

# COPPER FITTINGS FOR HVACR APPLICATIONS

<b>Job Name</b>	<b>Contractor</b>
<b>Job Location</b>	<b>Wholesaler</b>
<b>Engineer</b>	<b>Streamline<sup>®</sup> Rep</b>

**Product Description:**

Streamline<sup>®</sup> Wrot Copper fittings for use in refrigeration applications. Available sizes ranging from 1/4" to 8-1/8" in outside diameter. Product is designed to join ASTM B280 and ASTM B88 seamless copper tube.

**Material:**

Streamline<sup>®</sup> Wrot Copper fittings shall be made from material in compliance with ASTM B75 and of UNS C12200 grade of copper.

**Key Specifications:**

Streamline<sup>®</sup> Wrot Copper, solder-joint, pressure fittings shall conform to ASME B1 6.22 and MSS SP104. Streamline<sup>®</sup> Wrot Copper, solder-joint, pressure fittings are third party verified in select sizes<sup>1</sup> through Underwriters Laboratories (UL) for operating pressure of 700psi at 250°F.

**Installation:**

Installations shall comply with the latest applicable building codes for the local jurisdiction. For detailed installation instructions, consult the Copper Development Association at [copper.org](http://copper.org).

**References:**

Product Line	Product Type	Diameter
1 Copper Fittings <b>US 700 PSI</b> R410A	Streamline <sup>®</sup> Wrot Solder-Joint Pressure	1/8" – 2-5/8"

\*700PSI at 250°F in select patterns

- |              |   |
|--------------|---|
| ASTM B75     | Seamless Copper Tube  |
| C12200       | 99.9% Pure Copper   |
| ASME B1 6.22 | Wrot Copper and Copper Alloy Solder Joint Pressure Fittings |
| MSS SP104    | Wrot Copper Solder and Joint Pressure Fittings              |

**Other Applicable Standards**

- |           |   |
|-----------|---|
| ASTM B88  | Seamless Copper Water and Gas Tube (Types K, L, M)          |
| ASTM B280 | Seamless Copper Tube for Air Conditioning and Refrigeration |

# COPPER FITTINGS - HVACR

## SOLDER JOINT PRESSURE WROT & CAST

**NOTE: ALL SIZES ARE OD**

### ADAPTER

#### FEMALE WC-402 C x F

Part	Size	Box	Ctn	Wt
W 01204	1/4 x 1/2	100	300	0.1
W 01205	x 3/8	100	700	0.05
W 01206	x 1/4	100	900	0.04
W 01207	x 1/8	100	1,500	0.04
W 01214	3/8 x 3/8	50	750	0.06
W 01215	x 1/4	50	750	0.04
W 01216	x 1/8	100	1,500	0.03
W 01223	1/2 x 3/4	50	300	0.16
W 01224	x 1/2	50	500	0.1
W 01225	x 3/8	50	750	0.07
W 01226	x 1/4	50	750	0.06
W 01230	5/8 x 3/4	25	250	0.16
W 01231	x 1/2	50	500	0.1
W 01232	x 3/8	50	500	0.07
W 01233	x 1/4	50	500	0.06
W 01238	3/4 x 3/4	50	500	0.15
W 01239	x 1/2	50	500	0.09
W 01245	7/8 x 1	25	250	0.27
W 01246	x 3/4	25	250	0.14
W 01247	x 1/2	25	250	0.11
W 01261	1-1/8 x 1-1/4	10	100	0.28
W 01263	x 1	25	250	0.25
W 01264	x 3/4	25	250	0.22
W 01265	x 1/2	20	200	0.25
W 01270	1-3/8 x 1-1/2	10	100	0.5
W 01271	x 1-1/4	10	100	0.45
W 01272	x 1	10	100	0.33
W 01278	1-5/8 x 2	-	60	0.74
W 01279	x 1-1/2	10	100	0.53
W 01280	x 1-1/4	5	50	0.39
W 01287	2-1/8 x 2	-	50	0.57
W 01288	x 1-1/2	5	50	0.74
W 01296	2-5/8 x 2-1/2	-	25	1.22
W 01297	3-1/8 x 3	-	15	

### ADAPTER

#### FITTING WC-405 FTG x F

Part	Size	Box	Ctn	Wt
W 01514	3/8 x 3/8	50	750	0.06
W 01524	1/2 x 1/2	50	350	0.1
W 01525	x 3/8	50	750	0.05
W 01526	x 1/4	50	750	0.06
W 01531	5/8 x 1/2	50	450	0.11
W 01532	x 3/8	50	750	0.07
W 01546	7/8 x 3/4	25	250	0.17
W 01547	x 1/2	50	500	0.11
W 01563	1-1/8 x 1	25	250	0.24
W 01564	x 3/4	25	250	0.18
W 01571	1-3/8 x 1-1/4	10	100	0.4
W 01579	1-5/8 x 1-1/2	10	100	0.46
W 01587	2-1/8 x 2	-	50	0.65
W 01596	2-5/8 x 2-1/2	-	25	1.2

### ADAPTER

#### MALE WC-401 C x M

Part	Size	Box	Ctn	Wt
W 01105 †	1/4 x 3/8	50	750	0.06
W 01106 †	x 1/4	50	1,200	0.03
W 01107 †	x 1/8	50	2,400	0.02
W 01109 †	5/16 x 3/8	50	800	0.07
W 01110 †	x 1/4	50	1,200	0.03
W 01113 †	3/8 x 1/2	50	500	0.08
W 01114 †	x 3/8	50	750	0.06
W 01115 †	x 1/4	50	1,200	0.03
W 01116 †	x 1/8	50	2,000	0.02
W 01123 †	1/2 x 3/4	25	250	0.17
W 01124 †	x 1/2	50	500	0.09
W 01125 †	x 3/8	50	500	0.06

