Accurate. Trusted. Precise.
What Does Precise Equipment Sell and Which Markets do They Serve?

PEC manufactures gas control manifold systems and accessories for the medical, specialty gas, and industrial markets. PEC products include simplex, duplex, pressure differential, and fully automatic manifold systems, gas blenders/mixers, station drops, headers of all shapes and sizes, flashback arresters, relief valves, remote alarms, telemetry options, flow meters, pressure switches, and more.

Specialty Gas

Laboratories, cryogenics, and lasers are just a few examples of applications that fall within the realm of specialty, or “spec” gas. Precise Equipment Company’s complete line of high purity brass and stainless steel gas control manifold systems and accessories is specifically designed to serve the needs of this unique market. So whether it is compound analysis, cryogenic liquids, pharmaceutical laboratory research, or management of lasing and assist gas for lasers, PEC has a gas or cryogenic manifold system to fully satisfy the customer.

Medical

The medical market continues to expand dramatically, and Precise Equipment Company serves this segment with a full line of manifolds designed to meet the needs of the medical community. From large-scale hospitals to regional centers for surgery, from long term care nursing facilities to acute care centers, PEC can design and produce the ideal gas control system to satisfy any end user’s requirement.

Industrial

No one serves the industrial market with greater expertise and a more exhaustive line of gas manifold systems and accessories than Precise Equipment Company. PEC industrial products include simplex, duplex, pressure differential, automatic, and fully automatic manifolds as well as station drops, pigtails, heaters, mixers/blenders... You name it and more than likely Precise carries it.

Why Precise Equipment Company? What Makes PEC Better Than Everyone Else?

- **We are specialist.** There are many companies that produce manifolds as a sideline product, but PEC focuses exclusively on manifolds. We are manifolds.
- **Leading-edge technology.** PEC’s patented manifold technology allows both liquid and high-pressure gas supplies to be utilized interchangeably throughout the lifetime of the product.
- **Accessible expertise.** Calling PEC’s toll-free number results in instant access to PEC’s experienced Team.
- **Flexibility.** PEC designs manifold systems for even the most unique applications.
- **Industry proven.** PEC is already the chosen manifold supplier for many of the largest companies in the industry, including private label arrangements.
- **Competitive pricing.**
- **Prompt delivery.**
# Table of Contents

**Industrial Gas Manifolds**
- **Automatics (Pages 4-11)**
  - ACM
  - PDH
  - PDL
  - LQHP
- **Non-Automatics (Pages 12-15)**
  - DCM
  - SCM

**Specialty Gas Manifolds**
- **Automatics (Pages 16-27)**
  - Brass
    - HPA
    - HPB
    - 610/620
  - Stainless
    - HPAS
    - HPS
    - 610S/620S
- **Non-Automatics (Pages 28-35)**
  - Brass
    - HDM
    - HSM
  - Stainless
    - HDMS
    - HSMS

**Medical Gas Manifolds**
- **Automatics (Pages 36-39)**
  - MAC/MAC2
  - MAC3/MAC4
- **Non-Automatics (Pages 40-41)**
  - SCMM

**Mighty Pipe** (Pages 42-43)

**Gas Blending** (Page 44)

**Accessories (Pages 45-52)**
- Station Drops
- Alarms
- Gas Pipeline Shutoff Systems
- Heaters and Adaptor Block
- Station Regulators, Flow Meter, Pressure Switches
- Flashback Arrestors
- Pigtails
- Pressure Reliving and Bypass Equipment
**Industrial Gas Manifold**  
**ACM Series Electronic Automatic**

The ACM series uses patented technology that gives you flexibility to use either low-pressure or high-pressure cylinders on each side or a combination of both. Automatic leak detection will notify you if there is a loss of pressure on standby cylinder bank. The front panel controls included 6-system status LED’s.

**FEATURES**
- 3000 psi Maximum Inlet
- Automatically Recognizes New Stand-by Cylinders when Empties are Replenished
- Standby Cylinder Bank Leak Warning
- Cylinder Flexibility  
  Uses low or high pressure cylinders
- Priority Gas Bank Switch  
  Switch Primary Priority with a flip of a Switch
- Gas System Status  
  Easily identify each Gas Bank Status with the 6-System Status LED’s
- Ability to Set Left and Right Bank Switchover

**APPLICATIONS**
- Continuous Flow  
  Maintain a continuous flow to application that require non-interrupted gas flow.
- Laser Assist Gases  
  Models up to 400 psig
- Welding  
  Supply premixed gases or the major and minor gases to mix
- As a Micro-bulk Backup  
  Prioritize the micro-bulk as the primary and use high-pressure cylinders as the reserve

**MATERIALS**
- Regulators  
  Brass bar stock
- Diaphragms  
  Fabric reinforced neoprene
- Enclosure  
  NEMA 4X with lockable latches
- Tubing  
  Stainless Steel
- Solenoid Valve  
  Brass bar stock with stainless steel internal core with Viton® seal
- Shutoff Valves  
  Forged brass

**SYSTEM INCLUDES**
- Brass Headers  
  Brazed & tested to Min. 4500 psig
- Flexible stainless steel pigtails  
  Cylinder connection with check valve
  Flame arrester with check valve on Acetylene model
- Pipeline outlet assembly  
  Includes pipeline relief valve  
  Pipeline flashback arrester on select models (see back for details)
- Shutoff valves
- Mounting brackets  
  Cylinder holding bar and chain

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**INDUSTRIAL GAS MANIFOLD**

**MOUNTING AND DIMENSIONAL INFORMATION FOR THE ACM SERIES AUTOMATIC**

### Manifold Dimensions

<table>
<thead>
<tr>
<th>Header Type</th>
<th>2' 0&quot;</th>
<th>4' 0&quot;</th>
<th>5' 8&quot;</th>
<th>7' 4&quot;</th>
<th>9' 0&quot;</th>
<th>10' 8&quot;</th>
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</thead>
<tbody>
<tr>
<td>Standard</td>
<td>2'-0&quot;</td>
<td>4'-0&quot;</td>
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<tr>
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<td>Cross Type</td>
<td></td>
<td></td>
<td>4'-0&quot;</td>
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<td></td>
<td>5'-8&quot;</td>
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<tr>
<td>U-Shape</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Included Manifold Components

- Control Cabinet
- Header Expansion Plug
- Wall Brackets
- Cylinder Retaining Bar with Chains
- Cabinet Mounting Tabs

### OPTIONAL ACCESSORIES

- 160 CFH CO2 Heater
- Remote alarms in either Single or Dual bank models
- Mighty Pipe Coil & Fittings

### Manifold General Pressure and Flow Specifications

<table>
<thead>
<tr>
<th>Gas Services</th>
<th>ACM</th>
<th>ACM2</th>
<th>ACM3</th>
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<tbody>
<tr>
<td></td>
<td>PSI</td>
<td>CFH (Air)</td>
<td>PSI</td>
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<tr>
<td>O2, Inert</td>
<td>125</td>
<td>1500</td>
<td>200</td>
</tr>
<tr>
<td>CO2 w/o Heater</td>
<td>50*p</td>
<td>50*p</td>
<td>50*p</td>
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<td>CO2 w/ Heater</td>
<td>50 p/Cyl</td>
<td>50 p/Cyl</td>
<td>50 p/Cyl</td>
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<td>35 p/Cyl</td>
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<tr>
<td>Acetylene</td>
<td>15</td>
<td>35 p/Cyl</td>
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</tr>
<tr>
<td>HY, ME w/o FBA</td>
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<td>1500</td>
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</tr>
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<td>HY, ME w/ FBA**</td>
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</table>

*Recommended heater for applications requiring flow rates of more than 50 cfh.

**NFPA Pamphlet # 51 requirements for FBA
INDUSTRIAL GAS MANIFOLD
PDH SERIES—PRESSURE DIFFERENTIAL AUTOMATICS

The PDH Series is a Pressure Differential that will automatically switch over to the standby cylinder without a loss of flow. No power is required to operate the switchover, a simple flip of the control level resets the system after changing depleted cylinder.

