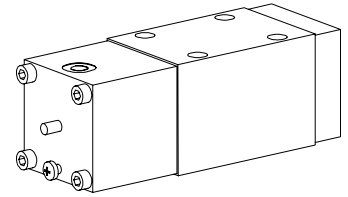


Poppet valve pneumatically operated

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

NG10
ISO 4401-05


DESCRIPTION

Poppet valve, flanged design NG10 according to ISO 4401-05, 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.

FUNCTION

The valve is direct operated by a pneumatically operated 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.

CONTENT

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TYPE CODE

2/2- or 3/2-way construction	A	K	<input type="checkbox"/>	2	10	<input type="checkbox"/>	#	<input type="checkbox"/>
3/4-way construction	A	K	3	4	10		#	<input type="checkbox"/>
International mounting interface ISO								
Pneumatically operated								
2-way (connections)			<input type="checkbox"/>	<input checked="" type="checkbox"/>				
3-way (connections)			<input type="checkbox"/>	<input checked="" type="checkbox"/>				
2 position								
4 position								
Nominal size 10								
Normally closed,	Pilot head on A-side		<input type="checkbox"/>	<input checked="" type="checkbox"/>				
Normally open,	Pilot head on B-side		<input checked="" type="checkbox"/>	<input type="checkbox"/>				
Design-Index (Subject to change)								

GENERAL SPECIFICATIONS

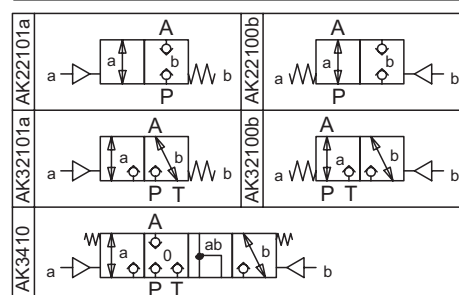
Description	2/2-, 3/2- and 3/4-way poppet valve
Nominal size	NG10 acc. to ISO 4401-05
Construction	Direct operated poppet valve
Operations	pneumatically operated
Mounting	Flange, 4 mounting holes for socket head screws M6x65
Connections	Threaded connection plates Multi-flange subplates Longitudinal stacking system
Ambient temperature	-20...+50°C
Mounting position	any, preferable horizontal
Fastening torque	$M_D = 9,5$ Nm (quality 8,8)
Weight: 2/2-, 3/2-way	$m = 4,1$ kg
3/4-way	$m = 5,4$ kg
Volume flow direction	any (see characteristics)

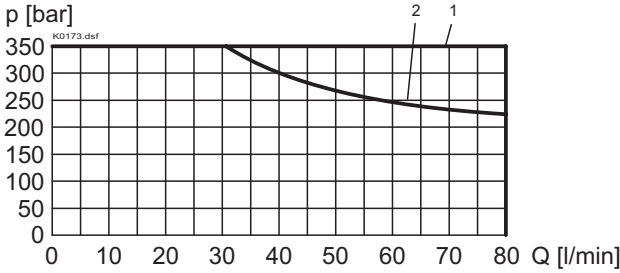
CONTROL PNEUMATIC

Min. pilot pressure	$p_{st\ min.} =$ see characteristics
Max. pilot pressure	$p_{st\ max.} = 8$ bar
Control volume	$V_{st} = 10$ cm ³

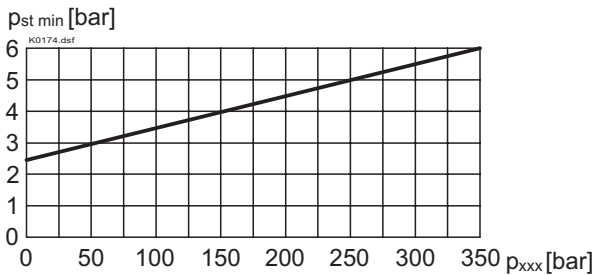
HYDRAULIC SPECIFICATIONS

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

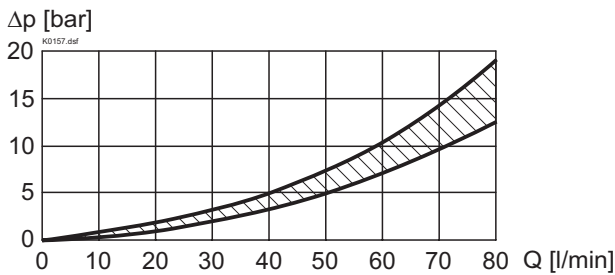
SYMBOLS


CHARACTERISTICS Oil viscosity $\nu = 30 \text{ mm}^2/\text{s}$
 $p = f(Q)$ Performance limit


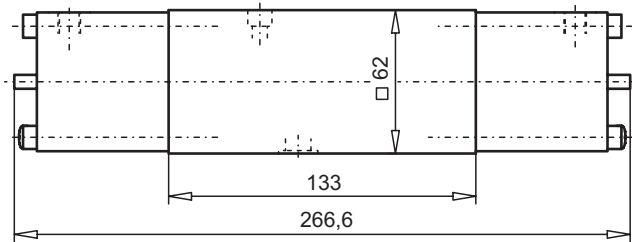
Type	Flow direction			
	P - A	A - T	A - P	T - A
AK22101a	1	-	1	-
AK22100b	1	-	2	-
AK32101a	1	2	1	1
AK32100b	1	1	2	1
AK3410	1	1	1	1

 $p_{st \text{ min}} = f(p_{xxx})$ Min. Pilot pressure characteristics at Q_{max}

 p_{xxx} = pressure in line xxx (see table)

Type	Flow direction			
	P - A	A - T	A - P	T - A
AK22101a	A	-	A	-
AK22100b	A	-	A	-
AK32101a	A	A	A	A
AK32100b	A	A	A	A
AK3410	A	T	A	T

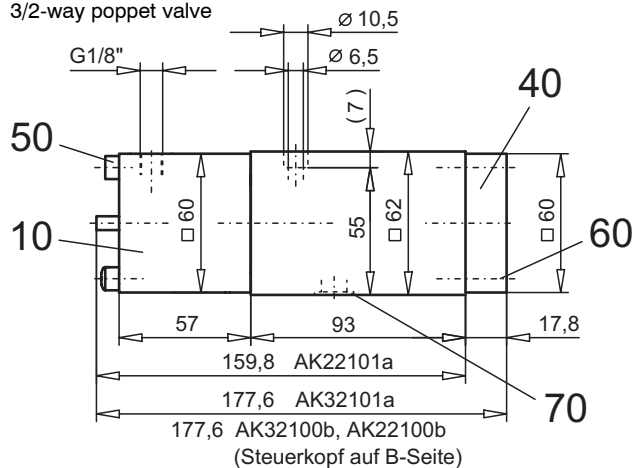
 $\Delta p = f(Q)$ Pressure loss/flow characteristics

DIMENSIONS

3/4-way poppet valve



2/2-way poppet valve

3/2-way poppet valve


PARTS LIST

Position	Article	Description
10	254.5000	Pneumatic pilot headf AKI
40	059.2200	Cover
50	246.3166	Socket head cap screw M6x65 DIN 912
60	246.3121	Socket head cap screw M6x20 DIN 912
70	160.2140	O-ring ID 14,00x1,78

ACCESSORIES

Threaded connections plates, Multi-flange subplates and Longitudinal stacking system see register 2.9

Technical explanation see data sheet 1.0-100E