

MiniButtweld™ Fittings

Parker
uhp

Catalog 4280 - MiniButtweld™
June 2000



MiniButtweld™ Fittings

Introduction

Parker UHP products are designed as leak-free components for applications where ultra-high pure applications are required. MiniButtweld™ fittings provide compact ultra-high pure designs for use with orbital weld equipment. Their unique machining and surface enhancement prevent outgassing and inhibit corrosion.

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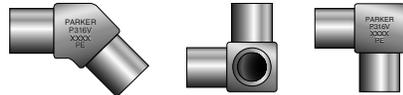
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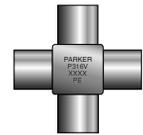
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Standard Features

- 316L VIM/VAR Material
- Permanently Heat Code marked; traceable to original mill certificate of test.
- Electropolished components permanently marked with designator on cube (PE).
- Critical surfaces are 100% visually inspected using magnification and lighting.
- Material composition printed on bag.



Specifications

- **Pressure Ratings** will be governed by the tubing selected for a particular application. Working Pressures are calculated below for tubing using maximum allowable stress levels in accordance with ASME/ANSI B31.3, at ambient temperature.

Tube O.D.	Pressure Rating		Normal Wall
	psig	bar	Thickness
1/8 in.	8500	580	.028 in.
1/4 in.	5100	350	.035 in.
3/8 in.	3300	220	.035 in.
1/2 in.	3500	240	.049 in.
6mm	6600	460	1mm

- **Dimensions** are for reference only and are subject to change.
- **Internal Surface Finishes:** Standard finish MiniButtweld™ fittings have an internal Surface Roughness of 15 μinch Ra. Electropolished (PE) MiniButtweld fittings have an internal Surface Roughness of 5 μinch Ra.
- **Cleaning and Packaging:** Ultra-High Purity 'OMEGA' cleaning and packaging in a Class 100 Clean Room environment validated per Federal Standard 209E, is standard for all electropolished components.

Materials

- 316L VIM/VAR Material complies with ASTM A276 and ASME SA479. Recommended tubing specifications include ASME SA213, ASTM A213, ASTM A249, ASTM A269, MIL T8504, and MIL T8506.



UHP Products Division

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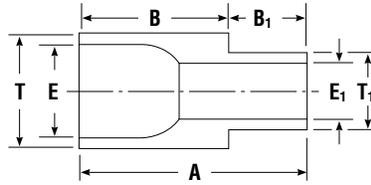
⚠ WARNING

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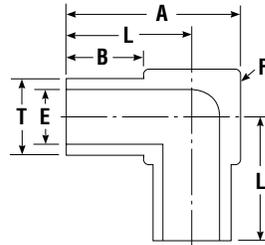
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MiniButtweld™ Fittings



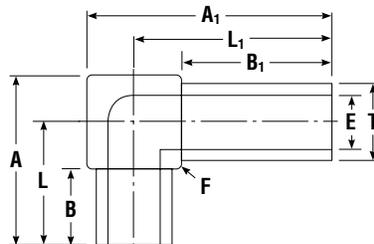
Reducing Union

T Tube O.D.	T1 Tube O.D.	Ordering Number	A		B		B1		E		E1	
			in.	mm	in.	mm	in.	mm	in.	mm	in.	mm
fractional												
1/4	1/8	4-2 MHM-SSV .035 .028	0.75	19.1	0.50	12.7	0.25	6.4	0.18	4.6	0.07	1.8
3/8	1/4	6-4 MHM-SSV .035	0.75	19.1	0.50	12.7	0.25	6.4	0.31	7.9	0.18	4.6
1/2	1/4	8-4 MHM-SSV .049 .035	0.75	19.1	0.50	12.7	0.25	6.4	0.40	10.2	0.18	4.6
1/2	3/8	8-6 MHM-SSV .049 .035	0.75	19.1	0.50	12.7	0.25	6.4	0.40	10.2	0.31	7.9



