



Autoclave Engineers

The world leader in high pressure valves, fittings and tubing

Since its inception in 1945, autoclave Engineers has been dedicated to manufacturing high pressure valving system which operate safely and reliable under extreme variations in temperature, pressure and environmental conditions. Today, Autoclave is a world leader in providing dependable high pressure valves, fitting and tubing, and serving applications in

While Autoclaves valves, fittings and tubing are known industry wide their ability to operate at pressure in excess of 100,000 psi (6895 bar), a low pressure line for application rated to 15,000 psi (1034 bar) is also available. Utilizing single ferrule compression sleeves which provide easy, leak free performance, the connection sizes come in 1/16 to 1/2 inches.

Manual Shut-off Valves

Autoclave valves are designed to operate safely and reliably at pressure to 1500,000 psi (10342 bar). Several important features make this dependable service possible under widely varying conditions.

Non rotating stem

Prevents stem / seat galling when valve is opened and closed.

Metal to metal seating

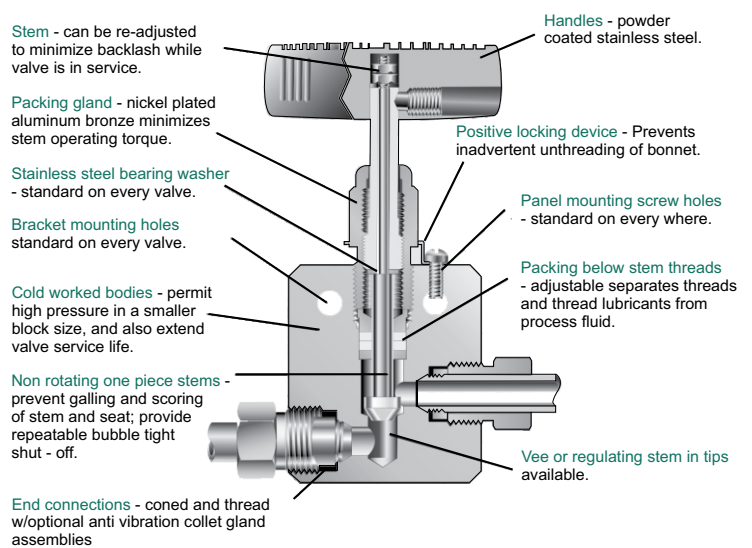
Provides bubble-tight shut-off, longer stem / seat life in abrasive flow, greater durability for repeated on / off cycles and excellent corrosion resistance.

PTFE encapsulated packing

Ensures dependable stem and body sealing. Stem sleeve and packing gland materials extend thread life and reduce the handle torque required to operate the valve.

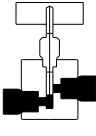
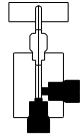
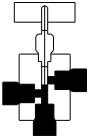
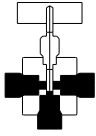
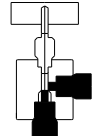
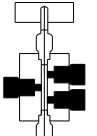
Manual

Enable you to customize Autoclave valves to meet your specific application. five different body patterns, a variety of materials and stem types, extreme temperature models, abrasive service options, panel mounting and several handle styles are among the available options.





