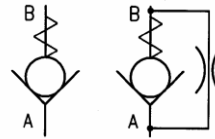


- Check valves size 04 ... size 25
- Plate-type, Screw-in design
- up to 140 l/min, 350 bar (500 bar on request)



## Description

Series RVE units are screw-in check valves with mounting threads from G 1/8" to G 1". Other thread forms are available on request.

Identical cavities allow the replacement with valves of the series RKVE and RKVG.

The valves prevent flow in screw-in direction B → A (see symbol). In the opposite direction, there is a range of opening pressures from 0,1 to 2 bar.

The units are spring-closed plate valves with hardened body, seat and valve plate. The sealing faces are diamond-lapped.

An external O-ring or metallic sealing edge seals the leakage path between the valve and cavity wall.

For applications with limited space, valves in a shortened version are available.

A "metered check" function can be easily created by providing an orifice in the centre of the valve plate.

The valves can be used for pressure relief in the opening direction, but only to a limited extent (consult Aroflex for such applications).

Advantages:

- virtually leak-free
- high pressure rating
- compact construction
- various opening pressures
- particularly suitable for use as suction valve
- Option: metered flow in the no-flow direction through an orifice

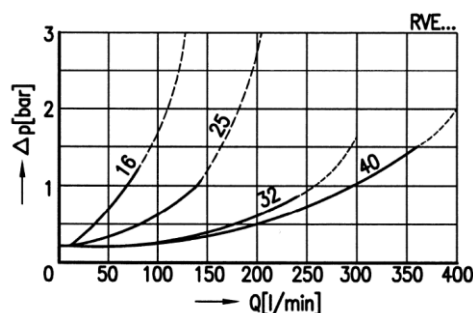
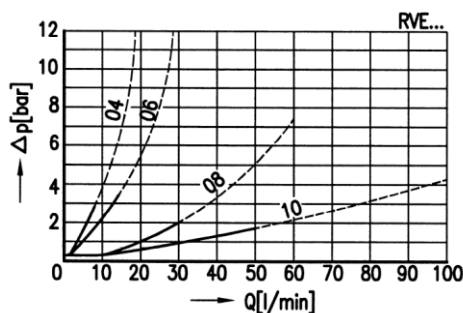
## Technical Data

General Specifications	RVE
Design:	guided plate design
Mounting method:	screw-in cartridge
Size:	nominal 04 ... 25 (see table Dimensions)
Mounting position:	unrestricted

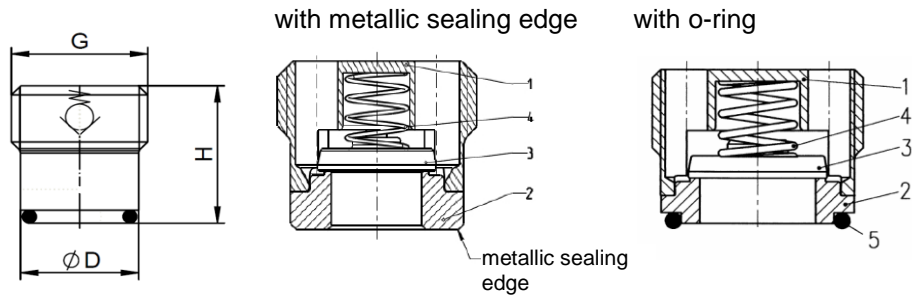
Hydraulic Specifications	
No-flow direction:	B → A (see symbol)
Max. pressure:	350 bar (500 bar on request)
Opening pressure range:	0,1 ... 2 bar for all sizes
Max. flow:	140 l/min
Fluid:	hydraulic oils HL and HLP according DIN 51524
Temperature range:	-30°C ... + 80°C
Viscosity range:	10 ... 500 mm <sup>2</sup> /s (cSt)
Min. fluid cleanliness	18/14 to ISO 4406 / CETOP RP70H 8 ... 9 to NAS 1638

## Characteristics

oil viscosity 33 mm<sup>2</sup>/s (cSt)



**Dimensions**

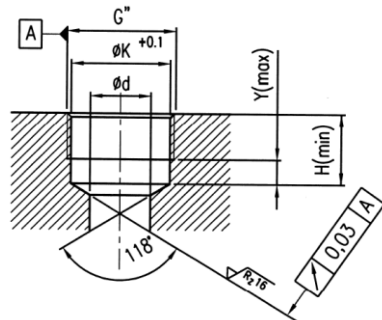


Item	Qty.	Description
1	1	Valve body
2	1	Valve seat
3	1	Valve plate
4	1	Spring
5	1	O-ring

