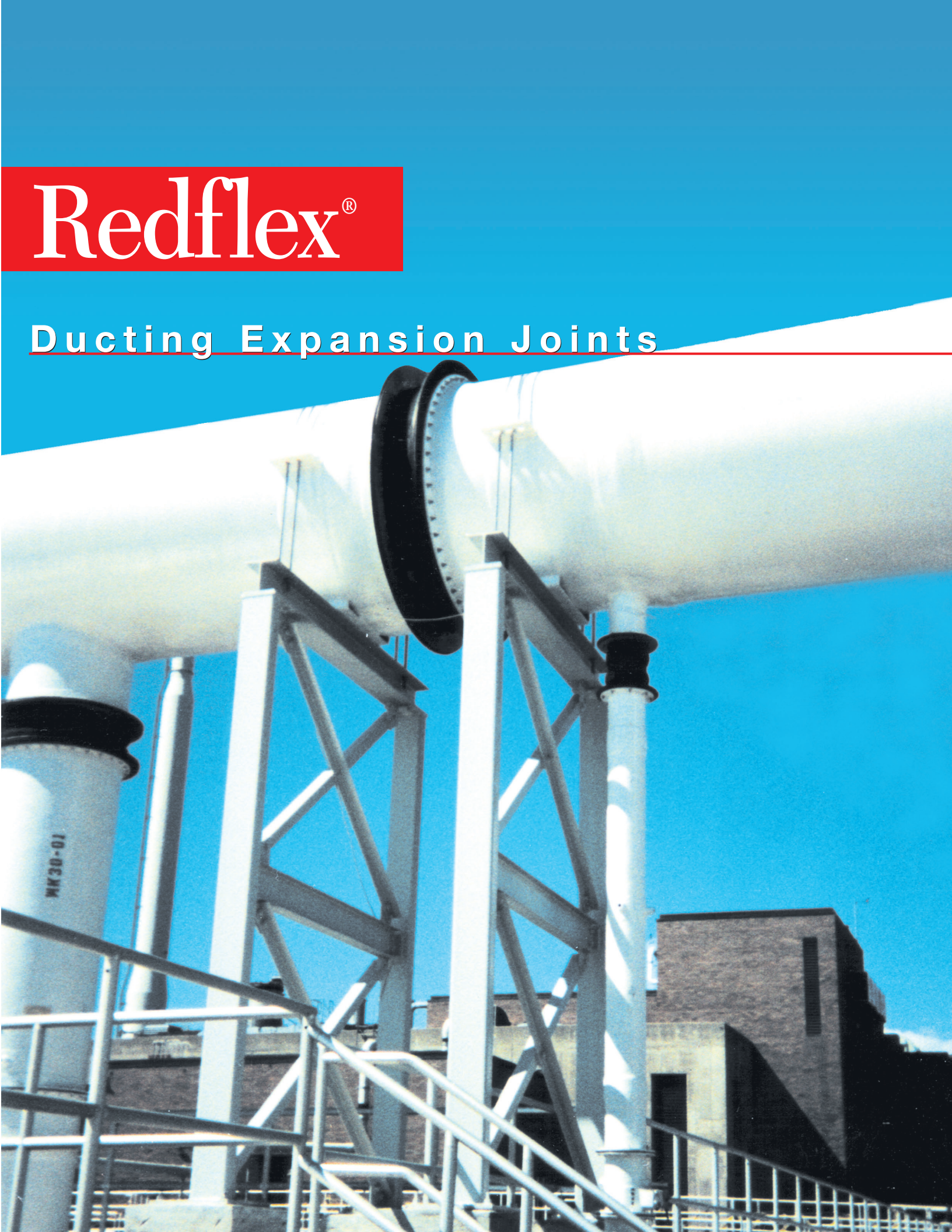
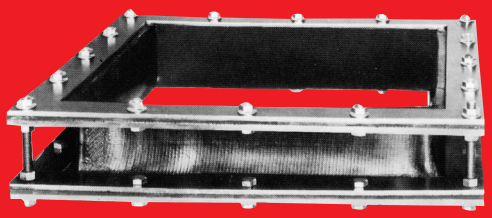
Redflex®

Ducting Expansion Joints



Redflex®

Large-diameter ducting joints for the power and water industries



Redflex® Expansion Joints are available in a variety of sizes and styles to meet any need.

Redflex® Ducting Joints are used in a variety of municipal, industrial and marine applications:

- **Power Plants**
- **FGD Systems**
- **HVAC**
- **Odor Control Systems**
- **Aeration**
- **Military Vessels**

Composite High Temperature Ducting Joints

Expansion joints in high temperature service, such as boiler exhaust gas, which can be as high as 1100°F, need to utilize a composite design.

