

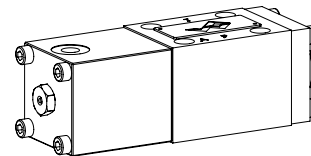
## Poppet valve

### Flange construction

- ◆ pneumatically operated
- ◆ 2/2-, 3/2- und 3/4-way
- ◆ normally open and normally closed
- ◆  $Q_{max} = 40 \text{ l/min}$
- ◆  $p_{max} = 350 \text{ bar}$

**NG6**

**ISO 4401-03**



## DESCRIPTION

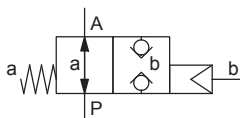
Direct operated 2/2-, 3/2 and 3/4-way poppet valve in flange construction. By means of the pneumatic actuation control head, the poppet valve spool is opened or closed acting against the spring. Due to the poppet spool construction with pressure compensation on both sides, the flow through the valve 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

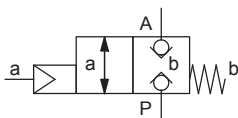
Poppet valves are used where tight closing functions of the valve are essential like leakage-free load holding, clamping or gripping.

## SYMBOL

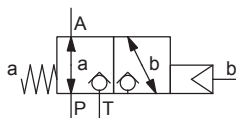
AK22060b



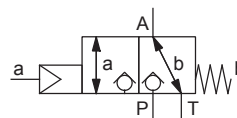
AK22061a



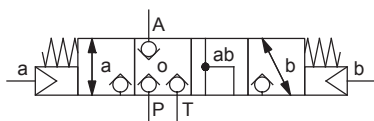
AK32060b



AK32061a



AK3406



## TYPE CODE

2/2 or 3/2 way execution

3/4 way execution

A K ☐ 2 06 ☐ - ☐ # ☐  
A K 3 4 06 - ☐ # ☐

International standard interface ISO

Pneumatically operated

2 way (connections)

☐ 2

3 way (connections)

☐ 3

2 switching positions

4 switching positions

Nominal size 6

Normally closed

Pilot head on A-side

☐ 1a

Normally open

Pilot head on B-side

☐ 0b

Sealing material

NBR

☐

FKM (Viton)

☐ D1

NBR 872

☐ Z604

Design index (subject to change)

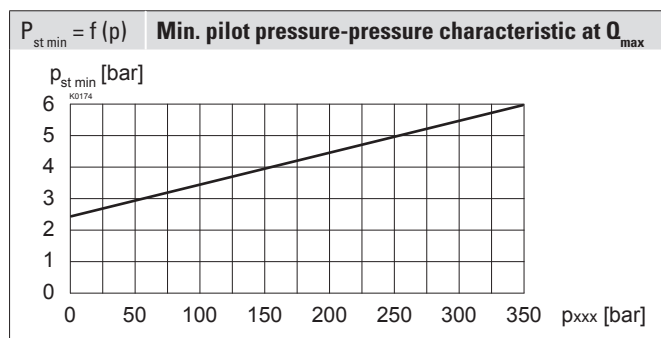
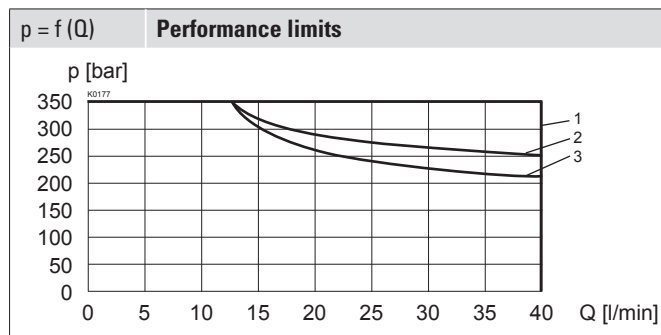
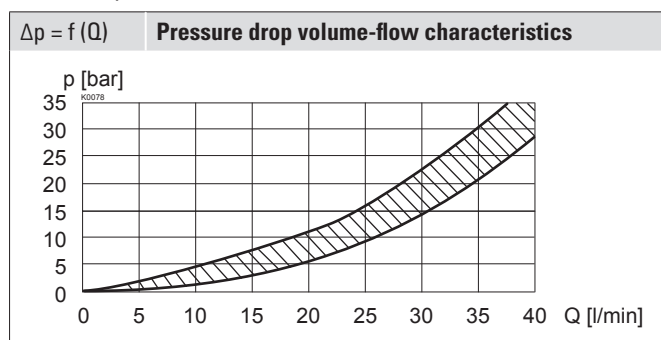
1.11-6140

## GENERAL SPECIFICATIONS

|                     |                                               |
|---------------------|-----------------------------------------------|
| Designation         | 2/2-, 3/2- and 3/4-way poppet valve           |
| Construction        | Direct operated                               |
| Mounting            | Flange construction                           |
| Nominal size        | NG6 according to ISO 4401-03                  |
| Actuation           | Pneumatically operated                        |
| Ambient temperature | -25...+70 °C                                  |
| Weight              | 1,7 kg (2/2- and 3/2-way)<br>2,5 kg (3/4-way) |
| MTTFd               | 150 years                                     |

## PERFORMANCE SPECIFICATIONS

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



## ACTUATION

|                |                                                                                                                       |
|----------------|-----------------------------------------------------------------------------------------------------------------------|
| Actuation      | Pneumatically                                                                                                         |
| Execution      | Actuation CKII #2                                                                                                     |
| Pilot pressure | $p_{v \min} = 2 \text{ bar}$ bei $p_T = 20 \text{ bar}$<br>$p_{v \min} = 5,5 \text{ bar}$ bei $p_T = 200 \text{ bar}$ |
| Control volume | $V = 6,9 \text{ cm}^3$                                                                                                |

