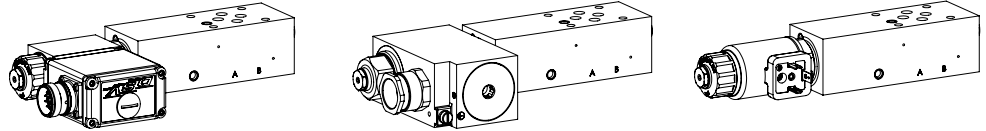


Proportional pressure reducing valve

Flange- or Sandwich construction

- ◆ pilot or direct operated
- ◆ $Q_{max} = 60 \text{ l/min}$
- ◆ $p_{max} = 400 \text{ bar}$

NG6
ISO 4401-03



DESCRIPTION

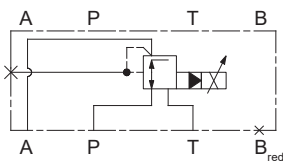
Proportional pressure reducing valve in flange or sandwich construction. By means of changing the electrical current on the proportional solenoid, the pressure in the controlled port changes proportionally to the solenoid current. Pressure increase in the controlled port to above the adjusted value, e.g. through an active consumer, is avoided by discharging excess oil to the tank. For the control, Wandfluh proportional amplifiers are available (see register 1.13).

APPLICATION

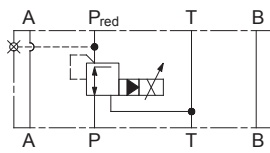
These valves are used in hydraulic systems, where the pressure in a consumer has to be maintained constant independent of pressure fluctuations on the supply side. The electrical remote control in conjunction with process controls allows economical solutions with repeatable processes.

