



POWER  
VALVE-CONTROLLED

## PVC

**SIZES:** 2" – 12" (DN50 to DN300) (d63 to d315)

**SEALS:** EPDM, VITON

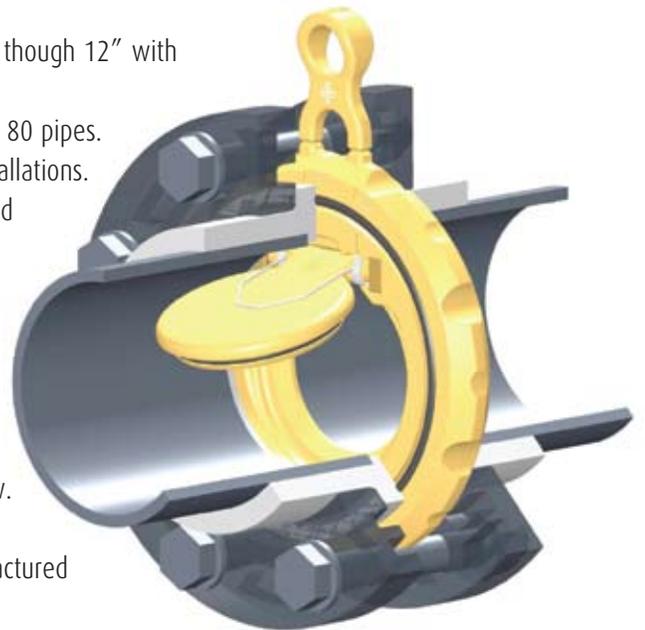
**SPRING:** 316 Stainless Steel, Hastelloy C-4 (on request)

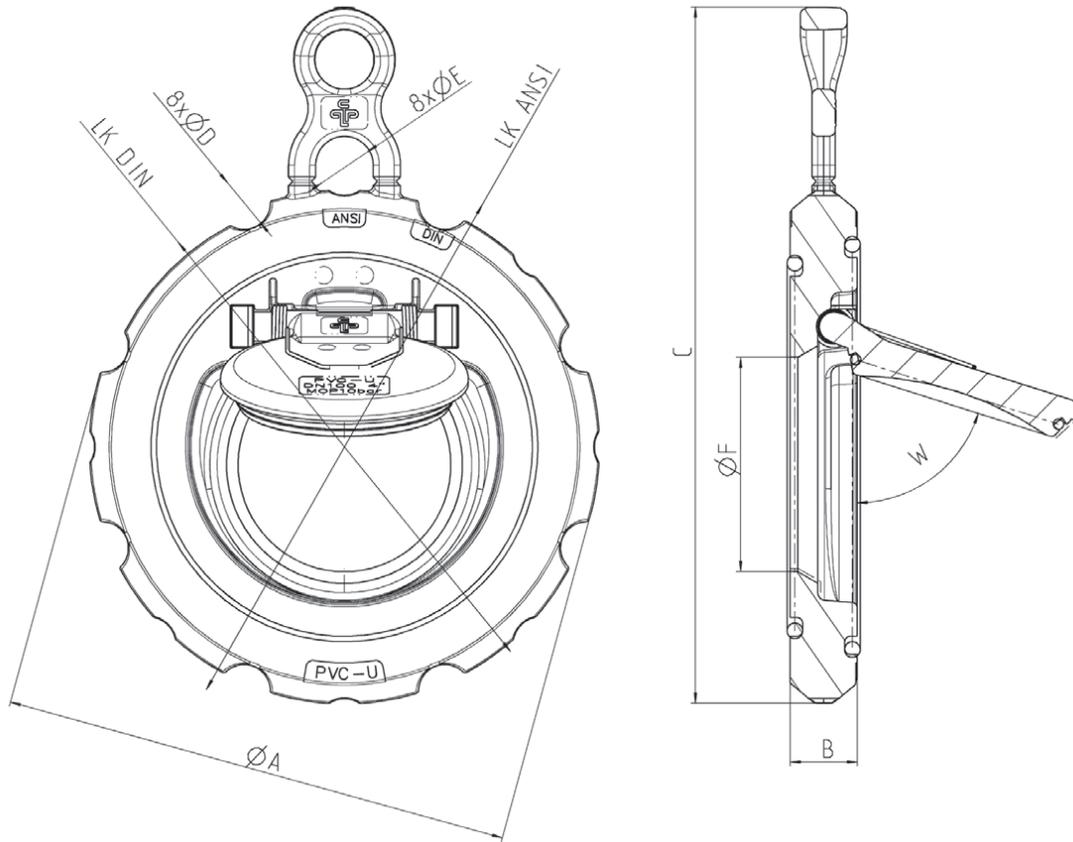
## Features:

- No spacers required in both ANSI and DIN piping
- Engineered and molded with improved hinge and spring design
- Improved flow rates
- Easy spring installation without any special tool requirements
- Maximum operating temp 60°C - 140°F
- Full seal at 10 feet of water
- New disc design with conical sealing surface for highest reliability and maximum operating cycles
- Flooded flapper hinge pins avoid sediment build up
- Cylindrically embedded flapper hinge pin for optimal stress absorption
- Easy installation due to integrated flange bolt guides for DIN2501 PN10 and ANSI Class 150
- Integrated installation lifting eyelet with FLOW ARROW with defined breaking point for easy removal after installation.
- Can be installed horizontally or vertically
- Rated to 150 psi on 2" – 8" sizes
- Rated to 115 psi on 10" – 12" sizes
- CRN No.: 0C17876.2

## Sample Specifications

- All Praher K6 thermoplastic wafer check valves shall be available in sizes 2" though 12" with maximum operating pressure of 150 psi at 72° F, non-shock.
- The valve does not require a spacer for full disc opening performance in SCH 80 pipes.
- Valves shall have a single disc design suitable for horizontal and vertical installations.
- Valves shall have a self-cleaning disc design with contoured inlet and improved disc seating (sealing) characteristics.
- Valves shall be equipped with a replaceable 316 Stainless steel spring for vertical installations.
- Valves shall have a flooded disc hinge pin pocket for improved life cycle performance in contaminated fluids.
- Valves shall be of round body design with incorporated notches for flange bolt alignment and incorporated valve lifting eyelet with flow direction arrow.
- All seals shall be EPDM (NSF/ANSI 61) or FKM (Viton)
- All thermoplastic K6 series thermoplastic wafer check valves shall be manufactured with PVC (ASTM D1784, Cell Classification 12454) with NSF 14/61 approval.
- Valves shall be wafer style conforming to ASME/ANSI B16.1 for 150 Lbs. and DIN flanges.





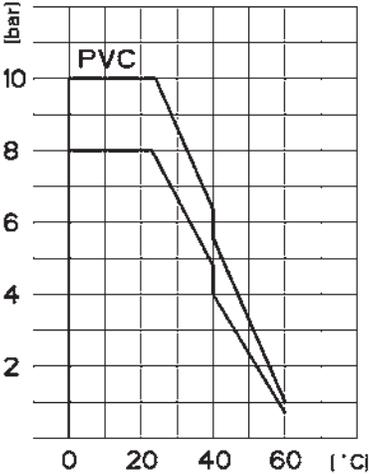
| DIMENSIONS: INCHES |     |     |       |      |       |        |      |         |      |      |
|--------------------|-----|-----|-------|------|-------|--------|------|---------|------|------|
| Size               | DN  | d   | ØA    | B    | C     | LK DIN | ØD   | LK ANSI | ØE   | ØF   |
| 2"                 | 50  | 63  | 4.29  | 0.71 | 6.28  | 4.92   | 0.71 | 4.75    | 0.75 | 1.30 |
| 2 1/2"             | 65  | 75  | 5.12  | 0.79 | 7.28  | 5.71   | 0.71 | 5.50    | 0.75 | 1.65 |
| 3"                 | 80  | 90  | 5.75  | 0.79 | 7.89  | 6.30   | 0.71 | 6.00    | 0.75 | 2.09 |
| 4"                 | 100 | 110 | 6.89  | 0.91 | 9.34  | 7.09   | 0.71 | 7.50    | 0.75 | 2.87 |
| 5"                 | 125 | 140 | 7.80  | 0.98 | 10.33 | 8.27   | 0.71 | 8.50    | 0.87 | 3.66 |
| 6"                 | 150 | 160 | 8.78  | 1.18 | 11.37 | 9.45   | 0.87 | 9.50    | 0.87 | 4.33 |
| 8"                 | 200 | 225 | 11.02 | 1.34 | 13.71 | 11.61  | 0.87 | 11.75   | 0.87 | 5.91 |
| 10"                | 250 | 280 | 13.50 | 1.65 | —     | 13.78  | 0.87 | 14.25   | 1.00 | 7.32 |
| 12"                | 300 | 315 | 16.00 | 1.85 | —     | 15.75  | 0.87 | 17.00   | 1.00 | 9.02 |

| DIMENSIONS: DEGREES |                   |              |           |
|---------------------|-------------------|--------------|-----------|
| Size                | Opening angle (W) |              | Cv Values |
|                     | Sch. 40 pipe      | Sch. 80 pipe |           |
| 2"                  | 79.5              |              | 49        |
| 2 1/2"              | 72                | 63           | 73        |
| 3"                  | 79.5              | 72           | 122       |
| 4"                  | 76                | 69           | 253       |
| 5"                  | 75                | 68           | 422       |
| 6"                  | 78.5              | 71           | 572       |
| 8"                  | 73                | 66           | 1095      |
| 10"                 | 75.5              | 68.5         | 1798      |
| 12"                 | 75                | 68.5         | 2865      |

