

- Check valves size 04 ... size 40
- Spherical poppet-type, Screw-in design
- up to 360 l/min, 350 bar (500 bar on request)



Description

Series RKVE units are screw-in check valves with mounting threads from G 1/8" to G 1 1/2". Other thread forms are available on request.

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

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 spherical poppet valves with hardened body, poppet and seat.

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.

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
- spring enclosed (up to size 16)
- various opening pressures
- damped and undamped models

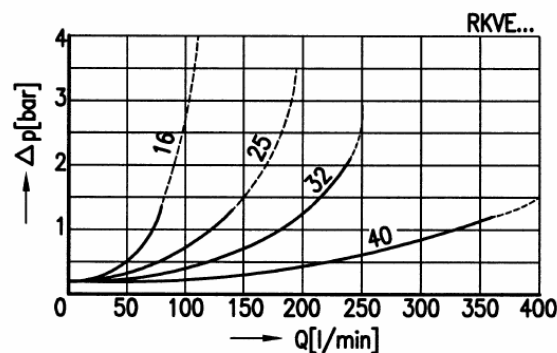
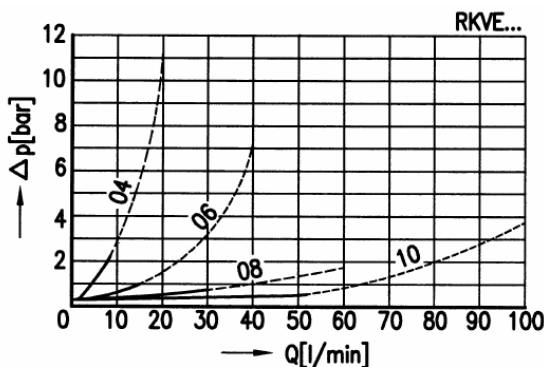
Technical Data

General Specifications	RKVE
Design:	spherical poppet design
Mounting method:	screw-in cartridge
Size:	nominal 04 ... 40 (see table Dimensions)
Mounting position:	unrestricted

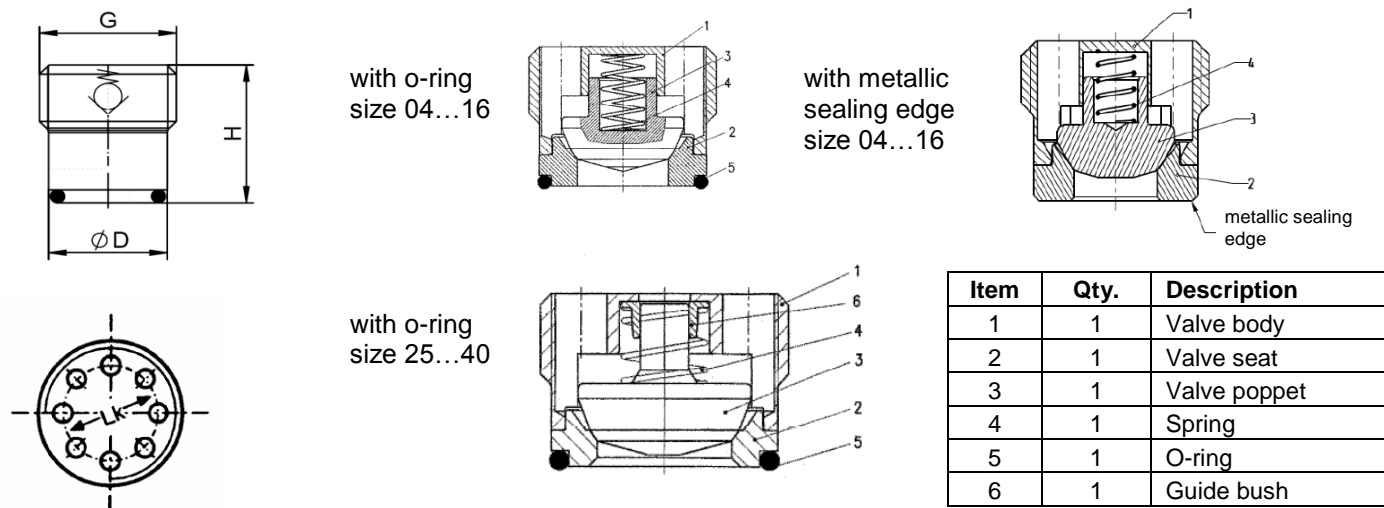
Hydraulic Specifications	
No-flow direction:	B → A (see symbol)
Max. pressure:	350 bar (500 bar on request)
Opening pressure range:	0,1 ... 2 bar for all sizes
Max. flow:	360 l/min
Fluid:	hydraulic oils HL and HLP according DIN 51524
Temperature range:	-30°C ... + 80°C
Viscosity range:	10 ... 500 mm ² /s (cSt)
Min. fluid cleanliness	18/14 to ISO 4406 / CETOP RP70H 8 ... 9 to NAS 1638

