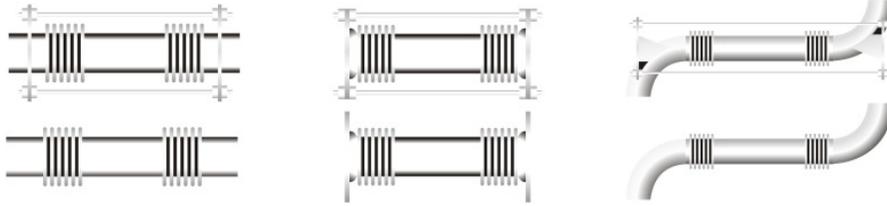




UNIVERSAL EXPANSION JOINTS



16- / 18- / 20-INCH
NOMINAL DIAMETER

S I Z E	P R E S S U R E	NON-CONCURRENT MOVEMENTS/SPRING RATES							
		LATERAL MOVEMENT/SPRING RATES						AXIAL	
		48 IN O.A.L.		60 IN O.A.L.		72 IN O.A.L.		M O V E M E N T	S P R I N G R A T E
		1219 MM O.A.L.		1524 MM O.A.L.		1829 MM O.A.L.			
		MOVEMENT	SPRING RATE	MOVEMENT	SPRING RATE	MOVEMENT	SPRING RATE		
		PSIG	IN	LB/IN	IN	LB/IN	IN	LB/IN	IN
KG/ CM ²	MM	KG/MM	MM	KG/MM	MM	KG/MM	MM	KG/MM	
16	35	6.73	70	11.60	29	16.70	16	7.75	211
	2.5	171	1.3	295	0.52	424	0.29	197	4
	200	3.11	339	5.06	149	7.05	83	2.96	1235
	14.1	79	6.1	129	2.67	179	1.49	75	22
	400	2.45	843	3.98	363	5.54	200	2.3	2894
	28.1	62	15.1	101	6.50	141	3.58	58	52
18	40	5.91	98	10.18	41	14.66	22	7.59	238
	2.8	150	1.8	259	0.73	372	0.39	193	4
	200	2.48	550	4.16	230	5.88	125	2.85	1394
	14.1	63	9.8	106	4.12	149	2.24	72	25
	400	1.97	1365	3.16	595	4.37	331	1.98	3919
	28.1	50	24.4	80	10.65	111	5.92	50	70
20	45	5.24	133	9.03	55	12.99	30	7.43	265
	3.2	133	2.4	229	0.98	330	0.54	189	5
	200	2.26	725	3.75	306	5.27	167	2.77	1533
	14.1	57	13.0	95	5.48	134	2.99	70	28
	400	1.59	2120	2.62	881	3.66	479	1.88	4365
	28.1	40	37.9	67	15.77	93	8.57	48	78

GENERAL NOTES

1. Rated life cycle at 650°F is 3000 cycles for any one tabulated movement.
2. To combine axial, lateral and angular movements, please refer to page 80.
3. To increase cycle life or movements, please refer to graph on page 79.
4. Rated bellows extension is equal to rated axial movement. Provided bellows is precompressed the amount of design extension. Installed O.A.L. will decrease by the amount of precompression.
5. Tabulated values are for tied joints, with butt weld ends. Performance of joints with flanged ends, and unrestrained joints, will exceed tabulated values.
6. Maximum test pressure: 1.5 X rated working pressure.
7. Bellows are rated for 650°F: See page 31 for appropriate flange temperature/pressure ratings.
8. Pressure thrust load applied to adjacent pipe anchors/equipment when unrestrained expansion joints are used.
9. Please refer to page 81 for part number example.

MATERIALS

BELLOWS: A240-T304. Alternate materials available upon request. Refer to page 33.
 FLANGES: ASTM A105.
 35-45 psig Series: 125 lb Lt/Wt FFSSO.
 200 psig Series: 150 lb ANSI B16.5 RFSO.
 400 psig Series: 300 lb ANSI B16.5 RFSO.
 Plate flanges and angle flanges available for low pressure systems. Please refer to page 32.
 PIPE: ASTM A-53/A-106.
 35-45 psig Series: Std. Wt. pipe.
 200 psig Series: Std. Wt. pipe.
 400 psig Series: Std. Wt. pipe.
 LINERS: A240-T304.
 COVERS: Carbon steel.
 TIE RODS, HINGES, GIMBALS: Carbon steel