

## Foreword

This catalog briefly describes the Goddard Industrial Gas and Cryogenic Equipment available from the Cryo-Flow division of Engineered Controls International, Inc. As a result of condensing information in this catalog, some highly technical and special application material has been omitted. Proper application, installation and maintenance of the product is essential. Buyers should obtain further information if there are any doubts or questions. All information contained in this catalog is subject to change by Engineered Controls International, Inc. without notice. Additional product information is available from Engineered Controls International, Inc. or authorized product distributors.

### Warning

Never use any product on oxygen service if another gas has been previously used on the product.

### Materials

Rego Cryo-Flow Products Division may make suggestions for a material to use with a specific media. These suggestions will be based on technical compatibility resources through associations and manufacturers. Rego does not guarantee the material to be compatible with the specific media – that is the responsibility of the user. Users must test under their own operating conditions to determine the suitability of any material in a particular application.

### Oxygen Service

Rego Cryo-Flow Products Division provides specified product cleaned in accordance with the intermediate level of ASTM-G93 and CGA G-4.1 which assures removal of visible particles and combustible residues. System designers must verify the compatibility of the materials used in this product before installation and operation. Specifications of materials for oxygen service is the USER'S RESPONSIBILITY. If there is any doubt consult an expert.

#### Canadian Registration Numbers

The Majority of products in this catalog are registered with the Canadian Department of Labor under the following reference numbers:

Bronze 7082.5 \*  
Steel 5899.5\*

\* Represents Province code number

#### European PED Certification

Individual part numbers certified are available by request that have received PED certification by the notified body, Lloyd's Register Verification, Ltd. #0038

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## Goddard 110 Series Stainless Steel Gate Valve for Cryogenic Service



### Features:

- **Top Entry:** This valve can be permanently installed in the line and serviced from the top
  - **Soft Seated:** PCTFE Seat provides a virtually bubble tight seal and is replaceable
  - **Construction:** Stainless steel body and bonnet
  - **Sizes:** ½" - 6" (15mm - 150mm)
  - **Ends:** RF Flange, Butt weld, Socket weld, Threaded (FNPT)
  - **Service:** Liquified and vaporized atmospheric gases, LNG
  - **Temperature Rating:** -325°F - 150°F (-196°C +65°C)
  - **Pressure Rating:** (Cold, Non-shock)
    - Class 150 valve - 275 PSIG (19 bar)
    - Class 300 valve - 720 PSIG (50 bar)
- ½" - 6" Class 150  
PED Approved, Approved for US and Canada  
½" - 6" Class 300  
PED Approved, Approved for US and Canada



# Goddard 110 Series Stainless Steel Gate Valve for Cryogenic Service

## Stainless Body • RF Flange Ends

150# Part Number	300# Part Number	Valve Size		Ends	Weight 150#		Weight 300#		Estimated CV
		Inches	MM		Lbs.	Kg	Lbs.	Kg.	
GS-00110W-8F	-	1"	25 mm	Flange	15	6.80	-	-	30.00
GS-00110W-12F	GS-00110W-12F3	1½"	40 mm		35	15.88	45	20.41	85.00
GS-00110W-16F	GS-00110W-16F3	2"	50 mm		35	15.88	50	22.68	100.00
GS-00110W-24F	GS-00110W-24F3	3"	80 mm		65	29.48	85	35.56	310.00
GS-00110W-32F	GS-00110W-32F3	4"	100 mm		90	40.82	120	54.43	700.00
GS-00110W-48F	GS-00110W-48F3	6"	150 mm		150	68.04	200	90.72	850.00

150# ANSI Class (275 PSIG Cold Working Pressure)

300# ANSI Class (720 PSIG Cold Working Pressure)

## Stainless Body • Butt Weld, Socket Weld, Threaded Ends

150# Part Number	300# Part Number	Valve Size		Ends	Weight		Estimated CV
		Inches	MM		Lbs.	Kg.	
GS-00110W-4WA	-	½"	15 mm	Butt Weld SCH10	10	4.54	7.00
GS-00110W-4S3	GS-00110W-4S3	½"	15 mm	Socket Weld	15	6.80	7.00
GS-00110W-4T	-	½"	15 mm	Threaded	10	4.54	7.00
GS-00110W-6WA	-	¾"	20 mm	Butt Weld SCH10	10	4.54	23.00
GS-00110W-6S3	GS-00110W-6S3	¾"	20 mm	Socket Weld	15	6.80	23.00
GS-00110W-8WA	-	1"	25 mm	Butt Weld SCH10	10	4.54	30.00
GS-00110W-8S3	GS-00110W-8S3	1"	25 mm	Socket Weld	15	6.80	30.00
GS-110W-8T	-	1"	25 mm	Threaded	10	4.54	30.00
GS-00110W-12WA	-	1½"	40 mm	Butt Weld SCH10	30	13.61	85.00
GS-00110W-12S3	GS-00110W-12S3	1½"	40 mm	Socket Weld	35	15.88	85.00
GS-00110W-16W3A	GS-00110W-16W3A	2"	50 mm	Butt Weld SCH10	35	15.88	100.00
GS-00110W-16W3J	GS-00110W-16W3J	2"	50 mm	Butt Weld SCH40	35	15.88	100.00
GS-00110W-16S	-	2"	50 mm	Socket Weld	30	13.61	100.00
GS-00110W-24W3A	GS-00110W-24W3A	3"	80 mm	Butt Weld SCH10	65	29.48	310.00
GS-00110W-24W3J	GS-00110W-24W3J	3"	80 mm	Butt Weld SCH40	65	29.48	310.00
GS-00110W-32W3A	GS-00110W-32W3A	4"	100 mm	Butt Weld SCH10	80	40.82	700.00
GS-00110W-32W3J	GS-00110W-32W3J	4"	100 mm	Butt Weld SCH40	80	40.82	700.00
GS-00110W-48WA	GS-00110W-48W3A	6"	150 mm	Butt Weld SCH10	120/150*	54.43/68.04*	850.00
GS-00110W-48WJ	GS-00110W-48W3J	6"	150 mm	Butt Weld SCH40	120/150*	54.43/68.04*	850.00

150# ANSI Class (275 PSIG Cold Working Pressure)

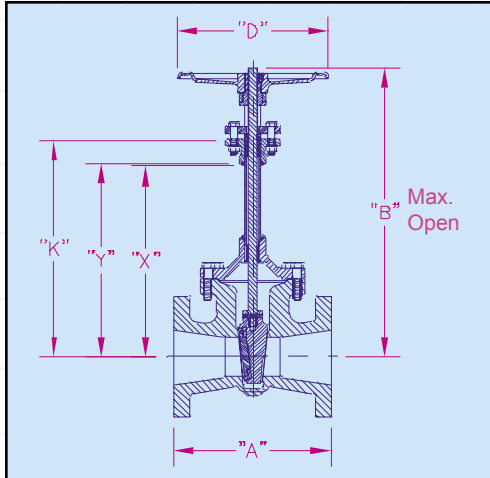
300# ANSI Class (720 PSIG Cold Working Pressure)

\* Second number indicates valve for 300# part number.

Service: 300#-720 PSI Non-shock Cold • Service: 150#-275 PSI Non-shock Cold • Temperature Rating +150°F - 325°F



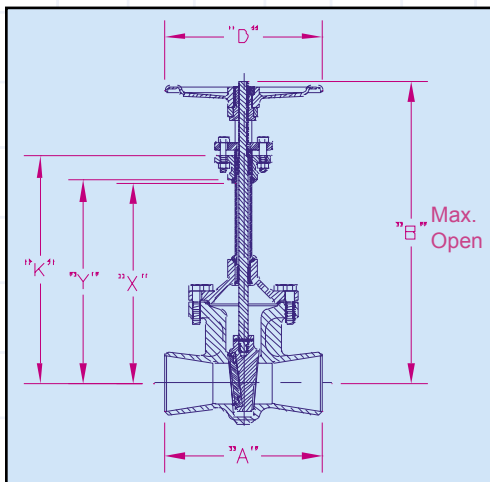
# Goddard 110 Series Stainless Steel Gate Valve for Cryogenic Service



## Raised Face Flange Ends\*

Size	"A" 150#	"A" 300#	"B"	"D"	"K"	"X"	"Y"
1"	4 $\frac{1}{8}$ "	N/A	17 $\frac{3}{4}$ "	4 $\frac{1}{2}$ "	12 $\frac{3}{4}$ "	11 $\frac{1}{16}$ "	11 $\frac{3}{8}$ "
1 $\frac{1}{2}$ "	4 $\frac{5}{8}$ "	6 $\frac{1}{8}$ "*	21 $\frac{7}{8}$ "	7"	14"	12 $\frac{5}{16}$ "	12 $\frac{5}{8}$ "
2"	7"	7 $\frac{1}{4}$ "*	21 $\frac{7}{8}$ "	7"	14"	12 $\frac{5}{16}$ "	12 $\frac{5}{8}$ "
3"	8"	8 $\frac{3}{4}$ "*	31 $\frac{1}{2}$ "	12"	20"	17 $\frac{3}{4}$ "	18 $\frac{1}{16}$ "
4"	9"	12"	33 $\frac{3}{4}$ "	12"	21 $\frac{1}{2}$ "	19 $\frac{1}{4}$ "	19 $\frac{9}{16}$ "
6"	10 $\frac{1}{2}$ "	15 $\frac{7}{8}$ "	41 $\frac{1}{2}$ "	16"	26"	23 $\frac{9}{16}$ "	23 $\frac{7}{8}$ "

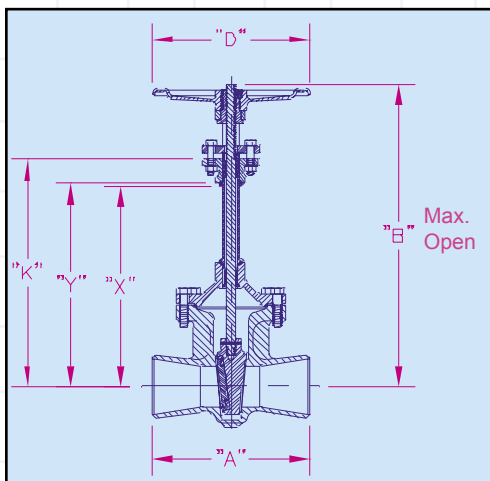
\*Face-to-face dimensions (A) are Goddard standard not to ANSI standard.  
Vented Body and Bonnet • Special B,K,X & Y Dimensions Available



## Butt Weld Ends

Size	"A" 150#	"A" 300#	"B"	"D"	"K"	"X"	"Y"
1/2"	4 $\frac{1}{4}$ "	N/A	17 $\frac{3}{4}$ "	4 $\frac{1}{2}$ "	12 $\frac{3}{4}$ "	11 $\frac{1}{16}$ "	11 $\frac{3}{8}$ "
3/4"	4 $\frac{5}{8}$ "	N/A	17 $\frac{3}{4}$ "	4 $\frac{1}{2}$ "	12 $\frac{3}{4}$ "	11 $\frac{1}{16}$ "	11 $\frac{3}{8}$ "
1"	5"	N/A	17 $\frac{3}{4}$ "	4 $\frac{1}{2}$ "	12 $\frac{3}{4}$ "	11 $\frac{1}{16}$ "	11 $\frac{3}{8}$ "
1 $\frac{1}{2}$ "	6"	6"	21 $\frac{7}{8}$ "	7"	14"	12 $\frac{5}{16}$ "	12 $\frac{5}{8}$ "
2"	8 $\frac{1}{2}$ "	8 $\frac{1}{2}$ "	21 $\frac{7}{8}$ "	7"	14"	12 $\frac{5}{16}$ "	12 $\frac{5}{8}$ "
3"	11 $\frac{1}{8}$ "	11 $\frac{1}{8}$ "	31 $\frac{1}{2}$ "	12"	20"	17 $\frac{3}{4}$ "	18 $\frac{1}{16}$ "
4"	12"	12"	33 $\frac{3}{4}$ "	12"	21 $\frac{1}{2}$ "	19 $\frac{1}{4}$ "	19 $\frac{9}{16}$ "
6"	15 $\frac{7}{8}$ "	15 $\frac{7}{8}$ "	41 $\frac{1}{2}$ "	16"	26"	23 $\frac{9}{16}$ "	23 $\frac{7}{8}$ "

Vented Body and Bonnet • Special B,K,X & Y Dimensions Available  
• Unless otherwise specified, Schedule 10 weld ends are supplied



## Socket Weld Ends

Size	"A" 150#	"A" 300#	"B"	"D"	"E"	"F"	"K"	"X"	"Y"
1/2"	3 $\frac{3}{4}$ "	3 $\frac{3}{4}$ "	17 $\frac{3}{4}$ "	4 $\frac{1}{2}$ "	.855	3/8"	12 $\frac{3}{4}$ "	11 $\frac{1}{16}$ "	11 $\frac{3}{8}$ "
3/4"	3 $\frac{3}{4}$ "	3 $\frac{3}{4}$ "	17 $\frac{3}{4}$ "	4 $\frac{1}{2}$ "	1.065	1/2"	12 $\frac{3}{4}$ "	11 $\frac{1}{16}$ "	11 $\frac{3}{8}$ "
1"	3 $\frac{1}{2}$ "	4"	17 $\frac{3}{4}$ "	4 $\frac{1}{2}$ "	1.330	1/2"	12 $\frac{3}{4}$ "	11 $\frac{1}{16}$ "	11 $\frac{3}{8}$ "
1 $\frac{1}{2}$ "	4 $\frac{5}{8}$ "	5"	21 $\frac{7}{8}$ "	7"	1.915	1/2"	14"	12 $\frac{5}{16}$ "	12 $\frac{5}{8}$ "
2"	8 $\frac{1}{2}$ "	N/A	21 $\frac{7}{8}$ "	7"	2.406	5/8"	14"	12 $\frac{5}{16}$ "	12 $\frac{5}{8}$ "

Vented Body and Bonnet • Special B,K,X & Y Dimensions Available



## Goddard 210 Series Stainless Steel Gate Valve for Cryogenic Service



### Features:

- **Top Entry:** This valve can be permanently installed in the line and serviced from the top
- **Soft Seated:** PCTFE Seat provides a virtually bubble tight seal and is replaceable
- **Construction:** Stainless steel body and bonnet
- **Sizes:** ½" - 6" (15mm - 150mm)
- **Ends:** RF Flange, Butt weld, Socket weld, Threaded (FNPT)
- **Service:** Liquified and vaporized atmospheric gases, LNG
- **Temperature Rating:** -325°F - 150°F (-196°C +65°C)
- **Pressure Rating:** (Cold, Non-shock)  
Class 150 valve - 275 PSIG (19 bar)  
Class 300 valve - 720 PSIG (50 bar)  
  
½" - 4" Class 150  
PED Approved, Approved for US and Canada  
½" - 4" Class 300  
PED Approved, Approved for US and Canada

Our investment cast stainless steel is specified by leading industrial gas companies for storage tank and yard operations.

