



MECHANICAL CONTRACTORS ASSOCIATION OF AMERICA, INC.

FITTINGS

**STAINLESS STEEL BUTTWELD
Standard Weight**

Dia. In.	90° Ell Long Radius	90° Ell Short Radius	45° Ell	180° Deg Long Radius Bend	Tee	Cap	Stub End	Cross	Lateral	Wye	Belled Connector
1/2	1.58		1.58	1.58	2.34	.81	.81		2.34		
3/4	2.34		2.34	2.35	3.49	1.20	1.20		3.51		
1	3.11	3.11	3.11	3.12	4.65	1.58	1.59	6.18	4.66	4.65	
1-1/4	3.88	3.88	3.88	3.90	5.80	1.96	1.97	7.72	5.82	5.81	
1-1/2	4.65	4.65	4.64	4.67	6.96	2.35	2.36	9.26	6.98	6.96	
2	6.19	6.18	6.18	6.23	9.27	3.12	3.14	12.33	9.31	9.27	
2-1/2	7.28	7.27	7.26	7.36	10.91	3.66	3.69	14.50	10.98	10.92	
3	7.65	7.62	7.61	7.77	11.45	3.83	3.88	15.21	11.55	11.45	7.60
3-1/2	8.71	8.68	8.66	8.85	13.04	4.36	4.42	17.32			
4	9.49	9.45	9.42	9.72	14.18	4.74	4.80	18.83	14.34	14.18	9.39
5	10.99	10.93	10.87	11.23	16.43	5.46	5.58	21.79	16.61	16.42	10.81
6	12.16	12.06	11.98	12.53	18.04	6.03	6.15	23.92	18.35	18.06	11.87
8	15.46	15.31	15.10	16.19	22.78	7.58	7.75	30.13	23.26	22.75	14.85
10	19.71	19.37	19.06	21.01	28.78	9.54	9.83	37.97	29.61	28.70	18.57
12	24.08	23.30	23.08	25.98	35.19	11.50	11.80	46.22	35.96	34.61	22.28
14	28.12	27.30	26.94		41.28	13.44	13.86	54.15			
16	32.51	31.43	30.97		47.48	15.48	15.86	62.19			
18	37.05	35.77	35.10		53.69	17.48	18.08	70.23			
20	41.13	40.06	39.29		59.68	19.55	20.06	78.06			
24	49.38	48.28	47.66		71.64	23.58	24.20	93.70			

NOTES:

1. Labor units based on Gas Tungsten Arc Welding (GTAW) process for the root pass and (SMAW) for any remaining passes that



MECHANICAL CONTRACTORS ASSOCIATION OF AMERICA, INC.

FITTINGS

CAST IRON NO HUB FITTINGS

Dia. In.			Reducing Sanitary Tee	Reducing Sanitary Tee	Sanitary Tap Tee W/1-1/2" Tap On Top	Long Test Tee Reducing	Long Tap P-Trap	Two Way Baffle CleanOut	Figure One W/No-Hub Top	Figure One W/Tap On Top	Reducing Figure Five	Figure Five Extended
1-1/2	1-1/2	1-1/4				.77						
2	1-1/2	1-1/2			1.25					1.77		
2	1-1/2	12					.82					
2	1-1/2	14					.82					
2	1-1/2	16					.83					
2	1-1/2	18					.84					
2	2	1-1/4		.86								
2	2	1-1/2	.51	.91	1.39				1.47			
2	2	12					.91					
3	2	3								1.07	1.10	
3	3	1-1/4		1.02								
3	3	1-1/2	.67	1.07								
3	3	2	.73	1.17								
3	3	4						1.01				
4	2	4								1.42	1.47	
4	3	3-1/2				.77						
4	4	1-1/4		1.18								
4	4	1-1/2		1.22								
4	4	2	.91	1.37								
4	4	3	1.01									
4	4	4						1.30				
5	5	1-1/2		1.45								
5	5	2	1.10	1.53								
5	5	3	1.19									
5	5	4	1.30									
6	6	1-1/2		1.60								
6	6	2	1.28	1.69								
6	6	3	1.37									
6	6	4	1.47									
8	8	3	1.47									
8	8	4	1.57									
8	8	5	1.72									
8	8	6	1.77									



MECHANICAL CONTRACTORS ASSOCIATION OF AMERICA, INC.

FITTINGS

CAST IRON SERVICE WEIGHT SOIL PIPE FITTINGS
GASKET JOINT

Dia. In.	Double Wye W/2" Side Inlet	H Branch	Upright Wye	Combination Wye & Eight Bend	Double Combination Wye & Eight Bend	Combination Wye & Eight Bend W/2" Side Inlet	Combination Wye & Eight Bend W/C.O. On Main	P-Trap	Deep Seal P- Trap	Running Trap	Running Trap W/Single Hub Vent	P Trap W/ 1/2" Tap In Heel	Running Trap W/Double Hub Vent
2		.78		.78	1.15								
3		1.15		1.18	1.74			.46	.50	.46		.70	
4	2.71	1.55	1.59	1.65	2.43	1.93	.98	.96	1.12	.96	1.29	.95	1.77
5				2.11				1.18					2.43
6				2.48	3.52			1.51	1.53	1.61	2.40		
8				3.38				2.40					3.47
10								3.00					
12													
15													

Dia. In.	Sanitary Cross W/2" Side Opening	Sanitary Cross W/2" Side Opening Both Sides	Sanitary Cross W/2" Side Tap	Single Two Way Cleanout	Short Special Two Way Cleanout	Double Two Way Cleanout	Straight Cross	Sanitary Cross	Sanitary Tapped Cross	Single Hub Fitting	Double Hub Fitting	Plug
2								1.10	1.88		.73	.06
3	2.01	2.34						1.67			1.07	.08
4	2.52	2.86	3.17	1.71	1.56	2.36	2.16	2.22		.73	1.41	.09
5											1.73	.12
6								3.20			1.90	.14
8								4.59			2.34	.21
10											3.06	.31
12											3.40	.43
15											4.02	.58



MECHANICAL CONTRACTORS ASSOCIATION OF AMERICA, INC.

