583 Series AutoSwitch 2

The 583 Series AutoSwitch 2 with stainless steel internals is an electronic gas delivery system for high purity gas service, typically in the laboratory or process plant. It automatically changes cylinder or bank priority from the primary source to a reserve supply without causing pressure fluctuations to the use line. The system comes with inlet pressure transducers to help monitor gas supply pressure. Unlike most fully automatic switchovers, every valve in the AutoSwitch 2 has metal-to-metal seals suitable for continuous high purity gas delivery without compromising purity integrity. The 583 AutoSwitch 2 is intended for high pressure supply sources only. For cryogenic liquid supply systems, CONCOA recommends the IntelliSwitch family of products.



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Typical Applications

- High Purity Non-toxic, Non-flammable Gas from High Pressure Supply Sources
- Gas chromatography and Mass Spec Carrier and Support Gases
- Central Gas Supply System for Laboratory, Research, or Process Plants
- Biotech, Pharmaceutical, and Forensic Gas Systems
- Modified Atmosphere Packaging (MAP)

Features

Metal-to-Metal Seals prevent possibility of gas contamination

Integral Line Regulator provides stable line pressure during changeover

Variable Line Pressure allows pressure change on site

Microprocessor Control permits fully automatic priority assignment

400 Series Stainless Steel Components with CAPSULE® Seat Technology feature 360° filtration

Primary-Reserve Failure Mode ensures continuous efficient gas supply during power loss

Three 4-20 mA Analog Outputs echo the pressure to optional remote alarm/monitoring system

Leak Detection Capability eliminates waste and improves safety when engaged

Integral Pressure Monitors activate digital relays when inlet or outlet pressures cross user-set limits

Optional Altos 2 Remote Alarm prevents downtime or process interruption

Materials and Specifications

Maximum Inlet Pressure: 3000 PSIG (210 BAR)

Temperature Range: 0°F to 100°F (-18°C to 40°C)

Maximum Flow at 100 PSIG (7 BAR): 600 SCFH (283 LPM)

Inlet Connection: 1/2" FNPT

Outlet Connection: 1/2" FNPT

Priority Valve Body: 316L stainless steel barstock

Line Regulator Body: 316L stainless steel barstock

Helium Leak Integrity: 1 x 10^{-8} scc/sec

Diaphragms: 316L stainless steel

Enclosure: Polycarbonate (NEMA 12)

Tubing and Fittings: 316L stainless steel

Internal Seals: PTFE

Seats: PTFE (line regulator); PCTFE (priority regulator)

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CONCOA PRECISION GAS CONTROLS

Materials and Specifications

Transducers: Two 0-6000 PSIG (inlets); One 0-1000 PSIG (outlet)

Power Input: 24VDC 800 mA (high voltage transformer not included)

Outputs: Dry contact relay outputs (four); Normally open/normally closed; Contact rating 0.5A 24V
4-20 mA analog outputs (three)

Weight: 30 lbs. (14 kg)

Conformances: Cleanliness meets or exceeds CGA G-4.1; CRN OH5216.5; CRN: OH17950.5

Ordering Information

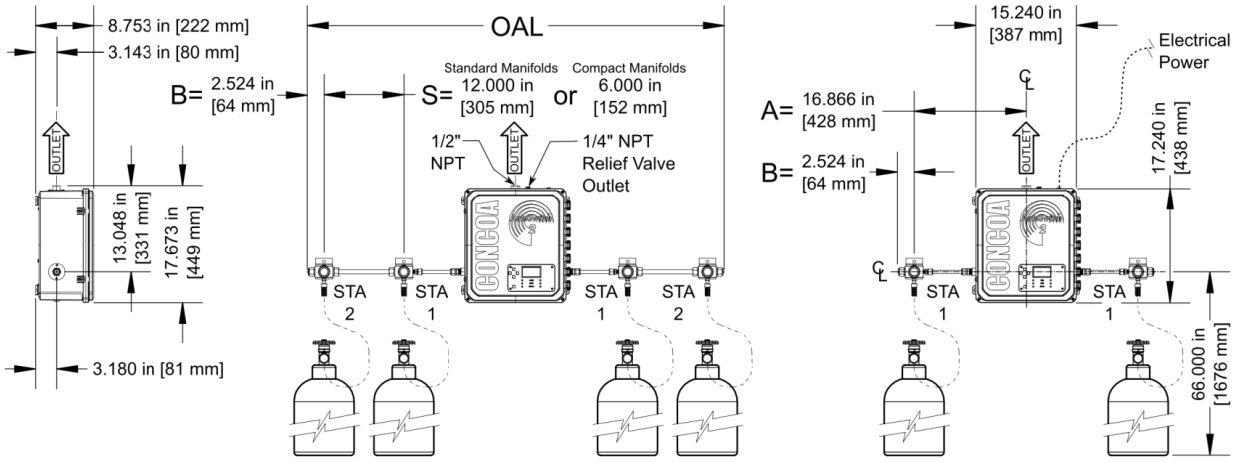
Series	A	B	C	D	-CON	Options
583	Outlet Pressure	Inlet Connection	Cylinders/Side	Alarm	Hose	Installed Options
	1: 0-100 PSIG (0-7 BAR)	**0:** 1/2" FNPT	**0:** No inlet connection	**1:** No alarm included	**-001:** 1/2" FNPT Port	**None**
	2: 0-200 PSIG (0-14 BAR)	**1:** 316L Stainless steel manifolds with one 24" (610 mm) stainless steel flexible hose at each station	**1:** One cylinder	**A:** Altos 2 Alarm included	*Please specify inlet connection (if applicable).*	**C:** Compact manifold connector and 6" extensions
	3: 0-350 PSIG (0-24 BAR)	**2:** 316L Stainless steel manifolds with one 36" (914 mm) stainless steel flexible hose at each station	**2:** Two cylinders		*CGA DIN 477 BS 341 and others available.*	
		5: 316L Stainless steel diaphragm valves with one or two 36" (914 mm) stainless steel flexible hoses per side only	**3:** Three cylinders			
		6: 316L Stainless steel diaphragm valves with one or two 72" (1829 mm) stainless steel flexible hoses per side only	**4:** Four cylinders			
		7: 316L Stainless steel double row manifold with two 24" (610 mm) stainless steel hoses at each station	**5:** Five cylinders			
		8: 316L Stainless steel double row manifold with two 36" (914 mm) stainless steel hoses at each station	**6:** Six cylinders			
			7: Seven cylinders			
			8: Eight cylinders			

