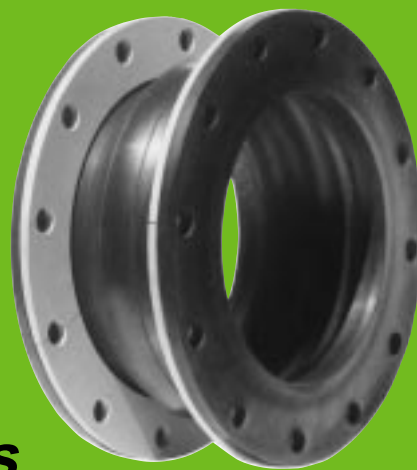


PROCO™

SERIES 261R

molded wide arch expansion joints



The PROCO Series 261R Wide Arch Expansion Joint expansion joint is specifically designed for use with Plastic or FRP Piping Systems. A replacement for standard spool-type expansion joints, the PROCO 261R has the lowest spring rate offered in the world today. With its low forces to compress, extend or laterally offset, the PROCO Series 261R can be used on plastic or FRP pipes, pumps, valves or tanks without fear of the expansion joint being stronger than the pipe, pump, valve or tank flanges. In addition the PROCO Series 261R is designed for tough demanding corrosive chemical applications, as found in: Chemical & Petrochemical Process Facilities and Highly Corrosive Industrial Piping & Pollution Control Systems. The PROCO Series 261R may be used where metallic hoses/expansion joints or old design rubber expansion joints may have been specified previously. Used on Pumps, Chillers, Cooling Towers, Compressors, Blowers, Fans, Absorption Machines, etc. to: (1) Absorb Pipe Movements/Stress, (2) Reduce System Noise, (3) Isolate Mechanical Vibrations, (4) Compensate Alignment/Offset, (5) Eliminate Electrolytic Action and Electrolysis, (6) Protect Against Start-Up/Surge Forces. Our history in the manufacture of expansion joints dates back to 1930. When you need an engineered rubber expansion joint solution to a piping problem, call PROCO.

PROCO Series 261R Wide Arch Rubber Expansion Joints offer some of the following advantages:

- **Low Spring Rates:** The Series 261R has the lowest spring rates and forces to deflect of any expansion joint made today.
- **Greater Movements:** The Series 261R has a wider arch than the conventional narrow arch of the spool-type expansion joint. This arch is twice the standard width of the spool-type arch, thus, eliminating the need for double and triple arch expansion joints.
- **Less Weight:** The steel flanges of spherical design (Series 240/242) can be very heavy, especially for plastic or fiberglass piping applications. The Series 261R Expansion Joint, including retaining rings, is considerably lighter than the spherical expansion joint design, which lowers shipping and installation costs.
- **Easier Sealing:** The Series 261R design utilizes the full-faced rubber and fabric flange of the spool-type design making sealing quick and sure when compared with the spherical design.
- **Self-Cleaning Wide Arch:** The Arch of the Series 261R is wide enough to allow the normal flow of the media to keep the arch clean of particulates. The accumulation of particles in the arch associated with the narrow arch spool-type design is not a consideration with the Wide Arch configuration.
- **Looks Familiar:** It looks like the familiar design of the spool-type expansion joint. This long proven design adds to the comfort of the Series 261R.

Flange Drilling/Retaining Rings. All PROCO Series 261R Wide Arch Expansion Joints are drilled in accordance with ANSI 125/150# Standards. They must be installed against a Full-Face Flange with the unique Backing/Retaining Rings that are supplied with the joint. Rings are fabricated from plate steel; plated to prevent corrosion. Rings from materials such as 304 or 316 Stainless Steel are available upon request. Gaskets or packing are not required with the PROCO Series 261R. **Visit our Web site for specific mating flange guidelines.**

High Pressure with Full Safety Factors. The PROCO Series 261R pressure ratings meet or exceed the requirements of the Fluid Sealing Association, Non-Metallic Expansion Joint Division for Series A or C. Sizes 1.5" through 12" include a three-to-one safety factor; sizes 14" through 20" include a four-to-one safety factor.

