



MASON SAFEFLEX

PEROXIDE CURED EPDM AND DuPONT KEVLAR® TIRE CORD REINFORCEMENT

Safeflex expansion joints are molded and vulcanized in hydraulic presses. This high pressure process produces a smooth finished product with outstanding adhesion between the cover, reinforcement and tube.

Most of our competitors still use Natural Rubber impregnated Nylon tire cord between sulfur cured, EPDM covers and tubes. This construction becomes brittle with age at higher temperatures. We have changed from Nylon to Kevlar®, as Kevlar® has a higher modulus that minimizes swell and elongation, and outstanding temperature tolerance up to 250°F (121°C).

Changing the EPDM curing system from sulfur to the slower, more expensive peroxide method raised the high temperature safety factor, as well as other physical properties. We friction EPDM between and over the Kevlar® cords. This makes Safeflex superior as cover, reinforcement and tube are all homogeneous. Natural Rubber has been completely eliminated to improve aging and temperature tolerance.

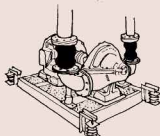
Another serious problem was the body pulling out of the flange because flexible bead wire does not provide sufficient retention. Our answer to this was to wrap the tire cord around a solid steel ring in place of the cable. The steel ring cannot pull through.

Sealing pressure is applied through ductile iron flanges that rotate inward around solid exterior stops. The split flanges are hooked together to prevent spreading.

Safeflex is the culmination of 25 years of application experience and a driving desire to eliminate all possible failures. These improvements are costly, but the engineering and contracting communities and the consumers they serve have always been receptive to our improved longer lasting and safer products. Why risk failure when there is a better product.

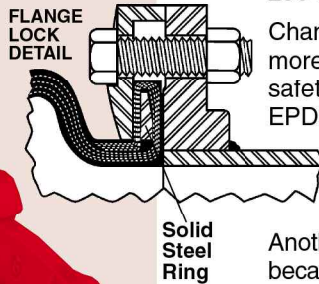
SAFEFLEX IS SAFE BECAUSE...

- All Safeflex Expansion Joints are factory tested to 150% of rated pressure before shipment.
- Kevlar® high temperature tolerance is outstanding.
- Peroxide cured EPDM covers, reinforcement rubber and tubes are superior to sulfur cured EPDM and Natural Rubber, Nylon reinforced bodies.
- Kevlar® reinforcement wrapped around solid steel rings cannot pull through the flanges.
- Sealing pressure is higher using external stops as rotation points.



SAFEFLEX SFDEJ

SFDEJ double sphere connectors are always our first recommendation. The longer body has better volumetric response to sound pressure waves and provides superior sound attenuation. In seismic zones the extra movement capabilities are very important as well.



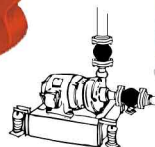
SAFEFLEX SFEJ

SFEJ single spheres are used where there is minor expansion and no seismic considerations or space and cost controls.



SAFEFLEX SFDCR

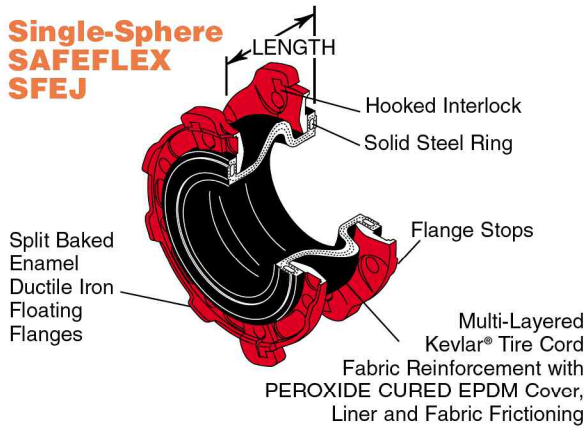
SFDCR twin sphere reducers eliminate the need for cast iron or steel transition pieces usually found on both ends of pumping systems. Since the reducing fitting is eliminated, there are space, cost and a labor savings. The SFDCR has a wide range of applications.



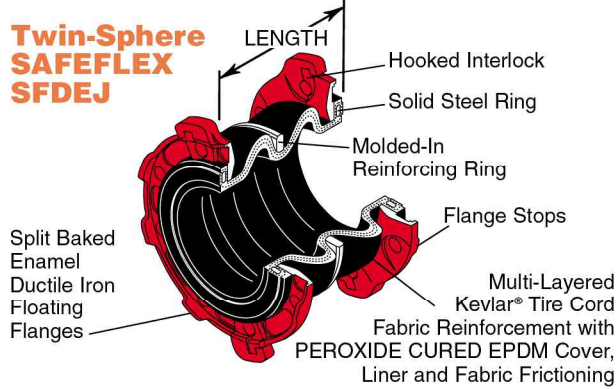
SAFEFLEX SFU SINGLE-SPHERE UNION CONNECTOR

SFU single spheres are more than adequate for both acoustics and movements as the new single sphere has similar characteristics to our old twin sphere size 3/4" to 2" (19 to 50mm).

