

SPECIFICATIONS

OPERATING PARAMETERS

Pressure rating per criteria of CGA E-4; ASME B31; ASME BPVC

Maximum Inlet Pressure

Cv = 0.06: 4500 psig / 310 bar

Maximum Outlet Pressure

15, 25, 50, 125, 250 psig
103, 172, 345, 862, 1724 kPa
1.0, 1.7, 3.4, 8.6, 17.2 bar

Design Proof Pressure

150% maximum rated

Leak Rate

Internal: Bubble-tight

External: Designed to meet

$< 2 \times 10^{-8}$ atm cc/sec He / $< 2 \times 10^{-8}$ mbar l/s He

Operating Temperature

PCTFE seat: -40°F to 140°F / -40°C to 60°C

Flow Capacity

Cv = 0.06

Decaying Inlet Characteristic

Cv = 0.06

0.37 psig / 100 psig

0.03 bar / 6.9 bar

MEDIA CONTACT MATERIALS

Body

316L Stainless Steel, Nickel-Plated Brass

Seat

PCTFE

Diaphragm

316L Stainless Steel

Filter

- 10 micron nominal sintered Bronze
- 10 micron nominal sintered 316 Stainless Steel

Seal

Teflon®

Remaining Parts

Brass, 300 Series Stainless Steel

Weight

2.4 lbs / 1.1 kg

OTHERS

Connections

Inlet and outlet: 1/4" NPTF

Accessories: 1/4" NPTF

Cleaning

CGA 4.1 and ASTM G93



The SG1 Series is a compact, lightweight high purity single-stage regulator for specialty and industrial gases.

Sensitive, extra long-life metal diaphragm ensures gas purity and integrity. User-friendly model number enables the specifier to select optional gauges, relief and shut-off valves, and cylinder connections as part of the regulator assembly.

APPLICATIONS

- Laboratory and Point-of-Use Gas Systems in medical, pharmaceutical, food and beverage, and other high-purity applications
- Process analyzer gases, metal fabrication and specialty and industrial gas cylinders

