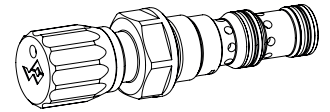


Pressure reducing cartridge

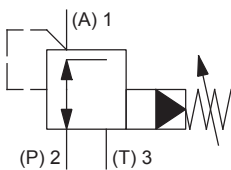
- ◆ pilot operated
- ◆ $p_{\max} = 400 \text{ bar}$
- ◆ $p_{N \text{ red max}} = 350 \text{ bar}$
- ◆ $Q_{\max} = 80 \text{ l/min}$

M22 x 1,5
ISO 7789

DESCRIPTION

Pilot operated pressure reducing valve in screw-in cartridge construction for cavity according to ISO 7789. The valve reduces the input pressure to an adjustable output pressure. Through the integrated pressure relief function, exceeding the reduced pressure as a result of external forces is avoided. The pressure reducing valve controls the pressure in port A (1). Through increasing the spring tension, the pressure in port A(1) rises. The valve operates practically independently of the pressure in port P (2). Pressure increase in port A (1) to above the adjusted value, e.g. through an active consumer, is avoided by discharging excess oil to the tank (3).

APPLICATION

The integrated pressure relief makes an additional pressure relief valve in the consumer line superfluous. In the case of several consumers, the pressure of the specific consumers can be individually adjusted by the pressure reducing valve. Pressure reducing valves are used to maintain the pressure in a consumer constant independent of pressure fluctuations on the supply side. The screw-in cartridge is perfectly suitable for installation in control blocks. 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 M8 x 1
Execution	S = blockable key adjustment D = blockable knob adjustment Optionally: K = lockable adjustment G = star handle adjustment → see Data sheet 2.0-50
Actuation angle	$\alpha_b = 1800^\circ$ (5 rotations)
Actuation stroke	$S_b = 5 \text{ mm}$

TYPE CODE

Pressure reducing valve			M	V	<input type="checkbox"/>	PM22	-	<input type="checkbox"/>	-	<input type="checkbox"/>	#	<input type="checkbox"/>
Pilot operated												
Type of adjustment	Key <input type="checkbox"/>	Control knob <input type="checkbox"/>	Cover <input type="checkbox"/>									
Screw-in cartridge M22 x 1,5												
Nominal pressure range p_N	63 bar <input type="checkbox"/>	160 bar <input type="checkbox"/>	350 bar <input type="checkbox"/>									
Sealing material	NBR <input type="checkbox"/>	FKM (Viton) <input type="checkbox"/>										
Design index (subject to change)												

