general rubber
The Maxi-Joint Company.

TECHNICAL GUIDELINES
Features and Benefits:

**ABSORBS ALL DIRECTIONAL MOVEMENT**
General Rubber’s Maxi-Joint® wide arch expansion joints provide superior movement capability in axial compression, axial extension, and lateral deflection, as well as in the angular and torsional direction. This performance cannot be obtained with metallic joints, grooved couplings, or large pipe loops. The low stiffness and deflection forces make designing with General Rubber expansion joints a breeze.

**REDUCES NOISE AND VIBRATION**
General Rubber’s expansion joints and flexible connectors effectively dampen and insulate against the transmission of noise and vibration generated by mechanical equipment. This is particularly important in HVAC applications where the disturbing frequency of pipe and fluid-conducting noise can resonate and amplify throughout the building. Metallic joints and grooved couplings do little to reduce noise and vibration.

**HIGH RESISTANCE TO SHOCK**
The highly compliant and resilient characteristics of General Rubber expansion joints make them ideally suited for earthquake and bomb blast isolation, as well as pressure-surge and water hammer dampening.

**RELIEVES PIPE AND ANCHOR STRESS**
Thermal movements along with other external forces and displacements, including ground settlement can quickly exceed allowable pipe and anchor stresses. General Rubber expansion joints absorb these stresses and replace them with their own low stiffness (spring rate).

**COMPENSATES FOR MISALIGNMENT**
It is common in both new construction and replacement applications to encounter pipe misalignment. Minor misalignment can be taken up with standard General Rubber expansion joints, and custom units can be quickly fabricated with large permanent offsets.

**PROVIDES ACCESS TO PIPING AND EQUIPMENT**
Access to piping and equipment can be easily achieved by treating the expansion joint as a removable spool piece. If a self-retracting design is needed, General Rubber’s Style 1101DJ dismantling joint can be utilized.

**COST-EFFECTIVE SOLUTION**
An optimal design does not necessarily mean higher pressure or temperature ratings, because these features typically increase the product’s stiffness and cost. With a proven track record that dates back to 1950, General Rubber has the experience and is confident that we can develop an optimal and cost effective solution to meet your requirements. Our abrasion and corrosion-resistant materials can be superior to even the most exotic metals. Our large inventories and modern U.S. ISO 9001 certified manufacturing facility also mean quick deliveries, as well as top quality products and services.

Style 3303 - Molded Teflon® design offers superior chemical resistance with low deflection forces.

Style 1102 has double the movements of a single arch unit with one half the deflection forces.
Materials of Construction:

EPDM—Outstanding water, vapor, and weather resistance. Good resistance to heat, ozone, alkalis, sunlight, and oxygenated solvents. Ideal for outdoor service. Do not use with petroleum oil service. Good general purpose elastomer with an effective operating range from -30°F to 350°F.

NEOPRENE—Resists alkalis, inorganic acids, and salt solutions. Flame-retardant, as well as abrasion and weather resistant. Good resistance to animal and vegetable oils; moderate resistance to petroleum oils. Effective operating range from -20°F to 225°F.

CHLOROBUTYL—Lowest permeability, very good resistance to water, heat, fats, ozone, alkalis, sunlight, abrasion, and oxygenated solvents. Effective operating range from -30°F to 300°F with brief allowable excursions to 350°F.

HYPALON®—Offers superior weather resistance, flame retardant, good abrasion resistance, and excellent resistance to acids, alkalis, and oxidation. Effective operating range from -10°F to 250°F.

BUNA-N (NITRILE)—Good resistance to mineral and vegetable oils, greases, hydrocarbon solvents, dilute acids, and alkalis. Effective operating range from -10°F to 210°F.

HNBR (HYDROGENATED NITRILE)—Has a wide service temperature range from -40°F to 302°F and resistance to fluids of various chemical compositions, as well as excellent resistance to alkaline and aggressive fluids. HNBR also has improved wear and abrasion resistance and improved ozone resistance of up to 5 times that of standard NBR/Buna-N. It uniquely bridges the gap in oil applications where the temperature was too high for NBR/Buna-N and otherwise forced the use of the much more expensive FKM compound.

PURE GUM RUBBER—Excellent resilience and rebound elasticity with high tensile strength. Excellent resistance to tear and abrasion. Effective operating range from -40°F to 180°F.

PTFE FLUOROPLASTIC—Superior chemical resistance, completely inert to nearly all industrial chemicals and solvents. Effective operating range from -60°F to 450°F. Teflon® is used when indicated or specified. FDA Food-Grade Service: Several white and black elastomers meet FDA requirements and can be used in direct contact with food, beverage, and pharmaceutical products.

VITON®—Excellent resistance to aggressive chemicals, solvents, and halogenated hydrocarbons. Viton® TBR-S provides excellent resistance to steam, aqueous acids, amines and concentrated caustics/bases/alkalies. Viton® ETP-S offers the most universal chemical resistance and has excellent flexibility at low temperatures. Effective operating range from -10°F to 400°F.

REINFORCEMENTS—Polyester, Nylon, Kevlar®, fiberglass, and steel. Temperature rating is dependent on both elastomer and reinforcements.
Maxi-Joint®
Molded Wide Arch Expansion Joint

**Style 1015**
**Features:**
- Wide flowing arch design
- Exceptional all directional movement capability
- Virtually eliminates sediment buildup
- Higher pressure rating than conventional expansion joints
- Excellent chemical and abrasion resistance
- Full vacuum rating (30" Hg) in all sizes
- 250°F continuous service standard, 400°F available
- Filled arch design available
- Economically fully molded construction
- Standard face to face dimensions with ANSI 125/150 lb. drilling
- Hot dipped galvanized retaining rings standard
- Absorbs noise, vibration and shock
- Compensates for minor misalignment and offset
- Low stiffness and deflection forces
- Integral flanged design, no gaskets required
- Large inventory means quick shipments
- Simple to install, lightweight and high strength
- Provides easy access to piping and equipment
- Wide variety of tube and cover elastomers available, including Pure Gum Rubber, EPDM, Neoprene, Butyl, Nitrile, Hypalon®, Viton®, Teflon®, Food Grade, and more

**Notes:**
1. All parts listed are designed for 30" Hg (full vacuum) and have a maximum test at 26" Hg due to facility altitude and equipment limitations.
2. Maximum operating temperature of 250ºF for EPDM, Butyl, Hypalon®, and Viton®; 225ºF for Neoprene; 210ºF for Nitrile; 180ºF for Pure Gum Rubber; 300ºF for EPDM and Butyl in air service at 25 PSI maximum; higher pressure and temperature ratings available.
3. All sizes can be supplied with a filled arch reducing their movements by 50% and increasing the spring rates fourfold.
4. For full product specifications and installation instructions, see SPEC 1015-1, SPEC 1015T-1 and ININ 1015-1, ININ 1015T-1.
5. **WARNING:** Control units (sold separately) must be used when piping is not properly anchored. Number of rods are dependent upon maximum field test pressures. Expansion joints may operate in pipelines carrying fluids at elevated temperatures and pressures, so precaution should be taken to ensure proper installation and regular inspection. Care is required to protect personnel in the event of leakage or splash. Adequate floor drains are always recommended.
6. Movements are non-concurrent. Contact General Rubber for concurrent movements, and for sizes not shown up to 144" I.D.
7. Retaining rings are typically "L" shaped for sizes 1" through 16", and can be flat depending on internal reinforcements and for sizes 18" and larger.
8. Standard 125/150 lb. drilling includes, 1"-34" with ANSI B16.1 Class 125 lb./B16.5 Class 150 lb., 30"-60" with ANSI B16.1 Class 125 lb./ B16.47 series A, Class 150 lb., 72"-108" with ANSI B16.1 Class 125 lb./ AWWA C207 Class B.
### Maxi-Joint®

**Teflon® Lined Molded Wide Arch Expansion Joint**

**Style 1015T**

#### Features:
- Superior chemical resistance even at higher temperatures and pressures
- Wide flowing arch design
- Exceptional all directional movement
- Integrally flanged design, no gaskets required
- Liner made of 100% virgin DuPont Teflon®
- Ideal for food, pharmaceutical, chemical and ultra pure water applications
- Multiple arches available

### Specifications

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<th>SIZE</th>
<th>I.D. (inch)</th>
<th>LENGTH</th>
<th>MAX PRESSURE (PSIG)</th>
<th>VACUUM RATING (inch Hg)</th>
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### Notes:
- **NOTE 8**
  - Liner made of 100% virgin DuPont Teflon®
- **NOTE 5**
  - Control Unit
- **NOTE 6**
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**Style1101**

**Features:**
- Versatile hand-built construction. Made in the U.S.A.
- Standard or custom face to face dimensions
- Wide flowing arch design
- Exceptional all directional movement capability
- Virtually eliminates sediment buildup
- Higher pressure rating than conventional expansion joints
- Excellent chemical and abrasion resistance
- Full vacuum rating (30” Hg) in all sizes
- 250°F continuous service standard, 400°F available
- Filled arch design available
- Hot dip galvanized retaining rings standard
- Absorbs noise, vibration and shock
- Compensates for minor misalignment and offset
- Low stiffness and deflection forces
- Integrally flanged design, no gaskets required
- Simple to install and high strength
- Integrally flanged design, no gaskets required
- Wide variety of tube and cover elastomers available,
- Provides easy access to piping and equipment
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- Wide variety of tube and cover elastomers available,
Maxi-Joint®
Double (2) Wide Arch Expansion Joints

**Style 1102,1202**

**Features:**
- Double the movement with 1/2 the spring rate
- Versatile hand-built construction. Made in the U.S.A
- Standard or custom face to face dimensions
- Wide flowing arch design
- Exceptional all directional movement capability
- Virtually eliminates sediment buildup
- Higher pressure rating than conventional expansion joints
- Excellent chemical and abrasion resistance
- Full vacuum rating (30” Hg) for style 1202
- 250°F continuous service standard, 400°F available
- Filled arch design available
- Hot dip galvanized retaining rings standard
- Absorbs noise, vibration and shock
- Compensates for minor misalignment and offset
- Low stiffness and deflection forces
- Simply flanged design, no gaskets required
- Provides easy access to piping and equipment
- Simple to install and high strength
- Integrally flanged design, no gaskets required
- Low stiffness and deflection forces
- Compensates for minor misalignment and offset
- Filled arch design available
- 250ºF continuous service standard, 400ºF available
- Full vacuum rating (30” Hg) for style 1202
- Excellent chemical and abrasion resistance
- Higher pressure rating than conventional expansion joints
- Virtually eliminates sediment buildup
- Exceptionally all directional movement capability
- Wide flowing arch design
- Optional filled arch construction also typical for other styles

**Notes:**
1. Series 1200 are designed for 30” Hg (full vacuum) and have a maximum test at 26” Hg due to facility altitude and equipment limitations.
2. Maximum operating temperature of 250 deg F for EPDM, Butyl, Hypalon, and Viton; 225 deg F for Neoprene; 210 deg F for Nitrile; 180 deg F for Pure Gum Rubber; 300 deg F for EPDM and Butyl in air service at 25 PSI maximum; higher pressure and temperature ratings available.
3. All sizes can be supplied with a filled arch reducing their movements by 50% and increasing the spring rates fourfold.
4. For full product specifications and installation instructions, see SPEC 1102-1 and ININ 1102-1.
5. Control units (sold separately) must be used when piping is not properly anchored. Number of rods are dependent upon maximum field test pressures. Expansion joints may operate in pipelines carrying fluids at elevated temperatures and pressures, so precaution should be taken to ensure proper installation and regular inspection. Care is required to protect personnel in the event of leakage or splash. Adequate floor drains are always recommended.
6. Movements are non-concurrent. Contact General Rubber for concurrent movements, and for sizes not shown up to 144” I.D.
7. Standard 125/150 lb. drilling includes, 1”-24” with ANSI B16.1 Class 125 lb./B16.5 Class 150 lb., 30”-60” with ANSI B16.1 Class 125 lb./B16.47 series A, Class 150 lb., 72”-100” with ANSI B16.1 Class 125 lb./AWWA C207 Class B.

