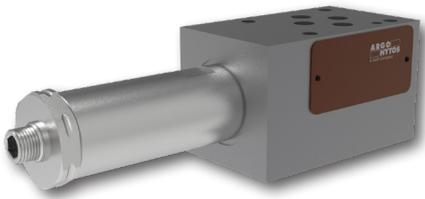


VRN2-06/M(R)

Size 06 (D03) • Q_{max} 40 l/min (11 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 03)
- › Excellent stability throughout flow range with rapid response to dynamic pressure changes
- › Low hysteresis, accurate pressure control and low pressure drop
- › Reverse relief protection
- › 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)

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 freely through the valve.

Model MA, MB, MC

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. The MC type is identical to the MB type, but without the bypass check valve.

Model MP

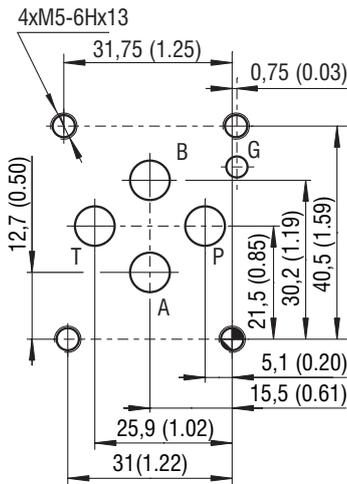
In model MP, the pressure is reduced from port P2 to port P1.

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

Technical Data

| Valve size / Cartridge cavity | | Size 06 / QF3 |
|---|-------------|---|
| Max. flow | l/min (GPM) | 40 (10.6) |
| Max. control flow | l/min (GPM) | 0.25 (0.07) |
| Max. operating pressure (ports P, A, B) | bar (PSI) | 320 (4600) |
| 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) | 1.20 (2.65) |
| - models MC, MP | | 1.10 (2.43) |
| - model RA1 | | 1.10 (2.43) |
| | Datasheet | Type |
| General information | HA 0060 | Products and operating conditions |
| Mounting interface | HA 0019 | ISO 4401-03-02-0-05 DIN 24340 (CETOP 03) |
| Spare parts | HA 8010 | |

ISO 4401-03-02-0-05



Ports P, A, B, T - max. Ø 7.5 mm (0.29 in)

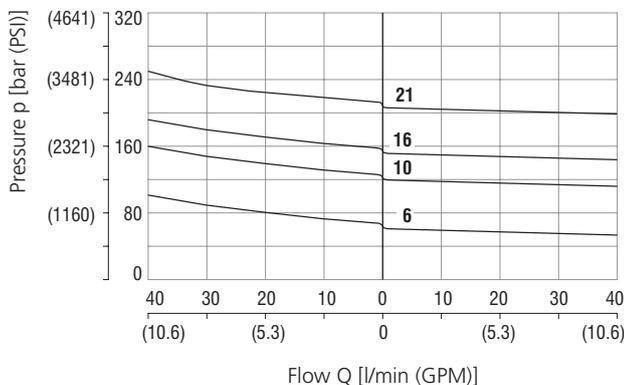


The volume flow, which is needed for control of output pressure and maintaining the adjusted value of reducing pressure, flows permanently through the pilot stage of valve.

Characteristics measured at v = 32 mm²/s (156 SUS)

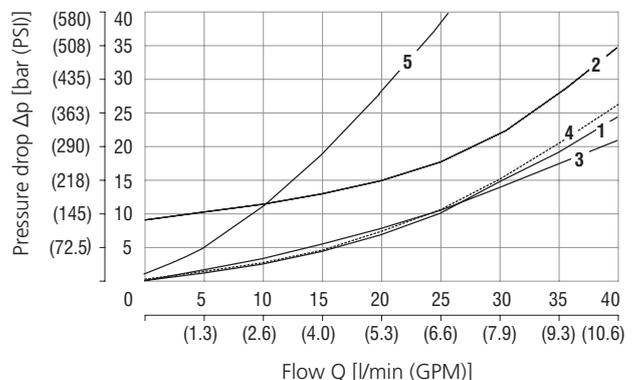
Reducing - relieving pressure related to flow rate

Relieving function A-T / Reducing function P-A



Pressure drop related to flow rate

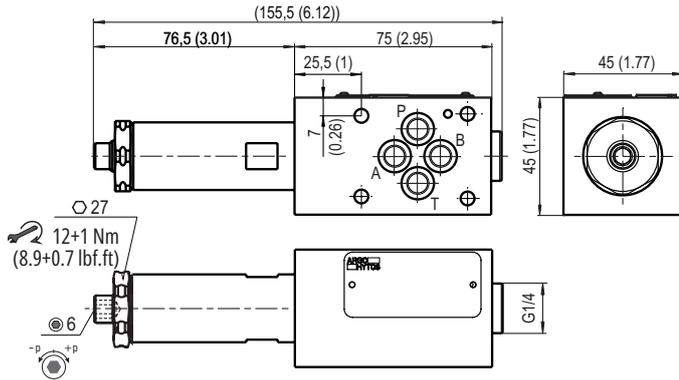
Flow direction P-A Fully open valve through section



