

Schedule 80 CPVC Technical Information  
Schedule 80 CPVC Fittings



ASTM STANDARD DIMENSIONS

**SCHEDULE 80 PIPE DIMENSIONS  
ASTM D 1785**

Nominal Pipe Size In.	Mean Outside Diameter In.	O. D. Tolerance In.	Minimum Wall Thickness In.
1/8	0.405	± 0.004	0.095
1/4	0.540	± 0.004	0.119
3/8	0.675	± 0.004	0.126
1/2	0.840	± 0.004	0.147
3/4	1.050	± 0.004	0.154
1	1.315	± 0.005	0.179
1-1/4	1.660	± 0.005	0.191
1-1/2	1.900	± 0.006	0.200
2	2.375	± 0.006	0.218
2-1/2	2.875	± 0.007	0.276
3	3.500	± 0.008	0.300
4	4.500	± 0.009	0.337
5	5.563	± 0.010	0.375
6	6.625	± 0.011	0.432
8	8.625	± 0.015	0.500
10	10.750	± 0.015	0.593
12	12.750	± 0.015	0.687

**SCHEDULE 80 SOCKET DIMENSIONS  
ASTM D 2467**

Nominal Size In.	Diameter			Socket Length Minimum C
	Entrance A	Bottom B	Tolerance A	
1/8	0.417	0.401	± 0.004	0.500
1/4	0.552	0.536	± 0.004	0.625
3/8	0.687	0.671	± 0.004	0.750
1/2	0.848	0.836	± 0.004	0.875
3/4	1.058	1.046	± 0.004	1.000
1	1.325	1.310	± 0.005	1.125
1-1/4	1.670	1.655	± 0.005	1.250
1-1/2	1.912	1.894	± 0.006	1.375
2	2.387	2.369	± 0.006	1.500
2-1/2	2.889	2.868	± 0.007	1.750
3	3.516	3.492	± 0.008	1.875
4	4.518	4.491	± 0.009	2.250
5	5.583	5.553	± 0.010	2.625
6	6.647	6.614	± 0.011	3.000
8	8.655	8.610	± 0.015	4.000
10	10.780	10.735	± 0.015	5.000
12	12.780	12.735	± 0.015	6.000
14	14.030	13.985	± 0.015	7.000

**AMERICAN NATIONAL STANDARD  
TAPER PIPE THREADS (NPT) ANSI  
B1 .20.1 ASTM F 1498**

Nominal Size In.	Threads Per Inch	Effective Thread Length L	Pitch Of Thread P
1/8	27	0.2639	0.03704
1/4	18	0.4018	0.05556
3/8	18	0.4078	0.05556
1/2	14	0.5337	0.07143
3/4	14	0.5457	0.07143
1	11-1/2	0.6828	0.08696
1-1/4	11-1/2	0.7068	0.08696
1-1/2	11-1/2	0.7235	0.08696
2	11-1/2	0.7565	0.08696
2-1/2	8	1.1375	0.12500
3	8	1.2000	0.12500
4	8	1.3000	0.12500
5	8	1.4063	0.12500
6	8	1.5125	0.12500
8	8	1.7125	0.12500

STANDARD COMPARISONS

SPEARS® IPS-to-Metric transition unions are listed by nominal size. The chart below compares nominal and actual\* pipe O.D. for each size according to the designated standard.

JIS K6741 (mm)		DIN 8062 (mm)		ASTM D1785 (in.)		NPT—ANSI B1.20.1** Tapered Thread		BSP—BS21, DIN 2999, ISO 7/1 Thread	
Nominal	Actual*	O.D.	Actual*	Nominal	Actual*	Designation	Threads/in.	Designation	Threads/25.4mm
16	22	15	20	1/2	.840	1/2	14	1/2	14
20	26	20	25	3/4	1.050	3/4	14	3/4	14
25	32	25	32	1	1.315	1	11.5	1	11
30	38	38	40	1-1/4	1.660	1-1/4	11.5	1-1/4	11
40	48	40	50	1-1/2	1.900	1-1/2	11.5	1-1/2	11
50	60	50	63	2	2.375	2	11.5	2	11
75	89	80	90	3	3.500	3	8	3	11
100	114	100	110	4	4.500	4	8	4	11

\*Specified dimension, certain tolerances apply

\*\*NPT and BSP have different thread angles and not compatible.