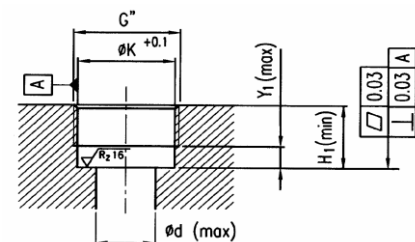
	$Q_{Nom} = Q_{max}$ (l/min)	G	ØD	H stand- ard	H short	o-ring (1 pce)	Tightening torque o-ring (Nm)	Tightening torque metallic sealing edge (Nm)	Pin spanner Type
RVE-04-...	8	G1/8"	8,5	10,0	6,5	6,2 x 1,0	3	8	M-04
RVE-06-...	15	G1/4"	11,5	11,3	8,0	8,5 x 1,5	7	20	M-06
RVE-08-...	30	G3/8"	14,9	13,3	9,5	12,0 x 1,5	15	25	M-08
RVE-10-...	50	G1/2"	18,7	15,9	12,0	16,0 x 1,5	30	40	M-10
RVE-16-...	80	G3/4"	24,2	18,9	15,0	20,0 x 2,0	60	60	M-16 / MKS-16
RVE-25-...	140	G1"	30,2	23,0	18,7	25,0 x 2,5	120		M-25 / MKS-25

**Cavity**

for metallic  
sealing edge



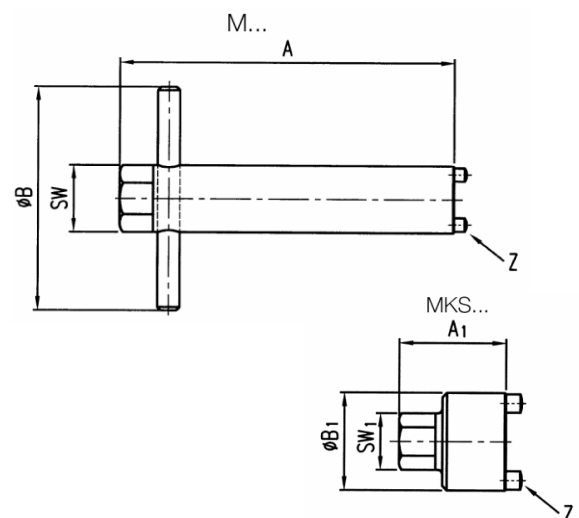
for o-ring



	standard version				short version						
	G	ØK	Ød	H	Y	H1	Y1	H	Y	H1	Y1
RVE-04-...	G1/8"	8,70	4,0	10,0	2,5	10,0	4,0	6,0	1,5	6,5	1,5
RVE-06-...	G1/4"	11,75	6,0	11,5	3,2	11,0	5,0	7,0	2,0	8,0	2,0
RVE-08-...	G3/8"	15,25	8,0	13,5	3,7	13,0	5,0	8,7	2,0	9,5	3,0
RVE-10-...	G1/2"	19,00	11,0	16,0	4,3	15,5	6,0	11,2	3,5	13,5	6,0
RVE-16-...	G3/4"	24,50	15,0	19,0	5,0	18,5	7,0	13,8	3,5	15,0	6,5
RVE-25-...	G1"	30,50	20,0	-	-	23,0	9,0	-	-	18,7	6,7

**Pin spanner**

	A	A <sub>1</sub>	ØB	ØB <sub>1</sub>	SW	SW <sub>1</sub>	Z
M-04	90	-	50	-	7	-	3
M-06	105	-	60	-	10	-	3
M-08	120	-	70	-	13	-	4
M-10	135	-	90	-	17	-	4
M-16/MKS-16	150	35	90	24	22	14	4
M-25/MKS-25	150	37	90	30	27	19	3



