



# StarFlex<sup>®</sup> series 5000

Double-Ball Flexible Expansion Joint  
for the Protection of Water Wastewater, and Industrial Pipelines



StarFlex<sup>®</sup> Series 5000 for DI, Steel or PVC

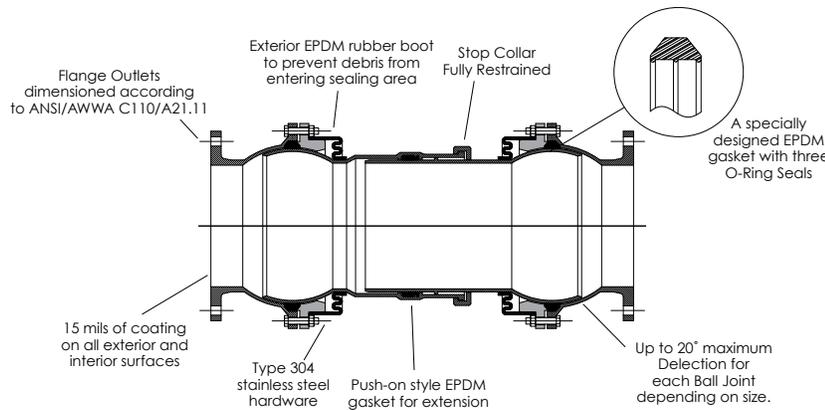
### SUBMITTAL INFORMATION

PROJECT NAME:

ENGINEER:

CONTRACTOR:

SPEC. SECTION:



### FEATURES & ADVANTAGES

- Each StarFlex™ is coated inside and outside with 15 mils of Fusion Bonded Epoxy that is NSF compliant.
- Each ball on the StarFlex™ can deflect a minimum of 20 degrees for 3"-10", 18 degrees for 12", 15 degrees for 14"-24", 14 degrees for 30", 13.5 degrees for 36" and 13 degrees for 42"-48".
- Every unit is pressurized and cycled while maintaining 350 PSI on sizes 3" - 24", 250 PSI on sizes 30" and above.
- Each unit is shipped in a cradle at its preset position, but can be adjusted to the desired dimension in the field.
- All sizes have external EPDM rubber boots to prevent debris from entering the sealing areas.
- Pressure seals are EPDM. Maximum operating temperature is 175° F.
- The StarFlex™ may be used on ductile iron, steel, HDPE or PVC pipe.
- Flanged outlets are dimensioned according to ANSI/AWWA C110/A21.11 which is also equal to ASME B16.1 Class 125 & ASME B16.5 Class 150 without a raised face.
- NSF61 Approved Fusion Bonded Epoxy coating is used in wetted areas.

**Note:** Starflex™ series 5000 and 5100 flexible expansion joints are designed to expand when internally pressurized. End thrust generated from expansion of the Starflex™ under internal pressure must be accommodated in the piping system design.

### MATERIAL SPECIFICATIONS:

- All cast components are made entirely of Ductile Iron per ASTM A536, Grade 65-45-12
- All fasteners are Type 304 Stainless Steel.



STAR<sup>®</sup> PIPE PRODUCTS



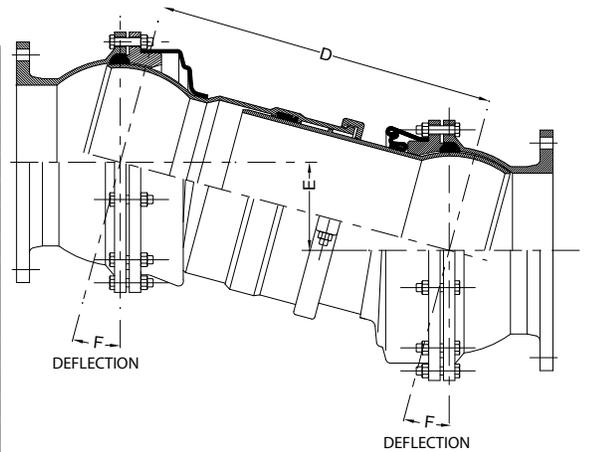
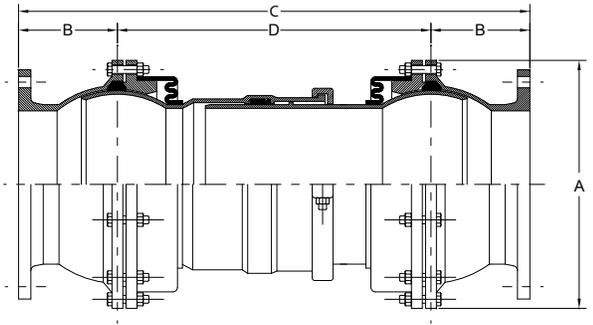
**StarFlex<sup>®</sup> series 5000**

