REGO

REGO 10 YEAR WARRANTY

REGO 100% TESTED ★

CLEANED FOR OXYGEN SERVICE O_2 CGA G-4.1

2022
Featured Cryogenic Product Information

Stainless Steel Globe Valves for Cryogenic Service

Brass High Pressure ASME Relief Valves

Stainless Steel Relief Device Diverters

Cryogenic ½" Pressure Builder

Cryogenic ½" Combination Pressure Builder/Economizer

Scan Below for The Complete RegO IG Literature Selection

CG-100 Brochure 0422

The Tradition Continues

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.

REGO DISTRIBUTOR NETWORK

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.

REGO 10 YEAR WARRANTY

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 O_2 CGA G-4.1

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.

Built to Stand the Test of Time

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 100% TESTED

REGO 10 YEAR WARRANTY

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.

REGO 100% TESTED ★

REGO 10 YEAR WARRANTY

CLEANED FOR OXYGEN SERVICE O_2 CGA G-4.1

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

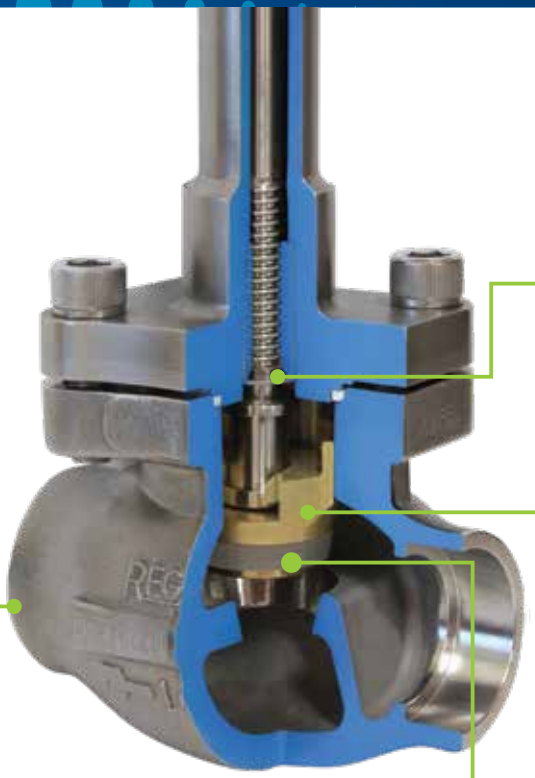
TPED & PED Certified CE

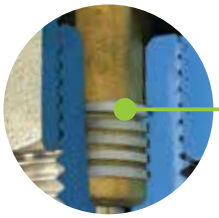
TÜV SÜD

PED & TPED CERTIFIED

NEW ADDITIONAL END CONNECTIONS NOW AVAILABLE

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.

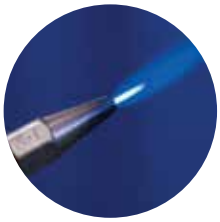
Reduced risk of components vibrating loose that could affect downstream equipment

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



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 NEW!!!

SOCKET WELD X NPT NEW!!!

LONG STEM | MEDIUM STEM | SHORT STEM | LONG STEM ANGLE | MEDIUM STEM ANGLE

Up to 16% lighter than the competition

Robust, stainless steel design

Stainless Steel Globe Valves for Cryogenic Service
ESK Advantage Series

Application

ESK series cryogenic emergency shutoff valves are designed for handling cryogenic liquids through ISO tanks, trailers and piping configurations. Ideal service medium includes oxygen, nitrogen, krypton, carbon dioxide, dinitrogen monoxide, carbon dioxide, methane, ethane, ethylene, argon and LNG. In the event of a fire or manual trigger, the safety valve automatically closes to prevent product spillage to the environment.