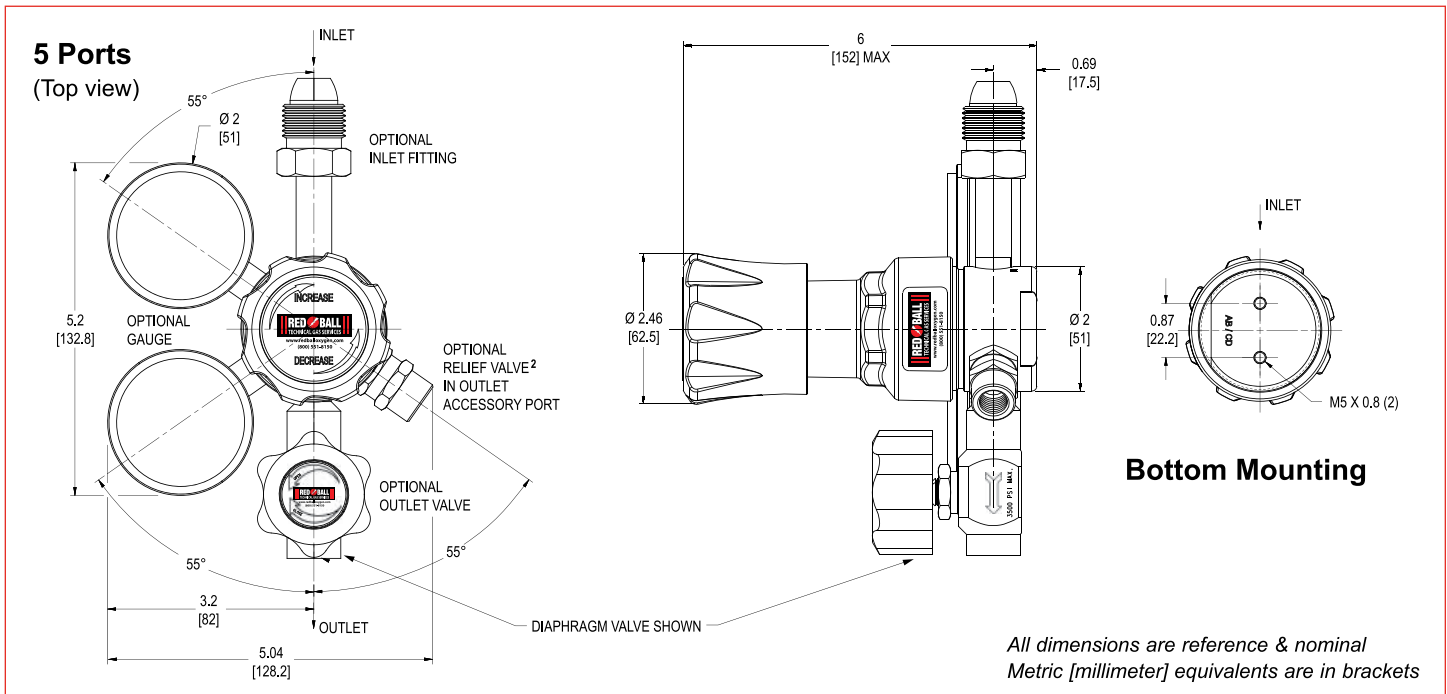
FEATURES AND BENEFITS

- Cartridge valve design
- Incorporated 10 micron filter
- Filter protects the regulator seat and makes service simple

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SG1 SERIES

PRESSURE REDUCING REGULATORS

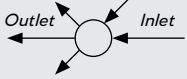


All dimensions are reference & nominal
Metric [millimeter] equivalents are in brackets

SG1 SERIES REGULATOR PART NUMBER SELECTOR

Base Model

Example for selecting a part number:

SG1	6	3	1	5	1		
BASIC SERIES	BODY MATERIAL	OUTLET PRESSURE RANGES	DIAPHRAGM MATERIAL	SEAL MATERIAL	PORTS (TOP VIEW)	FLOW C _v	P1
SG1	P - Nickel -Plated Brass 6 - 316L Stainless Steel	1 - 15 psig • 103 kPa • 1.0 bar ¹ 2 - 25 psig • 172 kPa • 1.7 bar 3 - 50 psig • 345 kPa • 3.4 bar 4 - 125 psig • 862 kPa • 8.6 bar 5 - 250 psig • 1724 kPa • 17.2 bar	1 - 316L Stainless Steel	Teflon®	5 - 5 Port 	1 - 0.06	4500 psig 31,026 kPa 310 bar

¹Consider a two-stage regulator (SG2) if using full range of inlet pressure capabilities

ACCESSORIES

Extension to Base Model
Part Number
SG1XXXXXX

04	A	P	A	-002
CYLINDER CONNECTIONS	GAUGES ³	RELIEF VALVE ¹	OUTLET VALVE	
00 - None 01 - CGA 296 02 - CGA 350 C1 - CGA 510	03 - CGA 540 04 - CGA 580 05 - CGA 590 C2 - CGA 660	0 - None P - Plug(s) A - psi / kPa	A - None P - Plug 1 - Teflon® Pipe-away	0 - None A - Diaphragm valve

GAUGE PRESSURE RANGES³

OUTLET PRESSURE RANGE

SG1X1XXXX - 15 psig / 103 kPa / 1.0 bar
SG1X2XXXX - 25 psig / 172 kPa / 1.7 bar
SG1X3XXXX - 50 psig / 345 kPa / 3.4 bar
SG1X4XXXX - 125 psig / 862 kPa / 8.6 bar
SG1X5XXXX - 250 psig / 1724 kPa / 17.2 bar

OUTLET GAUGE PRESSURE RANGE

0-30 psig / 200 kPa / 2 bar
0-30 psig / 200 kPa / 2 bar
0-60 psig / 400 kPa / 4 bar
0-160 psig / 1100 kPa / 11 bar
0-300 psig / 2000 kPa / 20 bar

INLET PRESSURE RANGE

ALL

INLET GAUGE PRESSURE RANGE

6000 psig / 41,000 kPa / 400 bar

²The relief valve is not intended to be a "Pressure Relief Device" as defined by ASME Boiler & Pressure Vessel Code - Section VIII, nor is it intended to be a "Safety Accessory" or "Pressure Limiting Device" as defined by the Pressure Equipment Directive (97/23/EC). The relief valve is intended to indicate a potential problem with the regulator and prevent further damage to the regulator. The relief valve is not intended to protect the downstream process equipment.