GENERANT

CRYOGENIC PRESSURE REGULATOR
1/2" NPT
Max. Inlet 600 PSI (41.4 bar)

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**

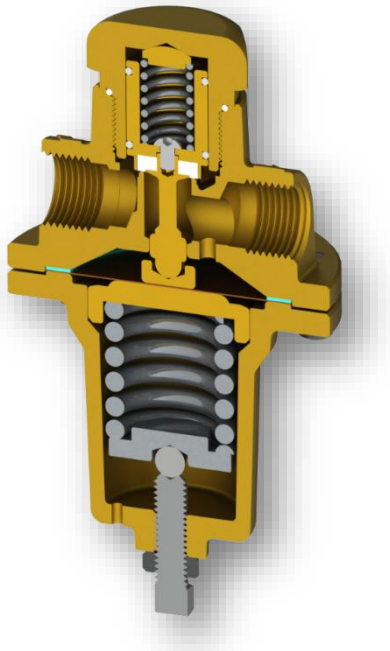
TECHNICAL DATA:

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

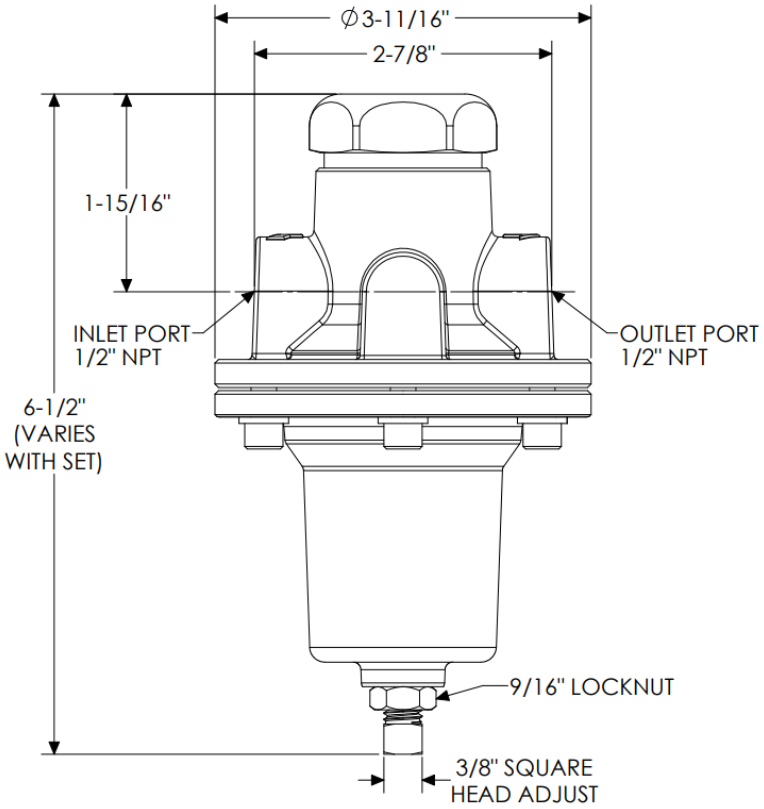
MATERIALS OF CONSTRUCTION:

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	Complete Repair Kit Includes Valve Assembly, Valve Spring, Bottom Plug Seal, Chamber Seal, and Diaphragms (4)
BLD-VLV-RK	Valve Only Repair Kit 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.

GENERANT
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