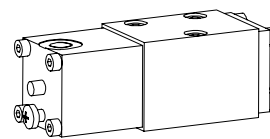


Poppet valve pneumatically operated

- 2/2-, 3/2- and 3/4-way construction
- $Q_{\max} = 15 \text{ l/min}$
- $p_{\max} = 350 \text{ bar}$

NG4-Mini®

DESCRIPTION

Poppet valve, flanged design NG4-Mini according to Wandfluh standard, 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 NG4-Mini series is the poppet valve cartridge NG4. See data sheet 1.11-2020.

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. Mini-4 valves are used where both, reduced dimensions and weight are important.

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TYPE CODE

2/2- or 3/2-way construction	B	K	☐	2	04	☐	#	☐
3/4-way construction	B	K	☐	3	4	04	#	☐
Mounting interface								
pneumatically operated								
2-way (connections)				☐				
3-way (connections)				☐				
2 position								
4 position								
Nominal size NG4-Mini								
Normally closed, Pilot head on A-side						☐	1a	
Normally open, Pilot head on B-side						☐	0b	
Design-Index (Subject to change)								

GENERAL SPECIFICATIONS

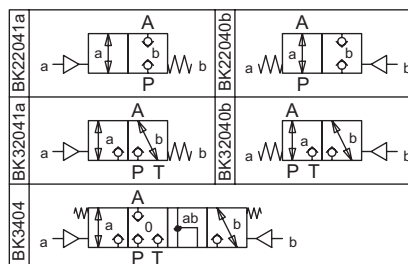
Description	2/2-, 3/2- and 3/4-way poppet valve
Nominal size	NG4-Mini acc. to Wandfluh standard
Construction	Direct operated poppet valve
Operations	pneumatically operated
Mounting	Flange, 4 mounting holes for socket head screws M5x40
Connections	Threaded connection plates Multi-flange subplates Longitudinal stacking system
Ambient temperature	-20 ... +50°C
Mounting position	any, preferable horizontal
Fastening torque	$M_D = 5,5 \text{ Nm}$ (Quality 8,8)
Weight: 2/2-, 3/2-way	$m = 0,9 \text{ kg}$
3/4-way	$m = 1,2 \text{ kg}$
Volume flow direction	any (see characteristics)

CONTROL PNEUMATIC

Min. pilot pressure	$p_{st' \min.} = \text{see characteristics}$
Max. pilot pressure	$p_{st' \max.} = 8 \text{ bar}$
Control volume	$V_{st} = 2,5 \text{ cm}^3$

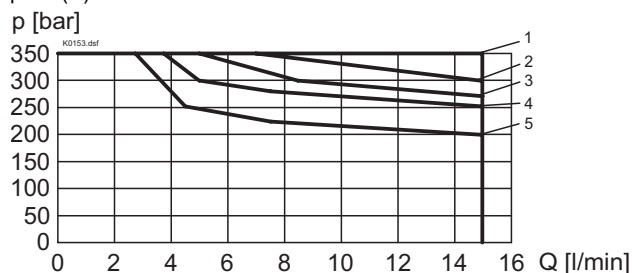
HYDRAULIC SPECIFICATIONS

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	$12 \text{ mm}^2/\text{s} \dots 320 \text{ mm}^2/\text{s}$
Fluid temperature	-20...+70°C
Working pressure	$p_{\max} = 350 \text{ bar}$
Max. volume flow	$Q_{\max} = 15 \text{ l/min}$ see characteristics

SYMBOLS


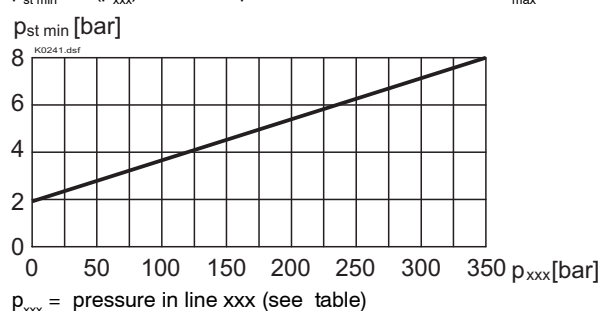
CHARACTERISTICS Oil viscosity $\nu = 30 \text{ mm}^2/\text{s}$

$p = f(Q)$ Performance limit



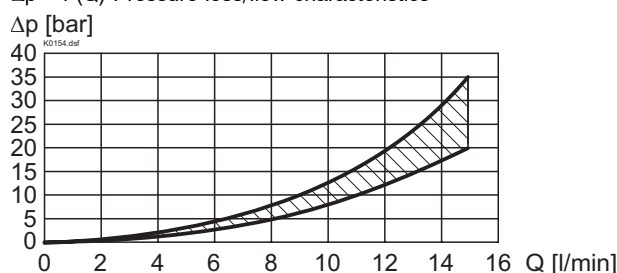
Type	Flow direction			
	P - A	A - T	A - P	T - A
BK22041a	1	-	2	-
BK22040b	1	-	4	-
BK32041a	1	3	5	1
BK32040b	1	4	5	1
BK3404	1	1	2	2

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



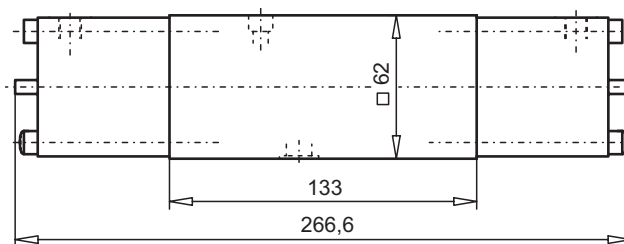
Type	Flow direction			
	P - A	A - T	A - P	T - A
BK22041a	A	-	A	-
BK22040b	A	-	A	-
BK32041a	A	A	A	A
BK32040b	A	A	A	A
BK3404	A	T	A	T

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



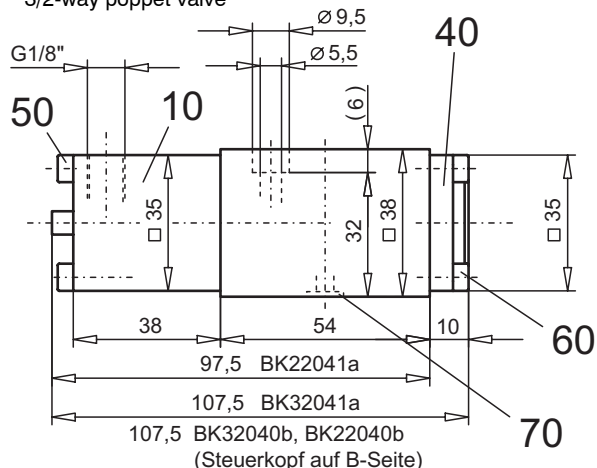
DIMENSIONS

3/4-way poppet valve



2/2-way poppet valve

3/2-way poppet valve



PARTS LIST

Position	Article	Description
10	254.2000	Pneumatic pilot head BKII
40	057.4201	Cover
50	246.1146	Socket head cap screw M4x45 DIN 912
60	246.1113	Socket head cap screw M4x12 DIN 912
70	160.2052	O-ring ID 5,28x1,78

ACCESSORIES

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

Technical explanation see data sheet 1.0-100E