Manual Shut-off Valves

										
	O.D Tube Size In. (mm)	Pressure Rating psi (bar)	*Rated C (full open)	Valve Stem Type	2-Way Straight	2-Way Angle	3-Way 2 on Pressure	3-Way 1 On Pressure	2-Way Angle Replaceable Seat	3-Way 2 Steam Manifold
Medium Pressure	1/4 (6.35)	20,000 (1380)	.31	Vee Reg	20SM4071 20SM4081	20SM4072 20SM4082	20SM4073 20SM4083	20SM4074 20SM4084	20SM4872 20SM4882	20SM4075 20SM4085
	3/8 (9.53)	20,000 (1380)	.75	Vee Reg	20SM6071 20SM6081	20SM6072 20SM6082	20SM6073 20SM6083	20SM6074 20SM6084	20SM6872 20SM6882	20SM6075 20SM6085
	9/16 (14.3)	20,000 (1380)	1.30	Vee Reg	20SM9071 20SM9081	20SM9072 20SM9082	20SM9073 20SM9083	20SM9074 20SM9084	20SM9872 20SM9882	20SM9075 20SM9085
	3/4 (19.1)	20,000 (1380)	2.50	Vee Reg	20SM12071 20SM12081	20SM12072 20SM12082	20SM12073 20SM12083	20SM12074 20SM12084	20SM12872 20SM12882	20SM12075 20SM12085
	1 (25.4)	20,000 (1380)	4.40	Vee Reg	20SM16071 20SM16081	20SM16072 20SM16082	20SM16073 20SM16083	20SM16074 20SM16084	20SM16872 20SM16882	20SM16075 20SM16085
	9/16 (14.30)	10,000 (690)	1.75	Vee Reg	10SM9071 10SM9081	10SM9072 10SM9082	10SM9073 10SM9083	10SM9074 10SM9084	10SM9872 10SM9882	10SM9075 10SM9085
	3/4 (19.10)	10,000 (690)	2.80	Vee Reg	10SM12071 10SM12081	10SM12072 10SM12082	10SM12073 10SM12083	10SM12074 10SM12084	10SM12872 10SM12882	10SM12075 10SM12085
	1 (25.40)	10,000 (690)	5.20	Vee Reg	10SM16071 10SM16081	10SM16072 10SM16082	10SM16073 10SM16083	10SM16074 10SM16084	10SM16872 10SM16882	10SM16075 10SM16085
High Pressure	1 (25.4)	30,000 (2070)	2.60	Vee Reg	30SC16071 30SC16081	30SC16072 30SC16082	30SC16073 30SC16083	30SC16074 30SC16084	30SC16872 30SC16882	30SC16075 30SC16085
	1/4 (6.35)	30,000 (2070)	.12	Vee Reg	30VM4071 30VM4081	30VM4072 30VM4082	30VM4073 30VM4083	30VM4074 30VM4084	30VM4872 30VM4882	30VM4075 30VM4085
	3/8 (9.53)	30,000 (2070)	.23	Vee Reg	30VM6071 30VM6081	30VM6072 30VM6082	30VM6073 30VM6083	30VM6074 30VM6084	30VM6872 30VM6882	30VM6075 30VM6085
	9/16 (14.3)	30,000 (2070)	.33	Vee Reg	30VM9071 30VM9081	30VM9072 30VM9082	30VM9073 30VM9083	30VM9074 30VM9084	30VM9872 30VM9882	30VM9075 30VM9085
	9/16 (14.3)	40,000 (2760)	.28	Vee Reg	40VM9071 40VM9081	40VM9072 40VM9082	40VM9073 40VM9083	40VM9074 40VM9084	40VM9872 40VM9882	40VM9075 40VM9085
	1/4 (6.35)	60,000 (4140)	.08	Vee Reg	60VM4071 60VM4081	60VM4072 60VM4082	60VM4073 60VM4083	60VM4074 60VM4084	60VM4872 60VM4882	60VM4075 60VM4085
	3/8 (9.53)	60,000 (4140)	.09	Vee Reg	60VM6071 60VM6081	60VM6072 60VM6082	60VM6073 60VM6083	60VM6074 60VM6084	60VM6872 60VM6882	60VM6075 60VM6085
	9/16 (14.3)	60,000 (4140)	.14	Vee Reg	60VM9071 60VM9081	60VM9072 60VM9082	60VM9073 60VM9083	60VM9074 60VM9084	60VM9872 60VM9882	60VM9075 60VM9085

Air Actuators (for AE Manual Valves)

Three sizes of air operators (medium, heavy duty or extra heavy) are offered for remote on-off operation or automatic operation of AE medium or high pressure valves. The actuators are available in air to open (*normally closed*) and air to close (*normally open*) designs.

Duty Rating	Operator	Type
Medium	Diaphragm	Air to open
		Air to close
	Piston	Air to open
		Air to close
Heavy	Diaphragm	Air to open
		Air to close
	Piston	Air to open
		Air to close
Extra Heavy Single Stage	Piston	Air to open
Extra Heavy Two Stage	Piston	Air to open
		Air to close



