

**Fig. 7068** Cross  
**Fig. 7074** Cap  
**Fig. 7075** Bull Plug



Fig. 7068



Fig. 7074



Fig. 7075



## Material Specifications

### Cast Fittings

Ductile iron conforming to ASTM A536, Grade 65-45-12

Malleable iron conforming to ASTM A47

### Fabricated Fittings

1-12" Carbon steel, Schedule 40, conforming to ASTM A53, Grade B

14-24" Carbon steel, 0.375 wall, conforming to ASTM A53, Grade B

### Coatings

Rust inhibiting paint

Color: Orange (standard)

Hot Dipped Zinc Galvanized conforming to ASTM A153 (optional)

Other Colors Available  
(IE: RAL3000 and RAL9000)

Gruvlok fittings are available through 24" nominal pipe size in a variety of styles. Use the Fitting Size Table to convert nominal pipe size to corresponding pipe O.D.

These fittings are designed to provide minimum pressure drop and uniform strength.

Depending on styles and size, Gruvlok fittings are provided in various materials including ductile iron, forged steel or fabricated steel.

Pressure ratings of Gruvlok standard fittings conform to those of Fig. 7001 Gruvlok coupling.

For Listings/Approval Details and Limitations, visit our website at [www.asc-es.com](http://www.asc-es.com) or contact an ASC Engineered Solutions™ Sales Representative.



| PROJECT INFORMATION | APPROVAL STAMP    |
|---------------------|-------------------|
| Project:            | Approved          |
| Address:            | Approved as noted |
| Contractor:         | Not approved      |
| Engineer:           | Remarks:          |
| Submittal Date:     |                   |
| Notes 1:            |                   |
| Notes 2:            |                   |

