



PART OF OPW | a DOVER company



REGO
10
YEAR
WARRANTY

REGO
100%
TESTED
★

CLEANED FOR
OXYGEN SERVICE
O₂
CGA G-4.1

2023

Featured Cryogenic Product Information

Stainless Steel Globe Valves for Cryogenic Service

Stainless Steel Relief Device Diverter

Cryogenic Regulators

Coming Soon

Hydrogen Products

Scan Below for The Complete
RegO IG Literature Selection





History

From the company that pioneered gas regulators, you expect nothing less than products that lead the industry. For over 100 years, we have been manufacturing gas regulating equipment to the highest standards of precision and durability—standards that we set.



Quality Design & Manufacturing

Our regulators have stood the test of time. The basic design is ingenious. The materials are top quality. The robot-assisted manufacturing is precise. RegO values the relationships we have with our customers, and we stand behind our products.



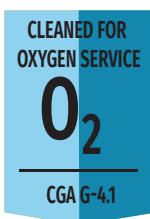
Industries Best Partners to Help Support You

Our distributors are the best in the industry. Distributors are indispensable contributors to our success and we treat them as the valuable partners they are. We support our distributors and OEMs with training, inventory and technical support around the world.



10 Year Warranty on All Products

Quality materials, innovations and long lasting design are built into every product we manufacture. That's how we can offer the RegO 10 Year Warranty, double that offered by most manufacturers.



Cleaned for Oxygen Service

All Industrial Gas products are cleaned for oxygen use according to CGA G-4.1 and EIGA Doc 200/17 to guarantee the highest possible safety level for use in oxygen and any cryogenic gas application.

Long Lasting Product

With the largest installed base in the industry, RegO has over 110 years of field proven track record of long lasting service.

Supply Chain Management

RegO utilizes the Production Part Approval Process (PPAP) in our supply chain. Critical measurements are taken of all components parts to ensure quality and reliability.

World-class quality—but don't just take our word for it.

RegO builds products that last. Our durable materials, proven designs, and rigorous testing, all add up to products designed for years of operations under harsh conditions. With internal standards like these, it's no wonder that RegO quality is recognized the world over.

100% Testing

All our products are 100% tested at multiple steps in the process from incoming component quality to final assembly testing for leakage, lock up and set pressure.

Manufacturing Excellence

RegO uses top quality materials and precise robot-assisted manufacturing in our factories. That means every product has consistent quality.

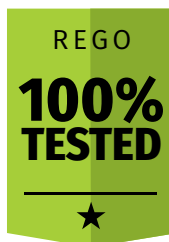
We Stand Behind Our Products

RegO values the relationships we have with our customers, and we stand behind our products. In addition to an industry leading 10 year warranty on our products, we support our channel partners with ongoing training and technical assistance.



8D Quality Metric Tracking

- D0 Plan
- D1 Create A Team
- D2 Define & Describe the Problem
- D3 Contain the Problem
- D4 Identify, Describe & Verify Root Causes
- D5 Choose Corrective Actions
- D6 Implement & Validate Corrective Actions
- D7 Take Preventative Measures
- D8 Congratulate Your Team

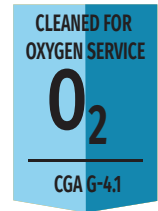


RegO® SK Advantage Series cryogenic globe valves: A better built valve, builds a better system.

Your customers depend on your equipment for safe, efficient and reliable cryogenic gas manufacturing, storage or delivery. To build a system that will meet these challenges, you need to start with quality components—products built for performance and built to last. Built from the industry-leading Goddard globe valve blueprint, the SK Advantage Series is packed full of RegO innovation to deliver years of low maintenance flow control.

Quality materials, innovation and long-lasting design

That's how we can offer a 10-year product warranty—double that of other companies.



