

## Pressure relief valve

### Flange- or Sandwich construction

- ◆ pilot or direct operated
- ◆  $p_{max} = 400 \text{ bar}$
- ◆  $p_{Nmax} = 350 \text{ bar}$
- ◆  $Q_{max} = 8 \text{ l/min}$

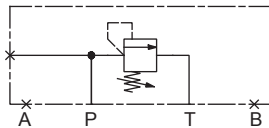
### DESCRIPTION

Pilot or direct operated pressure relief valve in flange or sandwich construction. When the adjusted operating pressure is reached, the main spool opens and connects the protected line with the drain to the tank. For flange or sandwich executions with pressure relief in port P, there is a manometer connection.

### SYMBOL

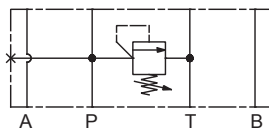
Flange execution

B..FA03-P



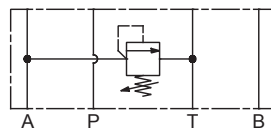
Sandwich execution

B..SA03-P



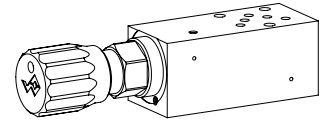
Sandwich execution

B..SA03-A



## NG3-Mini

Wandfluh standard



### APPLICATION

For the limitation of the operating pressure in hydraulic systems by relieving the oil from the secured oil line P (1), A (2), B (3) to output / tank line T (4). Miniature values are used where both, reduced dimensions and weight are important.

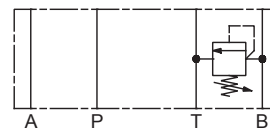
#### Note!



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

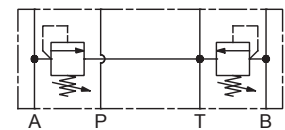
Sandwich execution

B..SA03-B



Sandwich execution

B..SA03-AB



### GENERAL SPECIFICATIONS

Designation	Pressure relief valve
Construction	Direct or pilot operated
Mounting	Flange- or Sandwich construction
Nominal size	NG3-Mini according to Wandfluh standard
Actuation	Manually
Ambient temperature	-25...+70 °C (NBR) -20...+70 °C (FKM)
Weight	0,8 kg (Flange construction) 0,6 kg (Sandwich construction P, A, B) 0,7 kg (Sandwich construction AB)

### STANDARDS

Mounting interface	Wandfluh standard
Contamination efficiency	ISO 4406

### ACTUATION

Actuation

S = lockable key adjustment  
D = lockable knob adjustment

#### Note!



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

### SURFACE TREATMENT

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

**TYPE CODE**

Pressure relief valve		B	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	A03	-	<input type="checkbox"/>	-	<input type="checkbox"/>	-	<input type="checkbox"/>	#	<input type="checkbox"/>
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"/>	<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"/>	<input type="checkbox"/>	<input type="checkbox"/>
Type of adjustment	Key	<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"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Control knob	<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"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Cover	<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"/>	<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"/>	<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"/>	<input type="checkbox"/>	<input type="checkbox"/>
Mounting interface acc. to Wandfluh standard, NG3-Mini														
Type list / Function	flange construction in P	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	sandwich construction in P	<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"/>	<input type="checkbox"/>	in A	<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"/>	<input type="checkbox"/>	in B	<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"/>	<input type="checkbox"/>	in A and B	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Nominal pressure range $p_N$	pilot operated	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	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"/>
	63 bar	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	63 bar	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	160 bar	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	160 bar	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	350 bar	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	315 bar	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Sealing material	NBR	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	FKM (Viton)	<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"/>	<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"/>
Design index (subject to change)														
2.1-600														

**HYDRAULIC SPECIFICATIONS**

Working pressure	$p_{max} = 400 \text{ bar}$
Nominal pressure range	$P_{Nmax} =$ S: 63, 160, 315 bar V: 63, 160, 350 bar
Maximum volume flow	<b>pilot operated</b> $Q_{max} = 8 \text{ l/min}$ <b>direct operated</b> $Q_{max} = 5 \text{ l/min}$
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 $\beta_{6...10} \geq 75$ , see data sheet 1.0-50

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


**PERFORMANCE SPECIFICATIONS**

**Note!** Detailed performance limites and additional hydraulic specifications may be drawn from the data sheets of the corresponding installed pressure relief cartridge.



**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.


**SEALING MATERIAL**

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

## VALVES INSTALLED

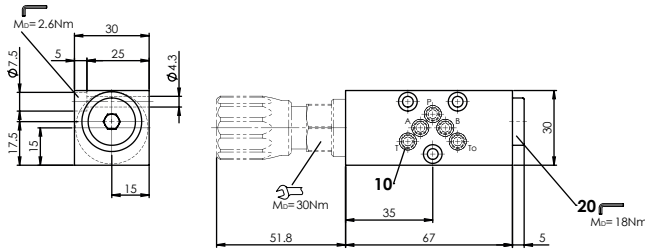
The following screw-in cartridges are used in either the flange body or the sandwich body.

Article	Description	Data sheet no.
BV.PM18	Pressure relief cartridge pilot operated	2.1-510
BS.PM18	Pressure relief cartridge direct operated	2.1-520

## DIMENSIONS

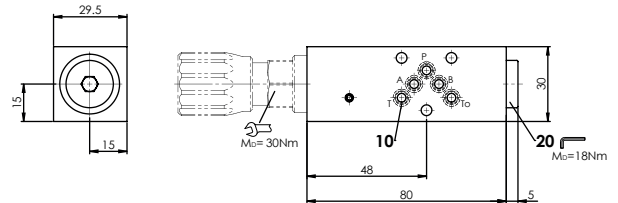
Flange execution

B.DFA03-P



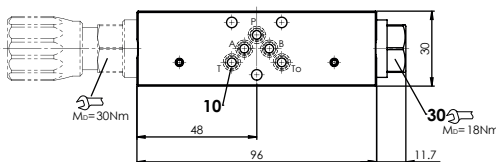
Sandwich execution

B.DSA03-P



Sandwich execution

B.DSA03-A / B / AB



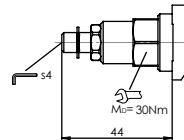
B.DSA03-A: Cartridge on A side

B.DSA03-B: Cartridge on B side

B.DSA03-AB: Cartridge on A and B side

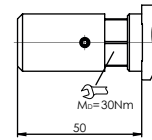
Type of adjustment

B.S.A03

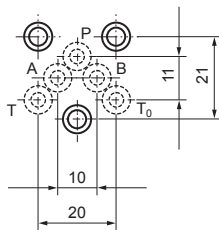


Type of adjustment

B.A.A03



## HYDRAULIC CONNECTION



## 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	239.3011	Screw plug M18 x 1,5

## INSTALLATION NOTES

Mounting type	Flange or sandwich mounting 3 fixing holes for socket head screws or stud M4
Mounting position	Any, preferably horizontal
Tightening torque	Fixing screws $M_0 = 2,6 \text{ Nm}$ (quality 8.8, zinc coated) Screw-in cartridge $M_0 = 30 \text{ Nm}$

## ACCESSORIES

Verstellarten für Schraubpatronen	Data sheet 2.0-50
Threaded subplates	Data sheet 2.9-05
Multi-station subplates	Data sheet 2.9-45
Horizontal mounting blocks	Data sheet 2.9-85
Technical explanations	Data sheet 1.0-100
Filtration	Data sheet 1.0-50