

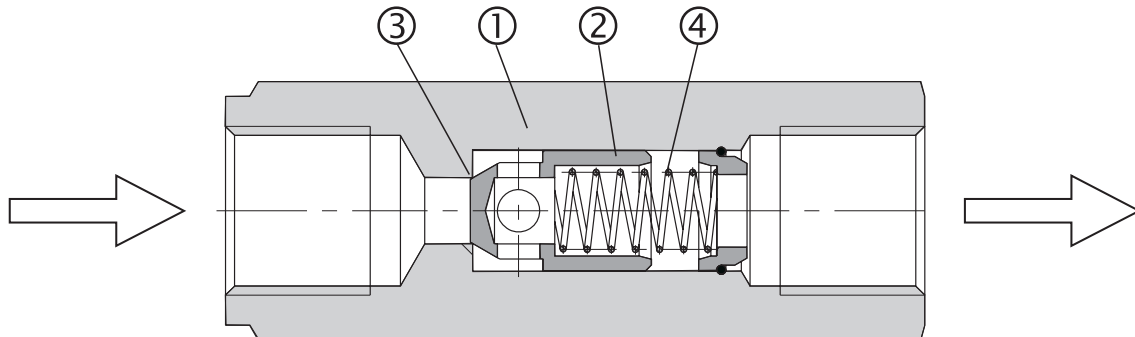
- Mounting styles:**
  - for in-line mounting
  - straight valve cartridge
  - right angled valve cartridge
- Seven sizes**
- Poppet design**
- Leakfree condition in one direction**
- Four cracking pressures**



**Functional Description**

The check valve is used to allow flow in one direction and prevent flow in the other. The poppet design guarantees leakfree condition in one direction. The seat (3) is directly in the housing (1) and the poppet (2) is pushed onto the seat by the compression spring (4). Design without spring pushes the poppet (2) on to

the seat by pressure of the fluid. The cracking pressure depends on the spring selected and the pressurised poppet surface area. Four cracking pressures are available. The valve without cracking pressure is also available (without spring). The valve housing is zinc coated.



**Ordering Code**

		<b>VJ3-</b> <span style="border: 1px solid black; padding: 2px;">  </span> - <span style="border: 1px solid black; padding: 2px;">  </span> - <span style="border: 1px solid black; padding: 2px;">  </span>	
<b>Check Valve</b>		<b>G1</b> <b>S</b> <b>02*</b> <b>03*</b> <b>02 V*</b> <b>03 V*</b>	<b>Model</b> For in-line mounting with G threads For in-line mounting with SAE threads Straight angled valve cartridge Right angled valve cartridge Straight angled valve cartr. with Viton seals Right angled valve cartridge with Viton seals
<b>Valve size</b>	(1/4) (06) (1/2) (08) (1/2) (10) (3/4) (16) (1) (20) (1 1/4) (25) (1 1/2) (30)	<b>1/4 (06)</b> <b>3/8 (08)</b> <b>1/2 (10)</b> <b>3/4 (16)</b> <b>1 (20)</b> <b>1 1/4 (25)</b> <b>1 1/2 (30)</b>	<b>Cracking pressure in PSI (bar)</b> <b>000</b> Without spring <b>005</b> 7 (0.5) <b>030</b> 44 (3.0) <b>050</b> 73 (5.0)

\*For sizes 06, 10, 16, 20 only

# Technical Data

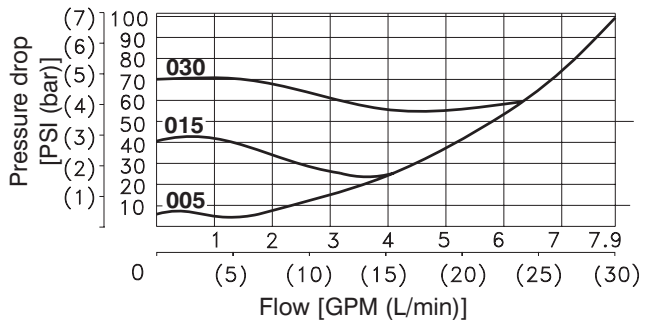
Valve size	US (mm)	1/4 (06)	3/8 (08)	1/2 (10)	3/4 (16)	1 (20)	1 1/4 (25)	1 1/2 (30)
Maximum flow	GPM (L/min)	7.9 (30)	10.6 (40)	15.9 (60)	42.3 (160)	66 (250)	79 (300)	106 (400)
Maximum pressure	PSI (bar)	4600 (320)						
Cracking pressure	PSI (bar)	7.3 (0.5)		43.5 (3.0)			73 (5.0)	
Hydraulic fluid		Petroleum oils (HM, HL, HLP) Phosphate ester fluids (HFD-R)						
Fluid temperature range (NBR)	°F (°C)	-22 ... +212 (-30 ... +100)						
Viscosity range	SUS (mm <sup>2</sup> /s)	98 ... 1840 (20 ... 400)						
Maximum degree of fluid contamination		Class 21/18/15 to ISO 4406 (1999).						
Weight - model G1,S	lbs (kg)	0.25 (0.11)	0.44 (0.2)	0.8 (0.34)	1.2 (0.52)	2.1 (0.95)	4.3 (1.95)	5.18 (2.35)
- models 02, 03		0.002 (0.05)	-	0.004 (0.09)	0.009 (0.22)	0.010 (0.26)	-	-
Mounting position		any						

