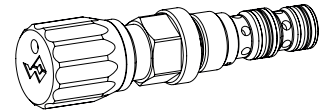


**Pressure reducing cartridge**

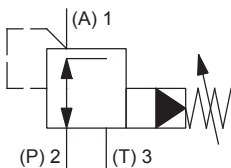
- ◆ pilot operated
- ◆  $p_{max} = 400 \text{ bar}$
- ◆  $p_{N \text{ red max}} = 350 \text{ bar}$
- ◆  $Q_{max} = 25 \text{ l/min}$

**M18 x 1,5**  
 Wandfluh standard

**DESCRIPTION**

Pilot operated pressure reducing valve in screw-in cartridge construction for cavity according to Wandfluh standard. 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"/>	PM18	-	<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 M18 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)												

2.2-510

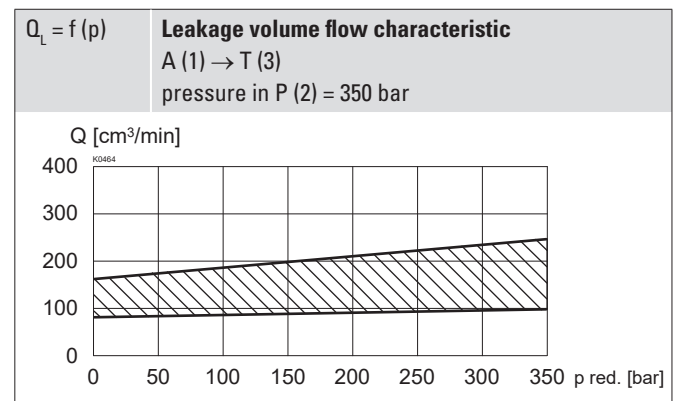
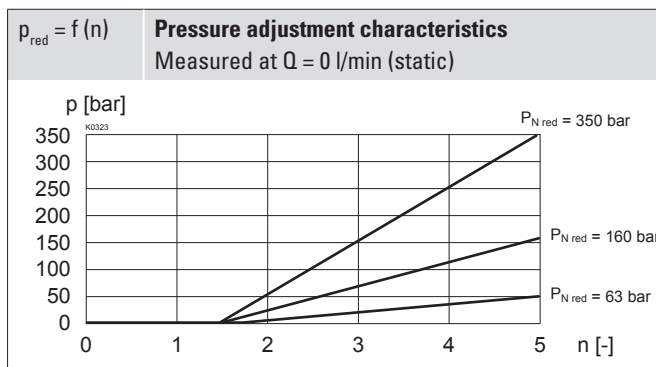
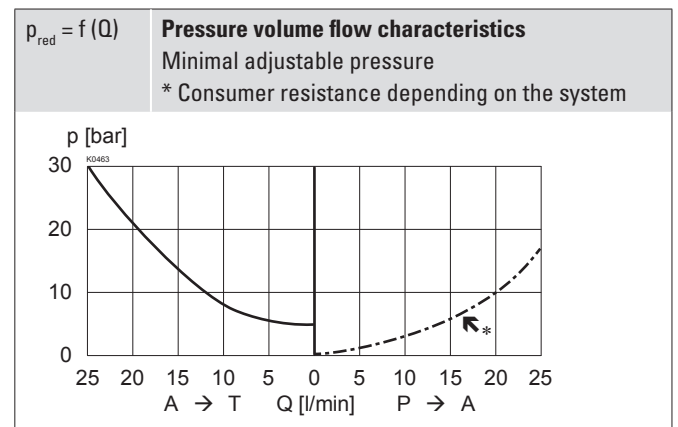
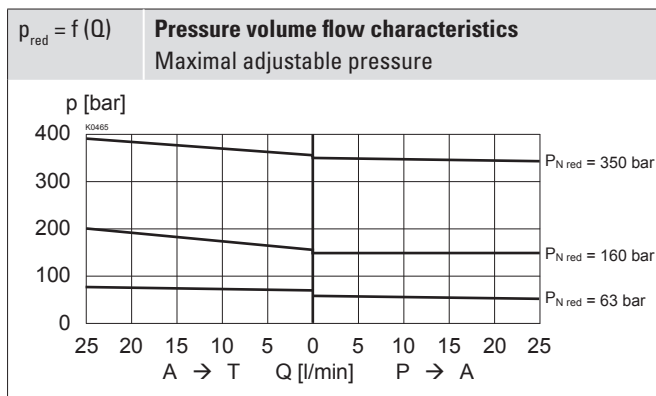
**GENERAL SPECIFICATIONS**

