

# Fittings, Tubing & Nipples

## High Pressure

*Pressures to 150,000 psi (10342 bar)*

Since 1945 Parker Autoclave Engineers has designed and built premium quality valves, fittings and tubing. This commitment to engineering and manufacturing excellence has earned Parker Autoclave Engineers a reputation for reliable, efficient product performance. Parker Autoclave Engineers has long been established as the world leader in high pressure fluid handling components for the chemical/petrochemical, research, and oil and gas, waterjet, and water-blast industries.



### *High Pressure Fittings, Tubing and Nipples Features:*

- Coned-and-Threaded Connection.
- Available sizes are 1/4, 5/16, 3/8, 9/16, and 1”.
- Fittings manufactured from 316 cold worked or high strength stainless steel.
- Tubing is manufactured from dual rated 316/316L and 304/304L cold worked stainless steel.
- Operating Temperatures from -423°F (-252°C) to 1200°F (649°C).
- Anti-vibration connection components available.
- Ultra-high pressure components.
- Autofrettaged tubing.
- High pressure high cycle tubing.

The high and ultra-high pressure series uses Parker Autoclave Engineers' high pressure connection. This coned-and-threaded connection provides dependable performance in gas or liquid service.



[www.autoclave.com](http://www.autoclave.com)

# Adapters/Couplings

Parker Autoclave Engineers offers a complete line of standard adapters and couplings as well as special designs and materials.

## **Male/Female Adapters:**

Male/female adapters are designed to join a female connection directly to another size and/or type of connection without the need for an additional coupling.

## **Couplings:**

Couplings and reducer/adaptor couplings accommodate female-to-female joining of any combination of standard size tubing listed.

## **Male/Male Adapters:**

Male-to-male one piece adapters are designed to join two female connections of any combination listed.

## **QSS Male/Female Adapters:**

Male/female adapters are designed to join a female connection directly to another size and/or type of connection without the need for an additional coupling.

## **QSS Male/Male Adapters:**

Male-to-male one piece adapters are designed to join two female connections of any combination listed.

## **Male/Male JIC Adapters:**

Male-to-male one piece adapters have one end machined with a 37° flare design.

## **Male/Female JIC Adapters:**

Male/female adapters are designed to join a female connection directly to another size and/or type of connection without the need for an additional coupling.

## **EZ-Union Adapters:**

O-ring face seal adapter.

Flat face style o-ring seal permits easy installation or removal of components.

## **Butt-Weld/Header Coupling Adapters:**

Female to male adapters have one end machined for butt-welding to pipe, tubes, and headers.

## **Bulkhead Adapters:**

Male to female adapters designed for panel mounting.

## **SAE O-Ring Adapters:**

Female to male SAE/MS straight thread o-ring seal adapter.

For specials or other adapters not listed contact your local Sales Representative.



**Autoclave  
Engineers**   
www.autoclave.com

# Adapters/Couplings - Male/Female Adapters

Male /female adapters are designed to adapt a female connection to another size and/or type of connection without the need for additional couplings. In selecting an adapter involving two different sized connections, the larger connection should be on the male end where it is possible to maximize the mechanical strength of the adapter.

### To use this chart:

1. Locate MALE end in vertical column.
2. Locate desired FEMALE end of adapter across top of chart.
3. Catalog number of required adapter is located at intersection of columns.
4. For one piece adapter add-OP to suffix of part number

### Other Adapters

Parker Autoclave Engineers supplies many other types of adapters on special order. These include socketweld to O.D. tube or nominal pipe size, extended or special designs.

### Materials

All Parker Autoclave Engineers adapters are precision machined from cold-worked Type 316 stainless steel. Other materials available on special order.

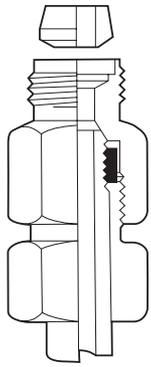
Note: Special material couplings may be supplied with four flats in place of standard hex. Pipe connections are rated 400°F (204°C) to -423°F (-17.8°C).

