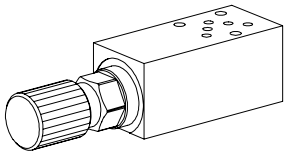
Back pressure valve
Sandwich construction

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

NG3-Mini®



DESCRIPTION

Back pressure valves in direct or pilot operated versions for sandwich mounting. The valves are available in three types of adjustment, one of them being lockable, the others beig fixed. A cover is also available for key adjustment, see data sheet 2.0-50. Three pressure ranges are available. The sandwich bodies are in anodised aluminium.

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 necessairy to prevent uncontrolled movement. The fields of applications are in machine building, handling system and hydraulic power packs.

CONTENT

TYPE CODE

G ☐ ☐ S A 03 - ☐ - ☐ # ☐

Back pressure valve		
Direct operated	S	
Pilot operated	V	
Setting versions: screw adjustment	S	
knob adjustment	D	
locking knob adjust.	K	
cover adjustment	A	
Sandwich construction		
Mounting interface NG3-Mini		
Pressure relief in: T	T	
A and B	AB	A A B B
Nominal pressure pilot operated: p_N= 63 bar	63	
p_N= 160 bar	160	
p_N= 350 bar	350	
Nominal pressure direct operated: p_N= 63 bar	63	
p_N= 160 bar	160	
p_N= 315 bar	315	
Design-Index (Subject to change)		

GENERAL SPECIFICATIONS

Nominal size	NG3-Mini according to Wandfluh standard
Denomination	Pilot- and direct operated back pressure valve
Construction	Sandwich construction
Mounting	3 holes for socket cap screws M4 or studs screws M4
Fastening torque	M_D= 2,8 Nm (qual. 8.8) for fixing screws M_D= 30 Nm for screw in cartridge
Connections	Threaded connection plates Multi-flange subplates Longitudial stacking system
Mounting position	any
Ambient temperature	-20...+50°C
Weight	Depending on the type of valves 0,30…0,85 kg

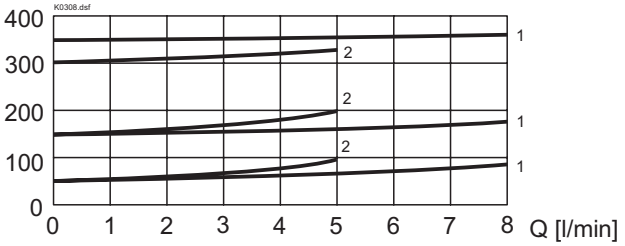
HYDRAULIC SPECIFICATIONS

Fluid	Mineral oil, other fluid on request
Contamination efficiency	ISO 4406:1999, class 18/16/13 (Required filtration grade ß 6…10≥75) refer to data sheet 1.0-50
Viscosity range	12 mm²/s…320 mm²/s
Fluid temperature	-20…+70°C
Peak pressure	p_{max} = 400 bar
Nominal pressure	
pilot operated:	p_N = 63 bar, 160 bar, 350 bar
direct operated:	p_N = 63 bar, 160 bar, 315 bar
Minimal Pressure	see characteristics
Opening pressure over non-return valve	$p_ö$ = 0,3 bar
Max. Volume flow	
pilot operated:	Q_{max} = 8 l/min
direct operated:	Q_{max} = 5 l/min

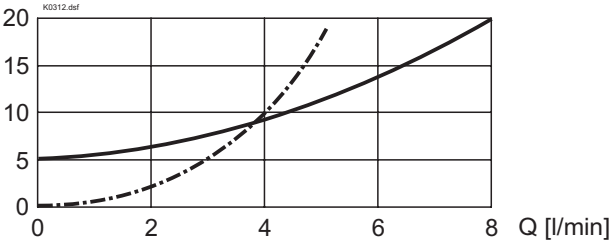
For further hydraulic specifications refer to data sheets:
2.1-510 for cartridge M18x1,5 pilot operated
2.1-520 for cartridge M18x1,5 direct operated

