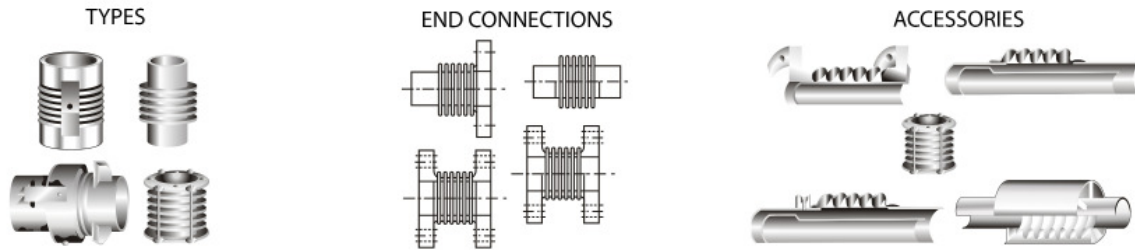


**SINGLE EXPANSION JOINTS**

Effective (Thrust) Area: 156.06 in<sup>2</sup> (1006.59 cm<sup>2</sup>)

**12-INCH NOMINAL DIAMETER**



D I A M E T E R	P R E S S U R E	OVERALL LENGTH AND WEIGHT						NON-CONCURRENT MOVEMENTS			SPRING RATES			
		FLANGED ENDS		WELD ENDS		COMBINATION ENDS		AXIAL C O M P	L A T E R A L	A N G U L A R	A X I A L	L A T E R A L	A N G U L A R	T O R S I O N A L
		O.A.L.	WT.	O.A.L.	WT.	O.A.L.	WT.							
		PSIG	IN	LB	IN	LB	IN	LB	IN	IN	DEG	LB/IN	LB/IN	IN-LB/DEG
KG/CM <sup>2</sup>	MM	KG	MM	KG	MM	KG	MM	MM	GRAD	KG/MM	KG/MM	N-M/GRAD	N-M/GRAD x 10 <sup>5</sup>	
12	80	12	137	16	45	14	91	2.94	0.53	10	416	2113	179	0.3358
	5.6	305	62.3	406	20.5	356	41.4	74.7	13.5	11	7	38	18.2	0.3415
	60	18	144	22	52	20	98	5.41	1.75	10	238	378	102	0.1910
	4.2	457	65.5	559	23.6	508	44.5	137	44.5	11	4	7	10.4	0.1943
	25	24	151	28	58	26	104	8.57	4	10	166	128	71	0.1335
	1.8	610	68.6	711	26.4	660	47.3	218	102	11	3	2	7.2	0.1357
12	210	12	243	16	49	14	146	1.41	0.21	10	1952	14794	840	0.6363
	14.8	305	110	406	22.3	356	66.4	35.8	5.33	11	35	265	85.4	0.6471
	210	18	253	22	59	20	156	2.68	0.78	10	1051	2074	453	0.3387
	14.8	457	115	559	26.8	508	70.9	68.1	19.8	11	19	37	46.1	0.3445
	300	24	296	28	101	26	198	3.97	1.71	10	1447	1295	627	0.2447
	21.1	610	135	711	45.9	660	90	101	43.3	11	26	23	63.8	0.2488

**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 43.
3. To increase cycle life or movements, please refer to graph on page 42.
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. Maximum test pressure: 1.5 X rated working pressure.
6. Bellows rated for 650°F: See page 31 for appropriate flange temperature/pressure ratings.
7. Torsional spring rate data provided only for modeling expansion joints on computer stress programs. Please consult factory for allowable torsional loadings.
8. Overall lengths and weights for unrestrained expansion joints only. Consult factory for information regarding tied, hinged, or gimbal expansion joints.
9. Pressure thrust load applied to adjacent pipe anchors/equipment when unrestrained expansion joints are used.

**MATERIALS**

**BELLOWS:** A240-T304. Alternate materials available upon request. Refer to page 33.  
**FLANGES:** ASTM A105.  
 25-80 psig Series: 150 lb ANSI B16.5 RFSO.  
 210-300 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 A53/A106.  
 25-80 psig Series: Std. Wt. Pipe.  
 210-300 psig Series: Std. Wt. Pipe  
**LINERS:** A240-T304.  
**COVERS:** Carbon steel.  
**TIE RODS, HINGES, GIMBALS:** Carbon steel