

BELVEN CHECK VALVES

INSTALLATION. OPERATION AND MAINTENANCE INSTRUCTIONS

**Applicable to check valves type BV36, BV38, BV39, BV40 and BV41
with nominal diameter DN15 till DN600 – NPS 1/2 till NPS 24**

1. Safety

- ✓ For safety reasons, the installation must take place under the supervision of a foreman taking into account the local safety instructions and advises.
- ✓ The installation of check valves must be done by staff trained in all aspect of their operation.

2. General remarks

- ✓ Check valves are mono-directional, meaning that the flow through the check valve must always be respected to guarantee a correct functioning.
- ✓ The correct flow is indicated on the valve by means of an arrow. The valve is to be installed in such a way that the disc always opens into the direction of the flow.
- ✓ Do not weld or execute any mechanical working onto the pipeline with the valve in place.

3. Check prior to installation

- ✓ Possible damages to the check valve and O-rings are to be checked prior to installation. Check if the valve can be moved, damaged parts are not to be installed.
- ✓ Before fitting the check valve between the flanges, make sure that the operating conditions (pressure, temperature and fluid) are compatible with the technical specifications of the check valve.
- ✓ Make sure to install a minimum of 5x nominal diameter of straight pipeline in front and behind the check valve.
- ✓ Do not install the valves directly onto a pump flange, avoid pulsation and pressure impact.
- ✓ ***Before installation make sure that the main is depressurised and purged in order to avoid any danger to the operator.***

4. Installation

- ✓ Check if the pipeline is free of welding splashes and slivers of metal.
- ✓ Check if the flange connections of the pipeline are parallel with each other.
- ✓ Make sure that the check valve fits between the flanges without difficulty. Force apart the flanges with a suitable tool if the fit is too tight.
- ✓ Insert the valve between the flanges and centre before tightening the bolts of the flange connections.
- ✓ Keep the check valve well aligned with the flanges while removing the flange separators and tighten the screws with a torque wrench to assure correct sealing (opposing bolts sequentially).
- ✓ Bring the installation gradually under pressure so that any leaks can be dealt with immediately.

5 Allowed installation positions

	→	←	↑	↓
<i>BV 36</i>	yes	yes	yes	yes
<i>BV 38</i>	yes	yes	yes	-
<i>BV 39</i>	yes	yes	yes	-
<i>BV 40</i>	yes	yes	yes	-
<i>BV 41</i>	yes	yes	yes	-

BV36 disco wafer check valve
can be installed in any vertical or horizontal position.

BV38 swing wafer check valve without spring
vertical installation only when valve can open at the top, in case of horizontal position, the ring or ring screw always at the top.

BV39 swing wafer check valve with spring
~ see BV38

BV40 dual plate wafer check valve
vertical installation only when valve can open at the top, in case of horizontal position, the shaft always positioned upright.

BV41 flanged ball check valve
vertical installation only when displacement of the ball is allowed from bottom to top, horizontal position always with bonnet positioned upright.

6 Storage

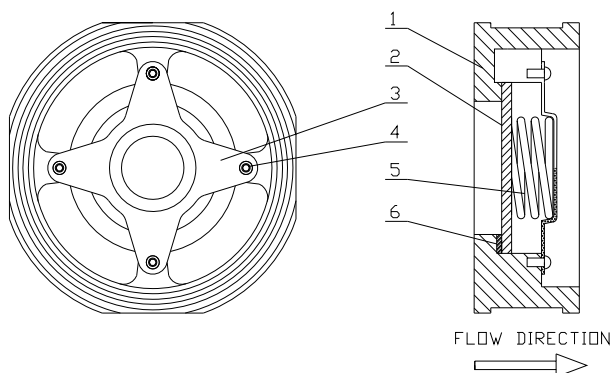
The check valves should be stored inside, in a clean, dry and dark place and in the original packaging.

7 Maintenance

- ✓ Belven check valves are maintenance free.
- ✓ Any sign of leakage must be dealt with immediately.
- ✓ In case of repair only use original Belven spare parts to allow correct functioning.

