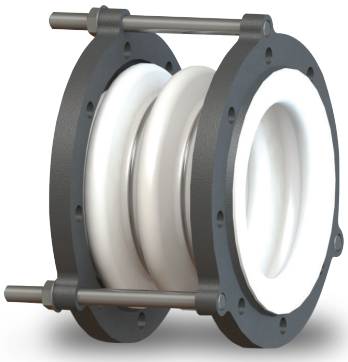
SURE-LINK™

These PTFE concentric spool-type flexible couplings are designed to reduce noise and compensate for expansion, contraction and minor piping misalignment in chemical processing, air conditioning and heating systems.



STYLE 214 - COUPLINGS

» Two convolutions
» Temperature: -100°F (-70°C) to +450°F (+230°C)
Pressure: To 178 psig (12 bar),
Full vacuum to +350°F (+180°C)

STYLE 215 - EXPANSION JOINTS

» Three convolutions
» Temperature: -100°F (-70°C) to +450°F (+230°C)
Pressure: To 132 psig (9 bar),
Full vacuum to +180°F (+80°C)

STYLE 216 & 217 - BELLOWS

» Four or Five convolutions
» Temperature: -100°F (-70°C) to +450°F (+230°C)
Pressure: To 87 psig (6 bar),
Vacuum to 17.7 In. Hg (0.6 bar) at 32°F (0°C)
to No Vacuum at 212°F (100°C)

BENEFITS

» The convolution shape provides extra-long flex life at high temperatures
» The proprietary contour molding process ensures consistent wall thickness for improved blowout resistance
» PTFE body withstands corrosion, water, steam, and most chemicals and gases
» Preset tie rods prevent over-extension
» FDA Compliant to 21CFR177.1550
» Available silicone-free upon request

PTFE CONTROL UNITS AND FLANGES

All PTFE joints and couplings are furnished with metallic flanges and tie rods/control units ready for immediate installation on the job site. Flanges in other alloys are available by special order.

Flanges are protected to resist atmosphere corrosion and are tapped to ASME B16.5/B16.47 Series A Class 125/150 (standard).

Control units are assembled with flanges to prevent joints from excessive axial elongation. They are designed to accept the static pressure thrust in the piping system.

Tie rods are factory set to maximum face-to-face working limits, with lock nuts as insurance against over-extension of the expansion joint. The polyethylene covered tie rods eliminate metal to metal contact between the rods and the flanges; the most frequent cause of noise transmission and electrolysis.

STANDARD DESIGN

» Complete assembly includes
› Fluorocarbon resin PTFE body
› Corrosion resistant plated metallic flanges
› Polyethylene-covered zinc plated restriction bolts
› Stainless steel corrosion-resistant reinforcing rings
» Standard sizes from 1" (25mm) through 24" (800mm) pipe I.D.
» Available with 304 or 316 stainless steel flanges and tie rods upon request

PRESSURE RATING

Garlock 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 all sizes.

Temp. °F (°C)	**SURE-LINK™** 2 Conv. Pressure psi (bar)	**SURE-LINK™** 3 Conv. Pressure psi (bar)	**SURE-LINK™** 4 Conv. Pressure psi (bar)	**SURE-LINK™** 5 Conv. Pressure psi (bar)
50 (10)	178 (12)	132 ((9)	87 (6)	87 (6)
100 (50)	165 (11)	120 (8)	87 (6)	87 (6)
150 (65)	150 (10)	103 (7)	81 (5.5)	81 (5.5)
200 (90)	130 (9)	90 (6)	71 (5)	71 (5)
250 (120)	110 (8)	75 (5)	59 (4)	59 (4)
300 (150)	92 (6)	60 (4)	48 (4)	48 (4)
350 (180)	78 (5)	50 (3)	36 (2.5)	36 (2.5)
400 (205)	65 (4.5)	42 (3)	28 (2)	28 (2)
450 (230)	60 (4)	35 (2.5)	17 (1)	17 (1)

