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Y's

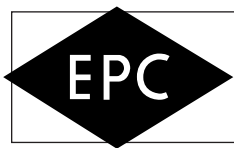
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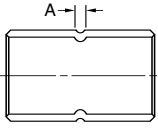
Numerical Index of EPC Fittings


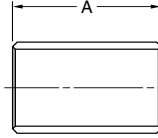
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101	4	306-2	26	5182	29
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104	6	309	28	5551	30
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105-C	7	311	28	5556	30
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106	8	351	29	5558	31
106-2	8	360	28	5559	31
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107-CR	10	4701-R	4	5801-7	24
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107-MT	10	4703-5	17	5803	25
107-MT-2	10	4703-5-1	18	5803-2	31
107-R	10	4703-5-W	18	5804	25
110	5	4704	6	5804-2	32
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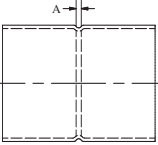
Comparison Chart of Product Numbers


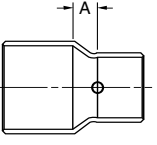


EPC	Mueller	Nibco	EPC	Mueller	Nibco	EPC	Mueller	Nibco
100	WC-400S	600-DS	305-P	-	-	4771	F-900	771
100-RS	WC-400	600-RS	306	DW-204	906	5180	-	801-T
101	WC-400NS	601	306-2	DW-205	906-2	5182	-	804-T
101-R	WC-400R	600	307	DW-200	907	5427	-	875-S
102	WC-407	633	307-LT	-	907-LT	5499	-	811-9
103	WC-402	603	307-2	DW-203	907-2	5516	D-786	835-B
103-2	WC-405	603-2	308	-	908	5550	-	885
104	WC-401	604	309	-	909	5551	-	884
104-2	WC-404	604-2	310	-	910	5555	-	880
105-C	WC-506	607-2-2	311	DW-707	911	5556	-	892-3-LA
105-L	WE-506L	607-2-2-LT	316-T	DW-798-T	917-B	5557	-	892-3
106	WE-504	606	351	DW-734	951	5558	-	892
106-2	WE-505	606-2	360	-	960	5559	-	892-LA
107-C	WE-500	607	4175	CD-100	701-D	5801-R	D-741	801
107-C-2	WE-503	607-2	4236	E-200-D	705-D	5801-2	D-738-F	801-2
107-CR	WE-503	607-2	4701-R	C-100-R	701	5802	-	802-F
107-L	WE-500L	607-LT	4703	C-102	703	5802-C	D-732-C	802-C
107-L-2	WE-503L	607-2-LT	4703-2	C-105	703-2	5803	D-753	803
107-MT	-	-	4703-5	-	-	5803-2	D-754	803-2
107-MT-2	-	-	4703-5-1	C-102-HE	703-5-A	5804	D-732	804
110	WC-400E	-	4703-5-W	C-102-S	703-5	5804-2	-	804-2
111	WT-600	611	4704	C-101	704	5804-S	D-732-F	802
111-2	-	611-2	4704-2	C104	704-2	5805-NH	-	-
116	WC-416	616	4704-F	-	704-F	5807	D-700	807
117	WC-415	617	4704-HT	-	704-H	5810	D-719	810
118	WC-403	600-2	4707	E-200	707	5811	D-707	811
119	WC-106	618	4707-3	E-202	707-3	5811-CCF	D-708	811-14
119-3	WC-417	618-3	4707-3-5	E-211	707-3-5	5811-CFC	-	811-13
120	WS-1100	624	4707-4	E-201	707-4	5811-CFF	-	811-15
120-S	-	-	4707-4-6	E-208	707-4-6	5812	D-715	812
121	-	620	4707-5	E-210	707-5	5814	D-714	814
122	WA-515	619	4707-5-1	E-210-HE	707-5-A	5816	D-730	816
123	-	698	4707-5-3	E-211-HE	707-3-5-A	5816-S	D-730-F	816-S
124	-	-	4708	E-215	708	5819	D-745	818
125	WS-1101	623	4710-3	-	710-3	5834	D-720	834
136	-	-	4710-3-4	-	710-3-4	5835	D-718	835
138	WE-512	638	4711	T-300	711	5836	D-717	836
301	DW-741	901	4711-5	T-310	711-5	5837	D-706	837
301-R	DW-741	901-R	4712	T-302	712	5878	D-783	878
301-2	DW-742	901-2	4712-5	T-311	712-5	5879	D-782	879
301-2-7	DW-724-F	901-2-7	4713	-	713	5890	-	890
301-2-F	-	901-2-F	4714	T-303	714	5891	-	891
301-7	DW-724	901-7	4714-B	T-301	705	7101	WW-812	501
301-NS	DW-741NS	901-RP	4717	C-115	717	7103	WW-814	503
303	-	903	4718-3	-	718-3	7104	WW-813	504
303-7	DW-757	903-7	4733	C-107	733	7107	WW-816	507
304	DW-732	904	4733-3	C-109	733-3	7101-3	-	507-3
304-7	DW-756	904-7	4733-4	C-108	733-4	7107-4	-	506-4
305	DW-733	905	4735	T-312	735	7111	WW-817	511
305-NH	-	-	4741	F-940	741			
			4749	T-317	749			

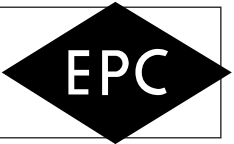
WROT 100		Coupling With Stop Copper to Copper		CAST	
					
Nominal Size In Inches	Part Number	Box Quantity	Master Pack	Approx. Net Wt.	Dim. A
1/4	30896	50	1000	0.007	3/32
3/8	30898	50	1000	0.014	3/32
1/2	30900	100	1000	0.021	3/32
5/8	30902	25	500	0.040	3/32
3/4	30904	50	500	0.056	3/32
7/8	30906	10	200	0.084	3/32
1	30908	25	250	0.122	3/32
1 1/4	30910	20	200	0.144	3/32
1 1/2	30914	10	100	0.216	3/32
2	30916	5	50	0.391	3/32
2 1/2	30918	5	50	0.624	3/32
3	30920	5	40	0.909	3/32
3 1/2	30922	1	16	1.369	3/32
4	30924	2	16	1.904	3/32
5	30926	1	6	3.365	3/16
6	30928	1	6	5.262	3/16
8	30930	1	1	12.941	1/8

WROT 101		Coupling Without Stop		CAST	
					
Nominal Size In Inches	Part Number	Box Quantity	Master Pack	Approx. Net Wt.	Dim. A
1/8	30944	50	1000	0.004	11/16
1/4	30948	50	1000	0.007	23/32
3/8	30950	50	1000	0.015	55/64
1/2	30952	100	1000	0.027	1 3/32
5/8	30954	25	500	0.041	1 21/64
3/4	30956	50	500	0.056	1 19/32
1	30960	25	250	0.121	1 29/32
1 1/4	30962	20	200	0.149	2 1/32
1 1/2	30964	10	100	0.213	2 17/64
2	30966	5	50	0.391	2 49/64
2 1/2	30968	5	50	0.616	3 1/32
3	30970	5	40	0.912	3 13/32
3 1/2	30972	1	16	1.352	3 29/32
4	30974	2	16	1.878	4 13/32
5	30976	1	6	3.365	5 1/2
6	30978	1	6	5.262	6 3/8
8	30980	1	1	12.941	8 1/4


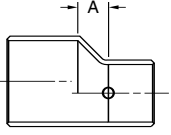
WROT 100-RS		Coupling With Roll Stop Copper to Copper		CAST	
					
Nominal Size In Inches	Part Number	Box Quantity	Master Pack	Approx. Net Wt.	Dim. A
3/16 OD	30662	50	1000	0.002	1/16
5/16 OD	30672	50	1000	0.006	1/16
1/8	30666	50	1000	0.004	1/16
1/4	30678	50	1000	0.007	3/32
3/8	30686	50	1000	0.014	3/32
1/2	30694	100	1000	0.021	3/32
5/8	30702	25	500	0.040	3/32
3/4	30712	50	500	0.056	3/32
7/8	30724	10	200	0.084	3/32
1	30730	25	250	0.122	3/32
1 1/4	30746	20	200	0.144	3/32
1 1/2	30764	10	100	0.216	3/32
2	30782	5	50	0.391	3/32


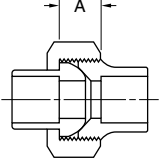
WROT 101-R		Coupling With Stop Copper to Copper		CAST 4701-R	
					
Nominal Size In Inches	Part Number	Box Quantity	Master Pack	Approx. Net Wt.	Dim. A
1/4 OD x 3/16 OD	30668	50	1000	0.004	3/32
5/16 OD x 1/4 OD	30674	50	1000	0.007	3/32
3/8 OD x 5/16 OD	30680	50	1000	0.008	3/32
1/4 x 1/8	30684	50	1000	0.008	5/32
3/8 x 1/4	30688	50	1000	0.017	3/16
3/8 x 1/8	30692	50	1000	0.019	1/4
1/2 x 3/8	30696	50	1000	0.024	5/32
1/2 x 1/4	30698	50	1000	0.025	1/4
1/2 x 1/8	30700	50	1000	0.027	23/64
5/8 x 1/2	30704	25	500	0.035	5/32
5/8 x 3/8	30706	25	500	0.033	7/32
5/8 x 1/4	30708	25	500	0.043	5/16
3/4 x 5/8	30714	50	500	0.057	3/16

Wrot & Cast Pressure Fittings Couplings & Unions



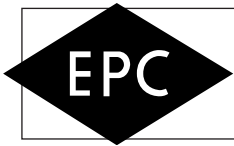
WROT 101-R		Coupling With Stop-cont. Copper to Copper			CAST 4701-R	
Nominal Size In Inches	Part Number	Box Quantity	Master Pack	Approx. Net Wt.	Dim. A	
3/4 x 1/2	30716	50	500	0.061	3/16	
3/4 x 3/8	30718	25	500	0.054	21/64	
3/4 x 1/4	30720	25	500	0.053	7/16	
1 x 3/4	30734	25	250	0.098	13/32	
1 x 5/8	30736	25	250	0.102	3/8	
1 x 1/2	30738	25	250	0.104	7/16	
1 x 3/8	30740	25	250	0.098	1/2	
1 1/4 x 1	30748	10	100	0.152	5/16	
1 1/4 x 3/4	30752	10	100	0.134	15/32	
1 1/4 x 1/2	30756	10	100	0.176	41/64	
1 1/2 x 1 1/4	30766	10	100	0.220	11/32	
1 1/2 x 1	30768	10	100	0.220	7/16	
1 1/2 x 3/4	30772	10	100	0.218	21/32	
1 1/2 x 1/2	30776	10	100	0.219	25/32	
2 x 1 1/2	30784	10	100	0.366	13/32	
2 x 1 1/4	30786	10	100	0.393	21/32	
2 x 1	30788	10	100	0.383	25/32	
2 x 3/4	30790	10	100	0.408	1	
2 x 1/2	30792	10	100	0.420	1 1/8	
2 1/2 x 2	30800	5	50	0.639	15/32	
2 1/2 x 1 1/2	30802	5	50	0.666	7/8	
2 1/2 x 1 1/4	30804	5	50	0.664	15/16	
2 1/2 x 1	30806	5	50	0.691	1 1/8	
3 x 2 1/2	30816	2	20	0.946	1/2	
3 x 2	30818	2	20	0.991	13/16	
3 x 1 1/2	30820	2	20	1.106	1 5/32	
** 3 x 1 1/4	34710	-	40	1.345	-	
** 3 x 1	34712	-	25	1.352	-	
3 1/2 x 3	30832	1	16	1.426	1/2	
4 x 3 1/2	30840	2	32	1.960	17/32	
4 x 3	30842	2	32	1.940	7/8	
4 x 2 1/2	30844	2	32	2.029	1 1/8	
4 x 2	30846	2	32	2.192	1 1/2	
5 x 4	30850	1	6	3.310	25/32	
5 x 3	30852	1	6	3.199	1 3/16	
5 x 2 1/2	30854	1	6	3.115	1 7/16	
5 x 2	30856	1	6	2.932	1 11/16	
6 x 5	30860	1	6	4.762	1/2	
6 x 4	30862	1	6	4.689	1 3/16	
6 x 3	30864	1	6	4.749	1 11/16	
6 x 2 1/2	30866	1	6	4.665	2 1/16	
6 x 2	30868	1	6	4.780	2 3/16	
8 x 6	30872	1	1	10.957	1 1/8	
8 x 5	30873	1	1	11.546	1 5/8	
8 x 4	30874	1	1	11.696	2 1/4	
8 x 3	30876	1	1	12.800	2 11/16	
8 x 2 1/2	30878	1	1	13.770	3 1/16	
8 x 2	30880	1	1	14.163	3	

WROT 110		Eccentric Coupling Copper to Copper			CAST	
				C x C		
Nominal Size In Inches	Part Number	Box Quantity	Master Pack	Approx. Net Wt.	Dim. A	
3/4 x 1/2	31042	25	250	0.060	3/8	
1 x 3/4	31044	10	100	0.114	13/32	
1 1/4 x 1	31046	10	100	0.162	1/2	
1 1/4 x 3/4	31048	10	100	0.190	3/4	

WROT 102		Union Copper to Copper			CAST 4733	
				C x C		
Nominal Size In Inches	Part Number	Box Quantity	Master Pack	Approx. Net Wt.	Dim. A	
1/4	33576	25	500	0.114	13/32	
3/8	33578	25	250	0.131	27/64	
**3/8	37933	50	500	0.147	-	
1/2	33580	25	250	0.113	1/2	
**1/2	37934	25	250	0.216	-	
**5/8	37936	25	250	0.308	-	
3/4	33582	20	200	0.261	21/32	
**3/4	37937	25	150	0.313	-	
1	33584	10	100	0.557	7/16	
1 1/4	33585	5	50	0.698	7/16	
1 1/2	33586	5	50	0.878	29/64	
2	33587	2	20	1.499	15/32	
**2 1/2	37947	-	10	3.250	-	
**3	37948	-	5	4.750	-	

** Cast Bronze Only

* Factory Option - consult factory for price and delivery information.



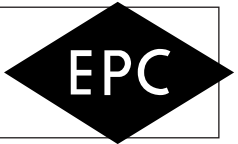
Wrot & Cast Pressure Fittings Adapters

WROT 103	Female Adapter Copper to Female N.P.T.		CAST 4703		
Nominal Size In Inches	Part Number	Box Quantity	Master Pack	Approx. Net Wt.	Dim. A
1/8	30100	50	1000	0.029	7/16
1/4	30110	50	1000	0.031	15/32
3/8	30120	50	500	0.053	19/32
1/2	30130	50	500	0.093	7/8
3/4	30150	25	250	0.143	23/32
1	30160	20	200	0.226	31/32
1 1/4	30170	10	100	0.369	1 3/32
1 1/2	30180	10	100	0.404	1 5/32
2	30190	5	50	0.667	1 1/4
2 1/2	30200	2	20	1.228	1 1/2
** 3	34252	-	12	2.400	-
** 4	34258	-	12	3.820	-
** 5	34259	-	6	8.250	-
** 6	34263	-	4	12.000	-
1/8 x 1/4	30106	50	1000	0.033	1/2
1/4 x 1/2	30112	50	500	0.078	25/32
1/4 x 3/8	30114	50	1000	0.043	21/32
1/4 x 1/8	30116	50	1000	0.024	11/32
3/8 x 3/4	30122	25	250	0.121	3/4
3/8 x 1/2	30124	50	500	0.082	7/8
3/8 x 1/4	30126	50	1000	0.041	15/32
** 1/2 x 1	34212	25	150	0.300	-
1/2 x 3/4	30134	25	250	0.121	29/32
1/2 x 3/8	30136	50	500	0.046	9/16
1/2 x 1/4	30138	50	500	0.044	15/32
5/8 x 3/4	30142	25	250	0.143	1
5/8 x 1/2	30144	25	250	0.102	3/4
** 3/4 x 1 1/4	34218	10	50	0.515	-
3/4 x 1	30154	20	200	0.218	1 7/32
3/4 x 1/2	30156	25	250	0.085	19/32
** 3/4 x 3/8	34222	25	250	0.170	-
** 1 x 1 1/2	34224	10	40	0.720	-
1 x 1 1/4	30164	10	100	0.299	1 7/32
1 x 3/4	30166	25	250	0.159	43/64
1 x 1/2	30168	10	100	0.239	11/16
** 1 1/4 x 2	34229	5	50	0.980	-
1 1/4 x 1 1/2	30172	10	100	0.431	1 19/64
1 1/4 x 1	30174	10	100	0.238	55/64
** 1 1/4 x 3/4	34233	-	100	0.290	-
1 1/2 x 2	30182	5	50	0.678	1 7/16
1 1/2 x 1 1/4	30184	10	100	0.388	7/8
** 1 1/2 x 1	34238	-	60	0.370	-
2 x 1 1/2	30192	5	50	0.730	1 3/16

WROT 103-2	Female Street Adapter Fitting to Female N.P.T.		CAST 4703-2		
Nominal Size In Inches	Part Number	Box Quantity	Master Pack	Approx. Net Wt.	Dim. A
1/4	30224	50	1000	0.030	29/32
3/8	30230	50	1000	0.049	1 1/16
1/2	30236	50	500	0.084	1 3/8
3/4	30242	25	250	0.143	1 11/16
1	30248	20	200	0.214	1 31/32
1 1/4	30254	10	100	0.324	2 5/32
1 1/2	30260	10	100	0.437	2 7/16
2	30266	5	50	0.641	2 19/32
** 2 1/2	34297	-	25	1.740	-
** 3	34298	-	20	2.470	-
1/2 x 3/8	30238	50	500	0.062	1 1/8
1/2 x 1/4	30240	50	500	0.041	59/64
** 3/4 x 1/2	34284	25	225	0.147	-
** 1 x 3/4	34287	25	100	0.414	-
*** 1 x 1/2	34288	25	250	0.153	-

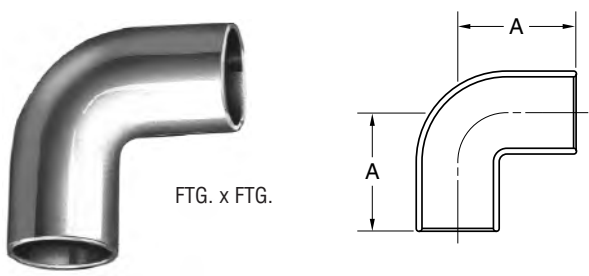
WROT 104	Male Adapter Copper to Male N.P.T.		CAST 4704		
Nominal Size In Inches	Part Number	Box Quantity	Master Pack	Approx. Net Wt.	Dim. A
* 1/8	30280	50	1000	0.019	13/32
1/4	30290	50	1000	0.027	15/32
3/8	30300	50	500	0.041	7/8
1/2	30310	50	500	0.064	19/32
3/4	30330	25	250	0.119	13/16
1	30342	20	200	0.170	27/32
1 1/4	30354	10	100	0.317	15/16
1 1/2	30368	10	100	0.462	7/8
2	30378	5	50	0.675	31/32
2 1/2	30388	4	40	1.267	1 21/32
3	30400	2	20	1.520	1 7/32
4	30410	1	16	2.262	1 9/32
** 5	34374	-	5	8.600	-
** 6	34377	-	4	10.730	-
1/8 x 3/8	30282	50	1000	0.040	3/4