Patented Ergonomic handwheel

Easy-to-turn ergonomic handwheel, for faster open/close

Requires less torque than other styles, increases safety and reduces repetitive motion stress

TPED & PED Certified



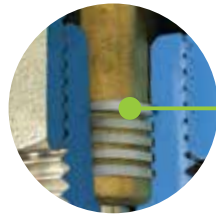
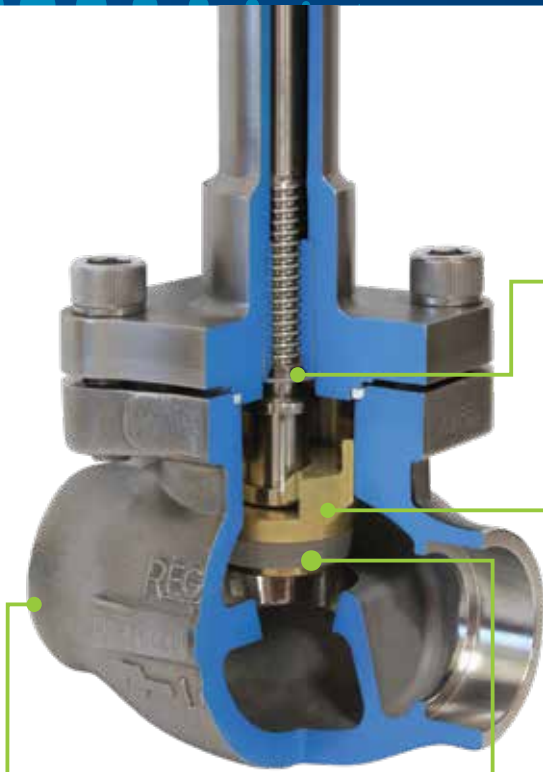
PED & TPED CERTIFIED

NEW ADDITIONAL END CONNECTIONS NOW AVAILABLE



NEW ADDITIONAL SIZES 2.5" & 3" COMING SOON





Less adjustment & maintenance

RegO Kold-Seal™ technology
Live loaded PTFE stem packing seals tighter to reduce loss

Longer life, less maintenance, and safe, no waste operation

Innovative bonnet pressure release system
Instead of wasteful weep holes, the SK Advantage Series captures excess pressure in the Kold-Seal protected valve stem on open and then returns it to the system upon close.

Up to 39% greater Cv

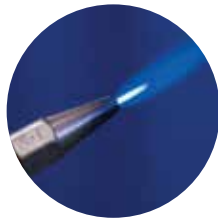
RegO conical seat for faster fills and secure shutoff
Opens wider for exception flow rates
More contact area between the seat and the seal for a tighter seal than other technologies
Less chance of debris accumulation for less frequent service
Up to 15x more durable in heavily used valves

Fast, easy maintenance with single seat assembly

PCTFE material for best cryogenic performance
No washers and nuts to retain the seat. Less adjustment and fast, easy maintenance.
Reduced risk of components vibrating loose that could affect downstream equipment

Weld-in-place

No disassembly required to install into a system
Simply follow proper installation and welding procedures
Available in socket and butt weld configurations



LONG STEM MEDIUM STEM SHORT STEM

LONG STEM ANGLE MEDIUM STEM ANGLE

1/4" - 3" SIZES AVAILABLE

CRYOGENIC LIQUID & VAPOR SERVICE:

- OXYGEN
- NITROGEN
- ARGON
- CARBON DIOXIDE
- NITROUS OXIDE
- METHANE
- ETHANE
- ETHYLENE
- KRYPTON
- LNG

APPLICATIONS:

- BULK STORAGE TANKS
- MICRO BULK TANKS
- TRANSPORT TRAILERS
- PIPING

END CONNECTIONS:

- SOCKET WELD
- BUTT WELD
- THREADED NPT
- SOCKET WELD X NPT
- PIPE STUB X NPT



Up to 16% lighter than the competition

Robust, stainless steel design

2 1/2" Stainless Steel Globe Valves for Cryogenic Service

SK Advantage 9420 Series

Application

SK stainless steel globe valves are designed for handling cryogenic liquids through trailer, bulk vessels and piping configurations. Live-loaded packing system and bonnet nut o-ring seal design assure a tight seal preventing gas loss. The conical seat design allows exceptional flow, positive shut off and less chance of debris accumulation in the flow path—resulting in an overall longer service life. Maintenance on the packing and seat is quick and easy. Ideal service medium includes oxygen, nitrogen, argon, carbon dioxide, nitrous oxide, methane, ethane, ethylene, krypton, carbon oxide and LNG.

