

Fig. 7050-3D 90° Elbow
Fig. 7057-3D 60° Elbow
Fig. 7051-3D 45° Elbow
Fig. 7058-3D 30° Elbow

Fig. 7052-3D 22½° Elbow
Fig. 7053-3D 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

Fig. 7050-3D, 7057-3D, 7051-3D, 7058-3D, 7052-3D, 7053-3D

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	11.1	55.6	22.2
350	355.6	9.5	6.8	3.4	16.6	6.8
16	16.000	0.375	25.5	12.8	63.9	25.5
400	406.4	9.5	7.8	3.9	18.8	7.8
18	18.000	0.375	28.9	14.5	72.2	28.9
450	457.2	9.5	8.8	4.4	20.6	8.8
20	20.000	0.375	32.2	16.1	81.3	32.2
500	508.0	9.5	9.8	4.9	22.9	9.8
24	24.000	0.375	38.9	19.4	113.0	38.9
600	609.6	9.5	11.9	5.9	34.4	11.9

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

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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Fig. 7050-3D, 7057-3D, 7051-3D, 7058-3D, 7052-3D, 7053-3D

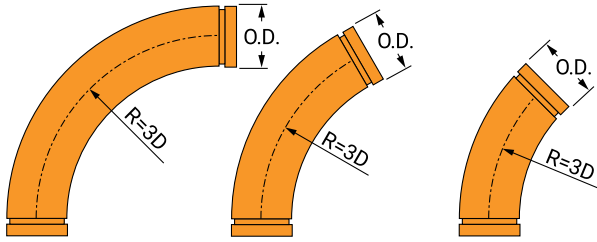


Fig. 7050-3D,
90° Elbow

Fig. 7057-3D,
60° Elbow

Fig. 7051-3D,
45° Elbow

Fig. 7050-3D 90° Elbow

Nominal Size	O.D.	Center to End	Approx. Wt. Ea.
In./DN(mm)	In./mm	In./mm	Lbs./kg
2	2.375	10	5.3
50	60.3	254	2.4
2½	2.875	11½	9.5
65	73.0	292	4.3
3	3.500	13	14.0
80	88.9	330	6.4
3½	4.000	14½	18.6
90	101.6	368	8.4
4	4.500	16	24.1
100	114.3	406	10.9
5	5.563	20	40.9
125	141.3	508	18.6
6	6.625	24	63.7
150	168.3	610	28.9
8	8.625	32	127.8
200	219.1	813	58.0
10	10.750	40	226.4
250	273.1	1016	102.7
12	12.750	48	332.7
300	323.9	1219	150.9
14	14.000	56	427.3
350	355.6	1422	193.8
16	16.000	64	560.1
400	406.4	1626	254.1
18	18.000	72	710.7
450	457.2	1829	322.4
20	20.000	80	879.3
500	508.0	2032	398.8
24	24.000	96	1270.3
600	609.6	2438	576.2

Fig. 7057-3D 60° Elbow

Center to End	Approx. Wt. Ea.
In./mm	Lbs./kg
7½	4.3
191	2.0
8¼	7.7
210	3.5
9¼	11.0
235	5.0
10	14.4
254	6.5
11	18.5
279	8.4
13¾	31.3
349	14.2
16½	48.8
419	22.1
22	97.9
559	44.4
27¼	173.4
692	78.7
32¾	254.8
832	115.6
38¼	327.3
972	148.5
43¾	429.0
1111	194.6
49¼	544.4
1251	246.9
54¾	673.5
1391	305.5
65½	973.0
1664	441.3

Fig. 7051-3D 45° Elbow

Center to End	Approx. Wt. Ea.
In./mm	Lbs./kg
6½	3.9
165	1.8
7¼	6.7
184	3.0
7¾	9.5
197	4.3
8½	12.3
216	5.6
9	15.7
229	7.1
11¼	26.5
286	12.0
13½	41.3
343	18.7
18	82.9
457	37.6
22½	146.9
572	66.6
27	215.9
686	97.9
31½	227.3
800	103.1
36	363.5
914	164.9
40½	461.3
1029	209.2
45	540.7
1143	245.3
53¾	824.4
1365	373.9