Double-Ball Flexible Expansion Joint  
for the Protection of Water, Wastewater, and Industrial Pipelines

STAR<sup>®</sup> PIPE PRODUCTS

Please check sizes:

| STARFLEX <sup>®</sup> 5000 SPECIFICATIONS* |       |        |       |                        |        |        |             |       |                  |
|--|-------|--------|-------|------------------------|--------|--------|-------------|-------|------------------|
| NOM. SIZE                                  | F     | A (OD) | B     | EXPANSION <sup>1</sup> | C      | D      | E (OFF SET) |       | APPROX WT. (LBS) |
|  |       |        |       |                        |        |        | Min         | Max   |                  |
| 3  | 20°   | 9.69   | 5.31  | +2 /-2                 | 29.52  | 18.90  | 5.78        | 7.15  | 109              |
|  | 20°   | 9.69   | 5.31  | +4 /-4                 | 39.37  | 28.75  | 8.46        | 11.20 | 132              |
| 4  | 20°   | 10.87  | 5.91  | +2 /-2                 | 32.28  | 20.46  | 6.31        | 7.68  | 141              |
|  | 20°   | 10.87  | 5.91  | +4 /-4                 | 42.13  | 30.31  | 9.00        | 11.73 | 173              |
|  | 20°   | 10.87  | 5.91  | +6 /-6                 | 51.97  | 40.15  | 11.68       | 15.78 | 196              |
|  | 20°   | 10.87  | 5.91  | +8 /-8                 | 61.82  | 50.00  | 14.36       | 19.84 | 219              |
| 6  | 20°   | 13.11  | 5.91  | +2 /-2                 | 33.46  | 21.64  | 6.72        | 8.09  | 202              |
|  | 20°   | 13.11  | 5.91  | +4 /-4                 | 43.70  | 31.88  | 9.54        | 12.27 | 256              |
|  | 20°   | 13.11  | 5.91  | +6 /-6                 | 53.54  | 41.72  | 12.22       | 16.32 | 290              |
|  | 20°   | 13.11  | 5.91  | +8 /-8                 | 63.39  | 51.57  | 14.90       | 20.37 | 323              |
|  | 20°   | 13.11  | 5.91  | +12 /-12               | 83.07  | 71.25  | 20.26       | 28.47 | 402              |
|  | 20°   | 13.11  | 5.91  | +12 /-12               | 83.07  | 71.25  | 20.26       | 28.47 | 402              |
| 8  | 20°   | 15.31  | 6.3   | +2 /-2                 | 35.83  | 23.23  | 7.26        | 8.63  | 273              |
|  | 20°   | 15.31  | 6.3   | +4 /-4                 | 45.67  | 33.07  | 9.94        | 12.68 | 342              |
|  | 20°   | 15.31  | 6.3   | +6 /-6                 | 55.51  | 42.91  | 12.62       | 16.73 | 386              |
|  | 20°   | 15.31  | 6.3   | +8 /-8                 | 65.36  | 52.76  | 15.31       | 20.78 | 430              |
|  | 20°   | 15.31  | 6.3   | +12 /-12               | 85.04  | 72.44  | 20.67       | 28.88 | 518              |
| 10   | 20°   | 17.32  | 6.69  | +2 /-2                 | 37.79  | 24.41  | 7.66        | 9.03  | 331              |
|  | 20°   | 17.32  | 6.69  | +4 /-4                 | 47.24  | 33.86  | 10.21       | 12.95 | 428              |
|  | 20°   | 17.32  | 6.69  | +6 /-6                 | 57.09  | 43.71  | 12.90       | 17.00 | 483              |
|  | 20°   | 17.32  | 6.69  | +8 /-8                 | 66.93  | 53.55  | 15.58       | 21.05 | 536              |
|  | 20°   | 17.32  | 6.69  | +12 /-12               | 86.61  | 73.23  | 20.94       | 29.15 | 659              |
| 12   | 18°   | 19.76  | 7.87  | +2 /-2                 | 41.34  | 25.60  | 7.29        | 8.53  | 463              |
|  | 18°   | 19.76  | 7.87  | +4 /-4                 | 52.36  | 36.62  | 10.08       | 12.55 | 575              |