Air to Close									
Valve Series	O.D Tube In. (mm)	Medium		Heavy		Extra Heavy Single Stage		Extra Heavy Two Stage	
		System Press. psi (bar)	Air Press. psi (bar)	System Press. psi (bar)	Air Press. psi (bar)	System Press. psi (bar)	Air Press. psi (bar)	System Press. psi (bar)	Air Press. psi (bar)
10SM	9/16 (14.3)	8,600 (593)	100 (6.9)	10,000 (690)	55 (3.8)	10,000 (690)	45 (3.10)	10,000 (690)	20 (1.4)
	3/4 (19.1)	4,800 (331)	100 (6.9)	10,000 (690)	100 (6.9)	10,000 (690)	70 (4.83)	10,000 (690)	35 (2.4)
	1 (25.4)	2,800 (193)	100 (6.9)	6,300 (434)	100 (6.9)	8,500 (586)	95 (6.55)	10,000 (690)	55 (3.79)
20SM	1/4 (6.35)	20,000 (1380)	95 (6.5)	20,000 (1380)	50 (3.5)	-	-	-	-
	3/8 (9.53)	19,000 (1310)	100 (6.9)	20,000 (1380)	5.5 (3.8)	-	-	-	-
	9/16 (14.3)	10,700 (734)	100 (6.9)	20,000 (1380)	85 (5.9)	20,000 (1380)	65 (4.48)	20,000 (1380)	30 (2.1)
	3/4 (19.1)	6,100 (421)	100 (6.9)	13,600 (938)	100 (6.9)	19,000 (1310)	100 (6.90)	20,000 (1380)	50 (3.4)
	1 (25.4)	3,900 (269)	100 (6.9)	8,800 (607)	100 (6.9)	19,000 (1310)	95 (6.55)	20,000 (1380)	75 (5.1)
30SC	1 (25.4)	-	-	-	-	-	-	30,000 (2068)	80 (5.5)
30VM	1/4 (6.35)	30,000 (2068)	55 (3.8)	30,000 (2068)	30 (2.0)	-	-	-	-
	3/8 (9.53)	30,000 (2068)	75 (5.2)	30,000 (2068)	40 (2.8)	-	-	-	-
	9/16 (14.3)	30,000 (2068)	75 (5.2)	30,000 (2068)	40 (2.8)	-	-	-	-
40VM	9/16 (14.3)	-	-	40,000 (2758)	45 (3.1)	-	-	-	-
60VM	1/4 (6.35)	60,000 (4137)	75 (5.2)	60,000 (4137)	40 (2.8)	-	-	-	-
	3/8 (9.53)	60,000 (4137)	75 (5.2)	60,000 (4137)	40 (2.8)	-	-	-	-
	9/16 (14.3)	60,000 (4137)	90 (6.2)	60,000 (4137)	45 (3.1)	-	-	-	-

Air Actuators (for AE Manual Valves)

Air to Open									
Valve Series	O.D Tube In. (mm)	Medium		Heavy		Extra Heavy Single Stage		Extra Heavy Two Stage	
		System Press. psi (bar)	Air Press. psi (bar)	System Press. psi (bar)	Air Press. psi (bar)	System Press. psi (bar)	Air Press. psi (bar)	System Press. psi (bar)	Air Press. psi (bar)
10SM	9/16 (14.3)	7,900 (545)	95 (6.6)	10,000 (690)	75 (5.1)	10,000 (690)	60 (4.13)	10,000 (690)	40 (2.8)
	3/4 (19.1)					10,000 (690)	95 (6.55)	10,000 (690)	60 (4.1)
	1 (25.4)					6,500 (448)	100 (6.90)	10,000 (690)	85 (5.9)
20SM	1/4 (6.35)	20,000 (1380)	95 (6.6)	20,000 (1380)	50 (3.4)	-	-	-	-
	3/8 (9.53)	18,250 (1258)	95 (6.6)	18,250 (1258)	50 (3.4)	-	-	-	-
	9/16 (14.3)	9,800 (676)	95 (6.6)	15,700 (1082)	75 (5.1)	20,000 (1380)	85 (5.86)	20,000 (1380)	55 (3.8)
	3/4 (19.1)			6,000 (414)	75 (5.1)	15,000 (1034)	100 (6.90)	20,000 (1380)	80 (5.5)
	1 (25.4)			4,000 (276)	75 (5.1)	10,000 (690)	100 (6.90)	20,000 (1380)	100 (6.9)
30SC	1 (25.4)	-	-	-	-	-	-	30,000 (2068)	100 (6.9)
30VM	1/4 (6.35)	30,000 (2068)	75 (5.2)	30,000 (2068)	40 (2.8)	-	-	-	-
	3/8 (9.53)	30,000 (2068)	95 (6.5)	30,000 (2068)	50 (3.5)	-	-	-	-
	9/16 (14.3)	30,000 (2068)	95 (6.5)	30,000 (2068)	50 (3.5)	-	-	-	-
40VM	9/16 (14.3)	-	-	40,000 (2758)	55 (3.8)	-	-	-	-
60VM	1/4 (6.35)	60,000 (4137)	95 (6.5)	60,000 (4137)	50 (3.5)	-	-	-	-
	3/8 (9.53)	60,000 (4137)	95 (6.5)	60,000 (4137)	50 (3.5)	-	-	-	-
	9/16 (14.3)	60,000 (4137)	95 (6.5)	60,000 (4137)	50 (3.5)	-	-	-	-