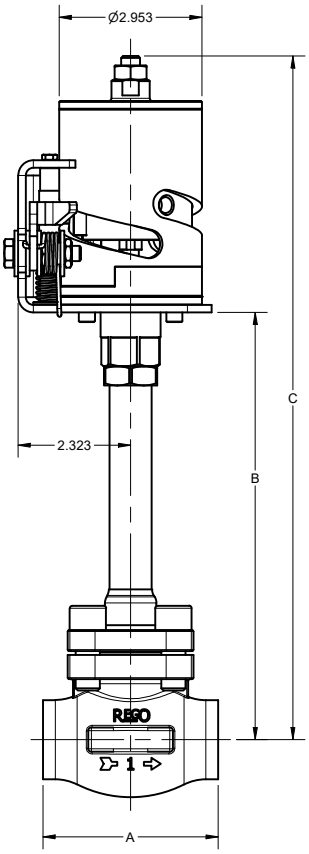
REGO 10 YEAR WARRANTY

Features

- Innovative RegO design builds upon years of proven experience with SK Advantage Globe Valve series to provide all of the benefits of the SK Advantage series and ensure the safest possible operation and longevity of transport equipment
- Cable attached to locking mechanism allows for remote, easy shutoff in the event of emergency
- When exposed to fire, thermal fuse (optional) triggered to shutoff valve automatically
- Operating lever with low torque design enables easy reopening of valve following shutoff
- Actuator position can be quickly and easily changed to accommodate any installation
- Compact, light weight design very suitable for installation in the limited space available in transport equipment and reduces overall payload
- One piece body globe valve design avoids leakage both externally and internally
- **Soft Seat:** TFM1600
- **Construction**: Bolted bonnet design allows easy access to the valve internals for faster, easier serviceability
- **Stem Packing:** Proven Kold-Seal technology, Live Loaded PTFE
- **Sizes:** 1" to 2"
- **Connection:** Socket Weld & Butt Weld that can be welded in place without removal of topworks to save installation time, labor, and cost
- **Temperature Rating**: -320°F to +150°F (-198°C to +65°C)
- **Pressure Rating**: Cold, Non-Shock, 725 psig (50 barg) Class 300 (PN 50)
- Cleaned and packaged for oxygen service per CGA G-4.1
- 100% factory tested

ESK Series

***Patent Pending**



Materials

Body ..... Stainless Steel CF8
Cover ..... Stainless Steel CF8/304
Stem ..... Stainless Steel S30300
Packing ..... PTFE
Seat Seal TFM1600
Seat Cage ..... Brass B16

Quality / Facility Features

- Material traceability in accordance with BS EN 10204 3.1

Ordering Information

Part Number	Size Inches	Size DN	Connection	A Inches	A mm	B Inches	B mm	C Inches	C mm	Cv	Kv	Weight lbs	Weight kg
ESK9408SW	1"	25	Socket Weld	3.6	92	8.8	224	14.7	373	14	12.1	10.18	4.62
ESK9412SW	1½"	40		4.7	121	8.3	85	14.2	360	28.3	21.6	13.87	6.39
ESK9416SW	2"	50		5.7	147	11.4	291	17.3	440	41	35.4	21.48	9.75
ESK9408BW	1"	25	Butt Weld	3.6	92	8.8	224	14.7	373	14	12.1	10.18	4.62
ESK9412BW	1½"	40		4.7	121	8.3	85	14.2	360	28.3	21.6	13.87	6.39
ESK9416BW	2"	50		5.7	147	11.4	291	17.3	440	41	35.4	21.48	9.75

SW =Socket Weld; BW = Butt Weld
*Please consult the factory for additional options

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Brass High Pressure ASME Relief Valves
PRV19534K Series

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Application

The RegO PRV19534 Series relief valves are designed for CO2 and other industrial gases and for cryogenic service in the vapor space. Apply on piping systems, liquid cylinders or mini-bulk cryogenic containers where an ASME relief valve is required. Compatible with all oxygen, nitrogen, argon, helium, LNG and CO2.

Features

- All valves are cleaned and packaged for oxygen service per CGA G-4.1
- Bubble tight at 95% of set pressure
- Full flow at 110% of set pressure
- Temperature range -320°F to +165°F (-196ºC to +74ºC)
- Rated for gas service only, not liquid
- Setpoint tolerance +/- 3%
- Available in brass with settings from 800 to 1,000 psig
- Builds off proven experience of and further extends PRV9400 series offerings
- ASME rated National Board Certified
- Easy to read color coded psig / bar labels
- Tamper resistant
- Adapters provide standard pipe thread connections for venting gas to the outdoors (B-9412-4, sold separately)
- Repeatable performance
- 100% factory tested
- In liquid service be sure to use with a candy cane riser (sold separately)
- In liquid service be sure to use with a candy cane riser (Sold Separately)

Flow Performance

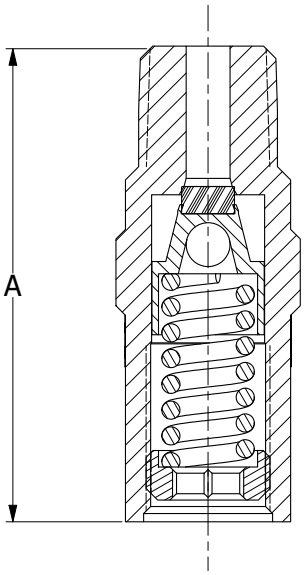
For set pressures 800-1000 psig, capacity is 0.805 SCFM of air per PSIA of flow pressure. Flow pressure per ASME is 10% above set pressure or +3 PSIG, whichever is greater.