Characteristics

oil viscosity 33 mm²/s (cSt)



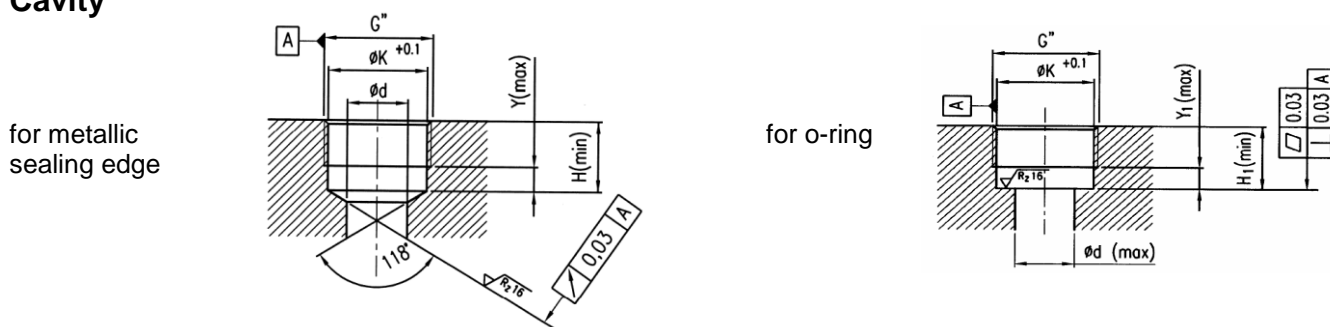
Dimensions



Item	Qty.	Description
1	1	Valve body
2	1	Valve seat
3	1	Valve poppet
4	1	Spring
5	1	O-ring
6	1	Guide bush

	$Q_{Nom.} = Q_{max.}$ (l/min)	G	ØD	H stand- ard	H short	H long	o-ring (1 pce)	Tightening torque o-ring (Nm)	Tightening torque metallic sealing edge (Nm)	Pin spanner Type
RKVE-04-..	8	G1/8"	8,5	10,0	-	15,0	6,2 x 1,0	3	8	M-04
RKVE-06-..	15	G1/4"	11,5	11,3	8,0	17,5	8,5 x 1,5	7	20	M-06
RKVE-08-..	30	G3/8"	14,9	13,3	9,5	20,0	12,0 x 1,5	15	25	M-08
RKVE-10-..	50	G1/2"	18,7	15,9	12,0	21,0	16,0 x 1,5	30	40	M-10
RKVE-16-..	80	G3/4"	24,2	18,9	15,0	26,0	20,0 x 2,0	60	60	M-16 / MKS-16
RKVE-25-..	140	G1"	30,2	23,0	18,7	34,0	25,0 x 2,5	120	-	M-25 / MKS-25
RKVE-32-..	240	G1¼"	39,1	36,0	-	62,0	34,0 x 2,5	200	-	MKS-32
RKVE-40-..	360	G1½"	44,5	42,0	-	76,0	40,0 x 2,5	300	-	MKS-40

