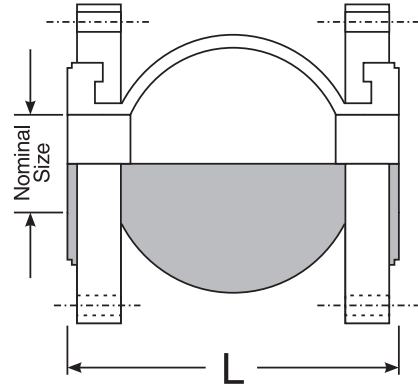
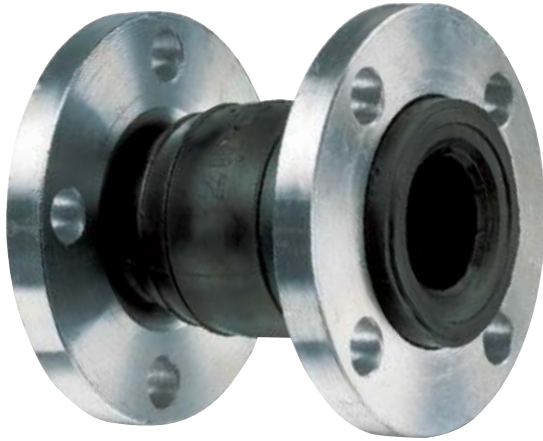




## Single Sphere Rubber Expansion Joints



### Single Sphere Flanged Rubber Expansion Joint

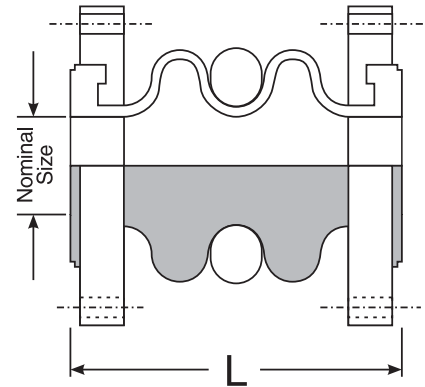
Part Number	Size (in.)	Length (L - in.)	Allowable Movement				Operating Conditions			
			Axial Compression (in.)	Axial Elongation (in.)	Transverse Deflection (in.)	Angular Deflection (Degrees)	Maximum Pressure (PSI)	Maximum Temperature (°F)	Vacuum (HG)	Weight Each (lbs.)
HTSRF12x6	1 1/4	6	1/2	3/8	1/2	15	225	220	16	5.00
HTSRF15x6	1 1/2	6	1/2	3/8	1/2	15	225	220	16	6.10
HTSRF20x6	2	6	1/2	3/8	1/2	15	225	220	16	8.90
HTSRF25x6	2 1/2	6	1/2	3/8	1/2	15	225	220	16	12.30
HTSRF30x6	3	6	1/2	3/8	1/2	15	225	220	16	14.00
HTSRF40x6	4	6	5/8	3/8	1/2	15	225	220	16	18.30
HTSRF50x6	5	6	5/8	3/8	1/2	15	225	220	16	22.80
HTSRF60x6	6	6	5/8	3/8	1/2	15	225	220	16	26.80
HTSRF80x6	8	6	5/8	3/8	1/2	15	225	220	16	40.60
HTSRF100x8	10	8	3/4	1/2	3/4	15	225	220	16	56.60
HTSRF120x8	12	8	3/4	1/2	3/4	15	225	220	16	83.00
HTSRF140x8	14	8	3/4	1/2	3/4	15	140	220	16	115.00
HTSRF160x8	16	8	3/4	1/2	3/4	15	140	220	16	165.00
HTSRF180x8	18	8	3/4	1/2	3/4	15	125	220	16	168.00
HTSRF200x8	20	8	3/4	1/2	3/4	15	125	220	16	170.00

See applications and specifications on page 64.

Because we continually examine ways to improve our products, we reserve the right to alter specifications or discontinue products without prior notice.

