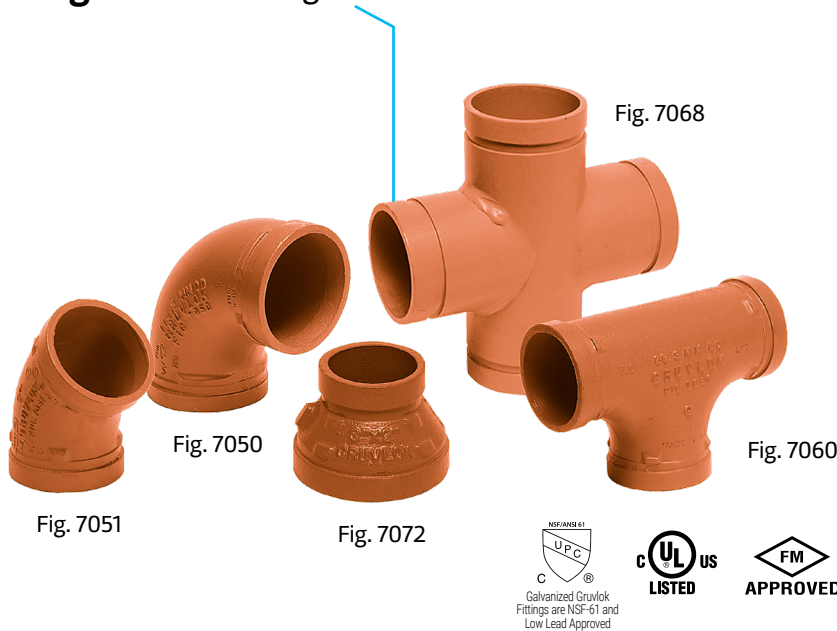


**Fig. 7068** Cross  
**Fig. 7074** Cap  
**Fig. 7075** Bull Plug



## 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](http://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:	

## Cross, Cap & Bull Plug Fig. 7068, 7074, 7075



### 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	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

### 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. 7074**  
Cap

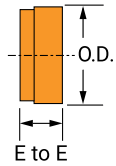
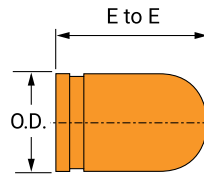


Fig. 7074T: 1/2", 3/4" and 1" tap options available.

Nominal Size	O.D.	End to End	Approx. Wt. Ea.
In./DN(mm)	In./mm	In./mm	Lbs./kg
1C	1.315	1 1/4	0.3
25	33.4	32	0.1
1 1/4 C	1.660	1 1/4	0.4
32	42.2	32	0.2
1 1/2 C	1.900	1 1/4	0.5
40	48.3	32	0.2
2 C	2.375	1	0.5
50	60.3	25	0.2
2 1/2 C	2.875	1	0.7
65	73.0	25	0.3
3 O.D. C	2.996	1	0.8
76.1	76.1	25	0.4
3 C	3.500	1	1.1
80	88.9	25	0.5
3 1/2 C	4.000	1	1.4
90	101.6	25	0.6
4 1/4 O.D. C	4.250	1 1/8	2.0
108	108.0	29	0.9
4 C	4.500	1 1/8	2.8
100	114.3	29	1.3
5 1/4 O.D. C	5.236	1 1/8	3.2
133	133.0	29	1.5
5 1/2 O.D. C	5.500	1 1/8	4.0
139.7	139.7	29	1.8
5 C	5.563	1 1/8	4.0
125	141.3	29	1.8
6 1/4 O.D. C	6.259	1 1/8	5.1
159	159.0	29	2.3
6 1/2 O.D. C	6.500	1 1/8	6.0
165.1	165.1	29	2.7
6 C	6.625	1 5/16	6.0
150	168.3	33	2.7
8 C	8.625	1 1/2	12.5
200	219.1	38	5.7
10 C	10.750	1 1/2	21.9
250	273.1	38	9.9
12 C	12.750	1 1/2	33.8
300	323.9	38	15.3
14*	14.000	8 1/2	40.0
350	355.6	216	18.1
16*	16.000	9	45.0
400	406.4	229	20.4
18*	18.000	10	58.0
450	457.2	254	26.3
20*	20.000	11	79.0
500	508.0	279	35.8
24*	24.000	12 1/2	100.0
600	609.6	318	45.4

**Fig. 7075**  
Bull Plug



Nominal Size	O.D.	End to End	Approx. Wt. Ea.
In./DN(mm)	In./mm	In./mm	Lbs./kg
2	2.375	4	2.5
50	60.3	102	1.1
2 1/2	2.875	5	3.1
65	73.0	127	1.4
3	3.500	6	4.4
80	88.9	152	2.0
4	4.500	7	7.4
100	114.3	178	3.4
5	5.563	9	13.0
125	141.3	22	*
6	6.625	10	18.5
150	168.3	254	8.4

**Note:**

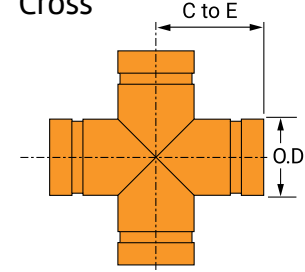
This product is not UL/ULC Listed or FM Approved.

\*Machined Dome Cap  
C – Cast Ductile Iron



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**Fig. 7068**  
Cross



Nominal Size	O.D.	Center to End	Approx. Wt. Ea.
In./DN(mm)	In./mm	In./mm	Lbs./kg
1	1.315	2 1/4	1.3
25	33.4	57	0.6
1 1/4	1.660	2 3/4	2.1
32	42.2	70	1.0
1 1/2	1.900	2 3/4	2.5
40	48.3	70	1.1
2	2.375	3 1/4	2.9
50	60.3	83	1.3
2 1/2	2.875	3 3/4	5.2
65	73.0	95	2.4
3	3.500	4 1/4	7.5
80	88.9	108	3.4
3 1/2	4.000	4 1/2	9.8
90	101.6	114	4.4
4	4.500	5	12.2
100	114.3	127	5.5
5	5.563	5 1/2	17.6
125	141.3	140	8.0
6	6.625	6 1/2	28.3
150	168.3	165	12.8
8	8.625	7 3/4	48.0
200	219.1	197	21.8
10	10.750	9	70.0
250	273.1	229	31.8
12	12.750	10	110.0
300	323.9	254	49.9
14	14.000	11	140.0
350	355.6	279	63.5
16	16.000	12	170.0
400	406.4	305	77.1
18	18.000	15 1/2	260.0
450	457.2	394	118.0
20	20.000	17 1/4	320.0
500	508.0	438	145.0
24	24.000	20	585.0
600	609.6	508	265.0



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