

Series 40™ and Series 46™

Heavy-Duty Single-Stage Pressure Regulators

Quick Specs

Applications

Farm and ranch
Construction and fabrication
Heavy equipment
Shipbuilding
Scrap and salvage

Oxy-Fuel Processes

Cutting, heating, welding
and brazing

Gas Service

Oxygen, acetylene, LP gas, and nitrogen

Max. Delivery Pressure

Cylinder: Up to 275 psig (19 bar)
Station: Up to 175 psig (12 bar)

Max. Inlet Pressure

Cylinder: 400 or 3,000 psig (28 or 207 bar)
Station: 100 or 200 psig (7 or 14 bar)

Outlet Connection

Cylinder: 9/16"-18 LH or RH "B" or 5/8"-18 RH internal
Station: 9/16"-18 LH or RH "B"

CGA Inlet Connection

Cylinder: 300, 510, 540 or 580
Station: 024 or 025

Regulator Body Inlet

1/4" NPT

Temperature Range

-20° – +140°F (-29° – +60°C)

Net Weight

5 lb. (2.3 kg)

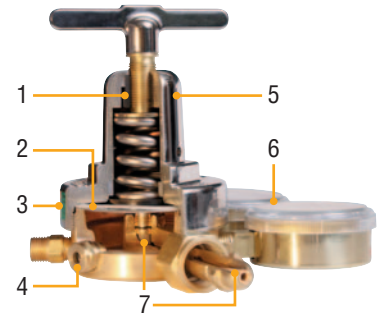
Accurate. Reliable. For high gas flow including liquid service.

SMITH
EQUIPMENT



40-175-540

Sure Seat™



Features

1. **Resin bonnet insert** allows smooth, easy adjustment even at high-pressure levels.
2. **Stainless steel diaphragm** resists corrosion, leaking and freeze-up if used with liquid (cryogenic) gases for extended service life.
3. **Color-coded labels** supply performance capabilities, easy gas service identification and technical information.
4. **External relief valve** protects regulator from damage due to inadvertent high-pressure surge. Relief valve will release excessive pressure and automatically reset.
5. **Nickel-plated bonnet with forged brass body** protects against corrosion.
6. **Easy-to-read 2.5-inch gauges** with shatter-resistant polycarbonate lens covers.
7. **Dual filters including Sure Seat** protect high-pressure seat from debris for reliable operation and long service life.

TRUE BLUE
3YR. WARRANTY

Warrantied for three years, parts and labor.



Underwriters Laboratories (UL) Listed



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Station Regulators

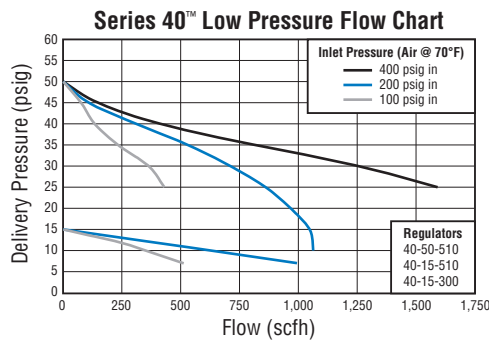
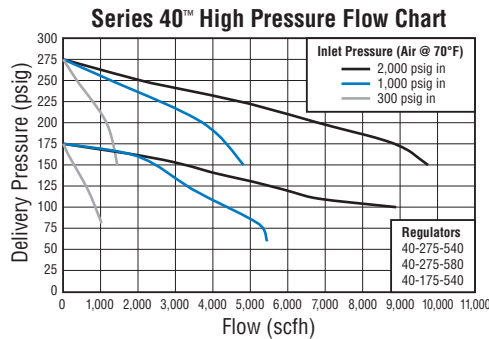


46-175

Station regulators are used to connect pipeline gas delivery systems to the welding stations. Because the pipeline pressure is regulated upstream, station regulators only require a single delivery pressure gauge.

Performance Data

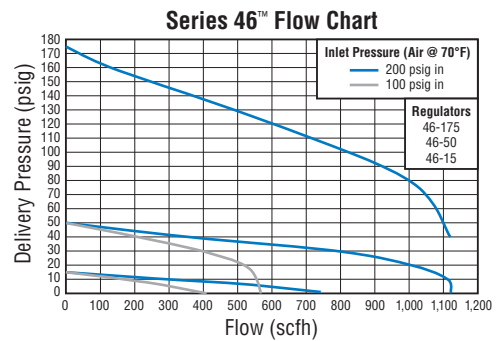
These flow charts are used to determine whether or not your regulator has the flow capability necessary for your application.



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

Stock No.	Gas Service	Inlet Gauge	Outlet Gauge	Max. Delivery Pressure	Max. Inlet Pressure	Outlet Connection	Inlet Connection
Cylinder Regulators							
40-175-540 40-175-540S*	Oxygen	0–4,000 psig (0–280 bar)	0–200 psig (0–14 bar)	175 psig (12 bar)	3,000 psig (207 bar)	9/16"-18 RH "B"	CGA 540
40-275-540			0–400 psig (0–28 bar)	275 psig (19 bar)			
40-15-300 40-15-300S*	Acetylene	0–400 psig (0–28 bar)	0–30 psig (0–2 bar)	15 psig (1 bar)	400 psig (28 bar)	9/16"-18 LH "B"	CGA 300
40-15-510 40-15-510S*							CGA 510
40-50-510	LP gas**	0–400 psig (0–28 bar)	0–60 psig (0–4 bar)	50 psig (3 bar)	400 psig (28 bar)	9/16"-18 LH "B"	CGA 510
40-275-580	Nitrogen	0–4,000 psig (0–280 bar)	0–400 psig (0–28 bar)	275 psig (19 bar)	3,000 psig (207 bar)	5/8"-18 RH internal	CGA 580
Station Regulators							
46-175	Oxygen	—	0–200 psig (0–14 bar)	175 psig (12 bar)	200 psig (14 bar)	9/16"-18 RH "B"	CGA 024 7/8"-14 RH "C"
46-15	Acetylene	—	0–30 psig (0–2 bar)	15 psig (1 bar)	100 psig (7 bar)	9/16"-18 LH "B"	CGA 025 7/8"-14 LH "C"
46-50	LP gas**	—	0–50 psig (0–3 bar)	50 psig (3 bar)	100 psig (7 bar)	9/16"-18 LH "B"	CGA 025 7/8"-14 LH "C"

* Includes HB190 Hard Hat gauge guard.
40-175-540S with the HB190 guard is shown at right.

**Propane, propylene or natural gas.



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