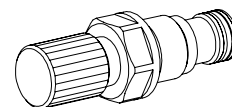


Pressure relief valve
Screw-in cartridge

- Direct operated
- $Q_{max} = 1 \text{ l/min}$
- $p_{max} = 400 \text{ bar}$
- $p_{Nmax} = 350 \text{ bar}$

M22x1,5
 ISO 7789

DESCRIPTION

Directly operated pressure relief valve in screw cartridge construction with M22x1,5 thread for cavity to ISO 7789. The valve is available with three different types of adjustment: key adjustment "S" and control knob adjustment "D", both of which are fixed, and version "K" which is lockable. Key adjustment "S" is also available with cover, see data sheet 2.0-50. 3 pressure stages, 63, 160 and 350 bar is available as standard. The steel cartridge body is zinc coated and thus protected against rust, and the aluminium control knob is clear anodised. These lend this quality product a clean appearance.

FUNCTION

The adjustment mechanism keeps the poppet spool in its end position by means of a coil spring. When the set operating pressure has been reached, the poppet spool opens and connects the protected line with the return to the tank. This means that the pressure occurring in P is relieved to T until the spring force returns the valve spool to its end position.

APPLICATION

For hydraulic systems with low operating pressures and high volume flows to limit the operating pressure by diverting the flow of the oil from the protected line P (or 1) to the outlet/tank line T (or 2). The screw cartridges are very well suited for installation in systems for pilot operated pressure. In cartridge deckplate on Wandfluh hydraulics NG16...NG40 it will be installed as a functioning part. Cavity tools are available (for hire or purchase) for the manufacture of cartridge cavities in steel or aluminium blocks. See data sheets in register 2.13. **Attention:** Should therefore not be utilized anymore in applications with periodically changing direction of flow.

CONTENT

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TYPE CODE

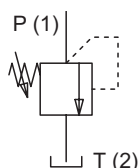
	B	S	<input type="checkbox"/>	PM22 -	<input style="width: 20px;" type="text"/>	- Z36 #	<input style="width: 20px;" type="text"/>
Pressure relief valve							
Directly operated							
Poppet seat spool							
Types of adjustment:	Key	<input type="checkbox"/>	S				
	Control knob	<input type="checkbox"/>	D				
	Lock	<input type="checkbox"/>	K				
	Cover	<input type="checkbox"/>	A				
Screw cartridge M22x1,5							
Rated pressure stage:	$p_N = 63 \text{ bar}$	<input type="checkbox"/>	63				
	$p_N = 160 \text{ bar}$	<input type="checkbox"/>	160				
	$p_N = 350 \text{ bar}$	<input type="checkbox"/>	350				
Description for pilot operated cartridge							
Design-Index (Subject to change)							

GENERAL CHARACTERISTICS

Description	Directly operated pressure relief valve
Construction	Screw cartridge for cavity acc. to ISO 7789
Type of fixture	M22x1.5 screw thread
Ambient temperature	-20...+50°C
Installation position	any
Tightening torque	$M_D = 50 \text{ Nm}$
Weight	$m = 0,14 \text{ kg}$ (key) $m = 0,15 \text{ kg}$ (control knob) $m = 0,25 \text{ kg}$ (lock)

HYDRAULIC CHARACTERISTICS

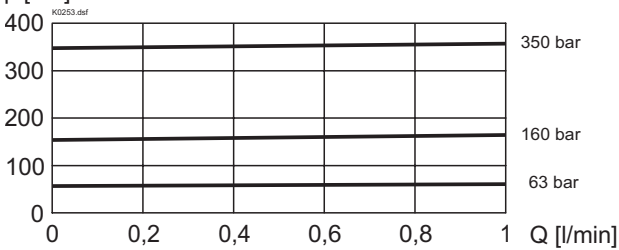
Hydraulic fluid	Mineral oils, other fluids on request
Max permissible contamination level	ISO 4406:1999, class 20/18/14...21/19/15 (recommended filter gauge $\beta_{10} \dots 25 \geq 75$) see data sheet 1.0-50/2
Viscosity range	12 mm ² /s...320 mm ² /s
Hydraulic fluid temp.	-20...+70°C
Peak pressure	$p_{max} = 400 \text{ bar}$
Rated pressure stage	$p_N = 63 \text{ bar}, 160 \text{ bar}, 350 \text{ bar}$
Minimum pressure	see curve
Maximum volume flow	$Q_{max} = 1 \text{ l/min}$
Leak volume flow	max. 4 drops/min (up to 80% of the adjusted pressure)

