

# GRUVLOK FITTINGS FOR GROOVED-END PIPE

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 malleable iron, ductile iron, forged steel or fabricated steel.

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

Not for use in copper systems.



For Listings/Approval Details and Limitations, visit our website at [www.anvilintl.com](http://www.anvilintl.com) or contact an Anvil® Sales Representative.



## FLOW DATA – FRICTIONAL RESISTANCE (EXPRESSED AS EQUIVALENT STRAIGHT PIPE)

| Nom. 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<br>25          | 1.315<br>33.4   | 0.133<br>3.4        | 1.7<br>0.5   | 0.9<br>0.3  | 4.4<br>1.3    | 1.7<br>0.5   |
| 1¼<br>32         | 1.660<br>42.2   | 0.140<br>3.6        | 2.3<br>0.7   | 1.2<br>0.4  | 5.8<br>1.8    | 2.3<br>0.7   |
| 1½<br>40         | 1.900<br>48.3   | 0.145<br>3.7        | 2.7<br>0.8   | 1.3<br>0.4  | 6.7<br>2.0    | 2.7<br>0.8   |
| 2<br>50          | 2.375<br>60.3   | 0.154<br>3.9        | 3.4<br>1.0   | 1.7<br>0.5  | 8.6<br>2.6    | 3.4<br>1.0   |
| 2½<br>65         | 2.875<br>73.0   | 0.203<br>5.2        | 4.1<br>1.2   | 2.1<br>0.6  | 10.3<br>3.1   | 4.1<br>1.2   |
| 3 O.D.<br>76.1   | 2.996<br>76.1   | 0.197<br>5.0        | 4.3<br>1.3   | 2.2<br>0.7  | 10.8<br>3.3   | 4.3<br>1.3   |
| 3<br>80          | 3.500<br>88.9   | 0.216<br>5.5        | 5.1<br>1.6   | 2.6<br>0.8  | 12.8<br>3.9   | 5.1<br>1.6   |
| 4¼ O.D.<br>108.0 | 4.250<br>108.0  | 0.220<br>5.6        | 6.4<br>2.0   | 3.2<br>1.0  | 16.1<br>4.9   | 6.4<br>2.0   |
| 4<br>100         | 4.500<br>114.3  | 0.237<br>6.0        | 6.7<br>2.0   | 3.4<br>1.0  | 16.8<br>5.1   | 6.7<br>2.0   |
| 5¼ O.D.<br>133.0 | 5.236<br>133.0  | 0.248<br>6.3        | 8.0<br>2.4   | 4.0<br>1.2  | 20.1<br>6.1   | 8.0<br>2.4   |
| 5½ O.D.<br>139.7 | 5.500<br>139.7  | 0.248<br>6.3        | 8.3<br>2.5   | 4.2<br>1.3  | 20.9<br>6.4   | 8.3<br>2.5   |
| 5<br>125         | 5.563<br>141.3  | 0.258<br>6.6        | 8.4<br>2.6   | 4.2<br>1.3  | 21.0<br>6.4   | 8.4<br>2.6   |
| 6¼ O.D.<br>159.0 | 6.259<br>159.0  | 0.280<br>7.1        | 9.7<br>3.0   | 4.9<br>1.5  | 24.3<br>7.4   | 9.7<br>3.0   |
| 6½ O.D.<br>165.1 | 6.500<br>165.1  | 0.280<br>7.1        | 10.0<br>3.0  | 5.0<br>1.5  | 24.9<br>7.6   | 10.0<br>3.0  |
| 6<br>150         | 6.625<br>168.3  | 0.280<br>7.1        | 10.1<br>3.1  | 5.1<br>1.6  | 25.3<br>7.7   | 10.1<br>3.1  |
| 8<br>200         | 8.625<br>219.1  | 0.322<br>8.2        | 13.3<br>4.1  | 6.7<br>2.0  | 33.3<br>10.1  | 13.3<br>4.1  |
| 10<br>250        | 10.750<br>273.1 | 0.365<br>9.3        | 16.7<br>5.1  | 8.4<br>2.6  | 41.8<br>12.7  | 16.7<br>5.1  |
| 12<br>300        | 12.750<br>323.9 | 0.375<br>9.5        | 20.0<br>6.1  | 10.0<br>3.0 | 50.0<br>15.2  | 20.0<br>6.1  |
| 14<br>350        | 14.000<br>355.6 | 0.375<br>9.5        | 22.2<br>6.8  | 17.7<br>5.4 | 64.2<br>19.6  | 22.9<br>7.0  |
| 16<br>400        | 16.000<br>406.4 | 0.375<br>9.5        | 25.5<br>7.8  | 20.4<br>6.2 | 73.9<br>22.5  | 26.4<br>8.0  |
| 18<br>450        | 18.000<br>457.2 | 0.375<br>9.5        | 28.9<br>8.8  | 23.1<br>7.0 | 87.2<br>26.6  | 31.1<br>9.5  |
| 20<br>500        | 20.000<br>508.0 | 0.375<br>9.5        | 32.2<br>9.8  | 25.7<br>7.8 | 97.3<br>29.7  | 34.8<br>10.6 |
| 24<br>600        | 24.000<br>609.6 | 0.375<br>9.5        | 38.9<br>11.9 | 31.1<br>9.5 | 113.0<br>34.4 | 40.4<br>12.3 |

