



UTILITY SWING & SPRING CHECK VALVES



Sample Engineering Specification

All thermoplastic check valves shall be Utility Swing Check or Utility Spring Check type constructed from PVC Type I, ASTM D 1784 Cell Classification 12454. All valves shall be maintenance free seal unit construction with EPDM seat and weighted disc. All Spring Check Valves shall have stainless steel spring assisted operation. All valves shall have external flow arrow direction designation. All valves shall be certified by NSF International for use in potable water service. All valves shall be pressure rated to 150 psi for water @73°F in full flow (open) position and to 75 psi @ 73°F back pressure (closed), as manufactured by Spears® Manufacturing Company.

Features - PVC White & PVC Clear

Spears® Utility Swing Check and spring assisted Utility Spring Check Valves offer a compact, high performance check valve for Landscape & Irrigation, Pool & Spa, Aquaculture, OEM and many general purpose applications. These maintenance free sealed units feature long-life EPDM elastomer seats with weighted disc for full-flow with minimal restriction and positive shutoff. Spring assisted “Spring Check” model incorporates a positive-pressure spring to assist in valve closing without slamming. Produced from PVC White or PVC Clear material with Socket, Threaded or SR Threaded end connectors. Available in IPS Sizes 1/2" through 8" for Swing Check Valves and 1/2" through 4" for Spring Check Valves.

- Chemical & Corrosion Resistant PVC White or High Visibility PVC Clear Construction
- No Metal Parts on Swing Check - Stainless Steel Spring on Spring Check
- Maintenance Free Sealed Unit in a Compact Space Saving Design
- Engineered for Maximum Flow, Quick Response & Positive Shutoff
- Long-Life, High Grade EPDM Seat with Weighted Disc
- Spring Assisted Spring Check Model Option for Positive Closing
- Sizes 1/2" – 8" Pressure Rated to 150 psi @ 73°F Full-Flow (open) and 75 psi @ 73°F Back Pressure (closed)
- Suitable for either Horizontal or Vertical Up-flow Installations and Vacuum Service
- NSF Certified for Potable Water Use
- Silicone-Free Assembly

Quick-View Utility Swing Check Valve Selection Chart

| Valve Size | Seat Material | PVC Material ¹ | | | Pressure Rating |
|------------|---------------|---------------------------|-----------|-------------|--|
| | | Socket | Threaded | SR Threaded | |
| 1/2 | EPDM | S1520-05 | S1520-05F | S1520-05FSR | 150 psi @ 73°F Full Flow (Open) 75 psi Back Pressure (Closed) |
| 3/4 | EPDM | S1520-07 | S1520-07F | S1520-07FSR | |
| 1 | EPDM | S1520-10 | S1520-10F | S1520-10FSR | |
| 1-1/4 | EPDM | S1520-12 | S1520-12F | S1520-12FSR | |
| 1-1/2 | EPDM | S1520-15 | S1520-15F | S1520-15FSR | |
| 2 | EPDM | S1520-20 | S1520-20F | S1520-20FSR | |
| 2-1/2 | EPDM | S1520-25 | S1520-25F | S1520-25FSR | |
| 3 | EPDM | S1520-30 | S1520-30F | S1520-30FSR | |
| 4 | EPDM | S1520-40 | S1520-40F | S1520-40FSR | |
| 6 | EPDM | S1520-60 | S1520-60F | S1520-60FSR | |
| 8 | EPDM | S1520-80 | N/A | N/A | |

¹: For PVC Clear Swing Check, replace dash (-) separator with the letter "C" in the part number (e.g. S1520C05), (e.g. S1520C05F) or (e.g. S1520C05FSR)

Quick-View Utility Spring Check Valve Selection Chart

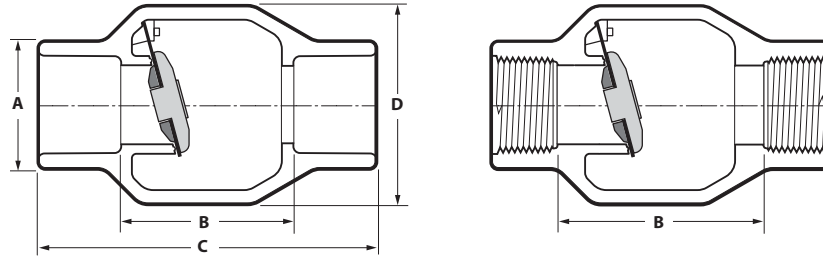
| Valve Size | Seat Material | PVC Material ¹ | | | Pressure Rating |
|------------|---------------|---------------------------|-----------|-------------|---------------------------------|
| | | Socket | Threaded | SR Threaded | |
| 1/2 | EPDM | S1580-05 | S1580-05F | S1580-05FSR | 150 psi @ 73°F Full Flow (Open) |
| 3/4 | EPDM | S1580-07 | S1580-07F | S1580-07FSR | |
| 1 | EPDM | S1580-10 | S1580-10F | S1580-10FSR | |
| 1-1/4 | EPDM | S1580-12 | S1580-12F | S1580-12FSR | |
| 1-1/2 | EPDM | S1580-15 | S1580-15F | S1580-15FSR | 75 psi Back Pressure (Closed) |
| 2 | EPDM | S1580-20 | S1580-20F | S1580-20FSR | |
| 2-1/2 | EPDM | S1580-25 | S1580-25F | S1580-25FSR | |
| 3 | EPDM | S1580-30 | S1580-30F | S1580-30FSR | |
| 4 | EPDM | S1580-40 | S1580-40F | S1580-40FSR | |

