

# Ball Valves

## Options / Details

Autoclave Engineers ball valves can be supplied with a number of options to meet your requirements. Options consist of different materials of construction, seal material, high temperature seals, handle colors, handle lockouts, limit switches or limit switches with visual indicators for pneumatic actuators.

Replacement of the old style ball valve with the new style is also addressed with complete ordering information.

The following pages provide details on the available options, as well as tube connection dimensions. For additional information on these options, or technical information not found in this or any other section, consult the factory or local distributor.



**Autoclave  
Engineers**

Fluid Components  
Division of Snap-tite, Inc.  
[www.autoclaveengineers.com](http://www.autoclaveengineers.com)

# Ball Valves - Options / Details

## **High Temperature Option**

Ball valves are available with alternate o-rings for high temperature operation. Standard Viton o-rings are replaced with Kalrez o-rings to increase the operating temperature to 500°F (260°C). To specify this option, add “-HT” to the catalog number as shown in the ball valve sections.

High temperature pneumatic valve actuators are also available. Consult factory with your application and for specific information.

## **Material Options**

Standard ball valves are constructed of 316 stainless steel. Other materials are available for specific applications upon request. NACE (MR-01-75) approved materials for sour service can be supplied upon request. Consult factory for the materials available and the temperature and pressure ratings.

## **Limit Switches or Limit Switches with Visual Indicators**

Pneumatic actuators are available with limit switches or limit switches with visual indicators. Consult the factory for information on these items or questions concerning your applications.

## **Handle Options**

Ball valves can be purchased with optional handle colors for process or valve identification. Consult factory for available colors and other options.

## **Handle Lockouts**

Handle lockouts are available to lockout ball valves in the open or closed position preventing unauthorized personnel from actuating valves during shutdowns or emergency situations. Lockouts consist of two halves that completely cover the valve handle and can be locked for security. They are constructed of durable plastic resistant to abrasion, solvents, and chemical agents. Consult factory for details.

## **Obsolete Ball Valves**

Ball valves complete with connection adapters are available for direct replacement of our older obsolete ball valve. The ball valve seat glands are designed to permit replacement without having to modify your existing tubing. To order valves for direct replacement add “-OS” to the end of the standard ball valve catalog number.

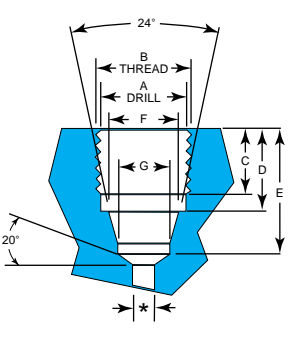
*Note: This applies only to the 1/4” 2-way ball valve.*

## **Connection Detail Dimensions**

The following are reference dimensions for the tube connections used in the ball valves. For complete connection information see the Tools, Installation, Operation and Maintenance section in the Autoclave Engineers Fluid Components complete catalog.

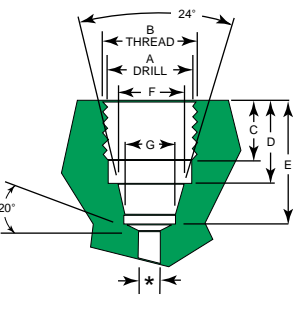
## Tube Connection Dimensions - AE SpeedBite SW \*

Tube Outside Diameter inches (mm)	Connection Type	Dimensions - Inches (mm)						
		A	B	C	D	E	F	G
1/4 (6.35)	SW250	29/64 (11.50)	1/2 -20 (12.7) -20	0.34 (8.64)	0.44 (11.20)	0.69 (17.50)	0.35 (8.89)	"F" 0.257 "F" (6.53)
3/8 (19.50)	SW375	37/64 (14.70)	5/8 -18 (15.90) -18	0.38 (9.65)	0.47 (11.90)	0.75 (19.10)	0.48 (12.20)	"W" 0.386 "W" (9.80)
1/2 (12.70)	SW500	3/4 (19.10)	13/16 -16 (20.60) -16	0.41 (10.50)	0.50 (12.70)	0.81 (20.60)	0.60 (15.20)	0.514 (13.100)