Absorbs Pipe-Wall and Fluid-Borne Noise. The noise transmission problems of metallic expansion joints are eliminated with the Series 261R Expansion Joints. Pipe-Wall sound loses energy and is absorbed as the noise carried by the piping both enters and leaves the rubber section. Fluid-Borne noise is absorbed by the volumetric expansion (breathing) of the expansion joint. This action cushions water hammer and smooths pumping impulses.

Isolates Vibration and Motion. Vibration originating from mechanical equipment is absorbed by the PROCO Series 261R. To isolate the equipment, rubber connectors should be installed just before and after the equipment generating the vibration. As most machinery vibrates in a radial direction from the main shaft, for optimum performance the PROCO connector should be installed horizontally and parallel to the shaft. Vertical and perpendicular installation of the Series 261R Wide Arch Expansion Joint is permissible as it will accept axial, lateral and rotational movements simultaneously. Installation of the Series 261R in a system allows isolated equipment to move freely on its vibration mountings. **Note: For maximum vibration transmission reduction, the piping section beyond the rubber connector must be anchored or rigid.**

Large Inventories Mean Same-Day Shipment. We maintain the largest inventory of expansion joints in the world. Rubber, PTFE Lined, Plastic or Metal Hose — PROCO can ship the products you need when you need them! In fact, when it comes to expansion joints, **if PROCO doesn't have them in stock ... nobody does!**

Information • Ordering • Pricing • Delivery. Day or night, weekends and holidays ... the PROCO phones are monitored 24 hours around the clock. When you have a question, you can call us.

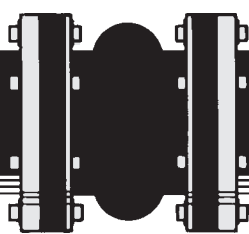
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Weekday office hours are 5:30 a.m. to 5:15 p.m. Pacific Time.

Table 1: Available Styles • Materials • Temperatures

For Specific Elastomer Recommendations, See: PROCO™ "Chemical To Elastomer Guide"					
PROCO Style Numbers	Cover ^{1,2} Elastomer	Tube Elastomer	Maximum Operating Temp. °F (°C)	Branding Label Color	F.S.A. Material Class
Single Arch					
261R/BB	Chlorobutyl	Chlorobutyl	250° (121°)	Black	STD. III
261R/EE ³	EPDM	EPDM	250° (121°)	Red	STD. III
261R/NH	Neoprene	Hypalon®	212° (100°)	Green	STD. II
261R/NN	Neoprene	Neoprene	225° (107°)	Blue	STD. II
261R/NP ³	Neoprene	Nitrile	225° (107°)	Yellow	STD. II
261R/NR	Neoprene	Natural	180° (68°)	White	STD. I

Notes: Hypalon® is a registered trademark of DuPont Dow Elastomers. All products are reinforced with tire cord and metal materials.
 1. Expansion joint "cover" can be coated with Hypalon® on special order.
 2. Styles with Neoprene covers meet all requirements of U.S.C.G.
 3. EPDM and Nitrile materials are available from Stock.
 All other elastomers are available upon request.



Protecting Piping And Equipment Systems From Stress/Motion

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molded wide arch expansion joints

Figure 1: Detail Of Style 261R

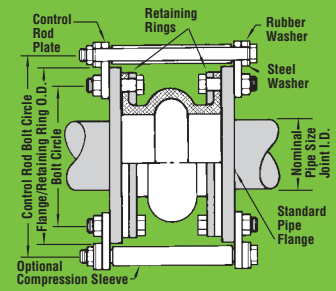
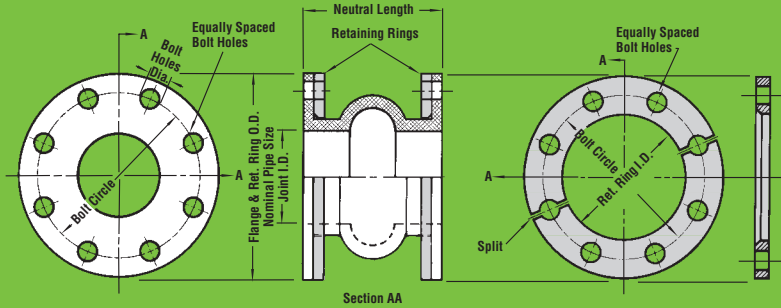


