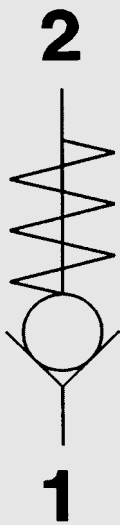


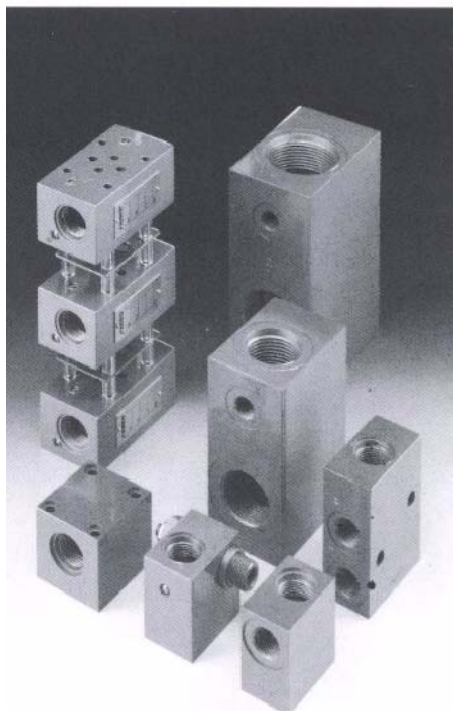
Check Valves RV5E



up to 350 bar
up to 30 l/min



Cartridge valve



Connection housing

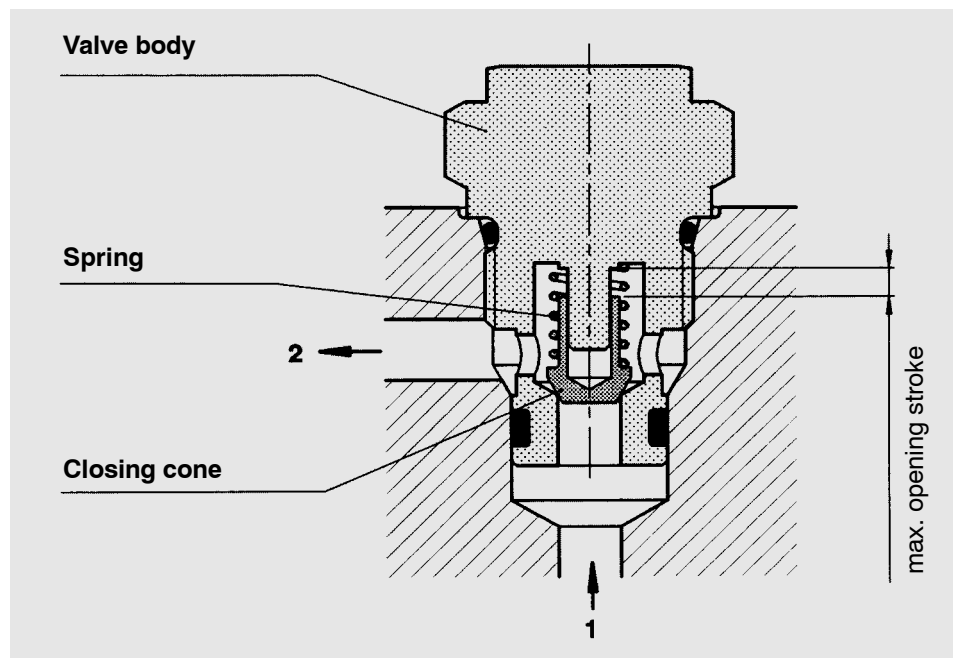
1. DESCRIPTION

1.1. GENERAL

HYDAC RV5E valves belong to the group of check valves. In accordance with DIN ISO 1219 these are valves for oil hydraulic systems which allow flow in only one direction while the other is shut off.

Important advantages are:

- Standardised installation dimensions mean that they are flexible and suited to many different applications.
- Their compact design provides space-saving installation in connection housings, control blocks, etc. especially where the installation space is confined.
- Simple assembly due to service-friendly cartridge valve technology.
- A wide range of connection housings is available for optimum mounting for a multitude of applications.



1.2. FUNCTION

HYDAC RV5E check valves are spring-loaded cone seat valves for oil hydraulic systems.