## Schedule 80 CPVC Technical Information

### Schedule 80 CPVC Fittings

#### Injection Molded Dimensions References:

- G** = (LAYING LENGTH) intersection of center lines to bottom of socket/thread; 90° elbows, tees, crosses; ± 1/32 inch.
- H** = Intersection of center lines to face of fitting; 90° elbow tees, crosses; ± 1/32 inch.
- J** = Intersection of center lines to bottom of socket/thread; 45° elbows; ± 1/32 inch

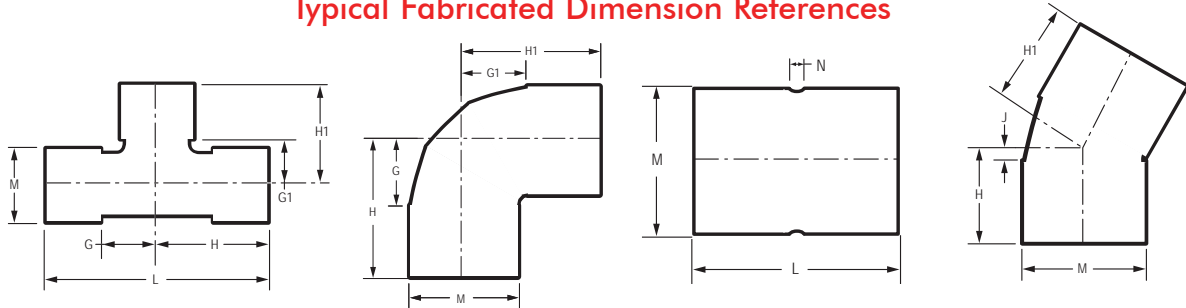
- L** = Overall length of fittings; ± 1/16 inch.
- H** = Outside diameter of socket/thread hub; ± 1/16 inch.
- N** = Socket bottom to socket bottom; couplings; ± 1/16 inch
- W** = Height of cap; ± 1/16 inch.

#### Fabricated Dimension References:

- G** = (LAYING LENGTH) intersection of center lines to bottom of socket/thread; 90° elbows, tees, crosses ± 1/4 inch; 14" & larger ± 1/2 inch.
- H** = Intersection of center lines to face of fitting; 90° elbows ± 1/4 inch, 14" & larger ± 3/4 inch; wyes ± 1/2 inch; tees, crosses ± 1/4 inch; 14" & larger ± 1/2 inch.
- J** = Intersection of center lines to bottom of socket/thread; 45° elbows; ± 1/4 inch; 14" & larger ± 1/2 inch.

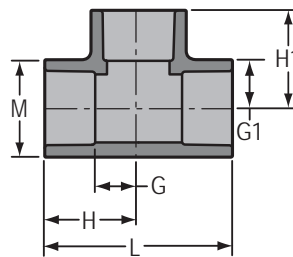
- L** = Overall length of fittings; ± 1/2 inch; 14" & larger ± 1 inch; wyes ± 1 inch.
- M** = Outside diameter of socket/thread hub; ± 1/4 inch.
- N** = Socket bottom to socket bottom; couplings; ± 1/2
- W** = Height of cap; ± 1/4 inch.

### Typical Fabricated Dimension References



### TEE

Socket x Socket x Socket



Part Number	Size	G	G1	H	H1	L	M	Approx. Wt. (Lbs.)
801-002C	1/4	5/16	5/16	31/32	31/32	1-15/16	27/32	.04
801-003C	3/8	15/32	15/32	1-1/4	1-1/4	2-1/2	31/32	.06
801-005C	1/2	19/32	19/32	1-15/32	1-15/32	2-15/16	1-3/16	.11
801-007C	3/4	21/32	21/32	1-11/16	1-11/16	3-13/32	1-13/32	.18
801-010C	1	27/32	27/32	2	2	3-31/32	1-23/32	.29
801-012C	1-1/4	1-1/32	1-1/32	2-9/32	2-9/32	4-19/32	2-3/32	.40
801-015C	1-1/2	1-3/16	1-3/16	2-9/32	2-9/32	5-1/8	2-3/8	.57
801-020C	2	1-7/16	1-7/16	2-15/16	2-15/16	5-7/8	2-7/8	.85
801-025C	2-1/2	1-23/32	1-23/32	3-1/2	3-1/2	7	3-15/32	1.62
801-030C	3	2-1/16	2-1/16	3-31/32	3-31/32	7-15/16	4-5/32	2.53
801-040C	4	2-1/2	2-1/2	4-3/4	4-3/4	9-1/2	5-1/4	3.72