¹: For PVC Clear Spring Check, replace dash (-) separator with the letter "C" in the part number (e.g. S1580C05), (e.g. S1580C05F) or (e.g. S1580C05FSR)

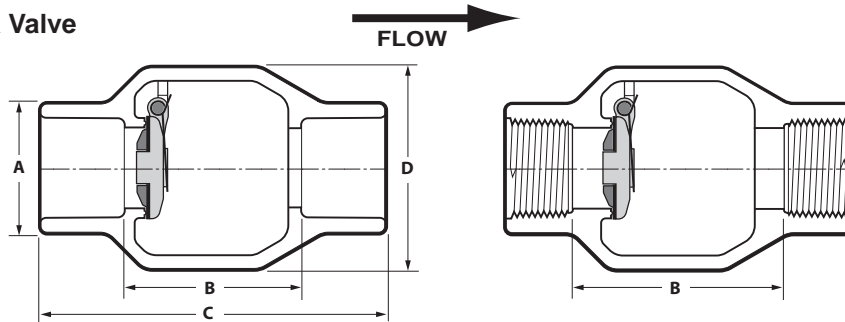
UTILITY SWING & SPRING CHECK VALVES



Utility Swing Check Valve



Utility Spring Check Valve



Dimensions

| Nominal Size | Dimension Reference (inches, ± 1/16) | | | | | |
|--------------|--------------------------------------|---------|----------------------|---------|----------|--------|
| | A | B | | C | D | |
| | | Socket | Threaded/SR Threaded | | Swing | Spring |
| 1/2 | 1-3/8 | 2-19/32 | 2-5/8 | 4-3/32 | 2-1/8 | 2-5/8 |
| 3/4 | 1-3/8 | 2-5/32 | 2-1/16 | 4-1/16 | 2-1/8 | 2-5/8 |
| 1 | 1-11/16 | 2-5/16 | 2-15/16 | 4-9/16 | 2-5/8 | 2-5/8 |
| 1-1/4 | 2-1/16 | 2-15/16 | 3-5/8 | 5-1/2 | 3-3/8 | 3-3/8 |
| 1-1/2 | 2-7/16 | 3 | 3-11/16 | 5-5/8 | 3-3/8 | 3-3/8 |
| 2 | 3 | 3-5/8 | 4-3/8 | 6-3/8 | 4-1/4 | 4-1/4 |
| 2-1/2 | 3-9/16 | 4-3/8 | 5-1/4 | 7-7/8 | 5-1/8 | 5-1/8 |
| 3 | 4-5/16 | 4-11/16 | 5-5/8 | 8-7/16 | 5-3/4 | 5-3/4 |
| 4 | 5-1/4 | 6 | 7-1/16 | 10-1/16 | 6-3/8 | 6-3/8 |
| 6 | 7-11/16 | 8-1/2 | 11-5/16 | 14-9/16 | 9-1/4 | N/A |
| 8 | 9-7/16 | 11-3/16 | N/A | 19-1/4 | 11-15/16 | N/A |

General Installation Information: Utility Swing check valves are designed for horizontal installations, but may be installed in up-flow only vertical position. Check valves **MUST** be installed with the valves **FLOW** arrow pointing in the direction of the flow. Do not install valve upside down. Flow velocity should not exceed 5ft./sec. Minimum opening pressure less than 0.5 psi.

Temperature Pressure Rating

| System Operating Temperature °F (°C) | | | 100 (38) | 110 (43) | 120 (49) | 130 (54) | 140 (60) | 150 (66) | 160 (71) | 170 (77) | 180 (82) | 190 (88) | 200 (93) | 210 (99) |
|--------------------------------------|-----------|-----|------------|-----------|-----------|-----------|-------------|-------------|------------|------------|------------|------------|------------|-----------|
| Valve Pressure Rating psi (MPa) | 1/2" - 8" | PVC | 150 (1.03) | 135 (.93) | 110 (.76) | 75 (.52) | 50 (.34) | -0- (-0-) | -0- (-0-) | -0- (-0-) | -0- (-0-) | -0- (-0-) | -0- (-0-) | -0- (-0-) |
| | | | 150 (1.03) | 140 (.97) | 130 (.90) | 120 (.83) | -110- (.76) | -100- (.70) | -90- (.62) | -80- (.55) | -70- (.48) | -60- (.41) | -50- (.34) | -0- (-0-) |