

DURA-SPHERE STYLE SWP | RUBBER EXPANSION JOINTS™

Lifetime Warranty | Laminar Flow Molded

Duraflex, Inc.'s **Dura-Sphere Style SWP Rubber Expansion Joints™** are competitively the strongest design & configuration due to its unique spherical shape. Because of this round design, pressure is applied equally in all directions allowing the forces to be evenly distributed over a much larger circumference. Turbulence is reduced through the streamlined flowing arch allowing for a gentle quiet flow. There is no need to restrict the arch movement by filling it up due to the inability of sediment to build up. **Dura-Sphere Style SWP Rubber Expansion Joints™** are rated for 26" hg vacuum & 225 psi w.p. (excluding 14" rated for 115 psi). Duraflex, Inc. products are engineered for confidence and designed to perform!

APPLICATIONS

Dura-Sphere Style SWP Rubber Expansion Joints™ most versatile smooth bore, unobstructed media flow, spherical expansion joints are selected when the application requires:

- Minimized Turbulence & Pressure Drop
- Erosion or Corrosion Pockets & Product Build-up Elimination
- High Flexibility & Outstanding Strength
- A Selection of Materials of Construction for Various Media
- Exceptional Noise Control



DESIGN FEATURES

- Metallic Floating Flanges, each end, to compensate for mating pipe flange misalignment & potential for harmful torsion.
- Beaded, integrated Flange to Body Seal eliminates potential for installation leakage.
- Acceptable to use in either FLAT or RAISED FACE mating Flanges.
- Gaskets are not required & should be avoided.
- One-piece molded construction eliminates manufacturing defects associated with seams or discontinuities.
- Shock Pressures, as tested, are the highest in the industry against comparative sizes & types.
- Vibration Absorption, as tested, exceeds competitor products.

PERFORMANCE BENEFITS

- Reduce stress on Pipe Anchors, Guides & Welds
- Reduce effects of Water Hammer
- Reduce effects of Pressure Spikes
- Allows for Piping Expansion, Compression & Lateral Movements

CONTACT Us: 877.462.1007 | www.duraflexinc.com | info@duraflexinc.com



- Short Lead Times (or) In-stock
- Custom Orders Available
- Cost Competitive...always!
- No Minimums
- Professional Appearance
- High Tech Testing | Analytics
- Engineered Drawings
- Double Leak Tested

HQ: Duraflex, Inc. | 765 Industrial Drive, Cary, IL 60013



AS9100D | ISO 9001:2015

Engineered for Confidence. Designed to Perform.™

DURA-SPHERE STYLE SWP | RUBBER EXPANSION JOINTS™

Standard Component Design Description

Dura-Sphere Style SWP Rubber Expansion Joints™ are precision molded from a wide variety of highly engineered materials. These joints require less force to move than conventional expansion joints allowing maximum deflection, elongation & compression. Dura-Sphere Style SWP Rubber Expansion Joints™ will minimize water hammer or hydraulic shock in any system. #150 ASA drilled flanges.

FLANGES

- **Conformance:** ASME B16.5/16.47
- **Standard:** Ductile Iron, Carbon Steel
- **Upgrades:** T-304, T-316 Stainless Steels*
- **Finishes:** Hot dipped Galvanized on Iron / Steel Flanges
Bright Polished / Passivated on Stainless Steel
- **Options:** Control Rod Units Available with Backing/
Retaining Rings of same Material
- **Drillings:** ANSI 150# / 250# / 300#
BS-10 / DIN PN10 / PN16 / JIS-10K
Pre-threaded holes available at time of order*

MATERIAL COMBOS

Cover

- Neoprene
- EPDM
- Chlorobutyl

(varied combo options)

Tube

- Hydrogenated NBR
- Nitrile
- Neoprene
- EPDM
- Chlorobutyl

QUALITY CONTROL

- All units are pressure decay leak tested after molding & prior to shipping
- **Duraflex, Inc.** is the only company doing this!

TUBE

- Nitrile & EPDM materials are standard for rigorous applications.
- See Material list for alternates.
- Nylon Tire Cord Reinforcement.
- Seamless Laminar Flow arch (FEA modeled).

