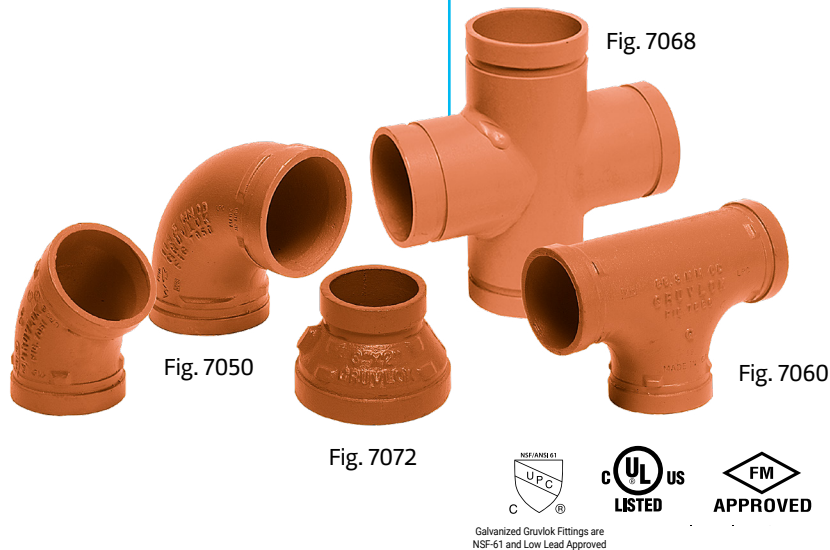


Fig. 7050-6D 90° Elbow
Fig. 7057-6D 60° Elbow
Fig. 7051-6D 45° Elbow
Fig. 7058-6D 30° Elbow

Fig. 7052-6D 22½° Elbow
Fig. 7053-6D 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. 7050-6D, 7057-6D, 7051-6D, 7058-6D, 7052-6D, 7053-6D

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	11.7	64.2	22.9
350	355.6	9.5	6.8	5.4	19.6	7.0
16	16.000	0.375	25.5	12.4	73.9	26.4
400	406.4	9.5	7.8	6.2	22.5	8.0
18	18.000	0.375	28.9	14.1	87.2	31.1
450	457.2	9.5	8.8	7.0	26.6	9.5
20	20.000	0.375	32.2	15.7	97.3	34.8
500	508.0	9.5	9.8	7.8	29.7	10.6
24	24.000	0.375	38.9	19.1	113.0	40.4
600	609.6	9.5	11.9	9.5	34.4	12.3

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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Long Radius Elbows

Fig. 7050-6D, 7057-6D, 7051-6D, 7058-6D, 7052-6D, 7053-6D

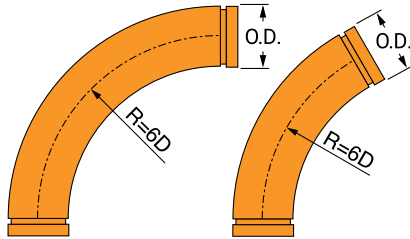


Fig. 7050-6D,
90° Elbow

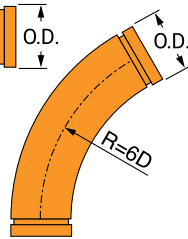


Fig. 7057-6D,
60° Elbow

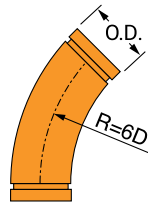


Fig. 7051-6D,
45° Elbow

Fig. 7050-6D 90° Elbow

Nominal Size	O.D.	Center to End	Approx. Wt. Ea.
In./DN(mm)	In./mm	In./mm	Lbs./kg
2	2.375	16	8.2
50	60.3	406	3.7
2½	2.875	19	15.2
65	73.0	483	6.9
3	3.500	22	22.9
80	88.9	559	10.4
3½	4.000	25	31.1
90	101.6	635	14.1
4	4.500	28	41.1
100	114.3	711	18.6
5	5.563	35	69.6
125	141.3	889	31.6
6	6.625	42	108.4
150	168.3	1067	49.2
8	8.625	56	217.5
200	219.1	1422	98.7
10	10.750	70	385.4
250	273.1	1778	174.8
12	12.750	84	566.2
300	323.9	2134	256.8
14	14.000	98	727.4
350	355.6	2489	329.9
16	16.000	112	953.3
400	406.4	2845	432.4
18	18.000	126	1209.7
450	457.2	3200	548.7
20	20.000	140	1496.6
500	508.0	3556	678.8
24	24.000	168	2162.0
600	609.6	4267	980.7

