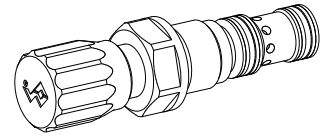


Pressure sequence valve
Screw-in cartridge

- Pilot operated
- $Q_{max} = 100 \text{ l/min}$
- $p_{max} = 400 \text{ bar}$
- $p_{Nmax} = 350 \text{ bar}$

M22x1,5
 ISO 7789

DESCRIPTION

Pilot operated pressure sequence valve in screw cartridge construction with M22x1,5 thread for cavity acc. to ISO 7789. The valve is available with 2 different types of adjustment: key adjustment „S“ and control knob adjustment „D“ both of which are fixed, and a lockable version „K“. Key adjustment „S“ is also available with cover see data sheet 2.0-50. Three pressure ranges are available as standard: 63, 160 and 350 bar. The steel cartridge body is zinc coated and thus protected against rust.

FUNCTION

The pressure sequence valve connects consumers in hydraulic circuits. Its separate leakage line means that the valve can be used as a pressure relief valve that is not sensitive to ram pressure. When the set pressure has been reached, the pilot operation opens to the tank, thereby opening the main spool to the next consumer. Pilot operated pressure sequence valves can be very finely adjusted and are suitable for high volume flows and pressures. There is very little play in the hardened spool, thus leakage is kept to a minimum.

APPLICATION

For sequence control of operating sequences, whereby a consumer is switched on when a specific pressure is reached. Operates as a pressure relief valve for controls where ram pressure in the secondary line may not affect the pressure setting. The screw cartridges are very well suited for use in control blocks and are installed as functional parts in the Wandfluh-Hydraulik NG4, NG6 and NG10 sandwich plates (vertical stacking). Please see separate data sheets in register 2.1). Step tools are available (for hire or purchase) for the manufacture of the cartridge cavities in steel or aluminium blocks. See data sheets in register 2.13

TYPE CODE

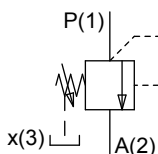
Pressure sequence valve	F	V	<input type="checkbox"/>	PM22 -	<input type="checkbox"/>	#	<input type="checkbox"/>
Pilot operated							
Type of adjustment	Key	<input type="checkbox"/>	S				
	Control knob	<input type="checkbox"/>	D				
	Cover	<input type="checkbox"/>	A	(see data sheet 2.0-50)			
Screw cartridge M22x1,5							
Pressure range p_N	63 bar	<input type="checkbox"/>	63				
	160 bar	<input type="checkbox"/>	160				
	350 bar	<input type="checkbox"/>	350				
Design-Index (Subject to change)							

GENERAL CHARACTERISTICS

Description	Pilot operated pressure sequence 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	$m = 0,17 \text{ kg}$ (key) $m = 0,18 \text{ kg}$ (control knob)

HYDRAULIC CHARACTERISTICS

Hydraulic fluid	Mineral oil, other media on request
Max. permissible contamination level	ISO 4406:1999, class 18/16/13 (recommended filter gauge $\beta_{6...10} \geq 75$) see also data sheet 1.0-50/2
Viscosity range	12 mm ² /s...320 mm ² /s
Hydraulic fluid temp.	-20...+70°C
Peak pressure	$p_{max} = 400 \text{ bar}$ $p_{Tmax} = p_p + 20 \text{ bar}$
Rated pressure ranges	$p_N = 63 \text{ bar}$, $p_N = 160 \text{ bar}$, $p_N = 350 \text{ bar}$
Minimum pressure	see curve
Volume flow	$Q = 0,2...100 \text{ l/min}$
Leak volume flow	see curve
Control volume flow	$Q_{st} = 0,1...0,4 \text{ l/min}$ (dep. on pressure)

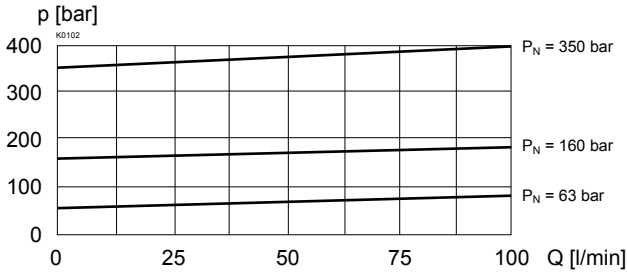
SYMBOL

MECHANICAL ACTUATION

Mechanical types of operation in 2 different versions:

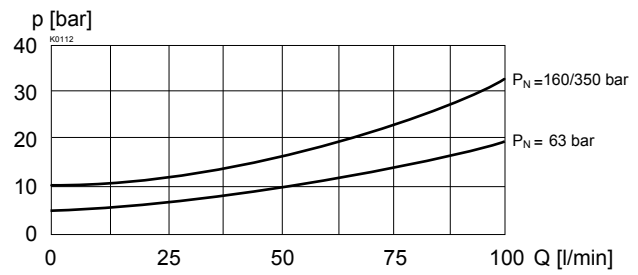
S	= Screw adjustment with fork wrench and Allen key
D	= Control knob adjustment, fixed
Actuation stroke S_b	= 5 mm
Actuation angle α_b	= 180° (5 turns)

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

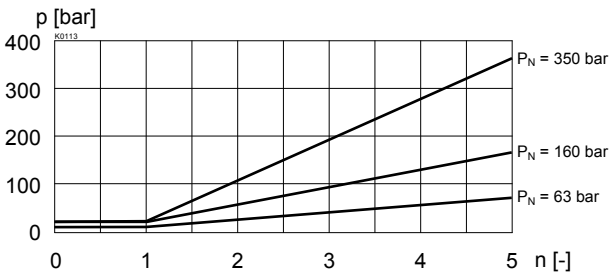
$p = f(Q)$ Pressure volume flow characteristics
(Maximal adjustable pressure)



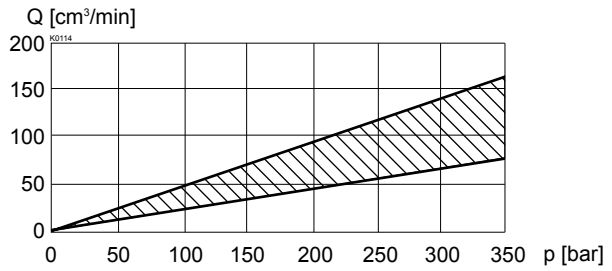
$p = f(Q)$ Pressure volume flow characteristics
(Minimal adjustable pressure)



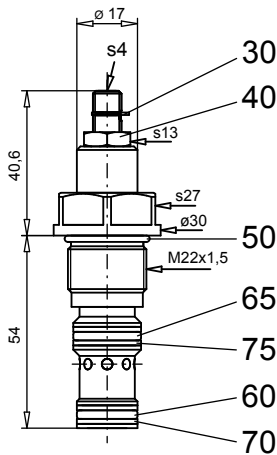
$p = f(n)$ Pressure adjustment characteristics
(at $Q = 5 \text{ l/min}$)



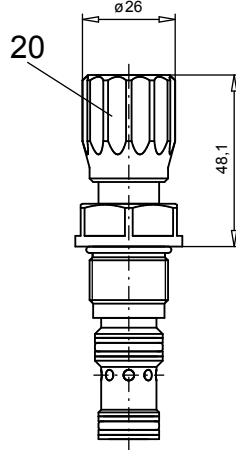
$Q_L = f(p)$ Leakage volume flow characteristics
[P (1) → T (2)]


DIMENSIONS

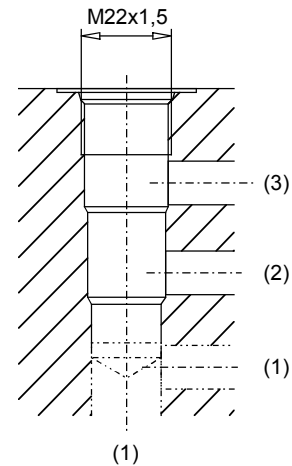
Screw adjustment „S“



Knob adjustment „D“



Cavity drawing acc. to
ISO 7789-22-06-0-98



For detailed cavity drawing and cavity tools see data sheet 2.13-1006.

PARTS LIST

Position	Article	Description
20	114.2224	Knob
30	193.1061	Safety plate RD6 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
65	160.2156	O-ring ID 15,60x1,78
70	049.3176	Back-up ring RD 14,1x17x1,4
75	049.3196	Back-up ring RD 16,1x19x1,4

ACCESSORIES

Sandwich plate NG4-Mini	Data sheet 2.1-820
Sandwich plate NG6	Data sheet 2.1-840
Sandwich plate NG10	Data sheet 2.1-860

Technical explanation see data sheet 1.0-100