

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



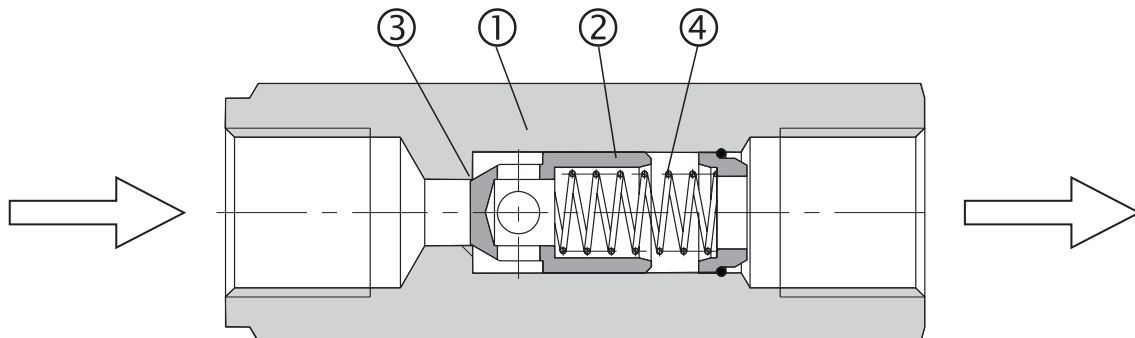
### Functional Description

The check valve is used to allow flow in one direction and prevent flow in the other. The poppet design guarantees leakfree closure.

The seat (3) is created 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. Three cracking pressures are available. The valve without cracking pressure is also available (without spring).

The basic surface treatment of the valve housing is zinc coated.



### Ordering Code

<b>VJ3</b> - [ ] - [ ] - [ ]		
<b>Check Valve</b>		<b>Model</b>
		G1 For in-line mounting - with G threads
		M1* - with M threads
		S* - with SAE threads
		02* Straight valve cartridge
		03* Straight valve cartridge
		*For sizes 06, 10, 16, 20 only
<b>Nominal size</b>		<b>Cracking pressure in bar</b>
06	<b>06</b>	000 Without spring
08	<b>08</b>	005 0,5 bar (7.25 PSI)
10	<b>10</b>	015 1,5 bar (21.75 PSI)
16	<b>16</b>	030 3,0 bar (43.51 PSI)
20	<b>20</b>	
25	<b>25</b>	
30	<b>30</b>	

FOR PREFERRED TYPES SEE BOLD TYPING IN ORDERING CODE AND TABLE OF PREFERRED TYPES ON PAGE 4

# Technical Data

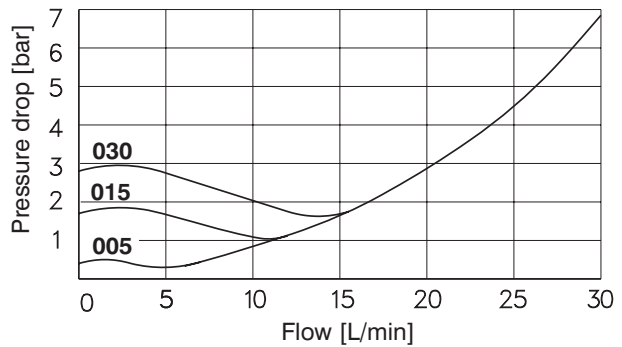
Nominal size	mm	06	08	10	16	20	25	30
Maximum flow rate	L/min (GPM)	30 (7.9)	40 (10.6)	60 (15.9)	160 (42.3)	250 (66)	300 (79.2)	400 (105.6)
Maximum pressure	bar(Psi)	320 (105.6)						
Cracking pressure	bar(Psi)	0,5 (7.25)		1,5 (21.75)		3,0 (43.51)		
Hydraulic fluid		Hydraulic oils of power classes (HL, HLP) to DIN 51524						
Fluid temperature range (NBR)	°C (°F)	-30 ... +100 (-22 ... +100)						
Viscosity range	mm <sup>2</sup> /s (SUS)	20 ... 400 (98 ... 1840)						
Maximum degree of fluid contamination		Class 21/18/15 according to ISO 4406 (1999)						
Weight - model G1	kg (lbs)	0,11 (0.25)	0,2 (0.44)	0,34 (0.8)	0,52 (1.2)	0,95 (2.1)	1,95 (4.29)	2,35 (5.18)
- models M1, S	kg (lbs)	0,11 (0.25)	-	0,34 (0.8)	0,52 (1.2)	0,95 (2.1)	-	-
- models 02, 03	kg (lbs)	0,05 (0.002)	-	0,09 (0.004)	0,22 (0.009)	0,26 (0.010)	-	-
Mounting position		optional, in case of construction without spring						