**Features:**
- Wide variety of tube and cover elastomers available,
- Other standard drilling available, including ASA 300, DIN, PN, JIS, API, and Navy
- Provides easy access to piping and equipment
- Simple to install and high strength
- Integrally flanged design, no gaskets required
- Low stiffness and deflection forces
- Compensates for minor misalignment and offset
- Filled arch design available
- 250ºF continuous service standard, 400ºF available
- Full vacuum rating (30” Hg) for style 1202
- Excellent chemical and abrasion resistance
- Higher pressure rating than conventional expansion joints
- Virtually eliminates sediment buildup
- Exceptionally all directional movement capability
- Wide flowing arch design
- Standard or custom face to face dimensions
- Versatile hand-built construction. Made in the U.S.A
- Double the movement with 1/2 the spring rate

**Toll Free:** 800-233-6294  
**Fax:** 201-935-1915  
**Web:** www.general-rubber.com  
**sales@general-rubber.com**
Maxi-Joint®
Triple (3) Wide Arch Expansion Joint

Style 1103, 1203

Features:
- Triple the movement with 1/3 the spring rate
- Versatile hand-built construction. Made in the U.S.A.
- Standard or custom face to face dimensions
- Wide flowing arch design
- Exceptional all directional movement capability
- Virtually eliminates sediment buildup
- Excellent chemical and abrasion resistance
- Full vacuum rating (30" Hg) for style 1203
- 250°F continuous service standard, 400°F available
- Filled arch design available
- Hot dip galvanized retaining rings standard
- Optional filled arch construction
- Also typical for other styles
- Wide variety of tube and cover elastomers available,
- Other standard drilling available, including ASA 300,
- DIN, PN, JIS, API, and Navy
- Provides easy access to piping and equipment
- Simple to install and high strength
- Integrally flanged design, no gaskets required
- Low stiffness and deflection forces
- Compensates for minor misalignment and offset
- Absorbs noise, vibration and shock
- Hot dip galvanized retaining rings standard
- Filled arch design available
- 250ºF continuous service standard, 400ºF available
- Full vacuum rating (30" Hg) for style 1203
- Higher pressure rating than conventional expansion joints
- Virtually eliminates sediment buildup
- Exceptional all directional movement capability
- Wide flowing arch design
- Standard or custom face to face dimensions
- Versatile hand-built construction. Made in the U.S.A
- Triple (3) Wide Arch Expansion Joint

Notes:
1.) Series 1200 are designed for 30" Hg (full vacuum) and have a maximum test at 26" Hg due to facility altitude and equipment limitations.
2.) Maximum operating temperature of 250 deg F for EPDM, Butyl, Hypalon, and Viton; 225 deg F for Neoprene; 210 deg F for Nitrile;
3.) Movements are non-concurrent. Contact General Rubber for concurrent movements, and for sizes not shown up to 144" I.D.
4.) All sizes can be supplied with a filled arch reducing their movements by 50% and increasing the spring rates fourfold.
5.) For full product specifications and installation instructions, see SPEC 1103-1 and ININ 1103-1. Gross weights include retaining rings.
6.) Movements are non-concurrent. Contact General Rubber for concurrent movements, and for sizes not shown up to 144" I.D.
7.) Series 1100 and 1200 replace styles 1025, 1050 and 1075.
8.) Standard 125/150 lb. drilling includes, 1"-24" with ANSI B16.1 Class 125 lb./B16.5 Class 150 lb., 30"-60" with ANSI B16.1 Class 125 lb./B16.47 series A, Class 150 lb., 72"-100" with ANSI B16.1 Class 125 lb./AWWA C207 Class B.
9.) WARNING: Control units (sold separately) must be used when piping is not properly anchored. Number of rods are dependent upon maximum field test pressures. Expansion joints may operate in pipelines carrying fluids at elevated temperatures and pressures, so precaution should be taken to ensure proper installation and regular inspection. Care is required to protect personnel in the event of leakage or splash. Adequate floor drains are always recommended.
10.) Movements are non-concurrent. Contact General Rubber for concurrent movements, and for sizes not shown up to 144" I.D.

Toll Free: 800-233-6294
Web: www.general-rubber.com
general rubber corporation
Fax: 201-935-1915
sales@general-rubber.com
Maxi-Joint®
Quadriple (4) Wide Arch Expansion Joints

Style 1104, 1204

Features:

- Quadruple the movement with 1/4 the spring rate
- Versatile hand-built construction. Made in the U.S.A.
- Standard or custom face to face dimensions
- Wide flowing arch design
- Exceptional all directional movement capability
- Virtually eliminates sediment buildup
- Higher pressure rating than conventional expansion joint
- Excellent chemical and abrasion resistance
- Full vacuum rating (30” Hg) for style 1204
- 250°F continuous service standard, 400°F available
- Filled arch design available
- Hot dip galvanized retaining rings standard
- Optional filled arch design available

• Wide variety of tube and cover elastomers available,
• Provides easy access to piping and equipment
• Simple to install and high strength
• Integrally flanged design, no gaskets required
• Low stiffness and deflection forces
• Compensates for minor misalignment and offset
• Hot dip galvanized retaining rings standard
• Filled arch design available
• 250ºF continuous service standard, 400ºF available
• Full vacuum rating (30” Hg) for style 1204
• Excellent chemical and abrasion resistance
• Higher pressure rating than conventional expansion joint
• Virtually eliminates sediment buildup
• Wide flowing arch design
• Standard or custom face to face dimensions
• Versatile hand-built construction. Made in the U.S.A.
• Quadruple the movement with 1/4 the spring rate

Notes:

1.) Series 1100 are designed for 30” Hg (full vacuum) and have a maximum test at 26” Hg due to facility altitude and equipment
2.) Movements are non-concurrent. Contact General Rubber for concurrent movements, and for sizes not shown up to 144” I.D.
3.) All sizes can be supplied with a filled arch reducing their movements by 50% and increasing the spring rates fourfold.
4.) For full product specifications and installation instructions, see SPEC 1104-1 and ININ 1104-1. Gross weights include retaining rings.
5.) WARNING: Control units (sold separately) must be used when piping is not properly anchored. Number of rods are dependent on maximum field test pressures. Expansion joints may operate in pipelines carrying fluids at elevated temperatures and pressures, so precaution should be taken to ensure proper installation and regular inspection. Care is required to protect personnel in the event of leakage or splash. Adequate floor drains are always recommended.
6.) Movements are non-concurrent. Contact General Rubber for concurrent movements, and for sizes not shown up to 144” I.D.
7.) Series 1100 and 1200 replace styles 1025, 1050 and 1075.
8.) Standard 125/150 lb. drilling includes, 1”-24” with ANSI B16.1 Class 125 lb./B16.5 Class 150 lb., 30”-60” with ANSI B16.1 Class 125 lb./B16.47 series A, Class 150 lb., 72”-108” with ANSI B16.1 Class 125 lb. / AWWA C207 Class B.

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sales@general-rubber.com
**Maxi-Joint®**
Concentric Reducing Expansion Joints

**Style 1101CR**

**Features:**

- An economic and space saving way to combine a reducing pipe fitting with an expansion joint
- Available in custom offset arrangements and sizes not shown
- Versatile hand-built construction. Made in the U.S.A.
- Standard or custom face to face dimensions
- Excellent all directional movement capability
- Absorbs noise, vibration and shock
- 250°F continuous service standard, 400°F available
- Integral flange design, no gaskets required
- ANSI 150 lb. drilling standard, other standard drilling available, including ASA 300 lb., DIN, PN, JIS, API, and Navy
- Filled arch design available
- Available in high pressure (HP) and high temperature (HT) designs
- Multiple plies of tire cord reinforcement and a wide variety of tube and cover elastomers available

---

### Notes:

1. All Series 1200 parts listed are designed for 30" Hg (full vacuum) and have a maximum test at 26" Hg due to facility altitude and equipment limitations.
2. Maximum operating temperature of 250 deg F for EPDM, Butyl, Hypalon, and Viton; 225 deg F for Neoprene; 210 deg F for Nitrile; 180 deg F for Pure Gum Rubber; 300 deg F for EPDM and Butyl in air service at 25 PSI maximum; higher pressure and temperature ratings available.
3. All sizes can be supplied with a filled arch reducing their movements by 50% and increasing the spring rates fourfold.
5. **WARNING:** Control units (sold separately) must be used when piping is not properly anchored. Number of rods are dependent upon maximum field test pressures. Expansion joints may operate in pipelines carrying fluids at elevated temperatures and pressures, so precaution should be taken to ensure proper installation and regular inspection. Care is required to protect personnel in the event of leakage or splash. Adequate floor drains are always recommended.
6. Movements are non-concurrent. Contact General Rubber for concurrent movements, and for sizes not shown up to 144" I.D.
7. Standard 125/150 lb. drilling includes, 1"-24" with ANSI B16.1 Class 125 lb./B16.5 Class 150 lb., 30"-48" with ANSI B16.1 Class 125 lb./ B16.47 series A, Class 150 lb., 72"-108" with ANSI B16.1 Class 125 lb./ AWWA C207 Class B.

