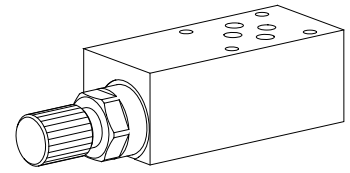


**Back pressure valve  
Sandwich construction**

- **Pilot operated:**  $Q_{max} = 80 \text{ l/min}$   
 $p_{N \text{ max}} = 350 \text{ bar}$   $p_{max} = 400 \text{ bar}$
- **Direct operated:**  $Q_{max} = 80 / 25 \text{ l/min}$   
 $p_{N \text{ max}} = 32/315 \text{ bar}$   $p_{max} = 100/400 \text{ bar}$

**NG6**  
 ISO 4401-03

**DESCRIPTION**

Back pressure valves in direct or pilot operated versions for sandwich mounting. Mounting interface acc. to ISO 4401-03. The valves are available in three types of adjustment, one of them being lockable, the others being fixed. A cover is also available for key adjustment, see data sheet 2.0-50. Three pressure ranges are available for the pilot operated valves, four are available for the directly operated ones. The steel bodies are phosphate coated.

**FUNCTION**

When pressure reaches the setting of the back pressure valve main spool will open up the oil passage.

**APPLICATION**

Back pressure valves are applied where a back pressure in the outlet part of a cylinder or motor is necessary to prevent uncontrolled movement. The fields of applications are in machine building, handling system and hydraulic power packs.

**CONTENT**

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HYDRAULIC CHARACTERISTICS.....	1
CHARACTERISTICS.....	2
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**TYPE CODE**

G		<input type="checkbox"/>	<input type="checkbox"/>	S	A06	-	<input type="checkbox"/>	-	<input type="checkbox"/>	#	<input type="checkbox"/>
Back pressure valve											
Direct operation, conical spool											
Direct operation, control spool											
Pilot operated											
Setting versions:	Key										
	Control knob										
	Lock										
	Cover										
Sandwich construction											
Mounting interface NG6											
Pressure relief in:	T										
	A and B										
Nominal pressure	$p_N = 63 \text{ bar}$										
pilot operated:	$p_N = 160 \text{ bar}$										
	$p_N = 350 \text{ bar}$										
Nominal pressure	$p_N = 63 \text{ bar}$										
direct operated:	$p_N = 210 \text{ bar}$										
conical spool	$p_N = 315 \text{ bar}$										
control spool	$p_N = 32 \text{ bar}$										

Design-Index (Subject to change)

**GENERAL SPECIFICATIONS**

Nominal size	NG6 acc. to ISO 4401-03
Denomination	Pilot- and direct operated pressure valve
Bauart	Sandwich construction
Mounting	4 holes for socket cap screws M5 or studs screws M5
Fastening torque	$M_D = 5,5 \text{ Nm}$ (qual. 8.8) for fixing screws $M_S = 50 \text{ Nm}$ for screw in cartridge
Connections	Threaded connection plates Multi-flange subplates Longitudinal stacking system
Mounting position	any
Ambient temperature	-20...+50 °C
Weight	Depending on the type of valves 1,3...2,6 kg

**HYDRAULIC SPECIFICATIONS**

Fluid	Mineral oil, other fluid on request
Contamination efficiency	ISO 4406:1999, class 18/16/13 (Required filtration grade $\beta_{6...10} \geq 75$ ) refer to data sheet 1.0-50/2
Viscosity range	12 mm <sup>2</sup> /s...320 mm <sup>2</sup> /s
Fluid temperature	-20...+70 °C
Peak pressure	$p_{max} = 400 \text{ bar}$ $p_{max} = 100 \text{ bar}$ (Dir. op., control spool)
Nominal pressure	
pilot operated:	$p_N = 63 \text{ bar}, 160 \text{ bar}, 350 \text{ bar}$
direct operated:	
conical spool	$p_N = 63 \text{ bar}, 210 \text{ bar}, 315 \text{ bar}$
control spool	$p_N = 32 \text{ bar}$ see characteristics
Minimal Pressure	
Opening pressure over non-return valve	$p_o = 2 \text{ bar}$
Max. Volume flow	
pilot- direct op. control spool	$Q_{max} = 80 \text{ l/min}$
direct operated conical spool	$Q_{max} = 25 \text{ l/min}$

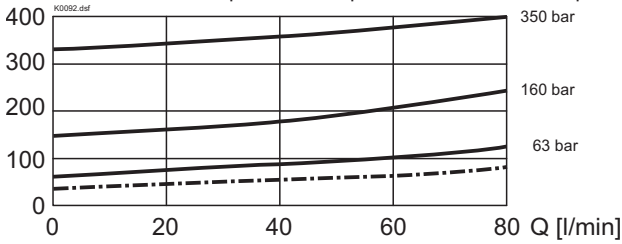
For further hydraulic specifications refer to data sheets:

- 2.1-530 for cartridge M22x1,5 pilot operated
- 2.1-540 for cartridge M22x1,5 direct operated conical spool
- 2.1-542 for cartridge M22x1,5 direct operated control spool