### ADAPTER CONT.

W 01126 †	x 1/4	50	750	0.05
W 01129 †	5/8 x 1	15	150	0.3
W 01130 †	x 3/4	25	250	0.17
W 01131 †	x 1/2	50	500	0.06
W 01132 †	x 3/8	50	500	0.07
W 01133 †	x 1/4	25	600	0.06
W 01138 †	3/4 x 3/4	25	250	0.14
W 01139 †	x 1/2	25	250	0.12
W 01145 †	7/8 x 1	10	100	0.29
W 01146 †	x 3/4	25	250	0.13
W 01147 †	x 1/2	25	250	0.12
W 01161 †	1-1/8 x 1-1/2	10	100	0.48
W 01162 †	x 11/4	10	100	0.39
W 01163 †	x 1	10	100	0.24
W 01164 †	x 3/4	10	100	0.17
W 01165 †	x 1/2	10	100	0.18
W 01170 †	1-3/8 x 1-1/2	10	100	0.48
W 01171 †	x 1-1/4	10	100	0.41
W 01172 †	x 1	10	100	0.24
W 01173 †	x 3/4	10	100	0.21
W 01178 †	1-5/8 x 2	-	50	0.78
W 01179 †	x 1-1/2	10	100	0.51
W 01180 †	x 1-1/4	10	100	0.37
W 01181 †	x 1	10	100	0.38
W 01187 †	2-1/8 x 2	5	50	0.57
W 01188 †	x 1-1/2	-	50	0.64
W 01189 †	x 1-1/4	-	50	0.57
W 01196 †	2-5/8 x 2-1/2	-	20	1.26
W 01197 †	x 2	-	20	0.98
W 01198 †	x 1-1/2	-	22	0.98
W 01199	3-1/8 x 3	-	20	1.7
W 01150	4-1/8 x 4	-	16	3.71

### ADAPTER

#### FITTING WC-404 FTG x M

Part	Size	Box	Ctn	Wt
W 01425 †	1/2 x 3/8	50	750	0.05
W 01431 †	5/8 x 1/2	50	500	0.09
W 01432 †	x 3/8	50	750	0.06
W 01446 †	7/8 x 3/4	50	500	0.15
W 01447 †	x 1/2	50	500	0.13
W 01463 †	1-1/8 x 1	25	250	0.23
W 01464 †	x 3/4	25	250	0.19
W 01471 †	1-3/8 x 1-1/4	10	100	0.41
W 01479 †	1-5/8 x 1-1/2	10	100	0.49
W 01487 †	2 1/8 x 2	-	50	0.76
W 01496 †	2-5/8 x 2-1/2	-	20	1.95

### BUSHING

#### FLUSH WC-106 FTG x C

Part	Size	Box	Ctn	Wt
W 01706 †	3/8 x 1/4	100	4,000	0.01
W 01712 †	1/2 x 3/8	100	4,000	0.01
W 01714 †	x 1/4	100	2,400	0.02
W 01715 †	5/8 x 1/2	100	1,500	0.02
W 01717 †	x 3/8	100	1,500	0.04
W 01720 †	3/4 x 5/8	50	750	0.03
W 01721 †	x 1/2	50	750	0.06
W 01722 †	x 3/8	50	750	0.08
W 01725 †	7/8x 3/4	50	500	0.04
W 01726 †	x 5/8	50	500	0.07
W 01727 †	x 1/2	50	500	0.11
W 01737 †	1-1/8 x 7/8	50	500	0.12
W 01738 †	x 3/4	50	500	0.18
W 01739 †	x 5/8	25	250	0.22
W 01743 †	1-3/8 x 1-1/8	10	200	0.16
W 01745 †	x 7/8	10	200	0.3
W 01750 †	1-5/8 x 1-3/8	10	100	0.22
W 01751 †	x 1-1/8	10	100	0.41
W 01758 †	2-1/8 x 1-5/8	10	100	0.68
W 01759 †	x 1-3/8	5	50	0.94
W 01767 †	2-5/8 x 2-1/8	-	50	0.92

### BUSHING

#### FLUSH WC-417 FTG x F

Part	Size	Box	Ctn	Wt
A 07812	5/8 x 1/8	100	1,600	0.04
A 07813	x 1/4	50	1,200	0.02
A 07814	7/8 x 3/8	50	450	0.08
A 07815	1-1/8 x 1/2	50	300	0.17
A 07816	1-3/8 x 3/4	10	160	0.25
A 07817	1-5/8 x 1	10	90	0.34
A 07819	2-1/8 x 1-1/2	10	90	0.48

### CAP

#### FLUSH WC-415 C

Part	Size	Box	Ctn	Wt
W 07002	1/4	50	2,000	0
W 07004	3/8	50	2,000	0.01
W 07006	1/2	50	1,000	0.01
W 07007	5/8	100	1,000	0.02
W 07008	3/4	50	2,000	0.03
W 07009	7/8	50	500	0.04
W 07011	1-1/8	50	500	0.08
W 07012	1-3/8	25	250	0.11
W 07013	1-5/8	25	250	0.18
W 07014	2-1/8	-	100	0.3
W 07015	2-5/8	-	50	0.48
W 07016	3-1/8	-	50	0.73
W 07017	3-5/8	-	25	1.15
W 07018	4-1/8	-	20	1.5

### COUPLING

#### NO STOP WC-400NS C x C

Part	Size	Box	Ctn	Wt
W 01900 †	1/4	100	4,000	0
W 01901 †	3/8	50	2,000	0.01
W 01902 †	1/2	50	1,700	0.01
W 01903 †	5/8	100	1,000	0.03
W 01904 †	3/4	25	375	0.04
W 01905 †	7/8	50	500	0.06
W 01906 †	1-1/8	25	250	0.11
W 01907 †	1-3/8	25	250	0.15
W 01908 †	1-5/8	10	100	0.25
W 01909 †	2-1/8	-	75	0.4
W 01910 †	2-5/8	-	50	0.66
W 01911	3-1/8	-	25	1.03
W 01913	4-1/8	-	15	2.15

### COUPLING

#### ROLLED STOP WC-400 C x C

Part	Size	Box	Ctn	Wt
W 01000 †	1/8	100	4,000	0
W 01001 †	3/16	100	4,000	0
W 01003 †	1/4	100	4,000	0
W 01009 †	3/8	50	2,000	0.01
W 01017 †	1/2	50	1,700	0.01
W 01022 †	5/8	100	1,000	0.03
W 01028 †	3/4	50	500	0.05
W 01034 †	7/8	50	500	0.06
W 01040 †	1	25	250	0.09
W 01047 †	1-1/8	25	250	0.11
W 01055 †	1-3/8	25	250	0.15
W 01062 †	1-1/2	-	150	0.22
W 01063 †	1-5/8	10	100	0.21
W 01072 †	2-1/8	-	75	0.4
W 01082 †	2-5/8	-	50	0.66
W 01092	3-1/8	-	25	1.03
W 01000	3-5/8	-	20	1.18
W 01017	4-1/8	-	15	2.11