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### MAXI-JOINT®
Concentric Reducing Expansion Joints

#### Features:

- An economic and space saving way to combine a reducing pipe fitting with an expansion joint
- Available in custom offset arrangements and sizes not shown
- Versatile hand-built construction. Made in the U.S.A.
- Standard or custom face to face dimensions
- Excellent all directional movement capability
- Absorbs noise, vibration and shock
- 250°F continuous service standard, 400°F available
- Integral flange design, no gaskets required
- ANSI 150 lb. drilling standard, other standard drilling available, including ASA 300 lb., DIN, PN, JIS, API, and Navy
- Filled arch design available
- Available in high pressure (HP) and high temperature (HT) designs
- Multiple plies of tire cord reinforcement and a wide variety of tube and cover elastomers available

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### Table: MAXI-JOINT®

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<th>VACUUM Rating (inch Hg)</th>
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**Notes:**

1) All Series 1200 parts listed are designed for 30" Hg (full vacuum) and have a maximum test at 26" Hg due to facility altitude and equipment limitations.
2) Maximum operating temperature of 250 deg F for EPDM, Butyl, Hypalon, and Viton; 225 deg F for Neoprene; 210 deg F for Nitrile; 180 deg F for Pure Gum Rubber; 300 deg F for EPDM and Butyl in air service at 25 PSI maximum; higher pressure and temperature ratings available.
3) All sizes can be supplied with a filled arch reducing their movements by 50% and increasing the spring rates fourfold.
4) For full product specifications and installation instructions, see SPEC 1101CR-1 and ININ 1101CR-1. Gross weights include retaining rings.
5) **WARNING:** Control units (sold separately) must be used when piping is not properly anchored. Number of rods are dependent upon maximum field test pressures. Expansion joints may operate in pipelines carrying fluids at elevated temperatures and pressures, so precaution should be taken to ensure proper installation and regular inspection. Care is required to protect personnel in the event of leakage or splash. Adequate floor drains are always recommended.
6) Movements are non-concurrent. Contact General Rubber for concurrent movements, and for sizes not shown up to 144" I.D.
7) Standard 125/150 lb. drilling includes, 1"-24" with ANSI B16.1 Class 125 lb./B16.5 Class 150 lb., 30"-48" with ANSI B16.1 Class 125 lb./ B16.47 series A, Class 150 lb., 72"-108" with ANSI B16.1 Class 125 lb./ AWWA C207 Class B.
Maxi-Joint
Eccentric Reducing Expansion Joints

Style 1101ER

Features:
- An economic and space saving way to combine a reducing pipe fitting with an expansion joint
- Available in custom offset arrangements and sizes not shown
- Versatile hand-built construction. Made in the U.S.A.
- Standard or custom face to face dimensions
- Excellent all directional movement capability
- Absorbs noise, vibration and shock
- 250°F continuous service standard, 400°F available
- Integral flange design, no gaskets required
- ANSI 150 lb. drilling standard, other standard drilling available, including ASA 300 lb., DIN, PN, JIS, API, and Navy
- Filled arch design available
- Available in high pressure (HP) and high temperature (HT) designs
- Multiple plies of tire cord reinforcement and a wide variety of tube and cover elastomers available

Eccentric Reducing Expansion Joints

Style 1101ER

Features:
- An economic and space saving way to combine a reducing pipe fitting with an expansion joint
- Available in custom offset arrangements and sizes not shown
- Versatile hand-built construction. Made in the U.S.A.
- Standard or custom face to face dimensions
- Excellent all directional movement capability
- Absorbs noise, vibration and shock
- 250°F continuous service standard, 400°F available
- Integral flange design, no gaskets required
- ANSI 150 lb. drilling standard, other standard drilling available, including ASA 300 lb., DIN, PN, JIS, API, and Navy
- Filled arch design available
- Available in high pressure (HP) and high temperature (HT) designs
- Multiple plies of tire cord reinforcement and a wide variety of tube and cover elastomers available

Notes:
1.) All Series 1200 parts listed are designed for 30” Hg (full vacuum) and have a maximum test at 26” Hg due to facility altitude and equipment limitations.
2.) Maximum operating temperature of 250 deg F for EPDM, Butyl, Hypalon, and Viton; 225 deg F for Neoprene; 210 deg F for Nitrile; 180 deg F for Pure Gum Rubber; 300 deg F for EPDM and Butyl in air service at 25 PSI maximum; higher pressure and temperature ratings available.
3.) All sizes can be supplied with a filled arch reducing their movements by 50% and increasing the spring rates fourfold.
4.) For full product specifications and installation instructions, see SPEC 1101CR-1 and ININ 1101CR-1. Gross weights include retaining rings.
5.) WARNING: Control units (sold separately) must be used when piping is not properly anchored. Number of rods are dependent upon maximum field test pressures. Expansion joints may operate in pipelines carrying fluids at elevated temperatures and pressures, as precaution should be taken to ensure proper installation and regular inspection. Care is required to protect personnel in the event of leakage or splash. Adequate floor drains are always recommended.
6.) Movements are non-concurrent. Contact General Rubber for concurrent movements, and for sizes not shown up to 144” I.D.
7.) Standard 125/150 lb. drilling includes, 1”-24” with ANSI B16.1 Class 125 lb./B16.5 Class 150 lb., 30”-60” with ANSI B16.1 Class 125 lb./B16.47 series A, Class 150 lb., 72”-108” with ANSI B16.1 Class 125 lb./AWWA C207 Class B.
**Maxi-Joint**

**Lightweight Expansion Joints**

**Style 1101LW**

**Features:**
- Extremely flexible design with minimum stiffness and deflection forces
- 250ºF with 25 PSIG and 10” Hg service standard
- Versatile hand-built construction allows General Rubber to work with the system requirements to develop an optimal and cost-effective solution, including non-standard face to face dimensions, no arch, single or multiple arch designs in straight or reducing arrangements
- Integral ANSI 150 lb. flange design, no gaskets required
- Other standard drilling available, including DIN, PN, JIS, API, and Navy
- Ideal flexible connector for fans, blowers and other industrial OEM Equipment
- Absorbs system noise, vibration and shock
- Compensates for minor misalignment and offset while providing easy access to piping and equipment
- Wide variety of tube and cover elastomers available, including Pure Gum Rubber, EPDM, Neoprene, Butyl, Nitrile, Hypalon®, Viton®, Teflon®, Food Grade, and more

**STYLE 1101LW MOVEMENTS**

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<th>Ext. (inch)</th>
<th>Lateral (inch)</th>
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<th>Torsional (degree)</th>
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**Notes:**
1.) For full product specifications and installation instructions, see SPEC 1101LW-1 and ININ 1101LW-1. Gross weights include retaining rings.
2.) Technical data shown above reflect the single arch design, additional arches typically increase movements and decrease spring ratios proportionately. Contact the factory for full details including availability of larger sizes, higher pressure and temperature ratings.
3.) Style 1101LW will replace Style 2000.
Notes:
1.) All parts listed are designed for 30" Hg (full vacuum) and have a maximum test at 26" Hg due to facility altitude and equipment limitations.
2.) Maximum operating temperature of 250 deg F for EPDM, Butyl, Hypalon, and Viton; 225 deg F for Neoprene; 210 deg F for Nitrile; 180 deg F for Pure Gum Rubber; 300 deg F for EPDM and Butyl in air service at 25 PSI maximum; higher pressure and temperature ratings available.
3.) All sizes can be supplied with a filled arch reducing their movements by 50% and increasing the spring rates fourfold.
4.) For full product specifications and installation instructions, see SPEC 1101HP-1 and ININ 1101HP-1. Gross weights include retaining rings.
5.) WARNING: Control units (sold separately) must be used when piping is not properly anchored. Number of rods are dependent upon maximum field test pressures. Expansion joints may operate in pipelines carrying fluids at elevated temperatures and pressures, so precaution should be taken to ensure proper installation and regular inspection. Care is required to protect personnel in the event of leakage or splash. Adequate floor drains are always recommended.
6.) Movements are non-concurrent. Contact General Rubber for concurrent movements, and for sizes not shown up to 144" I.D.
7.) All sizes can be supplied with multiple arches for increased movements and decreased spring rates.
8.) Standard 125/150 lb. drilling includes, 1"-24" with ANSI B16.1 Class 125 lb./B16.5 Class 150 lb., 300/600 with ANSI B16.1 Class 125 lb./16.47 series A, Class 150 lb., 275/550 with ANSI B16.1 Class 125 lb./AFWA C207 Class B.
9.) Contact General Rubber with your design conditions and we will provide a detailed drawing with our proposal.

**Maxi-Joint**

**High Pressure Expansion Joints**

**Style 1101HP**

**Features:**
- Versatile hand-built construction allows General Rubber to design to higher working programs with greater safety factors. Made in the U.S.A.
- Standard or custom face to face dimensions
- Wide flowing arch design
- Exceptional all directional movement capability
- Virtually eliminates sediment buildup
- Excellent chemical and abrasion resistance
- Full vacuum rating (30" Hg) in all style 1101HP sizes
- 250°F continuous service standard, 400°F available
- Filled arch design available
- Hot dip galvanized retaining rings standard
- Absorbs noise, vibration and shock
- Compensates for minor misalignment and offset
- Low stiffness and deflection forces
- Integrally flanged design, no gaskets required
- Simple to install and high strength
- Provides easy access to piping and equipment
- Other standard drilling available, including ASA 300, DIN, PN, JIS, API, and Navy
- Wide variety of tube and cover elastomers available, including Pure Gum Rubber, EPDM, Neoprene, Butyl, Nitrile, Hypalon®, Viton®, Teflon®, Food Grade, and more

**Style 1101HP High Pressure Expansion Joints**

**Features:**
- Versatile hand-built construction allows General Rubber to design to higher working programs with greater safety factors. Made in the U.S.A.
- Standard or custom face to face dimensions
- Wide flowing arch design
- Exceptional all directional movement capability
- Virtually eliminates sediment buildup
- Excellent chemical and abrasion resistance
- Full vacuum rating (30" Hg) in all style 1101HP sizes
- 250°F continuous service standard, 400°F available
- Filled arch design available
- Hot dip galvanized retaining rings standard
- Absorbs noise, vibration and shock
- Compensates for minor misalignment and offset
- Low stiffness and deflection forces
- Integrally flanged design, no gaskets required
- Simple to install and high strength
- Provides easy access to piping and equipment
- Other standard drilling available, including ASA 300, DIN, PN, JIS, API, and Navy
- Wide variety of tube and cover elastomers available, including Pure Gum Rubber, EPDM, Neoprene, Butyl, Nitrile, Hypalon®, Viton®, Teflon®, Food Grade, and more

**SIZE (inch) | LENGTH (inch) | FLANGE TH (inch) | MAX PRESSURE (PSIG) | VACUUM RATING (inch Hg) | STYLE 1101HP MOVEMENTS | STYLE 1101HP SPRING RATES**

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<th>SIZE (inch)</th>
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<th>FLANGE TH (inch)</th>
<th>MAX PRESSURE (PSIG)</th>
<th>VACUUM RATING (inch Hg)</th>
<th>Comp. (inch)</th>
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</table>

General Rubber Corporation
Toll Free: 800-233-6294
Web: www.general-rubber.com
sales@general-rubber.com
Fax: 201-935-1915
Maxi-Joint®
High Temperature Expansion Joints

Style 1101HT
Features:
• Versatile hand-built construction allows General Rubber to design higher working temperatures. Made in the U.S.A.
• 350°F continuous service with EPDM / Kevlar®
• 400°F continuous service with Viton® / Kevlar®
• Standard or custom face to face dimensions
• Wide flowing arch design
• Exceptional all directional movement capability
• Virtually eliminates sediment buildup
• Higher pressure rating than conventional expansion joints
• Excellent chemical and abrasion resistance
• Full vacuum rating (30" Hg) in all style 1101HT sizes
• Filled arch design available
• Hot dip galvanized retaining rings standard
• Absorbs noise, vibration and shock
• Compensates for minor misalignment and offset
• Low stiffness and deflection forces
• Integ rally flanged design, no gaskets required
• Simple to install and high strength
• Provides easy access to piping and equipment
• Other standard drilling available, including ASA 300, DIN, PN, JIS, API, and Navy

