- **Check valve size 04 … size 40**
- **Spherical-poppet type, Push-in design, invertible**
- **up to 360 l/min; 350 bar (500 bar on request)**

Description

Series RKVC units are push-in check valve cartridges.

Identical cavities allow the replacement with valves of the series RVC.

The valves prevent flow in direction B → A (see symbol). In the opposite direction, there is a range of opening pressures from 0,1 to 8 bar. The no flow direction can be reversed by inverting the valve in its cavity.

The units are spring-closed spherical poppet valves with hardened body, poppet and seat.

External O-rings seal the leakage path between the valve and cavity wall.

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
- various opening pressures
- no-flow direction can be reversed
- can be used as right-angle valve
- in conjunction with an ESH threaded mounting sleeve, can be used as a screw-in valve

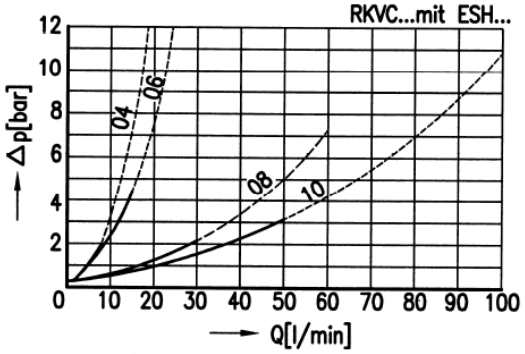
Technical Data

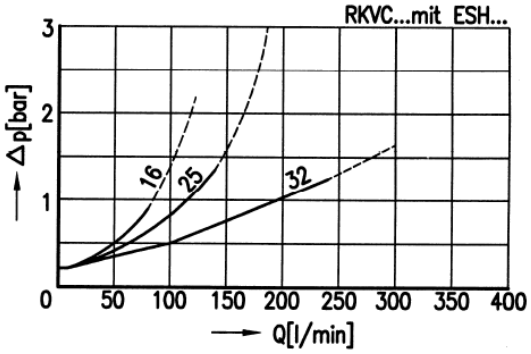
General Specifications	**RKVC**
Design:	spherical poppet design
Mounting method:	push-in cartridge
Size:	nominal 04 … 40 (see table Dimensions)
Mounting position:	unrestricted

Hydraulic Specifications	
No-flow direction:	B → A (see symbol)
Max. pressure:	350 bar (500 bar on request)
Opening pressure range:	0,1 … 8 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 mm²/s (cSt)
Min. fluid cleanliness	18/14 to ISO 4406 / CETOP RP70H 8 … 9 to NAS 1638

Characteristics

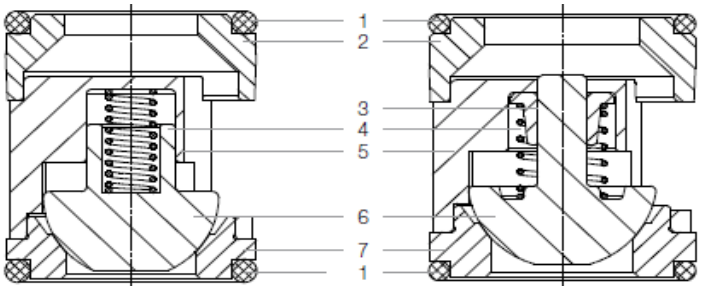
oil viscosity 33 mm²/s (cSt)