Coupling

The couplings shown here permit the joining of any combination of standard size Autoclave tubing with female to female couplings. Other couplings available on special order

"A" Connection				"B" Connection										
				AE Medium Pressure					AE High Pressure					
Tube Size In. (mm)	Conn. Type	Pressure psi (bar)	1/4 (6.35) SF250CX	3/8 (9.53) SF375CX	9/16 (14.3) SF562CX	3/4 (19.1) SF750CX	1 (25.4) SF1000CX	1 (25.4) F1000C43	1/4 (6.35) F250C	3/8 (9.53) F375C	9/16 (14.3) F562C	9/16 (14.3) F562C40	"A" Connection FEMALE	
AE Medium Pressure	1/4 (6.35)	SF250 CX	20,000 (1380)	20FX 4466	20F 4666	20F 4966	20F 41266	20F 41666	20F 41663	20F 4463	20F 4663	20F 4963		
	3/8 (9.53)	SF375 CX	20,000 (1380)		20FX 6666	20F 6966	20F 61266	20F 61666	20F 61663	20F 6463	20F 6663	20F 6963		
	9/16 (14.3)	SF562 CX	20,000 (1380)			9/16 9966	20F 91266	20F 91666		20F 9463	20F 9663	20F 9963		
	3/4 (19.1)	SF750 CX	20,000 (1380)				20FX 12	20F 121666		20F 12463	20F 12663	20F 12963		
	1 (25.4)	SF1000 XC	20,000 (1380)					20FX 16		20F 16463	20F 16663	20F 16963		
AE High Pressure	1 (25.4)	F1000 CX	43,000 (2964)						43F 16					
	1/4 (6.35)	F250 C	60,000 (4140)						43F 41633	60F 4433	60F 4633	60F 4933		
	3/8 (9.53)	F375 C	60,000 (4140)						43F 61633		60F 6633	60F 6933		
	9/16 (14.3)	F562C	60,000 (4140)						43F 91633			60F 9333		
	9/16 (14.3)	F562 C40	40,000 (2758)										40F 9933	

Male / Female Adapters

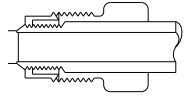
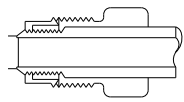
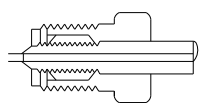
Male/female adapters are designed to adapt a female connection direct to another size and/or type of connection. In selecting an adapter involving two different sized connections, the larger connection should be on the male end where it is possible to maximize the mechanical strength of the adapter

Female End				AE Medium Pressure					AE High Pressure				
				1/4"(6.35) SF250CX	3/8"(9.53) SF375CX	9/16"(14.1) SF562CX	3/4"(19.1) SF750CX	1"(25.4) SF1000X	1"(25.4) F1000C43	1/4"(6.35) F250C	3/8"(9.53) F375C	9/16"(14.3) F562C	9/16"(14.3) F562C40
Tube Size In. (mm)	Conn. Type	Pressure psi (bar)	20,000 (1380)	20,000 (1380)	20,000 (1380)	20,000 (1380)	20,000 (1380)	43,000 (2964)	60,000 (4140)	60,000 (4140)	60,000 (4140)	40,000 (2758)	
AE Medium Pressure	1/4 (6.35)	SF250CX	20,000 (1380)		20M46K6	20M49K6	20M412K6	20M416K6		20M44K3	20M46K3	20M49K3	
	3/8 (9.53)	SF375CX	20,000 (1380)	20M64K6		20M69K6	20M612K6	20M616K6		20M64K3	20M66K3	20M69K3	
	9/16 (14.3)	SF562CX	20,000 (1380)	20M94K6	20M96K6		20M912K6	20M919K6		20M94K3	20M96K3	20M99K3	
	3/4 (19.1)	SF750CX	20,000 (1380)	20M124K6	20M126K6	20M129K6		20M1216K6		20M124K3	20M126K3	20M129K3	20M129K40
	1 (25.4)	SF1000XC	20,000 (1380)	20M164K6	20M166K6	20M169K6	20M1612K6	20M1616K6		20M164K3	20M166K3	20M169K3	
AE High Pressure	1 (25.4)	F1000CX	43,000 (2964)							43M164B3	43M166B3	43M169B3	43M169B40
	1/4 (6.35)	F250C	60,000 (4140)	20M44B6	20M46B6	20M49B6	20M412B6		43M416B6		60M46B3	60M49B3	
	3/8 (9.53)	F375C	60,000 (4140)	20M64B6	20M66B6	20M69B6	20M612B6	20M616B6	43M616B6	60M64B3		60M69B3	
	9/16 (14.3)	F562C	60,000 (4140)	20M94B6	20M96B6	20M99B6	20M912B6	20M916B6	43M916B6	60M94B3	60M96B3		
	9/16 (14.3)	F562C40	40,000 (2758)				20M912G6						