Notes:
1.) All parts listed are designed for 30" Hg (full vacuum) and have a maximum test at 26" Hg due to facility altitude and equipment limitations.
2.) Maximum operating temperature of 350 deg F for EPDM/Kevlar and 400 deg F for Viton/Kevlar.
3.) All sizes can be supplied with a filled arch reducing their movements by 50% and increasing the spring rates fourfold.
4.) For full product specifications and installation instructions, see SPEC 1101HT-1 and ININ 1101HT-1. Gross weights include retaining rings.
5.) WARNING: Control units (sold separately) must be used when piping is not properly anchored. Number of rods are dependent upon maximum field test pressures. Expansion joints may operate in pipelines carrying fluids at elevated temperatures and pressures, so precaution should be taken to ensure proper installation and regular inspection. Care is required to protect personnel in the event of leakage or splash. Adequate floor drains are always recommended.
6.) Movements are non-concurrent. Contact General Rubber for concurrent movements, and for sizes not shown up to 144" I.D.
7.) All sizes can be supplied with multiple arches for increased movements and decreased spring rates.
8.) Standard 125/150 lb. drilling includes, 1”-24” with ANSI B16.1 Class 125 lb./B16.5 Class 150 lb., 30”-60” with ANSI B16.1 Class 125 lb./B16.47 series A, Class 150 lb., 72”-108” with ANSI B16.1 Class 125 lb./ANWW C207 Class B.
9.) Contact General Rubber with your design conditions and we will provide a detailed drawing with our proposal.
Maxi-Joint
Dismantling Expansion Joints

Style 1101DJ
Features:
- Versatile hand-built construction allows General Rubber to design self retracting designs with integral gusseted rotating rings embedded. Made in the U.S.A.
- Standard or custom face to face dimensions
- Wide flowing arch design
- Exceptional all directional movement capability
- Virtually eliminates sediment buildup
- Higher pressure rating than conventional expansion joints
- Excellent chemical and abrasion resistance
- Full vacuum rating (30" Hg) in all style 1101 sizes
- 250°F continuous service standard, 400°F available
- Filled arch design available
- Hot dip galvanized retaining rings standard
- Absorbs noise, vibration and shock
- Compensates for minor misalignment and offset
- Low stiffness and deflection forces
- Integrally flanged design, no gaskets required
- Simple to install and high strength
- Provides easy access to piping and equipment
- Other standard drilling available, including ASA 300, DIN, PN, JIS, API, and Navy
- Wide variety of tube and cover elastomers available, including Pure Gum Rubber, EPDM, Neoprene, Butyl, Nitrile, Hypalon®, Viton®, Teflon®, Food Grade, and more

Maxi-Joint®
Dismantling Expansion Joints

Style 1101DJ
Dismantling Joint with Turnbuckles

Notes:
1.) All parts listed are designed for 30" Hg (full vacuum) and have a maximum test at 26" Hg due to facility altitude and equipment limitations.
2.) Maximum operating temperature of 350 deg F for EPDM/Kevlar and 400 deg F for Viton/Kevlar.
3.) All sizes can be supplied with a filled arch reducing their movements by 50% and increasing the spring rates fourfold.
4.) For full product specifications and installation instructions, see SPEC 1101HT-1 and ININ 1101HT-1. Gross weights include retaining rings.
5.) WARNING: Control units (sold separately) must be used when piping is not properly anchored. Number of rods are dependent upon maximum field test pressures. Expansion joints may operate in pipelines carrying fluids at elevated temperatures and pressures, so precaution should be taken to ensure proper installation and regular inspection. Care is required to protect personnel in the event of leakage or splash. Adequate floor drains are always recommended.
6.) Movements are non-concurrent. Contact General Rubber for concurrent movements, and for sizes not shown up to 144" I.D.
7.) All sizes can be supplied with multiple arches for increased movements and decreased spring rates.
8.) Standard 125/150 lb. drilling includes 1"-24" with ANSI B16.1 Class 125 lb./B16.5 Class 150 lb., 30°-60° with ANSI B16.1 Class 125 lb./B16.47 series A, Class 150 lb., 72°-180° with ANSI B16.1 Class 125 lb./AWWA C207 Class B.
9.) Contact General Rubber with your design conditions and we will provide a detailed drawing with our proposal.
**Maxi-Joint**

*No Arch Rubber Flanged Pipe*

**Style 1100**

**Features:**
- The capacity of a flexible connector to absorb noise and vibration is directly proportional to its flexible length; this original design pre-dates the spherical connector and is still preferred by many design engineers and is considered the ultimate in noise and vibration control.
- 250°F continuous service standard, 400°F available
- Versatile hand-built construction, available as reducers both concentric and eccentric, as well as elbows and tees; elbows in long or short radius to ANSI dimensions. Made in the U.S.A.
- Excellent chemical and abrasion resistance
- Integ rally flanged design, no gaskets required
- Other standard drilling available, including ASA 300, DIN, PN, JIS, API, and Navy

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**Notes:**
1. All Series 1200 parts listed are designed for 30” Hg (full vacuum) and have a maximum test at 26” Hg due to facility altitude and equipment limitations.
2. Maximum operating temperature of 250 deg F for EPDM, Butyl, Hypalon, and Viton; 225 deg F for Neoprene; 210 deg F for Nitrile; 180 deg F for Pure Gum Rubber; 300 deg F for EPDM and Butyl in air service at 25 PSI maximum; higher pressure and temperature ratings available.
3. For full product specifications and installation instructions, see SPEC 1100-1 and ININ 1100-1. Gross weights include retaining rings.
4. **WARNING:** Control units (sold separately) must be used when piping is not properly anchored. Number of rods are dependent upon maximum field test pressures. Expansion joints may operate in pipelines carrying fluids at elevated temperatures and pressures, as precaution should be taken to ensure proper installation and regular inspection. Care is required to protect personnel in the event of leakage or splash. Adequate floor drains are always recommended.
5. Movements are non-concurrent. Contact General Rubber for concurrent movements, and for sizes not shown up to 144” I.D.
6. Standard 125/150 lb. drilling includes, 1”-24” with ANSI B16.1 Class 150 lb./B16.5 Class 150 lb., 30”-60” with ANSI B16.1 Class 125 lb./B16.47 series A, Class 150 lb., 72”-108” with ANSI B16.1 Class 125 lb./AWWA C207 Class B.

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### Size: 1100

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<th>Vacuum Rating (in Hg)</th>
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</table>

**General Rubber Corporation**

Web: [www.general-rubber.com](http://www.general-rubber.com)

Toll Free: 800-233-6294

Fax: 201-935-1915

sales@general-rubber.com
Maxi-Joint®
No Arch Rubber Flanged Fittings

**Style 1100-45, 1100-90, 1100-TF**

**Features:**
- The capacity of a flexible connector to absorb noise and vibration is directly proportional to its flexible length; this original design pre-dates the spherical connector and is still preferred by many design engineers and is considered the ultimate in noise and vibration control.
- 250°F continuous service standard, 400°F available
- Versatile hand-built construction, available as reducers both concentric and eccentric, as well as elbows and tees; elbows in long or short radius to ANSI dimensions. Made in the U.S.A.
- Excellent chemical and abrasion resistance
- Integrally flanged design, no gaskets required
- Other standard drilling available, including ASA 300, DIN, PN, JIS, API, and Navy
- Wide variety of tube and cover elastomers available

Notes:
1) Contact General Rubber with your design conditions and we will provide a detailed drawing with our proposal.
   Pressures are not normally as high as our straight Style 1100.

---

Maxi-Joint®
No Arch Rubber Flanged Fittings

**Style 1100-90**
Elbow (90°) No Arch Rubber Flanged Fittings

**Style 1100-45**
Elbow (45°) No Arch Rubber Flanged Fittings

**Style 1100-TF**
Tee Shaped No Arch Rubber Flanged Fittings
**Style 1010 Features:**

- Superior noise and vibration control
- Most economical flexible connector
- Precision molded spherical flowing arch design
- Solid galvanized steel floating flanges avoids the problematic hooked or interlocking split flange design
- High tensile aircraft cable is embedded in the raised face rubber ends to prevent pull out and avoids the sharp cutting edge of solid steel rings
- Safe industry standard proven design utilizing the same beaded cable technology established in the tire industry
- No gaskets required; ANSI 150 lb. drilling standard, other flange drilling available, including ANSI 300 lb., DIN, PN, JIS and API
- Compensates for minor misalignment and offset while providing easy access to piping and equipment
- Large inventory means quick shipments
- Multiple plies of tire cord reinforcement and a wide variety of tube and cover elastomers

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**Notes:**

1.) Maximum operating temperature of 250ºF for EPDM, Butyl, Hypalon®, and Viton®; 225ºF for Neoprene; 210ºF for Nitrile; 180ºF for Pure Gum Rubber; 300ºF for EPDM and Butyl in air service at 25 PSI maximum; higher pressure and temperature ratings available. For full product specifications and installation instructions, see SPEC 1010-1, and ININ 1010-1. Gross weights include flanges.

2.) For drilling information see 125/150 lb.

3.) **WARNING:** Control units (sold separately) must be used when piping is not properly anchored. Number of rods are dependent upon maximum field test pressures. Expansion joints may operate in pipelines carrying fluids at elevated temperatures and pressures, so precaution should be taken to ensure proper installation and regular inspection. Care is required to protect personnel in the event of leakage or splash. Adequate floor drains are always recommended.

4.) Movements are non-concurrent. Contact General Rubber for concurrent movements, and for sizes not shown up to 24” I.D.
Maxi-Joint®
Double Sphere Connector

**Style 1020**

**Features:**
- Superior noise and vibration control
- Most economical flexible connector
- Precision molded spherical flowing arch design
- Solid galvanized steel floating flanges avoids the problematic hooked or interlocking split flange design
- High tensile aircraft cable is embedded in the raised face rubber ends to prevent pull out and avoids the sharp cutting edge of solid steel rings
- Safe industry standard proven design utilizing the same beaded cable technology established in the tire industry
- No gaskets required; ANSI 150 lb. drilling standard, other flange drilling available, including ANSI 300 lb., DIN, PN, JIS and API
- Compensates for minor misalignment and offset while providing easy access to piping and equipment
- Large inventory means quick shipments
- Multiple plies of tire cord reinforcement and a wide variety of tube and cover elastomers

**Notes:**
1.) Maximum operating temperature of 250ºF for EPDM, Butyl, Hypalon®, and Viton®; 225ºF for Neoprene; 210ºF for Nitrile; 180ºF for Pure Gum Rubber; 300ºF for EPDM and Butyl in air service at 25 PSI maximum; higher pressure and temperature ratings available. For full product specifications and installation instructions, see SPEC 1020-1, and ININ 1020-1. Gross weights include flanges.
2.) For drilling information see 125/150 lb.
3.) **WARNING:** Control units (sold separately) must be used when piping is not properly anchored. Number of rods are dependent upon maximum field test pressures. Expansion joints may operate in pipelines carrying fluids at elevated temperatures and pressures, so precaution should be taken to ensure proper installation and regular inspection. Care is required to protect personnel in the event of leakage or splash. Adequate floor drains are always recommended.
4.) Movements are non-concurrent. Contact General Rubber for concurrent movements, and for sizes not shown up to 24” I.D.