Cavity



	G	ØK	Ød	standard version				short version				long version	
				H	Y	H1	Y1	H	Y	H1	Y1	H	Y
RVKE-04-..	G1/8"	8,70	4,0	10,0	2,5	10,0	4,0	-	-	-	-	15,0	4,0
RVKE-06-..	G1/4"	11,75	6,0	11,5	4,0	11,3	5,0	7,0	2,0	8,0	2,0	17,5	5,0
RVKE-08-..	G3/8"	15,25	8,0	13,5	4,0	13,3	5,0	8,7	2,0	9,5	3,0	20,0	5,0
RVKE-10-..	G1/2"	19,00	11,0	16,0	4,5	15,9	6,0	11,2	3,5	13,5	6,0	21,0	6,0
RVKE-16-..	G3/4"	24,50	15,0	19,0	6,0	18,9	7,0	13,8	3,5	15,0	5,5	26,0	7,0
RVKE-25-..	G1"	30,50	20,0	-	-	23,0	9,0	-	-	18,7	6,7	34,0	9,0
RVKE-32-..	G1¼"	39,50	26,0	-	-	36,0	12,0	-	-	-	-	62,0	12,0
RVKE-40-..	G1½"	45,00	33,0	-	-	42,0	12,0	-	-	-	-	76,0	12,0

Type code

RKVE	-...	...	-...	-...	-...
<p>Sealing omit = NBR o-ring V = FKM o-ring (Viton) DK = metallic sealing edge</p> <hr/> <p>Damping Z4 = damped (size 04 ... 16) Z2 = undamped (size 10, 16) omit = undamped (size 25 ... 40) = undamped (long version size 04 ... 40)</p> <hr/> <p>Opening pressure omit = standard 0,5 bar (size 04 ... 16) standard 0,2 bar (size 25 ... 40) 0,1 = 0,1 bar 0,2 = 0,2 bar 0,5 = 0,5 bar 1 = 1 bar 2 = 2 bar 3 = 3 bar 4 = 4 bar 5 = 5 bar 6 = 6 bar 8 = 8 bar 10 = 10 bar 12 = 12 bar</p> <hr/> <p>Overall length omit = standard version K = short version L = long version (from opening pressure 3 bar)</p> <hr/> <p>Nominal size 04 06 08 10 16 25 32 40</p> <hr/> <p>Check valve, spherical poppet type, screw-in design</p>					

Options on request:

- with metric or UNF thread
- other opening pressures
- special materials
- customised design

Ordering example

- Check valve, spherical poppet type, screw-in design
- Nominal size 06, G 1/4"
- Long version
- Opening pressure 8 bar

Type code

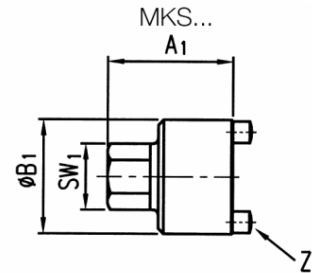
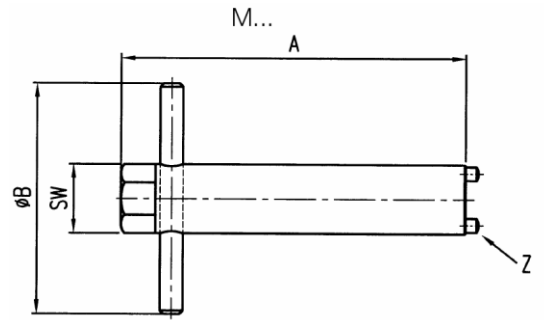
RKVE-06L-8

Pin spanner

	A	A ₁	øB	øB ₁	SW	SW ₁	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
MKS-32	-	45	-	38	-	19	5
MKS-40	-	47	-	43	-	22	5

On request:

- Pin spanner without lever



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 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.