

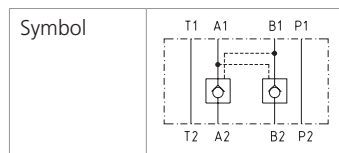


**Technical Features**

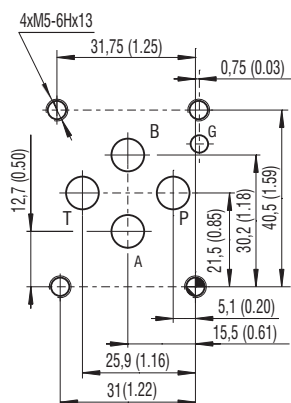
- › Pilot to open check valve, poppet type with subplate mounting interface acc. to ISO 4401, DIN 24340 (CETOP 03)
- › Sandwich plate design for use in vertical stacking assemblies
- › Sharp-edged steel seats for dirt-tolerant performance
- › Leak-free closing, suitable for fast cycling with long life
- › High flow capacity
- › Optional bias spring ranges for back-pressure control
- › Three pilot ratios available
- › In the standard version, the valve housing is phosphated and steel parts are zinc-coated for 240 h protection acc. to ISO 9227

**Functional Description**

The valve allows flow to pass from port A(B)1 to A(B)2 while normally closing flow from A(B)2 to A(B)1 with load. When pressure is applied at pilot port. The flow passes from port 2 to 1. The valve has three pilot ratios option. This requires at least one-third (ratio 3:1), one-sixth (ratio 6:1) or one-ninth (ratio 9:1) of the load pressure to be applied at the opposite port to open the valve. The check valve is spring closed to secure the holding position in static conditions and without load. The valve is offered with optional bias spring ranges for back-pressure control.

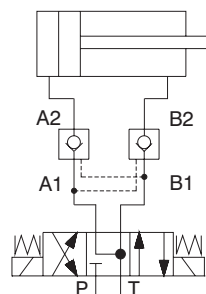


ISO 4401-03-02-0-05



Ports P, A, B, T max.  $\varnothing$ 7.5 mm (0.29 in)

**Typical circuit with pilot operated check valve**



**Technical Data**

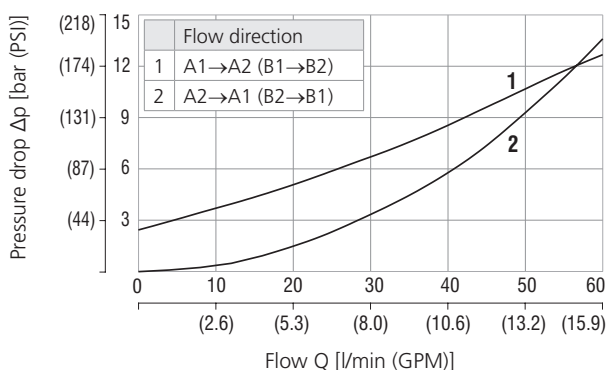
Valve size	06 (D03)	
Max. flow	l/min (GPM)	60 (15.9)
Max. operating pressure	bar (PSI)	320 (4640)
Cracking pressure	bar (PSI)	3 (43.5) 4 (58) 5 (72.5) 8 (116) 12 (174)
Fluid temperature range (NBR)	°C (°F)	-30 .... +100 (-22 ... +212)
Fluid temperature range (FPM)	°C (°F)	-20 .... +120 (-4 ... +248)
Pilot ratio	3:1 / 6:1 / 9:1	
Weight	kg (lbs)	0.8 (1.76)

	Datasheet	Type
General information	GI_0060	Products and operating conditions
Mounting interface	SMT_0019	Size 06
Spare parts	SP_8010	

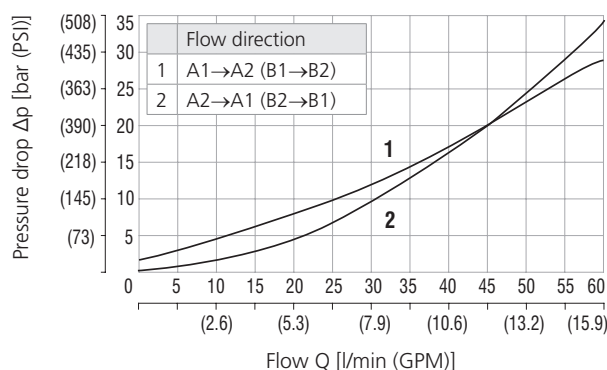
**Characteristics** measured at  $v = 32 \text{ mm}^2/\text{s}$  (156 SUS)