Wrot & Cast Pressure Fittings Adapters & Elbows



WROT 104	Male Adapter-cont. <small>Copper to Male N.P.T.</small>		CAST 4704		
Nominal Size In Inches	Part Number	Box Quantity	Master Pack	Approx. Net Wt.	Dim. A
1/8 x 1/4	30284	50	1000	0.033	7/16
1/4 x 1/2	30292	50	500	0.069	7/8
1/4 x 3/8	30294	50	1000	0.060	63/64
1/4 x 1/8	30296	50	1000	0.014	17/32
3/8 x 3/4	30302	25	250	0.143	1 11/32
3/8 x 1/2	30304	50	500	0.072	15/16
3/8 x 1/4	30306	50	1000	0.039	5/8
1/2 x 1	30314	20	200	0.240	1
1/2 x 3/4	30316	25	250	0.135	13/16
1/2 x 3/8	30318	50	500	0.053	47/64
1/2 x 1/4	30320	50	500	0.059	5/8
5/8 x 3/4	30324	25	250	0.129	1 1/8
5/8 x 1/2	30326	25	500	0.075	11/16
** 3/4 x 1 1/2	34329	5	50	0.596	-
** 3/4 x 1 1/4	34330	-	120	0.375	-
3/4 x 1	30336	20	200	0.234	7/8
3/4 x 1/2	30338	25	250	0.106	53/64
1 x 1 1/2	30344	10	100	0.544	1 29/32
1 x 1 1/4	30346	10	100	0.399	1 21/32
1 x 3/4	30348	25	250	0.206	1 3/32
1 x 1/2	30350	25	250	0.176	31/32
** 1 1/4 x 2	34345	-	40	0.880	-
1 1/4 x 1 1/2	30358	10	100	0.523	1 45/64
1 1/4 x 1	30360	10	100	0.304	1 1/4
1 1/4 x 3/4	30362	10	100	0.273	1
1 1/2 x 2	30370	5	50	0.772	1 25/32
1 1/2 x 1 1/4	30372	10	100	0.386	1 27/64
1 1/2 x 1	30374	10	100	0.435	1 9/64
** 2 x 2 1/2	34357	-	25	1.565	-
2 x 1 1/2	30380	5	50	0.650	1 23/64
2 x 1 1/4	30382	5	50	0.631	1 3/4
2 1/2 x 2	30390	5	50	0.931	1 9/64

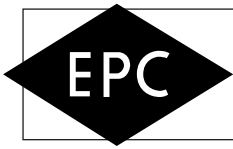
WROT 104-2	Male Street Adapter-cont. <small>Fitting to Male N.P.T.</small>		CAST 4704-2		
Nominal Size In Inches	Part Number	Box Quantity	Master Pack	Approx. Net Wt.	Dim. A
1	30452	20	200	0.232	2 5/32
1 1/4	30460	10	100	0.444	2 1/2
1 1/2	30470	10	100	0.508	2 13/16
2	30480	5	50	0.749	2 13/16
** 2 1/2	34417	-	25	1.550	-
** 3	34422	-	20	2.280	-
1/2 x 3/4	30438	25	250	0.153	-
1/2 x 3/8	30440	50	500	0.045	-
3/4 x 1/2	30448	25	250	0.093	1 23/32

WROT 105-C	90° Street Elbow-Close Ruff <small>Fitting to Fitting</small>		CAST		
					
Nominal Size In Inches	Part Number	Box Quantity	Master Pack	Approx. Net Wt.	Dim. A
1/8	31450	25	500	0.008	5/8
1/4	31452	25	500	0.013	27/32
3/8	31456	25	500	0.029	15/16
1/2	31460	25	500	0.044	1 1/32
5/8	31464	10	200	0.073	1 1/4
3/4	31468	25	250	0.086	1 13/32
1	31472	10	100	0.166	1 21/32
1 1/4	31476	5	50	0.269	1 29/32

WROT 104-2	Male Street Adapter <small>Fitting to Male N.P.T.</small>		CAST 4704-2		
					
Nominal Size In Inches	Part Number	Box Quantity	Master Pack	Approx. Net Wt.	Dim. A
1/4	30424	50	1000	0.033	1 1/6
3/8	30430	50	1000	0.049	1 3/16
1/2	30436	50	500	0.074	1 7/16
3/4	30444	25	250	0.143	1 27/32

** Cast Bronze Only

*Factory Option—consult factory for price and delivery information.



Wrot & Cast Pressure Fittings Elbows

WROT 105-L	90° Street Elbow-Long Turn Fitting to Fitting	CAST
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FTG. x FTG.

Nominal Size In Inches	Part Number	Box Quantity	Master Pack	Approx. Net Wt.	Dim. A
3/8	31896	25	500	0.033	1 3/16
1/2	31902	25	250	0.057	1 7/16
3/4	31914	25	250	0.138	2
1	31926	10	100	0.251	2 15/32
1 1/4	31932	5	50	0.381	2 29/32
1 1/2	31938	5	50	0.563	3 5/16
2	31944	5	40	1.156	4 3/8

WROT 106-2	45° Street Elbow Fitting to Copper	CAST
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FTG. x C

Nominal Size In Inches	Part Number	Box Quantity	Master Pack	Approx. Net Wt.	Dim. A	Dim. B
1/4	31186	50	1000	0.013	15/64	41/64
3/8	31190	50	1000	0.024	9/32	23/32
1/2	31194	100	1000	0.035	5/16	25/32
5/8	31198	25	250	0.059	5/16	1
3/4	31202	50	500	0.076	13/32	1 3/16
1	31206	25	250	0.134	7/16	1 7/16
1 1/4	31212	25	200	0.229	17/32	1 9/16
1 1/2	31216	20	160	0.343	19/32	1 3/4
2	31220	10	80	0.625	11/16	2 3/32
2 1/2	31224	5	40	0.965	29/32	2 7/16
3	31228	3	24	1.470	1	2 11/16
*3 1/2	31232	1	16	2.100	1 5/32	3
4	31236	1	8	3.340	1 9/32	3 1/2

WROT 106	45° Elbow Copper to Copper	CAST
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C x C

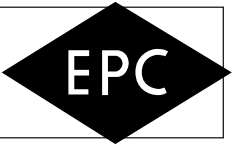
Nominal Size In Inches	Part Number	Box Quantity	Master Pack	Approx. Net Wt.	Dim. A
1/8	31082	50	1000	0.006	1/8
1/4	31086	50	1000	0.013	15/64
3/8	31090	50	1000	0.024	1/4
1/2	31096	100	1000	0.034	17/64
5/8	31102	25	250	0.056	5/16
3/4	31106	50	500	0.076	3/8
1	31120	25	250	0.137	13/32
1 1/4	31128	25	200	0.229	33/64
1 1/2	31134	20	160	0.343	19/32
2	31140	10	80	0.625	25/32
2 1/2	31148	5	40	0.970	7/8
3	31156	3	24	1.460	63/64
3 1/2	31162	1	16	2.180	1 5/32
4	31168	1	8	3.800	1 11/64
5	31170	1	6	6.564	1 13/32
6	31172	1	1	11.200	1 11/16
8	31174	1	1	27.900	2 1/4

WROT 107-C	90° Elbow-Close Ruff Copper to Copper	CAST 4707
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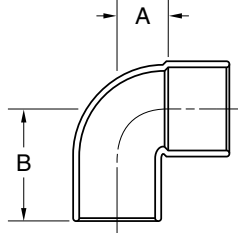
C x C

Nominal Size In Inches	Part Number	Box Quantity	Master Pack	Approx. Net Wt.	Dim. A	Dim. B
1/8	31260	50	1000	0.008	3/8	3/8
1/4	31262	50	1000	0.012	3/8	3/8
3/8	31266	50	1000	0.026	13/32	13/32
1/2	31272	100	1000	0.044	25/64	25/64
5/8	31280	25	250	0.069	17/32	17/32
3/4	31288	50	500	0.096	9/16	9/16
1	31296	20	200	0.208	47/64	47/64
1 1/4	31306	25	200	0.259	15/16	15/16
1 1/2	31314	20	120	0.371	1 11/64	1 11/64
2	31322	10	80	0.805	1 29/64	1 29/64
2 1/2	31330	5	40	1.180	1 21/32	1 21/32
3	31338	3	24	1.920	1 61/64	1 61/64
3 1/2	31346	1	8	2.728	2 7/32	2 7/32
4	31352	1	8	4.557	2 17/32	2 17/32
5	31360	1	1	8.586	3 1/8	3 1/8
6	31368	1	1	15.200	3 13/16	3 13/16
8	31371	1	1	37.000	5 1/8	5 1/8

Wrot & Cast Pressure Fittings Elbows



WROT	107-C-2	90° Street Elbow -Close Ruff	CAST
		Fitting to Copper	

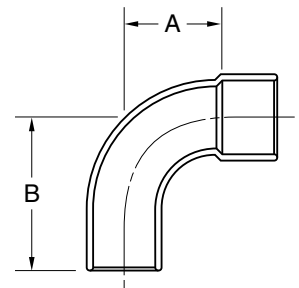


Nominal Size In Inches	Part Number	Box Quantity	Master Pack	Approx. Net Wt.	Dim. A	Dim. B
1/8	31390	50	1000	0.006	3/8	49/64
1/4	31392	50	1000	0.012	3/8	3/4
3/8	31396	50	1000	0.027	13/32	15/16
1/2	31400	100	1000	0.042	29/64	1 1/32
5/8	31404	25	250	0.061	17/32	1 7/32
3/4	31408	50	500	0.103	19/32	1 13/32
1	31412	20	200	0.195	21/32	1 21/32
1 1/4	31416	25	200	0.259	7/8	1 29/32
1 1/2	31420	20	120	0.392	1 11/64	2 3/8
2	31424	10	80	0.805	1 29/64	2 27/32
2 1/2	31428	5	40	1.187	1 3/4	3 21/64
3	31432	3	24	1.960	2	3 25/32
3 1/2	31436	1	8	2.798	2 15/64	4 15/64
4	31440	1	8	4.460	2 19/32	4 13/16

WROT	107-L	90° Elbow-Long Turn-cont.	CAST
		Copper to Copper	

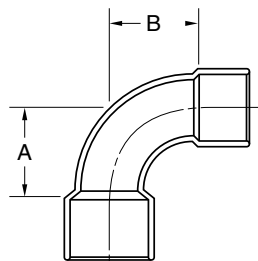
Nominal Size In Inches	Part Number	Box Quantity	Master Pack	Approx. Net Wt.	Dim. A	Dim. B
1/2	31676	50	500	0.055	55/64	55/64
5/8	31684	25	250	0.087	1 1/16	1 1/16
3/4	31692	25	250	0.123	1 5/32	1 5/32
7/8	31702	10	100	0.210	1 15/32	1 15/32
1	31708	10	100	0.270	1 29/64	1 29/64
1 1/4	31720	10	80	0.381	1 7/8	1 7/8
1 1/2	31730	10	80	0.563	2 3/16	2 3/16
2	31740	5	30	1.156	3	3
2 1/2	31750	1	10	1.980	3 3/16	3 3/16
3	31756	1	8	3.320	4 5/8	4 5/8
3 1/2	31762	1	1	4.850	5 1/4	5 1/4
4	31770	1	1	7.400	5 7/8	5 7/8

WROT	107-L-2	90° Street Elbow-Long Turn	CAST
		Fitting to Copper	



Nominal Size In Inches	Part Number	Box Quantity	Master Pack	Approx. Net Wt.	Dim. A	Dim. B
1/8	31790	50	1000	0.008	1/2	7/8
1/4	31792	50	1000	0.019	23/64	1 1/16
3/8	31796	50	500	0.032	23/32	1 7/32
1/2	31802	50	500	0.055	55/64	1 7/16
5/8	31810	25	250	0.087	1 1/16	1 27/32
3/4	31816	25	250	0.139	1 1/8	2 1/16
1	31830	10	100	0.269	1 13/32	2 9/16
1 1/4	31838	10	80	0.381	1 7/8	2 29/32
1 1/2	31844	10	80	0.563	2 3/16	3 5/16
2	31850	5	30	1.156	2 31/32	4 3/8
2 1/2	31856	1	10	1.963	3 3/16	4 23/32
3	31862	1	8	3.300	4 5/8	6 11/32
3 1/2	31868	1	8	3.850	4	5 31/32
4	31874	1	1	5.890	4 29/64	6 23/32

WROT	107-L	90° Elbow-Long Turn	CAST
		Copper to Copper	


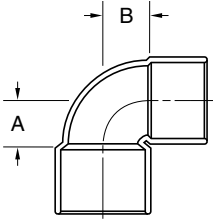



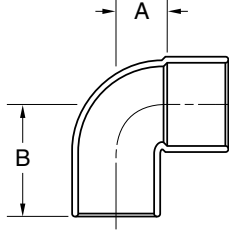
Nominal Size In Inches	Part Number	Box Quantity	Master Pack	Approx. Net Wt.	Dim. A	Dim. B
3/16 OD	31662	50	1000	0.007	5/16	5/16
5/16 OD	31666	50	1000	0.013	9/16	9/16
1/8	31664	50	1000	0.083	1/2	1/2
1/4	31668	50	1000	0.019	3/4	3/4
3/8	31672	50	500	0.033	23/32	23/32


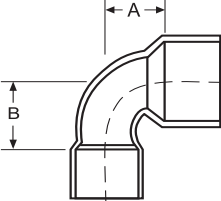
** Cast Bronze Only


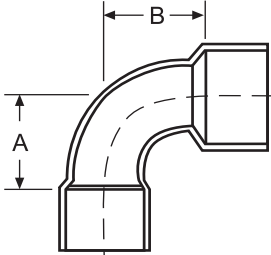
*Factory Option—consult factory for price and delivery information.

Wrot & Cast Pressure Fittings Elbows

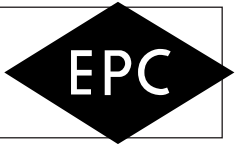
WROT				CAST		
107-MT	90° Elbow-Medium Turn					
Copper to Copper						
						
C x C						
Nominal Size In Inches	Part Number	Box Quantity	Master Pack	Approx. Net Wt.	Dim. A	Dim. B
1/8	31510	50	1000	0.010	3/8	3/8
1/4	31512	50	1000	0.016	3/8	3/8
3/8	31516	50	1000	0.043	1/2	1/2
1/2	31522	50	500	0.068	19/32	19/32
5/8	31530	25	250	0.109	7/8	7/8
3/4	31536	25	250	0.141	13/16	13/16
1	31542	10	100	0.252	1	1


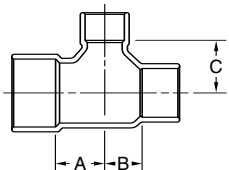
WROT				CAST		
107-MT-2	90° Street Elbow -Medium Turn					
Fitting to Copper						
						
FTG. x C						
Nominal Size In Inches	Part Number	Box Quantity	Master Pack	Approx. Net Wt.	Dim. A	Dim. B
1/8	31560	50	1000	0.010	3/8	3/4
1/4	31562	50	1000	0.017	3/8	3/4
3/8	31566	50	1000	0.044	1/2	15/16
1/2	31572	50	500	0.066	19/32	1 3/16
5/8	31578	25	250	0.104	7/8	1 1/2
3/4	31584	25	250	0.146	13/16	1 5/8
1	31590	10	100	0.271	1 1/16	2 1/32

WROT				CAST		
107-CR	90° Reducer Elbow-Close Ruff			4707		
Copper to Copper						
						
C x C						
Nominal Size In Inches	Part Number	Box Quantity	Master Pack	Approx. Net Wt.	Dim. A	Dim. B
3/8 x 1/4	31268	50	1000	0.027	5/8	39/64
1/2 x 3/8	31274	50	500	0.041	43/64	5/8
1/2 x 1/4	31276	50	500	0.034	11/16	43/64
5/8 x 1/2	31282	25	250	0.077	31/32	7/8
3/4 x 1/2	31290	50	500	0.085	5/8	15/32
1 x 3/4	31298	25	250	0.146	3/4	19/32
1 x 1/2	31300	25	250	0.129	1 1/8	7/8
1 1/4 x 1	31308	10	100	0.229	7/8	11/16
** 1 1/4 x 3/4	35212	15	90	0.338	-	-
** 1 1/4 x 1/2	35214	20	120	0.280	-	-
** 1 1/2 x 1 1/4	31316	10	100	0.338	1 9/64	55/64
** 1 1/2 x 1	35218	-	60	0.540	-	-
** 1 1/2 x 3/4	35220	-	72	0.455	-	-
** 1 1/2 x 1/2	35222	12	72	0.380	-	-
2 x 1 1/2	31324	5	40	0.602	1 1/2	1 13/64
** 2 x 1 1/4	35226	-	25	0.880	-	-
** 2 x 1	35228	-	30	0.780	-	-
** 2 x 3/4	35229	-	30	0.660	-	-
2 1/2 x 2	31332	5	40	1.128	1 7/8	1 1/2
3 x 2 1/2	31340	3	24	1.598	2 3/32	1 3/4
** 3 x 2	35242	-	20	2.753	-	-
4 x 3	31354	1	8	3.313	2 11/16	2
* 5 x 4	31362	1	6	6.542	3 13/32	2 17/32
* 6 x 4	31370	1	6	8.091	3 7/8	2 17/32

WROT				CAST		
107-R	90° Reducer Elbow					
Copper to Copper						
						
FTG. x C						
Nominal Size In Inches	Part Number	Box Quantity	Master Pack	Approx. Net Wt.	Dim. A	Dim. B
3/8 x 1/4	31674	50	1000	0.027	39/64	5/8
1/2 x 3/8	31678	50	500	0.042	5/8	43/64
5/8 x 1/2	31686	25	250	0.077	7/8	31/32
3/4 x 3/8	31698	50	500	0.073	11/16	27/32
3/4 x 1/2	31696	50	500	0.086	7/8	7/8
3/4 x 5/8	31694	25	250	0.113	1 1/16	1 5/32
1 x 3/4	31710	25	250	0.170	1 9/64	1 1/4
1 1/2 x 1	31734	5	50	0.350	1 13/32	1 11/16
1 1/2 x 1 1/4	31732	5	50	0.480	2	2 1/4
2 x 1 1/2	31742	5	40	0.754	2 3/16	2 5/16

Wrot & Cast Pressure Fittings Tees

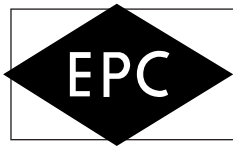


WROT 111	Tee			CAST 4711			
	Copper to Copper to Copper						
							
C x C x C							
Nominal Size In Inches	Part Number	Box Quantity	Master Pack	Approx. Net Wt.	Dim. A	Dim. B	Dim. C
1/8	32606	50	1000	0.016	13/64	13/64	7/32
3/16 OD	32602	50	1000	0.009	3/16	3/16	3/16
5/16 OD	32622	50	1000	0.020	7/32	7/32	9/32
1/4	32640	50	1000	0.028	17/64	17/64	1/4
3/8	32668	50	500	0.045	5/16	5/16	3/8
1/2	32700	50	500	0.059	21/64	21/64	11/32
5/8	32732	25	250	0.110	7/16	7/16	1/2
3/4	32768	25	250	0.144	1/2	1/2	17/32
1	32818	10	100	0.239	41/64	41/64	19/32
1 1/4	32866	5	50	0.397	41/64	41/64	41/64
1 1/2	32910	5	50	0.540	13/16	13/16	13/16
2	32970	5	40	1.082	1 1/16	1 1/16	1 15/64
2 1/2	33030	1	10	1.967	1 21/32	1 21/32	1 11/16
3	33124	1	10	2.632	1 7/8	1 7/8	1 11/16
3 1/2	33250	1	8	4.167	2 5/32	2 5/32	2 1/4
4	33258	1	8	5.210	2 13/32	2 13/32	2 9/16
* 5	33400	1	1	7.998	2 37/64	2 37/64	2 29/32
* 6	33420	1	1	12.613	3 1/8	3 1/8	3 11/16
* 8	33454	1	1	32.086	4 1/16	4 1/16	4 3/4
1/4 x 1/4 x 1/8 OD	32614	50	1000	0.016	5/16	5/16	7/32
1/4 x 1/4 x 1/4 OD	33492	50	1000	0.016	13/64	13/64	7/32
1/4 x 1/4 x 5/16 OD	32608	50	1000	0.020	17/64	17/64	9/32
5/16 x 5/16 x 1/4 OD	32626	50	1000	0.020	7/32	7/32	11/32
5/16 x 1/4 x 5/16 OD	32628	50	1000	0.020	7/32	11/32	9/32
5/16 x 1/4 x 1/4 OD	32630	50	1000	0.020	7/32	11/32	11/32
* 3/8 x 3/8 x 3/16 OD	32650	50	1000	0.028	17/64	17/64	7/16
3/8 x 1/4 x 5/16 OD	32658	50	1000	0.028	17/64	13/32	11/32
1/8 x 1/8 x 1/4	32610	50	1000	0.028	13/32	13/32	1/4
1/4 x 1/4 x 1/2	32642	50	500	0.063	21/32	21/32	11/32
1/4 x 1/4 x 3/8	32644	50	500	0.045	15/32	15/32	3/8
1/4 x 1/4 x 1/8	32648	50	1000	0.028	17/64	17/64	13/32
1/4 x 1/8 x 1/4	32656	50	1000	0.028	17/64	13/32	1/4
1/4 x 1/8 x 1/8	32664	50	1000	0.028	17/64	13/32	13/32
3/8 x 3/8 x 1/2	32672	50	500	0.063	17/32	17/32	11/32
3/8 x 3/8 x 1/4	32674	50	500	0.045	5/16	5/16	15/32
3/8 x 3/8 x 1/8	32678	50	500	0.045	5/16	5/16	39/64
3/8 x 1/4 x 3/8	32684	50	500	0.045	5/16	15/32	3/8
3/8 x 1/4 x 1/4	32686	50	500	0.045	5/16	15/32	15/32
* 3/8 x 1/4 x 1/8	32688	50	500	0.045	5/16	15/32	5/8
3/8 x 1/8 x 3/8	32694	50	500	0.045	5/16	9/16	3/8
1/2 x 1/2 x 1	32702	10	100	0.290	15/16	15/16	3/4
1/2 x 1/2 x 3/4	32704	25	250	0.118	33/64	33/64	15/32
1/2 x 1/2 x 5/8	32706	50	500	0.110	21/32	21/32	1/2
1/2 x 1/2 x 3/8	32708	50	500	0.064	5/16	5/16	13/32
1/2 x 1/2 x 1/4	32710	50	500	0.064	9/32	9/32	13/32
1/2 x 1/2 x 1/8	32712	50	500	0.064	9/32	9/32	1/2