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).

## MATERIAL SPECIFICATIONS

### CAST FITTINGS:

Ductile iron conforming to ASTM A 536

Malleable iron conforming to ASTM A 47

### FABRICATED FITTINGS:

1-6" Carbon steel, Schedule 40, conforming to ASTM A 53, Grade B

8-12" Carbon steel, Schedule 30, conforming to ASTM A 53, Grade B

14-24" Carbon steel, 0.375 wall, conforming to ASTM A 53, Grade B

### COATINGS:

Rust inhibiting paint Color: ORANGE (standard)

Hot Dipped Zinc Galvanized conforming to ASTM A 153 (optional)

Other Colors Available (IE: RAL3000 and RAL9000)

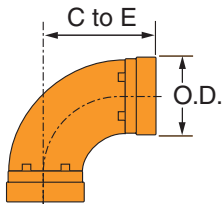
## FITTING SIZE

| Nominal Size     | O.D.           | Nominal Size     | O.D.            |
|------------------|----------------|------------------|-----------------|
| In./DN(mm)       | In./mm         | In./DN(mm)       | In./mm          |
| 1<br>25          | 1.315<br>33.4  | 5<br>140         | 5.563<br>141.3  |
| 1¼<br>32         | 1.660<br>42.4  | 6¼ O.D.<br>159.0 | 6.259<br>159.0  |
| 1½<br>40         | 1.900<br>48.3  | 6½ O.D.<br>165.1 | 6.500<br>165.1  |
| 2<br>50          | 2.375<br>60.3  | 6<br>150         | 6.625<br>168.3  |
| 2½<br>65         | 2.875<br>73.0  | 8<br>200         | 8.625<br>219.1  |
| 3 O.D.<br>76.1   | 2.996<br>76.1  | 10<br>250        | 10.750<br>273.0 |
| 3<br>80          | 3.500<br>88.9  | 12<br>300        | 12.750<br>323.9 |
| 3½<br>65         | 4.000<br>101.6 | 14<br>350        | 14.000<br>355.6 |
| 4¼ O.D.<br>108.0 | 4.250<br>108.0 | 16<br>400        | 16.000<br>406.4 |
| 4<br>100         | 4.500<br>114.3 | 18<br>450        | 18.000<br>457.2 |
| 5¼ O.D.<br>133.0 | 5.236<br>133.0 | 20<br>500        | 20.000<br>508.0 |
| 5½ O.D.<br>139.7 | 5.500<br>139.7 | 24<br>600        | 24.000<br>609.6 |

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.