Special bonnet extensions can be supplied for cold box applications

Valves for hydrogen use can be supplied



# Goddard 210 Series Stainless Steel Gate Valve for Cryogenic Service

## Stainless Body • RF Flange Ends

150# Part Number	300# Part Number	Valve Size		Ends	150# Weight		300# Weight		Estimated CV
		Inches	MM		Lbs.	Kg.	Lbs.	Kg.	
GS-00210W-8F	GS-00210W-8F3	1"	25 mm	Flange	15	6.80	20	9.07	11.50
GS-00210W-16F	GS-00210W-16F3	2"	50 mm		35	15.88	40	18.14	40.00
GS-00210W-24F	GS-00210W-24F3	3"	80 mm		65	29.48	70	31.75	60.00
GS-00210W-32F	GS-00210W-32F3	4"	100 mm		90	40.82	95	43.09	175.00

150# ANSI Class (275 PSIG Cold Working Pressure)

300# ANSI Class (720 PSIG Cold Working Pressure)

## Stainless Body • Butt Weld, Socket Weld, Threaded Ends

150# Part Number	300# Part Number	Valve Size		Ends	Weight		Estimated CV
		Inches	MM		Lbs.	Kg.	
GS-00210W-4S3	GS-00210W-4S3	½"	15 mm	Socket Weld	15	6.80	3.90
GS-00210W-4T3	GS-00210W-4T3	½"	15 mm	Threaded	15	6.80	3.90
GS-00210W-6S3	GS-00210W-6S3	¾"	20 mm	Socket Weld	15	6.80	7.10
GS-00210W-6T3	GS-00210W-6T3	¾"	20 mm	Threaded	15	6.80	7.10
GS-00210W-8S3	GS-00210W-8S3	1"	25 mm	Socket Weld	15	6.80	11.50
GS-00210W-8T3	GS-00210W-8T3	1"	25 mm	Threaded	15	6.80	11.50
GS-00210W-12S3	GS-00210W-12S3	1½"	40 mm	Socket Weld	25	11.34	29.00
GS-00210W-16W3A	GS-00210W-16W3A	2"	50 mm	Butt Weld SCH10	35	15.88	40.00
GS-00210W-16W3J	GS-00210W-16W3J	2"	50 mm	Butt Weld SCH40	35	15.88	40.00
GS-00210W-24W3A	GS-00210W-24W3A	3"	80 mm	Butt Weld SCH10	55	24.95	60.00
GS-00210W-24W3J	GS-00210W-24W3J	3"	80 mm	Butt Weld SCH40	55	24.95	60.00
GS-00210W-32W3A	GS-00210W-32W3A	4"	100 mm	Butt Weld SCH10	80	36.29	175.00
GS-00210W-32W3J	GS-00210W-32W3J	4"	100 mm	Butt Weld SCH40	80	36.29	175.00

150# ANSI Class (275 PSIG Cold Working Pressure)

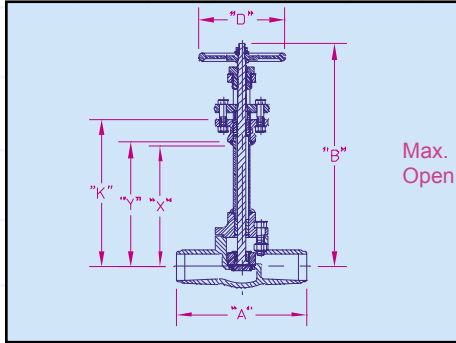
300# ANSI Class (720 PSIG Cold Working Pressure)

\* Second number indicates valve for 300# part number.

Service: 300#-720 PSI Non-shock Cold • Service: 150#-275 PSI Non-shock Cold • Temperature Rating +150°F to -325°F



# Goddard 210 Series Stainless Steel Gate Valve for Cryogenic Service



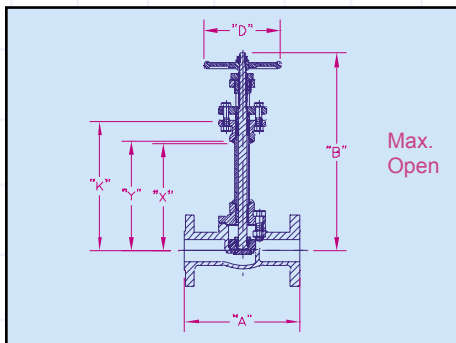
## Butt Weld Ends

Size	"A"	"B"	"D"	"K"	"X"	"Y"
2"	10 $\frac{1}{2}$ "	22 $\frac{1}{4}$ "	7"	15"	12 $\frac{3}{4}$ "	13 $\frac{1}{16}$ "
3"	$\Delta$ 12"	30 $\frac{1}{2}$ "	10"	21 $\frac{1}{2}$ "	19 $\frac{1}{16}$ "	19 $\frac{3}{8}$ "
4"	$\Theta$ 13 $\frac{1}{2}$ "	36 $\frac{3}{4}$ "	12"	24 $\frac{1}{4}$ "	21 $\frac{1}{16}$ "	22"
6"	17 $\frac{1}{2}$ "	43 $\frac{3}{4}$ "	18"	33 $\frac{3}{16}$ "	28 $\frac{13}{16}$ "	29 $\frac{3}{16}$ "

$\Delta$  For SCH. 40 A=12 $\frac{1}{2}$ "

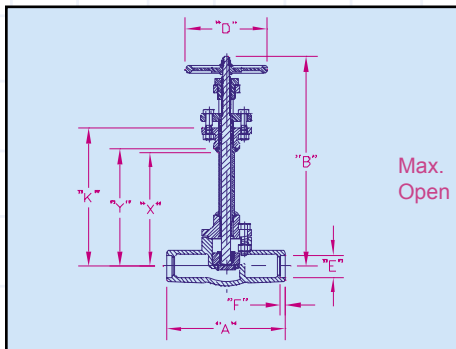
$\Theta$  For SCH. 40 A=14"

\* Unless otherwise specified, SOH 10 weld ends are supplied



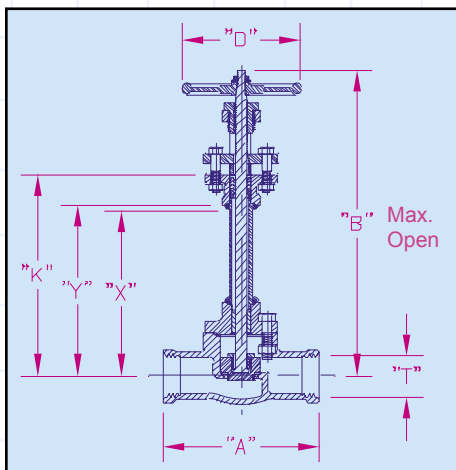
## Raised Face Flange Ends\*

Size	"A" 150#	"A" 300#	"B"	"D"	"K"	"X"	"Y"
1"	6 $\frac{1}{2}$ "	8"	18 $\frac{1}{8}$ "	5"	12 $\frac{3}{4}$ "	11 $\frac{1}{16}$ "	11 $\frac{3}{8}$ "
2"	8"	10 $\frac{1}{2}$ "	22 $\frac{1}{4}$ "	7"	15"	12 $\frac{3}{4}$ "	13 $\frac{1}{16}$ "
3"	9 $\frac{1}{2}$ "	12 $\frac{1}{2}$ "	30 $\frac{1}{2}$ "	10"	21 $\frac{1}{2}$ "	19 $\frac{1}{16}$ "	19 $\frac{3}{8}$ "
4"	11 $\frac{1}{2}$ "	14"	36 $\frac{3}{4}$ "	12"	24 $\frac{1}{4}$ "	21 $\frac{1}{16}$ "	22"



## Socket Weld Ends

Size	"A"	"B"	"D"	"E"	"F"	"K"	"X"	"Y"
$\frac{1}{2}$ "	5"	18 $\frac{1}{8}$ "	5"	.855	$\frac{3}{8}$ "	12 $\frac{3}{4}$ "	11 $\frac{1}{16}$ "	11 $\frac{3}{8}$ "
$\frac{3}{4}$ "	5"	18 $\frac{1}{8}$ "	5"	1.065	$\frac{1}{2}$ "	12 $\frac{3}{4}$ "	11 $\frac{1}{16}$ "	11 $\frac{3}{8}$ "
1"	5"	18 $\frac{1}{8}$ "	5"	1.330	$\frac{1}{2}$ "	12 $\frac{3}{4}$ "	11 $\frac{1}{16}$ "	11 $\frac{3}{8}$ "
1 $\frac{1}{2}$ "	10 $\frac{1}{4}$ "	22 $\frac{1}{4}$ "	7"	1.915	$\frac{1}{2}$ "	15"	12 $\frac{3}{4}$ "	13 $\frac{1}{16}$ "



## Threaded Ends

Size	"T" - NPT	"A"	"B"	"D"	"K"	"X"	"Y"
$\frac{1}{2}$ "	$\frac{1}{2}$ "-14	5"	18 $\frac{1}{8}$ "	5"	12 $\frac{3}{4}$ "	11 $\frac{1}{16}$ "	11 $\frac{3}{8}$ "
$\frac{3}{4}$ "	$\frac{3}{4}$ "-14	5"	18 $\frac{1}{8}$ "	5"	12 $\frac{3}{4}$ "	11 $\frac{1}{16}$ "	11 $\frac{3}{8}$ "
1"	1"-11 $\frac{1}{2}$ "	5 $\frac{3}{4}$ "	18 $\frac{1}{8}$ "	5"	12 $\frac{3}{4}$ "	11 $\frac{1}{16}$ "	11 $\frac{3}{8}$ "

Vented body and bonnet. Special B,K,X & Y dimensions available.



## Goddard 231 Series Stainless Steel Globe Valve for Cryogenic Service



### FEATURES:

- **Top Entry:** Rugged stainless steel \* soft seated cryogenic globe valve. This valve can be permanently installed in the line and serviced from the top
- **Soft Seated:** PCTFE Seat provides a virtually bubble tight seal. Stem/Globe assembly is replaceable
- **Construction:** One piece investment cast bonnet eliminates welded joint in topworks
- **Stem Packing:** Proprietary Goddard system utilizing GRAFOIL®\*\* flexible graphite
- **Sizes:** 1/4" through 1 1/2" (6mm through 40mm)
- **Ends:** Socket weld, Butt weld
- **Service:** Liquified and Gaseous hydrogen service only (see series 232 for non-hydrogen service)
- **Temperature Rating:** -425°F to 150°F (-254°C to +65°C)
- **Pressure Rating:** (Cold, Non-shock)  
300 PSIG (20 Bar)  
400 PSIG (27 Bar)

\*Stainless steel ASTM A351-CF3M (316L)

\*\*GRAFOIL® is a UCAR Carbon Company development

PED Approved, Approved for US and Canada  
Designed to ASME B16.34

A rugged construction and easy access are design features which provide minimum installation and maintenance cost while maintaining superior performance and operator safety. This valve replaces higher cost bellows-seated valves in many applications. The proprietary Goddard GRAFOIL® stem packing system provides excellent performance when the valve operates in liquid hydrogen service.



# Goddard 231 Series Stainless Steel Globe Valve for Cryogenic Service

## Stainless Body • 400 PSIG Socket Weld Ends

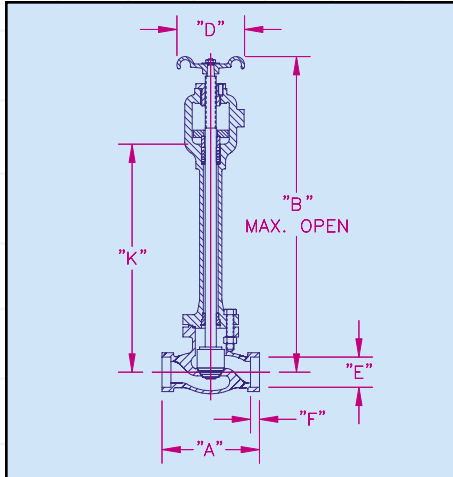
Part Number	Valve size Inches	Valve Size mm	Ends	Weight Lbs.	Weight Kgs.	Estimated Cv
<b>S-000231-2S4</b>	¼"	6 mm	Socket Weld	6 lbs.	2.72 Kgs.	1.30
<b>S-000231-4S4</b>	½"	15 mm	Socket Weld	6 lbs.	2.72 Kgs.	3.90
<b>S-000231-6S4</b>	¾"	20 mm	Socket Weld	10 lbs.	4.54 Kgs.	7.10
<b>S-000231-8S4</b>	1"	25 mm	Socket Weld	10 lbs.	4.54 Kgs.	10.50
<b>S-000231-12S4</b>	1½"	40 mm	Socket Weld	15 lbs.	6.80 Kgs.	25.00

## Stainless Body • 300 PSIG Butt Weld Ends

Part Number	Valve size Inches	Valve Size mm	Ends	Weight Lbs.	Weight Kgs.	Estimated Cv
<b>S-000231-4WA</b>	½"	15 mm	Butt Weld	6 lbs.	2.72 Kgs.	3.90
<b>S-000231-8WA</b>	1"	25 mm	Butt Weld	10 lbs.	4.54 Kgs.	10.50
<b>S-000231-12WA</b>	1½"	40 mm	Butt Weld	15 lbs.	6.80 Kgs.	25.00



# Goddard 231 Series Stainless Steel Globe Valve for Cryogenic Service

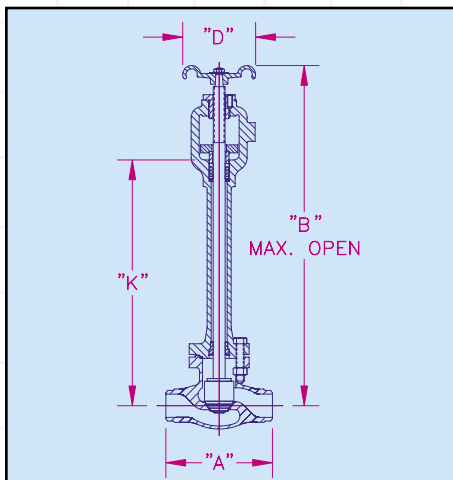


Pressure Rating 400 PSIG  
 Temperature Rating +150° F to - 425° F  
 This valve is not approved for gaseous and/or liquid oxygen service  
 For oxygen service use Goddard series 232H cryogenic globe valve

Dimensional data  
 All Dimensional Data are in inches.

