

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

## VJR1-04/M

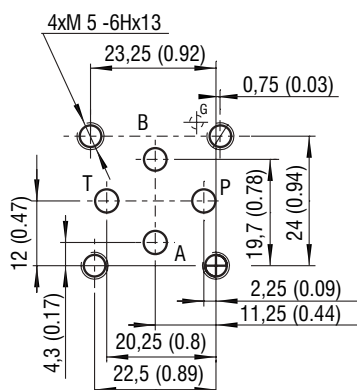
Size 04 (D02) •  $Q_{max}$  20 l/min (5 GPM) •  $p_{max}$  320 bar (4600 PSI)



### Technical Features

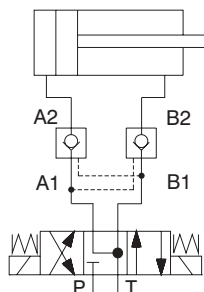
- › Pilot to open check valve, poppet-type with subplate mounting interface acc. to ISO 4401, DIN 24340 (CETOP 02)
- › Sandwich plate design for use in vertical stacking assemblies
- › Sharp-edged steel seats for dirt-tolerant performance
- › Leak-free closing, suitable for fast cycling with long life
- › 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



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

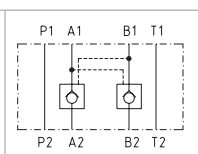
### Typical circuit with pilot operated check valve



### Functional Description

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.

Symbol



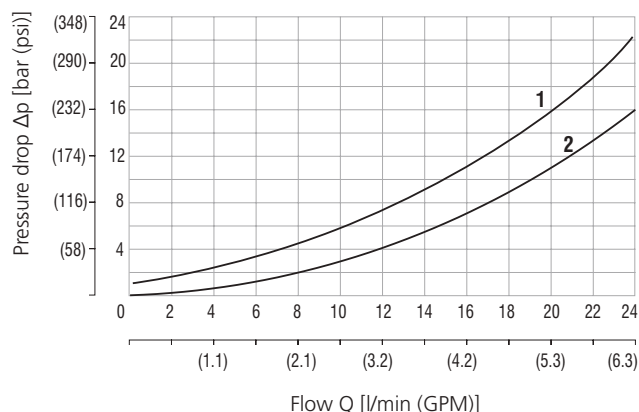
### Technical Data

| 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)                   |

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

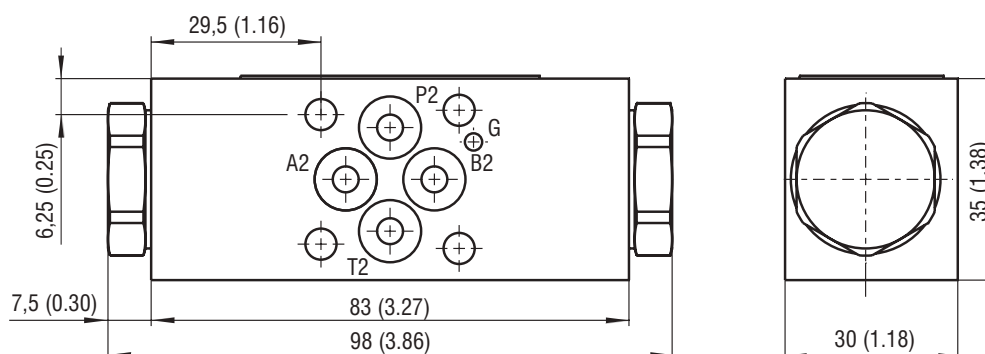
### Characteristics measured at $v = 32 \text{ mm}^2/\text{s}$ (156 SUS)

#### Pressure drop related to flow rate



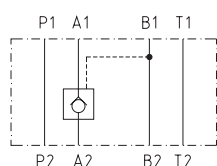
|   | Flow direction |
|---|----------------|
| 1 | A1→A2 (B1→B2)  |
| 2 | A2→A1 (B2→B1)  |

## Dimensions in millimeters (inches)

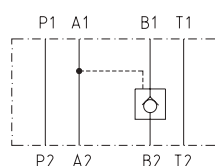


## Functional symbols

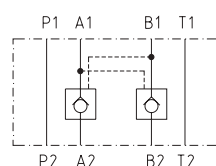
### VJR1-04/MA



### 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

Pilot ratio

3 : 1

A  
B  
C

3

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

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

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

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