2.2-530

GENERAL SPECIFICATIONS

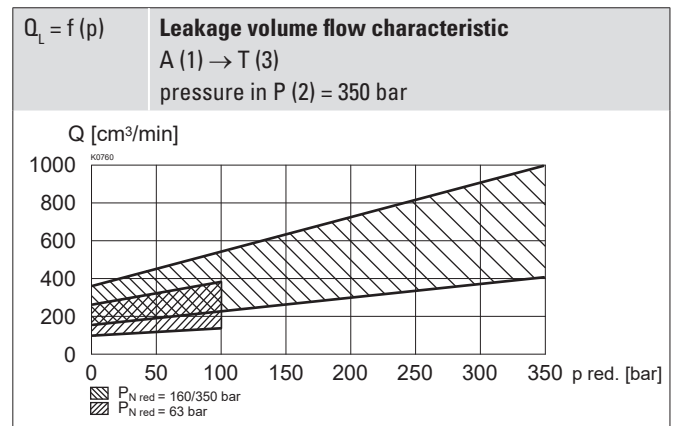
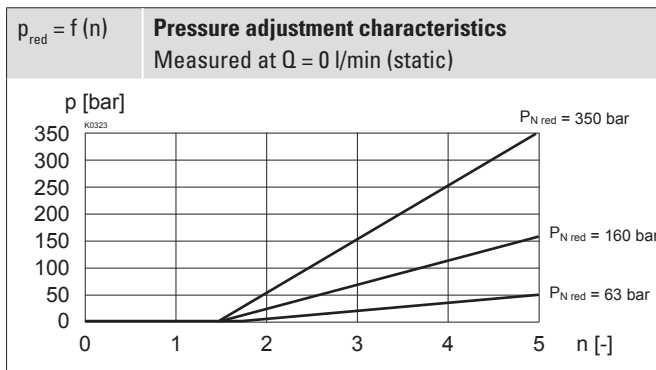
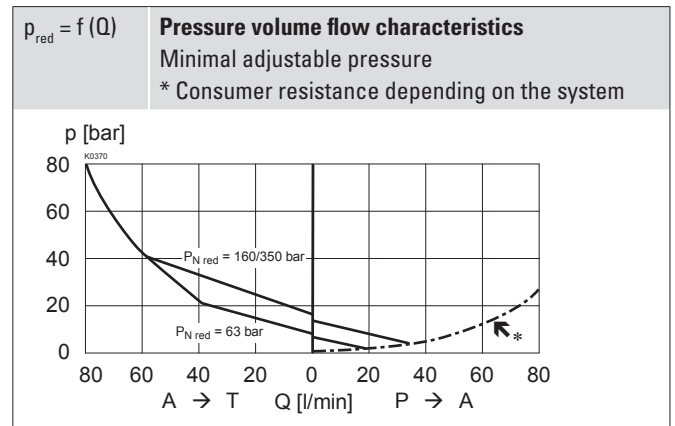
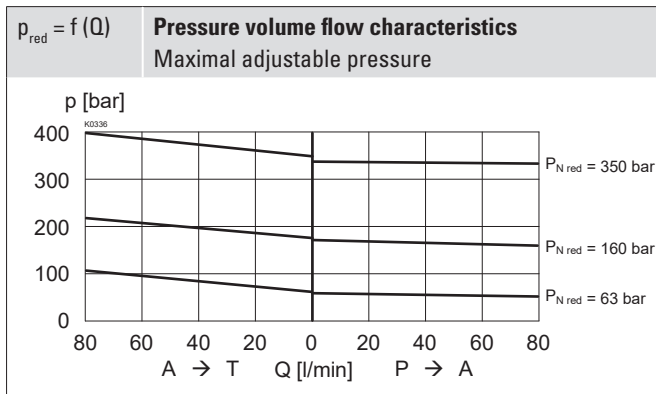
Designation	Pressure reducing valve
Construction	Pilot operated
Mounting	Screw-in cartridge construction
Nominal size	M22 x 1,5 according to ISO 7789
Actuation	Manually
Ambient temperature	-25...+90 °C
Weight	0,17 kg key adjustment 0,18 kg control knob adjustment 0,22 kg cover
MTTFd	150 years

HYDRAULIC SPECIFICATIONS

Working pressure	$p_{max} = 400$ bar
Nominal pressure range	$P_{N\ red} = 63$ bar, 160 bar, 350 bar
Volume flow range	$Q = 0 \dots 80$ l/min
Leakage oil	See characteristics
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 $\beta_{10 \dots 16} \geq 75$, see data sheet 1.0-50

PERFORMANCE SPECIFICATIONS

Oil viscosity $\nu = 30$ mm²/s



SEALING MATERIAL

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

SURFACE TREATMENT

- ◆ The cartridge body made of steel is zinc-nickel coated
- ◆ The control knob is made of plastic

STANDARDS

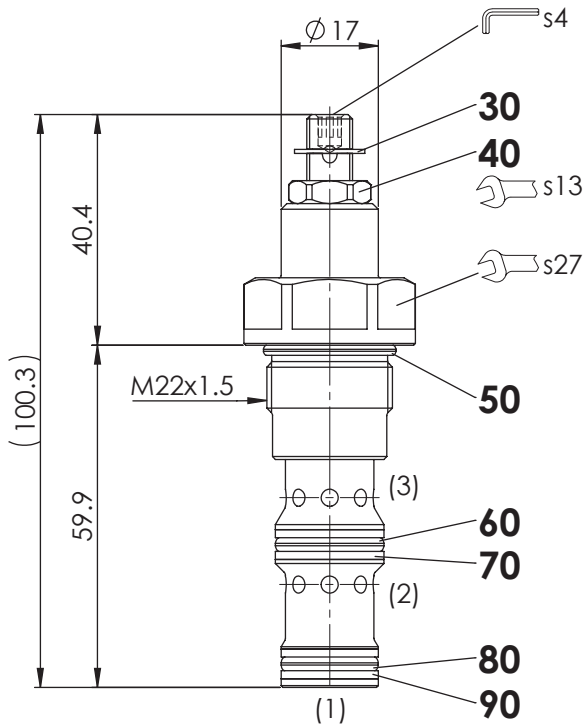
Cartridge cavity	ISO 7789
Contamination efficiency	ISO 4406