† UL Recognized to 700 PSI (select sizes)

### COUPLING

STACKED STOP WC-400S		C x C		
Part	Size	Box	Ctn	Wt
W 10141 †	1/4	100	3,400	0
W 10142 †	5/16	100	5,600	0.01
W 10143 †	3/8	50	2,000	0.01
W 10144 †	1/2	50	1,700	0.01
W 10145 †	5/8	100	1,000	0.03
W 10157 †	3/4	25	500	0.04
W 10146 †	7/8	50	500	0.06
W 10147 †	1-1/8	25	250	0.11
W 10148 †	1-3/8	25	250	0.15
W 10149 †	1-5/8	10	100	0.22
W 10150 †	2-1/8	-	75	0.41
W 10151 †	2-5/8	-	50	0.66
W 10152	3-1/8	-	25	1.02
W 10153	3-5/8	-	20	1.03
W 10154	4-1/8	-	15	2.15
W 10155	5-1/8	-	8	3.34
W 10156	6-1/8	-	3	4.61
W 10130	8-1/8	-	1	14.13

### COUPLING

REDUCING WC-400R		C x C		
Part	Size	Box	Ctn	Wt
W 01004 †	1/4 x 3/16	50	2,000	0.01
W 01005 †	x 1/8	50	2,000	0
W 01010 †	3/8 x 5/16	50	1,700	0.01
W 01011 †	x 1/4	50	2,000	0.01
W 01019 †	1/2 x 3/8	50	1,700	0.01
W 01021 †	x 1/4	50	1,200	0.02
W 01023 †	5/8 x 1/2	100	1,000	0.03
W 01025 †	x 3/8	100	1,000	0.03
W 01027 †	x 1/4	100	1,000	0.03
W 01029 †	3/4 x 5/8	100	600	0.05
W 01030 †	x 1/2	100	600	0.04
W 01031 †	x 3/8	100	600	0.04
W 01035 †	7/8 x 3/4	100	1,000	0.06
W 01036 †	x 5/8	50	500	0.08
W 01037 †	7/8 x 1/2	50	500	0.06
W 01038 †	x 3/8	50	500	0.06
W 01049 †	1-1/8 x 7/8	25	250	0.13
W 01050 †	x 3/4	25	250	0.11
W 01051 †	x 5/8	25	250	0.11
W 01052 †	x 1/2	25	250	0.11
W 01056 †	1-3/8 x 1-1/8	10	100	0.2
W 01058 †	x 7/8	10	100	0.17
W 01060 †	x 5/8	10	100	0.17
W 01064 †	1-5/8 x 1-3/8	10	100	0.23
W 01065 †	x 1-1/8	10	100	0.23
W 01067 †	x 7/8	10	100	0.24
W 01069 †	x 5/8	10	100	0.22
W 01073 †	2-1/8 x 1-5/8	-	100	0.43
W 01074 †	x 1-3/8	-	100	0.43
W 01075 †	x 1-1/8	-	100	0.46
W 01077 †	x 7/8	-	100	0.4
W 01079 †	x 5/8	-	75	0.41
W 01083 †	2-5/8 x 2-1/8	-	50	0.65
W 01084 †	x 1-5/8	-	50	0.75
W 01085 †	x 1-3/8	-	50	0.7
W 01086 †	x 1-1/8	-	50	0.71
W 01093	3-1/8 x 2-5/8	-	25	1.06
W 01094	x 2-1/8	-	25	1.1
W 01095	x 1-5/8	-	25	1.01
W 10101	3-5/8 x 3-1/8	-	25	1.22
W 10108	4-1/8 x 3-5/8	-	20	1.87
W 10109	x 3-1/8	-	20	0.76
W 10110	x 2-5/8	-	15	1.88
W 10111	x 2-1/8	-	20	1.97

† UL Recognized to 700 PSI (select sizes)

### 45° ELBOW

WE-504		C x C		
Part	Size	Box	Ctn	Wt
W 03005 †	1/4	50	2,000	0.01
W 03012 †	3/8	50	2,800	0.01
W 03021 †	1/2	50	850	0.03
W 03026 †	5/8	50	500	0.04
W 03030 †	3/4	50	500	0.06
W 03034 †	7/8	25	250	0.09
W 03044 †	1-1/8	25	250	0.16
W 03050 †	1-3/8	10	100	0.25
W 03055 †	1-5/8	10	100	0.36
W 03059 †	2-1/8	10	50	0.6
W 03063 †	2-5/8	5	25	1
W 03067	3-1/8	2	20	1.53
W 03070	3-5/8	2	10	2.81
W 03073	4-1/8	-	5	3.14

### 45° ELBOW

STREET WE-505		FTG x C		
Part	Size	Box	Ctn	Wt
W 03312 †	3/8	100	3,400	0.01
W 03321 †	1/2	100	1,500	0.03
W 03326 †	5/8	50	500	0.03
W 03330 †	3/4	50	500	0.06
W 03334 †	7/8	25	250	0.09
W 03344 †	1-1/8	25	250	0.15
W 03350 †	1-3/8	10	100	0.24
W 03355 †	1-5/8	10	100	0.33
W 03359 †	2-1/8	5	50	0.61
W 03363 †	2-5/8	2	20	1.05
W 03368	3-1/8	2	10	1.52
W 03373	4-1/8	-	5	3.11

### 45° ELBOW

WE-507		FTG x FTG		
Part	Size	Box	Ctn	Wt
W 03621 †	1/2	50	1,700	0.02
W 03626 †	5/8	50	750	0.04
W 03634 †	7/8	25	250	0.1
W 03644 †	1-1/8	10	100	0.18

### 90° ELBOW

SHORT RADIUS WE-500		C x C		
Part	Size	Box	Ctn	Wt
W 02003 †	1/4	50	2,000	0.01
W 02009 †	3/8	50	1,700	0.02
W 02017 †	1/2	50	1,000	0.03
W 02022 †	5/8	100	1,000	0.05
W 02028 †	3/4	50	500	0.08
W 02034 †	7/8	50	500	0.11
W 02040 †	1	20	200	0.22
W 02047 †	1-1/8	25	250	0.24
W 02084 †	1-3/8	10	100	0.3
W 02085 †	1-5/8	10	100	0.42
W 02086 †	2-1/8	10	50	0.76
W 02087 †	2-5/8	5	25	1.19
W 02088	3-1/8	5	25	1.88
W 02089	3-5/8	2	10	2.77
W 02090	4-1/8	2	10	4
W 02097	6-1/8	-	1	13.73

