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Rev 06/23/26 Note: The Colonial 8” Wafer Check valve should be used only with LASCO / Westlake Flange part No 854-080FT. See bottom of page 2 for specific instructions. For other sizes, any brand of ASTM Sch 80 PVC Flanges are suitable.

PLEASE READ THE FOLLOWING INFORMATION PRIOR TO INSTALLING AND USING COLONIAL VALVES and STRAINERS, AND OTHER ASSOCIATED PRODUCTS. FAILURE TO FOLLOW THESE INSTRUCTIONS MAY RESULT IN SERIOUS INJURY.

1. Colonial Valve guarantees its products against defects in material and workmanship only. Colonial Valve assumes no responsibility for damage or injury resulting from improper installation, misapplication, or misuse of any product.
2. Colonial Valve assumes no responsibility for damage or injury resulting from chemical incompatibility between its products and the process fluids to which they are subjected. Compatibility charts provided in Colonial Valve literature are based on ambient temperatures of 70°F and are for reference only. Customer should always test to determine application correctness.
3. Consult Colonial Valve literature to determine operating pressure and temperature limitations before installing any Colonial Valve product.
4. **Note that the maximum recommended fluid velocity through any Colonial Valve product is eight feet per second.** Higher flow rates can result in possible damage due to water-hammer effect. **Consult with the adjoining pipe and pipe-fittings manufacturers' installation instructions to determine the maximum flow velocity for your piping system.** Also note that maximum operating pressure is dependent upon material selection as well as operating temperature. Colonial Valve products are designed primarily for use with non-compressible liquids. **They should NEVER be used or tested with compressible fluids such as compressed air or gas.**
5. Systems should always be depressurized and drained prior to installing or maintaining valves.
6. Temperature effect on piping systems should always be considered when the systems are initially designed. Piping systems must be designed and supported to prevent excess mechanical loading on Colonial Valve equipment due to system misalignment, weight, shock, vibration, and the effects of thermal expansion and contraction.
7. Because PVC and CPVC will have reduced impact resistance and flexural strength as temperatures approach 32°F (0°C) and lower, caution is recommended if using pipe, valves or fittings below this temperature
8. **Install the valve no closer than 5 pipe diameters from a pump, directional-changing fitting, or other sources of turbulence.**



**WARNING: Cancer and Reproductive Harm –** [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov)

Colonial 601 Series PVC Wafer Check Valves are designed to fit between two ANSI B16.5, Class 150 Flanges. The valves contain o-ring seals that mate with the flange sealing surface, so no gaskets are required for installation. The valves feature locating ears that center the valve during installation.

No spacers are required when installing with Sch 80 flanges.

**FLANGE CONNECTION:** Lubricate all threads. For Stainless Steel, use Anti-Seize lubricant that is approved for use with PVC .

Use properly sized flat washers under every nut and bolt head. Failure to do so may lead to premature flange failure due to high stress concentrations. See Table below for proper bolt, nut and washer sizes, and torque.

| Pipe Size (in) | No. of Bolt Holes | Hex Head Bolt Size* | Hex Head Bolt Length (in)* | Hex Nut Size | Flat Washer Size | Required Torque (FT.-LBS) |
|----------------|-------------------|---------------------|----------------------------|--------------|------------------|---------------------------|
| 2-1/2          | 4                 | 5/8-11              | 4                          | 5/8          | 5/8              | 20-30                     |
| 3              | 4                 | 5/8-11              | 4                          | 5/8          | 5/8              | 20-30                     |
| 4              | 8                 | 5/8-11              | 4.5                        | 5/8          | 5/8              | 20-30                     |
| 6              | 8                 | 3/4-10              | 5.50                       | 3/4          | 3/4              | 33-40                     |
| 8              | 8                 | 3/4-10              | 6                          | 3/4          | 3/4              | 33-40                     |

\*When using PVC Van Stone (loose-ring) type flanges

# 601 Series Wafer Check Valve 2-1/2 – 8” IOM\_Rev\_062326

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## Precautions

Clean and inspect flange sealing surfaces for dents and any other damage prior to assembly. Bolts and nut threads should be clean and lubricated. Make sure bolt holes freely align and that flange faces are parallel to each other. Make sure that one end of the system is free to move enough to allow the faces to contact the valve-seals during tightening. Do not hang excessive weight from a flange. These steps need to be taken to prevent mechanical loading on the pipe and flanges. Tighten nuts in small increments with a wrench holding the bolt head and a torque wrench tightening the nut. Flange faces must remain parallel during bolt-tightening. Uneven tightening and / or over-torquing will damage flanges. Tighten in a sequential, crisscross manner.