# Performance Curves

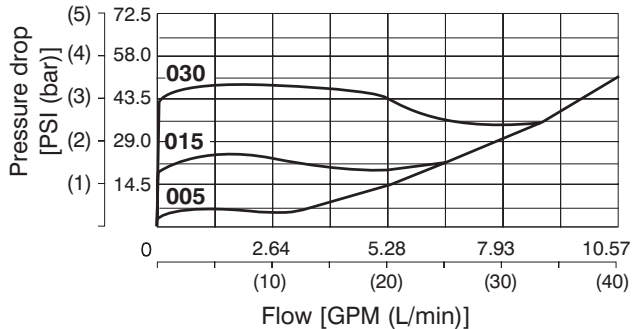
Measured at  $v = 156 \text{ SUS (32 mm}^2/\text{s)}$

Pressure drop  $\Delta p$  related to flow rate.

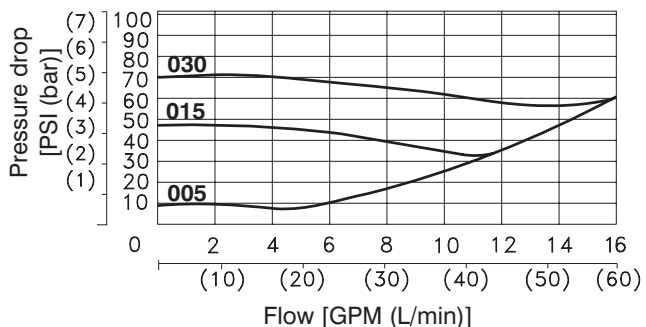
## Valve size 06



## Valve size 08



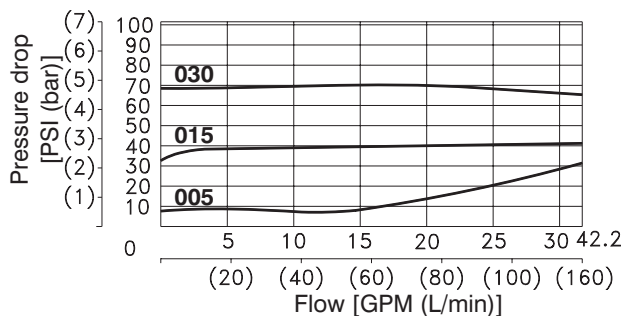
## Valve size 10



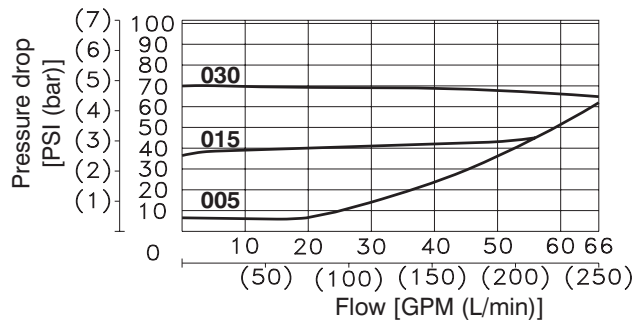
# Performance Curves

Measured at  $v = 156 \text{ SUS} (32 \text{ mm}^2/\text{s})$

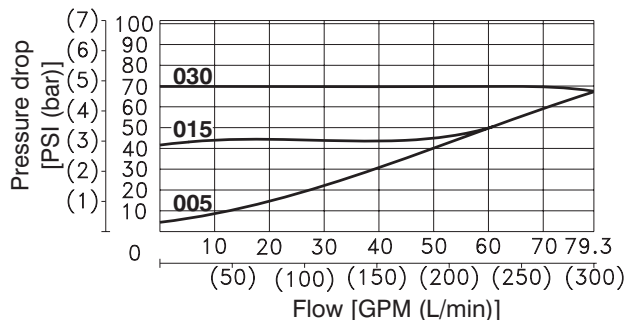
**Valve size 16**



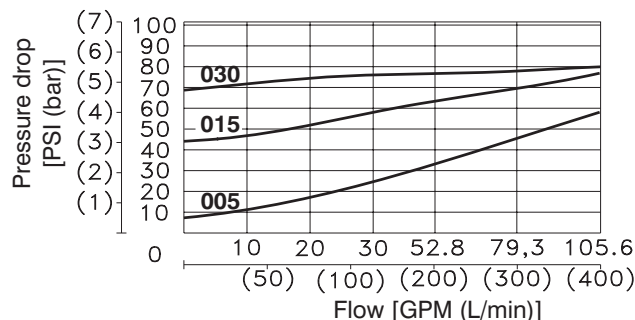
**Valve size 20**



**Valve size 25**



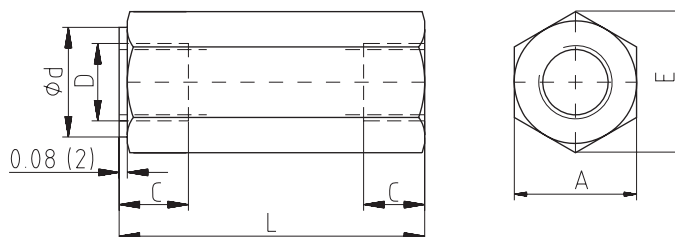
**Valve size 30**



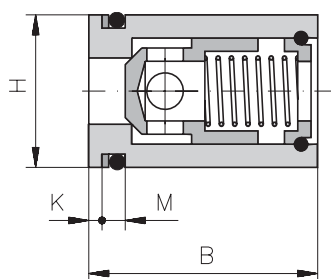
# Valve Dimensions

Dimensions in inches and millimeters

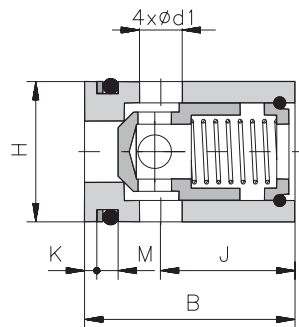
**Model G1,S**



**Model 02**



**Model 03**

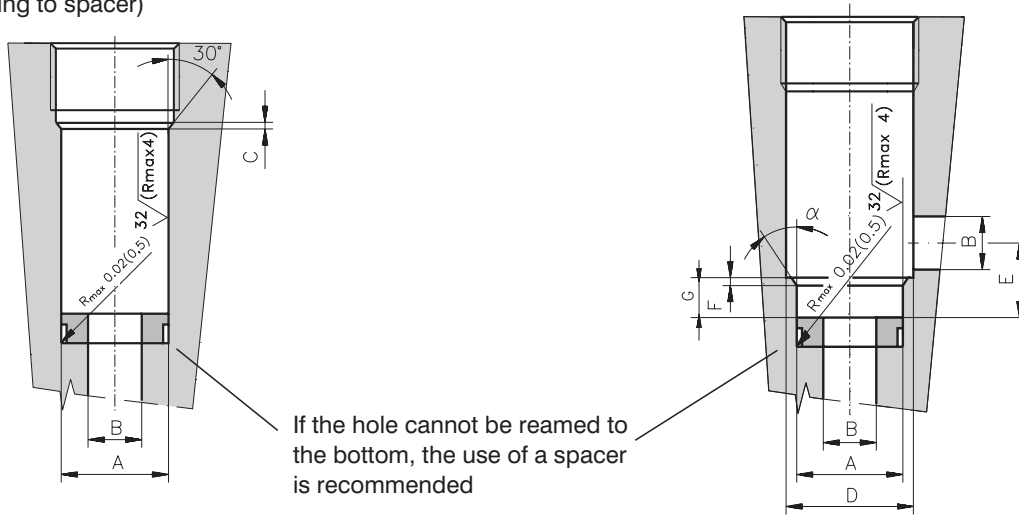


Size	A	B	C	D	$\phi d1$	$\phi d$
1/4 (06)	0.748 (19)	1.063-0.008 (27-0.2)	0.47 (12)	G 1/4 (SAE-6; 9/16-18)	0.138 (3.5)	0.75 (19)
3/8 (08)	0.945 (24)	-	0.47 (12)	G 3/8 (SAE-8; 3/4-16)	-	0.94 (24)