REDUCING		C x C		
Part	Size	Box	Ctn	Wt
W 02011 †	3/8 x 1/4	50	750	0.02
W 02019 †	1/2 x 3/8	50	750	0.03
W 02023 †	5/8 x 1/2	50	500	0.05
W 02025 †	x 3/8	50	500	0.05
W 02029 †	3/4 x 5/8	50	500	0.06
W 02030 †	x 1/2	50	500	0.07
W 02035 †	7/8 x 3/4	50	500	0.11
W 02036 †	x 5/8	50	500	0.11
W 02037 †	x 1/2	50	500	0.11
W 02049 †	1-1/8 x 7/8	25	250	0.17
W 02050 †	x 3/4	25	250	0.16
W 02051 †	x 5/8	25	250	0.18
W 02052 †	x 1/2	25	150	0.2
W 02056 †	1-3/8 x 1-1/8	20	200	0.32
W 02077 †	1-5/8 x 1-3/8	5	100	0.33
W 02078 †	2-1/8 x 1-5/8	5	50	0.6

### 90° ELBOW

LONG RADIUS WE-500L		C x C		
Part	Size	Box	Ctn	Wt
W 02701 †	3/16	50	1,000	0
W 02715 †	1/4	50	2,000	0.01
W 02710 †	5/16	50	1,700	0.01
W 02716 †	3/8	50	1,700	0.02
W 02717 †	1/2	50	500	0.04
W 02722 †	5/8	50	500	0.06
W 02728 †	3/4	50	500	0.09
W 02734 †	7/8	25	250	0.13
W 02747 †	1-1/8	10	100	0.27
W 02055 †	1-3/8	10	100	0.42
W 02063 †	1-5/8	5	50	0.6
W 02072 †	2-1/8	5	25	1.23
W 02082 †	2-5/8	5	25	2.05
W 02092	3-1/8	2	10	3.13
W 02093	3-5/8	1	5	5.53
W 02095	4-1/8	-	1	7.98

### REDUCING

W 02711 †	3/8 x 1/4	50	3,000	0.01
W 02719 †	1/2 x 3/8	50	2,000	0.03
W 02723 †	5/8 x 1/2	50	1,000	0.04
W 02725 †	x 3/8	50	1,000	0.03
W 02735 †	7/8 x 3/4	25	250	0.12
W 02736 †	x 5/8	50	500	0.09
W 02749 †	1-1/8 x 7/8	10	100	0.17
W 02756 †	1-3/8 x 1-1/8	10	100	0.31
W 02058 †	x 7/8	10	100	0.37
W 02060 †	x 5/8	10	100	0.37
W 02064 †	1-5/8 x 1-3/8	5	50	0.44
W 02065 †	x 1-1/8	5	50	0.52
W 02067 †	x 7/8	5	50	0.51
W 02073 †	2-1/8 x 1-5/8	2	20	0.98
W 02074 †	x 1-3/8	2	20	0.94
W 02075 †	x 1-1/8	2	20	0.97
W 02083 †	2-5/8 x 2-1/8	2	20	1.53

### 90° ELBOW

STREET SHORT RADIUS WE-503		FTG x C		
Part	Size	Box	Ctn	Wt
W 02305 †	1/4	50	2,000	0.01
W 02312 †	3/8	50	1,700	0.02
W 02321 †	1/2	50	750	0.03
W 02326 †	5/8	50	500	0.05
W 02330 †	3/4	25	250	0.09
W 02334 †	7/8	25	250	0.11
W 02344 †	1-1/8	25	250	0.22
W 02384 †	1-3/8	25	125	0.29
W 02385 †	1-5/8	10	100	0.44
W 02386 †	2-1/8	10	50	0.77
W 02387 †	2-5/8	5	25	1.23
W 02388	3-1/8	2	20	1.94
W 02389	3-5/8	1	10	2.78
W 02390	4-1/8	2	10	4.03

### 90° ELBOW

STREET LONG RADIUS WE-503L		FTG x C		
Part	Size	Box	Ctn	Wt
W 02809 †	3/8	50	1,700	0.02
W 02817 †	1/2	50	500	0.04
W 02822 †	5/8	50	500	0.06
W 02828 †	3/4	25	250	0.09
W 02834 †	7/8	25	250	0.13
W 02847 †	1-1/8	10	100	0.26
W 02350 †	1-3/8	10	100	0.42
W 02355 †	1-5/8	5	50	0.6
W 02359 †	2-1/8	5	25	1.23
W 02363 †	2-5/8	5	25	2.08
W 02368	3-1/8	2	10	3.12
W 02393	3-5/8	1	5	5.52
W 02395	4-1/8	-	1	8.07

### 90° ELBOW

#### SHORT RADIUS WE-506

FTG x FTG



Part	Size	Box	Ctn	Wt
W 02612 †	3/8	50	2,800	0.02
W 02621 †	1/2	50	750	0.03
W 02626 †	5/8	50	500	0.05
W 02634 †	7/8	25	250	0.11
W 02644 †	1-1/8	10	100	0.22
W 02684 †	1-3/8	10	100	0.31
W 02685 †	1-5/8	5	50	0.43
W 02686 †	2-1/8	1	10	0.79
W 02687 †	2-5/8	1	10	1.25
W 02688	3-1/8	1	10	2.08
W 02689	3-5/8	1	10	2.63
W 02690	4-1/8	1	5	3.88

### 90° ELBOW

#### LONG RADIUS WE-506L

FTG x FTG



Part	Size	Box	Ctn	Wt
W 02650 †	1-3/8	5	50	0.44
W 02655 †	1-5/8	5	50	0.63
W 02659 †	2-1/8	1	10	1.23

### 90° ELBOW

#### FORGED BRASS WE-502

C x F



Part	Size	Box	Ctn	Wt
W 02206	1/4 x 1/4	50	450	0.1
W 02207	x 1/8	50	800	0.07
W 02214	3/8 x 3/8	50	600	0.1
W 02216	x 1/8	50	700	0.08
W 02225	x 3/8	25	300	0.11
W 02226	x 1/4	25	350	0.1

