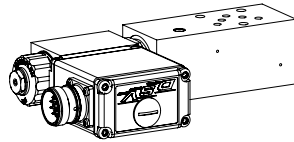


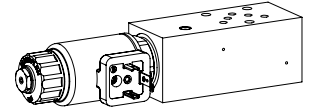
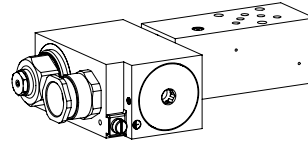
Proportional pressure relief valve

Flange- or Sandwich construction

- ◆ pilot or direct operated
- ◆ $Q_{max} = 20 \text{ l/min}$
- ◆ $p_{max} = 400 \text{ bar}$



NG4-Mini Wandfluh standard



DESCRIPTION

Pilot or direct operated proportional pressure relief valve in flange or sandwich construction. When the operating pressure adjusted by means of the proportional solenoid is reached, the valve opens and connects the protected line with the drain to the tank. The back pressure in T influences the pressure in the secured oil line. These proportional valves are very sensitively adjustable. For flange or sandwich executions with pressure relief in port P, there is a manometer connection. For the control, Wandfluh proportional amplifiers are available (see register 1.13).

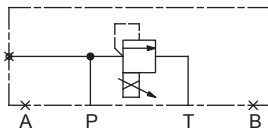
APPLICATION

These valves are used in hydraulic systems where the pressure has to be changed frequently. The electrical remote control in conjunction with process controls allows economical solutions with repeatable processes. Miniature valves are used where both, reduced dimensions and weight are important.

SYMBOL

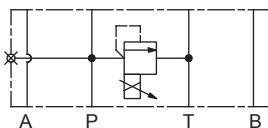
Flange execution

B..FA04-P



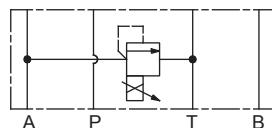
Sandwich execution

B..SA04-P



Sandwich execution

B..SA04-A



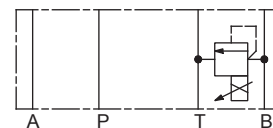
Note!



- ◆ Direct operated execution drawn
- ◆ All variants are also available pilot operated

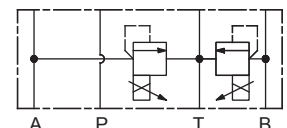
Sandwich execution

B..SA04-B



Sandwich execution

B..SA04-AB



GENERAL SPECIFICATIONS

Designation	Proportional pressure relief valve
Construction	Pilot or direct operated
Mounting	Flange- or Sandwich construction
Nominal size	NG4-Mini according to Wandfluh standard
Actuation	Proportional solenoid
Ambient temperature	-25...+70 °C
Weight	Without screw-in cartridge 1,15 kg (Flange construction) 0,96 kg (Sandwich construction P, A, B) 1,24 kg (Sandwich construction AB)
MTTFd	150 years

ACTUATION

Actuation

Proportional solenoid, wet pin push type, pressure tight

Note!



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

TYPE CODE

Pressure relief valve		B	<input type="text"/>	<input type="text"/>	<input type="text"/>	A04 -	<input type="text"/>	-	<input type="text"/>	#	<input type="text"/>
Direct operated	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Pilot operated	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Proportional	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Proportional Ex-protection	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Flange construction	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Sandwich construction	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Mounting interface according to Wandfluh standard, NG4-Mini											
Type list / Function	flange construction in P	<input type="checkbox"/>	sandwich construction in P	<input type="checkbox"/>	in A	<input type="checkbox"/>	in B	<input type="checkbox"/>	in A and B	<input type="checkbox"/>	<input type="checkbox"/>
Nominal pressure range p_N , Nominal voltage U_N , etc. of the built-in screw-in cartridge											
Design index (subject to change)											

2.3-720

HYDRAULIC SPECIFICATIONS

Working pressure	$p_{max} = 400 \text{ bar}$
Nominal pressure range	$P_N =$ see data sheet of the screw-in cartridges
Volume flow range	$Q = 0 \dots 20 \text{ l/min}$
Fluid	Mineral oil, other fluid on request
Viscosity range	$12 \text{ mm}^2/\text{s} \dots 320 \text{ mm}^2/\text{s}$
Temperature range fluid	-25...+70 °C (NBR) -20...+70 °C (FKM)
Contamination efficiency	Class 18 / 16 / 13
Filtration	Required filtration grade $\beta_{6 \dots 10} \geq 75$, see data sheet 1.0-50

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.

