



Ultra-Clean Welding Joint

Uitra Clean Welding Joint



- Specifications: 1.8 to 1 in.
- Crafted from high-purity stainless steel, it offers high-purity (BA grade) and ultra-high-purity (EP grade) connectors.
- Designed for manual and automatic welding equipment.

Product Summary

Micro-welded taper joint MRUW series	
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Micro-welded el-bow MEW series	
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Welded single-ended extended el-bow MEXW series	
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Micro-welded reducing el-bow MERW series	
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45° welded elbow MEW45 Series	
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Micro-welded tee joint MTW series	
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Welded tapered tee joint MTRW series	
23	
Micro-welded four-way joint MCW series	
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Welded 3D three-way joint METW series	
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Welded tapered joint RW series	
24	
Welded elbow EW series	
24	

Welded tee joint TW series	
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Welded tee reducer joint TRW series	
25	
Welded four-way joint CW series	
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Welded Joint Characteristics

GCTec specializes in the design and production of high quality welded joints for high purity and ultra-high purity applications.

All welding products are manufactured and welded in accordance with SEMI F75 and F81 standards.

Construction Material

Bar , forged		
Material	Code name	Standard
316L stainless steel	SS	Bar stock: ASME SA479 and ASTM A276 Body shape: ASME SA182
316L VAR stainless steel	SV	Bar stock: ASME SA479 and ASTM A276 Body shape: ASME SA182

Rated Stress

All rated values comply with the calculated values specified in ASME Code for pressure pipelines, process pipelines, and ASME B31.3 for power pipelines.

To determine the main pipe pressure rating according to ASME B31.1, multiply the nominal psig value by 0.94.

The rated working pressure is determined by the gasket material at room temperature.

Temperature rating		
Element	Material	Temperature °C (°F)
Connect	316L stainless steel	537 (1000)
	316L VAR stainless steel	537 (1000)

Clean and Ultra-High Purity Process

Each joint is specially cleaned to remove oil, grease and fine particles. A variety of joints are available with controlled surface finish, electro-polishing and special cleaning to meet the requirements of ultra-high purity systems.

Micro Sleeve for Welded Head

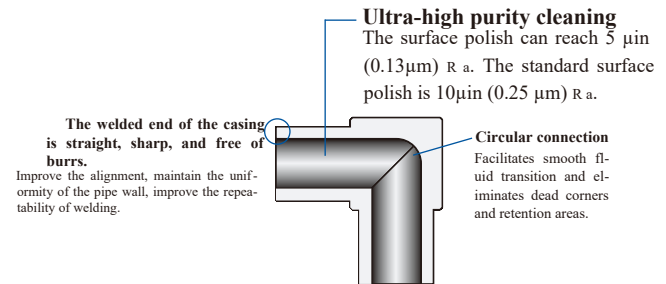
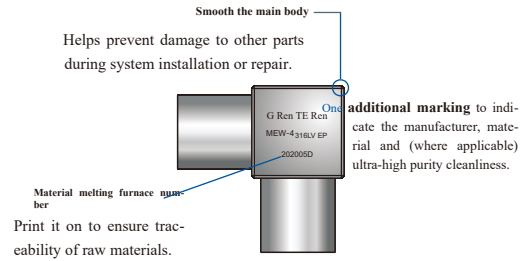
Packaged Design

- Adapt to the requirements of miniaturized card sleeve system.
- Allow components to be compact and close together.
- Provide the same flow rate and service grade as a larger welded joint.

Order Details and Size

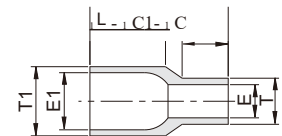
- The dimensions are for reference only and may change.
- We provide high-purity (BA grade) and ultra-high-purity (EP grade) connectors.

To order high-purity (BA grade) 316L stainless steel products, prefix the standard model with SS-. For example: SS-MEW-4. For electrolytic polishing, add-EP to the model. To order ultra-high purity (EP grade) 316 L VAR stainless steel products, replace SS with SV before the standard model and add-EP after the model. For example: SV-MEW-4-EP.