FEATURES

• Uses Individual High-Pressure Cylinders, or Multi-Cylinder Packs

• 3000 psi Maximum Inlet

• Semi-Automatic Changeover & Easy Reset
  Once in-use side is depleted, the reserve side will flow uninterrupted a quick flip of the level resets the primary side

• No Power Required

• Optional Pressure Switch Alarm

APPLICATIONS

Safety
Ability to have your gas supply in a central location

Continuous Flow Without Power
Maintain a continuous flow to application that require non-interrupted gas flow where power is not available

Delivery Pressure
Models up to 200 psig

Welding
Supply premixed gases or the major and minor gases to mixer

MATERIALS

Enclosure
Polycarbonate with lockable latches

Regulators
Brass bar stock

Diaphragms
Fabric reinforced neoprene

Tubing
Stainless Steel

Shutoff valves
Forged Brass

SYSTEM INCLUDES

Flexible stainless steel lined pigtails
Cylinder connections with check valve
Flame arresters with check valve for Acetylene model

Pipeline outlet assembly
Includes pipeline relief valve
Pipeline flashback arrester on select models (see back for details)

Shutoff valves
Mounting brackets
Cylinder holding bar and chain

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INDUSTRIAL GAS MANIFOLD
MOUNTING AND DIMENSIONAL INFORMATION FOR THE PDH SERIES AUTOMATIC

Number of Cylinders and Overall Length

<table>
<thead>
<tr>
<th>Header Type</th>
<th>2</th>
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<th>6</th>
<th>8</th>
<th>10</th>
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<td>2'-0&quot;</td>
<td>4'-0&quot;</td>
<td>5'-8&quot;</td>
<td>7'-4&quot;</td>
<td>9'-0&quot;</td>
<td>10'-8&quot;</td>
</tr>
<tr>
<td>Close Space</td>
<td>2'-0&quot;</td>
<td>4'-0&quot;</td>
<td>4'-0&quot;</td>
<td>4'-10&quot;</td>
<td>5'-8&quot;</td>
<td>6'-6&quot;</td>
</tr>
<tr>
<td>Cross Type</td>
<td>Per Your Specifications</td>
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<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>U-Shape</td>
<td>----</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

OPTIONAL ACCESSORIES

- 160 CFH CO2 Heater
- Pressure Switch & Remote Kit
- Mighty Pipe Coil & Fittings

Manifold General Pressure and Flow Specifications

<table>
<thead>
<tr>
<th>Gas Services</th>
<th>PDH</th>
<th>PDH2</th>
</tr>
</thead>
<tbody>
<tr>
<td>O2, Inert</td>
<td>100</td>
<td>100</td>
</tr>
<tr>
<td>CO2 w/o Heater</td>
<td>100</td>
<td>200</td>
</tr>
<tr>
<td>CO2 w/ Heater</td>
<td>50</td>
<td>50</td>
</tr>
<tr>
<td>LPG</td>
<td>50</td>
<td>50</td>
</tr>
<tr>
<td>Acetylene</td>
<td>15</td>
<td>50</td>
</tr>
<tr>
<td>HY, ME w/o FBA</td>
<td>100</td>
<td>200</td>
</tr>
<tr>
<td>HY, ME w/ FBA</td>
<td>50</td>
<td>1500</td>
</tr>
</tbody>
</table>

*Recommended heater for applications requiring flow rates of more than 50 cfh.

*NFPA Pamphlet # 51 requirements for FBA

* * *

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**INDUSTRIAL GAS MANIFOLD**

**PDL SERIES—PRESSURE DIFFERENTIAL AUTOMATICS**

The PDL Series is a Pressure Differential that will automatically switch over to the standby cylinder without a loss of flow. No power is required to operate the switchover, a simple flip of the control level resets the system after changing depleted cylinder.

**FEATURES**

- **Supply**
  Gas Withdrawal from Low-Pressure Dewars
- **500 psi Maximum Inlet**
- **Semi-Automatic Changeover & Easy Reset**
  Once in-use side is depleted, the reserve side will flow uninterrupted a quick flip of the level resets the primary side
- **No Power Required**
- **Optional Pressure Switch Alarm Kit**

**APPLICATIONS**

- **Safety**
  Ability to have your gas supply in a central location
- **Continuous Flow Without Power**
  Maintain a continuous flow to applications that require non-interrupted gas flow where power is not available
- **Delivery Pressure**
  Models up to 400 psig
- **Welding**
  Supply premixed gases or the major and minor gases to mixer

**MATERIALS**

- **Enclosure**
  Polycarbonate with lockable latches
- **Regulators**
  Brass bar stock
- **Diaphragms**
  Fabric reinforced neoprene
- **Tubing**
  Stainless Steel
- **Shutoff valves**
  Forged Brass

**SYSTEM INCLUDES**

- **Flexible stainless steel lined pig-tails**
  Cylinder connections with check valve
  Choose from 4-standard lengths
- **Pipeline outlet assembly**
  Includes pipeline relief valve
  Pipeline flashback arrester on select models (see back for details)
- **Shutoff valves**
- **Mounting brackets**
- **Cylinder holding bar and chain**

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INDUSTRIAL GAS MANIFOLD
MOUNTING AND DIMENSIONAL INFORMATION FOR THE PDL SERIES AUTOMATIC

Manifold Dimensions

Number of Cylinders and Overall Length

<table>
<thead>
<tr>
<th></th>
<th>2</th>
<th>4</th>
<th>6</th>
<th>8</th>
<th>10</th>
<th>12</th>
</tr>
</thead>
<tbody>
<tr>
<td>Standard</td>
<td>1'-8&quot;</td>
<td>1'-8&quot;</td>
<td>1'-8&quot;</td>
<td>TBD</td>
<td>TBD</td>
<td>TBD</td>
</tr>
</tbody>
</table>

Manifold Components Include

- Pipeline Relief Valve
- Cabinet Mounting Tabs
- Headers for up to 3-cylinder capacity
- Stainless Steel flexible Pigtails w/Check Valve
- Varying lengths with multiple cylinders

OPTIONAL ACCESSORIES

- 160 CFH CO2 Heater
- Pressure Switch & Remote Kit
- Mighty Pipe Coil & Fittings

Manifold General Pressure and Flow Specifications

<table>
<thead>
<tr>
<th>Gas Service</th>
<th>PDL</th>
<th>PDL2</th>
<th>PDL3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Argon, Nitrogen, Oxygen</td>
<td>PSI</td>
<td>CFH (Air)</td>
<td>PSI</td>
</tr>
<tr>
<td>100</td>
<td>1 cyl. p/side 300</td>
<td>2 cyl. p/side 450</td>
<td>3 cyl. p/side 525</td>
</tr>
<tr>
<td></td>
<td>1 cyl. p/side 110</td>
<td>2 cyl. p/side 150</td>
<td>3 cyl. p/side 200</td>
</tr>
<tr>
<td>CO2 w/ Heater</td>
<td>50*</td>
<td>50*</td>
<td>50*</td>
</tr>
<tr>
<td></td>
<td>1 cyl. p/side 110</td>
<td>2 cyl. p/side 150</td>
<td>3 cyl. p/side 200</td>
</tr>
<tr>
<td>CO2 w/o Heater</td>
<td>50*</td>
<td>50*</td>
<td>50*</td>
</tr>
</tbody>
</table>

*Recommended heater for applications requiring flow rates of more than 50 cfh.
**INDUSTRIAL GAS MANIFOLD**

**LQHP SERIES—SEMI AUTOMATIC**

The LQHP Series manifold is used in conjunction with low-pressure and high-pressure cylinder gas supply. The manifold will automatically switch over to the high pressure bank providing uninterrupted flow.

**FEATURES**

- **High-Pressure**
  - For reserve side
  - Maximum 3000 psi inlet

- **Low-Pressure**
  - For primary in-use side
  - Maximum 500 psi inlet

- **2-1/2” Gauges**
- **3-1/4” Diaphragm**
- **Safety Feature**
  - Relief valve on low pressure side
- **Returns to Low-Pressure Source**
  - Returns to low primary gas when depleted cylinders are changed out

**APPLICATIONS**

- **Continuous Flow**
  - Maintain a continuous flow to application that require non-interrupted gas flow.

- **Savings**
  - Uses low-pressure bulk tanks as the primary gas supply with a high-pressure backup

- **Delivery Pressure**
  - Model up to 175 psig

**MATERIALS**

- **Regulator**
  - Forged brass body and cap

- **Filter**
  - Sintered bronze inlet filter

- **Shutoff Valve**
  - Forged Brass

- **Header**
  - Silver brazed brass & tested to Min. 4500 psig

- **Check Valve**
  - Brass, inline spring loaded

**SYSTEM INCLUDES**

- **Brass Headers**
  - Brazed & tested to Min. 4500 psig

- **Flexible stainless steel pigtails**
  - Cylinder check valve connection
  - Choose from 4-standard lengths

- **Pipeline outlet assembly**
  - Includes pipeline relief valve

- **Shutoff valves**

- **Mounting bracket(s)**

- **Cylinder holding bar(s) and chain**

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INDUSTRIAL GAS MANIFOLD
MOUNTING AND DIMENSIONAL INFORMATION FOR THE LQHP SERIES

Manifold Dimensions

<table>
<thead>
<tr>
<th>Number of LP Cylinders</th>
<th>Number of HP Cylinders</th>
<th>2HP</th>
<th>3HP</th>
<th>4HP</th>
<th>5HP</th>
<th>6HP</th>
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<tbody>
<tr>
<td>1 LP</td>
<td>Standard</td>
<td>2'-10&quot;</td>
<td>3'-8&quot;</td>
<td>4'-6&quot;</td>
<td>5'-4&quot;</td>
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</tr>
<tr>
<td></td>
<td>Close Space</td>
<td>2'-0&quot;</td>
<td>2'-10&quot;</td>
<td>3'-8&quot;</td>
<td>4'-6&quot;</td>
<td>5'-4&quot;</td>
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<td>2 LP</td>
<td>Standard</td>
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<tr>
<td></td>
<td>Close Space</td>
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<td>4'-8&quot;</td>
<td>5'-6&quot;</td>
<td>6'-4&quot;</td>
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Manifold General Pressure and Flow Specifications

<table>
<thead>
<tr>
<th>Gas Services</th>
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<th>LQHP2</th>
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<td>CFH (Air)</td>
<td>PSI</td>
<td>CFH (Air)</td>
</tr>
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<td>Argon, Nitrogen,</td>
<td>100</td>
<td>50*</td>
<td>200</td>
<td>50*</td>
</tr>
<tr>
<td>Oxygen</td>
<td>1 cyl. L/side 300</td>
<td>2 cyl. L/side 450</td>
<td>1 cyl. L/side 300</td>
<td>2 cyl. L/side 450</td>
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<tr>
<td></td>
<td>2 cyl. L/side 525</td>
<td></td>
<td>3 cyl. L/side 525</td>
<td></td>
</tr>
<tr>
<td>CO2 without Heater</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>CO2 with Heater</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Recommended heater for applications requiring flow rates of more than 50 cfh.

