

# Stainless Steel Globe Valve for Hydrogen Cryogenic Service

## 231 Series

### Application

The RegO Goddard 231 Series Stainless Steel globe valves are designed for handling of cryogenic liquids through bulk tanks, trailers, ASU plants and piping configurations. Compatible with oxygen, nitrogen, CO<sub>2</sub>, hydrogen, helium and argon.

### Features

- **Top Entry:** Rugged stainless steel ASTM A351-CF3M (316L) 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 bubble tight seal and is replaceable
- **Construction:** One piece investment cast bonnet eliminates welded joint in topworks
- **Stem Packing:** Proprietary Goddard system utilizing GRAFOIL® flexible graphite
- **Sizes:** ¼" through 1½" (6mm through 40mm)
- **Ends:** Socket weld, Butt weld
- **Temperature Rating:** -425°F to 150°F (-254°C to +65°C)
- **Pressure Rating:** (Cold, Non-shock)  
300 psig (20 barg)  
400 psig (27 barg)

PED Approved  
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.



231 Series



### Ordering Information

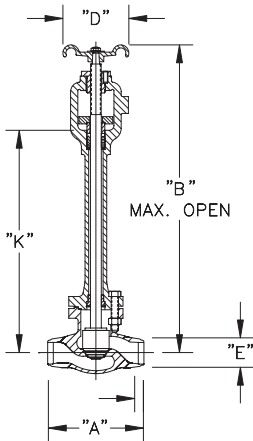
#### Stainless Body • 400 psig (28 barg) Socket Weld Ends

Part Number	Valve size Inches	Valve Size DN	Ends	Weight Lbs.	Weight Kgs.	Estimated C <sub>v</sub> (Kv)
S-231-2S4	¼"	8	Socket Weld	6	2.72	1.30 (1.12)
S-231-4S4	½"	15				3.90 (3.37)
S-231-6S4	¾"	20		10	4.54	7.10 (6.14)
S-231-8S4	1"	25				10.50 (9.08)
S-231-12S4	1½"	40				15

#### Stainless Body • 300 psig (20 barg) Butt Weld Ends

Part Number	Valve size Inches	Valve Size DN	Ends	Weight Lbs.	Weight Kgs.	Estimated C <sub>v</sub> (Kv)
S-231-4WA	½"	15	Butt Weld	6	2.72	3.90 (3.37)
S-231-8WA	1"	25		10	4.54	10.50 (9.08)
S-231-12WA	1½"	40		15	6.80	25.00 (21.62)

# Stainless Steel Globe Valve for Cryogenic Service 231 Series



Pressure Rating 400 psig (28 barg)

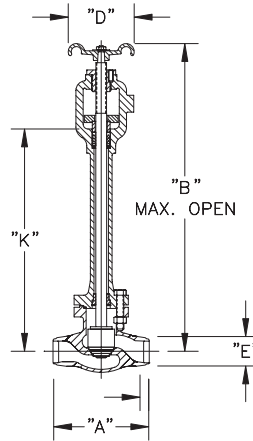
Temperature Rating - 425° F to +150° F (-25°C to 65°C)

This valve is not approved for gaseous and/or liquid oxygen service  
For oxygen service use Goddard series 232H cryogenic globe valve

Dimensional data

### Socket Weld Ends

Size		"A"		"B"		"D"		"E"		"F"		"K"	
Inches	DN	Inches	mm	Inches	mm	Inches	mm	Inches	mm	Inches	mm	Inches	mm
¼"	8	4¼"	108	14 <sup>9</sup> / <sub>16</sub> "	370	2¾"	60	0.560	14	0.375	9	10 <sup>3</sup> / <sub>16</sub> "	259
½"	15							0.860	22				
¾"	20	5¾"	137	17"	432	3"	76	1.070	27	0.500	13	11½"	292
1"	25							1.335	34				
1½"	40	6½"	165	18 <sup>14</sup> / <sub>16</sub> "	479	4"	102	1.920	49			12 <sup>15</sup> / <sub>16</sub> "	329



Pressure Rating 300 psig (20 barg)

Temperature Rating - 425° F to +150° F (-253°C to 65°C)

This valve is not approved for gaseous and/or liquid oxygen service  
For oxygen service use Goddard series 232H cryogenic globe valve

Dimensional data

### Butt Weld Ends

Size		"A"		"B"		"D"		"K"		"E"	
Inches	DN	Inches	mm	Inches	mm	Inches	mm	Inches	mm	Inches	mm
½"	15	4¼"	108	14 <sup>9</sup> / <sub>16</sub> "	370	2¾"	60	10 <sup>3</sup> / <sub>16</sub> "	259	½"	13
1"	25	5"	127	17"	432	3"	76	11½"	292	1"	25
1½"	40	6½"	165	18 <sup>8</sup> / <sub>16</sub> "	479	4"	102	12 <sup>5</sup> / <sub>16</sub> "	313	1½"	38