MINI REDUCING UNION

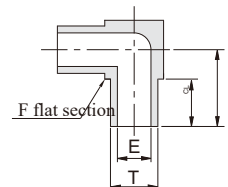
MRUW Series Micro-Soldered Thread-Reducing Coupling



Basic Sub- cription Model	L		C1		C		E1		E		T1 Cardiac catheter outer dia- meter	T1 wall thick- ness		T Casing on- ter dia- meter	T wall thick- ness	
	mm	inch	mm	inch	mm	inch	mm	inch	mm	inch	inch	mm	inch	inch	mm	inch
MRUW-4-2	19.1	0.75	10.4	0.41	6.4	0.25	4.4	0.17	1.9	0.07	1/4	1.0	-	1/8	-	0.028
MRUW-6-4	19.1	0.75	10.4	0.41	6.4	0.25	7.5	0.30	4.4	0.17	3/8	1.0	-	1/4	1.0	-
MRUW-8-4	19.1	0.75	10.4	0.41	6.4	0.25	10.2	0.40	4.4	0.17	1/2	-	0.049	1/4	1.0	-
MRUW-8-6	19.1	0.75	10.4	0.41	6.4	0.25	10.2	0.40	7.5	0.30	1/2	-	0.049	3/8	1.0	-
MRUW-12-4	19.1	0.75	10.4	0.41	6.4	0.25	15.8	0.62	4.4	0.17	3/4	-	0.065	1/4	1.0	-
MRUW-12-6	19.1	0.75	10.4	0.41	6.4	0.25	15.8	0.62	7.5	0.30	3/4	-	0.065	3/8	1.0	-
MRUW-12-8	19.1	0.75	10.4	0.41	6.4	0.25	15.8	0.62	10.2	0.40	3/4	-	0.065	1/2	-	0.049

MINI ELBOW

MEW Series Micro-Soldered El-
bow

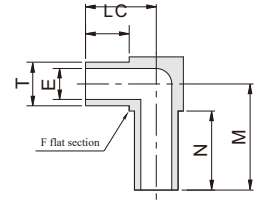


Basic Sub- cription Model	L		C		E		F	T Casing outer dia- meter	T wall thick- ness	
	mm	inch	mm	inch	mm	inch	inch	inch	mm	inch
MEW-2	10.3	0.41	6.4	0.25	1.9	0.07	5/16	1/8	-	0.028
MEW-4	10.3	0.41	6.4	0.25	4.4	0.17	5/16	1/4	1.0	-
MEW-6	11.9	0.47	6.4	0.25	7.5	0.30	7/16	3/8	1.0	-
MEW-8	13.5	0.53	6.4	0.25	10.2	0.40	9/16	1/2	-	0.049
MEW-12	16.7	0.66	6.4	0.25	15.8	0.62	13/16	3/4	-	0.065

MINI ELBOW

With extended leg

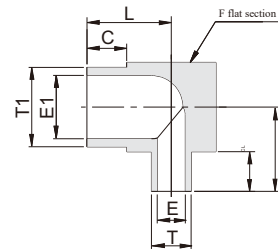
MEXW Series Micro-Soldered Single-End Extended Elbow



Basic Sub- cription Model	L		C		M		N		E		F	T	T wall thick- ness
	mm	inch	mm	inch	mm	inch	mm	inch	mm	inch	inch	inch	mm
MEXW-4-4*11.4	10.3	0.41	6.4	0.25	15.4	0.61	11.4	0.45	4.4	0.18	5/16	1/4	1.0
MEXW-4-4*12.7	10.3	0.41	6.4	0.25	16.8	0.66	12.7	0.50	4.4	0.18	5/16	1/4	1.0
MEXW-4*12.7-4*12.7	16.8	0.66	12.7	0.50	16.8	0.66	12.7	0.50	4.4	0.18	5/16	1/4	1.0

MINI ELBOW REDUCER

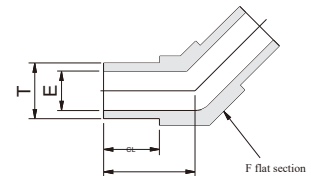
MERW Series Micro-Soldered Variable Diameter Elbow