WROT 111	Tee-cont.			CAST 4711			
	Copper to Copper to Copper						
Nominal Size In Inches	Part Number	Box Quantity	Master Pack	Approx. Net Wt.	Dim. A	Dim. B	Dim. C
1/2 x 3/8 x 1/2	32716	50	500	0.063	3/8	17/32	11/32
1/2 x 3/8 x 3/8	32718	50	500	0.064	5/16	1/2	13/32
1/2 x 1/4 x 1/2	32724	50	500	0.063	3/8	21/32	11/32
1/2 x 1/4 x 1/4	32728	50	500	0.064	9/32	5/8	13/32
5/8 x 5/8 x 3/4	32736	25	250	0.170	11/16	11/16	17/32
5/8 x 5/8 x 1/2	32738	25	250	0.107	27/64	27/64	1/2
5/8 x 5/8 x 3/8	32740	25	250	0.107	27/64	27/64	21/32
5/8 x 5/8 x 1/4	32742	25	250	0.107	27/64	27/64	23/32
5/8 x 1/2 x 1/2	32748	25	250	0.107	27/64	5/8	1/2
3/4 x 3/4 x 1	32770	10	100	0.202	3/4	3/4	17/32
* 3/4 x 3/4 x 5/8	32772	25	250	0.153	1/2	1/2	3/4
3/4 x 3/4 x 1/2	32774	25	250	0.112	25/64	25/64	19/32
3/4 x 3/4 x 3/8	32776	25	250	0.130	25/64	25/64	11/16
3/4 x 3/4 x 1/4	32778	25	250	0.135	25/64	25/64	3/4
* 3/4 x 5/8 x 5/8	32786	25	250	0.150	1/2	11/16	3/4
3/4 x 1/2 x 3/4	32790	25	250	0.144	1/2	25/32	17/32
3/4 x 1/2 x 1/2	32794	25	250	0.109	25/64	5/8	19/32
* 3/4 x 1/2 x 3/8	32796	25	250	0.137	25/64	5/8	11/16
3/4 x 1/2 x 1/4	32798	25	250	0.140	25/64	5/8	3/4
* 3/4 x 3/8 x 3/4	32802	25	250	0.159	1/2	29/32	17/32
* 3/4 x 3/8 x 3/8	32806	25	250	0.132	25/64	23/32	11/16
1 x 1 x 1 1/2	32820	5	50	0.680	1 1/4	1 1/4	1 5/32
1 x 1 x 1 1/4	32822	5	50	0.405	1 5/32	1 5/32	31/32
1 x 1 x 3/4	32824	10	100	0.220	1/2	1/2	5/8
* 1 x 1 x 5/8	32826	10	100	0.319	1/2	1/2	15/16
1 x 1 x 1/2	32828	10	100	0.183	23/64	23/64	11/16
1 x 1 x 3/8	32830	10	100	0.183	23/64	23/64	13/16
1 x 3/4 x 1	32836	10	100	0.290	21/32	53/64	21/32
1 x 3/4 x 3/4	32838	10	100	0.220	1/2	11/16	5/8
1 x 3/4 x 1/2	32842	10	100	0.183	23/64	9/16	11/16
* 1 x 3/4 x 3/8	32844	10	100	0.270	23/64	9/16	13/16
1 x 1/2 x 1	32856	10	100	0.290	21/32	5/64	21/32
1 x 1/2 x 3/4	32858	10	100	0.220	1/2	15/16	5/8
1 x 1/2 x 1/2	32860	10	100	0.185	23/64	13/16	11/16
1 1/4 x 1 1/4 x 2	32868	5	40	1.352	1 3/4	1 3/4	1 3/8
1 1/4 x 1 1/4 x 1 1/2	32870	5	50	0.680	1 3/16	1 3/16	1 5/32
1 1/4 x 1 1/4 x 1	32872	5	50	0.348	17/32	17/32	25/32
1 1/4 x 1 1/4 x 3/4	32874	5	50	0.314	7/16	7/16	3/4
1 1/4 x 1 1/4 x 1/2	32876	5	50	0.259	19/64	19/64	11/16
1 1/4 x 1 x 1 1/4	32882	5	50	0.405	7/8	7/8	25/32
1 1/4 x 1 x 1	32884	5	50	0.391	3/4	3/4	25/32
1 1/4 x 1 x 3/4	32886	5	50	0.297	5/8	5/8	25/32
1 1/4 x 1 x 1/2	32888	5	50	0.267	1/2	1/2	25/32
1 1/4 x 3/4 x 1 1/4	32894	5	50	0.405	7/8	7/8	25/32
1 1/4 x 3/4 x 1	32896	5	50	0.391	3/4	3/4	25/32
1 1/4 x 3/4 x 3/4	32898	5	50	0.297	5/8	5/8	25/32
1 1/4 x 3/4 x 1/2	32900	5	50	0.267	1/2	1/2	25/32
1 1/4 x 1/2 x 1 1/4	32904	5	50	0.405	7/8	7/8	25/32
** 1 1/4 x 1/2 x 1	36780	12	72	0.470	-	-	-
** 1 1/2 x 1/2 x 1/2	36783	5	50	0.500	-	-	-
1 1/2 x 1 1/2 x 2	32912	5	50	1.352	1 37/64	1 37/64	1 3/8
1 1/2 x 1 1/2 x 1 1/4	32914	5	50	0.457	11/16	11/16	13/16
1 1/2 x 1 1/2 x 1	32916	5	50	0.376	9/16	9/16	13/16
1 1/2 x 1 1/2 x 3/4	32918	5	50	0.332	7/16	7/16	13/16
1 1/2 x 1 1/2 x 1/2	32920	5	50	0.296	21/64	21/64	29/32
1 1/2 x 1 1/4 x 1 1/2	32924	5	50	0.680	1 7/32	1 3/16	1 7/32

** Cast Bronze Only

*Factory Option—consult factory for price and delivery information.

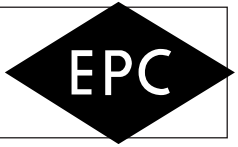


Wrot & Cast Pressure Fittings Tees

WROT 111		Tee-cont. Copper to Copper to Copper					CAST 4711	
Nominal Size In Inches	Part Number	Box Quantity	Master Pack	Approx. Net Wt.	Dim. A	Dim. B	Dim. C	
1 1/2 x 1 1/4 x 1 1/4	32926	5	50	0.661	31/32	1 3/16	1 1/16	
1 1/2 x 1 1/4 x 1	32928	5	50	0.591	27/32	1 3/16	1 1/16	
1 1/2 x 1 1/4 x 3/4	32930	5	50	0.583	11/16	7/8	31/32	
1 1/2 x 1 1/4 x 1/2	32932	5	50	0.460	9/16	13/16	31/32	
1 1/2 x 1 x 1 1/2	32936	5	50	0.680	1 5/32	1 1/4	1 5/32	
1 1/2 x 1 x 1 1/4	32938	5	50	0.661	31/32	1 5/16	1 1/16	
1 1/2 x 1 x 1	32940	5	50	0.591	27/32	1 1/8	1 1/16	
1 1/2 x 1 x 3/4	32942	5	50	0.583	11/16	1	31/32	
1 1/2 x 1 x 1/2	32944	5	50	0.460	9/16	13/16	31/32	
1 1/2 x 3/4 x 1 1/2	32948	5	50	0.680	1 5/32	1 19/64	1 5/32	
1 1/2 x 3/4 x 1 1/4	32950	5	50	0.661	31/32	1 1/4	1 1/16	
1 1/2 x 3/4 x 1	32952	5	50	0.591	27/32	1 5/16	1 1/16	
1 1/2 x 3/4 x 3/4	32954	5	50	0.583	11/64	1 1/32	31/32	
1 1/2 x 3/4 x 1/2	32956	5	50	0.460	9/16	15/16	31/32	
1 1/2 x 1/2 x 1 1/2	32960	5	50	0.680	1 5/32	1 31/64	1 5/32	
** 1 1/2 x 1/2 x 1 1/4	36814	5	50	0.750	-	-	-	
** 2 x 2 x 3	36825	-	8	3.110	-	-	-	
2 x 2 x 2 1/2	32972	1	10	1.961	2	2	1 11/16	
2 x 2 x 1 1/2	32974	5	40	0.893	3/4	3/4	1 3/32	
2 x 2 x 1 1/4	32976	5	40	0.742	11/16	11/16	1 1/8	
2 x 2 x 1	32978	5	40	0.673	1/2	1/2	1 3/32	
2 x 2 x 3/4	32980	5	40	0.624	7/16	7/16	1 5/32	
2 x 2 x 1/2	32982	5	40	0.551	5/16	5/16	1 1/8	
2 x 1 1/2 x 2	32984	5	40	1.352	1 3/8	1 37/64	1 3/8	
2 x 1 1/2 x 1 1/2	32986	5	40	1.097	1 1/32	1 19/64	1 11/32	
2 x 1 1/2 x 1 1/4	32988	5	40	1.013	31/32	1 3/16	1 3/8	
2 x 1 1/2 x 1	32990	5	40	1.023	13/16	1 1/16	1 5/16	
2 x 1 1/2 x 3/4	32992	5	40	0.960	11/16	1 1/16	1 1/4	
2 x 1 1/2 x 1/2	32994	5	40	0.850	5/8	15/16	1 1/4	
2 x 1 1/4 x 2	32998	5	40	1.352	1 3/8	1 25/32	1 3/8	
2 x 1 1/4 x 1 1/2	33000	5	40	1.097	1 1/32	1 3/8	1 11/32	
2 x 1 1/4 x 1 1/4	33002	5	40	1.013	31/32	1 3/16	1 3/8	
2 x 1 1/4 x 1	33004	5	40	1.023	13/16	1 9/32	1 5/16	
2 x 1 1/4 x 3/4	33006	5	40	0.960	11/16	1 5/32	1 1/4	
2 x 1 1/4 x 1/2	33008	5	40	0.850	5/8	1 5/64	1 1/4	
2 x 1 x 2	33012	5	40	1.352	1 3/8	1 25/32	1 3/8	
** 2 x 1 x 1 1/2	36852	-	25	1.150	-	-	-	
2 x 1 x 1	33016	5	40	1.023	27/32	1 9/32	1 11/32	
2 x 3/4 x 2	33020	5	40	1.352	1 3/8	1 3/4	1 3/8	
2 x 3/4 x 3/4	36862	-	50	0.890	-	-	-	
2 x 1/2 x 2	33024	5	40	1.352	1 3/8	1 7/8	1 3/8	
2 1/2 x 2 1/2 x 3	33032	1	10	2.744	2 5/8	2 5/8	1 7/8	
2 1/2 x 2 1/2 x 2	33034	1	10	1.673	1 7/16	1 7/16	1 11/16	
2 1/2 x 2 1/2 x 1 1/2	33036	1	10	1.460	1 3/16	1 3/16	1 19/32	
2 1/2 x 2 1/2 x 1 1/4	33038	1	10	1.341	1	1	1 39/64	
2 1/2 x 2 1/2 x 1	33040	1	10	1.356	7/8	7/8	1 5/8	
2 1/2 x 2 1/2 x 3/4	33042	1	10	1.258	3/4	3/4	1 31/64	
2 1/2 x 2 1/2 x 1/2	33044	1	10	1.081	1/2	1/2	1 1/2	
2 1/2 x 2 x 2 1/2	33046	1	10	1.961	1 21/32	2	1 11/16	
2 1/2 x 2 x 2	33048	1	10	1.673	1 7/16	2 3/64	1 11/16	
2 1/2 x 2 x 1 1/2	33050	1	10	1.460	1 3/16	1 3/4	1 19/32	
2 1/2 x 2 x 1 1/4	33052	1	10	1.341	1	1 11/16	1 39/64	
2 1/2 x 2 x 1	33054	1	10	1.356	7/8	1 9/16	1 5/8	
2 1/2 x 2 x 3/4	33056	1	10	1.258	3/4	1 3/8	1 31/64	
2 1/2 x 2 x 1/2	33058	1	10	1.081	1/2	1 11/32	1 1/2	
2 1/2 x 1 1/2 x 2 1/2	33062	1	10	1.961	1 21/32	2 21/32	1 11/16	
2 1/2 x 1 1/2 x 2	33064	1	10	1.673	1 7/16	2 15/32	1 11/16	

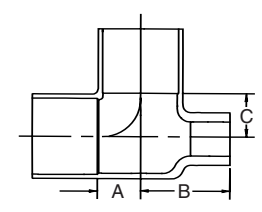
WROT 111		Tee-cont. Copper to Copper to Copper					CAST 4711	
Nominal Size In Inches	Part Number	Box Quantity	Master Pack	Approx. Net Wt.	Dim. A	Dim. B	Dim. C	
2 1/2 x 1 1/2 x 1 1/2	33066	1	10	1.460	1 3/16	2 19/64	1 19/32	
2 1/2 x 1 1/2 x 1 1/4	33068	1	10	1.341	1	2 3/16	1 39/64	
2 1/2 x 1 1/4 x 2 1/2	33076	1	10	1.961	1 21/32	2 31/32	1 11/16	
2 1/2 x 1 1/4 x 2	33078	1	10	1.673	1 7/16	2 45/64	1 11/16	
2 1/2 x 1 x 2 1/2	33092	1	10	1.961	1 21/32	3 7/32	1 11/16	
2 1/2 x 3/4 x 2 1/2	33108	1	10	1.961	1 21/32	3 7/16	1 11/16	
** 2 1/2 x 1/2 x 2 1/2	36916	10	20	2.460	-	-	-	
3 x 3 x 4	33126	1	8	6.396	3 21/32	3 21/32	2 9/16	
3 x 3 x 2 1/2	33128	1	10	2.351	1 11/16	1 11/16	1 31/32	
3 x 3 x 2	33130	1	10	2.270	1 7/16	1 7/16	1 31/32	
3 x 3 x 1 1/2	33132	1	10	2.024	1 3/16	1 3/16	1 29/32	
3 x 3 x 1 1/4	33134	1	10	1.939	31/32	31/32	1 59/64	
3 x 3 x 1	33136	1	10	1.757	7/8	7/8	1 59/64	
3 x 3 x 3/4	33138	1	10	1.691	3/4	3/4	1 13/16	
3 x 3 x 1/2	33140	1	10	1.542	9/16	9/16	1 11/16	
3 x 2 1/2 x 3	33144	1	10	2.744	1 7/8	2 5/8	1 7/8	
3 x 2 1/2 x 2 1/2	33146	1	10	2.351	1 11/16	2 13/32	1 31/32	
3 x 2 1/2 x 2	33148	1	10	2.270	1 7/16	2 1/8	1 31/32	
3 x 2 1/2 x 1 1/2	33150	1	10	2.024	1 3/16	1 7/8	1 29/32	
3 x 2 1/2 x 1 1/4	33152	1	10	1.939	31/32	1 3/4	1 59/64	
3 x 2 1/2 x 1	33154	1	10	1.757	7/8	1 5/8	1 59/64	
3 x 2 1/2 x 3/4	33156	1	10	1.691	3/4	1 17/32	1 13/16	
3 x 2 x 3	33162	1	10	2.744	1 7/8	3 1/16	1 7/8	
3 x 2 x 2 1/2	33164	1	10	2.351	1 11/16	2 23/32	1 31/32	
3 x 2 x 2	33166	1	10	2.270	1 7/16	2 9/16	1 31/32	
3 x 2 x 1 1/2	33168	1	10	2.024	1 3/16	2 5/16	1 29/32	
* 3 x 2 x 1 1/4	33170	1	10	1.939	31/32	2 3/16	1 59/64	
* 3 x 2 x 1	33172	1	10	1.757	7/8	2	1 59/64	
3 x 1 1/2 x 3	33180	1	10	2.744	1 7/8	3 9/16	1 7/8	
* 3 x 1 1/2 x 2 1/2	33182	1	10	2.351	1 11/16	3 5/16	1 31/32	
* 3 x 1 1/2 x 2	33184	1	10	2.270	1 7/16	3 1/8	1 31/32	
3 x 1 1/2 x 1 1/2	33186	1	10	2.024	1 3/16	2 25/32	1 29/32	
* 3 x 1 1/4 x 3	33196	1	10	2.744	1 7/8	3 23/32	1 7/8	
3 x 1 x 3	33214	1	10	2.744	1 7/8	3 29/32	1 7/8	
3 x 3/4 x 3	33232	1	10	2.744	1 7/8	4 1/32	1 7/8	
4 x 4 x 3	33262	1	8	5.714	2 1/32	2 1/32	2 1/2	
4 x 4 x 2 1/2	33264	1	8	5.361	1 25/32	1 25/32	2 19/32	
4 x 4 x 2	33266	1	8	4.880	1 1/2	1 1/2	2 7/16	
4 x 4 x 1 1/2	33268	1	8	4.985	1 3/16	1 3/16	2 9/16	
4 x 4 x 1 1/4	33270	1	8	4.715	1 3/32	1 3/32	2 1/2	
4 x 4 x 1	33272	1	8	4.502	15/16	15/16	2 5/16	
4 x 4 x 3/4	33274	1	16	2.393	13/32	13/32	2 5/16	
4 x 4 x 1/2	33276	1	16	2.296	1/2	1/2	2 5/16	
4 x 3 x 4	33280	1	8	6.396	2 13/32	3 21/32	2 35/64	
4 x 3 x 3	33282	1	8	5.714	2 1/32	3 1/32	2 1/2	
4 x 3 x 2 1/2	33284	1	8	5.361	1 25/32	2 29/32	2 19/32	
4 x 3 x 2	33286	1	8	4.880	1 1/2	2 23/32	2 7/16	
4 x 2 1/2 x 4	33300	1	8	6.396	2 13/32	4 1/16	2 35/64	
4 x 2 1/2 x 2 1/2	33304	1	8	5.361	1 25/32	3 5/16	2 19/32	
4 x 2 x 4	33320	1	8	6.396	2 13/32	4 1/2	2 35/64	
4 x 2 x 2	33326	1	8	4.880	1 1/2	3 17/32	2 7/16	
4 x 1 1/2 x 4	33340	1	8	6.396	2 13/32	4 29/32	2 35/64	
4 x 1 x 4	33380	1	8	6.396	2 13/32	5 9/32	2 25/64	
* 5 x 5 x 4	33404	1	6	6.950	2 7/64	2 7/64	2 15/16	
* 5 x 5 x 3	33406	1	6	5.604	1 9/16	1 9/16	2 15/16	
* 5 x 5 x 2 1/2	33408	1	6	5.511	1 13/32	1 13/32	2 15/16	
* 5 x 5 x 2	33410	1	6	4.824	1 5/64	1 5/64	2 7/8	

