SG1 SERIES
PRESSURE REDUCING REGULATORS

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 x 10-8 atm cc/sec He / < 2 x 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

OTHERS

Connections
Inlet and outlet: 1/4" NPTF
Accessories: 1/4" NPTF

Cleaning
CGA 4.1 and ASTM G93

Weight
2.4 lbs / 1.1 kg

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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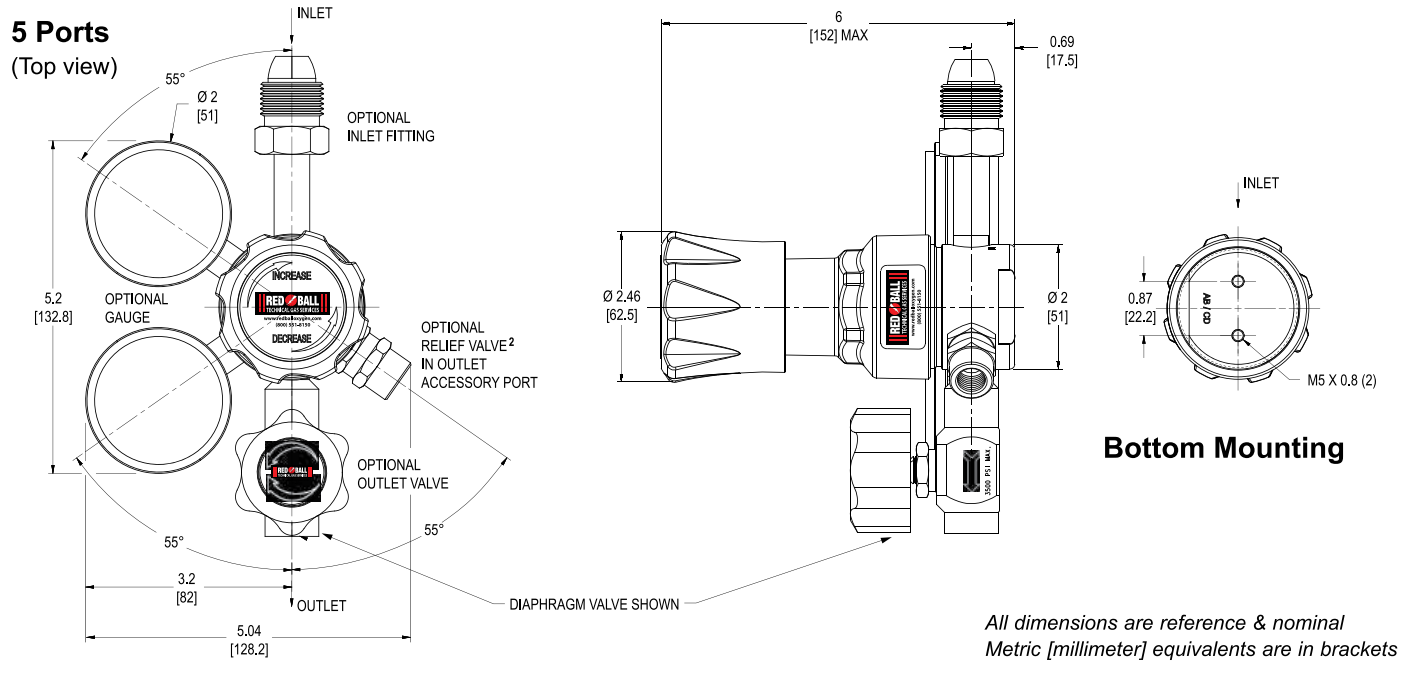

SG1 SERIES REGULATOR PART NUMBER SELECTOR

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 Outlet Inlet	1 - 0.06	4500 psig 31,026 kPa 310 bar

[1]Consider 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	03 – CGA 540	0 - None	A - None	0 - None
01 – CGA 296	04 – CGA 580	P - Plug(s)	P - Plug	A - Diaphragm valve
02 – CGA 350	05 – CGA 590	A - psi / kPa	1 - Teflon® Pipe-away	
C1 – CGA 510	C2 – CGA 660			

GAUGE PRESSURE RANGES [3]

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

[2]The 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.

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