Optional Accessories

- 160 CFH CO2 Heater
- Pressure Switch & Remote Kit
- Mighty Pipe Coil & Fittings
The DCM Series Duplex Control Manifold has two-headers (Manual switchover to reserve). Once the in-use bank is depleted, a quick switch of the header valves activates the reserve supply. Ideal for the user who uses irregular amounts of gas and can briefly interrupt gas flow.

**FEATURES**

- 3000 psi Maximum Inlet
- High-Pressure
  For in-use and reserve sides
- Manual Reserve Changeover
- 2-1/2” Gauges
- 3-1/4” Diaphragm

**APPLICATIONS**

- Delivery Pressure
  Models up to 200 psig
- Manual Reserve
  Once in-use side empties, Duplexes require a manual opening of the reserve valve to switchover
- High-Pressure Back-up
  For medium application typically ranging from 6-10 tanks replenished weekly
- Safety
  Ability to have your gas supply in a central location

**MATERIALS**

- Regulator
  Forged brass body and cap
- Filter
  Sintered bronze inlet filter
- Shutoff Valve
  Forged Brass
- Header
  Silver brazed brass & tested to Min. 4500 psig
- Pigtailed
  Stainless steel with brass ends

**SYSTEM INCLUDES**

- Brass Headers
  Brazed & tested to Min. 4500 psig
- Flexible stainless steel pigtailed
  Cylinder connection check valves
  Flame arresters with check valves for Acetylene model
- Pipeline outlet assembly
  Includes pipeline relief valve
  Pipeline flashback arresters on select models (see back for details)
- Shutoff valves
- Mounting brackets
- Cylinder holding bars and chain
INDUSTRIAL GAS MANIFOLD
MOUNTING AND DIMENSIONAL INFORMATION FOR THE DCM SERIES

Manifold Dimensions

<table>
<thead>
<tr>
<th>Number of Cylinders</th>
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</thead>
<tbody>
<tr>
<td>2</td>
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<td>10</td>
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Close Space

<table>
<thead>
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<th>Number of Cylinders</th>
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</thead>
<tbody>
<tr>
<td>2</td>
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<tr>
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<td>2'-4&quot;</td>
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<td>10</td>
<td>4'-8&quot;</td>
</tr>
<tr>
<td>12</td>
<td>5'-8&quot;</td>
</tr>
</tbody>
</table>

Cross Type

- U-Shape
  - Per Your Specifications

Manifold Components Include

- Pipeline Relief Valve
- Acetylene, HY, and MF Models include Pipeline Flashback arrester
- Pipeline Outlet 1/2" NPT
- Delivery Regulator
- Wall Bracket
- Stainless Steel flexible Pigtails w/Check Valve
- Acetylene Pigtails include Dry Flame Arrester
- Cylinder Restaining Bar w/ Chain

OPTIONAL ACCESSORIES

- 160 CFH CO2 Heater
- Pressure Switch & Remote Kit
- Mighty Pipe Coil & Fittings

Manifold General Pressure and Flow Specifications

<table>
<thead>
<tr>
<th>Gas Services</th>
<th>DCM</th>
<th>DCM2</th>
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</thead>
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<tr>
<td>O2, Inert</td>
<td>2500</td>
<td>2500</td>
</tr>
<tr>
<td>CO2 w/o Heater</td>
<td>50*</td>
<td>50*</td>
</tr>
<tr>
<td>CO2 w/ Heater</td>
<td>50 p/Cyl</td>
<td>50 p/Cyl</td>
</tr>
<tr>
<td>LPG</td>
<td>50</td>
<td>35 p/Cyl</td>
</tr>
<tr>
<td>Acetylene</td>
<td>15</td>
<td>35 p/Cyl</td>
</tr>
<tr>
<td>HY, ME w/o FBA</td>
<td>125</td>
<td>2500</td>
</tr>
<tr>
<td>HY, ME w/ FBA</td>
<td>50</td>
<td>1000</td>
</tr>
</tbody>
</table>

*Recommended heater for applications requiring flow rates of more than 50 cfh.
*NFPA Pamphlet # 51 requirements for FBA

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**Industrial Gas Manifold**

**SCM Series—Simplex Manifold**

The SCM series manifolds has one header and does not have a reserve bank. All cylinders empty at the same time and are changed out together. This is ideal for the customer looking to replenish their gas supply on a weekly basis and can interrupt gas flow.

**Features**

- 3000 psi Maximum Inlet
- High-Pressure Only
- Economical
- 2-1/2” Gauges
- 3-1/4” Diaphragm

**Applications**

- Delivery Pressure
  Models up to 200 psig
- Primary Gas Supply
  For small application typically ranging from 2-5 tanks replenished weekly
- High-Pressure Back-up
  Bulk tanks being used as primary would use a Simple to supply the reserve with minor modifications to the gas use line.
- Safety
  Ability to have your gas supply in a central location

**Materials**

- Regulator
  Forged brass body and cap
- Filter
  Sintered bronze inlet filter
- Shutoff Valve
  Forged Brass
- Header
  Silver brazed brass & tested to Min. 4500 psig
- Pigtails
  Stainless steel with brass ends

**System Includes**

- Header
  Including label, cleaned and capped
- Flexible stainless steel pigtails
  Cylinder connection check valves
  Flame arresters with check valves for Acetylene model
- Pipeline outlet assembly
  Includes pipeline relief valve
  Pipeline flashback arrester on select models (see back for details)
- Shutoff Valve
- Mounting bracket(s)
  Cylinder holding bar(s) and chain

*Left and Right models shown*
INDUSTRIAL GAS MANIFOLD
MOUNTING AND DIMENSIONAL INFORMATION FOR THE SCM SERIES

Manifold Dimension

Manifold Components Include

See Chart for Overall Length

Total Number of Cylinders and Overall Length

<table>
<thead>
<tr>
<th>Header Type</th>
<th>2 Cyl.</th>
<th>3 Cyl.</th>
<th>4 Cyl.</th>
<th>5 Cyl.</th>
<th>6 Cyl.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Standard</td>
<td>1'-5&quot;</td>
<td>2'-3&quot;</td>
<td>3'-1&quot;</td>
<td>3'-11&quot;</td>
<td>4'-9&quot;</td>
</tr>
<tr>
<td>Close Space</td>
<td>1'</td>
<td>1'-5&quot;</td>
<td>1'-10&quot;</td>
<td>2'-3&quot;</td>
<td>2'-8&quot;</td>
</tr>
<tr>
<td>Cross Type</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>U Shape</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Per Your Specifications</td>
</tr>
</tbody>
</table>

OPTIONAL ACCESSORIES

160 CFH CO2 Heater
Pressure Switch & Remote Kit
Mighty Pipe Coil & Fittings

Manifold General Pressure and Flow Specifications

<table>
<thead>
<tr>
<th>Gas Services</th>
<th>SCM</th>
<th>SCM2</th>
</tr>
</thead>
<tbody>
<tr>
<td>PSI</td>
<td>CFH (Air)</td>
<td>PSI</td>
</tr>
<tr>
<td>O2, Inert</td>
<td>125</td>
<td>2500</td>
</tr>
<tr>
<td>CO2 w/o Heater</td>
<td>50&quot;</td>
<td>50&quot;</td>
</tr>
<tr>
<td>CO2 w/ Heater</td>
<td>50 p/Cyl</td>
<td>50 p/Cyl</td>
</tr>
<tr>
<td>LPG</td>
<td>50</td>
<td>35 p/Cyl</td>
</tr>
<tr>
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<td>35 p/Cyl</td>
</tr>
<tr>
<td>HY, ME w/o FBA</td>
<td>125</td>
<td>2500</td>
</tr>
<tr>
<td>HY, ME w/ FBA</td>
<td>50</td>
<td>1000</td>
</tr>
</tbody>
</table>

*Recommended heater for applications requiring flow rates of more than 50 cfh.
*NFPA Pamphlet # 51 requirements for FBA
**PRECISE EQUIPMENT**

**SPECIALTY GAS MANIFOLD**

**HPA SERIES ELECTRONIC AUTOMATIC**

The HPA series uses patented technology that gives you flexibility to use either low-pressure or high-pressure cylinders on each side or a combination of both. Automatic leak detection will notify you if there is a loss of pressure on the standby cylinder bank. The front panel controls include 6-system status LED's.

**FEATURES**

- 3000 psi Maximum Inlet
- Automatically Recognizes New Standby Cylinders when Empties are Replenished
- Standby Cylinder Bank Leak Warning
- Cylinder Flexibility
  Uses low or high pressure cylinders
- Priority Gas Bank Switch
  Switch Primary Priority with a flip of a switch
- Gas System Status
  Easily identify each Gas Bank Status with the 6-System Status LED’s
- Ability to Set Left and Right Bank Switchover points at Independent

**APPLICATIONS**

- Continuous Flow
  Maintain a continuous flow to application that require non-interrupted gas flow.

