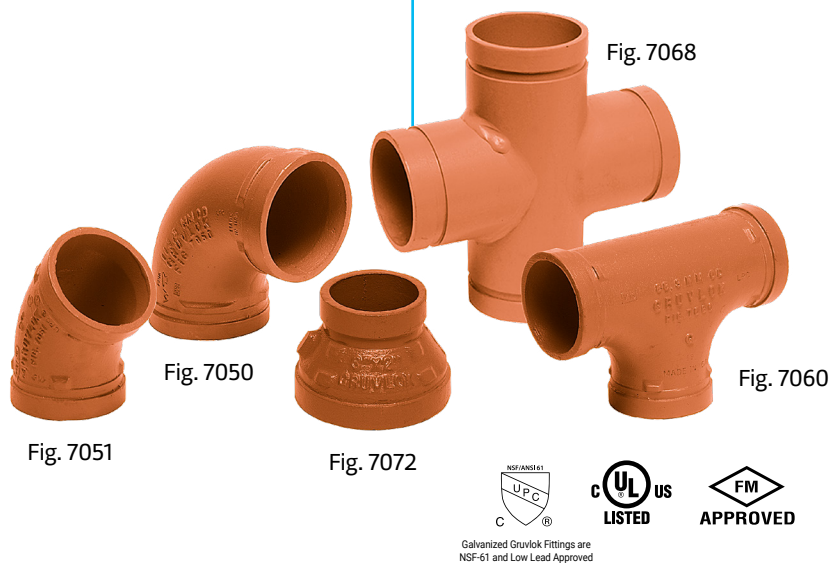


Fig. 7050LR 90° Long Radius Elbow
Fig. 7051LR 45° Long Radius Elbow
Fig. 7053 11¼° Elbow



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:	

Long Radius Elbows & Elbow Fig. 7050LR, 7051LR, 7053

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

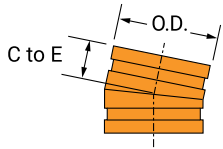
Nominal Size	O.D.
In./DN(mm)	In./mm
1	1.315
25	33.4
1 ¼	1.660
32	42.4
1 ½	1.900
40	48.3
2	2.375
50	60.3
2 ½	2.875
65	73.0
3 O.D.	2.996
76.1	76.1
3	3.500
80	88.9
3 ½	4.000
90	101.6
4 ¼ O.D.	4.250
108.0	108.0
4	4.500
100	114.3
5 ¼ O.D.	5.236
133.0	133.0
5 ½ O.D.	5.500
139.7	139.7
5	5.563
140	141.3
6 ¼ 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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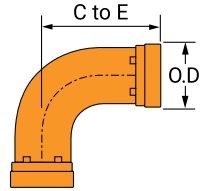
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Fig. 7053
11¼° Elbow



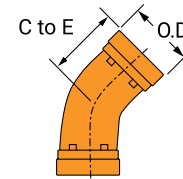
Nominal Size	O.D.	Center to End	Approx. Wt. Ea.
In./DN(mm)	In./mm	In./mm	Lbs./kg
1 25	1.315 33.4	1⅜ 35	0.3 0.1
1¼ 32	1.660 42.2	1⅜ 35	0.5 0.2
1½ 40	1.900 48.3	1⅜ 35	0.7 0.3
2 50	2.375 60.3	1⅜ 35	0.9 0.4
2½ 65	2.875 73.0	1½ 38	1.5 0.7
3 80	3.500 88.9	1½ 38	2.0 0.9
3½ 90	4.000 101.6	1¾ 44	2.8 1.3
4 100	4.500 114.3	1¾ 44	3.3 1.5
5 125	5.563 141.3	2 51	5.0 2.3
6 150	6.625 168.3	2 51	6.5 2.9
8 200	8.625 219.1	2 51	10.0 4.5