Features

- Lower stem guide rings maintain proper centering of seat position to ensure a tight shutoff every time the valve is closed and reduce potential for liquid ingress into the bonnet to increase packing system longevity
- Bonnet nut o-ring seal reduces potential for introduction of water or humidity to prevent ice formation in the bonnet area, further increasing the packing system life and reducing required maintenance
- Soft seat: PCTFE material which is the most widely specified cryogenic seat material in the industry
- Construction: Bolted bonnet allows easy access to the valve internals for servicing
- Stem Packing: Spring loaded PTFE
- Connection: Socket weld and SCH10 butt weld
- Service: Liquefied and vaporized atmospheric gases, LNG
- Temperature rating: -325°F to +150°F (-198°C to +65°C)
- Pressure rating: Cold, non-shock, 720 PSIG (50 BAR) Class 300 (PN 50)
- Cleaned and packaged for oxygen service per CGA G-4.1



SKL9420 Series

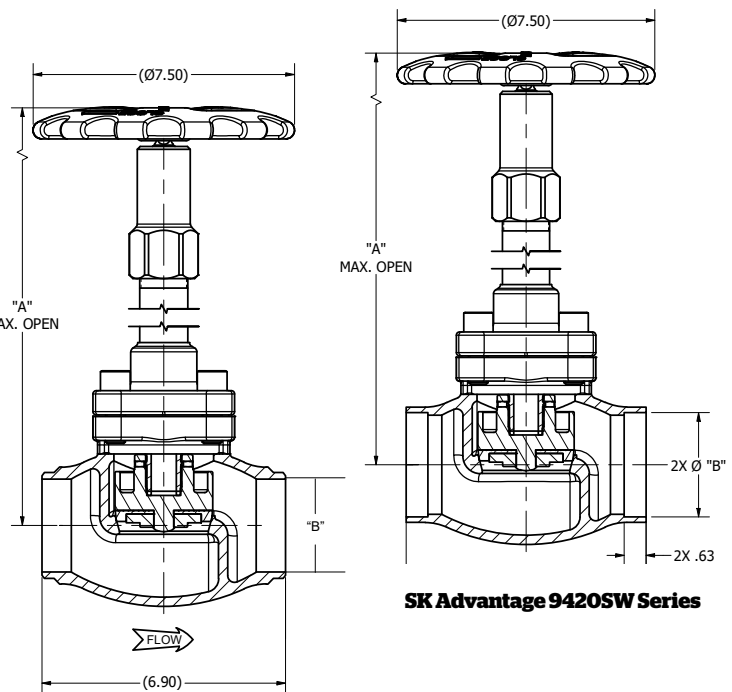


Materials

Body	Stainless Steel ASTM A351 CF8
Bonnet and Tube	Stainless Steel ASTM A351 CF8/ASTM A479 type 304
Stem	Stainless Steel ASTM A582 S30300
Spring.....	Stainless Steel ASTM A313 S30200
Packing.....	Live Loaded PTFE Packing
Gasket.....	PTFE 25% Glass Fill
Seat Disc.....	PCTFE ASTM D1430
Seat Retainer.....	Brass ASTM B16
Bonnet Screws.....	ASTM F837
Handwheel.....	Painted Aluminum

Quality / Facility Features

- Material traceability in accordance with BS EN 10204 3.1



SK Advantage 9420SW Series

SK Advantage 9420BW Series

Ordering Information

Part Number	Size Inches	Size DN	Connection*	A Inches	A mm	B Inches	B mm	Cv	Kv	Weight Ibs	Weight kg
SKM9420SW	2 1/2"	65	Socket Weld	11.8	300	2.64	67.1	75	65	20.5	9.8
SKL9420SW				15.8	401						
SKM9420BW			Butt Weld	11.8	300	2.68	60.1				
SKL9420BW				15.8	401						

*Other connection options available upon request.

3" Stainless Steel Globe Valves for Cryogenic Service

SK Advantage 9424 Series

Application

SK stainless steel globe valves are designed for handling cryogenic liquids through trailer, bulk vessels and piping configurations. RegO Live-loaded packing system and bonnet nut o-ring seal design assure a tight seal preventing gas loss. The conical seat design allows exceptional flow, positive shut off and less chance of debris accumulation in the flow path—resulting in an overall longer service life. Maintenance on the packing and seat is quick and easy. Ideal service medium includes oxygen, nitrogen, argon, carbon dioxide, nitrous oxide, methane, ethane, ethylene, krypton, carbon oxide and LNG.