Wrot & Cast Pressure Fittings Tees & Plugs



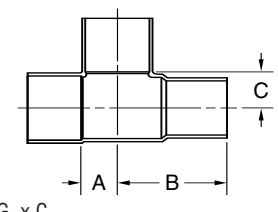
WROT 111	Tee-cont. <small>Copper to Copper to Copper</small>				CAST 4711			
Nominal Size In Inches	Part Number	Box Quantity	Master Pack	Approx. Net Wt.	Dim. A	Dim. B	Dim. C	
* 5 x 5 x 1 1/2	33412	1	6	4.479	27/32	27/32	2 7/8	
* 5 x 5 x 1 1/4	33414	1	6	4.276	3/4	3/4	2 7/8	
* 5 x 5 x 1	33416	1	6	4.050	21/32	21/32	2 7/8	
* 5 x 5 x 3/4	33418	1	6	3.841	5/8	5/8	2 7/8	
* 5 x 4 x 5	33398	1	1	10.087	2 37/64	4 1/8	29/32	
* 5 x 4 x 4	33399	1	1	8.101	2 1/8	3 29/64	2 15/16	
* 6 x 6 x 5	33424	1	1	11.580	2 45/64	2 45/64	3 7/16	
* 6 x 6 x 4	33426	1	1	10.132	2 13/64	2 13/64	3 7/16	
* 6 x 6 x 3	33428	1	1	8.093	1 11/16	1 11/16	3 7/16	
* 6 x 6 x 2 1/2	33430	1	1	7.663	1 7/16	1 7/16	3 7/16	
* 6 x 6 x 2	33432	1	1	7.132	1 17/32	1 17/32	3 7/16	
* 6 x 6 x 1 1/2	33434	1	6	6.716	15/16	15/16	3 7/16	
* 6 x 6 x 1 1/4	33436	1	6	6.454	13/16	13/16	3 7/16	
* 6 x 6 x 1	33438	1	6	6.168	11/16	11/16	3 7/16	
* 6 x 6 x 3/4	33440	1	6	5.885	5/8	5/8	3 7/16	
* 6 x 6 x 1/2	33441	1	6	5.668	11/32	11/32	3 11/32	
* 6 x 4 x 6	33443	1	1	13.252	3 1/8	4 23/32	3 11/16	
* 6 x 4 x 4	33446	1	1	10.103	2 13/64	4 3/16	3 7/16	
* 8 x 8 x 6	33456	1	1	26.140	3 1/16	3 1/16	4 1/2	
* 8 x 8 x 5	33458	1	1	23.380	2 9/16	2 9/16	4 1/2	
* 8 x 8 x 4	33460	1	1	20.706	2 1/16	2 1/16	4 9/16	
* 8 x 8 x 3	33462	1	1	18.308	1 1/2	1 1/2	4 1/2	
* 8 x 8 x 2 1/2	33464	1	1	17.650	1 23/64	1 23/64	4 9/16	
* 8 x 8 x 2	33466	1	1	17.199	1 1/16	1 1/16	4 1/2	
* 8 x 6 x 6	33468	1	1	25.984	3 1/16	4 1/2	4 1/2	

WROT	Baseboard Tee <small>Copper to Female N.P.T. to Copper</small>				CAST 4714-B			
Nominal Size In Inches	Part Number	Box Quantity	Master Pack	Approx. Net Wt.	Dim. A	Dim. B	Dim. C	
** 1/2 x 1/8 x 1/2	37852	40	320	0.110	-	-	-	
** 1/2 x 1/8 x 3/4	37850	20	160	0.170	-	-	-	
** 3/4 x 1/8 x 3/4	37855	35	210	0.186	-	-	-	
** 1 x 1/8 x 1	37857	15	90	0.300	-	-	-	
** 1 1/4 x 1/8 x 1 1/4	37858	-	45	0.501	-	-	-	



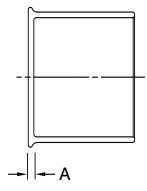
C x F x C

WROT 111-2	Street Tee <small>Copper to Fitting to Copper</small>				CAST			
Nominal Size In Inches	Part Number	Box Quantity	Master Pack	Approx. Net Wt.	Dim. A	Dim. B	Dim. C	
1/2	33506	50	500	0.069	3/8	1 1/32	3/8	
3/4	33508	25	250	0.147	1/2	1 7/16	15/32	



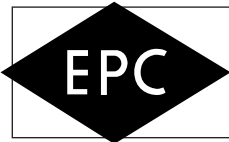
C x FTG. x C

WROT 116	Fitting End Plug <small>For Fitting</small>				CAST	
Nominal Size In Inches	Part Number	Box Quantity	Master Pack	Approx. Net Wt.	Dim. A	
* 3/8	32020	50	1000	0.010	1/16	
1/2	32022	100	1000	0.016	3/32	
3/4	32026	50	500	0.036	1/8	
1	32028	25	250	0.059	5/32	


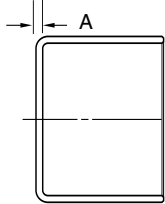


** Cast Bronze Only


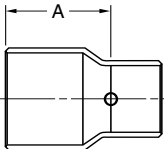
*Factory Option—consult factory for price and delivery information.



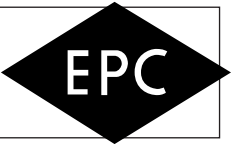
Wrot & Cast Pressure Fittings Caps & Reducers

WROT 117		Tube Cap For Tube End			CAST 4717	
						
Nominal Size In Inches	Part Number	Box Quantity	Master Pack	Approx. Net Wt.	Dim. A	
1/8	30620	50	1000	0.003	1/32	
1/4	30622	50	1000	0.005	1/16	
3/8	30624	50	1000	0.010	3/32	
1/2	30626	100	1000	0.016	5/64	
5/8	30628	25	500	0.030	1/8	
3/4	30630	50	500	0.036	5/64	
1	30632	50	500	0.059	1/8	
1 1/4	30634	25	250	0.108	5/32	
1 1/2	30636	20	200	0.159	5/32	
2	30638	10	100	0.284	5/32	
2 1/2	30640	5	50	0.469	5/32	
3	30642	5	50	0.713	3/16	
3 1/2	30644	1	10	0.970	3/16	
4	30646	1	10	1.384	7/32	
**5	34647	-	5	5.484	-	
**6	34648	-	5	9.670	-	

WROT 118		Fitting Reducer-cont. Fitting to Copper			CAST	
Nominal Size In Inches	Part Number	Box Quantity	Master Pack	Approx. Net Wt.	Dim. A	
3/4 x 3/8	32066	50	500	0.037	1 1/16	
3/4 x 1/4	32068	50	500	0.049	1 1/8	
1 x 3/4	32072	25	250	0.092	1 3/16	
1 x 5/8	32074	25	250	0.089	1 7/32	
1 x 1/2	32076	25	250	0.095	1 9/32	
1 x 3/8	32078	25	250	0.088	1 3/8	
1 1/4 x 1	32082	10	100	0.150	1 1/4	
1 1/4 x 3/4	32084	10	100	0.118	1 11/32	
1 1/4 x 1/2	32086	10	100	0.169	1 15/32	
1 1/2 x 1 1/4	32090	10	100	0.206	1 19/64	
1 1/2 x 1	32092	10	100	0.203	1 17/32	
1 1/2 x 3/4	32094	10	100	0.200	1 11/16	
1 1/2 x 1/2	32096	10	100	0.207	1 7/8	
2 x 1 1/2	32102	10	100	0.374	1 11/16	
2 x 1 1/4	32104	10	100	0.360	1 15/16	
2 x 1	32106	10	100	0.357	2 1/8	
2 x 3/4	32108	10	100	0.403	2 11/32	
2 x 1/2	32110	10	100	0.426	2 7/16	
2 1/2 x 2	32114	5	50	0.643	1 15/16	
2 1/2 x 1 1/2	32116	5	50	0.666	2 1/4	
2 1/2 x 1 1/4	32118	5	50	0.628	2 5/16	
2 1/2 x 1	32120	5	50	0.655	2 17/32	
3 x 2 1/2	32126	2	20	0.893	2 3/32	
3 x 2	32128	2	20	0.948	2 33/64	
3 x 1 1/2	32130	2	20	1.027	2 11/16	
3 x 1 1/4	32132	2	20	1.029	2 25/32	
3 1/2 x 3	32136	1	10	1.336	2 1/4	
3 1/2 x 2 1/2	32138	1	10	1.344	2 7/16	
3 1/2 x 2	32140	1	10	1.380	2 51/64	
4 x 3 1/2	32144	2	32	1.850	2 23/32	
4 x 3	32146	2	32	1.860	2 15/16	
4 x 2 1/2	32148	2	32	1.929	3 7/32	
4 x 2	32150	2	32	2.003	3 17/32	
5 x 4	32154	1	6	3.240	3 11/32	
5 x 3	32156	1	6	3.168	3 13/16	
5 x 2 1/2	32158	1	6	3.084	4 9/64	
5 x 2	32160	1	6	2.901	4 7/16	
6 x 5	32164	1	6	4.642	3 7/8	
6 x 4	32166	1	6	4.556	4 3/8	
6 x 3	32168	1	6	4.388	4 23/32	
6 x 2 1/2	32170	1	6	4.304	5 1/32	
6 x 2	32172	1	6	4.517	5 7/32	
8 x 6	32176	1	1	10.643	5 7/32	
8 x 5	32178	1	1	11.379	5 23/32	
8 x 4	32180	1	1	11.244	6 3/32	
8 x 3	32182	1	1	12.291	6 19/32	

WROT 118		Fitting Reducer Fitting to Copper			CAST	
						
Nominal Size In Inches	Part Number	Box Quantity	Master Pack	Approx. Net Wt.	Dim. A	
1/4 OD x 1/8 OD	32040	50	1000	0.004	33/64	
1/4 x 1/8	32042	50	1000	0.007	1/2	
3/8 x 1/4	32044	50	1000	0.014	17/32	
3/8 x 1/8	32046	50	1000	0.016	5/8	
1/2 x 3/8	32048	50	1000	0.025	23/32	
1/2 x 1/4	32050	50	1000	0.022	47/64	
5/8 x 1/2	32054	25	500	0.033	25/32	
5/8 x 3/8	32056	25	500	0.029	29/32	
5/8 x 1/4	32058	25	500	0.038	15/16	
3/4 x 5/8	32062	50	500	0.052	15/16	
3/4 x 1/2	32064	50	500	0.058	1	

Wrot & Cast Pressure Fittings Bushings & Straps



WROT 119	Flush Bushing Fitting to Copper	CAST				
Nominal Size In Inches	Part Number	Box Quantity	Master Pack	Approx. Net Wt.	Dim. A	Dim. B
1/4 x 1/8	30530	50	1000	0.008	3/8	1/16
3/8 x 1/4	30532	50	1000	0.011	3/8	1/16
1/2 x 3/8	30536	50	1000	0.019	9/16	3/16
1/2 x 1/4	30538	50	1000	0.034	1/2	3/16
5/8 x 1/2	30542	25	500	0.028	5/8	1/8
5/8 x 3/8	30544	25	500	0.054	5/8	1/4
3/4 x 5/8	30548	50	500	0.040	3/4	1/8
3/4 x 1/2	30550	50	500	0.070	3/4	1/4
1 x 3/4	30556	25	250	0.115	29/32	5/32
1 x 1/2	30560	25	250	0.211	29/32	13/32
1 1/4 x 1	30564	25	250	0.146	31/32	1/16
1 1/2 x 1 1/4	30570	20	200	0.199	1 3/32	1/8
2 x 1 1/2	30580	5	50	0.648	1 11/32	1/4

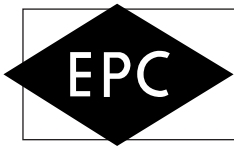
WROT 120	Copper Tube Strap Double Hole	CAST		
Nominal Size In Inches	Part Number	Box Quantity	Master Pack	Approx. Net Wt.
1/8	32410	100	2000	0.008
1/4	32412	100	2000	0.011
3/8	32414	100	2000	0.014
1/2	32416	100	1000	0.016
5/8	32418	100	1000	0.021
3/4	32420	100	1000	0.022
1	32422	100	1000	0.025
1 1/4	32424	50	500	0.041
1 1/2	32426	50	500	0.048
2	32428	100	800	0.062

WROT 119-3	Flush Bushing Fitting to Female N.P.T.	CAST 4718-3			
Nominal Size In Inches	Part Number	Box Quantity	Master Pack	Approx. Net Wt.	Dim. A
1/2 x 1/4	30600	50	1000	0.021	9/16
1/2 x 1/8	30602	50	1000	0.034	9/16
**1 x 1/2	34614	25	250	0.125	-
**1 1/4 x 3/4	34616	10	200	0.159	-

WROT 120-S	Copper Tube Strap Single Hole Heavy Weight	CAST		
Nominal Size In Inches	Part Number	Box Quantity	Master Pack	Approx. Net Wt.
1/8	32440	100	2000	0.007
1/4	32442	100	2000	0.009
3/8	32444	100	2000	0.012
1/2	32446	100	2000	0.014


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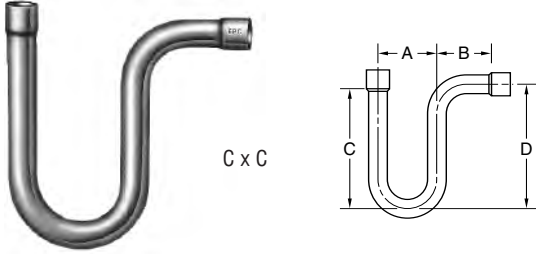
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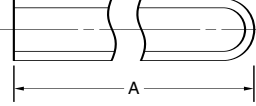



Wrot & Cast Pressure Fittings


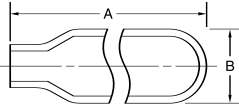
Straps, Air Chambers, P-Traps, & Hangers

WROT 125		Perforated Copper Strap 3/4" Wide			CAST
					
Size	Part Number	Box Quantity	Master Pack	Approx. Net Wt.	
10 Ft. Roll	32400	6	48	0.704	
25 Ft. Roll	32402	6	48	1.766	

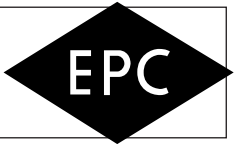
WROT 123		Suction-Line P-Trap Copper to Copper			CAST			
								
O.D. Size in Inches	Part Number	Box Quantity	Master Pack	Approx. Net Wt.	Dim. A	Dim. B	Dim. C	Dim. D
5/8	32000	5	50	0.213	2 1/4	2 3/16	2 5/32	3 47/64
3/4	32002	10	60	0.465	3	2 7/8	5 9/32	6
7/8	32004	10	60	0.541	3 1/2	2 3/4	5 7/32	5 3/16
1 1/8	32006	-	10	0.902	3 17/32	2 11/64	4 59/64	5 9/32
1 3/8	32008	-	5	1.439	5	3 1/2	5 1/4	7
1 5/8	32010	-	5	2.491	7	4 1/2	7 3/4	9 1/2
2 1/8	32012	-	3	4.468	6	3 3/4	8 9/16	9 21/32

WROT 121		Stub Out Air Chamber For Fitting End			CAST	
						
From Type M Tube						
						
Nominal Size In Inches	Part Number	Box Quantity	Master Pack	Approx. Net Wt.	Dim. A	
1/2 x 6	32530	100	800	0.105	6	
1/2 x 8	32532	100	600	0.139	8	
1/2 x 12	32536	-	200	0.193	12	
3/4 x 12	32552	-	100	0.315	12	

WROT 124		Hi-Ear Hanger C			CAST	
						
Nominal Size In Inches	Part Number	Box Quantity	Master Pack	Approx. Net Wt.	Dim. A	Dim. B
1/2	31980	100	1000	0.029	1 5/8	47/64
3/4	31982	50	500	0.038	1 5/8	7/8
1	31984	25	250	0.043	1 5/8	1

WROT 122		Air Chamber For Fitting End			CAST	
						
						
Nominal Size In Inches	Part Number	Box Quantity	Master Pack	Approx. Net Wt.	Dim. A	Dim. B
1/2 x 6	30500	50	300	0.218	6	1
1/2 x 12	30506	-	50	0.423	12	1

Wrot & Cast Pressure Fittings Couplings, Return Bends, Elbows, & Adapters



WROT 136	Cross-Over Coupling Copper to Copper	CAST			
Nominal Size In Inches	Part Number	Box Quantity	Master Pack	Approx. Net Wt.	Dim. A
1/2	31070	5	100	0.090	1 19/64
3/4	31072	5	50	0.198	1 23/32

WROT	Copper Drain Coupling Copper to Copper with Drain Cap	CAST 4175		
Nominal Size In Inches	Part Number	Box Quantity	Master Pack	Approx. Net Wt.
**1/2	34766	75	300	0.080
**3/4	34767	25	200	0.140
**1	34768	10	100	0.220

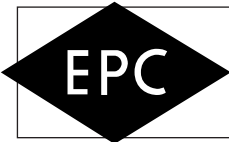
WROT 138	Return Bend Copper to Copper	CAST				
Nominal Size In Inches	Part Number	Box Quantity	Master Pack	Approx. Net Wt.	Dim. A	Dim. B
1/8 x 1	32300	50	1000	0.013	1	5/8
1/4 x 1 1/2	32302	50	500	0.031	1 1/2	15/16
1/4 x 1 1/4	32304	50	500	0.028	1 1/4	13/16
3/8 x 2	32316	25	250	0.069	2	1 1/4
3/8 x 1 1/2	32320	25	250	0.054	1 1/2	1
*1/2 x 3	32330	25	250	0.128	3	1 13/16
1/2 x 2 1/2	32332	25	250	0.113	2 1/2	1 9/16
1/2 x 2 1/4	32334	25	250	0.102	2 1/4	1 7/16
1/2 x 1 9/16	32344	25	250	0.078	1 9/16	1 3/32
1/2 x 1 1/2	32346	25	250	0.074	1 1/2	1 1/16
5/8 x 2 1/4	32352	10	100	0.138	2 1/4	1 5/8
5/8 x 2 1/8	32354	10	100	0.129	2 1/8	1 7/16
3/4 x 2 1/2	32364	10	100	0.194	2 1/2	1 11/16
3/4 x 2 3/8	32366	10	100	0.178	2 3/8	1 5/8
1 x 3 1/4	32368	5	50	0.412	3 1/4	2 3/16
1 x 3	32370	5	50	0.336	3	2 1/16
1 1/4 x 4	32374	5	40	0.606	4	2 11/16
1 1/2 x 4 3/8	32382	5	40	0.810	4 3/8	3
2 x 5 1/2	32384	4	32	1.802	5 1/2	3 13/16
2 x 5 1/8	32386	4	32	1.725	5 1/8	3 5/8

WROT	90° Copper Drain Elbow Copper to Copper with Drain Cap	CAST 4236		
Nominal Size In Inches	Part Number	Box Quantity	Master Pack	Approx. Net Wt.
**1/2	35578	50	500	0.100
**3/4	35580	25	250	0.200
**1	35583	10	100	0.310


WROT	Drop Adapter Copper to Female N.P.T.	CAST 4703-5		
Nominal Size In Inches	Part Number	Box Quantity	Master Pack	Approx. Net Wt.
**1/2	34446	50	200	0.150


** Cast Bronze Only


*Factory Option—consult factory for price and delivery information.