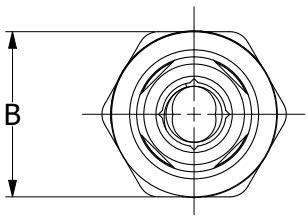
Materials

Body ..... Brass ASTM B16 UNS C36000
Spring ..... Stainless Steel ASTM A313
Seat Retainer..... Brass ASTM B16 UNS C36000
Seat ..... PCTFE (Kel –F)
Pipe-Away Adapter ..... Brass ASTM B16 UNS C36000

The use of a candy cane riser is recommended for liquid phase installation of these PRVs.

PRV19534K Series





Ordering Information

Part Number	Material	Pressure Setting Range psig (barg)	Inlet M.NPT	"A" Inches (mm)	"B" Inches (mm)	Orifice Size Inch² (mm²)	Kd Value	Pipe-Away Adapter P/N
PRV19534K	Brass	800- 1000 (55.1 - 68.9)	½"	2.9 (73.1)	1.0 (25.4)	0.266 (171.6)	0.79	B-9412-4

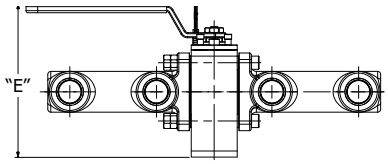
RegO® Stainless Steel Relief Device Diverter (3-Way) Valve DV4108 Series

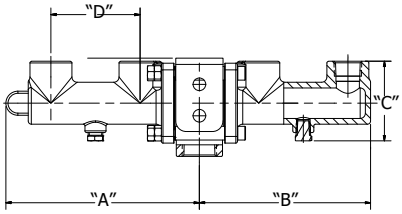
Application

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.

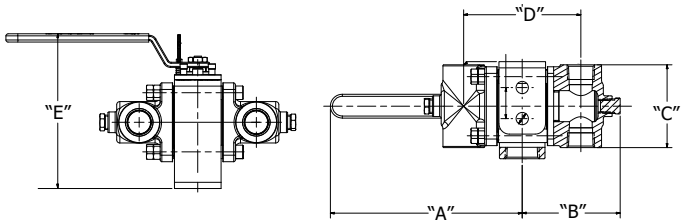
DV4108SU Series

REGO 10 YEAR WARRANTY





DV4108SM Series



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 CE

Materials

Body ..... 316 Stainless Steel ASTM A351-CF-8M (DIN 1.4408)
Ball.....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)
Packing..... Live Loaded PTFE
Stem .....316L Stainless Steel ASTM A276 (DIN 1.4006)
Lever.....304 Stainless Steel ASTM A182 (DIN 1.5415)
Bracket .....304 Stainless Steel ASTM A182 (DIN 1.5415)

DV4112 1½" Series Coming Soon

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)	½ (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)
											Both Sides	21.7 (18.8)
DV4108SU06		¾ (DN20)									One Side	13.3 (11.5)
											Both Sides	22.5 (19.5)
DV4108SU08		1 (DN25)									One Side	16.0 (13.8)
											Both Sides	25.3 (21.9)
DV4108SM04		½ (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	11.0 (9.5)
											Both Sides	20.0 (17.3)
DV4108SM06		¾ (DN20)									One Side	12.7 (11.0)
											Both Sides	21.6 (18.7)
DV4108SM08		1 (DN25)									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.

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RegO® Stainless Steel Relief Device Diverter (3-Way) Valve DV4108SD Series for PRVs

Application

The DV4108SD04 Diverter Valve Series provides a lightweight, simplified solution for the isolation of pressure relief valves during testing and change out 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 oxygen, nitrogen, krypton, carbon dioxide, nitrous oxide, dinitrogen monoxide, carbon oxide, methane, ethane, ethylene, argon, and LNG.

The DV4108SD04 has the inlet port in the upper position for the easy installation of the Micro-Bulk's relief pressure line, and the four-outlet port oriented at down position to avoid the humidity going into the PRVs and guarantee proper operation.