COVER *(Elemental & Atmospheric Protection)*

- Uniform seamless layer of neoprene as standard.
- See Material list for alternates.
- UV Coating upgrades for steady Outdoor Exposure*

CERTIFICATIONS

- ASTM F1123-87 Compliant
- ABS TYPE APPROVAL
- ISO 15540 Fire Safe
- US Coast Guard 46CFR 56



WARRANTY | GUARENTEE

- LIFETIME Material & Workmanship defect free for 100% replacement!
- 36 months Performance Guarantee upon completion of Application Engineering Analysis!

**available upon request*

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DURA-SPHERE STYLE SWP | RUBBER EXPANSION JOINTSTM

Standard Offerings | Strength & Efficiency



Size, Movement, Pressure, Weight & Drilling Chart

Sizes in.	F-F in.	No. Holes	Bolt Hole Size in.	Flange O.D. in.	Bolt Circle in.	Axial Compression in.	Axial Extension in.	+/- Lateral Deflection in.	+/- Angular Deflection degrees	Weight Joint & Flanges #
1	6	4	.625	4.25	3.13	.5	.375	.5	37	3.8
1.25	6	4	.625	4.63	3.5	.5	.375	.5	31	5
1.5	6	4	.625	5	3.88	.5	.375	.5	27	6.1
2	6	4	.75	6	4.75	.5	.375	.5	20	12.3
2.5	6	4	.75	7	5.5	.5	.375	.5	17	12.3
3	6	4	.75	7.5	6	.5	.375	.5	14	14
3.5	6	8	.75	8.5	7	.5	.375	.5	12	17.6
4	6	8	.75	9	7.5	.75	.5	.5	14	18.3
5	6	8	.875	10	8.5	.75	.5	.5	11	22.8
6	6	8	.875	11	9.5	.75	.5	.5	9	26.8
8	6	8	.875	13.5	11.75	.75	.5	.5	7	40.6
10	8	12	1	16	14.25	1	.625	.75	7	56.6
12	8	12	1	19	17	1	.625	.75	6	83
14	8	12	1.125	21	18.75	1	.625	.75	6	115
16	8	16	1.125	23	21.25	1	.625	.75	4	165
18	8	16	1.25	25	22.75	1	.625	.75	4	168
20	8	20	1.25	27.5	25	1	.625	.75	3	1710
24	10	20	1.375	32.5	29.5	1	.625	.75	3	255
30	10	28	1.375	38.75	36	1	.625	.75	2	295

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Temperature | Pressure Rating Chart

Operating Temperature °F	Pressure Psi
Up to 122	232
123 – 158	174
159 – 194	139
195 – 210	70
211 – 230	25

Vacuum Rating Chart

Pipe ID in.	Vacuum in. Hg
2 – 2.5	23
3	20
4	17
5 – 6	11
8	8
10 – 12	5

*recommended installed position

High Flex Series (SWP-HF)

Nominal ID in.	Nominal F-F in.	Type of Movement		
		Compression in.	Elongation in.	Transverse Deflection* in.
2	5	1	1	+/- 1
	6	1	1	+/- 1
2.5	5	1	1	+/- 1
	6	1	1	+/- 1
3	5	1	1	+/- 1
	6	1	1	+/- 1
4	5	1	1	+/- 1
	6	1	1	+/- 1
5	5	1	1	+/- 1
	6	1	1	+/- 1
6	5	1	1	+/- 1
	6	1	1	+/- 1
8	5	1	1	+/- 1
	6	1	1	+/- 1
10	5	1	1	+/- 1
	6	1	1	+/- 1
12	5	1	1	+/- 1
	6	1	1	+/- 1

DURAFLEX, INC. ADVANTAGE

- Only American Sphere company with degreed Engineers on staff
- 2D drawings & Solid Models available at time of order.
- We are able to perform an engineering “system design”.
- Best quality assemblies in the industry!
- Pressure or vacuum tested before shipment.
- Large stocking of standards.
- Widest variety of materials available.
- Best Warranty in the industry!

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