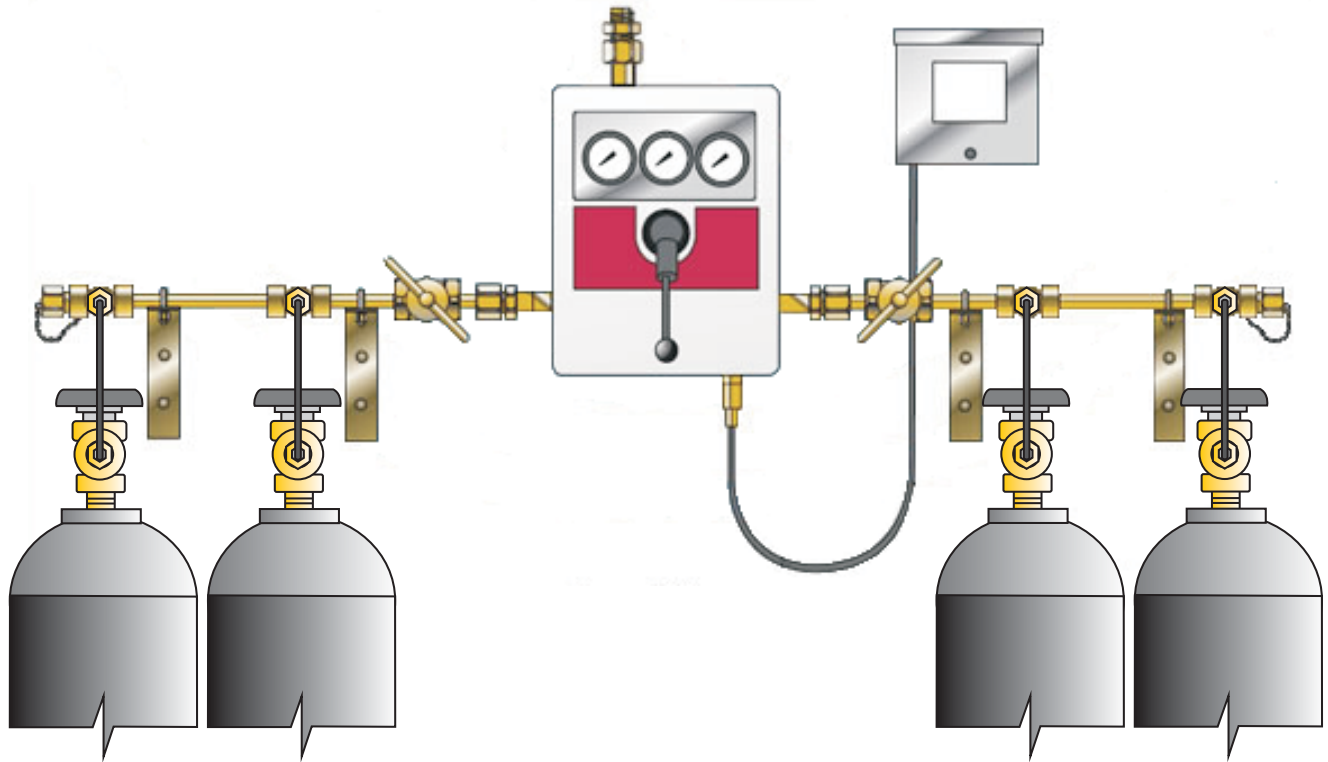


## Automatic Switchover Manifolds for 3000 PSIG Cylinders



### BI, BIHL, BIHP Series - Key Features

- **Automatic switchover**  
Un-interrupted flow of gas
- **Pressure differential technology**  
Priority bank handle rotation resets the system
- **High pressure supply**  
Cylinder pressure: 3000 PSIG each bank
- **Two-stage delivery pressure regulation**  
Constant delivery pressure regardless of cylinder pressure
- **For moderate flow rate applications**  
Maximum flow: 1200 scfh (see flow chart)
- **Built-in alarm**  
Warns when a bank is depleted



