

## Redflex J-10 Concentric Reducing Expansion Joint, With Arches (JCC)



- Connects unequal pipe sizes
- Absorbs thermal expansion and contraction
- Eliminates vibration and noise
- Noncorrosive and shock resistant
- Made in the U.S.A.

### Materials of Construction

- **Elastomers:** Natural Rubber (NR), Ethylene Propylene Diene Terpolymer (EPDM)\*, Acrylonitrile-Butadiene (NBR), Fluoroelastomer (FKM), Chloroprene (CR)\*, Chlorosulfonated Polyethylene (CSM), Chloro-Isobutylene-Isoprene (CIIR)  
\* - White food grade options available.
- **Control Rods and Retaining Rods:** galvanized steel, stainless steel

### Working Pressure

- Standard pressure rating: 50 psi (350 kPa)
- High pressure rating: 75 psi (520 kPa)

### Vacuum Rating

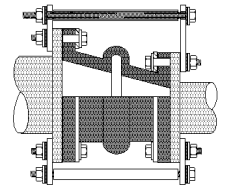
- 15" (381mm) Hg
- Full vacuum available

The Redflex J-10 Concentric Reducing Expansion Joint, With Arches has the ability to mate unequal sized pipes. J-10 Concentric Reducing Expansion Joints can be used as pipe reducers or increasers, expansion joints, flexible connectors and vibration eliminators. These joints were designed to replace metal reducers in pipelines. They are available in single arches, in either open or filled models. Multiple arches are used where expansion or contraction will occur. The flexibility and durability of the J-10's elastomer body is its advantage. Filled reducers are usually used on slurry and abrasive applications to prevent the collection of material which can settle in the arches.

The Redflex J-10 Concentric Reducing Expansion Joint reduces noise and isolates vibration in the pipeline, reduces stress, eliminates electrolysis and protects against start-up surges. Concentric reducers save installation space and reduce costs.

Concentric reducing expansion joints are manufactured to meet your exact piping needs. Flanges are designed to meet ASME Class 125 drilling. Redflex J-10 Reducing Expansion Joints are available in a variety of elastomers to satisfy chemical compatibility and temperature of the process fluid.

Piping systems must be anchored when using concentric reducers. Standard control rods cannot be used to prevent overextension or elongation. This is of particular concern in large diameter sizes over 12" (305mm), where the smaller end joint control rods have a lever effect. Special design control rods with backup plates may need to be engineered.



Control Rod Configuration

## Redflex R-4 Concentric Reducing Expansion Joint, No Arches (JCC)



- Connects unequal pipe sizes
- Reduces vibration and noise
- Noncorrosive and shock resistant
- Made in the U.S.A.

### Materials of Construction

- **Elastomers:** Natural Rubber (NR), Ethylene Propylene Diene Terpolymer (EPDM)\*, Acrylonitrile-Butadiene (NBR), Fluoroelastomer (FKM), Chloroprene (CR)\*, Chlorosulfonated Polyethylene (CSM), Chloro-Isobutylene-Isoprene (CIIR)  
\* - White food grade options available.
- **Control Rods and Retaining Rods:** galvanized steel, stainless steel

### Working Pressure

- Standard pressure rating: 50 psi (350 kPa)
- High pressure rating: 75 psi (520 kPa)

The Redflex R-4 Concentric Reducing Expansion Joint, No Arches can be used as pipe reducers or increasers, flexible connectors or vibration and noise reducers. These reducers are designed to replace metal reducers used with pipelines from pumps, compressors and other equipment. Like Redflex Rubber and Vibration Pipe, elbows and other flexible connectors, they prevent damage to equipment and compensate for minor misalignments.