## SOCKET WELD ENDS

Size	"A"	"B"	"D"	"E"	"F"	"K"
1/4"	4 1/4"	14 9/16"	2 3/8"	0.560	0.375	10 3/16"
1/2"	4 1/4"	14 9/16"	2 3/8"	0.860	0.375	10 3/16"
3/4"	5 3/8"	17"	3"	1.070	0.500	11 1/2"
1"	5 3/8"	17"	3"	1.335	0.500	11 1/2"
1 1/2"	6 1/2"	18 14/16"	4"	1.920	0.500	12 5/16"



Pressure Rating 300 PSIG  
 Temperature Rating +150° F to - 425° F  
 This valve is not approved for gaseous and/or liquid oxygen service  
 For oxygen service use Goddard series 232H cryogenic globe valve

Dimensional data  
 All Dimensional Data are in inches.

## BUTT WELD ENDS

Size	"A"	"B"	"D"	"K"
1/2"	4 1/4"	14 9/16"	2 3/8"	10 3/16"
1"	5"	17"	3"	11 1/2"
1 1/2"	6 1/2"	18 7/8"	4"	12 5/16"



## Goddard 232 Series Stainless Steel Globe Valve for Cryogenic Service



### Features:

- **Top Entry:** Rugged stainless steel \* soft seated cryogenic globe valve. This valve can be permanently installed in the line and serviced from the top
- **Soft Seated:** PCTFE Seat provides a virtually bubble tight seal. Stem/Globe assembly is replaceable
- **Construction:** One piece investment cast bonnet eliminates welded joint in topworks.
- **Sizes:** 1/2" through 1 1/2" (15mm through 40mm)
- **Ends:** Socket weld and Butt weld
- **Service:** Liquified and vaporized atmospheric gases, LNG
- **Temperature Rating:** -325°F to 150°F (-198°C to +65°C)
- **Pressure Rating:** (Cold, Non-shock)  
300 PSIG (20 Bar)  
400 PSIG (27 Bar)

\*Stainless steel ASTM A351-CF3M (316L)

PED Approved, Approved for US and Canada  
Designed to ASME B16.34

**A rugged construction and easy access are design features which provide minimum installation and maintenance cost while maintaining superior performance and operator safety.**



# Goddard 232 Series Stainless Steel Globe Valve for Cryogenic Service

## Stainless Body Socket Weld Ends 400 PSIG

Part Number	Valve size Inches	Valve Size mm	Ends	Weight Lbs.	Weight Kgs.	Estimated Cv
S-000232-4S4	½"	15 mm	Socket Weld	6 lbs.	2.72 Kgs.	3.90
S-000232-8S4	1"	25 mm	Socket Weld	10 lbs.	4.54 Kgs.	10.50

## High Purity Cryogenic Bonnet Chrome Plated Naval Brass Yoke Bushing Stainless Body Butt Weld Ends 300 PSIG

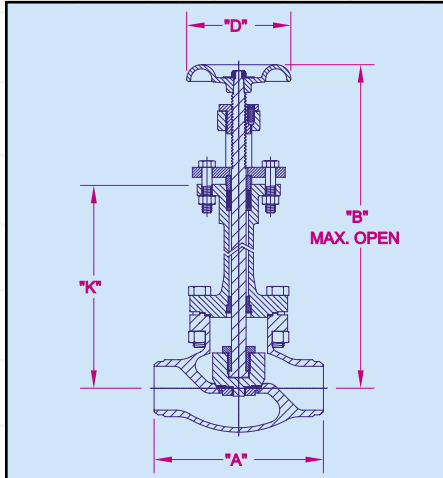
Part Number	Valve size Inches	Valve Size mm	Ends	Weight Lbs.	Weight Kgs.	Estimated Cv
S-232HCB-4WA	½"	15 mm	Butt Weld	6 Lbs.	2.72 Kgs.	3.90
S-232HCB-8WA	1"	25 mm	Butt Weld	10 Lbs.	4.54 Kgs.	10.50
S-232HCB-12WA	1½"	40 mm	Butt Weld	15 Lbs.	6.80 Kgs.	25.00

## High Purity Cryogenic Bonnet Chrome Plated Naval Brass Yoke Bushing Socket Weld Ends 400 PSIG

Part Number	Valve size Inches	Valve Size mm	Ends	Weight Lbs.	Weight Kgs.	Estimated Cv
S-232HCB-4S4	½"	15 mm	Socket Weld	6 lbs.	2.72 Kgs.	3.90
S-232HCB-8S4	1"	25 mm	Socket Weld	10 Lbs.	4.54 Kgs.	10.50
S-232HCB-12S4	1½"	40 mm	Socket Weld	15 Lbs.	6.80 Kgs.	25.00



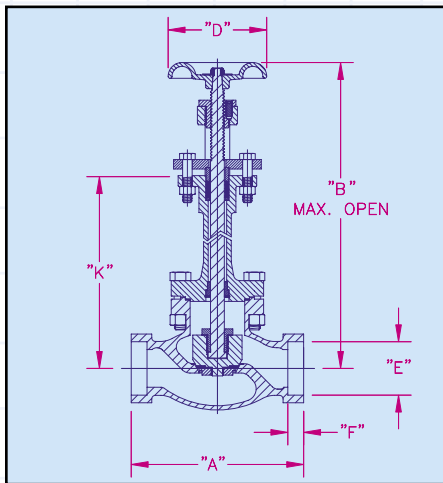
# Goddard 232 Series Stainless Steel Globe Valve for Cryogenic Service



Pressure rating 300 PSIG non-shock cold  
Temperature rating +150° F to -325° F  
Dimensional Data  
All dimensions are in inches

## BUTT WELD ENDS

Size	"A"	"B"	"D"	"K"
1/2"	4 1/4"	14 9/16"	2 3/8"	10 3/16"
1"	5"	17"	3"	11 1/2"
1 1/2"	6"	18 7/8"	4"	12 5/16"



Pressure rating 400 PSIG non-shock cold  
Temperature rating +150° F to -325° F  
Dimensional Data  
All dimensions are in inches

## SOCKET WELD ENDS

Size	"A"	"B"	"D"	"E"	"F"	"K"
1/2"	4 1/4"	14 9/16"	2 3/8"	0.860	0.375	10 3/16"
1"	5 3/8"	17"	3"	1.335	0.500	11 1/2"
1 1/2"	6 1/2"	18 7/8"	4"	1.920	0.500	12 5/16"



## Goddard 302, 306, 310 & 310X Series Bronze Gate Valves for Cryogenic Service



### Features:

- **Top Entry:** This union bonnet valve can be permanently installed in the line and serviced from the top
  - **Soft Seated:** PCTFE Seat provides a virtually bubble tight seal and is replaceable in solid wedge types.  
*\*310 & 310X Series only*
  - **Construction:**  
Bronze cast body and bonnet  
Rugged construction for long life  
Straight through design for high CV  
Designed with unique KOLD-SEAL™  
Standard split wedge design provides better sealing and cycle life
  - **Sizes:** ½" - 3" (15mm - 80mm)
  - **Ends:** Threaded (FNPT), Sil Braze Tube (SBT), or with stainless steel pipe nipples brazed in
  - **Service:** Liquified and vaporized atmospheric gases, LNG
  - **Temperature Rating:** -325°F - 150°F (-196°C + 65°C)
  - **Pressure Rating:** (Cold, Non-shock)  
310, 310x Series 300 PSIG  
302 Series 400 PSIG  
306 Series 600 PSIG
- Designed to MSS SP-80 and ASME B31.3  
Sizes 1.5" - 3.0" PED approved per EN 10204, 3.1

**Gate design for high flow applications.  
Straight-through flow for highest CV rating in the industry.**

**302, 306 Non-Extended stem for selective cold gas applications**

**310, 310X Extended stem ideal for cryogenic supply applications**



# Goddard 302, 306, 310 & 310X Series Bronze Gate Valves for Cryogenic Service

## 302 Series

Bronze Gate Valves

Bronze Body Non-Extended Bonnet, Split Wedge

For selected cold gas operations

400 PSIG COLD WORKING PRESSURE

Part Number	NPT Size Inches	NPT Size mm	Ends	Weight Lbs.	Weight Kgs.	Estimated CV
B-000302-4T4	½"	15	Threaded	1.50	0.70	19.80
B-000302-20T4	2½"	65	Threaded	17.50	8.00	372.00
B-000302-24T4	3"	80	Threaded	26.00	11.80	588.00

Part Number	SBT Size Inches*	SBT Size mm*	Ends	Weight Lbs.	Weight Kgs.	Estimated CV
B-000302-4S4	½"	15	Silver Braze	1.25	0.60	19.80
B-000302-6S4	¾"	20	Silver Braze	2.25	1.00	36.00
B-000302-8S4	1"	25	Silver Braze	3.00	1.40	60.80
B-000302-12S4	1½"	40	Silver Braze	6.00	2.70	152.00
B-000302-16S4	2"	50	Silver Braze	9.50	4.30	245.00
B-000302-20S4	2½"	65	Silver Braze	14.50	6.60	372.00
B-000302-24S4	3"	80	Silver Braze	22.00	10.00	588.00

\*Nominal Size

## 306 Series

600 PSIG Bronze Body, Non-Extended Bonnet, Split Wedge

Part Number	NPT Size Inches	NPT Size mm	Ends	Weight Lbs.	Weight Kgs.	Estimated CV
B-000306-6T6	¾"	20	Threaded	2.25	1.00	36.00
B-000306-8T6	1"	25	Threaded	3.00	1.40	60.80
B-000306-12T6	1½"	40	Threaded	6.00	2.70	152.00
B-000306-16T6	2"	50	Threaded	9.50	4.30	245.00

## 310 Series

300 PSIG Bronze Body, Extended Bonnet, Solid Wedge, Soft Seat

Part Number	NPT Size Inches	NPT Size mm	Ends	Weight Lbs.	Weight Kgs.	Estimated CV
B-000310-20T	2½"	65	Threaded	14.50	6.60	372.00
B-000310-24T	3"	80	Threaded	22.00	10.00	588.00

Part Number	SBT Size Inches *	SBT Size mm *	Ends	Weight Lbs.	Weight Kgs.	Estimated CV
B-000310-24S	3"	80	Silver Braze	22.00	10.00	588.00

\*Nominal Size

## 310X Series

Short Top Works for Trailer Service

300 PSIG Bronze Body, Extended Bonnet, Solid Wedge, Soft Seat

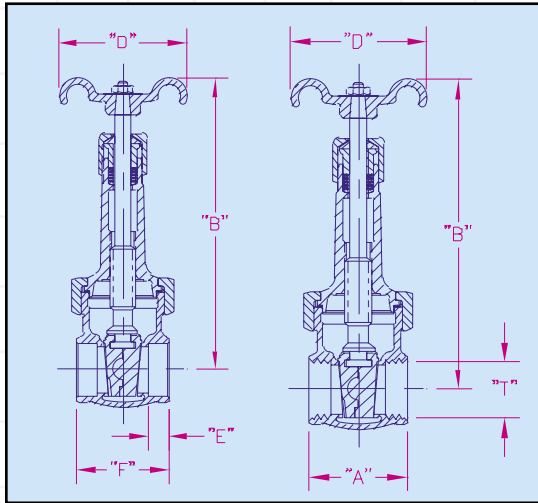
Part Number	NPT Size Inches	NPT Size mm	Ends	Weight Lbs.	Weight Kgs.	Estimated CV
B-000310X-20T	2½"	65	Threaded	14.50	6.60	372.00
B-000310X-24T	3"	80	Threaded	22.00	10.00	588.00

Part Number	SBT Size Inches *	SBT Size mm *	Ends	Weight Lbs.	Weight Kgs.	Estimated CV
B-000310X-24S	3"	80	Silver Braze	22.00	10.00	588.00

\*Nominal Size



# Goddard 302, 306, 310 & 310X Series Bronze Gate Valves for Cryogenic Service



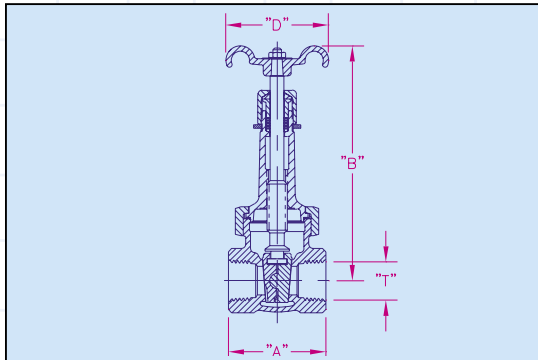
## 302 Series

MAWP: 400 PSIG Non-Shock Cold Temperature Rating +150° F to -325°F  
Non-Extended Valve for selective cold gas applications

