# SINGLE SPHERE FLEXIBLE CONNECTOR

Flexible connectors are used to absorb thermal and seismic movement, absorb hydraulic shock, provide vibration and noise dampening, ease installation, and correct minor misalignment of piping and components.

Similar to the metal flexible connectors in application advantages, single sphere flexible connectors are suitable for pressure and vacuum services. The spherical shape is stronger than cylindrical elastomer connectors and disperses pressure evenly over a larger surface area. The streamline shape also reduces turbulence and sediment build-up and lessens deformation while under pressure. The elastomer allows greater movements in the axial, elongation, lateral, and angular directions and provides a wide service range due to its chemical resistance characteristics.

**Warning:** Control rods must be used to protect this part from excessive movement if piping is not properly anchored.




| Operating Conditions | |
|---|---|
| Maximum Operating Pressure | 227 PSI |
| Burst Pressure @ 80°F | 853 PSI |
| Vacuum Rating | 25.59"Hg (650 Torr) |
| Operating Temperature | 14°F–158°F |

## PART NUMBERS AND WEIGHT

| Size | Approximate Wt |
|---|---|
| 2-1/2 | 14.74 |
| 3 | 16.50 |
| 4 | 18.26 |
| 5 | 23.98 |
| 6 | 31.68 |
| 8 | 42.24 |
| 10 | 55.00 |

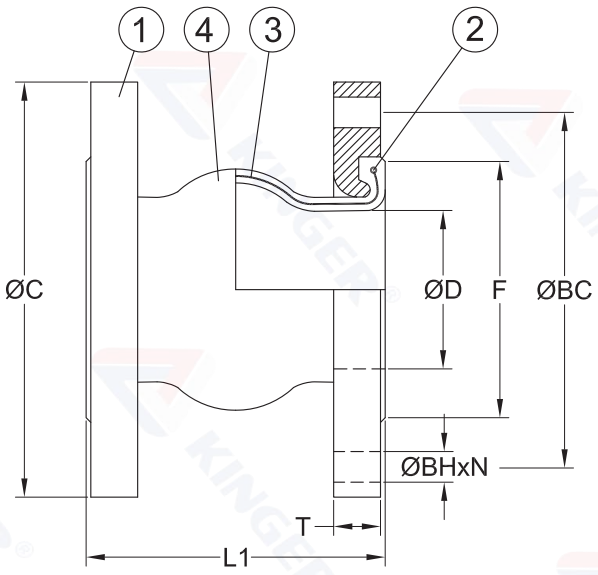
## CONTROL RODS (sold separately)

| Size | Plate Thickness | Rod Diameter | Sets Needed |
|---|---|---|---|
| 2-1/2" | 3/8" | 5/8" | 1 Set (2 rods) |
| 3" | 3/8" | 5/8" | 1 Set (2 rods) |
| 4" | 3/8" | 5/8" | 1 Set (2 rods) |
| 5" | 3/8" | 3/4" | 1 Set (2 rods) |
| 6" | 1/2" | 3/4" | 1 Set (2 rods) |
| 8" | 1/2" | 3/4" | 2 Sets (4 rods) |
| 10" | 3/4" | 7/8" | 2 Sets (4 rods) |

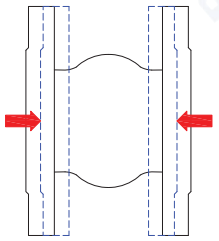

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# Flexible Connectors

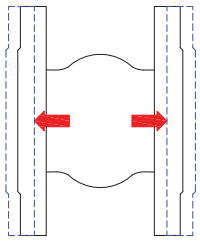
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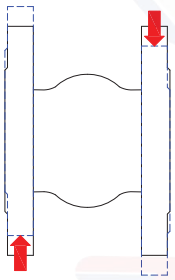

### Braid Limits



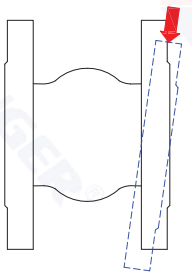
Axial Compression



Axial Elongation



Transverse Movement



Angular Deflection

### DIMENSIONS (INCHES)

| SIZE | ØC | ØD | F | L1 | ØBC | ØBH | N | T |
|---|---|---|---|---|---|---|---|---|
| 2-1/2 | 7.0 | 2.68 | 4.17 | 6.0 | 5.50 | 0.75 | 4 | 0.71 |
| 3 | 7.5 | 2.99 | 4.57 | 6.0 | 6.00 | 0.75 | 4 | 0.71 |
| 4 | 9.0 | 4.06 | 5.91 | 6.0 | 7.50 | 0.75 | 8 | 0.71 |
| 5 | 10.0 | 5.04 | 7.09 | 6.0 | 8.50 | 0.87 | 8 | 0.79 |
| 6 | 11.0 | 5.98 | 8.23 | 6.0 | 9.50 | 0.87 | 8 | 0.87 |
| 8 | 13.5 | 7.64 | 10.24 | 6.0 | 11.75 | 0.87 | 8 | 0.87 |
| 10 | 16.0 | 9.84 | 12.60 | 8.0 | 14.25 | 1.00 | 12 | 0.94 |

### STANDARD MATERIALS

| Ref. No. | Description | Material |
|---|---|---|
| 1 | Flange | Carbon Steel |
| 2 | Reinforcement Wire | Carbon Steel |
| 3 | Reinforcement Fabric | Synthetic Fiber |
| 4 | Elastomer Sleeve | Inside and Outside: EPDM<br>Middle: NBR |

| Size | Maximum Axial Compression | Maximum Axial Elongation | Maximum Transverse Movement | Maximum Angular Deflection |
|---|---|---|---|---|
| 2-1/2 | 0.500" | 0.375" | 0.50" | 15° |
| 3 | 0.500" | 0.375" | 0.50" | 15° |
| 4 | 0.625" | 0.375" | 0.50" | 15° |
| 5 | 0.625" | 0.375" | 0.50" | 15° |
| 6 | 0.625" | 0.375" | 0.50" | 15° |
| 8 | 0.625" | 0.375" | 0.50" | 15° |
| 10 | 0.625" | 0.500" | 0.75" | 15° |