**Pressure drop related to flow rate**

Pilot ratio 3 : 1

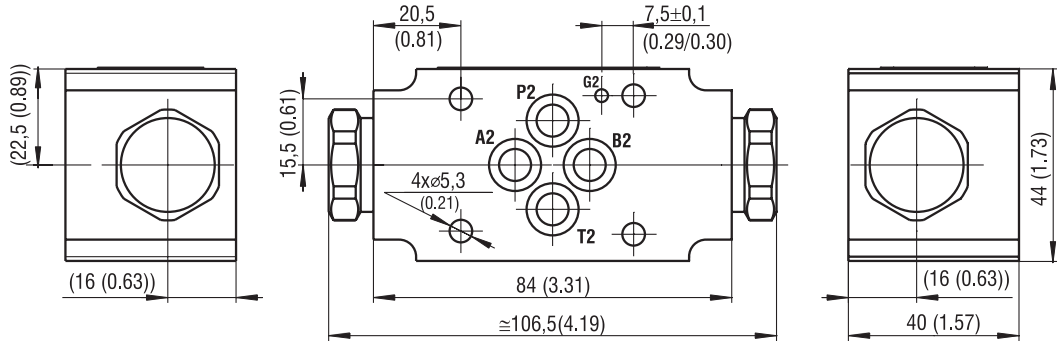


Pilot ratio 6 : 1

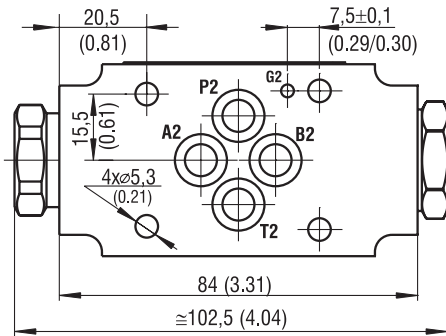


## Dimensions in millimeters (inches)

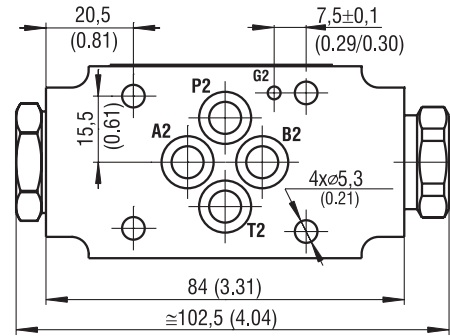
### Model MC



### Model MA

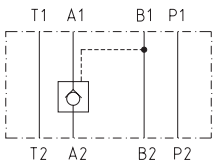


### Model MB

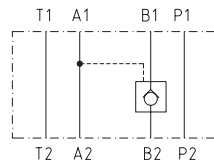


## Functional symbols

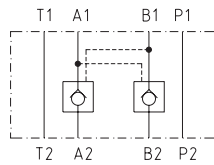
### 2RJV1-06/MA



### 2RJV1-06/MB



### 2RJV1-06/MC



- ① valve side
- ② subplate or manifold side

**Notes:** The orientation of the symbol on the name plate corresponds with the valve function.

## Ordering Code

2RJV1 - 06 / M

Check valve, pilot to open, poppet type, modular

Valve size

Modular sandwich plate design

Functional symbols

check valve in line A  
check valve in line B  
check valve in line A and B

Pilot ratio

3 : 1 (for all cracking pressures except 2 bar) **3**  
6 : 1 (only for cracking pressure 2 bar) **6**  
9 : 1 (only for cracking pressure 0 bar and 3 bar) **9**

A  
B  
C

**Surface treatment**  
No designation body phosphated, steel parts  
zinc-coated (ZnCr-3), ISO9227 (240 h)  
A zinc-coated (ZnCr-3), ISO 9227 (240 h)  
B zinc-coated (ZnNi), ISO 9227 (520 h)

**Seals**  
No designation  
V NBR  
FPM (Viton)

**Cracking pressure**

no spring  
000 (for all pilot ratios) 2 bar (29.0 PSI)  
020 (for pilot ratio 6 : 1) 3 bar (43.5 PSI)  
030\* (for pilot ratio 3 : 1 and 9 : 1) 4 bar (58.0 PSI)  
040 (for pilot ratio 3 : 1) 5 bar (72.5 PSI)  
050 (for pilot ratio 3 : 1) 8 bar (116 PSI)  
080 (for pilot ratio 3 : 1) 12 bar (174 PSI)  
120 (for pilot ratio 3 : 1)