|  | 18°   | 19.76  | 7.87  | +6 /-6                 | 62.20  | 46.46  | 12.50       | 16.21 | 639              |
|  | 18°   | 19.76  | 7.87  | +8 /-8                 | 72.05  | 56.31  | 14.93       | 19.87 | 703              |
|  | 18°   | 19.76  | 7.87  | +12 /-12               | 91.73  | 75.99  | 19.77       | 27.19 | 849              |
| 14   | 15°   | 22.56  | 9.06  | +4 /-4                 | 55.51  | 37.39  | 8.64        | 10.71 | 839              |
|  | 15°   | 22.56  | 9.06  | +6 /-6                 | 65.75  | 47.63  | 10.77       | 13.88 | 998              |
|  | 15°   | 22.56  | 9.06  | +8 /-8                 | 75.59  | 57.47  | 12.80       | 16.94 | 1095             |
|  | 15°   | 22.56  | 9.06  | +12 /-12               | 108.27 | 90.15  | 20.23       | 26.44 | 1288             |
| 16   | 15°   | 24.69  | 9.45  | +4 /-4                 | 57.09  | 38.19  | 8.85        | 10.92 | 969              |
|  | 15°   | 24.69  | 9.45  | +6 /-6                 | 66.93  | 48.03  | 10.88       | 13.98 | 1148             |
|  | 15°   | 24.69  | 9.45  | +8 /-8                 | 79.92  | 61.02  | 13.72       | 17.86 | 1258             |
|  | 15°   | 24.69  | 9.45  | +12 /-12               | 99.61  | 80.71  | 17.78       | 24.00 | 1507             |
| 18   | 15°   | 26.81  | 10.24 | +4 /-4                 | 59.45  | 38.97  | 9.05        | 11.12 | 1080             |
|  | 15°   | 26.81  | 10.24 | +6 /-6                 | 69.69  | 49.21  | 11.18       | 14.29 | 1305             |
|  | 15°   | 26.81  | 10.24 | +8 /-8                 | 81.50  | 61.02  | 13.72       | 17.86 | 1430             |
|  | 15°   | 26.81  | 10.24 | +12 /-12               | 110.63 | 90.15  | 20.23       | 26.44 | 1761             |
| 20   | 15°   | 28.94  | 11.02 | +4 /-4                 | 61.81  | 39.77  | 9.26        | 11.33 | 1251             |
|  | 15°   | 28.94  | 11.02 | +6 /-6                 | 72.05  | 50.01  | 11.39       | 14.50 | 1538             |
|  | 15°   | 28.94  | 11.02 | +8 /-8                 | 83.07  | 61.03  | 13.73       | 17.87 | 1686             |
|  | 15°   | 28.94  | 11.02 | +12 /-12               | 112.20 | 90.16  | 20.23       | 26.44 | 1980             |
| 24   | 15°   | 33.15  | 11.42 | +4 /-4                 | 63.78  | 40.94  | 9.56        | 11.63 | 1672             |
|  | 15°   | 33.15  | 11.42 | +6 /-6                 | 74.02  | 51.18  | 11.69       | 14.80 | 2029             |
|  | 15°   | 33.15  | 11.42 | +8 /-8                 | 88.19  | 65.35  | 14.84       | 18.98 | 2216             |
|  | 15°   | 33.15  | 11.42 | +12 /-12               | 119.69 | 96.85  | 21.96       | 28.17 | 2606             |
| 30   | 14°   | 44.49  | 15.16 | +6 /-6                 | 90.75  | 60.43  | 13.17       | 16.07 | 4291             |
|  | 14°   | 44.49  | 15.16 | +12 /-12               | 120.28 | 89.96  | 18.86       | 24.67 | 5060             |
| 36   | 13.5° | 50.51  | 16.54 | +6 /-6                 | 95.87  | 62.79  | 13.26       | 16.06 | 5437             |
|  | 13.5° | 50.51  | 16.54 | +12 /-12               | 137.40 | 104.32 | 21.55       | 27.15 | 6633             |
| 48   | 13°   | 64.49  | 19.02 | +6 /-6                 | 107.72 | 69.68  | 14.32       | 17.02 | 9049             |
|  | 13°   | 64.49  | 19.02 | +12 /-12               | 142.36 | 104.32 | 20.77       | 26.17 | 10536            |



\*Dimensions "C" & "D" are factory set position.  
\*All dimensions in inches except where indicated.  
<sup>1</sup>For units of expansion that are not listed, please contact your Star<sup>®</sup> Pipe representative.