## Δp-Q Characteristics

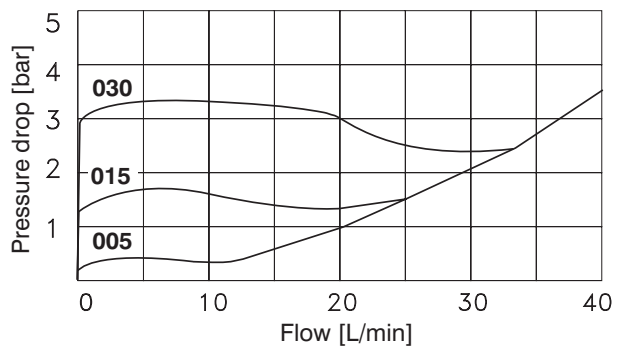
Measured at  $\nu = 32 \text{ mm}^2/\text{s}$

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

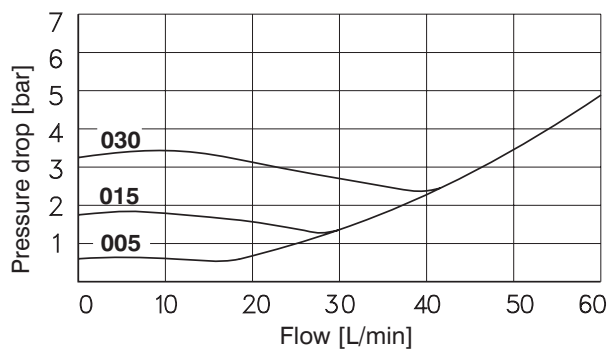
### Nominal size 06



### Nominal size 08



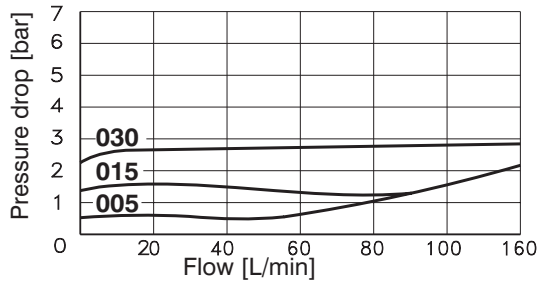
### Nominal size 10



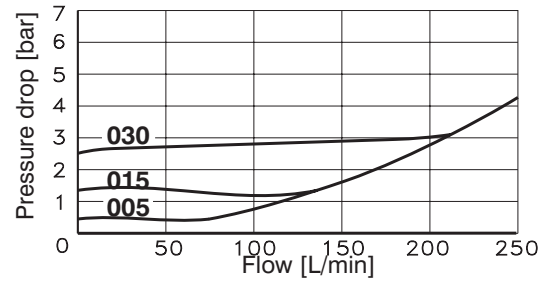
# Δp-Q Characteristics

Measured at  $v = 32 \text{ mm}^2/\text{s}$

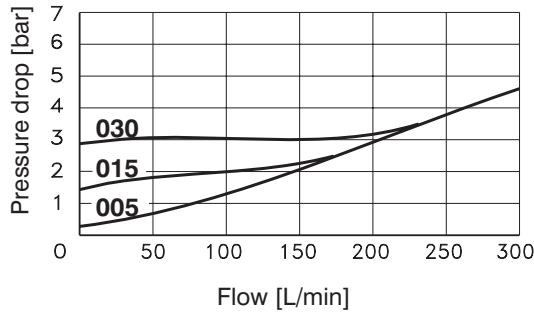
Nominal size 16



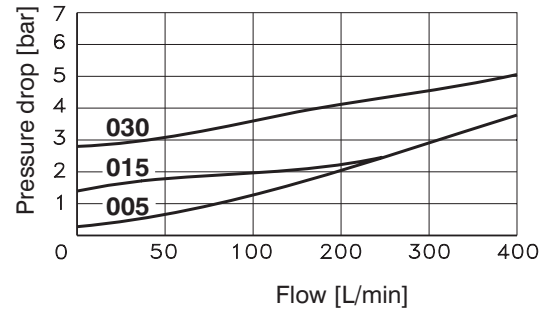
Nominal size 20



Nominal size 25



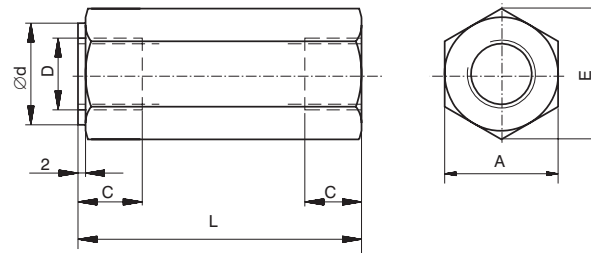
Nominal size 30



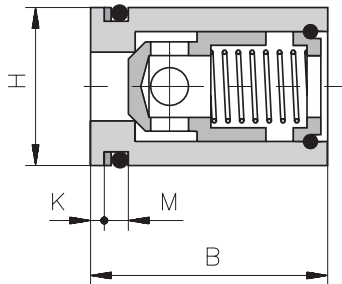
## Valve Dimensions

Dimensions in millimetres

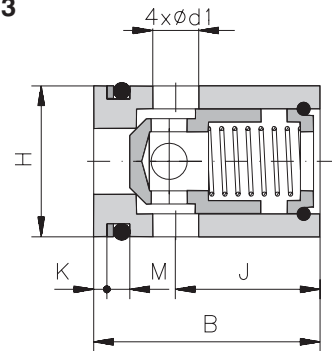
Model G1,M1, S



Model 02



Model 03



Size	A	B	C	D			Ød
				G1	M1	S	
06	19 (0.748)	27 - 0,2 (1.063-0.008)	12 (0.47)	G 1/4	M14x1,5	SAE-6, 9/16-18	19 (0.75)
08	24 (0.945)	-	12 (0.47)	G 3/8	-	-	24 (0.94)
10	30 (1.181)	32 - 0,2 (1.260-0.008)	14 (0.55)	G 1/2	M18x1,5	SAE-8, 3/4-16	30 (1.18)
16	36 (1.417)	45 - 0,2 (1.772-0.008)	16 (0.63)	G 3/4	M27x2	SAE-12, 1 1/16-12	36 (1.42)
20	46 (1.811)	45 - 0,2 (1.772-0.008)	18 (0.71)	G 1	M33x2	SAE-16, 1 5/16-12	46 (1.81)
25	60 (2.362)	-	20 (0.79)	G1 1/4	-	-	60 (2.36)
30	65 (2.559)	-	22 (0.87)	G1 1/2	-	-	65 (2.56)

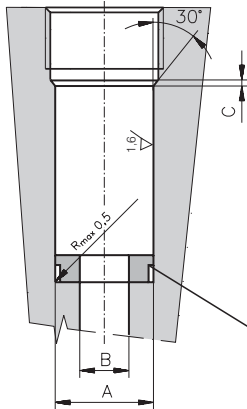
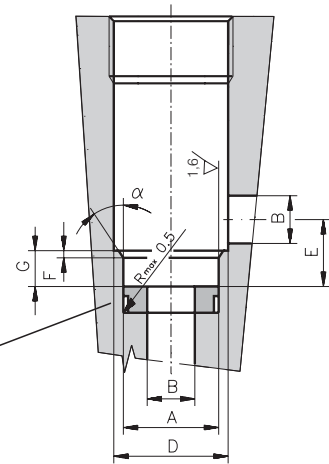
  

Size	Ød1	E	H	J	K	L	M
06	3,5 (0.138)	22 (0.866)	Ø 20 (0.787 f8)	18 (0.709)	1,6 (0.063)	58 (2.28)	4,4 +0,2 (0.173+0.0079)
