

Pilot operated check valves

Type ERV700

up to 700 bar

NG 6 up to 25 l/min

Features

- Poppet tight
- Ball-seat construction
- Load supported closing
- Porting NG 6 according to DIN 24340
- Compact design
- Outer parts of cartridge are corrosion protected

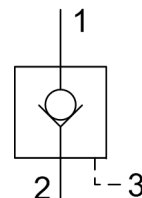


Applications

The cartridge design allows a compact integration on cylinders and motors. This assembly offers an enhancement of the tractive strength and also an increase in system stiffness.

Design

- Leakage free block of lead pressure
- As Cartridge or as Intermediate plate available



Technical data

| | | |
|--|---|-----------------|
| Hydraulic fluid | mineral oil according to DIN 51524 (other fluids on request) | |
| Fluid temperature range | - 20 to 80 °C | |
| Ambient temperature range | - 30 to 50 °C | |
| Viscosity range | 5 to 400 mm ² /s | |
| Porting (Cartridge see page 3) | NG 6 according to DIN 24340 / ISO 4401 / CETOP RP 121 H | |
| Max. operating pressure connection P, A, B (1,2,3) | 700 bar | |
| Max. pressure admissible connection T | 350 bar | |
| Pressure ratio | modular subplate (parts in body) $p_e/p = 1:5,4$ cartridge 1:7,2 | |
| Max. flow rate | 25 l/min | |
| Back pressure at 25 l/min | modular subplate (parts in body) 5 bar cartridge 30 bar | |
| Cracking pressure check valve | modular subplate (parts in body) ca. 1 bar cartridge ca. 6 bar | |
| Filtration (recommendation) | according to NAS 1638, class 6 or ISO/DIN 4406 17/15/12 | |
| Weight | see overlook "product information" | |
| Material | valve body | stainless steel |
| | outer parts cartridge | stainless steel |

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Ordering code

The diagram illustrates the structure of a product code, breaking it down into its constituent parts. The code is shown as a sequence of boxes: **ERV**, **700**, **-**, **6**, **-**, **A**, **-**, **V**, **-**, **00**. Each part is linked to a descriptive box:

- Example**: Links to the entire code sequence.
- Pilot operated check valve**: Links to the **ERV** box.
- Type**: Links to the **700** box.
- Size**: Links to the **6** box.
- Check valve**: Links to the **A** box.
- Seal material**: Links to the **V** box.
- Design**: Links to the **00** box.
- Index**: Links to the **00** box.
- Design revision**: Links to the **00** box.

Additional information for the **Check valve** and **Design** sections:

- Check valve**: E Cartridge; Modular subplate form: A block of port A, B block of port B, AB block of port A or B.
- Design**: 00 ... 99 for internal purposes.
- Index**: Please leave blank for internal purposes.
- Design revision**: Please leave blank for internal purposes.

Accessories

For each intermediate plate valve the following is included:
4 pieces O-rings 9,25 x 1,78 mm 90°ShA article no. 4003217

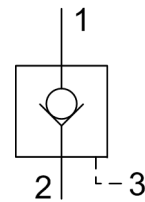
Tie bolts/fixation screws and subplates are optional, see technical data sheet AP700/RP700/EP700

Product information

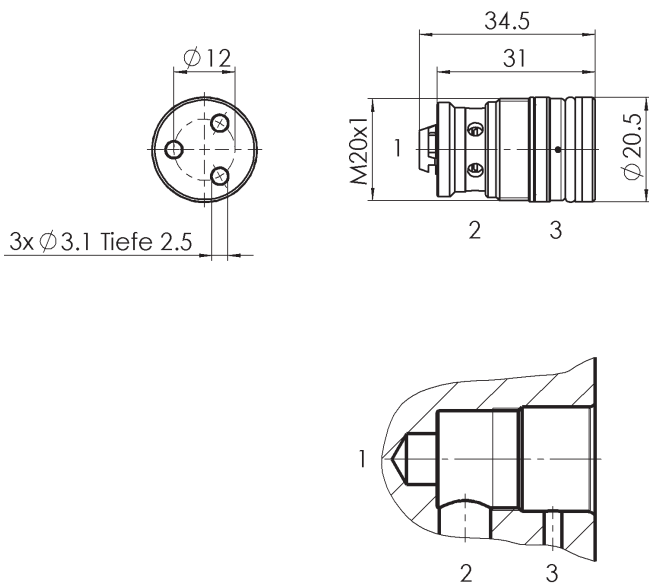
Screw-in cartridge

| Type | Weight [kg] | Part number |
|-------------------|-------------|-------------|
| ERV700-6-E-V-A*00 | 0.055 | 3683103 |

