# COMPRESSION UTILITY SWING CHECK VALVES



## Sample Engineering Specification

All thermoplastic check valves Shall be Utility Compression Swing Check type constructed form 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 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.

## Quick-View Compression Utility Swing Check Valve Selection Chart

| Valve Size | Seat Material | PVC Material[1] Compression | Pressure Rating |
|---|---|---|---|
| 1/2 | EPDM | S1500-05 | 150 psi @ 73° F Full Flow (Open) 75 psi Back Pressure (Closed) |
| 3/4 | EPDM | S1500-07 | |
| 1 | EPDM | S1500-10 | |
| 1-1/4 | EPDM | S1500-12 | |
| 1-1/2 | EPDM | S1500-15 | |
| 2 | EPDM | S1500-20 | |
| 2-1/2 | EPDM | S1500-25 | |
| 3 | EPDM | S1500-30 | |
| 4 | EPDM | S1500-40 | |

1: For PVC Clear, replace dash (-) separator with the letter "C" in the part number (e.g. S1500**C**05).

## Features - PVC White & PVC Clear

Spears® Compresion Utility Swing Check Valves offer a compact, high performance check valve with EPDM gasketed compression-type ends for fast, convenient connection to virtual and IPS size pipe, plastic or metal. Maintenance-free sealed unit design features long-life EPDM elastomer seats and weighted disc for full flow with minimal restriction and positive shutoff. Produced from PVC White or PVC Clear with White compression end connectors and EPDM seats. Available in IPS Sizes 1/2" through 4".

- Standard Swing Check Assembly Maintains a Positive Seal
- Convenient Compression Ends for Quick Connections
- Engineered for Maximum Flow, Quick Response & Positive Shutoff
- Excellent for Pool & Spa, OEM and General Purpose Applications
- Compact, Space-Saving Design
- Replaceable PVC White or Clear Sealed Unit
- High Grade EPDM Seat
- Suitable for Horizontal or Vertical Up-flow Installations
- Pressure Rated to 150 psi @73° F Full Flow (open), 75 psi Back Pressure (closed)
- Maximum Service Temperature 140° F (temperature/pressure de-ratings apply)



## Compression Coupling Nut Wrenches

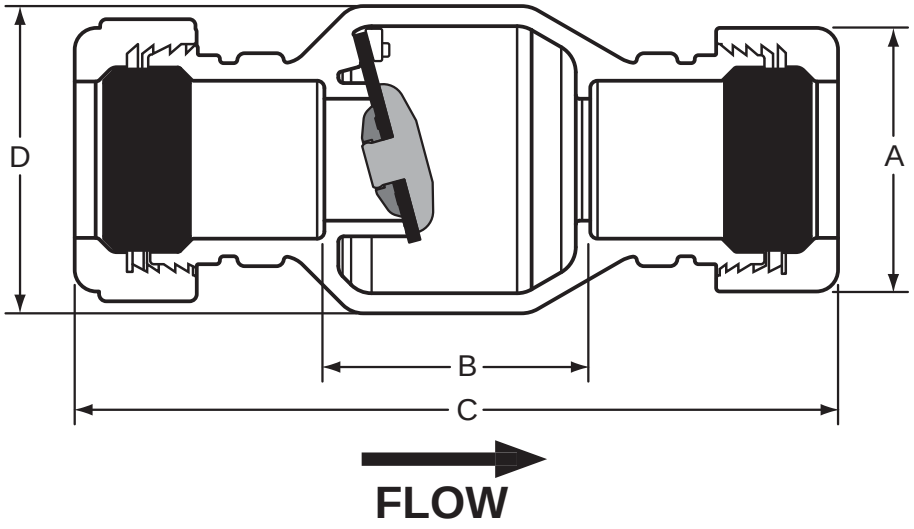
| Part Number | Size |
|---|---|
| CCW-005 | 1/2 |
| CCW-007 | 3/4 |
| CCW-010 | 1 |
| CCW-012 | 1-1/4 |
| CCW-015 | 1-1/2 |
| CCW-020* | 2 |
| CCW-030** | 3 |

* CCW-020 - Wrench also fits 2-1/2" Coupling Body
**CCW-030 - Wrench also fits 4" Coupling Body

## Compression Coupling Nut Wrench Sets

| Part Number | Size |
|---|---|
| CCW-000 | Set |
| Complete Set of Wrenches, Sizes 1/2" - 3" | |

# COMPRESSION UTILITY SWING CHECK VALVES




*WARNING: The compression joints provide a positive seal but do not restrain pipe from thrust and movement under pressure. Use of compression joint requires blocking of connecting pipe to prevent any movement. Failure to do so can result in system failure or severe personal injury. Use in cold water/fluid applications only.*

## Dimensions

| Nominal Size | Dimension Reference (inches, ± 1/16) | | | |
|---|---|---|---|---|
| | A | B | C | D |
| 1/2 | 1-3/4 | 1-3/4 | 5-15/16 | 2-1/8 |
| 3/4 | 2-1/16 | 1-3/4 | 6 | 2-1/8 |
| 1 | 2-7/16 | 2-1/4 | 6-5/16 | 2-21/32 |
| 1-1/4 | 2-15/16 | 2-15/16 | 8-9/16 | 3-3/8 |
| 1-1/2 | 3-5/16 | 2-15/16 | 8-17/32 | 3-3/8 |
| 2 | 3-3/4 | 3-1/2 | 9-7/32 | 4-1/4 |
| 2-1/2 | 4-11/16 | 4-9/32 | 11-1/8 | 5-1/8 |
| 3 | 5-7/16 | 4-9/16 | 12-3/8 | 5-23/32 |
| 4 | 6-3/4 | 5-15/16 | 16-7/8 | 6-3/8 |

**General Installation Information:** 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 valve's **FLOW** arrow pointing in the direction of the flow. Do not install valve upside down. Flow velocity should not exceed 5 ft./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" - 4" | 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-) |