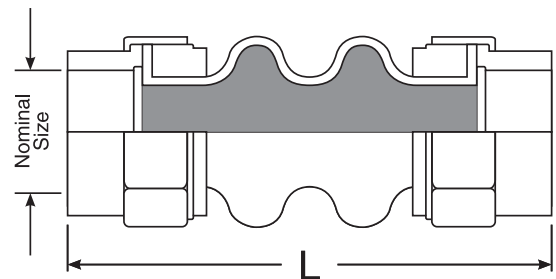


## Double Sphere and Threaded Union Rubber Expansion Joints



**Double Sphere Flanged Rubber Expansion Joint**

Part Number	Size (in.)	Length (L - in.)	Allowable Movement				Operating Conditions			
			Axial Compression (in.)	Axial Elongation (in.)	Transverse Deflection (in.)	Angular Deflection (Degrees)	Maximum Pressure (PSI)	Maximum Temperature (°F)	Vacuum (HG)	Weight Each (lbs.)
HTDRF12x7	1 1/4	7	2	1 1/4	1 1/2	40	150	220	16	5.30
HTDRF15x7	1 1/2	7	2	1 1/4	1 1/2	40	150	220	16	6.80
HTDRF20x7	2	7	2	1 1/4	1 1/2	40	150	220	16	9.00
HTDRF25x7	2 1/2	7	2	1 1/4	1 1/2	40	150	220	16	13.30
HTDRF30x7	3	7	2	1 1/4	1 1/2	40	150	220	16	14.30
HTDRF40x9	4	9	2 1/4	1 1/2	1 3/4	35	150	220	16	20.30
HTDRF50x9	5	9	2 1/4	1 1/2	1 3/4	35	150	220	16	24.50
HTDRF60x9	6	9	2 1/4	1 1/2	1 3/4	35	150	220	16	29.50
HTDRF80x13	8	13	2 1/2	1 1/2	1 3/4	30	150	220	16	43.80
HTDRF100x13	10	13	2 1/2	1 1/2	1 3/4	30	150	220	16	64.10
HTDRF120x13	12	13	2 1/2	1 1/2	1 3/4	30	150	220	16	95.00



**Threaded Union Rubber Expansion Joint**

Part Number	Size (in.)	Length (L - in.)	Allowable Movement				Operating Conditions			
			Axial Compression (in.)	Axial Elongation (in.)	Transverse Deflection (in.)	Angular Deflection (Degrees)	Maximum Pressure (PSI)	Maximum Temperature (°F)	Vacuum (HG)	Weight Each (lbs.)
HTDRU0075	3/4	8	7/8	1/4	7/8	45	150	240	16	1.80
HTDRU0100	1	8	7/8	1/4	7/8	45	150	240	16	2.80
HTDRU0125	1 1/4	8	7/8	1/4	7/8	45	150	240	16	3.50
HTDRU0150	1 1/2	8	7/8	1/4	7/8	45	150	240	16	4.00
HTDRU0200	2	8	7/8	1/4	7/8	45	150	240	16	5.00

See applications and specifications on page 64.

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## Rubber Expansion Joints

### Features & Benefits

- Excellent ability to absorb vibration and sound
- Allows for four-way movement
- Withstands high pressure
- Easy installation using either floating flanges or threaded unions
- Excellent for use with moderate chemicals, most oils, fats, grease, and many solvents
- A retention ring is supplied with all double sphere flanged expansion joints

### Construction:

- Nylon fabric-reinforced neoprene body with forged carbon steel flanges or cast ductile iron pipe unions

### Note:

- Not for use with oxidizing acids, esters, and ketones

## Elastomer Physical Properties & Chemical Resistance

Material Designation	Neoprene	Material Designation	Neoprene
ANSI/ASTM D1418-17	CR	Dielectric Strength	Very Good
ASTM D-2000 SAE J-200	BC, BE	Electrical Insulation	Fair/Good
Ozone	Very Good	Water Absorption	Good
Weather	Excellent	Radiation	Very Good
Sunlight	Very Good	Swelling in Oil	Good
Oxidation	Very Good	Acid, Diluted	Excellent
Heat	Good	Acid, Concentrated	Good
Cold	Good	Aliphatic Hydrocarbons	Fair/Good
Flame	Good	Aromatic Hydrocarbons	Fair
Tear	Good	Oxygenated Hydrocarbons	Poor/Fair
Abrasion	Very Good	Lacquers	Poor
Impermeability	Good	Oil & Gasoline	Good
Dynamic	Fair	Alkali, Diluted	Good
Rebound-Hot	Very Good	Alkali, Concentrated	Poor
Rebound-Cold	Good	Animal & Vegetable Oil	Good
Comp. Set	Fair	Chemical	Fair/Good
Tensile Strength	Good	Water	Good

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## Why Rubber Expansion Joints?