## Cross, Cap & Bull Plug Fig. 7068, 7074, 7075

### Flow Data - Frictional Resistance (Expressed as Equivalent Straight Pipe)

| Nominal Size | O.D.   | Pipe Wall Thickness | Elbow |       | Tee    |       |
|--------------|--------|---------------------|-------|-------|--------|-------|
|              |        |                     | 90°   | 45°   | Branch | Run   |
| In./DN(mm)   | In./mm | In./mm              | Ft./m | Ft./m | Ft./m  | Ft./m |
| 1            | 1.315  | 0.133               | 1.7   | 0.9   | 4.4    | 1.7   |
| 25           | 33.4   | 3.4                 | 0.5   | 0.3   | 1.3    | 0.5   |
| 1 ¼          | 1.660  | 0.140               | 2.3   | 1.2   | 5.8    | 2.3   |
| 32           | 42.2   | 3.6                 | 0.7   | 0.4   | 1.8    | 0.7   |
| 1 ½          | 1.900  | 0.145               | 2.7   | 1.3   | 6.7    | 2.7   |
| 40           | 48.3   | 3.7                 | 0.8   | 0.4   | 2.0    | 0.8   |
| 2            | 2.375  | 0.154               | 3.4   | 1.7   | 8.6    | 3.4   |
| 50           | 60.3   | 3.9                 | 1.0   | 0.5   | 2.6    | 1.0   |
| 2 ½          | 2.875  | 0.203               | 4.1   | 2.1   | 10.3   | 4.1   |
| 65           | 73.0   | 5.2                 | 1.2   | 0.6   | 3.1    | 1.2   |
| 3 O.D.       | 2.996  | 0.197               | 4.3   | 2.2   | 10.8   | 4.3   |
| 76.1         | 76.1   | 5.0                 | 1.3   | 0.7   | 3.3    | 1.3   |
| 3            | 3.500  | 0.216               | 5.1   | 2.6   | 12.8   | 5.1   |
| 80           | 88.9   | 5.5                 | 1.6   | 0.8   | 3.9    | 1.6   |
| 4 ¼ O.D.     | 4.250  | 0.220               | 6.4   | 3.2   | 16.1   | 6.4   |
| 108.0        | 108.0  | 5.6                 | 2.0   | 1.0   | 4.9    | 2.0   |
| 4            | 4.500  | 0.237               | 6.7   | 3.4   | 16.8   | 6.7   |
| 100          | 114.3  | 6.0                 | 2.0   | 1.0   | 5.1    | 2.0   |
| 5 ¼ O.D.     | 5.236  | 0.248               | 8.0   | 4.0   | 20.1   | 8.0   |
| 133.0        | 133.0  | 6.3                 | 2.4   | 1.2   | 6.1    | 2.4   |
| 5 ½ O.D.     | 5.500  | 0.248               | 8.3   | 4.2   | 20.9   | 8.3   |
| 139.7        | 139.7  | 6.3                 | 2.5   | 1.3   | 6.4    | 2.5   |
| 5            | 5.563  | 0.258               | 8.4   | 4.2   | 21.0   | 8.4   |
| 125          | 141.3  | 6.6                 | 2.6   | 1.3   | 6.4    | 2.6   |
| 6 ¼ O.D.     | 6.259  | 0.280               | 9.7   | 4.9   | 24.3   | 9.7   |
| 159.0        | 159.0  | 7.1                 | 3.0   | 1.5   | 7.4    | 3.0   |
| 6 ½ O.D.     | 6.500  | 0.280               | 10.0  | 5.0   | 24.9   | 10.0  |
| 165.1        | 165.1  | 7.1                 | 3.0   | 1.5   | 7.6    | 3.0   |
| 6            | 6.625  | 0.280               | 10.1  | 5.1   | 25.3   | 10.1  |
| 150          | 168.3  | 7.1                 | 3.1   | 1.6   | 7.7    | 3.1   |
| 8            | 8.625  | 0.322               | 13.3  | 6.7   | 33.3   | 13.3  |
| 200          | 219.1  | 8.2                 | 4.1   | 2.0   | 10.1   | 4.1   |
| 10           | 10.750 | 0.365               | 16.7  | 8.4   | 41.8   | 16.7  |
| 250          | 273.1  | 9.3                 | 5.1   | 2.6   | 12.7   | 5.1   |
| 12           | 12.750 | 0.375               | 20.0  | 10.0  | 50.0   | 20.0  |
| 300          | 323.9  | 9.5                 | 6.1   | 3.0   | 15.2   | 6.1   |
| 14           | 14.000 | 0.375               | 22.2  | 17.7  | 64.2   | 22.9  |
| 350          | 355.6  | 9.5                 | 6.8   | 5.4   | 19.6   | 7.0   |
| 16           | 16.000 | 0.375               | 25.5  | 20.4  | 73.9   | 26.4  |
| 400          | 406.4  | 9.5                 | 7.8   | 6.2   | 22.5   | 8.0   |
| 18           | 18.000 | 0.375               | 28.9  | 23.1  | 87.2   | 31.1  |
| 450          | 457.2  | 9.5                 | 8.8   | 7.0   | 26.6   | 9.5   |
| 20           | 20.000 | 0.375               | 32.2  | 25.7  | 97.3   | 34.8  |
| 500          | 508.0  | 9.5                 | 9.8   | 7.8   | 29.7   | 10.6  |
| 24           | 24.000 | 0.375               | 38.9  | 31.1  | 113.0  | 40.4  |
| 600          | 609.6  | 9.5                 | 11.9  | 9.5   | 34.4   | 12.3  |

#### Note:

For the reducing tee and branches, use the value that is corresponding to the branch size. For example: for 6" x 6" x 3" tee, the branch value of 3" is 12.8 ft (3.9).

The Fitting Size Chart is used to determine the O.D. of the pipe that the fittings is to be used with. Gruvlok Fittings are identified by either the Nominal size in inches or the Pipe O.D. in/mm.