90° Union Elbow

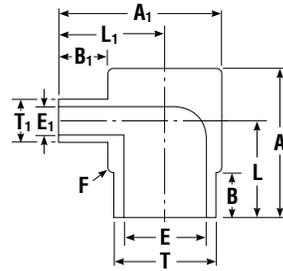
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		in.	mm	in.	mm	in.	mm		in.	mm
fractional										
1/8	2-2 MEM-SSV .028	0.56	14.2	0.25	6.4	0.07	1.8	5/16	0.41	10.4
1/4	4-4 MEM-SSV .035	0.56	14.2	0.25	6.4	0.18	4.6	5/16	0.41	10.4
3/8	6-6 MEM-SSV .035	0.69	17.5	0.25	6.4	0.31	7.9	7/16	0.47	11.9
1/2	8-8 MEM-SSV .049	0.81	20.6	0.25	6.4	0.40	10.2	9/16	0.53	13.5
6 mm	6M-6M MEM-SSV	0.56	14.2	0.25	6.4	0.16	4.1	5/16	0.41	10.4



Extended Leg 90° Union Elbow

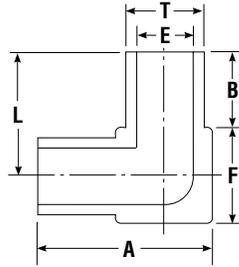
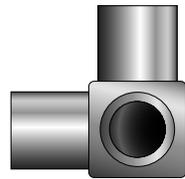
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		in.	mm	in.	mm	in.	mm	in.	mm	in.	mm		in.	mm	in.	mm
fractional																
1/4	4-4 MEM1-SSV .035	0.56	14.2	0.76	19.3	0.25	6.4	.45	0.5	0.18	4.6	5/16	0.41	10.41	0.61	15.5
1/4	4-4 MEM2-SSV .035	0.56	14.2	0.81	20.6	0.25	6.4	.50	0.5	0.18	4.6	5/16	0.41	10.41	0.66	16.8
1/4	4-4 M1EM1-SSV .035	0.76	19.3	0.76	19.3	0.45	11.4	.45	0.5	0.18	4.6	5/16	0.61	15.49	0.61	15.5
1/4	4-4 M2EM2-SSV .035	0.81	20.6	0.81	20.6	0.50	12.7	.50	0.5	0.18	4.6	5/16	0.66	16.76	0.66	16.8

MiniButtweld™ Fittings



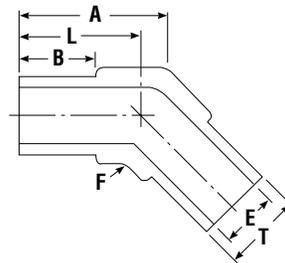
Reducing Elbow

T Tube O.D.	T1 Tube O.D.	Ordering Number	A		A1		B		B1		E		E1		F Body Cube	L		L1	
			in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm		in.	mm		
fractional																			
3/8	1/4	6-4 MEM-SSV .035	0.69	17.5	0.69	17.5	0.25	6.4	0.25	6.4	0.31	7.9	0.18	4.6	7/16	0.47	11.9	0.47	11.9
1/2	1/4	8-4 MEM-SSV .049 .035	0.81	20.6	0.81	20.6	0.25	6.4	0.25	6.4	0.40	10.2	0.18	4.6	9/16	0.53	13.5	0.53	13.5
1/2	3/8	8-6 MEM-SSV .049 .035	0.81	20.6	0.81	20.6	0.25	6.4	0.25	6.4	0.40	10.2	0.31	7.9	9/16	0.53	13.5	0.53	13.5



