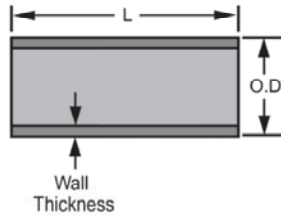




Marine & Offshore Technical
EverTUFF® CPVC Schedule 80 Marine Pipe

**Pipe - CPVC Schedule 80 Plain
End - Marine**

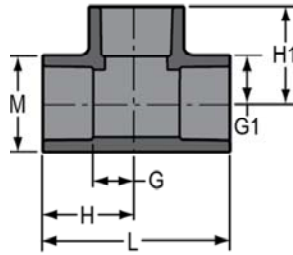
20' Lengths, Price Per Foot



Part Number	Size	L	AVG.O.D.	Minimum Wall	Approx. Wt. (Lbs.)
CG-PD-800-005C	1/2	20	.840	.147	.22
CG-PD-800-007C	3/4	20	1.050	.154	.30
CG-PD-800-010C	1	20	1.315	.179	.44
CG-PD-800-012C	1-1/4	20	1.660	.191	.61
CG-PD-800-015C	1-1/2	20	1.900	.200	.75
CG-PD-800-020C	2	20	2.375	.218	1.03
CG-PD-800-025C	2-1/2	20	2.875	.276	1.58
CG-PD-800-030C	3	20	3.500	.300	2.12
CG-PD-800-040C	4	20	4.500	.337	3.10
CG-PD-800-060C	6	20	6.625	.432	5.92
CG-PD-800-080C	8	20	8.625	.500	9.04
CG-PD-800-100C	10	20	10.750	.593	13.01
CG-PD-800-120C	12	20	12.750	.687	18.35

Tee - Marine

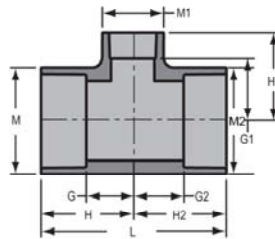
Socket x Socket x Socket



Part Number	Size	G	G1	H	H1	L	M	Approx. Wt. (Lbs.)
CG-801-005C	1/2	19/32	19/32	1-15/32	1-15/32	2-15/16	1-3/16	.11
CG-801-007C	3/4	11/16	11/16	1-11/16	1-11/16	3- 3/8	1-13/32	.16
CG-801-010C	1	27/32	27/32	2	2	4	1-23/32	.29
CG-801-012C	1-1/4	1-1/32	1-1/32	2-9/32	2-9/32	4-9/16	2-3/32	.39
CG-801-015C	1-1/2	1-3/16	1-3/16	2-9/16	2-9/16	5-1/8	2-3/8	.53
CG-801-020C	2	1-7/16	1-7/16	2-15/16	2-15/16	5-7/8	2-7/8	.86
CG-801-025C	2-1/2	1-23/32	1-23/32	3-1/2	3-1/2	7-1/32	3-1/2	1.68
CG-801-030C	3	2-1/16	2-1/16	3-31/32	3-31/32	7-15/16	4-5/32	2.56
CG-801-040C	4	2-15/32	2-15/32	4-3/4	4-3/4	9-15/32	5-1/4	3.71
CG-801-060C	6	4-1/16	4-1/16	7-1/8	7-1/8	14-1/4	7-19/32	12.18
CG-801-080C	8	4-7/8	4-7/8	8-7/8	8-7/8	17-23/32	9-23/32	21.58
CG-801-100C	10	5-29/32	5-29/32	10-29/32	10-29/32	21-29/32	12-3/16	38.18
CG-801-120C	12	6-31/32	6-31/32	12-31/32	12-31/32	25-11/16	14-1/4	55.92

Tee - Reducing - Marine

Socket x Socket x Socket



Part Number	Size	G	G1	G2	H	H1	H2	L	M	M1	M2	Approx. Wt. (Lbs.)
CG-801-101C	3/4X1/2	19/32	11/16	19/32	1-19/32	1-9/16	1-19/32	3-3/16	1-13/32	1-3/16	1-13/32	.14
CG-801-130C	1X1/2	19/32	7/8	19/32	1-23/32	1-3/4	1-23/32	3-7/16	1-3/4	1-3/16	1-3/4	.20
CG-801-131C	1X3/4	11/16	27/32	11/16	1-27/32	1-27/32	1-27/32	3-11/16	1-3/4	1-13/32	1-3/4	.24
CG-801-157C	1-1/4X1X3/4	11/16	1-1/16	11/16	1-7/8	2-1/16	1-15/16	3-3/4	2-3/32	1-13/32	1-23/32	.32
CG-801-158C	1-1/4X1X1	7/8	27/32	25/32	2-1/8	1-31/32	1-15/16	4	2-1/8	1-3/4	1-3/4	.32
CG-801-159C	1-1/4X1X1-1/4	15/16	15/16	15/16	2-7/32	2-7/32	2-3/32	4-5/16	2-3/32	2-3/32	1-23/32	.40
CG-801-166C ¹	1-1/4X1/2	5/8	1-5/16	5/8	1-15/16	2-7/32	1-15/16	3-7/8	2-3/32	1-13/32	2-3/32	.28
CG-801-167C	1-1/4X3/4	5/8	31/32	5/8	1-15/16	1-31/32	1-15/16	3-7/8	2-3/32	1-13/32	2-3/32	.29
CG-801-168C	1-1/4X1	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	2-3/32	.35
CG-801-202C	1-1/2X1-1/4X1	27/32	1-1/32	27/32	2-1/4	2-5/32	2-1/4	4-1/2	2-11/32	1-23/32	2-1/16	.42
CG-801-209C	1-1/2X1/2	19/32	1-3/32	19/32	1-31/32	1-31/32	1-31/32	3-15/16	2- 3/8	1-3/16	2-3/8	.36
CG-801-210C	1-1/2X3/4	11/16	1-1/32	11/16	2-1/16	2-1/32	2-3/32	4-3/16	2-11/32	1-13/32	2-11/32	.40
CG-801-211C	1-1/2X1	27/32	1-5/32	27/32	2-1/4	2-5/16	2-1/4	4-1/2	2-11/32	1-3/4	2-11/32	.43
CG-801-212C	1-1/2X1-1/4	1-3/16	1-1/32	1-3/16	2-9/16	2-9/32	2-9/16	5-1/8	2-11/32	2-3/32	2-11/32	.57
CG-801-247C	2X1/2	9/16	1-13/32	9/16	2-3/32	2-9/32	2-3/32	4-3/16	2-27/32	1-5/32	2-27/32	.45
CG-801-248C	2X3/4	11/16	1-13/32	11/16	2-3/16	2-13/32	2-3/16	4-3/8	2-27/32	1-3/8	2-27/32	.51
CG-801-249C	2X1	27/32	1-7/16	27/32	2-11/32	2-9/16	2-11/32	4-23/32	2-7/8	1-3/4	2-7/8	.57
CG-801-250C	2X1-1/4	1-1/32	1-11/32	1-1/32	2-9/16	2-19/32	2-9/16	5-3/32	2-27/32	2-3/32	2-27/32	.65

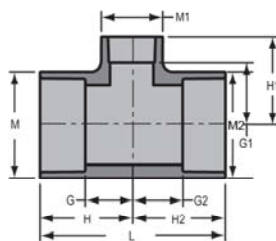


Marine & Offshore Technical
EverTUFF® CPVC Schedule 80 Marine Fittings

Tee - Reducing - Marine

(Continued)

Socket x Socket x Socket

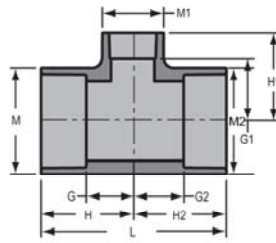


Part Number	Size	G	G1	G2	H	H1	H2	L	M	M1	M2	Approx. Wt. (Lbs.)
CG-801-251C	2X1-1/2	1-3/16	1-11/32	1-3/16	2-11/16	2-27/32	2-11/16	5-3/8	2-7/8	2-3/8	2-7/8	.79
CG-801-254C ¹	2X2X4	3-21/32	2-15/32	3-21/32	5-3/16	4-3/4	5-3/16	10-11/32	5-1/4	5-1/4	5-1/4	5.92
CG-801-287C	2-1/2X1/2	19/32	1-19/32	19/32	2-3/8	2-15/32	2-3/8	4-23/32	3-1/2	1-3/16	3-1/2	.78
CG-801-288C	2-1/2X3/4	21/32	1-1/2	21/32	2-7/16	2-17/32	2-7/16	4-27/32	3-15/32	1-13/32	3-15/32	.83
CG-801-289C	2-1/2X1	7/8	1-11/16	7/8	2-5/8	2-13/16	2-5/8	5-1/4	3-1/2	1-23/32	3-1/2	1.03
CG-801-290C	2-1/2X1-1/4	1-1/32	1-23/32	1-1/32	2-27/32	2-31/32	2-27/32	5-11/16	3-1/2	2-3/32	3-1/2	1.16
CG-801-291C	2-1/2X1-1/2	1-3/16	1-3/4	1-3/16	2-15/16	3-1/8	2-15/16	5-7/8	3-1/2	2-11/32	3-1/2	1.27
CG-801-292C	2-1/2X2	1-13/32	1-5/8	1-13/32	3-3/16	3-1/8	3-3/16	6-3/8	3-1/2	2-7/8	3-1/2	1.37
CG-801-333C ¹	3X1/2	27/32	2-7/16	27/32	2-3/4	3-11/32	2-3/4	5-1/2	4-3/16	1-3/4	4-3/16	1.35
CG-801-334C ¹	3X3/4	11/16	2-1/16	11/16	2-19/32	3-3/32	2-19/32	5-3/16	4-3/16	1-13/32	4-3/16	1.20
CG-801-335C	3X1	27/32	1-31/32	27/32	2-3/4	3-1/8	2-3/4	5-1/2	4-3/16	1-3/4	4-3/16	1.28
CG-801-336C ¹	3X1-1/4	1-3/8	2-1/4	1-3/8	3-5/16	3-17/32	3-5/16	6-5/8	4-3/16	2-7/8	4-3/16	1.93
CG-801-337C	3X1-1/2	1-5/32	2-1/16	1-5/32	3-1/16	3-7/16	3-1/16	6-1/8	4-3/16	2-3/8	4-3/16	1.49
CG-801-338C	3X2	1-7/16	1-13/16	1-7/16	3-5/16	3-5/16	3-5/16	6-5/8	4-3/16	2-7/8	4-3/16	1.73
CG-801-339C	3X2-1/2	1-3/4	1-15/16	1-3/4	3-5/8	3-11/16	3-5/8	7-1/4	4-3/16	3-1/2	4-3/16	2.11
CG-801-415C ¹	4X1/2	7/8	3-1/8	7/8	3-1/8	4-1/32	3-1/8	6-1/4	5-1/4	1-3/4	5-1/4	2.06
CG-801-416C	4X3/4	7/8	3-1/8	7/8	3-1/8	4-1/8	3-1/8	6-1/4	5-1/4	1-3/4	5-1/4	2.02
CG-801-417C	4X1	7/8	2-5/8	7/8	3-1/8	3-3/4	3-1/8	6-1/4	5-1/4	1-3/4	5-1/4	1.99
CG-801-418C ¹	4X1-1/4	1-1/8	2-13/16	1-1/8	3-3/8	4-7/32	3-3/8	6-3/4	5-1/4	2-3/8	5-1/4	2.27
CG-801-419C	4X1-1/2	1-1/8	2-9/16	1-1/8	3-3/8	3-15/16	3-3/8	6-3/4	5-1/4	2-3/8	5-1/4	2.20
CG-801-420C	4X2	1-7/16	2-7/16	1-7/16	3-11/16	3-15/16	3-11/16	7-3/8	5-1/4	2-7/8	5-1/4	2.46
CG-801-421C ¹	4X2-1/2	2-1/8	2-29/32	2-1/8	4-3/8	5	4-3/8	8-3/4	5-1/4	4-3/16	5-1/4	3.48
CG-801-422C	4X3	2-1/8	2-13/16	2-1/8	4-3/8	4-19/32	4-3/8	8-3/4	5-1/4	4-3/16	5-1/4	3.07
CG-801-426C	4X6	5-3/8	4	5-3/8	7-19/32	7-1/16	7-19/32	15-3/16	7-19/16	7-19/16	7-19/16	18.00
CG-801-524C ¹	6X3/4	7/8	3-31/32	7/8	3-7/8	5	3-7/8	7-3/4	7-9/16	1-23/32	7-9/16	4.47
CG-801-525C	6X1	7/8	3-23/32	7/8	3-7/8	4-27/32	3-7/8	7-3/4	7-9/16	1-23/32	7-9/16	4.43
CG-801-526C ¹	6X1-1/4	1-7/16	4-3/16	1-7/16	4-7/16	5-15/32	4-7/16	8-7/8	7-9/16	2-7/8	7-9/16	5.59
CG-801-527C ¹	6X1-1/2	1-7/16	4-3/32	1-7/16	4-7/16	5-1/2	4-7/16	8-7/8	7-19/32	2-7/8	7-19/32	5.54
CG-801-528C	6X2	1-7/16	3-3/4	1-7/16	4-7/16	5-1/4	4-7/16	8-7/8	7-9/16	2-7/8	7-9/16	5.39
CG-801-529C ¹	6X2-1/2	2-1/16	4-3/16	2-1/16	5-5/32	6	5-5/32	10-3/16	7-9/16	4-3/16	7-9/16	7.11
CG-801-530C	6X3	2-1/16	3-3/4	2-1/16	5-3/32	5-5/8	5-3/32	10-3/16	7-9/16	5-1/4	7-9/16	6.70
CG-801-532C	6X4	2-11/16	3-13/16	2-11/16	5-11/16	6-1/16	5-11/16	11-3/8	7-9/16	5-1/4	7-9/16	7.54
CG-801-578C ¹	8X2	2-5/8	6	2-5/8	6-5/8	7-1/2	6-5/8	13-1/4	9-23/32	5-1/4	9-23/32	13.47
CG-801-580C ¹	8X3	2-5/8	5-21/32	2-5/8	6-5/8	7-17/32	6-5/8	13-1/4	9-23/32	5-1/4	9-23/32	13.23
CG-801-582C ¹	8X4	2-5/8	4-7/8	2-5/8	6-5/8	7-1/8	6-5/8	13-1/4	9-23/32	5-1/4	9-23/32	12.37
CG-801-585C	8X6	3-7/8	4-15/16	3-7/8	7-29/32	8	7-29/32	15-13/16	9-23/32	7-9/16	9-23/32	15.60
CG-801-621C	10X2	3-13/16	7-29/32	3-13/16	9-7/16	9-7/16	9-7/16	18-7/8	12-1/8	7-5/8	12-1/8	28.63
CG-801-623C ¹	10X3	3-25/32	7-1/2	3-25/32	9-3/8	9-3/8	9-3/8	18-3/4	12-1/16	7-9/16	12-1/16	28.57
CG-801-624C ¹	10X4	3-25/32	7-1/8	3-25/32	9-3/8	9-3/8	9-3/8	18-3/4	12-1/16	7-9/16	12-1/16	28.40
CG-801-626C	10X6	3-7/8	5-13/16	3-7/8	9-3/8	8-27/32	9-3/8	18-3/4	12-1/16	7-9/16	12-1/16	25.50
CG-801-628C ¹	10X8	5-27/32	7-7/32	5-27/32	10-29/32	11-7/32	10-29/32	21-13/16	12-1/8	12-1/8	12-1/8	49.65
CG-801-664C ¹	12X4	4-7/8	9-3/8	4-7/8	11-15/32	11-5/8	11-15/32	22-29/32	14-1/4	9-3/4	14-1/4	50.14

Tee - Reducing - Marine

Socket x Socket x Socket

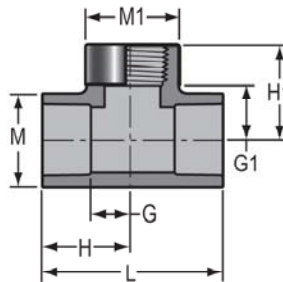
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Part Number	Size	G	G1	G2	H	H1	H2	L	M	M1	M2	Approx. Wt. (Lbs.)
CG-801-666C ¹	12X6	4-7/8	8-1/2	4-7/8	11-15/32	11-1/2	11-15/32	22-29/32	14-9/32	9-23/32	14-9/32	49.36
CG-801-668C	12X8	4-7/8	7-1/8	4-7/8	11-15/32	11-5/32	11-15/32	22-29/32	14-1/4	9-3/4	14-1/4	44.00
CG-801-670C	12X10	6-15/16	8-13/32	6-15/16	12-15/16	13-13/32	12-15/16	25-7/8	14-3/16	14-3/16	14-3/16	69.75

Tee- Special Reinforced - Marine

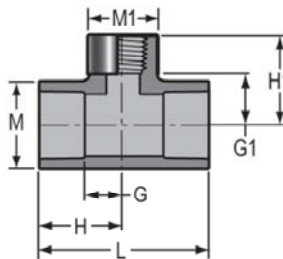
Socket x Socket x SR Fipt - Stainless Steel Collar



Part Number	Size	G	G1	H	H1	L	M	M1	Approx. Wt. (Lbs.)
CG-802-005CSR	1/2	9/16	21/32	1-15/32	1- 3/8	2-15/16	1- 7/32	1-3/16	.13
CG-802-007CSR	3/4	19/32	21/32	1-19/32	1-3/8	3- 3/16	1-3/8	1-3/8	.15
CG-802-010CSR	1	21/32	11/16	1-13/16	1- 5/8	3- 5/8	1-23/32	1-23/32	.34
CG-802-012CSR	1-1/4	13/16	1	2- 3/32	1-31/32	4- 3/16	2- 3/32	2- 1/16	.38
CG-802-015CSR	1-1/2	1-5/16	1- 7/32	2-11/32	2- 5/32	4-11/16	2-11/32	2- 7/16	.52
CG-802-020CSR	2	1- 5/16	1-7/16	2-13/16	2-7/16	5-21/32	2-27/32	3- 1/32	.83
CG-802-030CSR	3	1-27/32	2-5/32	3-23/32	3-9/16	7-15/32	4- 9/32	4-1/4	2.43
CG-802-040CSR	4	2-1/2	2-21/32	4- 5/8	4- 5/32	9- 7/32	5- 1/4	5- 1/4	3.55

Tee - Special Reinforced Reducing - Marine

Socket x Socket x SR Fipt - Stainless Steel Collar



Part Number	Size	G	G1	H	H1	L	M	M1	Approx. Wt. (Lbs.)
CG-802-101CSR	3/4X1/2	19/32	23/32	1-19/32	1-15/32	3-7/32	1-13/32	1-3/16	.15
CG-802-130CSR	1X1/2	7/16	29/32	1- 9/16	1- 5/8	3- 1/8	1-23/32	1- 3/16	.20
CG-802-131CSR	1X3/4	21/32	13/16	1-13/16	1-9/16	3-19/32	1-23/32	1-3/8	.22
CG-802-166CSR	1-1/4X1/2	7/16	1-1/8	1-11/16	1-27/32	3-13/32	2-3/32	1-3/16	.26
CG-802-168CSR	1-1/4X1	27/32	1	2-1/8	1-29/32	4-1/4	2- 3/32	1-11/16	.36
CG-802-211CSR	1-1/2X1	27/32	1- 7/32	2- 1/4	2- 1/8	4-15/32	2- 3/8	1-11/16	.43
CG-802-212CSR	1-1/2X1-1/4	1- 1/32	1- 5/32	2- 7/16	2- 3/32	4-7/8	2- 3/8	2- 1/16	.51

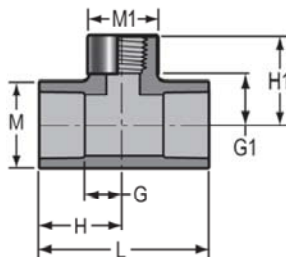


Marine & Offshore Technical
EverTUFF® CPVC Schedule 80 Marine Fittings

Tee - Special Reinforced Reducing - Marine

Socket x Socket x SR Fipt - Stainless Steel Collar

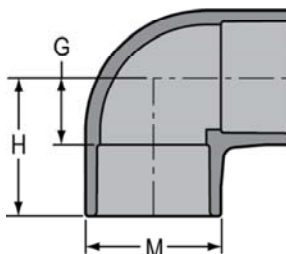
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Part Number	Size	G	G1	H	H1	L	M	M1	Approx. Wt. (Lbs.)
CG-802-247CSR	2X1/2	1/2	1-17/32	2	2- 1/4	4	2-27/32	1- 3/16	.48
CG-802-248CSR	2X3/4	19/32	1-13/32	2- 1/8	2- 1/8	4- 1/4	2- 7/8	1- 3/8	.50
CG-802-287CSR	2-1/2X1/2	17/32	1-3/4	2- 5/16	2- 1/2	4-5/8	3- 1/2	1-3/16	.79

90° Ell - Marine

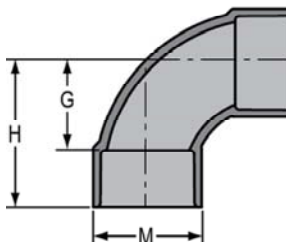
Socket x Socket



Part Number	Size	G	H	M	Approx. Wt. (Lbs.)
CG-806-005C	1/2	9/16	1-15/32	1- 3/16	.08
CG-806-007C	3/4	11/16	1-11/16	1-13/32	.12
CG-806-010C	1	7/8	2	1- 3/4	.20
CG-806-012C	1-1/4	1-1/32	2- 9/32	2-3/32	.31
CG-806-015C	1-1/2	1- 5/32	2- 9/16	2-11/32	.41
CG-806-020C	2	1-13/32	2-15/16	2- 7/8	.62
CG-806-025C	2-1/2	1-1/2	3-3/8	3-1/2	1.14
CG-806-030C	3	2-1/16	4	4- 3/16	1.75
CG-806-040C	4	2-19/32	4-27/32	5- 1/4	2.92
CG-806-060C	6	3-13/16	6-13/16	7-19/32	7.97
CG-806-080C	8	4-25/32	8-25/32	9- 3/4	15.11
CG-806-100C	10	5-25/32	10-13/16	12-1/16	27.41
CG-806-120C	12	7	13	14-1/4	45.01

