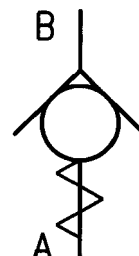


**Check Valves, Size 04 ... 16**  
**Spherical Poppet-type, Screw-in Design**  
**Series RKVG ... 80 l/min, 350 bar (500 bar)**



## 1 General

### 1.1 Product description

Series RKVG units are screw-in check valves with mounting threads ranging from G 1/8" to G 3/4". For other thread forms, contact Bucher Hydraulics.

The valves prevent flow against the screw-in direction (A → B). In the opposite direction, the opening pressure is 0.2 to 1 bar.

The cavities are identical to those of the RVE/RKVE valves (REG-02 cavity only).

The units are spring-closed poppet valves with hardened poppets and seats. The poppet is fully guided, with a spherically shaped sealing surface.

A metal cutting lip seals 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 Bucher Hydraulics for such applications).

### 1.2 Advantages

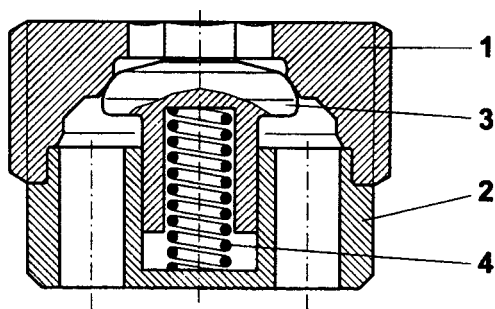
- Virtually leak-free
- High pressure rating
- Compact construction
- Spring is enclosed

## 2 Main characteristics

Designation	check valve / non-return valve
Design	spherical poppet design
Mounting method	screw-in cartridge
Size	nominal 4...16 mm. See Table in section 5, Dimensions
Dimensions	see Table in section 5, Dimensions
Mounting attitude	unrestricted
No-flow direction	A → B (see symbol)
Operating pressure range	... 350 bar (for higher pressures, contact Bucher Hydraulics)
Opening pressure	0.2 ... 1 bar
Flow rate, Q max.	... 80 l/min
Fluid	HL and HLP hydraulic oils to 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

For applications outside these parameters, please contact Bucher Hydraulics.

### 3 Schematic section

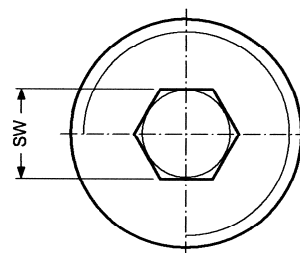
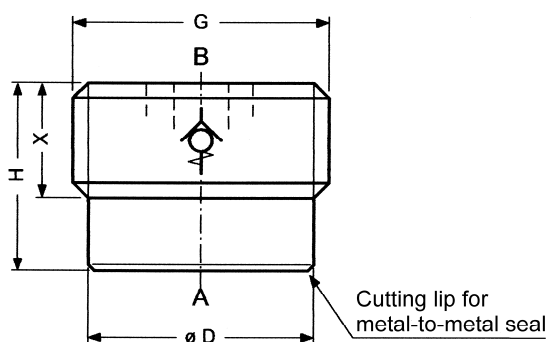


### 4 Components

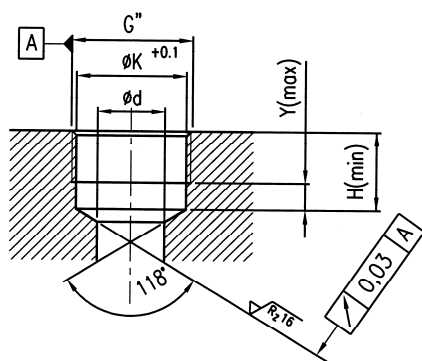
Item	Qty.	Description
1	1	Valve seat
2	1	Valve body
3	1	Valve poppet
4	1	Spring

