

Garlock

# EXPANSION JOINTS

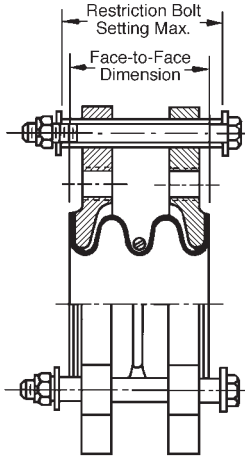


## Style 214/215 Expansion Joints

### PTFE Expansion Joints/Flexible Couplings for Chemical Processing, Air Conditioning and Heating Piping Systems

Styles 214/215 Garlock expansion joints and couplings were constructed especially to reduce noise while compensating for expansion, contraction, and minor misalignment. PTFE expansion joints and couplings are available in standard sizes from 1" through 8" (25-200 mm) pipe I.D.

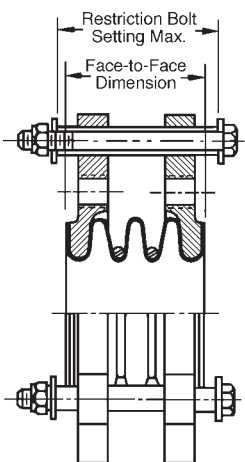
Maximum service range to +450°F (+230°C). Can handle temperatures as low as -100°F (-75°C).



### PTFE Style 214

Concentric Spool-Type Coupling  
Two Convolution

Maximum Service Range to  
+450°F (+230°C)  
178 psig (12 bar), Full Vacuum  
to +350°F (+175°C)



### PTFE Style 215

Concentric Spool-Type Coupling  
Three Convolution

Maximum Service Range to  
+450°F(+230°C)  
132 psig (9 bar), Full Vacuum  
to +180°F (+80°C)

**Made in the U.S.A.**

#### Features

Styles 214/215 are contour molded by a proprietary process

White corrosion-resistant PTFE fluoro-carbon resin body

Higher pressure ratings for modern piping systems. Non-aging with long flex life

Low force to deflect

Complete assembly includes plated ductile iron flanges, polyethylene covered restriction bolts and corrosion-resistant reinforcing rings

#### Advantages

■ Controlled wall thickness  
■ Contour and shape of each convolution provides extra-long flex life at high temperatures

■ PTFE has a wide service range, -100°F (-75°C) to +450°F (+230°C)

■ Resistant to water, steam and almost all chemicals and gases

■ Ideal for use in glass piping systems

■ Restriction bolts are pre-set to prevent over-extension

#### Benefits

- Longer life
- Superior service
- One material can handle most applications

## PTFE Flexible Couplings - Style 214

Pipe Size (In.)	1	1-1/2	2	2-1/2	3	4	5	6	8
Normal installed Face-to-Face Dimension	1-3/8	1-3/8	1-9/16	2-1/4	2-1/4	2-5/8	3-1/4	2-3/4	4
Restriction Bolt Setting, max.	1-1/4	1-5/16	1-15/32	2-7/32	2-1/4	2-23/32	3-5/16	2-3/4	4
Max. Axial Movement Plus or Minus	1/4	1/4	1/4	5/16	3/8	1/2	1/2	1/2	1/2
Max. Transverse Deflection Plus or Minus*	1/8	1/8	1/8	1/8	3/16	1/4	1/4	1/4	1/4

Maximum angular movement approximately 7°

\*Based on unit being in normal installed position with no axial movement or angular deflection.

## PTFE Expansion Joints - Style 215

Pipe Size (In.)	1	1-1/2	2	2-1/2	3	4	5	6	8
Normal installed Face-to-Face Dimension	1-3/4	2	2-3/4	3-3/16	3-5/8	3-5/8	4	4	6
Restriction Bolt Setting, max.	1-7/8	2-5/32	3-5/32	3-9/16	4-1/4	4-1/4	4-9/16	4-5/8	6-5/8
Max. Axial Movement Plus or Minus	1/2	1/2	3/4	3/4	1	1	1	1-1/8	1-1/8
Max. Transverse Deflection Plus or Minus*	1/4	1/4	3/8	3/8	1/2	1/2	1/2	9/16	9/16

Maximum angular movement approximately 14°

\*Based on unit being in normal installed position with no axial movement or angular deflection

To convert to mm, multiply inches by 25.4

## PTFE Material

The basic PTFE materials are made to conform to USA Department of Commerce, Standard PS3-68, Grade A, having the following properties:

Tensile - 4000 psi (280 Kg/cm<sup>2</sup>)

Elongation - 300% min.

## Pressure and Vacuum Rating

### HIGH PRESSURE RATING

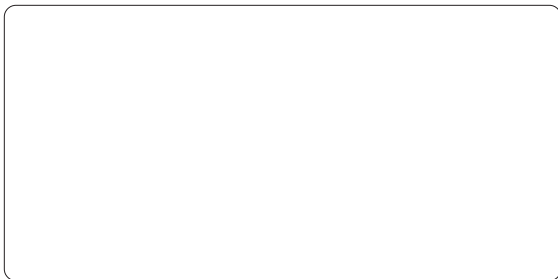
PTFE expansion joints and couplings have pressure ratings high enough to handle most applications. As the pipe size gets larger, Garlock increases the bellows thickness and the strength of the reinforcing rings to compensate for the change in internal forces. This permits the same high pressure rating for large diameter sizes as for small ones.

### VACUUM SERVICE

Style 214 rated for full vacuum at temperatures up to +350°F (+175°C). Style 215 rated for full vacuum up to +180°F (+80°C).

PRESSURE-TEMPERATURE psig (bar)		
TEMPERATURE	214	215
50°F (10°C)	178 (12)	132 (9)
100°F (40°C)	165 (11)	120 (8)
150°F (65°C)	150 (10)	103 (7)
200°F (95°C)	130 (9)	90 (6)
250°F (120°C)	110 (8)	75 (5)
300°F (150°C)	92 (6)	60 (4)
350°F (175°C)	78 (5)	50 (3.5)
400°F (205°C)	65 (4.5)	42 (3)
450°F (230°C)	60 (4)	35 (2)

## AUTHORIZED DISTRIBUTOR



ISO 9002-94  
Cert. #001762

### WARNING:

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Performance data published in this brochure has been developed from field testing, customer field reports and/or in-house testing.

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