

Lock valve Spring loaded check valve

$Q_{max} = 1000 \text{ l/min}$, $p_{max} = 420 \text{ bar}$

poppet type

Type series: RVSAE3/6-2"-...



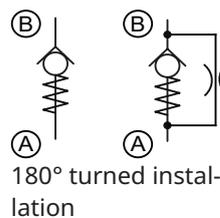
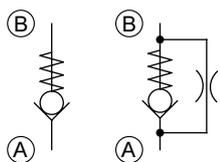
- For SAE flange ports
- High pressure rating
- Compact construction
- No-flow direction can be reversed
- The same valve body is used for 3000 psi and 6000 psi ports
- Optional metered flow in the no-flow direction

Description

Check valves for SAE flange ports are characterized by very high load capacity and very small pressure rise. The valve can be used without modification on both 3000 psi (210 bar) and 6000 psi (420 bar) SAE flange ports. The no-flow direction can be reversed by inverting the valve. The valve design is based on a guided poppet that is hardened and ground. In the no-flow

direction, the valve closes. The valve can be used for pressure relief in the opening direction, but only to a limited extent (consult Bucher Hydraulics for such applications). Seal plates and insert plates are available as required. The valve is available in nominal sizes $\frac{3}{4}$ ", 1", 1 $\frac{1}{4}$ ", 1 $\frac{1}{2}$ " and 2".

Symbol



Technical data

| General characteristics | Description, value, unit |
|-------------------------|---------------------------|
| Function group | Lock valve |
| Function | Spring loaded check valve |
| Characteristic | poppet type |
| Construction size | SAE 2" |
| Mounting attitude | unrestricted |
| Weight | 2,1 kg |

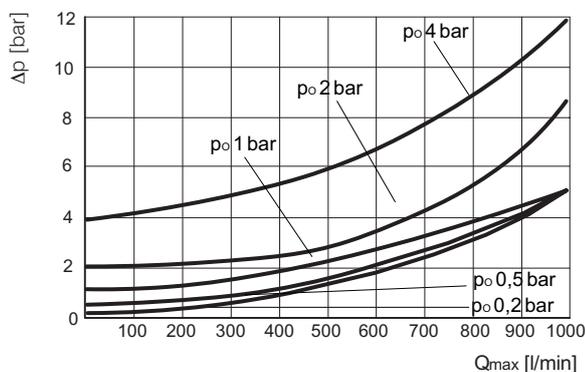
| Hydraulic characteristics | Description, value, unit |
|--|---|
| Maximum operating pressure | 420 bar |
| Maximum flow rate | 1000 l/min |
| Flow direction | see symbol |
| Hydraulic fluid | HL and HLP mineral oil according to DIN 51 524; other fluids on request! |
| Minimum fluid temperature | - 30 °C |
| Maximum fluid temperature | + 80 °C |
| Viscosity range | 10 ... 500 mm ² /s (cSt) |
| Minimum fluid cleanliness (cleanliness class according to ISO 4406:1999) | class 20/18/15 |
| Opening pressure | 0,2, 0,5, 1, 2, 4 bar |

i **NOTE!**
For other values please contact Bucher Hydraulics.

Performance graphs

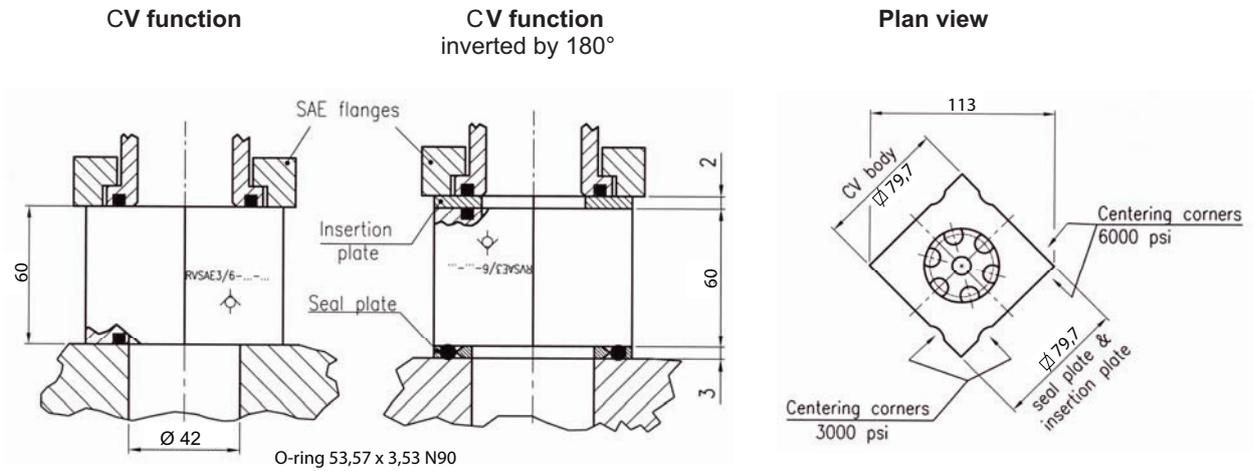
measured with oil viscosity 33.0 mm²/s (cSt)