### 90° ELBOW

#### FORGED BRASS WE-501

C x M



Part	Size	Box	Ctn	Wt
W 02106	x 1/4	50	700	0.07
W 02107	x 1/8	50	1,200	0.04
W 02115	x 1/4	50	800	0.06
W 02116	x 1/8	50	800	0.06
W 02125	x 3/8	25	400	0.1
W 02132	x 3/8	10	240	0.16

### FITTING REDUCER

#### WC-403

FTG x C



Part	Size	Box	Ctn	Wt
<b>REDUCING</b>				
W 01302 †	1/4 x 1/8	50	2,000	0
W 01306 †	3/8 x 1/4	50	2,000	0.01
W 01312 †	1/2 x 3/8	50	2,000	0.02
W 01314 †	x 1/4	50	2,800	0.01
W 01315 †	5/8 x 1/2	50	750	0.03
W 01317 †	x 3/8	50	1,700	0.02
W 01320 †	3/4 x 5/8	100	1,000	0.04
W 01321 †	x 1/2	100	900	0.04
W 01322 †	x 3/8	100	900	0.04
W 01325 †	7/8 x 3/4	50	500	0.06
W 01326 †	x 5/8	50	500	0.06
W 01327 †	x 1/2	50	500	0.06
W 01337 †	1-1/8 x 7/8	25	250	0.11
W 01338 †	x 3/4	25	250	0.1
W 01339 †	x 5/8	25	250	0.1
W 01340 †	x 1/2	200	200	0.1
W 01343 †	1-3/8 x 1-1/8	10	100	0.17
W 01345 †	x 7/8	10	100	0.17
W 01347 †	x 5/8	10	100	0.16
W 01350 †	1-5/8 x 1-3/8	10	100	0.23
W 01351 †	x 1-1/8	10	100	0.24
W 01353 †	x 7/8	10	100	0.23
W 01355 †	x 5/8	10	100	0.22
W 01358 †	2-1/8 x 1-5/8	-	100	0.44
W 01359 †	x 1-3/8	-	100	0.43
W 01360 †	x 1-1/8	-	100	0.45
W 01362 †	x 7/8	-	100	0.43
W 01364 †	x 5/8	-	100	0.42

### FITTING REDUCER (CONT.)

Part	Size	Box	Ctn	Wt
W 01367 †	2-5/8 x 2-1/8	-	50	0.62
W 01368 †	x 1-5/8	-	50	0.57
W 01369 †	x 1-3/8	-	50	0.62
W 01370 †	x 1-1/8	-	50	0.63
W 01376 †	3-1/8 x 2-5/8	-	25	1
W 01377	x 2-1/8	-	25	0.89
W 01379	x 1-3/8	-	50	1.01
W 01381	3-5/8 x 3-1/8	-	20	1.28
W 01382	x 2-5/8	-	20	1.37
W 01383	x 2-1/8	-	20	1.47
W 01386	4-1/8 x 3-5/8	-	20	1.74
W 01387	x 3-1/8	-	15	1.77
W 01388	x 2-5/8	-	15	1.83
W 01389	x 2-1/8	-	15	1.86

### HANGER

#### HI-EAR W-124

C



Part	Size	Box	Ctn	Wt
A 03167	5/8	100	10,000	0.03
A 03168	7/8	25	500	0.04
A 03171	1-1/8	25	250	0.04

### P-TRAP

#### SUCTION LINE WE-554P

C x C



Part	Size	Box	Ctn	Wt
W 60999	5/8	10	50	0.38
W 61008	3/4	10	50	0.51
W 61000	7/8	5	25	0.63
W 61001	1-1/8	3	15	0.87
W 61002	1-3/8	4	20	1.16
W 61003	1-5/8	4	4	2.28
W 61009	2-1/8	-	3	3.87

### P-TRAP

#### SUCTION LINE LONG RADIUS WE-554PL

C x C



Part	Size	Box	Ctn	Wt
W 60998	5/8	30	150	0.15
W 60997	3/4	20	100	0.3
W 60996	7/8	15	75	0.36
W 60995	1-1/8	15	75	0.58
W 60994	1-3/8	5	25	0.97
W 60993	1-5/8	-	5	1.84
W 60992	2-1/8	-	3	3.61

### PLUG

#### FITTING WC-416

FTG



Part	Size	Box	Ctn	Wt
<b>(SIZES 1/8 THRU 1 1/2 BRASS ROD)</b>				
A 01402	1/4	50	500	0.01
A 01422	3/8	100	4,000	0.01
A 01392	1/2	50	2,000	0.02
A 01504	5/8	50	1,200	0.03
A 01529	7/8	50	600	0.07
A 01556	1-1/8	25	375	0.12
A 01590	1-3/8	15	180	0.2
A 01628	1-5/8	10	120	0.28

### RETURN BEND

#### WE-512

C x C



Part	Size	Box	Ctn	Wt
W 06025	3/8 x 4-1/2	25	150	0.1
W 06020	x 1-1/2	25	850	0.02
W 06048	1/2 x 6	-	100	0.21
W 06045	x 4	-	200	0.14
W 06041	x 3	25	250	0.11
W 06036	x 2	50	300	0.06
W 06035	x 12-9/32	50	300	0.08
W 06032	x 1-1/2	50	500	0.06
W 06069	5/8 x 6	5	30	0.3
W 06062	x 3-3/8	10	100	0.18
W 06060	x 3	25	150	0.16

### RETURN BEND (CONT.)

Part	Size	Box	Ctn	Wt
W 06058	x 2-1/2	25	250	0.14
W 06056	x 2-1/4	25	250	0.13
W 06053	x 1-7/8	25	250	0.11
W 06051	x 19/16	25	250	0.1
W 06084	3/4 x 4	-	120	0.25
W 06081	x 3-3/8	10	90	0.24
W 06077	x 2-1/2	10	100	0.17
W 06074	x 2-1/8	10	100	0.16
W 06073	x 2	10	100	0.15
W 06099	7/8 x 12	-	15	0.88
W 06095	x 3-3/8	10	100	0.29
W 06092	x 2-1/2	10	100	0.23
W 60111	1-1/8 x 3-1/4	5	50	0.49
W 60110	x 3	5	50	0.47
W 60121	1-3/8 x 3-3/4	5	50	0.65
W 60131	1-5/8 x 4-1/2	5	25	1
W 60140	2-1/8 x 5-1/2	5	25	1.92

