

# WHEATLEY Valves – Short Pattern Wafer Check Valve

Installation, Operation, and Maintenance Manual



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File copies of this manual are maintained. Revisions and/or additions will be made as deemed necessary by Cameron. The drawings in this book are not drawn to scale, but the dimensions shown are accurate.

**BILL OF MATERIALS**

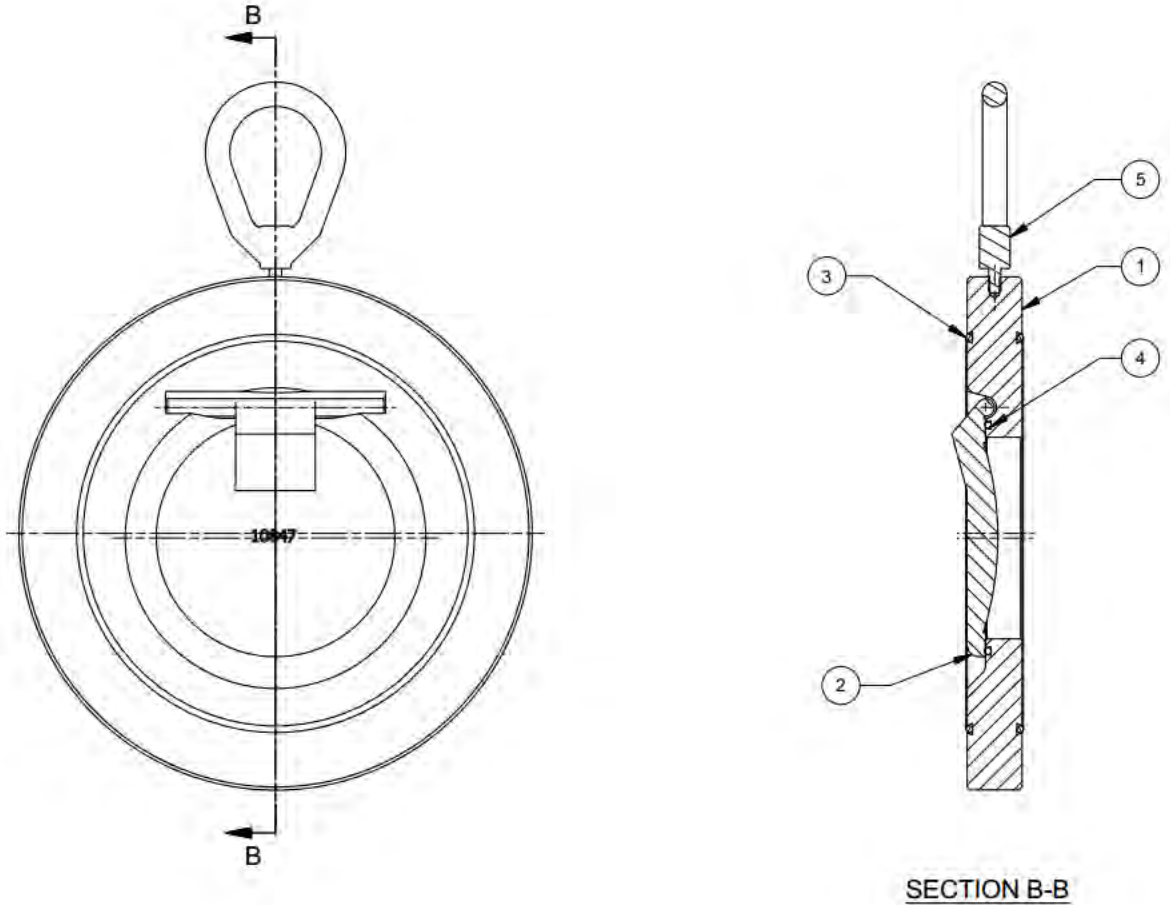


Table 1 – WHEATLEY® Short Pattern Wafer Check Valve Parts List

Item	Description
1	Body
2	Clapper
3	Body O-Ring (x2)
4	Seat O-Ring
5	Eye Bolt

## SCOPE

The Wheatley short-pattern wafer check valve is a lightweight, compact design ideal for backflow prevention in gas and liquid application. The wafer check valve clapper can open approximately 50° out when the bore of the adjoining outlet flange (downstream) is equal to the bore minimum. If a larger-bore flange is used, the maximum possible clapper angle can be increased. However, since drop-in type clappers are retained by the flange face, too large a bore will result in the clapper falling out of the valve. As a result, this model cannot be used with a slip-on flange on the downstream side.