Dimensional Data

All dimensions are in inches

Size	"A"	"B"	"D"	"T" NPT	"E"	"F"
1/2"	2 11/32"	5 13/16"	2 1/4"	1/2"	3/8"	2 1/2"
3/4"	2 1/2"	6 15/16"	2 3/4"	3/4"	13/32"	3"
1"	2 27/32"	8 7/16"	3"	1"	7/16"	3 1/4"
1 1/2"	3 7/16"	11 3/16"	4"	1 1/2"	5/8"	4"
2"	3 13/16"	13 3/16"	4 3/4"	2"	2 1/32"	4 1/2"
2 1/2"	4 11/16"	15 13/16"	5 1/4"	2 1/2"	25/32"	5 1/4"
3"	5 1/8"	18 1/4"	6"	3"	53/64"	6"



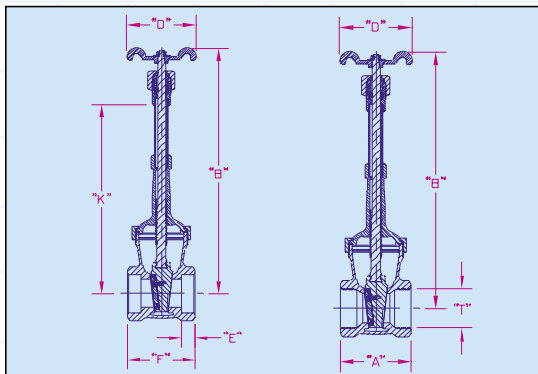
## 306 Series

MAWP: 600 PSIG Non-Shock Cold Temperature Rating +150° F to -325°F  
Non-Extended Valve for selective cold gas applications

Dimensional Data

All dimensions are in inches

Size	"A"	"B"	"D"	"T" NPT
3/4"	2 1/2"	6 15/16"	2 3/4"	3/4"
1"	2 27/32"	8 7/16"	3"	1"
1 1/2"	3 7/16"	11 3/16"	4"	1 1/2"
2"	3 13/16"	13 3/16"	4 3/4"	2"



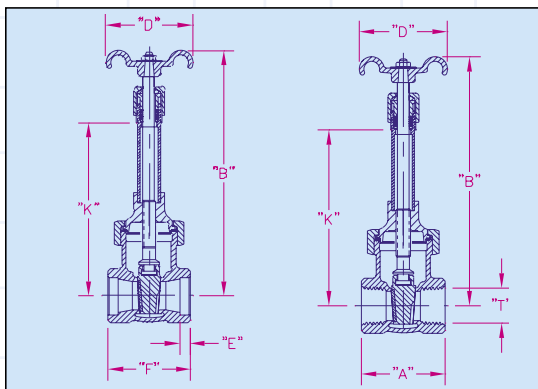
## 310 Series

MAWP: 300 PSIG Non-Shock Cold Temperature Rating +150° F to -325°F  
Extended Valve for selective cold gas applications

Dimensional Data

All dimensions are in inches

Size	"A"	"B"	"D"	"T" NPT	"E"	"F"	"K"
2 1/2"	6"	25 3/8"	2 3/4"	2 1/2"	25/32"	6"	16 13/16"
3"	6"	25 3/8"	3"	3"	53/64"	6"	16 13/16"



## 310X Series

MAWP: 300 PSIG Non-Shock Cold Temperature Rating +150° F to -325°F  
Extended Valve for selective cold gas applications, Ideal for Trailer Service

Dimensional Data

All dimensions are in inches

Size	"A"	"B"	"D"	"T" NPT	"E"	"F"	"K"
2 1/2"	6"	20 3/8"	6"	2 1/2"	25/32"	6"	11 1/2"
3"	6"	20 3/8"	6"	3"	53/64"	6"	11 1/2"



## Goddard 322 and 326 Series Extended Bonnet Bronze Gate Valve for Cryogenic Service



### Features:

- **Top Entry:** This union bonnet valve can be permanently installed in the line and serviced from the top
  - **Construction:**
    - Bronze cast body and Internals
    - Rugged construction for long life
    - Straight through construction for high CV
    - Designed with unique KOLD-SEAL™
    - Standard split wedge design provides better sealing and cycle life
  - **Sizes:** ½" - 3" (15mm - 80mm)
  - **Ends:** Threaded (FNPT), Sil Braze Tube (SBT), Silver Brazed Pipe (SBP) or with stainless steel pipe nipples brazed in
  - **Service:** Liquified and vaporized atmospheric gases, LNG
  - **Temperature Rating:** -325°F - 150°F (-196°C + 65°C)
  - **Pressure Rating:** (Cold, Non-shock)
    - 322 Series 400 PSIG
    - 326 Series 600 PSIG
- Designed to MSS SP-80 and ASME B31.3  
Series 1.5" to 3" PED Approved per EN 10204, 3.1

**Ideal for cryogenic supply and storage handling applications.**

**Straight-through flow for highest CV rating in the industry.**

**Also available with GRAFOIL® packing**



# Goddard 322 and 326 Series Extended Bonnet Bronze Gate Valve for Cryogenic Service

## 322 Series

Bronze Gate Valves

400 PSIG COLD WORKING PRESSURE

Part Number	NPT Size Inches	NPT Size mm	Ends	Weight Lbs.	Weight Kgs.	Estimated CV
B-000322-20T4	2½"	65 mm	Threaded	19.00	8.64	372.00
B-000322-24T4	3"	80 mm	Threaded	28.00	121.73	588.00

Part Number	SBT Size Inches*	SBT Size mm	Ends	Weight Lbs.	Weight Kgs.	Estimated CV
B-000322-4S4	½"	15 mm	Silver Braze	1.75	0.80	19.80
B-000322-6S4	¾"	20 mm	Silver Braze	2.25	1.02	36.00
B-000322-8S4	1"	25 mm	Silver Braze	3.50	1.59	60.80
B-000322-12S4	1½"	40 mm	Silver Braze	7.50	3.41	152.00
B-000322-16S4	2"	50 mm	Silver Braze	11.25	5.11	245.00
B-000322-20S4	2½"	65 mm	Silver Braze	17.00	7.73	372.00
B-000322-24S4	3"	80 mm	Silver Braze	24.00	10.91	588.00

\*Nominal Size

## 326 Series

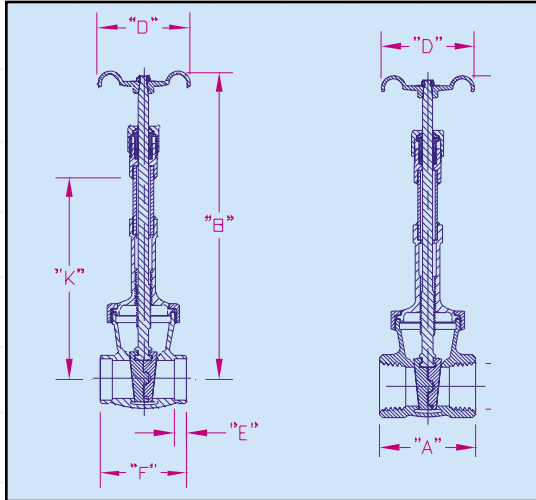
Bronze Gate Valves

600 PSIG COLD WORKING PRESSURE

Part Number	NPT Size Inches	NPT Size mm	Ends	Weight Lbs.	Weight Kgs.	Estimated CV
B-000326-4T6	½"	15 mm	Threaded	1.75	0.80	19.80
B-000326-6T6	¾"	20 mm	Threaded	2.25	1.02	36.00
B-000326-8T6	1"	25 mm	Threaded	4.00	1.82	60.80
B-000326-12T6	1½"	40 mm	Threaded	8.25	3.75	152.00
B-000326-16T6	2"	50 mm	Threaded	12.50	5.68	245.00



# Goddard 322 and 326 Series Extended Bonnet Bronze Gate Valve for Cryogenic Service

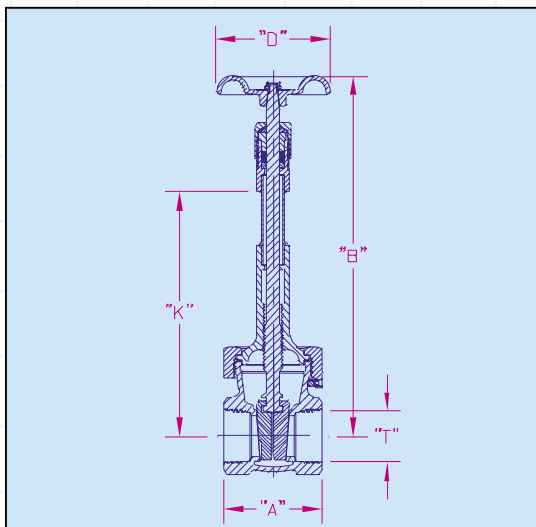


## 322 Series

MAWP: 400 PSIG Non-Shock Cold  
Temperature Rating +150° F to -325°F  
Dimensional Data

All dimensions are in inches

Size	"A"	"B"	"D"	"T" NPT	"E"	"F"	"K"
1/2"	2 11/32"	9 3/8"	2 1/4"	1/2"	3/8"	2 1/2"	5 1/2"
3/4"	2 1/2"	10 9/16"	2 3/4"	3/4"	13/32"	3"	6 1/8"
1"	2 27/32"	12 3/8"	3"	1"	7/16"	3 1/4"	7 11/16"
1 1/2"	3 7/16"	17"	4"	1 1/2"	5/8"	4"	10 7/8"
2"	3 13/16"	19 5/8"	4 3/4"	2"	21/32"	4 1/2"	12 3/8"
2 1/2"	4 11/16"	22 1/2"	5 1/4"	2 1/2"	25/32"	5 1/4"	14 1/2"
3"	5 1/8"	24 7/8"	6"	3"	53/64"	6"	16 5/16"



## 326 Series

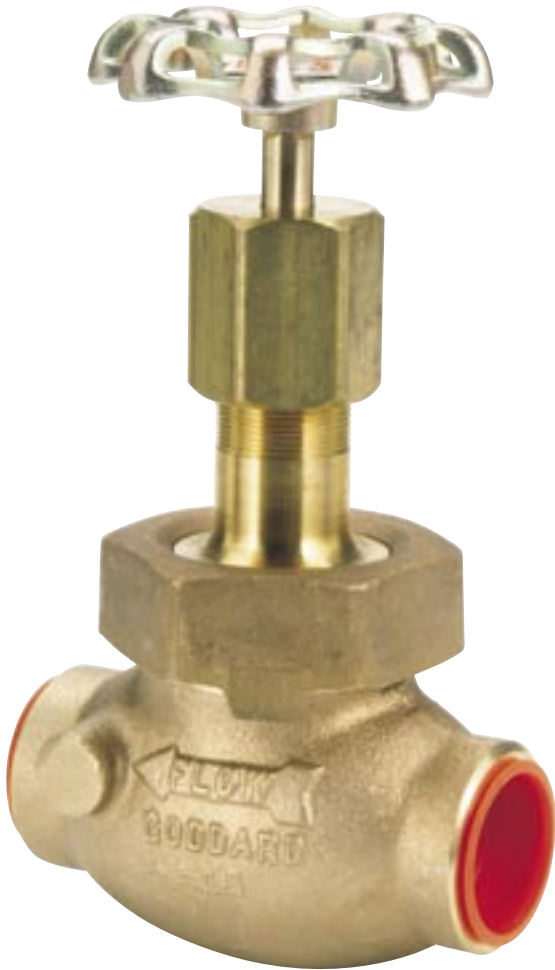
MAWP: 600 PSIG Non-Shock Cold  
Temperature Rating +150° F to -325°F  
Dimensional Data

All dimensions are in inches

Size	"A"	"B"	"D"	"T" NPT	"K"
1/2"	2 11/32"	9 3/8"	2 1/4"	1/2"	5 1/2"
3/4"	2 1/2"	10 9/16"	2 3/4"	3/4"	6 1/8"
1"	2 27/32"	12 3/8"	3"	1"	7 11/16"
1 1/2"	3 7/16"	17"	4"	1 1/2"	10 7/8"
3"	3 13/16"	19 5/8"	4 3/4"	2"	12 3/8"



## Goddard 202X Series Bronze Globe Valve for Cryogenic Service Including 206LL, 206GF, 206ULL



### Features:

- **Top Entry:** This union bonnet valve can be permanently installed in the line and serviced from the top
- **Construction:** Bronze cast body and bonnet  
Rugged construction for long life
- **Designed with the unique Kold-Seal™** and high CV. Standard PTFE seat design assures bubble tight seating and high cycle life
- **Sizes:** 1/4" through 2" (8mm through 50mm)
- **Ends:** Threaded (FNPT), Sil Braze Tube (SBT), or with stainless steel pipe nipples brazed in.
- **Service:** Liquified and vaporized atmospheric gases, LNG
- **Temperature Rating:** -325°F to 150°F (-196°C to +65°C)
- **Pressure Rating:** (Cold, Non-shock)  
202 Series Rated for 400 PSIG  
206 Series Rated for 600 PSIG  
Sizes 1.5" to 2.0" PED approved per EN10204, 3.1

**Kold-Seal™ Technology assures tight seal preventing cryogen gas loss. Non-extended stem for selective cold gas service.**



# Goddard 202X Series Bronze Globe Valve for Cryogenic Service Including 206LL, 206GF, 206ULL

## 202X

Bronze Globe Valves

Non-Extended Stem - Conical Seat

400 PSIG Cold Working Pressure

For selective Cold Gas Applications

### Threaded End

Part Number	NPT Valve size Inches	Valve Size mm	Ends	Weight Lbs.	Weight Kgs.	Estimated Cv
<b>B-00202X-12T4</b>	1½"	40 mm	Threaded	6.50 Lbs.	3.00 Kgs.	29.00
<b>B-00202X-16T4</b>	2"	50 mm	Threaded	10.50 Lbs.	4.80 Kgs.	50.00

### Sil Braze Ends

Part Number	SBT Valve size Inches *	Valve Size mm *	Ends	Weight Lbs.	Weight Kgs.	Estimated Cv
<b>B-00202X-4S4</b>	½"	15 mm	Silver Braze	1.50 Lbs.	0.7 Kgs.	3.90
<b>B-00202X-8S4</b>	1"	25 mm	Silver Braze	3.25 Lbs.	1.50 Kgs.	11.50
<b>B-00202X-12S4</b>	1½"	40 mm	Silver Braze	6.50 Lbs.	3.00 Kgs.	29.00
<b>B-00202X-16S4</b>	2"	50 mm	Silver Braze	10.50 Lbs.	4.80 Kgs.	50.00

\* Nominal Size

## 206GF

Bronze Globe Valves

Non-Extended Stem - PFA seat with high temperature, low permeability GRAFOIL® packing and gasket.