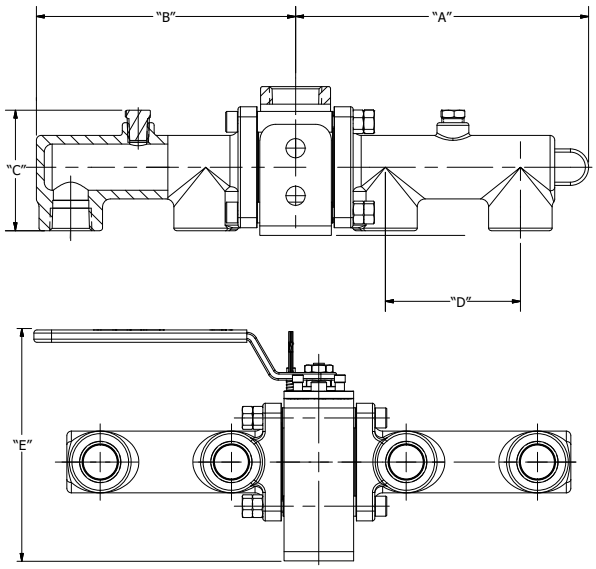
PED Certified CE

REGO 10 YEAR WARRANTY

DV4108SD04

Materials

Body ..... 316 Stainless Steel ASTM A351-CF-8M (DIN 1.4408)
Ball.....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)
Packing..... Live Loaded PTFE
Stem .....316L Stainless Steel ASTM A276 (DIN 1.4006)
Lever.....304 Stainless Steel ASTM A182 (DIN 1.5415)
Bracket .....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)
DV4108SD04	1" (DN25)	½ (DN15)	Thread NPTF	4 ports, all opposite of inlet	¼" NFPT, 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)
											Both Side	21.7 (18.8)
DV4108SD06		¾" (DN20)									One Side	13.3 (11.5)
											Both Side	22.5 (19.5)
DV4108SD08		1" (DN25)									One Side	16.0 (13.8)
											Both Side	25.3 (21.9)

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

Cryogenic ½" Pressure Builder
PB504 Series

Application

PB series cryogenic regulators are primarily designed to maintain the pressure in cryogenic containers; they may also be used as a line regulator for cryogenic lines and cold gas lines. They are specifically useful in installations where the precision in pressure control and flow capability are important. For use with oxygen, nitrogen, argon, LNG and CO_2.

Features

- All parts are copper alloy (brass), PTFE and stainless steel—materials selected specifically for compatibility with cryogenic temperatures down to -320°F. (-196° C)
- One-piece PTFE Poppet seat design eliminates possible leak paths at cryogenic temperatures and provides better guidance for improved seating, ensuring a positive shutoff.
- High and low pressure regulators are the same compact size—designed to fit in close quarters
- Customizable pressure settings between 20 - 550 psig (1.4 - 37.9 barg)
- Interchangeable with existing cryogenic regulator units
- Inlet filter (150 Mesh) helps prevent foreign material from entering the regulator
- Easier to service, use an allen wrench versus large crescent wrench
- Less field repair because diaphragm is squeezed versus twisted
- Locknut is provided to maintain adjusting screw setting
- Maximum inlet pressure of 600 psig (41.4 barg)
- Cleaned for oxygen service per CGA G-4.1
- 100% Factory Tested
- Copper Backcap Gasket reduces the possibility of external leakage at cryogenic temperatures, as the contraction coefficient is similar to that of brass

PB504

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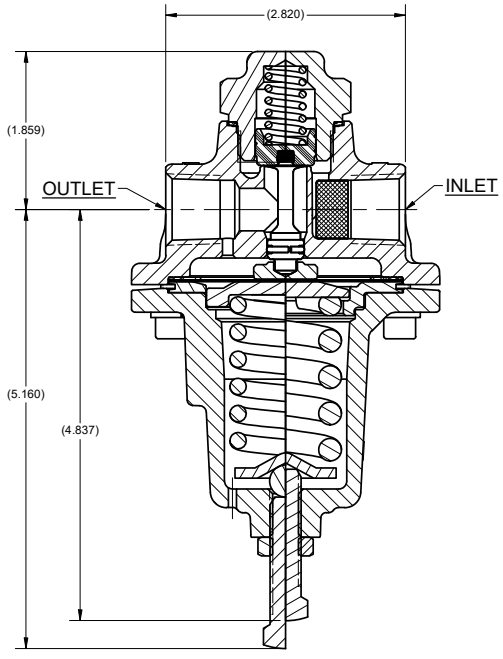
NEW! FLOW CALCULATOR TOOL AVAILABLE
Contact your local sales representative for more information.



