

# ChangeOver System

## Continuous Gas Management

aerospace  
climate control  
electromechanical  
filtration  
fluid & gas handling  
hydraulics  
pneumatics  
process control  
sealing & shielding

### Customer Value Proposition:

The ChangeOver System is a compact turnkey module that assists the operator with their total gas management. The COSE maintains a continuous gas delivery from two separate sources allowing for maximum cylinder gas usage from one source before automatically switching to the second source. The COSE lowers speciality gas costs by maximizing the consumption of gas from each cylinder. In addition, the gas cylinder bank(s) can be monitored remotely utilizing the optional pressure switches reducing the need for visual inspection by the operator.



### Contact Information:

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### Product Features:

- Fully enclosed to protect internal components
- Removable side panels for field maintenance
- Allows change out of depleted cylinder(s) while maintaining gas flow
- Especially suited for continuous on-stream analyzers
- Alarm sensor port for systems integration allowing user to monitor gas consumption
- Cleaned for Oxygen service
- Regulator design integrates positive upward and downward stops which increases cycle life by preventing over stroking of the diaphragm

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# Specifications

Materials of Construction		Operating Conditions	
<b>Regulator Wetted</b>		Maximum Inlet Pressure	3,000 psig (207 barg)
Body	316L Stainless Steel, Nickel Plated Brass	Outlet Pressure	up to 250 psig (17 barg) max
Diaphragm	Hastelloy C-22®	Temperature:	-40°F to 150°F (-40°C to 66°C)
Poppet	Hastelloy C-22®, Phosphor Bronze	<b>Functional Performance</b>	
Poppet Spring	316L Stainless Steel	<b>Design</b>	
Seat	PCTFE	Burst Pressure	9,000 psig (620 barg)
Retainer	Inconel®	Proof Pressure	4,500 psig (310 barg)
Carrier	316L Stainless Steel	Flow Capacity	$C_v = 0.06$ <i>SEMI Flow Coefficient Test #F32-0998</i>
Back Up Washer	316L Stainless Steel, Phosphor Bronze	Supply Pressure Effect	0.4 psig/100psig (.03/7 barg) <i>without Outlet Regulator option</i>
Back Up O-Ring	Fluorocarbon	<b>Leakage</b>	
Tubing	316L Stainless Steel, Brass	External seal	Bubble Tight
Fittings	316L Stainless Steel, Brass	Internal seal	Bubble Tight
<b>Regulator Non-Wetted</b>		<b>Standard Configuration</b>	
Nut	316 Stainless Steel		1/4" NPT Female
Cap	Nickel Plated Brass	<b>Approx. Weight</b>	
Knob (Black)	ABS Plastic		21 lbs. (9.5 kg)
<b>Valve Wetted</b>			
Body	316L Stainless Steel, Nickel Plated Brass		
Diaphragm	Elgiloy® or equivalent		
Seat	PCTFE		
<b>Valve Non-Wetted</b>			
Nut	316 Stainless Steel		
Knob (Black)	ABS Plastic		

## Applications

### Specialty Gases

All Specialty Gases used for Process and Purging Applications

### Industrial/Analyzer

- Refineries
- Test Cells
- Emission Analysis
- Laboratories
- Laser Gas Systems
- Research and Development
- Gas and Liquid Chromatography
- High Volume Gas Manufacturing Facilities

## ChangeOver System Flow Rates (Based on 400 psig Cylinder Change)

COS Model	Maximum Recommended Flow
COS 200	70 slpm N <sub>2</sub>
COS 250	70 slpm N <sub>2</sub>
COS 150	70 slpm N <sub>2</sub>
COS 100	100 slpm N <sub>2</sub>
COS XXX OR*	70 slpm N <sub>2</sub>

\* ChangeOver System with optional outlet regulators

### OFFER OF SALE:

The items described in this document are hereby offered for sale by Parker-Hannifin Corporation, its subsidiaries or its authorized distributors. This offer and its acceptance are governed by the provisions stated in the detailed "Offer of Sale" elsewhere in this document or available at [www.parker.com/veriflo](http://www.parker.com/veriflo)



**WARNING USER RESPONSIBILITY**

FAILURE OR IMPROPER SELECTION OR IMPROPER USE OF THE PRODUCTS DESCRIBED HEREIN OR RELATED ITEMS CAN CAUSE DEATH, PERSONAL INJURY AND PROPERTY DAMAGE.

