# ONYX VALVE CO.

## Series DBMJ
## Installation & Maintenance Instructions

1) **Operation**:

a) The Onyx Series DBMJ valve incorporates an Onyx "duckbill" type check valve inside a metal housing. When inlet pressure is higher than outlet pressure, the mouth of the duckbill opens allowing flow with little restriction. When outlet pressure is higher than inlet pressure, the rubber duckbill collapses, blocking reverse flow.

**2) Storage:**

a) Correct storage yields improved sleeve life. Rubber sleeves are perishable. Ideal storage temperature is 50° F. We recommend the following storage procedures:

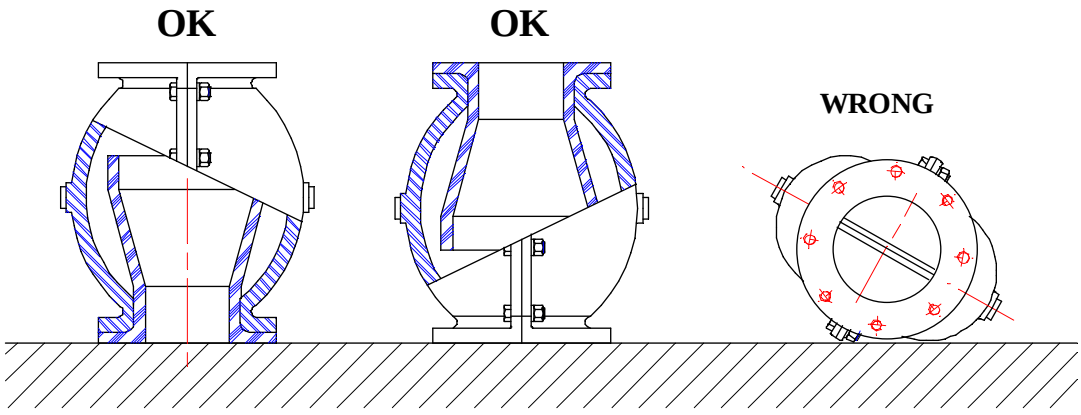
b) Store valves and sleeves in the coolest location possible. They can be stored in unheated locations, but allow maximum ventilation in areas subject to high summer temperatures. Do **NOT** store valves or sleeves in trailers, sheds or other poorly ventilated areas.

c) Avoid sunlight. Ultra-violet destroys rubber. Leave valves and sleeves in their box, or cover with black plastic.

d) Avoid ozone. Do not store near active electrical equipment.

e) For long term storage, coat exposed rubber parts every 6 months with silicone spray or liquid.

f) The model DBMJ MUST be stored in the upright position. Do not lay the valve on its side for prolonged periods or the rubber insert will gradually distort.




**Recommended position for extended storage.**

**3) Safety:**

a) Leakage: Consider the possibility of leakage due to improperly tightened flange bolts. Take precautions where liquids may drip onto electrical equipment or plant personnel, or combustible fluid may drain into a dangerous area.

b) Check the catalogue for max pressure rating for the valve. Do not exceed maximum recommended pressure for this valve.

## 4) Mating Flanges:

a) Use **flat face flanges**. Do not use serrated or raised face flanges. Steel, iron and non-metallic flanges are compatible with these valves.

