

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.

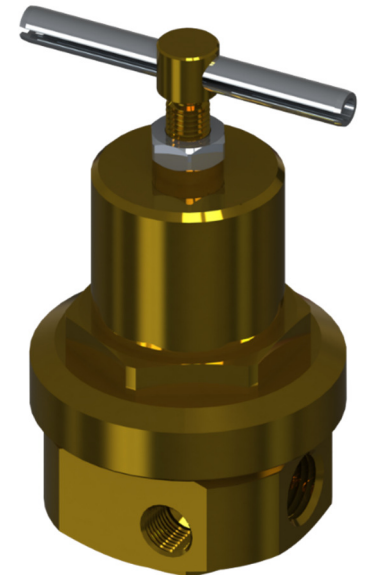
Temperature Range: -320° to 200°F (-196° to 93°C)

Full Open Flow Coefficient: 0.51

MATERIALS OF CONSTRUCTION:

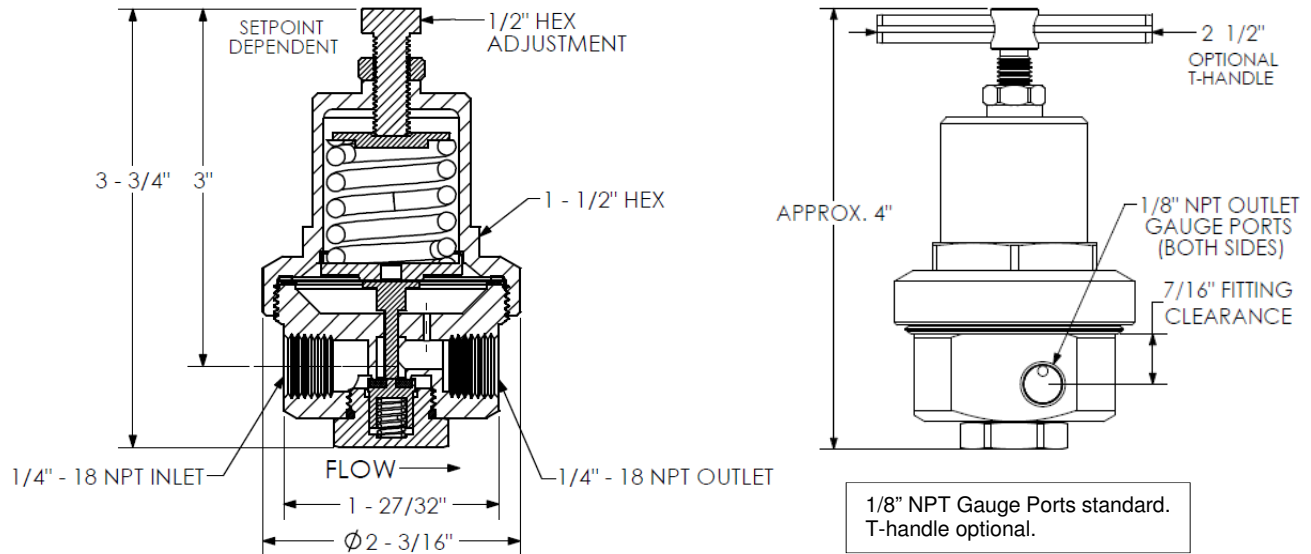
| Component | Material |
|--|---------------------------|
| Body, Chamber, Valve Body, Stem, Spring Button, Spring Retainer, Bottom Plug | CDA 360 Brass, ASTM B16 |
| Adjustment Springs | Chrome Silicon, ASTM A401 |
| Adjustment Screw, Locknut, Optional T-Handle | 18-8 Stainless Steel |
| Valve Spring | 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 CO₂ 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)

| 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."

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

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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