1/2 (10)	1.181 (30)	1.260-0.008 (32-0.2)	0.55 (14)	G 1/2 (SAE-10; 7/8-14)	0.217 (5.5)	1.18 (30)
3/4 (16)	1.417 (36)	1.772-0.008 (45-0.2)	0.63 (16)	G 3/4 (SAE-12; 1 1/16-12)	0.335 (8.5)	1.42 (36)
1 (20)	1.811 (46)	1.772-0.008 (45-0.2)	0.71 (18)	G 1 (SAE-16; 1 5/16-12)	0.413 (10.5)	1.81 (46)
1 1/4 (25)	2.362 (60)	-	0.79 (20)	G 1 1/4 (SAE-20; 1 5/8-12)	-	2.36 (60)
Size	E	H	J	K	L	M
1/4 (06)	0.866 (22)	$\phi 0.787 (20 \text{ f8})$ $^{+0.0008}$ $^{-0.0021}$	0.709 (18)	0.063 (1.6)	2.28 (58)	$0.173+0.0079 (4.4+0.2)$
3/8 (08)	1.09 (27.7)	-	-	-	2.28 (58)	-
1/2 (10)	1.358 (34.5)	$\phi 0.984 (25 \text{ f8})$ $^{+0.0008}$ $^{-0.0021}$	0.787 (20)	0.063 (1.6)	2.83 (72)	$0.173+0.0079 (4.4+0.2)$
3/4 (16)	1.634 (41.5)	$\phi 1.378 (35 \text{ f8})$ $^{+0.0010}$ $^{-0.0025}$	1.063 (27)	0.087 (2.2)	3.35 (85)	$0.209+0.0079 (5.3+0.2)$
1 (20)	2.087 (53)	$\phi 1.575 (40 \text{ f8})$ $^{+0.0010}$ $^{-0.0025}$	0.984 (25)	0.087 (2.2)	3.86 (98)	$0.209+0.0079 (5.3+0.2)$
1 1/4 (25)	2.717 (69)	-	-	-	4.72 (120)	-
1 1/2 (30)	2.953 (75)	-	-	-	5.20 (132)	-