Table 2: Sizes • Movements • Spring Rates • Pressures • Weights • Drilling

EXPANSION JOINT SIZE Nom. I.D. x Inch / (mm)	NEUTRAL LENGTH Inch / (mm)	261R Movement Capability: From Neutral Position ¹						Spring Rates			Operating ⁴ Conditions		Weights in lbs / (kgs) ⁵		Flange Dimensions and Drilling ⁷				
		Axial Compression Inch / (mm)	Axial Extension Inch / (mm)	Lateral Deflection Inch / (mm)	Angular Deflection Degrees	Torsional Rotation ² Degrees	Thrust Factor ³ In ² / (cm ²)	Force Pounds for 1" Axial Compression lb/in. / (N/mm)	Force Pounds for 1" Axial Extension lb/in. / (N/mm)	Force Pounds for 1" Lateral Deflection lb/in. / (N/mm)	Positive PSIG / (Bar)	Vacuum Inches of Hg / (mm of Hg)	Expansion Joint	Retaining Ring Set	Control Unit ⁶ Assembly	O.D. of Expansion Joint / Ring Inch / (mm)	Bolt Circle Inch / (mm)	Number of Holes	Size of Holes Inch / (mm)
1.5 (40)	6 (150)	1.5 (38)	0.625 (16)	0.750 (19)	28°	5°	11.04 (71)	126 (22)	182 (32)	149 (26)	225 (15.5)	24 (610)	1.3 (0.59)	2.5 (1.1)	2.3 (1.0)	5.00 (127.0)	3.88 (98.55)	4	0.625 (15.88)
2 (50)			0.625 (16)	0.750 (19)	25°	5°	14.18 (92)	132 (23)	158 (28)	130 (23)	225 (15.5)	24 (610)	1.7 (0.77)	4.0 (1.8)	2.8 (1.3)	6.00 (152.4)	4.75 (120.65)	4	0.750 (19.05)
2.5 (65)			0.625 (16)	0.750 (19)	20°	5°	17.71 (114)	128 (22)	141 (25)	111 (19)	225 (15.5)	24 (610)	2.1 (0.95)	4.5 (2.0)	2.8 (1.3)	7.00 (177.8)	5.50 (139.70)	4	0.750 (19.05)
3 (80)			0.625 (16)	0.750 (19)	18°	5°	21.64 (140)	139 (24)	208 (36)	133 (23)	225 (15.5)	24 (610)	2.4 (1.0)	5.5 (2.5)	2.8 (1.3)	7.50 (190.5)	6.00 (152.40)	4	0.750 (19.05)
4 (100)			0.625 (16)	0.750 (19)	14°	4°	30.66 (198)	110 (19)	180 (32)	105 (18)	225 (15.5)	24 (610)	3.2 (1.4)	6.0 (2.7)	2.8 (1.3)	9.00 (228.6)	7.50 (190.50)	8	0.750 (19.05)
5 (125)			0.625 (16)	0.750 (19)	13°	4°	41.26 (266)	143 (25)	190 (33)	136 (24)	225 (15.5)	24 (610)	3.6 (1.6)	8.5 (3.9)	4.0 (1.8)	10.00 (254.0)	8.50 (215.90)	8	0.875 (22.23)
6 (150)			0.625 (16)	0.750 (19)	12°	4°	53.43 (345)	136 (24)	166 (29)	147 (26)	225 (15.5)	24 (610)	4.9 (2.2)	9.5 (4.3)	4.0 (1.8)	11.00 (279.4)	9.50 (241.30)	8	0.875 (22.23)
8 (200)			0.625 (16)	0.750 (19)	12°	4°	82.47 (532)	226 (40)	230 (40)	210 (37)	210 (14.8)	24 (610)	7.7 (3.5)	14.5 (6.6)	8.0 (3.6)	13.50 (342.9)	11.75 (298.45)	8	0.875 (22.23)
10 (250)	8 (200)	2.25 (57)	0.750 (19)	1.0 (25)	12°	4°	135.13 (872)	248 (43)	381 (67)	281 (49)	210 (14.8)	24 (610)	13.9 (6.3)	17.0 (7.7)	10.0 (4.5)	16.00 (406.4)	14.25 (361.95)	12	1.000 (25.40)
12 (300)			0.750 (19)	1.0 (25)	11°	4°	179.46 (1158)	378 (66)	493 (86)	409 (72)	210 (14.8)	24 (610)	19.5 (8.8)	24.5 (11.0)	10.0 (4.5)	19.00 (482.6)	17.00 (431.80)	12	1.000 (25.40)
14 (350)			0.750 (19)	1.0 (25)	11°	3°	230.08 (1484)	423 (74)	592 (104)	497 (87)	150 (10.3)	24 (610)	22.7 (10.3)	27.0 (12.3)	12.0 (5.4)	21.00 (533.4)	18.75 (476.25)	12	1.125 (28.58)
16 (400)			0.750 (19)	1.0 (25)	10°	3°	286.98 (1852)	432 (76)	606 (106)	509 (89)	150 (10.3)	24 (610)	26.8 (12.2)	33.5 (15.3)	15.0 (6.8)	23.50 (596.9)	21.25 (539.75)	16	1.125 (28.58)
18 (450)			0.750 (19)	1.0 (25)	8°	3°	350.15 (2259)	543 (95)	761 (133)	690 (121)	150 (10.3)	24 (610)	29.5 (13.4)	34.0 (15.5)	16.0 (7.2)	25.00 (635.0)	22.75 (577.85)	16	1.250 (31.75)
20 (500)			0.750 (19)	1.0 (25)	8°	3°	419.61 (2707)	628 (110)	829 (145)	776 (136)	150 (10.3)	24 (610)	31.8 (17.3)	38.0 (17.3)	16.0 (7.2)	27.50 (698.50)	25.00 (635.00)	20	1.250 (31.75)

