

## Proportional pressure relief valve

### Flange- or Sandwich construction

- ◆ pilot or direct operated
- ◆  $Q_{max} = 8 \text{ l/min}$
- ◆  $p_{max} = 350 \text{ bar}$
- ◆  $p_{N \text{ red max}} = 315 \text{ bar}$

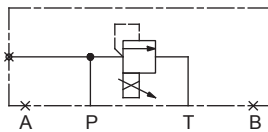
## DESCRIPTION

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. 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).

## SYMBOL

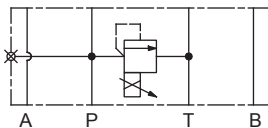
Flange execution

B..FA03-P



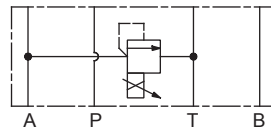
Sandwich execution

B..SA03-P



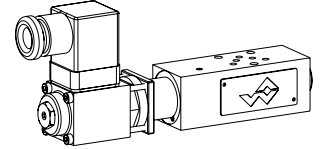
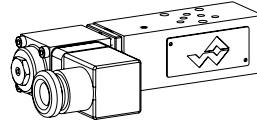
Sandwich execution

B..SA03-A



## NG3-Mini

Wandfluh standard



## APPLICATION

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.

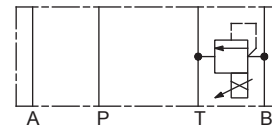
### Note!



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

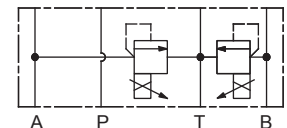
Sandwich execution

B..SA03-B



Sandwich execution

B..SA03-AB



## GENERAL SPECIFICATIONS

Designation	Proportional pressure relief valve
Construction	Pilot or direct operated
Mounting	Flange- or Sandwich construction
Nominal size	NG3-Mini according to Wandfluh standard
Actuation	Proportional solenoid
Ambient temperature	-25...+70 °C
Weight	Without screw-in cartridge 0,65 kg (Flange construction) 0,45 kg (Sandwich construction P) 0,52 kg (Sandwich construction A, B, AB)
MTTFd	150 years

## ACTUATION

Actuation	Proportional solenoid, wet pin push type, pressure tight
Execution	PI29V (Data sheet 1.1-90)
Connection	Connector socket EN 175301 – 803

### Note!



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

**TYPE CODE**



Pressure relief valve		B	<input type="text"/>	P	<input type="text"/>	A03	-	<input type="text"/>	-	<input type="text"/>	-	<input type="text"/>	-	<input type="text"/>	#	<input type="text"/>
Pilot operated	<input type="text" value="V"/>															
Direct operated	<input type="text" value="D"/>															
Proportional																
Flange construction	<input type="text" value="F"/>															
Sandwich construction	<input type="text" value="S"/>															
Mounting interface according to Wandfluh standard, NG3-Mini																
Type list / Function	flange construction in P	<input type="text" value="P"/>	sandwich construction in P	<input type="text" value="P"/>	in A	<input type="text" value="A"/>	in B	<input type="text" value="B"/>	in A and B	<input type="text" value="AB"/>						
Nominal pressure range $p_N$	pilot operated	20 bar	<input type="text" value="20"/>	direct operated	20 bar	<input type="text" value="20"/>	100 bar	<input type="text" value="100"/>	100 bar	<input type="text" value="100"/>	200 bar	<input type="text" value="200"/>	200 bar	<input type="text" value="200"/>	315 bar	<input type="text" value="315"/>
Nominal voltage $U_N$	12 VDC	<input type="text" value="G12"/>	24 VDC	<input type="text" value="G24"/>												
Sealing material	NBR	<input type="text"/>	FKM (Viton)	<input type="text" value="D1"/>												
Design index (subject to change)																

2.3-700

**HYDRAULIC SPECIFICATIONS**

Working pressure	$p_{max} = 350$ bar
Nominal pressure range	<b>Pilot or direct operated</b> $P_N = 20$ bar, 100 bar, 200 bar, 315 bar
Volume flow range	$Q = 0 \dots 8$ l/min
Fluid	Mineral oil, other fluid on request
Viscosity range	12 mm <sup>2</sup> /s ... 320 mm <sup>2</sup> /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**