# Cavity

Dimensions in inches and millimeters

(length according to spacer)



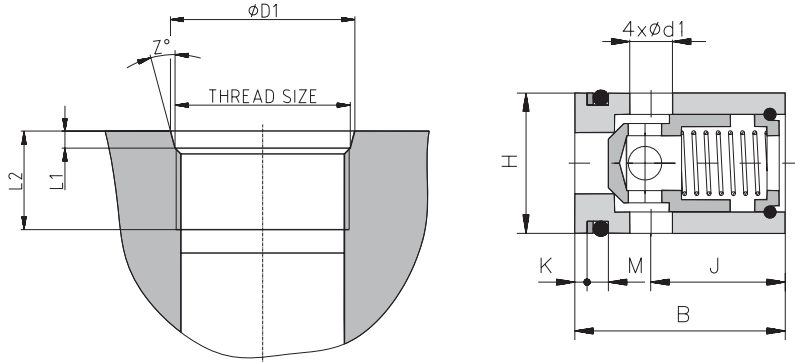
Size	A	B	C	D*	E	F	G	α
1/4 (06)	∅0.787+0.0013 (20 H8)	∅0.236 (06)	0.079 (2)	∅1.024 (26)	0.413 (10.5)	0.039 (1)	0.276-0.0118 (7-0.3)	20 °
1/2 (10)	∅0.984+0.0013 (25 H8)	∅0.394 (10)	0.079 (2)	∅1.260 (32)	0.551 (14)	0.059 (1.5)	0.315+0.0079 (8+0.2)	30 °
3/4 (16)	∅1.378+0.0015 (35 H8)	∅0.630 (16)	0.079 (2)	∅1.732 (44)	0.866 (22)	0.079 (2)	0.512+0.0079 (13+0.2)	30 °
1 (20)	∅1.575+0.0015 (40 H8)	∅0.787 (20)	0.079 (2)	∅1.890 (48)	0.984 (25)	0.079 (2)	0.551+0.0079 (14+0.2)	30 °

\* minimum diameter recommended

# SAE-Port Cavities

Dimensions in inches and millimeters (in brackets)

ISO 11926, SAE J1926, MS 16142



Type	Thread size	∅D1	L1	L2	Z°
SAE-6	9/16-18 UNF-2B	0.614 (15.6)	0.098 (2.5)	0.512 (13)	12
SAE-8	3/4-16 UNF-2B	0.811 (20.6)	0.098 (2.5)	0.591 (15)	15
SAE-12	1 1/16-12 UN-2B	1.150 (29.2)	0.098 (2.5)	0.748 (19)	15
SAE-16	1 5/16-12 UN-2B	1.398 (35.5)	0.130 (3.3)	0.748 (19)	15

# Spare Parts

Seal kit for Model 02 and Model 03

Size	O-Ring - NBR	Back-up ring	Order number
06	15,08 x 2,62	BBP 80B113-N9 14,66 x 19,02 x 1,14	22701100
10	20 x 2,65	BBP 80B116-N962N 19,43 x 23,79 x 1,14	15954600
16	28 x 3,55	BBP 80B216-N9 8,98 x 34,98 x 1,02	15954700
20	32,92x3,53	BBP 80B219-N90 33,88 x 39,88 x 1,02	22701400

# Caution!

- The plastic packaging is recyclable.
- Certified documentation is available per request.

ARGO-HYTOS s.r.o. CZ - 543 15 Vrchlaví  
 Tel.: +420-499-403111, Fax: +420-499-403421  
 E-mail: sales.cz@argo-hytos.com  
 www.argo-hytos.com