\*Preferred type for pilot ratio 3 : 1 respective 9 : 1

Check Valve, Poppet-type, Pilot to Open, Modular

**VJR1-04/M**

Size 04 (D02) •  $Q_{max}$  20 l/min (5 GPM) •  $p_{max}$  320 bar (4600 PSI)

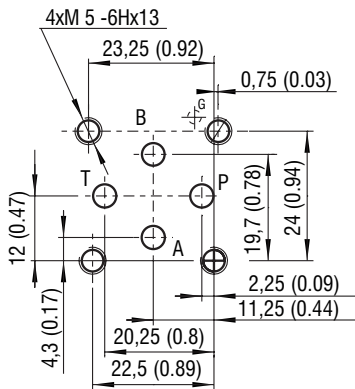


**Technical Features**

- › Pilot to open check valve, poppet-type with subplate mounting interface acc. to ISO 4401, DIN 24340 (CETOP 02)
- › Sandwich plate design for use in vertical stacking assemblies
- › Sharp-edged steel seats for dirt-tolerant performance
- › Leak-free closing, suitable for fast cycling with long life
- › High flow capacity
- › In the standard version, the valve housing is phosphated and steel parts are zinc-coated for 240 h protection acc. to ISO 9227

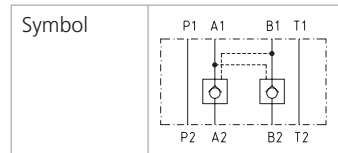
ISO 4401-02-01-0-05

**Functional Description**



Ports P, A, B, T  
max  $\varnothing$ 4.5 mm (0.18 in)

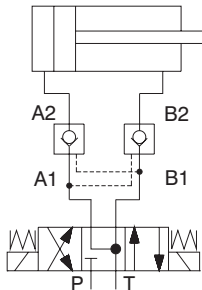
The valve allows flow to pass from port A(B)1 to A(B)2 while normally under load inhibiting flow from A(B)2 to A(B)1. When pressure is applied at the pilot port, the valve is opened and flow passes from port 2 to 1. The valve has a 3:1 pilot ratio, meaning that at least one third of the load pressure must be applied to open the valve. The check valve is spring closed to secure the holding position in static conditions and without load.



**Technical Data**

Valve size		04 (D02)
Max. flow	l/min (GPM)	20 (5.3)
Max. operating pressure	bar (PSI)	320 (4640)
Cracking pressure	bar (PSI)	1 (14.5)
Fluid temperature range (NBR)	°C (°F)	-30 .... +100 (-22 ... +212)
Fluid temperature range (FPM)	°C (°F)	-20 .... +120 (-4 ... +248)
Pilot ratio		3 : 1
Mass	kg (lbs)	0.7 (1.54)

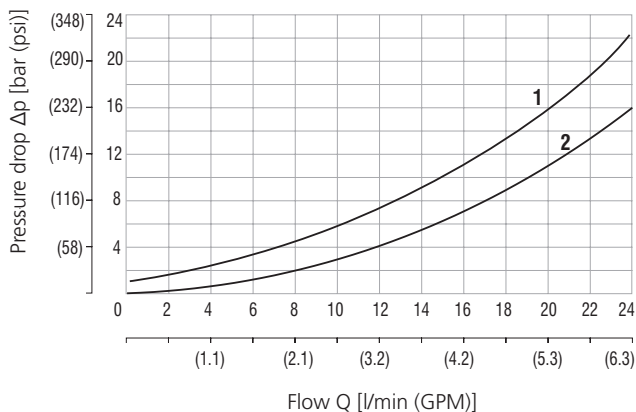
**Typical circuit with pilot operated check valve**



	Datasheet	Type
General information	GI_0060	Products and operating conditions
Mounting interface / tolerances	SMT_0019	Size 04
Spare parts	SP_8010	

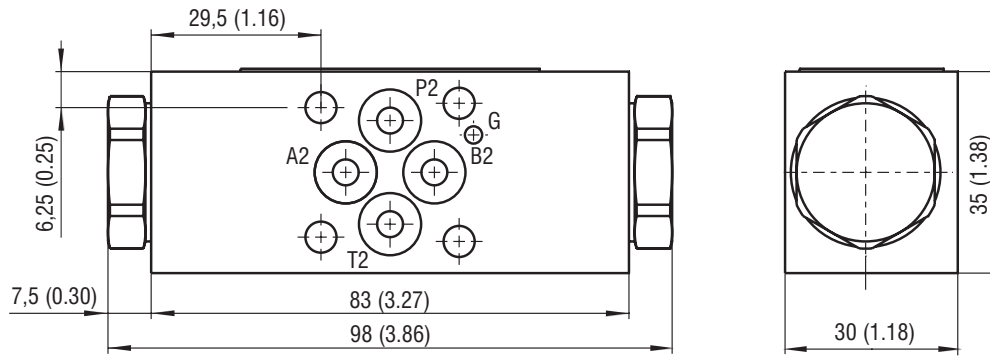
**Characteristics** measured at  $v = 32 \text{ mm}^2/\text{s}$  (156 SUS)