FITTINGS

CAST IRON SERVICE WEIGHT SOIL PIPE FITTINGS
GASKET JOINT

Dia. In.	Running Trap W/Reducing Single Hub Vent	Running Trap W/Reducing Double Hub Vent	Double Two Way Cleanout Reducing	Straight Cross Reducing	Reducing Sanitary Cross	Reducing Sanitary Tapped Cross	Reducing Straight Tap Cross	Tap Wye Reducing	Tap Double Wye Reducing	Reducer (Spigot x Hub)	Increaser (Spigot x Hub)	Reducing Close Flange	Long Plain Increaser (Spig x Spig)	Long Tapped Increaser (FPT x Spig)
1-1/2	4													0.75
2	1-1/4					1.48								
2	1-1/2												.24	1.03
2	4													
3	1-1/4													
3	1-1/2					1.88								
3	2				1.33	1.96	1.93	1.27	2.00	.43				
4	1-1/4					1.88		1.35						
4	1-1/2													
4	2			1.55	1.51	2.14	2.13	1.45	2.14	.44				
4	3				1.85					.63		1.48	.41	
4	5										.98		.41	
4	8										1.38			
4	8													
5	2									.47				
5	3									.66				
5	4	1.96	2.72	2.51	2.42					.80				
6	2									.49				
6	3									.66				
6	4	2.13	2.80	2.60	2.45					.83				
6	5									1.01				
8	2									.57				
8	3									.72				
8	4	2.98	3.52	3.28	2.62					.90				
8	5									1.07				
8	6	3.44	4.38							1.21				
10	3													
10	4									1.06				
10	5									1.39				
10	8									1.24				
10	8	5.32	6.09							1.44				
12	4									1.12				
12	5									1.38				
12	6									1.39				
12	8									1.61				
12	10	6.53	7.50							1.91				
15	4													
15	6									1.70				
15	8									1.87				
15	10									2.28				
15	12	8.44	8.86							2.34				



MECHANICAL CONTRACTORS ASSOCIATION OF AMERICA, INC.

FITTINGS

CAST IRON EXTRA HEAVY SOIL FITTINGS
LEAD JOINT

Dia. In.	Sanitary Tee Reducing	Straight Tap Tee Reducing	Sanitary Tap Tee Reducing	Straight Tee Reducing	Reducing Wye	Reducing Double Wye	Combination Wye & Eighth Bend Reducing	Reducing Double Combination	Running Trap W/Reducing Single Hub Vent	Running Trap W/Reducing Double Hub Vent	Running Trap W/Double Cleanout & Reducing Tee Branch	Reducer (Spigot X Hub)	Increaser (Spig X Hub)	Tap Wye Reducing	Reducing Closet Flange
2	1-1/2			1.13											
2	4												1.16		
3	1-1/2	1.41	1.42												
3	2	1.39	1.53	1.55	1.39	1.41	1.99	1.44	2.05						
3	3														
3	4												1.16		
4	2	1.68	1.81	1.79	1.68	1.67	2.25	1.70	2.22			.51		1.79	
4	3	1.84	2.39			1.97	2.71	2.02	2.85		2.23	.86			2.17
4	4														
4	6												1.48		
5	3	2.11				2.16		2.26				.90			
5	4	2.37	3.04			2.39		2.48	3.43	2.68	3.66	1.13			
6	2							1.97				.69			
6	3	2.23				2.33		2.28				.92			
6	4	2.64	3.23		2.50	2.54	3.42	2.62	3.48	3.00	4.04	1.16			
6	5	2.89				2.84		2.90				1.35			
6	6														
6	8												2.10		
8	3					2.70									
8	4	3.03				2.98		3.08		4.54	5.36	1.29			
8	5					3.24						1.44			
8	5					3.24						1.44			
8	6	3.44				3.60		3.73		4.88	6.09	1.55			
8	10												2.54		
10	4					3.76						1.39			
10	5											1.70			
10	6	4.16				4.36			6.18			1.70			
10	8	4.80				5.19	7.60			7.77		2.05			
12	4					4.25						1.45			
12	5					4.41									
12	6	4.48				4.68				7.70		1.94			
12	8	5.04				5.25						2.17			
12	10	5.55				6.16						2.65			
15	4					5.01									
15	6	5.48				5.62									
15	8	5.96				6.56						2.60			
15	10	6.43				7.00						3.18			
15	12					7.37						2.83			



MECHANICAL CONTRACTORS ASSOCIATION OF AMERICA, INC.

FITTINGS

CAST IRON DWV THREADED FITTINGS

90° Ell Reducing Short Radius			CAST IRON DWV THREADED FITTINGS						
Dia. In.		Increase	Dia. In.	Reducing Tee	Short Turn Reducing Sanitary Tee	Double Short Turn Reducing Sanitary Tee	Reducing Wye	Reducing Long Turn Wye	
1-1/2	1-1/4	1.00	1-1/2	1-1/4	1-1/4				
2	1-1/2	1.15	1-1/2	1-1/2	1-1/4				
2-1/2	2		2	1-1/2	1-1/2				
3	2	1.94	2	1-1/2	2				
4	2	2.15	2	2	1-1/4				
4	3	2.60	2	2	1-1/2	1.79			
4	3	3.03	2-1/2	2-1/2	1-1/2		2.28	1.80	
6	4	5.61	3	3	1-1/2			1.81	
6	5	6.22	3	3	2			2.74	
8	6	7.99	3	4	1-1/2			3.20	
			4	4	2			3.36	
			4	4	1-1/2			4.03	
			4	4	2			4.12	
			4	4	3			4.22	
			5	5	4			4.25	
			6	6	3			4.67	
			6	6	4			4.67	
			6	6	4			7.79	
			6	6	5			8.96	
			8	8	4			9.05	
			8	8	6			9.44	
			8	8	6			11.95	
			10	10	6			12.56	
								15.76	



MECHANICAL CONTRACTORS ASSOCIATION OF AMERICA, INC.

FITTINGS

CAST IRON THREADED FITTINGS
125 LBS.