600 PSIG Cold Working Pressure

For Selective Cold Gas Applications

High Temperature Service Rating +350°F

### Threaded Ends

Part Number	Valve size Inches	Valve Size mm	Ends	Weight Lbs.	Weight Kgs.	Estimated Cv
<b>VB-0206GF-2T6</b>	¼"	8 mm	Threaded	1.25 Lbs.	0.6 Kgs.	1.30
<b>VB-0206GF-4T6</b>	½"	15 mm	Threaded	1.50 Lbs.	0.70 Kgs.	3.90
<b>VB-0206GF-6T6</b>	¾"	20 mm	Threaded	2.50 Lbs.	1.10 Kgs.	7.10
<b>VB-0206GF-8T6</b>	1"	25 mm	Threaded	3.50 Lbs.	1.60 Kgs.	11.50
<b>VB-0206GF-12T6</b>	1½"	40 mm	Threaded	7.00 Lbs.	3.20 Kgs.	29.00
<b>VB-0206GF-16T6</b>	2"	50 mm	Threaded	11.75 Lbs.	5.30 Kgs.	50.00



# Goddard 202X Series Bronze Globe Valve for Cryogenic Service Including 206LL, 206GF, 206ULL

## 206LL

Bronze Globe Valves  
Non-Extended Stem  
Live Loaded Packing  
600 PSIG Cold Working Pressure  
For Selective Cold Gas Applications

### Threaded Ends

Part Number	NPT Valve size Inches	Valve Size mm	Ends	Weight Lbs.	Weight Kgs.	Estimated Cv
<b>B-0206LL-2T6</b>	¼"	8 mm	¼" NPT	1.25 Lbs.	0.6 Kgs.	1.30
<b>B-0206LL-3T6</b>	⅜"	10 mm	⅜" NPT	1.25 Lbs.	0.6 Kgs.	2.40
<b>B-0206LL-4T6</b>	½"	15 mm	½" NPT	1.75 Lbs.	0.8 Kgs.	3.90
<b>B-0206LL-6T6</b>	¾"	20 mm	¾" NPT	2.5 Lbs.	1.1 Kgs.	7.10
<b>B-0206LL-8T6</b>	1"	25 mm	1" NPT	3.5 Lbs.	1.6 Kgs.	11.50

### Sil Brazed Ends

Part Number	SBT Valve size Inches *	Valve Size mm	Ends	Weight Lbs.	Weight Kgs.	Estimated Cv
<b>B-0206LL-4S6</b>	½"	10 mm	Silver Braze	1.25 Lbs.	0.6 Kgs.	3.90
<b>B-0206LL-6S6</b>	¾"	15 mm	Silver Braze	1.75 Lbs.	0.8 Kgs.	7.10
<b>B-0206LL-8S6</b>	1"	20 mm	Silver Braze	2.5 Lbs.	1.1 Kgs.	11.50

\* Nominal Size

## 206ULL

Bronze Globe Valves  
Non-Extended Stem  
Live Loaded Packing - Union Bonnet  
600 PSIG Cold Working Pressure  
For Selective Cold Gas Applications

### Threaded Ends

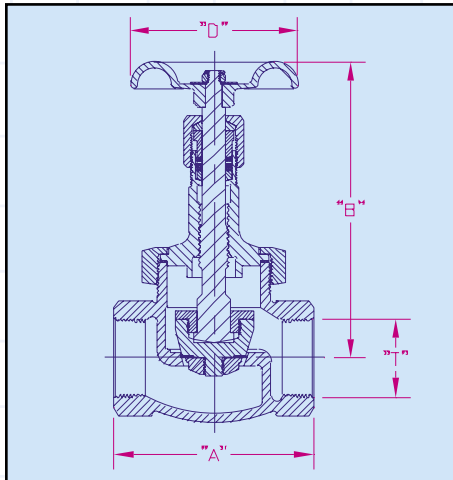
Part Number	Valve size Inches	Valve Size mm	Ends	Weight Lbs.	Weight Kgs.	Estimated Cv
<b>B-206ULL-12T6</b>	1½"	40 mm	1½" NPT	7 Lbs.	3.2 Kgs.	29.00
<b>B-206ULL-16T6</b>	2"	50 mm	2" NPT	11.75 Lbs.	5.3 Kgs.	50.00

### Sil Brazed Ends

Part Number	Valve size Inches	Valve Size mm	Ends	Weight Lbs.	Weight Kgs.	Estimated Cv
<b>B-206ULL-12S6</b>	1½"	40 mm	Silver Braze	7 Lbs.	3.2 Kgs.	29.00
<b>B-206ULL-16S6</b>	2"	50 mm	Silver Braze	11.75 Lbs.	5.3 Kgs.	50.00



# Goddard 202X Series Bronze Globe Valve for Cryogenic Service Including 206LL, 206GF, 206ULL



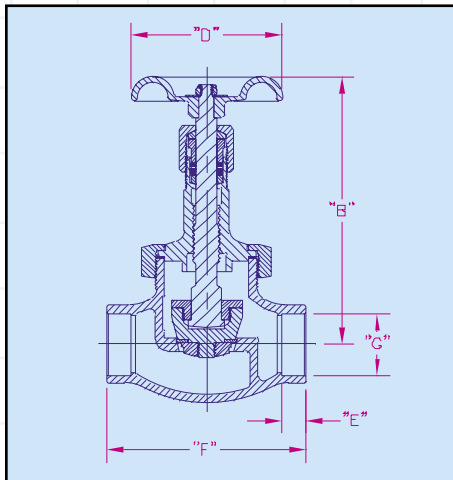
## 202 Series 202X

Pressure Rating 400 PSIG  
Temperature Rating +150°F to -325°F  
Non-Extended Valve for Cold Gas Applications  
Conical Seat

Dimensional data  
All Dimensional Data are in inches.

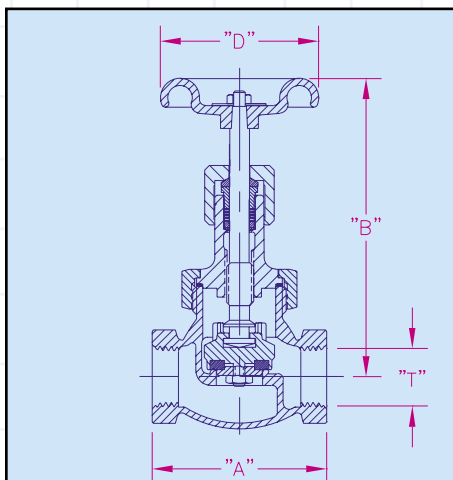
### THREADED ENDS

Size	"A"	"B"	"D"	"T" NPT
1½"	4¾"	8⅝"	4"	1½"
2"	5¾"	9½"	4¾"	2"



### SILVER BRAZED ENDS

Size	"B"	"D"	"E"	"F"	"G"
½"	4⅝"	2"	.38	3¼"	.628/1.630
1"	4⅝"	2"	.44	4¼"	1.129/1.131
1½"	5"	2⅜"	.62	5¼"	1.629/1.632
2"	5¾"	2¾"	.66	6½"	2.129/2.132



## 206GF

Pressure Rating 600 PSIG  
Temperature Rating +350°F to -325°F  
Non-Extended Stem - GRAFOIL® Packing, Gasket and PFA Seat  
Dimensional data

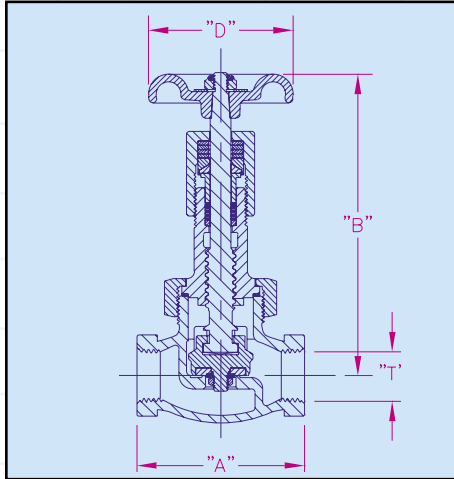
All Dimensional Data are in inches.

### THREADED ENDS

Size	"A"	"B"	"D"	"T" NPT
¼"	2⅝"	4⅝"	2"	¼"
½"	2⅝"	5"	2⅜"	½"
¾"	3⅜"	5¾"	2¾"	¾"
1"	3¾"	6¾"	3"	1"
1½"	4¾"	8⅝"	4"	1½"
2"	5¾"	9½"	4¾"	2"



# Goddard 202X Series Bronze Globe Valve for Cryogenic Service Including 206LL, 206GF, 206ULL



## 206LL

Pressure Rating 600 PSIG

Temperature Rating +150° F to -325° F

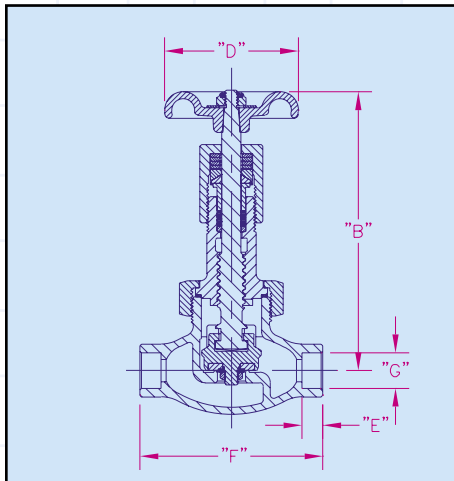
Live Load Packing

Dimensional Data

All Dimensions are in Inches

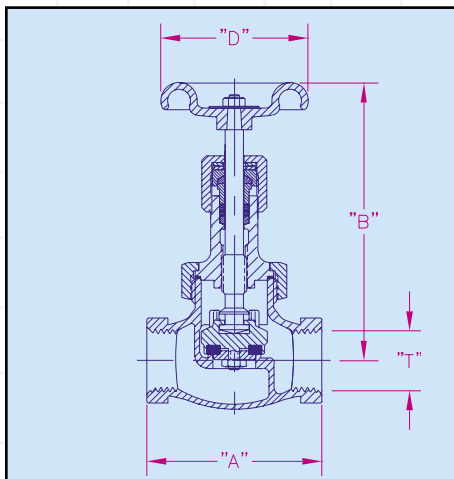
### THREADED ENDS

Size	"A"	"B"	"D"	"T" NPT
1/4"	2 <sup>5</sup> / <sub>8</sub> "	5"	2 <sup>3</sup> / <sub>8</sub> "	1/4"
3/8"	2 <sup>5</sup> / <sub>8</sub> "	5"	2 <sup>3</sup> / <sub>8</sub> "	3/8"
1/2"	2 <sup>5</sup> / <sub>8</sub> "	5"	2 <sup>3</sup> / <sub>8</sub> "	1/2"
3/4"	3 <sup>3</sup> / <sub>16</sub> "	5 <sup>3</sup> / <sub>4</sub> "	2 <sup>3</sup> / <sub>4</sub> "	3/4"
1"	3 <sup>3</sup> / <sub>4</sub> "	5 <sup>3</sup> / <sub>4</sub> "	3"	1"



### SIL BRAZED ENDS

Size	"B"	"D"	"G"	"E"	"F"
1/4"	5"	2 <sup>3</sup> / <sub>8</sub> "	.378/.380	.26	2 <sup>3</sup> / <sub>8</sub> "
1/2"	5"	2 <sup>3</sup> / <sub>8</sub> "	.628/.630	.38	3 <sup>1</sup> / <sub>4</sub> "
3/4"	5 <sup>3</sup> / <sub>4</sub> "	2 <sup>3</sup> / <sub>4</sub> "	.878/.880	.41	4 <sup>1</sup> / <sub>4</sub> "



## 206ULL

Pressure Rating 600 PSIG

Temperature Rating +150° F to -325° F

Live Load Packing - Union Bonnet

Dimensional Data

All Dimensions are in Inches

### THREADED ENDS

Size	"A"	"B"	"D"	"T" NPT
1 1/2"	4 <sup>3</sup> / <sub>4</sub> "	8 <sup>5</sup> / <sub>8</sub> "	4"	1 1/2"
2"	5 <sup>3</sup> / <sub>4</sub> "	11 <sup>3</sup> / <sub>4</sub> "	4 <sup>3</sup> / <sub>4</sub> "	2"