MALE END		FEMALE END											
		Connection Size and Type			SpeedBite				Medium Pressure				
		Fits this Female Connection	Pressure Rating PSI (bar)*	1/8" W125	1/4" SW250	3/8" SW375	1/2" SW500	1/4" SF250CX	3/8" SF375CX	9/16" SF562CX	3/4" SF750CX	1" SF1000CX	1-1/2" SF1500CX
SpeedBite	1/8"	<b>W125</b>	15,000 (1034.20)		6M24C2	6M26C2	4M28C2	6M24C6	6M26C6	6M29C6			15M224C6
	1/4"	<b>SW250</b>	15,000 (1034.20)	6M42D1		6M46D2	4M48D2	6M44D6	6M46D6	6M49D6	6M412D6		
	3/8"	<b>SW375</b>	15,000 (1034.20)	6M62D1	6M64D2		4M68D2	6M64D6	6M66D6	6M69D6	6M612D6	6M616D6	15M624D6
	1/2"	<b>SW500</b>	10,000 (689.46)	4M82D1	4M84D2	4M86D2		4M84D6	4M86D6	4M89D6	4M812D6	4M816D6	
Medium Pressure	1/4"	<b>SF250CX</b>	20,000 (1378.93)	15MX42K1	6MX44K2	6MX46K2	4MX48K2	20M44K6	20M46K6	20M49K6	20M412K6	20M416K6	15M424K6
	3/8"	<b>SF375CX</b>	20,000 (1378.93)	15MX62K1	6MX64K2	6MX66K2	4MX68K2	20M64K6	20M66K6	20M69K6	20M612K6	20M616K6	
	9/16"	<b>SF562CX</b>	20,000 (1378.93)	15MX92K1	6MX94K2	6MX96K2	4MX98K2	20M94K6	20M96K6	20M99K6	20M912K6	20M916K6	15M924K6
	3/4"	<b>SF750CX</b>	20,000 (1378.93)	15MX122K1	6MX124K2	6MX126K2	4MX128K2	20M124K6	20M126K6	20M129K6	20M1212K6	20M1216K6	15M1224K6
	1"	<b>SF1000CX</b>	20,000 (1378.93)	15MX162K1	6MX164K2	6MX166K2	4MX168K2	20M164K6	20M166K6	20M169K6	20M1612K6	20M1616K6	15M1624K6
	1-1/2"	<b>SF1500CX</b>	15,000 (1034.20)					15M244K6		15M249K6	15M2412K6	15M2416K6	15M2424K6
High Pressure	1"	<b>F1000C43</b>	43,000 (2964.69)										15M1624B6
	1/4"	<b>F250C</b>	60,000 (4136.85)	15M42B1	6M44B2	6M46B2	4M48B2	20M44B6	20M46B6	20M49B6	20M412B6		15M4848B6
	5/16"	<b>F312C150</b>	150,000 (10342.14)		6M54B2	6M56B2	4M58B2	20M54B6	20M56B6	20M59B6	20M512B6		
	3/8"	<b>F375C</b>	60,000 (4136.85)	15M62B1	6M64B2	6M66B2	4M68B2	20M64B6	20M66B6	20M69B6	20M612B6	20M616B6	
	9/16"	<b>F562C</b>	60,000 (4136.85)	15M92B1	6M94B2	6M96B2	4M98B2	20M94B6	20M96B6	20M99B6	20M912B6	20M916B6	
	9/16"	<b>F562C40</b>	40,000 (2757.90)		6M94G2						20M912G6		
Flat Top Flat Bottom	7/16"	<b>F437FB</b>	10,000 (689.45)	15M72E1	6M74E2	6M76E2	4M78E2	15M74E6	15M76E6	15M79E6			
	9/16"	<b>F562FB</b>	10,000 (689.45)	15M92E1	6M94E2	6M96E2	4M98E2	15M94E6	15M96E6	15M99E6	15M912E6	15M916E6	
	9/16"	<b>F562FT</b>	10,000 (689.45)	15M92R1	6M94R2	6M96R2	4M98R2	15M94R6	15M96R6	15M99R6	15M912R6	15M916R6	
	3/4"	<b>F750FB</b>	10,000 (689.45)	15M122E1	6M124E2	6M126E2	4M128E2	15M124E6	15M126E6	15M129E6	15M1212E6	15M1216E6	
National Pipe Thread (NPT)	1/8"	<b>NPT</b>	15,000 (1034.20)	15M22N1	15M24N2	15M26N2	10M28N2	15M24N6	15M26N6	15M29N6			
	1/4"	<b>NPT</b>	15,000 (1034.20)	15M42N1	15M44N2	15M46N2	10M48N2	15M44N6	15M46N6	15M49N6	15M412N6	15M416N6	15M424N6
	3/8"	<b>NPT</b>	15,000 (1034.20)	15M62N1	15M64N2	15M66N2	10M68N2	15M64N6	15M66N6	15M69N6	15M612N6	15M616N6	
	1/2"	<b>NPT</b>	15,000 (1034.20)	15M82N1	15M84N2	15M86N2	10M88N2	15M84N6	15M86N6	15M89N6	15M812N6	15M816N6	15M824N6
	3/4"	<b>NPT</b>	10,000 (689.45)		10M124N2	10M126N2	10M128N2	10M124N6	10M126N6	10M129N6	10M1212N6	10M1216N6	
	1"	<b>NPT</b>	10,000 (689.45)			10M166N2	10M168N2		10M166N6	10M169N6	10M1612N6	10M1616N6	