Dia. In.					Dia. In.					Dia. In.					
Reducing 90° El	Concentric Reducer	Eccentric Reducer	Hex Bushing		Reducing 90° Ell	Concentric Reducer	Eccentric Reducer	Hex Bushing		Reducing 90° Ell	Concentric Reducer	Eccentric Reducer	Hex Bushing		
1/4	1/8		.22		2	1/2	.84	.84	.29	4	2	2.61	2.53	2.54	.71
3/8	1/8		.22		2	3/4	.92	.92	.38	4	2-1/2	2.81	2.76	2.75	1.09
3/8	1/4		.22		2	1	1.00	.99	.45	4	3	2.99	2.94	2.95	1.29
1/2	1/8		.22		2	1-1/4	1.08	1.07	.52	4	3-1/2	3.22	3.15	3.15	1.48
1/2	1/4		.22		2	1-1/2	1.16	1.15	.56	5	2			3.85	.74
1/2	3/8	.45	.22		2-1/2	1/2			.29	5	2-1/2	4.25		4.12	1.11
3/4	1/8		.28		2-1/2	3/4			.39	5	3	4.50		4.38	1.31
3/4	1/4		.28		2-1/2	1	1.48		.46	5	3-1/2			4.63	1.50
3/4	3/8		.28		2-1/2	1-1/4	1.59		.52	5	4	4.98	4.89	4.90	1.70
3/4	1/2	.59	.59	.59	2-1/2	1-1/2	1.69	1.68	.57	6	2			4.44	.78
1	1/8		.28		2-1/2	2	1.90	1.88	.67	6	2-1/2			4.70	1.16
1	1/4		.28		3	1/2			.30	6	3	5.02		4.95	1.36
1	3/8		.28		3	3/4		1.60	.40	6	3-1/2			5.20	1.55
1	1/2	.65	.65	.65	3	1			.47	6	4	5.62	5.47	5.49	1.74
1	3/4	.75	.75	.75	3	1-1/4	1.83		.53	6	5	6.17	6.00	6.03	2.73
1-1/4	1/4		.28		3	1-1/2	1.92		.58	8	3				1.48
1-1/4	3/8		.28		3	2	2.12	2.10	.69	8	3-1/2				1.66
1-1/4	1/2	.70	.70	.70	3	2-1/2	2.33	2.30	1.07	8	4				1.85
1-1/4	3/4	.80	.80	.79	3-1/2	1			.48	8	5			7.26	2.86
1-1/4	1	.89	.89	.89	3-1/2	1-1/4			.54	8	6	8.11	7.77	7.76	3.37
1-1/2	1/4		.28		3-1/2	1-1/2			.59	10	4				2.06
1-1/2	3/8		.28		3-1/2	2			.69	10	6				3.54
1-1/2	1/2	.74	.73	.73	3-1/2	2-1/2			1.08	10	8				4.54
1-1/2	3/4	.83	.82	.82	3-1/2	3	2.77		1.27	12	5				3.27
1-1/2	1	.91	.91	.91	4	1			.50	12	6				3.78
1-1/2	1-1/4	1.00	.99	.99	4	1-1/4			.56	12	8				4.77
2	1/4		.29		4	1-1/2			.60	12	10				5.75
2	3/8		.29												



MECHANICAL CONTRACTORS ASSOCIATION OF AMERICA, INC.

FITTINGS

CAST IRON FLANGED FITTINGS
CLASS 125

Dia. In.	90° Reducing Ell Standard Radius	90° Reducing Ell Long Radius	Concentric Reducer	Eccentric Reducer	Dia. In.	90° Reducing Ell Standard Radius	90° Reducing Ell Long Radius	Concentric Reducer	Eccentric Reducer	
2	1-1/2	.91	.93		6	4	2.53	2.83	2.30	2.34
2-1/2	1-1/2		.90		6	5	2.80	3.03	2.49	2.51
2-1/2	2	1.05	1.02		8	4	2.68	.00	2.34	2.42
2-1/2	2	1.05	1.02		8	5	2.82	3.42	2.53	2.61
3	1-1/2		.88		8	6	3.14	3.75	2.72	2.72
3	2	1.07	1.09	.98	10	4			3.27	
3	2-1/2	1.15	1.20	1.09	10	5			3.49	
3-1/2	3		1.91	1.14	10	6	4.56		3.78	3.89
4	2	1.71	1.61	1.67	10	8	5.09	6.09	4.36	4.36
4	2-1/2	1.85	1.74	1.77	12	6	5.31		4.39	4.42
4	3	1.99	2.11	1.87	12	8	5.93		4.87	4.87
4	3-1/2		2.02	1.87	12	10	6.42	7.38	5.49	5.49
5	2-1/2		1.90		14	6			5.63	
5	3	2.17	2.00	2.00	14	8			6.13	
5	4	2.49	2.59	2.30	14	10			6.71	
6	2		1.79		14	12	8.24		7.46	
6	2-1/2		1.92		16	10			7.66	
6	3	2.25	2.02	2.14	16	12	8.60		8.13	
					16	14			8.62	



MECHANICAL CONTRACTORS ASSOCIATION OF AMERICA, INC.

FITTINGS

AWWA DUCTILE IRON GROOVED FITTINGS
STANDARD WEIGHT

Dia. In.	90° Ell Standard Radius	90° Ell Long Radius	Base Ell	90° Ell W/Side Outlet	Standard Radius Flare 90° Ell	Long Radius Flare 90° Ell	Straight Flare	45° Ell	22-1/2° Ell	11-1/4° Ell
3	1.10	1.26	1.25	1.85	.78	.86	.70	1.05	1.16	1.10
4	1.45	1.70	1.63	2.52	1.19	1.30	.92	1.40	1.45	1.45
6	2.59	3.09	2.89	4.65	2.22	2.19	1.50	2.48	2.63	2.58
8	3.58	4.25	4.13	6.20	3.35	3.32	2.17	3.42	3.59	3.58
10	4.88	6.17	5.46	8.90	4.28	4.76	2.77	4.38	4.74	4.90
12	5.13	8.93	6.04	9.68	4.79	5.88	3.41	4.82	5.37	5.55
14	6.56	7.80	7.61		5.57	6.30	3.35	5.49	5.31	5.45
16	7.62	8.37	8.21		6.17	7.07	4.22	6.14	5.68	5.81
18	8.80	9.63	9.63		7.02	8.24	5.39	7.30	6.67	6.69
20	9.86	10.84	10.83		7.97	9.56	5.88	8.71	8.00	8.03
24	12.56	14.18	13.54		10.56	12.99	7.10	10.85	9.96	9.97
30	16.42	18.15			13.18	14.22	9.68	14.38	14.12	14.24
36	18.82	21.13			14.74	16.50	11.55	18.12	17.56	18.08

Dia. In.	Tee	Tee W/Side Outlet	Base Tee	Cross	45° Lateral	Cap	Coupling	Transition Coupling
3	1.84	2.31	1.71	2.25	1.85	.57	.12	.14
4	2.17	3.14	2.28	3.11	2.47	.73	.16	.17
6	3.87	5.75	4.12	5.54	4.38	1.29	.19	.18
8	5.36	7.07	5.86	7.54	6.29	1.78	.30	.32
10	7.25	10.74	7.47	10.83	8.84	2.45	.39	.38
12	7.83	11.52	8.35	11.62	10.03	2.88	.50	.52
14	9.74		9.94	11.97	11.28	2.82	.87	
16	10.11		10.34	12.89	12.75	3.04	.98	
18	11.54		12.09	14.82	14.65	3.63	1.27	
20	13.25		13.79	16.81	16.57	4.18	1.21	
24	17.60		17.03	21.09	19.03	5.51	1.64	
30	20.93			24.32	23.58	7.88	2.52	
36	23.80			28.05	28.44	10.20	3.11	

NOTE:
Labor Unit does not include handling and installing the coupling.



MECHANICAL CONTRACTORS ASSOCIATION OF AMERICA, INC.