90° Ell - Sweep - Marine

Socket x Socket

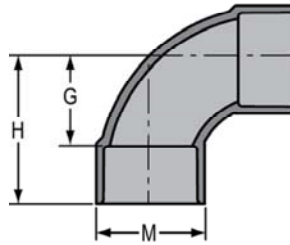


Part Number	Size	G	H	M	Approx. Wt. (Lbs.)
CG-806-005SC	1/2	27/32	1-23/32	1- 3/16	.09
CG-806-007SC	3/4	1-1/16	2-1/16	1-13/32	.13

90° EII - Sweep - Marine

(Continued)

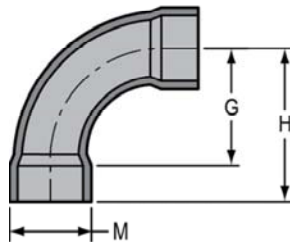
Socket x Socket



Part Number	Size	G	H	M	Approx. Wt. (Lbs.)
CG-806-010SC	1	1- 5/16	2- 7/16	1-3/4	.23
CG-806-012SC	1-1/4	1- 9/16	2-27/32	2- 3/32	.35
CG-806-015SC	1-1/2	1- 3/4	3-5/32	2-3/8	.43
CG-806-020SC	2	2- 5/16	3-13/16	2- 7/8	.81

90° EII - Long Sweep - Marine

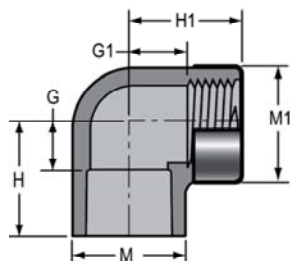
Socket x Socket



Part Number	Size	G	H	M	Approx. Wt. (Lbs.)
CG-806-005LSCF	1/2	1- 7/8	2- 3/4	1- 1/8	.15
CG-806-007LSCF	3/4	2- 7/16	3- 7/16	1- 7/16	.26
CG-806-010LSCF	1	2- 7/8	4	1-11/16	.40
CG-806-012LSCF	1 1/4	3- 5/8	4- 7/8	2- 1/16	.56
CG-806-015LSCF	1 1/2	4- 1/8	5- 1/2	2- 5/16	.65
CG-806-020LSCF	2	4- 3/4	6-1/4	2-13/16	1.18
CG-806-025LSCF	2-1/2	5-3/4	7-3/4	3-7/16	1.70
CG-806-030LSCF	3	7	9	4- 1/8	2.46
CG-806-040LSCF	4	9	11- 1/4	5- 3/16	4.85
CG-806-060LSCF	6	13	16- 1/4	7- 1/2	11.76
CG-806-080LSCF	8	23-1/2	27-3/4	9-5/8	31.25
CG-806-100LSCF	10	27	32-1/4	11-15/16	54.83

90° EII - Special Reinforced - Marine

Socket x SR Fipt - Stainless Steel Collar



Part Number	Size	G	G1	H	H1	M	M1	Approx. Wt. (Lbs.)
CG-807-005CSR	1/2	15/32	23/32	1-11/32	1- 9/32	1- 3/16	1- 7/32	.09
CG-807-007CSR	3/4	9/16	21/32	1- 9/16	1-13/32	1- 3/8	1- 3/8	.11

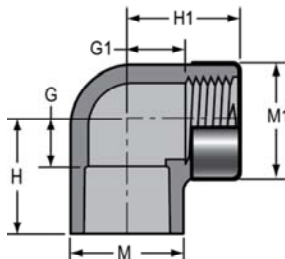


Marine & Offshore Technical
EverTUFF® CPVC Schedule 80 Marine Fittings

90° EII - Special Reinforced - Marine

(Continued)

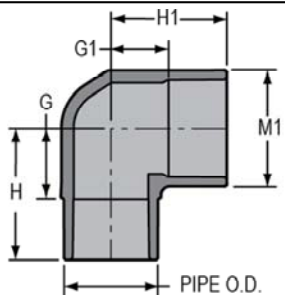
Socket x SR Fipt - Stainless Steel Collar



Part Number	Size	G	G1	H	H1	M	M1	Approx. Wt. (Lbs.)
CG-807-010CSR	1	19/32	13/16	1-23/32	1-23/32	1-11/16	1-23/32	.21
CG-807-012CSR	1-1/4	23/32	1- 1/32	1-31/32	1-31/32	2- 1/16	2- 1/16	.31
CG-807-015CSR	1-1/2	31/32	1- 5/32	2- 3/8	2-1/8	2-11/32	2- 7/16	.42
CG-807-020CSR	2	1-13/32	1- 1/2	2-15/16	2-17/32	3	3-1/32	.87
CG-807-030CSR	3	1-13/16	2- 7/32	3-23/32	3- 9/16	4- 9/32	4- 9/32	1.98
CG-807-040CSR	4	2- 9/32	2-25/32	4- 9/16	4- 7/32	5- 1/4	5- 1/4	3.03

90° Street EII - Marine

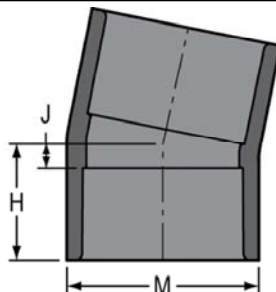
Spigot x Socket



Part Number	Size	G	G1	H	H1	M1	Approx. Wt. (Lbs.)
CG-809-005C	1/2	25/32	19/32	1-11/16	1-15/32	1-3/16	.07
CG-809-007C	3/4	29/32	11/16	1-15/16	1-11/16	1-13/32	.11
CG-809-010C	1	1-3/32	27/32	2- 7/32	2	1-23/32	.20
CG-809-012C	1-1/4	1-5/16	1-1/32	2-9/16	2-9/32	2- 3/32	.31
CG-809-015C	1-1/2	1- 7/16	1- 3/16	2-13/16	2- 9/16	2- 3/8	.42
CG-809-020C	2	1-3/4	1- 7/16	3-1/4	2-31/32	2- 7/8	.64
CG-809-025C	2-1/2	3-3/8	1-1/2	5-1/4	3- 3/8	3-1/2	1.41
CG-809-030C	3	2- 3/8	1-13/16	4- 1/4	3-11/16	4- 3/16	1.70
CG-809-040C	4	3-1/32	2-9/32	5-9/32	4-9/16	5- 1/4	2.94
CG-809-060C	6	5-13/16	3-13/16	8-13/16	6-13/16	7- 9/16	9.27
CG-809-080C	8	7-1/8	5	11-1/8	8-7/8	9- 3/4	17.33
CG-809-100C	10	8-7/8	5-7/8	13-7/8	10-7/8	12- 1/16	34.95
CG-809-120C	12	11	7	17	13	14-5/16	57.29

11-1/4° Ell - Marine

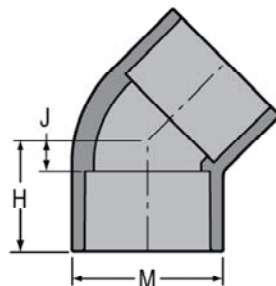
Socket x Socket



Part Number	Size	H	J	M	Approx. Wt. (Lbs.)
CG-811-005CF	1/2	1-5/16	5/16	1-1/8	.06
CG-811-007CF	3/4	1-5/16	5/16	1-3/8	.08
CG-811-010CF	1	1-9/16	5/16	1-11/16	.14
CG-811-012CF	1-1/4	2	1/2	2-1/16	.25
CG-811-015C	1-1/2	1-19/32	7/32	2- 3/8	.25
CG-811-020C	2	1-23/32	7/32	2-27/32	.35
CG-811-025CF	2-1/2	2-11/16	11/16	3- 7/16	.88
CG-811-030C	3	2- 3/16	5/16	4-5/32	.91
CG-811-040C	4	2-21/32	3/8	5- 1/4	1.58
CG-811-060CF	6	4- 1/4	1	7- 1/2	4.68
CG-811-080CF	8	5- 3/8	1- 1/8	9- 5/8	8.72
CG-811-100CF	10	6-11/16	1- 7/16	11-15/16	15.81
CG-811-120CF	12	7-13/16	1- 9/16	14- 1/8	26.65

45° Ell - Marine

Socket x Socket



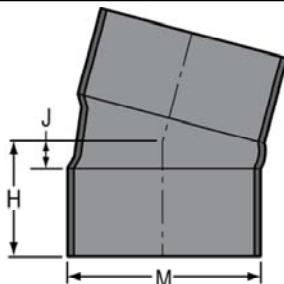
Part Number	Size	H	J	M	Approx. Wt. (Lbs.)
CG-817-005C	1/2	1-1/8	1/4	1-3/16	.06
CG-817-007C	3/4	1-5/16	5/16	1-7/16	.09
CG-817-010C	1	1-7/16	5/16	1-23/32	.16
CG-817-012C	1-1/4	1-5/8	3/8	2-1/8	.22
CG-817-015C	1-1/2	1-13/16	7/16	2-3/8	.29
CG-817-020C	2	2-1/8	5/8	2-7/8	.47
CG-817-025C	2-1/2	2-7/16	11/16	3-1/2	.82
CG-817-030C	3	2-25/32	29/32	4-1/8	1.21
CG-817-040C	4	3-5/16	1-1/16	5-1/4	2.14
CG-817-060C	6	4-3/4	1-3/4	7-9/16	5.58
CG-817-080C	8	6	2	9-3/4	10.64
CG-817-100C	10	7-5/8	2-19/32	12-1/8	20.08
CG-817-120C	12	9-3/16	3-1/8	14-9/32	32.86



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15° Ell - Marine

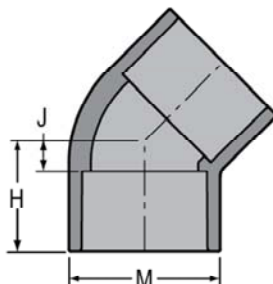
Socket x Socket



Part Number	Size	H	J	M	Approx. Wt. (Lbs.)
CG-818-005CF	1/2	1-5/16	5/16	1-1/8	.13
CG-818-007CF	3/4	1-5/16	5/16	1-3/8	.08
CG-818-010CF	1	1-5/8	3/8	1-11/16	.15
CG-818-012CF	1-1/4	2	1/2	2-1/16	.25
CG-818-015CF	1-1/2	2	1/2	2-5/16	.26
CG-818-020CF	2	2- 5/16	9/16	2-13/16	.48
CG-818-025CF	2-1/2	2- 3/4	3/4	3- 7/16	.88
CG-818-030CF	3	3	3/4	4- 1/8	1.25
CG-818-040CF	4	3- 1/8	7/8	5- 3/16	1.79
CG-818-060CF	6	4- 3/8	1- 1/8	7- 1/2	4.77
CG-818-080CF	8	5-1/2	1- 1/4	9- 5/8	8.81
CG-818-100CF	10	6-15/16	1-11/16	11-15/16	17.29
CG-818-120CF	12	8- 1/16	1-13/16	14- 1/8	27.73

45° Street Ell - Marine

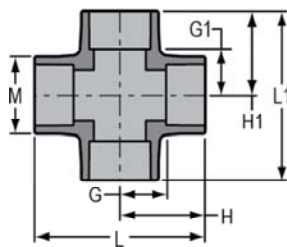
Spigot x Socket



Part Number	Size	H	H1	J	J1	M1	Approx. Wt. (Lbs.)
CG-827-005C	1/2	1-3/8	1-1/8	15/32	1/4	1- 3/16	.06
CG-827-007C	3/4	1-9/16	1-3/8	17/32	3/8	1-3/8	.09
CG-827-010C	1	1-25/32	1- 1/2	19/32	11/32	1-23/32	.15
CG-827-012C	1-1/4	2	1-23/32	3/4	15/32	2- 3/32	.24
CG-827-015C	1-1/2	2-3/16	1-29/32	13/16	17/32	2-3/8	.31
CG-827-020C	2	2-7/16	2-1/8	15/16	5/8	2-7/8	.46
CG-827-025C	2-1/2	3-5/16	2-7/16	1-9/16	11/16	3-17/32	1.22
CG-827-030C	3	3-3/16	2-3/4	1-5/16	7/8	4-3/16	1.25
CG-827-040C	4	3-7/8	3-11/32	1-5/8	1-3/32	5- 1/4	2.19
CG-827-060C	6	5-1/8	4-3/4	2-1/8	1-3/4	7-19/32	5.91
CG-827-080C	8	6-19/32	6	2-9/16	2	9- 3/4	11.14
CG-827-100C	10	10-5/8	7-21/32	5-5/8	2-5/8	12	25.44
CG-827-120C	12	12-13/16	9-5/32	6-13/16	3- 3/32	14-13/32	45.35

Cross - Marine

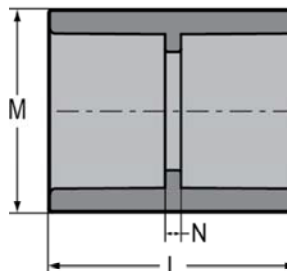
Socket x Socket x Socket x Socket



Part Number	Size	G	G1	H	H1	L	L1	M	M1	Approx. Wt. (Lbs.)
CG-820-005C	1/2	19/32	19/32	1-15/32	1-15/32	2-15/16	2-15/16	1- 3/16	1- 3/16	.14
CG-820-007C	3/4	5/8	5/8	1- 5/8	1- 5/8	3-9/32	3-9/32	1-13/32	1-13/32	.21
CG-820-010C	1	31/32	31/32	2- 3/32	2- 3/32	4-3/16	4-3/16	1-23/32	1-23/32	.39
CG-820-012C	1-1/4	1- 3/32	1- 3/32	2- 3/8	2- 3/8	4- 3/4	4- 3/4	2- 1/8	2- 1/8	.61
CG-820-015C	1-1/2	1- 1/4	1- 1/4	2- 5/8	2- 5/8	5- 1/4	5- 1/4	2- 3/8	2- 3/8	.86
CG-820-020C	2	1- 1/2	1- 1/2	3	3	6	6	3	3	1.40
CG-820-025C	2-1/2	1-11/16	1-11/16	3-7/16	3-7/16	6-7/8	6-7/8	3-17/32	3-17/32	2.17
CG-820-030C	3	2- 3/32	2- 3/32	3-31/32	3-31/32	7-15/16	7-15/16	4-11/32	4-11/32	3.39
CG-820-040C	4	2- 5/8	2- 5/8	4- 7/8	4- 7/8	9- 3/4	9- 3/4	5-1/4	5-1/4	5.50
CG-820-060CF	6	6- 1/4	6- 1/4	9- 1/2	9- 1/2	19	19	7- 1/2	7- 1/2	16.93
CG-820-080CF	8	7- 5/8	7- 5/8	11- 7/8	11- 7/8	23- 3/4	23- 3/4	9- 5/8	9- 5/8	30.81
CG-820-100CF	10	9	9	14- 1/4	14- 1/4	28- 1/2	28- 1/2	11-15/16	11-15/16	68.17
CG-820-120CF	12	11- 1/4	11- 1/4	17- 1/2	17- 1/2	35	35	14- 1/8	14- 1/8	96.33

Coupling - Marine

Socket x Socket



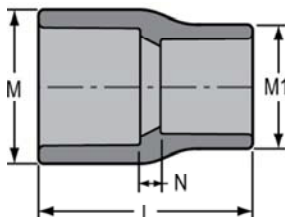
Part Number	Size	L	M	N	Approx. Wt. (Lbs.)
CG-829-005C	1/2	1- 7/8	1-9/32	1/8	.07
CG-829-007C	3/4	2-5/32	1-1/2	1/8	.10
CG-829-010C	1	2-13/32	1-23/32	1/8	.12
CG-829-012C	1-1/4	2-11/16	2- 7/32	5/32	.17
CG-829-015C	1-1/2	2- 7/8	2-11/32	3/32	.22
CG-829-020C	2	3- 1/8	2-7/8	3/32	.32
CG-829-025C	2-1/2	3-23/32	3-1/2	7/32	.58
CG-829-030C	3	3-31/32	4-3/16	3/16	.81
CG-829-040C	4	4-13/16	5-1/4	1/4	1.36
CG-829-060C	6	6-5/16	7-21/32	9/32	3.53
CG-829-080C	8	8-9/32	9-3/4	9/32	6.77
CG-829-100C	10	10- 9/32	12- 1/16	1/4	12.63
CG-829-120C	12	12-13/32	14-9/32	3/8	20.05



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Coupling - Reducing - Marine

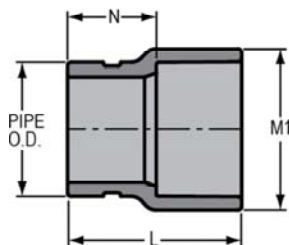
Socket x Socket



Part Number	Size	L	M	M1	N	Approx. Wt. (Lbs.)
CG-829-101C	3/4X1/2	2- 3/32	1-7/16	1-3/16	7/32	.06
CG-829-130C	1X1/2	2- 3/16	1-23/32	1-13/32	3/16	.12
CG-829-131C	1X3/4	2-3/8	1-23/32	1-13/32	7/32	.15
CG-829-166C	1-1/4X1/2	2- 9/16	2- 3/32	1- 5/32	7/16	.14
CG-829-167C	1-1/4X3/4	2-19/32	2- 3/32	1- 5/8	11/32	.17
CG-829-168C	1-1/4X1	2-11/16	2-3/32	1-23/32	5/16	.18
CG-829-209C	1-1/2X1/2	2-27/32	2-11/32	1- 3/16	9/16	.20
CG-829-210C	1-1/2X3/4	2- 7/8	2-7/16	1-13/32	15/32	.22
CG-829-211C	1-1/2X1	2- 7/8	2-13/32	1-15/16	11/32	.26
CG-829-212C	1-1/2X1-1/4	2-13/16	2-13/32	2- 1/8	5/32	.22
CG-829-247C	2X1/2	3- 3/32	2- 7/8	1- 5/32	11/16	.31
CG-829-248C	2X3/4	3- 7/32	2- 7/8	1-7/16	11/16	.32
CG-829-249C	2X1	3-1/2	3	1-3/4	13/16	.37
CG-829-251C	2X1-1/2	3- 7/32	2-27/32	2-11/32	1/4	.31
CG-829-290C	2-1/2X1-1/4	3-29/32	3-1/2	2-3/8	7/8	.57
CG-829-291C	2-1/2X1-1/2	3- 3/4	3- 1/2	2- 3/8	19/32	.50
CG-829-292C	2-1/2X2	3-21/32	3-1/2	2-7/8	3/8	.51
CG-829-335C	3X1	4-1/4	4-3/16	2-29/32	1-7/32	1.01
CG-829-336C	3X1-1/4	4-3/16	4-3/16	2-29/32	1- 1/16	.98
CG-829-337C	3X1-1/2	3- 1/2	4- 3/16	2-3/8	7/32	.70
CG-829-338C	3X2	4	4- 5/32	2-7/8	19/32	.77
CG-829-339C	3X2-1/2	4-1/8	4- 5/32	3- 15/32	1/2	.79
CG-829-416C	4X3/4	5-23/32	5- 9/32	2-29/32	2-7/16	1.79
CG-829-417C	4X1	5-25/32	5- 9/32	2-29/32	2-13/32	1.76
CG-829-419C	4X1-1/2	5-23/32	5- 9/32	2-29/32	2- 1/16	1.67
CG-829-420C	4X2	5- 1/2	5-5/16	2-29/32	1-23/32	1.52
CG-829-421C	4X2-1/2	4-25/32	5-1/4	3- 1/2	25/32	1.27
CG-829-422C	4X3	4-19/32	5- 1/4	4- 3/16	15/32	1.32
CG-829-528C	6X2	7- 1/16	7-19/32	5-9/32	2-1/2	4.55
CG-829-529C	6X2-1/2	6-31/32	7-9/16	5- 9/32	2- 3/16	4.71
CG-829-530C	6X3	7-1/16	7- 9/16	5- 9/32	2-5/32	4.30
CG-829-532C	6X4	6-21/32	7-19/32	5-9/32	1-3/8	3.44
CG-829-580CF	8X3	15	9- 1/2	5- 3/16	8-7/8	8.74
CG-829-582C	8X4	8-7/8	9-3/4	5-9/32	2-9/16	6.43
CG-829-585C	8X6	8-1/16	9- 3/4	7-19/32	1	6.48
CG-829-621CF	10X2	21- 1/2	11- 3/4	5- 3/16	14-3/4	17.04
CG-829-623CF	10X3	21-1/2	11- 3/4	5- 3/16	14-3/8	17.18
CG-829-624CF	10X4	21- 1/8	11- 3/4	5- 3/16	13- 5/8	16.03
CG-829-626C	10X6	10-5/8	12- 1/32	7-19/32	2-5/8	11.46
CG-829-628C	10X8	10- 5/8	12-1/32	9- 3/4	1-5/8	11.62
CG-829-664CF	12X4	28- 3/8	13-15/16	5- 3/16	19- 7/8	29.44
CG-829-666CF	12X6	24- 7/8	13-15/16	7- 1/2	15- 3/8	29.92
CG-829-668C	12X8	12-5/8	14-7/32	9- 3/4	2-7/16	18.35
CG-829-670CF	12X10	16- 3/8	13-15/16	11-15/16	4- 7/8	20.77