## FIG. 7050

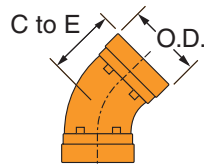
90° Elbow\*



| FIGURE 7050<br>90° ELBOW* |        |               |                 |
|---------------------------|--------|---------------|-----------------|
| Nominal Size              | O.D.   | Center to End | Approx. Wt. Ea. |
| In./DN(mm)                | In./mm | In./mm        | Lbs./Kg         |
| 1                         | 1.315  | 2¼ C          | 0.6             |
| 25                        | 33.4   | 57            | 0.3             |
| 1¼                        | 1.660  | 2¾ C          | 1.0             |
| 32                        | 42.2   | 70            | 0.5             |
| 1½                        | 1.900  | 2¾ C          | 1.2             |
| 40                        | 48.3   | 70            | 0.5             |
| 2                         | 2.375  | 3¼ C          | 1.7             |
| 50                        | 60.3   | 83            | 0.8             |
| 2½                        | 2.875  | 3¼ C          | 2.6             |
| 65                        | 73.0   | 95            | 1.2             |
| 3 O.D.                    | 2.996  | 4 C           | 3.6             |
| 76.1                      | 76.1   | 102           | 1.6             |
| 3                         | 3.500  | 4¼ C          | 4.0             |
| 80                        | 88.9   | 108           | 1.8             |
| 3½                        | 4.000  | 4½ C          | 5.5             |
| 90                        | 101.6  | 114           | 2.5             |
| 4¼ O.D.                   | 4.250  | 4¾ C          | 7.7             |
| 108.0                     | 108.0  | 121           | 3.5             |
| 4                         | 4.500  | 5 C           | 7.7             |
| 100                       | 114.3  | 127           | 3.5             |
| 5¼ O.D.                   | 5.236  | 5¼ C          | 10.4            |
| 133.0                     | 133.0  | 133           | 4.7             |
| 5½ O.D.                   | 5.500  | 5¼ C          | 10.9            |
| 139.7                     | 139.7  | 133           | 4.9             |
| 5                         | 5.563  | 5½ C          | 11.1            |
| 125                       | 141.3  | 140           | 5.0             |
| 6¼ O.D.                   | 6.259  | 6 C           | 15.2            |
| 159.0                     | 159.0  | 152           | 6.9             |
| 6½ O.D.                   | 6.500  | 6½ C          | 17.4            |
| 165.1                     | 165.1  | 165           | 7.9             |
| 6                         | 6.625  | 6½ C          | 16.5            |
| 150                       | 168.3  | 165           | 7.5             |
| 8                         | 8.625  | 7¾ C          | 30.6            |
| 200                       | 219.1  | 197           | 13.9            |
| 10                        | 10.750 | 9 C           | 53.5            |
| 250                       | 273.1  | 229           | 24.3            |
| 12                        | 12.750 | 10 C          | 82              |
| 300                       | 323.9  | 254           | 37.2            |
| 14                        | 14.000 | 21            | 169.0           |
| 350                       | 355.6  | 533           | 76.7            |
| 16                        | 16.000 | 24            | 222.0           |
| 400                       | 406.4  | 610           | 100.7           |
| 18                        | 18.000 | 27            | 280.0           |
| 450                       | 457.2  | 686           | 127.0           |
| 20                        | 20.000 | 30            | 344.0           |
| 500                       | 508.0  | 762           | 156.0           |
| 24                        | 24.000 | 36            | 490.0           |
| 600                       | 609.6  | 914           | 222.3           |

