SGP Datasheet

SPECIALITY GAS POINT OF USE GAS MANIFOLD

Gas | Liquid | Diaphragm | Piston | Self-Venting | Non-Venting | Max Inlet: 50 bar (725 psi) | Max Outlet: 14 bar (203 psi) | Cv 0.1

INTRODUCING THE SGP...

The SGP is a point of use gas manifold, mounted onto a stainless steel panel (as standard), for inert, reactive, flammable, corrosive, and oxidising gases and gas mixtures, with a maximum purity of 6.0.

They are designed to accurately reduce the incoming gas supply from a maximum of 50 bar (725 psi) inlet pressure to a safe and usable level at the point-of-use.

Typical applications include gas supply to analytical instruments and engine emission testing for automotive industries.

The SGP consists of a pressure regulator, and an optional upstream shut-off valve, outlet gauge, and relief valve.

STANDARD MATERIALS OF CONSTRUCTION

PART	MATERIALS
Body and Bonnet	ASTM A479 316/316L Stainless Steel (UNS S31600/S31603)
	Chrome Plated Brass CW614N (UNS C38500)
Main Valve Pin	Hastelloy C276® (UNS N10276)
Soft Seat	PCTFE (Kel-F)
Valve Spring	Inconel® X750 (UNS N07750)
Diaphragm	Hastelloy C22® (UNS N06022)
Handwheel	Anodised Aluminium
O-Rings	FKM/FPM (Viton)
Loading Spring	Spring Steel Grade 80 BS 1449
Filter	100 Microns

Note: Pressure regulator rating may be limited by connection type, Cv and/or seat material. Contact the office for specific pressure or temperature requirements.

SPECIFICATIONS

Max. Inlet	50 bar (725 psi)
Max. Outlet	Up to 14 bar (203 psi)
Cv	0.1
Design Proof Pressure	150% max. working pressure
Seat Leakage	< 1×10 E-6 mbar L/s (Helium)
External Leakage	< 1×10 E-9 mbar L/s (Helium)
Purity	≥ 6.0
Min/Max Temperatures	-25°C to +70°C (-13°F to 158°F)
Weights	Up to 2.4kg (5.3lbs)
Dimensions	See page 2

Note: Unless otherwise requested, the relief valve's set pressure will be 120% of the regulator's nominal outlet set pressure.

FEATURES AND BENEFITS

1 FOR HIGH PURITY GAS ≥6.0

Ensures the materials, design, and internal surface finish do not contaminate high purity gases.

2 ERGONOMIC DESIGN

Handwheel and body shape makes it easier for technicians to adjust pressures.

3 OPTIONAL OUTLET PRESSURE RELIEF VALVE

Automatically vents gas if downstream pressure rises above required levels.

4 LOW-PROFILE DESIGN

Compact dimensions are perfect when space is limited.

PRESSURE TECH LTD
Unit 24, Graphite Way, Hadfield, Glossop, Derbyshire, UK, SK13 1QH
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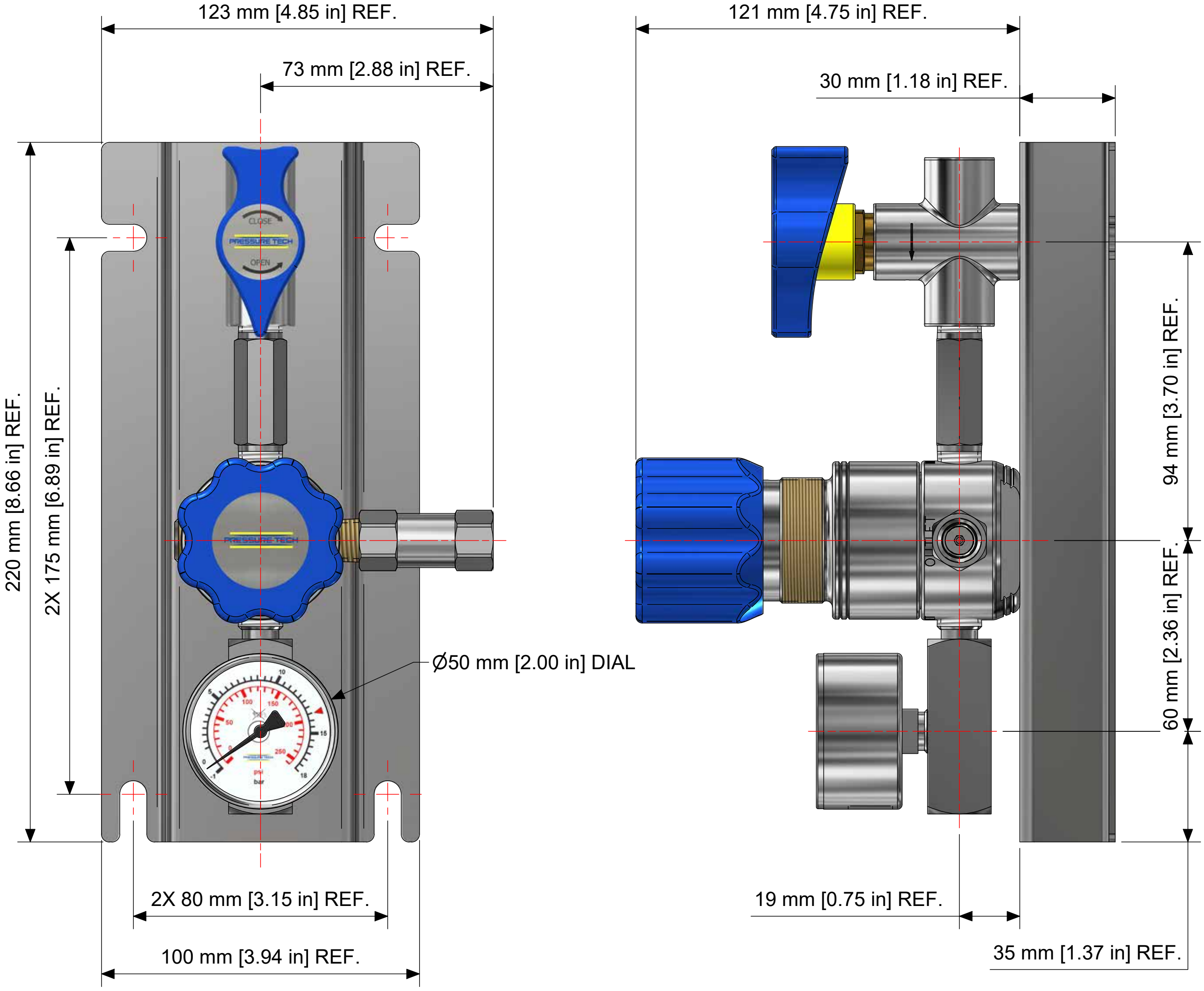
CLEANLINESS STANDARDS & SURFACE FINISH