**Features:**
- Superior noise and vibration control
- Most economical flexible connector
- Precision molded spherical flowing arch design
- Solid galvanized steel floating flanges avoids the problematic hooked or interlocking split flange design
- High tensile aircraft cable is embedded in the raised face rubber ends to prevent pull out and avoids the sharp cutting edge of solid steel rings
- Safe industry standard proven design utilizing the same beaded cable technology established in the tire industry
- No gaskets required; ANSI 150 lb. drilling standard, other flange drilling available, including ANSI 300 lb., DIN, PN, JIS and API
- Compensates for minor misalignment and offset while providing easy access to piping and equipment
- Large inventory means quick shipments
- Multiple plies of tire cord reinforcement and a wide variety of tube and cover elastomers

**Style 1020 Double Sphere Connector with Floating Flanges**

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<th>SIZE</th>
<th>LENGTH</th>
<th>FLANGE</th>
<th>MOVEMENTS</th>
<th>MAX PRESSURE</th>
<th>VACUUM</th>
<th>GROSS</th>
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<td>1-3/4</td>
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</tbody>
</table>

Notes:
1.) Maximum operating temperature of 250ºF for EPDM, Butyl, Hypalon®, and Viton®; 225ºF for Neoprene; 210ºF for Nitrile; 180ºF for Pure Gum Rubber; 300ºF for EPDM and Butyl in air service at 25 PSI maximum; higher pressure and temperature ratings available. For full product specifications and installation instructions, see SPEC 1020-1, and ININ 1020-1. Gross weights include flanges.
2.) For drilling information see 125/150 lb.
3.) **WARNING:** Control units (sold separately) must be used when piping is not properly anchored. Number of rods are dependent upon maximum field test pressures. Expansion joints may operate in pipelines carrying fluids at elevated temperatures and pressures, so precaution should be taken to ensure proper installation and regular inspection. Care is required to protect personnel in the event of leakage or splash. Adequate floor drains are always recommended.
4.) Movements are non-concurrent. Contact General Rubber for concurrent movements, and for sizes not shown up to 24” I.D.
Maxi-Joint®
Double Union Sphere Connector

**Style 1030**

**Features:**
- Superior noise and vibration control
- Most economical flexible connector
- Precision molded spherical flowing arch design
- Solid galvanized steel union ends with NPT female threads
- High tensile aircraft cable is embedded in the raised face rubber ends to prevent pull out and avoids the sharp cutting edge of solid steel rings
- Safe industry standard proven design utilizing the same beaded cable technology established in the tire industry
- Compensates for minor misalignment and offset while providing easy access to piping and equipment
- Large inventory means quick shipments
- Multiple plies of tire cord reinforcement and a wide variety of tube and cover elastomers

---

**Notes:**
1. Maximum operating temperature of 250°F for EPDM, Butyl, Hypalon®, and Viton®; 225°F for Neoprene; 210°F for Nitrile; 180°F for Pure Gum Rubber; 300°F for EPDM and Butyl in air service at 25 PSI maximum; higher pressure and temperature ratings available. For full product specifications and installation instructions, see SPEC 1010-1, and ININ 1010-1. Gross weights include flanges.
2. For drilling information see 125/150 lb.
3. **WARNING:** Control units (sold separately) must be used when piping is not properly anchored. Number of rods are dependent upon maximum field test pressures. Expansion joints may operate in pipelines carrying fluids at elevated temperatures and pressures, so precaution should be taken to ensure proper installation and regular inspection. Care is required to protect personnel in the event of leakage or splash. Adequate floor drains are always recommended.
4. ** Movements are non-concurrent. Contact General Rubber for concurrent movements, and for sizes not shown up to 24” I.D.**

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**Maxi-Joint® Double Union Sphere Connector with Union Ends**

<table>
<thead>
<tr>
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<th>LENGTH F/F (inch)</th>
<th>FLANGE TH (inch)</th>
<th>MOVEMENTS Comp. (inch)</th>
<th>Ext. (inch)</th>
<th>Lateral (inch)</th>
<th>Angular (degree)</th>
<th>Torsional (degree)</th>
<th>MAX Pressure (PSIG)</th>
<th>VACUUM Rating (inch Hg)</th>
<th>GROSS Weight (lbs)</th>
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<td>7/8</td>
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<td>4.8</td>
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<td>30</td>
<td>2.5</td>
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<td>7/8</td>
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<td>20</td>
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<td>4</td>
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<td>13</td>
<td>2</td>
<td>150</td>
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</tbody>
</table>

**Notes:**
1. Maximum operating temperature of 250°F for EPDM, Butyl, Hypalon®, and Viton®; 225°F for Neoprene; 210°F for Nitrile; 180°F for Pure Gum Rubber; 300°F for EPDM and Butyl in air service at 25 PSI maximum; higher pressure and temperature ratings available. For full product specifications and installation instructions, see SPEC 1010-1, and ININ 1010-1. Gross weights include flanges.
2. For drilling information see 125/150 lb.
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4. ** Movements are non-concurrent. Contact General Rubber for concurrent movements, and for sizes not shown up to 24” I.D.**
Maxi-Joint®
Molded Teflon® Expansion Joints

**Style 3302**

**Features:**
- Superior chemical resistance, utilizing 100% virgin Dupont Teflon®
- Low stiffness and deflection forces
- 400°F continuous service standard
- Full vacuum rating (30" Hg) in all sizes offered
- Standard face to face dimensions with threaded ANSI 125/150 lb. drilling
- Large inventory means quick shipments
- Absorbs all directional movement
- Carbon steel or stainless steel flanges
- Reduces system noise, vibration and shock
- Compensates for minor misalignment and offset
- Simple to install, lightweight and high strength
- Integral control units standard
- Provides easy access to piping and equipment
- Ideal for food, pharmaceutical, chemical and ultra pure water applications

![Integral Limit Bolt](image)

**Notes:**
1. Movements are non-concurrent. Contact General Rubber for concurrent movement, and for sizes not shown up to 24” I.D.
2. For full product specifications and installation instructions, see SPEC 3302-1 and ININ 3302-1.
3. **WARNING:** Control units (integral limit bolts) must be used when piping is not properly anchored. Expansion joints may operate in pipelines carrying fluids at elevated temperatures and pressures, so precaution should be taken to ensure proper installation and regular inspection. Care is required to protect personnel in the event of leakage or splash. Adequate floor drains are always recommended.

### Style 3302 Two Convolution Molded Teflon® Coupling

| SIZE (I.D.) | LENGTH (inch) | MAX PRESSURE (PSI) (Temp @ 70°F) | MAX PRESSURE (PSI) (Temp @ 300°F) | MAX PRESSURE (PSI) (Temp @ 400°F) | MAX TEMP (Temp @ 300°F) | MAX TEMP (Temp @ 400°F) | MAX TEMP (Temp @ 500°F) | MAX TEMP (Temp @ 600°F) | MAX TEMP (Temp @ 700°F) | MAX TEMP (Temp @ 800°F) | MAX TEMP (Temp @ 900°F) | MAX TEMP (Temp @ 1000°F) | MAX TEMP (Temp @ 1100°F) | MAX TEMP (Temp @ 1200°F) | MAX TEMP (Temp @ 1300°F) | MAX TEMP (Temp @ 1400°F) | MAX TEMP (Temp @ 1500°F) | MAX TEMP (Temp @ 1600°F) | MAX TEMP (Temp @ 1700°F) | MAX TEMP (Temp @ 1800°F) | MAX TEMP (Temp @ 1900°F) | MAX TEMP (Temp @ 2000°F) | MAX TEMP (Temp @ 2100°F) | MAX TEMP (Temp @ 2200°F) | MAX TEMP (Temp @ 2300°F) | MAX TEMP (Temp @ 2400°F) | MAX TEMP (Temp @ 2500°F) | MAX TEMP (Temp @ 2600°F) | MAX TEMP (Temp @ 2700°F) | MAX TEMP (Temp @ 2800°F) | MAX TEMP (Temp @ 2900°F) | MAX TEMP (Temp @ 3000°F) | MAX TEMP (Temp @ 3100°F) | MAX TEMP (Temp @ 3200°F) | MAX TEMP (Temp @ 3300°F) | MAX TEMP (Temp @ 3400°F) | MAX TEMP (Temp @ 3500°F) | MAX TEMP (Temp @ 3600°F) | MAX TEMP (Temp @ 3700°F) | MAX TEMP (Temp @ 3800°F) | MAX TEMP (Temp @ 3900°F) | MAX TEMP (Temp @ 4000°F) | MAX TEMP (Temp @ 4100°F) | MAX TEMP (Temp @ 4200°F) | MAX TEMP (Temp @ 4300°F) | MAX TEMP (Temp @ 4400°F) | MAX TEMP (Temp @ 4500°F) | MAX TEMP (Temp @ 4600°F) | MAX TEMP (Temp @ 4700°F) | MAX TEMP (Temp @ 4800°F) | MAX TEMP (Temp @ 4900°F) | MAX TEMP (Temp @ 5000°F) | MAX TEMP (Temp @ 5100°F) | MAX TEMP (Temp @ 5200°F) | MAX TEMP (Temp @ 5300°F) | MAX TEMP (Temp @ 5400°F) | MAX TEMP (Temp @ 5500°F) | MAX TEMP (Temp @ 5600°F) | MAX TEMP (Temp @ 5700°F) | MAX TEMP (Temp @ 5800°F) | MAX TEMP (Temp @ 5900°F) | MAX TEMP (Temp @ 6000°F) | MAX TEMP (Temp @ 6100°F) | MAX TEMP (Temp @ 6200°F) | MAX TEMP (Temp @ 6300°F) | MAX TEMP (Temp @ 6400°F) | MAX TEMP (Temp @ 6500°F) | MAX TEMP (Temp @ 6600°F) | MAX TEMP (Temp @ 6700°F) | MAX TEMP (Temp @ 6800°F) | MAX TEMP (Temp @ 6900°F) | MAX TEMP (Temp @ 7000°F) | MAX TEMP (Temp @ 7100°F) | MAX TEMP (Temp @ 7200°F) | MAX TEMP (Temp @ 7300°F) | MAX TEMP (Temp @ 7400°F) | MAX TEMP (Temp @ 7500°F) | MAX TEMP (Temp @ 7600°F) | MAX TEMP (Temp @ 7700°F) | MAX TEMP (Temp @ 7800°F) | MAX TEMP (Temp @ 7900°F) | MAX TEMP (Temp @ 8000°F) | MAX TEMP (Temp @ 8100°F) | MAX TEMP (Temp @ 8200°F) | MAX TEMP (Temp @ 8300°F) | MAX TEMP (Temp @ 8400°F) | MAX TEMP (Temp @ 8500°F) | MAX TEMP (Temp @ 8600°F) | MAX TEMP (Temp @ 8700°F) | MAX TEMP (Temp @ 8800°F) | MAX TEMP (Temp @ 8900°F) | MAX TEMP (Temp @ 9000°F) | MAX TEMP (Temp @ 9100°F) | MAX TEMP (Temp @ 9200°F) | MAX TEMP (Temp @ 9300°F) | MAX TEMP (Temp @ 9400°F) | MAX TEMP (Temp @ 9500°F) | MAX TEMP (Temp @ 9600°F) | MAX TEMP (Temp @ 9700°F) | MAX TEMP (Temp @ 9800°F) | MAX TEMP (Temp @ 9900°F) | MAX TEMP (Temp @ 10000°F) | MAX TEMP (Temp @ 10100°F) | MAX TEMP (Temp @ 10200°F) | MAX TEMP (Temp @ 10300°F) | MAX TEMP (Temp @ 10400°F) | MAX TEMP (Temp @ 10500°F) | MAX TEMP (Temp @ 10600°F) | MAX TEMP (Temp @ 10700°F) | MAX TEMP (Temp @ 10800°F) | MAX TEMP (Temp @ 10900°F) | MAX TEMP (Temp @ 11000°F) | MAX TEMP (Temp @ 11100°F) | MAX TEMP (Temp @ 11200°F) | MAX TEMP (Temp @ 11300°F) | MAX TEMP (Temp @ 11400°F) | MAX TEMP (Temp @ 11500°F) | MAX TEMP (Temp @ 11600°F) | MAX TEMP (Temp @ 11700°F) | MAX TEMP (Temp @ 11800°F) | MAX TEMP (Temp @ 11900°F) | MAX TEMP (Temp @ 12000°F) | MAX TEMP (Temp @ 12100°F) | MAX TEMP (Temp @ 12200°F) | MAX TEMP (Temp @ 12300°F) | MAX TEMP (Temp @ 12400°F) | MAX TEMP (Temp @ 12500°F) | MAX TEMP (Temp @ 12600°F) | MAX TEMP (Temp @ 12700°F) | MAX TEMP (Temp @ 12800°F) | MAX TEM
**Maxi-Joint®**
Molded Teflon® Expansion Joints