Materials

All AE adapters are precision machined from cold worked Type 316 stainless steel. Other materials available on special

Fitting Component & Accessories

	Connection Size In. (mm)	Pressure Rating psi (bar)	Connection Type
Medium Pressure	1/4 to 1 (6.35 to 25.4)	to 20,000 (1380)	Coned and threaded type for high Strength and repeated make up. Anti vibration collet gland available. In line collar and gland to minimize block thickness. 
High Pressure	1 (25.4)	to 43,000 (2964)	Coned and threaded type for high Strength and repeated make up. Anti vibration collet gland available. 
	1/4 to 9/16 (6.35 to 14.3)	to 60,000 (4140)	Coned and threaded type for high Strength and repeated make up. Anti vibration collet gland available. Nested collar and gland to minimize block width. 

	O.D. Tube Size In. (mm)	Pressure Rating psi (bar)	Elbow	Tee	Cross	Straight Coupling	Union Coupling	Bulkhead Coupling
Medium Pressure	1/4 (6.35)	20,000 (1380)	CLX4400	CTX4400	CXX4400	20FX4466	20UFX4466	20BFX4466
	3/8 (9.53)	20,000 (1380)	CLX6600	CTX6600	CXX6600	20FX6666	20UFX6666	20BFX6666
	6/16 (14.3)	20,000 (1380)	CLX9900	CTX9900	CXX9900	20FX9966	20UFX9966	20BFX9966
	3/4 (19.1)	20,000 (1380)	CLX12	CTX12	CXX12	20FX12	20UFX12	20BFX12
	1 (25.4)	20,000 (1380)	CLX16	CTX16	CXX16	20FX16	20UFX16	20BFX16
High Pressure	1 (25.4)	43,000 (2964)	43CL16	43CT16	43CX16	43F16	43UF16	43BF16
	9/16 (14.3)	40,000 (2760)	40CL9900	40CT9900	40CX9999	40F9933	40UF9933	40BF9933
	1/4 (6.35)	60,000 (4140)	CL4400	CT4400	CX4444	60F4433	60UF4433	60BF4433
	3/8 (9.53)	60,000 (4140)	CL6600	CT6600	CX6666	60F6633	60UF6633	60BF6633
	9/16(14.3)	60,000 (4140)	CL9900	CT9900	CX9999	60F9933	60UF9933	60BF9933

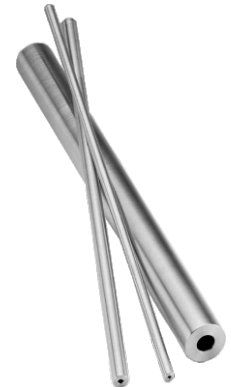
	O.D. Tube Size In. (mm)	Pressure Rating psi (bar)	Connection Components			Check Valves			Line Filters		Safety Heads
											
