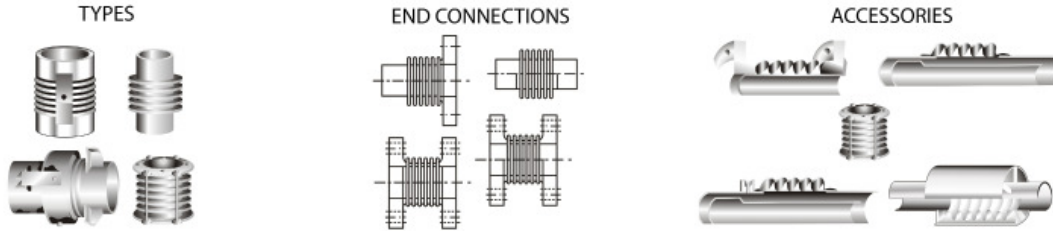


SINGLE EXPANSION JOINTS

42-INCH NOMINAL DIAMETER

Effective (Thrust) Area: 1492.74 in² (9628.17 cm²)



| 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 | 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 | |
| 42 | 50 | 12 | 700 | 16 | 160 | 14 | 430 | 3.98 | 0.26 | 10 | 724 | 28481 | 2993 | 9.1159 |
| | 3.5 | 305 | 318 | 406 | 72.7 | 356 | 195 | 101 | 6.6 | 11 | 13 | 510 | 304.4 | 9.2709 |
| | 50 | 18 | 725 | 22 | 185 | 20 | 455 | 6.8 | 0.76 | 10 | 434 | 5872 | 1796 | 5.4457 |
| | 3.5 | 457 | 330 | 559 | 84.1 | 508 | 207 | 173 | 193 | 11 | 8 | 105 | 182.7 | 5.5383 |
| | 50 | 24 | 750 | 28 | 211 | 26 | 480 | 9.61 | 1.51 | 10 | 310 | 2098 | 1283 | 3.8826 |
| | 3.5 | 610 | 341 | 711 | 95.9 | 660 | 218 | 244 | 38.4 | 11 | 6 | 38 | 130.5 | 3.9486 |
| 42 | 120 | Customer to specify flange configuration. Weights and O.A.L. will be furnished upon receipt of this information. | | 16 | 177 | Customer to specify flange configuration. Weights and O.A.L. will be furnished upon receipt of this information. | | 2.29 | 0.14 | 6 | 3338 | 148378 | 13812 | 16.4581 |
| | 8.4 | | | 406 | 80.5 | | | 58.2 | 3.56 | 7 | 60 | 2655 | 1404.7 | 16.7379 |
| | 120 | | | 22 | 217 | | | 4.01 | 0.43 | 10 | 1908 | 27686 | 7892 | 9.4046 |
| | 8.4 | | | 5.59 | 98.6 | | | 102 | 10.9 | 11 | 34 | 495 | 802.6 | 9.5645 |
| | 120 | | | 28 | 257 | | | 5.73 | 0.88 | 10 | 1335 | 9496 | 5525 | 6.5832 |
| | 8.4 | | | 711 | 117 | | | 146 | 22.4 | 11 | 24 | 170 | 561.9 | 6.6952 |
| 42 | 225 | Customer to specify flange configuration. Weights and O.A.L. will be furnished upon receipt of this information. | | 16 | 231 | Customer to specify flange configuration. Weights and O.A.L. will be furnished upon receipt of this information. | | 2.18 | 0.13 | 6 | 6688 | 297936 | 27733 | 17.0894 |
| | 15.8 | | | 406 | 105 | | | 55.4 | 3.3 | 6 | 120 | 5332 | 2820.4 | 17.3799 |
| | 225 | | | 22 | 308 | | | 3.08 | 0.41 | 10 | 3822 | 55592 | 15848 | 9.7654 |
| | 15.8 | | | 559 | 140 | | | 97 | 10.4 | 11 | 68 | 995 | 1611.7 | 9.9314 |
| | 225 | | | 28 | 385 | | | 5.46 | 0.84 | 10 | 2675 | 19068 | 11093 | 6.8358 |
| | 15.8 | | | 711 | 175 | | | 139 | 21.3 | 11 | 48 | 341 | 1128.2 | 6.9520 |

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.
 50 psig Series: 125 lb Lt. Wt. FFSSO.
 For 120 psig and 225 psig Series: Customer to specify actual flanges required.
 Plate flanges and angle flanges available for low pressure systems. Please refer to page 32.
PIPE: ASTM A285-C.
 50 psig Series: 0.375-inch wall.
 120 psig Series: 0.375-inch wall.
 225 psig Series: 0.500-inch wall.
LINERS: A240-T304.
COVERS: Carbon steel.
TIE RODS, HINGES, GIMBALS: Carbon steel