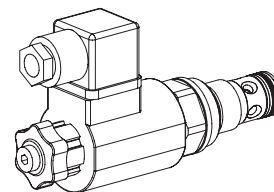


Solenoid poppet valve cartridge
2/2-way versions

- Pilot operated
- $Q_{max} = 80 \text{ l/min}$
- $p_{max} = 350 \text{ bar}$

M22x1,5
ISO 7789

DESCRIPTION

Pilot operated 2/2-way poppet valve in screw-in cartridge design with thread M22x1,5 for cavity to ISO 7789. The valve functions „normally open“ and „normally closed“ are available. There are two versions of the slip-on coil. The coil type „M“ with steel housing and the more economical type „K“ with plastic moulded coil with the same performance as the steel type. The coil may be exchanged without opening the hydraulic circuit. The outside of the armature tube and the valve body are zinc coated for surface protection.

FUNCTION

For the function „normally closed“ with deenergised pull-type solenoid, and „normally open“ with energised push-type solenoid, the differential area poppet piston is held in closed position by a spring and seals leak free from port 2 to 1. If pull-type solenoid is energised respectively push-type solenoid deenergised, the poppet piston will open flow passage from 2 to 1 after having reached the opening pressure. In the „normally closed“ valve with deenergised solenoid respectively the „normally open“ valve with energised solenoid flow passage from 1 to 2 is open when opening pressure has been reached.

APPLICATION

Wandfluh solenoid operated poppet valves are applied where an absolutely leak free closing of the valve is essential like in load holding, clamping or gripping functions. The solenoid operated screw-in cartridges are mainly used in mobile or stationary integrated blocks and in size NG4 and NG6 flange and sandwich bodies. To machine the cavities in steel or aluminium blocks cavity tools may be supplied (hire or purchase). Please refer to the data sheets in register 2.13

CONTENT

GENERAL SPECIFICATIONS	1
HYDRAULIC SPECIFICATIONS	1
SYMBOLS	1
ELECTRICAL CONTROL	2
CHARACTERISTICS	2
DIMENSIONS/ SECTIONAL DRAWING	2/3
CAVITY	3
PARTS LIST	3
ACCESSORIES	3

TYPE CODE

		S V S PM22 -				/				35		#			
Poppet valve															
Pilot operated															
Super															
Screw-in cartridge M22x1,5															
2/2-way, „normally closed“				DC											
2/2-way, „normally open“				CD											
Standard-nominal voltage U_N :		12 VDC		G12		110 VAC		R110							
		24 VDC		G24		115 VAC		R115							
						230 VAC		R230							
Slip-on coil:		Plastic moulded		K		(only for 12 VDC and 24 VDC available)									
		Steel		M											
Connector		ISO 4400 / DIN 43650		D											
socket:		AMP Junior-Timer		J											
Coil types															
Design-Index (Subject to change)															

GENERAL SPECIFICATIONS

Description	Pilot operated 2/2-way solenoid poppet valve
Construction	Screw-in cartridge for cavity acc. to ISO 7789
Operation	Solenoid with exchangeable slip-on coil
Mounting	Screw-in thread M33x2
Ambient temperature	-20...+50° C
Mounting position	any
Fastening torque	$M_D = 50 \text{ Nm}$ for cartridge $M_{Dmax} = 5 \text{ Nm}$ for coil retaining nut
Weight	$m = 0,47 \text{ kg}$ 2/2-way with plastic coil $M = 0,61 \text{ kg}$ 2/2-way with steel coil
Volume flow	see symbols

HYDRAULIC SPECIFICATIONS

Fluid	Mineral oil, other fluid on request
Contamination efficiency	ISO 4406:1999, classe 18/16/13 (Required filtration grade $\beta_{10...16} \geq 75$) see data sheet 1.0-50/2
Viscosity range	12 mm ² /s...320 mm ² /s
Fluid temperature	-20...+70° C
Working pressure	$p_{max} = 350 \text{ bar}$
Nominal flow	$Q_N = 60 \text{ l/min}$
Max. volume flow	$Q_{max} = 80 \text{ l/min}$
Pressure drop	see characteristics
Opening pressure	1,4 bar

SYMBOLS



SVSPM22-DC...

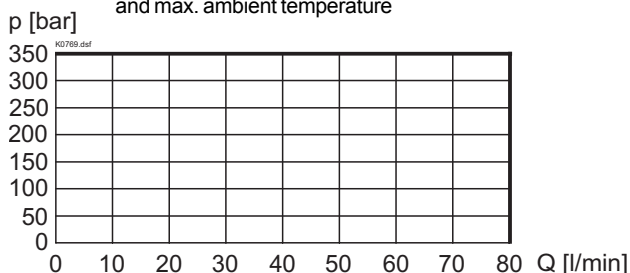
SVSPM22-CD...

ELECTRICAL CONTROL

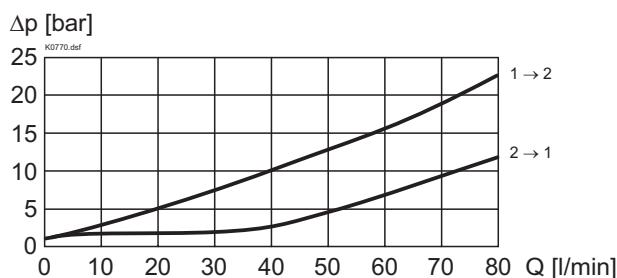
Construction	solenoid, wet pin, pull or push type, pressure tight with exchangeable slip-on coil
Standard nominal voltage:	$U_N = 12 \text{ VDC}$, 24 VDC $U_N = 110 \text{ VAC}$ *, 115 VAC *, 230 VAC * AC = 50 up to 60 Hz
	– * Rectifier integrated in connector socket
	– Other nominal voltages and wattages on request
Voltage tolerance	$\pm 10\%$ of nominal voltage
Protection class	IP 65 acc. to EN 60 529 (if correctly mounted)
Relative duty cycle	100% DF (see data sheet 1.1-430)
Switching cycles	5'000/h
Operating life	10^7 (number of switching cycles, theoretically)
Connections/Power supply	Versions see type code
Solenoid type:	
- Steel coil (M.35/16)	data sheet 1.1-170
- Plastic coil (K.35/16)	data sheet 1.1-172

