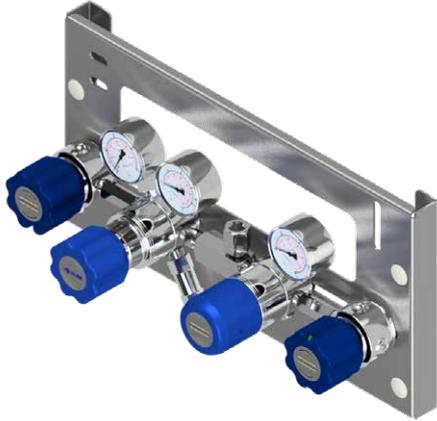


SGA Datasheet

SPECIALITY GAS AUTOMATIC CHANGEOVER MANIFOLD



Gas
 Liquid
 Diaphragm
 Piston
 Self-Venting
 Non-Venting
 Max Inlet: 300 bar (4,350 psi)
 Max Outlet: 50 bar (725 psi)
 Cv 0.1



INTRODUCING THE SGA...

The SGA is an automatic changeover manifold, mounted onto a stainless steel panel, for speciality gases with a maximum purity of 6.0. They are designed to reduce the incoming gas supply from two separate cylinders from a maximum of 300 bar (4,350 psi) inlet pressure to a safe and usable level.

The upstream shut-off valve allows for an uninterrupted flow of gas as one cylinder is completely depleted, automatically switching over to the adjacent full cylinder. Once the empty cylinder is replaced the lever should be rotated towards the active cylinder.

These panels are found in gas cylinder storage rooms, or close to point-of-use. Typical applications include gas supply to analytical instruments and engine emission testing for automotive industries.

The SGA consists of pressure regulators, and an upstream shut-off valve, plus an optional purge valve, inlet and outlet gauges, and relief valve. The inlet connection is 1/4" female NPT.

FEATURES AND BENEFITS

1 FOR HIGH PURITY GAS ≥ 6.0

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

2 UNINTERRUPTED GAS SUPPLY

Automatically switches to the adjacent full cylinder.

3 VISUAL SUPPLY INDICATOR

Lever indicates which gas cylinder is currently active.

4 SECOND-STAGE LETDOWN OPTION

Minimises fluctuations in outlet pressure as cylinder pressure drops.

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 (KeI-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	300 bar (4,350 psi)
Max. Outlet	Single-Stage: Up to 50 bar (725 psi) Two-Stage: 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	Single-Stage / Chrome-Plated Brass: 6.4kg (14.1lbs) Two-Stage / Chrome-Plated Brass: 7.6kg (16.76lbs)
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.

Product availability and specifications contained herein are subject to change without notice. Consult local distributor or factory for potential revisions and/or service related issues. Pressure Tech Ltd support with product selection recommendations only - it is the users responsibility to ensure the product is suitable for their specific application requirements.