Features

- Lower stem guide rings maintain proper centering of seat position to ensure a tight shutoff every time the valve is closed and reduce potential for liquid ingress into the bonnet to increase packing system longevity
- Bonnet nut o-ring seal reduces potential for introduction of water or humidity to prevent ice formation in the bonnet area, further increasing the packing system life and reducing required maintenance
- Soft seat: PCTFE material which is the most widely specified cryogenic seat material in the industry
- Construction: Bolted bonnet allows easy access to the valve internals for servicing
- Stem Packing: Spring loaded PTFE
- Connection: Socket weld and SCH10 butt weld
- Service: Liquefied and vaporized atmospheric gases, LNG
- Temperature rating: -325°F to +150°F (-198°C to +65°C)
- Pressure rating: Cold, non-shock, 720 PSIG (50 BAR) Class 300 (PN 50)
- Cleaned and packaged for oxygen service per CGA G-4.1

Materials

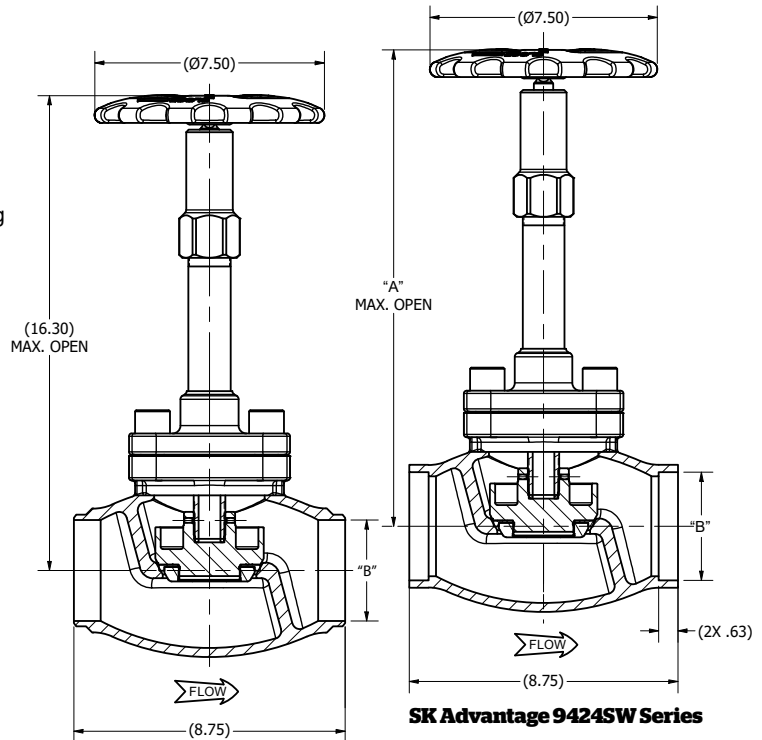
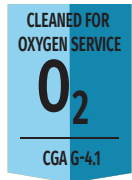
Body Stainless Steel ASTM A351 CF8
 Bonnet and Tube ..Stainless Steel ASTM A351 CF8/ASTM A479 type 304
 StemStainless Steel ASTM A582 S30300
 Spring.....Stainless Steel ASTM A313 S30200
 Packing..... Live Loaded PTFE Packing
 Gasket.....PTFE 25% Glass Fill
 Seat Disc.....PCTFE ASTM D1430
 Seat Retainer.....Brass ASTM B16
 Bonnet Screws.....ASTM F837
 Handwheel..... Painted Aluminum

Quality / Facility Features

- Material traceability in accordance with BS EN 10204 3.1



SKL9424 Series



SK Advantage 9424BW Series

SK Advantage 9424SW Series

Ordering Information

Part Number	Size Inches	Size DN	Connection*	A Inches	A mm	B Inches	B mm	Cv	Kv	Weight lbs	Weight kg
SKL9424SW	3"	80	Socket Weld	16.3	414	3.52	89.4	115	100	33.1	15
SKL9424BW			Butt Weld			3.26	82.8				

*Other options, including connections, available upon request.