Basic Sub- scription Model	L		C		E1		E		F	T1 Casing outer diam- eter	T1 wall thick- ness		T Casing outer diam- eter	T wall thick- ness	
	mm	inch	mm	inch	mm	inch	mm	inch	inch	inch	mm	inch	inch	mm	inch
MERW-4-2	10.3	0.41	6.4	0.25	4.4	0.17	1.9	0.07	5/16	1/4"	1.0	-	1/8"	-	0.028
MERW-6-4	11.9	0.47	6.4	0.25	7.5	0.30	4.4	0.17	7/16	3/8"	1.0	-	1/4"	1.0	-
MERW-8-4	13.5	0.53	6.4	0.25	10.2	0.40	4.4	0.17	9/16	1/2"	-	0.049	1/4"	1.0	-
MERW-8-6	13.5	0.53	6.4	0.25	10.2	0.40	7.5	0.30	9/16	1/2"	-	0.049	3/8"	1.0	-
MERW-12-4	16.7	0.66	6.4	0.25	15.8	0.62	4.4	0.17	13/16	3/4"	-	0.065	1/4"	1.0	0.028
MERW-12-6	16.7	0.66	6.4	0.25	15.8	0.62	7.5	0.30	13/16	3/4"	-	0.065	3/8"	1.0	-
MERW-12-8	16.7	0.66	6.4	0.25	15.8	0.62	10.2	0.40	13/16	3/4"	-	0.065	1/2"	-	0.065

MINI ELBOW 45°

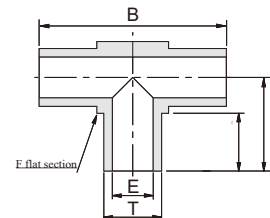
MEW45 Series Micro-Solder 45° El-
bow



Basic Subscription Model	L		C		E		F	T Casing outer diameter	T wall thickness	
	mm	inch	mm	inch	mm	inch	inch	inch	mm	inch
MEW45-4	10.3	0.41	6.4	0.25	4.4	0.17	5/16	1/4	1.0	-
MEW45-6	11.9	0.47	6.4	0.25	7.5	0.30	7/16	3/8	1.0	-
MEW45-8	13.5	0.53	6.4	0.25	10.2	0.40	9/16	1/2	-	0.049
MEW45-12	21.0	0.83	6.4	0.25	15.8	0.62	13/16	3/4	-	0.065

MINI TEE

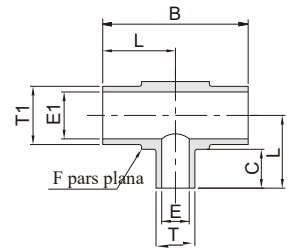
MTW Series Micro-Soldered T-Connectors



Basic Sub- scription Model	L		B		C		E		F	T Casing outer diam- eter	T wall thick- ness	
	mm	inch	mm	inch	mm	inch	mm	inch	inch	inch	mm	inch
MTW-2	10.3	0.41	20.7	0.81	6.4	0.25	1.9	0.07	5/16	1/8	-	0.028
MTW-4	10.3	0.41	20.7	0.81	6.4	0.25	4.4	0.17	5/16	1/4	1.0	-
MTW-6	11.9	0.47	23.9	0.94	6.4	0.25	7.5	0.30	7/16	3/8	1.0	-
MTW-8	13.5	0.53	27.1	1.07	6.4	0.25	10.2	0.40	9/16	1/2	-	0.049
MTW-12	16.7	0.66	33.4	1.31	6.4	0.25	15.8	0.62	13/16	3/4	-	0.065

MINI TEE REDUCER

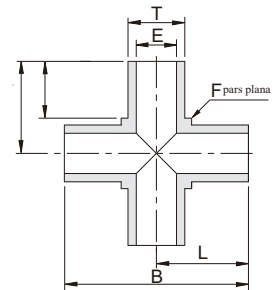
MTRW Series Micro-Soldered Variable Diameter T-Union