SYMBOL

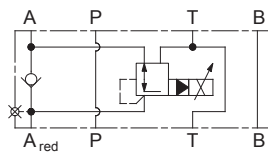
Flange execution
 MV.FA06-P/A



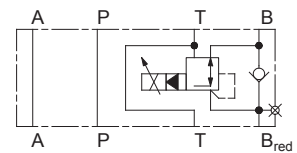
Sandwich execution
 MV.SA06-P



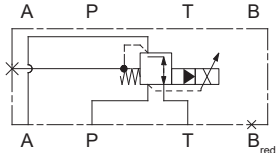
Sandwich execution
 MV.SA06-A



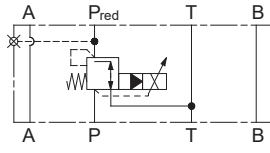
Sandwich execution
 MV.SA06-B



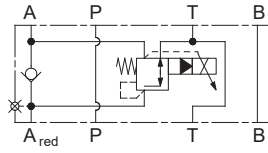
Flange execution
 MQ.FA06-P/A



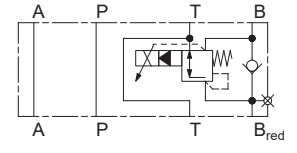
Sandwich execution
 MQ.SA06-P



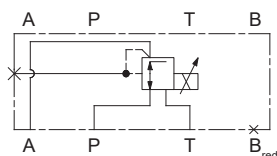
Sandwich execution
 MQ.SA06-A



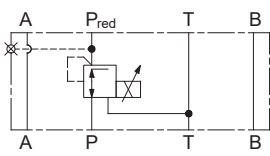
Sandwich execution
 MQ.SA06-B



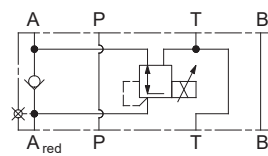
Flange execution
 MP.FA06-P/A



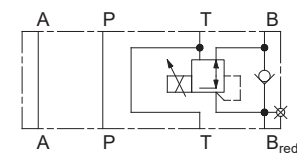
Sandwich execution
 MP.SA06-P



Sandwich execution
 MP.SA06-A



Sandwich execution
 MP.SA06-B



TYPE CODE

| | | | | | | | | | | | |
|--|------------------------------|------------------------------|-------------------------------|----------------------------|----------------------|----------------------------|----------------------|----------------------------|----------------------|---|----------------------|
| Pressure reducing valve | | M | <input type="text"/> | <input type="text"/> | <input type="text"/> | A06 - | <input type="text"/> | - | <input type="text"/> | # | <input type="text"/> |
| Direct operated | <input type="checkbox"/> P | | | | | | | | | | |
| Pilot operated | <input type="checkbox"/> Q | or | <input type="checkbox"/> V | | | | | | | | |
| Proportional | <input type="checkbox"/> P | | | | | | | | | | |
| Proportional Ex-protection | <input type="checkbox"/> B | | | | | | | | | | |
| Flange construction | <input type="checkbox"/> F | | | | | | | | | | |
| Sandwich construction | <input type="checkbox"/> S | | | | | | | | | | |
| International standard interface ISO, NG6 | | | | | | | | | | | |
| Type list / Function | flange construction P → A | <input type="checkbox"/> P/A | sandwich construction in P | <input type="checkbox"/> P | in A | <input type="checkbox"/> A | in B | <input type="checkbox"/> B | | | |
| Nominal pressure range p_N , Nominal voltage U_N , etc. of the built-in screw-in cartridge | | | | | | | | | | | |
| Design index (subject to change) 2.3-840 | | | | | | | | | | | |

Examples: M VP F A06- P/A - 100-G24/WD- D1
 M VB S A06- A - 200-G12/L15/IN
 M QP S A06- B - 350-G24/MEA1-HB0
 M PP S A06- P - 80-G24/WD- HB4,5

GENERAL SPECIFICATIONS

| | |
|---------------------|--|
| Designation | Proportional pressure reducing valve |
| Construction | Pilot or direct operated |
| Mounting | Flange- or Sandwich construction |
| Nominal size | NG6 according to ISO 4401-03 |
| Actuation | Proportional solenoid |
| Ambient temperature | -25...+70 °C |
| Weight | Without screw-in cartridge 1,64 kg (Flange construction) 1,41 kg (Sandwich construction P) 1,78 kg (Sandwich construction A, B) |
| MTTFd | 150 years |

HYDRAULIC SPECIFICATIONS

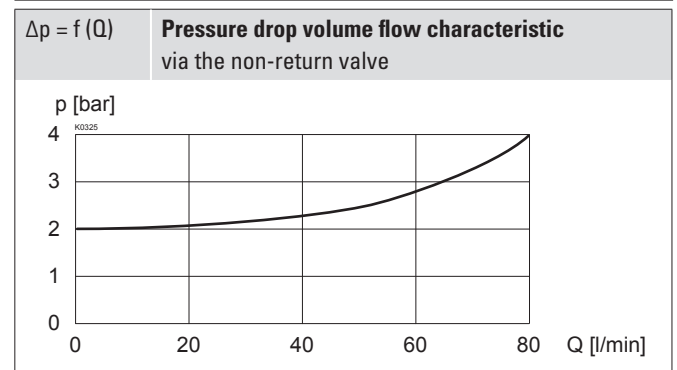
| | |
|--------------------------|---|
| Working pressure | $p_{max} = 400$ bar |
| Nominal pressure range | $P_N =$ see data sheet of the screw-in cartridges |
| Volume flow range | $Q = 0...60$ l/min |
| Fluid | Mineral oil, other fluid on request |
| Viscosity range | 12 mm ² /s...320 mm ² /s |
| Temperature range fluid | -25...+70 °C (NBR) -20...+70 °C (FKM) |
| Contamination efficiency | Class 20 / 18 / 14 |
| Filtration | Required filtration grade $\beta_{10...16} \geq 75$, see data sheet 1.0-50 |

ACTUATION

Actuation: Proportional solenoid, wet pin push type, pressure tight

Note!


Other specifications, see data sheet of the screw-in cartridges

PERFORMANCE SPECIFICATIONS

Note!


Detailed performance specifications as well as further hydraulic specifications can be found on the data sheet of the pressure reducing cartridge installed.

Attention!


The performance data especially the „pressure-flowcharacteristic., on the data sheets of the screw-in cartridges refer to the screw-in cartridges only. The additional pressure drop of the flange body respectively sandwich body must be taken into consideration.

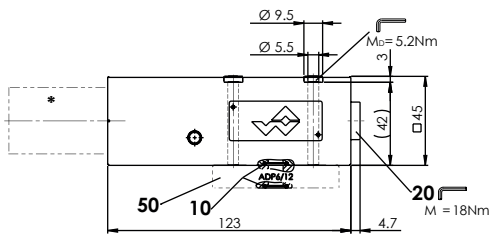
VALVES INSTALLED

The following screw-in cartridges are used in either the flange body or the sandwich body.

