

# Low-Pressure Three-Stage Nitrogen Regulators

## Quick Specs

### Applications

Power transformers

### Gas Service

Nitrogen

### Delivery Pressure

3rd stage: 0.5 psig (0.03 bar)

3rd stage bypass: 6 psig (0.41 bar)

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

**Outlet Connection** 1/2" FNPT

**CGA Inlet Connection** 580

**Regulator Body Inlet** 1/4" NPT

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

**Consistent, accurate low-pressure control. Reliable for daily use.**

### Pressure switch (16347-3 only)

will alert when cylinder is low.  
Factory set at 250 psig (17 bar).

**Large diaphragm** allows for highly sensitive and accurate low pressure control.

**Adjusting screw with protective cap** to prevent tampering.

**Easy-to-read 2-inch gauge with shatter-resistant polycarbonate lens cover.**

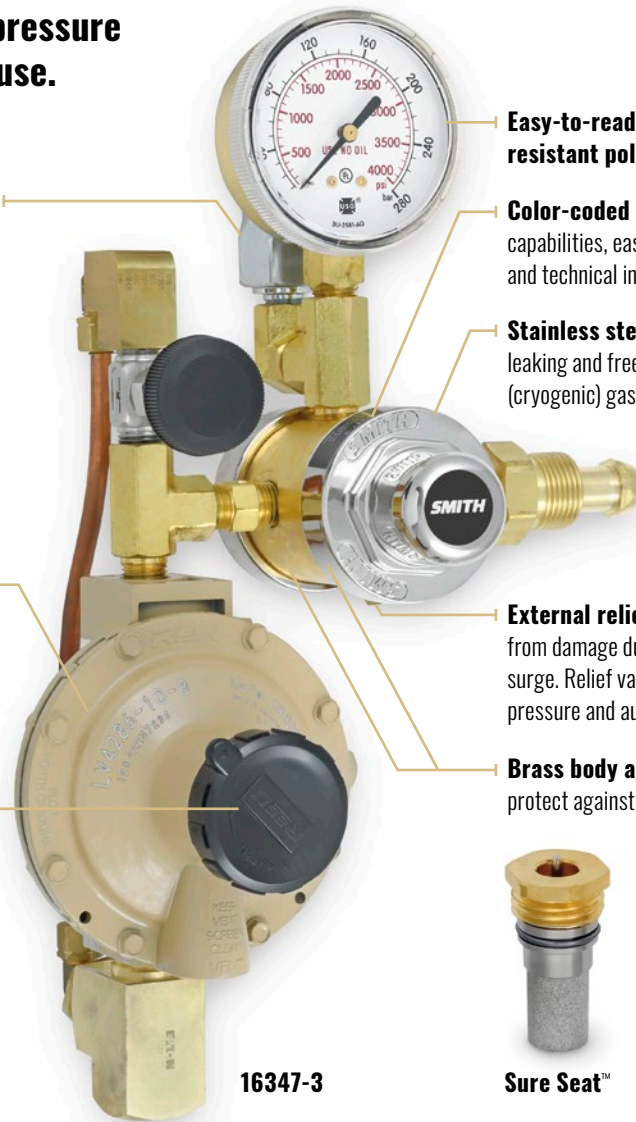
**Color-coded label** supplies performance capabilities, easy gas service identification and technical information.

**Stainless steel diaphragm** resists corrosion, leaking and freeze-up if used with liquid (cryogenic) gases for extended service life.

**External relief valve** protects regulator from damage due to inadvertent high-pressure surge. Relief valve will release excessive pressure and automatically reset.

**Brass body and nickel-plated bonnet** protect against corrosion.

**Dual filters including Sure Seat™** protect high-pressure seat from debris for reliable operation and long service life.



16347-3

Sure Seat™



Regulators are warranted for one year, parts and labor.



### Smith Equipment

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# Performance Data

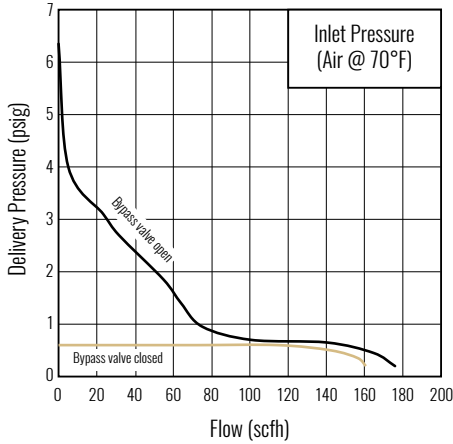
These flow charts are used to determine whether or not your regulator has the flow capability necessary for your application.

## How to use a flow chart:

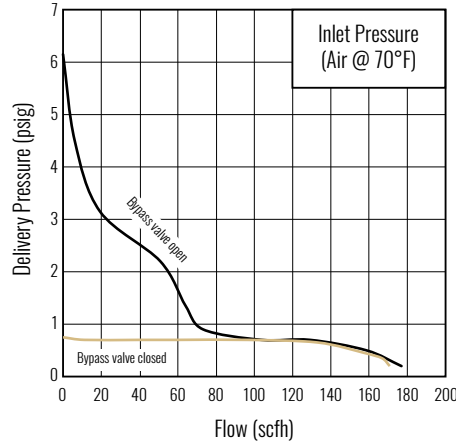
There are multiple ways to use a flow chart. Each method relies on a pair of known values for inlet pressure, outlet pressure, or flow rate to determine the third. For example, if the inlet and outlet pressures are known and you wish to know the flow rate, the following steps may be used:

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.

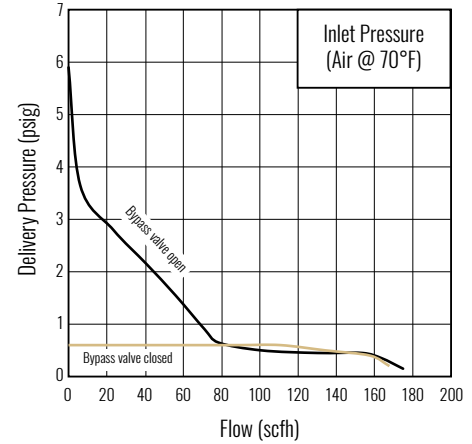
Flow Rate (2,000 psi in)



Flow Rate (1,000 psi in)



Flow Rate (200 psi in)



# Ordering Information

REGULATOR	STOCK NUMBER	GAS SERVICE	INLET GAUGE	PRESET OUTLET PRESSURE		MAX. INLET PRESSURE	OUTLET CONNECTION	INLET CONNECTION
				2ND STAGE	3RD STAGE			
Low-Pressure Three-Stage Nitrogen Regulators	16391 (without pressure switch) 16347-3 (with pressure switch)	Nitrogen	0–4,000 psig (0–280 bar)	6 psig (0.41 bar)	0.5 psig (0.03 bar)	3,000 psig (207 bar)	1/2" FNPT	CGA 580

Note: Operation voltage for model 16347-3: 5 amps at 12/24 VDC or 125 VAC. 3 amps at 250 V.  
 Pressure switch setting: Preset at 250 psig, but is adjustable from 70–300 psig.  
 Switch wiring: Normally open or normally closed (DPDT), three 18-inch flying leads.

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