## Goddard 222 Series Bronze Globe Valve for Cryogenic Service Including 226LL, 226GF, 226ULL



### Features:

- **Top Entry:** This union bonnet valve can be permanently installed in the line and serviced from the top. Stainless Steel tube prevents stem distortion. Also available in bolted bonnet configuration.
- **Construction:** Bronze cast body and bonnet  
Rugged construction for long life
- **Designed with the unique Kold-Seal™** and high CV. standard PTFE seat design assures bubble tight seating and high cycle life
- **Sizes:** 1/4" through 3" (8mm through 80mm)
- **Ends:** Threaded (FNPT), Sil Braze Tube (SBT), Silver Braze Pipe, back brazed threaded pipe nipples
- **Service:** Liquified and vaporized atmospheric gases, LNG
- **Temperature Rating:** -325°F to 150°F (-196°C to +65°C)
- **Pressure Rating:** (Cold, Non-shock)  
400 and 600 PSIG  
Sizes 1½" to 3" PED approved per EN10204, 3.1

**Kold-Seal™ Technology assures tight seal preventing cryogen gas loss.**

**Special bonnet lengths available upon request.**

**Extended stem suitable for cold box, transport vehicles, pipelines, and customer service applications.**

**Live loaded option improves life of asset and minimizes service costs.**

**Replaceable top works means low maintenance costs.**



# Goddard 222 Series Bronze Globe Valve for Cryogenic Service Including 226LL, 226GF, 226ULL

## 222X

Bronze Globe Valves  
Extended Stem - Conical Seat  
400 PSIG Cold Working Pressure

### Threaded End

Part Number	NPT size Inches	NPT Size mm	Ends	Weight Lbs.	Weight Kgs.	Estimated Cv
B-00222X-2T4	1/4"	8 mm	Threaded	1.50 Lbs.	0.70 Kgs.	1.30
B-00222X-4T4	1/2"	15 mm	Threaded	1.50 Lbs.	0.70 Kgs.	3.25
B-00222X-6T4	3/4"	20 mm	Threaded	3.00 Lbs.	1.40 Kgs.	6.25
B-00222X-8T4	1"	25 mm	Threaded	4.00 Lbs.	1.80 Kgs.	10.00
B-00222X-12T4	1 1/2"	40 mm	Threaded	7.75 Lbs.	3.50 Kgs.	26.00
B-00222X-16T4	2"	50 mm	Threaded	12.50 Lbs.	5.70 Kgs.	45.00
B-00222X-20T4	2 1/2"	63.5 mm	Threaded	61.00 Lbs.	27.70 Kgs.	50.00
B-00222X-24T4	3"	80 mm	Threaded	61.00 Lbs.	27.70 Kgs.	100.00

### Sil Brazed End

Part Number	SBT size Inches	SBT Size mm	Ends	Weight Lbs.	Weight Kgs.	Estimated Cv
B-00222X-4S4	1/2"	15 mm	Silver Braze	2.00 Lbs.	0.90 Kgs.	3.25
B-00222X-6S4	3/4"	20 mm	Silver Braze	2.75 Lbs.	1.30 Kgs.	6.25
B-00222X-8S4	1"	25 mm	Silver Braze	3.75 Lbs.	1.70 Kgs.	10.00
B-00222X-12S4	1 1/2"	40 mm	Silver Braze	7.25 Lbs.	3.30 Kgs.	26.00
B-00222X-16S4	2"	50 mm	Silver Braze	11.50 Lbs.	5.20 Kgs.	45.00
B-00222X-24S4	3"	80 mm	Silver Braze	58.00 Lbs.	26.40 Kgs.	100.00

## 226LL

Bronze Globe Valves  
Live Load Packing  
Extended Stem  
600 PSIG Cold Working Pressure

### Threaded End

Part Number	NPT size Inches	NPT Size mm	Ends	Weight Lbs.	Weight Kgs.	Estimated Cv
B-0226LL-2T6	1/4"	8 mm	Threaded	1.50 Lbs.	0.70 Kgs.	1.30
B-0226LL-3T6	3/8"	10 mm	Threaded	1.50 Lbs.	0.70 Kgs.	2.40
B-0226LL-4T6	1/2"	15 mm	Threaded	1.50 Lbs.	0.70 Kgs.	3.25
B-0226LL-6T6	3/4"	20 mm	Threaded	3.00 Lbs.	1.40 Kgs.	6.25
B-0226LL-8T6	1"	25 mm	Threaded	4.00 Lbs.	1.80 Kgs.	10.00

### Sil Brazed Ends

Part Number	SBT size Inches	SBT Size mm	Ends	Weight Lbs.	Weight Kgs.	Estimated Cv
B-0226LL-4S6	1/2"	15 mm	Silver Braze	2.00 Lbs.	0.90 Kgs.	3.25
B-0226LL-6S6	3/4"	20 mm	Silver Braze	2.75 Lbs.	1.30 Kgs.	6.25
B-0226LL-8S6	1"	25 mm	Silver Braze	3.75 Lbs.	1.70 Kgs.	10.00



## Goddard 222 Series Bronze Globe Valve for Cryogenic Service Including 226LL, 226GF, 226ULL

### 226ULL

Bronze Globe Valves  
Live Loaded Packing - Union Bonnet  
Extended Stem  
600 PSIG Cold Working Pressure

#### Threaded End

Part Number	NPT size Inches	NPT Size mm	Ends	Weight Lbs.	Weight Kgs.	Estimated Cv
<b>B-226ULL-12T6</b>	1½"	40 mm	Threaded	7.75 Lbs.	3.50 Kgs.	26.00
<b>B-226ULL-16T6</b>	2"	50 mm	Threaded	12.50 Lbs.	5.70 Kgs.	45.00

#### Sil Brazed Ends

Part Number	SBT size Inches*	SBT Size mm*	Ends	Weight Lbs.	Weight Kgs.	Estimated Cv
<b>B-226ULL-12S6</b>	1½"	40 mm	Silver Braze	7.25 Lbs.	3.30 Kgs.	26.00
<b>B-226ULL-16S6</b>	2"	50 mm	Silver Braze	11.50 Lbs.	5.20 Kgs.	45.00

\*Nominal Size

### 226XGF

Bronze Globe Valves  
Extended Stem - Conical Seat GRAFIOIL Packing, Gasket and PFA Seat  
600 PSIG Cold Working Pressure

#### Threaded End

Part Number	NPT size Inches	NPT Size mm	Ends	Weight Lbs.	Weight Kgs.	Estimated Cv
<b>VB-226XGF-4T6</b>	½"	15 mm	Threaded	1.50 Lbs.	0.70 Kgs.	3.25
<b>VB-226XGF-6T6</b>	¾"	20 mm	Threaded	3.00 Lbs.	1.40 Kgs.	6.25
<b>VB-226XGF-8T6</b>	1"	25 mm	Threaded	4.00 Lbs.	1.80 Kgs.	10.00

### 226BLL

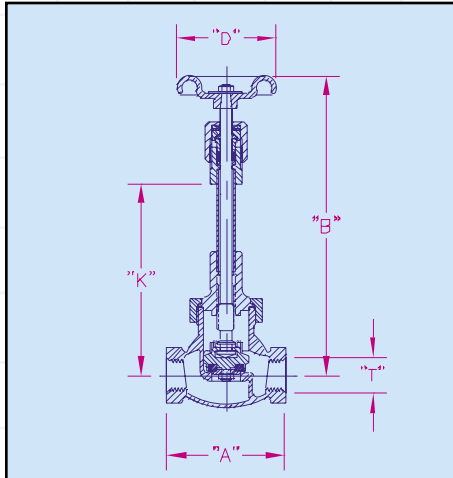
Bronze Globe Valves  
Live Loaded Packing - Bolted Bonnet  
Extended Stem  
600 PSIG Cold Working Pressure

#### Threaded End

Part Number	NPT size Inches	NPT Size mm	Ends	Weight Lbs.	Weight Kgs.	Estimated Cv
<b>B-226BLL-12T6</b>	1½"	40 mm	Threaded	7.75 Lbs.	3.50 Kgs.	26.00
<b>B-226BLL-16T6</b>	2"	50 mm	Threaded	12.50 Lbs.	5.70 Kgs.	45.00



# Goddard 222 Series Bronze Globe Valve for Cryogenic Service Including 226LL, 226GF, 226ULL



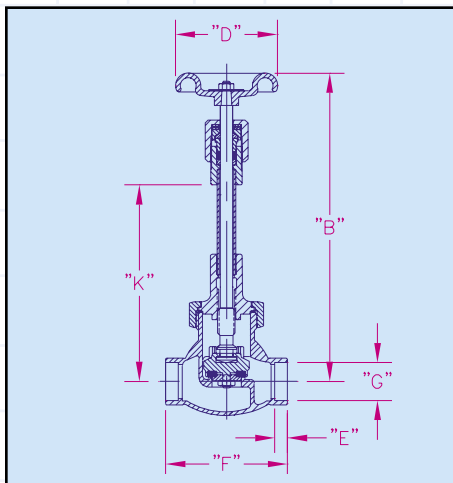
## 226ULL

Pressure Rating 600 PSIG  
Temperature Rating +150°F to -325°F

Dimensional data  
All Dimensional Data are in inches.

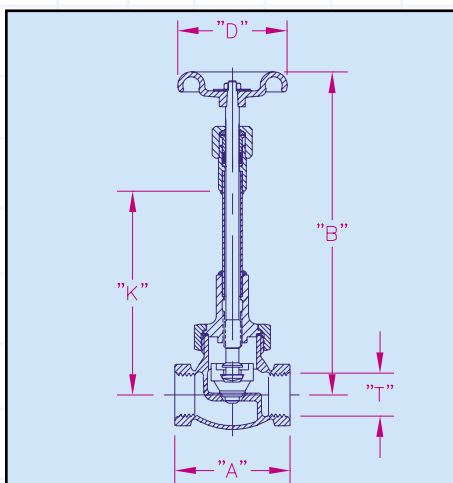
### THREADED ENDS

Size	"A"	"B"	"D"	"T" NPT	"K"
1½"	4¾"	14⅝"	4"	1½"	9⅜"
2"	5¾"	15⅝"	4¾"	2"	9⅜"



### SIL BRAZED END

Size	"B"	"D"	"E"	"F"	"G"	"K"
1½"	14⅝"	4"	⅝"	5¼"	1.63"	9⅜"
2"	15⅝"	4¾"	21/32"	6½"	2.13"	9⅜"



## 226XGF

Pressure Rating 600 PSIG  
Temperature Rating +150°F to -325°F

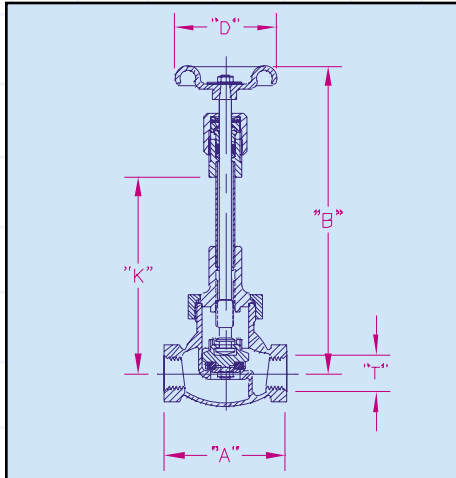
Dimensional data  
All Dimensional Data are in inches.

### THREADED ENDS

Size	"A"	"B"	"D"	"T" NPT	"K"
½"	2⅝"	8¼"	2⅝"	½"	4⅞"
¾"	3 ⅜"	8⅝"	2¾"	¾"	4⅜"
1"	3¾"	10½"	3"	1"	6½"



# Goddard 222 Series Bronze Globe Valve for Cryogenic Service Including 226LL, 226GF, 226ULL



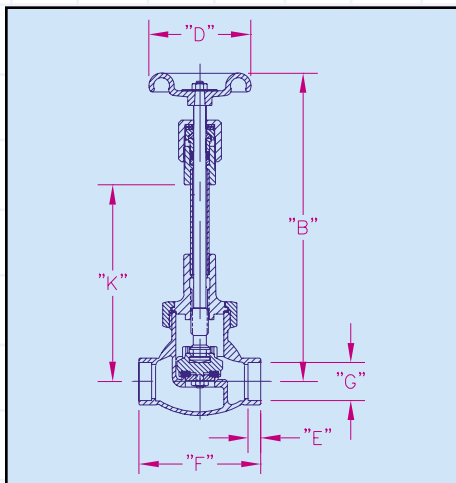
## 226ULL

Pressure Rating 600 PSIG  
Temperature Rating +150°F to -325°F

Dimensional data  
All Dimensional Data are in inches.

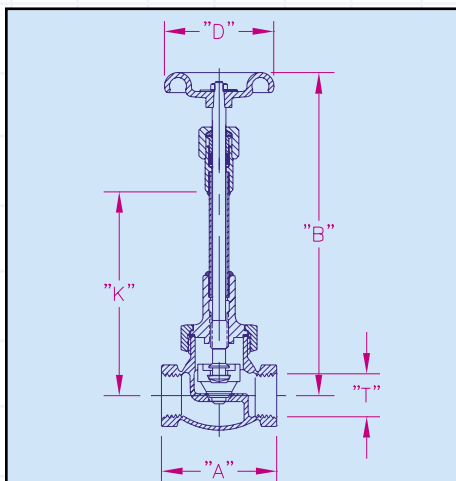
### THREADED ENDS

Size	"A"	"B"	"D"	"T" NPT	"K"
1½"	4¾"	14⅝"	4"	1½"	9⅛"
2"	5¾"	15⅝"	4¾"	2"	9⅛"



### SIL BRAZED END

Size	"B"	"D"	"E"	"F"	"G"	"K"
1½"	14⅝"	4"	⅝"	5¼"	1.63"	9⅛"
2"	15⅝"	4¾"	21/32"	6½"	2.13"	9⅛"



## 226XGF

Pressure Rating 600 PSIG  
Temperature Rating +150°F to -325°F

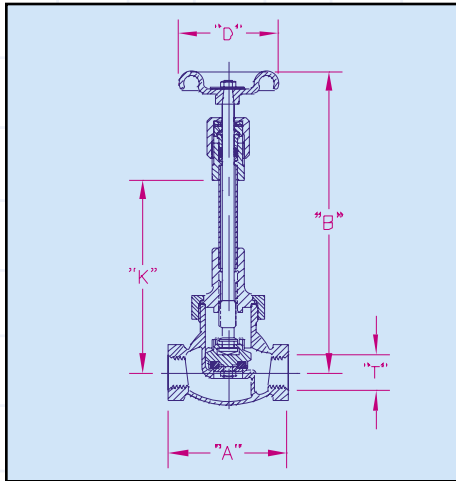
Dimensional data  
All Dimensional Data are in inches.