The valve consists basically of a valve body with a built-in valve seat, a hardened, polished closing cone and the spring.

When there is no flow through the valve the spring keeps the closing cone in the closed position. The valve opens when the pressure across port 1 is higher than the pressure across port 2, including the cracking pressure created by the spring force. In the check direction the closing cone is pressed against the seat and shuts off port 2 from port 1.

1.3. APPLICATIONS

HYDAC RV5E check valves are used:

- where the flow must be prevented from flowing back and a leakage-free shut-off is required,
- as suction and pressure valves,
- as bypass valves, e.g. to protect filter elements from damage,
- in HYDAC shut-off blocks,
- as a bridge rectifier circuit when used with HYDAC flow control valves or pressure relief valves.

Preferred areas of application are:

- mobile hydraulics
- clamping hydraulics
- loading ramps
- conveyor belts
- system engineering
- handling devices

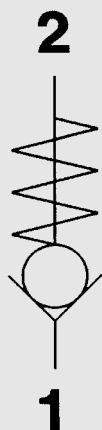
1.4. NOTE

- when fitting the valves into control blocks and housings the recommended torque must be observed (see point 3)!
- the cracking pressure of the valve increases by the amount of pressure across port 2!

2. TECHNICAL SPECIFICATIONS

2.1. GENERAL

2.1.1. Designation and symbol Check valve



2.1.2. Model code (also order example)

RV5E - 01 X - 0.5

Check valve

Model

01 = technical specifications as per this brochure

Series

(determined by manufacturer)

Cracking pressure

0.5 = 0.5 bar (others on request)

Standard models

Part no. (= order no.)	Model code
710 166	RV5E-01X-0.5

Please quote part number when ordering.

Delivery for non-standard models is longer and the price is higher.

2.1.3. Type of construction

Cone seat valve

2.1.4. Type of mounting

Cartridge valve

2.1.5. Mounting position

Optional

2.1.6. Weight

RV5E ... 0.08 kg

2.1.7. Direction of flow

from 1 to 2 free flow
from 2 to 1 shut off

2.1.8. Ambient temperature range

min. -20 °C
max. +80 °C

2.1.9. Materials

Valve body: free-cutting steel
Closing cone: hardened and polished steel
Seals: compatible with hydraulic oil to DIN 51524 Part 1 and 2 (FPM and PTFE)

2.1.10. Type of connection

Suitable connection housings with installation dimensions 06020 are available in various models. See separate housing brochure no. E 5.252../..

2.2. HYDRAULIC DETAILS

2.2.1. Nominal pressure

$p_N = 350$ bar
across all ports

2.2.2. Operating fluid

Mineral oil to DIN 51524 Part 1 and Part 2

2.2.3. Pressure fluid temperature range

min. -20 °C
max. +80 °C

2.2.4. Viscosity range

min. 2.8 mm²/s
max. 800 mm²/s

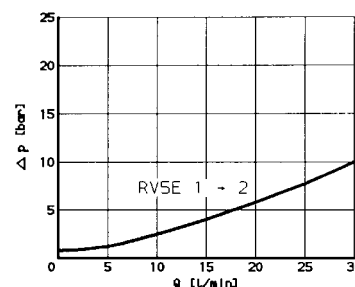
2.2.5. Filtration

Max. permissible contamination level of the operating fluid to ISO 4406, class 21/19/16 (NAS 1638, class 10).
We therefore recommend a filter with a minimum retention rate of $\beta_{20} \geq 100$.

The fitting of filters and regular replacement of elements guarantees correct functioning, reduces wear and tear and increases the service life.