## HYDRAULIC SPECIFICATIONS

|                             |                                                                                |
|-----------------------------|--------------------------------------------------------------------------------|
| Working pressure            | $p_{\max} = 350 \text{ bar}$                                                   |
| Maximum volume flow         | $Q_{\max} = 40 \text{ l/min}$ , see characteristic                             |
| Volume flow direction       | Any (see characteristic)                                                       |
| Leakage oil                 | Poppet type, max. 0,05 ml / min (approx.<br>1 drop / min) at 30 cSt            |
| Fluid                       | Mineral oil, other fluid on request                                            |
| Viscosity range             | 12 $\text{mm}^2/\text{s}$ ...320 $\text{mm}^2/\text{s}$                        |
| Temperature range<br>fluid  | -25...+70 °C (NBR)<br>-20...+70 °C (FKM)                                       |
| Contamination<br>efficiency | Class 20 / 18 / 14                                                             |
| Filtration                  | Required filtration grade $\beta_{10...16} \geq 75$ ,<br>see data sheet 1.0-50 |

| Type     | Flow direction |       |       |       |
|----------|----------------|-------|-------|-------|
|          | P - A          | A - T | A - P | T - A |
| AK22061a | 1              | -     | 1     | -     |
| AK22060b | 1              | -     | 3     | -     |
| AK32061a | 1              | 2     | 1     | 1     |
| AK32060b | 1              | 1     | 2     | 1     |
| AK3406   | 1              | 1     | 1     | 1     |

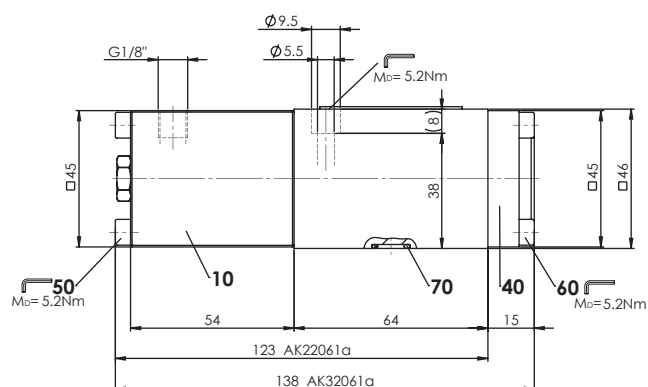
## VALVES INSTALLED

The central functioning element is the poppet valve cartridge listed below

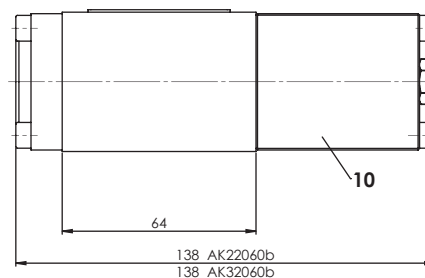
| Article | Description                                         | Data sheet no. |
|---------|-----------------------------------------------------|----------------|
| 2206    | Solenoid poppet valve cartridge normally closed NG6 | 1.11-2030      |

## DIMENSIONS

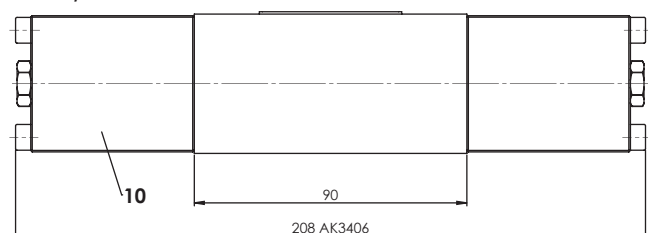
3/2-; 2/2-way



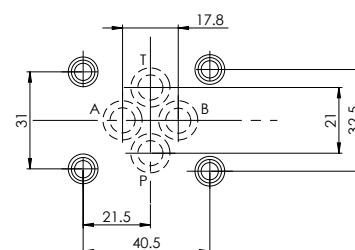
3/2-; 2/2-way



3/4-way



## HYDRAULIC CONNECTION



## PARTS LIST

| Position | Article  | Description                       |
|----------|----------|-----------------------------------|
| 10       | 254.4061 | Pneumatic actuation CK II #2      |
| 40       | 058.4215 | Cover                             |
| 50       | 246.2160 | Socket head screw M5 x 60 DIN 912 |
| 60       | 246.2117 | Socket head screw M5 x 16 DIN 912 |
| 70       | 160.2093 | O-ring ID 9,25 x 1,78 (NBR)       |
|          | 160.6092 | O-ring ID 9,25 x 1,78 (FKM)       |

## ACCESSORIES

|                            |                    |
|----------------------------|--------------------|
| Fixing screws              | Data sheet 1.0-60  |
| Threaded subplates         | Data sheet 2.9-30  |
| Multi-station subplates    | Data sheet 2.9-60  |
| Horizontal mounting blocks | Data sheet 2.9-100 |
| 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 and the cover are zinc-nickel coated
- ◆ The socket head screws are zinc coated

## STANDARDS

|                          |             |
|--------------------------|-------------|
| Mounting interface       | ISO 4401-03 |
| Contamination efficiency | ISO 4406    |

## MANUAL OVERRIDE

HB6 as standard  
 Optionally: HN (K)  
 → see data sheet 1.1-311

## SEALING MATERIAL

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

## INSTALLATION NOTES

|                   |                                                                          |
|-------------------|--------------------------------------------------------------------------|
| Mounting type     | Flange mounting<br>4 fixing holes for<br>socket head screws M5 x 45      |
| Mounting position | Any, preferably horizontal                                               |
| Tightening torque | Fixing screws $M_0 = 5,2 \text{ Nm}$ (screw<br>quality 8.8, zinc coated) |

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