## INSTALLATION AND OPERATION PROCEDURES

### BEFORE ASSEMBLY SAFETY INFORMATION



CAUTION

#### READ CAREFULLY BEFORE INSTALLING OR OPERATING THE VALVE

Hazards are inherent with the construction, operation, and maintenance of high pressure piping systems. The following information and precautions are provided to minimize these hazards:

1. The valve's nameplate indicates maximum operating pressure as well as minimum and maximum operating temperatures. The valve may be safely operated within these limits.
2. The valve has been factory pressure tested based on the nameplate maximum operating pressure.
3. Valve assembly includes a lifting eye which shall be used for lifting purpose. Always follow local safety regulations when lifting heavy valves.
4. WHEATLEY valves are designed, manufactured, and tested under a certified quality system. Only quality parts and materials are used in the assembly of WHEATLEY valves. Pressure containing components are suitable for the minimum temperature marked on the nameplate. Factory certification is available.
5. If the valve, in service, is exposed to hazards such as corrosive or abrasive fluids or atmospheric conditions, contact the factory, to confirm that the valve design is suitable for the application. The factory requires a complete description of the hazard before making any recommendations.
6. The valve has been designed and manufactured so that under normal operating conditions hazards such as material fatigue, brittle fracture, creep rupture, or buckling will not occur. Do not operate the valve beyond the pressures and temperatures marked on the nameplate. The factory requires a complete description of the hazard before making any recommendations.
7. The user is responsible for minimizing other hazards associated with the construction, operation and maintenance of high pressure piping systems, such as:
  - a. Provisions for the release or blow off of pressure
  - b. Prevention of physical access to system under pressure

- c. Prevention of physical access to surfaces of extreme temperature
- d. Provisions for inspection
- e. Provisions for draining and venting
- f. Provisions for filling
- g. Provisions for equipment access
- h. Prevention of over-pressurization, over-heating, and over-filling
- i. Provisions for fault indication

8. The user is responsible for meeting applicable local safety regulations.

NOTE: If system hydrostatic tests are to be performed at pressures exceeding the rated working pressure of the valve, the valve should be pressurized from the upstream side. This prevents exposure of the clapper to these pressures while the body cavity can accept up to 150% rated working pressure. Care must be taken not to damage the seal faces and that they are clean for assembly.

### HORIZONTAL INSTALLATION

When installing the swing check valve in the horizontal position, install the valve with the arrow mark on the body pointing in the direction of flow.

Flow through the valve (in the direction of the arrow mark) forces the clapper to lift. The clapper seals the valve when the flow is reversed. Gravity causes the clapper to swing closed when no flow is present.

### VERTICAL INSTALLATION

When installing the swing check valve in vertical piping, install the valve with the arrow mark on the body pointed in the upward direction. Upward flow through the valve will cause the clapper to swing open. This valve cannot be used with vertical downward flow.

If there is no flow through the piping, gravity will keep the clapper in the closed position. Flow through the piping in the upward direction will cause the clapper to swing open. When the flow is reversed, the flow and weight of the clapper will automatically close the valve.

### MAINTENANCE PROCEDURES



**CAUTION:** Safety practices for pressurized equipment must be followed and address hazards inherent in pressurized systems. Extreme caution and safety procedures are to be exercised whenever valves, or fittings on a valve, are serviced or maintained.

The frequency of the maintenance depends on the service conditions. Please contact the factory regarding the maintenance schedule for particular service conditions.

## DISASSEMBLY

No special tools are required to disassemble the valve. **With all pressure removed from the associated piping system**, the valves can be serviced offline.

During maintenance, the swing check valve should be isolated from and relieved of all pressure on both the upstream and downstream sides. Ensure all line pressure is relieved before removing the valve from the pipeline.

This valve can be only maintained offline and the valve should be removed from the pipeline.

Inspect the clapper and body seating surface for possible scoring marks or damage. These surfaces must be smooth. During maintenance, replace the clapper seal with a new seal. Inspect the body O-rings seal for damage.

## REASSEMBLY

Reassemble the valve in accordance with the following instructions.

1. Install seal (3) into body (1).
2. Install seal (4) into groove.
3. Thread eye bolt (5) into body (1) and tighten.
4. Install clapper (2) into body (1).

## CONTACT INFORMATION

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**For more information:** <https://www.products.slb.com/valves/check-valves>