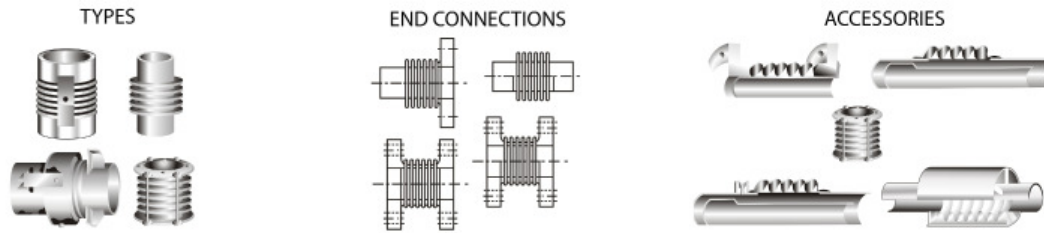


SINGLE EXPANSION JOINTS

U.S. Bellows, Inc.

Effective (Thrust) Area: 69.74 in² (449.82 cm²)

8-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	
8	75	8	63	13	23	10	43	1.81	0.29	10	251	1643	48	0.0948
	5.3	203	28.6	330	10.5	254	19.5	46	7.37	11	4	29	4.9	0.0965
	50	12	65	17	25	14	45	3.65	1.1	10	133	244	26	0.0502
	3.5	305	29.5	432	11.4	356	20.5	92.7	27.9	11	2	4	2.6	0.0511
	25	16	67	21	27	18	47	5.69	2.53	10	90	77	17	0.0341
	1.8	406	30.5	533	12.3	457	21.4	145	64.3	11	2	1	1.7	0.0347
8	200	8	64	13	25	19	44	1.02	0.16	10	1166	7641	225	0.1618
	14.1	203	29.1	330	11.4	254	20	26.9	4.32	11	21	137	22.9	0.1646
	200	12	68	17	28	14	48	1.93	0.58	10	617	1134	119	0.0857
	14.1	305	30.9	432	12.7	356	21.8	49	14.7	11	11	20	12.1	0.0871
	105	16	71	21	32	18	51	3.1	1.37	10	420	357	81	0.0583
	7.4	406	32.3	533	14.5	457	23.2	78.7	34.8	11	8	6	8.2	0.0592
8	400	8	120	12	25	10	72	0.39	0.04	5	8627	117663	1671	0.4596
	28.1	203	54.5	305	11.4	254	32.7	9.91	1.02	5	154	2106	169.9	0.4674
	400	12	125	16	29	14	77	0.91	0.23	10	3595	9431	696	0.1938
	28.1	305	56.8	406	13.2	356	35	23.1	5.84	11	64	169	70.8	0.1971
	400	16	130	20	34	20	82	1.41	0.56	10	2270	2443	440	0.1228
	28.1	406	59.1	508	15.5	508	37.3	35.8	14.2	11	41	44	44.7	0.1249

GENERAL NOTES

- Rated life cycle at 650°F is 3000 cycles for any one tabulated movement.
- To combine axial, lateral and angular movements, please refer to page 43.
- To increase cycle life or movements, please refer to graph on page 42.
- 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.
- Maximum test pressure: 1.5 X rated working pressure.
- Bellows rated for 650°F: See page 31 for appropriate flange temperature/pressure ratings.
- Torsional spring rate data provided only for modeling expansion joints on computer stress programs. Please consult factory for allowable torsional loadings.
- Overall lengths and weights for unrestrained expansion joints only. Consult factory for information regarding tied, hinged, or gimbal expansion joints.
- 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.
 25-70 psig Series: 150 lb ANSI B16.5 RFSSO.
 105-200 psig Series: 150 lb ANSI B16.5 RFSSO.
 400 psig Series: 300 lb ANSI B16.5 RFSSO.
 Plate flanges and angle flanges available for low pressure systems. Please refer to page 32.
PIPE: ASTM A53/A106.
 25-70 psig Series: Std. Wt. Pipe.
 105-200 psig Series: Std. Wt. Pipe.
 400 psig Series: Std. Wt. Pipe.
LINERS: A240-T304.
COVERS: Carbon steel.
TIE RODS, HINGES, GIMBALS: Carbon steel