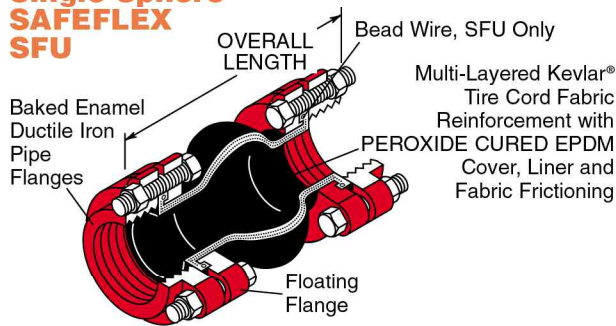
Single-Sphere SAFEFLEX SFEJ



Twin-Sphere SAFEFLEX SFDEJ



Single-Sphere SAFEFLEX SFU



SAFEFLEX SFU-DI

Ductile Iron Threaded End

SAFEFLEX SFEJ Dimensions and Allowable Movements

Pipe (in)		Pipe (mm)		Allowable Movements					
Size (in)	Length (in)	Size (mm)	Length (mm)	Angular (degrees)	Compression (in) (mm)	Elongation (in) (mm)	Transverse ±(in) ±(mm)		
1 1/2		40		21					
2		50		20					
2 1/2	4	65	100	19	5/8 16	1/2 12	3/8 9.5		
3		75		18					
4		100		17					
5		125		16					
6		150		15					
8	6	200	150	14	1 25	5/8 16	5/8 16		
10		250		13					
12		300		12					
14		350		10					
16	9	400	225	9	1 1/8 29	7/8 22	7/8 22		
18		450		8					
20		500		7					
24	10	600	250	6	1 1/8 29	1 25	1 25		

SAFEFLEX SFDEJ Dimensions and Allowable Movements

Pipe (in)		Pipe (mm)		Allowable Movements					
Size (in)	Length (in)	Size (mm)	Length (mm)	Angular (degrees)	Compression (in) (mm)	Elongation (in) (mm)	Transverse ±(in) ±(mm)		
1 1/2		40		36					
2		50		34					
2 1/2		65		32					
3	7	75	175	30	1 1/4 32	3/4 19	3/4 19		
4		100		28					
5		125		24					
6		150		22					
8		200		20					
10	8	250	200	18	1 1/2 38	7/8 22	7/8 22		
12		300		16					
14	10	350	250	14	1 5/8 41	1 25	1 25		

SAFEFLEX SFU Dimensions and Allowable Movements

Pipe (in)		Pipe (mm)		Allowable Movements					
Size (in)	Length (in)	Size (mm)	Length (mm)	Angular (degrees)	Compression (in) (mm)	Elongation (in) (mm)	Transverse ±(in) ±(mm)		
3/4	7	20	175	25					
1	7	25	175	24					
1 1/4	8	32	200	23	3/4 19	3/8 10	3/8 10		
1 1/2	8	40	200	22					
2	8	50	200	21					

SAFEFLEX SFEJ, SFDEJ, SFDCR and SFU KEVLAR® REINFORCEMENT Standard and High Pressure Construction-Pressure Reduction at Higher Temperatures

Construction Types & Sizes (in) (mm)	Nominal Rating In PSI At:					Nominal Rating In Bar At:					Max. Vacuum	
	170°F	190°F	210°F	230°F	250°F	77°C	88°C	99°C	110°C	121°C	in Hg	Minus Bar
SFEJ Standard 1 1/2" - 16" 40mm - 600mm	250	245	235	225	215	17	16.5	16	15	14	18"	0.6
SFEJ Standard 18" - 24" 450mm - 600mm	180	175	170	165	155	12	11.5	11	10.5	10	18"	0.6
SFDEJ Standard 1 1/2" - 14" 40mm - 350mm	250	245	235	225	215	17	16.5	16	15	14	14"	0.5
SFDCR Standard All Sizes	250	245	235	225	215	17	16.5	16	15	14	14"	0.5
SFU Standard All Sizes	250	245	235	225	215	17	16.5	16	15	14	18"	0.6
SFEJ High Pressure 1 1/2" - 16" 40mm - 400mm	335	325	315	300	285	23	22	21	20	19	29"	1.0
SFEJ High Pressure 18" - 24" 450mm - 600mm	225	220	210	200	190	15	14.5	14	13.5	13	29"	1.0
SFDEJ High Pressure 1 1/2" - 14" 40mm - 350mm	335	325	315	300	285	23	22	21	20	19	22"	0.7

FITTING OPTIONS



SAFEFLEX SFU-SS
Stainless Steel Threaded End



SAFEFLEX SFU-CT
Sweat End for Copper Tubing



SAFEFLEX SFU-PC
PVC Cement End



SAFEFLEX SFU-PT
PVC Threaded End



SAFEFLEX SFU-BT
Brass Threaded End

Burst pressures are a minimum of three times Operating Pressures.