- Lasers
  Continuous flow for Resonator Gas Mixture

- Laboratories
  Research or Pharmaceutical Cell Culture Growth

- Compound Analysis

**MATERIALS**

- Regulators
  Brass bar stock

- Diaphragms
  Stainless Steel

- Enclosure
  NEMA 4X with lockable latches

- Filter
  Nickel-Plated Sintered Bronze

- Solenoid Valve
  Brass bar stock with stainless steel internal core with Viton® seal

**SYSTEM INCLUDES**

- Brass Headers
  Brazed & tested to Min. 4500 psig

- Flexible stainless steel lined pigtails
  Cylinder connections with check valve
  Choose from 4-standard lengths

- Pipeline outlet assembly
  Includes pipeline relief valve

- Diaphragm type valves

- Mounting brackets

- Cylinder holding bar and chain

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SPECIALTY GAS MANIFOLD
MOUNTING AND DIMENSIONAL INFORMATION FOR THE HPA SERIES AUTOMATIC

Manifold General Pressure and Flow Specifications

<table>
<thead>
<tr>
<th>Gas Services</th>
<th>HPA</th>
<th>PSI</th>
<th>CFH (Air)</th>
<th>HPA2</th>
<th>PSI</th>
<th>CFH (Air)</th>
</tr>
</thead>
<tbody>
<tr>
<td>O2, Inert</td>
<td></td>
<td>600</td>
<td></td>
<td></td>
<td>2500</td>
<td></td>
</tr>
<tr>
<td>CO2 w/o Heater</td>
<td>200</td>
<td>50*</td>
<td></td>
<td>400</td>
<td>50*</td>
<td></td>
</tr>
<tr>
<td>CO2 w/ Heater</td>
<td>50 p/Cyl</td>
<td></td>
<td></td>
<td>50 p/Cyl</td>
<td></td>
<td></td>
</tr>
<tr>
<td>HY, ME w/o FBA</td>
<td>600</td>
<td></td>
<td></td>
<td>2500</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Recommended heater for applications requiring flow rates of more than 50 cfh.

OPTIONAL ACCESSORIES

- Tee
- Purges
- Remote Alarms in either Single or Dual bank models
- Mighty Pipe Coil & Fittings

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**Flexible stainless steel lined pig-tails**

**Cylinder connections with check valve**

**Choose from 4-standard lengths**

**Pipeline outlet assembly**

**Includes pipeline relief valve**

**Shutoff valves**

**Diaphragm type**

**Manual reset level**

**Mounting brackets**

**Cylinder holding bar and chain**

The HPB Series is a brass Specialty Gas Pressure Differential that will automatically switch over to the standby cylinder without a loss of flow. No power is required to operate the switchover, a simple flip of the selector level resets the system after changing depleted cylinder.

**FEATURES**

- 3000 psi Maximum Inlet
- Semi-Auto Reserve
- Durable Powder Coated Enclosure
- Panel Mounted Regulators/Gauges
- No Power Required
- Optional Pressure Switch Alarm

**APPLICATIONS**

- Safety
  - Ability to have your gas supply in a central location

- Continuous Flow Without Power
  - Maintain a continuous flow to application that require non-interrupted gas flow where power is not available

- Power Plants
  - Nuclear reactor

- Lasers

- Research Sample Systems

- Gas Chromatography

**MATERIALS**

- Regulators
  - Chrome plated brass barstock

- Tubing
  - Stainless steel for regulators
  - Copper for panel mount gauges

- Regulator filter
  - Nickel-plated sintered bronze

- Diaphragm
  - 316L stainless steel

- Shutoff valves
  - Brass bar stock

**SYSTEM INCLUDES**

- Flexible stainless steel lined pig-tails
  - Cylinder connections with check valve
  - Choose from 4-standard lengths

- Pipeline outlet assembly
  - Includes pipeline relief valve

- Shutoff valves
  - Diaphragm type

- Manual reset level

- Mounting brackets

- Cylinder holding bar and chain

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SPECIALTY GAS MANIFOLD
MOUNTING AND DIMENSIONAL INFORMATION FOR THE HPB SERIES

**Manifold Dimensions**

<table>
<thead>
<tr>
<th>Header Type</th>
<th>2</th>
<th>4</th>
<th>6</th>
<th>8</th>
<th>10</th>
<th>12</th>
</tr>
</thead>
<tbody>
<tr>
<td>Standard</td>
<td>1'-6&quot;</td>
<td>3'-0&quot;</td>
<td>4'-8&quot;</td>
<td>6'-2&quot;</td>
<td>7'-10&quot;</td>
<td>9'-6&quot;</td>
</tr>
<tr>
<td>Close Space</td>
<td>1'-6&quot;</td>
<td>2'-2&quot;</td>
<td>3'-0&quot;</td>
<td>3'-10&quot;</td>
<td>4'-8&quot;</td>
<td>5'-6&quot;</td>
</tr>
<tr>
<td>Cross Type</td>
<td>Per Your Specifications</td>
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<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>U-Shape</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Manifold Components Include**

- Pipeline Relief Valve
- Control Cabinet
- Expansion Port
- Header Valves
- Pipeline Outlet 12" NPT
- Cabinet Mounting Tabs
- Wall Brackets
- Stainless Steel Lined Pigtail w/ Check Valve
- Cylinder Retaining Bar w/ Chains

**Optional Accessories**

- Tee Purges
- Pressure Switch & Remote Kit
- Mighty Pipe Coil & Fittings

---

**Manifold General Pressure and Flow Specifications**

<table>
<thead>
<tr>
<th>Gas Services</th>
<th>HPB</th>
<th>HPB2</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>PSI</td>
<td>CFH (Air)</td>
</tr>
<tr>
<td>O2, Inert</td>
<td>600</td>
<td></td>
</tr>
<tr>
<td>CO2 w/o Heater</td>
<td>50*</td>
<td>200</td>
</tr>
<tr>
<td>CO2 w/ Heater</td>
<td>35 p/Cyl</td>
<td>50 p/Cyl</td>
</tr>
<tr>
<td>HY, ME w/o FBA</td>
<td>600</td>
<td>600</td>
</tr>
</tbody>
</table>

*Recommended heater for applications requiring flow rates of more than 50 cfh.
The 610 & 620 Series is a brass Specialty Gas Pressure Differential that will automatically switch over to the standby cylinder without a loss of flow. A simple flip of the selector level resets the system after changing depleted cylinder.

**FEATURES**

- **3000 psi Maximum Inlet**
- **Panel for Wall Mount**
- **Semi-Automatic Changeover**
  Once in-use side is depleted, the reserve side will flow uninterrupted but requires a manual adjustment to change the primary gas supply
- **No Power Required**

**APPLICATIONS**

- Continuous Flow Without Power
  Maintain a continuous flow to application that require non-interrupted gas flow where power is not available
- Delivery Pressure
  Standard models up to 200 psig
- Process Analyzer
- Lasers
- Research Sample Systems

**MATERIALS**

- **Regulators**
  Chrome plated brass barstock
- **Individual Parts**
  Chrome plated brass
- **Plastic Handle**
  Ability to change delivery pressure with your hand
- **Shutoff valves**
  Brass Diaphragm

**SYSTEM INCLUDES**

- **Brass Headers**
  Brazed & tested to Min. 4500 psig
- **Flexible stainless steel pigtails**
  Check valve cylinder connection
  Choose from 4-standard lengths
- **Pipeline outlet assembly**
  Includes pipeline relief valve
- **Shutoff valves**
- **Mounting brackets**
SPECIALTY GAS MANIFOLD
MOUNTING AND DIMENSIONAL INFORMATION FOR THE 610/620 SERIES

Manifold Dimensions

See Chart for Overall Length

Manifold Components Include

- Delivery Regulator
- Pipeline Outlet
- Pipeline Relief Valve
- Header Valve
- Reset Lever
- Wall Bracket
- Expansion Port
- Stainless Steel Lined Flexible Pigtails w/ Check Valve
- Cylinder Restaining Bar with Chain

Number of Cylinders and Overall Length

<table>
<thead>
<tr>
<th>Header Type</th>
<th>2</th>
<th>4</th>
<th>6</th>
<th>8</th>
<th>10</th>
<th>12</th>
</tr>
</thead>
<tbody>
<tr>
<td>Standard</td>
<td>0'-9&quot;</td>
<td>3'-0&quot;</td>
<td>4'-8&quot;</td>
<td>6'-2&quot;</td>
<td>7'-10&quot;</td>
<td>9'-6&quot;</td>
</tr>
<tr>
<td>Close Space</td>
<td>0'-9&quot;</td>
<td>2'-2&quot;</td>
<td>3'-0&quot;</td>
<td>3'-10&quot;</td>
<td>4'-8&quot;</td>
<td>5'-6&quot;</td>
</tr>
<tr>
<td>Cross Type</td>
<td>Per Your Specifications</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>U-Shape</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

OPTIONAL ACCESSORIES

- Tee Purges
- Pressure Switches & Remote Alarm Kit
- Mighty Pipe Coil & Fittings

Manifold General Pressure and Flow Specifications

<table>
<thead>
<tr>
<th>Gas Services</th>
<th>610 PSI</th>
<th>610 CFH (Air)</th>
<th>620 PSI</th>
<th>620 CFH (Air)</th>
</tr>
</thead>
<tbody>
<tr>
<td>O2, Inert</td>
<td>125</td>
<td>600</td>
<td>600</td>
<td></td>
</tr>
<tr>
<td>CO2 w/o Heater</td>
<td></td>
<td>50*</td>
<td></td>
<td>50*</td>
</tr>
<tr>
<td>CO2 w/ Heater</td>
<td></td>
<td>35 p/Cyl</td>
<td></td>
<td>50 p/Cyl</td>
</tr>
<tr>
<td>HY, ME w/o FBA</td>
<td>600</td>
<td>600</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Recommended heater for applications requiring flow rates of more than 50 cfh.
**SPECIALTY GAS MANIFOLD**
**HDM SERIES—SPECIALTY GAS DUPLEX MANIFOLD**

The HDM series is a brass manifold that has two headers (Manual switchover to reserve). Once the in-use bank is depleted, a quick switch of the header valves activates the reserve supply.

