

## Materials of Construction and Dimensional Data

The following materials and specifications are used in the construction of all standard Series 3500 expansion joints.

**Flanges:** Flat face carbon steel made from ASME A-36 plate. Outside diameter and drilling per ASME/ANSI B16.5. 150 lb. drilling for all 150 psig designs, 300 lb. drilling for all 300 psig designs.

**Pipe:** Fixed and traveling pipe nipples and housing made from ASME A53 Grade B standard weight steel pipe. Weld end preparation per ASME/ANSI B16.9. Grooved ends per ANSI/AWWA C606-87.

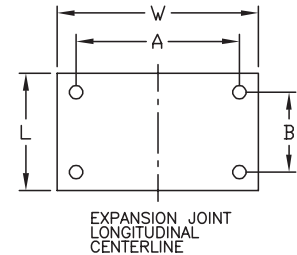
**Guide Rings:** Steel plate per ASME A-36.

**Drain Port & Plug:** 3000 lb. thread-o-let made from ASME A105 steel forging.

**Bellows:** Three or four ply laminated

made from ASTM A240 type 321 stainless steel.

The Dimensional Data in Table 4 relates to the standard designs in Tables 5 through 10.



**Table 4**  
**Dimensional Data**

Nom Size (NPS)	Housing Outside Diameter (inches)		Centerline Height (inches) 3501AB, 3502AB 3505, 3506	Drain Port Size (NPS)	Anchor Base Pattern 3501AB, 3502AB, 3505, 3506				
	Part No. 3501, 3502 3505, 3506	Part No. 3501PB 3502PB			Hole Diameter (inches)	Base Length (L) (inches)	Base Width (W) (inches)	Hole Spacing (inches)	
								A	B
2	4.50		3.88	1/2	0.625	6.0	7.0	5.0	4.0
2 1/2	5.56		4.88	1/2	0.625	6.0	7.0	5.0	4.0
3	6.63		4.88	1/2	0.625	6.0	7.5	5.5	4.0
4	8.63	10.75	5.50	1/2	0.625	6.0	9.5	7.5	4.0
5	8.63	12.75	6.50	1/2	0.625	6.0	9.5	7.5	4.0
6	10.75	14.00	6.50	3/4	0.875	8.0	12.0	10.0	6.0
8	12.75	18.00	8.50	3/4	0.875	8.0	12.0	10.0	6.0
10	16.00	20.00	9.75	3/4	0.875	10.0	16.0	14.0	8.0
12	18.00	24.00	12.00	3/4	0.875	10.0	18.0	16.0	8.0
14	20.00	26.00	12.00	3/4	0.875	10.0	20.0	18.0	8.0
16	22.00	29.00	13.50	1	1.125	12.5	22.0	18.0	10.0
18	24.00	32.00	14.75	1	1.125	12.5	24.0	18.0	10.0
20	26.00	35.00	16.00	1	1.125	16.5	26.0	22.0	14.0
24	29.25	40.50	18.75	1	1.125	16.5	26.0	22.0	14.0
1	2	3	4	5	6	7	8	9	10

## Ordering Instructions

Refer to Tables 5 through 10 to select the configuration and service conditions required for your application. If the travel required is unknown, see the method of calculation on Page 5.

**Example** Single Expansion Joint  
Steel pipe weld ends  
150 psig at 500°F maximum  
4.0" axial travel maximum  
2" NPS

3502-131-4  
 ↑ Axial travel, 4.0" compression, 1.0" extension  
 ↑ Size & pressure designation, 2" NPS, 150 PSIG  
 ↑ Type specification, steel pipe weld end both ends, steel housing and guides

Single expansion joints, 3501 and 3502, ordered with anchor based are identified as 3501AB and 3502AB. Anchor bases are standard on dual anchor base joints, 3505 and 3506, and do not require the AB suffix. In-line pressure balanced joints are available as single configurations and identified as 3501PB and 3502PB—refer to Pages 12 & 13.