### TEE

#### WT-600

C x C x C



Part	Size	Box	Ctn	Wt
W 40302 †	3/16	50	1,700	0.01
W 40306 †	1/4	100	2,400	0.01
W 40313 †	5/16	50	1,700	0.01
W 04000 †	3/8	50	1,700	0.02
W 04001 †	1/2	50	500	0.04
W 04006 †	5/8	50	500	0.07
W 04017 †	3/4	25	250	0.12
W 04031 †	7/8	25	250	0.16
W 04048 †	1-1/8	10	100	0.29
W 04068 †	1-3/8	5	50	0.42
W 04084 †	1-5/8	5	50	0.6
W 40102 †	2-1/8	5	25	1.14
W 40123 †	2-5/8	2	20	1.72
W 40152	3-1/8	2	10	2.77
W 40190	3-5/8	1	5	5.66
W 40200	4-1/8	1	5	5.99
W 40400	5-1/8	-	1	12.38
W 40500	6-1/8	-	1	20.85

### REDUCING

W 40368 †	1/4x1/4x3/8	50	750	0.03
W 40308 †	x 3/16	50	2,000	0.01
W 40334 †	5/16x5/16x3/8	50	750	0.03
W 04016 †	3/8x3/8x5/8	50	500	0.08
W 04005 †	x 1/2	50	500	0.04
W 40324 †	x 1/4	50	1,700	0.02
W 40330 †	x 1/4 x 3/8	50	500	0.02
W 40332 †	x 1/4	50	1,700	0.02
W 04015 †	1/2x1/2x5/8	50	500	0.09
W 04002 †	x 3/8	50	500	0.04
W 40350 †	x 1/4	50	500	0.04
W 04003 †	x 3/8x1/2	50	500	0.05
W 04004 †	x 3/8	50	500	0.04
W 40358 †	x 1/4	50	750	0.04
W 40363 †	x 1/4x1/2	50	750	0.05
W 40364 †	x 3/8	50	750	0.04
W 40366 †	x 1/4	50	450	0.05
W 04067 †	5/8x5/8x1-1/8	10	100	0.35
W 04047 †	x 7/8	25	250	0.11
W 04029 †	x 3/4	25	250	0.1
W 04007 †	x 1/2	50	500	0.08
W 04008 †	x 3/8	50	500	0.06
W 04014 †	x 1/4	50	500	0.08
W 04009 †	x 1/2x5/8	50	500	0.09
W 04010 †	x 1/2	50	500	0.08
W 04011 †	x 3/8	50	500	0.08
W 04012 †	x 3/8x5/8	50	500	0.09
W 40367 †	x 1/2	50	500	0.08
W 04013 †	x 3/8	50	500	0.09
W 04046 †	3/4x3/4x7/8	25	250	0.15
W 04018 †	x 5/8			




### TEE (CONT.)

Part	Size	Box	Ctn	Wt
W 04032 †	x 3/4	25	250	0.17
W 04033 †	x 5/8	25	250	0.12
W 04034 †	7/8x7/8x1/2	25	250	0.11
W 04035 †	x 3/8	25	250	0.11
W 04036 †	x 3/4 x 7/8	25	250	0.19
W 04037 †	x 3/4	25	250	0.17
W 04041 †	x 5/8 x 7/8	25	250	0.16
W 04042 †	x 3/4	25	150	0.17
W 04043 †	x 5/8	25	250	0.13
W 04044 †	x 1/2	25	250	0.12
W 04045 †	x 3/8	25	225	0.15
W 40101 †	1-1/8x1-1/8x1-5/8	5	50	0.47
W 04082 †	x 1-3/8	5	50	0.31
W 04049 †	x 7/8	10	100	0.24
W 04050 †	x 3/4	10	100	0.27
W 04051 †	x 5/8	10	100	0.21
W 04052 †	x 1/2	10	100	0.19
W 04055 †	x 7/8x1-1/8	10	100	0.3
W 04056 †	x 7/8	10	100	0.25
W 04057 †	x 3/4	10	90	0.43
W 04058 †	x 5/8	10	100	0.23
W 04059 †	x 1/2	10	100	0.21
W 40233 †	x 3/4x11/8	10	100	0.33
W 40234 †	x 7/8	10	90	0.3
W 40235 †	x 3/4	10	100	0.31
W 40236 †	x 5/8	10	90	0.35
W 40461 †	x 5/8x1-1/8	10	100	0.3
W 40462 †	x 7/8	10	100	0.28
W 40463 †	x 5/8	10	100	0.21
W 40122 †	1-3/8x1-3/8x2-1/8	2	20	0.89
W 40100 †	x 1-5/8	5	50	0.49
W 40469 †	x 1-1/8	5	50	0.41
W 40470 †	x 7/8	5	50	0.35
W 40471 †	x 5/8	5	50	0.32
W 40472 †	x 1/2	5	50	0.29
W 40473 †	x 1-1/8 x1-3/8	5	50	0.48
W 40474 †	x 1-1/8	5	50	0.46
W 40475 †	x 7/8	5	50	0.38
W 40476 †	x 5/8	5	50	0.36
W 40478 †	x 7/8 x 1-3/8	5	50	0.45
W 40479 †	x 1-1/8	5	50	0.46
W 40480 †	x 7/8	5	50	0.37
W 40481 †	x 5/8	5	50	0.34
W 40483 †	x 5/8 x 1-3/8	5	50	0.57
W 40121 †	1-5/8x1-5/8x2-1/8	2	20	1.21
W 40485 †	x 1-3/8	5	50	0.57
W 40486 †	x 1-1/8	5	50	0.52
W 40487 †	x 7/8	5	50	0.47
W 40488 †	x 5/8	5	50	0.42
W 40489 †	x 1/2	5	50	0.41
W 40490 †	x 1-3/8x1-5/8	5	50	0.68
W 40491 †	x 1-3/8	5	50	0.69
W 40492 †	x 1-1/8	5	50	0.57
W 40493 †	x 7/8	5	50	0.57
W 40494 †	x 5/8	5	50	0.45
W 40495 †	x 1-1/8x1-5/8	5	50	0.68
W 40496 †	x 1-3/8	5	50	0.65
W 40497 †	x 1-1/8	5	50	0.61
W 40498 †	x 7/8	5	50	0.56
W 40237 †	x 5/8	5	30	0.45
W 40499 †	x 7/8 x 1-5/8	5	50	0.67
W 40239 †	x 1-3/8	5	50	0.75
W 40240 †	x 1-1/8	5	50	0.52
W 40238 †	x 7/8	5	50	0.55
W 40243 †	x 5/8	5	50	0.47
W 40244 †	x 5/8 x 15/8	5	50	0.66
W 40153 †	2-1/8x2-1/8x3-1/8	1	10	2.55
W 40144 †	x 2-5/8	1	10	1.46
W 40103 †	x 1-5/8	5	50	0.99
W 40104 †	x 1-3/8	5	50	0.85
W 40105 †	x 1-1/8	5	50	0.88
W 40106 †	x 7/8	5	50	0.83
W 40107 †	x 5/8	5	50	0.67
W 40108 †	x 1/2	2	20	0.68
W 40109 †	x 1-5/8x2-1/8	2	20	1.31
W 40110 †	x 1-5/8	2	20	1.15
W 40111 †	x 1-3/8	2	20	0.86
W 40112 †	x 1-1/8	2	20	1.06
W 40113 †	x 7/8	2	20	0.75
W 40114 †	x 5/8	5	50	0.77
W 40115 †	x 1-3/8x2-1/8	2	20	1.3
W 40116 †	x 1-5/8	2	20	1.14
W 40117 †	x 1-3/8	2	20	1.09

