

Series 31™

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Gas
Equipment

Medium-Duty Single-Stage Flow Gauge Regulators

Quick Specs

Applications

Welding services
Heavy fabrication
Manufacturing
Shipbuilding

Processes

MIG (GMAW)
TIG (GTAW)

Gas Service Argon and CO₂

Flow Range 10–50 scfh (5–25 lpm)

Max. Inlet Pressure 3,000 psig (207 bar)

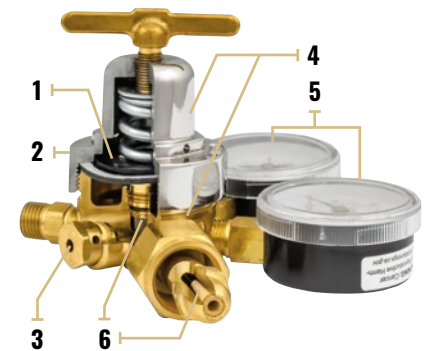
Outlet Connection 5/8"-18 RH internal

CGA Inlet Connection 320 or 580

Regulator Body Inlet 1/4" NPT

Temperature Range -20°–+140°F (-29°–+60°C)

Compact, precise flow control. Reliable for daily use.



FEATURES

- 1. Neoprene composite diaphragm**
Resists corrosion for extended service life.
- 2. Color-coded label**
Supplies performance capabilities, easy gas service identification and technical information.
- 3. External relief valve**
Protects regulator from damage due to inadvertent high-pressure surge. Relief valve will release excessive pressure and automatically reset.
- 4. Brass body and nickel-plated bonnet**
Protects against corrosion.
- 5. Shatter-resistant 2-inch gauges**
Easy-to-read gauges with polycarbonate lens covers for protection.
- 6. Dual filters including Sure Seat™**
Protects high-pressure seat from debris for reliable operation and long service life.



Regulators are warranted for three years, parts and labor.



Underwriters Laboratories (UL) Listed



Smith Equipment

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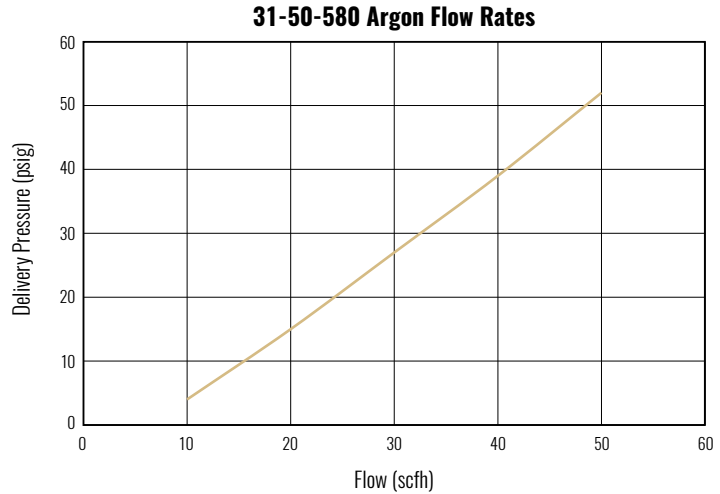
Performance Data

These flow charts are used to determine whether or not your regulator has the flow capability necessary for your application.

How to use a flow chart:

There are multiple ways to use a flow chart. Each method relies on a pair of known values for inlet pressure, outlet pressure, or flow rate to determine the third. For example, if the inlet and outlet pressures are known and you wish to know the flow rate, the following steps may be used:

1. Identify curve corresponding to the system's inlet pressure. Different colors or symbols may be used to differentiate one inlet pressure from another.
2. Find desired outlet pressure on vertical axis.
3. Move horizontally across the chart until the line corresponding to the desired outlet pressure intersects the curve corresponding to the inlet pressure.
4. Read the flow rate marked along the horizontal axis.



Ordering Information

| REGULATOR | STOCK NUMBER | GAS SERVICE | INLET GAUGE | OUTLET GAUGE | FLOW RANGE | MAX. INLET PRESSURE | OUTLET CONNECTION | INLET CONNECTION |
|-----------------------------------|----------------------------|-------------|-----------------------------|-------------------------|--------------------------|-------------------------|---------------------|----------------------------------|
| Medium-Duty Flow Gauge Regulators | 31-50-580 | Argon | 0–4,000 psig (0–280 bar) | 0–50 scfh (0–25 lpm) | 10–50 scfh (5–25 lpm) | 3,000 psig (207 bar) | 5/8"-18 RH internal | CGA 580 |
| | 31-50-580-6* | | | | | | | CGA 320 |
| | 31-50-9 British fitting | Argon | | | | | | G-5/8"A-14 RH British fitting |

*Flow gauge regulator with 6-feet x 1/4-inch inert hose and fittings.

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