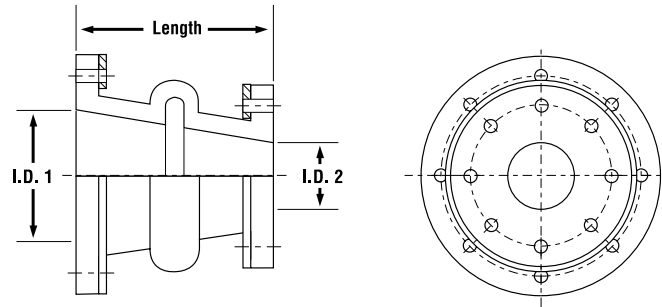
The inner lining and body of the reducer is constructed of elastomer. Steel wire is embedded in the body of the reducer for additional strength. A protective cover of natural or synthetic elastomer provides resistance to weather and ozone deterioration.

R-4 Concentric Reducing Expansion Joints are manufactured to meet your exact piping needs. Flanges are designed to meet ASME Class 125 drilling. Split steel rings must be installed on the inside of the flanges.

As with standard expansion joints, when piping is not anchored, control units must be used with the reducer joint to prevent over-elongation.

Dimensions of the R-4 Reducers are the same as dimensions of the J-10 Concentric Expansion Joints.

# Redflex J-10 Concentric Reducer Expansion Joint (JCC)



Series J-10 Concentric Reducer Expansion Joint Dimensions and Movement

JOINT SIZE I.D. 1 X I.D. 2 X LENGTH	OPEN ARCH MOVEMENT CAPABILITY: FROM NEUTRAL POSITION						FILLED ARCH MOVEMENT CAPABILITY: FROM NEUTRAL POSITION					
	AXIAL COMPRESS in/mm	AXIAL EXTEND in/mm	LATERAL DEFLECT in/mm	ANGULAR DEFLECT	DEGREES TORSION	THRUST FACTOR	AXIAL COMPRESS in/mm	AXIAL EXTEND in/mm	LATERAL DEFLECT in/mm	ANGULAR DEFLECT	DEGREES TORSION	THRUST FACTOR
*2 X 1 X 6" 50 x 25 x 150mm	0.50 13	0.25 6	0.50 13	18.4°	3°	23.69	0.25 6	0.13 3	0.28 7	9.5°	1.8°	3.14
*2 X 1.5 X 6" 50 x 40 x 150mm	0.50 13	0.25 6	0.50 13	15.9°	3°	14.32	0.25 6	0.13 3	0.28 7	8.1°	1.8°	3.14
2.5 X 2 X 6" 65 x 50 x 150mm	0.50 13	0.25 6	0.50 13	12.5°	3°	17.87	0.25 6	0.13 39	0.28 7	6.4°	1.8°	4.97
3 X 1 X 6" 80 x 25 x 150mm	0.50 13	0.25 6	0.50 13	12.5°	3°	17.87	0.25 6	0.13 3	0.28 7	6.4°	1.8°	7.06
3 X 2 X 6" 80 x 50 x 150mm	0.50 13	0.25 6	0.50 13	11.3°	3°	19.79	0.25 6	0.13 3	0.28 7	5.7°	1.8°	7.06
4 X 2 X 6" 100 x 50 x 150mm	0.50 13	0.25 6	0.50 13	9.5°	3°	23.92	0.25 6	0.13 39	0.28 7	4.8°	1.8°	12.57