2.2.6. Pressure drops, dependent on flow rate

measured at $v = 36$ mm²/s
and at $t_{oil} = 50$ °C

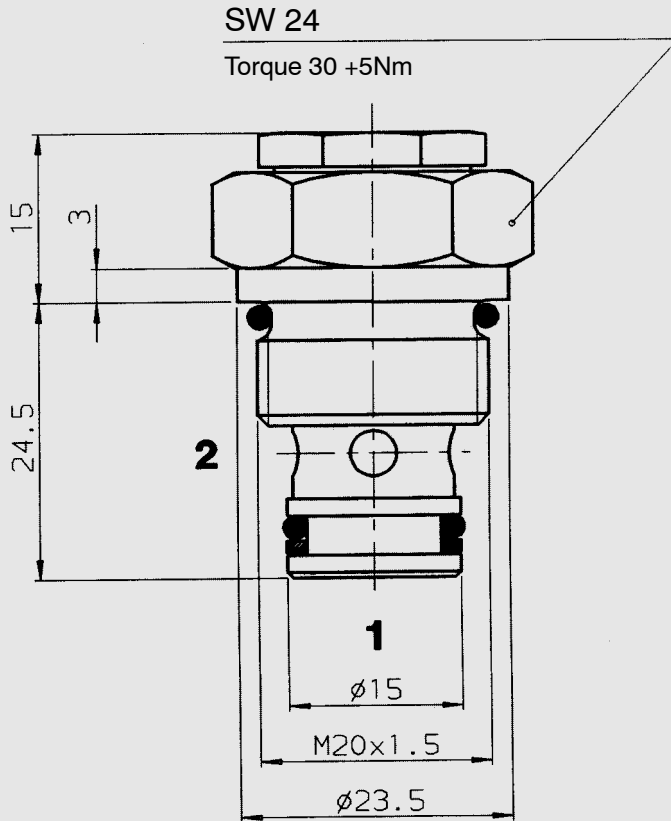


2.2.7. Cracking pressure

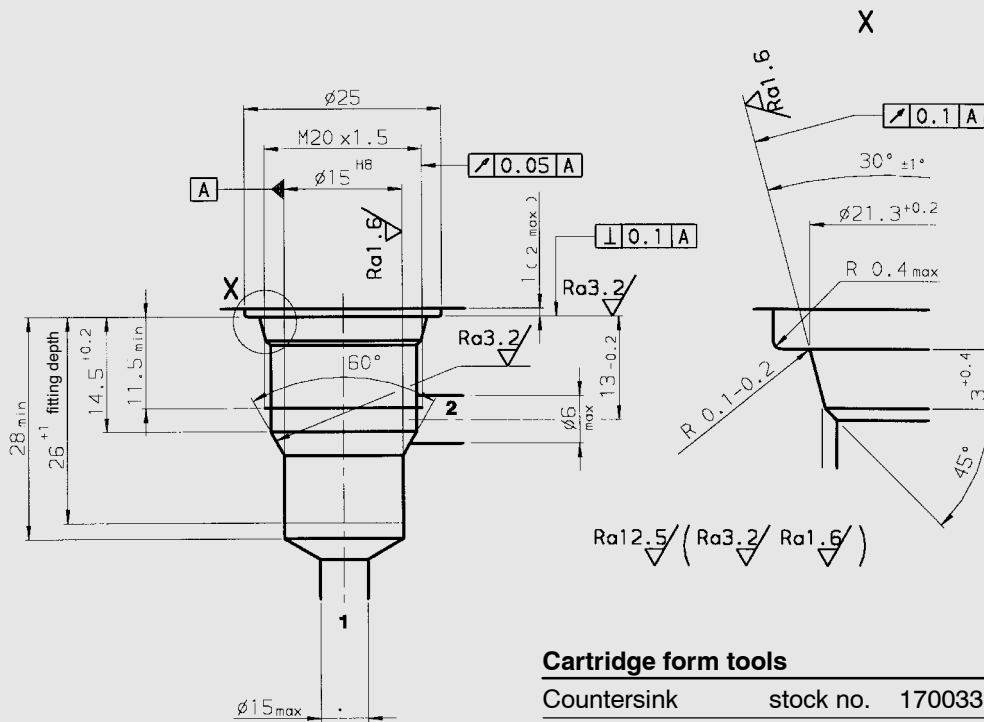
$p_o = 0.5$ bar
(others on request)

3. DIMENSIONS

RV5E



Installation dimensions 06020



Cartridge form tools

Countersink	stock no.	170033
Reamer	stock no.	1000768
Tap	stock no.	1002648
Plug gauge	stock no.	168840

4. NOTE

The information in this brochure relates to the operating conditions and applications described. For applications or operating conditions not described, please contact the relevant technical department. Subject to technical modifications.