**WESTERN**

The Leader in Industrial Gas Control Equipment





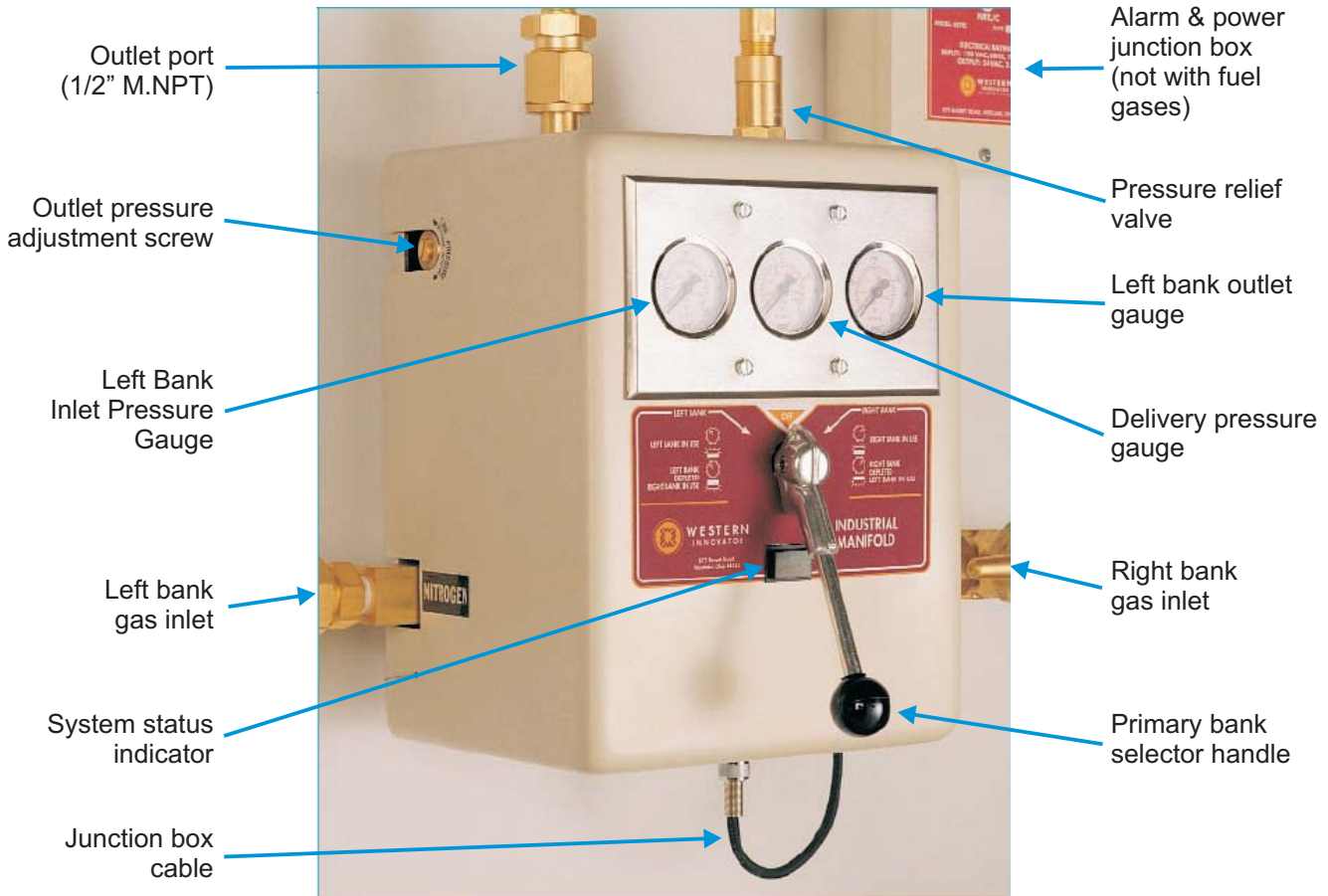
# AUTOMATIC SWITCHOVER MANIFOLDS FOR 3000 PSIG CYLINDERS

**BI, BIHL,  
BIHP  
SERIES**

WEB

PDF

CAD



## How to order - part number matrix

<b>BI</b>	-	-	-	-
<b>Basic industrial series</b> <input checked="" type="checkbox"/> <b>BI</b> Non-flammable (30-125 PSIG) Acetylene (0-15 PSIG) LPG (0-45 PSIG)  <input checked="" type="checkbox"/> <b>BIHL</b> CO <sub>2</sub> and N <sub>2</sub> O (30-125 psig) Includes a 500 SCFH heater  <input checked="" type="checkbox"/> <b>BIHP</b> Non-flammable (50-200 PSIG)	<b>Fluid</b> <input checked="" type="checkbox"/> Acetylene - POL (CGA 510) = 1 <input checked="" type="checkbox"/> Acetylene - Com. (CGA 300) = 1A <input checked="" type="checkbox"/> Air - compressed (CGA 346) = 2 <input checked="" type="checkbox"/> Argon (CGA 580) = 3 <input checked="" type="checkbox"/> Carbon dioxide (CGA 320) = 4 <input checked="" type="checkbox"/> Helium (CGA 580) = 5 <input checked="" type="checkbox"/> Hydrogen (CGA 350) = 6 <input checked="" type="checkbox"/> Argon/methane = 6A <input checked="" type="checkbox"/> Nitrogen (CGA 580) = 7 <input checked="" type="checkbox"/> Air - industrial (CGA 590) = 7A <input checked="" type="checkbox"/> Nitrous oxide (CGA 326) = 8 <input checked="" type="checkbox"/> Oxygen (CGA 540) = 9 <input checked="" type="checkbox"/> LPG (CGA 510) = 10	<b># of cyl's</b>	<b>Header configuration</b> <input checked="" type="checkbox"/> <b>STANDARD</b> = BLANK 10" center or 13" for acetylene & LPG <input checked="" type="checkbox"/> <b>STAGGERED</b> = S 5" center or 6.5" for acetylene & LPG <input checked="" type="checkbox"/> <b>VERTICAL CROSSOVER</b> = V 