Fig. 7057-6D 60° Elbow

Center to End	Approx. Wt. Ea.
In./mm	Lbs./kg
11	6.3
279	2.9
12¾	11.4
324	5.2
14½	17.0
368	7.7
16¼	22.8
413	10.3
18	29.8
457	13.5
22¼	50.5
565	22.9
26¾	78.6
679	35.7
35¾	157.7
908	71.5
44¾	279.4
1137	126.7
53½	410.5
1359	186.2
62½	527.3
1588	239.2
71½	691.1
1816	313.5
80½	877.1
2045	397.8
89¼	1085.1
2267	492.2
107¼	1567.5
2724	711.0

Fig. 7051-6D 45° Elbow

Center to End	Approx. Wt. Ea.
In./mm	Lbs./kg
9	5.3
229	2.4
10¼	9.5
260	4.3
11½	14.0
292	6.4
12¾	18.6
324	8.4
14	24.1
356	10.9
17½	40.9
445	18.6
21	63.7
533	28.9
28	127.8
711	58.0
35	226.4
889	102.7
41¾	332.7
1060	150.9
48¾	427.3
1238	193.8
55¾	560.1
1416	254.1
62¾	710.7
1594	322.4
69¾	879.3
1772	398.8
83¾	1270.3
2127	576.2

- 6D 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. 7050-6D, 7057-6D, 7051-6D, 7058-6D, 7052-6D, 7053-6D

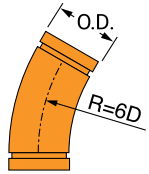


Fig. 7058-6D,
30° Elbow

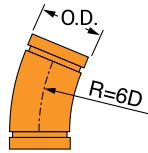


Fig. 7052-6D,
22 1/2° Elbow

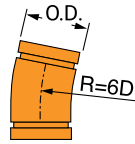


Fig. 7053-6D,
11 1/4° Elbow

Fig. 7058-6D 30° Elbow

Center to End	Approx. Wt. Ea.
In./mm	Lbs./kg
7 1/4 184	4.3 2.0
8 203	7.7 3.5
8 3/4 222	11.0 5.0
9 3/4 248	14.4 6.5
10 1/2 267	18.5 8.4
13 330	31.3 14.2
15 3/4 400	48.8 22.1
21 533	97.9 44.4
26 660	173.4 78.7
31 1/4 794	254.8 115.6
36 1/2 927	327.3 148.5
41 3/4 1060	429.0 194.6
47 1194	544.4 246.9
52 1/4 1327	673.5 305.5
62 1/2 1588	973.0 441.3

Fig. 7052-6D 22 1/2° Elbow

Center to End	Approx. Wt. Ea.
In./mm	Lbs./kg
6 1/2 165	3.9 1.8
7 178	6.7 3.0
7 1/2 191	9.5 4.3
8 1/4 210	12.3 5.6
8 3/4 222	15.7 7.1
11 279	26.5 12.0
13 1/4 337	41.3 18.7
17 1/2 445	82.9 37.6
22 559	146.9 66.6
26 1/4 667	215.9 97.9
30 3/4 781	277.3 125.8
35 1/4 895	363.5 164.9
39 1/2 1003	461.3 209.2
44 1118	570.7 258.9
52.34 1329	824.4 373.9

Fig. 7053-6D 11 1/4° Elbow

Center to End	Approx. Wt. Ea.
In./mm	Lbs./kg
5 1/4 133	3.2 1.5
5 1/2 140	5.3 2.4
5 3/4 146	7.3 3.3
6 152	9.2 4.2
6 1/2 165	11.4 5.2
8 203	19.4 8.8
9 1/2 241	30.1 13.7
12 3/4 324	60.5 27.4
16 406	107.2 48.6
19 483	157.5 71.4
22 1/4 565	202.3 91.8
25 1/2 648	265.2 120.3
28 3/4 730	336.5 152.6
31 3/4 806	416.3 188.8
38 1/4 972	601.4 272.8

- 6D 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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