SURE-LINK™

MOVEMENT CAPABILITIES

Nominal I.D. Inch (mm)	SURE-LINK™ Maximum Axial Movement, + or -				SURE-LINK™ Maximum Lateral Deflection, + or -			
	2 Convolutions	3 Convolutions	4 Convolutions	5 Convolutions	2 Convolutions	3 Convolutions	4 Convolutions	5 Convolutions
1 (25)	1/4	1/2	11/16	7/8	1/8	1/4	1/2	9/16
1.25 (32)	3/8	9/16	11/16	7/8	1/4	3/8	1/2	9/16
1.5 (40)	1/4	1/2	13/16	1	1/8	1/4	9/16	11/16
2 (50)	1/4	3/4	13/16	1	1/8	3/8	9/16	11/16
2.5 (65)	5/16	3/4	7/8	1 1/16	1/8	3/8	5/8	13/16
3 (80)	3/8	1	7/8	1 1/16	3/16	1/2	5/8	13/16
4 (100)	1/2	1	15/16	1 3/16	1/4	1/2	11/16	7/8
5 (125)	1/2	1	1	1 1/4	1/4	1/2	11/16	7/8
6 (150)	1/2	1 1/8	1 1/8	1 3/8	1/4	9/16	11/16	7/8
8 (200)	1/2	1 1/8	1 3/16	1 1/2	1/4	9/16	13/16	1
10 (250)	5/8	15/16	1 1/4	1 9/16	3/8	9/16	13/16	1
12 (300)	5/8	15/16	1 1/4	1 9/16	3/8	9/16	13/16	1
14 (350)	21/32	1	1 5/16	1 11/16	3/8	9/16	13/16	1
16 (400)	21/32	1	1 5/16	1 11/16	3/8	9/16	13/16	1
18 (450)	21/32	1	1 5/16	1 11/16	3/8	9/16	13/16	1
20 (500)	11/16	1 1/16	1 7/16	1 3/4	13/32	5/8	7/8	1 1/16
24 (600)	11/16	1 1/16	1 7/16	1 3/4	13/32	5/8	7/8	1 1/16

FLANGE DIMENSIONS AND DRILLING

Nominal Pipe Size I.D. (Inch)	Flange Dimensions		
	Outside Diameter	Thickness	Bolt Hole Threads
1	5-13/16	3/8	1/2-13
1.25	7-5/16	9/16	1/2-12
1.5	6-11/16	3/8	1/2-13
2	7-7/16	1/2	5/8-11
2.5	8-7/16	5/6	5/8-11
3	9-3/16	5/8	5/8-11
4	10-11/16	11/16	5/8-11
5	11-11/16	11/16	3/4-10
6	13-1/4	11/16	3/4-10
8	15-3/4	11/16	3/4-10
10	18-1/8	13/16	7/8-9
12	20-1/2	13/16	7/8-9
14	23-1/16	13/16	1-8
16	25-1/16	15/16	1-8
18	27-9/16	1-1/16	1 1/8-7
20	30-7/8	1-1/16	1 1/8-7
24	35-7/16	1-1/8	1 1/8-7

STANDARD FACE TO FACE

Nominal Pipe Size I.D. (Inch)	SURE-LINK™ 2 Conv. Install Length	SURE-LINK™ 3 Conv. Install Length	SURE-LINK™ 4 Conv. Install Length	SURE-LINK™ 5 Conv. Install Length	Torque Values ft-lbs.
1	1.375	1.750	2.625	3.125	15
1.25	2.000	2.625	3.188	3.750	15
1.5	1.375	2.000	3.313	3.938	15
2	1.563	2.750	3.375	4.000	20
2.5	2.250	3.188	4.000	4.813	25
3	2.250	3.625	4.438	5.375	30
4	2.625	3.625	4.625	5.625	35
5	3.250	4.000	4.938	5.938	40
6	2.750	4.000	5.125	6.125	44
8	4.000	6.000	5.250	6.313	50
10	3.063	4.250	5.375	6.563	55
12	3.125	4.313	5.500	6.688	60
14	3.563	4.813	6.063	7.313	70
16	3.688	4.938	6.188	7.438	75
18	4.125	5.438	6.750	8.125	80
20	4.125	5.438	6.750	8.125	85
24	4.125	5.500	6.813	8.125	90