08	-	27,7 (1.09)	-	-	-	58 (2.28)	-
10	5,5 (0.217)	34,5 (1.358)	Ø 25 (0.984 f8)	20 (0.787)	1,6 (0.063)	72 (2.83)	4,4 +0,2 (0.173+0.0079)
16	8,5 (0.335)	41,5 (1.634)	Ø 35 (1.378 f8)	27 (1.063)	2,2 (0.087)	85 (3.35)	5,3 +0,2 (0.209+0.0079)
20	10,5 (0.413)	53,6 (2.087)	Ø 40 (1.575 f8)	25 (0.984)	2,2 (0.087)	98 (3.86)	5,3 +0,2 (0.209+0.0079)
25	-	69 (2.717)	-	-	-	120 (4.72)	-
30	-	75 (2.953)	-	-	-	132 (5.20)	-

**Cavity**

Dimensions in millimetres

(length according to distance ring)

**Model 02****Model 03**

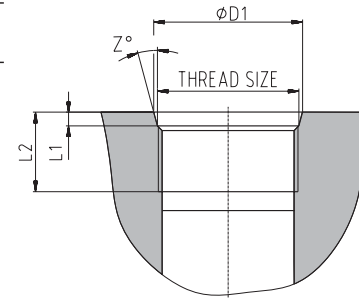
If the hole cannot be reamed to the bottom, the use of a distance ring is recommended

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

\* minimum diameter recommended

**SAE-Port Cavities** Dimensions in millimeters and inches (in brackets)

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

**Preferred Types of Valves**

Typ	Order number	Typ	Order number
VJ3-06-005-M1	28433500	VJ3-06-005-G1	15946400
-	-	VJ3-08-005-G1	22666100
VJ3-10-005-M1	28433800	VJ3-10-005-G1	17333500
VJ3-16-005-M1	28434100	VJ3-16-005-G1	22663600
VJ3-20-005-M1	28434400	VJ3-20-005-G1	17333700
-	-	VJ3-25-005-G1	22664200
-	-	VJ3-30-005-G1	22665000

**Caution!**

- The packing foil is recyclable.
- The technical information regarding the product presented in this catalogue is for descriptive purposes only. It should not be construed in any case as a guaranteed representation of the product properties in the sense of the law.

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