Redflex® Expansion Joint styles utilize multiple layers of material, such as high-performance textiles, vermacite, "S" glass and hitex for high-temperature service. These are custom built for application.

Red Valve Company's Redflex® division offers a complete line of rectangular, circular and custom ducting joints. Our ducting joints are available in a variety of elastomers to match chemical and temperature requirements:

- EPDM (max. temp. 300°F)
- Chlorabutyl (max. temp. 300°F)
- Neoprene (max. temp. 250°F)
- Viton® (max. temp. 400°F)

Custom back-up rings in galvanized or stainless steel are also available.

Redflex® is your single source for pipeline flexibility. Our complete product line includes:

- Expansion Joints
- T and Y Shaped Fittings
- Elbows
- Vibration Pipe
- Reducers
- Dredging Hose

Redflex® Ducting Joints are available for a wide variety of applications such as flue gas desulfurization, wet lime and low-pressure aeration systems.

Our engineering team and internal sales representatives are available to conduct on-site evaluations to best determine your needs.

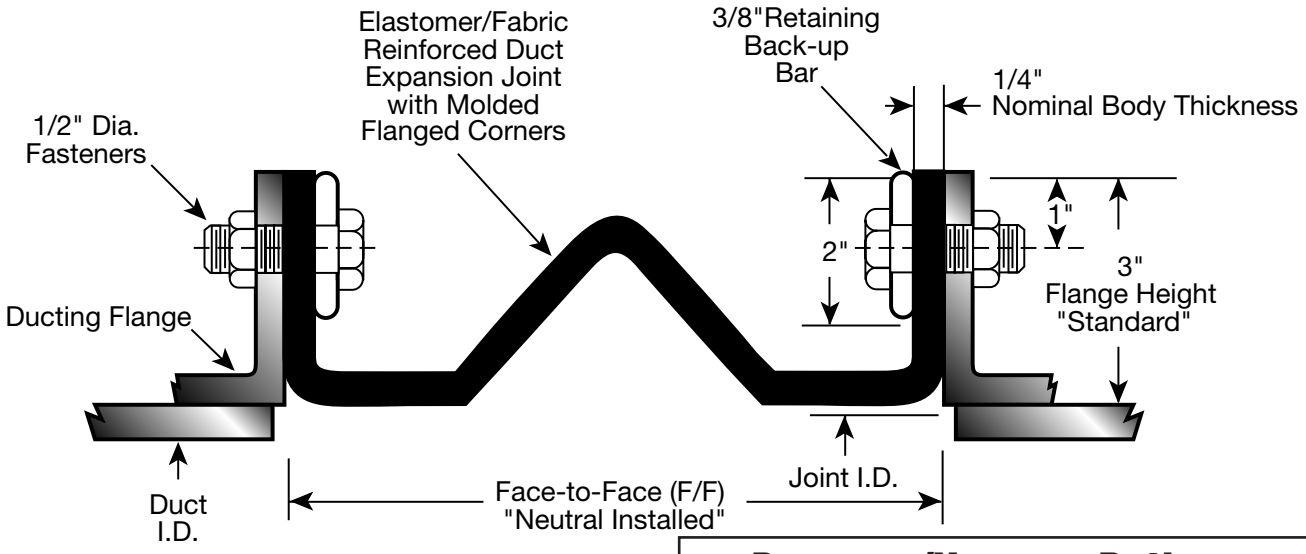
Redflex® circular 48-inch ducting joints on a large-scale aeration system.

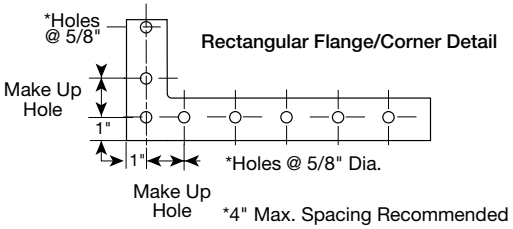
Circular 72-inch ducting joints on an air recovery system at a coal-fired power plant.

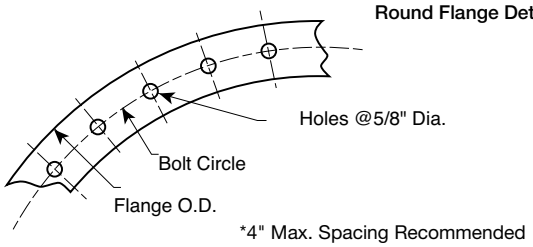
Blower system using 60-inch rectangular and 60-inch round ducting expansion joints.