Grooved Coupling Adapter - Marine

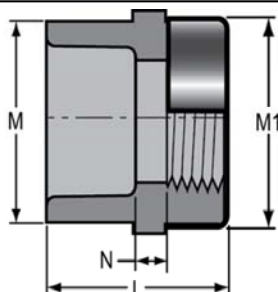
Groove x Socket



Part Number	Size	L	M1	N	Approx. Wt. (Lbs.)
CG-833-012C	1-1/4	2-27/32	2-3/32	1-9/16	.16
CG-833-015C	1-1/2	2-29/32	2-3/8	1-1/2	.19
CG-833-020C	2	3-1/16	2-7/8	1-9/16	.29
CG-833-025C	2-1/2	3-13/32	3-1/2	1-5/8	.52
CG-833-030C	3	3-9/16	4-3/16	1-11/16	.72
CG-833-040C	4	4-1/2	5-1/4	2-7/32	1.37
CG-833-060C	6	5-11/16	7-9/16	2-11/16	2.99
CG-833-080CF	8	8-3/16	9-5/8	3-15/16	6.59
CG-833-100CF	10	9-7/8	11-15/16	4-5/8	10.90
CG-833-120CF	12	10-7/8	14-1/8	4-5/8	17.84

Female Adapter - Special Reinforced - Marine

Socket x SR Fipt - Stainless Steel Collar



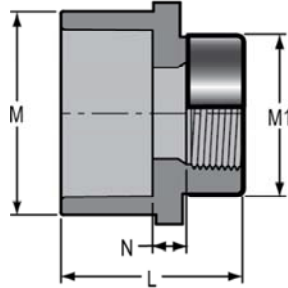
Part Number	Size	L	M	M1	N	Approx. Wt. (Lbs.)
CG-835-005CSR	1/2	1-23/32	1- 5/32	1- 3/16	3/32	.06
CG-835-007CSR	3/4	1- 7/8	1-13/32	1- 3/8	3/32	.08
CG-835-010CSR	1	2-5/32	1-23/32	1-11/16	3/32	.12
CG-835-012CSR	1-1/4	2- 5/16	2- 3/32	2-1/16	3/32	.24
CG-835-015CSR	1-1/2	2- 7/16	2-13/32	2- 7/16	3/32	.28
CG-835-020CSR	2	2-23/32	3	3- 1/32	1/4	.45
CG-835-025CSR	2 1/2	3-9/32	3- 9/16	3- 9/16	3/16	.70
CG-835-030CSR	3	3- 1/2	4- 1/4	4- 9/32	3/32	1.01
CG-835-040CSR	4	3-11/16	5- 7/32	5-7/32	1/4	1.35
CG-835-060CSR	6	4-31/32	7-21/32	7-21/32	1/4	3.16



Marine & Offshore Technical
EverTUFF® CPVC Schedule 80 Marine Fittings

Female Adapter - Special Reinforced Reducing - Marine

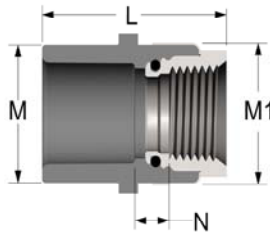
Socket x SR Fipt - Stainless Steel Collar



Part Number	Size	L	M	M1	N	Approx. Wt. (Lbs.)
CG-835-074CSR	1/2X3/4	1-23/32	1- 3/16	1- 3/8	3/32	.07
CG-835-101CSR	3/4X1/2	1-27/32	1- 3/8	1- 3/16	3/32	.07
CG-835-102CSR	3/4X1	2-1/32	1-7/16	1-11/16	3/32	.12
CG-835-130CSR	1X1/2	2	1-11/16	1- 3/16	7/32	.10
CG-835-131CSR	1X3/4	2- 3/32	1- 3/4	1- 3/8	1/4	.12

Female Adapter - Stainless Steel Transition - Marine

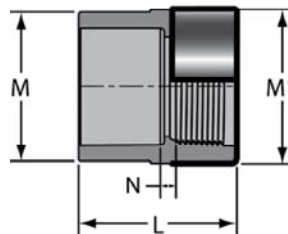
Socket x Fipt With Type 316 Stainless Steel Thread Insert



Part Number	Size	L	M	M1	N	Approx. Wt. (Lbs.)
CG-835-005CSS	1/2	1-25/32	1-5/32	1-3/16	11/32	.10
CG-835-007CSS	3/4	2	1-3/8	1-13/32	1/4	.14
CG-835-010CSS	1	2-1/4	1-23/32	1-11/16	15/32	.24
CG-835-012CSS	1-1/4	2-3/8	2-3/32	2-1/16	3/8	.28
CG-835-015CSS	1-1/2	2-9/16	2-3/8	2-7/16	3/8	.64
CG-835-020CSS	2	2-11/16	2-7/8	3	7/16	.84

Female Adapter - Encapsulated Special Reinforced - Marine

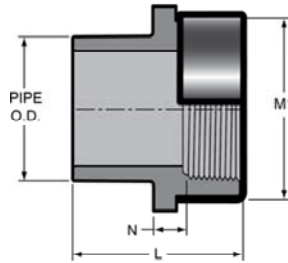
Socket x ESR Fipt



Part Number	Size	L	M	M1	N	Approx. Wt. (Lbs.)
CG-835-005CESR	1/2	1-27/32	1-5/32	1- 9/32	3/32	.07
CG-835-007CESR	3/4	1-31/32	1-13/32	1-15/32	3/32	.09
CG-835-010CESR	1	2- 1/4	1-23/32	1-25/32	3/32	.14
CG-835-012CESR	1-1/4	2- 7/16	2-3/32	2- 5/32	1/8	.26
CG-835-015CESR	1-1/2	2- 9/16	2-13/32	2- 1/2	7/32	.31
CG-835-020CESR	2	2-27/32	3	3- 3/32	1/4	.48

Female Spigot Adapter - Special Reinforced - Marine

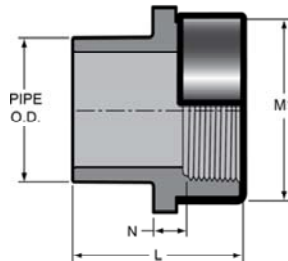
Spigot x SR Fipt - Stainless Steel Collar



Part Number	Size	L	M1	N	Approx. Wt. (Lbs.)
CG-878-005CSR	1/2	1- 3/4	1- 3/16	1/8	.05
CG-878-007CSR	3/4	1-15/16	1- 3/8	3/16	.07
CG-878-010CSR	1	2- 1/4	1-23/32	7/32	.12
CG-878-012CSR	1-1/4	2-15/32	2- 1/16	1/4	.18
CG-878-015CSR	1-1/2	2-21/32	2- 7/16	9/32	.26
CG-878-020CSR	2	2-13/16	3	9/32	.40
CG-878-030CSR	3	3-27/32	4- 9/32	5/16	.96
CG-878-040CSR	4	4- 3/8	5- 1/4	5/8	1.42

Female Adapter- Special Reinforced-Marine-Metric

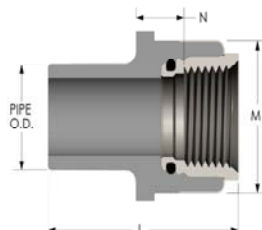
Spigot X BSPT- Stainless Steel Collar



Part Number	Size	L	M1	N	Approx. Wt. (Lbs.)
CG-378-005CSR	1/2	1-3/4	1-3/16	1/8	.05
CG-378-007CSR	3/4	1-15/16	1-3/8	3/16	.07
CG-378-010CSR	1	2-1/4	1-11/16	7/32	.11
CG-378-015CSR	1-1/2	2-5/8	2-7/16	5/16	.26
CG-378-020CSR	2	2-13/16	3	5/16	.40

Female Spigot Adapter - Stainless Steel Transition - Marine

Spigot x Fipt With Type 316 Stainless Steel Thread Insert



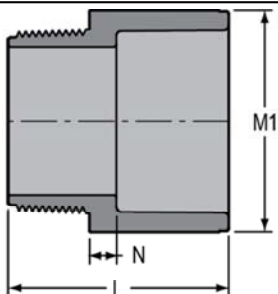
Part Number	Size	L	M1	N	Approx. Wt. (Lbs.)
CG-878-005CSS	1/2	1-15/16	1-3/16	15/32	.09
CG-878-007CSS	3/4	2-1/16	1-3/8	9/16	.14
CG-878-010CSS	1	2-9/32	1-11/16	7/16	.36



Marine & Offshore Technical
EverTUFF® CPVC Schedule 80 Marine Fittings

Male Adapter - Marine

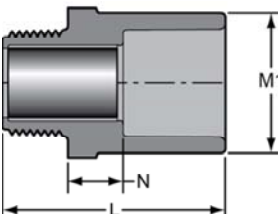
Mipt x Socket



Part Number	Size	L	M1	N	Approx. Wt. (Lbs.)
CG-836-005C	1/2	1-23/32	1-9/32	3/16	.04
CG-836-007C	3/4	1-29/32	1-7/16	7/32	.06
CG-836-102C	3/4X1	2- 9/32	1- 3/4	17/32	.10
CG-836-131C	1X3/4	2- 1/16	1-13/32	1/4	.12
CG-836-010C	1	2-5/32	1-23/32	7/32	.10
CG-836-012C	1-1/4	2-1/4	2-1/8	1/4	.15
CG-836-015C	1-1/2	2-9/16	2-7/16	9/32	.19
CG-836-020C	2	2-7/8	2-7/8	5/16	.30
CG-836-025C	2-1/2	3-11/16	3-17/32	11/32	.53
CG-836-030C	3	3-29/32	4-7/32	3/8	.77
CG-836-040C	4	4-13/32	5-5/16	13/32	1.18
CG-836-060C	6	5-1/2	7-9/16	19/32	3.03
CG-836-080CF	8	8-3/16	9-5/8	2-3/16	6.67
CG-836-100CF	10	10-3/8	11-15/16	3-3/16	11.27
CG-836-120CF	12	11-1/8	14-1/8	2-3/4	22.93

Male Adapter - Internal Reinforced - Marine

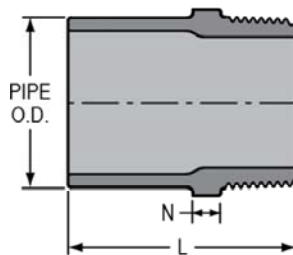
R Mipt x Socket - Stainless Steel Sleeve



Part Number	Size	L	M1	N	Approx. Wt. (Lbs.)
CG-836-005CR	1/2	2-1/8	1-3/16	9/16	.05
CG-836-007CR	3/4	2-1/4	1-13/32	9/16	.08
CG-836-010CR	1	2-21/32	1-23/32	21/32	.15
CG-836-012CR	1-1/4	2-15/16	2-1/8	21/32	.17
CG-836-015CR	1-1/2	3-3/16	2-3/8	3/4	.26
CG-836-020CR	2	3-11/32	2-29/32	3/4	.29

Male Spigot Adapter - Marine

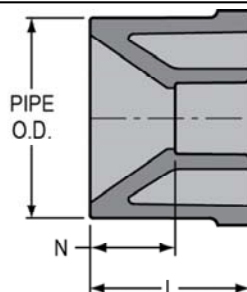
Spigot x Mipt



Part Number	Size	L	N	Approx. Wt. (Lbs.)
CG-861-005C	1/2	1-13/16	1/4	.03
CG-861-007C	3/4	1-31/32	1/4	.04
CG-861-010C	1	2- 3/32	1/4	.07
CG-861-131C	1X3/4	2	1/4	.07
CG-861-012C	1-1/4	2- 9/32	9/32	.12
CG-861-015C	1-1/2	2-7/16	5/16	.14
CG-861-020C	2	2-11/16	3/8	.24

Reducer Bushing Flush Style - Marine

Spigot x Socket



Part Number	Size	L	N	Approx. Wt. (Lbs.)
CG-837-101C	3/4X1/2	1-1/4	3/8	.02
CG-837-130C	1X1/2	1-3/8	1/2	.06
CG-837-131C	1X3/4	1-11/32	5/16	.03
CG-837-166C	1-1/4X1/2	1-1/2	5/8	.12
CG-837-167C	1-1/4X3/4	1-13/32	13/32	.09
CG-837-168C	1-1/4X1	1-13/32	9/32	.06
CG-837-209C	1-1/2X1/2	1-23/32	13/16	.15
CG-837-210C	1-1/2X3/4	1- 5/8	5/8	.16
CG-837-211C	1-1/2X1	1-19/32	13/32	.12
CG-837-212C	1-1/2X1-1/4	1-17/32	9/32	.06
CG-837-247C	2X1/2	1-29/32	1	.29
CG-837-248C	2X3/4	1-23/32	23/32	.27
CG-837-249C	2X1	1-3/4	5/8	.23
CG-837-250C	2X1-1/4	1-11/16	7/16	.20
CG-837-251C	2X1-1/2	1-3/4	11/32	.15
CG-837-289C	2-1/2X1	2-1/32	29/32	.43
CG-837-290C	2-1/2X1-1/4	2-5/32	13/32	.46
CG-837-291C	2-1/2X1-1/2	2-5/32	3/4	.40
CG-837-292C	2-1/2X2	2-9/32	3/4	.29
CG-837-333C	3X1/2	2-3/16	1-5/16	.64
CG-837-334C ¹	3X3/4	2-3/8	1-3/8	.70
CG-837-335C	3X1	2- 9/32	1- 1/8	.66
CG-837-336C	3X1-1/4	2-1/4	1	.70
CG-837-337C	3X1-1/2	2-9/32	7/8	.66

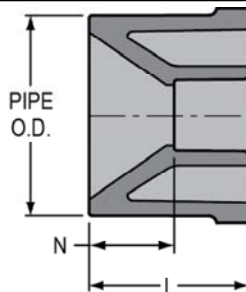


Marine & Offshore Technical
EverTUFF® CPVC Schedule 80 Marine Fittings

Reducer Bushing Flush Style - Marine

Spigot x Socket

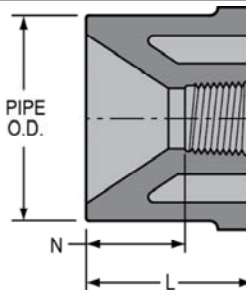
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Part Number	Size	L	N	Approx. Wt. (Lbs.)
CG-837-338C	3X2	2-7/32	9/16	.63
CG-837-339C	3X2-1/2	2-11/32	9/32	.43
CG-837-416C ¹	4X3/4	2-13/16	1-13/16	1.37
CG-837-418C ¹	4X1-1/4	2-23/32	1-15/32	1.14
CG-837-419C	4X1-1/2	2-19/32	1-3/16	1.07
CG-837-420C	4X2	2-21/32	1-1/8	1.10
CG-837-421C	4X2-1/2	2-17/32	25/32	1.07
CG-837-422C	4X3	2-5/8	3/4	.85
CG-837-525C ¹	6X1	3-13/16	2-11/16	3.37
CG-837-527C ¹	6X1-1/2	3-3/4	2-11/32	3.28
CG-837-528C	6X2	3-1/2	2	3.13
CG-837-530C	6X3	3-17/32	2-1/8	3.07
CG-837-532C	6X4	3-9/16	1-1/4	2.90
CG-837-578C ¹	8X2	4-15/16	3-3/8	7.25
CG-837-580C	8X3	4-7/8	3	7.00
CG-837-582C	8X4	4-1/2	2-1/4	6.14
CG-837-585C	8X6	4-3/8	1-3/8	5.36
CG-837-621C ¹	10X2	5-13/16	4-7/16	13.52
CG-837-624C ¹	10X4	6	3-3/4	13.30
CG-837-626C	10X6	5-5/16	2-5/16	10.39
CG-837-628C	10X8	5-11/32	1-5/16	11.47
CG-837-664C ¹	12X4	6-13/16	4-9/16	22.44
CG-837-668C	12X8	6-7/8	2-7/16	16.29
CG-837-670CF	12X10	6	1	12.31

Reducer Bushing Flush Style - Marine

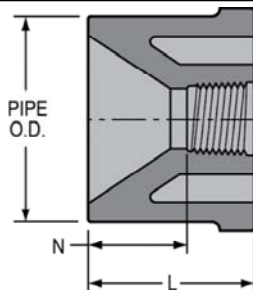
Spigot x Fipt



Part Number	Size	L	N	Approx. Wt. (Lbs.)
CG-838-101C	3/4X1/2	1-1/4	1/2	.02
CG-838-130C	1X1/2	1-3/8	5/8	.06
CG-838-131C	1X3/4	1- 3/8	21/32	.05
CG-838-166C	1-1/4X1/2	1-9/16	13/16	.11
CG-838-167C	1-1/4X3/4	1-15/32	3/4	.09
CG-838-168C	1-1/4X1	1-7/16	1/2	.09

Reducer Bushing Flush Style - Marine

Spigot x Fipt

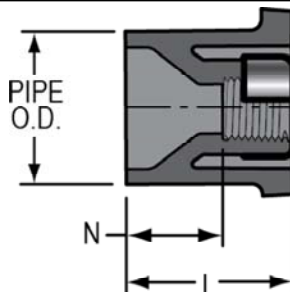


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Part Number	Size	L	N	Approx. Wt. (Lbs.)
CG-838-207C	1-1/2X1/4	1-9/16	15/16	.15
CG-838-209C	1-1/2X1/2	1-23/32	1	.16
CG-838-210C	1-1/2X3/4	1-23/32	29/32	.14
CG-838-211C	1-1/2X1	1-23/32	13/16	.15
CG-838-212C	1-1/2X1-1/4	1- 1/2	9/16	.10
CG-838-247C	2X1/2	1-29/32	1-3/16	.29
CG-838-248C	2X3/4	1-29/32	1- 5/32	.30
CG-838-249C	2X1	1-7/8	1	.26
CG-838-250C	2X1-1/4	1-29/32	7/8	.25
CG-838-251C	2X1-1/2	1-29/32	15/16	.20
CG-838-287C	2-1/2X1/2	2- 3/8	1-21/32	.45
CG-838-288C	2-1/2X3/4	2- 7/16	1- 5/8	.53
CG-838-289C	2-1/2X1	2-1/8	1-7/32	.41
CG-838-290C	2-1/2X1-1/4	2-3/8	1-7/32	.45
CG-838-291C	2-1/2X1-1/2	2- 3/8	1-13/32	.51
CG-838-292C	2-1/2X2	2-1/32	1- 1/16	.26
CG-838-334C	3X3/4	2- 9/32	1-17/32	.62
CG-838-335C	3X1	2-1/4	1-3/8	.61
CG-838-336C	3X1-1/4	2-9/32	1-11/32	.61
CG-838-337C	3X1-1/2	2-9/32	1-5/16	.74
CG-838-338C	3X2	2- 3/16	1- 7/32	.57
CG-838-339C	3X2-1/2	2- 3/8	13/16	.50
CG-838-420C	4X2	2-21/32	1-21/32	1.19
CG-838-421C	4X2-1/2	2-21/32	1-5/32	1.10
CG-838-422C	4X3	2- 5/8	1-1/32	.84
CG-838-528C	6X2	3-1/2	2-1/2	3.25
CG-838-530C	6X3	3-17/32	2- 1/8	3.14
CG-838-532C	6X4	3-17/32	2- 1/32	2.79

Reducer Bushing - Special Reinforced - Marine

Spigot x SR Fipt - Stainless Steel Collar



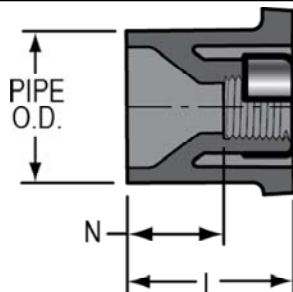
Part Number	Size	L	N	Approx. Wt. (Lbs.)
CG-838-209CSR	1-1/2X1/2	1-23/32	1	.17
CG-838-210CSR	1-1/2X3/4	1-23/32	29/32	.16
CG-838-247CSR	2X1/2	1-29/32	1-3/16	.29



Marine & Offshore Technical
EverTUFF® CPVC Schedule 80 Marine Fittings

Reducer Bushing - Special Reinforced - Marine

Spigot x SR Fipt - Stainless Steel Collar

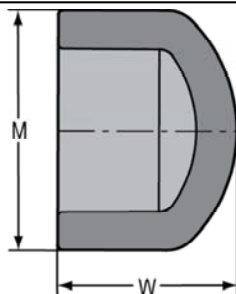


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Part Number	Size	L	N	Approx. Wt. (Lbs.)
CG-838-248CSR	2X3/4	1-29/32	1- 5/32	.29
CG-838-249CSR	2X1	1-7/8	31/32	.31
CG-838-334CSR	3X3/4	2- 9/32	1-17/32	.62
CG-838-335CSR	3X1	2-1/4	1-3/8	.68
CG-838-336CSR	3X1-1/4	2-9/32	1-11/32	.63
CG-838-337CSR	3X1-1/2	2-9/32	1-5/16	.64
CG-838-528CSR	6X2	3-1/2	2-1/2	3.20
CG-838-530CSR	6X3	3-17/32	2- 1/8	3.07
CG-838-532CSR	6X4	3-27/32	2	2.75

