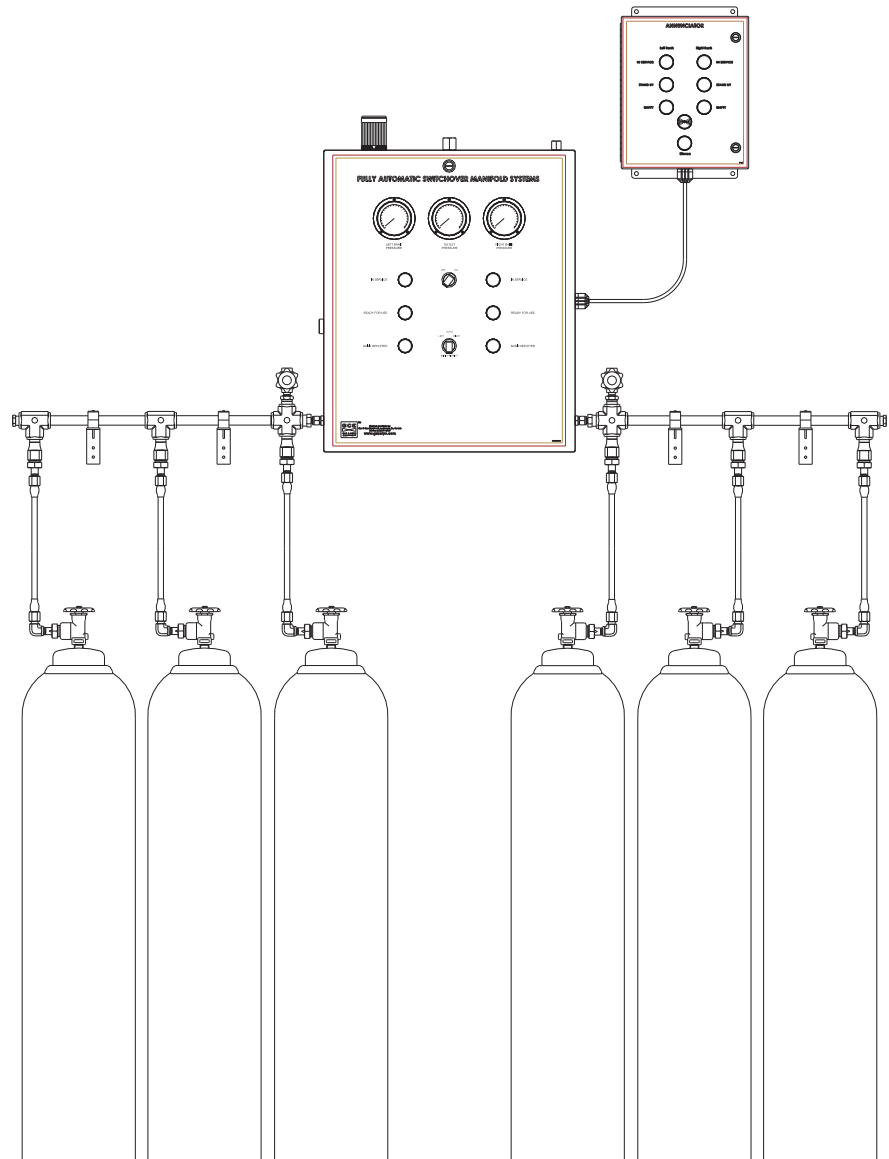
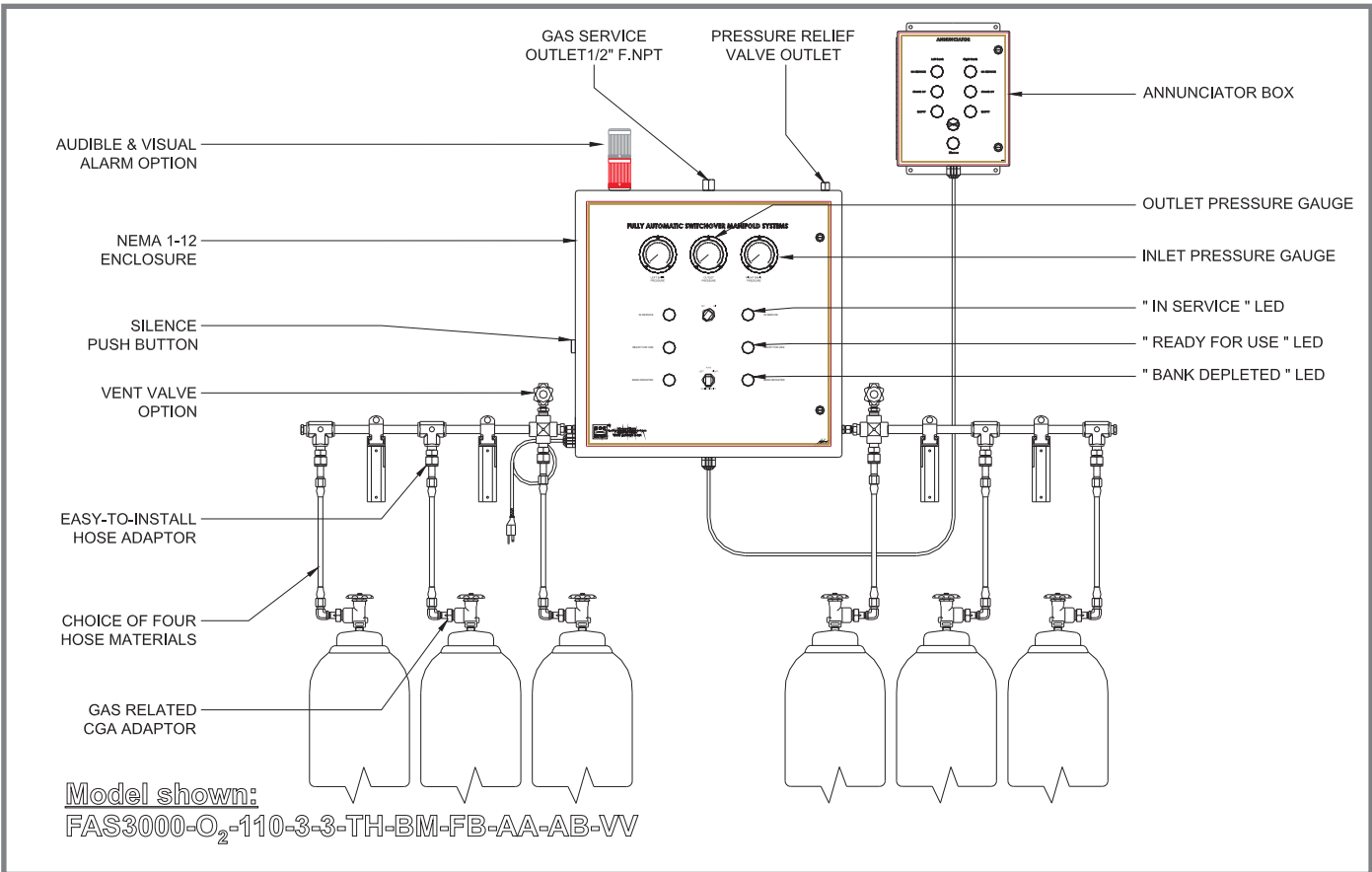




