Gruvlok® Fittings for Grooved-End Pipe

☐ **Fig. 7050** 90° Elbow
☐ **Fig. 7051** 45° Elbow
☐ **Fig. 7052** 22½° Elbow



Galvanized Gruvlok Fittings are NSF-61 and Low Lead Approved

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 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:	

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Elbows
Fig. 7050, 7051, 7052

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

Fitting Size

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

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).

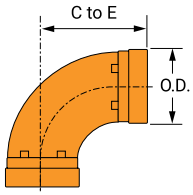
The Fitting Size Chart is used to determine the O.D. of the pipe that the fittings is to be used with. Gruvlok Fittings are identified by either the Nominal size in inches or the Pipe O.D. in/mm.

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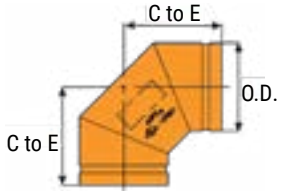
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Fig. 7050
90° Elbow*



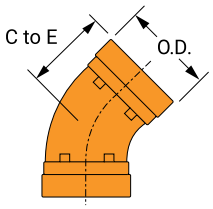
Cast



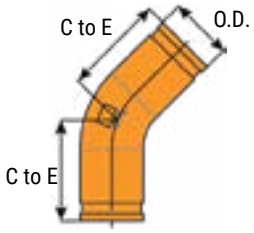
Fabricated

Nominal Size	O.D.	Center to End	Approx. Wt. Ea.
In./DN(mm)	In./mm	In./mm	Lbs./kg
1 25	1.315 33.4	2¼ C 57	0.6 0.3
1¼ 32	1.660 42.2	2¾ C 70	1.0 0.5
1½ 40	1.900 48.3	2¾ C 70	1.2 0.5
2 50	2.375 60.3	3¼ C 83	1.7 0.8
2½ 65	2.875 73.0	3¾ C 95	2.6 1.2
3 O.D. 76.1	2.996 76.1	4 C 102	3.6 1.6
3 80	3.500 88.9	4¼ C 108	4.0 1.8
3½ 90	4.000 101.6	4½ C 114	5.5 2.5
4¼ O.D. 108.0	4.250 108.0	4¾ C 121	7.7 3.5
4 100	4.500 114.3	5 C 127	7.7 3.5
5¼ O.D. 133.0	2.236 133.0	5¼ C 133	10.4 4.7
5½ O.D. 139.7	5.500 139.7	5¼ C 133	10.9 4.9

Fig. 7051
45° Elbow*



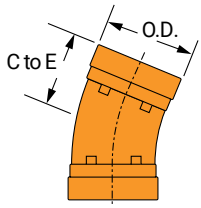
Cast



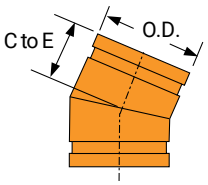
Fabricated

Nominal Size	O.D.	Center to End	Approx. Wt. Ea.
In./DN(mm)	In./mm	In./mm	Lbs./kg
1 25	1.315 33.4	1¾ C 44	0.5 0.2
1¼ 32	1.660 42.2	1¾ C 44	0.7 0.3
1½ 40	1.900 48.3	1¾ C 44	0.9 0.4
2 50	2.375 60.3	2 C 51	1.5 0.7
2½ 65	2.875 73.0	2¼ C 57	1.9 0.9
3 O.D. 76.1	2.996 76.1	2½ C 64	2.2 1.0
3 80	3.500 88.9	2½ C 64	3.3 1.5
3½ 90	4.000 101.6	2¾ C 70	4.3 2.0
4¼ O.D. 108.0	4.250 108.0	2⅞ C 83	4.4 2.0
4 100.0	4.500 114.3	3 C 76	5.4 2.4
5¼ O.D. 133.0	2.236 133.0	3¼ C 83	7.3 3.3
5½ O.D. 139.7	5.500 139.7	3¼ C 83	7.8 3.5

Fig. 7052
22½° Elbow



Cast



Fabricated

Nominal Size	O.D.	Center to End	Approx. Wt. Ea.
In./DN(mm)	In./mm	In./mm	Lbs./kg
1 25	1.315 33.4	3¼ 83	0.5 0.2
1¼ 32	1.660 42.2	1¾ 44	0.7 0.3
1½ 40	1.900 48.3	1¾ 44	0.8 0.4
2 50	2.375 60.3	1⅞ C 48	1.5 0.7
2½ 65	2.875 73.0	2 51	1.9 0.9
3 80	3.500 88.9	2¼ C 57	3.2 1.5
3½ 90	4.000 101.6	2½ 64	4.0 1.8
4 100	4.500 114.3	2⅝ C 67	5.3 2.4
5 125	5.563 141.3	2⅞ 73	7.2 3.3
6 150	6.625 168.3	3⅛ C 79	8.2 3.7
8 200	8.625 219.1	3⅞ C 98	17.8 8.1
10 250	10.750 273.1	4⅜ 111	30.0 13.6

Note:

C – Cast ductile iron, all others are fabricated steel.