Cap - Marine

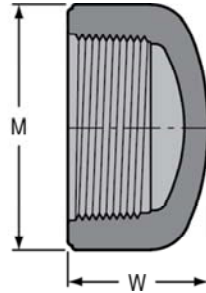
Socket



Part Number	Size	M	W	Approx. Wt. (Lbs.)
CG-847-005C	1/2	1-3/16	1-7/32	.03
CG-847-007C	3/4	1-3/8	1-13/32	.04
CG-847-010C	1	1-11/16	1-5/8	.08
CG-847-012C	1-1/4	2-3/32	1-27/32	.12
CG-847-015C	1-1/2	2-11/32	2	.17
CG-847-020C	2	2-27/32	2-9/32	.26
CG-847-025C	2-1/2	3-17/32	2-5/8	.46
CG-847-030C	3	4-5/32	3-1/32	.73
CG-847-040C	4	5-7/32	3-15/16	1.36
CG-847-060C	6	7-9/16	5-15/32	3.42
CG-847-080C	8	9-23/32	7-5/32	6.93
CG-847-100CF	10	12-1/4	5-15/16	7.48
CG-847-120CF	12	14-1/4	7-1/8	12.11

CAP - Marine

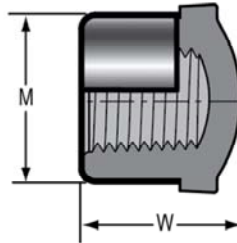
Fipt



Part Number	Size	M	W	Approx. Wt. (Lbs.)
CG-848-005C	1/2	1-3/16	1-1/16	.03
CG-848-007C	3/4	1-3/8	1-3/32	.04
CG-848-010C	1	1-27/32	1-7/16	.10
CG-848-012C	1-1/4	2-7/32	1-17/32	.15
CG-848-015C	1-1/2	2-17/32	1-19/32	.20
CG-848-020C	2	3-1/16	1-13/16	.29
CG-848-025C	2-1/2	3-11/16	2-15/32	.58
CG-848-030C	3	4-3/8	2-7/16	.77
CG-848-040C	4	5-17/32	3	1.37
CG-848-060CF	6	7-3/16	4-3/8	2.20
CG-848-080CF	8	9-3/8	4-3/8	3.76

Cap - Special Reinforced - Marine

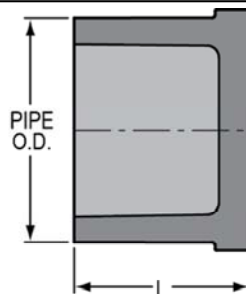
SR Fipt - Stainless Steel Collar



Part Number	Size	M	W	Approx. Wt. (Lbs.)
CG-848-005CSR	1/2	1-3/16	1-1/16	.04
CG-848-007CSR	3/4	1- 3/8	1- 3/32	.05
CG-848-030CSR	3	4- 9/32	2- 7/16	.84

Plug - Marine

Spigot



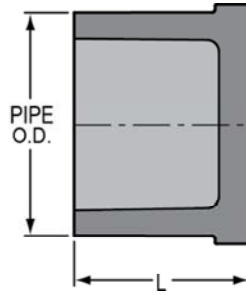
Part Number	Size	L	Approx. Wt. (Lbs.)
CG-849-005C	1/2	1-5/32	.03
CG-849-007C	3/4	1-1/4	.03
CG-849-010C	1	1-3/8	.06
CG-849-012C	1-1/4	1-17/32	.10



Marine & Offshore Technical
EverTUFF® CPVC Schedule 80 Marine Fittings

Plug - Marine

Spigot

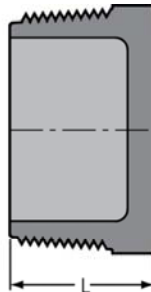


(Continued)

Part Number	Size	L	Approx. Wt. (Lbs.)
CG-849-015C	1-1/2	1-11/16	.14
CG-849-020C	2	1-7/8	.22
CG-849-025CF ⁴	2-1/2	5-3/8	1.12
CG-849-030CF ⁴	3	5-7/8	1.55
CG-849-040CF ⁴	4	6-15/16	2.66
CG-849-060CF ⁴	6	9-5/8	6.75
CG-849-080CF ⁴	8	12-3/16	13.50
CG-849-100CF ⁴	10	12-1/4	17.99
CG-849-120CF ⁴	12	14-1/8	28.85

Plug - Marine

Mipt



Part Number	Size	L	Approx. Wt. (Lbs.)
CG-850-005C	1/2	27/32	.01
CG-850-007C	3/4	7/8	.02
CG-850-010C	1	1-1/16	.05
CG-850-012C	1-1/4	1-5/16	.07
CG-850-015C	1-1/2	1-3/8	.10
CG-850-020C	2	1-3/8	.16
CG-850-025C	2-1/2	1-13/16	.29
CG-850-030C	3	1-7/8	.45
CG-850-040C	4	2-1/8	.81
CG-850-060C	6	2-3/32	1.79
CG-850-080C	8	2-13/32	3.53
CG-850-100CF ⁴	10	8- 7/16	13.76
CG-850-120CF ⁴	12	10-5/8	24.34

Wye - Marine

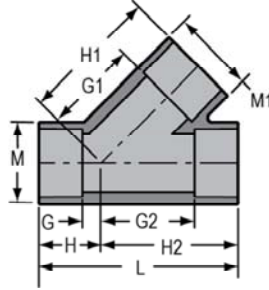
Socket x Socket x Socket

1/2" - 2" - 235 psi Maximum Internal Pressure

Rating @ 73°F (23°C) 2-1/2" - 6" - 150 psi

Maximum Internal Pressure Rating @ 73°F (23°C) 8" - Larger & All Fabricated Sizes - 100 psi

Maximum Internal Pressure Rating @ 73°F (23°C)



Part Number	Size	G	G1	G2	H	H1	H2	L	M	M1	Approx. Wt. (Lbs.)
CG-875-005C	1/2	1/4	1-3/16	1-3/16	1-5/32	2- 1/16	2-1/16	3-7/32	1- 5/32	1- 5/32	.12
CG-875-007C	3/4	9/32	1-13/32	1-13/32	1-9/32	2-13/32	2-13/32	3-11/16	1- 3/8	1- 3/8	.19
CG-875-010C	1	11/32	1- 3/4	1- 3/4	1-15/32	2-7/8	2- 7/8	4-11/32	1-11/16	1-11/16	.32
CG-875-012C	1-1/4	13/32	2-3/16	2-3/16	1-21/32	3-15/32	3-15/32	5-1/8	2- 1/16	2- 1/16	.52
CG-875-015C	1-1/2	15/32	2-19/32	2-19/32	1-27/32	3-31/32	3-31/32	5-13/16	2-11/32	2-11/32	.73
CG-875-020C	2	5/8	3- 7/32	3- 7/32	2- 5/32	4-23/32	4-23/32	6- 7/8	2- 7/8	2- 7/8	1.27
CG-875-025C	2-1/2	27/32	3-31/32	3-31/32	2-19/32	5-23/32	5-23/32	8- 5/16	3- 1/2	3- 1/2	2.04
CG-875-030C	3	31/32	4- 3/4	4-3/4	2-7/8	6- 5/8	6-5/8	9- 1/2	4- 3/16	4- 3/16	3.12
CG-875-040C	4	1-7/32	6- 1/32	6- 1/32	3-15/32	8- 9/32	8- 9/32	11-3/4	5- 1/4	5- 1/4	5.35
CG-875-060C	6	1-13/32	8-21/32	8-1/16	4-13/32	11-21/32	11-1/16	15-15/32	7- 9/16	7- 9/16	13.21
CG-875-080C	8	2-1/32	11-9/32	11-9/32	6-1/32	15-9/32	15-9/32	21- 5/16	9- 3/4	9- 3/4	28.12

Wye - Reducing - Marine

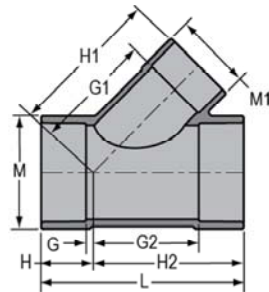
Socket x Socket x Socket

1/2" - 2" - 235 psi Maximum Internal Pressure

Rating @ 73°F (23°C) 2-1/2" - 6" - 150 psi

Maximum Internal Pressure Rating @ 73°F (23°C) 8" - 12" 100 psi Maximum Internal Pressure

Rating @ 73°F (23°C)



Part Number	Size	G	G1	G2	H	H1	H2	L	M	M1	Approx. Wt. (Lbs.)
CG-875-101C ¹	3/4X1/2	9/32	1-25/32	1-13/32	1-9/32	2-21/32	2-13/32	3-11/16	1-3/8	1-3/8	.21
CG-875-130C ¹	1X1/2	11/32	2-3/16	1-3/4	1-15/32	3-3/32	2-7/8	4-3/8	1-11/16	1-11/16	.39
CG-875-131C ¹	1X3/4	11/32	2-1/16	1-3/4	1-15/32	3-3/32	2-29/32	4-3/8	1-11/16	1-11/16	.36
CG-875-166C ¹	1-1/4X1/2	13/32	2-13/16	2-13/16	1-21/32	3-23/32	3-15/32	5-1/8	2-1/16	2-1/16	.65
CG-875-167C ¹	1-1/4X3/4	13/32	2-9/32	2-3/16	1-21/32	3-5/8	3-15/32	5- 1/8	2- 1/16	2- 1/16	.62
CG-875-168C ¹	1-1/4X1	13/32	2-15/32	2-3/16	1-21/32	3-5/8	3-15/32	5- 1/8	2- 1/16	2- 1/16	.59
CG-875-209C ¹	1-1/2X1/2	15/32	3-13/32	2-19/32	1-27/32	4-9/32	3-31/32	5-13/16	2-11/32	2-11/32	.89
CG-875-210C ¹	1-1/2X3/4	1/2	3-1/2	2-9/16	1-7/8	4-1/2	3-15/16	5-13/16	2-11/32	2-11/32	.90
CG-875-211C ¹	1-1/2X1	15/32	3	2-19/32	1-27/32	4-1/8	3-31/32	5-13/16	2-11/32	2-11/32	.86
CG-875-212C ¹	1-1/2X1-1/4	15/32	2-7/8	2-19/32	1-27/32	4-1/8	3-31/32	5-13/16	2-11/32	2-11/32	.80
CG-875-247C ¹	2X1/2	5/8	4-1/8	3-7/32	2-5/32	5	4-23/32	6-7/8	2-7/8	2-7/8	1.57
CG-875-248C ¹	2X3/4	5/8	4-5/32	3- 7/32	2- 5/32	5-5/32	4-7/8	6- 7/8	2- 7/8	2- 7/8	1.55
CG-875-249C ¹	2X1	5/8	3-7/8	3-7/32	2-5/32	5	4-23/32	6-7/8	2-7/8	2-7/8	1.51
CG-875-250C ¹	2X1-1/4	5/8	3-21/32	3-7/32	2- 5/32	4-15/16	4-23/32	6- 7/8	2- 7/8	2- 7/8	1.48
CG-875-251C ¹	2X1-1/2	5/8	3-3/4	3-7/32	2-5/32	5-1/8	4-23/32	6- 7/8	2- 7/8	2- 7/8	1.43
CG-875-335C ¹	3X1	31/32	5- 7/8	4-3/4	2-7/8	7-1/32	6-5/8	9-1/2	4- 3/16	4- 3/16	3.79
CG-875-336C ¹	3X1-1/4	31/32	5- 3/4	4-3/4	2-7/8	7-1/32	6-5/8	9-1/2	4- 3/16	4- 3/16	3.83
CG-875-337C ¹	3X1-1/2	31/32	5-3/4	4-3/4	2-7/8	7-1/32	6-5/8	9-1/2	4-3/16	4-3/16	3.79



Marine & Offshore Technical
EverTUFF® CPVC Schedule 80 Marine Fittings

Wye - Reducing - Marine

(Continued)

Socket x Socket x Socket

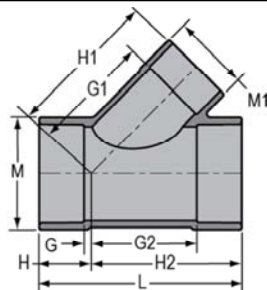
1/2" - 2" - 235 psi Maximum Internal Pressure

Rating @ 73°F (23°C) 2-1/2" - 6" - 150 psi

Maximum Internal Pressure Rating @ 73°F (23°C)

8" - 12" 100 psi Maximum Internal Pressure

Rating @ 73°F (23°C)

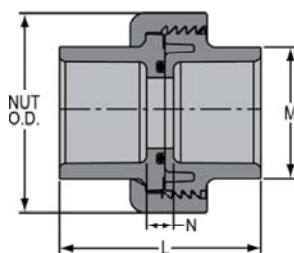


Part Number	Size	G	G1	G2	H	H1	H2	L	M	M1	Approx. Wt. (Lbs.)
CG-875-338C ¹	3X2	31/32	5-7/16	4- 3/4	2- 7/8	6-31/32	6- 5/8	9- 1/2	4- 3/16	4- 3/16	3.76
CG-875-339C ¹	3X2-1/2	31/32	4-15/16	4-3/4	2-7/8	7-1/32	6-5/8	9-1/2	4- 3/16	4- 3/16	3.53
CG-875-420C	4X2	3/32	4-7/8	4-15/32	2-5/32	6-3/8	6-3/4	8-29/32	5-1/4	2-7/8	3.13
CG-875-422C	4X3	5/8	5- 7/16	5-9/32	2-7/8	7- 5/16	7-1/2	10-3/8	5- 1/4	4-5/32	4.18
CG-875-528C ¹	6X2	0	8-23/32	6-11/16	3	10-1/4	9-11/16	12-11/16	7- 9/16	5- 7/16	11.18
CG-875-530C ¹	6X3	0	8-11/32	6-11/16	3	10- 1/4	9-11/16	12-11/16	7- 9/16	5-7/16	10.94
CG-875-532C	6X4	0	7-5/8	6-11/16	3	9-7/8	9-11/16	12-11/16	7- 9/16	5- 7/16	10.08
CG-875-578C ¹	8X2	15/32	10-3/16	8-1/4	3-17/32	11-23/32	12-1/4	15-25/32	9-23/32	5-1/4	16.42
CG-875-580C ¹	8X3	15/32	9-3/4	8-1/4	3-17/32	11-21/32	12-1/4	15-3/4	9-23/32	5-1/4	16.17
CG-875-582C	8X4	-15/32	9-1/16	8-1/4	3-17/32	11-5/16	12-1/4	15-3/4	9-23/32	5- 1/4	15.31
CG-875-585C ¹	8X6	2-1/32	12-11/16	11-9/32	6-1/32	15-11/16	15-9/32	21-5/16	9-3/4	9-3/4	33.48
CG-875-626C	10X6	-3/16	11-29/32	11	4-13/16	14-15/16	16	20-13/16	12- 1/16	7-5/8	29.73
CG-875-628C	10X8	1-7/16	12-7/8	12-7/16	6-7/16	16-7/8	17-7/16	23-7/8	12-3/32	9-3/4	37.73

Union 2000 - Socket/FKM - Marine

Socket x Socket with FKM O-ring Seal

235 psi Maximum Internal Pressure Rating @ 73°F (23°C)

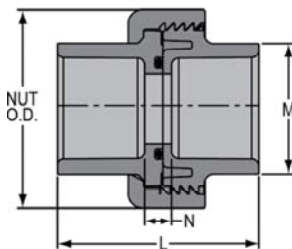


Part Number	Size	L	M	N	NUT O.D.	Approx. Wt. (Lbs.)
CG-8057-005C	1/2	2- 3/32	1- 3/16	5/16	1-15/16	.12
CG-8057-007C	3/4	2- 3/8	1-3/8	3/8	2-3/8	.20
CG-8057-010C	1	2-11/16	1-23/32	13/32	2-21/32	.28
CG-8057-012C	1-1/4	2-15/16	2- 3/32	1-3/32	3-3/32	.41
CG-8057-015C	1-1/2	3- 1/4	2-11/32	1/2	3-19/32	.54
CG-8057-020C	2	3-9/16	2- 7/8	17/32	4-5/16	.90
CG-8057-025C	2-1/2	4- 7/32	3- 1/2	11/16	6-3/16	2.25
CG-8057-030C	3	4-5/16	4-5/32	17/32	6-3/16	2.27
CG-8057-040C	4	5-3/16	5- 1/4	21/32	7- 3/4	4.02
CG-8057-060C	6	6-29/32	7-21/32	27/32	11- 5/8	12.44

Transition Union - Socket/FKM - Metric MARINE

IPS x DIN Socket with FKM O-ring Seal

235 psi Maximum Internal Pressure Rating @ 73°
F (23°C)

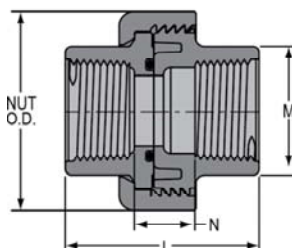


Part Number	Size	L	M	N	NUT O.D.	Approx. Wt. (Lbs.)
CG-8657-020C	1/2 X 20d	2-1/16	1-3/16	5/16	1-15/16	.13
CG-8657-025C	3/4 X 25d	2-3/8	1-17/32	11/32	2-3/8	.20
CG-8657-032C	1 X 32d	2-21/32	1-11/16	3/8	2-21/32	.28
CG-8657-040C	1-1/4 X 40d	2-15/16	2-1/16	13/32	3-3/16	.42
CG-8657-050C	1-1/2 X 50d	3-9/32	2-11/32	1/2	3-19/32	.52
CG-8657-063C	2 X 63d	3-9/16	3	9/16	4-5/16	.87
CG-8657-090C	3 X 90d	5-1/32	4-3/8	1-1/4	5-25/32	2.51
CG-8657-110C	4 X 110d	5-7/8	5-13/32	1-11/32	7-1/8	4.17

Union 2000 - Fipt/FKM - Marine

Fipt x Fipt with FKM O-ring Seal

235 psi Maximum Internal Pressure Rating @ 73°
F (23°C)



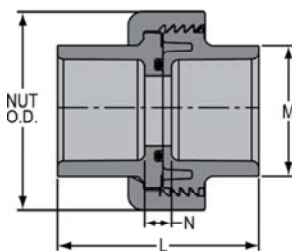
Part Number	Size	L	M	N	NUT O.D.	Approx. Wt. (Lbs.)
CG-8058-005C	1/2	1-29/32	1- 3/16	17/32	1-7/8	.13
CG-8058-007C	3/4	2-3/32	1- 3/8	3/4	2-3/8	.20
CG-8058-010C	1	2-9/16	1-11/16	29/32	2-9/16	.29
CG-8058-012C	1-1/4	2-23/32	2-1/16	7/8	3-3/16	.42
CG-8058-015C	1-1/2	2-3/16	2-3/8	1	3-19/32	.56
CG-8058-020C	2	3-3/16	3	1-1/4	4-5/16	.94
CG-8058-025C	2-1/2	4-1/16	3- 9/16	1-15/32	6-3/16	2.41
CG-8058-030C	3	4-3/16	4- 9/32	1-1/2	6-3/16	2.48
CG-8058-040C	4	4-11/16	5- 1/4	1-13/16	7- 3/4	4.05
CG-8058-060C	6	6-7/32	7-21/32	2-13/16	11-5/8	12.14



Marine & Offshore Technical
EverTUFF® CPVC Schedule 80 Marine Fittings

Union 2000 - Socket/EPDM - Marine

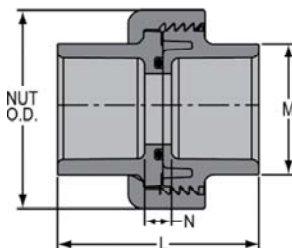
Socket x Socket with EPDM O-ring Seal
235 psi Maximum Internal Pressure Rating @ 73° F (23°C)



Part Number	Size	L	M	N	NUT O.D.	Approx. Wt. (Lbs.)
CG-8097-005C	1/2	2- 3/32	1- 3/16	5/16	1-15/16	.12
CG-8097-007C	3/4	2- 3/8	1-3/8	3/8	2-3/8	.20
CG-8097-010C	1	2-11/16	1-23/32	13/32	2-21/32	.27
CG-8097-012C	1-1/4	2-15/16	2- 3/32	1-3/32	3-3/32	.41
CG-8097-015C	1-1/2	3- 1/4	2-11/32	1/2	3-19/32	.53
CG-8097-020C	2	3-9/16	2- 7/8	17/32	4-5/16	.90
CG-8097-025C	2-1/2	4- 7/32	3- 1/2	11/16	6-3/16	2.24
CG-8097-030C	3	4-5/16	4-5/32	17/32	6-3/16	2.26
CG-8097-040C	4	5-3/16	5- 1/4	21/32	7- 3/4	4.00
CG-8097-060C	6	6-29/32	7-21/32	27/32	11- 5/8	12.41

Transition Union - Socket/EPDM - Metric MARINE

IPS x DIN Socket with EPDM O-ring Seal
235 psi Maximum Internal Pressure Rating @ 73° F (23°C)

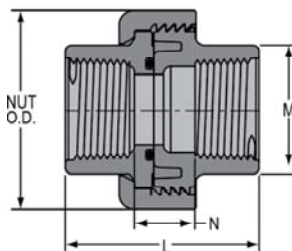


Part Number	Size	L	M	N	NUT O.D.	Approx. Wt. (Lbs.)
CG-8697-020C	1/2 X 20d	2-1/16	1-3/16	5/16	1-15/16	.13
CG-8697-025C	3/4 X 25d	2-3/8	1-17/32	11/32	2-3/8	.20
CG-8697-032C	1 X 32d	2-21/32	1-11/16	3/8	2-21/32	.28
CG-8697-040C	1-1/4 X 40d	2-15/16	2-1/16	13/32	3-3/16	.42
CG-8697-050C	1-1/2 X 50d	3-9/32	2-11/32	1/2	3-19/32	.52
CG-8697-063C	2 X 63d	3-9/16	3	9/16	4-5/16	.86
CG-8697-090C	3 X 90d	5-1/32	4-3/8	1-1/4	5-25/32	2.50
CG-8697-110C	4 X 110d	5-7/8	5-13/32	1-11/32	7-1/8	4.15