10" center or 13" for acetylene & LPG <input checked="" type="checkbox"/> <b>CROSSOVER</b> (floor mount) = C 10" center or 13" for acetylene & LPG <input checked="" type="checkbox"/> <b>U-SHAPED</b> = U Sketch required <input checked="" type="checkbox"/> <b>L-SHAPED</b> = L Sketch required	<b>Mounting</b> <input checked="" type="checkbox"/> Wall mount = none <input checked="" type="checkbox"/> Floor mounted = F

Contact Technical Sales 800.783.7890



# AUTOMATIC SWITCHOVER MANIFOLDS FOR 3000-PSIG CYLINDERS BI, BIHL, BIHP SERIES TECHNICAL SPECIFICATIONS

## Description

The BI Series automatic switchover manifolds are designed to supply an uninterrupted flow of industrial gases. The system automatically changes from the supply bank to the reserve bank without an interruption in gas supply. A simple rotation of the primary bank selector handle resets the unit. All functional components are enclosed in a tamper-resistant metal case.

### Optional remote alarm

Internal pressure switch, low bank pressure lights and a buzzer indicate low bank pressure and the need to change out the depleted cylinder's.

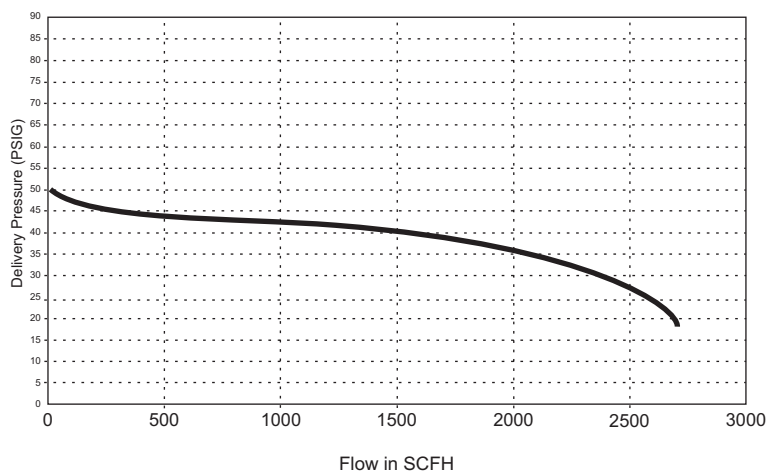
## Flow data

### Flow Regulation

Western BI-X Manifold

Inlet pressure: 2200 psig

Test Media: Nitrogen @ 70F



## Specifications

### Description

Service fluids	Refer to part number matrix
Maximum inlet pressure	3000 PSIG
Outlet pressure range	Refer to part number matrix
Flow	See flow chart
Operating temperature	-40°F to + 100°F
Pressure gauge size	2-1/2"- dial
Inlet connections	Gas related CGA fittings
Outlet connection	1/2" M.NPT
Audible and visual alarm	Built-in
Header diameter	1/2" NPS, silver brazed painted almond
Power requirement	110 VAC, 50-60 Hz

