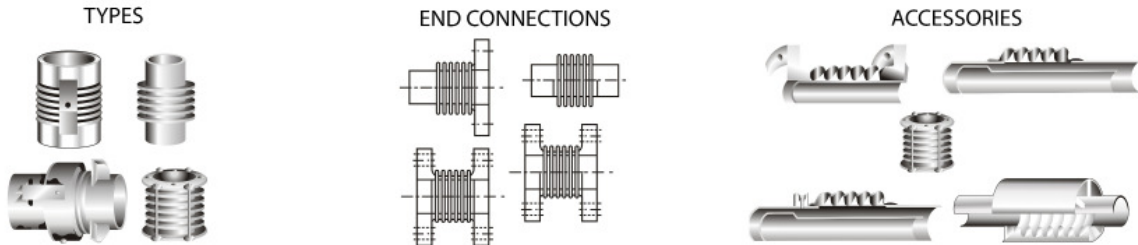


SINGLE EXPANSION JOINTS

Effective (Thrust) Area: 16.12 in² (104 cm²)

3-1/2-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 ²	MM	KG	MM	KG	MM	KG	MM	MM	GRAD	KG/MM	KG/MM	N-M/GRAD	N-M/GRAD x 10 ⁵	
3.5	170	6	23	12	8	9	15	0.9	0.23	10	349	873	16	0.0130
	11.9	152	10.5	305	3.64	229	6.82	22.9	5.84	11	6	16	1.6	0.0132
	100	9	24	15	8	12	16	1.75	0.84	10	194	141	9	0.0072
	7.0	229	10.9	381	3.64	305	7.27	44.5	21.3	11	3	3	0.9	0.0073
	40	12	24	18	9	15	17	2.69	1.89	10	134	46	6	0.0049
	2.8	305	10.9	457	4.09	381	7.73	68.3	48	11	2	1	0.6	0.0050
3.5	500	6	35	12	8	9	21	0.32	0.06	8	2710	13345	121	0.0361
	35.1	152	15.9	305	3.64	229	9.55	8.13	1.52	9	48	239	12.3	0.0367
	500	9	36	15	9	12	22	0.72	0.29	10	1161	1182	52	0.0157
	35.1	229	16.4	381	4.09	305	10	18.3	7.37	11	21	21	5.3	0.0160
	300	12	37	18	10	15	23	1.23	0.77	10	739	315	33	0.0100
	21.1	305	16.8	457	4.55	381	10.5	31.2	19.6	11	13	6	3.4	0.0102

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.
 40-170 psig Series: 150 lb ANSI B16.5 RFSO.
 300-500 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.
 40-70 psig Series: Std. Wt. Pipe.
 300-500 psig Series: Std. Wt. Pipe
LINERS: A240-T304.
COVERS: Carbon steel.
TIE RODS, HINGES, GIMBALS: Carbon steel