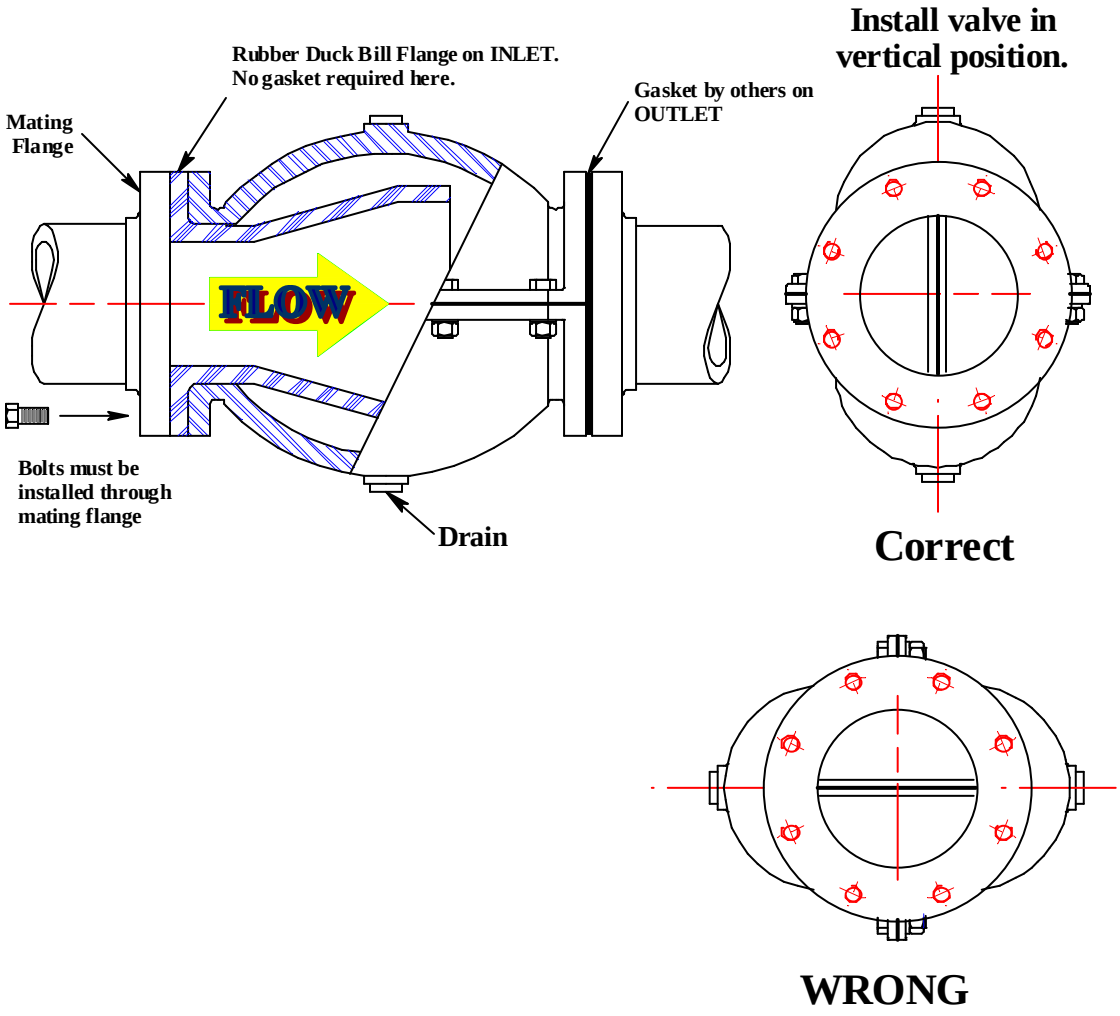
b) Flange bolts must be installed through the mating flanges. Flange bolts can **not** be inserted from the valve side of the flange assembly.

## 5) Installation:

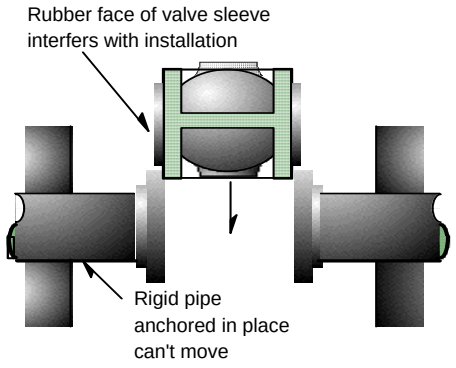
a) Install the valve with the integral gasket on the UPSTREAM side.

b) Valve can be installed in any attitude.

c) If the valve is installed in a horizontal line, the valve must be oriented in a vertical position as shown below.



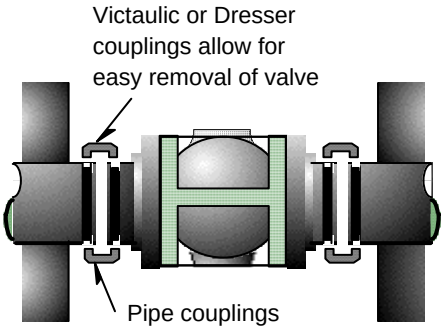
d) Design the installation so that the valve can be removed for service and reinstalled. If the mating pipe flanges are rigidly anchored in concrete or permanently welded into a steel structure, you might be able to pry the valve out from the line for servicing, but there will be hell to pay when you attempt to reinstall it. The protruding rubber face of the sleeve will thwart any attempt to get the valve back into place.




*Wrong way to install pinch valve.*

e) Connecting the mating flanges to your process pipe with a Victaulic or Dresser type coupling will facilitate removal and replacement of the valve.

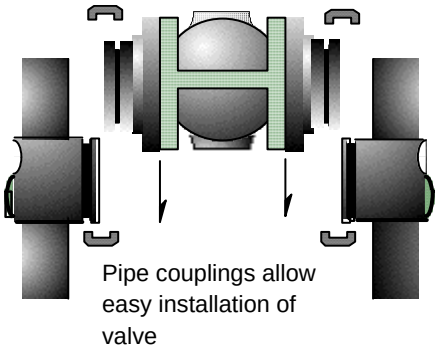
f) By using split couplings, the mating flanges can be attached to the valve and tightened prior to installation. Then the entire assembly can be dropped into place and secured with the split couplings.