Redflex® Series LDV-1 Lightweight Duct Expansion Joint Rectangular or Circular "V" Arch Style

Typical Installation Arrangement







Pressure/Vacuum Ratings

Nominal Body Thickness	No. of Body Plies	Pressure/Vacuum			
		PSIG	In. H_2O	kPa	Excursion PSIG
1/8″	1	±1	±28	±6.9	±2
1/4″	2	±2	±55	±13.8	±3
3/8″	3	±4	±111	±27.6	±6

Vacuum Applications:
For constant vacuum, a set-back may be required to ensure the joint is not in the media stream.

Product Weight

Nominal Body Thickness	Elastomer pounds per (sq. ft.)		Retaining Ring/Bars (linear ft.)
	Neoprene Butyl	Viton®	
1/8″	0.8	1.3	6.0
1/4″	1.3	1.9	
3/8″	1.8	2.7	

Add 7 inches to the face-to-face dimension for calculating the square footage.
Retaining rings/bars: standard material - 3/8″x2″ chamfered or rounded-edge steel.

Maximum Movement Capabilities in Inches

Movement At Shown Face-to-Face	6″ F/F			9″ F/F			12″ F/F			16″ F/F		
	Axial Compress	Axial Extension	Lateral Deflect	Axial Compress	Axial Extension	Lateral Deflect	Axial Compress	Axial Extension	Lateral Deflect	Axial Compress	Axial Extension	Lateral Deflect
NOTES:	2.25	1.25	1.25	3.0	1.5	2.0	4.0	2.0	2.5	5.0	2.75	3.0

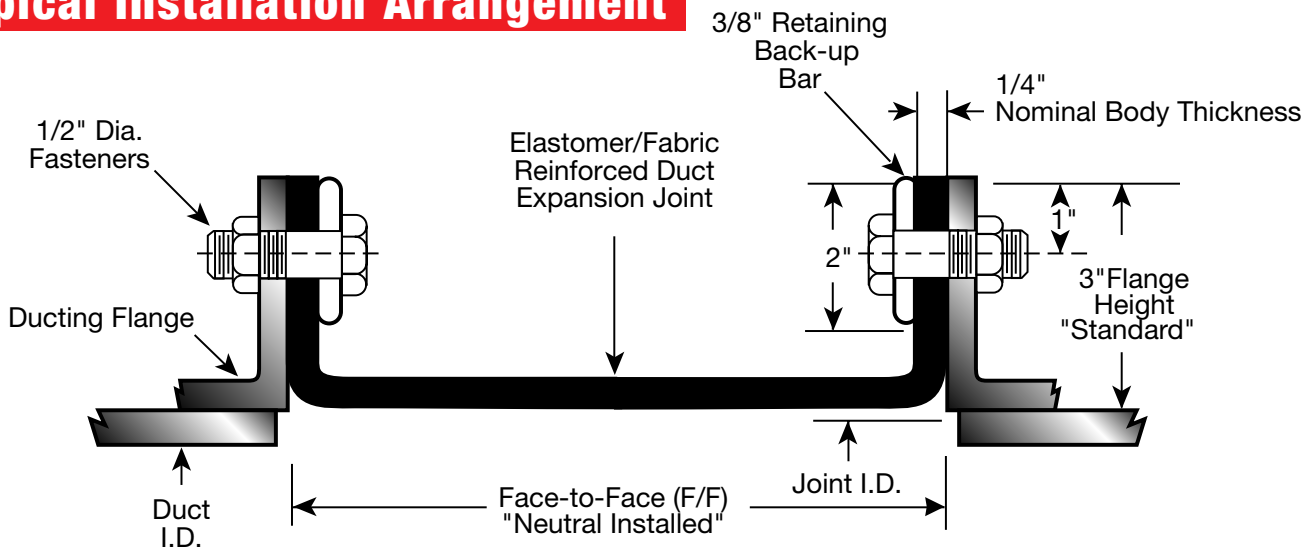
1. The offset lateral movements shown above are assumed to have occurred before any compressing movements have taken place. In actuality, movements often happen at the same time, thus increasing the allowable lateral offset.

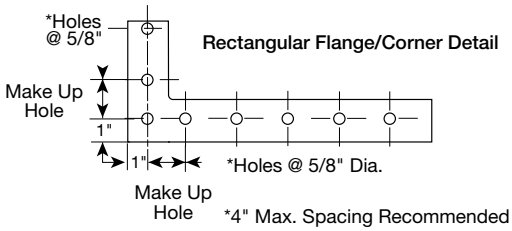
2. Pre-compressing the joint while installing will increase the allowable extension value and reduce the compression value by the same amount.

