



## INSTRUCTIONS FOR ASSEMBLY AND MAINTENANCE BALL CHECK VALVES

### 1. OBJECT AND SCOPE

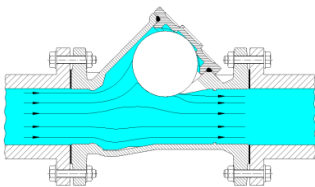
The object of following instruction is to establish the procedure for assembly, disassembly and mounting in pipeline of the ball check valve produced by Castflow Valves SL.

### 2. MAINTENANCE

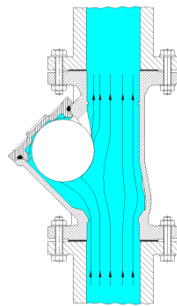
Castflow ball check valves do not require any special maintenance. In certain cases it might be possible to replace or clean the internals (ball , o-ring), caused by natural wear of the components or the accelerated wear as cause of the non appropriate installation in the pipeline (such like not respecting the precautions for assembly in pipeline or the application with very corrosive or aggressive fluids) . For general recommendations please consult our [mounting instructions and maintenance for check valves](#)

### 3. MOUNTING IN PIPELINE:

Installation with standard ball

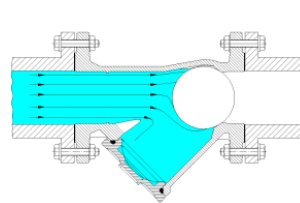


Horizontal Position

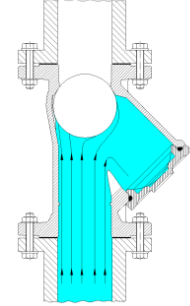


Vertical position

Installation with floating ball



Horizontal Position

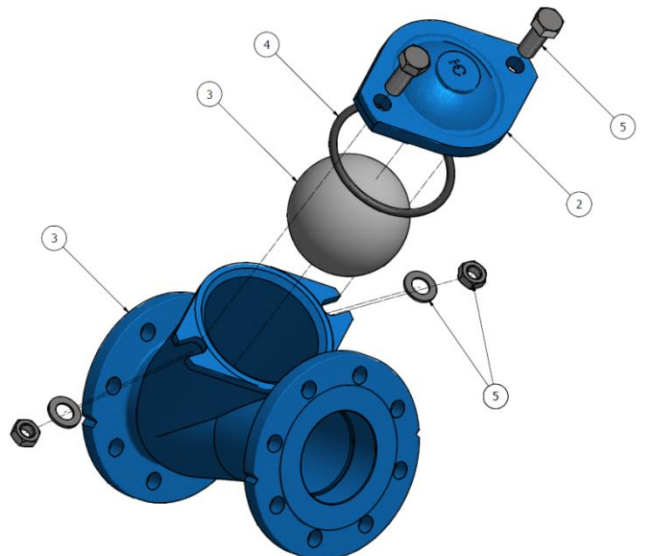


Vertical position

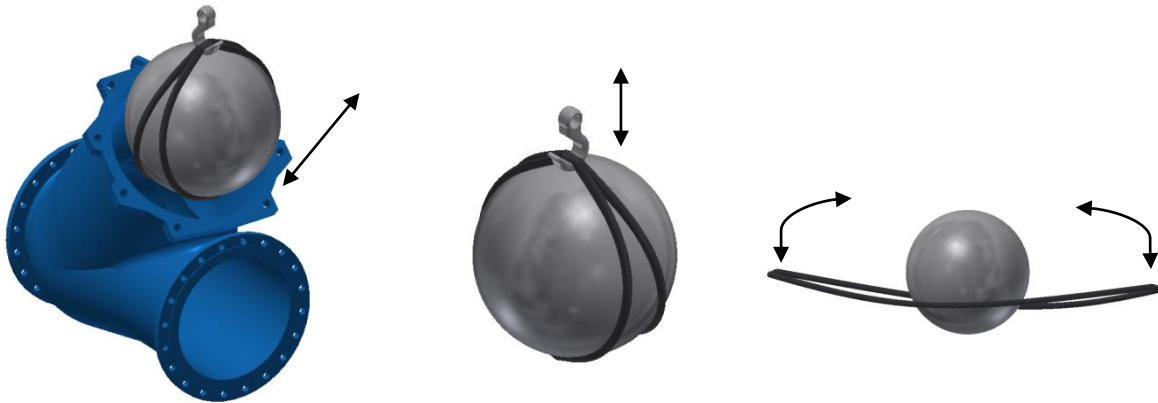
### 4. REPLACEMENT OR CLEANING OF COMPONENTS

Before preceding the replacement or cleaning, operator should assure the installation is depressurized and free of aggressive/corrosive fluids that can injure the workers.