### FEATURES
- 3000 psi Maximum Inlet
- 2" Chrome Plated Gauges
- One-piece Encapsulated Seat In Regulator
- 2 1/8" Diaphragm
- PTFE Teflon Seat
- Die Cast Bonnet
- High-Pressure Required for both side

### APPLICATIONS
- **Delivery Pressure**
  - Standard models up to 200 psig
  - Higher pressure available

- **Medium Gas Use**
  - Ability to control gas use manually without need of fully automatic switchover

- **High-Pressure Back-up**
  - For medium application typically ranging from 6-10 tanks replenished weekly

- **Safety**
  - Ability to have your gas supply in a central location

### MATERIALS
- **Regulator**
  - Chrome plated brass

- **Regulator Filter**
  - Sintered bronze inlet filter

- **Regulator Diaphragm**
  - 302 Stainless steel

- **Shutoff Valves**
  - Brass diaphragm

- **Headers**
  - Silver brazed brass & tested to Min. 4500 psig

### SYSTEM INCLUDES
- **Brass Headers**
  - Labeled and capped

- **Flexible stainless steel lined pig-tails**
  - Cylinder connections with check valve

- **Pipeline outlet assembly**
  - Includes pipeline relief valve

- **Diaphragm type valve**

- **Mounting bracket(s)**

- **Cylinder holding bar(s) and chain**

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SPECIALTY GAS MANIFOLD
MOUNTING AND DIMENSIONAL INFORMATION FOR THE HDM SERIES

Manifold Dimensions

<table>
<thead>
<tr>
<th></th>
<th>2</th>
<th>4</th>
<th>6</th>
<th>8</th>
<th>10</th>
<th>12</th>
</tr>
</thead>
<tbody>
<tr>
<td>Standard</td>
<td>0'-9&quot;</td>
<td>3'-6&quot;</td>
<td>5'-2&quot;</td>
<td>6'-10&quot;</td>
<td>8'-6&quot;</td>
<td>10'-2&quot;</td>
</tr>
<tr>
<td>Close Space</td>
<td>0'-9&quot;</td>
<td>2'-8&quot;</td>
<td>3'-6&quot;</td>
<td>4'-4&quot;</td>
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<td>Cross Type</td>
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<td></td>
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<td></td>
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<tr>
<td>U-Shape</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Optional Accessories

- Tee
- Purges
- Pressure Switch & Remote Kit
- Cylinder Restaining Bar with Chain

Manifold General Pressure and Flow Specifications

<table>
<thead>
<tr>
<th>Gas Services</th>
<th>HDM</th>
<th>HDM2</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>PSI</td>
<td>CFH (Air)</td>
</tr>
<tr>
<td>O₂, Inert</td>
<td></td>
<td>600</td>
</tr>
<tr>
<td>CO₂ w/o Heater</td>
<td>125</td>
<td>50*</td>
</tr>
<tr>
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<td>600</td>
<td>600</td>
</tr>
</tbody>
</table>

*Recommended heater for applications requiring flow rates of more than 50 cfh.

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## Specialty Gas Manifold

**HSM Series—Specialty Gas Simplex Manifold**

The HSM series is a brass manifold that has one header and does not have a reserve bank. All cylinders empty at the same time and are changed out together.

### Features
- 3000 psi Maximum Inlet
- 2" Chrome Plated Gauges
- One-piece Encapsulated Seat In Regulator
- 2 1/8" Diaphragm
- PTFE Teflon Seat
- Die cast Bonnet
- Cylinders empty simultaneously

### Applications
- **Delivery Pressure**
  - Standard models up to 200 psig
  - Higher pressure available
- **Primary Gas Supply**
  - For small application typically ranging from 2-5 tanks replenished weekly
- **High-Pressure Back-up**
  - Bulk tanks being used as primary would use a Simple to supply the reserve with minor modifications to the gas use line.
- **Safety**
  - Ability to have your gas supply in a central location

### Materials
- **Regulator**
  - Chrome plated brass
- **Regulator Filter**
  - Sintered bronze inlet filter
- **Regulator Diaphragm**
  - 302 Stainless steel
- **Shutoff Valve**
  - Brass diaphragm
- **Header**
  - Silver brazed brass & tested to Min. 4500 psig

### System Includes
- **Brass Headers**
  - Labeled and capped
- **Flexible stainless steel lined pig-tails**
  - Cylinder connections with check valve
  - Flame arresters with check valve for Acetylene model
- **Pipeline outlet assembly**
  - Includes pipeline relief valve
- **Diaphragm type valve**
- **Mounting bracket(s)**
- **Cylinder holding bar(s) and chain**

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SPECIALTY GAS MANIFOLD
MOUNTING AND DIMENSIONAL INFORMATION FOR THE HSM SERIES

Total Number of Cylinders and Overall Length

<table>
<thead>
<tr>
<th>Header Type</th>
<th>2 Cyl.</th>
<th>3 Cyl.</th>
<th>4 Cyl.</th>
<th>5 Cyl.</th>
<th>6 Cyl.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Standard</td>
<td>1'-3&quot;</td>
<td>2'-1&quot;</td>
<td>2'-11&quot;</td>
<td>3'-9&quot;</td>
<td>4'-7&quot;</td>
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<tr>
<td>Close Space</td>
<td>0'-10&quot;</td>
<td>1'-3&quot;</td>
<td>1'-8&quot;</td>
<td>2'-1&quot;</td>
<td>2'-6&quot;</td>
</tr>
<tr>
<td>Cross Type</td>
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<td>2'-1&quot;</td>
<td>2'-1&quot;</td>
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<td></td>
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</table>

OPTIONAL ACCESSORIES

- Tee Purges
- Pressure Switch & Remote Alarm Kit
- Mighty Pipe Coil & Fittings

Manifold General Pressure and Flow Specifications

<table>
<thead>
<tr>
<th>Gas Services</th>
<th>HSM</th>
<th>HSM2</th>
</tr>
</thead>
<tbody>
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<td>O2, Inert</td>
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<td>HY, ME w/o FBA</td>
<td>600</td>
<td>600</td>
</tr>
</tbody>
</table>

*Recommended heater for applications requiring flow rates of more than 50 cfh.
Flexible stainless steel lined pig-tails
Cylinder connections with check valve
Choose from 4-standard lengths
Pipeline outlet assembly
Includes pipeline Stainless Steel relief valve with 1/4” outlet assembly
Diaphragm Shutoff Valves
Stainless Steel
Gauge
Mounting brackets
Cylinder holding bar and chain

**FEATURES**

- 3000 psi Maximum Inlet
- Automatically Recognizes New Standby Cylinders when Empties are Replenished
- Standby Cylinder Bank Leak Warning
- Cylinder Flexibility
  - Uses low or high pressure cylinders
- Priority Gas Bank Switch
  - Switch Primary Priority with a flip of a Switch
- Gas System Status
  - Easily identify each Gas Bank Status with the 6-System Status LED’s
- Ability to Set Left and Right Bank Switchover points at Independent

**APPLICATIONS**

- Corrosive
  - For use with corrosive gases and/or corrosive environments
- Continuous Flow
  - Maintain a continuous flow to application that require non-interrupted gas flow.
- Lasers
  - Continuous flow for Resonator Gas Mixture
- Laboratories
  - Research or Pharmaceutical Cell Culture Growth

**MATERIALS**

- Regulators
  - Stainless Steel bar stock
- Diaphragms
  - Stainless Steel
- Enclosure
  - NEMA 4X with lockable latches
- Filter
  - Sintered Stainless Steel
- Solenoid Valve
  - Stainless Steel bar stock with stainless steel internal core with Viton® seal

**SYSTEM INCLUDES**

- Flexible stainless steel lined pig-tails
- Cylinder connections with check valve
  - Choose from 4-standard lengths
- Pipeline outlet assembly
  - Includes pipeline Stainless Steel relief valve with 1/4” outlet assembly
- Diaphragm Shutoff Valves
  - Stainless Steel
- Gauge
- Mounting brackets
- Cylinder holding bar and chain
**SPECIALTY GAS MANIFOLD**

**MOUNTING AND DIMENSIONAL INFORMATION FOR THE HPAS SERIES AUTOMATIC**

### Manifold Dimensions

![Manifold Dimensions Diagram]

