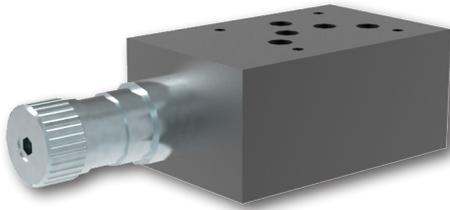


**VRN2-10/M(R)**

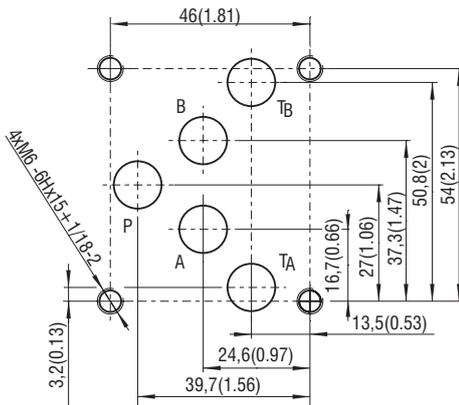
Size 10 (D05) •  $Q_{max}$  150 l/min (40 GPM) •  $p_{max}$  320 bar (4600 PSI)



**Technical Features**

- › Pressure reducing - relieving valve, spool type, pilot operated with mounting interface acc. to ISO 4401, DIN 24340 (CETOP 05) or in-line design
- › Excellent stability throughout flow range with rapid response to dynamic pressure changes
- › Low hysteresis, accurate pressure control and low pressure drop
- › Reverse relief protectionw
- › Wide pressure range up to 320 bar
- › High flow capacity
- › Hardened precision parts
- › Adjustable by allen key or hand screw, optionally sealable (lockwire holes)
- › In the standard version, the valve housing is phosphated for basic surface corrosion protection and as preparation for painting. Steel parts are zinc-coated for 240 h salt spray protection acc. to ISO 9227
- › Enhanced surface protection for mobile sector available for the valve housing and steel parts (ISO 9227, 520 h salt spray)

ISO 4401-05-04-0-05



Ports P, A, B, T - max.  $\varnothing$ 11.2 mm (0.44 in)

**Functional Description**

This pilot operated pressure reducing valve is designed to reduce the system pressure at the consumer port. Its 3 way design provides reverse relief protection of the secondary circuit to the tank port. The pressure can be set by an adjustment screw and the valve is optionally equipped with lockwire holes for sealing. Valve bodies for vertical stacking assemblies are available with pressure reduction in ports A and P. Check valves incorporated into the valve bodies MA(B) enable the reverse flow to pass through the valve.

**Model MA, MB**

In models MA and MB, the flow enters the valve through port A1 (B1). The input pressure is reduced and routed to port A2 (B2). In model MB the reverse flow passes through a check valve.

**Model MP**

In model MP, the pressure is reduced from port P2 to port P1.

All models support the connection of a pressure gauge to port M (thread G 1/4).

**Technical Data**

| Valve size / Cartridge cavity           |             | Size 10 / K3                                |
|---|-------------|---|
| Max. flow                               | l/min (GPM) | 150 (40)                                    |
| Max. control flow                       | l/min (GPM) | 0.65 (0.17)                                 |
| Max. operating pressure (ports P, A, B) | bar (PSI)   | 320 (4640)                                  |
| Max. operating pressure (port T)        | bar (PSI)   | 160 (2320)                                  |
| Fluid temperature range (NBR)           | °C (°F)     | -30 ... +100 (-22 ... 212)                  |
| Fluid temperature range (FPM)           | °C (°F)     | -20 ... +120 (-4 ... 248)                   |
| Weight - models MA, MB                  | kg (lbs)    | 3.20 (7.05)                                 |
| - model MP                              |             | 2.85 (6.28)                                 |
| - model RA1                             |             | 2.20 (4.85)                                 |
|   | Datasheet   | Type  |
| General information                     | GI_0060     | Products and operating conditions           |
| Mounting interface                      | SMT_0019    | ISO 4401-05-04-0-05<br>DIN 24340 (CETOP 05) |
| Spare parts                             | SP_8010     |   |

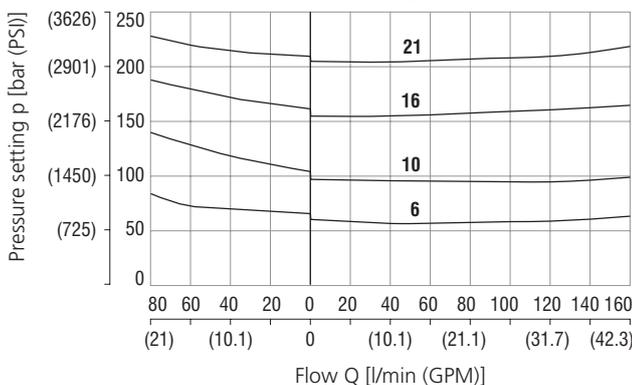


The volume flow, which is needed for control of output pressure and maintaining the adjusted value of reducing pressure, flows permanently through the pilot stage of valve.

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

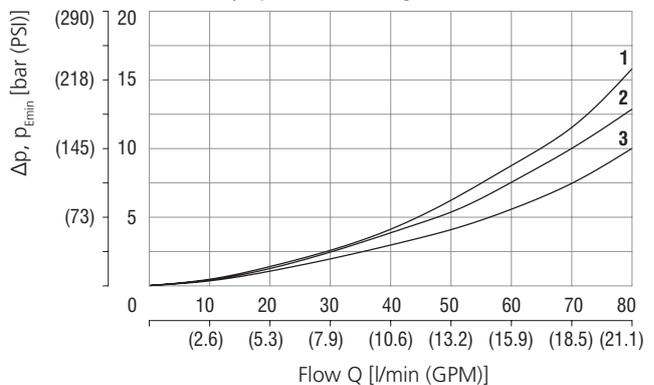
**Reducing - relieving pressure related to flow rate**

Relieving function A-T / Reducing function P-A



**Pressure drop related to flow rate**

Flow direction P-A Fully open valve through section



|   | Models | Directions   |
|---|--------|--------------|
| 1 | MA, MB | A-B, B1-B2   |
| 2 | MP     | P2-P1        |
| 3 | MA, MB | A2-A1, B2-B1 |