Medium Pressure	1/4 (6.35)	20,000 (1380)	CGLX40	CCLX40	CPX40	CXO4400	CXB4400	CXK4402	-	CXF4	CSX4600*
	3/8 (9.53)	20,000 (1380)	CGLX60	CCLX60	CPX60	CXO6600	CXB6602	CXK6602	-	CXF6	CSX6600*
	6/16 (14.3)	20,000 (1380)	CGLX90	CCLX90	CPX90	CXO9900	CXB9900	CXK9902	CLFX9900	CXF9	CSX9600*
	3/4 (19.1)	20,000 (1380)	CGLX120	CCLX120	CPX120	CXO12	CXB12	CXK1202	-	-	-
	1 (25.4)	20,000 (1380)	CGLX160	CCLX160	CPX160	CXO16	CXB16	CXK1602	-	CXF16	-
High Pressure	1 (25.4)	43,000 (2964)	CGLX160	CCLX160	43CP160	43CO16	43CB16	-	-	-	-
	9/16 (14.3)	40,000 (2760)	AGL90	ACL90	AP90	-	-	-	-	-	-
	1/4 (6.35)	60,000 (4140)	AGL40	ACL40	AP40	CKO4400	CB4401	CK4402	CLF4400	CF4	CS4600*
	3/8 (9.53)	60,000 (4140)	AGL60	ACL60	AP60	CKO6600	CB6601	CK6602	CLF6600	CF6	CS6600*
	9/16(14.3)	60,000 (4140)	AGL90	ACL90	AP90	CKO9900	CB9901	CK9902	CLF9900	CF9	CS9600*

* Indicate size of rupture disc



Tubing

Autoclave Engineers offer a complete selection of Austenetic, cold draw stainless tubing designed to match the performance standards of E valves and fittings. AE tubing is manufactured specially for high pressure applications requiring both strength and corrosion resistance. The tubing is furnished in random lengths between 20 and 27 feet (6.1 and 8.2 meter).



Inspection and Testing

AE tubing is inspected to assure it's free of seams, laps, fissures or other flaws, as well as carburization or intergranular carbide precipitation. The outside and inside diameters of the tubing are subject to special inspection and are controlled within close tolerances to assure proper fit. Sample pieces of tube for each lot are tested to confirm mechanical properties. Hydrostatic testing is also performed on a statistical basis and is conducted at the working pressure of the tube. Autoclave will perform 100% hydrostatic testing at additional cost if desired.

Tube Material	Fits Connection Type	Tube size in. (mm)		Wall Thickness nom. in. (mm)	Flow Area In. ² (mm ²)	Working Pressures psi (bar)				
		O.D. In. (mm)	I.D. In. (mm)			-325 to 100°F (-198 to 38°C)	200°F (93°C)	400°F (93°C)	600°F (93°C)	800°F (93°C)
316 SS	SF250CX	1/4 (6.35)	.109 (2.77)	.070 (1.78)	.009 (5.81)	20,000 (1380)	20,000 (1380)	19,250 (1330)	18,050 (1250)	16,800 (1160)
304 SS						20,000 (1380)	18,950 (1310)	17,200 (1190)	17,000 (1170)	16,150 (1110)
316 SS	SF375CX	3/8 (9.53)	.203 (5.16)	.86 (2.18)	.032 (20.6)	20,000 (1380)	20,000 (1380)	19,250 (1330)	18,050 (1250)	16,800 (1160)
316 SS						20,000 (1380)	20,000 (1380)	19,250 (1330)	18,050 (1250)	16,800 (1160)
316 SS	SF562CX	9/16 (14.3)	.312 (7.92)	.125 (3.17)	.076 (49)	20,000 (1380)	20,000 (1380)	19,250 (1330)	18,050 (1250)	16,800 (1160)
316 SS						20,000 (1380)	20,000 (1380)	19,250 (1330)	18,050 (1250)	16,800 (1160)
316 SS	SF562CX	9/16 (14.3)	.359 (9.12)	.101 (2.56)	.101 (65.2)	15,000 (1034)	15,000 (1034)	14,400 (992)	13,650 (941)	12,670 (874)
316 SS						15,000 (1034)	14,170 (1034)	12,900 (890)	12,750 (880)	12,670 (874)
316 SS	SF750CX	3/4 (19.1)	.359 (9.12)	.156 (3.96)	.151 (97.4)	20,000 (1380)	20,000 (1380)	19,250 (1330)	18,050 (1250)	16,800 (1160)
316 SS						15,000 (1034)	15,000 (1034)	14,400 (993)	13,650 (941)	12,670 (874)
316 SS	SF1000CX	1 (25.4)	.562 (14.3)	.219 (5.56)	.248 (160)	20,000 (1380)	20,000 (1380)	19,250 (1330)	18,050 (1250)	12,670 (874)
316 SS						15,000 (1034)	15,000 (1034)	14,400 (993)	13,650 (941)	12,670 (874)
316 SS	F250C	1/4 (6.35)	.083 (2.11)	.083 (2.11)	.005 (3.22)	60,000 (4140)	60,000 (4140)	57,750 (1380)	54,250 (1380)	50,700 (1380)
304 SS						60,000 (4140)	56,800 (3910)	51,650 (3560)	50,700 (3500)	48,450 (3340)
316 SS	F375C	3/8 (9.53)	.125 (3.18)	.125 (3.18)	.012 (7.74)	60,000 (4140)	60,000 (4140)	57,750 (1380)	54,250 (3740)	50,700 (3490)
304 SS						60,000 (4140)	56,800 (3910)	51,650 (3560)	50,700 (3500)	48,450 (3340)
316 SS	F562C40	9/16 (14.3)	.25 (6.35)	.156 (4.02)	.048 (31)	40,000 (2760)	40,000 (2760)	38,500 (2655)	36,100 (2489)	33,800 (2330)
316 SS	F562C	9/16 (14.3)	.187 (4.78)	.187 (4.78)	.028 (18)	60,000 (4140)	60,000 (4140)	57,750 (1380)	54,250 (3740)	50,700 (3490)
304 SS						60,000 (4140)	56,800 (3910)	51,650 (3560)	50,700 (3500)	48,450 (3340)
304 SS	F1000C43	1 (25.4)	.438 (11.1)	.281 (7.14)	.151 (97.4)	43,000 (2964)	40,600 (2799)	36,900 (2544)	36,300 (2502)	34,700 (2392)
316 SS	F1000C43	1 (25.4)	.438 (11.13)	.281 (7.14)	.151 (97.4)	43,000 (2964)	40,600 (2799)	43,000 (2964)	41,380 (2853)	36,330 (2504)