Wrot & Cast Pressure Fittings Adapters & Elbows

WROT	Hi-Ear Adapter Copper to Female N.P.T.			CAST 4703-5-1
				
C x F				
Nominal Size In Inches	Part Number	Box Quantity	Master Pack	Approx. Net Wt.
**1/2	34458	40	240	0.200

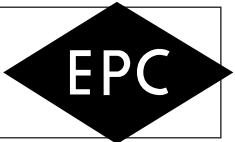
WROT	Hose Adapter Copper to Hose Thread N.H.T.			CAST 4704-HT
				
C x Hose Thread				
Nominal Size In Inches	Part Number	Box Quantity	Master Pack	Approx. Net Wt.
**1/2 x 3/4	34433	100	1000	0.080


WROT	Wing Adapter Copper to Female N.P.T.			CAST 4703-5-W
				
C x F				
Nominal Size In Inches	Part Number	Box Quantity	Master Pack	Approx. Net Wt.
**1/2	34453	50	300	0.150
**3/4	34455	25	150	0.250


WROT	90° CxF Elbow Copper to Female N.P.T.			CAST 4707-3
				
C x F				
Nominal Size In Inches	Part Number	Box Quantity	Master Pack	Approx. Net Wt.
**3/8	35302	50	500	0.090
**1/2	35306	50	200	0.113
**3/4	35312	30	120	0.194
**1	35317	-	100	0.438
**1 1/4	35322	-	60	0.707
**1 1/2	35328	-	40	0.912
**2	35337	-	15	1.458
**1/2 x 3/4	35308	25	250	0.200
**1/2 x 3/8	35309	100	600	0.085
**1/2 x 1/4	35310	50	500	0.096
**3/4 x 1	35314	20	120	0.358
**3/4 x 1/2	35315	45	180	0.187
**1 x 3/4	35319	20	120	0.330
**1 x 1/2	35320	25	150	0.260
**1 1/4 x 3/4	35326	10	100	0.470


WROT	Flush Adapter Copper to Male N.P.T.			CAST 4704-F
				
C x M				
Nominal Size In Inches	Part Number	Box Quantity	Master Pack	Approx. Net Wt.
**1/2	34380	200	2000	0.030
**3/4	34382	50	500	0.030


Wrot & Cast Pressure Fittings Elbows




WROT	90° Drop Elbow Copper to Female N.P.T.		CAST 4707-3-5	
 C x F				
Nominal Size In Inches	Part Number	Box Quantity	Master Pack	Approx. Net Wt.
**3/8	35438	50	500	0.120
**1/2	35440	25	200	0.160
**3/4	35445	20	120	0.250
**1	35447	-	50	0.490
**3/8 x 1/2	35439	25	200	0.190
**1/2 x 3/8	35444	50	300	0.110
**3/4 x 1/2	35446	25	100	0.240

WROT	90° Union Elbow Copper to Male N.P.T.		CAST 4707-4-6	
 C x M				
Nominal Size In Inches	Part Number	Box Quantity	Master Pack	Approx. Net Wt.
**1/2	35533	10	100	0.300
**3/4	35534	10	100	0.490
**1	35535	-	50	0.730

WROT	90° CxM Elbow Copper to Male N.P.T.		CAST 4707-4	
 C x M				
Nominal Size In Inches	Part Number	Box Quantity	Master Pack	Approx. Net Wt.
**3/8	35360	50	500	0.080
**1/2	35365	30	240	0.120
**3/4	35370	30	180	0.220
**1	35376	-	120	0.390
**1 1/4	35380	-	50	0.560
**1 1/2	35386	-	40	0.750
**2	35390	-	20	1.380
**1/2 x 3/4	35367	25	225	0.180
**1/2 x 3/8	35368	50	400	0.100
**3/4 x 1	35372	25	100	0.320
**3/4 x 1/2	35373	20	240	0.180
**1 x 3/4	35378	20	120	0.313


WROT	90° Drop Ear Elbow Copper to Copper		CAST 4707-5	
 C x C				
Nominal Size In Inches	Part Number	Box Quantity	Master Pack	Approx. Net Wt.
**1/2	35424	50	300	0.117
**3/4	35426	25	150	0.228


WROT	90° Hi-Ear Elbow Copper to Copper		CAST 4707-5-1	
 C x C				
Nominal Size In Inches	Part Number	Box Quantity	Master Pack	Approx. Net Wt.
**1/2	35458	50	300	0.128
**3/4	35459	25	150	0.210


** Cast Bronze Only


*Factory Option—consult factory for price and delivery information.


Wrot & Cast Pressure Fittings Elbows & Tees

WROT		90° Hi-Ear Elbow Copper to Female N.P.T.		CAST 4707-5-3	
				C x F	
Nominal Size In Inches	Part Number	Box Quantity	Master Pack	Approx. Net Wt.	
**1/2	35464	40	160	0.190	
**3/4	35466	25	150	0.300	

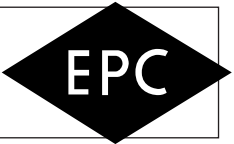
WROT		FxMxC Tee Female N.P.T. to Male N.P.T. to Copper		CAST 4710-3-4	
				F x M x C	
Nominal Size In Inches	Part Number	Box Quantity	Master Pack	Approx. Net Wt.	
**3/4 x 3/4 x 1/2	37696	25	150	0.330	


WROT		90° Flanged Sink Elbow Copper to Female N.P.T.		CAST 4708	
				C x F	
Nominal Size In Inches	Part Number	Box Quantity	Master Pack	Approx. Net Wt.	
**1/2	35493	25	150	0.200	


WROT		Drop Ear Tee Copper to Copper to Copper		CAST 4711-5	
				C x C x C	
Nominal Size In Inches	Part Number	Box Quantity	Master Pack	Approx. Net Wt.	
**1/2	37742	25	250	0.150	


WROT		FxFxC Tee Female N.P.T. to Female N.P.T. to Copper		CAST 4710-3	
				F x F x C	
Nominal Size In Inches	Part Number	Box Quantity	Master Pack	Approx. Net Wt.	
**1/2	37672	25	150	0.220	
**3/4	37674	20	120	0.370	
**3/4 x 3/4 x 1/2	37675	20	120	0.330	
**3/4 x 1/2 x 3/4	37676	20	120	0.310	
**3/4 x 1/2 x 1/2	37677	25	100	0.270	


Wrot & Cast Pressure Fittings Tees

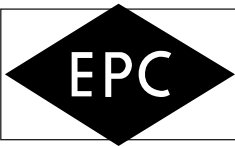


WROT	CxCxF Tee <small>Copper to Copper to Female N.P.T.</small>		CAST 4712	
 C x C x F				
Nominal Size In Inches	Part Number	Box Quantity	Master Pack	Approx. Net Wt.
**3/8	37405	50	400	0.110
**1/2	37409	50	200	0.200
**3/4	37418	25	150	0.310
* *1	37427	10	60	0.540
**1 1/4	37436	-	45	0.760
**1 1/2	37446	-	50	1.080
**2	37456	-	25	1.740
**1/2 x 1/2 x 3/4	37412	30	180	0.230
**1/2 x 1/2 x 3/8	37413	50	500	0.150
**1/2 x 1/2 x 1/4	37414	30	270	0.160
**1/2 x 1/2 x 1/8	37415	40	360	0.100
**3/4 x 3/4 x 1	37419	10	100	0.400
**3/4 x 3/4 x 1/2	37420	25	150	0.210
**3/4 x 3/4 x 3/8	37422	20	160	0.230
**3/4 x 1/2 x 3/4	37424	25	250	0.240
**1 x 1 x 3/4	37428	-	90	0.420
**1 x 1 x 1/2	37429	15	90	0.350
**1 1/4 x 1 1/4 x 1	37438	-	50	0.660
**1 1/4 x 1 1/4 x 3/4	37439	-	36	0.540
**1 1/4 x 1 1/4 x 1/2	37440	1	100	0.500
**1 1/2 x 1 1/2 x 1	37448	1	40	0.790
**1 1/2 x 1 1/2 x 3/4	37449	1	50	0.650
**1 1/2 x 1 1/2 x 1/2	37450	-	25	0.620
**2 x 2 x 1	37459	-	25	1.230
**2 x 2 x 3/4	37460	1	25	1.100
**2 x 2 x 1/2	37462	1	25	0.970


WROT	CxCxM Tee <small>Copper to Copper to Male N.P.T.</small>		CAST 4713	
 C x C x M				
Nominal Size In Inches	Part Number	Box Quantity	Master Pack	Approx. Net Wt.
**3/4	37497	20	120	0.290


WROT	CxFxC Tee <small>Copper to Female N.P.T. to Copper</small>		CAST 4714	
 C x F x C				
Nominal Size In Inches	Part Number	Box Quantity	Master Pack	Approx. Net Wt.
**1/2	37528	25	200	0.190
**3/4	37537	20	80	0.310
**1	37545	-	60	0.520
**1 1/4	37553	-	35	0.700
**1 1/2	37560	-	20	1.000
**2	37567	-	25	1.720
**1/2 x 3/4 x 1/2	37530	15	120	0.270
**3/4 x 1/2 x 3/4	37540	25	150	0.240
**1 x 3/4 x 1	37547	1	90	0.460
**1 x 1/2 x 1	37548	1	100	0.410
**1 1/4 x 3/4 x 1 1/4	37556	-	36	0.588
**1 1/4 x 1/2 x 1 1/4	37558	-	36	0.560
**1 1/2 x 3/4 x 1 1/2	37564	-	25	0.930
**1 1/2 x 1/2 x 1 1/2	37566	1	50	0.750
**2 x 3/4 x 2	37568	-	30	1.570
**2 x 1/2 x 2	37569	-	25	1.480


WROT	CxCxF Drop Ear Tee <small>Copper to Copper to Female N.P.T.</small>		CAST 4712-5	
 C x C x F				
Nominal Size In Inches	Part Number	Box Quantity	Master Pack	Approx. Net Wt.
**1/2	37753	20	160	0.240
**3/4	37755	15	90	0.370
**1/2 x 1/2 x 3/8	37754	20	160	0.190




Wrot & Cast Pressure Fittings Unions, Crosses & Flanges

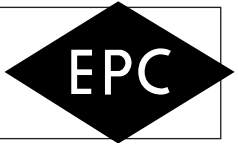
WROT	Union Copper to Female N.P.T.		CAST 4733-3	
 C x F				
Nominal Size In Inches	Part Number	Box Quantity	Master Pack	Approx. Net Wt.
**1/4	37965	10	200	0.140
**3/8	37966	10	200	0.190
**1/2	37967	25	125	0.260
**3/4	36969	25	100	0.370
**1	37970	-	50	0.610
**1 1/4	37973	5	50	0.980
**1 1/2	37975	-	30	1.210
**2	37977	-	15	1.900
**2 1/2	37979	10	20	3.610


WROT	Cross Copper to Copper to Copper to Copper			CAST 4735	
 C x C x C x C					
Nominal Size In Inches	Part Number	Box Quantity	Master Pack	Approx. Net Wt.	
***3/8	34842	25	250	0.080	
**1/2	34844	45	180	0.140	
**3/4	34847	15	90	0.300	
**1	34854	-	48	0.540	
**1 1/4	34863	-	25	0.750	
**1 1/2	34885	-	50	1.050	
**2	34928	-	8	2.000	


WROT	Union Copper to Male N.P.T.		CAST 4733-4	
 C x M				
Nominal Size In Inches	Part Number	Box Quantity	Master Pack	Approx. Net Wt.
**1/4	37985	25	250	0.130
**3/8	37986	10	100	0.200
**1/2	37987	25	125	0.280
**3/4	37992	10	100	0.430
**1	37996	-	50	0.680
**1 1/4	37998	5	50	0.980
**1 1/2	37999	-	50	1.350
**2	38000	-	20	2.170
**2 1/2	38002	10	20	4.130

WROT	125 lb. Companion Flange with A.S.M.E. Drilling Copper				CAST 4741				
(Bolts not included) 									
Nominal Size In Inches	Part Number	Flange Thickness	Flange O.D.	Bolt Circle DIA.	Hole DIA.	Bolt DIA.	Bolt Holes	Master Pack	Approx Net Wt.
**1/2	35644	3/16	3 1/2	2 3/8	5/8	1/2	4	50	0.530
**3/4	35646	3/16	3 7/8	2 3/4	5/8	1/2	4	50	0.710
**1	35649	1/4	4 1/4	3 1/8	5/8	1/2	4	50	1.090
**1 1/4	35653	1/4	4 5/8	3 1/2	5/8	1/2	4	50	1.140
**1 1/2	35656	5/16	5	3 7/8	5/8	1/2	4	24	1.640
**2	35659	3/8	6	4 3/4	3/4	5/8	4	15	2.740
**2 1/2	35663	3/8	7	5 1/2	3/4	5/8	4	12	3.570
**3	35666	7/16	7 1/2	6	3/4	5/8	4	6	4.950
**4	35673	7/16	9	7 1/2	3/4	5/8	8	6	6.950
**5	35676	7/16	10	8 1/2	7/8	3/4	8	4	9.040
**6	35679	1/2	11	9 1/2	7/8	3/4	8	2	13.180
**8	35682	5/8	13 1/2	11 3/4	7/8	3/4	8	1	25.900


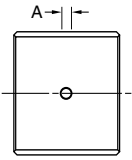
Wrot & Cast Pressure Fittings Flanges & Y's


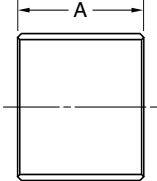


WROT	150 lb. Companion Flange with A.S.M.E. Drilling <small>Copper</small>	CAST							
		4771							
(Bolts not included)									
									
Nominal Size In Inches	Part Number	Flange Thickness	Flange O.D.	Bolt Circle DIA.	Hole DIA.	Bolt DIA.	Bolt Holes	Master Pack	Approx Net Wt.
**1	35794	3/8	4 1/4	3 1/8	5/8	1/2	4	12	1.410
**1 1/4	35799	13/32	4 5/8	3 1/2	5/8	1/2	4	40	1.860
**1 1/2	35806	7/16	5	3 7/8	5/8	1/2	4	20	2.430
**2	35810	1/2	6	4 3/4	3/4	5/8	4	15	3.670
**2 1/2	35816	9/16	7	5 1/2	3/4	5/8	4	5	5.490
**3	35822	5/8	7 1/2	6	3/4	5/8	4	6	7.440
**4	35834	11/16	9	7 1/2	3/4	5/8	8	3	10.350
**5	35837	3/4	10	8 1/2	7/8	3/4	8	2	15.690
**6	35840	13/16	11	9 1/2	7/8	3/4	8	2	19.330
**8	35844	15/16	13 1/2	11 3/4	7/8	3/4	8	1	42.130

WROT	45° Y <small>Copper to Copper to Copper</small>	CAST			
		4749			
					
C x C x C					
Nominal Size In Inches	Part Number	Box Quantity	Master Pack	Approx. Net Wt.	
**1/2	38063	25	200	0.150	
**3/4	38064	20	120	0.340	
**1	38066	10	60	0.550	
**1 1/4	38069	5	50	0.810	
**1 1/2	38072	5	50	1.140	
**2	38075	-	25	2.170	

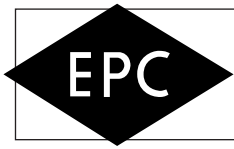
Wrot & Cast Drainage Fittings Couplings

WROT	301 DWV-Coupling <small>With Stop Copper to Copper</small>	CAST				
						
						
C x C W/Stop						
Nominal Size In Inches	Part Number	Box Quantity	Master Pack	Approx. Net Wt.	Dim. A	
1 1/4	46230	25	250	0.061	3/32	
1 1/2	46232	25	250	0.089	3/32	
2	46236	10	100	0.123	3/32	
3	46242	5	50	0.224	3/32	
*4	46250	2	20	0.497	1/8	

WROT	301-NS DWV-Coupling <small>Without Stop Copper to Copper</small>	CAST				
						
						
C x C Without Stop						
Nominal Size In Inches	Part Number	Box Quantity	Master Pack	Approx. Net Wt.	Dim. A	
1 1/4	46270	25	250	0.062	1 3/32	
1 1/2	46272	25	250	0.081	1 1/8	
2	46274	10	100	0.115	1 11/32	
3	46276	5	50	0.229	1 19/32	
*4	46278	2	20	0.485	2 1/8	


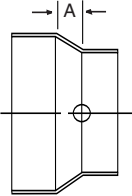
** Cast Bronze Only

*Factory Option—consult factory for price and delivery information.



Wrot & Cast Drainage Fittings Couplings, Bushings & Adapters


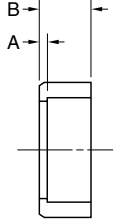
WROT 301-R	DWV-Coupling With Stop Copper to Copper	CAST 5801-R
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C x C

Nominal Size In Inches	Part Number	Box Quantity	Master Pack	Approx. Net Wt.	Dim. A
1 1/2 x 1 1/4	46234	25	250	0.107	1/4
2 x 1 1/2	46238	10	100	0.174	3/8
2 x 1 1/4	46240	10	100	0.181	5/8
3 x 2	46244	5	50	0.373	3/4
3 x 1 1/2	46246	5	50	0.430	7/8
3 x 1 1/4	46248	5	50	0.416	1 1/4
4 x 3	46252	5	40	0.606	3/4
**4 x 2	47818	-	25	1.257	-


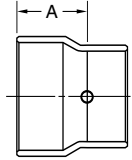
WROT 301-2-F	DWV-Flush Bushing Fitting to Copper	CAST
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FTG. x C

Nominal Size In Inches	Part Number	Box Quantity	Master Pack	Approx. Net Wt.	Dim. A	Dim. B
1 1/2 x 1 1/4	46180	25	250	0.122	1/8	5/8
2 x 1 1/2	46182	10	100	0.336	1/8	11/16


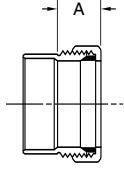
WROT 301-2	DWV-Extended Bushing Fitting to Copper	CAST 5801-2
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FTG. x C

Nominal Size In Inches	Part Number	Box Quantity	Master Pack	Approx. Net Wt.	Dim. A
1 1/2 x 1 1/4	46160	25	250	0.109	7/8
2 x 1 1/2	46162	10	100	0.175	1 3/32
2 x 1 1/4	46164	10	100	0.176	1 3/16
3 x 2	46166	5	50	0.366	1 7/16
3 x 1 1/2	46168	5	50	0.390	1 21/32
3 x 1 1/4	46170	5	50	0.410	2
**4 x 3	47616	-	25	1.060	-
**4 x 2	47618	-	40	1.260	-


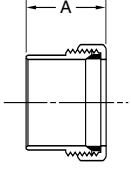
WROT 301-7	DWV-Trap Adapter CxSJ Copper to Slip Joint	CAST 5801-7
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C x SJ

Nominal Size In Inches	Part Number	Box Quantity	Master Pack	Approx. Net Wt.	Dim. A
1 1/4 x 1 1/4 OD	46110	25	250	0.206	21/32
**1 1/2 x 1 1/2 OD	47368	10	100	0.230	-
1 1/2 x 1 1/4 OD	46114	10	100	0.270	7/8

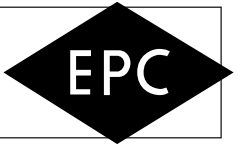
WROT 301-2-7	DWV-Fitting Trap Adapter Fitting to Slip Joint	CAST
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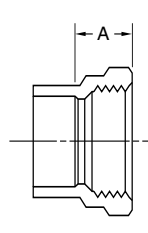
FTG. x SJ

Nominal Size In Inches	Part Number	Box Quantity	Master Pack	Approx. Net Wt.	Dim. A
1 1/2 x 1 1/2 OD	46122	10	100	0.258	1 7/16
1 1/2 x 1 1/4 OD	46124	10	100	0.230	1 7/16

Wrot & Cast Drainage Fittings Adapters



WROT 303	DWV-Female Adapter Copper to Female N.P.T.	CAST 5803
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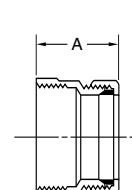
C x F

Nominal Size In Inches	Part Number	Box Quantity	Master Pack	Approx. Net Wt.	Dim. A
1 1/4	46000	20	200	0.287	27/32
1 1/2	46002	10	100	0.384	27/32
2	46004	10	100	0.591	31/32
**3	47022	-	30	1.450	-
**4	47028	-	15	2.310	-

WROT 304	DWV-Male Adapter-cont. Copper to Male N.P.T.	CAST 5804
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Nominal Size In Inches	Part Number	Box Quantity	Master Pack	Approx. Net Wt.	Dim. A
2	46040	5	100	0.518	15/16
**3	47066	-	40	1.294	-
**4	47070	-	18	2.588	-
**1 1/4 x 1 1/2	47050	-	100	0.380	-
**1 1/2 x 2	47054	-	50	0.550	-
**1 1/2 x 1 1/4	47056	-	75	0.309	-
**2 x 1 1/2	47060	10	100	0.455	-


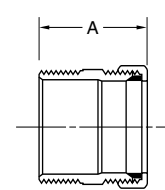
WROT 303-7	DWV-Trap Adapter FxSJ Female N.P.T. to Slip Joint	CAST
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F x SJ

Nominal Size In Inches	Part Number	Box Quantity	Master Pack	Approx. Net Wt.	Dim. A
1 1/4 x 1 1/4 OD	46130	10	100	0.340	1 7/16
1 1/2 x 1 1/2 OD	46132	10	100	0.400	1 7/16


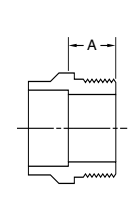
WROT 304-7	DWV-Trap Adapter MxSJ Male N.P.T. to Slip Joint	CAST
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M x SJ

Nominal Size In Inches	Part Number	Box Quantity	Master Pack	Approx. Net Wt.	Dim. A
1 1/4 x 1 1/4 OD	46140	10	100	0.420	1 3/4
1 1/2 x 1 1/2 OD	46142	10	100	0.499	1 25/32
1 1/2 x 1 1/4 OD	46144	10	100	0.530	1 29/32


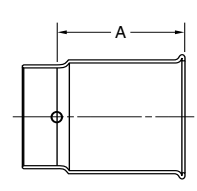
WROT 304	DWV-Male Adapter Copper to Male N.P.T.	CAST 5804
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C x M

Nominal Size In Inches	Part Number	Box Quantity	Master Pack	Approx. Net Wt.	Dim. A
1 1/4	46030	10	100	0.291	15/16
**1 1/2	47052	-	125	0.321	-

WROT 305	DWV-Soil Pipe Adapter Copper to Soil Pipe	CAST
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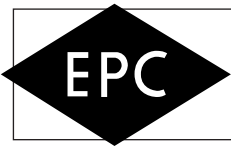



C x SP

Nominal Size In Inches	Part Number	Box Quantity	Master Pack	Approx. Net Wt.	Dim. A
2	46056	10	80	0.548	2 23/32
3	46062	5	40	1.093	2 15/16
4	46066	2	12	2.070	3 1/8
1 1/4 x 2	46050	10	80	0.660	3 7/8


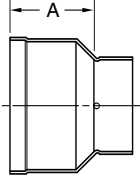
** Cast Bronze Only


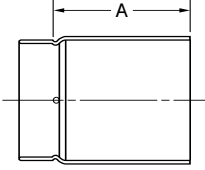
*Factory Option—consult factory for price and delivery information.