RegO® Stainless Steel Relief Device Diverter (3-Way) Valve DV4108 Series

Application

The DV4108 Diverter Valve Series provides a lightweight, simplified solution for the isolation of pressure relief valves during testing and change out of relief valves and burst discs without requiring evacuation of the vessel and guaranteeing that one port will be available to work during the operation. This all stainless steel diverter valve is ideal for use with oxygen, nitrogen, krypton, carbon dioxide, nitrous oxide, dinitrogen monoxide, carbon oxide, methane, ethane, ethylene, argon, and LNG.

Features

- High flow rates complement the RegO AR and PRV series pressure relief valves
- Outlet ports sufficiently spaced to allow AR and PRV series relief valves as well as burst discs to be easily installed and removed
- Compact, lightweight design
- Unique resilient seat design with Dyneon™ TFM 1600 material provides smooth operation and bubble tight seal in cryogenic conditions
- Special seal design using proven Kold-Seal technology, live loaded PTFE in conjunction with wave springs and added sealing protection prevent internal and external leakage (EN 1626:2008 compliant)
- Clearly labeled, heavy duty lever arm and locking pin provide positive isolation verification
- Various connection and configuration options available
- Bracket included for easy installation
- Service: Liquefied and vaporized atmospheric gases, LNG
- Temperature rating: -320°F to +150°F (-196°C to +65°C)
- Pressure rating: Cold, non-shock, 720 PSIG (50 BAR) Class 300 (PN 50)
- 100% factory tested; each valve is individually bagged and boxed to arrive in factory new condition until installation
- Cleaned and packaged for oxygen service per CGA G-4.1

PED Certified

Materials

Body 316 Stainless Steel ASTM A351-CF-8M (DIN 1.4408)
 Ball.....316L Stainless Steel ASTM A276 (DIN 1.4006)
 SeatDyneon TFM 1600
 End caps.....304 Stainless Steel ASTM A743 (DIN 1.4027)
 Wave springs.....Stainless Steel ASTM A313 (DIN 1.4544)
 Wave spring washers 304 Stainless Steel ASTM A182 (DIN 1.5415)
 Packing.....Live Loaded PTFE
 Stem316L Stainless Steel ASTM A276 (DIN 1.4006)
 Lever.....304 Stainless Steel ASTM A182 (DIN 1.5415)
 Bracket304 Stainless Steel ASTM A182 (DIN 1.5415)

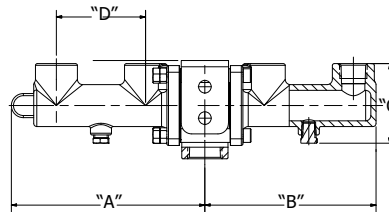
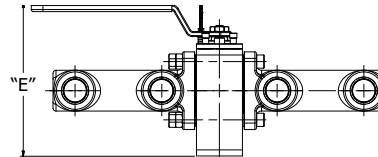
Ordering Information

Part Number	Inlet Inches (mm)	Outlet Inches (mm)	Outlet Connection Type	Outlet Port Orientation	Bleeder Connection	A Inches (mm)	B Inches (mm)	C Inches (mm)	D Inches (mm)	E Inches (mm)	Open Port	Cv (Kv)	
DV4108SU04	1 (DN25)	1/2 (DN15)	Thread NPTF	4 ports, all opposite of Inlet	1/4" NPTF, same side as inlet	7.29 (185)	6.42 (163)	2.98 (76)	3.34 (85)	5.90 (150)	One Side	12.0 (10.4)	
DV4108SU06		3/4 (DN20)									Both Sides	21.7 (18.8)	
DV4108SU08		1 (DN25)									One Side	13.3 (11.5)	
DV4108SM04		1/2 (DN15)		1 port up, 1 port down on each side			1/4" NPTF, 90° from inlet	3.72 (95)	3.2 (80)		4.45 (113)	One Side	16.0 (13.8)
DV4108SM06		3/4 (DN20)										Both Sides	25.3 (21.9)
DV4108SM08		1 (DN25)										One Side	11.0 (9.5)
		Both Sides	20.0 (17.3)										
		One Side	12.7 (11.0)										
		Both Sides	21.6 (18.7)										
		One Side	14.1 (12.2)										
		Both Sides	23.2 (20.1)										

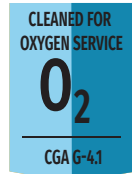
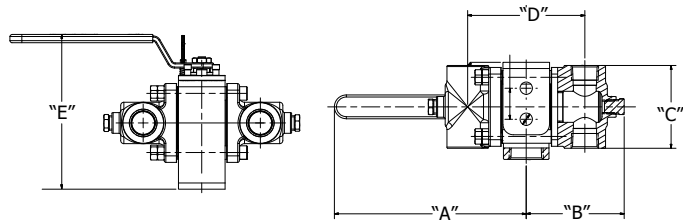
Other outlet port orientation options available; please contact your Sales representative with inquiries.



