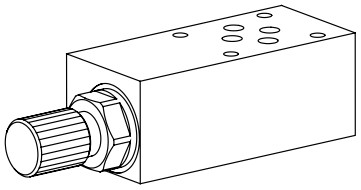
Pressure relief valve
Flange and sandwich construction

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

NG6

ISO 4401-03



DESCRIPTION

Pilot operated pressure reducing valves NG6. Flange and sandwich construction according to ISO 4401-03 with 4 ports. Incor-porated are proportional pressure reducing cartridges size M22x1,5 according to ISO 7789. The steel bodies for flange constructions and the bodies for sandwich constructions are phosphatized.

FUNCTION

When the set operating pressure has been reached, the spool opens and joins the protected line with the return to the tank T. G1/4“ connection thread is provided (sealed) as standard for flange and sandwich designs with pressure relief in P. This enables connection to a pressure gauge.

APPLICATION

For relieving the operating pressure of a hydraulic system by diverting the flow of oil from the protected oil lines P, A or B to the return/tank line T. Flange and sandwich valves (vertical stacking) are particularly suitable for: machine tools and all types of handling systems. NG6 size valves are also generally used in stacking systems on power units.

TYPE CODE

B ☐ ☐ ☐ A 06 - ☐ - ☐ # ☐

Pressure relief valve		
Direct operation, conical spool		A
direct operation, control spool		K
Pilot operated		V
Setting versions	Key	S
	Control knob	D
	Lock	K
	Cover	A
Flange design		F
Sandwich design		S
International standard interface ISO, NG6		
Type list / function	*Flange design*	*Sandwich design*
	P P	P P
		A A
		B B
		A und B AB
Standard nominal pressure ranges	*Pilot operated*	*conical spool direct operated* / *control spool direct operated*
	p_N= 63 bar 63	p_N= 63 bar 63 / p_N= 32 bar 32
	p_N= 160 bar 160	p_N= 210 bar 210
	p_N= 350 bar 350	p_N= 315 bar 315
Design-Index (Subject to change)		

GENERAL CHARACTERISTICS

Denomination	Pilot or direct operated pressure relief valve
Nominal size	NG6 acc. to ISO 4401-03
Construction	Flange or sandwich construction
Type of mounting	4 fixing holes for socket head cap screws M5 or stud M5
Fastening torque	M_D = 5,5 Nm (quality 8.8) for fixing screws M_D = 50 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 = 1,43 kg • Sandwich design P, A, B m = 1,18 kg • Sandwich design AB m = 1,58 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 ß 6...10≥75) see data sheet 1.0-50/2
Viscosity range	12 mm^2/s ... 320 m
Peak pressure:	p_{max} = 400 bar p_{max} = 100 bar (direct operated control spool)
Maximum volume flow	
pilot, direct op. conical spool	Q_{max} = 80 l/min
direct operated control spool	Q_{max} = 25 l/min

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

CAUTION!
The performace data especially the **„pressure-flow-characteristic„** on the data sheets of the screw-in catridges refere to the screw-in cartridges only. The additional pressure drop of the flange body respectivly sandwich body must be taken into consideration.

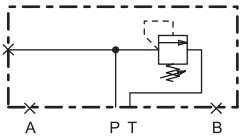
SCREW-IN CARTRIDGES INSTALLED

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

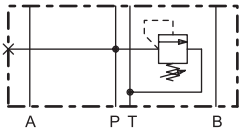
Type	*Designation*	*Data sheet no.*
B**V.**PM22	Pressure relief valve • pilot operated	2.1-530
B**A.**PM22	Pressure relief valve • pilot operated	2.1-540
B**K.**PM22	Pressure relief valvee • direct operated	2.1-542

TYPES/DIMENSIONS

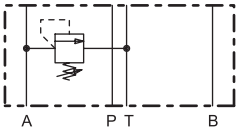
Flange construction
B..FA06-P



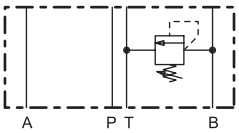
Sandwich construction
B..SA06-P



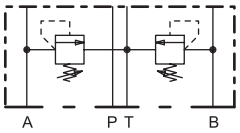
B..SA06-A



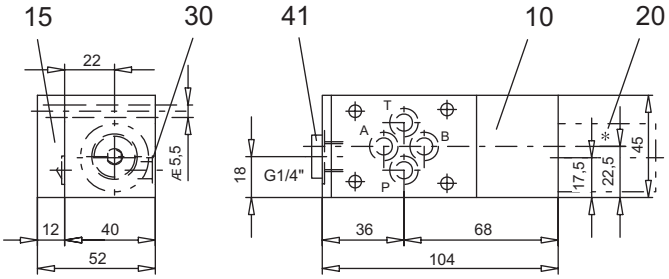
B..SA06-B



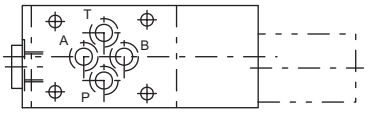
B..SA06-AB



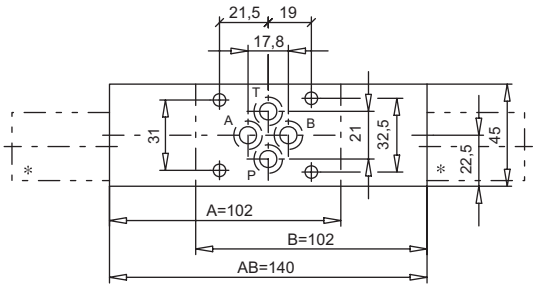
Flange construction



Sandwich construction in P



Sandwich construction in A, B or AB



PARTS LIST

Position	Article	Description
10	134.3626 134.3627 134.3634 134.3633	Sandwich plate P Sandwich plate AB Sandwich plate A Sandwich plate B
15	173.3150	Blindplate ABP6 (only for flansch)
20	593.…	Pressure relief cartridge M22x1,5 to data sheet 2.1-530, 2.1-540, 2.1-542
30	160.2093	O-ring ID 9,25x1,78
41	238.2406	Plug VSTI G1/4“-ED (only for flange and sandwich plate P)

∗ The exterior dimensions or the cartridges can be obtained from the corresponding data sheets

Technical explanation see data sheet 1.0-100D