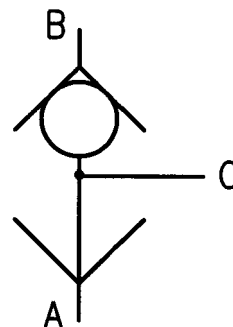


**Shuttle Valves, Size 04 ... 10**  
**Ball-type, Screw-in Design**  
**Series WRVC ... 50 l/min, 350 bar (500 bar)**



**1 General**

**1.1 Product description**

The WRVC units are screw-in shuttle valves with mounting threads ranging from G 1/8" to G 1/2". For other thread forms, contact Bucher Hydraulics.

The valve shuts off whichever of the inlet ports A or B is at the lower pressure.

Port C is thus always connected to the higher pressure.

The units are ball-type valves with hardened seat and ball.

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

**1.2 Advantages**

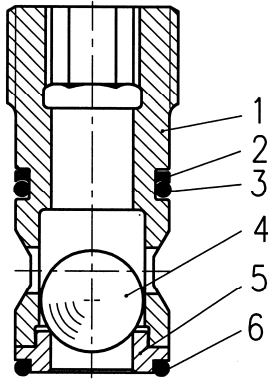
- Virtually leak-free
- High pressure rating
- Compact construction

**2 Main characteristics**

Designation	shuttle valve
Design	ball-type design
Mounting method	screw-in cartridge
Size	nominal 4...10 mm. See Table in section 5, Dimensions
Dimensions	see Table in section 5, Dimensions
Mounting attitude	unrestricted
No-flow direction	A → B, B → A (see symbol)
Operating pressure range	... 350 bar (for higher pressures, contact Bucher Hydraulics)
Flow rate, Q max.	... 50 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

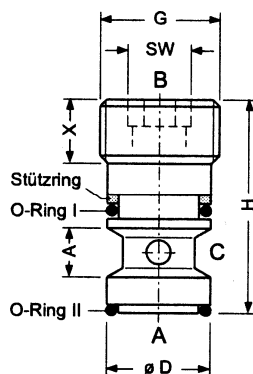


### 4 Components

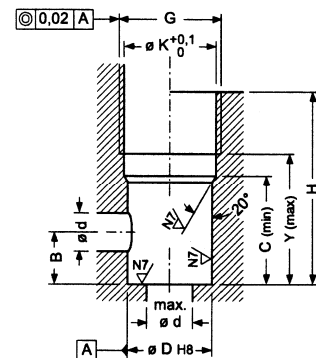
Item	Qty.	Description
1	1	Valve body
2	1	Backup ring
3	1	O-ring
4	1	Ball
5	1	Valve seat
6	1	O-ring

### 5 Dimensions

#### 5.1 Valve



#### 5.2 Cavity type WEG-01

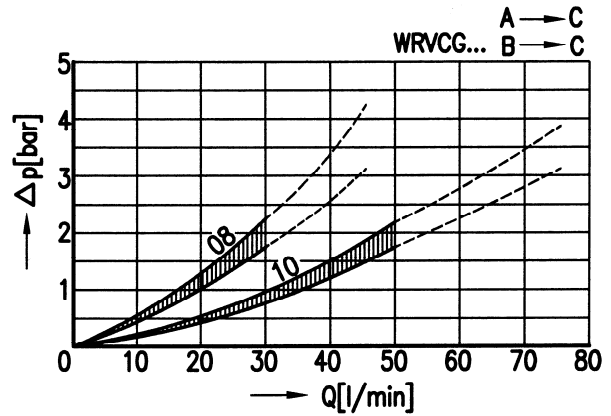
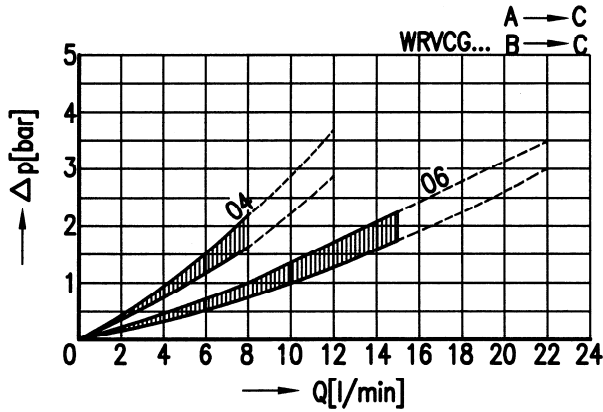


	Q Nom (l/min)	G	ØD	ØK	Ød	H	A	B	C	X	Y	SW (A/F)	Tightening torque (Nm)
WRVC-04	8	G1/8"	8.5	8.70	4	24	4	5.7	14.30	7	16.0	5	5
WRVC-06	15	G1/4"	11.5	11.75	6	30	6	8.0	15.85	10	19.0	6	10
WRVC-08	30	G3/8"	15	15.25	8	36	8	10.0	21.85	10	25.0	8	20
WRVC-10	50	G1/2"	18.5	19.00	10	45	10	14.0	25.70	12	32.0	10	40

	1 pc. O-ring I	1 pc. O-ring II	1 pc. Stützring (backup ring) PTFE
WRVC-04	6.2 x 1.0	6.2 x 1.0	8.5 / 6.5 x 1.0
WRVC-06	9.0 x 1.0	8.0 x 1.5	11.5 / 9.8 x 1.0
WRVC-08	12.0 x 1.5	12.0 x 1.5	15.0 / 12.3 x 1.0
WRVC-10	15.0 x 1.5	15.0 x 1.5	18.5 / 15.8 x 1.0

## 6 Performance graphs

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



## 7 Ordering details

Model code key

Ex.

W R V C - [ ] - [ ] - [ ]

Shuttle valve, screw-in type

Ball design

**Thread**

Whitworth pipe thread

Metrical thread

UNF thread

**Nominal size**

04

06

08

10

**O-rings**

Nitrile

(blank)

Viton

V

Contact Bucher Hydraulics for further advice on:

- special materials
- customised designs

## 8 Design and installation notes

The installation dimensions and tolerances must be maintained. The thread and the close-fitting cylindrical surface must be concentric.

We offer form tools for hire or sale.

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

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

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

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

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

Use the specified tightening torque when fitting the valve.

## 9 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.

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.

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