Coned and Threaded Nipples

For rapid system make up, AE supplies pre-cut, coned and threaded nipples in various sizes and lengths for AE valves and fittings.

Special lengths

In addition to the standart lenghts listed in the table below, nipples are available in any custom length. Consult factory.

Materials

Catalog numbers in table refer to type 316 stainless steel, unless

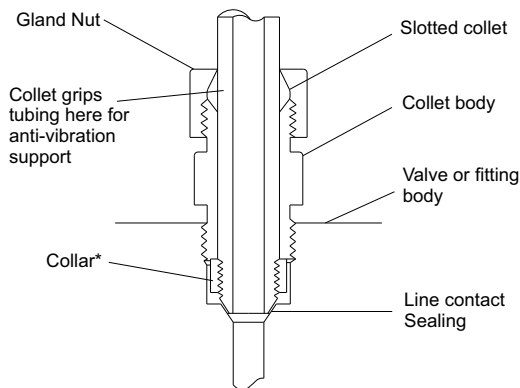
Working Fits Connection Type	Tube size in. (mm)		Pressure at 100°F (38°C) psi (bar)
	O.D	I.D	
SF250CX	1/4 (6.35)	.109 (2.77)	20,000 (1380)
SF375CX	3/8 (9.53)	.203 (5.16)	20,000 (1380)
SF562CX	9/16 (14.3)	.312 (7.92)	20,000 (1380)
SF562CX	9/16 (14.3)	.359 (9.12)	15,000 (1034)
SF750CX	3/4 (19.1)	.438 (11.1)	20,000 (1380)
SF750CX	3/4 (19.1)	.515 (13.1)	15,000 (1034)
SF1000CX	1 (25.4)	.562 (14.3)	20,000 (1380)
SF1000CX	1 (25.4)	.688 (17.5)	15,000 (1034)
F250C	1/4 (6.35)	.083 (2.11)	60,000 (4140)
F375C	3/8 (9.53)	.125 (3.18)	60,000 (4140)
F562C	9/16 (14.3)	.187 (4.78)	60,000 (4140)
F562C40	9/16 (14.3)	.250 (6.35)	40,000 (2760)
F1000C43	1 (25.4)	.438 (11.1)	43,000 (2964)



