

Part number:

HYDROMA

HYDRAULICKÉ SYSTÉMY

**HIDROMA
SYSTEMS**

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HYDROMA

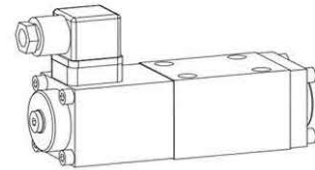
ГИДРАВЛИЧЕСКИЕ СИСТЕМЫ

Poppet valves

Solenoid poppet valve

- 2/2-, 3/2- and 3/4-way construction
- $Q_{max} = 40 \text{ l/min}$
- $p_{max} = 350 \text{ bar}$

NG6
ISO 4401-03



DESCRIPTION

Poppet valve, flanged design NG6, 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 NG6 series is the poppet valve cartridge NG6. See data sheet 1.11-2030. The solenoids correspond to VDE standard 0580.

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

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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.

TYPE CODE

| | | | | | | | | | | |
|--------------------------------------|--------|--------------------------|--------------------------|------|----|--------------------------|---|--------------------------|---|--------------------------|
| 2/2- or 3/2-way construction | A | <input type="checkbox"/> | <input type="checkbox"/> | 2 | 06 | <input type="checkbox"/> | - | <input type="checkbox"/> | # | <input type="checkbox"/> |
| 3/4-way construction | A | <input type="checkbox"/> | 3 | 4 | 06 | <input type="checkbox"/> | - | <input type="checkbox"/> | # | <input type="checkbox"/> |
| International mounting interface ISO | | | | | | | | | | |
| Medium | M | | | | | | | | | |
| Super | S | | | | | | | | | |
| 2-way (connections) | 2 | | | | | | | | | |
| 3-way (connections) | 3 | | | | | | | | | |
| 2 position | | | | | | | | | | |
| 4 position | | | | | | | | | | |
| Nominal size 6 | | | | | | | | | | |
| 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 | NG6 acc. to ISO 4401-03 |
| Construction | Direct operated poppet valve |
| Operations | Solenoid |
| Mounting | Flange, 4 holes for socket cap screws M5 x 45 |
| Connections | Threaded connection plates Multi-flange subplates Longitudinal stacking system |
| Ambient temperature | -20...+50 °C |
| Mounting position | any, preverable horizontal |
| Fastening torque | $M_D = 5,5 \text{ Nm}$ (quality 8.8) |
| Weight 2/2-, 3/2-way | $m = 1,8 \text{ kg}$ |
| 3/4-way | $m = 2,8 \text{ kg}$ |
| Volume flow direction | any (see characteristics) |

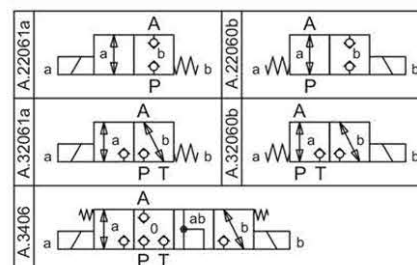
ELECTRICAL CONTROL

| | |
|--------------------------|---|
| Construction | Solenoid, wet pin push type, pressure high |
| Standard-nominal voltage | $U_N = 12 \text{ VDC}, 24 \text{ VDC}$ $U_N = 110 \text{ VAC}^*, 115 \text{ VAC}^*, 230 \text{ VAC}^*$ AC = 50 to 60 Hz * Rectifier integrated in the plug |
| Voltage tolerance | Other nominal voltages and nominal performances on request $\pm 10\%$ of nominal voltage |
| Protection class | IP 65 to EN 60 529 |
| Relative duty factor | 100% DF (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 - Medium SIN45V (1.1-120) - Super SIS45V (1.1-125) |
| Solenoid: | |

HYDRAULIC SPECIFICATIONS

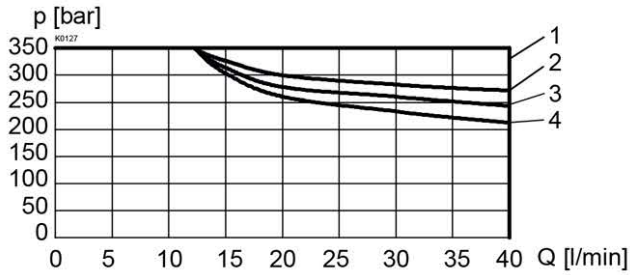
| | |
|--------------------------|---|
| Fluid | Mineral oil, other fluid on request |
| Contamination efficiency | ISO 4406:1999, class 20/18/14 (Required filtration grade $\beta_{10} \dots 16 \geq 75$) refer to data sheet 1.0-50/2 |
| Viscosity range | 12 mm ² /s...320 mm ² /s |
| Fluid temperature | -20...+70 °C |
| Working pressure | Medium: $p_{max} = 160 \text{ bar}$ Super: $p_{max} = 350 \text{ bar}$ |
| Max. volume flow | $Q_{max} = 40 \text{ l/min}$ see characteristics |