### THREADED ENDS

Size	"A"	"B"	"D"	"T" NPT	"K"
½"	2⅝"	8¼"	2⅝"	½"	4⅞"
¾"	3 ⅜"	8⅝"	2¾"	¾"	4 13/16"
1"	3¾"	10½"	3"	1"	6½"



# Goddard 222 Series Bronze Globe Valve for Cryogenic Service Including 226LL, 226 GF, 226ULL



## 226LL

Pressure Rating 600 PSIG

Temperature Rating +150° F to -325° F

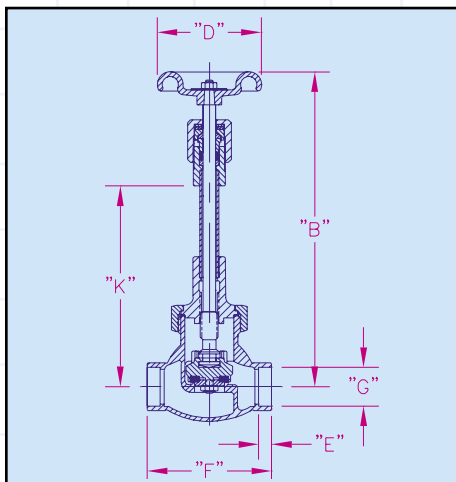
### Dimensional Data

All Dimensions are in Inches

#### THREADED ENDS

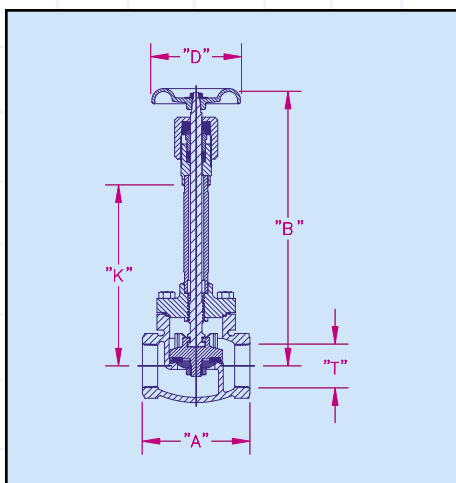
Size	"A"	"B"	"D"	"T" NPT	"K"
1/4"	2 5/16"	7 9/16"	2"	1/4"	4 19/32"
3/8"	2 5/16"	7 9/16"	2"	3/8"	4 19/16"
1/2"	2 5/8"	8 1/4"	2 3/8"	1/2"	4 7/8"
3/4"	3 3/16"	8 5/8"	2 3/4"	3/4"	4 13/16"
1"	3 3/4"	10 1/2"	3"	1"	6 1/2"

\*Bolted Bonnet



#### SIL BRAZED ENDS

Size	"B"	"D"	"E"	"F"	"G"	"K"
1/2"	8 1/4"	2 3/8"	3/8"	3 1/4"	.63	4 7/8"
3/4"	8 5/8"	2 3/4"	13/32"	3 3/4"	.88	4 13/16"
1"	10 1/2"	3"	7/16"	4 1/4"	1.13	6 1/2"



#### THREADED ENDS - BOLTED BONNET

Size	"A"	"B"	"D"	"T" NPT	"K"
1 1/2"	4 3/4"	14 5/8"	4"	1 1/2"	9 11/16"
2"	5 3/4"	14 15/16"	4 3/4"	2"	9 11/16"



## Goddard 886 Series Stainless Steel Swing Check Valve for Cryogenic Service



### Features:

- **Top Entry:** This bolted bonnet valve can be permanently installed in the line and serviced from the top
- **Construction:** Designed to prevent back flow in cryogenic systems. Higher fluid capacity (CV) than poppet or lift check valves. 316L stainless steel investment cast body, cap and arm
- **Sizes:** ½" through 4" (15mm through 100mm)
- **Ends:** Socket weld and butt weld schedule 10 and 40
- **Temperature Rating:** -325°F to 150°F (-196°C to +66°C)
- **Pressure Rating:** (Cold, Non-shock)  
400 PSIG (26 Bar) ½" - 2"  
275 PSIG (19 Bar) 150# ANSI Class 3" and 4"  
720 PSIG (50 Bar) 300# ANSI Class 3" and 4"  
PED Approved, Approved for US and Canada

**Note:** Do not use for reciprocating gas service.

Our investment cast stainless steel is specified by leading industrial gas companies for storage tank and yard operations.

Ideal for liquid atmospheric gases and LNG storage and handling.

High cycle life and superior sealing.

Valves for hydrogen service can be supplied.  
(-425°F to +350°F)



# Goddard 886 Series Stainless Steel Swing Check Valve for Cryogenic Service

**886**

Stainless Steel Swing Check Valves

Soft Seat

**GRAFOIL® Gasket - Hydrogen Service**

Part Number	Valve Size		End Connection	Seat	Pressure Rating	Estimated CV	Weight Lbs.
	Inches	mm					
S-0886GF-4S	½"	15 mm	Socket Weld	Soft	400 (26 Bar)	4.50	3 Lbs.
S-0886GF-6S	¾"	20 mm		Soft	400 (26 Bar)	12.00	6 Lbs.
S-0886GF-8S	1"	25 mm		Soft	400 (26 Bar)	61.00	11 Lbs.
S-0886GF-12S	1½"	40 mm		Soft	400 (26 Bar)	99.00	17 Lbs.

Part Number	Valve Size		End Connection	Seat	Pressure Rating	Estimated CV	Weight Lbs.
	Inches	mm					
S-000886-4S	½"	15 mm	Socket Weld	Soft	400 (26 Bar)	4.50	3 Lbs.
S-000886-6S	¾"	20 mm		Soft	400 (26 Bar)	12.00	6 Lbs.
S-000886-8S	1"	25 mm		Soft	400 (26 Bar)	61.00	11 Lbs.
S-000886-12S	1½"	40 mm		Soft	400 (26 Bar)	99.00	17 Lbs.

Part Number	Valve Size		End Connection	Seat	Butt Weld Schedule	Pressure Rating	Estimated CV	Weight Lbs.
	Inches	mm						
S-000886-4WA	½"	15 mm	Butt Weld	Soft	10	400 (26 Bar)	4.50	3 Lbs.
S-000886-8WA	1"	25 mm			10	400 (26 Bar)	18.00	11 Lbs.
S-000886-12WA	1½"	40 mm			10	400 (26 Bar)	61.00	17 Lbs.
S-000886-16W3A	2"	50 mm			10	720 (50 Bar)	99.00	17 Lbs.
S-000886-24WA	3"	80 mm			10	275 (19 Bar)	255.00	47 Lbs.
S-000886-24WJ	3"	80 mm			40	275 (19 Bar)	225.00	46 Lbs.
S-000886-32W3J	4"	100 mm			40	720 (50 Bar)	475.00	95 Lbs.
S-000886-32WA	4"	100 mm			10	275 (19 Bar)	475.00	95 Lbs.

**886M**

Stainless Steel Swing Check Valves

Metal Seat

**GRAFOIL® Gasket - Hydrogen Service**

Part Number	Valve Size		End Connection	Seat	Pressure Rating	Estimated CV	Weight Lbs.
	Inches	mm					
S-00886M-4S3	½"	15 mm	Socket Weld	Metal	720 (50 Bar)	4.50	3 Lbs.
S-00886M-8S3	1"	25 mm			720 (50 Bar)	18.00	11 Lbs.
S-00886M-12S3	1½"	40 mm			720 (50 Bar)	61.00	17 Lbs.

**Butt Weld Ends**

Part Number	Valve Size		End Connection	Seat	Butt Weld Schedule	Pressure Rating	Estimated CV	Weight Lbs.
	Inches	mm						
S-0886M-16W3A	2"	50 mm	Butt Weld	Metal	10	720 (50 Bar)	99.00	17 Lbs.
S-00886M-24W3J	3"	80 mm			40	720 (50 Bar)	225.00	46 Lbs.
S-00886M-24W3A	3"	80 mm			10	720 (50 Bar)	225.00	46 Lbs.
S-00886M-32WA	4"	100 mm			10	275 (19 Bar)	475.00	95 Lbs.
S-00886M-32W3J	4"	100 mm	Butt Weld		40	720 (50 Bar)	475.00	95 Lbs.

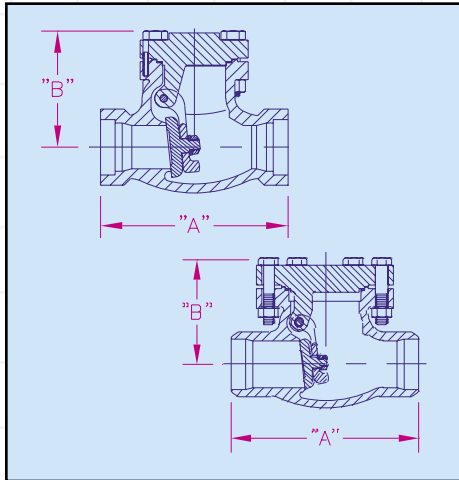
**Butt Weld Ends with GRAFOIL® Gasket for Hydrogen Service**

Part Number	Valve Size		End Connection	Seat	Butt Weld Schedule	Pressure Rating	Estimated CV	Weight Lbs.
	Inches	mm						
S-886MGF-16W3A	2"	50 mm	Butt Weld	Metal	10	720 (50 Bar)	99.00	17 Lbs.
S-886MGF-24W3A	3"	80 mm	SCH 10		10	720 (50 Bar)	225.00	46 Lbs.

**REGO CRYO-FLOW PRODUCTS**



# Goddard 886 Series Stainless Steel Swing Check Valve for Cryogenic Service

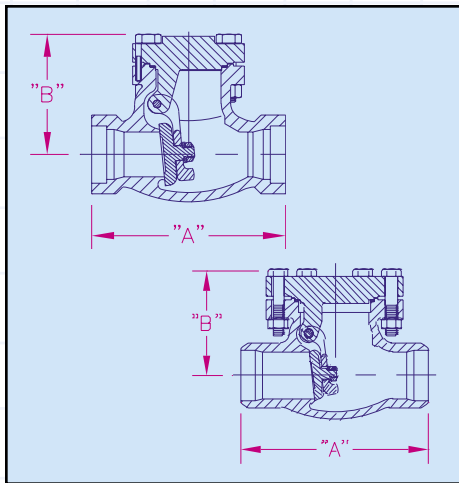


## 886

Pressure Rating 300 PSIG Non-Shock Cold  
Temperature Rating +150° F to - 325° F

Dimensional data  
All Dimensional Data are in inches.

Size	"A"	"B"
1/2"	4 1/4"	2 1/2"
3/4"	5"	3 1/4"
1"	5"	3 1/4"
1 1/2"	6 1/2"	4"
2"	8"	4 1/2"



## 886M

Service 300 Class 720 PSI Non-Shock Cold  
Temperature Rating +150° F to - 325° F

Dimensional data  
All Dimensional Data are in inches.

Size	"A"	"B"	Butt Weld End Schedule
1 1/2"	6 1/2"	4"	10
2"	8"	4 1/2"	10
3"	9 1/2"	5 3/4"	10 & 40
4"	11 1/2"	8 3/8"	10
4"	14"	8 3/8"	40

Size	"A"	"B"	End	End Dimension
1/2"	2 7/16"	4 1/4"	Socket Weld	SCH 10
1/2"	2 7/16"	4 1/4"		1/2" Pipe Socket



## Goddard 840 Series Bronze Swing Check Valve for Cryogenic Service Including 846M



### Features:

- **Top Entry:** This union bonnet valve can be permanently installed in the line and services from the top
- **Construction:** Designed to prevent back flow in cryogenic systems. Higher fluid capacity (CV) than poppet or lift check valves. Bronze body and internals. Rugged construction for long life and minimal down time
- **Sizes:** ½" through 2" (15mm through 50mm)
- **Ends:** Threaded (FNPT), or with Sil Brazed Tube (SBT)  
SCH-10, Threaded back brazed pipe nipples in 1" increments up to 6"  
SCH-40, Threaded back brazed pipe nipples in 1" increments up to 6"  
SCH-80, Threaded back brazed pipe nipples in 1" increments up to 6"
- **Temperature Rating:** -325°F to 150°F (-196°C to +65°C)
- **Pressure Rating:** (Cold, Non-shock)  
840 Series 400 PSIG  
846M Series 600 PSIG  
Sizes 1½" to 2" PED Approved Per EN10204 3.1

**Note: Do not use for reciprocating gas service.**



# Goddard 840 Series Bronze Swing Check Valve for Cryogenic Service Including 846M

## 840

Bronze Swing Check Valves - Soft Seated  
Threaded, Sil Brazed Ends, Back Brazed Pipe Nipples  
400 PSIG Cold Working Pressure

### Threaded Ends

Part Number	NPT Size Inches	NPT Size mm	Ends	Weight Lbs.	Weight Kgs.	Estimated CV
B-000840-4T	1/2"	15 mm	Threaded	2.00 Lbs.	0.91 Kgs.	4.50
B-000840-6T	3/4"	20 mm	Threaded	4.00 Lbs.	1.81 Kgs.	7.00
B-000840-8T	1"	25 mm	Threaded	4.50 Lbs.	2.04 Kgs.	10.00
B-000840-12T	1 1/2"	40 mm	Threaded	8.50 Lbs.	3.86 Kgs.	40.00
B-000840-16T	2"	50 mm	Threaded	14.50 Lbs.	6.58 Kgs.	100.00

