

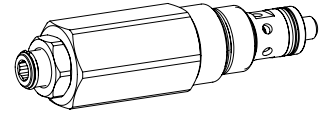
Pressure relief cartridge

Leakage-free

- ◆ direct operated
- ◆ $p_{max} = 450 \text{ bar}$
- ◆ $p_{Nmax} = 420 \text{ bar}$
- ◆ $Q_{max} = 50 \text{ l/min}$

DESCRIPTION

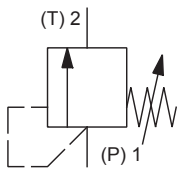
Direct operated poppet type pressure relief valve in screw-in cartridge construction for cavity according to Wandfluh standard. The valve is closed in the neutral position. If the pressure in P (1) exceeds the adjusted value of the valve, the excessive pressure is drained to T (2). The back pressure at T (2) is added to the adjusted value. T (2) can be charged up to the maximum. Hardened precision parts ensure virtually leakage-free closing. Rapid switching with low hysteresis and excellent stability over the whole flow range.

7/8"-14 UNF
Wandfluh standard


APPLICATION

These valves are used for limiting the operating pressure in the hydraulic system. Can be used in double pressure relief switches. For machining the cartridge cavity in steel and aluminum blocks, cavity tools are available (hire or purchase). Please refer to the data sheets in register 2.13.

SYMBOL



ACTUATION

Actuation	Adjustment spindle M12 x 1
Execution	S = blockable key adjustment
Actuation angle	$\alpha_b = 1800^\circ$ (5 rotations)
Actuation stroke	$S_b = 5 \text{ mm}$

TYPE CODE

Pressure relief valve			B E S PU10 -		-		#	
Direct operated, leakage-free								
Type of adjustment	Key							
Screw-in cartridge 7/8" - 14 UNF - 2A								
Nominal pressure range p_N	63 bar	<input type="text" value="63"/>						
	420 bar	<input type="text" value="420"/>						
Sealing material	NBR	<input type="text"/>						
	FKM (Viton)	<input type="text" value="D1"/>						
	NBR 872	<input type="text" value="Z604"/>						
Design index (subject to change)								
2.1-590								

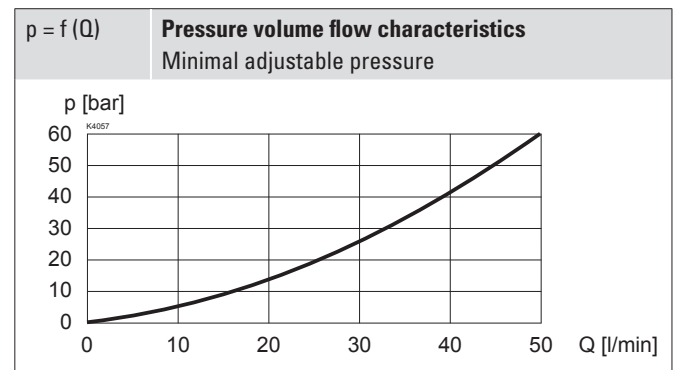
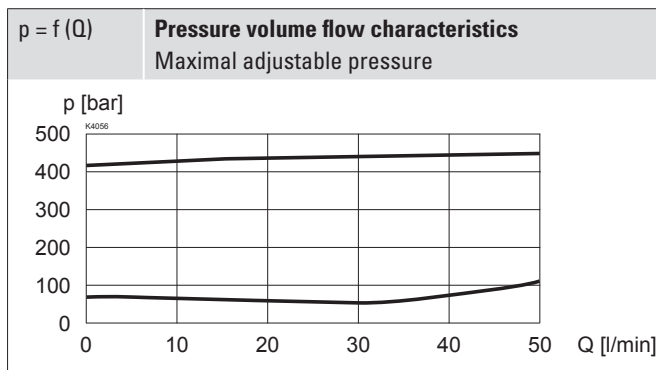
GENERAL SPECIFICATIONS

Designation	Pressure relief valve
Construction	Direct operated
Mounting	Screw-in cartridge construction
Nominal size	3/8"-14 UNF according to Wandfluh standard
Actuation	Manually
Ambient temperature	-25...+90 °C
Weight	0,30 kg (420 bar) 0,24 kg (63 bar)
MTTFd	150 years