- Notes:
- Movements shown are non-concurrent.
 - Neutral position is expressed when the expansion joint is at neutral length.
 - Torsional movement is expressed when the expansion joint is at neutral length.
 - To determine "end thrust," multiply thrust factor by operating pressure of system.
 - Pressure rating is based on 194°F operating temperature. At higher temperature the pressure rating is slightly reduced. Vacuum rating is expressed when expansion joint is at neutral length.
 - Weights are approximate.
 - Control unit weight consists of one rod, four washers, three nuts and two control rod plates. Multiply number of control units needed for application (as specified in the Fluid Sealing Association Technical Handbook) to determine correct weights.
 - Dimensions shown are in accordance with 125/150# standards of ANSI B-16.1, B-16.24, B-16.5; AWWA C-207 Table 1 and 2 Class D.

PROCO™ Series 261R Products Are Designed To Absorb Different Movements Concurrently.

Axial Compression
Axial Elongation
Angular Movement Bending Of The Centerline
Torsional Movement Rotation About The Centerline (Twist)
Lateral Movement Shear Or Perpendicular To Centerline
Absorbing Vibration

DISTRIBUTED BY:



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NATIONWIDE AND CANADA
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Warning: Expansion joints may operate in pipelines or equipment carrying fluids and/or gases at elevated temperatures and pressures. Normal precautions should be taken to make sure these parts are installed correctly and inspected regularly. Precautions should be taken to protect personnel in the event of leakage or splash. Note: Piping must be properly aligned and anchored to prevent damage to an expansion joint. Movement must not exceed specified ratings and control units are always recommended to prevent damage in the event other anchoring in the system fails. Properties applications shown throughout this data sheet are typical. This information does not constitute a warranty or representation and we assume no legal responsibility or obligation with respect thereto and the use to which such information may be put. Your specific application should not be undertaken without independent study and evaluation for suitability.