**On request:**

- Pin spanner without lever

**Type code**

<b>RVE</b>	-...	...	-...	-...	-...																																
<table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 50%;"><b>Sealing</b></td> <td></td> </tr> <tr> <td><b>omit</b></td> <td>= NBR o-ring</td> </tr> <tr> <td><b>V</b></td> <td>= FKM o-ring (Viton)</td> </tr> <tr> <td><b>DK</b></td> <td>= metallic sealing edge</td> </tr> <tr> <td colspan="2"><b>Orifice diameter</b></td> </tr> <tr> <td><b>omit</b></td> <td>= no orifice</td> </tr> <tr> <td><b>Dxx</b></td> <td>= orifice diameter in 1/10mm (min ø0,3mm) e.g. D04 for ø0,4mm</td> </tr> <tr> <td colspan="2"><b>Opening pressure</b></td> </tr> <tr> <td><b>omit</b></td> <td>= standard 0,2 ... 0,3 bar</td> </tr> <tr> <td><b>0,1 = 0,1 bar</b></td> <td><b>0,5 = 0,5 bar</b>    <b>1 = 1 bar</b>    <b>2 = 2 bar</b></td> </tr> <tr> <td colspan="2"><b>Overall length</b></td> </tr> <tr> <td><b>omit</b></td> <td>= standard version</td> </tr> <tr> <td><b>K</b></td> <td>= short version</td> </tr> <tr> <td colspan="2"><b>Nominal size</b></td> </tr> <tr> <td colspan="2"><b>04 06 08 10 16 25</b></td> </tr> <tr> <td colspan="2"><b>Check valve, plate type, screw-in design</b></td> </tr> </table>						<b>Sealing</b>		<b>omit</b>	= NBR o-ring	<b>V</b>	= FKM o-ring (Viton)	<b>DK</b>	= metallic sealing edge	<b>Orifice diameter</b>		<b>omit</b>	= no orifice	<b>Dxx</b>	= orifice diameter in 1/10mm (min ø0,3mm) e.g. D04 for ø0,4mm	<b>Opening pressure</b>		<b>omit</b>	= standard 0,2 ... 0,3 bar	<b>0,1 = 0,1 bar</b>	<b>0,5 = 0,5 bar</b> <b>1 = 1 bar</b> <b>2 = 2 bar</b>	<b>Overall length</b>		<b>omit</b>	= standard version	<b>K</b>	= short version	<b>Nominal size</b>		<b>04 06 08 10 16 25</b>		<b>Check valve, plate type, screw-in design</b>	
<b>Sealing</b>																																					
<b>omit</b>	= NBR o-ring																																				
<b>V</b>	= FKM o-ring (Viton)																																				
<b>DK</b>	= metallic sealing edge																																				
<b>Orifice diameter</b>																																					
<b>omit</b>	= no orifice																																				
<b>Dxx</b>	= orifice diameter in 1/10mm (min ø0,3mm) e.g. D04 for ø0,4mm																																				
<b>Opening pressure</b>																																					
<b>omit</b>	= standard 0,2 ... 0,3 bar																																				
<b>0,1 = 0,1 bar</b>	<b>0,5 = 0,5 bar</b> <b>1 = 1 bar</b> <b>2 = 2 bar</b>																																				
<b>Overall length</b>																																					
<b>omit</b>	= standard version																																				
<b>K</b>	= short version																																				
<b>Nominal size</b>																																					
<b>04 06 08 10 16 25</b>																																					
<b>Check valve, plate type, screw-in design</b>																																					

**Options on request:**

- with metric or UNF thread
- other opening pressures
- orifice for metered flow
- special materials
- customised design

**Ordering example**

- Check valve, plate type, screw-in design
- Nominal size 06, G 1/4"
- Short version
- Opening pressure 1 bar

**Type code**

**RVE-06K-1**

**Design and installation notes**

The installation dimensions and tolerances must be maintained.

Use the specified tightening torque when fitting the valve. Special fitting tools (pin spanners) are available.

Referring to the free-flow direction, nozzles and orifices must not be situated directly before the check valve.

**Application notes**

The maximum operating pressure must not be exceeded and any pressure peaks must be taken into consideration.

The specified nominal flow rate must not be exceeded. In applications such as accumulator circuits, where sudden pressure can be applied to the valve in the free-flow direction, ensure that the specified flow ratings are not exceeded.

When fitting the valve, take particular care to ensure that:

- the valve is firmly seated on the sealing surface
- valve components are not deformed by the use of excessive force

Recommendation: before installing the valve, fit the O-ring in the cavity.

In dynamic accumulator circuits, use the internally damped RKVE valves.

Buyers bear the sole responsibility for ensuring that the selected products are suitable for their applications. Buyers normally establish this by undertaking qualification programs on test stands, or evaluating the performance of prototype machines or systems.