There are a number of reasons why rubber expansion joints can provide the ideal solution to your piping and plumbing problems:

- **Minimal face-to-face dimensions** — Rubber expansion joints require considerably less space than typical expansion bends or loops and frequently have a lower pressure drop. This can translate into savings on installation costs, as well as improved performance.
- **Light weight** — Rubber expansion joints are relatively light in weight. This makes installation easier and less costly.
- **Low movement forces required** — The natural flexibility of rubber expansion joints allows almost unlimited flexing and recovery, as well as requiring less force to move. This helps prevent damage to costly equipment and expensive down time.
- **Reduced fatigue factor** — The elastomers used in rubber expansion joints are not subject to fatigue breakdown or embrittlement. And they prevent electrolytic action.
- **Reduced heat loss** — Rubber expansion

joints reduce heat losses and give longer maintenance-free service.

- **Corrosion- and erosion-resistance** — The superior corrosion-resistant characteristics of rubber expansion joints permit the safe handling of a wide variety of materials within the rated pressures and temperatures

### Typical Applications

#### Air Conditioning, Heating & Ventilation Systems

- Commercial & institutional buildings
- Hospitals
- Schools
- Motels
- Apartments
- Hotels
- Stores
- Aboard ships & boats

#### Central & Ancillary Power Generating Stations

- Communities
- Buildings
- Factories
- Aboard ships & boats

#### Sewage Disposal & Water Treatment Plants

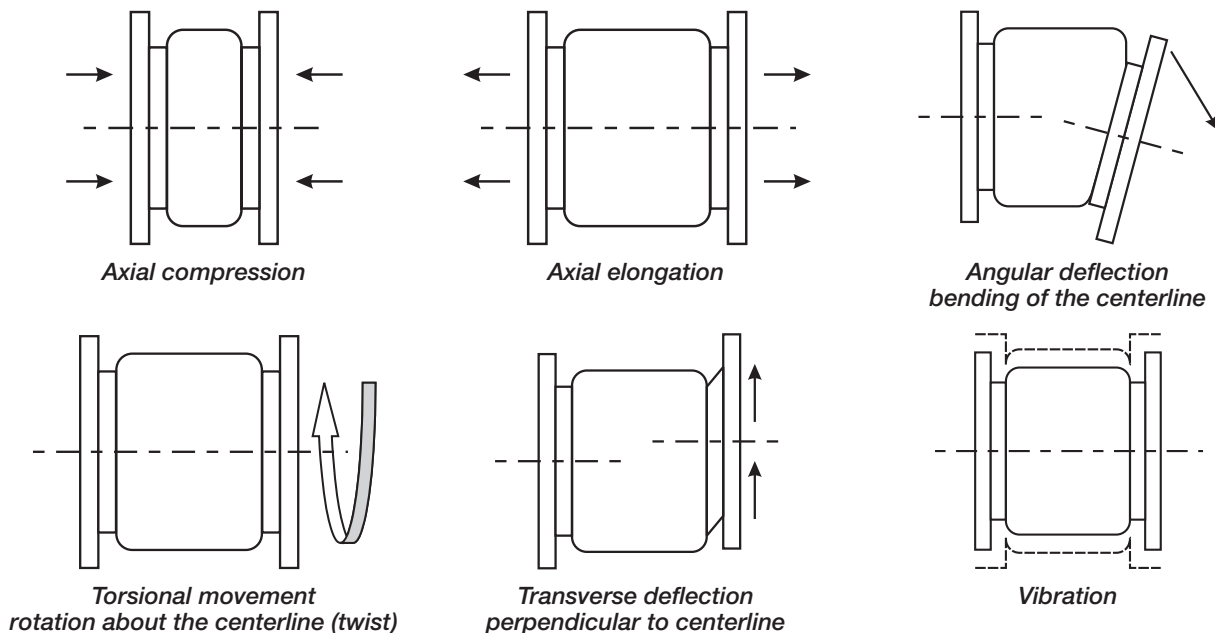
#### Irrigation & Fire Fighting Stations

#### Process Piping

- Pulp & paper
- Chemical
- Primary metal
- Petroleum refining

## Rubber Expansion Joints Movement

Expansion joints are designed to absorb different movements concurrently



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