Union 2000 - Fipt/EPDM - Marine

Fipt x Fipt with EPDM O-ring Seal

235 psi Maximum Internal Pressure Rating @ 73° F (23°C)

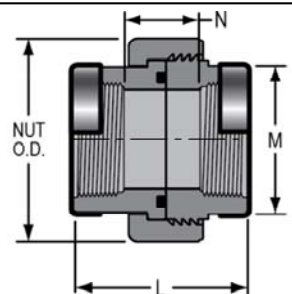


Part Number	Size	L	M	N	NUT O.D.	Approx. Wt. (Lbs.)
CG-8098-005C	1/2	1-15/16	1- 3/16	19/32	1-15/16	.13
CG-8098-007C	3/4	2-3/32	1- 3/8	3/4	2-3/8	.20
CG-8098-010C	1	2-9/16	1-11/16	29/32	2-9/16	.29
CG-8098-012C	1-1/4	2-23/32	2-1/16	7/8	3-3/16	.42
CG-8098-015C	1-1/2	2-3/16	2-3/8	1	3-19/32	.55
CG-8098-020C	2	3-3/16	3	1-1/4	4-5/16	.93
CG-8098-025C	2-1/2	4-1/16	3- 9/16	1-15/32	6-3/16	2.40
CG-8098-030C	3	4-3/16	4- 9/32	1-1/2	6-3/16	2.47
CG-8098-040C	4	4-11/16	5- 1/4	1-13/16	7- 3/4	4.03
CG-8098-060C	6	6-7/32	7-21/32	3	11-5/8	12.11

Union 2000 - Special Reinforced Fipt/FKM - Marine

SR Fipt x SR Fipt w/FKM O-ring Seal - Stainless Steel Collar

235 psi Maximum Internal Pressure Rating @ 73° F (23°C)



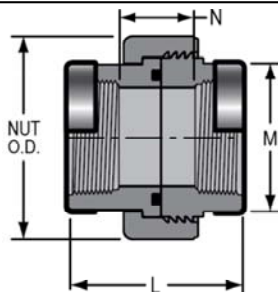
Part Number	Size	L	M	N	NUT O.D.	Approx. Wt. (Lbs.)
CG-8058-005CSR	1/2	2	1-7/32	9/16	1-15/16	.15
CG-8058-007CSR	3/4	2-1/8	1- 3/8	23/32	2-3/8	.22
CG-8058-010CSR	1	2-19/32	1-23/32	29/32	2-21/32	.34
CG-8058-012CSR	1-1/4	2-3/4	2-3/32	29/32	3-3/16	.46
CG-8058-015CSR	1-1/2	2-27/32	2-7/16	1-1/32	3-19/32	.62
CG-8058-020CSR	2	3-3/16	3- 1/32	1-9/32	4-5/32	1.02
CG-8058-025CSR	2-1/2	4-3/32	3-19/32	1-9/16	6-3/16	2.51
CG-8058-030CSR	3	4-7/32	4- 9/32	1-1/2	6-3/16	2.58
CG-8058-040CSR	4	4-3/4	5- 1/4	1-13/16	7-3/4	4.24
CG-8058-060CSR	6	6-1/4	7-19/32	2-31/32	11- 5/8	12.43



Marine & Offshore Technical
EverTUFF® CPVC Schedule 80 Marine Fittings

**Union 2000 - Special
Reinforced Fipt/EPDM - Marine**

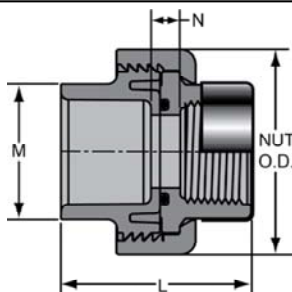
SR Fipt x SR Fipt w/EPDM O-ring Seal - Stainless Steel
Collar
235 psi Maximum Internal Pressure Rating @ 73°
F (23°C)



Part Number	Size	L	M	N	NUT O.D.	Approx. Wt. (Lbs.)
CG-8098-005CSR	1/2	2	1-7/32	9/16	1-15/16	.15
CG-8098-007CSR	3/4	2-1/8	1- 3/8	23/32	2-3/8	.22
CG-8098-010CSR	1	2-19/32	1-23/32	29/32	2-21/32	.34
CG-8098-012CSR	1-1/4	2-3/4	2-3/32	29/32	3-3/16	.46
CG-8098-015CSR	1-1/2	2-27/32	2-7/16	1-1/32	3-19/32	.61
CG-8098-020CSR	2	3-3/16	3- 1/32	1-9/32	4-5/16	1.02
CG-8098-025CSR	2-1/2	4- 3/32	3-19/32	1-9/16	6-3/16	2.50
CG-8098-030CSR	3	4-7/32	4- 9/32	1-1/2	6-3/16	2.57
CG-8098-040CSR	4	4-3/4	5- 1/4	1-13/16	7- 3/4	4.22
CG-8098-060CSR	6	6-1/4	7-19/32	2-31/32	11- 5/8	12.39

**Union 2000 - Socket/Special
Reinforced Fipt/EPDM-
MARINE**

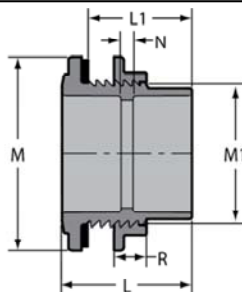
Socket x SR Fipt w/EPDM O-ring Seal - Stainless Steel
Collar
235 psi Maximum Internal Pressure Rating @ 73°
F (23°C)



Part Number	Size	L	M	N	NUT O.D.	Approx. Wt. (Lbs.)
CG-8099-005CSR	1/2	1-29/32	1-3/16	9/32	1-15/16	.13
CG-8099-007CSR	3/4	2-3/32	1-3/8	11/32	2-3/8	.20
CG-8099-010CSR	1	2-15/32	1-23/32	13/32	2-21/32	.29
CG-8099-012CSR	1-1/4	2-21/32	2-3/32	7/16	3-7/32	.42
CG-8099-015CSR	1-1/2	2-27/32	2-11/32	1/2	3-19/32	.55
CG-8099-020CSR	2	3-1/32	2-7/8	1/2	4-5/16	.92

**Tank Adapters, Standard with
Neoprene Gaskets - Marine**

Socket x Socket
150 psi Maximum Internal Pressure Rating @ 73°
F (23°C)

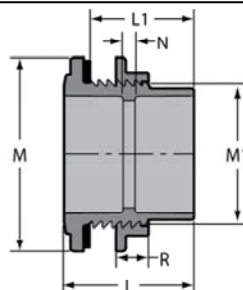


Part Number	Size	L	L1	M	M1	N	R	Min Hole Size	Approx. Wt. (Lbs.)
CG-8170-005C	1/2	2-29/32	2-3/16	2-1/16	1-7/16	1-1/8	5/8	1-1/2	.22
CG-8170-007C	3/4	2-15/16	2-3/16	2-1/4	1-5/8	29/32	5/8	1-3/4	.24

Tank Adapters, Standard with Neoprene Gaskets - Marine

Socket x Socket

150 psi Maximum Internal Pressure Rating @ 73° F (23°C)



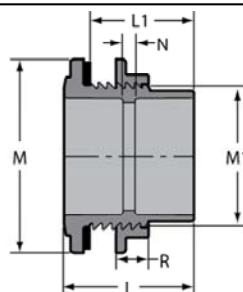
(Continued)

Part Number	Size	L	L1	M	M1	N	R	Min Hole Size	Approx. Wt. (Lbs.)
CG-8170-010C	1	3-9/32	2-9/16	2-21/32	1-31/32	1	5/8	2	.37
CG-8170-012C	1-1/4	3-13/32	2-5/8	3-1/8	2-5/16	29/32	5/8	2-3/8	.48
CG-8170-015C	1-1/2	3-5/8	2-13/16	3-5/8	2-11/16	7/8	5/8	2-3/4	.66
CG-8170-020C	2	4-1/8	3-1/4	4-7/8	3-1/4	1-1/16	3/4	3-3/8	1.29
CG-8170-025C	2-1/2	4-27/32	3-29/32	5-1/4	3-13/16	1-5/16	1	3-7/8	2.26
CG-8170-030C	3	5-1/2	4-1/2	6	4-17/32	1-23/32	1	4-5/8	2.61
CG-8170-040C	4	4-31/32	3-15/16	7-7/16	5-7/16	7/16	1-1/4	5-1/2	3.21
CG-8170-060C	6	5	4	10-3/32	8	1/8	1-1/4	8	5.76
CG-8170-080C	8	8-19/32	6-7/8	12-15/16	10-7/32	1/2	1-1/2	10-3/8	17.30

Tank Adapters, Standard with EPDM Gaskets - Marine

Socket x Socket

150 psi Maximum Internal Pressure Rating @ 73° F (23°C)



Part Number	Size	L	L1	M	M1	N	R	Min Hole Size	Approx. Wt. (Lbs.)
CG-8170E-005C	1/2	2-29/32	2-3/16	2-1/16	1-7/16	1-1/8	5/8	1-1/2	.23
CG-8170E-007C	3/4	2-15/16	2-3/16	2-1/4	1-5/8	29/32	5/8	1-3/4	.25
CG-8170E-010C	1	3-9/32	2-9/16	2-21/32	1-31/32	1	5/8	2	.38
CG-8170E-012C	1-1/4	3-13/32	2-5/8	3-1/8	2-5/16	29/32	5/8	2-3/8	.49
CG-8170E-015C	1-1/2	3-5/8	2-13/16	3-5/8	2-11/16	7/8	5/8	2-3/4	.67
CG-8170E-020C	2	4-1/8	3-1/4	4-7/8	3-1/4	1-1/16	3/4	3-3/8	1.31
CG-8170E-025C	2-1/2	4-27/32	3-29/32	5-1/4	3-13/16	1-5/16	1	3-7/8	1.90
CG-8170E-030C	3	5-1/2	4-1/2	6	4-17/32	1-23/32	1	4-5/8	2.62
CG-8170E-040C	4	4-31/32	3-15/16	7-7/16	5-7/16	7/16	1-1/4	5-1/2	3.24
CG-8170E-060C	6	5	4	10-3/32	8	1/8	1-1/4	6	5.73
CG-8170E-080C	8	8-19/32	6-7/8	12-15/16	10-7/32	1/2	1-1/2	10-3/8	16.85

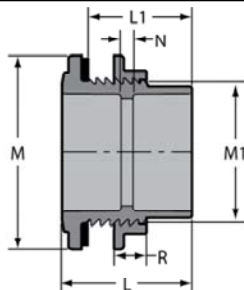


Marine & Offshore Technical
EverTUFF® CPVC Schedule 80 Marine Fittings

Tank Adapters, Standard with FKM Gaskets - Marine

Socket x Socket

150 psi Maximum Internal Pressure Rating @ 73°F (23°C)

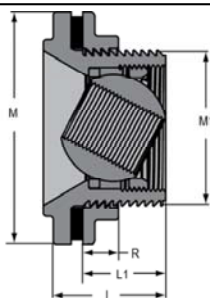


Part Number	Size	L	L1	M	M1	N	R	Min Hole Size	Approx. Wt. (Lbs.)
CG-8170V-005C	1/2	2-29/32	2-3/16	2-1/16	1-7/16	1-1/8	5/8	1-1/2	.23
CG-8170V-007C	3/4	2-15/16	2-3/16	2-1/4	1-5/8	29/32	5/8	1-3/4	.25
CG-8170V-010C	1	3-9/32	2-9/16	2-21/32	1-31/32	1	5/8	2	.38
CG-8170V-012C	1-1/4	3-13/32	2-5/8	3-1/8	2-5/16	29/32	5/8	2-3/8	.50
CG-8170V-015C	1-1/2	3-5/8	2-13/16	3-5/8	2-11/16	7/8	5/8	2-3/4	.69
CG-8170V-020C	2	4-1/8	3-1/4	4-7/8	3-1/4	1-1/16	3/4	3-3/8	1.37
CG-8170V-025C	2-1/2	4-27/32	3-29/32	5-1/4	3-13/16	1-5/16	1	3-7/8	1.95
CG-8170V-030C	3	5-1/2	4-1/2	6	4-17/32	1-23/32	1	4-5/8	2.68
CG-8170V-040C	4	4-31/32	3-15/16	7-7/16	5-7/16	7/16	1-1/4	5-1/2	3.36
CG-8170V-060C	6	5	4	10-3/32	8	1/8	1-1/4	8	5.88
CG-8170V-080C	8	8-29/32	6-7/8	12-15/16	10-7/32	1/2	1-1/2	10-3/8	16.92

Tank Adapter, Self Aligning with Neoprene Gasket - Marine

Fipt

75 psi Maximum Internal Pressure Rating @ 73°F (23°C)

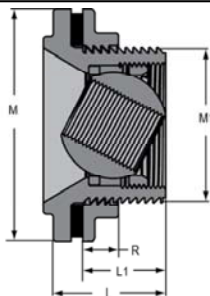


Part Number	Size	L	L1	M	M1	R	Approx. Wt. (Lbs.)
CG-8172SA-010C	1	2- 9/16	1- 3/4	4- 7/8	3- 1/4	3/4	2.60
CG-8172SA-020C	2	2-11/16	1- 3/4	6	4-7/16	1	2.14
CG-8172SA-030C	3	3-3/16	2-9/32	7-7/16	5-7/16	1- 1/4	3.14

Tank Adapter, Self Aligning with EPDM Gasket - Marine

Fipt

Tank Adapter, CPVC Self Aligning with EPDM Gasket

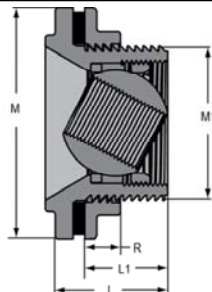


Part Number	Size	L	L1	M	M1	R	Approx. Wt. (Lbs.)
CG-8172ESA-010C	1	2- 9/16	1- 3/4	4- 7/8	3- 1/4	3/4	2.62
CG-8172ESA-020C	2	2-11/16	1- 3/4	6	4-17/32	1	2.16
CG-8172ESA-030C	3	3-3/16	2-9/32	7-7/16	5-7/16	1- 1/4	3.16

Tank Adapter, Self Aligning with FKM Gasket - Marine

Fipt

75 psi Maximum Internal Pressure Rating @ 73°F
(23°C)



Part Number	Size	L	L1	M	M1	R	Approx. Wt. (Lbs.)
CG-8172VSA-010C	1	2- 9/16	1- 3/4	4- 7/8	3- 1/4	3/4	2.68
CG-8172VSA-020C	2	2-11/16	1- 3/4	6	4-17/32	1	2.22
CG-8172VSA-030C	3	3-3/16	2-9/32	7-7/16	5-7/16	1- 1/4	3.29

TANK ADAPTER GASKET SECTION	SIZE	O.D.*	I.D.*	T
	1/2	2.25	1.33	3/16
	3/4	2.49	1.69	3/16
	1	2.79	1.94	3/16
	1-1/4	3.81	2.39	3/16
	1-1/2	3.81	2.39	3/16
	2	4.89	3.51	3/16
	3	6.30	4.49	3/16
	4	7.33	5.50	3/16

Tank Adapter Gasket & Hole Size Requirements			
Tank Adapter Size	Recommended Minimum Hole Size	Minimum Inside Curvature Radius (inches)	Maximum Tank Wall Thickness (inches)
1/2	1-1/2	4.00	.756
3/4	1-3/4	5.00	.75
1	2	7.00	.86
1-1/4	2-3/8	9.50	.86
1-1/2	2-3/4	12.00	.86
2	3-3/8	18.50	1.19
2-1/2	3-7/8	23.50	1.50
3	4-5/8	32.50	2.00
4	5-1/2	43.50	1.25
6	8	79.50	2.06
8	10-3/8	98.00	4.25

* Both outside and inside dimensions are +/- .03 shore hardness 65-70



The information contained in this publication is based on current information and product design at the time of publication and is subject to change without notification. Our ongoing commitment to product improvement may result in some variation. No representations, guarantees or warranties of any kind are made as to its accuracy, suitability for particular applications or results to be obtained therefrom. For verification of technical data or additional information not contained herein, please contact Spears® Technical Services Department [West Coast: (818) 364-1611 - East Coast: (678) 985-1263].

GENERAL INFORMATION

Recommendations For Installers And Users

CPVC marine piping systems should be **ENGINEERED, INSTALLED, and OPERATED** in accordance with **ESTABLISHED DESIGN AND ENGINEERING STANDARDS AND PROCEDURES** For plastic piping systems. Suitability for the intended service application should be determined by the installer and /or user prior to installation of a plastic piping system. **PRIOR TO ASSEMBLY, all marine piping system components should be inspected for damage or irregularities. Mating components should be checked to assure that tolerances and engagements are compatible. Do not use any components that appear irregular or do not fit properly. Contact the appropriate manufacturer of the component product in question to determine usability.**

Solvent Weld Connections - Use only marine approved quality solvent cements and primers formulated for the intended service application, pipe size and type of joint. While the pipe and fitting materials may be compatible with the intended medium, the solvent cement may not be. Consult the manufacturer for suitability of use. Read and follow the cement and primer manufacturers' applications and cure time instructions thoroughly. Be sure to use the correct size applicator.

Threaded Connections - Use a quality grade thread sealant. **WARNING: SOME PIPE JOINT COMPOUNDS OR PTFE PASTES MAY CONTAIN SUBSTANCES THAT COULD CAUSE STRESS CRACKING TO PLASTIC.** Spears® Manufacturing Company recommends the use of Spears® **BLUE 75™** thread sealant which has been tested for compatibility with Spears® products. Please follow the sealant manufacturer's application/installation instructions. Choice of an appropriate thread sealant other than those listed above is at the discretion of the installer. 1 to 2 turns beyond **FINGER TIGHT** is generally all that is required to make a sound plastic thread connection. Unnecessary **OVERTIGHTENING** will cause **DAMAGE TO BOTH PIPE AND FITTING.**

"Lead Free" low lead certification - unless otherwise specified; all Spears® Thermoplastic Flanges specified here-in are certified by NSF International to ANSI/NSF® Standard 61, Annex G and is in compliance with California's Health & Safety Code Section 116825 (commonly known as AB1953) and Vermont Act 193. Weighted average lead content $\leq 0.25\%$.





Molded Flange Technical Information

Application

Molded CLASS 150 Flange fittings are coupling devices designed for joining IPS (Iron Pipe Size) plastic piping systems, where frequent disassembly may be required, and can be used as a transitional fitting for joining plastic to metal piping systems. Suitability of application is at the discretion of the user.

Pressure Rating

150 psi, water at 73°F.

Flange Types

One Piece - Available in socket configuration, sizes 1/2" through 8"; threaded and SR threaded (Special Reinforced) configuration sizes 1/2" through 4".

Van Stone Style - Two-piece design with rotating flange ring, available in socket configurations, sizes 1/2" through 18"; threaded configurations, sizes 1/2" through 4" and spigot configurations, sizes 1/2" through 12".

Blind - Closed ring design for capping off a mating flange, flanged fitting or flanged valve, available in sizes 1/2" through 12".

Materials

All injection molded flanges are produced from CPVC materials approved for potable water use by NSF International (NSF®).

Glass-filled CPVC materials may be used in certain Van Stone Style flange rings and large diameter Blind flanges where additional reinforcement is deemed necessary.

Conformance Standards

Socket I.D. & Spigot O.D. - ASTM D 2467 (CPVC).

Bolt Hole Pattern - ANSI B16.5; ASTM D 4024.

Material - ASTM D 1784 (PVC Cell Classification 12454-B).

Weights & Dimensions

Specified minimum bolt lengths are based on the use of two Spears® marine flanges, two standard flat washers, standard nut and 1/8" thick elastomer full face gasket. Mating with other brands or accessories may require variation. Bolts and gaskets are not supplied with flanges.

Dimension references:

L = Overall length of hub, $\pm 1/16$ inch.

M = Outside diameter of socket hub, $\pm 1/16$ inch.

N = (Laying Length) socket/spigot bottom to seal-ring face of flange, $\pm 1/16$ inch.

R = Height (thickness) of flange ring, $\pm 1/16$ inch.

Max O.D. = Outside diameter of ring, $\pm 1/16$ inch.

Bolt Circle Diameter = ANSI B 16.5 Standard; ASTM D 4024, $\pm 1/16$ inch.

