

# FLR SERIES

## DESCRIPTION:

FLR Series pressure regulators provide high flow and quick, positive shut off at the desired set pressure. The regulator design is a non-balanced, spring reference, pressure reducing type regulator. They were designed especially for use as final line regulators for cryogenic liquid cylinders but can be used in many other applications. Solid, non-tied diaphragm provides leak-free and long-lasting performance. Optimized diaphragm and adjustment spring designs provide high flow performance. All FLR Series regulators are supplied factory pre-set and cleaned for oxygen service.

## FEATURES:

- **OPTIMIZED FOR HIGH FLOW:** High flow while maintaining outlet pressure near setpoint.
- **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.

## TECHNICAL DATA:

Max Inlet Pressure: 600 PSIG (41.4 bar)

Outlet Pressure Ranges:

Spring	Outlet Pressure Range	PSI/Turn*
A	15 to 65 PSIG (1.0 to 4.5 bar)	15
B	50 to 175 PSIG (3.4 to 12.1 bar)	25
C	150 to 350 PSIG (10.3 to 24.1 bar)	55
D	300 to 525 PSIG (20.7 to 36.2 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.

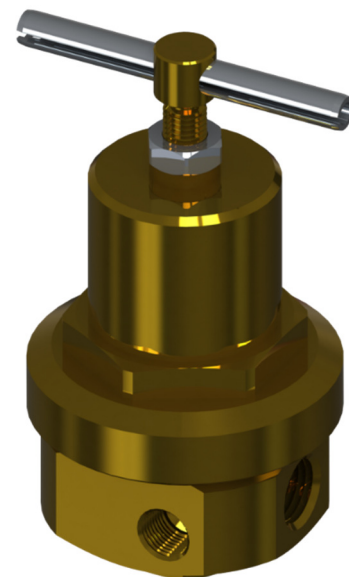
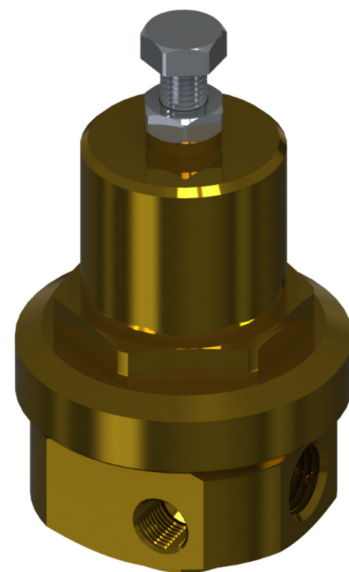
Temperature Range: -320° to 200°F (-196° to 93°C)

Full Open Flow Coefficient: 0.51

## MATERIALS OF CONSTRUCTION:

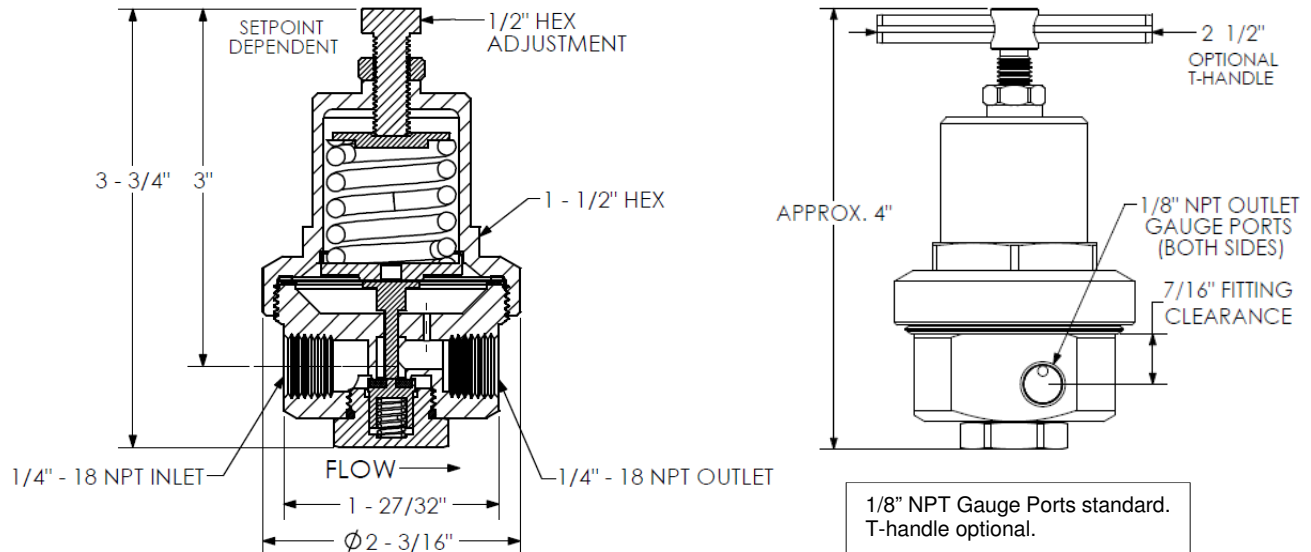
Component	Material
Body, Chamber, Valve Body, Stem, Spring Button, Spring Retainer, Bottom Plug	CDA 360 Brass, ASTM B16
Adjustment Springs	Chrome Silicon, ASTM A401
Adjustment Screw, Locknut, Optional T-Handle	18-8 Stainless Steel
Valve Spring	302 SS, ASTM A313
Diaphragms	Phosphor Bronze
Diaphragm Gasket	Vulcanex ®
Valve Seal	PTFE
Chamber Seal	Gylon ®
Bottom Plug Seal	Silicone

NOTE: Regulators are assembled with Dupont Krytox® lubricant.



# FINAL LINE REGULATOR

## DIMENSIONAL DATA



## PERFORMANCE INFORMATION

FLR Series Regulators were designed for high flow rates at low droop levels. Units were extensively tested and qualified for CO<sub>2</sub> applications but can be used with a wide variety of medias. Regulators transition from high flow to shut in a tight pressure band.

For flow information in specific applications or pressure conditions, consult factory.

## SPRING KITS

Part Number	Spring
CRM-SK-A	A (15 to 65 PSI)
CRM-SK-B	B (50 to 175 PSI)
CRM-SK-C	C (150 to 350 PSI)
CRM-SK-D	D (300 to 525 PSI)

All Replacement Spring Kits come with a Replacement Spring, Chamber Seal, and either Diaphragm Gasket (A, B, and C springs) or Chamber Ring (D Spring).

## HOW TO ORDER

**FLR-250 - B - 125 T**

**SERIES** ————  
FLR-250 - Final Line Regulator,  
1/4" NPT IN AND OUT,  
1/8" NPT GAUGE PORTS (2)

**OPTIONAL T-HANDLE**  
T - T-HANDLE  
OMIT FOR STANDARD ADJUSTMENT BOLT

**SET PRESSURE**  
Specify set pressure in PSI  
OMIT FOR STANDARD SET (BY SPRING, SEE TABLE)

**SPRING RANGE**  
A - 15 to 65 PSI (1.0 to 4.5 bar)  
B - 50 to 175 PSI (3.4 to 12.1 bar)  
C - 150 to 350 PSI (10.3 to 24.1 bar)  
D - 300 to 525 PSI (20.7 to 36.2 bar)

Repair Kit	Description
CRM-V-RK	Valve Only Repair Kit: Contains bottom plug o'ring, valve, and valve spring.

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

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

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**

Valves & **BI-Lok** Fittings

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