**CHARACTERISTICS** oil viscosity  $\nu = 30 \text{ mm}^2/\text{s}$

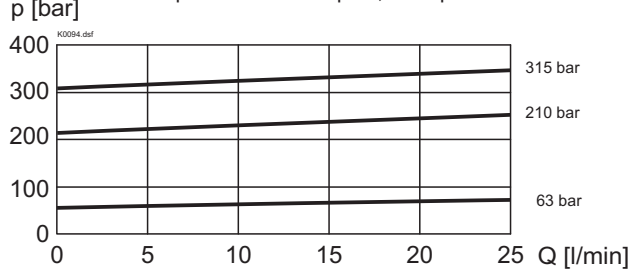
Pressure volume flow curve

$p$  [bar] — pilot operated back pressure valves  
- - - direct operated back pressure valves, control spool

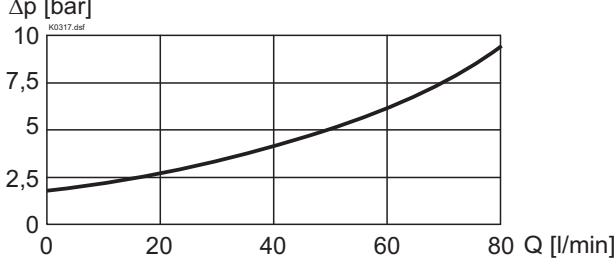


$p = f(Q)$  Pressure volume flow curve

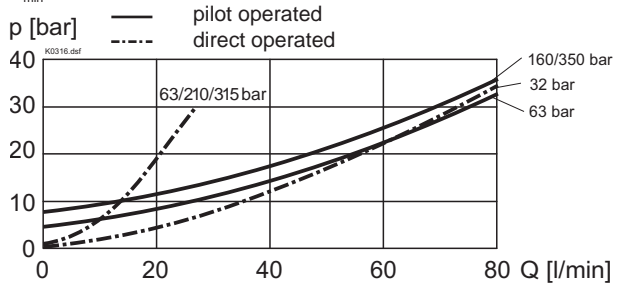
Direct operated conical spool, back pressure valve



$\Delta p = f(Q)$  Pressure drop-volume flow curve over non-return valve



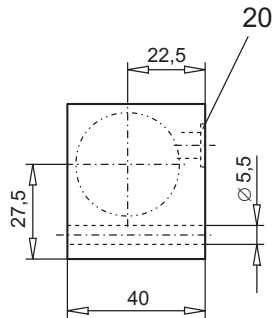
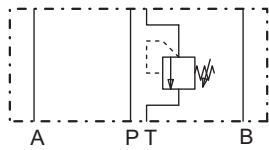
$p_{\min} = f(Q)$  Minimum adjustable pressure



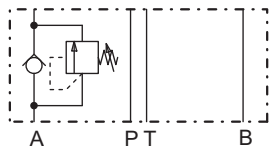
**TYPE LIST / DIMENSIONS**

Sandwich construction

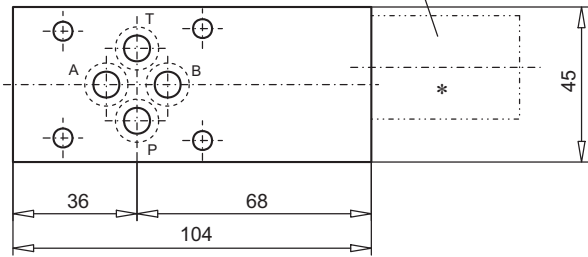
G..SA06-T



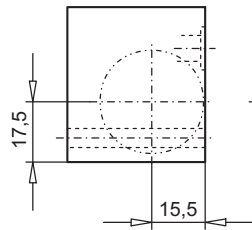
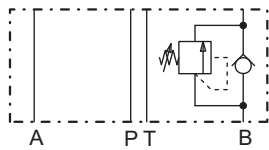
G..SA06-A



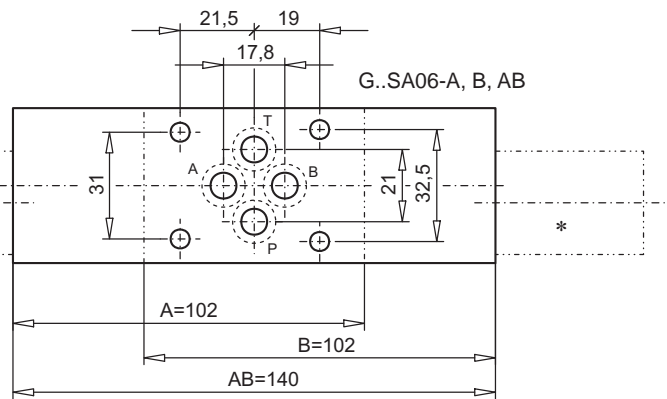
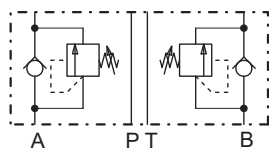
G..SA06-T



G..SA06-B



G..SA06-AB



\* The exterior dimensions of the cartridges can be obtained from the corresponding data sheets 2.1-530, 2.1-540 and 2.1-542.

**PARTS LIST**

Position	Article	Description
10	593. ...	Pressure relief cartridge M22x1,5 to data sheets 2.1-530, 2.1-540 and 2.1-542
20	160.2093	O-Ring ID 9,25x1,78

Technical explanation see data sheet 1.0-100