Materials

Body	Brass
Bonnet	Brass
Poppet	PTFE
Springs	Stainless Steel
Diaphragm Gasket	PTFE
Backcap Gasket	Copper
Diaphragm	Bronze

PB504 Series part number configuration

PB504 - 205

- PB504 - Series
- 205 - Set Pressure psig

Ordering Information

Part Number	Inlet / Outlet Connections (F.NPT) A Inches (mm)	Delivery Pressure Setting Range psig (barg)
PB504-020 to 070	½" (12.70)	20 - 75 psig (1.4 - 5.2 barg)
PB504-071 to 175		50 - 180 psig (3.4 - 12.4 barg)
PB504-176 to 300		150 - 300 psig (10.3 - 20.7 barg)
PB504-301 to 465		250 - 465 psig (17.2 - 32.1 barg)
PB504-466 to 550		400 - 550 psig (27.6 - 37.9 barg)

Delivery pressure setting psig specified by suffix in PB regulator number. Example: An order for PB504-125 has a maximum inlet pressure rating of 600 psig (41.3 barg) and is set at an outlet pressure of 125 psig (8.6 barg).

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Cryogenic ½" Combination Pressure Builder / Economizer
CBE Series

Application

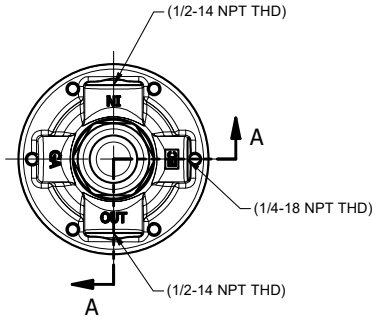
CBE series regulators maintain the pressure of the cryogenic vessels (Bulk Tanks or Micro bulks) during the operation or usage. The pressure building and economizer function are both combined in one unit, saving space and weight on the tank, simplifying the tank plumbing and reducing the leakage points.

Features

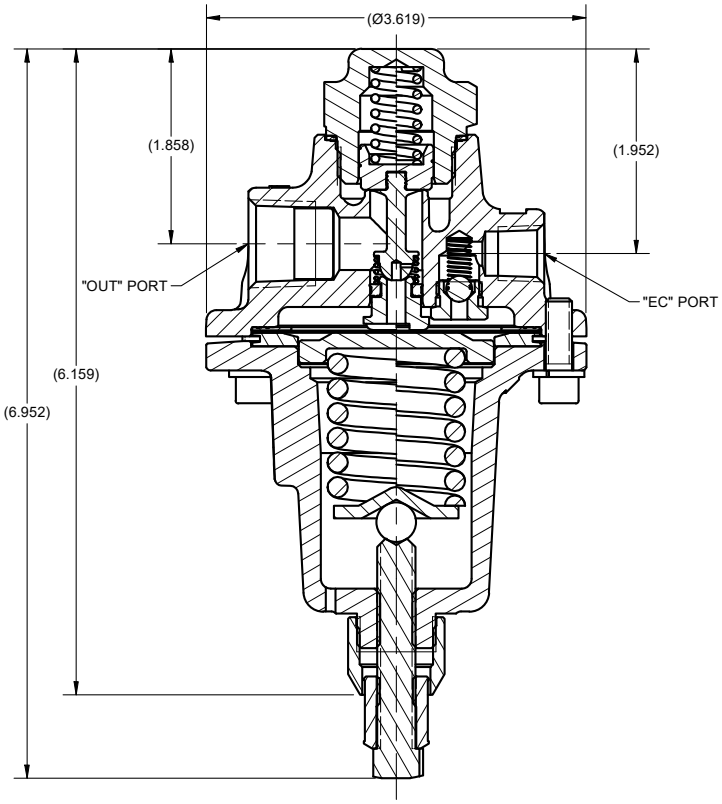
- Compact design fits well in tight plumbing geometries
- Built-in economizer check included on all models to prevent reverse flow during filling and operational upset conditions
- Economizer seal ring between PB (pressure build) OUT and EC (economizer) OUT (as compared to PB IN and EC OUT) prevents 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 -320ºF (-196ºF)
- PTFE seat provides positive shut off at cryogenic temperatures
- Maximum inlet pressure of 600 PSIG (41.4 BARG)
- Pressure range setting 20 psig to 550 psig (1.4 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)
CBE504-020 to 075	Pressure Build Inlet/Outlet: ½" (15) Economizer Outlet: ¼" (8)	20 - 85 (1.4 – 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)	

In the past year RegO launched more than 30 cryogenic product innovations.

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