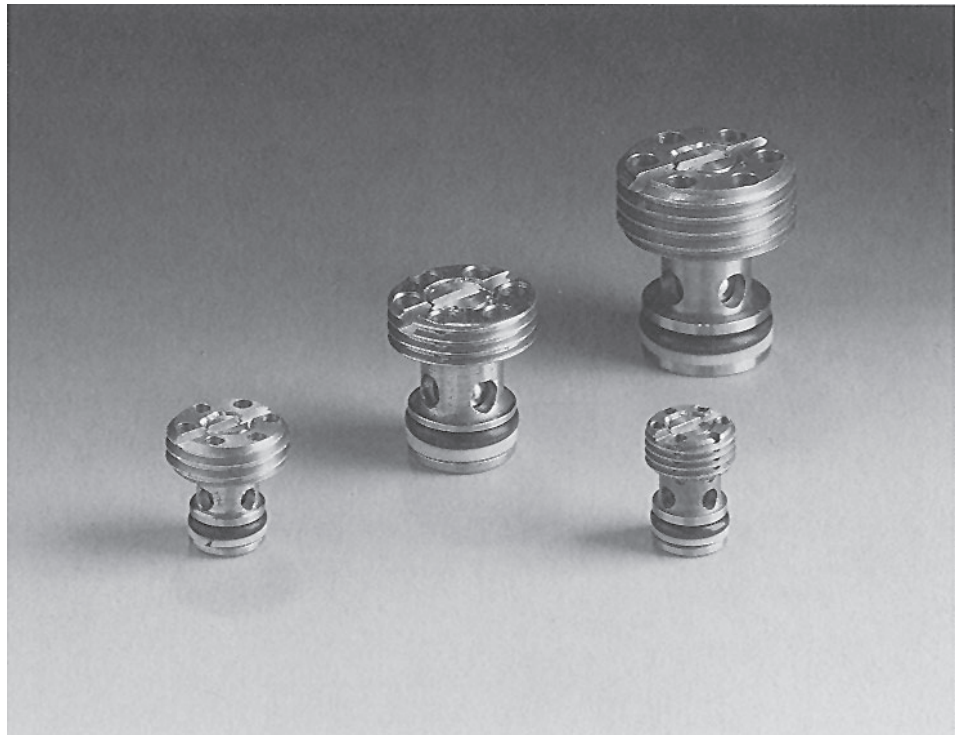


Check Valves RVE



up to 350 bar
up to 60 l/min



1. DESCRIPTION

1.1. GENERAL

HYDAC check valves, type RVE, belong to the group of check valves.

In accordance with DIN ISO 1219, these are valves which allow flow in only one direction while the other is shut off.

Important advantages are:

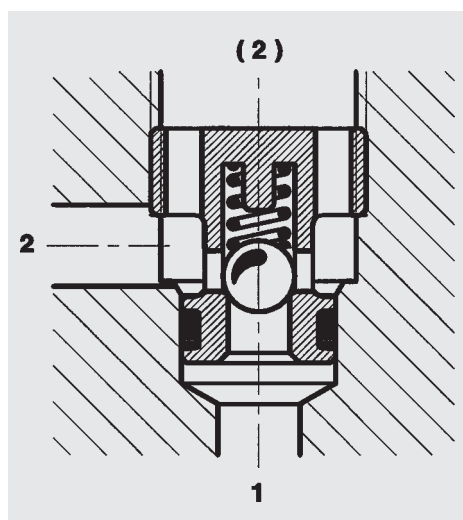
- axial and radial flow possible
- compact construction allows space-saving installation in control blocks
- simple fitting by means of commercially available screwdrivers
- mounting position optional
- long service life
- available in four sizes

1.2. FUNCTION

HYDAC check valves, type RVE, are spring-loaded ball seat valves for oil-hydraulic systems.

The valve essentially consists of a valve body with built-in valve seat, a ball and the spring.

When there is no flow through the valve the spring keeps the ball 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 ball is pressed against the seat and shuts off port 2 from port 1.



1.3. APPLICATION

HYDAC RVE check valves are particularly suitable for block constructions, where they have the advantage of both radial and axial flow direction.