Basic Sub- scription Model	L		B		C		E1		E		F	T1 Casing outer diam- eter	T1 Wall thic- kness		T Casing outer diam- eter	T wall thic- kness	
	mm	inch	mm	inch	mm	inch	mm	inch	mm	inch	inch	inch	mm	inch	inch	mm	inch
MTRW-6-4	11.9	0.47	23.9	0.94	6.4	0.25	7.7	0.30	4.4	0.17	7/16	3/8	1.0	-	1/4	1.0	-
MTRW-8-4	13.5	0.53	27.1	1.07	6.4	0.25	10.2	0.40	4.4	0.17	9/16	1/2	-	0.049	1/4	1.0	-
MTRW-8-6	13.5	0.53	27.1	1.07	6.4	0.25	10.2	0.40	7.5	0.30	9/16	1/2	-	0.049	3/8	1.0	-
MTRW-12-4	16.7	0.66	33.4	1.31	6.4	0.25	15.8	0.62	4.4	0.17	13/16	3/4	-	0.065	1/4	1.0	-
MTRW-12-6	16.7	0.66	33.4	1.31	6.4	0.25	15.8	0.62	7.5	0.30	13/16	3/4	-	0.065	3/8	1.0	-
MTRW-12-8	16.7	0.66	33.4	1.31	6.4	0.25	15.8	0.62	10.2	0.40	13/16	3/4	-	0.065	1/2	-	0.049

MINI CROSS

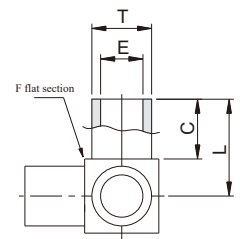
MCW Series Micro-Solder Four-Way Connector



Basic Sub- scription Model	L		B		C		E		F	T Casing outer diam- eter	T wall thick- ness	
	mm	inch	mm	inch	mm	inch	mm	inch	inch	inch	mm	inch
MCW-2	10.3	0.41	20.7	0.81	6.4	0.25	1.9	0.07	5/16	1/8	-	0.028
MCW-4	10.3	0.41	20.7	0.81	6.4	0.25	4.4	0.17	5/16	1/4	1.0	-
MCW-6	11.9	0.47	23.9	0.94	6.4	0.25	7.5	0.30	7/16	3/8	1.0	-
MCW-8	13.5	0.53	27.1	1.07	6.4	0.25	10.2	0.40	9/16	1/2	-	0.049
MCW-8	16.7	0.66	33.4	1.31	6.4	0.25	15.8	0.62	13/16	3/4	-	0.065

MINI TRI-EL

MTEW series micro-welded 3D three-way elbow

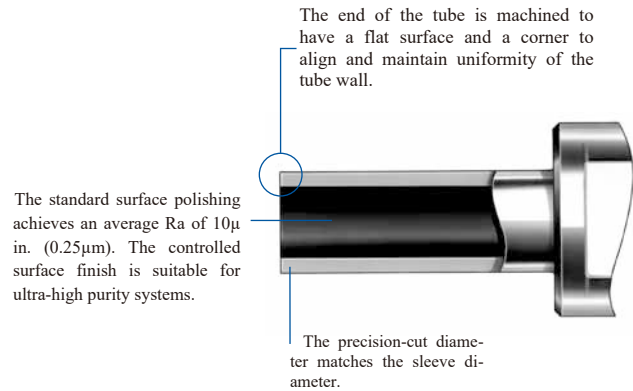


Basic Sub- scription Model	L		C		E		F	T Casing outer diam- eter	T wall thick- ness	
	mm	inch	mm	inch	mm	inch	inch	inch	mm	inch
MTEW-2	10.3	0.41	6.4	0.25	1.9	0.07	5/16	1/8	-	0.028
MTEW-4	10.3	0.41	6.4	0.25	4.4	0.17	5/16	1/4	1.0	-
MTEW-6	11.9	0.47	6.4	0.25	7.5	0.30	7/16	3/8	1.0	-
MTEW-8	13.5	0.53	6.4	0.25	10.2	0.40	9/16	1/2	-	0.049
MTEW-12	16.7	0.66	6.4	0.25	15.8	0.62	13/16	3/4	-	0.065

Casing to weld joint

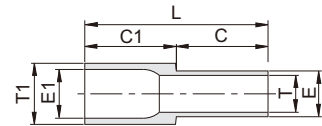
Order Details and Size

The dimensions are for reference only and may change.