* 14"–24" Standard Radius 90° & 45° Elbows are 1½ Long Radius.

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

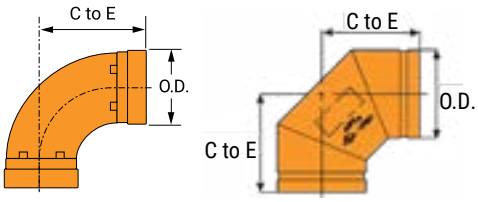
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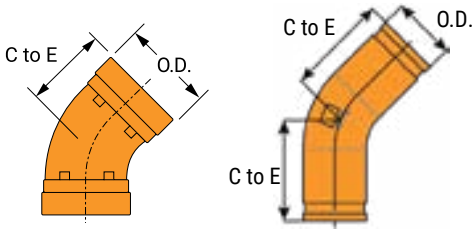
Fig. 7050
90° Elbow*



Cast Fabricated

Nominal Size	O.D.	Center to End		Approx. Wt. Ea.
In./DN(mm)	In./mm	In./mm		Lbs./kg
5 125	5.563 141.3	5½ C 140		11.1 5.0
6¼ O.D. 159.0	6.259 159.0	6 C 152		15.2 6.9
6½ O.D. 165.1	6.500 165.1	6½ C 165		17.4 7.9
6 150	6.625 168.3	6½ C 165		16.5 7.5
8 200	8.625 219.1	7¾ C 197		30.6 13.9
10 250	10.75 273.1	9 C 229		53.5 24.3
12 300	12.750 323.9	10 C 254		82.0 37.2
		Cast	Fab	
14* 350	14.000 355.6	21 C 533	21 F 533	176.0 79.8
16* 400	16.000 406.4	24 C 610	24 F 610	230.0 104.3
18* 450	18.000 457.2	27 C 686	27 F 686	293.0 132.9
20* 500	20.000 508	30 C 762	30 F 762	362.0 164.2
24* 600	24.000 609.6	36 C 914	36 F 914	520.0 235.9

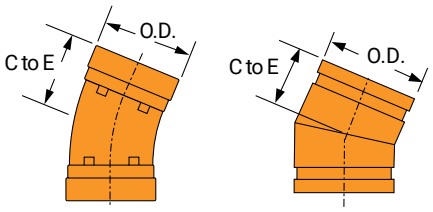
Fig. 7051
45° Elbow*



Cast Fabricated

Nominal Size	O.D.	Center to End		Approx. Wt. Ea.
In./DN(mm)	In./mm	In./mm		Lbs./kg
5 125.0	5.563 141.3	3¼ C 83		9.0 4.1
6¼ O.D. 159.0	6.259 159.0	3½ C 89		10.1 4.6
6½ O.D. 165.1	6.500 165.1	3½ C 89		11.1 5.0
6 150	6.625 168.3	3½ C 89		11.2 5.1
8 200	8.625 219.1	4¼ C 108		19.8 9.0
10 250	10.75 273.1	4¾ C 121		34.3 15.6
12 300	12.75 323.9	5¼ C 133		50.0 22.7
		Cast	Fab	
14* 350	14.000 355.6	8¾ C 222	8¾ F 222	89.0 40.4
16* 400	16.000 406.4	10 C 254	10 F 254	125.0 56.7
18* 450	18.000 457.2	11¼ C 286	11¼ F 286	158.0 71.7
20* 500	20.000 508.0	12½ C 317	12½ F 317	194.0 88.0
24* 600	24.000 609.6	15 C 381	15 F 381	277.0 125.6

Fig. 7052
22½° Elbow



Cast Fabricated

Nominal Size	O.D.	Center to End	Approx. Wt. Ea.
In./DN(mm)	In./mm	In./mm	Lbs./kg
12 300	12.750 323.9	4⅞ 124	40.4 18.3
14 350	14.000 355.6	5 127	46.0 20.9
16 400	16.000 406.4	5 127	52.2 23.7
18 450	18.000 457.2	5½ 140	65.0 29.5
20 500	20.000 508.0	6 152	80.0 36.3
24 600	24.000 609.6	7 178	112.0 50.8

Note:

C – Cast ductile iron, all others are fabricated steel.

* 14"–24" Standard Radius 90° & 45° Elbows are 1½ Long Radius.

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

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