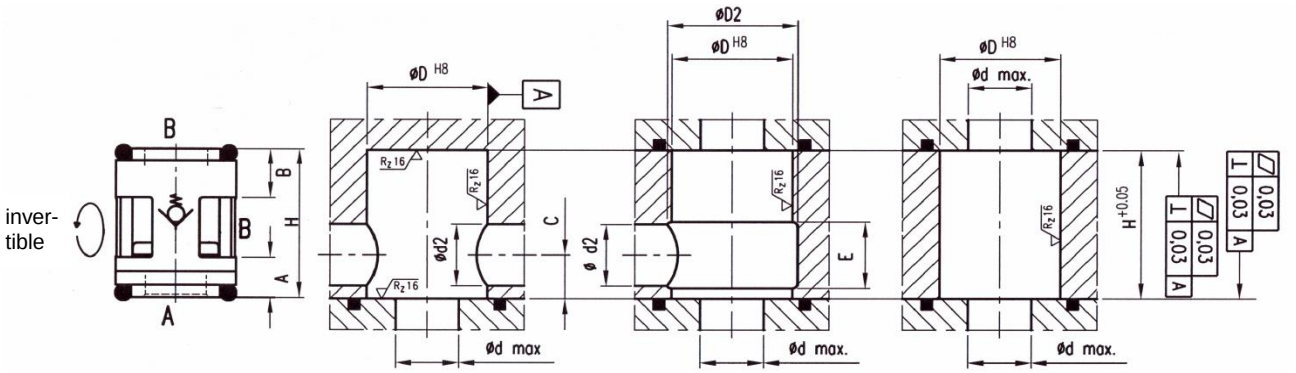


Dimensions

Valve size 04 … 16 Valve size 25 … 40

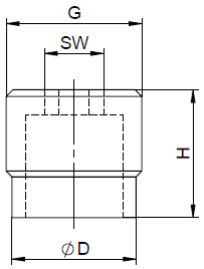


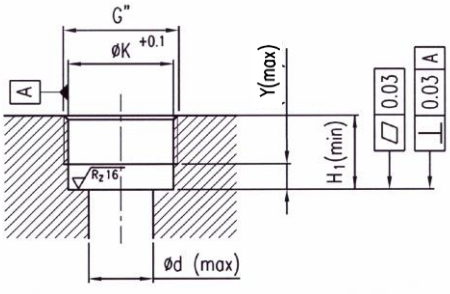
Item	Qty.	Description
1	2	O-ring
2	1	Press-fit ring
3	1	Guide bush
4	1	Spring
5	1	Valve body
6	1	Valve poppet
7	1	Valve seat



								standard version		long version			
	$Q_{Nom} = Q_{max.}$ (l/min)	øD	øD₂	ød$_{max}$	ød₂	A	B	H	C	H	C	E	o-ring (2 pcs)
RKVC-04-	8	8,5	11	4	5	3,4	5,0	13,5	6,75	18,5	9,25	5,6	6,2 x 1,0
RKVC-06-	15	11,5	14	6	6	3,9	4,8	14,5	7,25	20,8	10,4	6,5	8,5 x 1,5
RKVC-08-	30	15,0	18	8	9	3,9	5,5	17,0	8,5	24,0	12,0	9,5	12,0 x 1,5
RKVC-10-	50	19,0	22	11	11	5,1	6,5	20,0	10,0	25,5	12,75	11,5	16,0 x 1,5
RKVC-16-	80	24,5	28	15	14	5,5	6,5	23,0	11,5	31,0	15,5	14,5	20,0 x 2,0
RKVC-25-	140	30,5	35	20	20	7,3	7,8	28,0	14,0	39,0	19,5	20,0	25,0 x 2,5
RKVC-32-	240	39,5	46	26	23	9,6	8,0	42,0	21,0	-	-	28,0	34,0 x 2,5
RKVC-40-	360	45,0	56	32	28	9,0	9,5	51,0	25,0	-	-	32,0	40,0 x 2,5

Mounting sleeve ESH





	G	øD	øK	ød$_{max}$	H	Y	width across flats SW	Tightening torque (Nm)	used with
ESH-06	G1/4“	11,5	11,75	4	17,0	4	4	10	RKVC-04-..
ESH-08	G3/8“	14,9	15,25	6	18,5	5	6	20	RKVC-06-..
ESH-10	G1/2“	18,7	19,00	8	21,0	6	8	40	RKVC-08-..
ESH-16	G3/4“	24,2	24,50	11	25,0	7	10	80	RKVC-10-..
ESH-25	G1“	30,2	30,50	15	29,0	9	14	160	RKVC-16-..
ESH-32	G1 1/4“	39,0	39,50	20	34,0	11	19	250	RKVC-25-..
ESH-40	G1 1/2“	44,5	45,25	28	48,5	15	*1	350	RKVC-32-..
ESH-50	G2“	56,0	56,8	32	58,0	15	*2	450	RKVC-40-..

*1 = Mounting sleeve MKS-32 *2 = Mounting sleeve MKS-40

Type code

RKVC	-…	-…	-…	-…	-…

Sealing
omit = NBR o-ring
V = FKM o-ring (Viton)

Damping
Z4 = damped (size 04 … 16)
Z2 = undamped (size 10, 16)
omit = undamped (size 25 … 40)

Opening pressure
omit = standard 0,5 bar (size 04 … 16)
standard 0,2 bar (size 25 … 40)
0,1 = 0,1 bar **0,5** = 0,5 bar **1** = 1 bar **2** = 2 bar
4 = 4 bar **6** = 6 bar **8** = 8 bar

Overall length
omit = standard version
L = long version

Nominal size
04 06 08 10 16 25 32 40

Check valve, spherical-poppet type, push-in design

Options on request:
- other opening pressures
- special materials
- customised design

Ordering example

- Check valve, spherical poppet type, push-in design
- Nominal size 06
- Long version
- Opening pressure 8 bar

Type code

RKVC-06L-8

Design and installation notes

The installation dimensions and tolerances must be maintained.

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

When fitting the valve, take particular care to ensure, that the valve is firmly seated on the sealing surface.

Use the specified tightening torque when fitting the valve with the mounting sleeve. Special fitting tools (pin spanners) are available for ESH-40 and ESH-50.

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

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.

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.