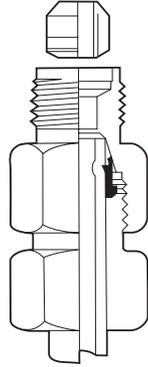
Note: All Parker Autoclave Engineers adapters are supplied complete with appropriate glands, collars, tube nuts and sleeves unless specified without.

\* The maximum pressure rating for an adapter is determined by the connection component with the LOWEST pressure rating; that is, the two end connections and the tubing or pipe used, whichever is LOWER.

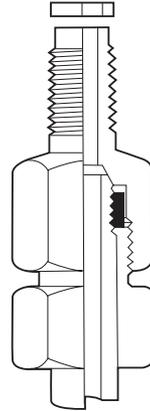
CAUTION: See appropriate pressure section in reference to proper selection of tubing.



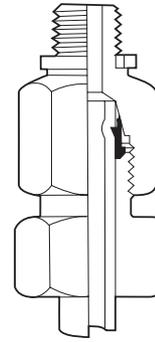
**Double Cone Plug**  
(Medium Pressure shown)



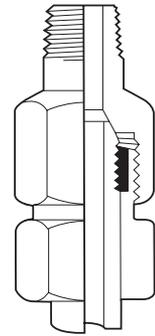
**Double Cone Plug**  
(SpeedBite shown)



**Flat Bottom Gasket**  
(Medium Pressure shown)



**Flat Top Gasket**  
(SpeedBite shown)



**Male NPT**  
(High Pressure shown)

**FEMALE END**

High Pressure						National Pipe Thread (NPT)					
1" F1000C43	1/4" F250C	5/16" F312C150	3/8" F375C	9/16" F562C	9/16" F562C40	1/8" NPT	1/4" NPT	3/8" NPT	1/2" NPT	3/4" NPT	1" NPT
43,000 (2964.69)	60,000 (4136.85)	150,000 (10342.14)	60,000 (4136.85)	60,000 (4136.85)	40,000 (2757.90)	15,000 (1034.20)	15,000 (1034.20)	15,000 (1034.20)	15,000 (1034.20)	10,000 (689.45)	10,000 (689.45)
	6M24C3		6M26C3	6M29C3		15M22C8	15M24C8	15M26C8	15M28C8		
	6M44D3		6M46D3	6M49D3		15M42D8	15M44D8	15M46D8	15M48D8	10M412D8	
	6M64D3		6M66D3	6M69D3		15M62D8	15M64D8	15M66D8	15M68D8	10M612D8	10M616D8
	4M84D3		4M86D3	4M89D3		10M82D8	10M84D8	10M86D8	10M88D8	10M812D8	10M816D8
	20M44K3	20M45K3	20M46K3	20M49K3		15MX42K8	15MX44K8	15MX46K8	15MX48K8	10MX412K8	
	20M64K3	20M65K3	20M66K3	20M69K3		15MX62K8	15MX64K8	15MX66K8	15MX68K8	10MX612K8	10MX616K8
	20M94K3	20M95K3	20M96K3	20M99K3		15MX92K8	15MX94K8	15MX96K8	15MX98K8	10MX912K8	10MX916K8
20M1216K3	20M124K3	20M125K3	20M126K3	20M129K3	20M129K40		15MX124K8	15MX126K8	15MX128K8	10MX1212K8	10MX1216K8
	20M164K3		20M166K3	20M169K3			15MX164K8	15MX166K8	15MX168K8	10MX1612K8	10MX1616K8
							15M244K8		15M248K8	10M2412K8	10M2416K8
	43M164B3		43M166B3	43M169B3	43M169B40						
43M416B3	60M44B3	60M45B3	60M46B3	60M49B3		15M42B8	15M44B8	15M46B8	15M48B8	10M412B8	10M416B8
	60M54B3	150M55B3-155	60M56B3	60M59B3					15M58B8	10M512B8	
43M616B3	60M64B3	60M65B3	60M66B3	60M69B3		15M62B8	15M64B8	15M66B8	15M68B8	10M612B8	10M616B8
43M916B3	60M94B3	60M95B3	60M96B3	60M99B3		15M92B8	15M94B8	15M96B8	15M98B8	10M912B8	10M916B8
									15M98G8		
	15M74E3		15M76E3	15M79E3		10M72E8	10M74E8	10M76E8	10M78E8	10M712E8	
	15M94E3		15M96E3			10M92E8	10M94E8	10M96E8	10M98E8	10M912E8	10M916E8
	15M94R3		15M96R3	15M99R3		10M92R8	10M94R8	10M96R8	10M98R8	10M912R8	10M916R8
	15M124E3		15M126E3	15M129E3		10M122E8	10M124E8	10M126E8	10M128E8	10M1212E8	10M1216E8
	15M24N3		15M26N3	15M29N3		15M22N8	15M24N8				
	15M44N3	15M45N3	15M46N3	15M49N3		15M42N8		15M46N8	15M48N8	10N412N8	
	15M64N3		15M66N3	15M69N3	15M69N40		15M64N8		15M68N8		
	15M84N3		15M86N3	15M89N3	15M89N40		15M84N8	15M86N8		10M812N8	
	10M124N3		10M126N3	10M129N3		10M122N8	10M124N8		10M128N8		
10M1616N3			10M166N3	10M169N3					10M168N8		