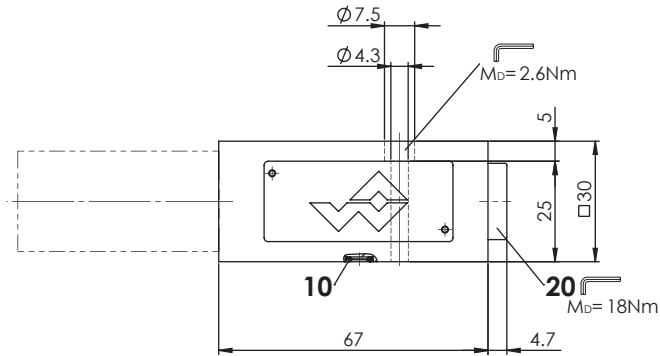
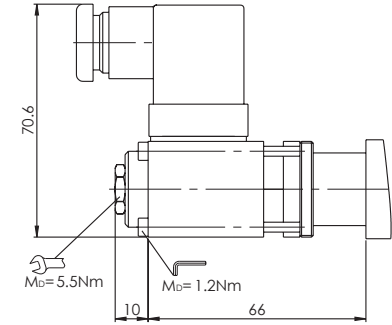
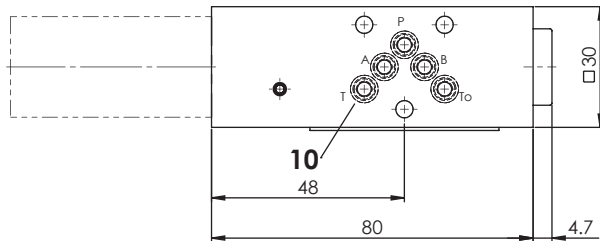
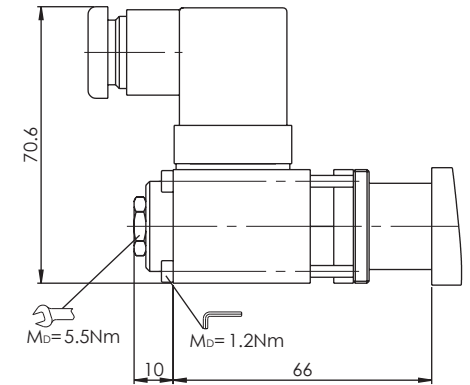
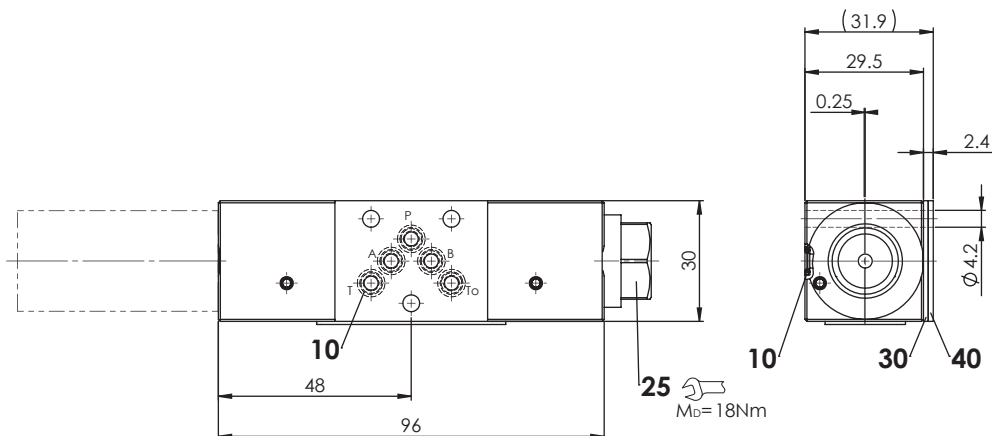
- Note!**  Detailed performance specifications as well as further hydraulic specifications can be found on the data sheet of the pressure reducing cartridge installed.
- Attention!**  The performance data especially the „pressure-flowcharacteristic,“ on the data sheets of the screw-in cartridges refer 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.
BVPPM18	Proportional pressure relief cartridge pilot operated	2.3-510
BDPPM18	Proportional pressure relief cartridge direct operated	2.3-520

**DIMENSIONS**

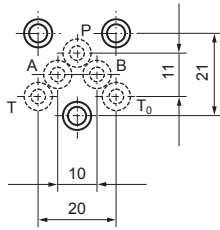
 Flange execution  
 B.PFA03-P

 Sandwich execution  
 BDPSA03-...

 Sandwich execution  
 B.PSA03-P

 Sandwich execution  
 BVPSA03-...

 Sandwich execution  
 B.PSA03-A / B / AB


B.PSA03-A: Cartridge on A side

B.PSA03-B: Cartridge on B side

B.PSA03-AB: Cartridge on A and B side

## HYDRAULIC CONNECTION



## ACCESSORIES

Proportional amplifier	Register 1.13
Threaded subplates	Data sheet 2.9-05
Multi-station subplates	Data sheet 2.9-45
Module type manifold blocks	Data sheet 2.9-85
Technical explanations	Data sheet 1.0-100
Filtration	Data sheet 1.0-50
Relative duty factor	Data sheet 1.1-430

## STANDARDS

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

## PARTS LIST

Position	Article	Description
10	160.2045	O-ring ID 4,50 x 1,50 (NBR)
	160.6045	O-ring ID 4,50 x 1,50 (FKM)
20	238.2406	Screw plug VSTI G1/4"-ED
30	173.0650	Sealing plate PDSA03
40	173.0700	Intermediate plate PZSA03

## 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 M4
Mounting position	Any, preferably horizontal
Tightening torque	Fixing screws $M_0 = 2,6 \text{ Nm}$ (quality 8.8, zinc coated)