| Opening pressure (with spring) |            |          |
|--------------------------------|------------|----------|
| Size                           | Horizontal | Vertical |
| 2"                             | 0.17       | 0.29     |
| 2 1/2"                         | 0.17       | 0.29     |
| 3"                             | 0.17       | 0.29     |
| 4"                             | 0.17       | 0.29     |
| 5"                             | 0.19       | 0.36     |
| 6"                             | 0.19       | 0.36     |
| 8"                             | 0.19       | 0.36     |
| 10"                            | 0.20       | 0.44     |
| 12"                            | 0.20       | 0.44     |

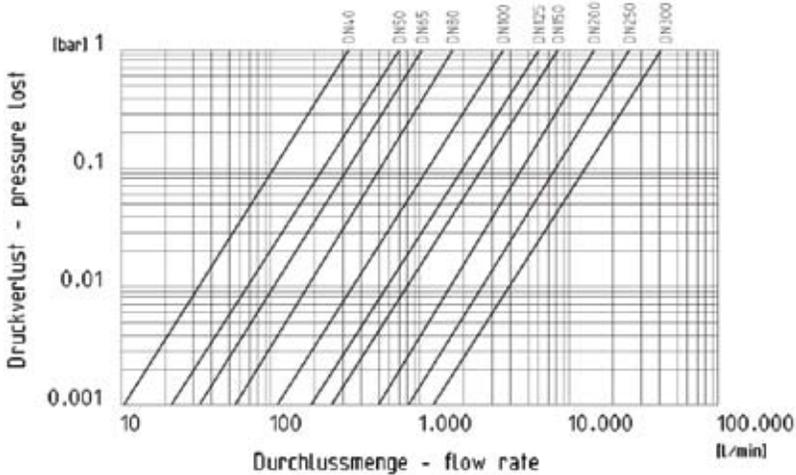
| Opening pressure (without spring) |            |          |
|-----------------------------------|------------|----------|
| Size                              | Horizontal | Vertical |
| 2"                                | 0.03       | 0.15     |
| 2 1/2"                            | 0.03       | 0.15     |
| 3"                                | 0.03       | 0.15     |
| 4"                                | 0.03       | 0.15     |
| 5"                                | 0.04       | 0.22     |
| 6"                                | 0.04       | 0.22     |
| 8"                                | 0.04       | 0.22     |
| 10"                               | 0.06       | 0.29     |
| 12"                               | 0.06       | 0.29     |

### Pressure - temperature diagram



from 40°C increased safety factor

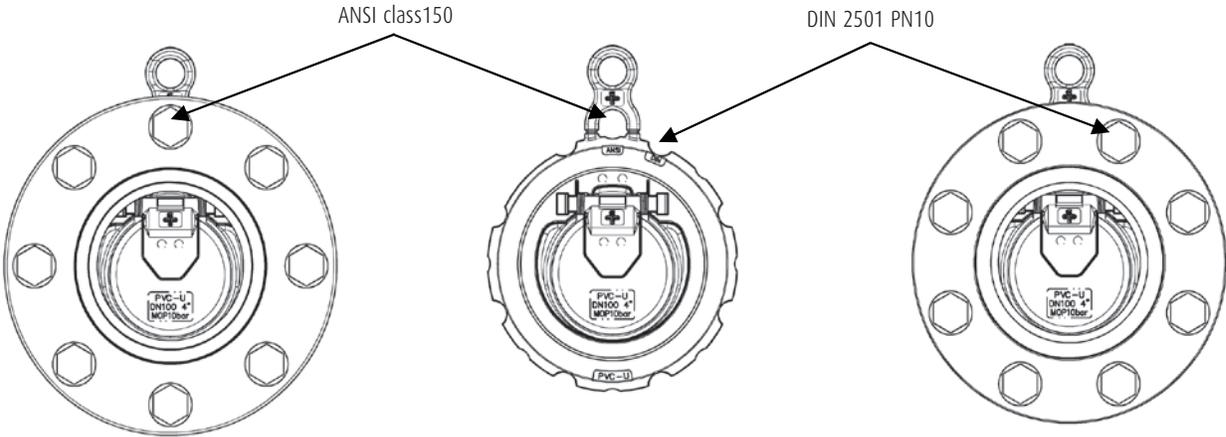
### Pressure loss diagram



Measurements implemented as per DIN EN 60534-2-3  
 Valves in pressure loss diagram obtained at max. opening angle with PVC 145 psi pipes and flow medium water at 20°C/68°F.

