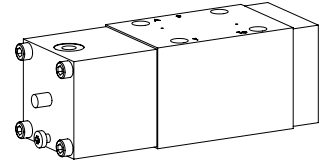


Poppet valve

Flange construction

- ◆ pneumatically operated
- ◆ 2/2-, 3/2- and 3/4-way
- ◆ normally open and normally closed
- ◆ $Q_{max} = 80 \text{ l/min}$
- ◆ $p_{max} = 350 \text{ bar}$

NG10
ISO 4401-05


DESCRIPTION

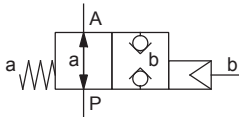
Direct operated 2/2-, 3/2 and 3/4-way poppet valve in flange construction. By means of the pneumatic actuation control head, the poppet valve spool is opened or closed acting against the spring. Due to the poppet spool construction with pressure compensation on both sides, the flow through the valve is possible in both directions. The seat spool guide is sealed by means of an O-ring. The metallic sealing seat closes the valve virtually leak free.

APPLICATION

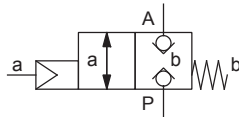
Poppet valves are used where tight closing functions of the valve are essential like leakage-free load holding, clamping or gripping.

SYMBOL

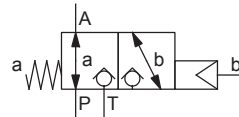
AK22100b



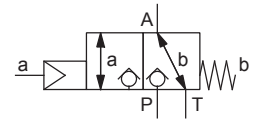
AK22101a



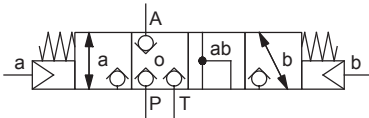
AK32100b



AK32101a



AK3410



TYPE CODE

 2/2 or 3/2 way execution
 3/4 way execution

A	K	<input type="checkbox"/>	2	10	<input type="checkbox"/>	-	<input type="checkbox"/>	#	<input type="checkbox"/>	
A	K	<input type="checkbox"/>	3	4	10	<input type="checkbox"/>	-	<input type="checkbox"/>	#	<input type="checkbox"/>

International standard interface ISO

Pneumatically operated

2 way (connections)

 2

3 way (connections)

 3

2 switching positions

4 switching positions

Nominal size 10

Normally closed

Pilot head on A-side

 1a

Normally open

Pilot head on B-side

 0b

Sealing material

NBR

FKM (Viton)

 D1

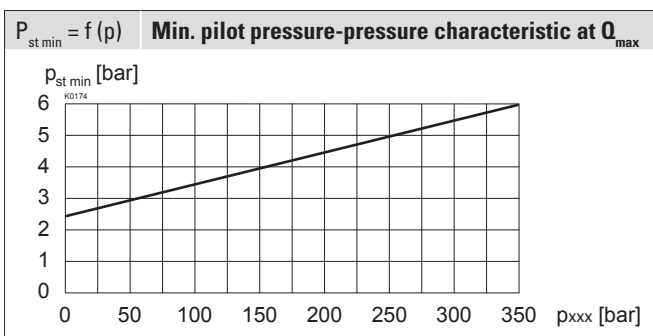
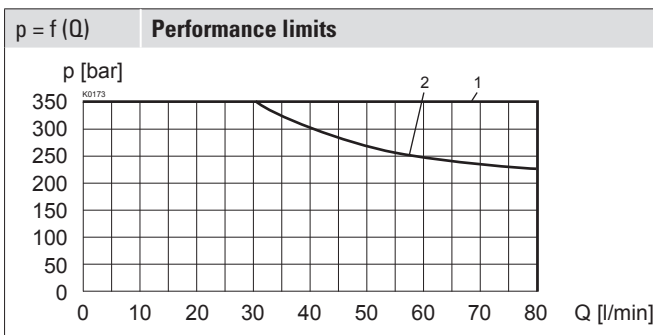
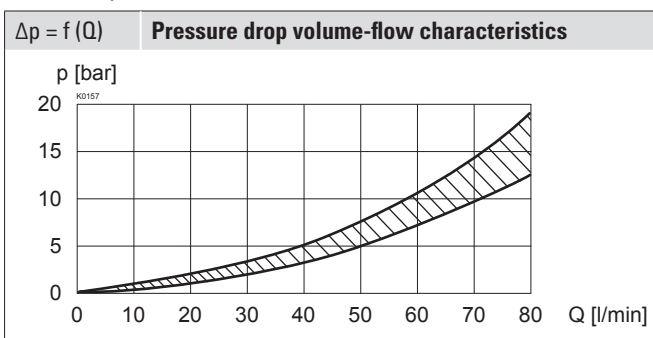
Design index (subject to change)

1.11-6160

GENERAL SPECIFICATIONS

Designation	2/2-, 3/2- and 3/4-way poppet valve
Construction	Direct operated
Mounting	Flange construction
Nominal size	NG10 according to ISO 4401-05
Actuation	Pneumatically operated
Ambient temperature	-25...+70 °C (NBR) -20...+70 °C (FKM)
Weight	4,1 kg (2/2- and 3/2-way) 5,4 kg (3/4-way)
MTTFd	150 years