4 X 2.5 X 6" 100 x 65 x 150mm	0.50 13	0.25 6	0.50 13	8.8°	3°	26.15	0.25 6	0.13 3	0.28 7	4.4°	1.8°	12.57
4 X 3 X 6" 100 x 80 x 150mm	0.50 13	0.25 6	0.50 13	8.2°	3°	28.46	0.25 6	0.13 3	0.28 7	4.1°	1.8°	12.57
5 X 4 X 6" 125 x 100 x 150mm	0.50 13	0.25 6	0.50 13	6.4°	3°	38.70	0.25 6	0.13 39	0.28 7	3.2°	1.8°	19.63
6 X 3 X 6" 150 x 80 x 150mm	0.50 13	0.25 6	0.50 13	6.4°	3°	38.70	0.25 6	0.13 3	0.28 7	3.2°	1.8°	28.27
6 X 4 X 6" 150 x 100 x 150mm	0.50 13	0.25 6	0.50 13	5.7°	3°	44.41	0.25 6	0.13 3	0.28 7	2.9°	1.8°	28.27
6 X 5 X 6" 150 x 125 x 150mm	0.50 13	0.25 6	0.50 13	5.2°	3°	50.51	0.25 6	0.13 39	0.28 7	2.6°	1.8°	28.27
8 X 4 X 6" 200 x 100 x 150mm	0.75 19	0.38 10	0.50 13	7.1°	3°	63.49	0.38 10	0.19 5	0.28 7	3.6°	1.8°	50.27
8 X 5 X 6" 200 x 125 x 150mm	0.75 19	0.38 10	0.50 13	6.6°	3°	70.76	0.38 10	0.19 5	0.28 7	3.6°	1.8°	50.27
8 X 6 X 6" 200 x 150 x 150mm	0.75 19	0.38 10	0.50 13	6.1°	3°	78.42	0.38 10	0.19 5	0.28 7	3.1°	1.8°	50.27
10 X 6 X 8" 250 x 150 x 200mm	0.75 19	0.38 10	0.50 13	5.3°	3°	94.90	0.38 10	0.19 5	0.28 7	2.8°	1.8°	78.54
10 X 8 X 6" 250 x 200 x 150mm	0.75 19	0.38 10	0.50 13	4.8°	3°	112.95	0.38 10	0.19 5	0.28 7	2.4°	1.8°	78.54
12 X 6 X 12" 300 x 150 x 300mm	0.75 19	0.38 10	0.50 13	4.8°	3°	113.10	0.38 10	0.19 5	0.28 7	2.4°	1.8°	CONSULT FACTORY
12 X 8 X 12" 300 x 200 x 300mm	0.75 19	0.38 10	0.50 13	4.3°	3°	132.57	0.38 10	0.19 5	0.28 7	2.2°	1.8°	
12 X 8 X 10" 300 x 200 x 250mm	0.75 19	0.38 10	0.50 13	3.9°	3°	153.76	0.38 10	0.19 5	0.28 7	1.9°	1.8°	
12 X 10 X 8" 300 x 250 x 200mm	0.75 19	0.38 10	0.50 13	3.9°	2°	177.09	0.38 10	0.19 5	0.28 7	1.9°	1.2°	
14 X 8 X 14" 350 x 200 x 350mm	0.75 19	0.38 10	0.50 13	3.6°	2°	201.46	0.38 10	0.19 5	0.28 7	1.8°	1.2°	
14 X 10 X 8" 350 x 250 200mm	0.75 19	0.38 10	0.50 13	3.3°	2°	277.40	0.38 10	0.19 5	0.28 7	1.7°	1.2°	

\* Filled arch only.