DV4108SU Series



DV4108SM Series



RegO® Stainless Steel Diverter (3-way) Valve DV4112 Series

Application

The DV4112 Diverter Valve Series provides a lightweight, simplified solution for the isolation of pressure relief valves and burst discs without requiring evacuation of the vessel and guaranteeing that one port will be available to work during the operation. This all stainless steel diverter valve is ideal for use with cryogenic and gaseous oxygen, nitrogen, krypton, carbon dioxide, nitrous oxide, dinitrogen monoxide, carbon oxide, methane, ethane, ethylene, argon, and LNG.

Features

- Unique resilient seat design with Dyneon™ TFM 1600 material provides smooth operation and bubble tight seal in cryogenic conditions
- Special seal design using proven Kold-Seal technology, live loaded PTFE in conjunction with wave springs and added sealing protection prevent internal and external leakage (EN 1626:2008 compliant)
- Clearly labeled, heavy duty lever arm and locking pin provide positive isolation verification
- Various connection and configuration options available
- Two outlet ports per side provide ability for connection of RegO Angle Relief valves and/or burst discs.
- Service: Liquefied and vaporized atmospheric gases and LNG
- Temperature rating: -320°F to +150°F (-196°C to +65°C)
- Pressure rating: Cold, non-shock, 720 PSIG (50 BAR) Class 300 (PN 50)
- Design tested under cryogenic conditions to 4000 cycles and for vibration at 17 Hz on three axis (X.Y.Z) EN1626:2008 compliant) Cleaned and packaged for oxygen service per CGA G-4.1
- High flow rates complement the RegO AR Series pressure relief valves
- Outlet ports sufficiently spaced to allow AR Series relief valves as well as burst discs to be easily installed and removed
- Compact, lightweight design
- Threaded body for easy diverter installation
- Welded pipe extension inlet option available*
- 100% factory tested; each valve is individually bagged and boxed to arrive in factory new condition until installation
- Vent port in each chamber for easy and safe maintenance process

Materials

Body 316 Stainless Steel ASTM A351-CF-8M (DIN 1.4408)
 Stem 316L Stainless Steel ASTM A276 (DIN 1.4006)
 Seat Dyneon TFM 1600
 End Caps 304 Stainless Steel ASTM A743 (DIN 1.4027)
 Wave Springs Stainless Steel ASTM A313 (DIN 1.4544)
 Wave Spring Washers 304 Stainless Steel ASTM A182 (DIN 1.5415)
 Ball 316L Stainless Steel ASTM A276 (DIN 1.4006)
 Packing Live Loaded PTFE
 Lever 304 Stainless Steel ASTM A182 (DIN 1.5415)

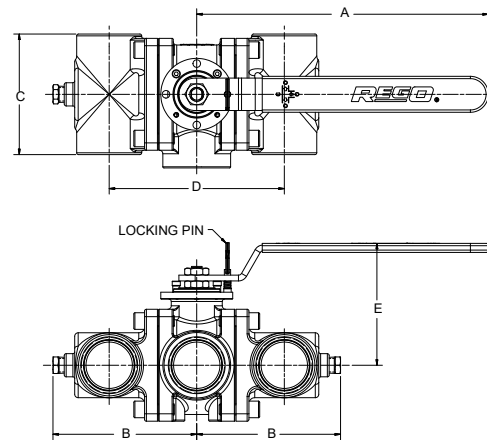
Ordering Information

Part Number	Inlet Inches (mm)	Outlet Inches (mm)	End Connection Type	Outlet Port Orientation	Bleeder Port Orientation	A Inches (mm)	B Inches (mm)	C inches (mm)	D Inches (mm)	E Inches (mm)	Open Port	Cv (Kv)	Weight Lbs (Kg)
DV4112SM08	1½ (DN40)	1 (DN25)	Thread NFPT	1 port up, 1 port down on each side	¼" NFPT, 90° from inlet	9.84 (250)	4.88 (124)	4.09 (104)	5.95 (152)	4.14 (105)	One Side	27.7 (23.9)	17 (7.7)
DV4112SM12		1½ (DN40)									Both Sides	48.8 (42.2)	
	One Side										38.6 (33.4)	15 (6.8)	

