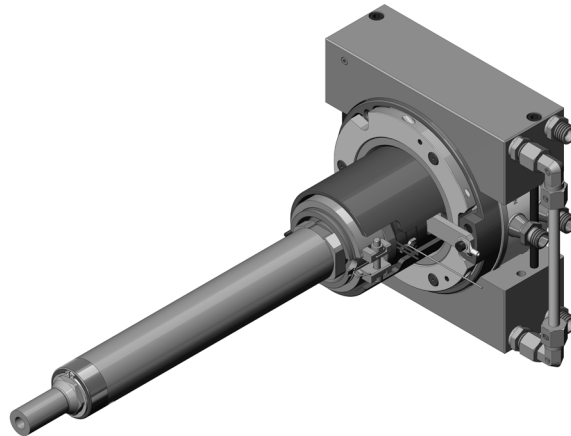
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**CU16SVH01 mounted on
Single Axis Valve Gate
Nozzle 16SVH-06****CU16SVH01 Technical
Data**

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

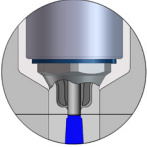
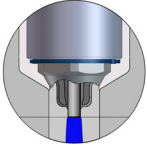
Pos.	Qty.	Description/ Part Number
01	2	Cooling Sleeve / CU16SVHCS01
02	1	Connecting Tube / CU16SVHCT01
03	2	Sealing Plug / Z942/6
04	4	Straight Coupling / GE08LMEDVITOMDCF
05	2	Elbow Coupling / EW08LVITOMDCF
06	2	Cutting Ring / PSR08LX
07	2	Nut / M08LCFX
08	3	Hexagon Socket Cap Screw / DIN912-M6x120-12.9
09	2	Straight Coupling / XAA01201401
10	2	Bonded Seal / 12.7X18X1.5USSFPM

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

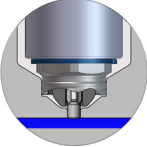
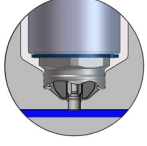


Illustrations simplified, schematically drawn and not to scale. All dimensions in mm.
H = Gate orifice diameter, F = Tip extension, Dt = Tip Diameter, Mod = Modifiable

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

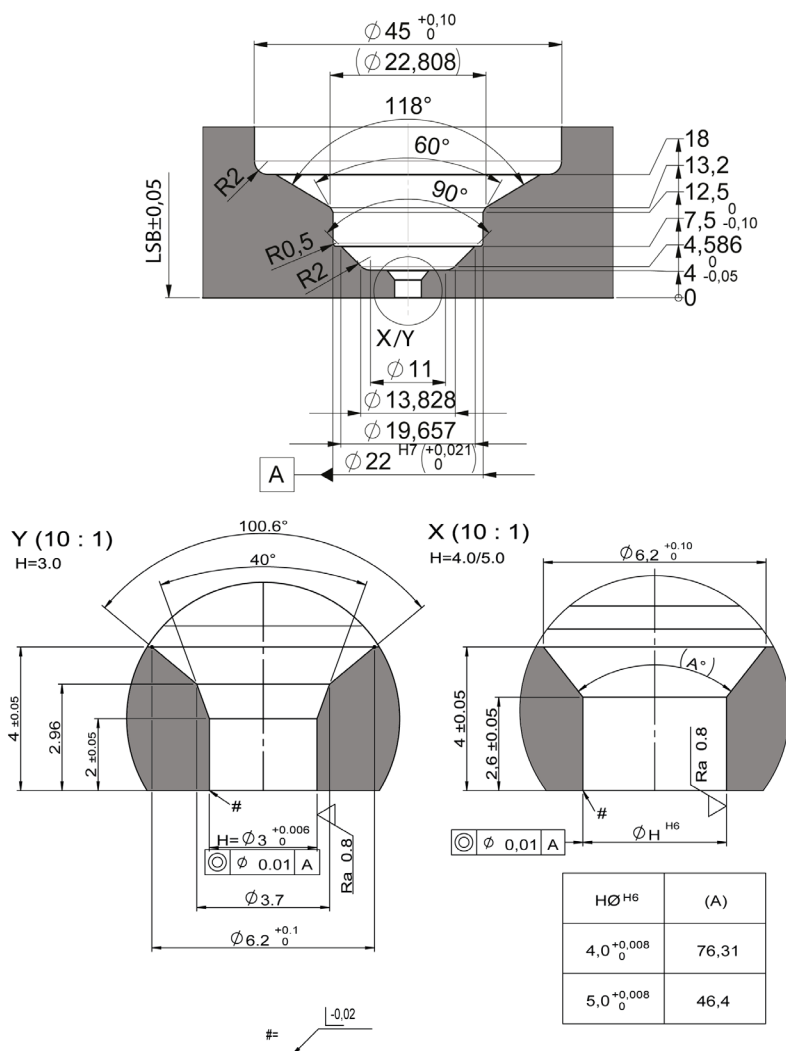
✗ Not Available



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Dimensions for reference only. Reference system drawing for complete dimensions prior to machining gate detail in mold.

VSW - Nozzle tip cutout dimensions



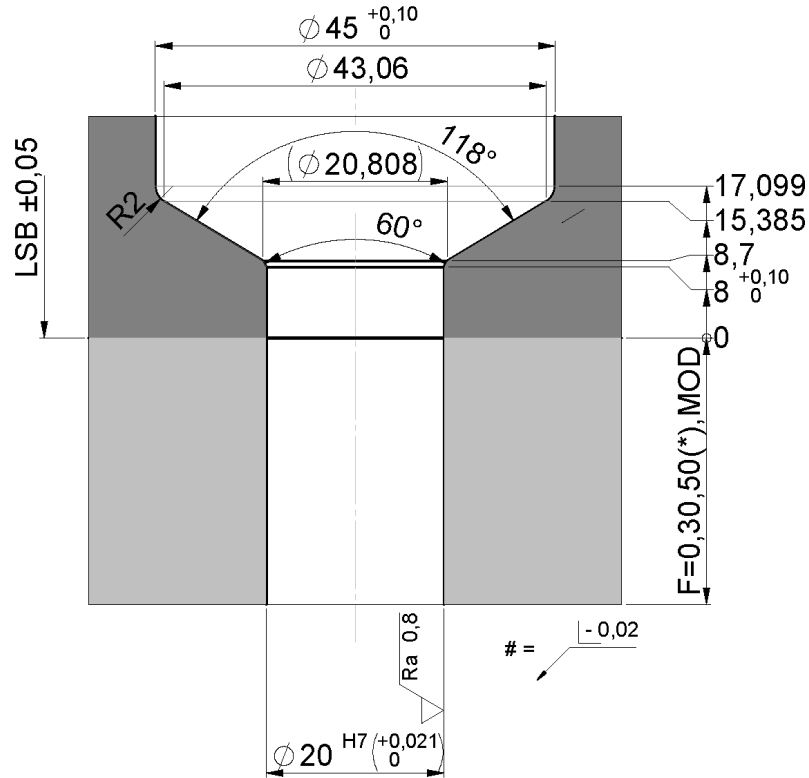
1. At the area of the nozzle gate replaceable, hardened (52 +2/-1HRC) inserts are recommended by Synventive.
2. Synventive recommends that the gate area geometry is manufactured by grinding and not EDM with a surface quality of $\sqrt{Ra0,8}$



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VSP - Nozzle tip cutout dimensions





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