1.4. NOTE

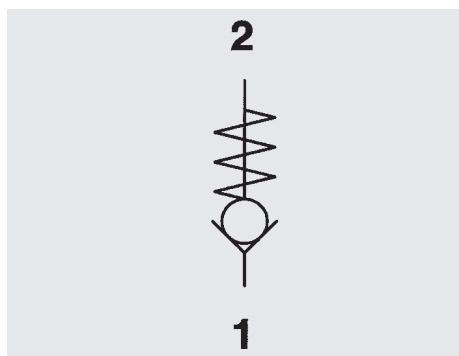
The cracking pressure of the valve increases by the amount of pressure across port 2!

2. TECHNICAL SPECIFICATIONS

2.1. GENERAL

2.1.1 Designation and symbol

Check valve



2.1.2 Model code

(also order example)

RVE - R 1/8 - X - 0.5

Check valve

Connection size

R 1/8

R 1/4

R 3/8

R 1/2

Series

(determined by manufacturer)

Cracking pressure

0.5 = 0.5 bar

(others on request)

Standard models

Stock no. (= order no.)	Model code
710 150	RVE-R1/8-X-0.5
710 151	RVE-R1/4-X-0.5
710 152	RVE-R3/8-X-0.5
710 153	RVE-R1/2-X-0.5

Please quote stock number when ordering. Delivery for non-standard models is longer and the price is higher.

2.1.3 Type of construction

Ball seat valve

2.1.4 Type of mounting

Cartridge valve

2.1.5 Mounting position

Optional

2.1.6 Weights

RVE - R 1/8 3 g

RVE - R 1/4 5 g

RVE - R 3/8 10 g

RVE - R 1/2 24 g

2.1.7 Ambient temperature range

min. -20 °C

max. +80 °C

2.1.8 Flow direction

From 1 to 2 (2) free flow

From 2 (2) to 1 shut off

2.1.9 Materials

Valve body: high tensile steel

Ball: roller bearing steel

Seals: compatible with hydraulic

oil to DIN 51524 Part 1 and 2

(FPM)

2.2. HYDRAULIC DETAILS

2.2.1 Nominal pressure

$p_N = 350$ bar

across all ports

2.2.2 Cracking pressure

$p_O = 0.5$ bar

(others on request)

2.2.3 Operating fluid

Mineral oil to DIN 51524

Part 1 and 2.

2.2.4 Fluid temperature range

min. -20 °C

max. +80 °C

2.2.5 Viscosity range

min. 2.8 mm²/s

max. 800 mm²/s

2.2.6 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.

2.2.7 Flow rate

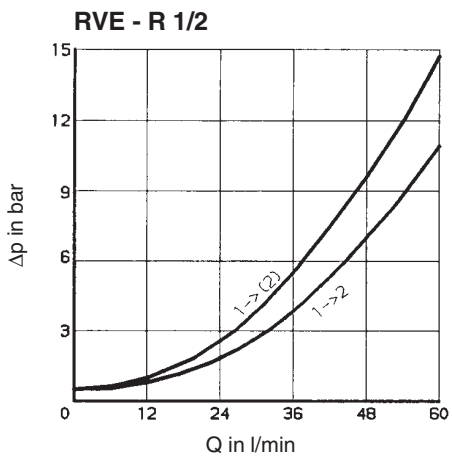
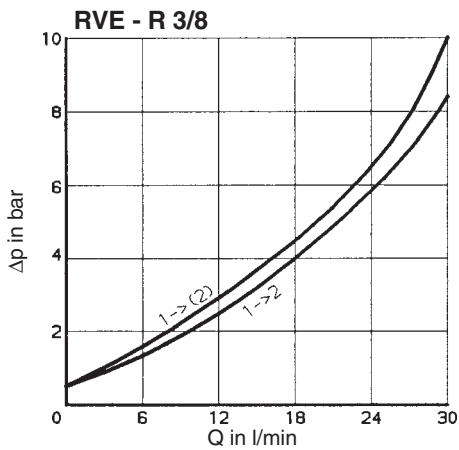
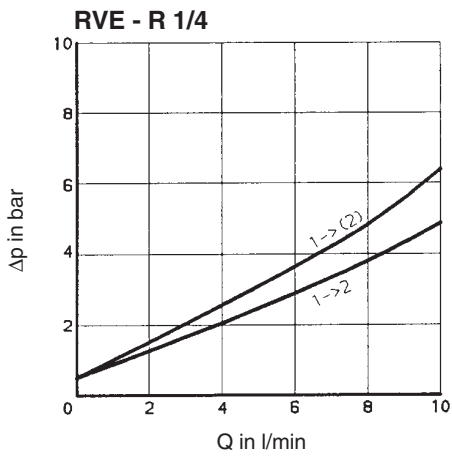
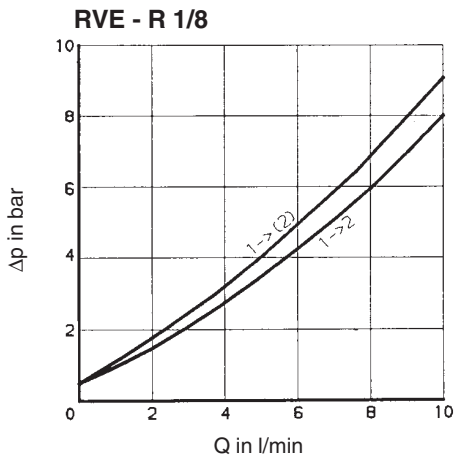
RVE - R 1/8 - X...Q = 10 l/min