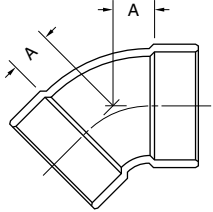



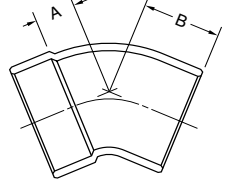
Wrot & Cast Drainage Fittings Adapters & Elbows

WROT 305		DWV-Soil Pipe Adapter-cont. Copper to Soil Pipe				CAST
Nominal Size In Inches	Part Number	Box Quantity	Master Pack	Approx. Net Wt.	Dim. A	
1 1/2 x 3	46052	-	10	1.426	4 1/8	
1 1/2 x 2	46054	10	80	0.676	3 23/32	
2 x 3	46060	-	10	1.509	4 3/16	
3 x 4	46064	2	12	2.491	4 15/32	

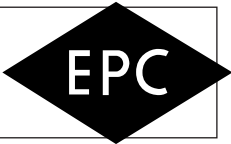
WROT 305-NH		DWV-No-Hub Soil Pipe Adapter Copper to No-Hub			CAST 5805-NH
(Service weight) For Use With Neoprene Gasket					
					
C x NH					
Nominal Size In Inches	Part Number	Box Quantity	Master Pack	Approx. Net Wt.	Dim. A
2	46086	5	50	0.276	1 3/8
**2	47284	-	50	0.430	-
3	46088	5	40	0.588	1 13/32
**3	47290	-	35	0.690	-
4	46090	2	20	1.044	1 13/32
**4	47294	-	50	1.140	-
1 1/4 x 2	46082	5	50	0.313	1 53/64
1 1/2 x 2	46084	5	50	0.298	1 37/64
**1 1/2 x 2	47282	-	50	0.450	-

WROT 305-P		DWV-Soil Pipe Adapter Plain End Copper to Spigot			CAST
(Service Weight) For Use With Neoprene Gasket					
					
C x Spigot					
Nominal Size In Inches	Part Number	Box Quantity	Master Pack	Approx. Net Wt.	Dim. A
2	46076	5	50	0.442	2 1/2

WROT 306		45° DWV-Elbow 1/2 Bend Copper to Copper			CAST
					
C x C					
Nominal Size In Inches	Part Number	Box Quantity	Master Pack	Approx. Net Wt.	Dim. A
1 1/4	46352	10	100	0.121	31/64
1 1/2	46354	10	100	0.192	19/32
2	46356	5	50	0.307	51/64
3	46358	2	20	0.630	1 3/16
4	46360	1	16	1.500	1 37/64

WROT 306-2		45° DWV-Street Elbow 1/2 Bend Fitting to Copper			CAST	
						
FTG. x C						
Nominal Size In Inches	Part Number	Box Quantity	Master Pack	Approx. Net Wt.	Dim. A	Dim. B
1 1/4	46370	10	100	0.132	31/64	1 3/64
1 1/2	46372	10	100	0.192	19/32	1 7/32
2	46374	5	50	0.316	51/64	1 31/64
3	46376	2	20	0.652	1 3/16	2
*4	46378	1	16	1.470	1 37/64	2 41/64

Wrot & Cast Drainage Fittings Elbows



WROT 307		90° DWV-Elbow ¼ Bend Copper to Copper			CAST 5807	
		C x C		FTG. x C		
Nominal Size In Inches	Part Number	Box Quantity	Master Pack	Approx. Net Wt.	Dim. A	Dim. B
1 1/4	46410	10	100	0.177	1 11/64	1 11/64
1 1/2	46412	10	100	0.285	1 13/32	1 13/32
2	46416	5	50	0.470	1 59/64	1 59/64
3	46418	2	16	0.990	2 7/8	2 7/8
4	46422	1	8	2.290	3 51/64	3 51/64
1 1/2 x 1 1/4	46414	10	100	0.216	1 11/32	1 5/32
**2 x 1 1/2	48138	-	65	0.680	-	-

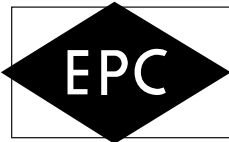
WROT 307-2		90° DWV-Street Elbow ¼ Bend Fitting to Copper			CAST	
		FTG. x C		C x C		
Nominal Size In Inches	Part Number	Box Quantity	Master Pack	Approx. Net Wt.	Dim. A	Dim. B
1 1/4	46450	10	100	0.181	1 11/64	1 47/64
1 1/2	46452	10	100	0.285	1 13/32	2 1/32
2	46454	5	50	0.470	1 59/64	2 39/64
3	46456	2	16	1.010	2 7/8	3 11/16
4	46458	1	8	2.270	3 51/64	4 55/64

WROT 307-LT		90° DWV-Long Radius Elbow Copper to Copper			CAST	
		C x C		C x C		
Nominal Size In Inches	Part Number	Box Quantity	Master Pack	Approx. Net Wt.	Dim. A	
1 1/2	46430	5	50	0.410	2 1/8	
2	46432	5	40	0.714	2 3/4	

WROT 308		22½° DWV-Elbow ⅙ Bend Copper to Copper			CAST	
		C x C		C x C		
Nominal Size In Inches	Part Number	Box Quantity	Master Pack	Approx. Net Wt.	Dim. A	
1 1/4	46330	10	100	0.096	15/64	
1 1/2	46332	10	100	0.153	9/32	
2	46334	5	50	0.236	3/8	
3	46336	2	20	0.453	1/2	

** Cast Bronze Only

*Factory Option—consult factory for price and delivery information.



Wrot & Cast Drainage Fittings

Elbows, Y's & Tees

WROT 309	11¼° DWV-Elbow ½ Bend Copper to Copper	CAST
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C x C

Nominal Size In Inches	Part Number	Box Quantity	Master Pack	Approx. Net Wt.	Dim. A
* 1 1/4	46310	10	100	0.099	7/64
1 1/2	46312	10	100	0.124	9/64
2	46314	5	50	0.200	3/16
* 3	46316	2	20	0.457	3/16

WROT 310	45° DWV-Y-cont. Copper to Copper to Copper	CAST 5810
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Nominal Size In Inches	Part Number	Box Quantity	Master Pack	Approx. Net Wt.	Dim. A	Dim. B	Dim. C
2	46636	5	40	0.861	9/16	2 13/16	2 13/16
3	46642	2	16	2.318	13/16	4 1/8	4 1/8
** 4	50798	-	5	5.245	-	-	-
1 1/2 x 1 1/2 x 1 1/4	46634	5	50	0.399	1/4	2 1/8	2 1/16
2 x 2 x 1 1/2	46638	5	40	0.801	7/32	2 19/32	2 17/32
** 2 x 2 x 1 1/4	50774	-	50	1.077	-	-	-
** 2 x 1 1/2 x 2	50776	-	35	1.115	-	-	-
** 2 x 1 1/2 x 1 1/2	50778	-	50	0.910	-	-	-
3 x 3 x 2	46644	3	18	1.754	1/8	3 3/8	3 9/16
3 x 3 x 1 1/2	46646	4	32	1.345	1/4	2 11/16	3 5/16
* 3 x 3 x 1 1/4	46648	4	32	1.309	3/8	2 5/16	3 3/16
** 4 x 4 x 3	50800	-	10	3.725	-	-	-
** 4 x 4 x 2	50802	-	10	2.904	-	-	-

WROT 360	60° DWV-Elbow ½ Bend Copper to Copper	CAST
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C x C

Nominal Size In Inches	Part Number	Box Quantity	Master Pack	Approx. Net Wt.	Dim. A
* 1 1/4	46390	10	100	0.149	43/64
1 1/2	46392	10	100	0.230	13/16
2	46394	5	50	0.366	1 7/64

WROT 311	90° DWV-Sanitary Tee Copper to Copper to Copper	CAST 5811
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C x C x C

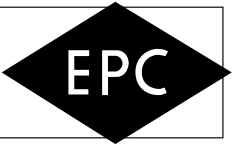
Nominal Size In Inches	Part Number	Box Quantity	Master Pack	Approx. Net Wt.	Dim. A	Dim. B	Dim. C
1 1/4	46560	10	100	0.247	1 3/16	1 3/16	7/8
1 1/2	46562	10	80	0.404	1 1/4	1 1/4	13/16
2	46570	5	40	0.659	1 11/16	1 3/4	1 1/16
3	46580	2	16	1.480	2 1/2	2 3/4	1 5/8
1 1/2 x 1 1/2 x 1 1/4	46564	5	50	0.416	1 5/16	1 3/32	3/4
* 1 1/2 x 1 1/4 x 1 1/2	46566	5	50	0.416	1 5/16	1 7/16	15/16
1 1/2 x 1 1/4 x 1 1/4	46568	5	50	0.416	1 5/16	1 3/32	3/4
2 x 2 x 1 1/2	46572	5	40	0.546	1 1/2	1 5/16	13/16
2 x 2 x 1 1/4	46574	5	40	0.453	1 1/2	1 1/8	3/4
2 x 1 1/2 x 2	46576	5	40	0.670	1 11/16	1 15/16	1 3/8
2 x 1 1/2 x 1 1/2	46578	5	40	0.601	1 1/2	1 5/16	1 3/16
3 x 3 x 2	46582	5	40	1.001	2 1/8	1 7/8	1 1/8
3 x 3 x 1 1/2	46584	5	40	0.955	2 3/16	1 7/16	15/16
3 x 3 x 1 1/4	46586	5	40	0.810	2 1/16	1 3/16	13/16
** 4	48812	-	5	5.380	-	-	-
** 4 x 4 x 3	48814	-	10	3.488	-	-	-
** 4 x 4 x 2	48816	-	12	2.550	-	-	-

WROT 310	45° DWV-Y Copper to Copper to Copper	CAST 5810
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C x C x C

Nominal Size In Inches	Part Number	Box Quantity	Master Pack	Approx. Net Wt.	Dim. A	Dim. B	Dim. C
1 1/4	46630	5	50	0.347	5/16	1 13/16	1 15/16
1 1/2	46632	10	80	0.475	3/8	2 3/16	2 3/16

Wrot & Cast Drainage Fittings Test Fittings, Flanges, & Adapters



WROT 316-T	To be used for test purposes only. DWV-Test Cap Not intended for sustained pressure.	CAST			
Nominal Size In Inches	Part Number	Box Quantity	Master Pack	Approx. Net Wt.	Dim. A
1/2	46200	100	2000	0.003	1/4
3/4	46202	100	2000	0.004	1/4
1	46204	100	1000	0.006	1/4
1 1/4	46206	50	1000	0.008	1/4
1 1/2	46208	50	500	0.011	1/4
2	46210	50	500	0.017	1/4
*3	46212	25	250	0.067	1/2
*4	46214	10	100	0.054	5/16

WROT	DWV-Trap Adapter Copper x OD Tube	CAST 5180		
Nominal Size In Inches	Part Number	Box Quantity	Master Pack	Approx. Net Wt.
**1 1/4 x 1 1/4 OD	47382	25	250	0.210
**1 1/2 x 1 1/2 OD	47384	-	100	0.220
**1 1/2 x 1 1/4 OD	47386	10	100	0.220

WROT	DWV-Trap Adapter O D Tube x Male	CAST 5182		
Nominal Size In Inches	Part Number	Box Quantity	Master Pack	Approx. Net Wt.
** 1 1/4 OD x 1 1/2	47472	10	100	0.470


WROT 351	DWV-Closet Flange	CAST					
Nominal Size In Inches	Part Number	Box Quantity	Master Pack	Approx. Net Wt.	Dim. A	Dim. B	Dim. C
3	46470	10	60	0.801	1 11/16	6 3/4	6
4	46472	5	40	0.551	5/8	6 3/4	6


** Cast Bronze Only


*Factory Option—consult factory for price and delivery information.


Wrot & Cast Drainage Fittings


Adapters, Upturns, & Traps

WROT	DWV-Trap Upturn Male to OD Fine Thread			CAST 5427
				
M x O.D. Fine Thread				
Nominal Size In Inches	Part Number	Box Quantity	Master Pack	Approx. Net Wt.
**1 1/2 x 1 1/2 OD	50416	-	50	1.110

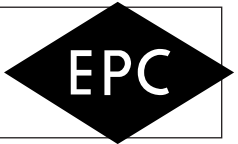
WROT	DWV-P-Trap with Cleanout Copper to Copper to Cleanout W/Plug			CAST 5551
				
C x C x Cleanout W/Plug				
Nominal Size In Inches	Part Number	Box Quantity	Master Pack	Approx. Net Wt.
** 1 1/4	49770	-	50	1.210
** 1 1/2	49772	1	25	1.530
** 2	49776	1	12	2.260
*** 3	49780	-	10	5.740


WROT	DWV-P-Trap Copper to Copper			CAST 5550
				
C x C				
Nominal Size In Inches	Part Number	Box Quantity	Master Pack	Approx. Net Wt.
**1 1/4	49750	-	50	1.090
**1 1/2	49752	1	25	1.450
**2	49758	1	12	2.110
**3	49762	-	10	5.170


WROT	DWV-P-Trap with Cleanout Copper to SJ to Cleanout W/Plug			CAST 5555
				
C x SJ x Cleanout W/Plug				
Nominal Size In Inches	Part Number	Box Quantity	Master Pack	Approx. Net Wt.
**1 1/2 x 1 1/2 OD	49842	-	50	1.800


WROT	DWV-P-Trap with Union Joint Female N.P.T. to SJ L.A. Pattern			CAST 5556
				
F x SJ				
Nominal Size In Inches	Part Number	Box Quantity	Master Pack	Approx. Net Wt.
**1 1/2 x 1 1/2 OD	49952	-	25	2.090


Wrot & Cast Drainage Fittings Traps & Adapters





WROT	DWV-P-Trap with Union Joint <small>Female N.P.T. to SJ</small>	CAST 5557			
 F x SJ					
Nominal Size In Inches	Part Number	Box Quantity	Master Pack	Approx. Net Wt.	
**1 1/2	49932	-	25	2.220	

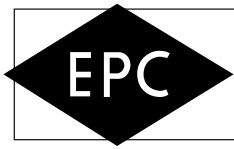
WROT	DWV-Marvel Thread Piece <small>Copper to SJ</small>	CAST 5802			
 C x SJ					
Nominal Size In Inches	Part Number	Box Quantity	Master Pack	Approx. Net Wt.	
**1 1/4	47350	50	500	0.050	
**1 1/2	47354	50	500	0.050	
**2	47358	25	250	0.050	

WROT	DWV-P-Trap with Union Joint <small>Copper to Slip Joint</small>	CAST 5558			
 C x SJ					
Nominal Size In Inches	Part Number	Box Quantity	Master Pack	Approx. Net Wt.	
**1 1/2	49882	-	30	1.860	


WROT	DWV-Flush Trap Adapter <small>Copper to Male N.P.T.</small>	CAST 5802-C			
 C x M					
Nominal Size In Inches	Part Number	Box Quantity	Master Pack	Approx. Net Wt.	
**1 1/2	47336	25	250	0.200	
**2	47340	10	100	0.250	


WROT	DWV-P-Trap with Union Joint <small>Copper to SJ L.A. Pattern</small>	CAST 5559			
 C x SJ					
Nominal Size In Inches	Part Number	Box Quantity	Master Pack	Approx. Net Wt.	
**1 1/2 x 1 1/2 OD	49892	-	30	2.030	


WROT	DWV-Fitting Adapter <small>Fitting to Female N.P.T.</small>	CAST 5803-2			
 FTG. x F					
Nominal Size In Inches	Part Number	Box Quantity	Master Pack	Approx. Net Wt.	
**1 1/2	47098	1	100	0.380	
**2	47102	-	50	0.560	
**3	47106	-	15	1.440	





Wrot & Cast Drainage Fittings Adapters & Tees

WROT		DWV-Fitting x Male Adapter Fitting to Male N.P.T.		CAST 5804-2	
					
FTG. x M					
Nominal Size In Inches	Part Number	Box Quantity	Master Pack	Approx. Net Wt.	
**1 1/2	47128	-	75	0.500	
**2	47130	-	50	0.610	

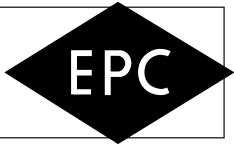
WROT		DWV-Utility Tee Copper to Copper to Copper to Copper		CAST 5499	
					
C x C x C x C					
Nominal Size In Inches	Part Number	Box Quantity	Master Pack	Approx. Net Wt.	
*2	49306	-	20	1.520	


WROT		DWV-Trap Adapter Copper to Male N.P.T.		CAST 5804-S	
					
C x M					
Nominal Size In Inches	Part Number	Box Quantity	Master Pack	Approx. Net Wt.	
**1 1/4	47310	25	250	0.220	
**1 1/2	47314	20	200	0.240	
**2	47320	10	100	0.330	
**1 1/4 x 1 1/2	47312	10	100	0.440	


WROT		DWV-Double L T Tee Copper to Copper to Copper to Copper		CAST 5516	
					
C x C x C x C					
Nominal Size In Inches	Part Number	Box Quantity	Master Pack	Approx. Net Wt.	
**2 x 1 1/2 x 1 1/2 x 1 1/2	49572	-	25	1.730	

WROT		DWV-Tee Copper to Copper to Female N.P.T.		CAST 5811-CCF	
					
C x C x F					
Nominal Size In Inches	Part Number	Box Quantity	Master Pack	Approx. Net Wt.	
**1 1/2	48912	-	60	0.880	
**2	48920	-	25	1.570	


Wrot & Cast Drainage Fittings Tees, T-Y's & Cleanouts



WROT	DWV-Tee Copper to Female N.P.T. to Copper	CAST 5811-CFC			
 C x F x C					
Nominal Size In Inches	Part Number	Box Quantity	Master Pack	Approx. Net Wt.	
**1 1/2	48974	-	50	0.960	

WROT	DWV-Test Tee Copper to Copper to Cleanout W/Plug	CAST 5814			
 C x C x Cleanout W/Plug					
Nominal Size In Inches	Part Number	Box Quantity	Master Pack	Approx. Net Wt.	
**1 1/2	49258	-	50	1.000	
**2	49260	-	20	1.350	
**3	49262	-	10	3.780	


WROT	DWV-Long Turn T-Y Copper to Copper to Copper	CAST 5812			
 C x C x C					
Nominal Size In Inches	Part Number	Box Quantity	Master Pack	Approx. Net Wt.	
**1 1/2	50442	-	40	0.870	
**2	50448	-	15	1.980	
**3	50462	-	10	3.690	
**4	50476	-	4	9.000	
**2 x 2 x 1 1/2	50450	-	30	1.020	
**2 x 1 1/2 x 1 1/2	50456	-	30	0.900	
**3 x 3 x 2	50466	-	18	2.780	

WROT	DWV-Fitting Cleanout Fitting to Cleanout W/Plug	CAST 5816			
 FTG. x Cleanout W/Plug					
Nominal Size In Inches	Part Number	Box Quantity	Master Pack	Approx. Net Wt.	
**1 1/4	47742	10	100	0.490	
**1 1/2	47744	-	75	0.600	
**2	47746	-	50	0.870	
**3	47748	-	20	2.370	
**4	47750	-	10	3.990	


** Cast Bronze Only


*Factory Option—consult factory for price and delivery information.