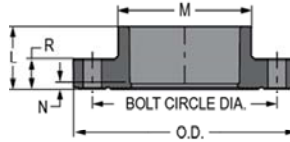


Marine & Offshore Technical
EverTUFF® CPVC Schedule 80 Marine Fittings

Flange One Piece - Marine

Socket

150 psi Maximum Internal Pressure Rating @ 73°
F (23°C)

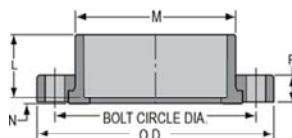


Part Number	Size	L	M	N	O.D.	R	Bolt Circle Dia.	Bolt Size	Min. Bolt Length	No of Bolts	Approx. Wt. (Lbs.)
CG-851-005C	1/2	1-1/16	1-9/32	5/32	3-1/2	9/16	2-3/8	1/2	2	4	.22
CG-851-007C	3/4	1-3/16	1-1/2	3/16	3-7/8	5/8	2-3/4	1/2	2	4	.28
CG-851-010C	1	1-5/16	1-13/16	3/16	4-1/4	11/16	3-1/8	1/2	2-1/4	4	.46
CG-851-012C	1-1/4	1-13/32	2-3/16	5/32	4-5/8	11/16	3-1/2	1/2	2-1/4	4	.44
CG-851-015C	1-1/2	1-21/32	2-1/2	1/4	5-1/32	13/16	3-7/8	1/2	2-1/2	4	.62
CG-851-020C	2	1-23/32	2-7/8	7/32	5-15/16	7/8	4-3/4	5/8	3	4	.95
CG-851-025C	2-1/2	2-1/4	3-1/2	15/32	7	1-1/16	5-1/2	5/8	3-1/4	4	1.54
CG-851-030C	3	2-5/16	4-9/32	7/16	7-9/16	1-3/32	6	5/8	3-1/4	4	1.86
CG-851-040C	4	2-15/32	5-1/4	7/32	9-1/16	1-5/16	7-1/2	5/8	3-1/2	8	2.87
CG-851-060C	6	3-5/16	7-19/32	9/32	10-15/16	1-13/32	9-1/2	3/4	4	8	4.34
CG-851-080C	8	4-21/32	9-3/4	19/32	13-17/32	1-23/32	11-11/16	3/4	4-1/2	8	8.28
CG-851-100C	10	5-15/32	11-13/16	15/32	16	1-3/4	14-1/4	7/8	4	12	13.52
CG-851-120C	12	6-5/8	14	5/8	19	2-1/4	17	7/8	6	12	18.81

Flange Van Stone Style with Plastic Ring - Marine

Socket

150 psi = maximum internal pressure rating @ 73°F (23°C)

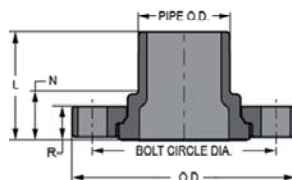


Part Number	Size	L	M	N	O.D.	R	Bolt Circle Dia.	Bolt Size	Min. Bolt Length	No of Bolts	Approx. Wt. (Lbs.)
CG-854-005C	1/2	1-1/32	1-7/32	5/32	3-1/2	9/16	2-3/8	1/2	2	4	.19
CG-854-007C	3/4	1-1/8	1-7/16	5/32	3-7/8	9/16	2-3/4	1/2	2	4	.27
CG-854-010C	1	1-1/4	1- 3/4	1/8		11/16	3- 1/8	1/2	2-1/4	4	.37
CG-854-012C	1-1/4	1-3/8	2-1/8	1/8	4-5/8	23/32	3-1/2	1/2	2-1/4	4	.45
CG-854-015C	1-1/2	1-1/2	2-7/16	1/8	5	13/16	3-7/8	1/2	2-1/2	4	.59
CG-854-020C	2	1-21/32	2-31/32	1/8	6	7/8	4-3/4	5/8	3	4	.91
CG-854-025C	2-1/2	2	3-5/8	7/32	7	1-1/32	5-1/2	5/8	3-1/4	4	1.48
CG-854-030C	3	2-1/8	4-1/4	1/4	7-1/2	1-1/8	6	5/8	3-1/4	4	1.78
CG-854-040C	4	2-1/2	5-1/4	9/32	9-3/32	1-3/16	7-1/2	5/8	3-1/2	8	2.83
CG-854-060C	6	3-3/8	7-9/16	5/16	11	1-3/8	9-1/2	3/4	4	8	4.50
CG-854-080C	8	4-13/32	9-5/16	5/16	13-9/16	1-1/2	11-3/4	3/4	4-1/2	8	7.00
CG-854-100C	10	5-23/32	11-3/4	21/32	16-1/16	1-25/32	14-1/4	7/8	5	12	12.12
CG-854-120C	12	6-19/32	13-3/4	5/8	19	1-13/16	17	7/8	5	12	18.28

Flange Van Stone Style with Plastic Ring - Marine

Spigot

150 psi Maximum Internal Pressure Rating @ 73°F (23°C)



Part Number	Size	L	N	O.D.	R	Bolt Circle Dia.	Bolt Size	No of Bolts	Approx. Wt. (Lbs.)
CG-856-005C	1/2	1-3/4	7/8	3-1/2	9/16	2-3/8	1/2	4	.21
CG-856-007C	3/4	1-15/16	15/16	3-7/8	5/8	2-3/4	1/2	4	.29
CG-856-010C	1	2-5/32	1-1/32	4-1/4	11/16	3-1/8	1/2	4	.41
CG-856-012C	1-1/4	2-5/16	1-1/16	4-5/8	23/32	3-1/2	1/2	4	.50
CG-856-015C	1-1/2	2-5/8	1-9/32	5	13/16	3-7/8	1/2	4	.67
CG-856-020C	2	2-27/32	1-11/32	6	7/8	4-3/4	5/8	4	1.00
CG-856-025C	2-1/2	3-3/32	1-9/32	7	1-1/32	5-1/2	5/8	4	1.61
CG-856-030C	3	3-11/32	1-3/8	7-1/2	1-1/8	6	5/8	4	1.94
CG-856-040C	4	3-13/16	1-3/8	9-3/32	1-3/16	7-1/2	5/8	8	3.12
CG-856-060C	6	4-15/16	1-7/8	11-7/32	1-3/8	9-1/2	3/4	8	5.37
CG-856-080C	8	5-15/16	1-7/8	13-9/16	1-15/32	11-3/4	3/4	8	8.16
CG-856-100C	10	8	2-11/32	16	1-25/32	14-1/4	7/8	12	16.45
CG-856-120C	12	8-9/16	2-1/8	19	1-13/16	17	7/8	12	23.64

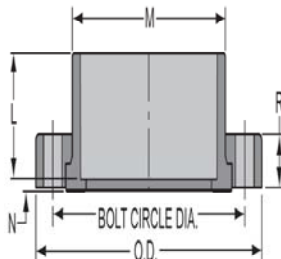


Marine & Offshore Technical
EverTUFF® CPVC Schedule 80 Marine Fittings

Flange Van Stone Style Class 300 Bolt Pattern Fabricated with Plastic Ring - Marine

Socket

Molded with fabricated ring - 150 psi = maximum internal pressure rating @ 73°F (23°C)

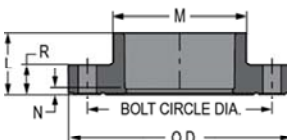


Part Number	Size	L	M	N	R	Bolt Circle Dia.	Bolt Size	Max. O.D.	No of Bolts	Approx. Wt. (Lbs.)
CG-854005CL300C	1/2	1	1-3/16	3/16	1/2	2-5/8	1/2	3-3/4	4	.42
CG-854007CL300C	3/4	1-1/8	1-3/8	1/8	1	3-1/4	5/8	4-5/8	4	1.32
CG-854010CL300C	1	1-1/4	1-3/4	3/16	1	3-1/2	5/8	4-7/8	4	.62
CG-854012CL300C	1-1/4	1-3/8	2-1/8	1/8	1	3-7/8	5/8	5-1/4	4	2.03
CG-854015CL300C	1-1/2	1-1/2	2-7/16	3/16	1	4-1/2	5/8	6-1/8	4	2.67
CG-854020CL300C	2	1-11/16	2-15/16	3/16	1	5	5/8	6-1/2	8	2.64
CG-854025CL300C	2-1/2	2	3-9/16	1/4	1	5-7/8	3/4	7-1/2	8	3.83
CG-854030CL300C	3	2-1/8	4-1/4	1/4	1	6-5/8	3/4	8-1/4	8	5.47
CG-854040CL300C	4	2-1/2	5-1/4	1/4	1-1/2	7-7/8	3/4	10	8	11.94
CG-854060CL300C	6	3-5/16	7-9/16	5/16	1-1/2	10-5/8	3/4	12-1/2	12	24.26
CG-854080CL300C	8	4-3/8	9-3/8	5/16	1-1/2	13	7/8	15	12	25.01
CG-854100CL300C	10	5-11/16	11-3/4	5/8	1-1/2	15-1/4	1	17-1/2	16	45.98
CG-854120CL300C	12	6-5/8	13-11/16	5/8	1-1/2	17-3/4	1-1/8	20-1/2	16	59.28

Flange One Piece Multi-Bolt Pattern* - Marine

ASTM Socket x Multi-bolt Pattern Ring

150 psi Maximum Internal Pressure Rating @ 73°F (23°C)



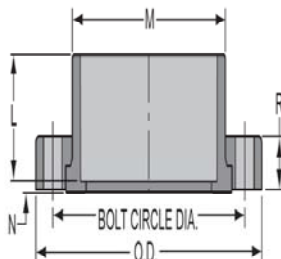
Part Number	Size	L	M	N	O.D.	R	Bolt Circle Dia.	Bolt Size	No of Bolts	Approx. Wt. (Lbs.)
CG-M851-100C	10	5-15/32	11-13/16	15/32	16	1-3/4	13-25/32	7/8	12	13.52
CG-M851-120C	12	6-5/8	14	5/8	19	1-13/16	15-3/4	7/8	12	18.81

Hubs fit 10" and 12" ASTM IPS pipe. Rings are manufactured to accept bolt patterns in size 10" and 12" in ANSI Class 150, B.S. 4504 PN10, B.S. 4504 PN16, B.S. 10 Table E for size 10". Consult Spears® Manufacturing Company Technical Services for additional information. Not for use with wafer valves.

Flange Van Stone Style with Plastic Ring ASTM - Marine

Socket x Multi-bolt Pattern Ring

150 psi Maximum Internal Pressure Rating @ 73°F (23°C)

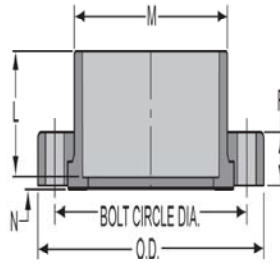


Part Number	Size	L	M	N	O.D.	R	Bolt Circle Dia Max	Bolt Circle Dia Min	Bolt Size	No of Bolts	Approx. Wt. (Lbs.)
CG-M854-020C	2	1-11/16	2-31/32	5/32	6	13/16	4-15/16	4-1/2	5/8	4	.86
CG-M854-060C	6	3-7/16	7-9/16	13/32	11-5/16	1-3/8	9-1/2	9-7/32	3/4	8	4.28

Flange Van Stone Style with Plastic Ring ASTM - Marine

(Continued)

Socket x Multi-bolt Pattern Ring
 150 psi Maximum Internal Pressure Rating @ 73°
 F (23°C)



Part Number	Size	L	M	N	O.D.	R	Bolt Circle Dia Max	Bolt Circle Dia Min	Bolt Size	No of Bolts	Approx. Wt. (Lbs.)
CG-M854-080C	8	4-7/16	9-3/8	5/16	13-9/16	1-1/2	11-3/4	11- 1/2	3/4	8	7.14



MARINE CLAMP-ON SADDLES

Simple Two-Piece Design Engineered for Reliability



Spears® EverTUFF™ CPVC Marine Clamp-On Saddles allow quick, easy and reliable addition of branch lines to existing piping system lines. These versatile saddle units can be used in either temporary or permanent installations on all types of CPVC marine pipe with IPS (Iron Pipe size) outside diameter, including PVC, CPVC, polyethylene, polypropylene and steel.

Excellent Metal-to-Plastic System Transition

Easily installs on metal pipe as a transition to plastic system.

Tee or Cross Configurations

Available in 2" - 12" IPS pipe saddle with socket outlets in sizes 1/2" - 6" and Special Reinforced (SR) threaded outlets in sizes 1/2" - 6", single Tee configurations.

O-ring Options

Choice of high grade EPDM or FKM O-rings for Schedule 80, for application specific selection and optimum chemical resistance.

Excellent Pressure Capabilities

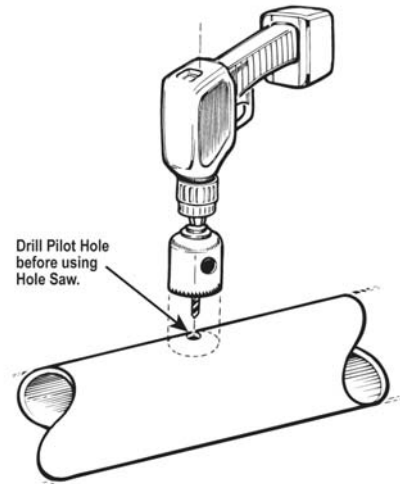
Maximum internal pressure rating of 235 psi through 4", 200 psi for 6", and 150 psi for 8" - 12" at 73°F.

CPVC Clamp-On Saddle Sample Engineering Specification

All thermoplastic marine saddles shall be clamp-on type with O-ring seal constructed from CPVC Type IV cell classification 23447. All O-rings shall be EPDM or FKM. All saddles shall be piloted at O-ring area for positive positioning in pipe. All bolt clamping hardware shall be stainless steel. All saddle outlets shall have dimensions to connect to IPS piping. Saddles shall be pressure rated at 235 psi for use on pipe sizes through 4" nominal IPS diameters, 200 psi for use on 6" pipe, and 150 psi for use on 8" - 12" pipe, maximum internal pressure for water at 73°F, as manufactured by Spears® Manufacturing Company. Saddles shall be suitable for use with Spears® U.S. Coast Guard Approved piping systems only.

Clamp-On Saddle Installation Instructions

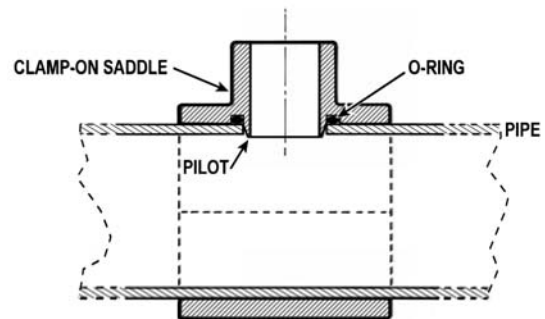
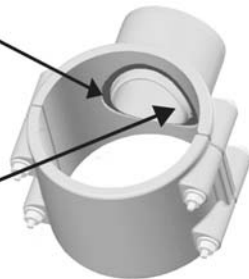
1. Using a standard industrial grade hole-saw, cut specified hole in desired position on pipe according to recommended hole saw size engraved on the saddle. **Note:** Care must be taken to deburr hole and remove all residue from hole area to assure tight fit and avoid leakage.
2. Fully seat O-ring in groove on underside of saddle outlet component. Position over hole and fully seat saddle onto pipe. Note: Certain saddle outlets are piloted. Be sure pilot lip fully engages with hole in pipe.
3. Place strap component opposite outlet and secure with bolts (4), nuts (4) and washers (8). Important: Washers **MUST** be placed under each bolt head (1) and under each nut (1) to avoid damage to saddle.
4. Tighten bolts to specified torque.



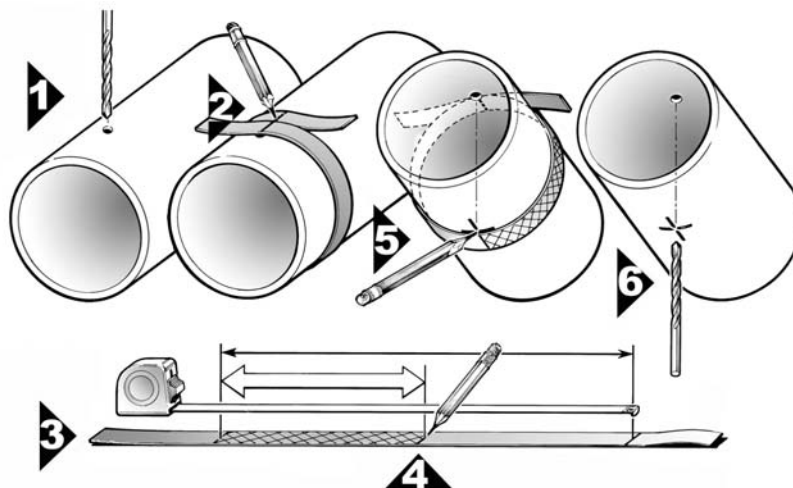
Saddle Size	2	3	4	6 & up
Recommended Bolt-Torque -ft/lb	8	8	8	10

O-ring seal provides positive, trouble-free sealing to pipe.

Special pilot engages with hole in pipe to prevent saddle dislocation.



For Double Outlet Saddle Installation —Determine second outlet hole position as shown



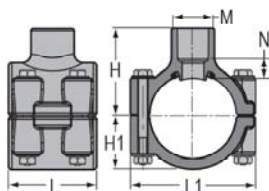


Marine & Offshore Technical
EverTUFF® CPVC Schedule 80 Marine Fittings

Clamp-On Saddle x Socket Single Outlet, - Marine

with EPDM O-ring Seal & SS Hardware

2"- 4" 235, 6" 200, 8"-12" 150 psi @ 73°F (23°C)

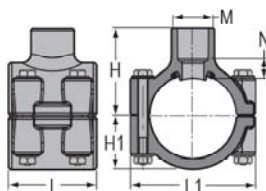


Part Number	Size	H	H1	L	L1	M	N	Bolt Torque FT./LBS.	No of Bolts	Approx. Wt. (Lbs.)
CG-866S-247C	2X1/2	2- 3/8	1- 1/2	2- 7/16	3- 7/16	1- 3/16	5/16	8	4	.61
CG-866S-248C	2X3/4	2-9/16	1- 1/2	2- 7/16	3- 7/16	1- 3/8	5/16	8	4	.62
CG-866S-249C	2X1	2-11/16	1- 1/2	2- 7/16	3- 7/16	1-11/16	5/16	8	4	.64
CG-866S-250C	2X1-1/4	2-13/16	1- 1/2	2- 7/16	3- 7/16	2- 1/16	5/16	8	4	.66
CG-866S-251C	2X1-1/2	2-15/16	1- 1/2	2- 7/16	3- 7/16	2-13/32	11/32	8	4	.73
CG-866S-291C	2-1/2X1-1/2	3- 3/16	1-3/4	4-1/8	4-1/8	2-13/32	11/32	8	4	1.08
CG-866S-333C	3X1/2	3-11/32	2	3	4-3/4	1- 3/8	11/16	8	4	.92
CG-866S-334C	3X3/4	3- 1/16	2	3	4-3/4	1- 3/8	9/32	8	4	.90
CG-866S-335C	3X1	3- 3/16	2	3	4-3/4	1-11/16	9/32	8	4	.92
CG-866S-336C	3X1-1/4	3-15/16	2	4-1/8	4-3/4	3	13/16	8	4	1.50
CG-866S-337C	3X1-1/2	3-7/8	2	4-1/8	4-3/4	3	29/32	8	4	1.45
CG-866S-338C	3X2	3-11/16	2	4-1/8	4-3/4	3	3/8	8	4	1.29
CG-866S-415C	4X1/2	4- 3/32	2- 5/8	3	5-13/16	1-11/16	15/16	8	4	1.37
CG-866S-416C	4X3/4	3-31/32	2- 5/8	3	5-13/16	1-11/16	11/16	8	4	1.33
CG-866S-417C	4X1	3-27/32	2- 5/8	3	5-13/16	1-11/16	13/32	8	4	1.30
CG-866S-418C	4X1-1/4	4-1/4	2- 5/8	4-1/8	5-13/16	2-7/16	3/4	8	4	1.73
CG-866S-419C	4X1-1/2	4-1/16	2- 5/8	4-1/8	5-13/16	2-7/16	13/32	8	4	1.66
CG-866S-420C	4X2	4-1/4	2- 5/8	4- 1/8	5-13/16	3	7/16	8	4	1.78
CG-866S-421C	4X2-1/2	5-1/16	2- 5/8	5-1/2	5-13/16	4- 9/32	23/32	8	4	2.95
CG-866S-422C	4X3	4-11/16	2-5/8	5-1/2	5-13/16	4-9/32	17/32	8	4	2.54
CG-866S-523C	6X1/2	5-7/8	3-13/16	3	8-3/16	1-11/16	1-3/16	8	4	2.48
CG-866S-524C	6X3/4	5-9/32	3-13/16	3	8-3/16	1-11/16	15/16	10	4	2.45
CG-866S-525C	6X1	5- 1/8	3-13/16	3	8-3/16	1-11/16	5/8	10	4	2.42
CG-866S-526C	6X1-1/4	5-11/16	3-13/16	4- 1/8	8-13/16	3	1-3/32	10	4	3.42
CG-866S-527C	6X1-1/2	5-11/16	3-13/16	4- 1/8	8-3/16	3	1	10	4	3.37
CG-866S-528C	6X2	5- 1/2	3-13/16	4- 1/8	8-3/16	3	11/16	10	4	3.22
CG-866S-529C	6X2-1/2	6-9/32	3-13/16	6	8-3/16	4-9/32	7/8	10	4	5.03
CG-866S-530C	6X3	5-7/8	3-13/16	6	8-3/16	4-9/32	11/16	10	4	4.62
CG-866S-532C	6X4	6	3-13/16	6-1/16	9-13/16	5-1/4	11/16	10	6	5.43
CG-866S-573C	8X1/2	6-7/8	4- 7/8	8-1/2	10-1/16	3	1-11/16	10	6	8.63
CG-866S-574C	8X3/4	6-7/8	4- 7/8	8- 1/2	10-1/16	3	1-9/16	10	6	8.61
CG-866S-575C	8X1	6-3/4	4- 7/8	8- 1/2	10-1/16	3	1-5/16	10	6	8.57
CG-866S-576C	8X1-1/4	6-5/8	4- 7/8	8- 1/2	10-1/16	3	1-1/16	10	6	10.30
CG-866S-577C	8X1-1/2	6-11/16	4- 7/8	8- 1/2	10-1/16	3	2- 3/8	10	6	10.27
CG-866S-578C	8X2	6-1/2	4- 7/8	8- 1/2	10-1/16	3	11/16	10	6	8.33
CG-866S-579C	8X2-1/2	7-5/8	4- 7/8	8-1/2	10-1/16	5-1/4	1-1/2	10	6	9.81
CG-866S-580C	8X3	7-11/16	4- 7/8	8- 1/2	10-1/16	5-1/4	1-1/2	10	6	9.60
CG-866S-582C	8X4	7- 5/16	4- 7/8	8- 1/2	10-1/16	5- 1/4	11/16	10	6	8.74
CG-866S-585C	8X6	8- 3/32	4- 7/8	8- 1/2	10-1/16	7-11/16	11/16	10	6	10.08