RVE - R 1/4 - X...Q = 10 l/min

RVE - R 3/8 - X...Q = 30 l/min

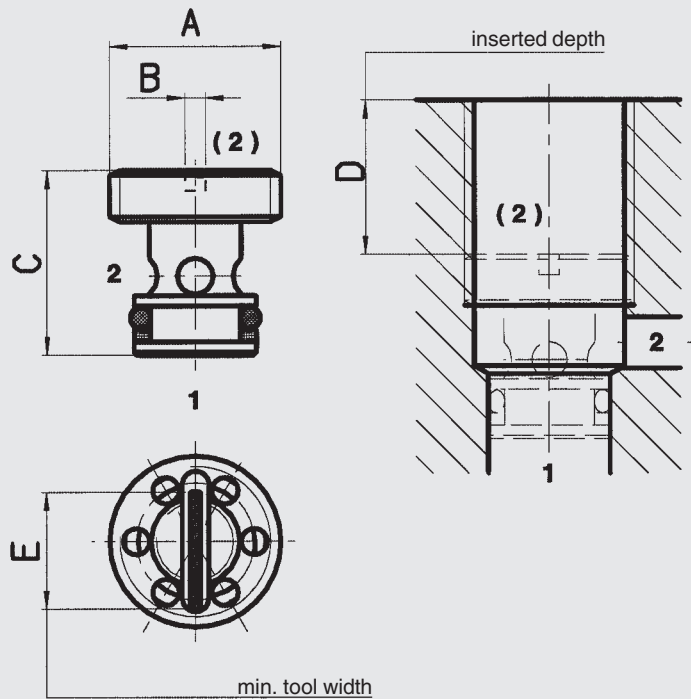
RVE - R 1/2 - X...Q = 60 l/min

2.2.8 Pressure drops, dependent on flow rate
 Measured at $v = 34 \text{ mm}^2/\text{s}$
 and $t_{\text{oil}} = 46 \text{ }^\circ\text{C}$



