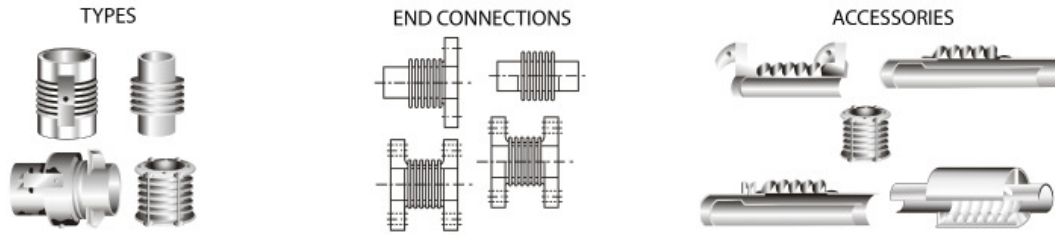


SINGLE EXPANSION JOINTS

U.S. Bellows, Inc.

Effective (Thrust) Area: 236.31 in² (1524.20 cm²)

16-INCH NOMINAL DIAMETER



D I A M E T E R	P R E S S U R E	O V E R A L L L E N G T H A N D W E I G H T						N O N - C O N C U R R E N T M O V E M E N T S			S P R I N G R A T E S			
		F L A N G E D E N D S		W E L D E N D S		C O M B I N A T I O N E N D S		A X I A L 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	
16	75	12	131	18	60	15	95	3.52	0.65	10	421	2090	274	0.5297
	5.3	305	59.5	457	27.3	381	43.2	89.4	16.5	11	8	37	27.9	0.5387
	50	18	139	24	68	21	103	6.04	1.8	10	263	491	171	0.3297
	3.5	457	63.2	610	30.9	46.8	1.53	45.7	11	11	5	9	17.4	0.3353
	25	24	147	30	76	27	112	8.95	3.71	10	191	186	125	0.2393
	1.8	610	66.8	762	34.5	686	50.9	22.7	94.2	11	3	3	12.7	0.2434
16	200	12	213	15	62	14	137	1.40	0.2	10	2469	22616	1612	1.2211
	14.1	305	96.8	381	28.2	356	62.3	37.6	5.08	11	44	405	163.9	1.2419
	200	18	226	21	75	20	150	2.75	0.69	10	1329	3531	868	0.6575
	14.1	457	103	533	34.1	508	68.2	69.9	17.5	11	24	63	88.3	0.6687
	150	24	239	27	88	26	163	4.21	1.54	10	910	1131	594	0.4499
	10.5	610	109	686	40	660	74.1	107	39.1	11	16	20	60.4	0.4575
16	400	12	408	14	73	13	240	1.15	0.12	8	5789	86365	3800	1.5335
	28.1	305	185	356	33.2	330	109	29.2	3.05	8	104	1546	386.5	1.5596
	400	18	433	20	98	19	265	2.36	0.52	10	2894	9877	1900	0.7591
	28.1	457	197	508	44.5	483	120	59.9	13.2	11	52	177	193.2	0.7720
	400	24	458	26	123	25	291	3.6	1.21	10	1930	2844	1267	0.5044
	28.1	610	208	660	55.9	635	132	91.4	30.7	11	35	51	128.9	0.5130

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.
 25-75 psig Series: 150 lb ANSI B16.5 RFSSO.
 150-200 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.
 25-75 psig Series: Std. Wt. Pipe.
 150-200 psig Series: Std. Wt. Pipe.
 400 psig Series: Std. Wt. Pipe.
LINERS: A240-T304.
COVERS: Carbon steel.
TIE RODS, HINGES, GIMBALS: Carbon steel