

Shurjoint Grooved Fittings

Shurjoint offers a wide range of grooved-end fittings in sizes through 24" (600mm). Fittings are available in a number of styles and configurations to support a variety of applications. Shurjoint grooved-end fittings are manufactured and designed to meet ASTM F1548 and ANSI/AWWA C606 requirements for use with grooved mechanical couplings conforming to ASTM F1476. For sizes not specified in these standards, please contact Shurjoint for details.



Pressure-Temperature Rating

| Size | Nom. Rating | Working Pressure (STD, Roll-grooved) | Max. Service Temperature |
|------------------------|-------------|--------------------------------------|--|
| 1" - 6" 25 - 150 | Class 300 | 750 psi @100°F 52 Bar @38°C | EPDM: 230°F / 110°C Nitrile: 180°F / 82°C |
| 8" - 12" 200 - 300 | Class 250 | 400 psi @100°F 28 Bar @38°C | |
| 14" - 24" 350 - 600 | Class 150 | 300 psi @100°F 20 Bar @38°C | |

*Working pressure is based on connection with roll- or cut-grooved standard wall carbon steel pipe.

*Proof test pressure: 1.5 times the working pressure, non-shock cold water.

*Burst pressure is engineered minimum 3 times the working pressure.

Most fittings are provided in ductile iron conforming to ASTM A536 Gr. 65-45-12 and or ASTM A395 Gr. 65-45-15. Some styles and sizes larger than 14" (350mm) are fabricated from carbon steel pipe to ASTM A53 Gr. B or fabricated of segmentally welded steel of the same or equivalent grade. Fittings are painted orange or red, or as an option can be supplied hot-dip galvanized or epoxy coated.

Flow Data / Frictional Resistance

Expressed as equivalent length of straight pipe

| Flow Data | | | | | | | | | | |
|-------------------|-----------|---------------------|---------------------------|-----------------------|------------------------------------|---------------------------|------------------------------------|--------------|-------------|--|
| Nominal Pipe Size | Pipe O.D. | Pipe Wall Thickness | Elbows | | | | | Tees | | |
| | | | #7110 90° Standard Radius | #901 90° Short Radius | #7110LR 90° Long Radius (1.5 D LR) | #7111 45° Standard Radius | #7111LR 45° Long Radius (1.5 D LR) | #7120 Branch | #903 Branch | |
| | | | meters | meters | meters | meters | meters | meters | meters | |
| 25 | 33.4 | 3.4 | 0.5 | --- | --- | 0.2 | --- | 1.3 | --- | |
| 1 | 1.315 | 0.133 | 1.7 | --- | --- | 0.8 | --- | 4.2 | --- | |
| 32 | 42.2 | 3.6 | 0.8 | 0.8 | --- | 0.3 | --- | 1.4 | 1.4 | |
| 1¼ | 1.660 | 0.140 | 2.5 | 2.5 | --- | 1.0 | --- | 4.7 | 4.7 | |
| 40 | 48.3 | 4.0 | 1.1 | 1.1 | --- | 0.5 | --- | 2.0 | 2.0 | |
| 1½ | 1.900 | 0.154 | 3.5 | 3.5 | --- | 1.5 | --- | 6.5 | 6.5 | |
| 50 | 60.3 | 5.2 | 1.2 | 1.2 | 0.8 | 0.5 | 0.3 | 2.6 | 2.6 | |
| 2 | 2.375 | 0.203 | 4.0 | 4.0 | 2.5 | 1.7 | 1.1 | 8.5 | 8.5 | |
| 65 | 73.0 | 5.0 | 1.4 | 1.4 | 0.9 | 0.6 | 0.4 | 3.1 | 3.1 | |
| 2½ | 2.875 | 0.197 | 4.5 | 4.5 | 2.9 | 2.0 | 1.4 | 10.0 | 10.0 | |
| 80 | 88.9 | 6.3 | 1.5 | 1.5 | 1.2 | 0.8 | 0.5 | 3.7 | 3.7 | |
| 3 | 3.500 | 0.237 | 5.0 | 5.0 | 3.8 | 2.5 | 1.5 | 12.0 | 12.0 | |
| 100 | 114.3 | 5.6 | 2.0 | 2.0 | 1.5 | 0.9 | 0.6 | 4.6 | 4.6 | |
| 4 | 4.500 | 0.220 | 6.7 | 6.7 | 5.0 | 3.0 | 2.1 | 15.0 | 15.0 | |
| 125 | 141.3 | 6.6 | 2.3 | 2.3 | 1.8 | 1.2 | 0.6 | 5.8 | 5.8 | |
| 5 | 5.563 | 0.258 | 7.5 | 7.5 | 6.0 | 4.0 | 2.5 | 19.0 | 19.0 | |
| 150 | 168.3 | 7.1 | 2.7 | 2.7 | 2.3 | 1.4 | 0.9 | 6.7 | 6.7 | |
| 6 | 6.625 | 0.280 | 9.0 | 9.0 | 7.5 | 4.5 | 3.0 | 22.0 | 22.0 | |
| 200 | 219.1 | 8.2 | 4.0 | 4.0 | 3.0 | 2.0 | 1.2 | 10.1 | 10.1 | |
| 8 | 8.625 | 0.322 | 13.0 | 13.0 | 9.8 | 6.5 | 4.0 | 33.0 | 33.0 | |
| 250 | 273.0 | 8.8 | 5.2 | --- | 3.7 | 2.5 | 1.5 | 12.5 | --- | |
| 10 | 10.750 | 0.365 | 17.0 | --- | 12.0 | 8.3 | 5.0 | 41.0 | --- | |
| 300 | 323.9 | 9.5 | 6.1 | --- | 4.4 | 3.1 | 1.8 | 14.9 | --- | |
| 12 | 12.750 | 0.375 | 20.0 | --- | 14.5 | 10.0 | 6.0 | 49.0 | --- | |

