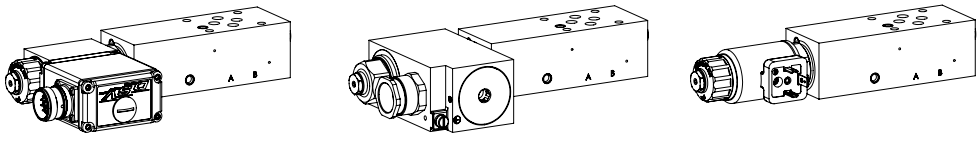
Proportional pressure reducing valve

Flange- or Sandwich construction

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

NG6
ISO 4401-03



DESCRIPTION

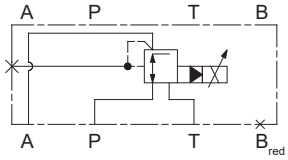
Proportional pressure reducing valve in flange or sandwich construction. By means of changing the electrical current on the proportional solenoid, the pressure in the controlled port changes proportionally to the solenoid current. Pressure increase in the controlled port to above the adjusted value, 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

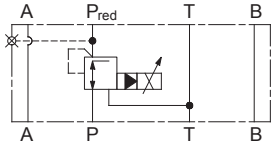
These valves are used in hydraulic systems, where the pressure in a consumer has to be maintained constant independent of pressure fluctuations on the supply side. The electrical remote control in conjunction with process controls allows economical solutions with repeatable processes.

SYMBOL

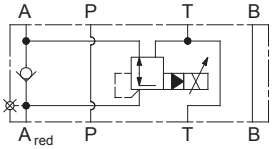
Flange execution
MV.FA06-P/A



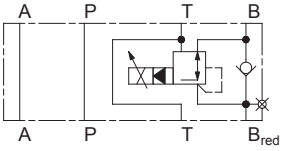
Sandwich execution
MV.SA06-P



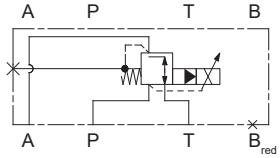
Sandwich execution
MV.SA06-A



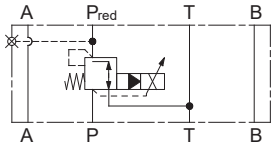
Sandwich execution
MV.SA06-B



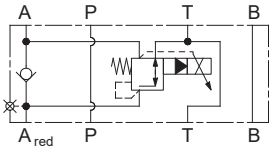
Flange execution
MQ.FA06-P/A



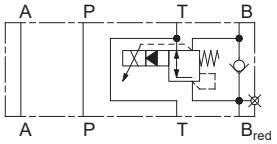
Sandwich execution
MQ.SA06-P



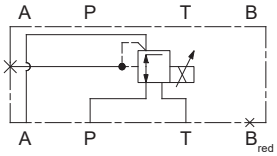
Sandwich execution
MQ.SA06-A



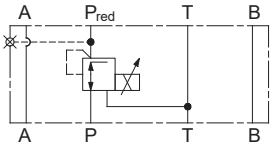
Sandwich execution
MQ.SA06-B



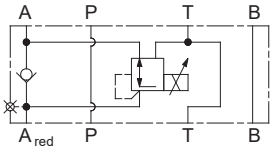
Flange execution
MP.FA06-P/A



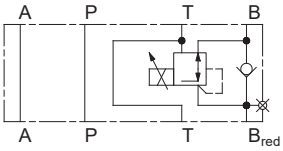
Sandwich execution
MP.SA06-P



Sandwich execution
MP.SA06-A



Sandwich execution
MP.SA06-B



TYPE CODE

M [ ] [ ] [ ] A06 - [ ] - [ ] # [ ]

Pressure reducing valve

Direct operated [P]
Pilot operated [Q] or [V]

Proportional [P]
Proportional Ex-protection [B]

Flange construction [F]
Sandwich construction [S]

International standard interface ISO, NG6

Type list / Function
flange construction P → A [P/A]
sandwich construction in P [P]
in A [A]
in B [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 mm²/s…320 mm²/s
Temperature range fluid	-25…+70 °C (NBR) -20…+70 °C (FKM)
Contamination efficiency	Class 20 / 18 / 14
Filtration	Required filtration grade ß 10…16 ≥ 75, see data sheet 1.0-50

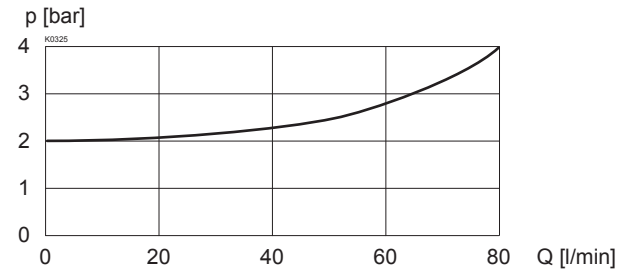
ACTUATION

Actuation	Proportional solenoid, wet pin push type, pressure tight

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

PERFORMANCE SPECIFICATIONS

Δp = f (Q) **Pressure drop volume flow characteristic** via the non-return valve



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 catridges refere to the screw-in cartridges only. The additional pressure drop of the flange body respectivly sandwich body must be taken into consideration.

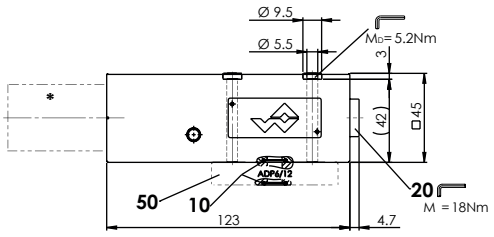
VALVES INSTALLED

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*

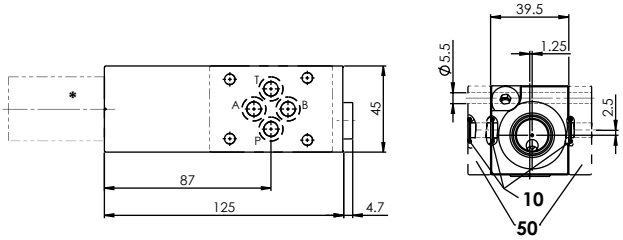
DIMENSIONS

Flange execution
M..FA06-P/A

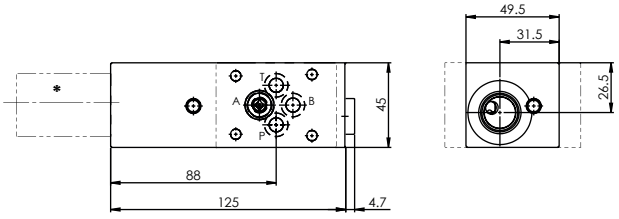


The distance plate ADP6 / … (pos. 50) has to be ordered separately for the ex-protection solenoid

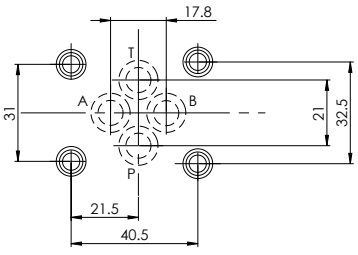
Sandwich execution
M..SA06-P



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

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

SURFACE TREATMENT

- The flange bodies are painted with a two component paint
- The sandwich plates are zinc-nickel coated

STANDARDS

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

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_D = 5,2 Nm (quality 8.8, zinc coated) Screw-in cartridge M_D = 60 Nm

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