* Additional options available upon request



DV4112 Series



Example: DV4112SM12S12BJ

M Outlet Port Configuration Style	12 Outlet Port Size	S Inlet Connection	12 Inlet Pipe Size*	B Inlet Pipe Schedule	J Inlet Pipe Length
M = 1 outlet up, one down each side	08 = 1" 12 = 1½"	Blank - NPT S = Socket Weld B = Butt Weld	Blank - No Pipe Weld 4 = ½" 6 = ¾" 8 = 1" 12 = 1½"	Blank - No Pipe A = SCH 10 B = SCH 40 C = SCH 80	A = 3" B = 4" C = 5" D = 6" E = 7" F = 8" H = 10" J = 12"



Cryogenic ½” Combination Pressure Builder / Economizer CBE Series

Application

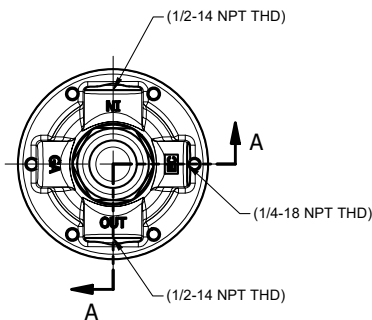
CBE series regulators maintain the pressure of the cryogenic vessels (Bulk Tanks or Micro bulks) during the operation or usage. The pressure building and economizer function are both combined in one unit, saving space and weight on the tank, simplifying the tank plumbing and reducing the leakage points.

Features

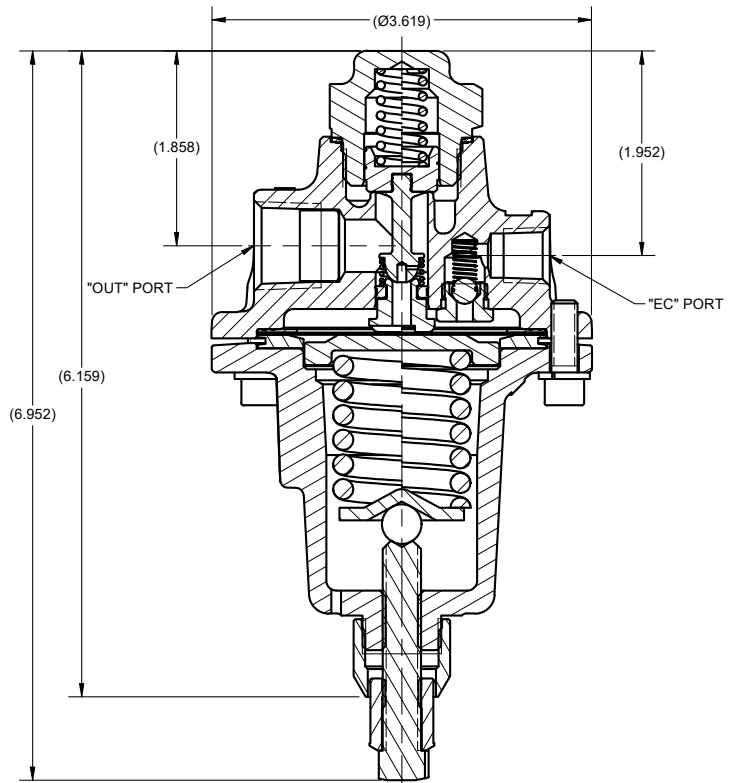
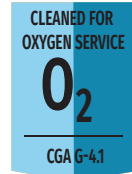
- Compact design fits well in tight plumbing geometries
- Built-in economizer check included on all models to prevent reverse flow during filling and operational upset conditions
- Economizer seal ring between PB (pressure build) OUT and EC (economizer) OUT (as compared to PB IN and EC OUT) prevents pressure runaways
- Diaphragm senses EC OUT pressure (as compared to PB OUT), accelerating pressure building function during gas use
- Improved calibrated pressure adjustment feature on bonnet cap aids in easier, more accurate pressure adjustment
- All parts are copper alloy (brass), PTFE, and stainless steel—materials selected specifically for compatibility with cryogenic temperatures down to -320°F (-196°F)
- PTFE seat provides positive shut off at cryogenic temperatures
- Maximum inlet pressure of 600 PSIG (41.4 barg)
- Pressure range setting 25 psig to 550 psig (1.7 barg to 37.9 barg)
- Monel screens included on pressure builder (PB) inlet and outlet
- Cleaned per CGA G-4.1 for oxygen service
- Suitable for argon, CO₂, nitrogen, oxygen and LNG
- 100% factory tested

