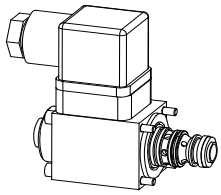
Solenoid poppet valve cartridge
- normally open
- Q_{max} = 6 l/min
- p_{max} = 350 bar

NG3



DESCRIPTION
This 2/2-way poppet valve in slip-in cartridge design is mainly used in blocs for hydraulic integrated circuits. Poppet cartridge and spring will be supplied as separate items, if ordered, together with solenoid (VDE standard 0580) and fastening screws.
Important: at the time the valve is taken into service, the valve must be vented under pressure (max. 2 revolutions of screw E).

FUNCTION
If energised, the pressure proof solenoid presses the poppet auto the seat, acting against a spring. In deenergised state the poppet is lifted off its seat by the spring. One to the pressure balanced design of the poppet-spool no undesired opening as closing forces arise. As a result, oil can flow in both directions through the seating valve. The seat/piston guide is sealed with an O-ring. The seat with a metallic seal closes off the valve so that there is no leakage oil.

APPLICATION
Wandfluh poppet valves can be used anywhere absolutely leak tight closing functions are important. Completely sealed loading, gripping and clamping operations are all important functions which Wandfluh poppet valves can perform. Cartridge typ poppet valves can be neatly accommodated in valve blocks. Cavity tools are available for hire or sale for machining aluminium or steel. See data sheet register no. 2.13.

CONTENT

TYPE CODE
Poppet valve cartridge: 2 2 03 0-S1265 # ☐
Poppet valve cartridge with solenoid: ☐ 2 2 03 0-S1265 - ☐ # ☐

- Medium-solenoid: M
- Super-solenoid: S
- 2-way (Connections)
- 2 Position
- Nominal size 3
- Normally open
- Standard-nominal voltage U_N: 12 VDC G12, 24 VDC G24, 110 VAC R110, 115 VAC R115, 230 VAC R230
- Design-Index (Subject to change)

GENERAL SPECIFICATIONS

Description	2/2-way poppet valve
Nominal size	NG3
Construction	Direct operated poppet valve
Operations	Solenoid
Mounting	cartridge form 4 solenoid fixing screws M3
Ambient temperature	-20… +50 °C
Mounting position	any
Fastening torque	M_D = 1,2 Nm (quality 8.8)
Weight: 22030-S1265	m = 0,02 kg
. 22030-S1265- . .	m = 0,23 kg
Volume flow direction	any

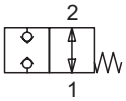
HYDRAULIC SPECIFICATIONS

Fluid	Mineral oil, other fluid on request
Contamination efficiency	ISO 4406:1999, class 20/18/14 (Required filtration grade ß10…16≥75) refer to data sheet 1.0-50/2
Viscosity range	12 mm²/s…320 mm²/s
Fluid temperature	-20…+70 °C
Working pressure	Medium: p_{max} = 125 bar Super: p_{max} = 350 bar
Max. volume flow	Q_{max} = 6 l/min, see characteristics

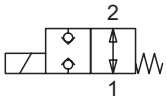
ELECTRICAL CONTROL

Construction	Solenoid, wet pin push type, pressure tight
Standard-nominal flow	U_N = 12 VDC, 24 VDC U_N = 110 VAC∗, 115 VAC∗, 230 VAC∗ AC = 50 to 60 Hz ∗ Rectifier integrated in the plug Other nominal voltages and nominal performances on request
Voltage tolerance	±10% of nominal voltage
Protection class	IP 65 to EN 60 529
Relative duty factor	100% DF (see data sheet 1.1-430)
Switching cycles	15 000/h
Operating life	10^7 (number of switching cycles, theoretically)
Connections / Power supply	Over device plug connection to ISO 4400 / DIN 43650, (2P+E), other connections on request
Solenoid:	– Medium SIN29V (data sheet 1.1-80) – Super SIS29V (data sheet 1.1-85)

SYMBOLS
22030-S1265

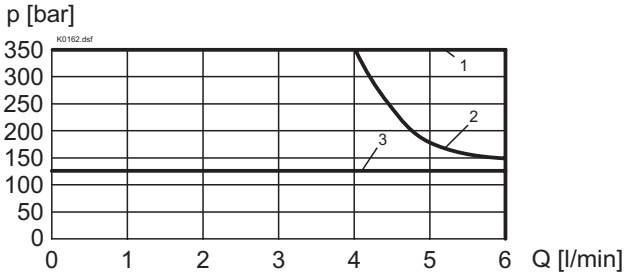


. 22030-S1265- . .