SYMBOLS

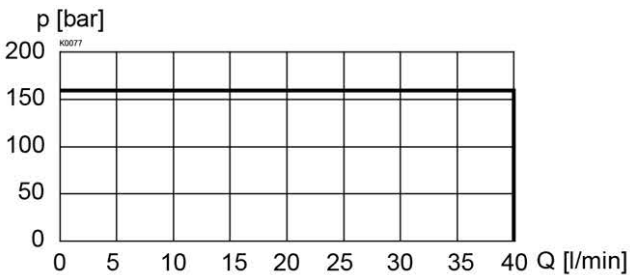


CHARACTERISTICS Oilviscosity $\nu = 30 \text{ mm}^2/\text{s}$

$p = f(Q)$ Performance limit by standard voltage at -10 % Super

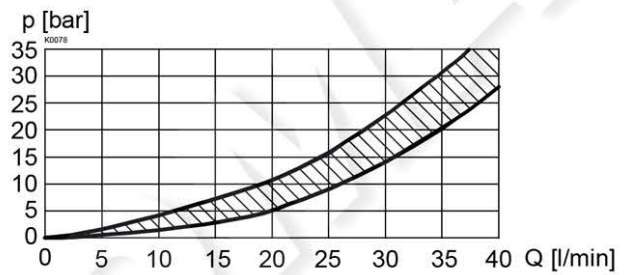


$p = f(Q)$ Performance limit by standard voltage at -10 % Medium



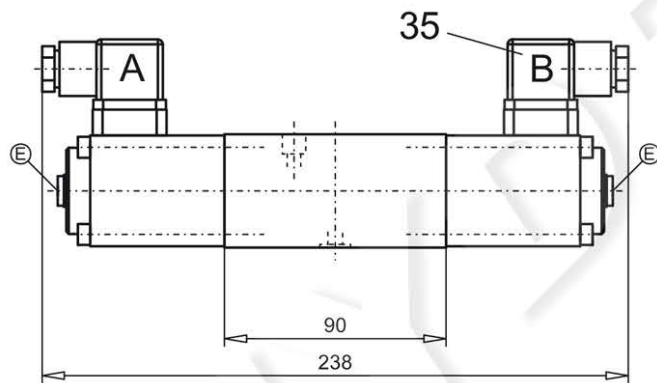
| Type | Flow direction | | | |
|----------|----------------|-------|-------|-------|
| | P - A | A - T | A - P | T - A |
| AS22061a | 1 | - | 2 | - |
| AS22060b | 1 | - | 4 | - |
| AS32061a | 1 | 2 | 3 | 1 |
| AS32060b | 1 | 2 | 3 | 1 |
| AS3406 | 1 | 1 | 2 | 2 |

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

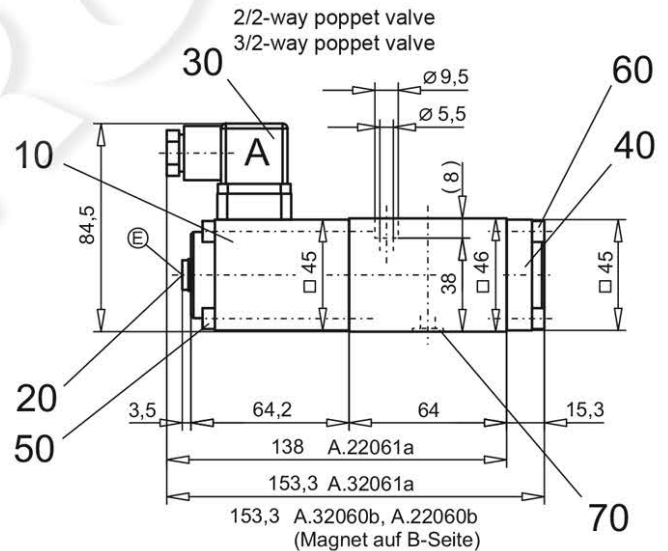


DIMENSIONS

3/4-way poppet valve

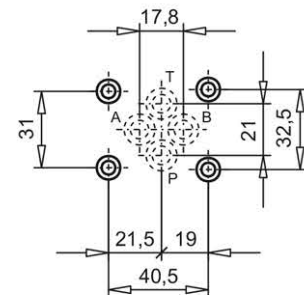


E = air bleed screw



PARTS LIST

| Position | Article | Description |
|----------|----------------------|---|
| 10 | 260.6... 260.7... | Medium-solenoid SIN45V Super-solenoid SIS45V |
| 20 | 239.2033 | Plug (incl. seal) HB0 |
| 30 | 219.2001 | Plug A (grey) |
| 35 | 219.2002 | Plug B (black) |
| 40 | 058.4215 | Cover |
| 50 | 246.2160 | Socket head cap screw M5x60 DIN 912 |
| 60 | 246.2117 | Socket head cap screw M5x16 DIN 912 |
| 70 | 160.2093 | O-ring ID 9,25x1,78 |



ACCESSORIES

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

Technical explanation see data sheet 1.0-100