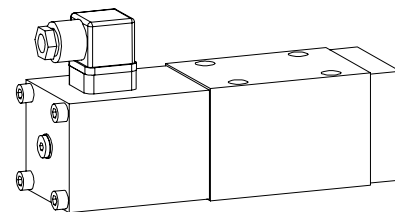


Solenoid poppet valve

- 2/2-, 3/2- and 3/4-way construction
- $Q_{max} = 80 \text{ l/min}$
- $p_{max} = 350 \text{ bar}$

NG10
ISO 4401-05


DESCRIPTION

Poppet valve, flanged design NG10, available as a 2/2 or 3/2-way valve (normally open or closed) and as a 3/4-way valve (normally closed). The central functioning element of all directly controlled poppet valves in the NG10 series is the poppet valve cartridge NG10. See data sheet 1.11-2040. The solenoids correspond to VDE standard 0580.

Important: When commissioning, the valve must be vented under pressure (max. 2 revolutions of screw E).

FUNCTION

The valve is direct operated by a wet pin push type solenoid which in turn either opens or closes the poppet. The design of the poppet spool, which is equal in surface area on both sides and thus pressure balanced, means there are no undue opening and closing hydraulic forces. Due to this the oil flow through the poppet valve is possible in both directions. The valve is tight in both flow directions.

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 type poppet valves can be neatly accommodated in valve blocks. From a mechanical and functional point of view, poppet valves can replace slide valves at any time. NG10 valves are used where a light, compact unit is needed.

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TYPE CODE

2/2- or 3/2-way construction	A	☐	☐	2	10	☐	-	☐	#	☐
3/4-way construction	A	☐	3	4	10	☐	-	☐	#	☐
International mounting interface ISO										
Medium-solenoid	M									
Super-solenoid	S									
2-way (connections)	2									
3-way (connections)	3									
2 position										
4 position										
Nominal size 10										
Normally closed, solenoid on A-side						1a				
Normally open, solenoid on B-side						0b				
Standard nominal voltage U_N : 12 VDC	G12					110 VAC	R110			
24 VDC	G24					115 VAC	R115			
						230 VAC	R230			

Design-Index (Subject to change)

GENERAL SPECIFICATIONS

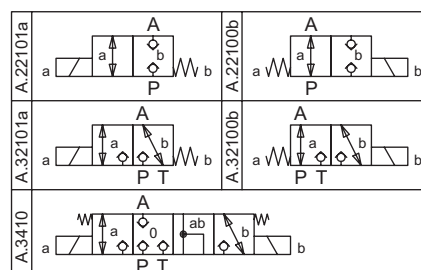
Description	2/2-, 3/2- and 3/4-way poppet valve
Nominal size	NG10 acc. to ISO 4401-05
Construction	Direct operated poppet valve
Operations	Solenoid
Mounting	Flange, 4 holes for socket cap screws M6x65
Connections	Threaded connection plates Multi-flange subplates Longitudinal stacking system
Ambient temperature	-20...+50°C
Mounting position	any, preferable horizontal
Fastening torque	$M_D = 9,5 \text{ Nm}$ (quality 8.8)
Weight 2/2-, 3/2-way	$m = 4,6 \text{ kg}$
3/4-way	$m = 6,4 \text{ kg}$
Volume flow direction	any (see characteristics)

ELECTRICAL CONTROL

Construction	Solenoid, wet pin push type, pressure tight
Standard-nominal voltage	$U_N = 12 \text{ VDC}, 24 \text{ VDC}$ $U_N = 110 \text{ VAC}^*, 115 \text{ VAC}^*, 230 \text{ VAC}^*$ $AC = 50 \text{ to } 60 \text{ Hz}$ * Rectifier integrated in the plug Other nominal voltages and nominal performances on request
Voltage tolerance	$\pm 10\%$ of nominal voltage
Protection class	IP 65 to EN 60 529
Relative duty factor	100% FD (see data sheet 1.1-430)
Switching cycles	15'000/h
Operating life	10^7 (number of switching cycles, theoretically)
Connection/Power supply	Over device plug connection to ISO 4400/ DIN 43 650, (2P+E), other connections on request
Solenoid:	- Medium SIN60V (data sheet 1.1-145) - Super SIS60V (data sheet 1.1-150)