Parker Autoclave Engineers Male/Female Adapters are available in a "one-piece" design. They are identical to the two piece designs in length and can be ordered by adding the suffix - OP to the two piece adapter part numbers listed.

For prompt service, Parker Autoclave Engineers stocks select products. Consult factory.

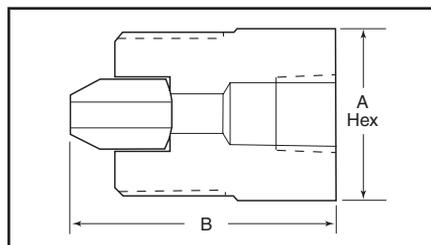
Male End Fits this Connection	Female End	Catalog Number	Dimension inches (mm)	
			A Hex	B
F312C150	W125			
F312C150	SW250	6M54B2	0.75 (19.1)	2.13 (54.0)
F312C150	SW375	6M56B2	0.75 (19.1)	2.25 (57.2)
F312C150	SW500	4M58B2	1.00 (25.4)	
F312C150	SF250CX	20M54B6	0.75 (19.1)	2.00 (50.8)
F312C150	SF375CX	20M56B6	0.75 (19.1)	2.25 (57.2)
F312C150	SF562CX	20M59B6	1.00 (25.4)	2.38 (60.4)
F312C150	SF750CX	20M512B6	1.38 (35.1)	3.00 (76.2)
F312C150	SF1000CX			
F312C150	F1000C43			
F312C150	F250C	60M54B3	1.00 (25.4)	2.06 (52.4)
F312C150	F312C150	150M5533-155	1.18 (29.97)	2.81 (71.37)
F312C150	F375C	60M56B3	1.00 (25.4)	2.25 (57.2)
F312C150	F562C	60M59B3	1.38 (35.1)	2.56 (65.1)
F312C150	F562C40			
F312C150	1/8 NPT			
F312C150	1/4 NPT			
F312C150	3/8 NPT			
F312C150	1/2 NPT	15M58B8	1.18 (30.1)	2.69 (68.3)
F312C150	3/4 NPT	10M512B8	1.38 (35.1)	2.88 (73.0)
F312C150	1 NPT			
F375C	W125	15M62B1	0.81 (20.6)	1.44 (36.5)
F375C	SW250	6M64B2	0.81 (20.6)	1.69 (42.8)
F375C	SW375	6M66B2	0.81 (20.6)	1.69 (42.8)
F375C	SW500	4M68B2	1.00 (25.4)	1.75 (44.5)
F375C	SF250CX	20M64B6	0.81 (20.6)	1.75 (44.5)
F375C	SF375CX	20M66B6	0.81 (20.6)	1.88 (47.6)
F375C	SF562CX	20M69B6	1.00 (25.4)	2.00 (50.8)
F375C	SF750CX	20M612B6	1.38 (35.1)	2.25 (57.2)
F375C	SF1000CX	20M616B6	1.75 (44.5)	3.25 (82.6)
F375C	F1000C43	43M616B6	1.75 (44.5)	3.25 (82.6)
F375C	F250C	60M64B3	0.81 (20.6)	1.63 (41.3)
F375C	F312C150	60M65B3	1.00 (25.4)	2.25 (57.2)
F375C	F375C	60M66B3	1.00 (25.4)	1.88 (47.63)
F375C	F562C	60M69B3	1.38 (35.1)	1.63 (41.3)
F375C	F562C40			
F375C	1/8 NPT	15M62B8	0.81 (20.6)	1.50 (38.1)
F375C	1/4 NPT	15M64B8	0.81 (20.6)	1.75 (44.5)
F375C	3/8 NPT	15M66B8	1.00 (25.4)	2.00 (50.8)
F375C	1/2 NPT	15M68B8	1.18 (30.1)	2.25 (57.2)
F375C	3/4 NPT	10M612B8	1.38 (35.1)	2.50 (63.5)
F375C	1 NPT	10M616B8	1.75 (44.5)	2.75 (69.9)