$\Delta p = f(Q)$ Pressure drop-flow rate characteristic

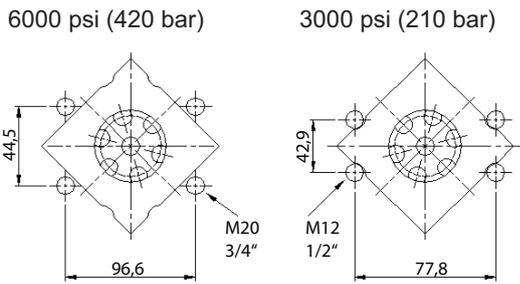


Dimensions and sectional view

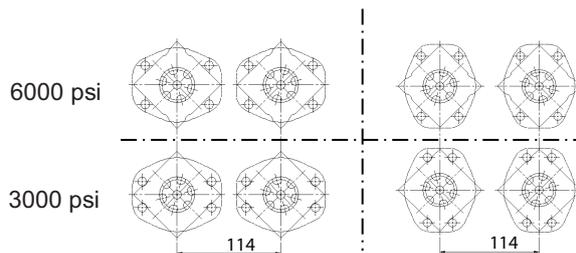
Dimensions – valves



Dimensions – SAE flange ports



Minimum distance between 2 SAE check valves



Installation information



NOTE!

The SAE flange mounting screws have to be tightened with the specified torque. The value can be found in the chapter technical data. By turning them through 90°, the RVSAE3/6... dual purpose bodies, the seal plates and insert plates can be used on both 3000 psi and 6000 psi ports of the same nominal size. Where a seal plate and an insert plate are added, it is seldom necessary to fit longer SAE flange connecting bolts. When you choose to add orifices or nozzles to the circuit they are to be placed after the check valve, if this is not possible, a right-angle bore must be designated between the check valve and the nozzle (see datasheet 170-P-059000).



ATTENTION!

When fitting the valve, make sure that it is firmly seated on the sealing surface and that it is not deformed by the use of excessive force.

Application Note



NOTE!

The maximum operating pressure must not be exceeded even when pressure peaks occur. 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 valve is suitable for their applications and must be substantiated by trials or testing, if necessary.

Ordering code



RV = Check valve

SAE = for SAE flange port (fits between port and flange)

3/6 = Dual-purpose body 3000 psi / 6000 psi

blank = O-ring on one face only

21 = Nominal size 2"

02 = Opening pressure 0,2 bar

05 = Opening pressure 0,5 bar

1 = Opening pressure 1 bar

2 = Opening pressure 2 bar

4 = Opening pressure 4 bar

blank = without orifice

D1x... = with orifice (by consultation Bucher Hydraulics)

blank = Nitrile (standard) seal

V = Viton seal

Contact Bucher Hydraulics for further information on:

- Other opening pressures
- Special materials
- Customised designs

Ordering codes for the associated insert plate and seal plates:

170202478 = ZPSAE-21 (insert plate for check valve SAE 2")

170627965 = DPSAE-21 (seal plate Nitrile (standard) seal for check valve SAE 2")

170527965 = DPSAE-21-V (seal plate Viton seal for check valve SAE 2")

Related data sheets

| Reference | Description |
|--------------|--|
| 170-P-059000 | Using nozzles or orifices before a check valve |