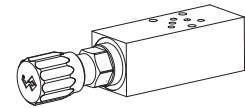


**Pressure relief valve
 Flange and sandwich construction**

- $Q_{max} = 8 \text{ l/min}$
- $p_{max} = 315 \text{ bar}$

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"/> S										
Pilot operated			<input type="checkbox"/> V										
Setting versions	Key		<input type="checkbox"/> S										
	Control knob		<input type="checkbox"/> D										
	Cover		<input type="checkbox"/> A										
Flange design			<input type="checkbox"/> F										
Sandwich design			<input type="checkbox"/> S										
Mounting interface acc. to Wandfluh standard, NG3-Mini													
Type list / function		<i>Flange design</i>		<i>Sandwich design</i>									
		in P	<input type="checkbox"/> P	in P	<input type="checkbox"/> P								
				in A	<input type="checkbox"/> A								
				in B	<input type="checkbox"/> B								
				in A and B	<input type="checkbox"/> AB								
Pressure range p_N		<i>Pilot operated</i>		<i>direct operated</i>									
		63 bar	<input type="checkbox"/> 63	63 bar	<input type="checkbox"/> 63								
		160 bar	<input type="checkbox"/> 160	160 bar	<input type="checkbox"/> 160								
		350 bar	<input type="checkbox"/> 350	315 bar	<input type="checkbox"/> 315								
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:	$p_{max} = 315 \text{ bar}$
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

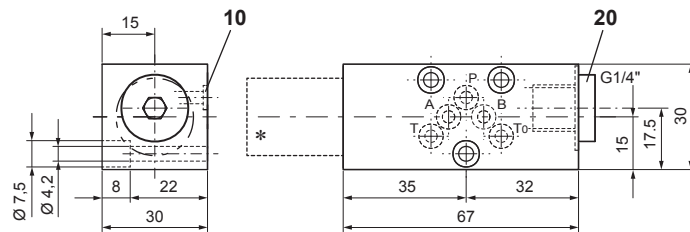
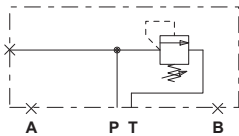
The following screw-in cartridges are used in either the flange body or the sandwich body:

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

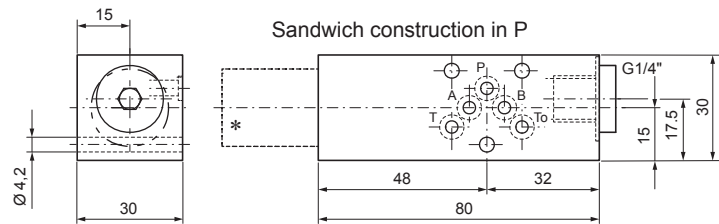
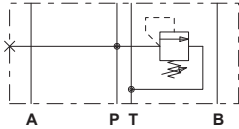
Flange construction

B..FA03-P

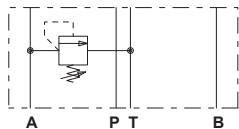


Sandwich construction

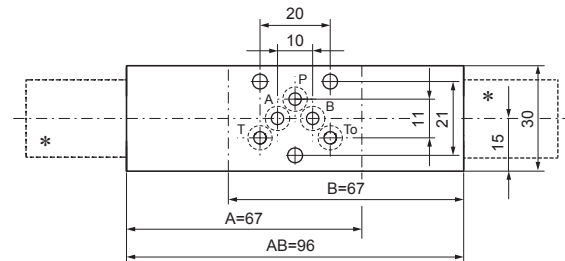
B..SA03-P



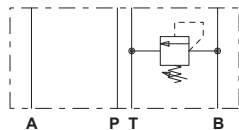
B..SA03-A



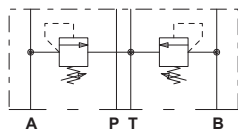
Sandwich construction in A, B or AB



B..SA03-B



B..SA03-AB


PARTS LIST

Position	Article	Description
10	160.2045	O-ring ID 4,50x1,50
20	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 1.0-100