- 3D long radius elbows are available in sizes up to 24". Sizes 4" and below are provided with a 4" (101.6 mm) long integral tangent. Remaining sizes are provided with integral tangents with lengths equal to the nominal pipe size.
- Grooved or plain-end available - specify choice on order.
- Material: standard wall steel pipe to ASTM A 53, Grade B. (Other materials available on request).
- Bends to conform to above radii.
- C to E tolerances: 2" through 6" ± 1/8" (3.2 mm); 8" through 16" ± 1/4" (6.4 mm); 18" through 24" + 3/8" (9.5 mm).
- All weights are approximate, based on calculated weight of pipe.



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Long Radius Elbows

Fig. 7050-3D, 7057-3D, 7051-3D, 7058-3D, 7052-3D, 7053-3D

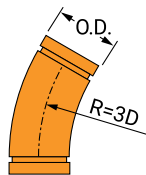


Fig. 7058-3D,
30° Elbow

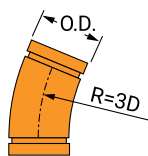


Fig. 7052-3D,
22 1/2° Elbow

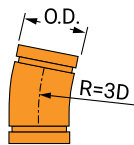


Fig. 7053-3D,
11 1/4° Elbow

Fig. 7058-3D 30° Elbow		Fig. 7052-3D 22 1/2° Elbow		Fig. 7053-3D 11 1/4° Elbow	
Center to End	Approx. Wt. Ea.	Center to End	Approx. Wt. Ea.	Center to End	Approx. Wt. Ea.
In./mm	Lbs./kg	In./mm	Lbs./kg	In./mm	Lbs./kg
5 3/4 146	3.4 1.5	5 1/4 133	3.2 1.5	4 1/2 114	2.8 1.3
6 152	5.8 2.6	5 1/2 140	5.3 2.4	4 3/4 121	4.6 2.1
6 1/2 165	8.0 3.6	5 3/4 146	7.3 3.3	5 127	6.2 2.8
6 3/4 171	10.2 4.6	6 152	9.2 4.2	5 127	7.6 3.4
7 1/4 184	12.8 5.8	6 1/2 165	11.4 5.2	5 1/4 133	9.3 4.2
9 229	21.8 9.9	8 203	19.4 8.8	6 1/2 165	15.8 7.2
10 3/4 273	33.9 15.4	9 1/2 241	30.1 13.7	7 3/4 197	24.6 11.2
14 1/2 368	68.0 30.8	12 3/4 324	60.5 27.4	10 1/2 267	49.3 22.4
18 457	120.5 54.7	16 406	107.2 48.6	13 330	87.3 39.6
21 3/4 552	177.0 80.3	19 1/4 489	157.5 71.4	15 1/2 394	128.3 58.2
25 1/4 641	227.3 103.1	22 1/2 572	202.3 91.8	18 1/4 464	164.8 74.8
29 737	297.9 135.1	25 1/2 648	265.2 120.3	20 3/4 527	216.0 98.0
32 1/2 826	378.1 171.5	28 3/4 730	336.5 152.6	23.35 593	274.1 124.3
36 914	467.8 212.2	32 813	416.3 188.8	26 660	339.2 153.9
43 1/4 1099	675.7 304.1	38 1/4 972	601.4 272.8	31 787	490.0 222.3

- 3D long radius elbows are available in sizes up to 24". Sizes 4" and below are provided with a 4" (101.6 mm) long integral tangent. Remaining sizes are provided with integral tangents with lengths equal to the nominal pipe size.
- Grooved or plain-end available - specify choice on order.
- Material: standard wall steel pipe to ASTM A 53, Grade B. (Other materials available on request).
- Bends to conform to above radii.
- C to E tolerances: 2" through 6" ± 1/8" (3.2 mm);
8" through 16" ± 1/4" (6.4 mm);
18" through 24" + 3/8" (9.5 mm).
- All weights are approximate, based on calculated weight of pipe.



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