Symbol

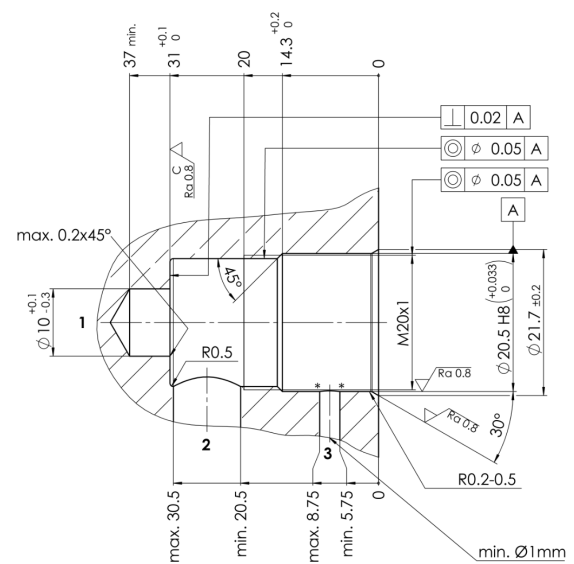


Dimensional drawing



Tightening torque: $M = 40 \text{ Nm}$

cavity dimension

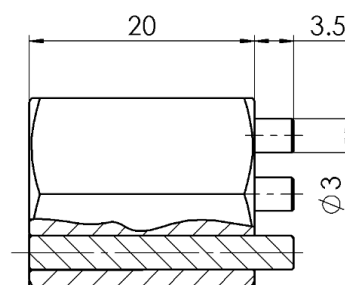
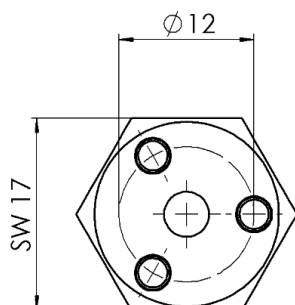


Steel yield strength $R_{p0.2} \geq 450 \text{ N/mm}^2$
elongation at fracture $A_s \geq 10\%$

* Flat chamfer or rounding max. 0.5 wide

Assembly tool

| Name | Weight [g] | Part number |
|------------|------------|-------------|
| Pin wrench | 0.33 | 3690831 |