### Included Manifold Components

- Pipeline Relief Valve
- Control Cabinet
- Cabinet Mounting Tabs
- Header Valves
- Expansion Pot
- Wall Brackets
- Cylinder Restaining Bar with Chains
- Stainless Steel Lined Pigtail w/ Check Valve

### Manifold General Pressure and Flow Specifications - HPAS

<table>
<thead>
<tr>
<th>Gas Services</th>
<th>PSI</th>
<th>CFH (Air)</th>
</tr>
</thead>
<tbody>
<tr>
<td>O2, Inert</td>
<td></td>
<td>600</td>
</tr>
<tr>
<td>CO2 w/o Heater</td>
<td>200</td>
<td></td>
</tr>
<tr>
<td>CO2 w/ Heater</td>
<td></td>
<td>50 p/Cyl</td>
</tr>
<tr>
<td>HY, ME w/o FBA</td>
<td></td>
<td>600</td>
</tr>
</tbody>
</table>

*Recommended heater for applications requiring flow rates of more than 50 cfh.*

### Number of Cylinders and Overall Length

<table>
<thead>
<tr>
<th></th>
<th>2</th>
<th>4</th>
<th>6</th>
<th>8</th>
<th>10</th>
<th>12</th>
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<tbody>
<tr>
<td>Standard</td>
<td>2'-0&quot;</td>
<td>4'-6&quot;</td>
<td>6'-2&quot;</td>
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<td>9'-6&quot;</td>
<td>11'-2&quot;</td>
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<tr>
<td>Close Space</td>
<td>2'-0&quot;</td>
<td>3'-8&quot;</td>
<td>4'-6&quot;</td>
<td>5'-4&quot;</td>
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<td>Cross Type</td>
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<td>4'-6&quot;</td>
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<td>U-Shape</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Per Your Specifications</td>
</tr>
</tbody>
</table>

### OPTIONAL ACCESSORIES

- Tee Purges
- Remote Alarms in either Single or Dual bank models
- Mighty Pipe Coil & Fittings

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The HPS Series is a Specialty Gas stainless steel pressure differential that will automatically switch over to the standby cylinder without a loss of flow. No power is required to operate the switchover, a simple flip of the selector level resets the system after changing depleted cylinder.

**FEATURES**

- 3000 psi Maximum Inlet
- Semi-Auto Reserve
- Powder Coated Blue Enclosure
- Panel Mounted Gauges
- No Power Required
- Optional Pressure Switch Alarm

**APPLICATIONS**

- Continuous Flow Without Power
  Maintain a continuous flow to application that require non-interrupted gas flow where power is not available
- Corrosive
  For use with corrosive gases and/or corrosive environments
- Ammonia
- Hydrogen Sulfide
- Research Grade Pure

**MATERIALS**

- **Regulators**
  Stainless steel body and fittings
- **Tubing**
  Stainless steel for regulators
  Copper for panel mount gauges
- **Regulator Filter**
  Nickel-plated sintered bronze
- **Diaphragm**
  316L stainless steel

**SYSTEM INCLUDES**

- Flexible stainless steel lined pigtails
  Cylinder connections with check valve
  Choose from 4-standard lengths
- Pipeline outlet assembly
  Includes pipeline relief valve
- Shutoff valves
- Mounting brackets
- Cylinder holding bars and chain

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SPECIALTY GAS MANIFOLD
MOUNTING AND DIMENSIONAL INFORMATION FOR THE HPS SERIES

Manifold Dimensions

Manifold Components Include

Number of Cylinders and Overall Length

<table>
<thead>
<tr>
<th>Header Type</th>
<th>2</th>
<th>4</th>
<th>6</th>
<th>8</th>
<th>10</th>
<th>12</th>
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</thead>
<tbody>
<tr>
<td>Standard</td>
<td>1'-5&quot;</td>
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<td>4'-8&quot;</td>
<td>6'-2&quot;</td>
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<td>9'-6&quot;</td>
</tr>
<tr>
<td>Close Space</td>
<td>1'-0&quot;</td>
<td>2'-2&quot;</td>
<td>3'-0&quot;</td>
<td>3'-10&quot;</td>
<td>4'-8&quot;</td>
<td>5'-6&quot;</td>
</tr>
<tr>
<td>Cross Type</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>U-Shape</td>
<td></td>
<td></td>
<td></td>
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<td></td>
</tr>
</tbody>
</table>

Cross Type

U-Shape Per Your Specifications

Manifold General Pressure and Flow Specifications

<table>
<thead>
<tr>
<th>Gas Services</th>
<th>HPS</th>
<th>HPS2</th>
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<tbody>
<tr>
<td>O2, Inert</td>
<td>600</td>
<td>600</td>
</tr>
<tr>
<td>CO2 w/o Heater</td>
<td>50*</td>
<td>50*</td>
</tr>
<tr>
<td>CO2 w/ Heater</td>
<td>35 p/Cyl</td>
<td>50 p/Cyl</td>
</tr>
<tr>
<td>HY, ME w/o FBA</td>
<td>600</td>
<td>600</td>
</tr>
</tbody>
</table>

*Recommended heater for applications requiring flow rates of more than 50 cfh.

OPTIONAL ACCESSORIES

Tee
Purges
Pressure Switch & Remote Kit
Mighty Pipe Coil & Fittings

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**Specialty Gas Manifold**

**610S/620S Series—Semi-Automatic**

The 610S & 620S Series is a Specialty Gas Stainless Steel Pressure Differential that will automatically switch over to the standby cylinder without a loss of flow. A simple flip of the selector level resets the system after changing depleted cylinder.

**FEATURES**

- 3000 psi Maximum Inlet
- Panel for Wall Mount
- Semi-Automatic Changeover
  Once in-use side is depleted, the reserve side will flow uninterrupted but requires a manual adjustment to change the primary gas supply
- No Power Required

**APPLICATIONS**

- Safety
  Ability to have your gas supply in a central location
- Corrosive
  For use with corrosive gases and/or corrosive environments
- Process Analyzer
- Lasers
- Research Sample Systems
- Gas Chromatography

**MATERIALS**

- Regulators
  Stainless Steel bar stock
- Diaphragms
  Stainless Steel
- Filter
  Sintered Stainless Steel
- Plastic handle
  Ability to change delivery pressure with your hand
- Shutoff valves
  Diaphragm type

**SYSTEM INCLUDES**

- Flexible stainless steel lined pig-tails
- Cylinder connections with check valve
  Choose from 4-standard lengths
- Pipeline outlet assembly
  Includes pipeline relief valve
- Shutoff valves
- Mounting brackets
- Cylinder holding bar and chain

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SPECIALTY GAS MANIFOLD
MOUNTING AND DIMENSIONAL INFORMATION FOR THE 610S/620S SERIES

Manifold Dimensions

Number of Cylinders and Overall Length

<table>
<thead>
<tr>
<th>Header Type</th>
<th>2</th>
<th>4</th>
<th>6</th>
<th>8</th>
<th>10</th>
<th>12</th>
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</thead>
<tbody>
<tr>
<td>Standard</td>
<td>0'-9&quot;</td>
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<td>9'-6&quot;</td>
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<tr>
<td>Close Space</td>
<td>0'-9&quot;</td>
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<td>3'-0&quot;</td>
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<td>U-Shape</td>
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<td>Per Your Specifications</td>
<td></td>
<td></td>
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</tbody>
</table>

Manifold Components Include

OPTIONAL ACCESSORIES

- Tee Purges
- Pressure Switches & Remote Alarm Kit
- Mighty Pipe Coil & Fittings

Manifold General Pressure and Flow Specifications

<table>
<thead>
<tr>
<th>Gas Services</th>
<th>610S</th>
<th>620S</th>
</tr>
</thead>
<tbody>
<tr>
<td>O2, Inert</td>
<td>600</td>
<td>600</td>
</tr>
<tr>
<td>CO2 w/o Heater</td>
<td>125</td>
<td>50*</td>
</tr>
<tr>
<td>CO2 w/ Heater</td>
<td>35 p/Cyl</td>
<td>50 p/Cyl</td>
</tr>
<tr>
<td>HY, ME w/o FBA</td>
<td>600</td>
<td>600</td>
</tr>
</tbody>
</table>

*Recommended heater for applications requiring flow rates of more than 50 cfh.
The HDMS series Specialty Gas stainless steel manifold that has two headers connected to the delivery regulator. Diaphragm style valves and CGA connections for both headers. Optional remote alarm for need to manually switch the cylinders using the headers valves.

