

**BLD**

**SERIES**

**DESCRIPTION:**

BLD Series cryogenic pressure regulators provide high flow and shut off quickly at the desired set pressure. The regulator design is a non-balanced, spring reference, reducing type regulator and comes with PTFE seals for cryogenic use. These regulators are optimized for use in pressure build applications. The solid (non-tied) metal diaphragms provide long lasting, leak-free performance. The springs for BLD Series regulators have been designed for optimized flow within the set pressure range. All BLD Series regulators are supplied cleaned for oxygen service.

**FEATURES:**

- **OPTIMIZED FOR HIGH FLOW:** Design provides high flow rates at low pressure differential.
- **QUICK SHUT-OFF:** Regulators transition from the flowing condition to shut in a tight pressure band.
- **SOLID, NON-TIED, DIAPHRAGM:** Solid diaphragm eliminates potential leak path and increases sensitivity.
- **DESIGNED FOR CRYOGENICS:** All materials were selected specifically for use in cryogenic environments.
- **CLEANED FOR OXYGEN SERVICE:** Regulators are cleaned for use in Oxygen service standard.
- **EXTENSIVELY FIELD QUALIFIED**

**TECHNICAL DATA:**

Max. Inlet Pressure: 600 PSIG (41.4 bar)

Outlet Pressure Ranges:

Spring	Outlet Pressure Range	PSI/Turn*
A	15 to 75 PSI (1.0 to 5.2 bar)	12
B	50 to 200 PSI (3.4 to 13.8 bar)	20
C	100 to 350 PSI (6.9 to 24.1 bar)	40
D	300 to 600 PSI (20.7 to 41.4 bar)	70

\*PSI/Turn Value is approximate change in setpoint per full turn of the adjustment screw (CW to increase, CCW to decrease), for reference only.

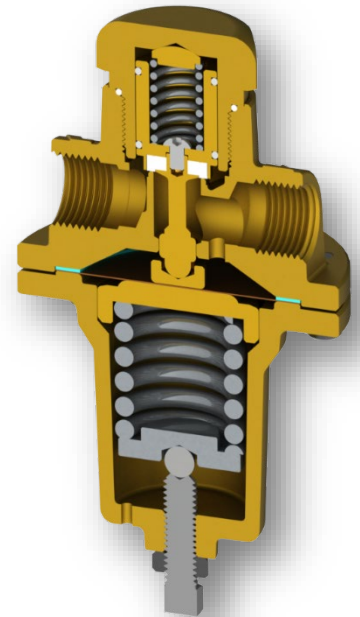
Temperature Range: -320° to 200°F (-196° to 93°C)