All components are precision-cleaned to meet stringent cleanliness levels of 1mg/m², in accordance with ASTM G93/G93M, ASTM F331-13, and ISO 15001:2011. Brass products are electroplated as standard to enhance durability and corrosion resistance.

DRAWINGS AND INSTALLATION DIMENSIONS

Mounted on stainless-steel panel:



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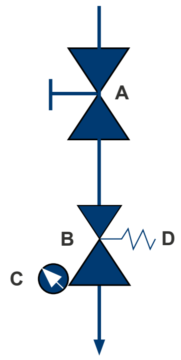
P&ID

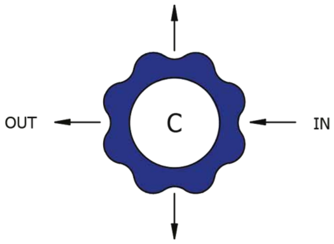


A: Upstream shut-off valve
B: Pressure regulator
C: Outlet pressure gauge
D: Relief valve

FLOW CURVE

The flow charts for line pressure regulators have been generated in accordance with ISO 2503 which requires the upstream pressure to be approximately twice that of the downstream pressure.

PORTING CONFIGURATIONS



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PRESSURE TECH

◉ Gas ○ Liquid	◉ Diaphragm ○ Piston	○ Self-Venting ◉ Non-Venting	Max Inlet: 50 bar (725 psi)	Max Outlet: 14 bar (203 psi)	Cv 0.1

ORDERING INFORMATION

To build a Pressure Tech part number, simply combine the characters identified below in sequence:

				IN	OUT	PGRSM
SGP50S	1	S	10	02N	02N	CGRSM

INLET PRESSURE/STAGES

SGP50S – Up to 50 bar (725 psi) - Single-stage

CV

1 – 0.1

MATERIAL

C – Chrome Plated Brass
S – ASTM A479 316/316L Stainless Steel

OUTLET PRESSURE

01 – Up to 1 bar (14.5 psi)
02 – Up to 2 bar (29 psi)
03 – Up to 3 bar (45 psi)
04 – Up to 4 bar (58 psi)
06 – Up to 6 bar (87 psi)
10 – Up to 10 bar (145 psi)
14 – Up to 14 bar (203 psi)

INLET/OUTLET PORT*

01T – 1/8” Tube
01U – 1/8” Compression
06M – 6mm Tube
06L – 6mm Compression
02N – 1/4” NPT
02T – 1/4” Tube
02U – 1/4” Compression
08M – 8mm Tube
08L – 8mm Compression
03T – 3/8” Tube
03U – 3/8” Compression

MOUNTING (M)

S – Standalone
M – Mounted

INLET SHUT-OFF VALVE (S)

N – No Shut-Off Valve
S – Shut-Off Valve

RELIEF VALVE (R)

N – No Relief Valve
R – Relief Valve

GAUGE OPTIONS (G)

N – No Gauges
G – Standard Gauges
Y – Pressure Transducer

PORT CONFIGURATION (P)

C – C

* Other options available

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