**Series J-10 Concentric Reducer Expansion Joint Dimensions and Movement**

JOINT SIZE I.D. 1 X I.D. 2 X LENGTH	OPEN ARCH MOVEMENT CAPABILITY: FROM NEUTRAL POSITION						FILLED ARCH MOVEMENT CAPABILITY: FROM NEUTRAL POSITION					
	AXIAL COMPRESS in/mm	AXIAL EXTEND in/mm	LATERAL DEFLECT in/mm	ANGULAR DEFLECT	DEGREES TORSION	THRUST FACTOR	AXIAL COMPRESS in/mm	AXIAL EXTEND in/mm	LATERAL DEFLECT in/mm	ANGULAR DEFLECT	DEGREES TORSION	THRUST FACTOR
16 x 8 x 12" 400 x 200 x 300mm	<u>0.75</u> 19	<u>0.38</u> 10	<u>0.50</u> 13	3.3°	2°	227.40	<u>0.38</u> 10	<u>0.19</u> 5	<u>0.28</u> 7	1.7°	1.2°	CONSULT FACTORY
16 X 12 X 8" 400 x 300 x 200mm	<u>0.75</u> 19	<u>0.38</u> 10	<u>0.50</u> 13	3.1°	2°	254.91	<u>0.38</u> 10	<u>0.19</u> 5	<u>0.28</u> 7	1.5°	1.2°	
16 X 14 X 8" 400 x 350 x 200mm	<u>0.75</u> 19	<u>0.38</u> 10	<u>0.50</u> 13	2.9°	2°	283.99	<u>0.38</u> 10	<u>0.19</u> 5	<u>0.28</u> 7	1.4°	1.2°	
18 X 12 X 12" 450 x 300 x 300mm	<u>0.75</u> 19	<u>0.38</u> 10	<u>0.50</u> 13	2.9°	1°	283.99	<u>0.38</u> 10	<u>0.19</u> 5	<u>0.28</u> 7	1.4°	.6°	
18 X 14 X 8" 450 x 350 x 200mm	<u>0.75</u> 19	<u>0.38</u> 10	<u>0.50</u> 13	2.7°	1°	314.65	<u>0.38</u> 10	<u>0.19</u> 5	<u>0.28</u> 7	1.3°	.6°	
18 X 16 X 8" 450 x 400 x 200mm	<u>0.75</u> 19	<u>0.38</u> 10	<u>0.50</u> 13	2.6°	1°	346.88	<u>0.38</u> 10	<u>0.19</u> 5	<u>0.28</u> 7	1.3°	.6°	
20 X 10 X 20" 500 x 250 x 500mm	<u>0.75</u> 19	<u>0.38</u> 10	<u>0.50</u> 13	2.9°	1°	283.99	<u>0.38</u> 10	<u>0.19</u> 5	<u>0.28</u> 7	1.4°	.6°	
20 X 14 X 12" 500 x 350 x 300mm	<u>0.75</u> 19	<u>0.38</u> 10	<u>0.50</u> 13	2.9°	1°	283.99	<u>0.38</u> 10	<u>0.19</u> 5	<u>0.28</u> 7	1.4°	.6°	
20 X 16 X 10" 500 x 400 x 250mm	<u>0.75</u> 19	<u>0.38</u> 10	<u>0.50</u> 13	2.9°	1°	283.99	<u>0.38</u> 10	<u>0.19</u> 5	<u>0.28</u> 7	1.4°	.6°	
20 X 18 X 8" 500 x 450 x 200mm	<u>0.75</u> 19	<u>0.38</u> 10	<u>0.50</u> 13	2.9°	1°	283.99	<u>0.38</u> 10	<u>0.19</u> 5	<u>0.28</u> 7	1.4°	.6°	
24 X 18 X 12" 600 x 450 x 300mm	<u>0.75</u> 19	<u>0.38</u> 10	<u>0.50</u> 13	2.9°	1°	283.99	<u>0.38</u> 10	<u>0.19</u> 5	<u>0.28</u> 7	1.4°	.6°	
24 X 20 X 12" 600 x 500 x 300mm	<u>0.75</u> 19	<u>0.38</u> 10	<u>0.50</u> 13	2.9°	1°	283.99	<u>0.38</u> 10	<u>0.19</u> 5	<u>0.28</u> 7	1.4°	.6°	
30 X 20 X 18" 750 x 500 x 450mm	<u>0.75</u> 19	<u>0.38</u> 10	<u>0.50</u> 13	2.9°	1°	283.99	<u>0.38</u> 10	<u>0.19</u> 5	<u>0.28</u> 7	1.4°	.6°	
30 X 24 X 10" 750 x 600 x 250mm	<u>0.75</u> 19	<u>0.38</u> 10	<u>0.50</u> 13	2.9°	1°	283.99	<u>0.38</u> 10	<u>0.19</u> 5	<u>0.28</u> 7	1.4°	.6°	

Other sizes available, consult factory.