8 Parts

Type BV36 – disco wafer



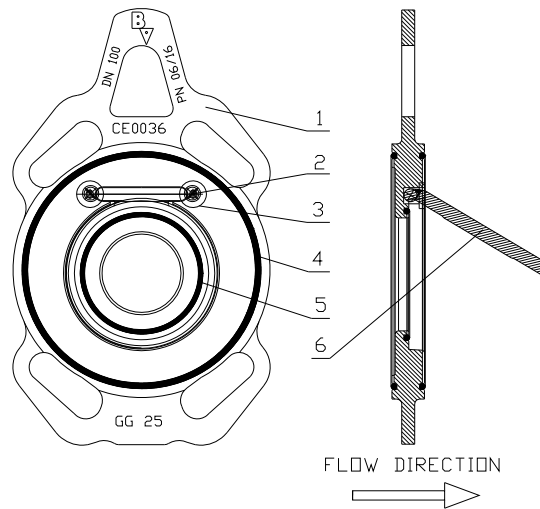
BV36, parts list :

1. body
2. disc
3. retainer plate
4. bolts
5. spring
6. O-ring ~ optional

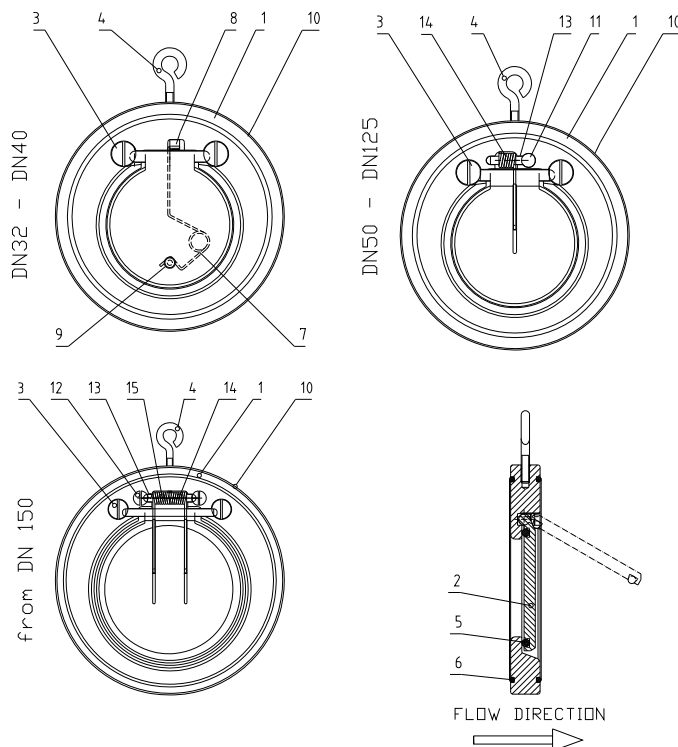
Type BV38 – swing wafer (~cast iron)

BV38, parts list :

1. body
2. bolts
3. retainer plate
4. O-ring body
5. O-ring disc
6. disc



Type BV38 and BV39 – swing wafer (~ steel / stainless steel)



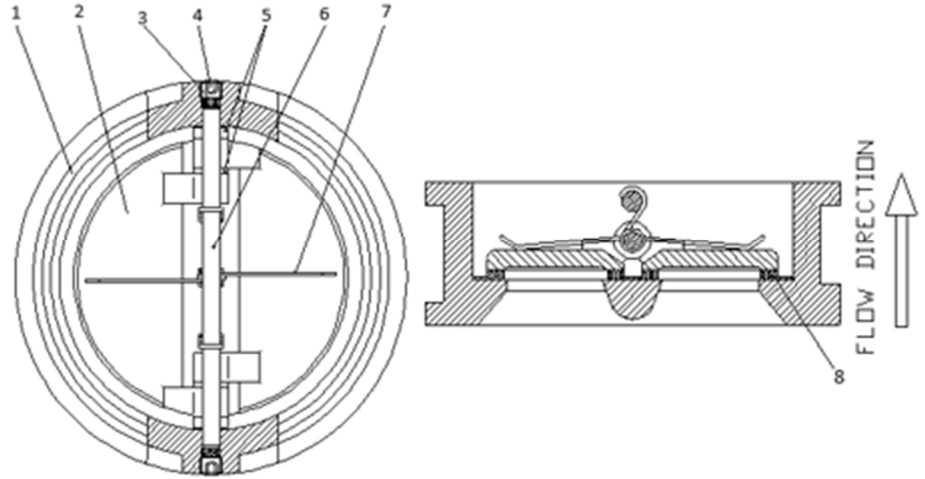
BV38 / BV 39, parts list :

1. body
2. disc
3. bolt
4. ring screw
5. O-ring disc
6. O-ring body
7. for BV39 = spring
8. pivot
9. jig
10. identification
11. jig for pin
12. bolts
13. pin for spring
14. spring right
15. spring left

Type BV 40 – dual plate wafer

BV40, parts list :

1. body
2. disc
3. gasket
4. hex nut
5. washers
6. shaft
7. spring
8. seat



Type BV 41 – flanged ball check valve

BV41, parts list :

1. body
2. ball
3. bonnet
4. bonnet gasket
5. bolt
6. nut