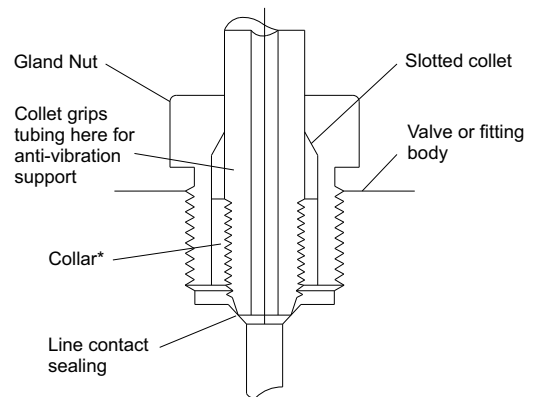
Anti Vibration Collet Gland Assemblies

Vibration and / or shock can be present in tubing systems, especially if the valve or fitting happens to be located on an unsupported line near a compressor. For this reason, Autoclave Engineers coned and threaded connections are offered with the AE anti Vibration Collet Gland Assemblies. Completely interchangeable with standard AE high pressure connections, the Collet Gland Assemblies provide equally effective pressure handling capability.

O.D. Tubing Size In. (mm)
1/4 (6.35)
3/8 (9.53)
9/16 (14.3)
3/4 (19.1)
1 (25.4)



Series KCBGLX
Pressures to 20,000 psi (1380 bar)



Series KCGL
Pressures to 60,000 psi (1380 bar)



Ball Valves

AE ball valves are designed for on-off, high flow applications. With the valve fully open the straight-through design minimizes pressure drop.

AE ball valves are economical and easy to maintain for long service life. One piece, trunnion mounted style stem design eliminates shear failure and reduces the effects of side loading found in two piece designs. Seat glands may be retightened for extended use. Operating torque is low to reduce wear and extend the life of parts.

The AE ball valve is designed to operate safely at pressures up to 20,000 psi @ 200°F (1380 bar @ 93°C) and temperature up to 500°F @ 5,000 psi (260°C 345 bar). AE Ball Valves are avail in 2 and 3 way design with orifice sizes of 0.187" to .500" (4.7 mm to 12.7 mm). Features include 316 SS construction, PEEK seats, one piece trunnion stems and low friction stem seals.



Series RVP & RVS

Series RVP & RVS relief valves provide reliable venting of gases or liquids for set pressure from 1,500 psi (103 bar) to 60,000 psi (4140 bar). Standard temperature range on RVP model is -423°F to 400°F (-253°C to 204°C). High temperature option to 750°F (400°C) also available. Temperature range on RVS model is 32°F to 400°F (0°C to 204°C). (Note : Seat material is Arlon).

These precision valves are designed for pressure gas systems, cryogenic systems, petrochemical application and other special systems. They are capable of handling air, gases, steam, vapor and liquids. They are not recommended for steam boiler applications and are not ASME code stampable.

Relief valves are designed to open proportionally to increasing back pressure and therefore, are not recommended for application requiring immediate full valve flow at set pressure (such as decompositions, polymerizations, etc). Full flow of relief valve is defined at 10% over set pressure.

Connection Size & Type (Inches)		Pressure rating PSIG @ 100°F (bar @ 38°C)			
Inlet	Outlet FNPT	Orifice In. (mm)	Min Set	Max set	Max Back
SF562CX	3/4 (19.1)	.312 (7.92)	3,000 (207)	5,000 (345)	500 (34.5)
SF562CX	3/4 (19.1)	.250 (6.35)	5,000 (345)	10,000 (690)	500 (34.5)
SF562CX	3/4 (19.1)	.188 (4.78)	10,000 (689)	15,000 (1034)	500 (34.5)
SF562CX	3/4 (19.1)	.156 (4.02)	15,000 (1034)	20,000 (1379)	500 (34.5)
F375C	3/4 (19.1)	.125 (3.18)	20,000 (1379)	30,000 (2068)	500 (34.5)
F562C	3/4 (19.1)	.093 (2.36)	25,000 (1724)	45,000 (3103)	500 (34.5)
F375C	3/4 (19.1)	.078 (1.98)	30,000 (2060)	60,000 (4137)	500 (34.5)



Manifold Block

Specialty pressure manifolds minimize space requirements and reduce installation time necessary to plumb a pressure system. In addition, by reducing the number of components used in a system, manifolds reduce the number of potential leak joints.

Autoclave Engineers will design and build pressure manifolds to meet specific installation, layout and pressure requirements. These manifolds are capable of withstanding pressures from vacuum to 60,000 psi (4137 bar), and are available in a variety of materials and sizes. Among the pressure connections that can be incorporated are autoclave are autoclave now, medium and high pressure, NPT, SAE, BSP and others. Transitions in system line sizes and tubing pressure series can be accomplished through a specialty manifold. These manifolds are appropriate wherever pressure tubing systems are utilized.