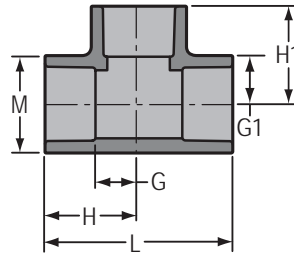
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**TEE**

Socket x Socket x Socket

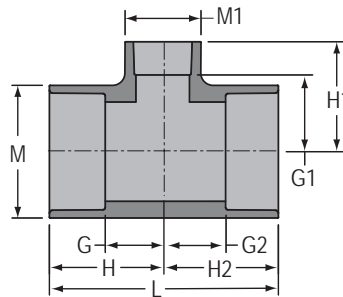
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Part Number	Size	G	G1	H	H1	L	M	Approx. Wt. (Lbs.)
801-050C	5	3-1/8	3-1/8	5-25/32	5-25/32	11-5/8	6-13/32	6.47
801-050CF	5	5-1/2	5-1/2	8-1/2	8-1/2	17	6-5/16	18.38
801-060C	6	4-1/32	4-1/32	7-3/32	7-3/32	14-5/32	7-19/32	12.19
801-080C	8	4-13/16	4-13/16	8-7/8	8-7/8	17-3/4	9-23/32	21.53
801-080CF	8	7-5/8	7-5/8	11-7/8	11-7/8	23-3/4	9-5/8	30.91
801-100C	10	5-3/4	5-3/4	10-13/16	10-13/16	21-5/8	11-19/32	40.50
801-100CF	10	9	9	14-1/4	14-1/4	28-1/2	11-15/16	51.41
801-120C	12	6-15/16	6-15/16	12-15/16	12-15/16	25-7/8	14-1/4	62.00
801-120CF	12	11-1/4	11-1/4	17-1/2	17-1/2	35	14-1/8	83.37
801-140C	14	7-1/32	7-1/32	14-7/32	14-1/32	28-7/16	15-21/32	70.48
801-140CF	14	12-1/4	12-1/4	19-1/4	19-1/4	38-1/2	15-1/2	108.34
801-160CF	16	13	13	21	21	42	17-11/16	144.86
801-180CF	18	13-3/4	13-3/4	22-3/4	22-3/4	45-1/2	19-7/8	198.00
801-200CF	20	16-3/8	16-3/8	26-3/8	26-3/8	52-3/4	22-1/16	249.75
801-240CF	24	20-1/4	20-1/4	32-1/4	32-1/4	64-1/2	26-7/16	460.00

**REDUCING TEE**

Socket x Socket x Socket



Part Number	Size	G	G1	G2	H	H1	H2	L	M	M1	Approx. Wt. (Lbs.)
801-101C	3/4x3/4x1/2	19/32	23/32	19/32	1-19/32	1-19/32	1-19/32	3-3/16	1-13/32	1-3/16	.15
801-130C	1x1x1/2	19/32	7/8	19/32	1-23/32	1-3/4	1-23/32	3-7/16	1-3/4	1-3/16	.21
801-131C	1x1x3/4	11/16	27/32	11/16	1-27/32	1-27/32	1-27/32	3-21/32	1-3/4	1-13/32	.24
801-158C	1-1/4x1x1	13/32	15/16	13/32	2-1/8	1-31/32	1-15/16	4	2-1/16	1-11/16	.34
801-159C	1-1/4x1x1-1/4	15/16	1-1/32	7/8	2-3/16	2-5/32	2-1/8	4-5/16	2-1/16	2-1/16	.41
801-166C <sup>1</sup>	1-1/4x1-1/4x1/2	7/8	1-13/32	7/8	2-3/32	2-3/8	2-3/32	4-7/32	2-1/8	1-3/4	.43
801-167C	1-1/4x1-1/4x3/4	5/8	31/32	5/8	1-15/16	1-31/32	1-15/16	3-7/8	2-1/8	1-13/32	.30
801-168C	1-1/4x1-1/4x1	27/32	1-1/32	27/32	2-3/32	2-5/32	2-3/32	4-7/32	2-3/32	1-3/4	.36

<sup>1</sup> Outlet sized with bushing