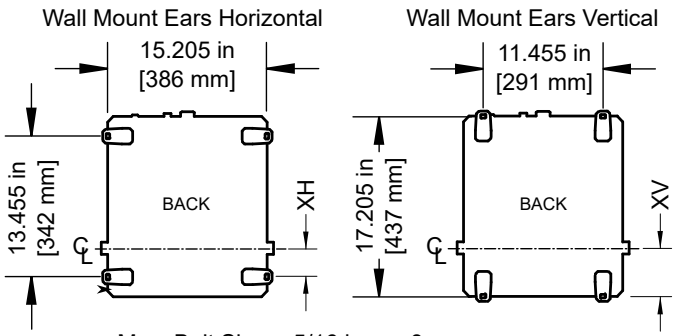
Related Options

Part No.	Description
835 5703	Power supply for 583 Series AutoSwitch 2 (100-240VAC to 24VDC 800mA)

583 Series AutoSwitch 2

Installation Dimensions





Max. Bolt Size: ø5/16 in or ø8 mm

XH = 2.732 in [69 mm] XV = 4.607 in [117 mm]

A = Distance from CL Outlet to CL Station 1
B = Distance from CL Last Station to End Cap
S = Distance Between Stations
OAL = System Overall Length

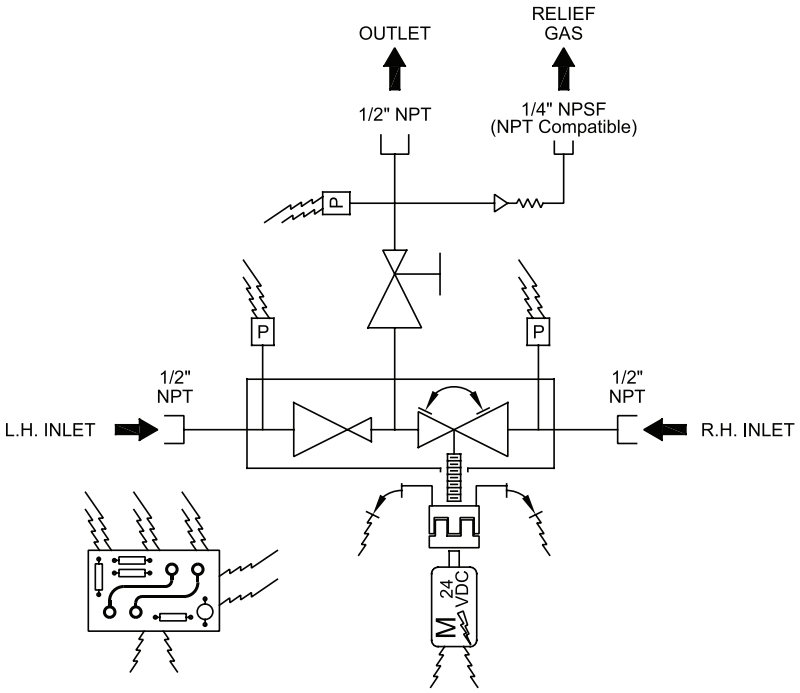
OAL = (A + B + [S x {number of stations minus 1}]) x 2

Example 1 4 Stations Per Side, Standard Manifolds:
OAL = (16.866 + 2.524 + [12.000 x 3]) x 2 = 110.78 in [2814 mm]

Example 2 9 Stations Per Side, Compact Manifolds:
OAL = (16.866 + 2.524 + [6.000 x 8]) x 2 = 134.78 in [3423 mm]

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Piping and Installation Diagram



LEGEND

- Electronic Circuit Board
- Pressure Transducer
- Pressure Reducing Valve, Adjusting Screw Operated
- Pressure Reducing Valve, Preset
- Pressure Reducing Valve, Hand Operated
- Electric Motor, 24 VDC
- Mechanical Coupling
- Limit Switch, Low Pressure
- Limit Switch, High Pressure
- Relief Valve
- NPT Port