REDUCER

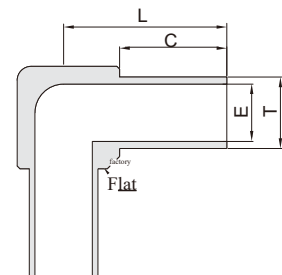
RW Series Welded Threaded Coupling



Basic Subscription Model	L		C1		C		E1		E		T1	T1	T	T wall thickness	
	mm	inch	mm	inch	mm	inch	mm	inch	mm	inch	Casing outer diameter	Wall thickness	Casing outer diameter	mm	inch
RW-4-2	38.1	1.50	19.1	0.75	19.1	0.75	4.4	0.17	1.9	0.07	1/4"	1.0	-	1/8"	-
RW-6-4	38.1	1.50	19.1	0.75	19.1	0.75	7.5	0.30	4.4	0.17	3/8"	1.0	-	1/4"	1.0
RW-8-4	38.1	1.50	19.1	0.75	19.1	0.75	10.2	0.40	4.4	0.17	1/2"	-	0.049	1/4"	1.0
RW-8-6	38.1	1.50	19.1	0.75	19.1	0.75	10.2	0.40	7.5	0.30	1/2"	-	0.049	3/8"	1.0
RW-12-4	38.1	1.50	19.1	0.75	19.1	0.75	15.8	0.62	4.4	0.17	3/4"	-	0.065	1/4"	1.0
RW-12-6	38.1	1.50	19.1	0.75	19.1	0.75	15.8	0.62	7.5	0.30	3/4"	-	0.065	3/8"	1.0
RW-12-8	38.1	1.50	19.1	0.75	19.1	0.75	15.8	0.62	10.2	0.40	3/4"	-	0.065	1/2"	-
RW-16-4	38.1	1.50	19.1	0.75	19.1	0.75	22.1	0.87	4.4	0.17	1"	-	0.065	1/4"	1.0
RW-16-6	38.1	1.50	19.1	0.75	19.1	0.75	22.1	0.87	7.5	0.30	1"	-	0.065	3/8"	1.0
RW-16-8	38.1	1.50	19.1	0.75	19.1	0.75	22.1	0.87	10.2	0.40	1"	-	0.065	1/2"	-
RW-16-12	38.1	1.50	19.1	0.75	19.1	0.75	22.1	0.87	15.8	0.62	1"	-	0.065	3/4"	-

ELBOW

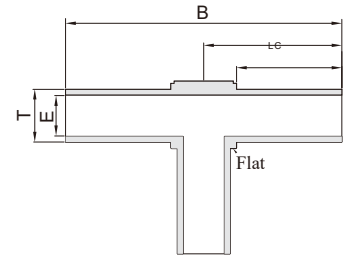
EW Series Welded Fittings



Basic Subscription Model	L		C		E		F	T	T wall thickness	
	mm	inch	mm	inch	mm	inch	mm	Casing outer diameter	mm	inch
EW-4	28.5	1.12	19.1	0.75	4.4	0.17	12.7	1/4	1.0	-
EW-6	28.5	1.12	19.1	0.75	7.5	0.30	12.7	3/8	1.0	-
EW-8	30.5	1.20	19.1	0.75	10.2	0.40	17.5	1/2	-	0.049
EW-12	36.0	1.42	23.0	0.90	15.8	0.62	23.8	3/4	-	0.065
EW-16	41.5	1.63	23.5	0.93	22.1	0.87	31.8	1	-	0.065