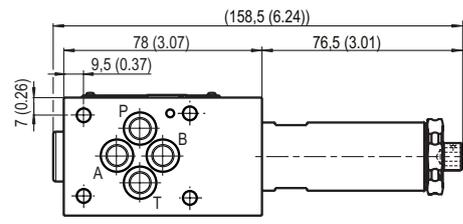
| Flow direction | 1 | 2 | 3 | 4 | 5 |
|----------------|----------------|----------------------|---|-------|--|
| | A1-A2 B1-B2 | A2-T B2-T P1-T | A2-A1 B2-B1 flow through check valve and fully opened main spool | P2-P1 | A2-A1 B2-B1 flow through check valve only |

Dimensions in millimeters (inches)

Model MA

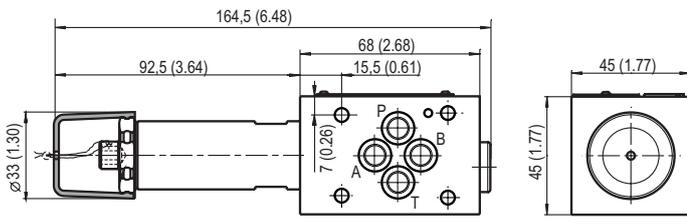


Models MB, MC



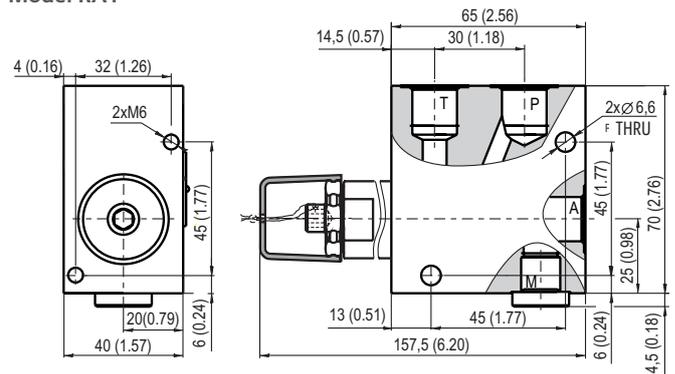
| Dimensions in mm (in) | | | | |
|-----------------------|-----------|---|---|-----------|
| Port | A | P | T | M |
| Thread | G 3/8 | | | G 1/4 |
| Depth of thread | 12 (0.47) | | | 12 (0.47) |
| Counterbore | Ø23 | | | Ø20 |
| Depth of counterbore | 1 | 1 | 1 | 1 |

Model MP



Required surface quality of the counterpart

Model RA1



Functional Symbols

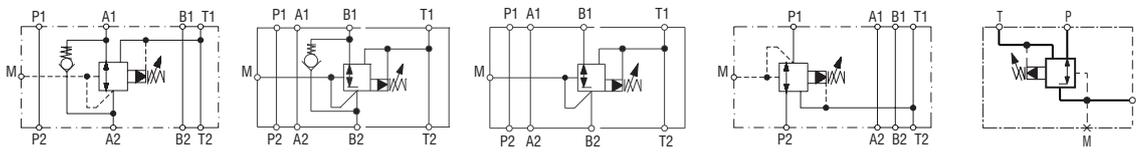
VRN2-06/MA

VRN2-06/MB

VRN2-06/MC

VRN2-06/MP

VRN2-06/RA1



- ① valve side
- ② subplate or manifold side

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

Ordering Code

VRN2-06/ - -

Pressure reducing - relieving valve, spool type, pilot operated, modular

Valve size
ISO 4401-03-02-0-05, DIN 24340 (CETOP 03), size 06

Model **Pressure reduction**

modular valve, on port A2 (with by-pass check valve) **MA**

modular valve, on port B2 (with by-pass check valve) **MB**

modular valve, on port B2 (without by-pass check valve) **MC**

modular valve, on port P1 **MP**

in-line valve, three ports, thread G 3/8 (P, T, A) **RA1**

Adjustable range of reduced pressure

10 ... 63 bar (145 ... 910 PSI) **6**

10 ... 100 bar (145 ... 1450 PSI) **10**

10 ... 160 bar (145 ... 2320 PSI) **16**

10 ... 210 bar (145 ... 3045 PSI) **21**

Surface treatment

No designation standard

A zinc-coated (ZnCr-3), ISO 9227 (240 h)

B zinc-coated (ZnNi), ISO 9227 (520 h)

Seals

No designation NBR

V FPM (Viton)

Adjustment option*

S allen key (hex. 6), without protective cap

RS hand screw, metal

RP hand screw, plastic

L allen key (hex. 6), with protective cap, sealable (lockwire holes)

*for dimensions of adjustment options see datasheet No.5153