

# 583 SERIES AutoSwitch 2



The 583 Series AutoSwitch 2 is an electronic gas delivery system for high purity gas service, typically in the laboratory or process plant, that automatically changes cylinder or bank priority from the primary source to a reserve supply without transmitting 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.



## 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

**Altos 2 Remote Alarm (optional)** prevents downtime or process interruption

## Materials and Specifications

**Priority Valve Body:** 316L stainless steel barstock

**Line Regulator Body:** 316L stainless steel barstock

**Diaphragms:** 316L stainless steel

**Enclosure:** Polycarbonate (NEMA 12)

**Tubing and Fittings:** 316L stainless steel

**Internal Seals:** PTFE

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

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

**Maximum Inlet Pressure:** 3000 PSIG (210 BAR)

**Temperature Range:** 60°F to 90°F (16°C to 32°C)

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

**Inlet Connection:** 1/2" FNPT

**Outlet Connection:** 1/2" FNPT

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## Materials and Specifications

**Helium Leak Integrity:** 1 x 10<sup>-8</sup> scc/sec

**Power Input:** 24VDC 800mA (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

583	A	B	C	D	-CON	Options
Series 583	Outlet Pressure	Inlet Connection	Cylinders/Side	Alarm	Hose	Installed Options
	<b>1:</b> 0-100 PSIG (0-7 BAR)	<b>0:</b> 1/2" FPT	<b>0:</b> No inlet connection	<b>1:</b> No alarm included	<b>-001:</b> 1/2" FNPT Port	<b>None</b>
	<b>2:</b> 0-200 PSIG (0-14 BAR)	<b>1:</b> 316L Stainless steel manifolds with one 24" (600 mm) stainless steel flexible hose at each station	<b>1:</b> One cylinder	<b>A:</b> Altos 2 alarm included	Please specify inlet connection (if applicable)	<b>C:</b> Compact manifold connector and 6-inch extensions
	<b>3:</b> 0-350 PSIG (0-24 BAR)	<b>2:</b> 316L Stainless steel manifolds with one 36" (900 mm) stainless steel flexible hose at each station	<b>2:</b> Two cylinders		CGA DIN 477 BS 341 and others available	
		<b>5:</b> 316L Stainless steel diaphragm valves with one or two 36" (900 mm) stainless steel flexible hoses per side only	<b>3:</b> Three cylinders			
		<b>6:</b> 316L Stainless steel diaphragm valves with one or two 72" (1800 mm) stainless steel flexible hoses per side only	<b>4:</b> Four cylinders			
		<b>7:</b> 316L Stainless steel double row manifold with two 24" (600 mm) stainless steel hoses at each station	<b>5:</b> Five cylinders			
		<b>8:</b> 316L Stainless steel double row manifold with two 36" (900 mm) stainless steel hoses at each station	<b>6:</b> Six cylinders			
			<b>7:</b> Seven cylinders			
			<b>8:</b> Eight cylinders			