FITTINGS

FORGED STEEL THREADED FITTING
2000 LBS. CLEANED FOR AMMONIA SERVICE

Dia. In.	90° Ell	45° Ell	Cross	Tee	Dia. In.	Reducing Tee	Dia. In.	Reducing Tee
1/2	.53	.53	1.00	.77	3/4	3/4	1/2	.95
3/4	.72	.72	1.39	1.05	1	1	1/2	1.09
1	.88	.88	1.71	1.30	1	1	3/4	1.19
1-1/4	1.02	1.01	1.98	1.50	1-1/4	1-1/4	1/2	1.21
1-1/2	1.12	1.11	2.18	1.65	1-1/4	1-1/4	3/4	1.31
2	1.36	1.35	2.65	2.01	1-1/4	1-1/4	1	1.40
2-1/2	2.20	2.22	4.40	3.27	1-1/2	1-1/2	1/2	1.30
3	2.68	2.68	5.27	3.94	1-1/2	1-1/2	3/4	1.39
4	3.74	3.62	7.11	5.41	1-1/2	1-1/2	1	1.48
					1-1/2	1-1/2	1-1/4	1.56
					2	2	1/2	1.53
					2	2	3/4	1.62
					2	2	1	1.69
					2	2	1-1/4	1.77
					2	2	1-1/2	1.85
					2-1/2	2-1/2	3/4	2.55
					2-1/2	2-1/2	1	2.65
					2-1/2	2-1/2	1-1/4	2.76
					2-1/2	2-1/2	1-1/2	2.86
					2-1/2	2-1/2	2	3.06
					3	3	1	3.11
					3	3	1-1/4	3.22
					3	3	1-1/2	3.32
					3	3	2	3.53
					3	3	2-1/2	3.73
					4	4	1-1/4	4.28
					4	4	1-1/2	4.40
					4	4	2	4.59
					4	4	2-1/2	4.81
					4	4	3	5.00



MECHANICAL CONTRACTORS ASSOCIATION OF AMERICA, INC.

FITTINGS

FORGED STEEL THREADED FITTING
6000 LBS.

Dia. In.		Reducing Tee	
1/4	1/4	1/8	.71
3/8	3/8	1/8	.71
3/8	3/8	1/4	.71
1/2	1/2	1/8	.71
1/2	1/2	1/4	.71
1/2	1/2	3/8	.71
3/4	3/4	1/8	.96
3/4	3/4	1/4	.96
3/4	3/4	3/8	.96
3/4	3/4	1/2	.96
1	1	1/8	1.11
1	1	1/4	1.11
1	1	3/8	1.11
1	1	1/2	1.11
1	1	3/4	1.21
1-1/4	1-1/4	1/4	1.26
1-1/4	1-1/4	3/8	1.26
1-1/4	1-1/4	1/2	1.26
1-1/4	1-1/4	3/4	1.36
1-1/4	1-1/4	1	1.45
1-1/2	1-1/2	3/8	1.37
1-1/2	1-1/2	1/2	1.37
1-1/2	1-1/2	3/4	1.46

Dia. In.		Reducing Tee	
1-1/2	1-1/2	1	1.54
1-1/2	1-1/2	1-1/4	1.62
2	2	1/2	1.71
2	2	3/4	1.79
2	2	1	1.86
2	2	1-1/4	1.94
2	2	1-1/2	2.01
2-1/2	2-1/2	3/4	2.76
2-1/2	2-1/2	1	2.86
2-1/2	2-1/2	1-1/4	2.96
2-1/2	2-1/2	1-1/2	3.06
2-1/2	2-1/2	2	3.26
3	3	1	3.55
3	3	1-1/4	3.66
3	3	1-1/2	3.76
3	3	2	3.96
3	3	2-1/2	4.15
4	4	1-1/4	4.49
4	4	1-1/2	4.60
4	4	2	4.79
4	4	2-1/2	5.00
4	4	3	5.19



MECHANICAL CONTRACTORS ASSOCIATION OF AMERICA, INC.

FITTINGS

FORGED STEEL SOCKET WELD FITTINGS
3000 LBS.

Reducer Couplings			Insert Reducer		Reducer Couplings			Insert Reducer		Reducing Tee			Reducing Tee				
Dia. In.			Dia. In.		Dia. In.			Dia. In.		Dia. In.			Dia. In.				
1/4	1/8	.52			2	1/8	.34			1/4	1/4	1/8	.79	2	2	1/2	2.52
3/8	1/8	.52	.25		2	1/4	.34			3/8	3/8	1/8	.79	2	2	3/4	2.66
3/8	1/4	.52	.25		2	3/8	.34			3/8	3/8	1/4	.79	2	2	1	2.79
1/2	1/8	.52	.25		2	1/2	1.42	.34		1/2	1/2	1/8	.79	2	2	1-1/4	2.92
1/2	1/4	.52	.25		2	3/4	1.55	.47		1/2	1/2	1/4	.79	2	2	1-1/2	3.05
1/2	3/8	.52	.25		2	1	1.68	.60		1/2	1/2	3/8	.79	2-1/2	2-1/2	3/4	3.08
3/4	1/8	.72	.32		2	1-1/4	1.82	.74		3/4	3/4	1/8	1.13	2-1/2	2-1/2	1	3.21
3/4	1/4	.72	.32		2	1-1/2	1.95	.87		3/4	3/4	1/4	1.13	2-1/2	2-1/2	1-1/4	3.34
3/4	3/8	.72	.32		2-1/2	1/8	.35			3/4	3/4	3/8	1.13	2-1/2	2-1/2	1-1/2	3.46
3/4	1/2	.72	.32		2-1/2	1/2	.35			3/4	3/4	1/2	1.13	2-1/2	2-1/2	2	3.71
1	1/8	.86	.32		2-1/2	3/4	1.73	.48		1	1	1/8	1.40	3	3	1	3.34
1	1/4	.86	.32		2-1/2	1	1.85	.61		1	1	1/4	1.40	3	3	1-1/4	3.46
1	3/8	.86	.32		2-1/2	1-1/4	1.98	.74		1	1	3/8	1.40	3	3	1-1/2	3.56
1	1/2	.86	.32		2-1/2	1-1/2	2.11	.88		1	1	1/2	1.40	3	3	2	3.79
1	3/4	.99	.45		2-1/2	2	2.36	1.14		1	1	3/4	1.54	3	3	2-1/2	4.00
1-1/4	1/4	1.00	.32		3	1/4	.35			1-1/4	1-1/4	1/4	.00	4	4	1-1/4	4.29
1-1/4	3/8	1.00	.32		3	1/2	.35			1-1/4	1-1/4	3/8	.00	4	4	1-1/2	4.40
1-1/4	1/2	1.00	.32		3	3/4	.48			1-1/4	1-1/4	1/2	1.68	4	4	2	4.60
1-1/4	3/4	1.13	.48		3	1	1.88	.61		1-1/4	1-1/4	3/4	1.82	4	4	2-1/2	4.82
1-1/4	1	1.26	.59		3	1-1/4	2.00	.74		1-1/4	1-1/4	1	1.95	4	4	3	5.02
1-1/2	1/8	.33			3	1-1/2	2.10	.87		1-1/2	1-1/2	3/8	1.96				
1-1/2	1/4	.33			3	2	2.33	1.14		1-1/2	1-1/2	1/2	1.96				
1-1/2	3/8	1.13	.33		3	2-1/2	2.54	1.33		1-1/2	1-1/2	3/4	2.09				
1-1/2	1/2	1.13	.33		4	1-1/4	2.31			1-1/2	1-1/2	1	2.23				
1-1/2	3/4	1.27	.48		4	1-1/2	2.43			1-1/2	1-1/2	1-1/4	2.36				
1-1/2	1	1.40	.59		4	2	2.63										
1-1/2	1-1/4	1.53	.73		4	2-1/2	2.84										
					4	3	3.04										

NOTE:
For Ammonia Service, see Forged Steel Socketweld Fittings for Ammonia Service.