SYMBOL

MECHANICAL ACTUATION

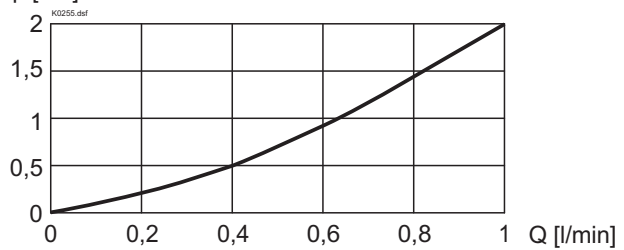
3 types of adjustments:	
S	= Key adjustment by means of Allen key and screw driver
D	= control knob adjustment, fixed
K	= Lock adjustment
Actuation stroke S_b	= 5 mm
Actuation angle α_b	= 180° (5 revolutions)

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

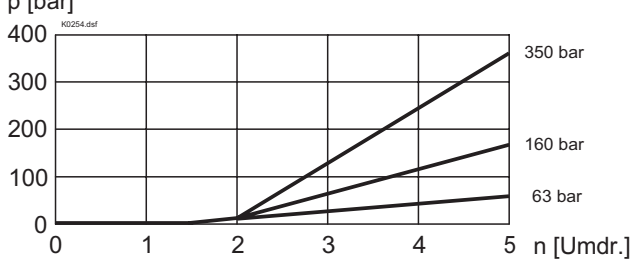
$p = f(Q)$ Pressure volume flow characteristics
 (Maximal adjustable pressure)



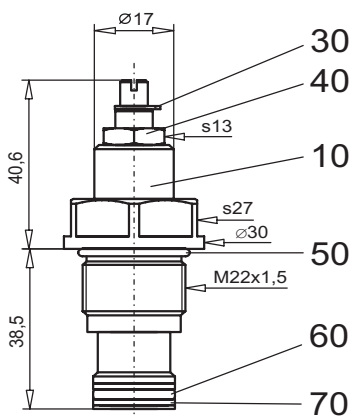
$p = f(Q)$ Pressure volume flow characteristics
 (Minimal adjustable pressure)



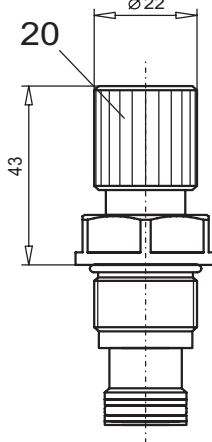
$p = f(n)$ Pressure adjustment characteristics
 (at $Q = 0,1 \text{ l/min}$)


DIMENSIONS

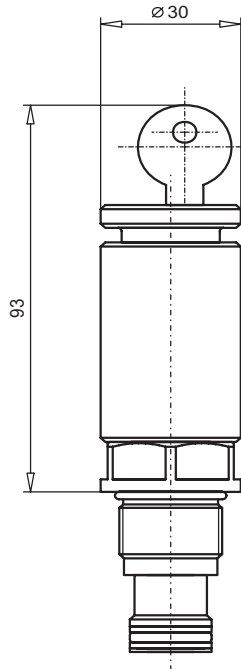
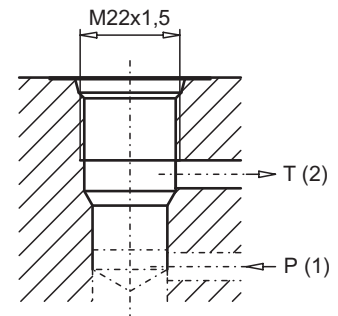
Screw adjustment "S"



Knob adjustment "D"



Lock adjustment "K"


 Cavity drawing to
 ISO 7789-22-02-0-98

 Detailed cavity drawing and cavity
 tools see data sheet 2.13-1003.

PARTS LIST

Position	Article	Description
10	592.43 ...	BS.PM22-32-Z36 pre-mounted
20	114.2217	Knob
30	193.1050	Safety plate RD5 DIN 6799
40	153.1402	Hexagonal nut 0,5D M8x1
50	160.2188	O-ring ID 18,77x1,78
60	160.2140	O-ring ID 14,00x1,78
70	49.3177	Back-up ring RD 14,5x17,5x1,4

ACCESSORIES

 Cartridge installed in cartridge lid:
 D ... 210

Reg. 1.12

Technical explanation see data sheet 1.0-100E