HYDRAULIC SPECIFICATIONS

Working pressure	$p_{max} = 450$ bar
Tank pressure	$p_{Tmax} = 210$ bar
Nominal pressure range	$p_N = 63; 420$ bar
Minimum pressure	See characteristics
Volume flow range	$Q = 0,1 \dots 50$ l/min
Leakage oil	Seat tight, max. 0,15 ml / min (approx. 3 drops / min) at 30 cSt
Fluid	Mineral oil, other fluid on request
Viscosity range	12 mm ² /s...320 mm ² /s
Temperature range fluid	-25...+90 °C (NBR) -20...+90 °C (FKM)
Contamination efficiency	Class 18 / 16 / 13
Filtration	Required filtration grade $\beta_{6 \dots 10} \geq 75$, see data sheet 1.0-50

PERFORMANCE SPECIFICATIONS

 Oil viscosity $\nu = 30$ mm²/s

SURFACE TREATMENT

- ◆ The cartridge body is zinc-nickel coated

ACCESSORIES

Types of adjustment for screw-in cartridges	Data sheet 2.0-50
Technical explanations	Data sheet 1.0-100
Hydraulic fluids	Data sheet 1.0-50
Filtration	Data sheet 1.0-50

SEALING MATERIAL

NBR or FKM (Viton) as standard, choice in the type code

INSTALLATION NOTES

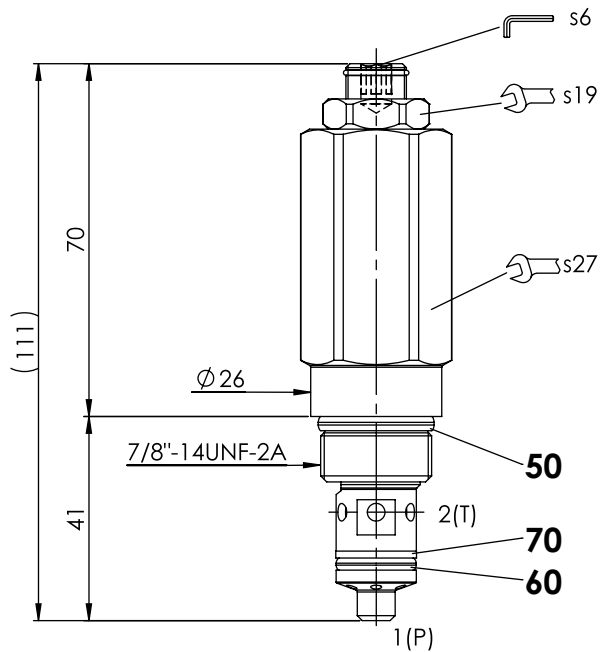
Mounting type	Screw-in cartridge 3/8"-14 UNF
Mounting position	Any
Tightening torque	$M_D = 60$ Nm Screw-in cartridge

STANDARDS

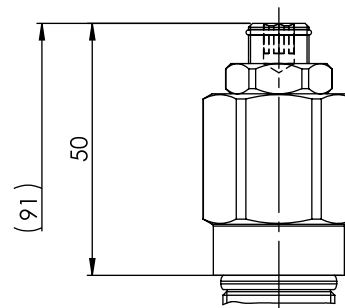
Cartridge cavity	ISO 7789
Contamination efficiency	ISO 4406

DIMENSIONS

BESPU10-420

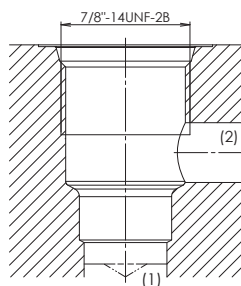


BESPU10-63



HYDRAULIC CONNECTION

Cavity drawing according to Wandfluh standard



Note!



For detailed cavity drawing and cavity tools see data sheet 2.13-1054

PARTS LIST

Position	Article	Description
50	160.2188	O-ring ID 18,77 x 1,78 (NBR)
	160.6188	O-ring ID 18,77 x 1,78 (FKM)
	160.2120	O-ring ID 12,42 x 1,78 (NBR)
	160.6124	O-ring ID 12,42 x 1,78 (FKM)
	049.3166	Backup ring rd 13,1 x 16 x 1,4