| Article | Description | Data sheet no. | |
|---------------|--|----------------|-----|
| MVPPM22 | Proportional pressure reducing cartridge pilot operated | 2.3-629 | 60* |
| MVPPM22.../ME | Proportional pressure reducing cartridge pilot operated, with integrated electronics | 2.3-632 | 60* |
| MVBPM22 | Proportional pressure reducing cartridge pilot operated, Ex-protection Ex d | 2.3-635 | 60* |
| MQPPM22 | Proportional pressure reducing cartridge pilot operated from connection P | 2.3-641 | 40* |
| MQPPM22.../ME | Proportional pressure reducing cartridge pilot operated from connection P, with integrated electronics | 2.3-643 | 40* |
| MQBPPM2 | Proportional pressure reducing cartridge pilot operated from connection P, Ex-protection Ex d | 2.3-644 | 40* |
| MPPPM22 | Proportional pressure reducing cartridge, direct operated | 2.3-625 | 20* |
| MPBPM22 | Proportional pressure reducing cartridge, direct operated, Ex-protection Ex d | 2.3-627 | 20* |

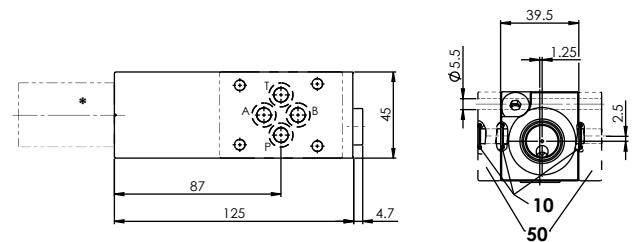
DIMENSIONS

Flange execution
M..FA06-P/A



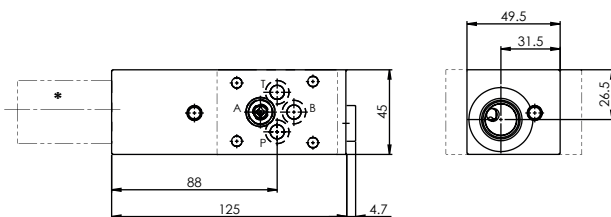
The distance plate ADP6 / ... (pos. 50) has to be ordered separately for the ex-protection solenoid

Sandwich execution
M..SA06-P

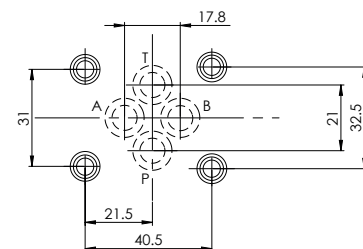


Sandwich execution
M..SA06-A

M..SA06-B (cartridge on B-side)



HYDRAULIC CONNECTION



Note!



* The exterior dimensions or the cartridges can be obtained from the corresponding data sheets.

PARTS LIST

| Position | Article | Description |
|----------|----------|---------------------------------------|
| 20 | 238.2406 | Screw plug VSTI G1/4"-ED |
| 50 | 173.3451 | Distance plate ADP6 / 12 (h = 12 mm) |
| | 173.3453 | Distance plate ADP6 / 30 (h = 30 mm) |
| | 173.3454 | Distance plate ADP6 / 46 (h = 46 mm) |
| | 251.3121 | Seal kit M(P,Q,V).FA06, M(P,Q,V).SA06 |

Seal kit consisting of:

| | | |
|----|----------|------------------------------|
| 10 | O-ring | ID 9,25 x 1,78 |
| | 251.3106 | Seal kit MP, MV, MQ, PM22 |
| | 251.3115 | Seal kit MP, MV, MQ, PM22-D1 |

SURFACE TREATMENT

- ◆ The sandwich plates and flange bodies are zinc-nickel coated

STANDARDS

| | |
|--------------------------|-------------|
| Mounting interface | ISO 4401-03 |
| Protection class | EN 60 529 |
| Contamination efficiency | ISO 4406 |

ACCESSORIES

| | |
|-----------------------------|--------------------|
| Proportional amplifier | Register 1.13 |
| Threaded subplates | Data sheet 2.9-30 |
| Multi-station subplates | Data sheet 2.9-60 |
| Module type manifold blocks | Data sheet 2.9-100 |
| Technical explanations | Data sheet 1.0-100 |
| Filtration | Data sheet 1.0-50 |
| Relative duty factor | Data sheet 1.1-430 |

SEALING MATERIAL

NBR or FKM (Viton) as standard, choice in the type code

INSTALLATION NOTES

| | |
|-------------------|---|
| Mounting type | Flange or sandwich mounting 4 fixing holes for socket head screws or studs M5 |
| Mounting position | Any, preferably horizontal |
| Tightening torque | Fixing screws $M_0 = 5,2 \text{ Nm}$ (quality 8.8, zinc coated) Screw-in cartridge $M_0 = 60 \text{ Nm}$ |