### 5 Dimensions

#### 5.1 Valve



#### 5.2 Dimensions - cavity type REG-02

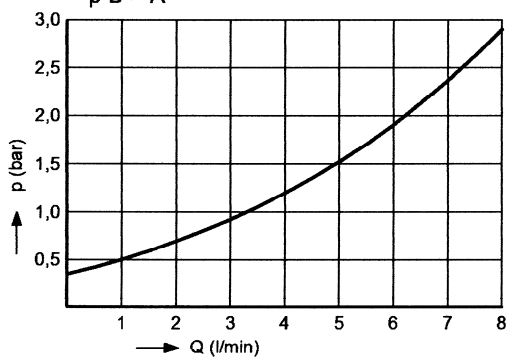


	Q Nom = Qmax (l/min)	G	ØD	H	X	SW	Mass (g)	ØK	Ød <sub>max</sub>	h <sub>min</sub>	Y <sub>max</sub>	Tightening torque (Nm)
RKVG-04	8	G 1/8"	8.5	9.0	5.5	3,5	4	8.70	6.0	10.0	2.5	8
RKVG-06	15	G 1/4"	11.6	11.3	6.3	5	8	11.75	8.0	11.5	4.0	20
RKVG-08	30	G 3/8"	14.9	13.0	7.8	6	14	15.25	11.5	13.5	4.0	25
RKVG-10	50	G 1/2"	18.8	15.0	9.6	8	24	19.00	15.5	16.0	4.5	40
RKVG-16	80	G 3/4"	24.2	18.5	11.5	10	42	24.50	20.0	19.0	6.0	60