**Style 3303**

**Features:**
- Superior chemical resistance, utilizing 100% virgin Dupont Teflon®
- Low stiffness and deflection forces
- 400°F continuous service standard
- Full vacuum rating (30" Hg) in all sizes offered
- Standard face to face dimensions with threaded ANSI 125/150 lb. drilling
- Large inventory means quick shipments
- Absorbs all directional movement
- Carbon steel or stainless steel flanges
- Reduces system noise, vibration and shock
- Compensates for minor misalignment and offset
- Simple to install, lightweight and high strength
- Integral control units standard
- Provides easy access to piping and equipment
- Ideal for food, pharmaceutical, chemical and ultra pure water applications

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**Teflon® Grommet**

**Integral Limit Bolt**

**Stainless Steel Reinforcing Ring**

**Molded Teflon® (PTFE) Bellows**

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### Style 3303 Three Convolution Molded Teflon® Expansion Joints

<table>
<thead>
<tr>
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<th>LENGTH</th>
<th>MAX PRESSURE (PSI)</th>
<th>MAX TEMP (°F)</th>
<th>MAX O.D. (inch)</th>
<th>FLANGE O.D. (inch)</th>
<th>R.C. (inch)</th>
<th>HOLES (no.) &amp; Dia.</th>
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**Note:**
1.) Movements are non-concurrent. Contact General Rubber for concurrent movement and sizes not shown up to 24" I.D.

2.) For full product specifications and installation instructions, see SPEC 3303-1 and ININ 3303-1.

**WARNING:** Control units (integral limit bolts) must be used when piping is not properly anchored. Expansion joints may operate in pipelines carrying fluids at elevated temperatures and pressures, so precaution should be taken to ensure proper installation and regular inspection. Care is required to protect personnel in the event of leakage or splash. Adequate floor drains are always recommended.

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**Toll Free:** 800-233-6294  
**Web:** www.general-rubber.com
Maxi-Joint®
Molded Teflon® Expansion Joints

Style 3305
Features:

- Superior chemical resistance, utilizing 100% virgin Dupont Teflon®
- Low stiffness and deflection forces
- 400°F continuous service standard
- Full vacuum rating (30" Hg) in all sizes offered
- Standard face to face dimensions with threaded ANSI 125/150 lb. drilling
- Large inventory means quick shipments
- Absorbs all directional movement
- Carbon steel or stainless steel flanges
- Reduces system noise, vibration and shock
- Compensates for minor misalignment and offset
- Simple to install, lightweight and high strength
- Integral control units standard
- Provides easy access to piping and equipment
- Ideal for food, pharmaceutical, chemical and ultra pure water applications

Notes:

1.) Movements are non-concurrent. Contact General Rubber for concurrent movement, and for sizes not shown up to 24” I.D.
2.) For full product specifications and installation instructions, see SPEC 3305-1 and ININ 3305-1.
3.) WARNING: Control units (integral limit bolts) must be used when piping is not properly anchored. Expansion joints may operate in pipelines carrying fluids at elevated temperatures and pressures, so precaution should be taken to ensure proper installation and regular inspection. Care is required to protect personnel in the event of leakage or splash. Adequate floor drains are always recommended.

### Style 3305
Five Convolution Molded Teflon® Bellows

#### Size

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</table>

### Notes:

1.) Movements are non-concurrent. Contact General Rubber for concurrent movement, and for sizes not shown up to 24” I.D.
2.) For full product specifications and installation instructions, see SPEC 3305-1 and ININ 3305-1.
3.) WARNING: Control units (integral limit bolts) must be used when piping is not properly anchored. Expansion joints may operate in pipelines carrying fluids at elevated temperatures and pressures, so precaution should be taken to ensure proper installation and regular inspection. Care is required to protect personnel in the event of leakage or splash. Adequate floor drains are always recommended.
Maxi-Joint®
Slip-on, Sleeve Type, Expansion Joints

**Style 1081, 1082, 1083**

**Features:**
- Economical slip-on design eliminates the need for mating flanges and hardware
- Extremely lightweight and flexible
- Large all directional movement capability with low stiffness and deflection forces
- 250°F continuous service standard, 400°F available
- More than (3) arches as well as reducers and offset styles available
- No gaskets required
- EPDM and multiple plies of tire cord reinforcements standard, with a wide variety of other tube and cover elastomers available

**Style 1082**
Double (2) Arch, Sleeve Type, Expansion Joints

**Style 1083**
Triple (3) Arch, Sleeve Type, Expansion Joints

---

### Maxi-Joint Slips-on, Sleeve Type, Expansion Joints

#### Specifications

<table>
<thead>
<tr>
<th>Pipe SIZE</th>
<th>ACTUAL I.D. (inch)</th>
<th>MAX PRESSURE (PSIG)</th>
<th>VACUUM (inch Hg)</th>
<th>MAX TEMP (°F)</th>
<th>风格1081</th>
<th>Style 1082</th>
<th>Style 1083</th>
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<td>Over-All Length (inch)</td>
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<td>Lateral (inch)</td>
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<td>250</td>
<td>8</td>
<td>1-3/4</td>
<td>3/4</td>
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</tbody>
</table>

**Notes:**
1) Expansion joints are sized to slip over schedule 40 pipe. Other I.D. dimensions are available.
2) Movements are non-concurrent movements. Contact General Rubber for concurrent movements, and for sizes not shown up to 96” I.D.
3) For full product specifications and installation instructions, see SPEC 1081-1, 1082-1 & 1083-1 and ININ 1081-1, 1082-1 & 1083-1.

**WARNING:** Anchors should be used to resist the pressure thrust force and isolate movements between expansion joints. Expansion joints may operate in pipelines carrying fluids at elevated temperatures and pressures, so precaution should be taken to ensure proper installation and regular inspection. Care is required to protect personnel in the event of leakage or splash. Adequate floor drains are always recommended.
Maxi-Joint®
Metal Braided Hose & Expansion Joints

**Style BSH-MN**
Braided Stainless Hose with Male Nipples

**Features:**
- Stainless steel corrugated hose and braid with carbon steel male NPT threaded ends
- Available in standard and non-standard lengths
- Absorbs noise, vibration, and minor misalignment

**Style BSH-RF**
Braided Stainless Hose with Rigid Flanges

**Features:**
- Stainless steel corrugated hose and braid with carbon steel plate flanges
- Available in standard and non-standard lengths
- Absorbs noise, vibration, and minor misalignment

**Style BBH-SE**
Braided Bronze Hose with Sweat Ends

**Features:**
- Bronze corrugated hose and braid with copper female sweat ends
- Available in standard and non-standard lengths
- Absorbs noise, vibration, and minor misalignment

**Style SSEJ-WE, SSEJ-RF**
Stainless Steel Expansion Joints

**Features:**
- Wide variety of stainless steel and other bellow materials
- Standard ends or custom designs
- Absorbs thermal movements, vibration, and minor misalignment
- Compensators available in an externally pressurized design with multi-Ply stainless steel bellows

**Notes:**
1.) Expansion joints are sized to slip over schedule 40 pipe. Other I.D. dimensions are available.
2.) Movements are non-concurrent movements. Contact General Rubber for concurrent movements, and for sizes not shown up to 96” I.D.
3.) For full product specifications and installation instructions, see SPEC 1081-1, 1082-1 & 1083-1 and ININ 1081-1, 1082-1 & 1083-1.
4.) **WARNING:** Anchors should be used to resist the pressure thrust force and isolate movements between expansion joints. Expansion joints may operate in pipelines carrying fluids at elevated temperatures and pressures, so precaution should be taken to ensure proper installation and regular inspection. Care is required to protect personnel in the event of leakage or splash. Adequate floor drains are always recommended.
Maxi-Joint®
Control Units & Accessories

Features:
- Protects expansion joints from over-expansion and over-compression
- High tensile galvanized steel rods standard, stainless steel and other materials available
- Galvanized gusset plates standard, stainless steel and other materials available
- Rubber grommets isolate vibration and are standard on sizes 1”-12” diameter
- Internal nuts or compression sleeves available and prevent over-compression
- Spherical washers available and prevent binding while minimizing lateral forces
- Double nuts are used to lock limit points and allow for field adjustment
- Other standard drilling available, including ASA 300, DIN, PN, JIS, API, and Navy
- Universal tied / self-guiding control units available and prevent squirming on longer expansion joints
- Hinges are available and allow for angular movement in one dimension
- Gimbles are available and allow for angular movement in two dimensions

Style HCU
Hinged Control Units

Style PG
Pipe Guide
1.) Maximum Control Unit lengths and diameters, as well as gusset thickness, are meant to assist in determining adequate clearance and making hardware selection. The values are maximum values and are based on mild steel design. Dimensions will change when using high tensile steel and with different arrangements. Contact General Rubber and request a specific submittal drawing for your job.

2.) Expansion joints should be installed between anchors. Anchors should be located at changes in pipe direction and guides should be spaced according to industry standards. Piping must be supported so the expansion joints do not carry any load or leakage or splash. Adequate floor drains are always recommended.

3.) Care is required to protect personnel in the event of expansion joint movement. Precaution should be taken to ensure proper installation and regular inspection.