Clamp-On Saddle x Socket Single Outlet, - Marine

with EPDM O-ring Seal & SS Hardware

2"- 4" 235, 6" 200, 8"-12" 150 psi @ 73°F (23°C)



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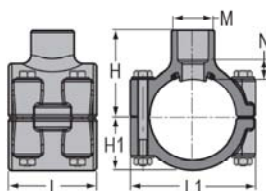
Part Number	Size	H	H1	L	L1	M	N	Bolt Torque FT./LBS.	No of Bolts	Approx. Wt. (Lbs.)
CG-866S-528C	6X2	5- 1/2	3-13/16	4- 1/8	8-3/16	3	11/16	10	4	3.22
CG-866S-529C	6X2-1/2	6-9/32	3-13/16	6	8-3/16	4-9/32	7/8	10	4	5.03
CG-866S-530C	6X3	5-7/8	3-13/16	6	8-3/16	4-9/32	11/16	10	4	4.62
CG-866S-532C	6X4	6	3-13/16	6-1/16	9-13/16	5-1/4	11/16	10	6	5.43
CG-866S-573C	8X1/2	6-7/8	4- 7/8	8-1/2	10-1/16	3	1-11/16	10	6	8.63
CG-866S-574C	8X3/4	6-7/8	4- 7/8	8- 1/2	10-1/16	3	1-9/16	10	6	8.61
CG-866S-575C	8X1	6-3/4	4- 7/8	8- 1/2	10-1/16	3	1-5/16	10	6	8.57
CG-866S-576C	8X1-1/4	6-5/8	4- 7/8	8- 1/2	10-1/16	3	1-1/16	10	6	10.30
CG-866S-577C	8X1-1/2	6-11/16	4- 7/8	8- 1/2	10-1/16	3	2- 3/8	10	6	10.27
CG-866S-578C	8X2	6-1/2	4- 7/8	8- 1/2	10-1/16	3	11/16	10	6	8.33
CG-866S-579C	8X2-1/2	7-5/8	4- 7/8	8-1/2	10-1/16	5-1/4	1-1/2	10	6	9.81
CG-866S-580C	8X3	7-11/16	4- 7/8	8- 1/2	10-1/16	5-1/4	1-1/2	10	6	9.60
CG-866S-582C	8X4	7- 5/16	4- 7/8	8- 1/2	10-1/16	5- 1/4	11/16	10	6	8.74
CG-866S-585C	8X6	8- 3/32	4- 7/8	8- 1/2	10-1/16	7-11/16	11/16	10	6	10.08
CG-866S-624C	10X4	8-7/16	6	8- 1/2	12-1/4	5- 1/4	13/16	10	6	12.73
CG-866S-626C	10X6	9-3/16	6	8- 1/2	12-1/4	7-11/16	13/16	10	6	13.73
CG-866S-664C	12X4	9-1/2	7-1/8	8- 1/2	14-1/4	5- 1/4	7/8	10	6	16.43
CG-866S-666C	12X6	10-5/16	7-1/8	8- 1/2	14-1/4	7-11/16	7/8	10	6	17.43

¹ Outlet-sized with Bushing

Clamp-On Saddle x Socket Single Outlet, - Marine

with FKM O-ring Seal & SS Hardware

2"- 4" 235, 6" 200, 8"-12" 150 psi @ 73°F (23°C)



Part Number	Size	H	H1	L	L1	M	N	Bolt Torque FT./LBS.	Hole Size	No of Bolts	Approx. Wt. (Lbs.)
CG-866SV-247C	2X1/2	2- 3/8	1- 1/2	2- 7/16	3- 7/16	1- 3/16	5/16	8	3/4	4	.62
CG-866SV-248C	2X3/4	2-9/16	1- 1/2	2- 7/16	3- 7/16	1- 3/8	5/16	8	7/8	4	.62
CG-866SV-249C	2X1	2-11/16	1- 1/2	2- 7/16	3- 7/16	1-11/16	5/16	8	1-1/8	4	.65
CG-866SV-250C	2X1-1/4	2-13/16	1- 1/2	2- 7/16	3- 7/16	2- 1/16	5/16	8	1-1/2	4	.66
CG-866SV-251C	2X1-1/2	2-15/16	1- 1/2	2- 7/16	3- 7/16	2-13/32	11/32	8	1-1/2	4	.73
CG-866SV-291C	2-1/2X1-1/2	3- 3/16	1-3/4	4-1/8	4-1/8	2-13/32	11/32	8	1-3/4	4	1.08
CG-866SV-333C	3X1/2	3-11/32	2	3	4-3/4	1- 3/8	11/16	8	7/8	4	.93
CG-866SV-334C	3X3/4	3- 1/16	2	3	4-3/4	1- 3/8	9/32	8	7/8	4	.90
CG-866SV-335C	3X1	3- 3/16	2	3	4-3/4	1-11/16	9/32	8	1-1/8	4	.92
CG-866SV-336C	3X1-1/4	3-15/16	2	4-1/8	4-3/4	3	15/16	8	2-1/4	4	1.50
CG-866SV-337C	3X1-1/2	3-7/8	2	4-1/8	4-3/4	3	25/32	8	2-1/4	4	1.45
CG-866SV-338C	3X2	3-11/16	2	4-1/8	4-3/4	3	3/8	8	2-1/4	4	1.30



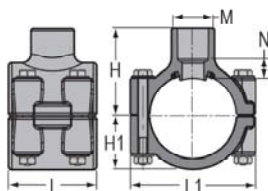
Marine & Offshore Technical
EverTUFF® CPVC Schedule 80 Marine Fittings

**Clamp-On Saddle x Socket
 Single Outlet, - Marine**

(Continued)

with FKM O-ring Seal & SS Hardware

2"- 4" 235, 6" 200, 8"-12" 150 psi @ 73°F (23°C)



Part Number	Size	H	H1	L	L1	M	N	Bolt Torque FT./LBS.	Hole Size	No of Bolts	Approx. Wt. (Lbs.)
CG-866SV-415C	4X1/2	4-1/32	2- 5/8	3	5-13/16	1-11/16	29/32	8	1-1/8	4	1.37
CG-866SV-416C	4X3/4	4-1/32	2- 5/8	3	5-13/16	1-11/16	25/32	8	1-1/8	4	1.34
CG-866SV-417C	4X1	3-27/32	2- 5/8	3	5-13/16	1-11/16	13/32	8	1-1/8	4	1.30
CG-866SV-418C	4X1-1/4	4-3/8	2- 5/8	4-1/8	5-13/16	2-7/16	27/32	8	1-3/4	4	1.73
CG-866SV-420C	4X2	4-1/4	2- 5/8	4- 1/8	5-13/16	3	7/16	8	2-1/4	4	1.79
CG-866SV-421C	4X2-1/2	5	2- 5/8	5-1/2	5-13/16	4- 9/32	31/32	8	3	4	2.96
CG-866SV-419C	4X1-1/2	4-1/16	2- 5/8	4-1/8	5-13/16	2-7/16	13/32	8	1-3/4	4	1.66
CG-866SV-422C	4X3	4-11/16	2-5/8	5-1/2	5-13/16	4-9/32	17/32	8	3	4	2.55
CG-866SV-523C	6X1/2	5-3/8	3-13/16	3	8-3/16	1-11/16	1-1/8	8	1-1/8	4	2.49
CG-866SV-524C	6X3/4	5-11/32	3-13/16	3	8-3/16	1-11/16	1	10	1-1/8	4	2.46
CG-866SV-525C	6X1	5- 1/8	3-13/16	3	8-3/16	1-11/16	5/8	10	1-1/8	4	2.42
CG-866SV-526C	6X1-1/4	5-11/16	3-13/16	4- 1/8	8-3/16	3	1-1/8	10	2-1/4	4	3.43
CG-866SV-527C	6X1-1/2	5-11/16	3-13/16	4- 1/8	8-3/16	3	1	10	2-1/4	4	3.38
CG-866SV-528C	6X2	5- 1/2	3-13/16	4- 1/8	8-3/16	3	11/16	10	2-1/4	4	3.23
CG-866SV-529C	6X2-1/2	6-7/32	3-13/16	6	8-3/16	4-9/32	1- 1/8	10	3	4	5.03
CG-866SV-530C	6X3	5-7/8	3-13/16	6	8-3/16	4-9/32	11/16	10	3	4	4.64
CG-866SV-532C	6X4	6	3-13/16	6-1/16	9-13/16	5-1/4	7/16	10	4	4	5.45
CG-866SV-573C	8X1/2	6-3/4	4- 7/8	8-1/2	10-1/16	3	1-9/16	10	2-1/8	6	8.64
CG-866SV-574C	8X3/4	6-11/16	4- 7/8	8- 1/2	10-1/16	3	1-3/8	10	2-1/8	6	8.62
CG-866SV-575C	8X1	6-3/4	4- 7/8	8- 1/2	10-1/16	3	1-5/16	10	2-1/8	6	8.58
CG-866SV-576C	8X1-1/4	6-5/8	4- 7/8	8- 1/2	10-1/16	3	1-1/16	10	2-1/8	6	10.32
CG-866SV-577C	8X1-1/2	6-11/16	4- 7/8	8- 1/2	10-1/16	3	1	10	2-1/8	6	10.29
CG-866SV-578C	8X2	6-1/2	4- 7/8	8- 1/2	10-1/16	3	11/16	10	2-1/8	6	8.33
CG-866SV-579C	8X2-1/2	7-5/8	4- 7/8	8-1/2	10-1/16	5-1/4	1-1/2	10	4	6	9.83
CG-866SV-580C	8X3	7-5/8	4- 7/8	8- 1/2	10-1/16	5-1/4	1-7/16	10	4	6	9.62
CG-866SV-582C	8X4	7- 5/16	4- 7/8	8- 1/2	10-1/16	5- 1/4	11/16	10	4	6	8.76
CG-866SV-585C	8X6	8- 3/32	4- 7/8	8- 1/2	10-1/16	7-11/16	11/16	10	6	6	10.12
CG-866SV-624C	10X4	8-7/16	6	8- 1/2	12-1/4	5- 1/4	13/16	10	4	6	12.75
CG-866SV-626C	10X6	9-3/16	6	8- 1/2	12-1/4	7-11/16	13/16	10	6	6	13.77
CG-866SV-664C	12X4	9-1/2	7-1/8	8- 1/2	14-1/4	5- 1/4	7/8	10	4	6	16.45
CG-866SV-666C	12X6	10-5/16	7-1/8	8- 1/2	14-1/4	7-11/16	7/8	10	6	6	17.47

¹ Outlet-sized with Bushing

Allows Connection to Existing Pipeline Under Pressure



Specially designed tapping saddle allows pipe branch connection to pressurized "Hot" lines without system shut-down.

- Marine Grade Bolt-on Saddle with EPDM or FKM O-ring Seals and Type 316 Stainless Steel Hardware.
- Built-in Stainless Steel Cutter Easily Cuts Hole in PVC, CPVC, HDPE and PP Pipe. Special Design Captures and Retains Coupon from Hole.
- Pressure Rated up to 235 psi @ 73°F.
- Available to fit IPS Pipe 2" through 8" with Versatile 3/4" Socket - 1" Spigot Combination Branch Outlet or 1-1/2" Socket - 2" Spigot Combination Branch Outlet

TECHNICAL DATA

Maximum Service Temperatures

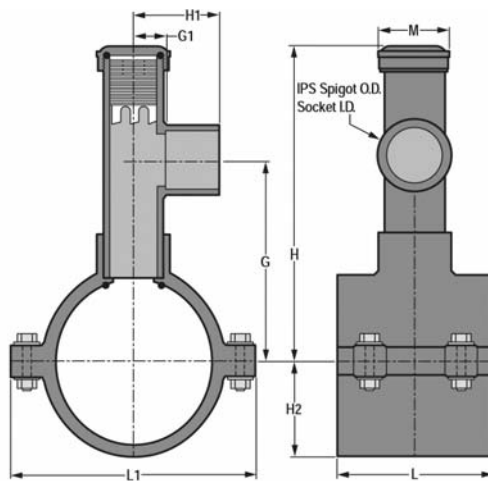
CPVC 200°F

Pressure Rating @ 73°F

2" - 4"	235 psi
6"	200 psi
8"	150 psi

NOTE: Elevated service temperatures required system pressure de-rating.

NOTE: Some leakage is possible during the tapping process, therefore "hot-taps" are not recommended for corrosive or dangerous fluid medium.



CPVC Hot Tap Saddle Engineering Specification

All thermoplastic marine hot tap saddles shall be clamp-on type with O-ring seal constructed from CPVC Type IV cell classification 23447. All O-rings shall be EPDM or FKM. All saddles shall be piloted at O-ring area for positive positioning in pipe. All bolt clamping hardware shall be stainless steel. Pipe cutter shall be machined from stainless steel. All saddle outlets shall have dimensions to connect to IPS piping. Saddles shall be pressure rated at 235 psi for use on pipe sizes through 8" nominal IPS diameters maximum internal pressure for water at 73°F, as manufactured by Spears® Manufacturing Company. Hot tap saddles shall be Type Approved by The American Bureau of Shipping and suitable for use with Spears® U.S. Coast Guard Approved piping systems.

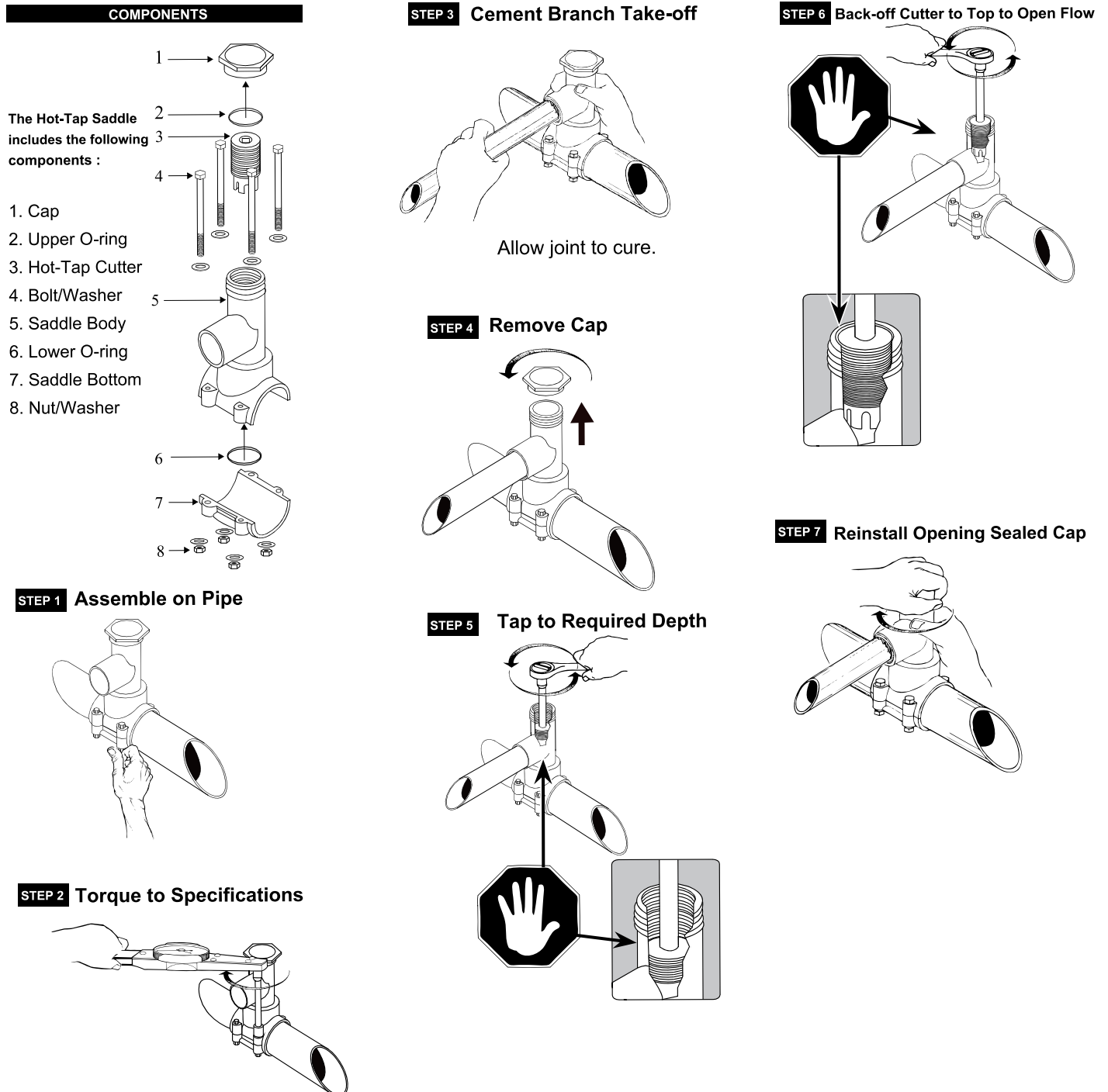


Marine & Offshore Technical
EverTUFF® CPVC Schedule 80 Marine Fittings

Basic Installation

Marine Hot-Tap Saddles are designed for adding branch connections to piping systems under live ("hot") pressure. Marine Hot-Tap Saddle branch outlets are either 3/4" socket (with 1" Spigot O.D.) or 1-1/2" socket (with 2" Spigot O.D.) in saddle sizes 2" through 8" to fit IPS pipe using a built-in O-ring seal. Internal cutter is operated using conventional ratchet and drive extension and permanently retains coupon cut from pipe. Maximum operating pressure at 73°F is 235 psi for saddle sizes 2" - 4", 200 psi for 6" saddles & 150 psi for 8".

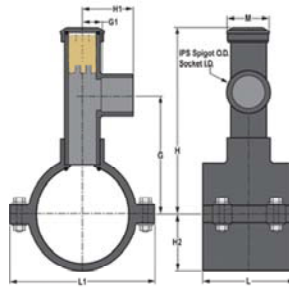
SEE PRODUCT INSTALLATION INSTRUCTION FOR DETAILS



Hot-Tap Saddle - Marine

EPDM with Stainless Steel Bolts

2"- 4" 235, 6" 200, 8" 150 psi @ 73°F (23°C)



Part Number	Size	G	G1	H	H1	H2	L	L1	M	Approx. Wt. (Lbs.)
CG-HT2S-248C	2X3/4	3-9/16	1	6-3/16	2	1-1/2	2-7/16	3-7/16	2	1.10
CG-HT2S-251C	2X1-1/2	4-1/2	1-1/4	8-1/2	2-11/16	1-1/2	2-7/16	3-7/16	2-7/8	2.25
CG-HT2S-288C	2-1/2X3/4	3-15/16	1	6-9/16	2	1-3/4	4-1/8	4-1/8	2	2.05
CG-HT2S-291C	2-1/2X1-1/2	4-13/16	1-1/4	8-13/16	2-11/16	1-3/4	4-1/8	4-1/8	2-7/8	2.61
CG-HT2S-334C	3X3/4	3-15/16	1	6-5/8	2	2	3	4-3/4	2	1.37
CG-HT2S-337C	3X1-1/2	5-1/8	1-1/4	9-1/8	2-11/16	2	4-1/8	4-3/4	2-7/8	2.99
CG-HT2S-416C	4X3/4	4-11/16	1	7-5/16	2	2-5/8	3	5-13/16	2	1.76
CG-HT2S-419C	4X1-1/2	5-1/4	1-1/4	9-5/8	2-11/16	2-5/8	4-1/8	5-13/16	2-7/8	3.46
CG-HT2S-524C	6X3/4	6	1	8-5/8	2	3-13/16	3	8-3/16	2	2.61
CG-HT2S-527C	6X1-1/2	6-15/16	1-1/4	10-15/16	2-11/16	3-13/16	4-1/8	8-3/16	2-7/8	4.65
CG-HT2S-574C	8X3/4	6-3/4	1	9-5/16	2	4-7/8	8-1/2	10-1/16	2	9.69
CG-HT2S-577C	8X1-1/2	8-1/4	1-1/4	12-1/4	2-11/16	4-7/8	8-1/2	10-1/16	2-7/8	10.01

Not intended to convey or dispense water for human consumption through drinking or cooking

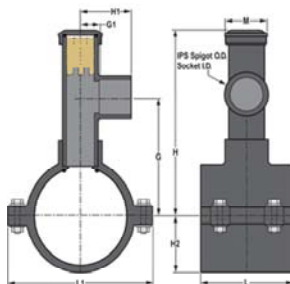


Marine & Offshore Technical
EverTUFF® CPVC Schedule 80 Marine Fittings

Hot-Tap Saddle - Marine

FKM with Stainless Steel Bolts

2"- 4" 235, 6" 200, 8" 150 psi @ 73°F (23°C)



Part Number	Size	G	G1	H	H1	H2	L	L1	M	Approx. Wt. (Lbs.)
CG-HT3S-248C	2X3/4	3-9/16	1	6-3/16	2	1-1/2	2-7/16	3-7/16	2	1.11
CG-HT3S-251C	2X1-1/2	4-1/2	1-1/4	8-1/2	2-11/16	1-1/2	2-7/16	3-7/16	2-7/8	2.24
CG-HT3S-288C	2-1/2X3/4	3-15/16	1	6-9/16	2	1-3/4	4-1/8	4-1/8	2	2.04
CG-HT3S-291C	2-1/2X1-1/2	4-13/16	1-1/4	8-13/16	2-11/16	1-3/4	4-1/8	4-1/8	2-7/8	2.61
CG-HT3S-334C	3X3/4	3-15/16	1	6-5/8	2	2	3	4-3/4	2	1.38
CG-HT3S-337C	3X1-1/2	5-1/8	1-1/4	9-1/8	2-11/16	2	4-1/8	4-3/4	2-7/8	3.00
CG-HT3S-416C	4X3/4	4-11/16	1	7-5/16	2	2-5/8	3	5-13/16	2	1.77
CG-HT3S-419C	4X1-1/2	5-1/4	1-1/4	9-5/8	2-11/16	2-5/8	4-1/8	5-13/16	2-7/8	3.47
CG-HT3S-524C	6X3/4	6	1	8-5/8	2	3-13/16	3	8-3/16	2	2.61
CG-HT3S-527C	6X1-1/2	6-15/16	1-1/4	10-15/16	2-11/16	3-13/16	4-1/8	8-3/16	2-7/8	4.66
CG-HT3S-574C	8X3/4	6-3/4	1	9-5/16	2	4-7/8	8-1/2	10-1/16	2	9.68
CG-HT3S-577C	8X1-1/2	8-1/4	1-1/4	12-1/4	2-11/16	4-7/8	8-1/2	10-1/16	2-7/8	7.64

Not intended to convey or dispense water for human consumption through drinking or cooking

Triple O-ring Sealed Telescoping Design Available With 6" and 12" Travel



Spears® Marine Expansion Joint allows a telescoping movement of an inner pipe within a firmly mounted outer tube to eliminate such damage. Available for CPVC 1/2" through 12" IPS piping systems in 6" or 12" maximum travel lengths.

