

**Series 20276 IOM**

REVISION: 1  
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**INSTALLATION, OPERATION  
AND MAINTENANCE FOR  
SHARPE® SERIES 20276  
SWING CHECK VALVES**

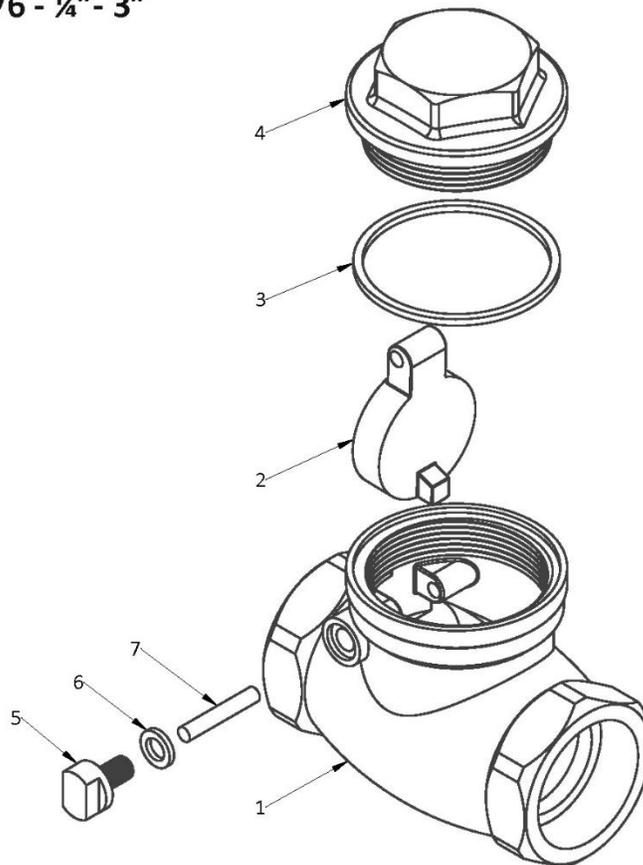


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## Sharpe® Series 20276

Series 20276 - ¼"- 3"



No.	Part Name	Qty	Material
1	Body	1	316 Stainless Steel
2	Disc	1	316 Stainless Steel
3	Seal	1	PTFE
4	Bonnet	1	316 Stainless Steel
5	Plug	1	316 Stainless Steel
6	Seal	1	PTFE
7	Pin	1	316 Stainless Steel

## INSTALLATION

Sharpe® brand check valves have been designed and engineered to provide long lasting and trouble-free service when used in accordance with the instructions and specifications herein.

### • General

- The following instructions only refer to Sharpe® brand standard valves as described in this document.
- Keep the protective covering in place until the moment of installation. Valve performance depends upon the prevention of damage to the sealing surfaces. Upon removal of the cover, make sure that the valve is completely open and free of obstructions.
- When shipped, valves may contain a silicon based lubricant which aids in the assembly of the valve.

### • Safety Precautions

- Before removing valve from pipeline: media flowing through a valve may be corrosive, toxic, flammable, or of a contaminant nature. Where there is evidence of harmful fluids having flowed through the valve, the utmost care must be taken. It is suggested that at least the following safety precautions should be taken when handling the valves. More precautions may be required, refer to the media's Safety Data Sheet for additional precautions.
  1. Always wear eye shields
  2. Always wear gloves and overalls
  3. Wear protective footwear
  4. Wear protective headgear
  5. Ensure that running water is easily available
  6. Have suitable fire extinguisher ready if the media is flammable
- By checking line gauges, ensure that no pressure exists on either the upstream or the downstream sides of the valve.
- Ensure that any media is released.
- Ideally, the valve should be decontaminated.

## OPERATION

- Sharpe® brand valves are designed to be used under normal conditions and in accordance with Sharpe® valves published pressure/temperature charts.
  - Valves are metal seated so, per the testing standard, there is an allowable through leakage.
- Any media which might solidify, crystallize or polymerize should not be allowed to stand in the valve cavities unless regular maintenance is provided.

### • Operation

- Sharpe® check valves are automatically opened or closed by fluid flow; allowing flow in the preferred direction and preventing flow in the reverse direction.