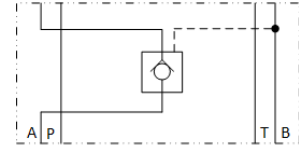
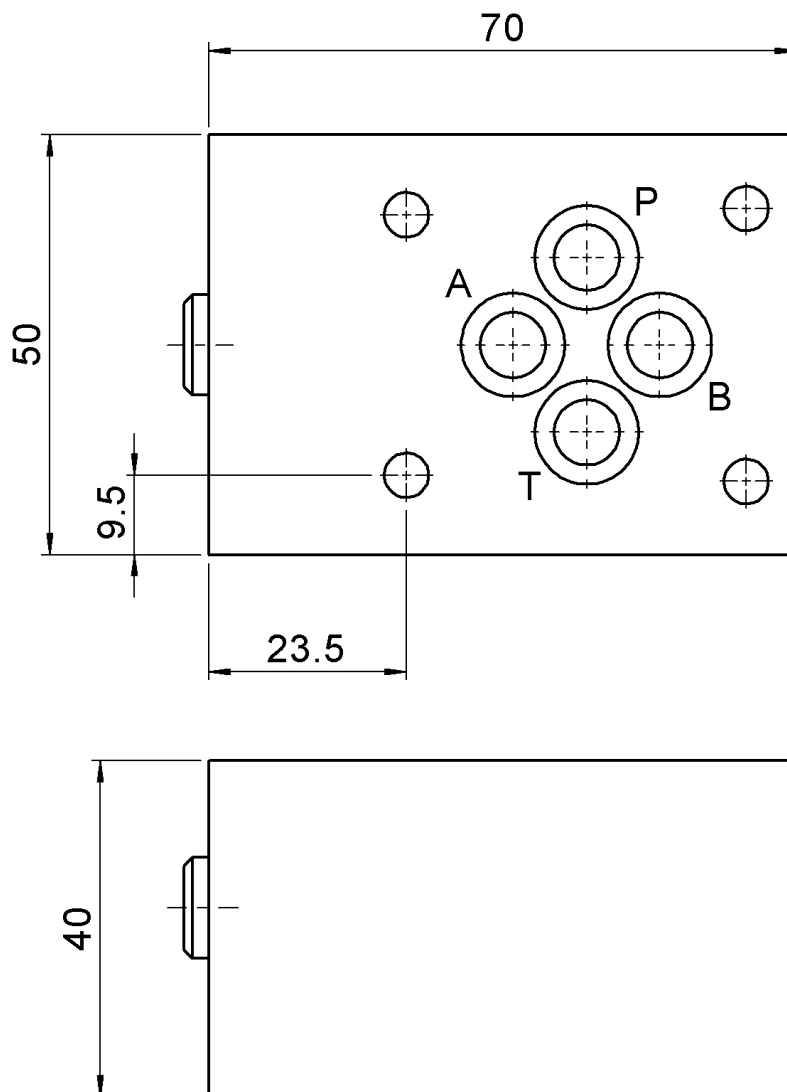


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Modular subplates**Check valve in A**

| Type | Weight [kg] | Part number |
|-------------------|-------------|-------------|
| ERV700-6-A-V-A*00 | 1.0 | 3683082 |

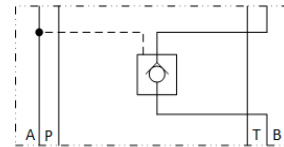
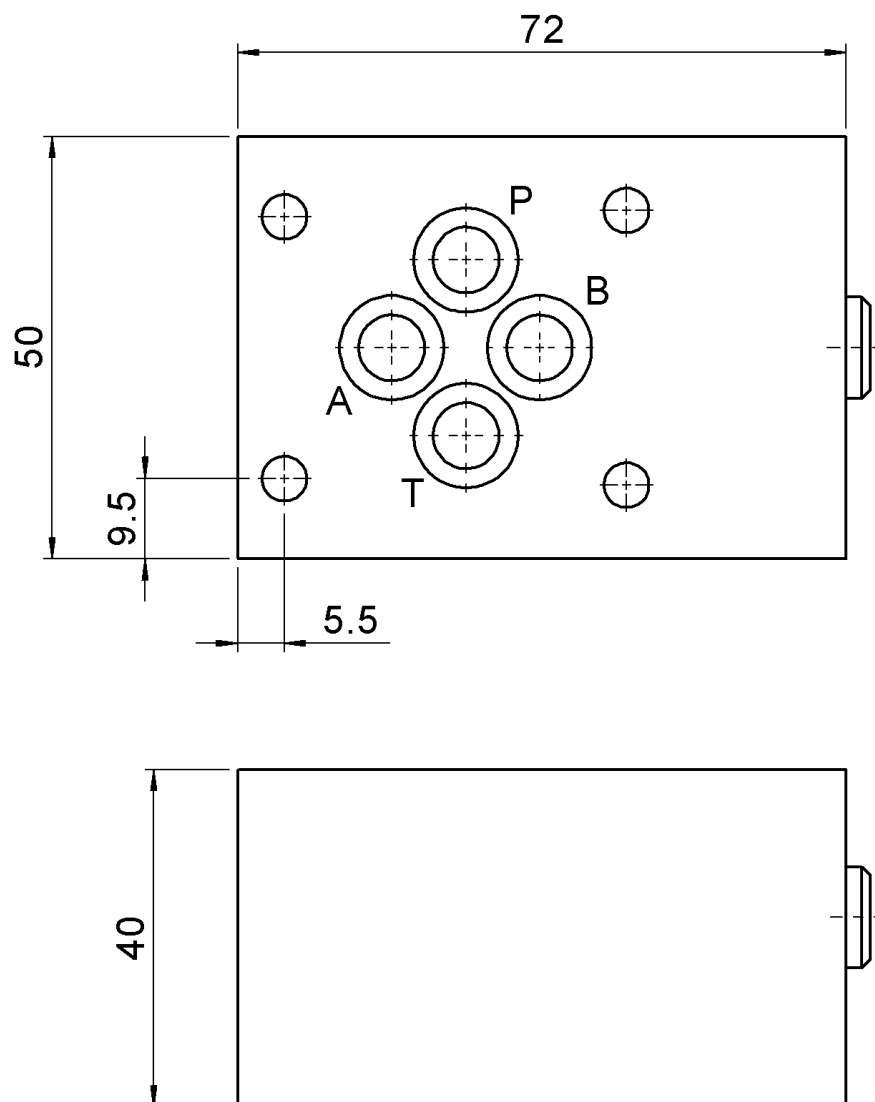
Symbol**Dimensional drawing**