### TEE (CONT.)

Part	Size	Box	Ctn	Wt
W 40118 †	x 1-1/8	2	20	0.95
W 40119 †	x 7/8	5	50	0.76
W 40120 †	x 5/8	5	20	0.78
W 40245 †	x 1-1/8x2-1/8	5	25	1.64
W 40247 †	x 1-1/8	5	50	1.06
W 40248 †	x 7/8 x 2-1/8	5	25	1.71
W 40249 †	x 5/8 x 2-1/8	5	25	1.66
W 40124 †	2-5/8x2-5/8x2-1/8	2	20	1.59
W 40125 †	x 1-5/8	2	20	1.49
W 40126 †	x 1-3/8	2	20	1.87
W 40127 †	x 1-1/8	2	20	1.83
W 40128 †	x 7/8	1	10	1.83
W 40129 †	x 5/8	1	10	2.05
W 40130 †	x 21/8x2-5/8	4	20	2.3
W 40131 †	x2-1/8	2	20	1.84
W 40132 †	x 1-5/8	4	20	2.09
W 40133 †	x 1-3/8	4	20	2.12
W 40134 †	x 1-1/8	4	20	2.1
W 40135 †	x 7/8	4	20	2.06
W 40136 †	x 5/8	4	20	2.2
W 40137 †	x 1-5/8x2-5/8	4	20	2.32
W 40138 †	x 2-1/8	4	20	1.84
W 40139 †	x 1-5/8	4	20	2.11
W 40140 †	x 1-3/8	4	20	2.17
W 40141 †	x 1-1/8	4	20	1.83
W 40142 †	x 7/8	4	20	2.36
W 40143 †	x 5/8	4	20	2.36
W 40220 †	x 1-3/8x2-5/8	4	20	2.35
W 40250 †	x 2-1/8	4	20	1.82
W 40251 †	x 1-5/8	4	20	2.47
W 40252 †	x 1-3/8	4	20	1.96
W 40253 †	x 1-1/8	4	20	2.47
W 40254 †	x 7/8	4	20	2.18
W 40255 †	x 5/8	4	20	2.47
W 40221 †	x 1-1/8x2-5/8	4	20	2.39
W 40256 †	x 2-1/8	4	20	1.97
W 40257 †	x 1-5/8	4	20	2.15
W 40258 †	x 1-3/8	4	20	2.04
W 40259 †	x 1-1/8	4	20	2.27
W 40222 †	x 7/8x2-5/8	4	20	2.41
W 40151	3-1/8x3-1/8x2-5/8	2	10	2.45
W 40150	x 2-1/8	2	20	2.3
W 40149	x 1-5/8	2	10	2.18
W 40148	x 1-3/8	2	10	2.38
W 40147	x 1-1/8	2	20	1.96
W 40146	x 7/8	2	20	1.49
W 40145	x 5/8	2	20	1.38
W 40159	x 2-5/8x3-1/8	2	10	2.96
W 40158	x 2-5/8	2	10	4.52
W 40157	x 2-1/8	2	10	2.68
W 40156	x 1-5/8	2	10	2.63
W 40155	x 1-3/8	2	10	2.62
W 40154	x 1-1/8	2	20	2.02
W 40167	x 2-1/8x3-1/8	2	10	3.07
W 40165	x 2-5/8	2	10	4.64
W 40164	x 2-1/8	2	10	2.75
W 40163	x 1-5/8	2	10	2.57
W 40162	x 1-3/8	2	10	2.61
W 40161	x 1-1/8	2	20	2.04
W 40174	x 1-5/8x3-1/8	2	10	2.97
W 40181	x 1-3/8x3-1/8	2	10	3.14
W 40178	x 1-1/8x3-1/8	2	10	3.02
W 40179	x 7/8x3-1/8	2	10	3.03
W 40198	4-1/8x4-1/8x3-1/8	1	5	4.94
W 40197	x 2-5/8	1	5	5.16
W 40196	x 2-1/8	1	10	4.52
W 40195	x 1-5/8	1	10	4.47
W 40194	x 1-3/8	1	10	4.55
W 40193	x 1-1/8	1	10	3.05
W 40192	x 7/8	1	10	2.89
W 40191	x 5/8	1	10	2.89
W 40208	x 3-1/8x4-1/8	1	5	8.66
W 40206	x 3-1/8	1	5	5.12
W 40205	x 2-5/8	1	5	5.61
W 40204	x 2-1/8	1	5	4.76
W 40212	x 2-5/8x4-1/8	1	5	7.79
W 40216	x 2-1/8x4-1/8	1	5	8.95
W 40215	x 1-5/8x4-1/8	1	5	8.51
W 40214	4-1/8x1-3/8x4-1/8	1	5	8.57
W 40213	x 1-1/8x4-1/8	1	5	9.33
W 40503	6-1/8x6-1/8x3-1/8	-	1	11
W 40504	x 2-5/8	-	1	11.1
W 40505	x 2-1/8	-	1	9.54


### TEE

**FORGED BRASS** 

**WT-602** **C x C x C**

Part	Size	Box	Ctn	Wt
W 04208	1/4x1/4x1/4	50	450	0.09
W 04209	x 1/8	50	1,200	0.04
W 04228	3/8x3/8x3/8	25	350	0.15
W 04229	x 1/4	25	400	0.1
W 04230	x 1/8	10	400	0.11
W 04259	1/2x1/2x3/8	10	240	0.15
W 04283	5/8x5/8x1/2	10	150	0.33