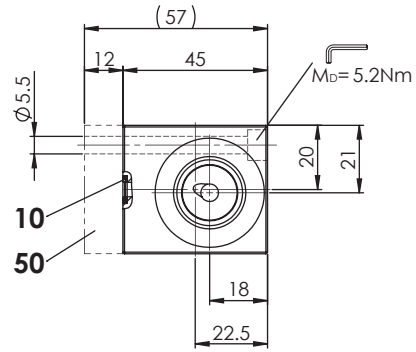
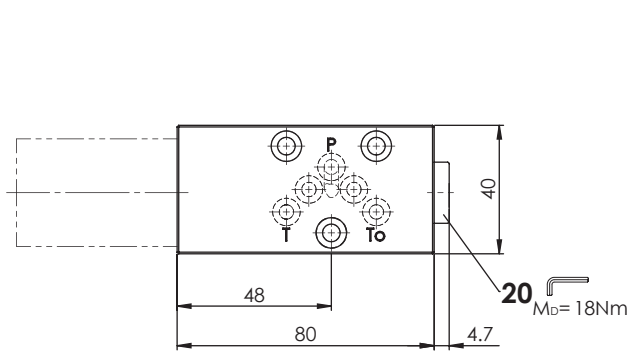
VALVES INSTALLED

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

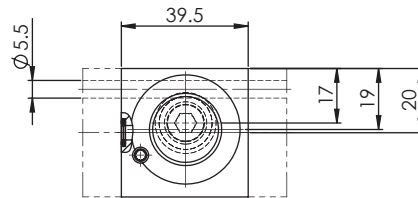
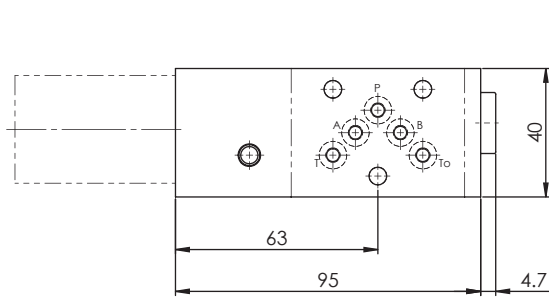
Article	Description	Data sheet no.
BVIPM22	Proportional pressure relief cartridge pilot operated, inverse	2.3-528
BVPPM22	Proportional pressure relief cartridge pilot operated	2.3-529
BVBPM22	Proportional pressure relief cartridge pilot operated, Ex-protection Ex d	2.3-536
BVPPM22-../ME	Proportional pressure relief cartridge pilot operated, with integrated electronics	2.3-537
BDPPM22	Proportional pressure relief cartridge direct operated	2.3-539
BDBPM22	Proportional pressure relief cartridge direct operated, Ex-protection Ex d	2.3-547
BDIPM22	Proportional pressure relief cartridge direct operated, inverse	2.3-548
BDPPM22-../ME	Proportional pressure relief cartridge direct operated, with integrated electronics	2.3-561
BDIPM22-../ME	Proportional pressure relief cartridge direct operated, inverse, with integr. electronics	2.3-562