## FIG. 7051

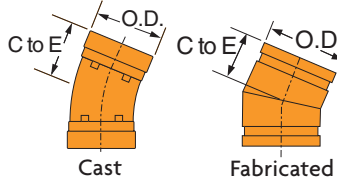
45° Elbow\*



| FIGURE 7051<br>45° ELBOW* |        |               |                 |
|---------------------------|--------|---------------|-----------------|
| Nominal Size              | O.D.   | Center to End | Approx. Wt. Ea. |
| In./DN(mm)                | In./mm | In./mm        | Lbs./Kg         |
| 1                         | 1.315  | 1¾ C          | 0.5             |
| 25                        | 33.4   | 44            | 0.2             |
| 1¼                        | 1.660  | 1¾ C          | 0.7             |
| 32                        | 42.2   | 44            | 0.3             |
| 1½                        | 1.900  | 1¾ C          | 0.9             |
| 40                        | 48.3   | 44            | 0.4             |
| 2                         | 2.375  | 2 C           | 1.5             |
| 50                        | 60.3   | 51            | 0.7             |
| 2½                        | 2.875  | 2½ C          | 1.9             |
| 65                        | 73.0   | 57            | 0.9             |
| 3 O.D.                    | 2.996  | 2½ C          | 2.2             |
| 76.1                      | 76.1   | 64            | 1.0             |
| 3                         | 3.500  | 2½ C          | 3.3             |
| 80                        | 88.9   | 64            | 1.5             |
| 3½                        | 4.000  | 2¾ C          | 4.3             |
| 90                        | 101.6  | 70            | 2.0             |
| 4¼ O.D.                   | 4.250  | 2¾ C          | 4.4             |
| 108.0                     | 108.0  | 83            | 2.0             |
| 4                         | 4.500  | 3 C           | 5.4             |
| 100                       | 114.3  | 76            | 2.4             |
| 5¼ O.D.                   | 5.236  | 3¼ C          | 7.3             |
| 133.0                     | 133.0  | 83            | 3.3             |
| 5½ O.D.                   | 5.500  | 3¼ C          | 7.8             |
| 139.7                     | 139.7  | 83            | 3.5             |
| 5                         | 5.563  | 3¼ C          | 9.0             |
| 125                       | 141.3  | 83            | 4.1             |
| 6¼ O.D.                   | 6.259  | 3½ C          | 10.1            |
| 159.0                     | 159.0  | 89            | 4.6             |
| 6½ O.D.                   | 6.500  | 3½ C          | 11.1            |
| 165.1                     | 165.1  | 89            | 5.0             |
| 6                         | 6.625  | 3½ C          | 11.2            |
| 150                       | 168.3  | 89            | 5.1             |
| 8                         | 8.625  | 4¼ C          | 19.8            |
| 200                       | 219.1  | 108           | 9.0             |
| 10                        | 10.750 | 4¾ C          | 34.3            |
| 250                       | 273.1  | 121           | 15.6            |
| 12                        | 12.750 | 5¼ C          | 50.0            |
| 300                       | 323.9  | 133           | 22.7            |
| 14                        | 14.000 | 8¾            | 92.0            |
| 350                       | 355.6  | 222           | 41.7            |
| 16                        | 16.000 | 10            | 117.0           |
| 400                       | 406.4  | 254           | 53.1            |
| 18                        | 18.000 | 11¼           | 146.0           |
| 450                       | 457.2  | 286           | 66.2            |
| 20                        | 20.000 | 12½           | 179.0           |
| 500                       | 508.0  | 317           | 81.2            |
| 24                        | 24.000 | 15            | 255.0           |
| 600                       | 609.6  | 381           | 115.7           |