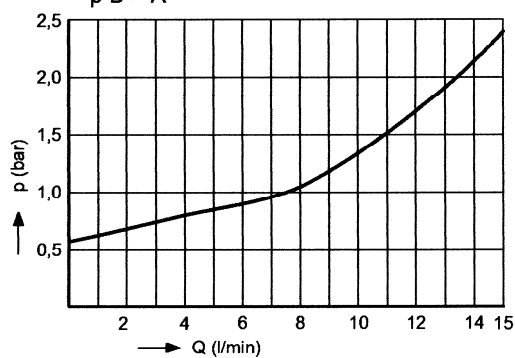
## 6 Performance graphs

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

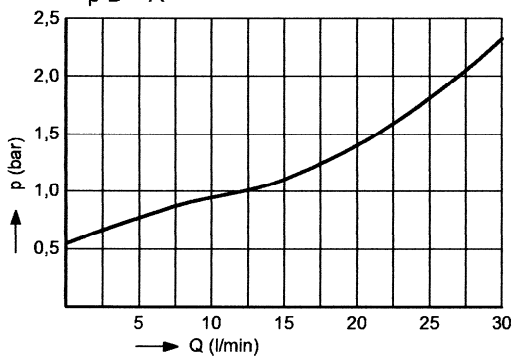
**RKVG-04**  
p B > A



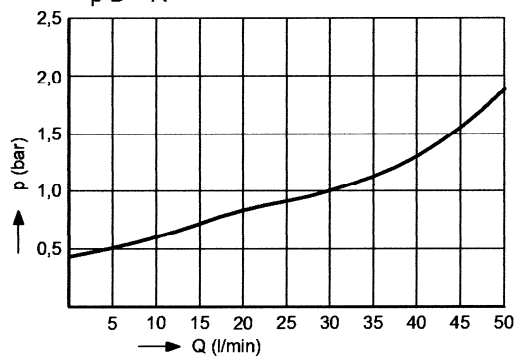
**RKVG-06**  
p B > A



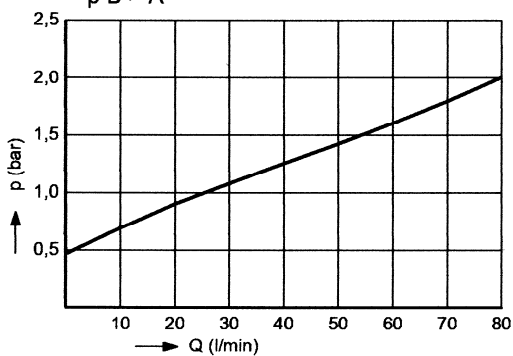
**RKVG-08**  
p B > A



**RKVG-10**  
p B > A

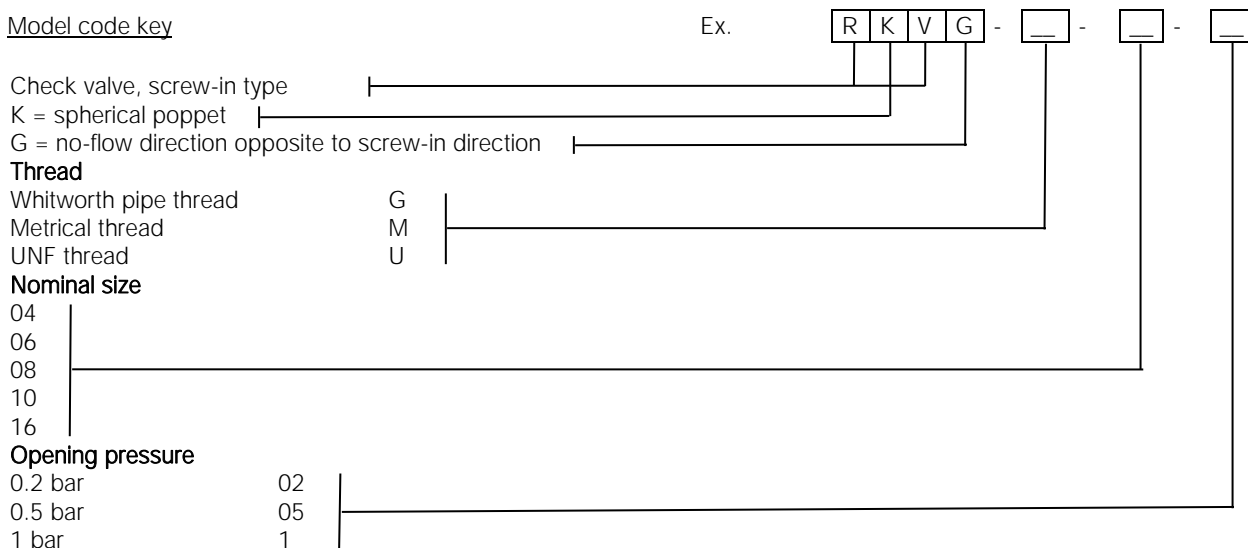


**RKVG-16**  
p B > A



## 7 Ordering details

### Model code key



### Contact Bucher Hydraulics for further advice on:

- other opening pressures
- special materials
- customised designs

## 8 Design and installation notes

The installation dimensions and tolerances must be maintained.

ated directly before the check valve (see Data Sheet 170-P-059000-E).

- valve components are not deformed by the use of excessive force

We offer form tools for hire or sale.

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

Use the specified tightening torque when fitting the valve.

Referring to the free-flow direction, nozzles and orifices must not be situ-

- the valve cutting lip is firmly seated on the sealing surface

## 9 Application notes

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

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 by evaluating the performance of prototype machines or systems.

[info.dah@bucherhydraulics.com](mailto:info.dah@bucherhydraulics.com)

[www.bucherhydraulics.com](http://www.bucherhydraulics.com)

© 2015 by Bucher Hydraulics Dachau GmbH, D-85221 Dachau

All rights reserved.

Data is provided for the purpose of product description only, and must not be construed as warranted characteristics in the legal sense. The information does not relieve users from the duty of conducting their own evaluations and tests. Because the products are subject to continual improvement, we reserve the right to amend the product specifications contained in this catalogue.