



Section 8

Rubber Bellows

Rubber Bellows

A Rubber bellow is a flexible joint made from heat resisting synthetic elastomers and moulded in a spherical shape with metal floating flanges. Rubber Bellows (Flexible Rubber Joints) are installed in piping systems to absorb movements in three directions:

1. Axial – the movement of elongation and compression along the centre line
2. Lateral – offset movement from the centre line
3. Angular – offset bending about the centre line

Applications – Air, Compressed Air, Water, Sea Water, Hot Water, Weak Acid.

Single Sphere Style 10

Single sphere expansion joint style 10 is capable of handling water, warm water, seawater, weak acids, alkalies, etc. The product comes with a wide selection of flange drilling: JIS, DIN, ANSI, BS, and other standard drilling. Style 10 is manufactured with any of the following material: Neoprene, Butyl, Nitrile, EPDM, Hypalon, Natural Rubber, etc. Not only does style 10 give you many choices, it is so strong that it can withstand burst pressure 60 bars for size 5/4" to 8" and 40 bars for sizes 10" to 24".

Design Layout		
ITEM #	PART	MATERIAL
1	Body	EPDM. Other elastomers also available
2	Reinforcement	Nylon Cord
3	Wire	Hard Steel Wire
4	Flange	Mild Steel. Various galvanized drillings available.

Double Sphere Style 20 without Root Ring

The double sphere connector of Style 20 allows greater compression, elongation, and deflection, and it requires little force to cause movement. With this product, you will not have problem installing it, because Style 20 is easy to install and uses floating flanges. Style 20 is capable of handling water, warm water, seawater, weak acids, alkalies, etc.. The product comes with a wide selection of flange drilling: JIS, DIN, ANSI, BS, and other standard drilling. It is manufactured with any of the following material: Neoprene, Butyl, Nitrile, EPDM, Hypalon, Natural Rubber, etc.. Not only does style 20 give you many choices, it is so strong that it can withstand burst pressure 60kg/cm² for size 5/4" to 8" and 40kg/cm² for sizes 10" to 12".

Design Layout		
ITEM #	PART	MATERIAL
1	Body	EPDM. Other elastomers also available
2	Reinforcement	Nylon Cord
3	Wire	Hard Steel Wire
4	Flange	Mild Steel. Various galvanized drillings available.

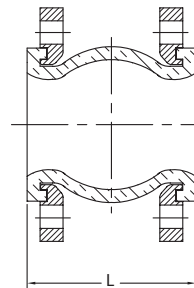
Double Sphere Threaded Unions Style 30 without Root Ring

The double sphere threaded unions style 30 product provides the benefits of superb absorption of vibration, low cost installation, and operation. It is effective for large eccentricity thermal and bending angle. Style 30 is available in BS and ANSI unions. For more information regarding the different flanges used, please refer to the 'Flanges' section.

Single Sphere Expansion Joint

Single Sphere Expansion Joint (Table E)

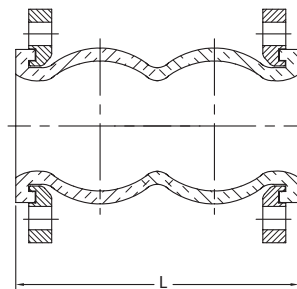
CODE	CODE	DIAM.D (mm)	L (mm)	ALLOWABLE MOVEMENT (mm)				OPERATING CONDITION		
				AXIAL COMPRESSION	AXIAL ELONGATION	TRANSVERSE DEFLECTION	ANGULAR DEFLECTION	MAX. PRESSURE KG/CM ² (PSIG)	MAX. TEMPERATURE C (F)	VACUUM RATING MM HG(IN.)
FLFLEX/050TE		50	105	8	6	8	15	10(150)	104(220)	660(26.40)
FLFLEX/065TE		65	115	12	6	10	15	10(150)	104(220)	660(26.40)
FLFLEX/080TE	FLFLEX/080TE16	80	130	12	10	10	15	10(150)	104(220)	660(26.40)
FLFLEX/100TE	FLFLEX/100TE16	100	135	18	10	12	15	10(150)	104(220)	660(26.40)
FLFLEX/125TE		125	170	18	10	12	15	10(150)	104(220)	660(26.40)
FLFLEX/150TE	FLFLEX/150TE16	150	180	18	14	12	15	10(150)	104(220)	660(26.40)
FLFLEX/200TE	FLFLEX/200TE16	200	205	25	14	22	15	10(150)	104(220)	660(26.40)
FLFLEX/250TE		250	240	25	14	22	15	10(150)	104(220)	660(26.40)
FLFLEX/300TE		300	260	25	16	22	15	10(150)	104(220)	660(26.40)



Double Sphere Expansion Joint

Double Sphere Expansion Joint (Table E)

CODE	DIAM.D (mm)	L (mm)	ALLOWABLE MOVEMENT (mm)				OPERATING CONDITION		
			AXIAL COMPRESSION	AXIAL ELONGATION	TRANSVERSE DEFLECTION	ANGULAR DEFLECTION	MAX. PRESSURE KG/CM ² (PSIG)	MAX. TEMPERATURE C (F)	VACUUM RATING MM HG(IN.)
FLFLEX/080TED	80	175	50	30	35	40	10(150)	104(220)	400(16)
FLFLEX/100TED	100	225	57	35	40	35	10(150)	104(220)	400(16)
FLFLEX/150TED	150	225	57	35	40	35	10(150)	104(220)	400(16)
FLFLEX/200TED	200	325	63	35	45	35	10(150)	104(220)	400(16)
FLFLEX/250TED	250	325	63	35	45	35	10(150)	104(220)	400(16)
FLFLEX/300TED	300	325	63	35	45	35	10(150)	104(220)	400(16)



Double Sphere Threaded Unions

Double Sphere Threaded Unions									
CODE	DIAM.D (mm)	L (mm)	ALLOWABLE MOVEMENT (mm)				OPERATING CONDITION		
			AXIAL COMPRESSION	AXIAL ELONGATION	TRANSVERSE DEFLECTION	ANGULAR DEFLECTION	MAX. PRESSURE KG/CM ² (PSIG)	MAX. TEMPERATURE C (F)	VACUUM RATING MM HG(IN.)
FLFLEX/025BSP	25	200	22	6	22	45	10(150)	115(240)	405(16.20)
FLFLEX/032BSP	32	200	22	6	22	45	10(150)	115(240)	405(16.20)
FLFLEX/040BSP	40	200	22	6	22	45	10(150)	115(240)	405(16.20)
FLFLEX/050BSP	50	200	22	6	22	45	10(150)	115(240)	405(16.20)