### Silver Brazed - Pipe Nipple

Part Number	SBT Size Inches*	SBT Size mm*	Ends	Weight Lbs.	Weight Kgs.	Estimated CV
B-000840-4S	1/2"	15 mm	Silver Braze	2.50 Lbs.	1.13 Kgs.	4.50
B-000840-6S	3/4"	20 mm	Silver Braze	4.5 Lbs.	2.05 Kgs.	7.00
B-000840-8S	1"	25 mm	Silver Braze	5.25 Lbs.	2.38 Kgs.	10.00
B-000840-12S	1 1/2"	40 mm	Silver Braze	10.75 Lbs.	4.88 Kgs.	40.00
B-000840-16S	2"	50 mm	Silver Braze	17.50 Lbs.	7.94 Kgs.	100.00

\* Nominal Size

## 846M

Bronze Swing Check Valves - Metal Seated  
Threaded, Sil Brazed Ends, Back Brazed Pipe Nipples  
600 PSIG Cold Working Pressure

### Threaded Ends

Part Number	NPT Size Inches	NPT Size mm	Ends	Weight Lbs.	Weight Kgs.	Estimated CV
B-000846M-4T6	1/2"	15 mm	Threaded	2.00 Lbs.	0.91 Kgs.	4.50
B-000846M-8T6	1"	25 mm	Threaded	4.50 Lbs.	2.04 Kgs.	10.00
B-000846M-12T6	1 1/2"	40 mm	Threaded	8.50 Lbs.	3.86 Kgs.	40.00
B-000846M-16T6	2"	50 mm	Threaded	14.50 Lbs.	6.58 Kgs.	100.00

### Silver Brazed - Pipe Nipple

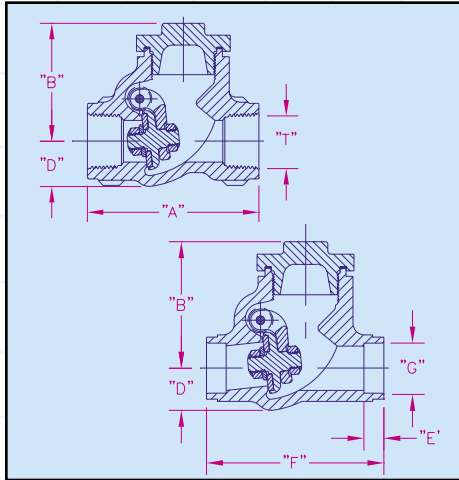
Part Number	SBT Size Inches*	SBT Size mm*	Ends	Weight Lbs.	Weight Kgs.	Estimated CV
B-000846M-4S6	1/2"	15 mm	Silver Braze	2.50 Lbs.	1.13 Kgs.	4.50
B-000846M-6S6	3/4"	20 mm	Silver Braze	4.50 Lbs.	2.04 Kgs.	7.00
B-000846M-8S6	1"	25 mm	Silver Braze	5.25 Lbs.	2.38 Kgs.	10.00
B-000846M-12S6	1 1/2"	40 mm	Silver Braze	10.75 Lbs.	4.88 Kgs.	40.00
B-000846M-16S6	2"	50 mm	Silver Braze	17.50 Lbs.	7.94 Kgs.	100.00

\* Nominal Size

- Contact company for threaded, back brazed pipe nipple information



# Goddard 840 Series Bronze Swing Check Valve for Cryogenic Service Including 846M

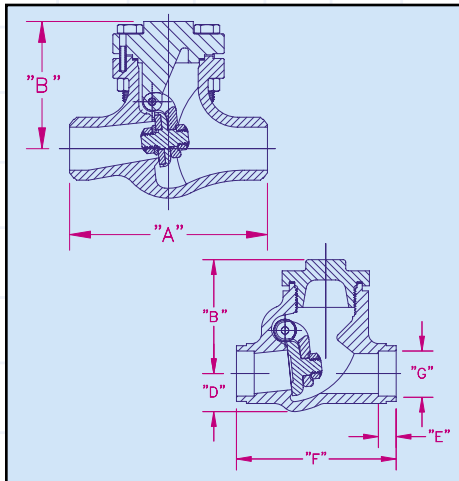


## 840 Series

Pressure Rating MSS SP-80 Class 200  
MAWP 400 PSIG Non-Shock Cold  
Temperature Rating +150°F to -325°F

Dimensional data  
All Dimensional Data are in inches.

Size	"A"	"B"	"D"	"T" NPT	"E"	"F"	"G"
1/2"	3.00"	2.13"	3/4"	1/2"	.38"	2.94"	.63"
3/4"	3.69"	2.81"	1.12"	3/4"	.41"	3.60"	.88"
1"	4.00"	2.81"	1.13"	1"	.45"	4.00"	1.13"
1 1/2"	5.03"	3.63"	1.44"	1 1/2"	.63"	5.03"	1.63"
2"	6.35"	4.34"	1.84"	2"	.66"	6.35"	2.13"



## 846M Series

Pressure Rating MSS SP-80 Class 300  
MAWP 600 PSIG Non-Shock Cold  
Temperature Rating +150°F to -325°F

Dimensional data  
All Dimensional Data are in inches.

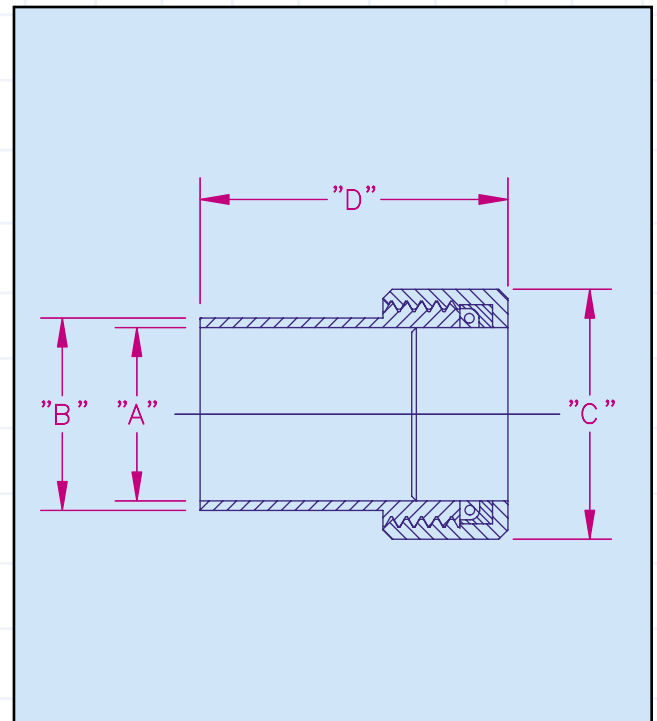
Size	"A"	"B"	"D"	"T" NPT	"E"	"F"	"G"
1/2"	3.00"	2.13"	3/4"	1/2"	.38"	2.94"	.63"
3/4"	3.69"	2.81"	1 1/8"	3/4"	.41"	3.60"	.88"
1"	4.00"	2.81"	1 1/8"	1"	.45"	4.00"	1.13"
1 1/2"	5.03"	3.63"	1 7/16"	1 1/2"	.63"	5.03"	1.63"
2"	6.35"	4.34"	1 27/32"	2"	.66"	6.35"	2.13"



# Goddard Quikonnnect Vacuum Couplings

## Features:

- Goddard "Quikonnnect" vacuum couplings are available in either brass or 304 stainless steel
- An extensive range of tube sizes available. Most sizes nest, and can be used as reducers in combination with one another.
- May be used for vacuum down to  $1 \times 10^{-8}$  Microns
- Viton O-rings are standard
- "Quikonnnect" vacuum couplings have four basic components:
  - Knurled Nut
  - Retainer Ring
  - O-ring
  - Sleeve



## Quikonnnect Vacuum Couplings

Brass Machine Finish	304-Stainless Machine Finish	"A"	"B"	"C"	"D"	Tube OD Size
B-000006-M	S-000006-M	0.720"	0.375"	$\frac{5}{8}$ "	$1 \frac{1}{32}$ "	$\frac{1}{16}$ "
B-000012-M	S-000012-M	0.135"	0.375"	$\frac{5}{8}$ "	$1 \frac{1}{32}$ "	$\frac{1}{8}$ "
B-000018-M	S-000018-M	0.197"	0.375"	$\frac{5}{8}$ "	$1 \frac{1}{32}$ "	$\frac{3}{16}$ "
B-000025-M	S-000025-M	0.260"	0.375"	$\frac{5}{8}$ "	$1 \frac{1}{32}$ "	$\frac{1}{4}$ "
B-000031-M	S-000031-M	0.322"	0.500"	$\frac{13}{16}$ "	$1 \frac{1}{4}$ "	$\frac{5}{16}$ "
B-000038-M	S-000038-M	0.385"	0.500"	$\frac{13}{16}$ "	$1 \frac{1}{4}$ "	$\frac{3}{8}$ "
B-000050-M	S-000050-M	0.510"	0.625"	$\frac{7}{8}$ "	$1 \frac{1}{4}$ "	$\frac{1}{2}$ "
B-000062-M	S-000062-M	0.635"	0.750"	$1 \frac{1}{8}$ "	$1 \frac{3}{8}$ "	$\frac{5}{8}$ "
B-000075-M	S-000075-M	0.760"	0.875"	$1 \frac{1}{4}$ "	$1 \frac{1}{2}$ "	$\frac{3}{4}$ "
B-000087-M	S-000087-M	0.885"	1.000"	$1 \frac{7}{16}$ "	$1 \frac{23}{32}$ "	$\frac{1}{2}$ "
B-000100-M	S-000100-M	1.010"	1.125"	$1 \frac{1}{2}$ "	$1 \frac{13}{16}$ "	1"
B-000112-M	S-000112-M	1.135"	1.250"	$1 \frac{5}{8}$ "	$1 \frac{15}{16}$ "	$1 \frac{1}{8}$ "
B-000125-M	S-000125-M	1.260"	1.500"	2"	$1 \frac{3}{16}$ "	$1 \frac{1}{4}$ "
B-000138-M	S-000138-M	1.385"	1.625"	2"	$1 \frac{3}{16}$ "	$1 \frac{3}{8}$ "
B-000150-M	S-000150-M	1.150"	1.750"	$2 \frac{1}{4}$ "	$1 \frac{3}{16}$ "	$1 \frac{1}{2}$ "
B-000162-M	S-000162-M	1.635"	1.875"	$2 \frac{3}{8}$ "	$2 \frac{1}{4}$ "	$1 \frac{5}{8}$ "
B-000200-M	S-000200-M	2.010"	2.250"	$2 \frac{3}{4}$ "	$2 \frac{31}{32}$ "	2"

# Limited Warranty and Limitation of Liability

## LIMITED WARRANTY

Engineered Controls International, Inc. warrants products and repair kits manufactured by it to be free from defects in materials and workmanship under normal use and service for a period of 12 months from the date of installation or operation or 18 months from the date of shipment from the factory, whichever is earlier. If within thirty days after buyer's discovery of what buyer believes is a defect, buyer notifies Engineered Controls International, Inc. thereof in writing, Engineered Controls International, Inc., at its option, and within forty-five days, will repair, replace F.O.B. point of manufacture, or refund the purchase price of that part or product found by it to be defective. Failure of buyer to give such written notice within thirty days shall be deemed an absolute and unconditional waiver of any and all claims of buyer arising out of such defect.

This warranty does not extend to any product or part that is not installed and used in accordance with Engineered Controls International, Inc.'s printed instructions, all applicable state and local regulations, and all applicable national standards, such as those promulgated by NFPA, DOT, CGA, and ANSI. This warranty does not extend to any product or part that has been damaged by accident, misuse, abuse or neglect, nor does it extend to any product or part which has been modified, altered, or repaired in the field.

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If Engineered Controls International, Inc. furnishes technical advice to buyer, whether or not at buyer's request, with respect to application, further manufacture or other use of the products and parts, Engineered Controls International, Inc. shall not be liable for technical advice and buyer assumes all risks of such advice and the results thereof.

NOTE: Some states do not allow the limitation or exclusion of incidental or consequential damages, so the above limitations or exclusions, wholly or partially, may not apply. The portions of this limited warranty and limitation of liability shall be considered severable and all portions which are not disallowed by applicable law shall remain in full force and effect.

## WARNING

All Engineered Controls International, Inc. products are mechanical devices that will eventually become inoperative due to wear, corrosion and aging of components made of materials such as rubber, etc. The environment and conditions of use will determine the safe service life of these products. Periodic inspection and maintenance are essential to avoid serious injury and property damage.

Many Engineered Controls International, Inc. products are manufactured components which are incorporated by others on or in other products or systems used for storage, transport, transfer and otherwise for use of toxic, flammable and dangerous liquids and gases. Such substances must be handled by experienced and trained personnel only, using accepted governmental and industrial safety procedures.

## NOTICE TO USERS OF PRODUCTS

The Limited Warranty stated above is a factory warranty to the first purchasers of Engineered Controls International, Inc. products. Since most users have purchased these products from Engineered Controls International, Inc. distributors, the user must within thirty (30) days after the user's discovery of what user believes is a defect, notify in writing the distributor from whom he purchased the product/parts. The distributor may or may not at the distributor's option, choose to submit the product/parts to Engineered Controls International, Inc. pursuant to its Limited Warranty. Failure by buyer to give such written notice within thirty (30) days shall be deemed an absolute and unconditional waiver or buyer's claim for such defects. Acceptance of any alleged defective product/parts by Engineered Controls International, Inc.'s distributor for replacement or repairs under the terms of Engineered Controls International, Inc.'s Limited Warranty in no way obligates Engineered Controls International, Inc. to the terms of the above warranty.

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Because of a policy of continuous product improvement, Engineered Controls International, Inc. reserves the right to change designs, materials or specifications without notice.

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