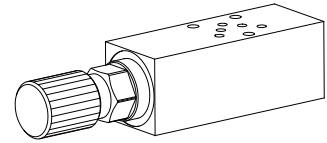


Pressure relief valve
Flange and sandwich construction

- **Pilot operated:** $Q_{max} = 8 \text{ l/min}$
 $p_{N \text{ max}} = 350 \text{ bar}$ $p_{max} = 400 \text{ bar}$
- **Direct operated:** $Q_{max} = 5 \text{ l/min}$
 $p_{N \text{ max}} = 315 \text{ bar}$ $p_{max} = 400 \text{ bar}$

NG3-Mini®

DESCRIPTION

Pilot and direct operated pressure reducing valves NG3-Mini. Flange and sandwich construction according to Wandfluh standard with 4 ports. Incorporated are proportional pressure reducing cartridges size M18x1,5 according to Wandfluh standard. The flange body and sandwich plates are made of aluminium.

FUNCTION

When the inlet pressure exceeds the control spring setting the main poppet opens allowing fluid to by-pass to tank „T“. Both flange and sandwich bodies with the pressure relief cartridge in the „P“ line have a G1/4“ tapping for a pressure gauge or similar device.

APPLICATION

For limiting the operating pressure in hydraulic systems by by-passing fluid from the protected „P“, „A“ and „B“ lines to tank „T“. Flange and sandwich vertical stacking valves are suitable for machine tools, also for mobile equipment of all kinds. The mini-3 pressure relief valves are recommended whenever hydraulic systems specify small valves at a low weight and size.

TYPE CODE

Pressure relief valve		B	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	A 03 -	<input type="checkbox"/>	-	<input type="checkbox"/>	#	<input type="checkbox"/>
Direct operated		<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"/>						
Setting versions	Key	<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"/>						
	Lock	<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"/>						
Flange design		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>						
Sandwich design		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>						
Mounting interface acc. to Wandfluh standard, NG3-Mini											
Type list / function	<i>Flange design</i>	<i>Sandwich design</i>									
	P <input type="checkbox"/>	P <input type="checkbox"/>									
		A <input type="checkbox"/>									
		B <input type="checkbox"/>									
		A und B <input type="checkbox"/>									
Standard nominal pressure ranges	<i>Pilot operated</i>	<i>direct operated</i>									
	$p_N = 63 \text{ bar}$ <input type="checkbox"/>	$p_N = 63 \text{ bar}$ <input type="checkbox"/>									
	$p_N = 160 \text{ bar}$ <input type="checkbox"/>	$p_N = 160 \text{ bar}$ <input type="checkbox"/>									
	$p_N = 350 \text{ bar}$ <input type="checkbox"/>	$p_N = 315 \text{ bar}$ <input type="checkbox"/>									
Design-Index (Subject to change)											

GENERAL CHARACTERISTICS

Denomination	Pilot or direct operated pressure relief valve
Nominal size	NG3-Mini acc. to Wandfluh standard
Construction	Flange or sandwich construction
Type of mounting	3 fixing holes for socket head cap screws M4 or stud M4
Fastening torque	$M_D = 2,8 \text{ Nm}$ (quality 8.8) for fixing screws $M_D = 30 \text{ Nm}$ for screw-in cartridge
Type of connections	Thread- connection plates rows of flange plates and horizontal stacking system
Installation position	any
Ambient temperature	-20...+50°C
Weight (without screw-in-cartridges)	• Flange design $m = 0,13 \text{ kg}$ • Sandwich design P, A, B $m = 0,15 \text{ kg}$ • Sandwich design AB $m = 0,19 \text{ kg}$

HYDRAULIC CHARACTERISTICS

Hydraulic fluid	Mineral oils, other media on request
Max. permissible contamination level	ISO 4406:1999, classe 18/16/13 (Rec. filter gauge $\beta_{6...10} \geq 75$) see data sheet 1.0-50/2
Viscosity range	12 mm ² /s ... 320 mm ² /s
Fluid temperature	-20...+70 °C
Peak pressure:	$p_{max} = 400 \text{ bar}$
Maximum volume flow	
pilot, direct op. conical spool	$Q_{max} = 8 \text{ l/min}$
direct operated control spool	$Q_{max} = 5 \text{ l/min}$


REMARK!

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


CAUTION!

The performance data especially the „**pressure-flow-characteristic**„ 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.

SCREW-IN CARTRIDGES INSTALLED

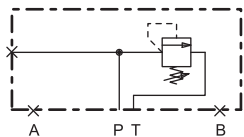
The following screw-in cartridges are used in either the flange body or the sandwich body:

Type	Designation	Data sheet no.
BV.PM18	Pressure relief valve • pilot operated	2.1-510
BS.PM18	Pressure relief valve • direct operated	2.1-520

TYPES/DIMENSIONS

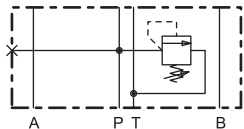
Flange construction

B..FA03-P

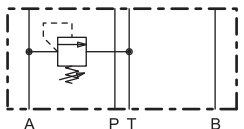


Sandwich construction

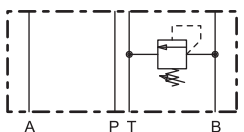
B..SA03-P



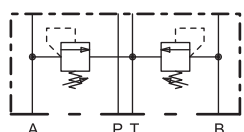
B..SA03-A



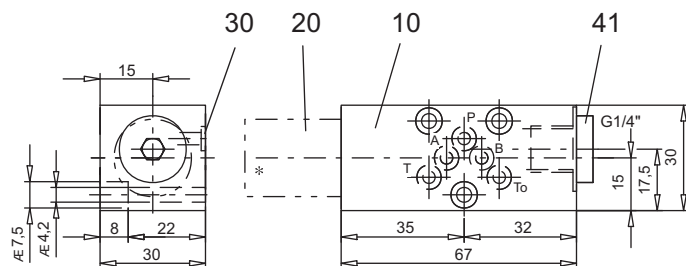
B..SA03-B



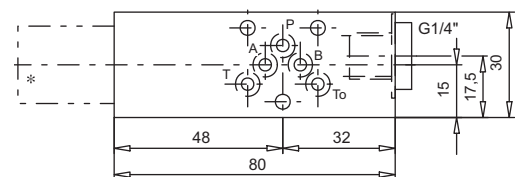
B..SA03-AB



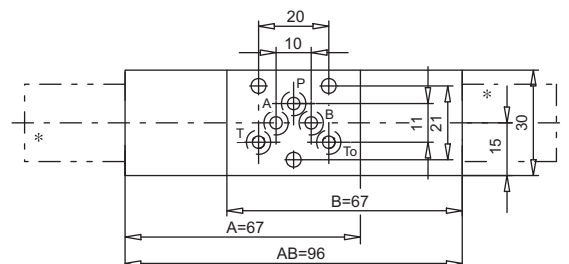
Flange construction



Sandwich construction in P



Sandwich construction in A, B or AB


PARTS LIST

Position	Article	Description
10	128.3200 128.3607 128.3606 128.3610 128.3611	Flange body Sandwich plate P Sandwich plate AB Sandwich plate A Sandwich plate B
20	593....	Pressure relief cartridge M18x1,5 to data sheet 2.1-510 and 2.1-520
30	160.2045	O-ring ID 4,50x1,78
41	238.2406	Plug VSTI G1/4"-ED (only for flange and sandwich plate P)

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

Technical explanation see data sheet 1.0-100D