Wrot & Cast Drainage Fittings


WROT	DWV-Flush Fitting Cleanout Fitting to Cleanout W/Plug		CAST	5816-S
				
FTG. x Cleanout W/Plug				
Nominal Size In Inches	Part Number	Box Quantity	Master Pack	Approx. Net Wt.
**1 1/4 x 3/4	47768	25	250	0.200
**1 1/2 x 1	47770	15	150	0.290
**2 x 1 1/2	47772	10	100	0.420
**3 x 2 1/2	47774	-	50	0.960
**4 x 3	47776	-	30	2.250

WROT	45° DWV-Double Y-cont. Copper to Copper to Copper to Copper			CAST	5834
Nominal Size In Inches	Part Number	Box Quantity	Master Pack	Approx. Net Wt.	
**3	51210	-	10	3.950	
**2 x 2 x 1 1/2 x 1 1/2	51198	-	30	1.240	

WROT	DWV-Double Tee Copper to Copper to Copper to Copper			CAST	5835
					
C x C x C x C					
Nominal Size In Inches	Part Number	Box Quantity	Master Pack	Approx. Net Wt.	
**1 1/4	49390	-	50	0.670	
**1 1/2	49392	-	50	0.780	
**2	49398	-	20	1.310	
**2 x 2 x 1 1/2 x 1 1/2	49400	-	25	0.920	
**2 x 2 x 1 1/4 x 1 1/4	49404	-	25	0.870	
**2 x 1 1/2 x 1 1/2 x 1 1/2	49406	-	25	0.900	
**3 x 3 x 2 x 2	49412	-	15	2.140	
**3 x 3 x 1 1/2 x 1 1/2	49416	-	25	1.510	


WROT	DWV-Plug Cored Hex Head		CAST	5819
				
Cored Hex Head				
Nominal Size In Inches	Part Number	Box Quantity	Master Pack	Approx. Net Wt.
**1 1/2	48602	25	250	0.220


WROT	45° DWV-Double Y Copper to Copper to Copper to Copper		CAST	5834
				
C x C x C x C				
Nominal Size In Inches	Part Number	Box Quantity	Master Pack	Approx. Net Wt.
**1 1/2	51182	-	40	1.080
**2	51194	-	20	2.000


WROT	DWV-Double Long Turn T-Y Copper to Copper to Copper to Copper			CAST	5836
					
C x C x C x C					
Nominal Size In Inches	Part Number	Box Quantity	Master Pack	Approx. Net Wt.	
**1 1/2	50632	-	25	1.250	
**2	50638	-	12	2.830	
**2 x 2 x 1 1/2 x 1 1/2	50640	-	20	1.960	


Wrot & Cast Drainage Fittings


EPC

WROT	DWV-Double Elbow Copper to Copper to Copper		CAST	
			5837	
	C x C x C			
Nominal Size In Inches	Part Number	Box Quantity	Master Pack	Approx. Net Wt.
**1 1/2	48368	-	50	0.750
**2	48372	-	25	1.310
**1 1/2 x 1 1/4 x 1 1/4	48370	-	75	0.630
**2 x 1 1/2 x 1 1/2	48374	-	40	0.940

WROT	DWV-Trap Return Bend Copper to Copper		CAST	
			5879	
	C x C			
Nominal Size In Inches	Part Number	Box Quantity	Master Pack	Approx. Net Wt.
**1 1/4	47576	-	75	0.740
**1 1/2	47578	1	35	0.900
**2	47582	1	20	1.250
**3	47588	-	10	2.770
**2 x 1 1/2	47584	-	25	1.370

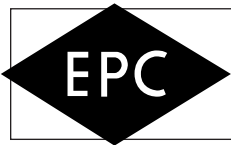
WROT	DWV-Trap Return Bend with Cleanout Copper to Copper to Cleanout W/Plug		CAST	
			5878	
	C x C x Cleanout W/Plug			
Nominal Size In Inches	Part Number	Box Quantity	Master Pack	Approx. Net Wt.
**1 1/4	47556	-	50	0.810
**1 1/2	47558	-	50	0.980
**2	47562	-	25	1.400

WROT	DWV-Drum Trap with Bottom Inlet C to F to Cleanout W/Plug, F Inlet in Bottom, C Outlet		CAST	
			5890	
	C to F to Cleanout W/Plug F Inlet in Bottom, C Outlet			
Nominal Size In Inches	Part Number	Box Quantity	Master Pack	Approx. Net Wt.
**1 1/2 x 3 x 5	49628	-	10	1.970


WROT	DWV-Swivel Drum Trap Copper to Copper to Cleanout W/Plug		CAST	
			5891	
	C x C x Cleanout W/Plug			
Nominal Size In Inches	Part Number	Box Quantity	Master Pack	Approx. Net Wt.
**1 1/2 x 3 x 6	49646	-	10	2.900


** Cast Bronze Only


*Factory Option—consult factory for price and delivery information.




Cast Flared Fittings Couplings, Adapters & Elbows

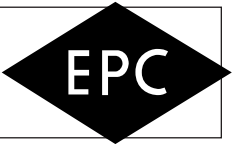
WROT	Flared Coupling Copper to Copper				CAST 7101
 C x C					
Nominal Size In Inches	Part Number	Box Quantity	Master Pack	Approx. Net Wt.	
**1/2	42226	10	100	0.440	
**3/4	42232	15	60	0.680	
**1	42238	-	30	1.260	
**1 1/4	42244	-	25	2.000	
**1 1/2	42250	-	20	2.980	
**2	42256	-	10	4.590	


WROT	Flared Adapter Copper to Male N.P.T.				CAST 7104
 C x M					
Nominal Size In Inches	Part Number	Box Quantity	Master Pack	Approx. Net Wt.	
**1/2	42126	25	250	0.290	
**3/4	42140	20	80	0.580	
**1	42148	-	50	0.880	
**1 1/4	42156	-	25	1.460	
**1 1/2	42162	-	25	1.890	
**2	42164	-	15	2.950	
**3/4 x 1/2	42144	25	100	0.500	


WROT	Flared Adapter Copper to Female N.P.T.				CAST 7103
 C x F					
Nominal Size In Inches	Part Number	Box Quantity	Master Pack	Approx. Net Wt.	
**1/2	42046	40	160	0.360	
**3/4	42062	25	100	0.480	
**1	42072	-	50	1.030	
**1 1/4	42078	-	25	1.640	
**1 1/2	42082	-	30	1.990	
**2	42086	-	15	3.220	


WROT	Flared 90° Elbow Copper to Copper				CAST 7107
 C x C					
Nominal Size In Inches	Part Number	Box Quantity	Master Pack	Approx. Net Wt.	
**1/2	42398	10	100	0.540	
**3/4	42404	5	50	0.770	
**1	42410	-	30	1.600	
**2	42418	-	5	5.390	

Cast Flared Fittings Elbows & Tees



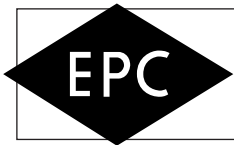
WROT	Flared 90° Elbow Copper to Female N.P.T.				CAST 7107-3
 C x F					
Nominal Size In Inches	Part Number	Box Quantity	Master Pack	Approx. Net Wt.	
**1	42470	5	50	1.430	

WROT	Flared Tee Copper to Copper to Copper				CAST 7111
 C x C x C					
Nominal Size In Inches	Part Number	Box Quantity	Master Pack	Approx. Net Wt.	
**3/4	42748	5	25	1.090	
**1	42770	-	25	2.080	

WROT	Flared 90° Elbow Copper to Male N.P.T.				CAST 7107-4
 C x M					
Nominal Size In Inches	Part Number	Box Quantity	Master Pack	Approx. Net Wt.	
**3/4	42536	5	50	0.550	
**1	42542	-	25	1.340	

** Cast Bronze Only

*Factory Option—consult factory for price and delivery information.



Engineering Data

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Copper Tube Types K, L, M, and DWV	Pages 43-44
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Product Certification

Elkhart Products Corporation manufactures and/or supplies products which meet the following specifications:

MSS	SP104-1995	<i>Wrought Copper Solder Joint Pressure Fittings</i>
ASME	B16.29-1994	<i>Wrought Copper and Wrought Copper Alloy Solder Joint Drainage Fittings - DWV</i>
ASME	B16.18-1994	<i>Cast Copper Alloy Solder Joint Pressure Fittings</i>
ASME	B16.15-1994	<i>Cast Bronze Threaded Fittings</i>
ASME	B16.26-1988	<i>Cast Copper Alloy Fittings for Flared Copper Tube</i>
ASME	B16.23-1992	<i>Cast Copper Alloy Solder Joint Drainage Fittings - DWV</i>
ASME	B16.24-1998	<i>Bronze Pipe Flanges and Flanged Fittings</i>
MSS	SP106-1991	<i>Welded Fabricated Copper Solder Joint Pressure Fittings</i>
MSS	SP109-1997	<i>Non Ferrous Threaded and Solder Joint Unions For Use With Copper Water Tube</i>

EPC's wrot copper solder joint fittings also are manufactured to comply with the material performance and installation/joining dimensions of ANSI B16.22-1995.

The materials used to manufacture these fittings are also in compliance with the following specifications:

Tubular Wrought Copper:

ASTM B75 Alloy C12200, *Standard Specification for Seamless Copper Tube, or*

Products Made From Sheet:

ASTM B152 Alloy C11000, *Standard Specification for Copper Sheet, Strip, Plate and Rolled Bar.*

Cast Products:

ASTM B584 Alloy C84400, *Standard Specification for Copper Alloy Sand Castings for General Applications. Federal Specification WW-U-516 for Type 111, Class A and Class B Copper Alloy Unions.*

The Advantages of Wrot Copper Fittings From EPC

Elkhart Products Corporation, Plumbing Products Division, manufactures a comprehensive line of Wrot Copper Solder-Joint fittings in sizes ranging from 1/8" to 8", which are shown on the following pages. Wrot Copper fittings have many advantages over their cast brass counterparts and Elkhart Products Corporation, recognizing the high rate of acceptability of the quality and well-designed fittings, is continually adding new items to this line.

These advantages show why EPC Wrot Copper Fittings are rapidly being accepted for copper installations in all parts of the country.

1. Reduced Installation Costs-EPC Wrot Copper Fittings heat up more rapidly than cast and thus effect a savings in time and fuel.
2. Smooth Inside Surface-Being fabricated from copper tube, EPC Wrot Fittings have no rough surfaces to collect waste or deter flow.
3. Full Flow Capacity-EPC Wrot Fittings have the same inside diameters as the rest of the installation.
4. Wrot Copper-The physical properties of copper tube from which EPC Wrot Fittings are made eliminate the danger of leakage from sand holes or poor castings.
5. Less Bulky than Cast-This facilitates handling, particularly on prefab installations, yet EPC Wrot Fittings have the same strength as tube. This can also be a money saver on transportation costs.
6. More Rugged-Due to fabrication processes, EPC Wrot Fittings are stronger and more rugged than tube with which they are used.
7. Priced Competitively-EPC Wrot Fittings cost no more than their cast counterparts.
8. Neat Appearance-In matching the color and appearance of the tube, EPC Wrot Fittings contribute toward a neater and more workman-like installation.
9. Accurate Pitch-EPC Wrot Fittings are made with accurately machined dies which ensure the proper pitch required for installations.
10. Boxed and Labeled-EPC Wrot Fittings are boxed in convenient quantities to facilitate handling and storage, and for protection against damage and dirt. Box contents are easily identified by bar coded, easy-to-read labels.

Working Pressures and Solder

The table of maximum working pressures below must be understood to reflect what is generally considered as good engineering practice under reasonably constant and favorable conditions; i.e., pressures which are fairly steady, absence of particularly corrosive media, etc. Unusual conditions require increased safety factors and therefore, lower working pressures should be used.

Rated Internal Working Pressures of Piping System Made of Copper Water Tube and Soldered Fittings

Solder Used in joints	Service Temp. °F	POUNDS PER SQUARE INCH Water (a)			
		Copper Water Tube-Nominal Sizes			
		½" to 1" Incl.	1¼" to 2" Incl.	2½" to 4" Incl.	5" to 8" Incl.
* 50-50 Tin-Lead (b)	100	200	175	150	135
	150	150	125	100	90
	200	100	90	75	70
	250	85	75	50	45
95-5 Tin-Antimony (c) (d)	100	500	400	300	270
	150	400	350	275	250
	200	300	250	200	180
	250	200	175	150	135
Brazing Alloys Melting at or above 1000° F.	Temperature and pressure ratings consistent with the materials and procedures employed.				

*The data given for 50% tin-50% lead applies also for the 40% tin-60% lead alloy.

The values in this table are based on data in the National Bureau of Standards Publications, Building Materials and Structures Reports BMS 58 and BMS 83.

- (a) Including other noncorrosive liquids and gases
- (b) ASTM B32, Alloy Grade Sn 90
- (c) ASTM B32, Alloy Grade Sb 5
- (d) The Safe Drinking Water Act Amendment of 1986 prohibits the use in potable water. Systems of any solder having a lead content in excess of 2%.

NOTE: The table at left is from data published by the Copper and Brass Research Association.

Estimated Quantity of 50-50 Solder Required to Make 100 Joints

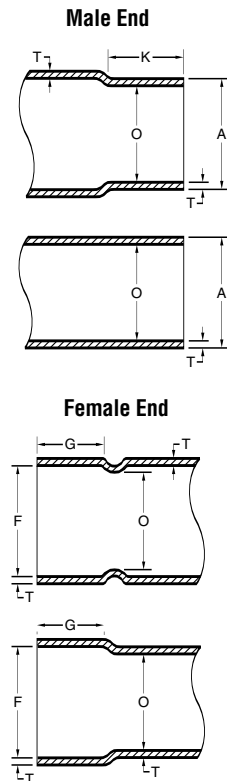
Size in Inches	3/8	1/2	3/4	1	1 1/4	1 1/2	2	2 1/2	3	3 1/2	4	5	6	8
Quantity in Pounds	.5	.75	1.0	1.4	1.7	1.9	2.4	3.2	3.9	4.5	5.5	8	15	32

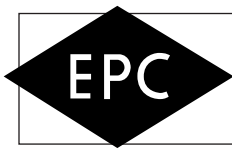
- The quantity of hard solder used is dependent in the skill of the operator, but for estimating purposes, 75% of the above figures may be used.
- Two ounces of Solder Flux will be required for each pound of solder.

Wrot Copper and Bronze Solder-Joint Pressure Fittings

Dimensions of Soldered-Joint Ends (in inches)

Standard Water Tube Size	Male End		Female End				Wall Thickness T	Inside Diameter of Fitting O
	Outside Diameter A	Length K	Inside Diameter F		Depth G			
			Min.	Max.		Min.	Max.	Min.
1/8	0.248	0.251	0.31	0.252	0.256	0.25	.019	0.18
1/4	0.373	0.376	0.38	0.377	0.381	0.31	.023	0.30
3/8	0.497	0.501	0.44	0.502	0.506	0.38	.026	0.39
1/2	0.622	0.626	0.56	0.627	0.631	0.50	.029	0.52
5/8	0.747	0.751	0.69	0.752	0.756	0.62	.031	0.63
3/4	0.872	0.876	0.81	0.877	0.881	0.75	.033	0.74
1	1.122	1.127	0.97	1.128	1.132	0.91	.040	0.98
1 1/4	1.372	1.377	1.03	1.378	1.382	0.97	.044	1.23
1 1/2	1.621	1.627	1.16	1.628	1.633	1.09	.051	1.47
2	2.121	2.127	1.41	2.128	2.133	1.34	.059	1.94
2 1/2	2.621	2.627	1.53	2.628	2.633	1.47	.067	2.42
3	3.121	3.127	1.72	3.128	3.133	1.66	.075	2.89
3 1/2	3.621	3.627	1.97	3.628	3.633	1.91	.086	3.37
4	4.121	4.127	2.22	4.128	4.133	2.16	.096	3.84
5	5.121	5.127	2.72	5.128	5.133	2.66	.111	4.70
6	6.121	6.127	3.22	6.128	6.133	3.09	.124	5.72
8	8.119	8.127	4.09	8.128	8.133	3.97	.173	7.55





Wrot Copper Solder-Joint Drainage Fittings

Dimensions of Soldered-Joint Ends (in inches) See Diagram Page 39

Size	Male End			Female End			Metal Thickness T	Inside Diameter of Fitting O
	Outside Diameter A		Length K	Inside Diameter F		Depth G		
	Min.	Max.	Min.	Min.	Max.	Min.		
1 1/4	1.372	1.377	0.56	1.378	1.382	0.50	0.040	1.29
1 1/2	1.621	1.627	0.62	1.628	1.633	0.56	0.042	1.53
2	2.121	2.127	0.69	2.128	2.133	0.62	0.042	2.01
3	3.121	3.127	0.81	3.128	3.133	0.75	1.045	2.98
4	4.121	4.127	1.06	4.128	4.133	1.00	0.058	3.93

Extracted from American National Standard Wrought Copper and Bronze Solder-Joint Drainage Fittings (ANSI B16.29) with permission of the publisher. The American Society of Mechanical Engineers, 3 Park Ave., New York, N.Y. 10016-5990

Wrot Copper Fittings Large Diameter Welded Design

Fitting Material:

Copper Alloy #122, Phosphorus
Deoxidized-High Residual Phosphorus (DHP).
Composition: 99% Copper; .015-.040% Phosphorus.

Weld Material:

Silicon Bronze. Meets specification
American Welding Society (AWS) A5.7-91R
and American Metals Society. (AMS) 4616 B

Weld Specifications:

Tensile Strength-Up to 58,000 PSI
Yield Strength-Up to 25,000 PSI
Elongation in 2"-53% to 55%
Hardness-80 to 100 Brinell (500kg. Load)
Temperature: Melt 1832°F, Flow 1931°F.

Method of Joining:

Electric Weld.

Dimensions & Specifications:

EPC Welded fittings are produced in accordance with specifications shown in Manufacturers Standardization Society (MSS) SP-109 for wrought copper, and copper alloy solder-joint pressure fittings.