HYDRAULIC SPECIFICATIONS

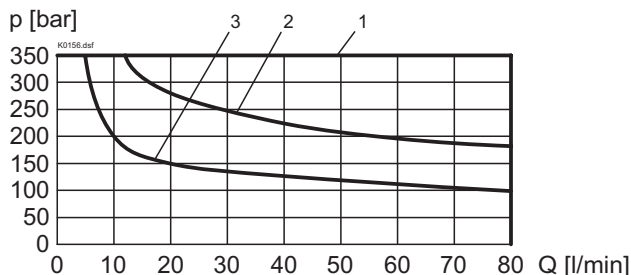
Fluid	Mineral oil, other fluid on request
Contamination efficiency	ISO 4406:1999, class 20/18/14 (Required filtration grade $\beta_{10...16} \geq 75$) refer to data sheet 1.0-50/2
Viscosity range	12 mm ² /s...320 mm ² /s
Fluid temperature	-20...+70°C
Working pressure	Medium: $p_{max} = 160 \text{ bar}$ Super: $p_{max} = 350 \text{ bar}$
Max. volume flow	$Q_{max} = 80 \text{ l/min}$ see characteristics

SYMBOLS


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

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

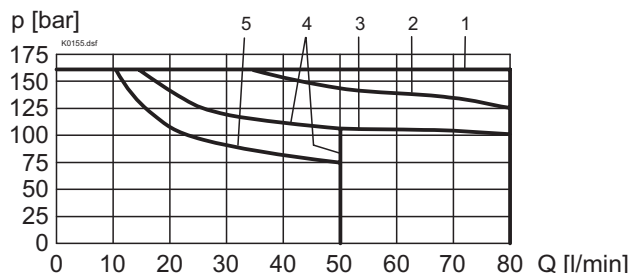
Super



Type	Flow direction			
	P - A	A - T	A - P	T - A
AS22101a	1	-	2	-
AS22100b	1	-	2	-
AS32101a	1	2	3	1
AS32100b	1	2	3	1
AS3410	1	1	2	2

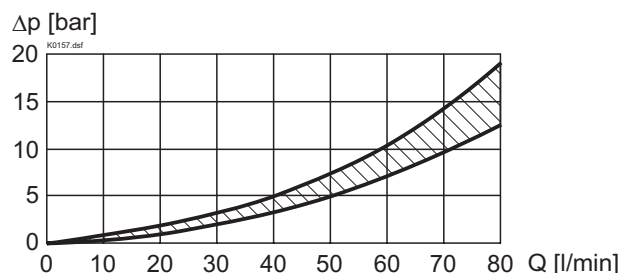
$p = f(Q)$ Performance limit at -10%

Medium



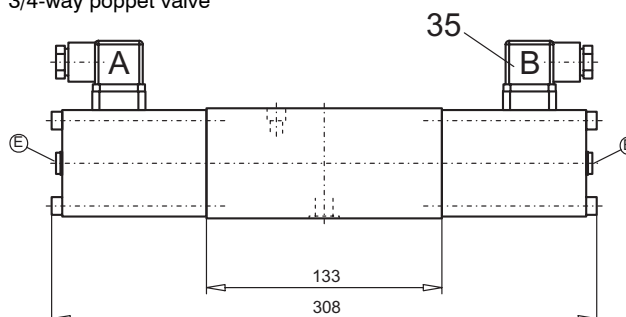
Type	Flow direction			
	P - A	A - T	A - P	T - A
AM22101a	1	-	4	-
AM22100b	1	-	2	-
AM32101a	1	3	5	1
AM32100b	1	3	3	1
AM3410	1	1	4	4

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



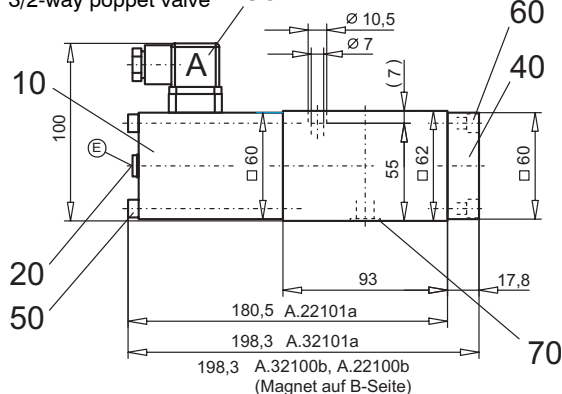
DIMENSIONS

3/4-way poppet valve

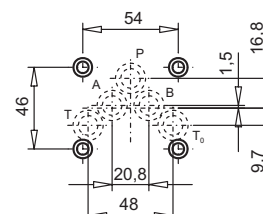


2/2-way poppet valve

3/2-way poppet valve



E = air bleed screw



PARTS LIST

Position	Article	Description
10	260.8... 260.9...	Medium-solenoid SIN60V Super-solenoid SIS60V
20	239.2033	Plug (incl. seal) HB0
30	219.2001	Plug A (grey)
35	219.2002	Plug B (black)
40	059.2200	Cover
50	246.3190	Socket head cap screw M6x90 DIN 912
60	246.3121	Socket head cap screw M6x20 DIN 912
70	160.2140	O-ring ID 14,00x1,78

ACCESSORIES

Threaded connection plates, Multi-flange subplates and
Longitudinal stacking system see Register 2.9

Technical explanation see data sheet 1.0-100E