4.) Outer and inner Control Unit gaps are set to a maximum of 1/2 the allowable movements, equal on each side so that the sum does not exceed the allowable movement in any one direction.
Maxi-Joint®
Duct Type Expansion Joints with Slip-on Ends

**Style 1080LW, 1081LW, 1091**

**Features:**
- Versatile hand-built construction allows General Rubber to work with the system requirements to develop an optimal and cost-effective solution
- 250°F continuous service standard, 400°F available
- The no arch Style 1080 typically incorporates wire reinforcement for higher pressure and vacuum ratings, while the no arch Style 1080LW has no wire and is designed for ducting applications operating within ± 5 PSIG
- The single and multiple arch styles 1081LW, 1082LW, 1083LW and 1084LW are also designed for ducting applications operating within ± 5 PSIG as well as requiring significant all directional movement and/or low deflection forces
- The unique beaded ends on the fully molded Style 1091 prevent the sleeve from being pulled out from under the clamps, making this design ideal for vibrating bin activators as well as other industrial OEM equipment
- Economical slip-on design eliminates the need for mating flanges and hardware
- Wide variety of tube and cover elastomers available, including Pure Gum Rubber, EPDM, Neoprene, Butyl, Nitrile, Hypalon®, Viton®, Food Grade, and more

Style 1080LW
No Arch, Expansion Joints

Optional Split Wrap Design
Also Typical for Other Styles

Style 1091
Beaded Endless Belt
Available in 4" and 5" Widths
Bead is 1/4" Wide
Maxi-Joint®
Duct Type Expansion Joints with Rigid Flanges

**Style 1092, 1097**

**Features:**
- Up to 400°F and ± 3 PSI continuous service
- Zero porosity in wet or dry service
- Economical, all molded construction
- Standard face to face dimensions of style 1092 include 3", 4", 6", 8", 9" or 12" with molded flanges
- Round and rectangular designs in all styles
- Exceptional all directional movement capability
- Absorbs system noise, vibration and shock
- Compensates for minor misalignment and offset
- Integral flanged design
- Low stiffness and deflection forces
- Simple to install, lightweight and high strength
- Provides easy access to ducting and equipment
- Carbon steel, stainless steel, or hot dipped galvanized backup rings available for easy bolting to mating flanges
- Custom face to face dimensions with style 1097
- No gaskets required
- Excellent chemical and abrasion resistance
- Wide variety of tube and cover elastomers available

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**Style 1092, 1097**
Single Layer Belt Type Expansion Joints

---

### 1092 – MOLDED FLANGE, FIXED FACE DESIGN

<table>
<thead>
<tr>
<th>Installed LENGTHS (inch)</th>
<th>MFD F/F + (inch)</th>
<th>MOVEMENT CAPABILITIES (inch) Lateral</th>
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<td>Comp. Ext. Lateral</td>
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<td>1/2</td>
</tr>
<tr>
<td>12</td>
<td>1/2</td>
<td>3/4</td>
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### 1097 – MOLDED FLANGE, VERSATILE FACE TO FACE CONSTRUCTION

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<th>MFD F/F + (inch)</th>
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<td>Comp. Ext. Lateral</td>
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<td>3/4</td>
<td>3/4</td>
</tr>
<tr>
<td>9-1/2 - 12</td>
<td>1</td>
<td>1</td>
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Notes:
1.) Extension movement capabilities can be increased with additional pre-compression during installation.
2.) Anchors should be used to resist the pressure thrust force and isolate the thermal movements between expansion joints.
3.) For vacuum or large pre-compressed applications, a set-back may be required to keep the expansion joint from protruding into the gas stream or touching the flow liner/baffle.
4.) Retaining Rings/Back Up Bars of 1/4” thickness standard. Suggested bolt spacing at 4” centers max.
5.) For full product specifications and installation instructions, see SPEC 1092-1 and 1097-1 and INSTR 1092-1 and 1097-1.
**Maxi-Joint**

Duct Type Expansion Joints with Rigid Flanges

**Style 1093**

**Features:**
- Up to 600°F and ± 3 PSI continuous service
- 9 Mil thick laminated fluoroplastic PTFE corrosion barrier
- Round and rectangular designs in all styles
- Exceptional all directional movement capability
- Absorbs system noise, vibration and shock
- Compensates for minor misalignment and offset
- Integrally flanged design
- Low stiffness and deflection forces
- Simple to install, lightweight and high strength
- Provides easy access to ducting and equipment
- Carbon steel, stainless steel, or hot dipped galvanized backup rings available for easy bolting to mating flanges
- Superior chemical resistance
- Zero porosity in wet and dry service
- Heat form and sealed to any size and arrangement

---

### Style 1093

**1093 – MOLDED FLANGE**

**VERSATILE FACE TO FACE CONSTRUCTION**

<table>
<thead>
<tr>
<th>Installed LENGTHS (inch)</th>
<th>MFD F/F (inch)</th>
<th>MOVEMENT CAPABILITIES (inch)</th>
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<td>3</td>
</tr>
<tr>
<td>9-1/2 - 12</td>
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<tr>
<td>12-1/2 - 16</td>
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<td>5</td>
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**Notes:**

1.) Extension movement capabilities can be increased with additional pre-compression during installation.
2.) Anchors should be used to resist the pressure thrust force and isolate the thermal movements between expansion joints.
3.) For vacuum or large pre-compressed applications, a set-back may be required to keep the expansion joint from protruding into the gas stream or touching the flow line/teflon.
4.) Retaining Rings/Backin Bars of 1/4" thickness standard. Suggested bolt spacing at 4" centers max.
5.) Flange gaskets suitable for the system temperature and fluid media should be used to ensure a full seal on all fluoroplastic styles. (Style 1093).
6.) For full product specifications and installation instructions, see SPEC 1093-1 and ININ 1093-1.
**Maxi-Joint®**  
Duct Type Expansion Joints with Rigid Flanges

**Style 1094**  
**Features:**
- Up to 1,000°F and ± 3 PSI continuous service
- 1/2” thick laminated fiberglass insulation layer
- Laminated fluoroplastic PTFE corrosion barrier
- Round and rectangular designs in all styles
- Exceptional all directional movement capability
- Absorbs system noise, vibration and shock
- Compensates for minor misalignment and offset
- Integrally flanged design
- Low stiffness and deflection forces
- Simple to install, lightweight and high strength
- Provides easy access to ducting and equipment
- Carbon steel, stainless steel, or hot dipped galvanized backup rings available for easy bolting to mating flanges
- Heat form and sealed to any size and arrangement

---

### 1094 – MOLDED FLANGE  
VERSATILE FACE TO FACE CONSTRUCTION

<table>
<thead>
<tr>
<th>Installed LENGTHS (inch)</th>
<th>MFD F/F + (inch)</th>
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<td>2</td>
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<tr>
<td>9-1/2 - 12</td>
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<tr>
<td>12-1/2 - 16</td>
<td>1</td>
<td>5</td>
<td>4</td>
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</tbody>
</table>

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**Notes:**

1.) Extension movement capabilities can be increased with additional pre-compression during installation.

2.) Anchors should be used to resist the pressure thrust force and isolate the thermal movements between expansion joints.

3.) For vacuum or large pre-compressed applications, a set-back may be required to keep the expansion joint from protruding into the gas stream or touching the flow liner/baffle.

4.) Retaining Rings/ Backing Bars of 1/4” thickness standard. – Suggested bolt spacing at 4” centers max.

5.) Flange gaskets suitable for the system temperature and fluid media should be used to ensure a full seal on all fluoroplastic styles. (Style 1094)

6.) For full product specifications and installation instructions, see SPEC 1094-1 and ININ 1094-1.
Maxi-Joint®
Duct Type Expansion Joints with Rigid Flanges

Style 1095

Features:
- Up to 500°F and ± 3 PSI continuous service
- Cycle life in the millions
- Solid fluoroplastic PTFE construction
- Ultimate chemical resistance
- Round and rectangular designs in all styles
- Exceptional all directional movement capability
- Absorbs system noise, vibration and shock
- Compensates for minor misalignment and offset
- Integrally flanged design
- Low stiffness and deflection forces
- Simple to install, lightweight and high strength
- Provides easy access to ducting and equipment
- Carbon steel, stainless steel, or hot dipped galvanized backup rings available for easy bolting to mating flanges
- No fiberglass component to fatigue
- Heat form and sealed to any size and arrangement

Notes:
1.) Extension movement capabilities can be increased with additional pre-compression during installation.
2.) Anchors should be used to resist the pressure thrust force and isolate the thermal movements between expansion joints.
3.) For vacuum or large pre-compressed applications, a set-back may be required to keep the expansion joint from protruding into the gas stream or touching the flow liner/baffle.
4.) Retaining Rings/Backing Bars of 1/4” thickness standard. Suggested bolt spacing at 4” centers max.
5.) Flange gaskets suitable for the system temperature and fluid media should be used to ensure a full seal on all fluoroplastic styles. (Style 1095)
6.) For full product specifications and installation instructions, see SPEC 1095-1 and ININ 1095-1.

<table>
<thead>
<tr>
<th>Installed LENGTHS (inch)</th>
<th>MFD F/F + (inch)</th>
<th>MOVEMENT CAPABILITIES (inch)</th>
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<tbody>
<tr>
<td></td>
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<td>Comp.</td>
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<tr>
<td>12-1/2 - 16</td>
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Maxi-Joint
Composite Belt Type Expansion Joints

Style 1096FF, 1096DB, 1096RF, 1096AF

Features:
- Flue gas service up to 1200°F continuous service
- 9 Mil thick laminated fluoroplastic PTFE corrosion barrier standard for superior chemical resistance
- Excellent all directional movement capability
- Absorbs system noise, vibration, and shock
- Field surveys and evaluations available
- Easy to field splice or repair by heat sealing
- Provides easy access to ducting and equipment
- Available with single or double baffles to protect composite belt from abrasive materials

### MOVEMENT CAPABILITIES - STYLE 1096

<table>
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<th>Width</th>
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<td>1-1/2</td>
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<tr>
<td>16</td>
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<td>1</td>
<td>3-1/2</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>PRESSURE/VACUUM RATING</th>
</tr>
</thead>
<tbody>
<tr>
<td>± 3 PSI Excursion</td>
</tr>
<tr>
<td>All dimensions expressed in inches.</td>
</tr>
</tbody>
</table>

### PRESSURE/VACUUM RATING

<table>
<thead>
<tr>
<th>Styles</th>
<th>Composite Construction</th>
<th>Continuous</th>
<th>Excursion</th>
</tr>
</thead>
<tbody>
<tr>
<td>HCJ-800 T</td>
<td>Fluoroplastic/Fiberglass</td>
<td>800</td>
<td>900</td>
</tr>
<tr>
<td>HCJ-1000 T</td>
<td>Fluoroplastic/Fiberglass</td>
<td>1,000</td>
<td>1,100</td>
</tr>
<tr>
<td>HCJ-1200 T</td>
<td>Fluoroplastic/Fiberglass</td>
<td>1,200</td>
<td>1,300</td>
</tr>
</tbody>
</table>

### Temperature (F)

<table>
<thead>
<tr>
<th>Styles</th>
<th>Composite Construction</th>
<th>Continuous</th>
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<td>Fluoroplastic/Fiberglass</td>
<td>1,200</td>
<td>1,300</td>
</tr>
</tbody>
</table>

### Style 1096FF
(Flat Flanges)

- Bolt In Style
- A-36 Steel (3X2 Angle STD)
- Set Back
- Mating Flange (By Others)
- Duct I.D.
- Flow
- Capped Edge

### Style 1096DB
(Double Baffle)

- Bolt In Style
- Double Action Baffle Design
- Duct I.D.