**Features**
- 3000 psi Maximum Inlet
- 1 11/16” Diaphragm
- Encapsulated Seat
- 2” Gauge
- Large Adjust Knob
- Regulator Filter
- High-Pressure
  Required for both sides

**Applications**
- Safety
  Ability to have your gas supply in a central location
- Corrosion Fatigue
  For use with corrosive gases and/or corrosive environments
- Delivery Pressure
  Standard model 125 psig
- Medium Gas Use
  Ability to control gas use manually without need of fully automatic switch-over

**Materials**
- Diaphragm valve
  Stainless steel bar stock
- Regulator Body
  Stainless steel barstock
- Nozzle/Diaphragm
  316L Stainless steel
- Seat/Seals
  PTFE Teflon
- Valve
  Stainless steel diaphragm

**System Includes**
- Flexible stainless steel lined pigtailed Cylinder connections with check valve
  Choose from 4-standard lengths
- Pipeline outlet assembly
  Includes pipeline relief valve
- Shutoff valve
- Mounting bracket(s)
- Cylinder holding bar(s) and chain

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SPECIALTY GAS MANIFOLD
MOUNTING AND DIMENSIONAL INFORMATION FOR THE HDMS SERIES

Manifold Dimensions

Manifold Components Include

Number of Cylinders and Overall Length

<table>
<thead>
<tr>
<th>Header Type</th>
<th>2</th>
<th>4</th>
<th>6</th>
<th>8</th>
<th>10</th>
<th>12</th>
</tr>
</thead>
<tbody>
<tr>
<td>Standard</td>
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<td>3'-6&quot;</td>
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<td>6'-10&quot;</td>
<td>8'-6&quot;</td>
<td>10'-2&quot;</td>
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<tr>
<td>Close Space</td>
<td>1'-2&quot;</td>
<td>2'-8&quot;</td>
<td>3'-6&quot;</td>
<td>4'-4&quot;</td>
<td>5'-2&quot;</td>
<td>6'-0&quot;</td>
</tr>
<tr>
<td>Cross Type</td>
<td></td>
<td></td>
<td>3'-6&quot;</td>
<td></td>
<td></td>
<td>5'-2&quot;</td>
</tr>
<tr>
<td>U-Shape</td>
<td></td>
<td></td>
<td></td>
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</table>

Manifold General Pressure and Flow Specifications

<table>
<thead>
<tr>
<th>Gas Services</th>
<th>Pressure</th>
<th>CFH (Air)</th>
</tr>
</thead>
<tbody>
<tr>
<td>O2, Inert</td>
<td>600</td>
<td></td>
</tr>
<tr>
<td>CO2 w/o Heater</td>
<td>125</td>
<td>50*</td>
</tr>
<tr>
<td>CO2 w/ Heater</td>
<td>50 p/Cyl</td>
<td></td>
</tr>
<tr>
<td>HY, ME w/o FBA</td>
<td>600</td>
<td></td>
</tr>
</tbody>
</table>

*Recommended heater for applications requiring flow rates of more than 50 cfh.

Optional Accessories

- Tee Purges
- Pressure Switch & Remote Kit
- Mighty Pipe Coil & Fittings
**Specialty Gas Manifold**

**HSMS Series—Simplex Manifold**

The HSM series Specialty Gas Stainless Steel manifold that has one header and does not have a reserve bank. All cylinders empty at the same time and are changed out together.

**Features**
- 3000 psi Maximum Inlet
- 1 11/16” Diaphragm
- Encapsulated Seat
- 2” Gauge
- Large Adjust Knob
- Regulator Filter
- High-Pressure Cylinder empty simultaneously without reserve

**Applications**
- Safety
  Ability to have your gas supply in a central location
- Corrosive
  For use with corrosive gases and/or corrosive environments
- Delivery Pressure
  Standard model 125 psig
- Primary Gas Supply
  For small application typically ranging from 2-5 tanks replenished weekly

**Materials**
- Diaphragm valve
  Stainless steel bar stock
- Regulator Body
  Stainless steel barstock
- Nozzle/Diaphragm
  316L Stainless steel
- Seat/Seals
  PTFE Teflon
- Valve
  Stainless steel diaphragm

**System Includes**
- Flexible stainless steel lined pig-tails
  Cylinder connections with check valve
  Choose from 4-standard lengths
- Pipeline outlet assembly
  Includes pipeline relief valve
- Shutoff valve
- Mounting bracket(s)
- Cylinder holding bar(s) and chain

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SPECIALTY GAS MANIFOLD
MOUNTING AND DIMENSIONAL INFORMATION FOR THE HSMS SERIES

**Manifold Dimensions**

**Manifold Components Include**

- Pipeline Relief Valve
- Pressure Switch
- Delivery Regulator
- Header Valve
- Expansion Port
- Stainless Steel Lined Flexible Fittings w/ Check valve
- Cylinder Raising Bar with Chain

**Total Number of Cylinders and Overall Length**

<table>
<thead>
<tr>
<th>Header Type</th>
<th>2 Cyl.</th>
<th>3 Cyl.</th>
<th>4 Cyl.</th>
<th>5 Cyl.</th>
<th>6 Cyl.</th>
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<tbody>
<tr>
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<td>Close Space</td>
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<td>1'-8&quot;</td>
<td>2'-1&quot;</td>
<td>2'-6&quot;</td>
</tr>
<tr>
<td>Cross Type</td>
<td></td>
<td>1'-3&quot;</td>
<td></td>
<td></td>
<td>2'-1&quot;</td>
</tr>
<tr>
<td>U Shape</td>
<td>Per Your Specifications</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**OPTIONAL ACCESSORIES**

- Tee Purges
- Pressure Switch & Remote Kit
- Mighty Pipe Coil & Fittings

**Manifold General Pressure and Flow Specifications**

**HSMS**

<table>
<thead>
<tr>
<th>Gas Services</th>
<th>PSI</th>
<th>CFH (Air)</th>
</tr>
</thead>
<tbody>
<tr>
<td>O2, Inert</td>
<td>125</td>
<td></td>
</tr>
<tr>
<td>CO2 w/o Heater</td>
<td>125</td>
<td>50*</td>
</tr>
<tr>
<td>CO2 w/ Heater</td>
<td>125</td>
<td>50 p/Cyl</td>
</tr>
<tr>
<td>HY, ME w/o FBA</td>
<td>125</td>
<td>600</td>
</tr>
</tbody>
</table>

*Recommended heater for applications requiring flow rates of more than 50 cfh.*
Flexible stainless steel pigtails or ridged copper CGA check valve connections at header inlet
Choose from 4-standard lengths
Pipeline outlet assembly
Includes pipeline relief valve
Redundancy
Built-in redundant final line regulators and emergency reserve port with isolation valve
Shutoff valves

The MAC/MAC2 uses patented technology that gives you flexibility to use high-pressure cylinders on each side or a combination of high-pressure and low-pressure. Automatic leak detection will notify you if there is a loss of pressure.

**FEATURES**

- 3000 psi Maximum Inlet
- Automatically Recognizes New Standby Cylinders when Empties are Replenished
- Standby Cylinder Bank Leak Warning
- External Port
  Optional Emergency Reserve (SCMM series)
- Gas System Status
  Easily identify each Gas Bank Status
  With the 6-System Status LED’s

**APPLICATIONS**

- Hospitals
- Hospice
- Surgery Centers
- Nursing Facilities
- Acute Care Centers
- Hyperbaric Chambers
- Delivery Pressure
  - Up to— 100 psig for MAC
  - Up to— 200 psig for MAC2

**MATERIALS**

- Regulators
  - Brass bar stock
- Diaphragms
  - Fabric reinforced neoprene
- Enclosure
  - NEMA 4X with lockable latches
- Tubing
  - Stainless Steel
- Solenoid Valve
  - Dual normally open solenoid valves fail safe open during power loss

**SYSTEM INCLUDES**

- Flexible stainless steel pigtails or ridged copper
- CGA check valve connections at header inlet
- Choose from 4-standard lengths

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MEDICAL GAS MANIFOLD
MOUNTING AND DIMENSIONAL INFORMATION FOR THE MAC/MAC2 SERIES AUTOMATIC

Manifold Dimensions

Manifold Components Include

Number of Cylinders and Overall Length

<table>
<thead>
<tr>
<th></th>
<th>2</th>
<th>4</th>
<th>6</th>
<th>8</th>
<th>10</th>
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<tr>
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<td>6'-2&quot;</td>
<td>7'-10&quot;</td>
<td>9'-6&quot;</td>
<td>11'-2&quot;</td>
</tr>
<tr>
<td>Close Space</td>
<td>2'-4&quot;</td>
<td>3'-2&quot;</td>
<td>4'-0&quot;</td>
<td>4'-10&quot;</td>
<td>5'-8&quot;</td>
<td>6'-6&quot;</td>
</tr>
</tbody>
</table>

OPTIONAL ACCESSORIES

- 160 CFH CO2/N2 Heater
- Single bank remote alarm
- Strobe Alarm

Manifold General Pressure and Flow Specifications

<table>
<thead>
<tr>
<th></th>
<th>MAC (HPxHP)</th>
<th>MAC2 (HPxHP)</th>
<th>MAC (LPxHP)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>PSI CFH (Air)</td>
<td>PSI CFH (Air)</td>
<td>PSI CFH (Air)</td>
</tr>
<tr>
<td>Oxy/Inert Med Gas</td>
<td>100 50* 2500</td>
<td>100 50* 2500</td>
<td>100 50* 2500</td>
</tr>
<tr>
<td>CO2, N2 w/o heater</td>
<td>100 50* 200</td>
<td>100 50* 200</td>
<td>100 50* 200</td>
</tr>
<tr>
<td>CO2, N2 w/ heater</td>
<td>100 50 p/cyl 50 p/cyl</td>
<td>100 50 p/cyl 50 p/cyl</td>
<td>100 50 p/cyl 50 p/cyl</td>
</tr>
<tr>
<td>Nitrogen</td>
<td>2500</td>
<td>2500</td>
<td>2500</td>
</tr>
</tbody>
</table>