### FITTING

**WT-600F** 

**C x FTG x C**

Part	Size	Box	Ctn	Wt
W 04106 †	5/8	50	300	0.1
W 04131 †	7/8	25	150	0.19


### UNION

**WC-407** 

**C x C**

Part	Size	Box	Ctn	Wt
W 08001	3/8	25	250	0.12
W 08002	1/2	25	250	0.11
W 08003	5/8	25	250	0.16
W 08004	7/8	25	150	0.37
W 08005	1-1/8	10	100	0.52


### COPPER TUBE STRAP

**2-HOLE** 

**WS-1100**

Part	Size	Box	Ctn	Wt
A 01203	1/4	100	4,000	0.01
A 01278	3/8	100	5,600	0.01
A 01366	1/2	100	3,400	0.01
A 02529	5/8	100	1,500	0.01
A 01467	3/4	100	2,000	0.01
A 02574	7/8	50	750	0.01
A 02614	1-1/8	50	750	0.02
A 02650	1-3/8	50	500	0.04
A 02675	1-5/8	50	500	0.05
A 02708	2-1/8	50	500	0.06

### PERFORATED COPPER STRAP

**WS-1101** 

Part	Size	Box	Ctn	Wt
A 01211	25 Ft. Roll	1	10	1.63

† UL Recognized to 700 PSI (select sizes)

## COPPER FITTING DATA

<b>TEMPERATURE - PRESSURE RATINGS OF SOLDER JOINTS</b>					
ALLOYS USED FOR JOINTS	SERVICE TEMPERATURE °F	STANDARD TUBE SIZE, TYPES K, L, AND M			
		WATER AND NON-CORROSIVE LIQUIDS & GASES			
		1/4 to 1	1-1/4 to 2	2-1/2 to 4	5 to 8
50 / 50 Tin Lead Solder Not to be used in potable water systems	100	200	175	150	135
	150	150	125	100	90
	200	100	90	75	70
	250	85	75	50	45
95 / 5 Tin-Antimony Solder	100	1090	850	705	660
	150	625	485	405	375
	200	505	395	325	305
	250	270	210	175	165
Alloy E Solder	100	710	555	460	430
	150	475	370	305	285
	200	375	290	240	225
	250	320	250	205	195
Alloy HB Solder	100	1035	805	670	625
	150	710	555	460	430
	200	440	345	285	265
	250	430	335	275	260
Brazing Alloys (melting at or above 1000°F)		Pressure-temperature ratings is that of the tubing being used			

Note: Ratings are those given in ASME B 16.22 "Wrought Copper and Copper Alloy Solder Joint Pressure Fittings." (a) Solder alloys are covered by ASTM Standard Specification B32. The Safe Drinking Water Act Amendment of 1986 prohibits the use of any solder having a lead content in excess of 0.2% for potable water systems.

<b>PRESSURE LOSS IN FITTINGS EXPRESSED AS EQUIVALENT LENGTH OF TUBE, FEET</b>						
Normal or Standard in Inches	Wrot Copper Fittings					
	90 Degree Ell	45 Degree Ell	Tee Straight Run	Tee Side Branch	Coupling	180 Degree Bend
3/8	0.5	0.5	0.5	1	-	0.5
1/2	0.5	0.5	0.5	1	-	1
5/8	0.5	0.5	0.5	2	-	1
3/4	1	0.5	0.5	2	-	2
1	1	1	0.5	3	-	2
1-1/4	2	1	0.5	4	0.5	3
1-1/2	2	2	1	5	0.5	4
2	2	2	1	7	0.5	8
2-1/2	2	3	2	9	0.5	16
3	3	4	-	-	1	20

## COPPER TUBE AND SOLDER TYPE FITTINGS

**1.** Cut tube square with the cutter or fine hack saw (32 tooth blade is recommended). Remove Burr.

**2.** Clean outside end of copper tube thoroughly with sand cloth or sandpaper equal depth of fitting. Leave no dark spots.

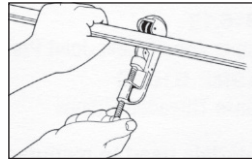
**3.** Clean inside of fitting carefully to tube stop with wire brush. Note: Sand cloth or sandpaper may also be used.

**4.** Using a brush, apply light uniform coat of soldering flux to the outside of the tube and inside of the fitting.

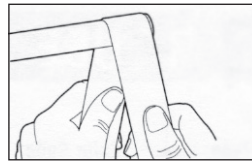
**5.** Slip tube into fitting to tube stop. Turn tube back and forth once or twice to distribute flux evenly.

**6.** Apply heat uniformly around the fitting with torch. When solder melts upon contact with heated fitting, the proper soldering temperature has been reached. Remove flame and feed solder slightly off center at the bottom of the joint. Proceed across the bottom of the fitting and up to the top center position. Return to the starting point, and then proceed up the incomplete side to the top, again, overlapping the solder metal. Wipe off surplus solder with a piece of cloth.

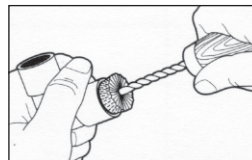
**CAUTION: No not overheat the joint or direct the flame into the face of the fitting cup. Overheating could burn the flux, which will destroy its effectiveness and the solder will not enter the joint properly.**



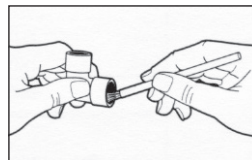
**1.** Cut tube to length & remove burr with file or scraper.



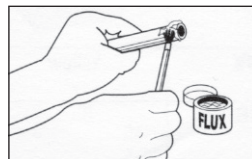
**2.** Clean outside of tube with sandpaper or sand cloth.



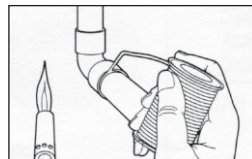
**3.** Clean inside of fitting with wire brush, sand cloth or sandpaper.



**4.** Apply flux thoroughly to inside of fitting.



**5.** Apply flux thoroughly to outside of tube - assemble tube and fitting.



**6.** Apply heat with torch. When solder melts upon contact with heated fitting, the proper temp for soldering has been reached. Remove flame & feed solder to the joint at one or two points until a ring of solder appears at the end of the fitting.