Designation	Pressure reducing valve
Construction	Pilot operated
Mounting	Screw-in cartridge construction
Nominal size	M18 x 1,5 according to Wandfluh standard
Actuation	Manually
Ambient temperature	-25...+90 °C
Weight	0,11 kg key adjustment 0,12 kg control knob adjustment 0,15 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	$Q = 0 \dots 25$ l/min
Leakage oil	See characteristics
Fluid	Mineral oil, other fluid on request
Viscosity range	12 mm <sup>2</sup> /s...320 mm <sup>2</sup> /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  $\nu = 30$  mm<sup>2</sup>/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**

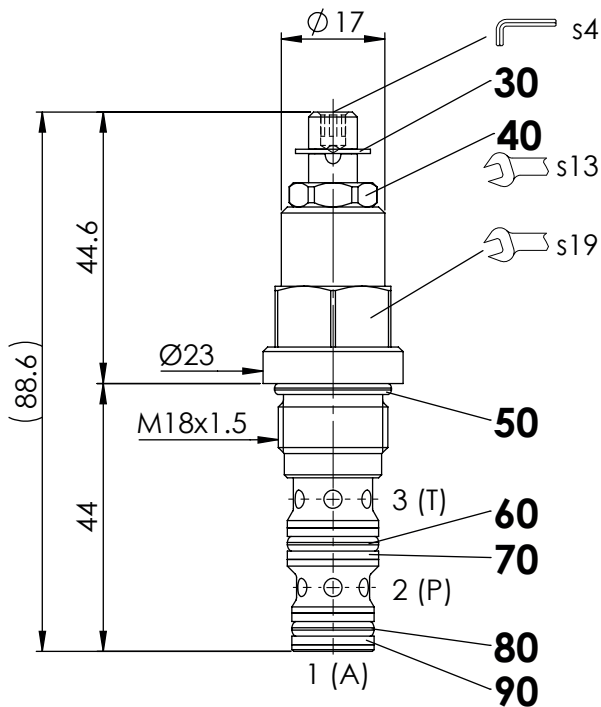
Cartridge cavity	Wandfluh standard
Contamination efficiency	ISO 4406

**INSTALLATION NOTES**

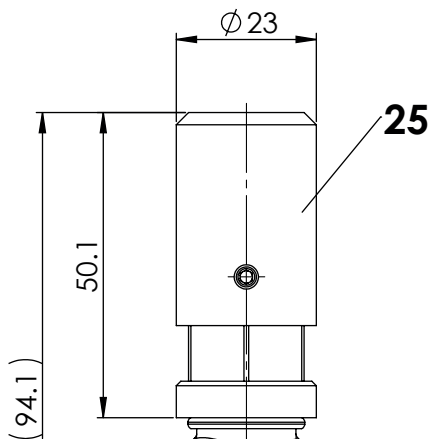
Mounting type	Screw-in cartridge M18 x 1,5
Mounting position	Any, preferably horizontal
Tightening torque	$M_D = 40$ Nm Screw-in cartridge

**DIMENSIONS**

Key adjustment „S”

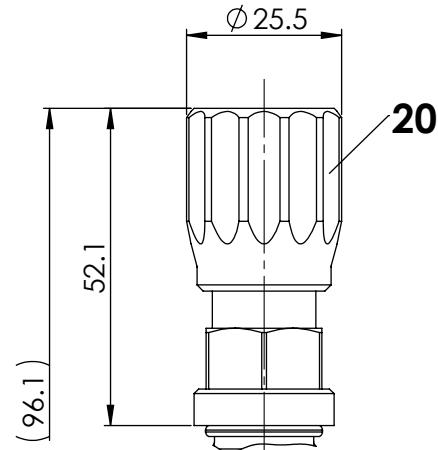


Cover „A”

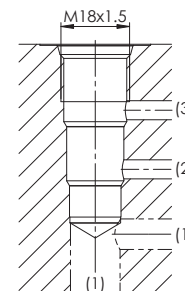

**ACCESSORIES**

Adjustment types for screw-in cartridges	Data sheet 2.0-50
Flange body / sandwich plate NG3-Mini	Data sheet 2.2-600
Threaded body	Data sheet 2.9-210
Technical explanations	Data sheet 1.0-100
Filtration	Data sheet 1.0-50

Control knob adjustment „D”


**HYDRAULIC CONNECTION**

Cavity drawing according to Wandfluh standard


**Note!**


For detailed cavity drawing and cavity tools see data sheet 2.13-1020

**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	160.2156	O-ring ID 15,60 x 1,78 (NBR)
	160.6156	O-ring ID 15,60 x 1,78 (FKM)
60	160.2111	O-ring ID 11,11 x 1,78 (NBR)
	160.6111	O-ring ID 11,11 x 1,78 (FKM)
70	049.3156	Backup ring rd 12,1 x 15 x 1,4
80	160.2093	O-ring ID 9,25 x 1,78 (NBR)
	160.6092	O-ring ID 9,25 x 1,78 (FKM)
90	049.3137	Backup ring rd 10,6 x 13,5 x 1,4