Male End Fits this Connection	Female End	Catalog Number	Dimension inches (mm)	
			A Hex	B
F562C	W125	15M92B1	1.18 (30.1)	1.50 (38.1)
F562C	SW250	6M94B2	1.18 (30.1)	1.69 (42.8)
F562C	SW375	6M96B2	1.18 (30.1)	1.69 (42.8)
F562C	SW500	4M98B2	1.18 (30.1)	1.75 (44.5)
F562C	SF250CX	20M94B6	1.18 (30.1)	1.69 (42.8)
F562C	SF375CX	20M96B6	1.18 (30.1)	1.81 (46.0)
F562C	SF562CX	20M99B6	1.18 (30.1)	1.94 (49.2)
F562C	SF750CX	20M912B6	1.38 (35.1)	2.31 (58.7)
F562C	SF1000CX	20M916B6	1.75 (44.5)	3.31 (84.1)
F562C	F1000C43	43M916B3	1.75 (44.5)	3.31 (84.1)
F562C	F250C	60M94B3	1.18 (30.1)	1.69 (42.8)
F562C	F312C150	60M95B3	1.18 (30.1)	2.31 (58.7)
F562C	F375C	60M96B3	1.18 (30.1)	1.88 (47.6)
F562C	F562C	60M99B3	1.38 (35.1)	2.31 (58.7)
F562C	F562C40			
F562C	1/8 NPT	15M92B8	0.94 (23.8)	1.81 (46.0)
F562C	1/4 NPT	15M94B8	0.94 (23.8)	1.81 (46.0)
F562C	3/8 NPT	15M96B8	0.94 (23.8)	1.81 (46.0)
F562C	1/2 NPT	15M98B8	1.18 (30.1)	2.13 (54.0)
F562C	3/4 NPT	10M912B8	1.50 (38.1)	2.31 (58.7)
F562C	1 NPT	10M916B8	1.75 (44.5)	1.69 (42.8)
F562C40	W125			
F562C40	SW250			
F562C40	SW375			
F562C40	SW500			
F562C40	SF250CX			
F562C40	SF375CX			
F562C40	SF562CX			
F562C40	SF750CX	20M912G6	1.38 (35.1)	2.50 (63.5)
F562C40	SF1000CX			
F562C40	F1000C43			
F562C40	F250C			
F562C40	F312C150			
F562C40	F375C			
F562C40	F562C			
F562C40	F562C40			
F562C40	1/8 NPT			
F562C40	1/4 NPT			
F562C40	3/8 NPT			
F562C40	1/2 NPT	15M98G8	1.18 (30.1)	2.13 (54.0)
F562C40	3/4 NPT			
F562C40	1 NPT			

Maximum pressure rating is based on the lowest rating of any component. Actual working pressure may be determined by tubing pressure rating, if lower.

Note: For pressure rating see selection chart.

All Dimensions for reference only and subject to change.



Adapter configurations may vary from outline shown

For prompt service, Parker Autoclave Engineers stocks select products. Consult factory.