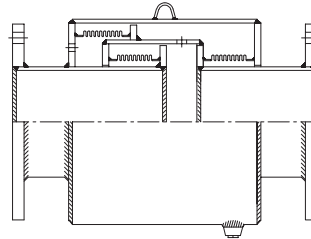


Series 3500

In-Line Externally Pressurized Pressure Balanced Expansion Joints

Series 3500 In-Line Pressure balanced expansion joints provide the same benefits as the standard design with the added advantage of internally reacting the pressure thrust by linking an additional bellows designed with twice the effective area of the expansion bellows. The design eliminates the requirement for main anchors to react the pressure thrust—only intermediate anchors must be provided to restrain the bellows spring force. Technical data is provided in Tables 9 and 10 for sizes 4" through 24".

3501PB Fixed Flange



3502PB Weld End

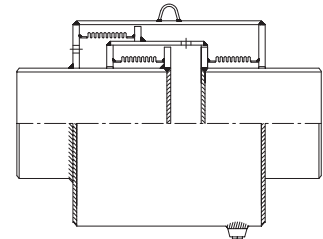


Table 9 Type 3501PB & 3502PB

Design Pressure: 150 psig Test Pressure: 225 psig Design Temperature: 500°F

Nominal Size (NPS)	Axial Spring Rate (1) (lb/in)	Part Number 3501PB 3502PB	Axial Compr. (inches)	Axial Ext. (inches)	3501PB		3502PB	
					Overall Length (inches)	Weight (lbs)	Overall Length (inches)	Weight (lbs)
4	638	-148-4	4	1	41.0	218	39.0	196
	408	-148-6	6	2	57.0	296	55.0	274
	320	-148-8	8	2	68.0	349	66.0	328
5	885	-155-4	4	1	41.0	278	39.0	255
	576	-155-6	6	2	57.0	264	55.0	339
	473	-155-8	8	2	68.0	441	66.0	417
6	1056	-160-4	4	1	43.0	336	39.0	302
	688	-160-6	6	2	59.0	436	55.0	400
	569	-160-8	8	2	70.0	528	66.0	492
8	1577	-167-4	4	1	43.0	488	39.0	437
	1014	-167-6	6	2	59.0	656	55.0	605
	786	-167-8	8	2	70.0	766	66.0	715
10	1930	-174-4	4	1	43.0	587	40.0	521
	1241	-174-6	6	2	59.0	776	56.0	720
	965	-174-8	8	2	70.0	916	67.0	850
12	2822	-180-4	4	1	48.0	798	42.0	705
	1796	-180-6	6	2	64.0	1055	57.0	962
	1518	-180-8	8	2	75.0	1212	69.0	1109
14	4726	-181-4	4	1	48.0	939	42.0	794
	3038	-181-6	6	2	64.0	1197	57.0	1053
	2363	-181-8	8	2	75.0	1405	69.0	1260
16	5116	-182-4	4	1	48.0	1097	42.0	922
	3289	-182-6	6	2	64.0	1386	57.0	1221
	2558	-182-8	8	2	75.0	1613	69.0	1438
18	5766	-183-4	4	1	49.0	1191	42.0	1013
	3706	-183-6	6	2	64.0	1518	57.0	1341
	2882	-183-8	8	2	76.0	1771	69.0	1597
20	5040	-184-4	4	1	49.0	1340	42.0	1130
	3241	-184-6	6	2	64.0	1699	57.0	1489
	2520	-184-8	8	2	76.0	1978	69.0	1768
24	5674	-186-4	4	1	50.0	1559	42.0	1285
	3648	-186-6	6	2	65.0	1980	57.0	1706
	2837	-186-8	8	2	77.0	2306	69.0	1928
1	2	3	4	5	6	7	8	9

Table 10 Type 3501PB & 3502PB

Design Pressure: 300 psig Test Pressure: 450 psig Design Temperature: 500°F

Nominal Size (NPS)	Axial Spring Rate (1) (lb/in)	Part Number 3501PB 3502PB	Axial Compr. (inches)	Axial Ext. (inches)	3501PB		3502PB	
					Overall Length (inches)	Weight (lbs)	Overall Length (inches)	Weight (lbs)
4	1467	-348-4	4	1	42.0	232	39.0	200
	886	-348-6	6	2	58.0	314	55.0	282
	675	-348-8	8	2	69.0	368	66.0	336
5	3028	-355-4	4	1	42.0	297	39.0	261
	1884	-355-6	6	2	58.0	387	55.0	350
	1314	-355-8	8	2	69.0	467	66.0	430
6	3424	-360-4	4	1	44.5	367	39.0	310
	2132	-360-6	6	2	60.5	470	55.0	413
	1483	-360-8	8	2	70.5	557	66.0	500
8	3725	-367-4	4	1	44.5	526	39.0	450
	2285	-367-6	6	2	60.5	701	55.0	625
	1699	-367-8	8	2	70.5	818	66.0	742
10	4458	-374-4	4	1	44.5	634	40.0	540
	2580	-374-6	6	2	60.5	854	56.0	760
	1947	-374-8	8	2	70.5	980	67.0	886
12	5223	-380-4	4	1	46.5	880	42.0	726
	3139	-380-6	6	2	63.0	1151	57.0	997
	2205	-380-8	8	2	73.0	1307	69.0	1153
14	9397	-381-4	4	1	50.0	1015	42.0	815
	5783	-381-6	6	2	65.0	1288	57.0	1088
	3968	-381-8	8	2	77.5	1504	69.0	1309
16	10367	-382-4	4	1	50.0	1170	42.0	935
	6373	-382-6	6	2	65.0	1482	57.0	1247
	4369	-382-8	8	2	77.5	1728	69.0	1493
18	12515	-383-4	4	1	50.0	1359	42.0	1040
	7677	-383-6	6	2	65.0	1701	57.0	1382
	5229	-383-8	8	2	77.5	1971	69.0	1652
20	16414	-384-4	4	1	51.5	1621	42.0	1195
	10072	-384-6	6	2	66.5	2016	57.0	1590
	6864	-384-8	8	2	79.0	2338	69.0	1912
24	19300	-386-4	4	1	51.5	1940	42.0	1363
	11840	-386-6	6	2	66.5	2408	57.0	1831
	8057	-386-8	8	2	79.0	2716	69.0	2159
1	2	3	4	5	6	7	8	9

Note:

- (1) Force (lbs.) per inch of compression (pipe expansion) resulting from bellows spring constant.
- (2) Refer to Table 4 on Page 7 for housing outside diameter and drain port size.
- (3) Refer to Applications on page 4 for correct installation.
- (4) The anchor force is calculated as follows:

$$\text{Anchor Force (lbs.)} = \left\{ \begin{array}{l} \text{Spring Rate (lb./in.)} \\ \text{Column 2 Tables 9 \& 10} \end{array} \right\} \times \left\{ \begin{array}{l} \text{Axial Travel} \\ \text{(inches)} \end{array} \right\}$$