Testing:

Each fitting is individually tested with air under water. The burst pressure of EPC welded fittings exceeds the recommended working pressure of comparable diameter, annealed, straight, seamless ASTM B88-96-A type L copper water tube by a safety factor

Copper Water Tube-Standard Dimensions and Weights

Nominal Tube Size Inches	Outside Dia., In.	Inside Diameter, Inches				Wall Thickness, Inches				†Pounds per Linear Foot			
	Types K-L-M- DWV	Type K	Type L	Type M	Type DWV	Type K	Type L	Type M	Type DWV	Type K	Type L	Type M	Type DWV
1/4	.375	.305	.315	-	-	.035	.030	.025	-	.145	.126	.106	-
3/8	.500	.402	.430	-	-	.049	.035	.025	-	.269	.198	.145	-
1/2	.625	.527	.545	-	-	.049	.040	.028	-	.344	.285	.204	-
5/8	.750	.652	.666	-	-	.049	.042	.030	-	.418	.362	.263	-
3/4	.875	.745	.785	-	-	.065	.045	.032	-	.641	.455	.328	-
1	1.125	.995	1.025	-	-	.065	.050	.035	-	.839	.655	.465	-
1 1/4	1.375	1.245	1.265	1.291	1.295	.065	.055	.042	.040	1.04	.884	.682	.650
1 1/2	1.625	1.481	1.505	1.527	1.541	.072	.060	.049	.042	1.36	1.14	.940	.809
2	2.125	1.959	1.985	2.009	2.041	.083	.070	.058	.042	2.06	1.75	1.46	1.07
2 1/2	2.625	2.435	2.465	2.495	-	.095	.080	.065	-	2.93	2.48	2.03	-
3	3.125	2.907	2.945	2.981	3.035	.109	.090	.072	.045	4.00	3.33	2.68	1.69
3 1/2	3.625	3.385	3.425	3.459	-	.120	.100	.083	-	5.12	4.29	3.58	-
4	4.125	3.857	3.905	3.935	4.009	.134	.110	.095	.058	6.51	5.38	4.66	2.87
5	5.125	4.805	4.875	4.907	4.981	.160	.125	.109	.072	9.67	7.61	6.66	4.43
6	6.125	5.741	5.845	5.881	5.959	.192	.140	.122	.083	13.9	10.2	8.92	6.10
8	8.125	7.583	7.725	7.785	-	.271	.200	.170	-	25.9	19.3	16.5	-

Copper Water Tube-Calculated Bursting Pressure*

Sizes of Copper Tube

Nominal Tube Size, Inches	Outside Diameter, In.	Inside Diameter Inches		Wall Thickness Inches		Bursting Pressure Lb. per Sq. In.				
		Types K-L	Type K	Type L	Type K	Type L	Type K		Type L	
							Hard (Drawn)	Soft (Annealed)	Hard (Drawn)	Soft (Annealed)
1/4	.375	.305	.315	.035	.030	6,700	5,600	5,800	4,800	
3/8	.500	.402	.430	.049	.035	7,100	5,900	5,000	4,200	
1/2	.625	.527	.545	.049	.040	5,600	4,700	4,600	3,800	
5/8	.750	.652	.666	.049	.042	4,700	3,900	4,000	3,400	
3/4	.875	.745	.785	.065	.045	5,300	4,500	3,700	3,100	
1	1.125	.995	1.025	.065	.050	4,200	3,500	3,200	2,700	
1 1/4	1.375	1.245	1.265	.065	.055	3,400	2,800	2,900	2,400	
1 1/2	1.625	1.481	1.505	.072	.060	3,200	2,700	2,700	2,200	
2	2.125	1.959	1.985	.083	.070	2,800	2,300	2,400	2,000	
2 1/2	2.625	2.435	2.465	.095	.080	2,600	2,200	2,200	1,800	
3	3.125	2.907	2.945	.109	.090	2,500	2,100	2,100	1,700	
3 1/2	3.625	3.385	3.425	.120	.100	2,400	2,000	2,000	1,700	
4	4.125	3.857	3.905	.134	.110	2,300	1,900	1,900	1,600	
5	5.125	4.805	4.875	.160	.125	2,200	1,900	1,800	1,500	
6	6.125	5.741	5.845	.192	.140	2,300	1,900	1,600	1,400	
8	8.125	7.583	7.725	.271	.200	2,400	2,000	1,800	1,500	

OD Size	Nominal Size
1/8	-
3/16	-
1/4	1/8
5/16	-
3/8	1/4
1/2	3/8
5/8	1/2
3/4	5/8
7/8	3/4
1	7/8
1 1/8	1
1 1/4	1 1/8
1 3/8	1 1/4
1 5/8	1 1/2
2 1/8	2
2 5/8	2 1/2
3 1/8	3
3 5/8	3 1/2
4 1/8	4
5 1/8	5
6 1/8	6
8 1/8	8

*Bursting Pressures are calculated from the following formula for thin, hollow cylinders under tension.
 where $P = \frac{2tS}{D}$
 P = Bursting Pressure, Lb. per Sq. In.
 t = Wall Thickness, Inches
 D = Outside Tube Diameter, Inches
 S = Tensile Strength (36,000 Lb. per Sq. In. for hard tubes and 30,000 for soft tubes)

Soldering and Brazing Copper Tube

Soldering and Brazing with capillary solder joint fittings is the most common system for joining copper tube. The American Welding Society defines soldering as a joining process which takes place below 840° and brazing as a similar process which occurs above 840°.

The basic theory and technique of soldering and brazing are the same for all diameters...the variables are: the amount of time, heat and filler metal required to complete a designated joint. A good joint is the product of a well trained craftsman who knows and respects the materials and methods he uses.

Basic Steps in Joining Process

Measuring - Measuring the length of the tube must be accurate. If the tube is too short it will not reach all the way into the socket of the fitting and a proper joint cannot be made.

Cutting - Cutting tube can be accomplished in a number of different ways to produce a satisfactory, square-end cut. The tube can be cut with a disc type tube cutter, a hacksaw, abrasive wheels, or stationary and portable bandsaws. Care must be taken that the tube is not deformed while being cut. Regardless of the cutting method used, the cut must be square with the run of the tube so that it will seat properly in the fitting socket.

Reaming - Most methods of cutting leave a small burr on the end of the tube. Unless these rough edges are removed, erosion-corrosion may occur due to local turbulence and increased velocities in the tube. Tools used to ream tube ends include the reaming blade on the tube cutter half-round or round files, a pocket knife, or a suitable deburring tool. With annealed tube, care must be taken not to get the tube end out-of-round by applying too much pressure. Both the inside and the outside of the tube may require removal of the burr. A properly reamed piece of tube will provide a smooth surface for better flow.

Cleaning - Cleaning is quickly and easily done. The removal of oxides and surface soil is crucial if filler metal is to flow properly. Oxides, surface soil and oil can interfere with the strength of the joint and this may result in the joint's failure. Mechanical cleaning is a simple operation. The end of the tube should be cleaned using sand cloth or nylon abrasive pads for a distance only slightly more than the depth of the fitting socket. The socket of the fitting should also be cleaned using sand cloth, abrasive pads, or properly sized fitting brushes. The same precautions, as when reaming the tube, should be observed.

Copper is a soft metal; if too much material is removed, a loose fit will result and interfere with satisfactory capillary action in making the joint. The capillary space between tube and fitting is approximately .004-in. Solder or brazing filler metal can fill this gap by capillary action. This spacing is critical for the filler metal to flow into the gap and form a strong joint. Chemical cleaning may be utilized, providing the tube and fittings are thoroughly rinsed, according to the manufacturer's recommendations furnished with the cleaner. This will help neutralize any acidic conditions that may exist. The surfaces, once cleaned, should not be touched with bare hands or oily gloves. Skin oils, lubricating oils and grease impair solder flow and wetting.

Temperature Ranges

Up to this point, the joining process is the same for both soldering and brazing. The choice for soldering or brazing will depend upon operating conditions. Solder joints are generally used where the system temperatures do not exceed 250° F and brazed joints can be used where greater strengths are required, or where system temperatures are as high as 350° F. In actual practice, most soldering is done at temperatures about 350° F to 550° F, while brazing is done at temperatures ranging from 1100° F to 1550° F.

Because of the differences in the soldering and brazing process, each will be discussed separately.

Soldering

Applying Flux - A non-aggressive soldering flux is recommended. Stir the flux before use. A good flux will dissolve and remove traces of residual oxides from the surfaces to be joined, protect the surfaces from re-oxidation during heating and promote the wetting of the surfaces by the solder. A thin, even coating of flux should be applied with a brush to both tube and fitting. Avoid the use of fingers to apply flux. Chemicals in the flux can be harmful if carried to the eyes or open cuts.

Types of Solder - There are a variety of solders available that will produce sound, leak-tight joints. Solders that are used for piping applications contain tin and varying amounts of either antimony, copper, lead or silver. Choice of solder will depend upon application and local codes. For potable water systems, solders which do not contain lead are the best choice.

Assembly - After both surfaces are properly fluxed, they should be assembled by placing the fitting on the tube, making sure the tube seats against the base of the fitting socket. A slight twisting motion is suggested to ensure even coverage by the flux. Remove the excess flux with a rag. Because of the heat that is required during soldering and brazing, only cotton rags should be used. Complete all prepared joints within a single work day. Care must be taken to assure that the tube and fittings are properly supported with a reasonable, uniform capillary space around the entire circumference of the joint. Uniformity of capillary space will ensure good filler metal penetration if the guidelines of successful joint making are followed. Excessive joint clearance can cause the filler metal to crack under stress or vibration.

Heating - Because of the open flame and high temperatures required for soldering and the flammability of the gases used, safety precautions must be observed. The heat is generally applied by use of an air/fuel torch. These torches can cause acetylene or a variety of LP gases. Electric resistance pliers can also be used.

Heating should begin with the flame perpendicular to the tube. This preheat will conduct the initial heat into the socket for even distribution of heat inside and out. Preheating depends upon the size of the joint - experience will indicate the proper amount of time. The flame should not be moved onto the fitting. Move the flame from the fitting socket onto the tube a distance equal to the fitting socket. Touch the solder to the joint. If the solder does not melt, remove it and continue the heating process. Be careful not to overheat or direct the flame into the fitting cup. This action can cause the flux to burn and destroy its effectiveness. When the melting temperature has been reached, heat may be applied to the base of the cup to aid capillary action in drawing the solder into the cup.

Applying Solder - When the tube is in a horizontal position, start applying the solder slightly off-center of the bottom of the joint. Proceed across the bottom of the fitting and up to the top-center position. Return to the point of beginning, overlap the starting point and then proceed up the incompleting side to the top. Again, overlapping the solder. Molten solder will be drawn into the joint by capillary action regardless if the solder is being fed upward, downward or horizontally.

Cooling & Cleaning - After the joint has been completed, natural cooling is best. Shock cooling may cause unnecessary stresses on the joint and may result in eventual failure. Once the fitting is cool, clean off any remaining flux with a wet rag.

Brazing

Applying Flux - The fluxes used for brazing copper joints are different in composition from soldering fluxes. They cannot, and should not, be used interchangeably.

Brazing fluxes are water based. Similar to soldering fluxes, brazing fluxes dissolve and remove residual oxides from the metal surfaces, they protect the metal

surfaces from re-oxidation during heating and they promote the wetting of the surfaces to be joined by the brazing filler metal. Fluxes also provide the craftsman with an indication of temperature. Application of the flux is the same as when soldering. If the outside of the fitting and the heat affected area of the tube are covered with flux, it will prevent oxidation and greatly improve the appearance of the joint.

Brazing Filler Metals - There are two general types of brazing filler metal used for joining copper tube: BCuP (Brazing - Copper - Phosphorus) and BA9 (Brazing - Silver). These brazing filler metals are classified according to their components.

BCuP filler metals are preferred for joining copper tube and fittings. The phosphorus in these filler metals acts as a fluxing agent and the lower percentage of silver makes them relatively low cost filler metals. When using copper tube, wrought copper fittings and BCuP brazing filler metal, fluxing is an option due to the self-fluxing action of the phosphorus present in all components of the brazed joint.

The choice of brazing filler metals depends upon four main factors:

- dimensional tolerance of the joint
- type and material of fitting (cast or wrought)
- desired appearance
- cost

Heating - Oxy/fuel torches are generally used when brazing because of the higher temperatures required. Due to recent innovations in air/fuel torch tip design, they can now be used on a wider variety of size for soldering and brazing.

When working with temperatures this high, safety precautions must be followed and care taken to protect both the operator and the materials being used.

The heating operation is the same as for soldering. First preheat the tube and then the tube and fitting. When the brazing filler metal starts to melt, apply the heat at the base of the fitting socket to help draw the brazing filler metal in by capillary action.

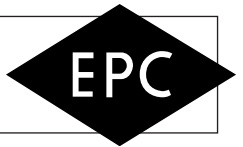
Applying Brazing Filler Metal - Remember to allow the heat of the joint to melt the filler metal. Do not melt the filler metal with the torch. The melted filler metal will be drawn into the joint by capillary action. It is very important that the flame be in continuous motion and should not be allowed to remain on any one point long enough to burn through the tube or fitting. When the joint is complete, a continuous filler should be visible completely around the joint. If the filler metal fails to flow, or has the tendency to ball-up, it indicates oxidation on the metal surfaces or insufficient heat on the parts to be joined. If the filler metal refuses to enter the joint and tends to flow over the outside of either part of the joint, it indicates that this part is overheated or that the other part is underheated.

Cooling and Cleaning - When the joint is complete, allow it to cool naturally. Flux residues can be removed by washing with hot water and brushing with a stainless steel wire brush.

Summary

If the parts to be joined are properly prepared, properly heated and the correct filler metal is used, the finished joint should be sound. Soldered or brazed copper piping systems, when installed properly, will provide years of safe and reliable service. Proper training of the correct installation techniques, such as those just covered, will give the craftsman the ability to achieve consistently reliable soldered and brazed joints in all diameters.

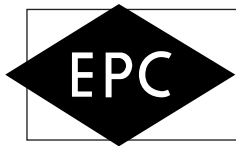
Prepared with technical assistance from the Copper Development Association.



Rated Internal Working Pressures for Copper Tube Types K, L, M and DWV

Size, Inches	Rated Internal Working Pressures, psi.							
	Type K		Type L		Type M		Type DWV	
	Annealed	Drawn	Annealed	Drawn	Annealed	Drawn	Annealed	Drawn
(Service Temperature up to 150°F (S = 5,100 psi, annealed 9,000 psi, drawn))								
1/4	913	2029	775	1722	-	-	-	-
3/8	979	2135	662	1471	485	1077	-	-
1/2	769	1683	614	1362	420	932	-	-
5/8	633	1389	536	1192	-	-	-	-
3/4	735	1609	495	1099	346	769	-	-
1	563	1236	420	933	286	636	-	-
1 1/4	456	1003	373	823	287	638	280	621
1 1/2	424	933	347	771	281	625	249	552
2	372	820	309	686	254	563	185	410
2 1/2	341	751	286	633	233	517	-	-
3	330	579	269	476	215	380	135	239
3 1/2	313	549	258	456	214	378	-	-
4	308	540	249	440	313	377	128	225
5	295	517	229	404	198	349	128	227
6	296	520	213	376	185	328	126	223
8	315	554	230	406	195	344	124	219
10	315	554	230	407	196	345	-	-
12	316	555	213	375	196	345	-	-
(Service Temperature up to 200°F (S = 4,800 psi, annealed 9,000 psi, drawn))								
1/4	860	2029	730	1722	-	-	-	-
3/8	921	2135	623	1471	456	1077	-	-
1/2	724	1683	578	1362	395	932	-	-
5/8	596	1389	505	1192	-	-	-	-
3/4	691	1609	466	1099	326	769	-	-
1	530	1236	395	933	270	636	-	-
1 1/4	429	1003	351	828	270	638	264	621
1 1/2	399	933	326	771	265	625	235	552
2	350	820	291	686	239	563	174	410
2 1/2	321	751	269	633	219	517	-	-
3	310	579	254	476	202	380	127	239
3 1/2	294	549	243	456	202	378	-	-
4	290	540	234	440	201	377	120	225
5	278	517	215	404	186	349	121	227
6	278	520	201	376	174	328	118	223
8	297	554	216	406	183	344	117	219
10	297	554	217	407	184	345	-	-
12	298	555	200	375	184	345	-	-
(Service Temperature up to 300°F (S = 4,700 psi, annealed 8,700 psi, drawn))								
1/4	842	1974	714	1676	-	-	-	-
3/8	902	2077	610	1431	446	1048	-	-
1/2	709	1638	565	1325	387	907	-	-
5/8	583	1351	494	1160	-	-	-	-
3/4	662	1566	456	1069	319	748	-	-
1	520	1203	387	908	264	619	-	-
1 1/4	420	976	344	806	265	621	258	604
1 1/2	391	908	319	750	359	608	230	537
2	343	798	285	667	234	548	170	399
2 1/2	314	731	263	616	215	503	-	-
3	304	560	248	449	198	367	124	231
3 1/2	288	531	238	441	197	366	-	-
4	283	522	229	425	197	365	117	218
5	272	500	211	391	182	337	118	220
6	272	502	197	364	171	317	116	216
8	290	535	211	393	179	333	114	209
10	290	535	212	394	180	334	-	-
12	291	536	196	363	180	334	-	-

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Engineering Data

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Size, Inches	Rated Internal Working Pressures, psi							
	Type K		Type L		Type M		Type DWV	
	Annealed	Drawn	Annealed	Drawn	Annealed	Drawn	Annealed	Drawn
(Service Temperature up to 400°F (S = 4,700 psi, annealed 8,700 psi, drawn))								
1/4	537	771	456	654	-	-	-	-
3/8	576	811	390	559	285	409	-	-
1/2	453	640	361	518	247	354	-	-
5/8	373	528	316	453	-	-	-	-
3/4	432	611	291	418	204	292	-	-
1	331	470	247	355	169	242	-	-
1 1/4	268	381	220	315	169	242	165	236
1 1/2	250	355	204	293	166	238	147	210
2	219	312	182	261	150	214	109	156
2 1/2	201	285	168	241	137	196	-	-
3	194	527	159	520	127	346	80	218
3 1/2	184	500	152	415	126	344	-	-
4	181	492	147	401	126	343	75	205
5	174	471	135	368	117	318	76	207
6	174	474	126	343	109	299	74	203
8	186	505	135	370	115	313	73	200
10	186	505	136	371	115	314	-	-
12	186	506	125	342	115	314	-	-

Fractional Inch/Decimal Inch/Millimeters Conversion Chart

Fractional Inch	Decimal Inch	Millimeters	Fractional Inch	Decimal Inch	Millimeters	Fractional Inch	Decimal Inch	Millimeters
1/64	.0156	.396	23/64	.3593	9.128	45/64	.7031	17.859
1/32	.0312	.793	3/8	.375	9.525	23/32	.7187	18.256
3/64	.0468	1.190	25/64	.3906	9.921	47/64	.7343	18.653
1/16	.0625	1.587	13/32	.4062	10.318	3/4	.750	19.050
5/64	.0781	1.984	27/64	.4218	10.715	49/64	.7656	19.446
3/32	.0937	2.381	7/16	.4375	11.112	25/32	.7812	19.843
7/64	.1093	2.778	29/64	.4531	11.509	51/64	.7968	20.240
1/8	.125	3.175	15/32	.4687	11.906	13/16	.8125	20.637
9/64	.1406	3.571	31/64	.4843	12.303	53/64	.8281	20.034
5/32	.1562	3.968	1/2	.500	12.700	27/32	.8437	21.431
11/64	.1718	4.365	33/64	.5156	13.096	55/64	.8593	21.828
3/16	.1875	4.762	17/32	.5312	13.493	7/8	.875	22.225
13/64	.2031	5.159	35/64	.5468	13.890	57/64	.8906	22.621
7/32	.2187	5.556	9/16	.5625	14.287	29/32	.9062	23.018
15/64	.2343	5.953	37/64	.5781	14.684	59/64	.9218	23.415
1/4	.250	6.350	19/32	.5937	15.081	15/16	.9375	23.812
17/64	.2656	6.746	39/64	.6093	15.478	61/64	.9531	24.209
9/32	.2812	7.143	5/8	.625	15.875	31/32	.9687	24.606
19/64	.2968	7.540	41/64	.6406	16.271	63/64	.9843	25.003
5/16	.3125	7.937	21/32	.6562	16.668	1	1.000	25.400
21/64	.3281	8.334	43/64	.6718	17.065			
11/32	.3437	8.731	11/16	.6875	17.462			