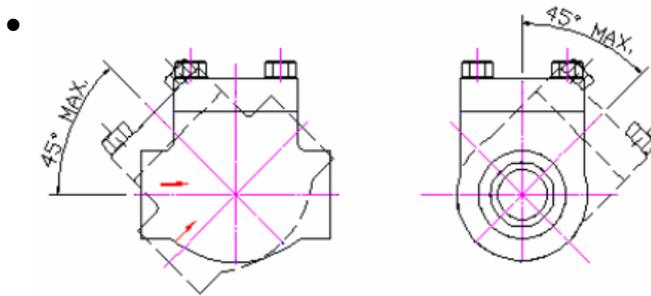
## STORAGE

- Valves shall be stored in a dry warehouse, with end covers installed.
- For long term storage, valves shall be checked periodically, and cleaned to remove dirt and foreign material. Special care shall be taken for the cleanliness of seat surfaces, to prevent damage to the seat and disc

## INSTALLATION

- ASC Engineered Solutions cannot anticipate all of the situations a user may encounter while installing and using the valve.
  - The user must know and follow all applicable industry specifications and government regulations for the safe installation and use of these valves.
  - Only qualified personnel or technicians who are trained for maintenance work and have read the instructions are to install the valve.
  - Misapplication of the product may result in injuries or property damage of which ASC Engineered Solutions is not liable for.
- Before installing the valves:
    - The pipes must be flushed clean of dirt, burrs and welding residues, or you will damage the seats and sealing surfaces.
    - Check the valve identification tag carefully to verify that it is the correct valve for the application.
    - Check inside passage and seal surface of the valve. Clean as necessary to remove all dirt and foreign material.

- When installing the valve, make sure that the flow arrow on the valve points in the required direction of flow.
- These valves should be installed using good pipe fitting practices.
- All check valves should be installed at least ten pipe diameters away from upstream pumps, elbows, fittings or equipment.
- Check valves should be installed with bonnet up and angle of incline should be no more than 45° from horizontal. Also the roll angle of the valves bonnet should be no more than 45° from side to side.



- For vertical installation of the check valve, the flow must be in an upward direction so the disc seats when flow is reduced. The upstream pressure must exceed the cracking and downstream back pressure or else the swing arm and disc will not open. Low flows can cause disc chatter, wear of seat and disc, and erosion.
- For threaded ends
  - It is recommended to use a suitable joint compound or PTFE tape on pipe threads for ease of fit-up.
- For socket weld ends
  - Be sure the ends of the pipe that are to be welded are clean to the bare metal. Any contaminants in the weld area could cause porosity in the weld.
  - Where possible, attach the electrical ground to the adjoining pipe on the same side of the valve as the weld being made. Do not attach the ground to the structure of the valve as arcing across the valve seating surfaces could occur.
  - Position the valve in your piping scheme, being sure you achieve the standard end gap from the end of the pipe to the end of the valve.
  - Tack weld the valve in place taking care to monitor the temperature through the process in the critical areas like the bonnet seal area so they do not exceed 350°F because the seals are PTFE. The temperature can be monitored with Tempilstik or Pyrometer.

- Immediately cool all portions of valve and pipe so the parts are cool to the touch. Non oily shop air or air convection can accomplish this.
- Tightly wrap a damp cotton shop towel or cloth around the valve exposing only the ends needing welding.
- Alternate weld passes end to end allowing the valve and weld to cool between passes. Cool the valve and weld by using a damp cotton shop towel or cloth or by quenching with cool water until the entire valve and weld area is cool to the touch.
- Monitor the temperature through the process in the critical areas like the bonnet seal area so they do not exceed 350°F because the seals and packing are PTFE. The temperature can be monitored with Tempilstik or Pyrometer.
- Remove the cloth that is wrapped around the body of the valve.
- It is HIGHLY recommended that the valve be flushed out while still in the open position after welding prior to any operating to prevent accidental damage to the internal components and surfaces.

## MAINTENANCE

### • General

- Sharpe® valves are designed to have a long, trouble-free life.
- The following checks should, however, help to extend valve life or reduce plant problems.

### • Leakage at Pipeline Joint

- *Threaded Valves:* Test for tightness of screwed thread. If loose, tighten with standard wrench - excessive force will only damage the connection. Normal jointing materials should be used in the correct quantity.
- *Welded Valves:* Examine welds for leakage point.

### • In-Line Leakage

- Check that the valve is fully closing. If it is, leakage may be due to a damaged seat or disc sealing surface and it will be necessary replace the valve.
  - ASC Engineered Solutions does not offer any repair parts for the 20276 swing check valve so if anything breaks or wears out beyond the warranty period replacing the valve is recommended.