**Pressure drop related to flow rate**



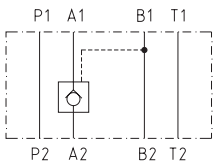
	Flow direction
1	A1 → A2 (B1 → B2)
2	A2 → A1 (B2 → B1)

**Dimensions** in millimeters (inches)

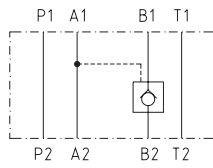


**Functional symbols**

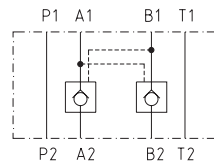
VJR1-04/MA



VJR1-04/MB



VJR1-04/MC



- ① valve side
- ② subplate or manifold side

**Notes:** The orientation of the symbol on the name plate corresponds with the valve function.

**Ordering Code**

VJR1-04 / M  -  -  -  -

Check valve, pilot to open, poppet-type, modular

Valve size

Modular sandwich plate design

Functional symbols

check valve in line A  
check valve in line B  
check valve in line A and B

A  
B  
C

Pilot ratio  
3 : 1

3

**Surface treatment**  
No designation body phosphated, steel parts  
A zinc-coated (ZnCr-3), ISO9227 (240 h)  
B zinc-coated (ZnNi), ISO 9227 (520 h)

No designation  
V

**Seals**  
NBR  
FPM (Viton)

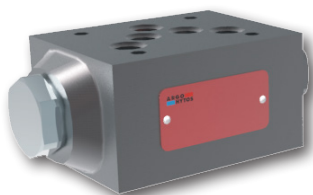
**Cracking pressure**  
1 bar (14.5 PSI)

010

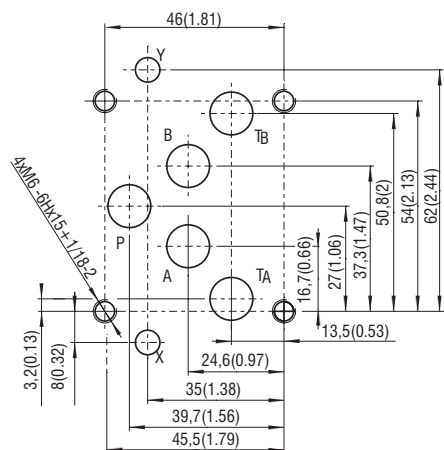
Pilot to Open Operated Check Valve, Poppet Type, Modular

**VJR3-10/M**

Size 10 (D05) • Q<sub>max</sub> 140 l/min (37 GPM) • p<sub>max</sub> 350 bar (5100 PSI)

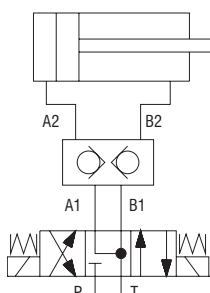


ISO 4401-05-04-0-05



Ports P, A, B, T - max. Ø11,2 mm (0.44 in)

Typical circuit with pilot operated check valve

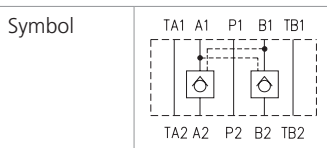


Technical Features

- › Pilot to open operated check valve, poppet type with subplate mounting surface acc. to ISO 4401, DIN 24340 (CETOP 05) standards
- › Sandwich plate design for use in vertical stacking assemblies
- › Sharp-edged ground steel seats for dirt-tolerant performance
- › Leak-free closing and suitable for fast cycling with long life
- › High flow capacity
- › Valve is fitted with decompression stage facilitating steady opening without pressure peaks
- › In the standard version, the valve housing is phosphated and steel parts zinc coated for 240 h protection acc. to ISO 9227

Functional Description

The valve allows flow to pass from port A(B)1 to A(B)2 while normally closing flow from A(B)2 to A(B)1 with load. When pressure is applied at pilot port. The flow passes from port 2 to 1. The valve has a 6:1 pilot ratio. The check valve is also spring closed to secure holding position in static conditions without the load. The valve is offered with optional bias spring ranges for back-pressure control.