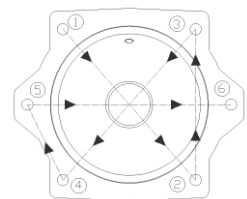
- 1- Loosen the bolts of the bonnet (5) in a cross sequence and with adequate tools in order to avoid damage on the components.
- 2- Proceed lifting the bonnet. For the bigger sized valves, it is recommended the use of elevation equipment. If the Bonnet contains a lifting lug or is foreseen of a threaded hole to fix a lifting lug, tan this must be used to lift the bonnet. If the Bonnet is not foreseen of lifting lugs it is recommended to use straps passing the holes of the bolting.
- 3- Take out the o-ring for sealing the bonnet (4) and proceed with cleaning or replacement. In order to assure the tightness after assembly Castflow valves recommends the replacement of this o ring every time the bonnet is being disassembled. Take out the ball (3) to proceed cleaning or replacement. Be careful not damaging the ball or coating during replacement or



cleaning when using non compatible products. For the bigger sized valves it is recommended to use elevation equipment and straps like shown in below photos. Verify if the ball is not damaged at any point. In case of any damage Castflow Valves recommends to replace.

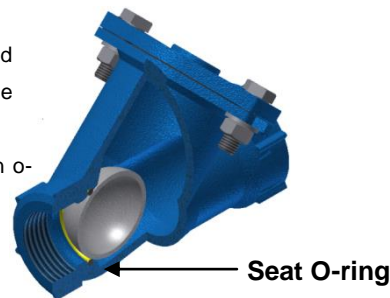


- 4- Clean the area where the ball is located when closed and also the valve passage must be clean.
- 5- Proceed assembly of the valves, introduce the ball (3), place the o ring for tightness (4) and the bonnet (2) centered correctly in the opening of the body (1), take special care that the o ring is placed in the correct position in order to avoid damage when fixing the bolts. Finally start fixing the bolts (5) in a cross sequenced order as indicated on figure.



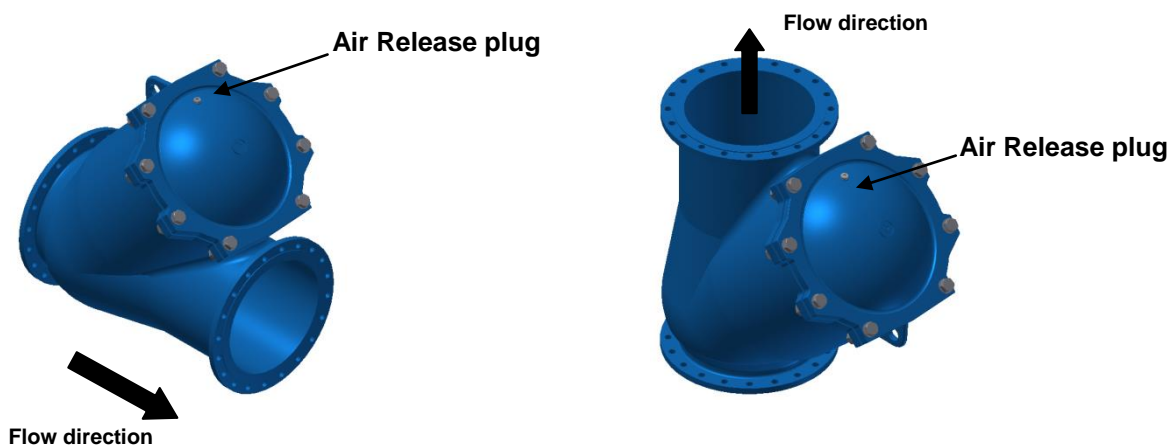
**IMPORTANT:**

- If the Bonnet is foreseen of an air release plug (DN-400 and above), make sure that it is located in the highest part of the valve.
- The valves with floating ball sized 1" to 2 1/2" are foreseen of an o-ring located in the seat area.



**5. VALVES WITH AIR RELEASE PLUG**

The ball check valves DN400 and above are foreseen of an air release plug for elimination of the accumulated air in order to avoid damage during start up. This plug must always be located on the highest part of the valve. See figures below depending on vertical or horizontal installation. If not specified by the customer, the plug is installed standard for horizontal pipeline installation. If valves are installed in vertical pipeline (and not specified in the PO), the bonnet must be turned 180°.



To eliminate the air proceed by unscrewing the plug in order to release the accumulated air until the fluid is coming out. The plug is auto blocked and cannot be unscrewed totally. If the plug is damaged or blocked, proceed disassembly of the Bonnet as indicated in previous content. It is recommended to clean the plug when Bonnet is disassembled for maintenance.