MECHANICAL CONTRACTORS ASSOCIATION OF AMERICA, INC.

FITTINGS

FORGED STEEL SOCKET WELD FITTINGS
6000 LBS.

Dia. In.	90° Ell	45° Ell	Tee	Cross	Full Coupling	Cap	Lateral	Union
1/2	.76	.76	1.12	1.48	.76	.40	1.13	.77
3/4	1.12	1.12	1.66	2.20	1.11	.58	1.68	1.13
1	1.49	1.48	2.21	2.91	1.47	.77	2.24	1.50
1-1/4	1.85	1.84	2.74	3.65	1.83	.94	2.78	1.86
1-1/2	2.24	2.22	3.33	4.40	2.19	1.14	3.40	2.25
2	2.96	2.93	4.39	5.82	2.92	1.51		3.02
2-1/2	3.52	3.48	5.23	6.93	3.42	1.78		
3	3.92	3.84	5.78	7.62	3.73	1.93		3.00
4	5.32	5.24	7.71	10.19	5.02	2.64		



MECHANICAL CONTRACTORS ASSOCIATION OF AMERICA, INC.

FITTINGS

AWWA DUCTILE IRON FITTINGS
C153 COMPACT BODY PUSH JOINT (GASKETED)
350 PSI

Dia. In.	Reducing Cross (PJ x PJ x PJ x PJ)	Concentric Reducer (PJ x PJ)	Concentric Reducer (PJ x FE)
6	4	1.92	1.87
8	4	1.75	1.75
8	6	4.12	2.02
8	6	4.12	2.02
10	4	4.11	1.98
10	6	2.19	2.55
10	8	2.46	2.81
12	4	2.25	2.47
12	6	2.23	2.64
12	8	5.92	2.56
12	10	2.81	3.27
14	6	5.46	2.65
14	8	5.95	2.84
14	10	6.49	3.04
14	12	7.01	3.39
16	6	6.23	2.94
16	8	6.97	3.20
16	10	7.17	3.63

Dia. In.	Reducing Cross (PJ x PJ x PJ x PJ)	Concentric Reducer (PJ x PJ)	Concentric Reducer (PJ x FE)
16	12	7.56	4.01
16	14	8.07	4.08
18	8	3.73	4.66
18	10	4.01	5.09
18	12	4.34	5.70
18	14	4.98	6.12
18	16	5.02	6.47
20	10	4.45	5.87
20	12	4.87	
20	14	5.31	6.49
20	16	5.65	6.81
20	18	5.81	
24	12	5.61	6.78
24	14	5.92	7.18
24	16	6.42	7.49
24	18	6.62	
24	20	6.90	

Dia. In.	Tapped Cross (PJ x PJ x 2" FPT x 2" FPT)	
4	2	2.86
6	2	3.45
8	2	3.53
10	2	4.07
12	2	4.32



MECHANICAL CONTRACTORS ASSOCIATION OF AMERICA, INC.

FITTINGS

AWWA DUCTILE IRON FITTINGS
C110 FULL BODY PUSH JOINT (GASKETED)
3" - 24" 350 PSI; 30" - 48" 250 PSI; 60" - 64" 150 PSI

Dia. In.			Hydrant Tee (PJ x PJ x PE)	Reducing Tee (PJ x PJ x PJ)	Reducing Tee (PJ x PE x PJ)	Tapped Connecting Piece (PJ x PJ x 2" FPT)	Reducing Cross (PJ x PJ x PJ x PJ)	Reducing Cross (PJ x PE x PJ x PJ)	Dia. In.			Reducing Tee (PJ x PJ x PJ)	Reducing Tee (PJ x PE x PJ)	Reducing Cross (PJ x PJ x PJ x PJ)	Reducing Cross (PJ x PE x PJ x PJ)	Dia. In.			Reducing Tee (PJ x PJ x PJ)	Reducing Cross (PJ x PJ x PJ x PJ)
4	4	2				1.88			20	20	6	7.59	5.68	8.23	6.32	42	42	12	15.06	16.20
4	4	3		2.54					20	20	8	7.80	5.91	8.66	6.78	42	42	14	15.23	16.61
6	6	2				2.39			20	20	10	8.03	6.12	9.12	7.21	42	42	16	15.43	16.98
6	6	3		3.08					20	20	12	8.28	6.36	9.61	7.70	42	42	18	15.63	17.38
6	6	4		3.32			4.07		20	20	14	8.78	6.87	10.37	8.46	42	42	20	15.85	17.77
6	6	6	2.75						20	20	16	9.06	7.48	10.85	9.36	42	42	24	16.20	18.52
8	8	2				2.57			20	20	18	9.62	7.73	11.64	9.80	42	42	30	17.63	20.67
8	8	4		3.43			3.99		24	24	6	9.13	6.93	9.78	7.57	42	42	36	18.29	21.90
8	8	6	3.04	3.73			4.61		24	24	8	9.36	7.15	10.24	8.04	48	48	12	17.38	18.54
10	10	2				3.12			24	24	10	9.60	7.40	10.69	8.48	48	48	14	17.56	18.91
10	10	4		4.50			5.11		24	24	12	9.82	7.62	11.15	8.95	48	48	16	17.75	19.33
10	10	6	4.07	4.76			5.63		24	24	14	10.06	7.86	11.63	9.42	48	48	18	17.98	19.70
10	10	8		5.11			6.24		24	24	16	10.32	8.12	12.01	9.81	48	48	20	18.17	20.09
12	12	2				3.49			24	24	18	10.73	8.53	12.50	10.30	48	48	24	18.53	20.85
12	12	4		4.98			5.42		24	24	20	10.93	8.73	12.92	10.72	48	48	30	19.23	21.43
12	12	6	4.62	5.19			5.81		30	30	6	10.84	8.12	11.42	8.69	48	48	36	20.51	24.12
12	12	8		5.42			6.27		30	30	8	11.05	8.32	11.80	9.08	48	48	42	21.27	25.59
12	12	10		5.72			6.80		30	30	10	11.22	8.50	12.21	9.48	54	54	30	20.70	23.64
14	14	6		5.94	4.61		6.60	5.27	30	30	12	11.43	8.70	12.60	9.86	54	54	36	21.29	24.82
14	14	8		6.16	4.83		7.05	5.72	30	30	14	11.73	8.91	13.07	10.25	54	54	42	22.06	26.40
14	14	10		6.39	5.07		7.51	6.21	30	30	16	11.91	9.09	13.49	10.66	54	54	48	22.77	27.83
14	14	12		6.66	5.33		8.03	6.70	30	30	18	12.30	9.47	14.05	11.22	60	60	30	21.83	24.96
16	16	6	6.01	6.62	5.09		7.27	5.74	30	30	20	12.51	9.68	14.45	11.62	60	60	36	22.51	26.32
16	16	8		6.84	5.31		7.73	6.20	30	30	24	13.03	10.20	15.40	12.57	60	60	42	24.06	28.60
16	16	10		7.08	5.55		8.19	6.66	36	36	8	12.75	9.36	13.51	10.12	60	60	48	24.55	29.59
16	16	12		7.31	5.78		8.68	7.15	36	36	10	12.96	9.57	13.93	10.54	60	60	54	25.25	30.99
16	16	14		7.57	6.04		9.16	7.63	36	36	12	13.14	9.75	14.32	10.93	64	64	36	23.59	27.43
18	18	6		7.08	5.36		7.75	6.02	36	36	14	13.35	9.96	14.70	11.31	64	64	42	25.81	30.30
18	18	8		7.31	5.59		8.20	6.47	36	36	16	13.53	10.13	15.09	11.70	64	64	48	26.28	31.29
18	18	10		7.55	5.84		8.66	6.93	36	36	18	13.74	10.34	15.48	12.09	64	64	54	26.99	32.78
18	18	12		7.79	6.08		9.14	7.41	36	36	20	13.95	10.56	15.88	12.49	64	64	60	27.44	33.61
18	18	14		8.30	6.58		9.92	8.19	36	36	24	14.33	10.94	16.63	13.24					
18	18	16		8.54	6.84		10.41	8.71	36	36	30	15.11	12.18	18.14	15.24					