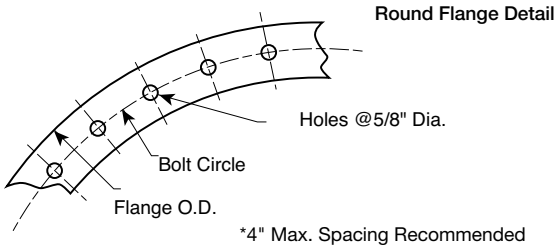
3. Ensure anchors are located so that rated movements are not exceeded.

Redflex® Series LDS-2 Lightweight Duct Expansion Joint Rectangular or Circular "U" Arch Style

Typical Installation Arrangement







Pressure/Vacuum Ratings

Nominal Body Thickness	No. of Body Plies	Pressure/Vacuum			
		PSIG	In. H_2O	kPa	Excursion PSIG
1/8″	1	±1	±28	±6.9	±2
1/4″	2	±3	±83	±20.7	±5
3/8″	3	±5	±138	±34.5	±8

Vacuum Applications:
For constant vacuum, a set-back may be required to ensure the joint is not in the media stream.

Product Weight

Nominal Body Thickness	Elastomer pounds per (sq. ft.)		Retaining Ring/Bars (linear ft.)
	EPDM	Viton®	
1/8″	0.8	1.3	6.0
1/4″	1.3	1.9	
3/8″	1.8	2.7	

Add 6 inches to the face-to-face dimension for calculating the square footage.
Retaining rings/bars: standard material - 3/8″x2″ chamfered or rounded-edge steel.

Maximum Movement Capabilities in Inches

Movement At Shown Face-to-Face	6″ F/F			9″ F/F			12″ F/F			16″ F/F		
	Axial Compress	Axial Extension	Lateral Deflect	Axial Compress	Axial Extension	Lateral Deflect	Axial Compress	Axial Extension	Lateral Deflect	Axial Compress	Axial Extension	Lateral Deflect
	0.75	0.25	0.5	1.25	0.25	0.75	2.0	0.5	1.0	3.0	0.5	1.5

NOTES:

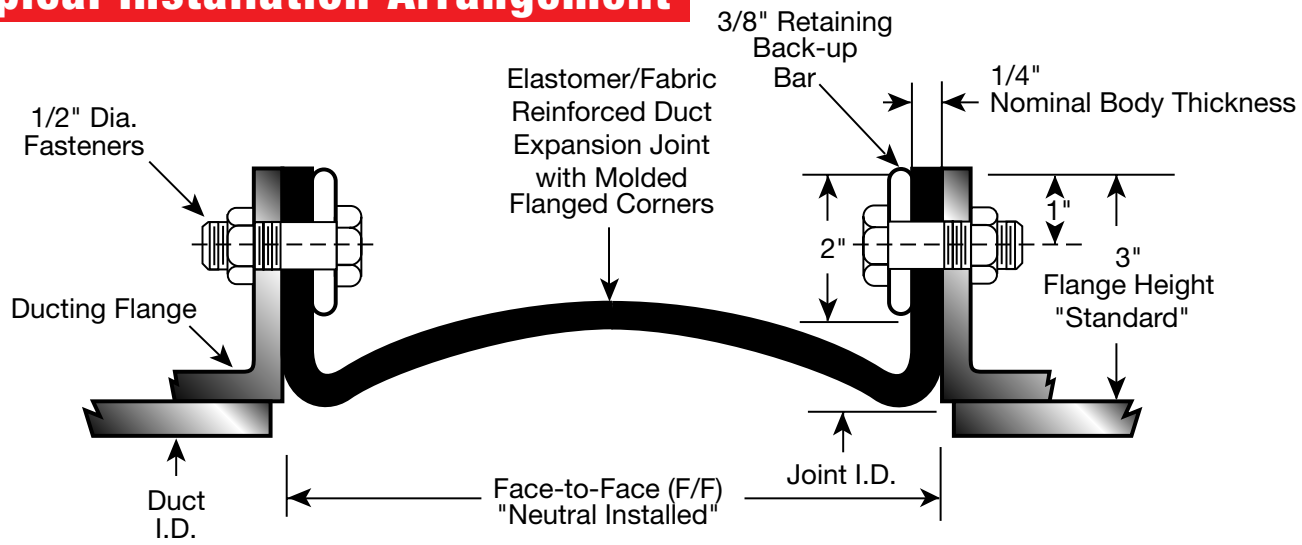
1. The offset lateral movements shown above are assumed to have occurred before any compressing movements have taken place. In actuality, movements often happen at the same time, thus increasing the allowable lateral offset.