# EQUIPMENT CATALOG

*Fully Automatic Switchover Manifolds  
Gaseous Withdrawal*





**DESCRIPTION**

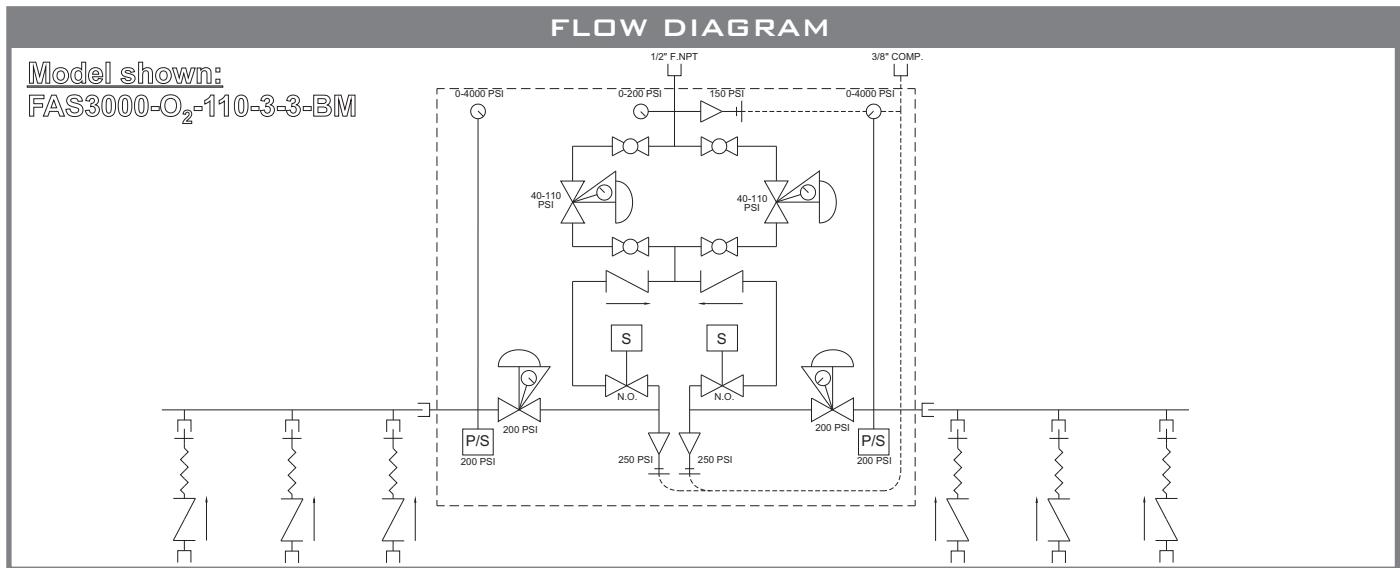
The GCE FAS Series fully automatic switchover manifolds accommodate multiple portable liquid cylinders or high pressure cylinders divided into two banks. The FAS series manifolds provide uninterrupted and continuous gas flow. The system consists of a control box and one cylinder bank per side. The manifold is cleaned and tested for the indicated gas service and built to meet NFPA 99, CSA B51, ASME B31.1, CSA Z351 and CGA requirements.