Compact Installation - Eliminates Need For Expansion Loops

Telescoping design allows more compact installation than possible with conventional expansion loops and permits rigid mounting between two fixed points.

EPDM or FKM Pressure O-ring Seal with Dual "Wiper" O-ring for Extended Life

Designed for sealing dependability, O-ring pressure seal utilizes two (2) additional "wiper" O-rings to remove dirt and particles that would normally wear joint seals during operation. Long-life Expansion Joint requires no repair or replacement. Choice of either EPDM or FKM O-rings.

Support Piston Eliminates Binding, Minimizes Alignment Problems

Alignment is critical in use of expansion joints. Specially designed support piston eliminates binding and minimizes alignment problems which can result in cocking or breakage.

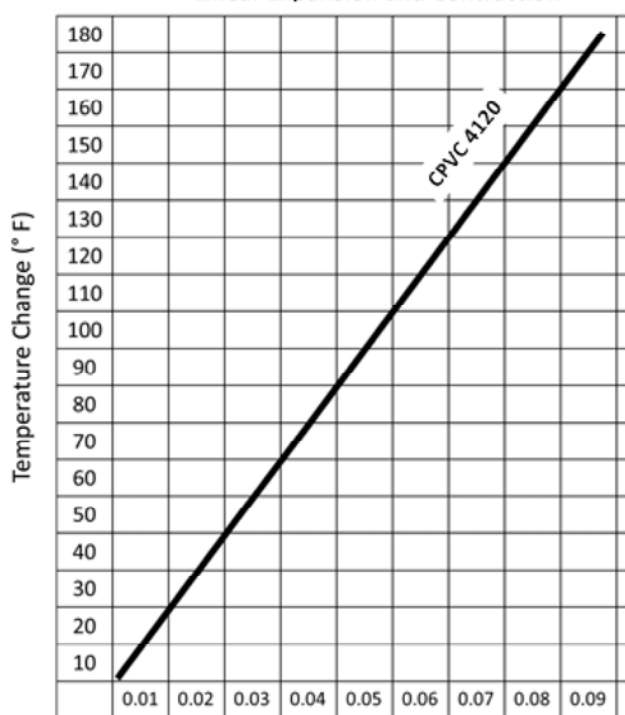
Excellent For Use as a Repair Coupling

Simply cut damaged pipe section from line, collapse expansion joint, solvent cement ends and expand halfway to install.

Sample Engineering Specifications

All Marine Expansion Joints shall be telescoping design with triple (3) EPDM or FKM O-ring seals, including center pressure seal and outer debris seals, and internal support piston. Maximum joint travel length shall be either 6" or 12". All Expansion Joints shall be pressure rated according to the manufacturer's specifications [see table] for water at 73°F. All Expansion Joints shall be fabricated from CPVC material conforming to ASTM D 1784. All sockets shall meet the dimensional requirements of ASTM D 2467, as manufactured by Spears® Manufacturing Company. Marine expansion joints in sizes 1/2" through 12" shall be type approved by the American Bureau of Shipping (ABS). Expansion Joints shall be suitable for use with Spears® U.S. Coast Guard approved piping systems.

Linear Expansion and Contraction



Change in Pipe Length (Inches/Feet)

Coefficient of Thermal Linear Expansion

CPVC 4120 = 3.4×10^{-5} in/in/°F



DETERMINING TRAVEL LENGTH NEEDED

General Rule: For CPVC systems, allow 1/2" expansion for every 10°F change in temperature per 100 feet of pipe, (all diameters). For example, a 6" travel expansion joint will accommodate approximately 120°F temperature change in 100 ft. of CPVC pipe (12 x 1/2" = 6").

INSTALLATION

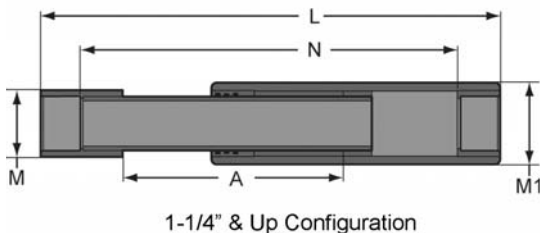
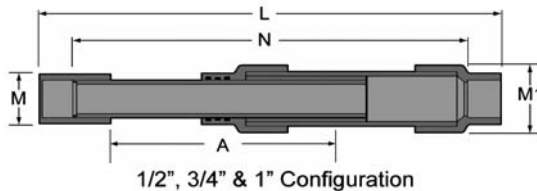
Expansion Joints consist of two telescoping tubes with internal O-ring seals. For proper operation, the outer tube should be firmly anchored to allow free movement of the inner tube or "piston". Support and thrust block the system to direct movement squarely into the Expansion Joint. Alignment is critical, axial guides should be installed to ensure straight movement into expansion joint. Provisions should be made to protect the cylinder shaft from scratches, damage and debris to prevent leaks. Expansion Joints can be installed at the travel range midpoint for most general installations and are shipped from the factory in this position. If desired, the extended position for installation may be additionally adjusted to specific system and installation parameters using the following calculation:

$$P = E \left(\frac{T-A}{T-F} \right)$$

T = Maximum Temperature of Pipe Exposure E = Maximum Expansion Joint Travel (6" or 12")
 A = Temperature of Pipe at time of Installation P = Piston Extension for Installation Position (inches)
 F = Minimum Temperature of Pipe Exposure

Example: A straight run of pipe will operate at temperatures between 60°F and 110°F. Temperature at time of installation is 75°F using a 6" travel Expansion Joint.

$$P = 6 \left(\frac{110-75}{110-60} \right) = 4.2 \text{ inches extended at installation.}$$



6" EXPANSION JOINT DIMENSION

Size	M	M1	L-CLOSED	L-OPEN	N-CLOSED	N-OPEN	Pressure Rating @ 73°F
1/2"	1-3/16	1-3/4	10-9/16	16-9/16	8-13/16	14-13/16	235
3/4"	1-7/16	2-1/8	12	18	10	16	235
1"	1-5/8	2-3/8	12-1/2	18-1/2	10-1/4	16-1/4	235
1-1/4"	2-1/4	2-3/8	13-1/16	19-1/16	10-1/2	16-1/2	235
1-1/2"	2-3/8	2-7/8	13-1/4	19-1/4	10-7/16	16-7/16	235
2"	2-7/8	3-1/2	14-7/16	20-7/16	11-7/16	17-7/16	235
2-1/2"	4-3/16	4-1/2	16-1/4	22-1/4	12-3/4	18-3/4	150
3"	4-3/16	4-1/2	15-5/8	21-5/8	11-13/16	17-13/16	150
4"	5-1/4	5-9/16	16-15/16	22-15/16	12-9/16	18-9/16	150
6"	7-9/16	8-5/8	19-3/4	25-3/4	13-5/8	19-5/8	150
8"	9-11/16	10-3/4	24-1/2	30-1/2	16-9/16	22-9/16	150
10"	12-1/16	12-3/4	28-7/8	34-7/8	18-7/8	24-7/8	150
12"	14-1/4	16	34	40	22	28	150

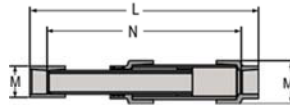
12" EXPANSION JOINT DIMENSIONS

Size	M	M1	L-CLOSED	L-OPEN	N-CLOSED	N-OPEN	Pressure Rating @ 73°F
1/2"	1-3/16	1-3/4	16-9/16	28-9/16	14-13/16	26-13/16	235
3/4"	1-7/16	2-1/8	18	30	16	28	235
1"	1-5/8	2-3/8	18-1/2	30-1/2	16-1/4	28-1/4	235
1-1/4"	2-1/4	2-3/8	19-1/16	31-1/16	16-1/2	28-1/2	235
1-1/2"	2-3/8	2-7/8	19-1/4	31-1/4	16-7/16	28-7/16	235
2"	2-7/8	3-1/2	20-7/16	32-7/16	17-7/16	29-7/16	235
2-1/2"	4-3/16	4-1/2	22-1/4	34-1/4	18-3/4	30-3/4	150
3"	4-3/16	4-1/2	21-5/8	33-5/8	17-13/16	29-13/16	150
4"	5-1/4	5-9/16	22-15/16	34-15/16	18-9/16	30-9/16	150
6"	7-9/16	8-5/8	25-3/4	37-3/4	19-5/8	31-5/8	150
8"	9-11/16	10-3/4	30-1/2	42-1/2	22-9/16	34-9/16	150
10"	12-1/16	12-3/4	34-7/8	46-7/8	24-7/8	36-7/8	150
12"	14-1/4	16	40	52	28	40	150

Fabricated Expansion Joints - Marine

6" Travel with EPDM O-rings

1/2" - 2" 235 psi @ 73°F (23°C) 2-1/2" - 12" 150 psi @ 73°F (23°C)

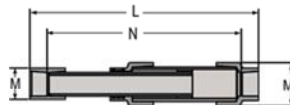


Part Number	Size	L-Closed	L-Open	M	M1	N-Closed	N-Open	T	Approx. Wt. (Lbs.)
CG-826E-005X6C	1/2	10-9/16	16-9/16	1-3/16	1-3/4	8-13/16	14-13/16	6	.74
CG-826E-007X6C	3/4	12	18	1-7/16	2-1/8	10	16	6	1.04
CG-826E-010X6C	1	12-1/2	18-1/2	1-5/8	2-3/8	10-1/4	16-1/4	6	1.49
CG-826E-012X6C	1 1/4	13-1/16	19-1/16	2-1/4	2-3/8	10-1/2	16-1/2	6	1.58
CG-826E-015X6C	1-1/2	13-1/4	19-1/4	2-3/8	2-7/8	10-7/16	16-7/16	6	2.64
CG-826E-020X6C	2	14-7/16	20-7/16	2-7/8	3-1/2	11-7/16	17-7/16	6	4.06
CG-826E-025X6C	2-1/2	16-1/4	22-1/4	4-3/16	4-1/2	12-3/4	18-3/4	6	7.17
CG-826E-030X6C	3	15-5/8	21-5/8	4-3/16	4-1/2	11-13/16	17-13/16	6	6.31
CG-826E-040X6C	4	16-15/16	22-15/16	5-1/4	5-9/16	12-9/16	18-9/16	6	9.26
CG-826E-060X6C	6	19-3/4	25-3/4	7-9/16	8-5/8	13-5/8	19-5/8	6	31.96
CG-826E-080X6C	8	24-1/2	30-1/2	9-11/16	10-3/4	16-9/16	22-9/16	6	49.85
CG-826E-100X6C	10	28-7/8	34-7/8	12-1/16	12-3/4	18-7/8	24-7/8	6	90.90
CG-826E-120X6C	12	34	40	14-1/4	16	22	28	6	188.77

Fabricated Expansion Joints - Marine

12" Travel with EPDM O-rings

1/2" - 2" 235 psi @ 73°F (23°C) 2-1/2" - 12" 150 psi @ 73°F (23°C)



Part Number	Size	L-Closed	L-Open	M	M1	N-Closed	N-Open	T	Approx. Wt. (Lbs.)
CG-826E-005X12C	1/2	16-9/16	28-9/16	1-3/16	1-3/4	14-13/16	26-13/16	12	1.01
CG-826E-007X12C	3/4	18	30	1-7/16	2-1/8	16	28	12	1.40
CG-826E-010X12C	1	18-1/2	30-1/2	1-5/8	2-3/8	16-1/4	28-1/4	12	1.95
CG-826E-012X12C	1-1/4	19-1/16	31-1/16	2-1/4	2-3/8	16-1/2	28-1/2	12	2.20
CG-826E-015X12C	1-1/2	19-1/4	31-1/4	2-3/8	2-7/8	16-7/16	28-7/16	12	3.17
CG-826E-020X12C	2	20-7/16	32-7/16	2-7/8	3-1/2	17-7/16	29-7/16	12	5.51
CG-826E-025X12C	2-1/2	22-1/4	34-1/4	4-3/16	4-1/2	18-3/4	30-3/4	12	8.66
CG-826E-030X12C	3	21-5/8	33-5/8	4-3/16	4-1/2	17-13/16	29-13/16	12	7.80
CG-826E-040X12C	4	22-15/16	34-15/16	5-1/4	5-9/16	18-9/16	30-9/16	12	11.13
CG-826E-060X12C	6	25-3/4	37-3/4	7-9/16	8-5/8	19-5/8	31-5/8	12	41.07
CG-826E-080X12C	8	30-1/2	42-1/2	9-11/16	10-3/4	22-9/16	34-9/16	12	57.51
CG-826E-100X12C	10	34-7/8	46-7/8	12-1/16	12-3/4	24-7/8	36-7/8	12	106.58
CG-826E-120X12C	12	40	52	14-1/4	16	28	40	12	183.13

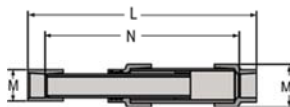


Marine & Offshore Technical
EverTUFF® CPVC Schedule 80 Marine Fittings

Fabricated Expansion Joints - Marine

6" Travel with FKM O-rings

1/2" - 2" 235 psi @ 73°F (23°C) 2-1/2" - 12" 150 psi @ 73°F (23°C)

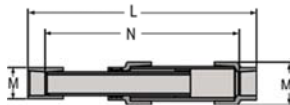


Part Number	Size	L-Closed	L-Open	M	M1	N-Closed	N-Open	T	Approx. Wt. (Lbs.)
CG-826-005X6C	1/2	10-9/16	16-9/16	1-3/16	1-3/4	8-13/16	14-13/16	6	.77
CG-826-007X6C	3/4	12	18	1-7/16	2- 1/8	10	16	6	1.07
CG-826-010X6C	1	12-1/2	18-1/2	1-5/8	2-3/8	10-1/4	16-1/4	6	1.52
CG-826-012X6C	1-1/4	13-1/16	19-1/16	2-1/4	2- 3/8	10-1/2	16-1/2	6	2.23
CG-826-015X6C	1-1/2	13-1/4	19-1/4	2-3/8	2- 7/8	10-7/16	16-7/16	6	2.66
CG-826-020X6C	2	14-7/16	20-7/16	2- 7/8	3- 1/2	11-7/16	17-7/16	6	4.11
CG-826-025X6C	2-1/2	16-1/4	22-1/4	4- 3/16	4- 1/2	12-3/4	18-3/4	6	7.25
CG-826-030X6C	3	15-5/8	21-5/8	4- 3/16	4- 1/2	11-13/16	17-13/16	6	6.37
CG-826-040X6C	4	16-15/16	22-15/16	5-1/4	5- 9/16	12-9/16	18-9/16	6	9.32
CG-826-060X6C	6	19-3/4	25-3/4	7-9/16	8- 5/8	13-5/8	19-5/8	6	32.05
CG-826-080X6C	8	24-1/2	30-1/2	9-11/16	10- 3/4	16-9/16	22-9/16	6	49.97
CG-826-100X6C	10	28-7/8	34-7/8	12-1/16	12- 3/4	18-7/8	24-7/8	6	91.09
CG-826-120X6C	12	34	40	14-1/4	16	22	28	6	188.48

Fabricated Expansion Joints - Marine

12" Travel with FKM O-rings

1/2" - 2" 235 psi @ 73°F (23°C) 2-1/2" - 12" 150 psi @ 73°F (23°C)



Part Number	Size	L-Closed	L-Open	M	M1	N-Closed	N-Open	T	Approx. Wt. (Lbs.)
CG-826-005X12C	1/2	16-9/16	28-9/16	1-3/16	1-3/4	14-13/16	26-13/16	12	1.04
CG-826-007X12C	3/4	18	30	1-7/16	2- 1/8	16	28	12	1.42
CG-826-010X12C	1	18-1/2	30-1/2	1-5/8	2-3/8	16-1/4	28-1/4	12	1.98
CG-826-012X12C	1-1/4	19-1/16	31-1/16	2-1/4	2- 3/8	16-1/2	28-1/2	12	2.23
CG-826-015X12C	1-1/2	19-1/4	31-1/4	2-3/8	2- 7/8	16-7/16	28-7/16	12	3.74
CG-826-020X12C	2	20-7/16	32-7/16	2- 7/8	3- 1/2	17-7/16	29-7/16	12	5.56
CG-826-025X12C	2-1/2	22-1/4	34-1/4	4- 3/16	4- 1/2	18-3/4	30-3/4	12	9.15
CG-826-030X12C	3	21-5/8	33-5/8	4- 3/16	4- 1/2	17-13/16	29-13/16	12	8.27
CG-826-040X12C	4	22-15/16	34-15/16	5-1/4	5- 9/16	18-9/16	30-9/16	12	11.88
CG-826-060X12C	6	25- 3/4	37-3/4	7-9/16	8- 5/8	19-5/8	31-5/8	12	41.16
CG-826-080X12C	8	30-1/2	42-1/2	9-11/16	10- 3/4	22-9/16	34-9/16	12	57.61
CG-826-100X12C	10	34-7/8	46-7/8	12-1/16	12- 3/4	24-7/8	36-7/8	12	106.77
CG-826-120X12C	12	40	52	14-1/4	16	28	40	12	212.61

GripLoc™ Marine Coupling



GripLoc™ Marine Coupling

Specially designed stainless steel Gripper Ring to firmly grip pipe and prevent potential pull-out.
 Compressed Gland Ring ensures positive O-ring seal against pipe.

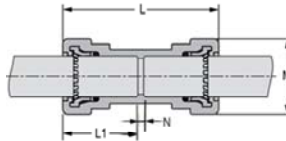
GripLoc™ Coupling - Marine

WARNING: DO NOT INSERT FINGERS

EPDM Gasket

Pressure Rated to 235 psi @ 73°F

Do Not Use Solvent Cement.



Part Number	Size	L	L1	M	N	Approx. Wt. (Lbs.)
CG-GL429-005C	1/2	3-13/16	1-27/32	1-5/8	1/8	.20
CG-GL429-007C	3/4	4	1-15/16	1-29/32	1/8	.26
CG-GL429-010C	1	4-3/16	2-1/32	2-1/4	1/8	.38
CG-GL429-012C	1-1/4	4-5/16	2-3/32	2-23/32	1/8	.51
CG-GL429-015C	1-1/2	4-5/16	2-3/32	3	1/8	.60
CG-GL429-020C	2	4-1/2	2-3/16	3-5/8	1/8	.89

Gripper is 410 Stainless Steel

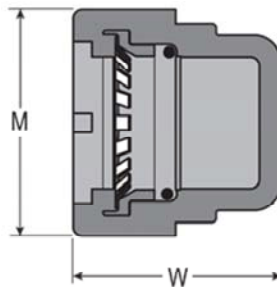
GripLoc™ Cap - Marine

WARNING: DO NOT INSERT FINGERS

EPDM Gasket

Pressure Rated to 235 psi @ 73°F

Do Not Use Solvent Cement.



Part Number	Size	M	W	Approx. Wt. (Lbs.)
CG-GL447-005C	1/2	1-5/8	1-5/8	.11
CG-GL447-007C	3/4	1-15/16	1-3/4	.14
CG-GL447-010C	1	2-5/16	2	.20
CG-GL447-012C	1-1/4	2-23/32	2-1/8	.29
CG-GL447-015C	1-1/2	3	2-3/16	.35
CG-GL447-020C	2	3-5/8	2-7/16	.54

Gripper is 410 Stainless Steel