Full Open Flow Coefficient: 2.20

**MATERIALS OF CONSTRUCTION:**

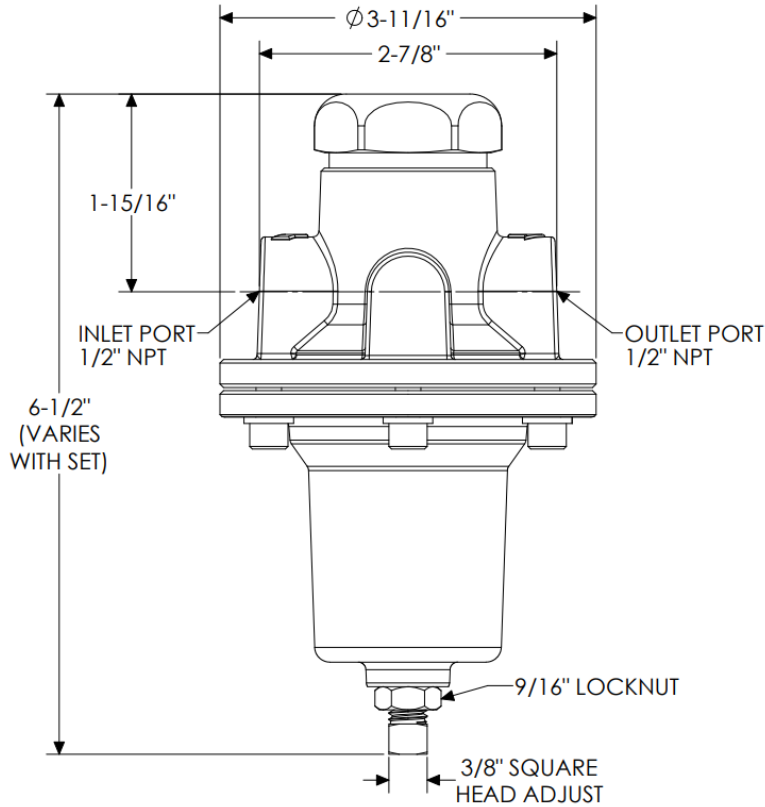
Component	Material
Body, Chamber	Brass, ASTM B124
Stem, Spring Retainer, Bottom Plug, BP Button, Stem Cap	Brass, ASTM B16
Adjustment Springs, Valve Spring	17-7PH SS
Adjustment Bolt, Locknut, Chamber Bolts, Lock Washers, Valve Screw	18-8 SS
Adjustment Screw Ball Bearing	440C SS
Diaphragms	Phosphor Bronze
Spring Button	303SS, ASTM A582
Valve Seal, Bottom Plug Seal, Chamber Seal, Valve O'Rings	PTFE

NOTE: Regulators are assembled with Dupont Krytox® lubricant.



# CRYOGENIC PRESSURE REGULATOR

## DIMENSIONAL DATA



## SPRING KITS

Part Number	Range
BLD-SK-A	15 to 75 PSI
BLD-SK-B	50 to 200 PSI
BLD-SK-C	100 to 350 PSI
BLD-SK-D	300 to 600 PSI

All Replacement Spring Kits come with a Replacement Spring, Spring Retainer, and Chamber Seal. D Range Spring Kits also come with a Chamber Ring.

## REPAIR KITS

Part Number	Description
BLD-RK	<b>Complete Repair Kit</b> Includes Valve Assembly, Valve Spring, Bottom Plug Seal, Chamber Seal, and Diaphragms (4)
BLD-VLV-RK	<b>Valve Only Repair Kit</b> Includes Valve Assembly, Valve Spring, and Bottom Plug Seal

## PERFORMANCE INFORMATION

Generant has flow information based on actual testing for both Pressure Build circuit applications and true cryogenic pressure reducing regulator applications. For more information, see Generant document SA.TD.BLD001.5256 *BLD Series Flow Datasheet*. The Full Open Flow Coefficient is listed in Technical Data.

## HOW TO ORDER

**2BLD - 500B - B - 125**

**SERIES** ————

2BLD - 2 Port BLD Regulator

**INLET SIZE** ————

500B - 1/2" NPT Ports, Brass

**SET PRESSURE**

Specify Set Pressure in PSI  
OMIT FOR STANDARD SET  
(BY SPRING, SEE TABLE)

**OUTLET PRESSURE RANGE**

A - 15 to 75 PSI (1.0 to 5.2 bar)  
B - 50 to 200 PSI (3.4 to 13.8 bar)  
C - 100 to 350 PSI (6.9 to 24.1 bar)  
D - 300 to 600 PSI (20.7 to 41.4 bar)

Spring	Std. Set
A	35
B	125
C	300
D	450

Standard Sets do not come engraved with "Factory Set Pressure."

### ADAPTER KIT

Order Part Number **BLD-A401-B**.  
Adapter Kit consists of two (2) fittings for easy interchange with other commonly used 1/2" NPT PB Regulators. No hard piping changes required.

PROPER COMPONENT SELECTION – When specifying a component, the total system design must be considered to ensure safe and trouble-free performance. Intended component function, materials compatibility, pressure ratings, installation, environment and maintenance are the responsibility of the system designer.



Valves & **BI-Lok** Fittings

[www.generant.com](http://www.generant.com)

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