### Fitting Size

| Nominal Size | O.D.   |
|--------------|--------|
| In./DN(mm)   | In./mm |
| 1            | 1.315  |
| 25           | 33.4   |
| 1 ¼          | 1.660  |
| 32           | 42.4   |
| 1 ½          | 1.900  |
| 40           | 48.3   |
| 2            | 2.375  |
| 50           | 60.3   |
| 2 ½          | 2.875  |
| 65           | 73.0   |
| 3 O.D.       | 2.996  |
| 76.1         | 76.1   |
| 3            | 3.500  |
| 80           | 88.9   |
| 3 ½          | 4.000  |
| 90           | 101.6  |
| 4 ¼ O.D.     | 4.250  |
| 108.0        | 108.0  |
| 4            | 4.500  |
| 100          | 114.3  |
| 5 ¼ O.D.     | 5.236  |
| 133.0        | 133.0  |
| 5 ½ O.D.     | 5.500  |
| 139.7        | 139.7  |
| 5            | 5.563  |
| 140          | 141.3  |
| 6 ¼ O.D.     | 6.259  |
| 159.0        | 159.0  |
| 6 ½ O.D.     | 6.500  |
| 165.1        | 165.1  |
| 6            | 6.625  |
| 150          | 168.3  |
| 8            | 8.625  |
| 200          | 219.1  |
| 10           | 10.750 |
| 250          | 273.0  |
| 12           | 12.750 |
| 300          | 323.9  |
| 14           | 14.000 |
| 350          | 355.6  |
| 16           | 16.000 |
| 400          | 406.4  |
| 18           | 18.000 |
| 450          | 457.2  |
| 20           | 20.000 |
| 500          | 508.0  |
| 24           | 24.000 |
| 600          | 609.6  |



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## Fig. 7074

Cap

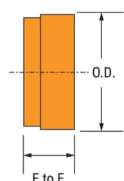
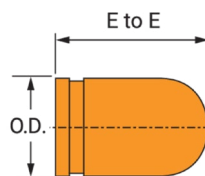


Fig. 7074T: ½", ¾" and 1" tap options available.

| Nominal Size | O.D.   | End to End | Approx. Wt. Ea. |
|--------------|--------|------------|-----------------|
| In./DN(mm)   | In./mm | In./mm     | Lbs./kg         |
| 1C           | 1.315  | 1 ¼        | 0.3             |
| 25           | 33.4   | 32         | 0.1             |
| 1 ¼ C        | 1.660  | 1 ¼        | 0.4             |
| 32           | 42.2   | 32         | 0.2             |
| 1 ½ C        | 1.900  | 1 ¼        | 0.5             |
| 40           | 48.3   | 32         | 0.2             |
| 2 C          | 2.375  | 1          | 0.5             |
| 50           | 60.3   | 25         | 0.2             |
| 2 ½ C        | 2.875  | 1          | 0.7             |
| 65           | 73.0   | 25         | 0.3             |
| 3 O.D. C     | 2.996  | 1          | 0.8             |
| 76.1         | 76.1   | 25         | 0.4             |
| 3 C          | 3.500  | 1          | 1.1             |
| 80           | 88.9   | 25         | 0.5             |
| 3 ½ C        | 4.000  | 1          | 1.4             |
| 90           | 101.6  | 25         | 0.6             |
| 4 ¼ O.D. C   | 4.250  | 1 ⅝        | 2.0             |
| 108          | 108.0  | 29         | 0.9             |
| 4 C          | 4.500  | 1 ⅝        | 2.8             |
| 100          | 114.3  | 29         | 1.3             |
| 5 ¼ O.D. C   | 5.236  | 1 ⅝        | 3.2             |
| 133          | 133.0  | 29         | 1.5             |
| 5 ½ O.D. C   | 5.500  | 1 ⅝        | 4.0             |
| 139.7        | 139.7  | 29         | 1.8             |
| 5 C          | 5.563  | 1 ⅝        | 4.0             |
| 125          | 141.3  | 29         | 1.8             |
| 6 ¼ O.D. C   | 6.259  | 1 ⅝        | 5.1             |
| 159          | 159.0  | 29         | 2.3             |
| 6 ½ O.D. C   | 6.500  | 1 ⅝        | 6.0             |
| 165.1        | 165.1  | 29         | 2.7             |
| 6 C          | 6.625  | 1 ⅝        | 6.0             |
| 150          | 168.3  | 33         | 2.7             |
| 8 C          | 8.625  | 1 ½        | 12.5            |
| 200          | 219.1  | 38         | 5.7             |
| 10 C         | 10.750 | 1 ½        | 21.9            |
| 250          | 273.1  | 38         | 9.9             |
| 12 C         | 12.750 | 1 ½        | 33.8            |
| 300          | 323.9  | 38         | 15.3            |
| 14*          | 14.000 | 8 ½        | 40.0            |
| 350          | 355.6  | 216        | 18.1            |
| 16*          | 16.000 | 9          | 45.0            |
| 400          | 406.4  | 229        | 20.4            |
| 18*          | 18.000 | 10         | 58.0            |
| 450          | 457.2  | 254        | 26.3            |
| 20*          | 20.000 | 11         | 79.0            |
| 500          | 508.0  | 279        | 35.8            |
| 24*          | 24.000 | 12 ½       | 100.0           |
| 600          | 609.6  | 318        | 45.4            |