MECHANICAL CONTRACTORS ASSOCIATION OF AMERICA, INC.

FITTINGS

AWWA DUCTILE IRON FITTINGS
C153 COMPACT BODY MECHANICAL JOINTS

Dia. In.	Tee (MJ x MJ x Swivel)	Tee (MJ x PE x MJ)	Wye (MJ x MJ x MJ)	Adapter (MJ x FE)	Adapler (MJ x PE)	Tapped Tee (MJ x MJ x 2" FPT)	Cross (MJ x MJ x MJ x MJ)	Solid Sleeve Short (MJ x MJ)	Solid Sleeve Long (MJ x MJ)	Cut-In Sleeve (MJ x FE)	Solid Plug	Solid Plug W/2" FPT Tap	Solid Cap	Solid Cap W/2" FPT Tap	Retainer Gland
3			3.13	1.59		2.67	4.02	2.00	2.06		.12	.73	1.04	1.65	.07
4			3.58	2.10	1.31	2.95	4.59	2.28	2.36	2.18	.14	.75	1.18	1.79	.08
6	5.16	3.51	5.31	2.76	1.82	3.94	6.66	3.24	3.34	2.89	.21	.82	1.67	2.28	.93
8	5.52		5.70	2.97	1.99	4.08	7.02	3.33	3.47	3.11	.28	.90	1.74	2.36	.12
10			7.84	4.03		5.26	9.42	4.47	4.61	4.53	.38	.99	2.36	2.97	.14
12			9.02	4.45		5.67	10.80	4.97	5.21	5.16	.47	1.08	2.65	3.27	.16
14			10.71				12.77	6.21	6.48		.77	1.38	3.40	4.01	.19
16			11.41	6.10		7.55	13.60	6.69	7.01		.96	1.58	3.59	4.20	.23
18				7.08				7.57	7.94		1.24	1.85	4.20	4.81	.28
20				9.15				8.72	9.13		1.45	2.06	4.77	5.38	.33
24								10.49	10.78		1.90	2.51	5.94	6.55	.40



MECHANICAL CONTRACTORS ASSOCIATION OF AMERICA, INC.

FITTINGS

AWWA DUCTILE IRON FITTINGS
C110 FULL BODY MECHANICAL JOINT
2" - 24" 350 PSI; 30" - 48" 250 PSI

Dia. In.				Reducing Tee (MJ x MJ x MJ)	Reducing Tee (MJ x PE x MJ)	Reducing Tee (MJ x MJ x FE)	Reducing Wye (MJ x MJ x MJ)	Dia. In.				Reducing Tee (MJ x MJ x MJ)	Reducing Tee (MJ x MJ x FE)	Reducing Wye (MJ x MJ x MJ)				
3	3	2		2.89				18	18	6	10.44	10.03	11.28	36	36	6	19.00	17.68
4	4	2		3.17		2.98		18	18	8	10.82	10.36	11.69	36	36	8	19.25	
4	4	3		3.60			3.69	18	18	10	11.23		12.16	36	36	10	19.62	
4	4	6		4.74				18	18	12	11.62	11.09	12.60	36	36	12	19.94	18.66
6	6	2		4.18				18	18	14	12.31		13.07	36	36	14	20.32	22.15
6	6	3		4.73			4.87	13	18	16	12.73		13.44	36	36	16	20.63	19.18
6	6	4		5.02		4.48	5.21	20	20	6	11.54			36	36	18	21.01	22.93
6	6	8		6.64				20	20	8	11.90	12.21	12.80	36	36	20	21.40	23.36
8	8	3		4.96				20	20	10	12.30		13.17	36	36	24	22.11	20.61
8	8	4		5.23		4.57	5.46	20	20	12	12.70		13.53	36	36	30	23.73	25.46
8	8	6		5.69	4.54	4.93	5.97	20	20	14	13.10		13.92	42	42	12	22.78	
10	10	4				6.55	7.18	20	20	16	13.89		14.29	42	42	14	23.08	
10	10	6		7.51		7.00	7.82	20	20	18	14.35		14.68	42	42	16	23.44	
10	10	8		7.94		7.48	8.08	24	24	6	13.68	12.99		42	42	18	23.81	
12	12	4		7.67	6.95	7.23	7.86	24	24	8	14.05	13.30	14.53	42	42	20	24.19	
12	12	6		8.08	6.98	7.59	8.28	24	24	10	14.43		14.92	42	42	24	24.86	
12	12	8		8.50	7.02	7.98	8.73	24	24	12	14.76	13.94	15.27	42	42	30	26.58	
12	12	10		9.00	7.18		9.34	24	24	14	15.10		15.64	42	42	36	28.73	
14	14	6		9.15			9.47	24	24	16	15.48		16.04	48	48	12	25.77	
14	14	8		9.56			9.91	24	24	18	16.05		16.42	48	48	14	26.11	
14	14	10		9.96			10.36	24	24	20	16.41		16.79	48	48	16	26.45	
14	14	12		10.44			10.86	30	30	6	16.30			48	48	18	26.87	
16	16	4		9.47		8.84		30	30	8	16.67			48	48	20	27.21	
16	16	6		9.64		9.25	10.13	30	30	10	16.98			48	48	24	27.89	
16	16	8		9.99		9.58	10.51	30	30	12	17.35		18.17	48	48	30	29.05	
16	16	10		10.40			10.97	30	30	14	17.72		18.57	48	48	36	30.89	
16	16	12		10.79		10.30	11.40	30	30	16	18.04		18.92	48	48	42	33.36	
16	16	14		11.23			11.93	30	30	18	18.41		19.32					
								30	30	20	18.79		19.73					
								30	30	24	19.84		20.52					