## FIG. 7052

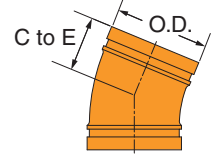
22 ½° Elbow



| FIGURE 7052<br>22½° ELBOW* |        |               |                 |
|----------------------------|--------|---------------|-----------------|
| Nominal Size               | O.D.   | Center to End | Approx. Wt. Ea. |
| In./DN(mm)                 | In./mm | In./mm        | Lbs./Kg         |
| 1                          | 1.315  | ¾             | 0.5             |
| 25                         | 33.4   | 83            | 0.2             |
| 1¼                         | 1.660  | 1¾            | 0.7             |
| 32                         | 42.2   | 44            | 0.3             |
| 1½                         | 1.900  | 1¾            | 0.8             |
| 40                         | 48.3   | 44            | 0.4             |
| 2                          | 2.375  | 1½ C          | 1.5             |
| 50                         | 60.3   | 48            | 0.7             |
| 2½                         | 2.875  | 2             | 1.9             |
| 65                         | 73.0   | 51            | 0.9             |
| 3                          | 3.500  | 2¼ C          | 3.2             |
| 80                         | 88.9   | 57            | 1.5             |
| 3½                         | 4.000  | 2½            | 4.0             |
| 90                         | 101.6  | 64            | 1.8             |
| 4                          | 4.500  | 2¾ C          | 5.3             |
| 100                        | 114.3  | 67            | 2.4             |
| 5                          | 5.563  | 2¾            | 7.2             |
| 125                        | 141.3  | 73            | 3.3             |
| 6                          | 6.625  | 3¾ C          | 8.2             |
| 150                        | 168.3  | 79            | 3.7             |
| 8                          | 8.625  | 3¾ C          | 17.8            |
| 200                        | 219.1  | 98            | 8.1             |
| 10                         | 10.750 | 4¾            | 30.0            |
| 250                        | 273.1  | 111           | 13.6            |
| 12                         | 12.750 | 4¾            | 40.4            |
| 300                        | 323.9  | 124           | 18.3            |
| 14                         | 14.000 | 5             | 46.0            |
| 350                        | 355.6  | 127           | 20.9            |
| 16                         | 16.000 | 5             | 52.2            |
| 400                        | 406.4  | 127           | 23.7            |
| 18                         | 18.000 | 5½            | 65.0            |
| 450                        | 457.2  | 140           | 29.5            |
| 20                         | 20.000 | 6             | 80.0            |
| 500                        | 508.0  | 152           | 36.3            |
| 24                         | 24.000 | 7             | 112.0           |
| 600                        | 609.6  | 178           | 50.8            |

## FIG. 7052i

22 ½° Elbow



| FIGURE 7052i<br>22½° ELBOW* |        |               |                 |
|-----------------------------|--------|---------------|-----------------|
| Nominal Size                | O.D.   | Center to End | Approx. Wt. Ea. |
| In./DN(mm)                  | In./mm | In./mm        | Lbs./Kg         |
| 1                           | 1.315  | 1¾            | 0.5             |
| 25                          | 33.4   | 41.28         | 0.227           |
| 1¼                          | 1.675  | 1¾            | 1.0             |
| 32                          | 42.2   | 44.45         | 0.454           |
| 1½                          | 1.900  | 1¾            | 1.0             |
| 40                          | 48.3   | 44.45         | 0.454           |
| 2                           | 2.375  | 1¾            | 1.5             |
| 50                          | 60.3   | 47.63         | 0.680           |
| 2½                          | 2.875  | 2             | 2.0             |
| 65                          | 73.0   | 50.8          | 0.907           |
| 3 O.D.                      | 2.996  | 2             | 2.0             |
| 76.1                        | 76.1   | 50.8          | 0.907           |
| 3                           | 3.500  | 2¼            | 2.5             |
| 80                          | 88.9   | 57.15         | 1.134           |
| 4                           | 4.5    | 2¾            | 5.0             |
| 100                         | 114.3  | 66.68         | 2.268           |
| 5½ O.D.                     | 5.500  | 2¾            | 7.0             |
| 139.7                       | 139.7  | 73.03         | 3.175           |
| 5                           | 5.563  | 2¾            | 7.5             |
| 125                         | 141.3  | 73.03         | 3.402           |
| 6½ O.D.                     | 6.500  | 3¾            | 10.0            |
| 165.1                       | 165.1  | 79.38         | 4.536           |
| 6                           | 6.625  | 3¾            | 10.0            |
| 150                         | 168.3  | 79.38         | 4.536           |
| 8                           | 8.625  | 3¾            | 18.5            |
| 200                         | 219.1  | 98.43         | 8.391           |
| 10                          | 10.75  | 4¾            | 32.5            |
| 250                         | 237.1  | 111.13        | 14.741          |
| 12                          | 12.75  | 4¾            | 48.0            |
| 300                         | 323.9  | 123.83        | 21.772          |

All 7052i fittings are cast ductile iron.

C - Cast malleable or ductile iron, all others are fabricated steel.

\* 14"-24" Standard Radius 90° & 45° Elbows are 1 ½."

Center to end dimensions and weights may differ from those shown in chart, contact an Anvil Representative for more information.