*Right way to install pinch valve.*

6) Make sure that mating flanges are smooth and properly de-burred.

7) Any sharp edges on the inside corner of mating flanges will cut the rubber sleeve causing premature failure.




*Split couplings make valve service easy!*

8) Inspect the valve before installation. **Do not install a damaged valve.** Check inside valve to be sure no foreign objects are present.

9) Do not install valve near a source of extreme heat.

10) Locate the valve where it can be reached for service.

11) Be sure pipe line is clean. Foreign material left in the pipe can damage valve. Remove any residual gasket material from mating flanges.

12) Install valve with drain port facing down.

13) A gaskets is required onlyon the down stream side of the valve.

14) Bolt the valve into the pipe line. Snug the bolts gently in a criss cross pattern. Do not use excessive torque on flange bolts. Max torque required is 40 ft lb.

15) **Sleeve Replacement:**

a) Relieve pressure and drain process pipe.

b) Remove the valve from the pipe.

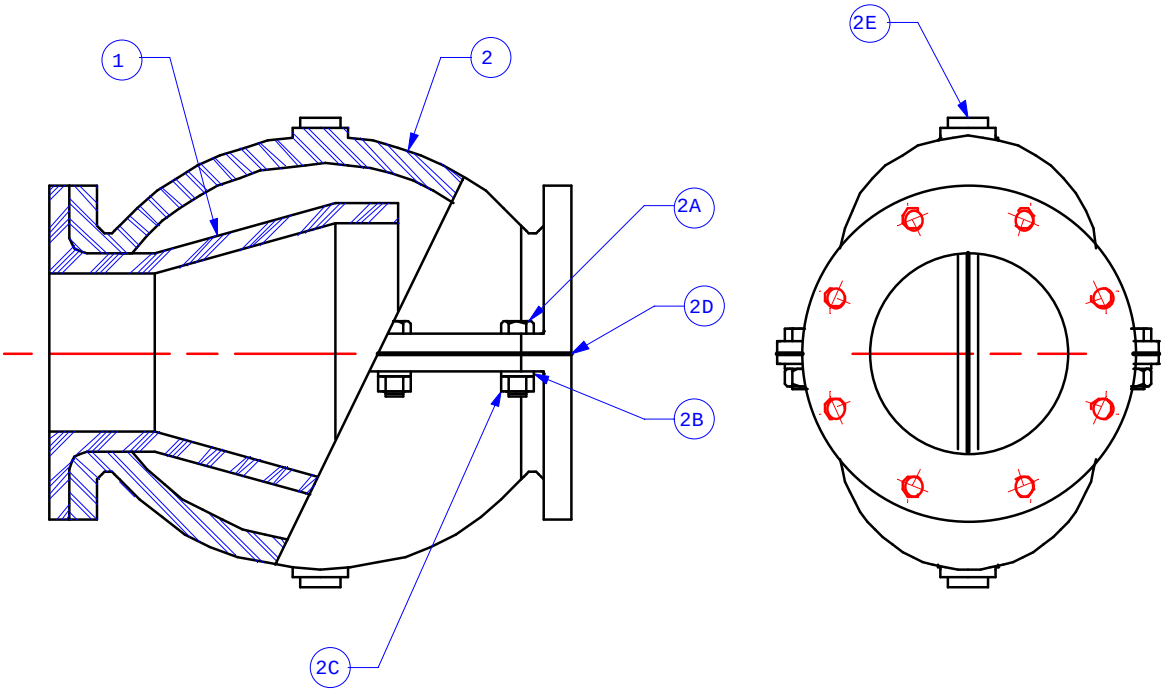
c) Remove the bonnet bolts (#2A, 2B, 2C) and separate the bonnet sections (#2).

d) Remove the old rubber sleeve (#1).

e) Insert the new sleeve into the housing.

f) Replace housing gaskets (#2D).

g) Reassemble the housing assembly. Replace the housing bolts, washers, and nuts.




| | | |
|---|---|---|
| 1 | SLEEVE | Elastomer & POLYESTER FABRIC |
| 2 | BONNET | CAST IRON ASTM# A126 C1-35 |
| 2A | BOLT | CARBON STEEL GALVANIZED GRADE 5 |
| 2B | WASHER | CARBON STEEL GALVANIZED GRADE 5 |
| 2C | NUT | CARBON STEEL GALVANIZED GRADE 5 |
| 2D | GASKET | NEOPRENE |
| 2E | PLUG | GALVANIZED IRON |

Ph: 856-829-2888
Fax: 856-829-3080
Web: www.onyxvalve.com