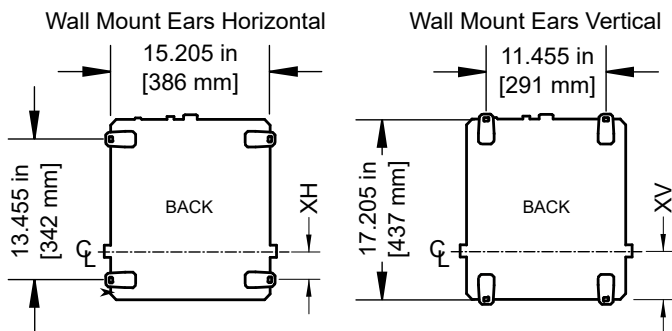
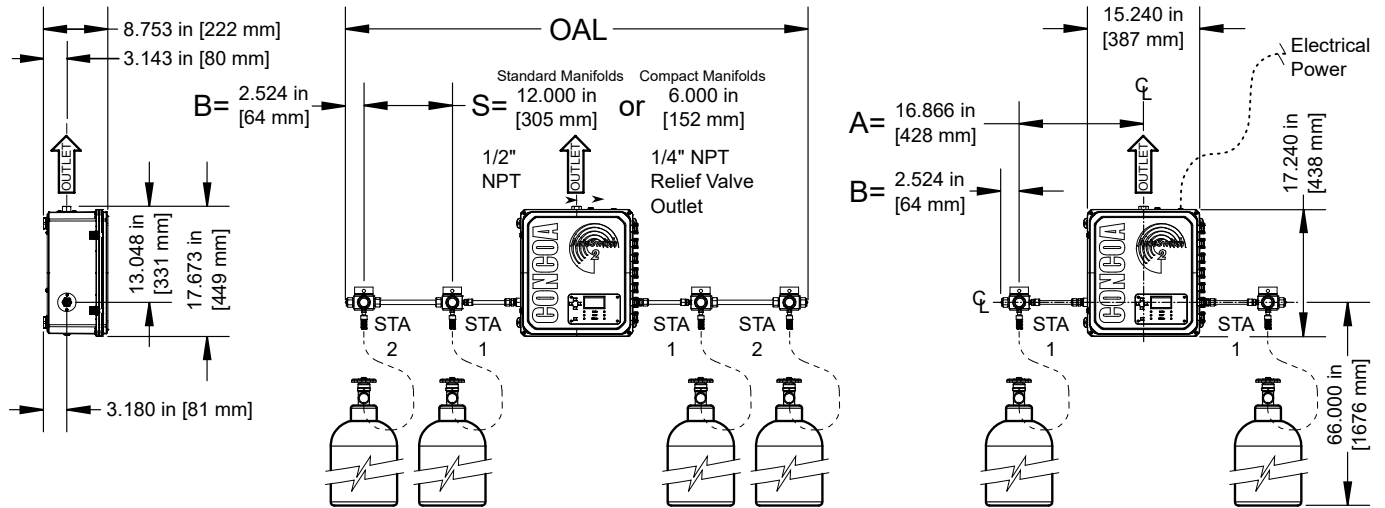
## Related Options

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

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## Installation Dimensions



Max. Bolt Size:  $\varnothing 5/16$  in or  $\varnothing 8$  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

$$OAL = (A + B + [S \times \{\text{number of stations minus 1}\}]) \times 2$$

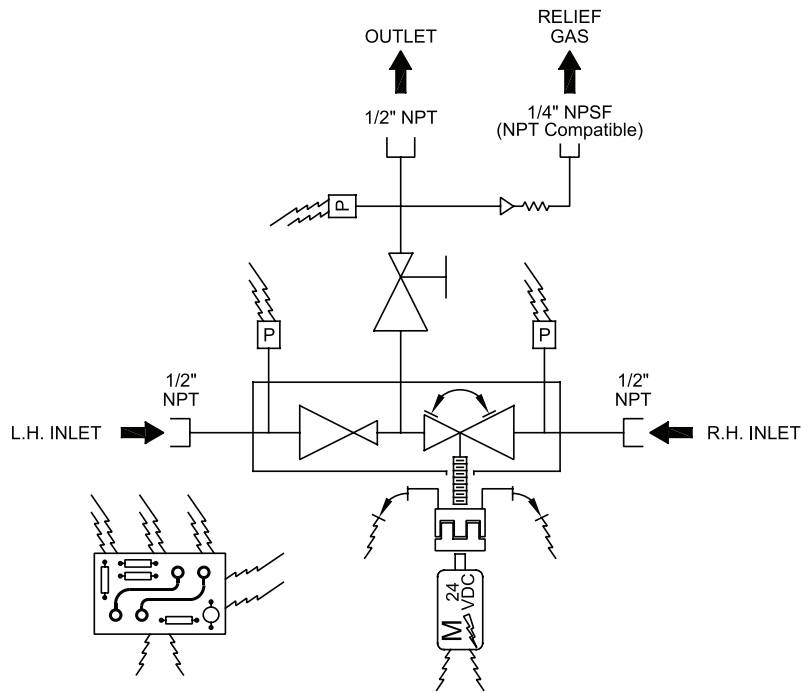
**Example 1** 4 Stations Per Side, Standard Manifolds:  
 $OAL = (16.866 + 2.524 + [12.000 \times 3]) \times 2 = 110.78$  in [2814 mm]

**Example 2** 9 Stations Per Side, Compact Manifolds:  
 $OAL = (16.866 + 2.524 + [6.000 \times 8]) \times 2 = 134.78$  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