## Flexible hose length

When connected to:	Hose length
Cylinders	24 inches
Clusters (bulk packs)	Made to order

## Materials of construction

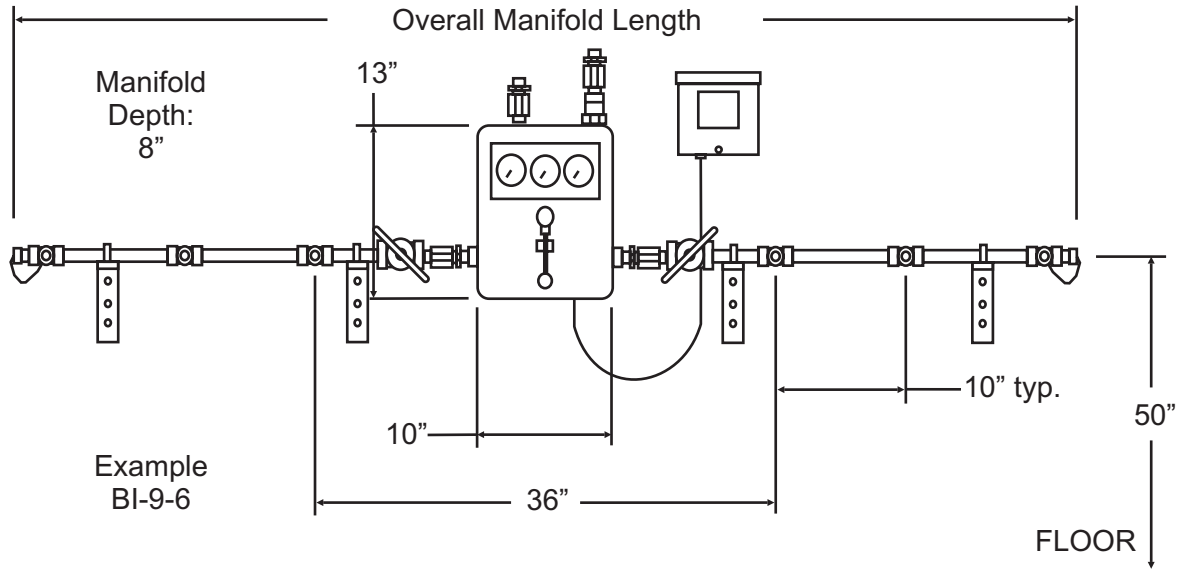
### Part

Enclosure	Aluminum, powder coated, almond
Headers	Brass ASTM B16 & CDA 377
Tubing	Copper ASTM B280
Fittings	Brass ASTM B16 & CDA 377
Hoses	
Teflon	Innercore: Teflon - fittings: brass
Thermoplastic (He & H <sub>2</sub> only)	Innercore: Nylon - fittings: steel - Specification: SAE J517 100R8I
Crossover valve	Body, rotor, shaft, housing: aluminum - "O"-ring: Buna-N - thrust bearing: stainless steel - pressure seal: brass - pressure seal spring: copper
Relief valve	Body, seat retainer: brass ASTM B16 - adjusting screw, spring: stainless steel 316 - Disc: PTFE
Regulators	Body, spring housing cap: forged brass - diaphragm: neoprene
Pressure switch	Diaphragm, "O"-ring, connection: brass



# AUTOMATIC SWITCHOVER MANIFOLDS FOR 3000-PSIG CYLINDERS BI, BIHL, BIHP SERIES TECHNICAL SPECIFICATIONS

## Dimensional drawing



Total number of cylinders	4	6	8	10	12
Overall manifold length	5' - 4"	7' - 0"	8' - 8"	10' - 4"	12' - 0"
Acetylene manifold length	5' - 9"	8' - 0"	10' - 2"	12' - 4"	14' - 5"

## Standard design

- ☑ Acetylene manifolds are shipped complete with a 300 SCFH flashback arrestor, a separate flash arrestor with check valve on each pigtail and connecting piping.
- ☑ Nitrous oxide and carbon dioxide manifolds include a 500 SCFH capacity heater. The thermostatically controlled heater warms the gas before entering the regulator, preventing freeze up. The control is supplied with a 6-foot cord and plug for 115 VAC (4 Amp.).
- ☑ Check valve is at header side of pigtail (except oxygen). Individual header at each cylinder location (units with 4 cyls and +, all gases except oxygen). Oxygen units shipped with C/V outlets in place of header valves.

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