MECHANICAL CONTRACTORS ASSOCIATION OF AMERICA, INC.

FITTINGS

AWWA DUCTILE IRON FITTINGS
C110 FULL BODY FLANGED JOINT
3" - 48" 250 PSI; 54" - 60" 150 PSI

Dia. In.			Reducing Tee	Reducing Wye	Dia. In.			Reducing Tee	Reducing Wye	Dia. In.			Reducing Tee	
3	3	2	1.68		12	8	6	7.77		20	20	10	14.79	15.54
4	3	3	2.88		12	8	8	8.13		20	20	12	15.23	16.21
4	4	2	2.80		12	8	12	8.94		20	20	14	15.63	16.59
4	4	3	3.15	2.43	12	10	6	8.24		20	20	16	17.15	16.96
4	4	6	4.21		12	10	8	8.55		20	20	18		17.33
6	4	4	3.49		12	10	10	8.94		24	24	6	15.36	
6	4	6	3.87		12	10	12	9.31		24	24	8	16.79	16.40
6	6	2	3.49		12	12	4	7.56	6.50	24	24	10	17.10	16.72
6	6	3	3.64	2.95	12	12	6	7.85	6.85	24	24	12	17.40	17.09
6	6	4	3.87	3.19	12	12	8	8.20	7.27	24	24	14	17.68	17.41
6	6	8	5.24		12	12	10	8.77	8.04	24	24	16	18.00	17.75
8	6	4	3.96		14	14	4	9.36		24	24	18	18.88	18.38
8	6	6	4.25		14	14	6	9.70	8.14	24	24	20	19.21	18.75
8	6	8	4.82		14	14	8	10.07	8.58	30	30	6	19.27	
8	8	3	4.07		14	14	10	10.44	9.02	30	30	12	20.18	19.70
8	8	4	4.56	3.86	14	14	12	10.87	9.61	30	30	14	20.49	20.06
8	8	6	4.82	4.22	16	16	4	10.68		30	30	16	20.75	20.39
8	8	10	6.72		16	16	6	11.07	9.40	30	30	18	21.06	20.75
8	8	12	7.27		16	16	8	11.43	10.39	30	30	20	21.36	21.39
10	6	6	7.07		16	16	10	11.79	11.14	30	30	24	22.90	22.21
10	6	10	7.82		16	16	12	12.22	11.69	36	36	12	22.41	23.78
10	8	6	7.38		16	16	14	12.64	12.51	36	36	14	22.72	24.11
10	8	8	7.75		18	18	6	11.73	11.68	36	36	16	22.98	24.51
10	6	10	8.23		18	18	8	12.07	12.40	36	36	18	23.29	24.90
10	10	4	6.49	5.57	18	18	10	12.47	12.87	36	36	20	23.61	25.82
10	10	6	6.92	6.07	18	18	12	12.88	13.41	36	36	24	24.23	26.62
10	10	8	7.34	6.48	18	18	14	14.06	14.19	36	36	30	26.16	27.98
10	10	12	8.98		18	18	16	14.47	14.83	42	42	12	25.63	
12	6	6	7.41		20	20	6	14.01		42	42	14	25.87	
12	6	8	7.80		20	20	8	14.38	15.01					



MECHANICAL CONTRACTORS ASSOCIATION OF AMERICA, INC.

FITTINGS

CORRUGATED METAL GALVANIZED FITTING
BAND IRON JOINT

8 Gauge

Dia. In.	90° Ell Short Radius	45° Ell Short Radius	Tee	45° Wye Lateral
36	7.36	6.9	10.48	11.28
42	8.31	7.78	11.95	12.51
48	9.9	9.68	13.45	14.06
54	10.93	10.24	14.64	15.33
60	12.05	11.44	16.14	17.19

12 Gauge

Dia. In.	90° Ell Short Radius	45° Ell Short Radius	Tee	45° Wye Lateral
12	2.10	1.81	3.13	3.13
15	2.62	2.25	3.90	4.27
18	3.13	2.69	4.67	5.11
21	3.68	3.68	5.50	6.32
24	4.20	4.20	6.27	6.99
30	5.08	5.22	7.81	8.34
36	6.88	6.25	9.88	10.28
42	7.76	7.28	11.03	11.73
48	9.04	8.25	12.38	13.58
54	9.97	9.53	13.72	14.79
60	10.90	10.41	15.57	16.25

16 Gauge

Dia. In.	90° Ell Short Radius	45° Ell Short Radius	Tee	45° Wye Lateral
6	1.06	1.06	1.61	1.61
8	1.14	1.14	1.74	1.74
10	1.42	1.42	2.32	2.32
12	1.88	1.7	2.8	2.8
15	2.32	2.1	3.46	3.68
18	2.8	2.52	4.18	4.45
21	3.24	3.24	4.84	5.46
24	3.68	3.68	5.5	6.2
30	5.04	4.6	6.88	7.76
36	6.05	5.52	9.07	9.43
42	7.06	6.44	10.33	10.74
48	8.38	7.32	11.55	12.48

10 Gauge

Dia. In.	90° Ell Short Radius	45° Ell Short Radius	Tee	45° Wye Lateral
24	4.49	4.49	6.71	7.24
36	6.94	6.36	9.14	10.84
38	6.94	6.36	9.14	10.84
42	8.04	7.6	11.49	12.35
48	9.46	8.45	12.9	13.81
54	10.44	9.87	14.31	15.05
60	11.44	10.81	15.83	16.82

14 Gauge

Dia. In.	90° Ell Short Radius	45° Ell Short Radius	Tee	45° Wye Lateral
12	1.96	1.74	2.91	2.91
15	2.43	2.16	3.63	3.90
18	2.91	2.58	4.34	4.67
21	3.39	3.39	5.06	5.63
24	3.88	3.86	5.77	6.66
30	5.37	4.82	7.21	8.00
36	6.44	5.77	9.29	9.73
42	7.49	6.73	10.57	11.09
48	8.63	7.68	11.86	13.03
54	9.51	9.18	13.14	14.46



MECHANICAL CONTRACTORS ASSOCIATION OF AMERICA, INC.