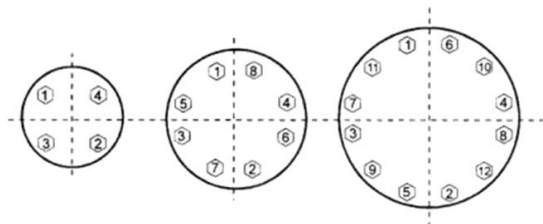
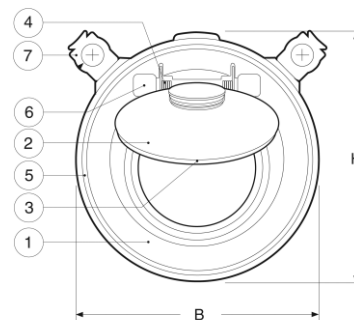


Illustration A



Pressure rated up to 150 psi for sizes 2-1/2 – 8” (non-shock water at 73° F).

## Maintenance: (Refer to Illustration A).

O-rings can be replaced by simply removing the valve from the flanged connection. The two-body O-rings (5) and disc o-ring (3) will be accessible.

## To disassemble for further maintenance:

After removing from the flanged connection, hold the disc (2) out in the open position while also grasping the body (1).

Pull the disc outward. This will release the hinge plugs (6) and allow the disc to separate from the body. You can now slip the spring (4) off of the disc-hinge.

Be sure to install with the **FLOW ARROW** in the correct direction

For horizontal installation, be sure to install with locating **EARS (7)** positioned upwards and level as shown in Illustration A above.



## Part Numbers – Valves

| SIZE  | PVC/EPDM | PVC/FKM | Ctn Qty | Wgt (lbs) | Cracking Pressure | Sealing (back) pressure required | Cv* Values | EPDM O-ring Kit | FKM O-ring Kit | SPRING  | DISC    | Hinge plugs and Locating Ears (Kit) |
|-------|----------|---------|---------|-----------|-------------------|----------------------------------|------------|-----------------|----------------|---------|---------|-------------------------------------|
| 2-1/2 | V27601N  | V27602N | 1       | 0.40      | 0.5 psi           | 0.02 psi                         | 98         | V27601NR        | V27602NR       | V27601S | V27601D | V27601H                             |
| 3     | V30601N  | V30602N | 1       | 0.50      | 0.5 psi           | 0.02 psi                         | 167        | V30601NR        | V30602NR       | V30601S | V30601D | V30601H                             |
| 4     | V40601N  | V40602N | 1       | 0.80      | 0.5 psi           | 0.02 psi                         | 281        | V40601NR        | V40602NR       | V40601S | V40601D | V40601H                             |
| 6     | V60601N  | V60602N | 1       | 2.30      | 0.5 psi           | 0.02 psi                         | 620        | V60601NR        | V60602NR       | V60601S | V60601D | V60601H                             |
| 8     | V80601N  | V80602N | 1       | 4.45      | 0.5 psi           | 2.00 psi                         | 1200       | V80601NR        | V80602NR       | V80601S | V80601D | V80601H                             |

## Part Numbers – Repair-parts

**SPECIAL INSTRUCTIONS FOR 8” VALVE:** To ensure that the socket-bottom of the flange covers the corners of the hinge-plugs (Pic 1 below), the valve must be positioned upward between the flanges, so that the 3/4” flange-bolts are in contact with the bottom of the locating ear-holes. Use a 1/8” Hex Wrench as a gage in both of the locating ear-holes to make sure the valve is properly positioned (Pic 2 below). The Hex wrench should fit between the top of the bolt and the top of the hole.

Use **LASCO / Westlake Flange 854-080FT** for proper retention of hinge-plugs.

Pic 1



Pic 2