CHARACTERISTICS oil viscosity υ = 30 mm²/s

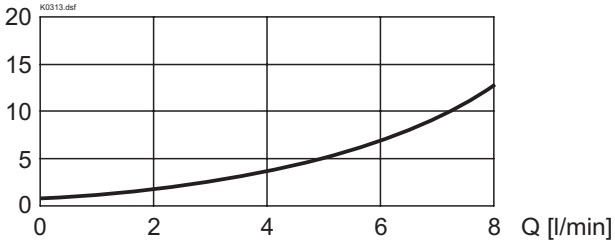
Pressure-flow characteristic curve
p = f(Q) 1 = pilot operated back pressure valves
2 = direct operated back pressure valves



p_{min} = f (Q) Minimum adjustable pressure
—— pilot operated
-·-·- direct operated

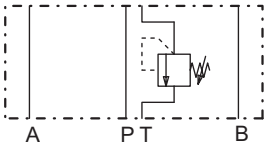


Δp = f (Q) Pressure drop-volume flow curve over non-return valve

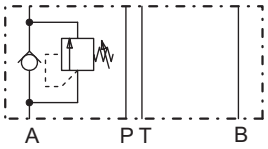


TYPE LIST / DIMENSIONS

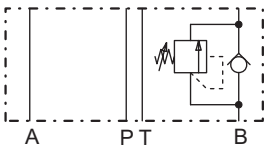
Sandwich construction
G..SA03-T



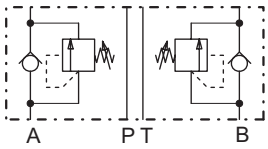
G..SA03-A

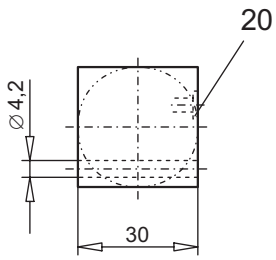


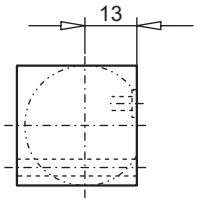
G..SA03-B

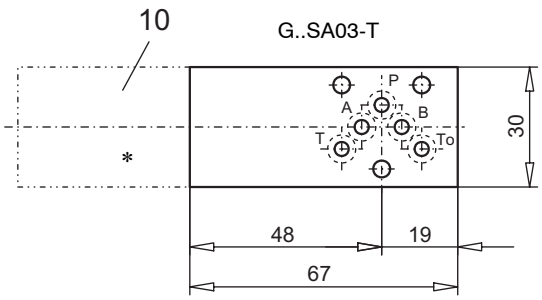


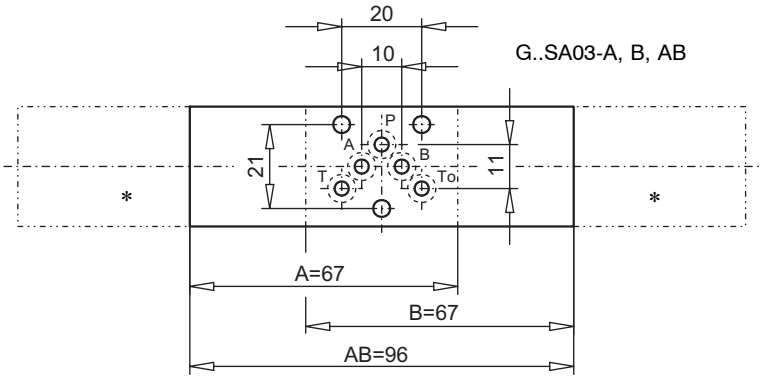
G..SA03-AB











* The exterior dimensions of the cartridges can be obtained from the corresponding data sheets 2.1-510 and 2.1-520.

PARTS LIST

Position	Article	Description
10	593. …	Pressure relief cartridge M18x1,5 to data sheets 2.1-510 and 2.1-520
20	160.2045	O-ring ID 4,5x1,5

Technical explanation see data sheet 1.0-100E