PRESSURE TECH LTD

Unit 24, Graphite Way, Hadfield, Glossop, Derbyshire, UK, SK13 1QH

+44 (0)1457 899 307 | sales@pressure-tech.com | www.pressure-tech.com

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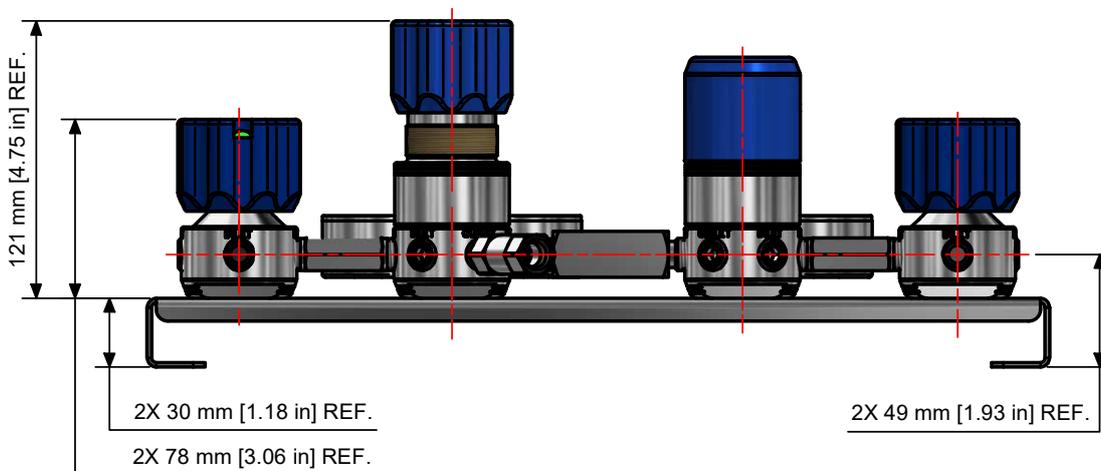
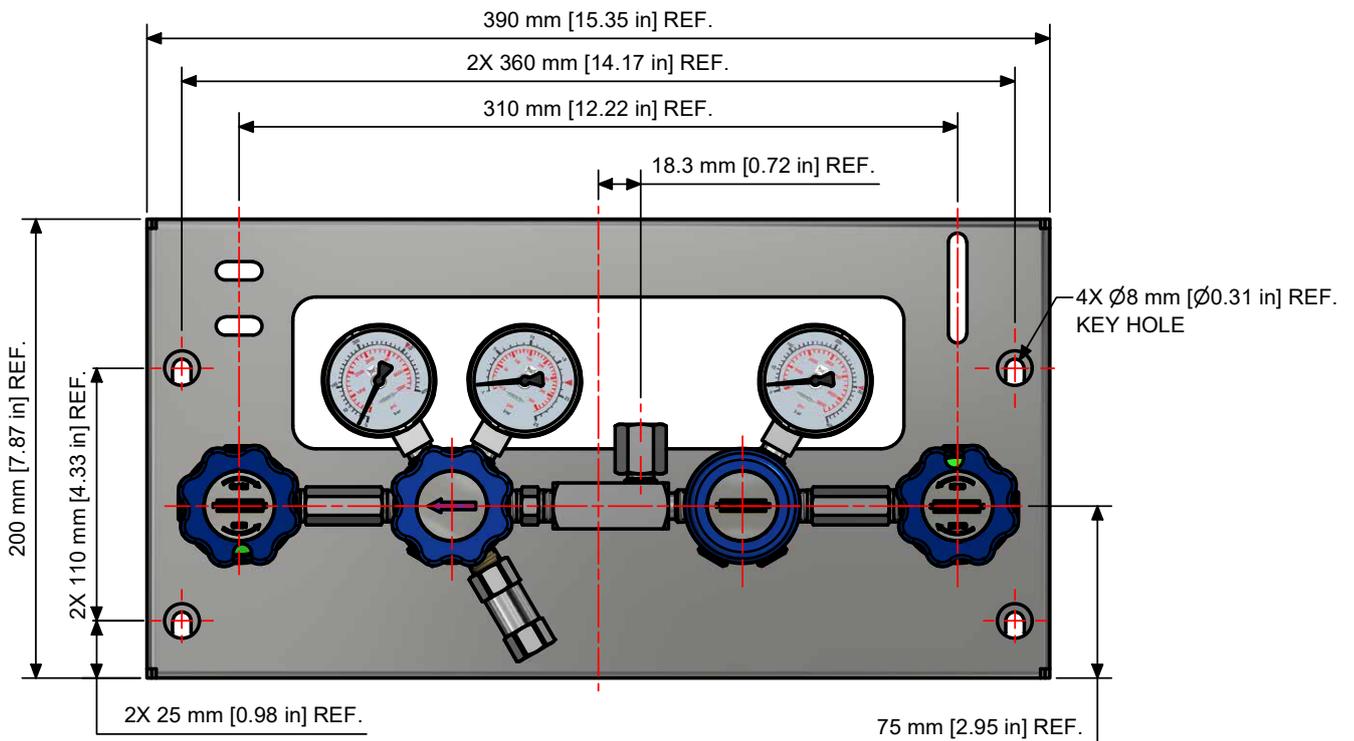
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CLEANLINESS STANDARDS & SURFACE FINISH

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

Dimensions shown for standard configurations only – please contact the office for other options.



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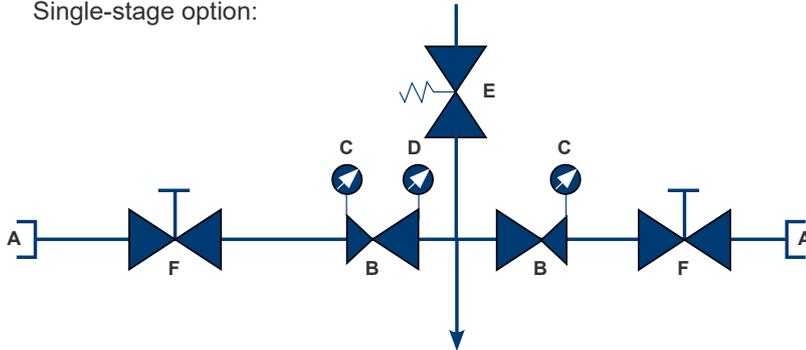
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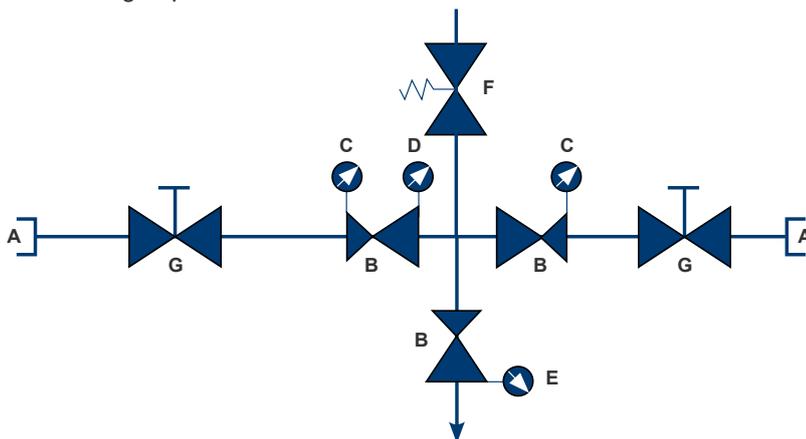
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Single-stage option:



- A:** Inlet connection
- B:** Pressure regulator
- C:** Inlet pressure gauge
- D:** Outlet pressure gauge
- E:** Relief valve
- F:** Upstream shut-off valve

Two-stage option:



- A:** Inlet connection
- B:** Pressure regulator
- C:** Inlet pressure gauge
- D:** Intermediate pressure gauge
- E:** Outlet pressure gauge
- F:** Relief valve
- G:** Upstream shut-off 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.

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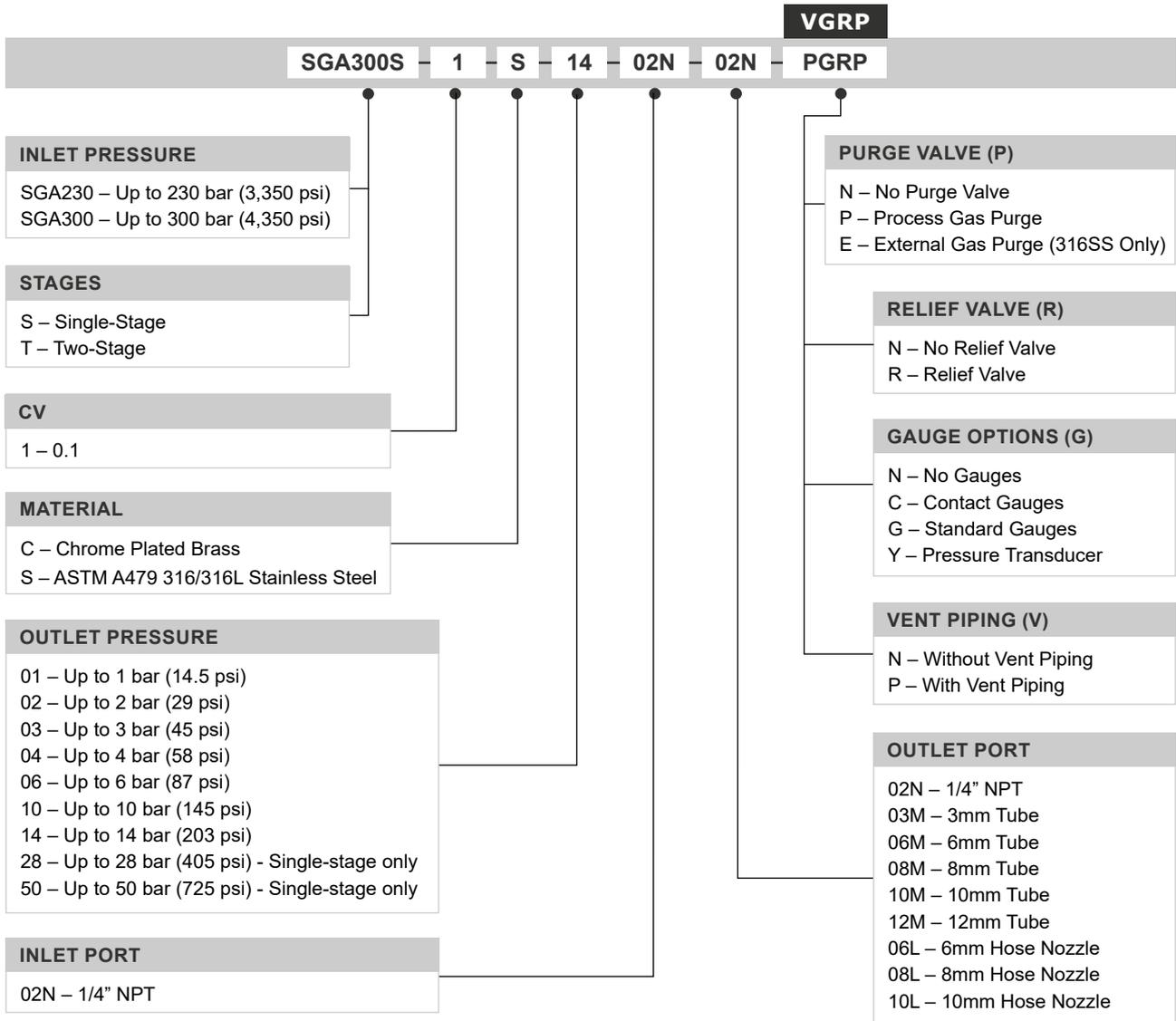
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ORDERING INFORMATION

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



TRADEMARKS: Inconel® is a registered trademark of Inco Alloys International
Hastelloy® is a registered trademark of Haynes International, Inc

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