

## FIG. 7050 5D

### Long Radius Elbows

- 5D 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.
- 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"  $\pm 1/8"$  (3.2 mm); 8" through 16"  $\pm 1/4"$  (6.4 mm); 18" through 24"  $+ 3/8"$  (9.5 mm).
- All weights are approximate, based on calculated weight of pipe.

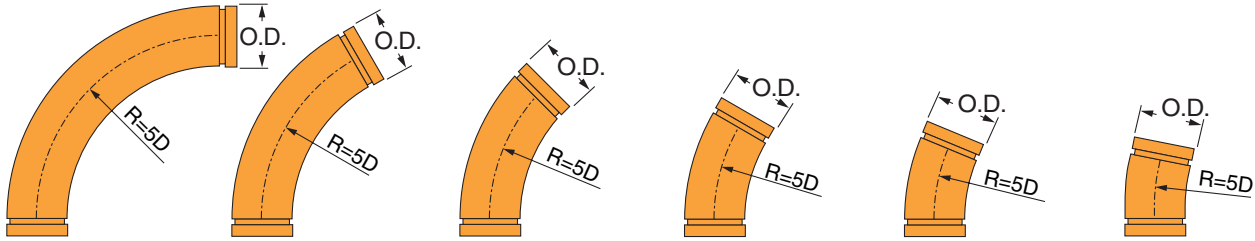


Fig. 7050-5D, 90° Elbow    
  Fig. 7057-5D, 60° Elbow    
  Fig. 7051-5D, 45° Elbow    
  Fig. 7058-5D, 30° Elbow    
  Fig. 7052-5D, 22½° Elbow    
  Fig. 7053-5D, 11¼° Elbow

FIGURE 7050-5D 90° ELBOW				FIG. 7057-5D 60° ELBOW		FIG. 7051-5D 45° ELBOW		FIG. 7058-5D 30° ELBOW		FIG. 7052-5D 22½° ELBOW		FIG. 7053-5D 11¼° ELBOW	
Nominal Size	O.D.	Center to End	Approx. Wt. Ea.	Center to End	Approx. Wt. Ea.	Center to End	Approx. Wt. Ea.	Center to End	Approx. Wt. Ea.	Center to End	Approx. Wt. Ea.	Center to End	Approx. Wt. Ea.
In./DN(mm)	In./mm	In./mm	Lbs./Kg	In./mm	Lbs./Kg	In./mm	Lbs./Kg	In./mm	Lbs./Kg	In./mm	Lbs./Kg	In./mm	Lbs./Kg
2	2.375	14	7.2	9¾	5.6	8¼	4.8	6¾	4.0	6	3.6	5	3.0
50	60.3	356	3.3	248	2.5	210	2.2	171	1.8	152	1.6	127	1.4
2½	2.875	16½	13.3	11¼	10.2	9¾	8.6	7½	7.0	6½	6.2	5¼	5.0
65	73	419	6.0	286	4.6	235	3.9	191	3.2	165	2.8	133	2.3
3	3.500	19	19.9	12¾	15.0	10¼	12.5	8	10.0	7	8.8	5½	6.9
80	88.9	483	9.0	324	6.8	260	5.7	203	4.5	178	4.0	140	3.1
3½	4.000	21½	26.9	12¼	20.0	11¼	16.5	8¾	13.0	7½	11.3	5¾	8.7
90	101.6	546	12.2	311	9.1	286	7.5	222	5.9	191	5.1	146	3.9
4	4.500	24	35.4	15½	26.0	12½	21.3	9½	16.6	8	14.3	6	10.7
100	114.3	610	16.1	394	11.8	318	9.7	241	7.5	203	6.5	152	4.9
5	5.563	30	60.0	19½	44.1	15½	36.1	11¼	28.1	10	24.1	7½	18.2
125	141.3	762	27.2	495	20.0	394	16.4	298	12.7	254	10.9	191	8.3
6	6.625	36	93.5	23¼	68.6	18½	56.2	14	43.8	12	37.6	9	28.3
150	168.3	914	42.4	591	31.1	470	25.5	356	19.9	305	17.1	229	12.8
8	8.625	48	187.6	31	137.7	24½	112.8	18¾	87.9	16	75.4	12	56.8
200	219.1	1219	85.1	787	62.5	622	51.2	476	39.9	406	34.2	305	25.8
10	10.750	60	332.4	39	244.1	30¾	199.9	23½	155.8	20	133.7	15	100.6
250	273.1	1524	150.8	991	110.7	781	90.7	597	70.7	508	60.6	381	45.6
12	12.750	72	488.4	46¾	358.6	37	293.7	28	228.9	24	196.4	18	147.8
300	323.9	1829	221.5	1187	162.7	940	133.2	711	103.8	610	89.1	457	67.0
14	14.000	84	627.4	54½	460.7	43	377.3	32¼	294.0	28	252.3	21	189.8
350	355.6	2134	284.6	1384	209.0	1092	171.1	832	133.4	711	114.4	533	86.1
16	16.000	96	822.2	62¼	603.8	49¼	494.5	37½	385.3	32	330.7	24	248.8
400	406.4	2438	372.9	1581	273.9	1251	224.3	953	174.8	813	150.0	610	112.9
18	18.000	108	1,043.4	70	766.2	55¼	627.6	42¼	489.0	36	419.7	27	315.7
450	457.2	2743	473.3	1778	347.5	1403	284.7	1073	221.8	914	190.4	686	143.2
20	20.000	120	1,290.9	77¾	947.9	61½	776.4	46¾	605.0	40	519.2	30	390.6
500	508	3048	585.5	1975	430.0	1562	352.2	1187	274.4	1016	235.5	762	177.2
24	24.000	144	1,864.8	93¼	1,369.3	73¼	1,121.6	56¼	873.9	48	750.1	35¾	564.3
600	609.6	3658	845.9	2369	621.1	1873	508.7	1429	396.4	1219	340.2	908	256.0

PROJECT INFORMATION		APPROVAL STAMP	
Project:		<input type="checkbox"/> Approved	
Address:		<input type="checkbox"/> Approved as noted	
Contractor:		<input type="checkbox"/> Not approved	
Engineer:		Remarks:	
Submittal Date:			
Notes 1:			
Notes 2:			

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.

Not for use in copper systems.



## 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 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
1¼ 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
1½ 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
2½ 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
4¼ 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
5¼ 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
5½ 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
6¼ 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
6½ 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

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, Grade 65-45-12

Malleable iron conforming to ASTM A 47

### FABRICATED FITTINGS:

1-12" Carbon steel, Schedule 40, 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 25	1.315 33.4	5 140	5.563 141.3
1¼ 32	1.660 42.4	6¼ O.D. 159.0	6.259 159.0
1½ 40	1.900 48.3	6½ O.D. 165.1	6.500 165.1
2 50	2.375 60.3	6 150	6.625 168.3
2½ 65	2.875 73.0	8 200	8.625 219.1
3 O.D. 76.1	2.996 76.1	10 250	10.750 273.0
3 80	3.500 88.9	12 300	12.750 323.9
3½ 90	4.000 101.6	14 350	14.000 355.6
4¼ O.D. 108.0	4.250 108.0	16 400	16.000 406.4
4 100	4.500 114.3	18 450	18.000 457.2
5¼ O.D. 133.0	5.236 133.0	20 500	20.000 508.0
5½ O.D. 139.7	5.500 139.7	24 600	24.000 609.6

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.