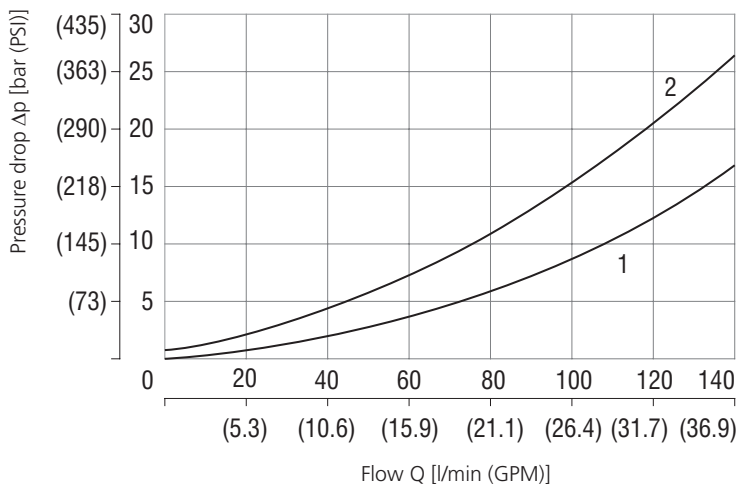


Technical Data

Valve size		10 (D05)
Max. flow	l/min (GPM)	140 (37)
Max. operating pressure	bar (PSI)	350 (5080)
Cracking pressure	bar (PSI)	2 (29)
Fluid temperature range (NBR)	°C (°F)	-30 .... +100 (-22 ... +212)
Fluid temperature range (FPM)	°C (°F)	-20 .... +120 (-4 ... +248)
Pilot ratio		6:1
Weight	kg (lbs)	2.2 (4.85)
	Datasheet	Type
General information	GI_0060	products and operating conditions
Mounting interface / tolerances	SMT_0019	Size 10
Spare parts	SP_8010	

Characteristics measured at v = 32 mm<sup>2</sup>/s (156 SUS)

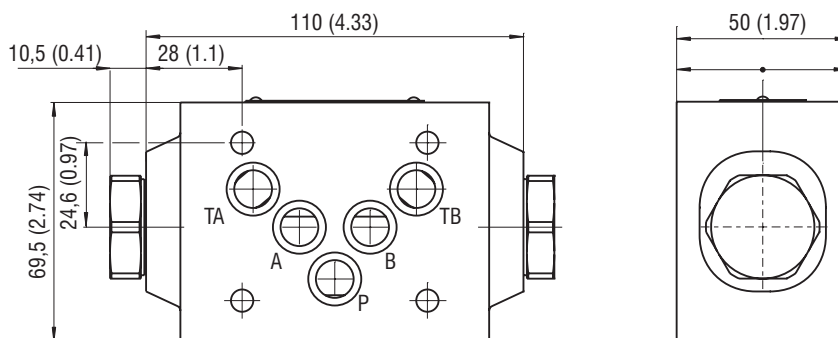
Pressure drop related to flow rate



	Flow direction
1	A1→A2 (B1→B2)
2	A2→A1 (B2→B1)

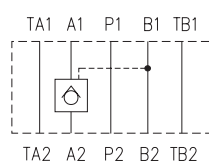
## Dimensions in millimeters (inches)

### Model "C,"

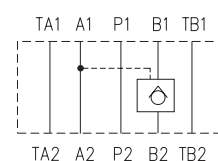


## Functional symbols

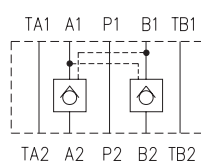
### VJR3-10/MA



### VJR3-10/MB



### VJR3-10/MC



① valve side

② subplate or manifold side

**Notes:** The orientation of the symbol on the name plate corresponds with the valve function.

## Ordering Code

VJR3-10 / M   -   -

Check valve, pilot to open, poppet type, modular

Valve size

Modular sandwich plate design

Functional symbols

Check valve in line A  
Check valve in line B  
Check valve in line A and B

A  
B  
C

Pilot ratio

6:1

6

No designation

Surface treatment

body phosphated, steel parts  
zinc-coated (ZnCr-3), ISO9227 (240 h)  
A zinc-coated (ZnCr-3), ISO 9227 (240 h)  
B zinc-coated (ZnNi), ISO 9227 (520 h)

No designation  
V

Seals

NBR  
FPM (Viton)

Cracking pressure

2.0 bar (29 PSI)

020