INSTALLATION NOTES

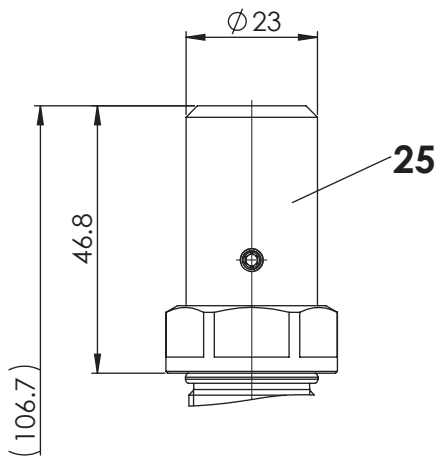
Mounting type	Screw-in cartridge M22 x 1,5
Mounting position	Any, preferably horizontal
Tightening torque	$M_D = 60$ Nm Screw-in cartridge

DIMENSIONS

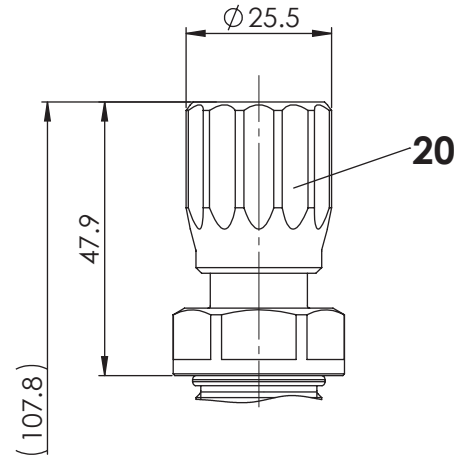
Key adjustment „S”



Cover „A”

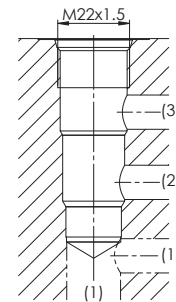


Control knob adjustment „D”



HYDRAULIC CONNECTION

Cavity drawing according to ISO 7789-22-04-0-98



Note!



For detailed cavity drawing and cavity tools see data sheet 2.13-1004

ACCESSORIES

Adjustment types for screw-in cartridges	Data sheet 2.0-50
Flange body / sandwich plate NG4-Mini	Data sheet 2.2-620
Flange body / sandwich plate NG6	Data sheet 2.2-640
Flange body / sandwich plate NG10	Data sheet 2.2-660
Threaded body	Data sheet 2.9-210
Technical explanations	Data sheet 1.0-100
Filtration	Data sheet 1.0-50

PARTS LIST

Position	Article	Description
20	114.2224	Control knob
25	032.0611	Cover rd 23 / 3 x 35
30	193.1061	Retainer rd 6 DIN 6799
40	153.1402	Hexagon nut 0,5d M8 x 1
50	160.2188	O-ring ID 18,77 x 1,78 (NBR)
	160.6188	O-ring ID 18,77 x 1,78 (FKM)
60	160.2156	O-ring ID 15,60 x 1,78 (NBR)
	160.6156	O-ring ID 15,60 x 1,78 (FKM)
70	049.3196	Backup ring rd 16,1 x 19 x 1,4
80	160.2140	O-ring ID 14,00 x 1,78 (NBR)
	160.6141	O-ring ID 14,00 x 1,78 (FKM)
90	049.3176	Backup ring rd 14,1 x 17 x 1,4

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