### Style 1096RF
(Retro-Fit)

- Bolt In Style
- New Mounting Plates
- Weld In Style
- Duct I.D.
- F/F

### Style 1096AF
(Angle Iron Flanges)

- Bolt In Style
- Composite Belt
- Weld In Style
- Duct I.D.
- Joint I.D.
Maxi-Joint®
Duct Type Expansion Joints with Rigid Flanges

**Style 1098**

**Features:**
- Versatile hand-built construction allows General Rubber to work with the system requirements to develop an optimal and cost-effective solution
- Single or multiple arch Style 1098 is designed for round or rectangular ducting systems operating within 400°F and ± 3 PSIG as well as requiring significant all directional movement and/or low deflection forces
- Round and rectangular designs in all styles
- Exceptional all directional movement capability
- Absorbs system noise, vibration and shock
- Compensates for minor misalignment and offset
- Integrimally flanged design
- Low stiffness and deflection forces
- Simple to install, lightweight and high strength
- Provides easy access to ducting and equipment
- Carbon steel, stainless steel, or hot dipped galvanized backup rings available for easy bolting to mating flanges
- No gaskets required
- Excellent chemical and abrasion resistance
- Wide variety of tube and cover elastomers available

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*Notes:*
1.) Contact General Rubber with your design conditions and we will provide a detailed drawing with our proposal.
2.) Anchors should be used to resist the pressure thrust force and isolate the thermal movements between expansion joints.
3.) For vacuum or large pre-compressed applications, a set-back may be required to keep the expansion joint from protruding into the gas stream or touching the flow liner/baffle.
4.) Retaining Rings/Back up Bars of 1/4" thickness standard – Suggested bolt spacing at 4" centers max.
5.) For full product specifications and installation instructions, see SPEC 1098-1 and ININ 1098-1.

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*Style 1098*  
Single Layer Molded Arch Type Expansion Joints With Rigid Flanges

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*Maxi-Joint®*  
Duct Type Expansion Joints with Rigid Flanges

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*Style 1098* with 6 molded arches, Viton® tube and cover developed for Lawrence Livermore National Lab’s (NIF) National Ignition Facility Program.
Maxi-Joint®
Teflon® Spray Shields

Style TSS
Features:
- Safely deflects harmful spray-out if leakage occurs at flanges, valves, or expansion joints
- Solid fluoroplastic PTFE construction offers superior chemical resistance and 400°F service
- Simple to install, lightweight, and high strength
- Also used as solar covers in desert environments
- Metal shrouds can be used for similar purpose and are available

Section E - E

Rope Tied Together At Both Ends Over Lapping The Solar Cover

Style TSS
Teflon® Spray Shields

Displayed As Transparent But actually Translucent

Fiber Rope

Section E - E
Maxi-Joint®
Link Penetration Seals

**Style LPS**

**Features:**
- Seals pipes through walls, floors, and casings
  Sealing pressure 20 PSI (40 feet of head) and 250°F service
- Seals around any round or radius penetration
- Wide variety of sealing elements, pressure plates and hardware available
- Absorbs noise, vibration and minor misalignment
- Simple to install, most cost-effective solution

Expansion Penetration Seals

**Style EPS**

**Features:**
- Seals pipes through walls, floors, and casings with excellent all directional movement capability and low deflection forces
- Absorbs noise, vibration, pipe misalignment, thermal movements, ground settlement, and seismic displacements
- Sealing pressure 20 PSI (40 feet of head) and 250°F service
- Versatile flanged or slip-on designs
- Custom designs available for larger movements, higher pressure and/or higher service temperature
- Wide variety of sealing elements and hardware available

Optional Split Wrap Design
Also Typical for Other Styles
Handling your toughest applications since 1950.

**POWER GENERATION**
General Rubber products are used on condenser water boxes, cooling towers, steam turbine exhaust lines, cooling water lines, scrubber units, and FGD systems.

**WATER AND WASTE TREATMENT**
Flexible connections and pinch valves are required on sludge and grit pumps, digesters, aeration systems, blowers, odor control, and methane gas ducting.

**CHEMICAL PROCESSING**
Expansion joints and pinch valves of chemical-resistant materials are required on caustic chemical pumps, digesters and scrubbers, and are found throughout the piping and ducting system.

**PAPER AND PULP**
Bleaching systems and lines containing white, black, and green liquors require chemical-resistant General Rubber products along with the pulp slurry pumps and scrubber units.

**HVAC**
Pump connectors and other noise vibration control products will reduce noise and vibration generated from mechanical equipment, including pumps, chillers, compressors, fans, heat exchangers, and cooling towers. They are also used to absorb thermal movements and vibration in risers and other pipelines.

**MINING**
The extremely abrasive slurry in tailing lines requires Pure Gum Rubber expansion joints and pinch valves. The ducting also often requires chemical-resistant flexible connections.

**MARINE**
Shipboard piping and ducting utilize Neoprene connectors built to Coast Guard, ABS, and ASTM F-1123-87 standards.

The General Rubber Advantage
High-quality General Rubber products solve problems in a remarkable number of applications, from electric boats to paper mills to major resort hotels. We have been audited and approved for use by the Nuclear Procurement Issues Committee (NUPIC). Nuclear and other power generating facilities select General Rubber because performance and reliability are critical.

As the pollution abatement and waste water treatment industries came of age, General Rubber responded by developing corrosion and abrasion-resistant products to meet their specific requirements. Similarly, chemical processing plants, paper mills, and mining operations have learned that they can depend on General Rubber products.

Milwaukee Park Stadium and many other commercial and industrial venues use General Rubber vibration control products for their heating, ventilation, and air conditioning (HVAC) systems to relieve stress and absorb objectionable noise and vibration. Ships, including the USS Cole, use General Rubber expansion joints to save space, reduce noise, and isolate vibration.

The General Rubber customer commitment is evident in every aspect of our business. Our sales team includes engineers who are prepared to discuss the intricacies of the application. They know what questions to ask to identify the best solution at the best price. If an effective solution cannot be obtained from our extensive product line, our professional engineers will custom design a solution optimal for your application. This willingness to search for answers is deeply ingrained in our customer commitment and lies behind our tradition of releasing new and innovative products each year.

Executive Vice President Amy Hammarstrom has a B.S. in Business Administration and is a Certified Auditor. Her primary responsibilities are to lead the internal operations and to enforce the ISO 9001 certified quality program.

Style 1104 has quadruple the movements of a single arch unit with one quarter the deflection forces.

Style 1103 has triple the movements of a single arch unit with one third the deflection forces.

Style 1092 Maxi-Span® is available in a wide range of materials and allows for needed flexibility in ducting systems.
Maxi-Joint is a brand under General Rubber Corp. representing our comprehensive line of expansion joints, flexible connectors, rubber flanged hoses and related accessories, as well as spray shields and penetration seals. These products provide critical functions in piping and ducting systems.

Since our inception in 1950, General Rubber Corp. has designed and developed a wide range of mechanical rubber products used in the most demanding applications. Rubber is one of the most compliant and resilient materials available. This not only makes it an ideal material for car tires, but also for expansion joints and flexible connectors. With a flexing cycle life in the tens of millions, fatigue is simply not a design concern.

Improved performance and engineered solutions are often accomplished by incorporating advanced materials and technologies to what otherwise would be considered a conventional product line. This benefits both the specifying engineer designing an optimal system, as well as the customer performing maintenance on, or upgrading an aging system.

Piping and ducting systems require support and flexibility as critical design elements. The obvious consequence of inadequate support is catastrophic system failure that can also be life threatening. It is less obvious however, that inadequate flexibility can produce the same devastating consequences. System flexibility is required to absorb thermal movements, ground settlement, misalignment, vibration and shock. The features and benefits of our expansion joints include absorbing these forces and displacements, and replacing them with the expansion joint’s low stiffness (spring rate). In addition, our products absorb noise and vibration, as well as provide easy access to piping and equipment. Applying expansion joints to your system is the subject and title of the linked article published in Pumps and Systems magazine. It remains a good reference for understanding piping system requirements and basic expansion joint functions, including the role of control units in anchored and unanchored systems.

Improved performance is directly related to our materials of construction and design. We utilize industry leading construction materials including premium elastomeric compounds, tire cord and high tensile steel reinforcement. Utilizing tire cord is a good example of optimizing a design with advanced materials. The tire cord is engineered with a Resorcinol-Formaldehyde Latex (RFL) coating for superior bonding to the rubber. The cords themselves can be aligned on an optimal bias ply angle, offering tailored strength in the directions needed. This virtually eliminates delamination and reduces the total number of plies required. The result is improved performance in the form of increased movement capability and decreased spring rates, as well as improved reliability.
Style 1101CR is an economic and space-saving way to combine a concentric pipe fitting with an expansion joint.

Style 1082 Slip-On type with double arches allows for maximum movement with minimum cost.

New design features in piping expansion joints is the subject and title of the linked paper presented at The American Power Conference. It also remains a good reference for understanding the incredible performance improvements that can be achieved when advanced materials and technologies are utilized.

Engineered solutions are also directly related to our many years of experience and understanding of demanding applications. For example, supplying high pressure and self retracting expansion joints on offshore mooring platforms provided us with the understanding to do the same on a massive scale for the CCWP project in Qatar. This project required hundreds of much larger diameter high pressure dismantling expansion joints. We are proud of an environmental award we earned from the Fluid Sealing Association and Chemical Engineering magazine for submitting the linked case study on this project. Similarly, supplying original equipment into many nuclear power plants has also provided us with the opportunity and ability to upgrade both metal and rubber expansion joints for higher performance and greater reliability. In general, replacement and retrofit work often requires building the product to existing field dimensions, including permanent offsets caused by ground settlement, unrestrained thrust forces or equipment substitution. The custom fit unit is easier to install and will have a longer maintenance free life. Utilizing improved materials and designs will also improve the product’s service life and reliability as well. We are experienced at obtaining the relevant field information and producing an optimal product for that application.

Maxi-Joint expansion joints and flexible connectors provide critical design elements in piping and ducting systems. The experience and capability of General Rubber can effectively utilize these products in even the most demanding applications. In consideration of our products, you are assured that every aspect of your project will be our priority.

Thank you for your consideration.

Over Fifty Years of Expansion Joint Solutions.

New Jersey Operation

ISO 9001 Registration Certificate

Maxi-Joint expansion joints and flexible connectors provide critical design elements in piping and ducting systems. The experience and capability of General Rubber can effectively utilize these products in even the most demanding applications. In consideration of our products, you are assured that every aspect of your project will be our priority.

Thank you for your consideration.
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