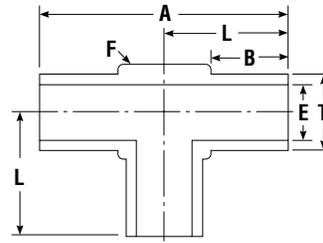
Tribow

T Tube O.D.	Ordering Number	A		B		E		F Body Cube	L	
		in.	mm	in.	mm	in.	mm		in.	mm
fractional										
1/4	4-4-4 MOJM-SSV .035	0.56	14.2	0.25	6.4	0.18	4.6	5/16	0.41	10.4
3/8	6-6-6 MOJM-SSV .035	0.69	17.5	0.25	6.4	0.31	7.9	7/16	0.47	11.9
1/2	8-8-8 MOJM-SSV .049	0.81	20.6	0.25	6.4	0.40	10.2	9/16	0.53	13.5



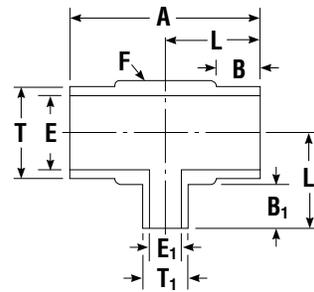
45° Union Elbow

T Tube O.D.	Ordering Number	A		B		E		F Body Cube	L	
		in.	mm	in.	mm	in.	mm		in.	mm
fractional										
1/4	4-4 MVM-SSV .035	0.47	11.9	0.25	6.4	0.18	4.6	5/16	0.41	10.4
3/8	6-6 MVM-SSV .035	0.56	14.2	0.25	6.4	0.31	7.9	7/16	0.47	11.9
1/2	8-8 MVM-SSV .049	0.64	16.3	0.25	6.4	0.40	10.2	9/16	0.53	13.5



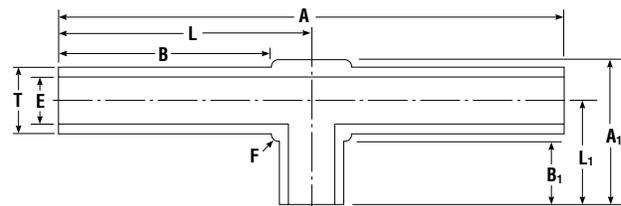
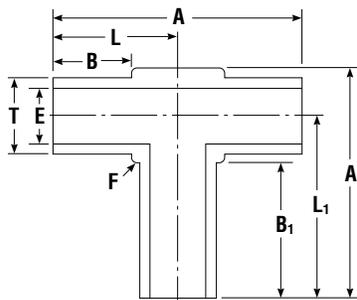
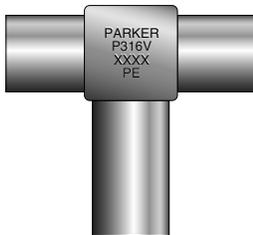
Union Tee

T Tube O.D.	Ordering Number	A		B		E		F Body Cube	L	
		in.	mm	in.	mm	in.	mm		in.	mm
fractional										
1/8	2-2-2 MJM-SSV .028	0.82	20.8	0.25	6.4	0.07	1.8	5/16	0.41	10.4
1/4	4-4-4 MJM-SSV .035	0.82	20.8	0.25	6.4	0.18	4.6	5/16	0.41	10.4
3/8	6-6-6 MJM-SSV .035	0.94	23.9	0.25	6.4	0.31	7.9	7/16	0.47	11.9
1/2	8-8-8 MJM-SSV .049	1.06	26.9	0.25	6.4	0.40	10.2	9/16	0.53	13.5
6 mm	6M-6M-6M MJM-SSV	0.82	20.8	0.25	6.4	0.16	4.1	5/16	0.41	10.4