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Check valve in B

| Type | Weight [kg] | Part number |
|-------------------|-------------|-------------|
| ERV700-6-B-V-A*00 | 1.0 | on request |

Symbol**Dimensional drawing**

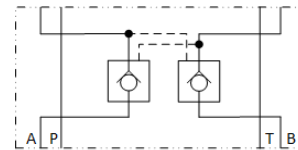
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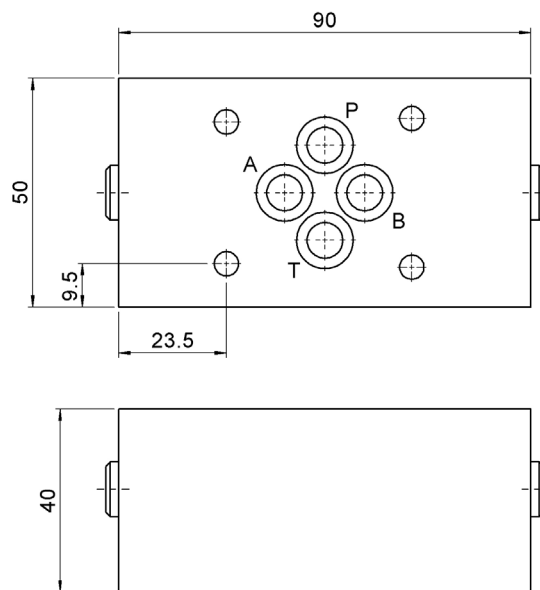
Check valve in A and B

| Type | Weight [kg] | Part number |
|--------------------|-------------|-------------|
| ERV700-6-AB-V-A*00 | 1.3 | 3683080 |

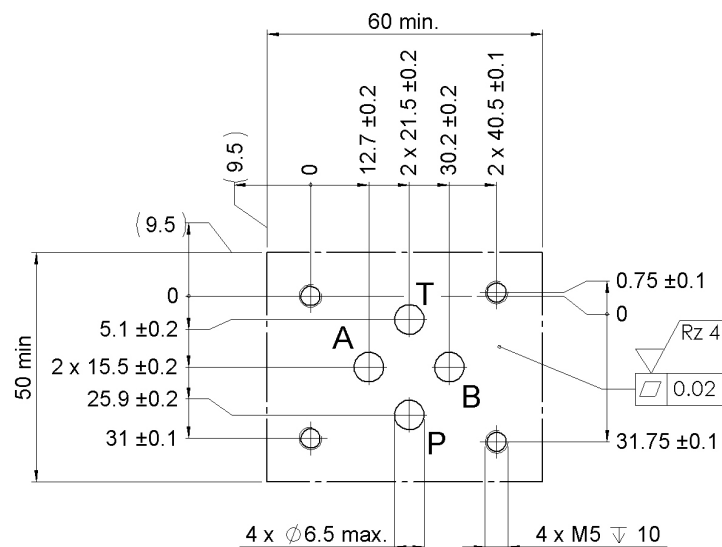
Symbol



Dimensional drawing



Drilling pattern



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The information in this brochure relates to the operating conditions and applications described.

For applications and operating conditions not described, please contact the relevant technical department.

Subject to technical modifications.