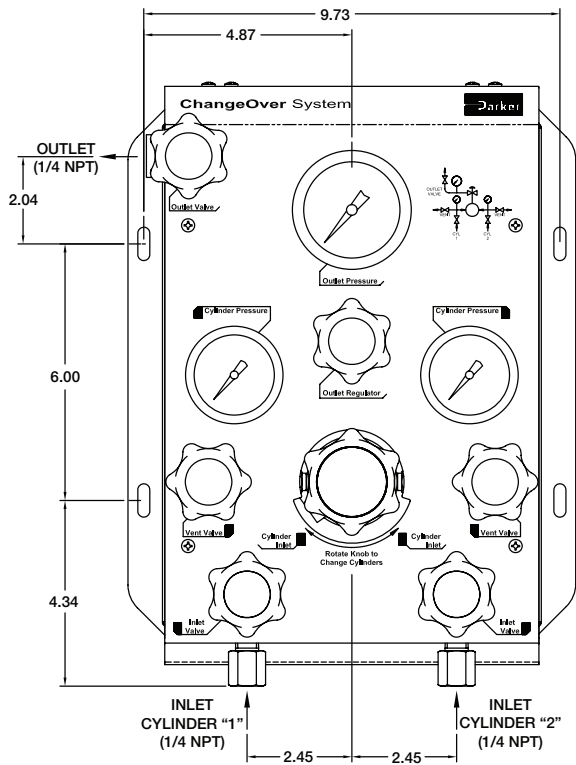
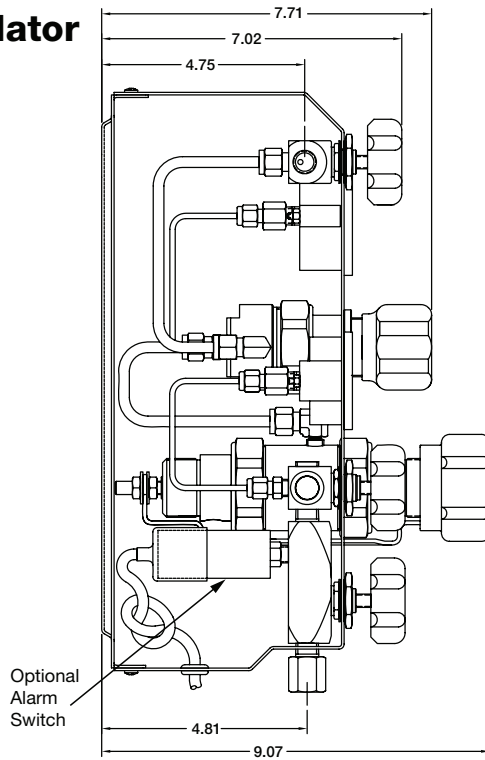
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The user, through its own analysis and testing, is solely responsible for making the final selection of the system and components and assuring that all performance, endurance, maintenance, safety and warning requirements of the application are met. The user must analyze all aspects of the application, follow applicable industry standards, and follow the information concerning the product in the current product catalog and in any other materials provided from Parker or its subsidiaries or authorized distributors.

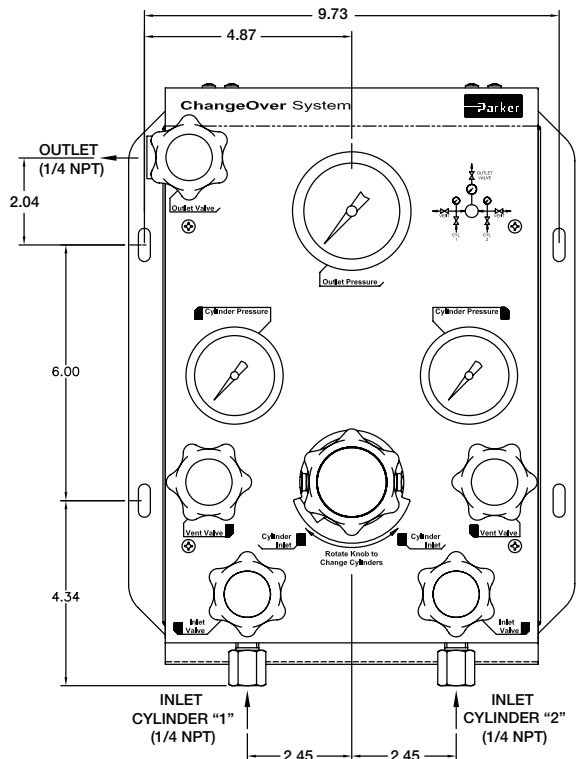
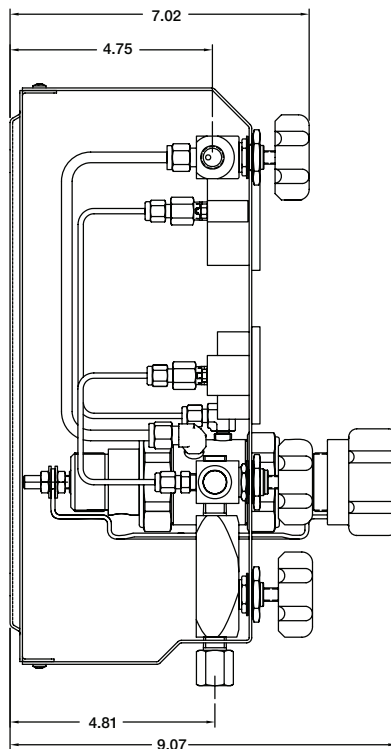
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# Dimensional Drawings

