



# SWING CHECK VALVE

## Installation Information

SK-3A-0516



Read all applicable instructions and procedures thoroughly before starting. Suitability of the intended service application must be determined prior to installation. Please review "Valves Product Guide & Engineering Specifications", in the Publication SSB-1, for important additional considerations related to valve installations. Plastic piping systems must be engineered, installed, operated and maintained in accordance with accepted standards and procedures for plastic piping systems. It is absolutely necessary that all design, installation, operation

and maintenance personnel be trained in proper handling, installation requirements and precautions for installation and use of plastic piping systems before starting.

Swing Check Valves are designed for horizontal installations, but may be installed in up-flow only vertical applications. Flanged ends are designed for connection to flanges having an ANSI Class 150 bolt pattern.

Caution: Valve must be installed with proper direction of flow. Do not install valve in upside down position. Swing Check Valves should be installed a minimum of 10 - pipe diameters from a pump.

Required materials: 1/8" thick, full-faced gasket suitable for the intended application, having a Shore-A durometer of approximately 60. Lubricated bolts, flat washers, and nuts as required for each end connection (see Bolt Specification Table).

**Step 1:** Position and support valve with flow arrows in desired direction. Flanges must be installed parallel face-to-face.

**Step 2:** With gaskets in place, install washers and lubricated bolts through mating flange and gasket into flange of Swing Check Valve. Install washers and nuts from valve-flange side of connection. Check alignment and make sure that the faces of mating surfaces are flush against the gasket prior to bolting down. Tighten nuts by hand until snug to hold assembly in place.

**Step 3:** Establish uniform pressure by tightening bolts to specifications in 5 ft-lb increments using a 180° opposing sequence (see Bolt Specification Table). Do not use bolts to bring together improperly mated flanges.

**Step 4:** Flush system and pressure test. Flanged connections may require additional tightening to specifications after initial pressure test.

### Bolt Specification Table

Valve Size	Flat Washers	Bolts & Nuts	Bolt Size	Min. Length*	Torque
3/4"	8	4	1/2	2	12 ft-lbs
1"	8	4	1/2	2-1/4	12 ft-lbs
1-1/2"	8	4	1/2	2-1/2	12 ft-lbs
2"	8	4	5/8	3	25 ft-lbs
2-1/2" - 3"	8	4	5/8	3-1/4	25 ft-lbs
4"	16	8	5/8	3-1/2	25 ft-lbs
6"	16	8	3/4	4	40 ft-lbs
8"	16	8	3/4	4-1/2	40 ft-lbs

\* = Bolt Length is based on mating Valve with Spears® brand flange. Length may vary with use of other flanges.

### Precautions And Warnings For All Valve Installations

**CAUTION:** The system must be designed and installed so as not to pull the valve in any direction. Pipe must be cut and installed in such a manner as to avoid all stress loads associated with bending, pulling, or shifting. Valve must be supported.

**CAUTION:** BEFORE THE VALVE IS CYCLED, all dirt, sand, grit or other material must be flushed from the system. This is to prevent scarring of internal components.

**LUBRICATION WARNING:** Some Lubricants, including vegetable oils, are known to cause stress cracking in thermoplastic materials. Formulation changes by lubricant manufacturers may alter compatibility of previously acceptable materials and are beyond our control. Lubricants are not required for installation of valves.

**WARNING:** Systems must not be operated or flushed out at flow velocities greater than 5 feet per second.

**WARNING:** NOT FOR DISTRIBUTION OF COMPRESSED AIR OR GAS

All air must be bled from the system during initial fluid fill. Pressure testing of the system must not be made until all solvent cement joints have properly cured. Initial pressure testing must be made at approximately 10% of the system hydrostatic pressure rating to identify potential problems, prior to testing at higher pressures.



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