



SWING JOINT RISER ASSEMBLIES

Precision Engineered

SJ-2-0801



Spears® Swing Joint Riser Assemblies are precision engineered for use in turf and landscape irrigation applications. Molded to a strong Schedule 80+ design from high quality PVC, Spears® Swing Joint Riser Assemblies offer full 360° adjustment on three planes, and are available in a variety of inlet/outlet combinations in 1", 1-1/4" and 1-1/2" ASTM IPS; 1", 1-1/4" and 1-1/2" BSP Threaded; 32mm, 40mm and 50mm DIN; and 25mm, 32mm, and 40mm JIS.

Heavy Schedule 80+ Design

Computer engineered for optimum performance, Schedule 80+ design is substantially heavier than other PVC swing joints manufactured to Schedule 40 or Class 200 specifications. Spears® design places additional material in critical areas to reduce typical stress concentration and guard against stress cracking.

Strong Buttress Threads

Buttress threads provides superior strength in high stress, omni-directional pressure applications, such as that encountered with pressure surges. Longer thread design allows free movement of the joint without restriction.

Double O-ring Seals

Pre-lubricated double O-ring seal at Buttress threaded joints provides both positive, leak-free sealing and protection from joint damage due to entry of sand, dirt and debris.

Variety of Inlet/Outlet Combinations

Spears® offers one of the broadest selections of inlet and outlet connections including specially designed inlet tees, female brass threaded outlet adapters, multi-ells and male acme thread O-ring sealed inlet/outlet adapters. Plus, a full range of standard and custom riser lengths and component kits are offered for assembly. Quickly create any swing joint riser configuration needed using convenient numbering system in Spears® Swing Joint Riser Assemblies price schedule, SJ-1.

Sweep Style Fittings

Full bore, Schedule 80+ medium sweep design optimizes flow and reduces friction loss over conventional block or square elbow patterns. Larger finger knurls eliminate need for wrenches or other tools during installation or adjustment.

Specialty Outlet Elbows

Male Acme Thread Ells, Brass Insert Ells and Spears® exclusive Special Reinforced (SR) Ells provide direct hook-up to Acme style rotors, quick coupler valves and other special connections. For additional information, refer to Swing Joint Riser Specialty Outlets brochure, SJ-2B.

Pressure Rated and Fully Tested

Spears® swing joints have a maximum internal pressure rating of 315 psi at 73°F and fully tested for the most demanding applications through ASTM 1599 hydrostatic burst tests, ASTM D 1598 sustained pressure tests, ASTM D 3139 Class 315 leak tests, and Spears® own cyclic pressure testing program.

Five-Year Limited Warranty

Spears® Swing Joint Riser Five-Year Limited Warranty covers defects in material and workmanship. See Spears® Price Schedule SJ-1 for Warranty details.

Sample Engineering Specification

All thermoplastic Swing Joint Riser Assemblies shall be produced by Spears® Manufacturing Company from PVC Type I, Cell Classification 12454. All swivel joints shall have buttress threads, double (2) O-ring seals, and be free from mold parting-lines on threads and O-ring sealing surfaces. All molded components and supplied inlet-outlet connections shall exceed ASTM Schedule 80 body wall thickness requirements. All factory assembled Swing Joint Risers shall have a Maximum Internal Pressure rating of at least 315 psi at 73°F, and shall meet minimum ASTM hydrostatic burst requirements for corresponding size of Schedule 80 pipe.



PROGRESSIVE PRODUCTS FROM SPEARS® INNOVATION & TECHNOLOGY
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Standards and Testing Criteria for Spears® Swing Joint Riser Assemblies

Spears® Swing Joint Riser Assemblies are tested to the following specifications and standards.

Test	Referenced Standard	Requirement
HYDROSTATIC BURST - Test per ASTM D 1599, 60 - 70 seconds	ASTM D 1785 / D 2467 (Schedule 80 Pipe & Fittings)	1" = 2020 psi, minimum 1-1/4" = 1660 psi, minimum 1-1/2" = 1510 psi, minimum
SUSTAINED PRESSURE - Test per ASTM D 1598, 1000 hours	ASTM D 2241, SDR 13.5 (315 psi Pressure Rating)	All sizes = 670 psi, minimum
HYDROSTATIC LEAK* - Test 1 hour @ 2.5 x Pressure Rating	ASTM D 3139	No Pressure Loss
VACUUM* - Test per ASTM D 3139, 1 hour @ 22 in. Hg	ASTM D 3139	No Leakage
DIMENSIONS - measured per ASTM D 2122	ASTM D 2467	Sockets = Schedule 80 Wall = Exceeds Schedule 80
O-RING TYPE & DIMENSIONS	AS 568A	Nitrile (Buna-N)

* Test conducted with primary O-ring only on each assembly joint (secondary O-ring is to protect joint-threads from external debris).

Spears® Swing Joint Riser Assembly Cv Factors**

Size	Cv(GPM)
1"	13
1-1/4"	24
1-1/2"	35

Cv factors are based on assemblies using
12" riser and 6" inlet nipples.

**Friction loss and cyclic pressure testing was conducted
by the Agricultural Engineering Department of CAL Poly
University, Pomona, California

Swing Joint Assembly Cyclic Pressure Test** 0-600 psi, 10 cpm @ 73°F

Size	Avg Cycles
1"	29,500
1-1/2"	13,000

Please refer Spears® Swing Joint Riser Assemblies price schedule, SJ-1, for pricing and configuration, and Spears® Swing Joint Riser Assemblies Installation, SJ-3, for installation recommendations.



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