Materials

Body CDA 377 (UNS C37700) Commercial Brass Alloy per ASTM B283
 Bonnet Commercial Yellow Brass Alloy per ASTM B283
 Delivery Spring 302 / 17-7PH Stainless Steel per ASTM A313
 Return Spring 304 Stainless Steel per ASTM A313
 Diaphragm Gasket..... Filled PTFE
 Diaphragm..... Phosphor Bronze (UNS C51000) per ASTM B103
 EC Poppet Seal Ring.....PTFE
 PB Seat Modified PTFE
 Backcap Gasket Copper (UNS C11000) per ASTM B152



CBE Series



Ordering Information

Part Number	Inlet/Outlet Connections in. (DN)	Operating Range psig (barg)	Weight lb (kg)
CBE504-025 to 075	Pressure Build Inlet/Outlet: ½" (15) Economizer Outlet: ¼" (8)	25 - 85 (1.7 - 5.9)	4.4 (2.0)
CBE504-076 to 155		50 - 170 (3.4 - 11.7)	
CBE504-156 to 260		100 - 280 (6.9 - 19.3)	
CBE504-261 to 450		200 - 460 (13.8 - 31.7)	
CBE504-451 to 550		400 - 550 (27.6 - 37.9)	

Coming Soon!



Additional 1 1/2" Diverter Options



Additional SK Advantage Series Sizes
(3/8", 1 1/4", 2 1/2" & 3")



1/2" & 3/4" In-line Check Valves



1/4" & 3/8" Stainless Steel
Needle Valves



1/4" & 1/2" Brass Cryogenic Economizers
up to 550+ PSIG Setting

Available Now!

Vacuum Jacketed Pipe (VJP)

The most cost-effective way to transfer cryogenic liquids

Evacuation & Safety Device

The comprehensive component design to complete the system design, manufacture, and installation capability.



Stainless Steel Inner Pipe

Maximum service life thanks to these advanced features to produce exceptional efficiencies across the entire system.

Cryogenic insulation for Nitrogen, Oxygen, Argon, Helium, Natural Gas, Carbon Dioxide, Hydrogen

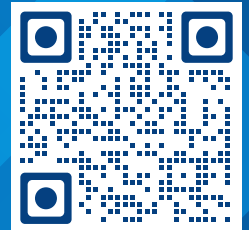
Super-Insulation

The inner and outer pipe is constructed of 300 series stainless steel. Insulation is a low vacuum with multiple layer insulation (MLI).

ACME CRYOGENICS

Acme Cryogenic Valve

The patented design builds on a conventional globe configuration by incorporating numerous unique features that decrease heat leak and increase the service life of the valve.



For more information visit acmecryo.com

REGO

RegO® brings decades of cryogenic experience to liquid and gas hydrogen applications.

When you partner with RegO, you get 100% tested products backed by our global support network and our industry-leading 10-year warranty. From regulators to valves, our products are easy to use, and designed for maximum performance and long life.



Available Now!

Coming Soon!



316L Stainless Steel Check Valves for Liquid Hydrogen Service



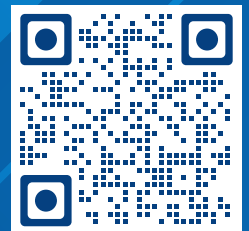
Stainless Steel Gate Valves for Gas Hydrogen Service



316L Stainless Steel Globe Valves for Liquid & Gas Hydrogen Service



316L Stainless Steel Economizer & ASME Rated Pressure Relief Valves for Liquid Hydrogen Service



For more information visit regoproducts.com