3. DIMENSIONS

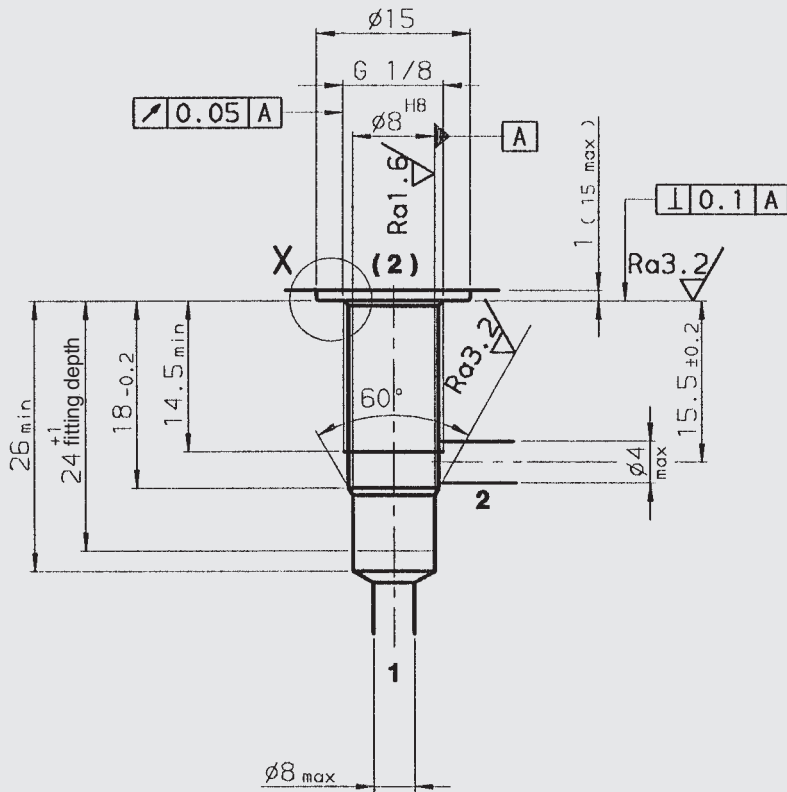
RVE



Designation	A	B	C	D	E
RVE - R 1/8 - X	G 1/8	1.5	13	10	7
RVE - R 1/4 - X	G 1/4	1.5	13	14.5	8.5
RVE - R 3/8 - X	G 3/8	2	18	15	13.5
RVE - R 1/2 - X	G 1/2	2	23	17	12

INSTALLATION DIMENSIONS

04020 (RVE - R 1/8)



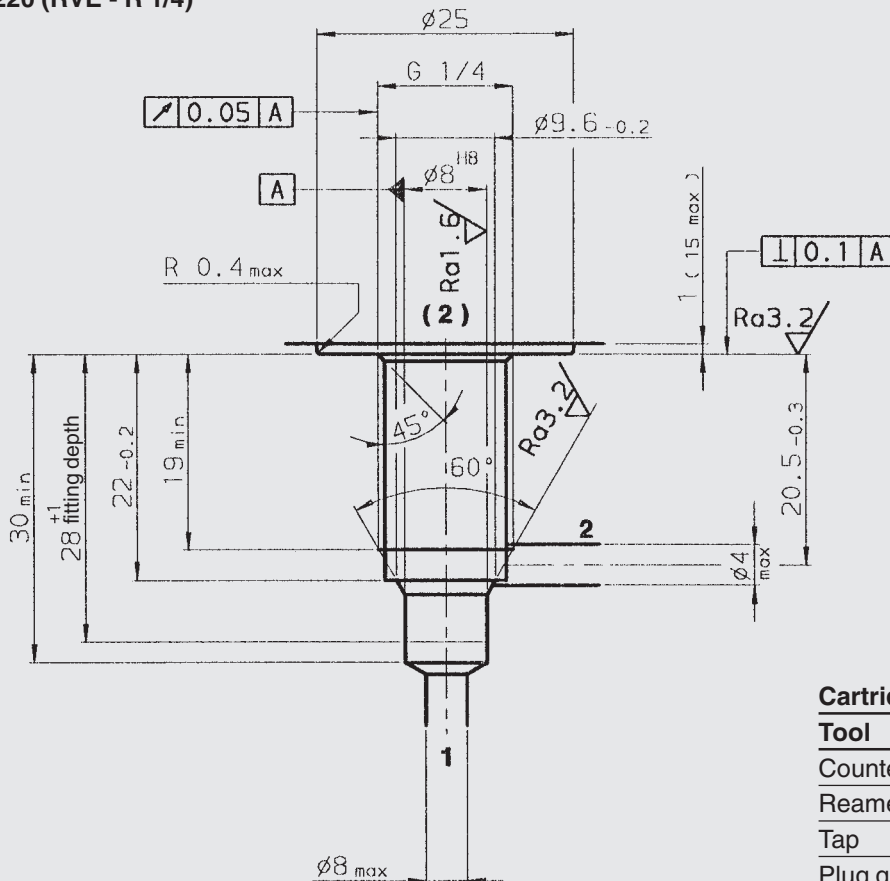
Ra12.5 / (Ra3.2 / Ra1.6)

Cartridge form tools

Tool	Stock no.
Countersink MK1	169549
Reamer MK1	1000747
Tap	1002671
Plug gauge	174850

INSTALLATION DIMENSIONS

04220 (RVE - R 1/4)



Ra12.5 / (Ra3.2 / Ra1.6)

Cartridge form tools

Tool	Stock no.
Countersink MK1	169563
Reamer MK1	1000747
Tap	1002670
Plug gauge	172742