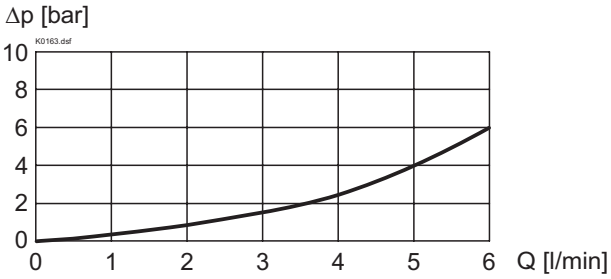
CHARACTERISTICS Oil viscosity υ = 30 mm²/s

p = f (Q) Performance limit at -10%



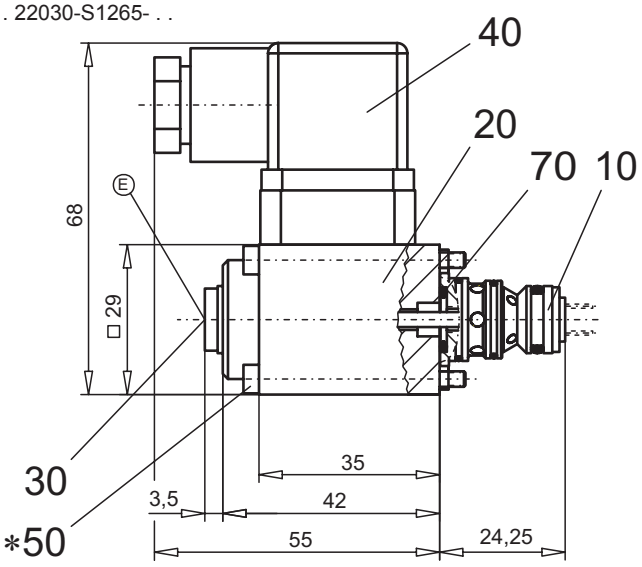
	Flow direction	
Type	1 → 2	2 → 1
M22030-S1265	3	3
S22030-S1265	1	2

Δp = f (Q) Pressure loss / flow characteristics



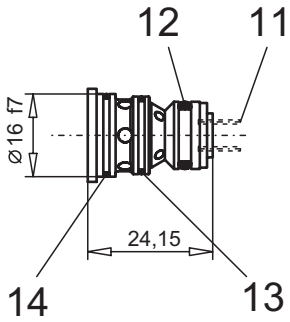
DIMENSIONS

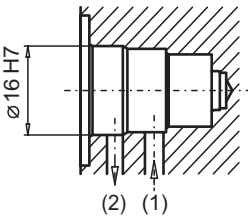
. 22030-S1265- . .



E = air bleed screw

22030-S1265





For detailed cavity drawing and cavity tools see data sheet 2.13-1016

PARTS LIST

Position	Article	Description
10	500.0001	Poppet valve cartridge 22030-S1265
11	052.1607	Spring 0,8 x 6 x 8
12	160.2093	O-ring ID 9,25 x 1,78
13	160.1131	O-ring ID 13,00 x 1,00
14	160.1142	O-ring ID 14,00 x 1,00
20	260.2… 260.3…	Medium-solenoid SIN29V Super-solenoid SIS29V
30	239.2033	Plug (incl. seal) HB0
40	219.2002	Plug
50	246.0141	Socket head cap screw M3 x 40 DIN 912
70	160.1095	O-ring ID 9,50 x 1,6

* Cartridge supplied with fastening screw M3 x 40 for steel bodies/ blocs. For aluminium bodies/blocs longer screws are recommended (min. 2 screw diameter).

ACCESSORIES

Cartridge built-in sandwich body:
Sandwich — Register 1.11

Special tool 983.2007 to poppet valve cartridge 22030-S1265

Technical explanation see data sheet 1.0-100