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

$p = f(Q)$ Performance limits at 10% under voltage and max. ambient temperature

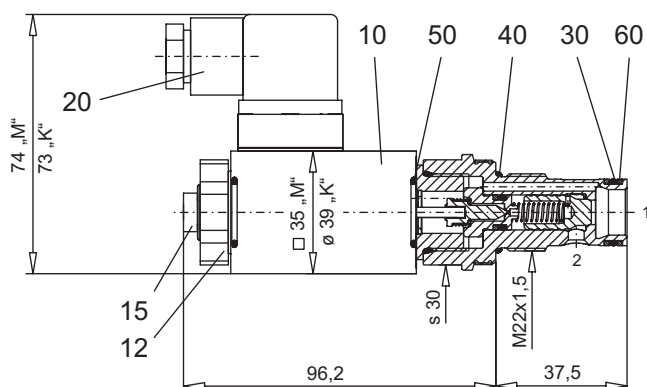


$\Delta p = f(Q)$ Pressure volume flow characteristics

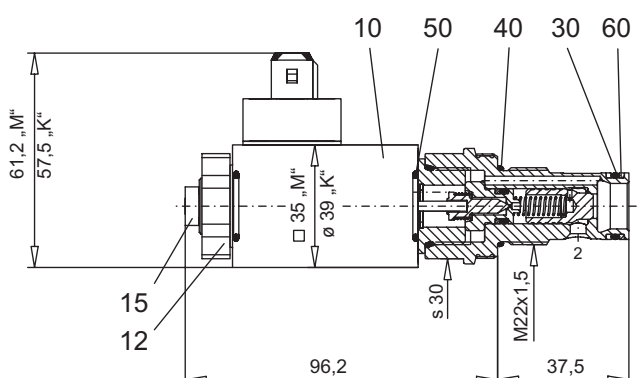


DIMENSIONS/SECTIONAL DRAWING

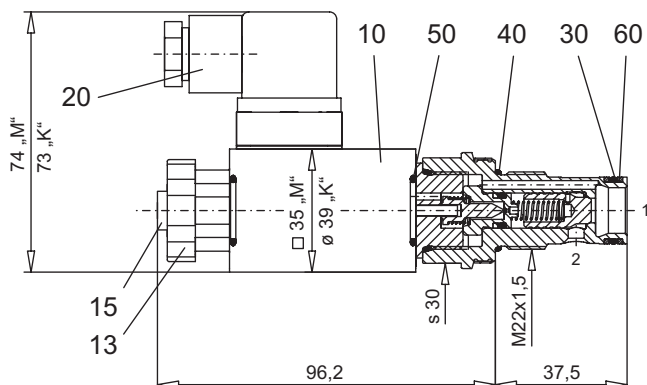
2/2-way version, „normally closed“ [DC]
with DIN connector socket



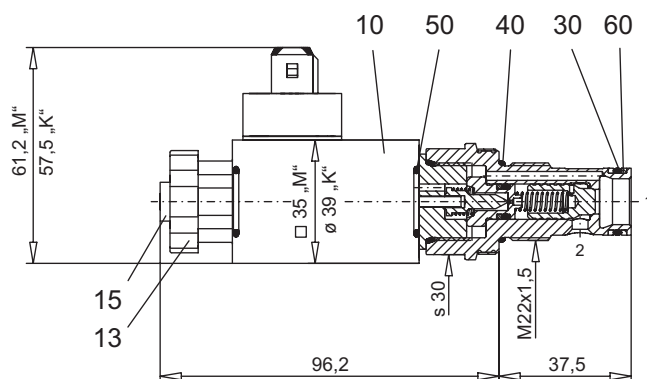
2/2-way version, „normally closed“ [DC]
with Junior-Timer connector socket



2/2-way version „normally open“ [CD]
with DIN connector socket

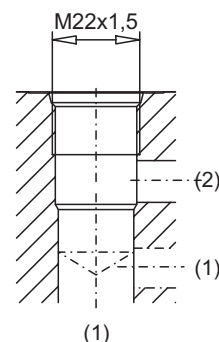


2/2-way version, „normally open“ [CD]
with Junior-Timer connector socket



CAVITY

Cavity drawing to
ISO 7789-22-01-0-98



For detailed cavity drawing and cavity tools
see data sheet 2.13-1008

PARTS LIST

Position	Article	Description
10	260.4... 260.4... 206.23.. 206.23..	Coil complete MD35/16-... Coil complete MJ35/16-... Coil complete KD35/16-... Coil complete KJ35/16-...
12	154.2600	Knurled nut M16x1x9
13	154.2601	Knurled nut M16x1x18
15	239.2033	Plug HB0 (incl. seal)
20	219.2002	Plug
30	160.2156	O-ring ID 15,60x1,78
40	160.2188	O-ring ID 18,77x1,78
50	160.6156	O-ring Viton ID 15,60x1,78
60	049.3196	Back-up ring RD 16,1x19x1,4

ACCESSORIES

Cartridge built-in flange- or sandwich body

Flange valve

Sandwich valve

register 1.11

register 1.11

Technical explanation see data sheet 1.0-100E