### Valve centering in the piping system:

The valve will be centered by the flange bolts. ANSI and DIN markings on the valve identify which pattern matches which flange system. The picture below shows the different bolt patterns in relation to the valve.



| TORQUE (INCH LBS.) |        |
|--------------------|--------|
| Size               | Torque |
| 2"                 | 174    |
| 2 1/2"             | 174    |
| 3"                 | 174    |
| 4"                 | 174    |
| 5"                 | 218    |
| 6"                 | 261    |
| 8"                 | 305    |
| 10"                | 348    |
| 12"                | 392    |

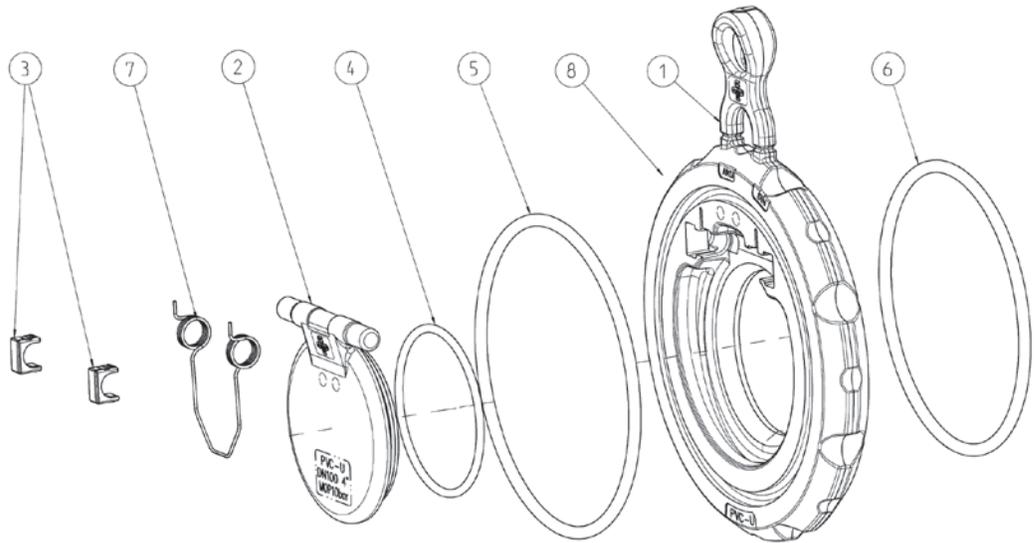
### Tightening Torque of screws for flange connections

Bolts should be tightened in alternative diagonal sequence with an equal torque

1. Tighten the bolts by hand in order to ensure an equal alignment of the sealing surfaces.
2. First, tighten bolts to 50% of the recommended torque in alternative sequence (diagonal).
3. Then, tighten the bolts further to 80% of the recommended torque in alternative sequence (diagonal).
4. Finally, tighten the bolts to the recommended torque.

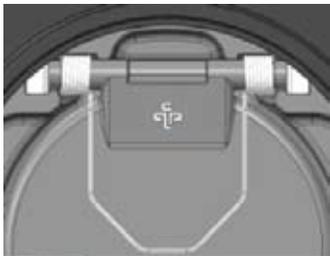
## Parts List/Diagram

1. Body
2. Flapper
3. Flapper clip
4. Flapper O-Ring
5. Body O-Ring, front
6. Body O-Ring, back
7. SS Spring
8. Label



## Installation Precautions:

- Valves are suitable for horizontal or vertical installations
- Before mounting onto a pipeline we recommend checking for any damages exist on the flapper clips, O-Rings and spring.
- To guarantee optimum flap opening angle please make sure the flange is centered and the flapper clips are covered by the flange ring (see picture).



Cover Flap clip

- The installed PVC hinge bolt (1-1/2" - 8" sizes) or galvanized stainless steel hinge bolt (10" & 12" sizes) will assist in centering the valve and can be removed after installation.
- No direct mounting onto a pump, bend or elbow
- Install a minimum of five times the nominal pipe diameter away from pumps, bends or elbows.  
(Example: Install a 4" valve 20" away from a pump discharge.)

### Please note:

- Do not use valves without springs for pulsating applications.
- Flapper clips are meant for holding the flapper in place and not as a safety lock of the flapper during transportation. Therefore, the flapper clips may become loose due to improper handling, storage and transportation. The correct positioning of the flapper clips, O-Rings, and spring has to be verified before mounting the wafer check onto a pipeline.

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**Praher Plastics Canada Ltd.**

Tel 705.725.1100

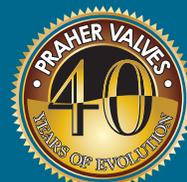
Fax 705.725.0444

101 Saunders Road

Barrie, Ontario, Canada L4N 9A7

[www.praherplastics.com](http://www.praherplastics.com)

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