## With Outlet Regulator

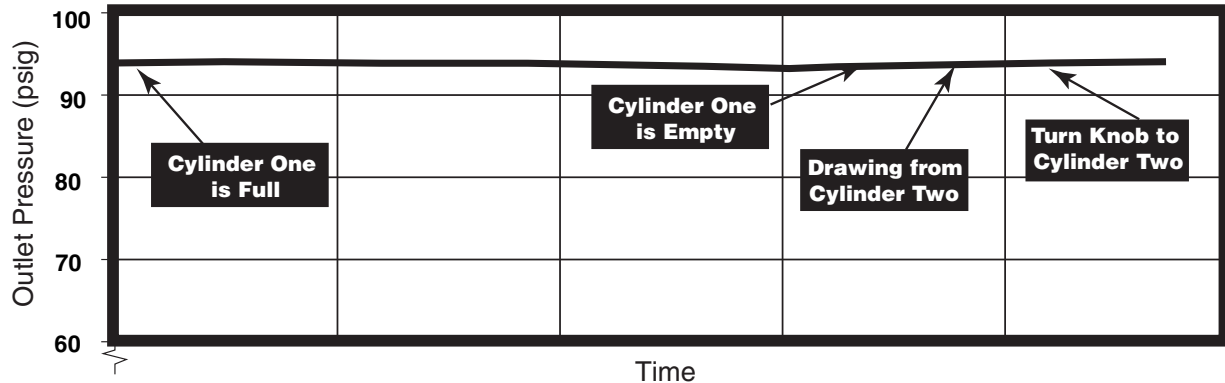


## Without Outlet Regulator

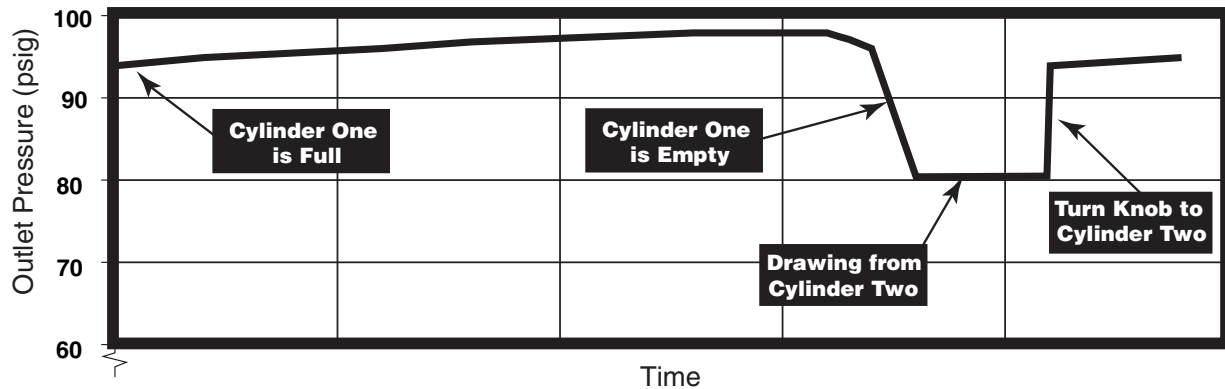


# Pressure Drop

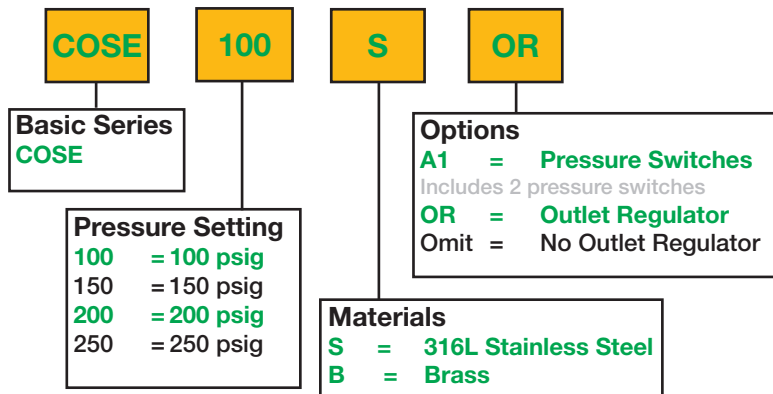
**Change Over System With Outlet Regulator**



**Change Over System**



## Ordering Information



**Notes:**

ESP COSE's include outlet regulator as standard  
Configurations without outlet regulator are available at standard lead times.  
Inlet valves and gauges are standard on all units.

The Express Service Program is the next generation of customer service to provide customers with an array of standard products in a 5 day delivery window. The ESP program offers a standard lead time of 5 working days from receipt of order to the ship date. Using the Ordering Information shown, you can identify the product configurations offered in the program by the **Green Print**. If the configuration you select is in black print, the product will be ready to ship in the standard lead time. Please contact your local Parker Hannifin Distributor or the factory for any questions regarding the scope of the Express Service Program.

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Print Reorder Number  
COSE\_02/08

Date of Issue  
02/13/08



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