PERFORMANCE SPECIFICATIONS

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

ACTUATION

Actuation	Pneumatically
Execution	Actuation AKI
Pilot pressure	$p_{st \min}$ = see characteristic $p_{st \max} = 8 \text{ bar}$
Control volume	$V = 10 \text{ cm}^3$

HYDRAULIC SPECIFICATIONS

Working pressure	$p_{\max} = 350 \text{ bar}$
Maximum volume flow	$Q_{\max} = 80 \text{ l/min}$, see characteristic
Volume flow direction	Any (see characteristic)
Leakage oil	Seat tight, max. 0,05 ml / min (approx. 1 drop / min) at 30 cSt
Fluid	Mineral oil, other fluid on request
Viscosity range	12 mm ² /s...320 mm ² /s
Temperature range fluid	-20...+70 °C
Contamination efficiency	Class 20 / 18 / 14
Filtration	Required filtration grade $\beta_{10...16} \geq 75$, see data sheet 1.0-50

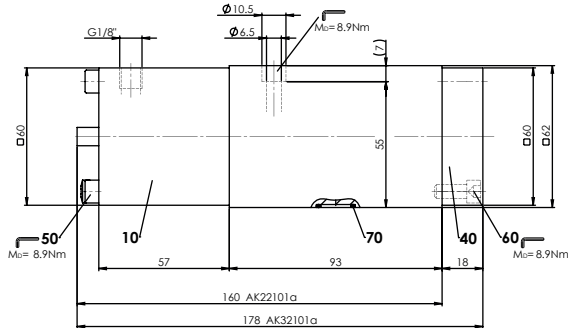
Type	Flow direction			
	P - A	A - T	A - P	T - A
AK22101a	1	-	1	-
AK22100b	1	-	2	-
AK32101a	1	2	1	1
AK32100b	1	1	2	1
AK3410	1	1	1	1

VALVES INSTALLED

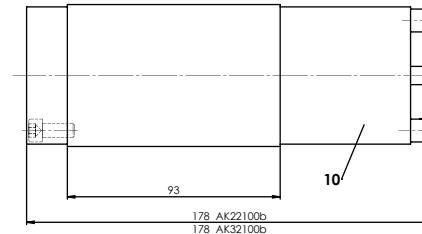
The central functioning element is the poppet valve cartridge NG10, data sheet 1.11-2040.

DIMENSIONS

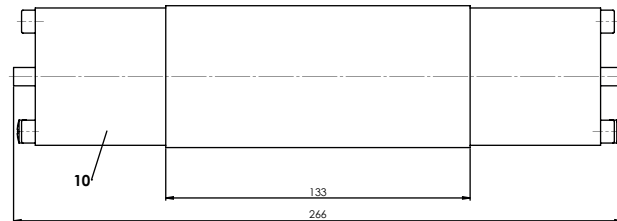
3/2-; 2/2-way



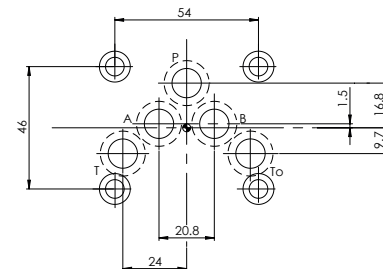
3/2-; 2/2-way



3/4-way



HYDRAULIC CONNECTION



PARTS LIST

Position	Article	Description
10	254.5000	Pneumatic actuation AKI
40	059.2200	Cover
50	246.3166	Socket head screw M6 x 65 DIN 912
60	246.3121	Socket head screw M6 x 20 DIN 912
70	160.2140	O-ring ID 14,00 x 1,78 (NBR)
	160.6141	O-ring ID 14,00 x 1,78 (FKM)

ACCESSORIES

Fixing screws	Data sheet 1.0-60
Threaded subplates	Data sheet 2.9-40
Multi-station subplates	Data sheet 2.9-70
Module type manifold blocks	Data sheet 2.9-110
Technical explanations	Data sheet 1.0-100
Filtration	Data sheet 1.0-50

SURFACE TREATMENT

- ◆ The valve body is painted with a two component paint
- ◆ The pneumatic actuation, the cover and the socket head screws are zinc coated

SEALING MATERIAL

NBR or FKM (Viton) as standard, choice in the type code

INSTALLATION NOTES

Mounting type	Flange mounting 4 fixing holes for socket head screws M5 x 65
Mounting position	Any, preferably horizontal
Tightening torque	Fixing screws $M_0 = 8,9 \text{ Nm}$ (quality 8.8, zinc-coated)

Note!



The length of the fixing screw depends on the base material of the connection element.

MANUAL OVERRIDE

In mechanical control head integrated. Actuation by pressing the pin

STANDARDS

Mounting interface	ISO 4401-05
Contamination efficiency	ISO 4406

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