FITTINGS

FORGED STEEL THREADED FITTING
3000 LBS. CLEANED FOR AMMONIA SERVICE

Dia. In.		Reducing Tee		Dia. In.		Reducing Tee	
3/4	3/4	1/2	.96	2-1/2	2-1/2	3/4	2.61
1	1	1/2	1.12	2-1/2	2-1/2	1	2.71
1	1	3/4	1.22	2-1/2	2-1/2	1-1/4	2.81
1-1/4	1-1/4	1/2	1.24	2-1/2	2-1/2	1-1/2	2.92
1-1/4	1-1/4	3/4	1.33	2-1/2	2-1/2	2	3.12
1-1/4	1-1/4	1	1.43	3	3	1	3.27
1-1/2	1-1/2	1/2	1.37	3	3	1-1/4	3.38
1-1/2	1-1/2	3/4	1.46	3	3	1-1/2	3.48
1-1/2	1-1/2	1	1.55	3	3	2	3.69
1-1/2	1-1/2	1-1/4	1.63	3	3	2-1/2	3.89
2	2	1/2	1.58	4	4	1-1/4	4.46
2	2	3/4	1.67	4	4	1-1/2	4.58
2	2	1	1.74	4	4	2	4.77
2	2	1-1/4	1.82	4	4	2-1/2	4.99
2	2	1-1/2	1.90	4	4	3	5.18



MECHANICAL CONTRACTORS ASSOCIATION OF AMERICA, INC.

FITTINGS

FORGED STEEL SOCKET WELD FITTINGS
3000 LBS. CLEANED FOR AMMONIA SERVICE

Reducer Couplings			Insert Reducer	Reducer Couplings			Insert Reducer	Reducing Tee			Reducing Tee				
Dia. In.				Dia. In.				Dia. In.			Dia. In.				
3/4	1/2	.74	.33	2-1/2	1/2	.36		3/4	3/4	1/2	1.17	2-1/2	2-1/2	3/4	3.10
1	1/2	.88	.33	2-1/2	3/4	1.78	.49	1	1	1/2	1.45	2-1/2	2-1/2	1	3.23
1	3/4	1.02	.47	2-1/2	1	1.91	.63	1	1	3/4	1.58	2-1/2	2-1/2	1-1/4	3.36
1-1/4	1/2	1.02	.33	2-1/2	1-1/4	2.04	.76	1-1/4	1-1/4	1/2	1.72	2-1/2	2-1/2	1-1/2	3.49
1-1/4	3/4	1.16	.47	2-1/2	1-1/2	2.17	.90	1-1/4	1-1/4	3/4	1.86	2-1/2	2-1/2	2	3.75
1-1/4	1	1.30	.61	2-1/2	2	2.43	1.17	1-1/4	1-1/4	1	2.00	3	3	1	3.38
1-1/2	1/2	1.16	.34	3	1/2	.36		1-1/2	1-1/2	1/2	2.01	3	3	1-1/4	3.50
1-1/2	3/4	1.30	.47	3	3/4	.50		1-1/2	1-1/2	3/4	2.15	3	3	1-1/2	3.61
1-1/2	1	1.44	.61	3	1	1.93	.63	1-1/2	1-1/2	1	2.29	3	3	2	3.84
1-1/2	1-1/4	1.58	.75	3	1-1/4	2.05	.76	1-1/2	1-1/2	1-1/4	2.42	3	3	2-1/2	4.06
2	1/2	1.46	.35	3	1-1/2	2.16	.90	2	2	1/2	2.56	4	4	1-1/4	4.17
2	3/4	1.60	.48	3	2	2.40	1.17	2	2	3/4	2.71	4	4	1-1/2	4.29
2	1	1.73	.62	3	2-1/2	2.62	1.37	2	2	1	2.85	4	4	2	4.50
2	1-1/4	1.88	.76	4	1-1/4	2.38		2	2	1-1/4	2.99	4	4	2-1/2	4.72
2	1-1/2	2.01	.89	4	1-1/2	2.50		2	2	1-1/2	3.12	4	4	3	4.92
				4	2	2.70									
				4	2-1/2	2.92									
				4	3	3.13									



MECHANICAL CONTRACTORS ASSOCIATION OF AMERICA, INC.

FITTINGS

CARBON STEEL/MALLEABLE IRON GROOVE END
Coupling Bolted-Pressure Rating Varies By Dia. In.

Dia. In.	90° Ell Std. Radius	90° Ell Long Radius	90° Adapter Elbow G x MPT	45° Ell Std. Radius	45° Ell Long Radius	45° Adapter Elbow G x MPT	22-1/2 Elbow Std. Radius	11-1/4 Elbow Std. Radius	Tee G x G x G	Tee G x G x MPT	Tee Wye G x G x G	Barbed Hose Nipple G x Barb
3/4	.51		.28	.51		.28			.74	.51		.51
1	.61		.33	.61		.33	.61	.60	.89	.61		.60
1-1/4	.67		.37	.67		.36	.67	.67	.99	.68		.67
1-1/2	.71		.38	.70		.38	.70	.70	1.04	.72		.70
2	.87	.88	.48	.87	.87	.47	.86	.86	1.28	.88	1.34	.86
2-1/2	.89		.47	.84		.46	.83	.83	1.27	.88	1.37	.84
3	1.04	1.06	.59	1.01	1.04	.58	1.01	1.00	1.52	1.06	1.64	1.01
3-1/2	1.19		.70	1.18		.72	1.18	1.16	1.77	1.24	2.00	
4	1.40	1.46	.84	1.36	1.38	.79	1.36	1.33	2.07	1.46	2.28	1.34
5	2.06			2.01			2.00	1.96	3.07	2.15	3.53	2.00
6	2.53	2.71	1.42	2.43	2.52	1.34	2.44	2.36	3.77	2.67	4.28	2.47
8	3.52	3.99		3.30	3.53		3.29	3.14	5.18	3.71	6.40	3.36
10	4.48	5.36		4.29	4.59		4.18	3.90	6.67	5.09	8.46	4.33
12	4.85	6.10		4.74	5.09		4.33	4.17	7.07	5.75	9.23	4.67
14		6.41			5.16		4.61	4.39	8.14			
16		7.18			5.49		4.85	4.61	8.80			
18		8.43			6.52		5.45	5.27	10.57			
20		9.39			7.60		6.14	5.94	11.81			
24		11.54			9.75		8.06	6.84	14.18			

NOTE:

Labor Unit does not include handling and installing the coupling.