## Tube Connection Dimensions - AE SpeedBite W \*

Tube Outside Diameter inches (mm)	Connection Type	Dimensions - Inches (mm)						
		A	B	C	D	E	F	G
1/8 (3.18)	W125	"Q" 0.332 "Q" (8.43)	3/8 -24 (9.53) -24	0.22 (5.59)	0.31 (7.87)	0.47 (11.90)	0.19 (4.83)	#30 0.128 #30 (3.25)
1/4 (6.35)	W250	11/16 (17.50)	3/4 -16 (19.10) -16	0.38 (9.65)	0.44 (11.20)	0.69 (17.50)	0.35 (8.89)	"F" 0.257 "F" (6.53)
3/8 (9.53)	W375	11/16 (17.50)	3/4 -16 (19.10) -16	0.38 (9.65)	0.44 (11.20)	0.69 (17.50)	0.48 (12.20)	"W" 0.386 "W" (9.80)



Note: All dimensions are shown for reference only and should not be considered as actual machine dimensions.

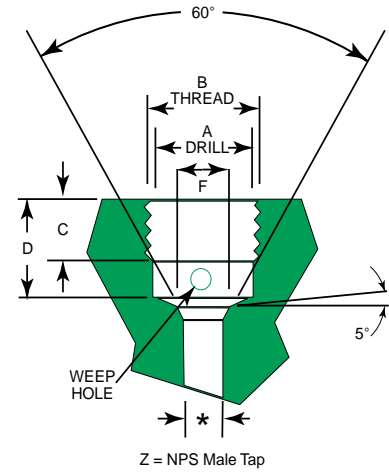
\* For port diameter please see orifice sizes for specific valves and fittings.

All threads are manufactured to a class 2A or 2B fit.

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

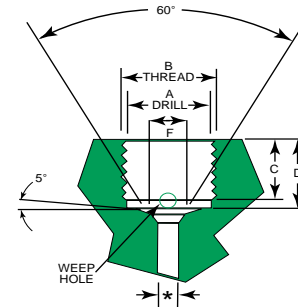
## Tube Connection Dimensions - AE Medium Pressure SFCX \*\*

Tube Outside Diameter inches (mm)	Connection Type	Dimensions - Inches (mm)				
		A	B	C	D	F
1/4 (6.35)	SF250CX20	25/64 (9.92)	7/16 -20 (11.10) -20	0.28 (7.11)	0.50 (12.70)	0.19 (4.83)
3/8 (9.53)	SF375CX20	33/64 (13.10)	9/16 -18 (14.30) -18	0.38 (9.65)	0.62 (15.70)	0.31 (7.87)
9/16 (14.30)	SF562CX20	3/4 (19.10)	13/16 -16 (20.60) -16	0.44 (11.20)	0.75 (19.10)	0.50 (12.70)
3/4 (19.10)	SF750CX20	61/64 (24.20)	3/4 -14 <sub>z</sub> (19.10) -14 <sub>z</sub>	0.50 (12.70)	0.94 (23.90)	0.62 (15.70)
1 (25.40)	SF100CX20	1 19/64 (32.90)	1 3/8 -12 (34.90) -12	0.81 (20.60)	1.31 (33.30)	0.88 (22.40)



## Tube Connection Dimensions - AE HighPressure FC \*\*

Tube Outside Diameter inches (mm)	Connection Type	Dimensions - Inches (mm)				
		A	B	C	D	F
1/4 (6.35)	F250C	33/64 (13.10)	9/16 -18 (14.30) -18	0.38 (9.65)	0.44 (11.20)	0.17 (4.32)
3/8 (9.53)	F375C	11/16 (17.50)	3/4 -16 (19.10) -16	0.53 (13.50)	0.62 (15.70)	0.26 (6.60)
9/16 (14.30)	F562C	1 3/64 (26.60)	1 1/8 -12 (28.60) -12	0.62 (15.70)	0.75 (19.10)	0.38 (9.65)



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Consult factory.

**Note:** All dimensions are shown for reference only and should not be considered as actual machine dimensions.

\* For port diameter please see orifice sizes for specific valves and fittings.

\*\* For male tubing end preparation, please see pages "Tools, Installation" section in main catalog.

All threads are manufactured to a class 2A or 2B fit.

### ! WARNING !

FAILURE OR IMPROPER SELECTION OR IMPROPER USE OF THE PRODUCTS AND/OR SYSTEMS DESCRIBED HEREIN OR RELATED ITEMS CAN CAUSE DEATH, PERSONAL INJURY AND/OR PROPERTY DAMAGE.

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