**STANDARD FEATURES**

- Programmable Logic Controller (PLC) monitors all functions and controls the switchover process
- 22 mm LEDs indicate the status of each bank: "IN SERVICE", "READY FOR USE" or "BANK DEPLETED"
- Fully automatic switchover assuring uninterrupted gas flow - no knobs or handle to reset
- Mechanical gauges display pressure in psig and Bar.
- Optional remote audio/visual alarm and floorstand
- Optional special header configurations available

**HOW TO ORDER - PART NUMBER MATRIX**

<b>FAS</b>							
<b>Basic series</b>	<b>Service Gas</b>	<b>Outlet Pressure</b>	<b>Left Bank</b>	<b>Right Bank</b>	<b>Flexible Hoses</b>	<b>Application</b>	<b>Options</b>
<input type="checkbox"/> FAS350 = 350 psig Per bank	<input type="checkbox"/> Argon = Ar	Standard Ranges (in psig)	No. of Cylinders (maximum 6 per side)		<input type="checkbox"/> Thermoplastic = NH (Nylon) Steel Fittings	<input type="checkbox"/> Bio Medical = BM Normally open	<input type="checkbox"/> Floor Stand = FS
<input type="checkbox"/> FAS3000 = 3000 psig Per bank	<input type="checkbox"/> Nitrogen = N <sub>2</sub>	<input type="checkbox"/> 0-110 = 110			<input type="checkbox"/> Thermoplastic = XH (Nylon) Steel Fittings	<input type="checkbox"/> Industrial = I Normally close	<input type="checkbox"/> Flashing = FB Beacon
<input type="checkbox"/> FAS3350 = 350 psig Left side, 3000 psig right side	<input type="checkbox"/> Oxygen = O <sub>2</sub>	<input type="checkbox"/> 0-200 = 200			<input type="checkbox"/> Teflon Core, = TH Brass Fittings, S/Steel Braid	<input type="checkbox"/> High Purity = HP Normally close	<input type="checkbox"/> Audible = AA alarm
<input type="checkbox"/> FAS5000 = 5000 psig Per bank	<input type="checkbox"/> Carbon Dioxide = CO <sub>2</sub>	Other: Please Specify			<input type="checkbox"/> All Stainless = SH Steel		<input type="checkbox"/> Annunciator = AB box
	<input type="checkbox"/> Nitrous Oxide = N <sub>2</sub> O						<input type="checkbox"/> Jonction box = JB
	<input type="checkbox"/> Air = Air						<input type="checkbox"/> Header valve = HV
							<input type="checkbox"/> Vent valve = VV