DIMENSIONS

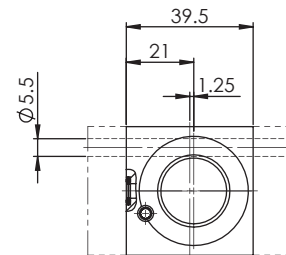
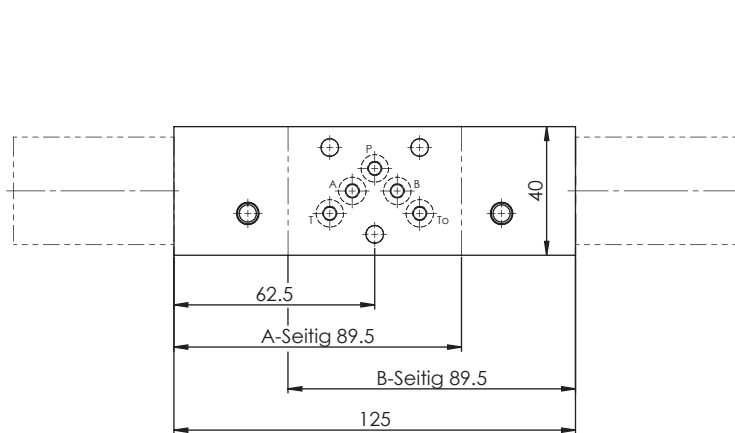
Flange execution
B..FA04-P



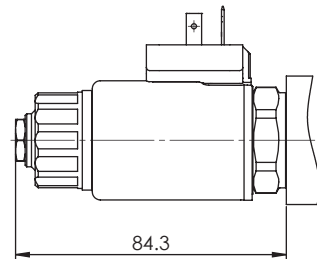
Sandwich execution
B..SA04-P



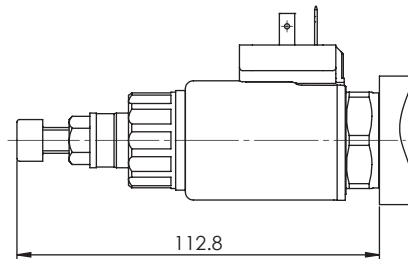
Sandwich execution
B..SA04-A / B / AB



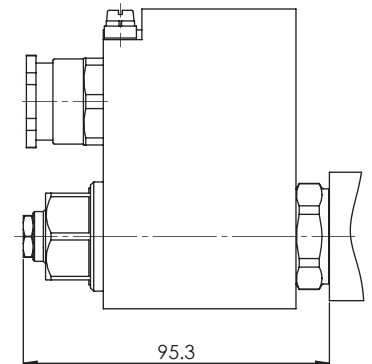
B.PSA04



B.ISA04



B.BSA04

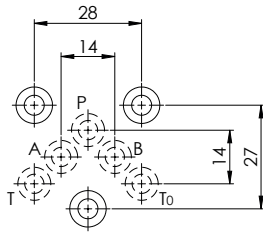


Note!



The distance plate BDP4 / ... (pos. 50) has to be ordered separately for the ex-protection solenoid

HYDRAULIC CONNECTION



ACCESSORIES

Proportional amplifier	Register 1.13
Threaded subplates	Data sheet 2.9-10
Multi-station subplates	Data sheet 2.9-50
Module type manifold blocks	Data sheet 2.9-90
Technical explanations	Data sheet 1.0-100
Filtration	Data sheet 1.0-50

STANDARDS

Mounting interface	Wandfluh standard
Protection class	EN 60 529
Contamination efficiency	ISO 4406

PARTS LIST

Position	Article	Description
10	160.2052	O-ring ID 5,28 x 1,78 (NBR)
	160.6052	O-ring ID 5,28 x 1,78 (FKM)
20	238.2406	Screw plug VSTI G1/4"-ED
50	173.1450	Distance plate BDP4 / 12 (h = 12 mm)
	173.1451	Distance plate BDP4 / 20 (h = 20 mm)

SURFACE TREATMENT

- ◆ The flange body is painted with a two component paint
- ◆ The sandwich bodies are zinc-nickel coated

SEALING MATERIAL

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

INSTALLATION NOTES

Mounting type	Flange or sandwich mounting 3 fixing holes for socket head screws or studs M5
Mounting position	Any, preferably horizontal
Tightening torque	Fixing screws $M_D = 5,2 \text{ Nm}$ (quality 8.8, zinc coated) Screw-in cartridge $M_D = 60 \text{ Nm}$