Fig. 7050LR
90° Long Radius Elbow



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	3½ 89	0.9 0.4
1¼ 32	1.660 42.2	3⅞ 98	1.3 0.6
1½ 40	1.900 48.3	4¼ 108	1.7 0.8
2 50	2.375 60.3	4⅜ C 111	2.5 1.1
2½ 65	2.875 73.0	5¼ 146	4.9 2.2
3 80	3.500 88.9	5⅞ C 149	6.5 2.9
3½ 90	4.000 101.6	7¼ 184	9.7 4.4
4 100	4.500 114.3	7½ 191	11.5 5.2
5 125	5.563 141.3	9½ 241	20.9 9.5
6 150	6.625 168.3	10¾ 273	29.1 13.2
8 200	8.625 219.1	15 381	59.2 26.9

Fig. 7051LR
45° Long Radius Elbow



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	2½ 64	0.7 0.3
1¼ 32	1.660 42.2	2½ 64	1.0 0.5
1½ 40	1.900 48.3	2½ 64	1.2 0.5
2 50	2.375 60.3	2¾ 70	1.7 0.8
2½ 65	2.875 73.0	3 76	2.9 1.3
3 80	3.500 88.9	3⅜ 86	4.3 2.0
3½ 90	4.000 101.6	3½ 89	5.3 2.4
4 100	4.500 114.3	4 102	7.2 3.3
5 125	5.563 141.3	5 127	12.2 5.5
6 150	6.625 168.3	5½ 140	17.4 7.9
8 200	8.625 219.1	7¼ 184	34.0 15.4

Continued on next page.

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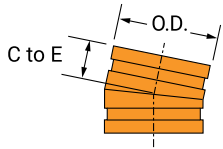


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Fig. 7053
11¼° Elbow

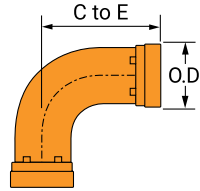
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Nominal Size	O.D.	Center to End	Approx. Wt. Ea.
In./DN(mm)	In./mm	In./mm	Lbs./kg
10 250	10.750 273.1	2⅞ 54	14.5 6.6
12 300	12.750 323.9	2¼ 57	18.7 8.5
14 350	14.000 355.6	3½ 89	32.1 14.6
16 400	16.000 406.4	4 102	42.0 19.1
18 450	18.000 457.2	4½ 114	53.2 24.1
20 500	20.000 508.0	5 127	65.7 29.8
24 600	24.000 609.6	6 152	96.0 43.5

Fig. 7050LR
90° Long Radius Elbow

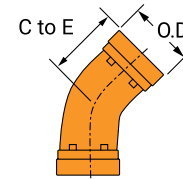
(continued)



Nominal Size	O.D.	Center to End	Approx. Wt. Ea.
In./DN(mm)	In./mm	In./mm	Lbs./kg
10 250	10.750 273.1	18 457	104.0 47.2
12 300	12.750 323.9	21 533	147.0 66.7
14 350	14.000 355.6	21 C 533	176.0 79.8
16 400	16.000 406.4	24 C 610	230.0 104.3
18 450	18.000 457.2	27 C 686	293.0 132.9
20 500	20.000 508.0	30 C 762	362.0 164.2
24 600	24.000 609.6	36 C 914	520.0 235.9

Fig. 7051LR
45° Long Radius Elbow

(continued)



Nominal Size	O.D.	Center to End	Approx. Wt. Ea.
In./DN(mm)	In./mm	In./mm	Lbs./kg
10 250	10.750 273.1	8½ 216	57.4 26.0
12 300	12.750 323.9	10 254	82.6 37.5
14 350	14.000 355.6	8¾ C 222	89.0 40.4
16 400	16.000 406.4	10 C 254	125.0 56.7
18 450	18.000 457.2	11¼ C 286	158.0 71.7
20 500	20.000 508.0	12½ C 317	194.0 88.0
24 600	24.000 609.6	15 C 381	277.0 125.6

Note:

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

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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