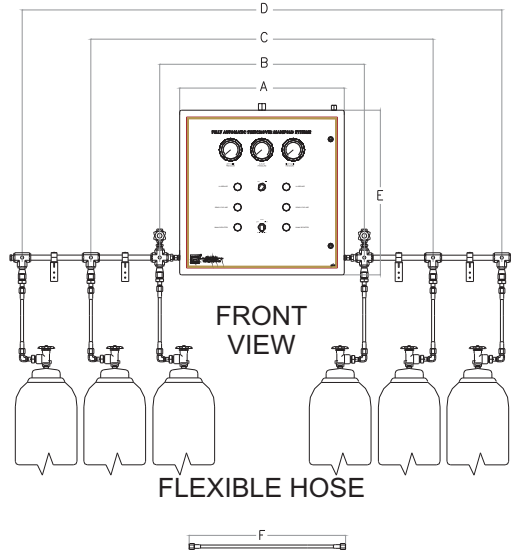
### Standard materials of construction

Part	
Enclosure	Steel
Headers	Stainless steel TP304/F304 - brass CDA 36000
Tubing	Stainless steel TP304 - copper ASTM B280/B819
Fittings	Brass ASTM B16/B453 - stainless steel 316
Flexible hoses	
Nylon hose (Thermoplastic):	Innercore: SAE J517 100 R8 - Nylon - fittings: steel
Teflon hose:	Innercore: virgin PTFE smooth bore tubing - overbraid: stainless steel - fittings: brass
All stainless steel hose:	Innercore: 321stainless steel - overbraid: 304 stainless steel - fittings: 316C stainless steel
Relief valves	Body, seat retainer: brass ASTM B16 - adjusting screw, springs: stainless steel 316 - Disc: PTFE
Inlet regulators	Body: forged brass - diaphragm: stainless steel - housing cap: forged brass - inlet filter: bronze
Pressure switches	Piston: stainless steel - "O"-ring: Buna-N - connection: brass
Outlet pressure regulators	Body: forged brass - bonnet: nickel plated aluminium - diaphragm: nitrile with PTFE liner - springs: stainless steel - "O"-rings: viton (EPDM seat disc & "O"-rings for nitrous oxide and carbon dioxide)
Solenoid valves	Body: brass - Seals & Discs: Buna "N" or Teflon - Disc Holder: Nylon - Core tube: 305 S.S. - Core & plugnut: 403F S.S. - shading coil: copper
Header valves	Diaphragm valve - Stainless steel Diaphragm

### TECHNICAL SPECIFICATIONS

	FAS350	FAS3000	FAS5000
Max. inlet pressure	350 psig	3000 psig	5000 psig
Outlet pressure range	0-110 psig	0-200 psig	0-200 psig
Low alarm set point & switchover set point	130 psig	220 psig	220 psig
Inlet gauges	0-400 psig	0-4000 psig	0-6000 psig
Outlet gauge	0-200 psig	0-200 psig	0-200 psig
Operating temperature	° 5 C to °50 C	5°C to 50 °C	5°C to 50 °C
Power requirement	110 VAC 50-60 Hz	110 VAC 50-60 Hz	110 VAC 50-60 Hz
Enclosure rating	Nema 1-12	Nema 1-12	Nema 1-12
Gauge size	2-1/2" dial	2-1/2" dial	2-1/2" dial
Pilot lights	22 mm, LED, 110 VAC	22 mm, LED, 110 VAC	22 mm, LED, 110 VAC

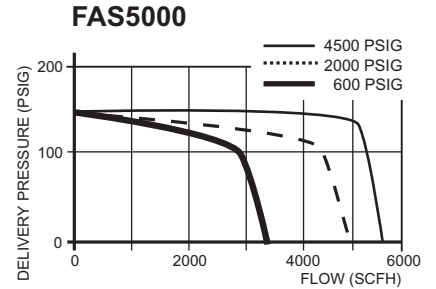
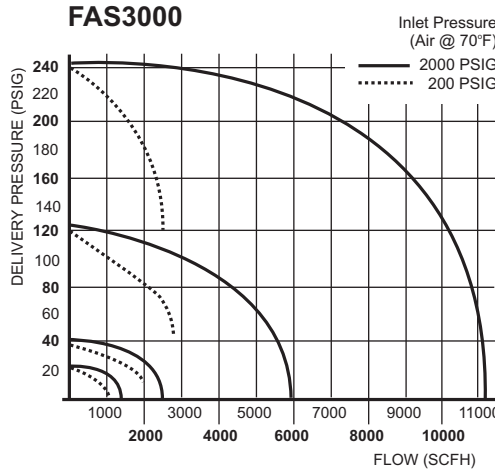
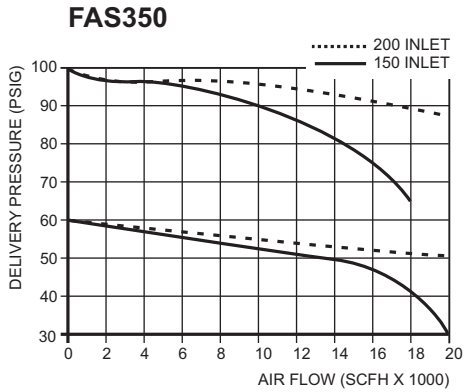
DIMENSIONAL DRAWING



	FAS350	FAS3000	FAS5000
A	24"	24"	24"
B	34"	30"	30"
C	54"	50"	50"
D	74"	70"	70"
E	24"	24"	24"
F*	60"	36"	36"

\*HOSES FOR BULKPACKS (CYLINDER CLUSTERS) ARE 96" LONG.  
CONTROL BOX DEPTH: 11"

FLOW CHARTS



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