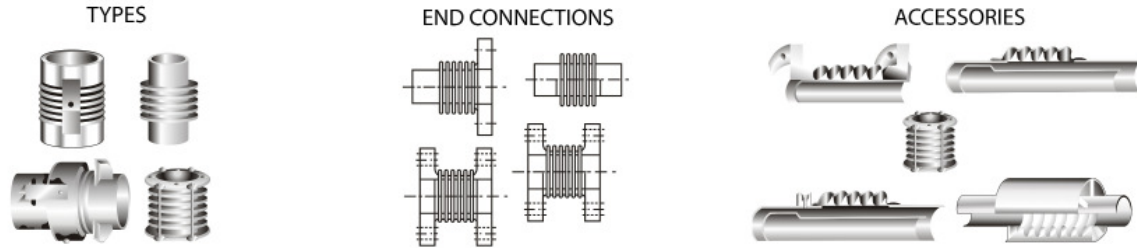


SINGLE EXPANSION JOINTS

4-INCH NOMINAL DIAMETER

Effective (Thrust) Area: 20.87 in² (134.64 cm²)



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	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	
4	100	6	27	12	9	9	18	1.23	0.27	10	222	774	13	0.0168
	7.0	152	12.3	305	4.09	229	818	31.2	6.96	11	4	14	1.3	0.0170
	65	9	28	15	10	12	19	2.49	1.03	10	118	115	7	0.0089
	4.6	229	12.7	381	4.55	305	8.64	63.2	26.2	11	2	2	0.7	0.0090
	30	12	29	18	11	15	20	3.89	2.36	10	80	36	5	0.0060
	2.1	305	13.2	457	5	381	9.09	98.8	59.9	11	1	1	0.5	0.0061
4	275	6	45	10	9	8	27	0.46	0.07	10	1549	12199	90	0.0433
	19.3	152	20.5	254	4.09	203	12.3	11.7	1.78	11	28	218	9.2	0.0441
	275	9	47	13	11	11	29	1.07	0.36	10	664	960	38	0.0186
	19.3	229	21.4	330	5	279	13.2	27.2	9.14	11	12	17	3.9	0.0189
	175	12	48	16	12	14	30	1.81	0.96	10	423	247	24	0.0118
	12.3	305	21.8	406	5.45	356	13.6	46	24.4	11	8	4	2.4	0.0120

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.
 30-100 psig Series: 150 lb ANSI B16.5 RFSO.
 175-275 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.
 30-100 psig Series: Std. Wt. Pipe.
 175-275 psig Series: Std. Wt. Pipe.
LINERS: A240-T304.
COVERS: Carbon steel.
TIE RODS, HINGES, GIMBALS: Carbon steel