## Fig. 7075

Bull Plug



| Nominal Size | O.D.   | End to End | Approx. Wt. Ea. |
|--------------|--------|------------|-----------------|
| In./DN(mm)   | In./mm | In./mm     | Lbs./kg         |
| 2            | 2.375  | 4          | 2.5             |
| 50           | 60.3   | 102        | 1.1             |
| 2 ½          | 2.875  | 5          | 3.1             |
| 65           | 73.0   | 127        | 1.4             |
| 3            | 3.500  | 6          | 4.4             |
| 80           | 88.9   | 152        | 2.0             |
| 4            | 4.500  | 7          | 7.4             |
| 100          | 114.3  | 178        | 3.4             |
| 5            | 5.563  | 9          | 13.0            |
| 125          | 141.3  | 22         | *               |
| 6            | 6.625  | 10         | 18.5            |
| 150          | 168.3  | 254        | 8.4             |

### Note:

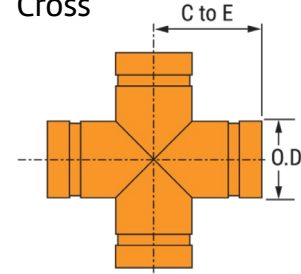
This product is not UL/ULC Listed or FM Approved.

\*Machined Dome Cap  
C – Cast Ductile Iron



## Fig. 7068

Cross



| Nominal Size | O.D.   | Center to End | Approx. Wt. Ea. |
|--------------|--------|---------------|-----------------|
| In./DN(mm)   | In./mm | In./mm        | Lbs./kg         |
| 1            | 1.315  | 2 ¼           | 1.3             |
| 25           | 33.4   | 57            | 0.6             |
| 1 ¼          | 1.660  | 2 ¾           | 2.1             |
| 32           | 42.2   | 70            | 1.0             |
| 1 ½          | 1.900  | 2 ¾           | 2.5             |
| 40           | 48.3   | 70            | 1.1             |
| 2            | 2.375  | 3 ¼           | 2.9             |
| 50           | 60.3   | 83            | 1.3             |
| 2 ½          | 2.875  | 3 ¾           | 5.2             |
| 65           | 73.0   | 95            | 2.4             |
| 3            | 3.500  | 4 ¼           | 7.5             |
| 80           | 88.9   | 108           | 3.4             |
| 3 ½          | 4.000  | 4 ½           | 9.8             |
| 90           | 101.6  | 114           | 4.4             |
| 4            | 4.500  | 5             | 12.2            |
| 100          | 114.3  | 127           | 5.5             |
| 5            | 5.563  | 5 ½           | 17.6            |
| 125          | 141.3  | 140           | 8.0             |
| 6            | 6.625  | 6 ½           | 28.3            |
| 150          | 168.3  | 165           | 12.8            |
| 8            | 8.625  | 7 ¾           | 48.0            |
| 200          | 219.1  | 197           | 21.8            |
| 10           | 10.750 | 9             | 70.0            |
| 250          | 273.1  | 229           | 31.8            |
| 12           | 12.750 | 10            | 110.0           |
| 300          | 323.9  | 254           | 49.9            |
| 14           | 14.000 | 11            | 140.0           |
| 350          | 355.6  | 279           | 63.5            |
| 16           | 16.000 | 12            | 170.0           |
| 400          | 406.4  | 305           | 77.1            |
| 18           | 18.000 | 15 ½          | 260.0           |
| 450          | 457.2  | 394           | 118.0           |
| 20           | 20.000 | 17 ¼          | 320.0           |
| 500          | 508.0  | 438           | 145.0           |
| 24           | 24.000 | 20            | 585.0           |
| 600          | 609.6  | 508           | 265.0           |



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