TEE

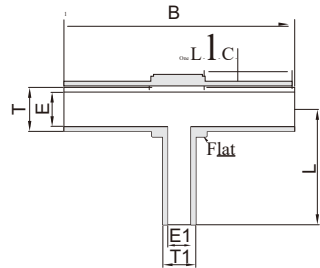
TW Series Welded T-joint



Basic Sub- cription Model	L		B		C		E		F	T	T wall thic- kness	
	mm	inch	mm	inch	mm	inch	mm	inch	mm	inch	mm	inch
TW-4	28.5	1.12	57.0	2.24	19.1	0.75	4.4	0.17	12.7	1/4	1.0	-
TW-6	28.5	1.12	57.0	2.24	19.1	0.75	7.5	0.30	12.7	3/8	1.0	-
TW-8	30.5	1.20	61.0	2.40	19.1	0.75	10.2	0.40	17.5	1/2	-	0.049
TW-12	36.0	1.42	72.0	2.83	23.0	0.90	15.8	0.62	23.8	3/4	-	0.065
TW-16	41.5	1.48	83.0	3.27	23.5	0.93	22.1	0.87	31.8	1	-	0.065

TEE REDUCER

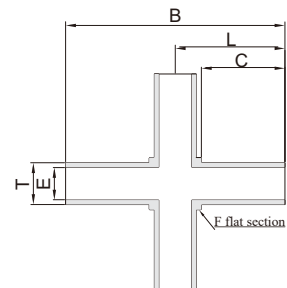
TRW Series Welded T-Union with Adjustable Dia-
meter



Basic Sub- cription Model	L		B		C		E		E1		F	T	T wall thic- kness	T1	T1
	mm	inch	mm	inch	mm	inch	mm	inch	mm	inch	mm	inch	inch/mm	inch	inch/mm
TRW-6-4	28.5	1.12	57.0	2.24	19.1	0.75	7.5	0.30	4.4	0.17	12.7	3/8	1.0	1/4	1.0
TRW-8-4	30.5	1.20	61.0	2.40	19.1	0.75	10.2	0.40	4.4	0.17	17.5	1/2	0.049"	1/4	1.0
TRW-8-6	30.5	1.20	61.0	2.40	19.1	0.75	10.2	0.40	7.5	0.30	17.5	1/2	0.049"	3/8	1.0
TRW-12-4	36.0	1.42	72.0	2.83	23.0	0.90	15.8	0.62	4.4	0.17	23.8	3/4	0.065"	1/4	1.0
TRW-12-6	36.0	1.42	72.0	2.83	23.0	0.90	15.8	0.62	7.5	0.30	23.8	3/4	0.065"	3/8	1.0
TRW-12-8	36.0	1.42	72.0	2.83	23.0	0.90	15.8	0.62	10.2	0.40	23.8	3/4	0.065"	1/2	0.049"
TRW-16-4	41.5	1.48	83.0	3.27	23.5	0.93	22.1	0.87	4.4	0.17	31.8	1	0.065"	1/4	1.0
TRW-16-6	41.5	1.48	83.0	3.27	23.5	0.93	22.1	0.87	7.5	0.30	31.8	1	0.065"	3/8	1.0
TRW-16-8	41.5	1.48	83.0	3.27	23.5	0.93	22.1	0.87	10.2	0.40	31.8	1	0.065"	1/2	0.049"
TRW-16-12	41.5	1.48	83.0	3.27	23.5	0.93	22.1	0.87	15.8	0.62	31.8	1	0.065"	3/4	0.065"

CROSS

CW Series Welded T-joint



Basic Sub- cription Model	L		B		C		E		F	T	T wall thic- kness	
	mm	inch	mm	inch	mm	inch	mm	inch	mm	inch	mm	inch
CW-4	28.5	1.12	57.0	2.24	19.1	0.75	4.4	0.17	12.7	1/4	1.0	-
CW-6	28.5	1.12	57.0	2.24	19.1	0.75	7.5	0.30	12.7	3/8	1.0	-
CW-8	30.5	1.20	61.0	2.40	19.1	0.75	10.2	0.40	17.5	1/2	-	0.049
CW-12	36.0	1.42	72.0	2.83	23.0	0.90	15.8	0.62	23.8	3/4	-	0.065
CW-16	41.5	1.48	83.0	3.27	23.5	0.93	22.1	0.87	31.8	1	-	0.065