Reducing Tee

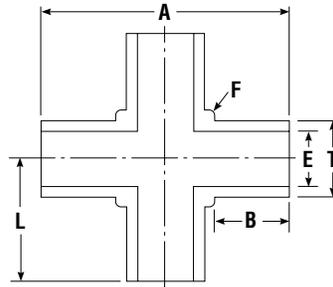
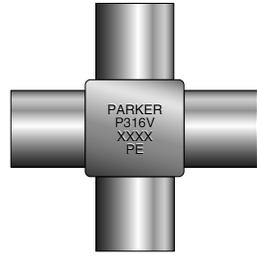
T Tube O.D.	T1 Tube O.D.	Ordering Number	A		B		B1		E		E1		F Body Cube	L		L1	
			in.	mm	in.	mm	in.	mm	in.	mm	in.	mm		in.	mm	in.	mm
fractional																	
3/8	1/4	6-6-4 MJM-SSV .035	0.94	23.9	0.25	6.4	0.25	6.4	0.31	7.9	0.18	4.6	7/16	0.47	11.9	0.47	11.9
1/2	1/4	8-8-4 MJM-SSV049049035	1.06	26.9	0.25	6.4	0.25	6.4	0.40	10.2	0.18	4.6	9/16	0.53	13.5	0.53	13.5
1/2	3/8	8-8-6 MJM-SSV049049035	1.06	26.9	0.25	6.4	0.25	6.4	0.40	10.2	0.31	7.9	9/16	0.53	13.5	0.53	13.5



Extended Leg Union Tee

T Tube O.D.	Ordering Number	A		A1		B		B1		E		F Body Cube	L		L1	
		in.	mm	in.	mm	in.	mm	in.	mm	in.	mm		in.	mm		
fractional																
1/4	4-4-4 MJM1-SSV .035	0.82	20.8	0.76	19.3	0.25	6.4	0.45	11.4	0.18	4.6	5/16	0.41	10.4	0.61	15.5
1/4	4-4-4 M3JM-SSV .035	1.97	50.0	0.56	14.2	0.83	21.1	0.25	6.4	0.18	4.6	5/16	0.98	24.9	0.41	10.4

MiniButtweld™ Fittings



Union Cross

T Tube O.D.	Ordering Number	A		B		E		F Body Cube	L	
		in.	mm	in.	mm	in.	mm		in.	mm
fractional										
1/8	2 MKM-SSV .028	0.82	20.8	0.25	6.4	0.07	1.8	5/16	0.41	10.4
1/4	4 MKM-SSV .035	0.82	20.8	0.25	6.4	0.18	4.6	5/16	0.41	10.4
3/8	6 MKM-SSV .035	0.94	23.9	0.25	6.4	0.31	7.9	7/16	0.47	11.9
1/2	8 MKM-SSV .049	1.06	26.9	0.25	6.4	0.40	10.2	9/16	0.53	13.5
6 mm	6M MKM-SSV	0.82	20.8	0.25	6.4	0.16	4.1	5/16	0.41	10.4

Ordering Instructions



Example: If your system requires an electropolished 90° Elbow orbital tube weld fitting connecting from 1/4" O.D. tubing to 1/4" O.D. tubing, .035" wall thickness, you would order the following part:

4-4 - MEM - SSV .035 - PE
 Size - Type - Material - Wall Thickness - Electropolished 5 μinch Ra



Size: Tube sizes are designated by the number of sixteenths of an inch. (i.e. 1/4" O.D. tube=4/16"=4) Metric Tube O.D. is designated in millimeters and prefixed by "M". (i.e. 6M-6M MEM-SSV)

Type: Designates shape of component: H=Union, E=90° Elbow, V= 45° Elbow, J=Tee, K=Cross, OJ=Tribow.

Material: 316L VIM/VAR Stainless Steel. High-purity Nickel and Hastelloy C-22® available upon request.

Wall Thickness: Fittings must be specified to match tube wall thicknesses. See page 2 for standard wall thicknesses, other sizes available upon request.

Hastelloy C-22® is a registered trademark of Haynes International, Inc.

How To Order

Parker MiniButtweld™ Components are ordered by ordering number, as listed in this catalog.

Additional Products

Automatic Buttweld



Socket Weld



VacuSeal™



Parker also offers a full line of Automatic Buttweld and Socket Weld (Weld-lok) fittings. See Catalog 4280 for additional information.

See Catalog 4245 VacuSeal™ for Parker's full line of Gasket Face Seal products.

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