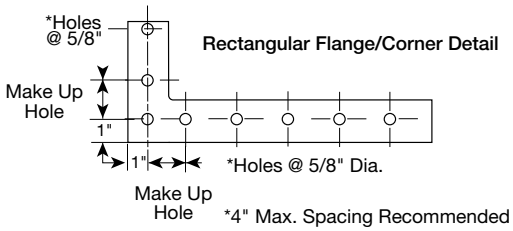
2. Pre-compressing the joint while installing will increase the allowable extension value and reduce the compression value by the same amount.

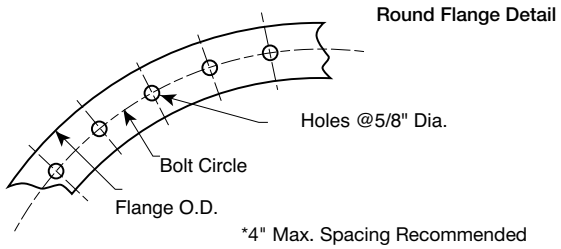
3. Ensure anchors are located so that rated movements are not exceeded.

Redflex® Series LDA-3 Lightweight Duct Expansion Joint Bellow Type Arch

Typical Installation Arrangement







Pressure/Vacuum Ratings

Nominal Body Thickness	No. of Body Plies	Pressure/Vacuum			
		PSIG	In. H_2O	kPa	Excursion PSIG
1/8″	1	±1	±28	±6.9	±2
1/4″	2	±3	±83	±20.7	±5
3/8″	3	±5	±138	±34.5	±8

Vacuum Applications:
For constant vacuum, a set-back may be required to ensure the joint is not in the media stream.

Product Weight

pounds per (sq. ft.) (linear ft.)

Nominal Body Thickness	Elastomer		Retaining Ring/Bars
	Neoprene Butyl	Viton®	
1/8″	0.8	1.3	6.0
1/4″	1.3	1.9	
3/8″	1.8	2.7	

Add 7 inches to the face-to-face dimension for calculating the square footage.
Retaining rings/bars: standard material - 3/8″x2″ chamfered or rounded-edge steel.

Maximum Movement Capabilities in Inches

Movement At Shown Face-to-Face	6″ F/F			9″ F/F			12″ F/F			16″ F/F		
	Axial Compress	Axial Extension	Lateral Deflect	Axial Compress	Axial Extension	Lateral Deflect	Axial Compress	Axial Extension	Lateral Deflect	Axial Compress	Axial Extension	Lateral Deflect
	2.0	0.5	1.0	3.0	0.75	2.0	4.0	1.0	3.0	7.0	1.0	4.0

NOTES:

1. The offset lateral movements shown above are assumed to have occurred before any compressing movements have taken place. In actuality, movements often happen at the same time, thus increasing the allowable lateral offset.
2. Pre-compressing the joint while installing will increase the allowable extension value and reduce the compression value by the same amount.
3. Ensure anchors are located so that rated movements are not exceeded.

A Complete Line Of Quality Products . . .
From Red Valve Company

Expansion Joints

Manufactured to 96″ in diameter, Redflex® expansion joints, reducers, rubber pipe, vibration pipe and rubber fittings are the industry standard.

Knife Gates

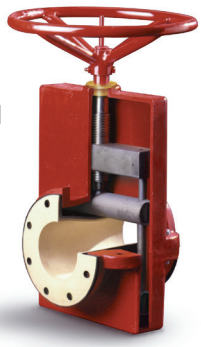
Red Valve's Flexgate Slurry Knife Gate is a heavy-duty, bi-directional valve engineered for operator dependability, low maintenance and excellent abrasion resistance. Red Valve's Series G Knife Gate is fully 316-lined and available in sizes to 144″.

Pressure Sensors

Providing a full 360° pressure reading, Red Valve Pressure Sensors are the industry standard for protecting instrumentation and ensuring accurate, dependable pressure measurement.

Mr. Spiros G. Raftis, founder of Red Valve Company

Pinch Valves



Red Valve's Series 75 Manual Pinch Valve has the same face-to-face as gate, plug and ball valves. The valve's full-port sleeve is the only wetted part.

Control Valves

Red Valve's large-diameter influent control valves are ideal for wastewater treatment plants. Benefits include a full-port, no hang-up design and accurate control.

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