| Flow Data | | | | | | | | | |
|-------------------------|------------------------|------------------------|---------------------------------|------------------------------|--|---------------------------------|--|-----------------------|-----------------------|
| Nominal Pipe Size | Pipe O.D. | Pipe Wall Thickness | Elbows | | | | | Tees | |
| | | | #7110 90° Standard Radius | #901 90° Short. Radius | #7110LR 90° Long Radius (1.5 D LR) | #7111 45° Standard Radius | #7111LR 45° Long Radius (1.5 D LR) | #7120 Branch | #903 Branch |
| | | | meters <i>feet</i> | meters <i>feet</i> | meters <i>feet</i> | meters <i>feet</i> | meters <i>feet</i> | meters <i>feet</i> | meters <i>feet</i> |
| 350 <i>14</i> | 355.6 <i>14.000</i> | 9.5 <i>0.375</i> | 7.5 <i>24.5</i> | 6.8 <i>22.3</i> | --- | 4.8 <i>13.8</i> | --- | 21.3 <i>69.9</i> | 21.3 <i>69.9</i> |
| 400 <i>16</i> | 406.4 <i>16.000</i> | 9.5 <i>0.375</i> | 8.5 <i>28.0</i> | 7.7 <i>25.3</i> | --- | 4.8 <i>15.8</i> | --- | 24.4 <i>80.0</i> | 24.4 <i>80.0</i> |
| 450 <i>18</i> | 457.2 <i>18.000</i> | 9.5 <i>0.375</i> | 9.5 <i>31.0</i> | 8.6 <i>28.2</i> | --- | 5.7 <i>18.7</i> | --- | 27.4 <i>89.9</i> | 27.4 <i>89.9</i> |
| 500 <i>20</i> | 508.0 <i>20.000</i> | 9.5 <i>0.375</i> | 10.4 <i>34.0</i> | 9.4 <i>30.8</i> | --- | 6.3 <i>20.9</i> | --- | 30.5 <i>100.0</i> | 30.5 <i>100.0</i> |
| 600 <i>24</i> | 609.6 <i>24.000</i> | 9.5 <i>0.375</i> | 12.8 <i>42.0</i> | 11.5 <i>37.7</i> | --- | 7.4 <i>24.2</i> | --- | 36.6 <i>120.0</i> | 36.6 <i>120.0</i> |

The values listed in this table express the frictional resistance of representative **Shurjoint** fittings as equivalent feet (meters) of straight pipe. For the branch of a tee that is reduced in size, use the value that corresponds to the branch size. For example, the branch value of a 4" x 4" x 3" tee is 12.0 feet (3.7 meters). For fittings not listed in this table, the equivalent length of straight pipe can be estimated from the data provided. For example, the flow resistance of a 22½° elbow is approximately one half that of a 45° elbow.