*Recommended heater for applications requiring flow rates of more than 50 cfh.
The MAC3/MAC4 uses the same technology that our other Automatics use, but also optimizes gas use with a built in economizer. Automatic leak detection will notify you if a there is a loss of pressure on standby cylinder bank. Includes built-in redundant final line regulators and ex-

### FEATURES

- **500 psi Maximum Inlet**
  For low-pressure cylinders only
- **Automatically Recognizes New Standby Cylinders when Empties are Replenished**
- **Standby Cylinder Bank Leak Warning**
- **Economizer**
  Ability to use excess pressure before relief to maximize gas use
- **External Port**
  Optional Emergency Reserve (SCMM series)
- **Priority Gas Bank Switch**
  Switch Primary Priority with a flip of a Switch

### MATERIALS

| Regulators | Brass bar stock |
| Diaphragm | Fabric reinforced neoprene |
| Enclosure | NEMA 4X with lockable latches |
| Economizer | Ability to use excess pressure before relief to maximize gas use |
| Solenoid Valve | Dual normally open solenoid valves fail safe open during power loss |

### SYSTEM INCLUDES

| Pipeline outlet assembly |
| Includes pipeline relief valve |
| Flexible stainless steel pigtails or ridged copper |
| CGA check valve connections at header inlet |
| Choose from 4-standard lengths |
| Redundancy |
| Built-in redundant final line regulators and emergency reserve port with isolation valve |
| Shutoff valves |

### APPLICATIONS

- Hospitals
- Hospice
- Surgery Centers
- Nursing Facilities
- Acute Care Centers
- Hyperbaric Chambers
- Delivery Pressure
  - Up to 100 psig for MAC3
  - Up to 200 psig for MAC4

### MATERIALS

- Regulators
  - Brass bar stock
- Diaphragm
  - Fabric reinforced neoprene
- Enclosure
  - NEMA 4X with lockable latches
- Economizer
  - Ability to use excess pressure before relief to maximize gas use
- Solenoid Valve
  - Dual normally open solenoid valves fail safe open during power loss

### SYSTEM INCLUDES

- Pipeline outlet assembly
  - Includes pipeline relief valve
- Flexible stainless steel pigtails or ridged copper
  - CGA check valve connections at header inlet
  - Choose from 4-standard lengths
- Redundancy
  - Built-in redundant final line regulators and emergency reserve port with isolation valve
- Shutoff valves

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MEDICAL GAS MANIFOLD
MOUNTING AND DIMENSIONAL INFORMATION FOR THE MAC3/MAC4 SERIES AUTOMATIC

Manifold Dimensions

Manifold Components Include

<table>
<thead>
<tr>
<th>Number of Cylinders and Overall Length</th>
<th>2</th>
<th>4</th>
<th>6</th>
<th>8</th>
<th>10</th>
<th>12</th>
</tr>
</thead>
<tbody>
<tr>
<td>Header</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Standard</td>
<td>2'-4&quot;</td>
<td>4'-6&quot;</td>
<td>6'-2&quot;</td>
<td>7'-10&quot;</td>
<td>9'-6&quot;</td>
<td>11'-2&quot;</td>
</tr>
<tr>
<td>Close Space</td>
<td>2'-4&quot;</td>
<td>3'-2&quot;</td>
<td>4'-0&quot;</td>
<td>4'-10&quot;</td>
<td>5'-8&quot;</td>
<td>6'-6&quot;</td>
</tr>
</tbody>
</table>

Optional Accessories

- 160 CFH CO2/N2 Heater
- Single bank remote alarm
- Strobe Alarm

Manifold General Pressure and Flow Specifications

<table>
<thead>
<tr>
<th>Gas Service</th>
<th>MAC3 (LPxLP)</th>
<th>MAC4 (LPxLP)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>PSI CFH (Air)</td>
<td>PSI CFH (Air)</td>
</tr>
<tr>
<td>Oxygen</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Nitrogen</td>
<td></td>
<td></td>
</tr>
<tr>
<td>CO2, N2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>w/o heater</td>
<td>100</td>
<td>200</td>
</tr>
<tr>
<td></td>
<td>50*</td>
<td>50*</td>
</tr>
<tr>
<td>CO2, N2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>w/heater</td>
<td>1 cyl. L/side 110</td>
<td>1 cyl. L/side 110</td>
</tr>
<tr>
<td></td>
<td>2 cyl. L/side 150</td>
<td>2 cyl. L/side 150</td>
</tr>
<tr>
<td></td>
<td>3 cyl. L/side 200</td>
<td>3 cyl. L/side 200</td>
</tr>
</tbody>
</table>

*Recommended heater for applications requiring flow rates of more than 50 cfh.
The SCMM series manifolds has one header and does not have a reserve bank. All cylinders empty at the same time and are changed out together. This is for use with any MAC Series equipment to provide further redundancy with a high-pressure emergency reserve.

**FEATURES**

- 3000 psi Maximum Inlet
- High-Pressure Only
- Meets the NFPA 99 Requirement
  When using low-pressure cylinders as a primary supply
- Pressure Switch
  Adjustable range 100-1500 psig

**APPLICATIONS**

- Safety
  NFPA 99 Required*
- Emergency Gas Supply
  Shall be at least 3 cylinders or a one day supply, whichever is larger
- High-Pressure Back-up
  Bulk tanks being used as primary would use an Simplex as the supply reserve
- Delivery Pressure
  Models up to 200 psig

<table>
<thead>
<tr>
<th>MATERIALS</th>
<th>SYSTEM INCLUDES</th>
</tr>
</thead>
</table>
| Regulator Brass bar stock
Filter Sintered bronze inlet filter
Shutoff Valves Forged Brass
Header Silver brazed brass & tested to Min. 4500 psig |
| Header Including label, cleaned and capped
Flexible stainless steel pigtailes or ridged copper
CGA check valve connections at header inlet
Pipeline outlet assembly Includes pipeline relief valve
Pressure Switch Adjustable range 100-1500 psi |
| Shutoff valve
Mounting brackets
Cylinder holding bar and chain |

*Required when using low pressure cylinders as the primary or hybrid configurations with MAC series

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MEDICAL GAS MANIFOLD
MOUNTING AND DIMENSIONAL INFORMATION FOR THE SCMM SERIES

Manifold Dimensions

Manifold Components Include

See Chart for Overall Length

Pipeline Safety Relief Valve with 12" FNPT Adapter
Pipeline Outlet Check Valve, 3/4" FNPT
Delivery Regulator
Emergency Reserve Low Pressure switch
Header Valve
Mounting Bracket
Expansion Pot
CGA Check Valve Adapters
Flexible or Rigid Pigtails
Cylinder Holding Bar with Chain

Total Number of Cylinders and Overall Length

<table>
<thead>
<tr>
<th>Header Type</th>
<th>2 Cyl.</th>
<th>3 Cyl.</th>
<th>4 Cyl.</th>
<th>5 Cyl.</th>
<th>6 Cyl.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Standard</td>
<td>1'-5&quot;</td>
<td>2'-3&quot;</td>
<td>3'-1&quot;</td>
<td>3'-11&quot;</td>
<td>4'-9&quot;</td>
</tr>
<tr>
<td>Close Space</td>
<td>1'</td>
<td>1'-5&quot;</td>
<td>1'-10&quot;</td>
<td>2'-3&quot;</td>
<td>2'-8&quot;</td>
</tr>
<tr>
<td>Cross Type</td>
<td></td>
<td></td>
<td>1'-5&quot;</td>
<td></td>
<td>2'-3&quot;</td>
</tr>
<tr>
<td>U Shape</td>
<td>Per Your Specifications</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
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</table>

Manifold General Pressure and Flow Specifications

<table>
<thead>
<tr>
<th>Gas Service</th>
<th>SCMM</th>
<th>SCMM2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oxygen, Inert Med Gas</td>
<td>2500 PSI CFH (Air)</td>
<td>2500 PSI CFH (Air)</td>
</tr>
<tr>
<td>CO2, Nitrous w/o Heater</td>
<td>100 PSI 50*</td>
<td>200 PSI 50*</td>
</tr>
<tr>
<td>CO2, Nitrous w/ Heater</td>
<td>50 p/cyl</td>
<td>50 p/cyl</td>
</tr>
<tr>
<td>Nitrogen</td>
<td>200 PSI 2500</td>
<td>2500 PSI</td>
</tr>
</tbody>
</table>

*Recommended heater for applications requiring flow rates of more than 50 cfh.

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Introducing Mighty Pipe Composite Pipe and Brass Fittings

Precise Equipment Company introduces Mighty Pipe, a five-layer composite pipe (HDPE-AL-HDPE) designed specifically for the delivery of compressed gasses in both industrial and specialty gas applications. Mighty Pipe’s aluminum core provides both strength and flexibility, while its layers of durable high density polyethylene (HDPE) plastic offers maximum protection in even the most extreme manufacturing environments.

The primary advantages of Mighty Pipe include:

- **Working Pressure** — Maximum 250 psig @ 70°F (Lower at elevated temperature)
- **Highly Resistant** — Mighty Pipe, due to its HDPE inner and outer layers, is extremely resistant to corrosion, high temperatures, and high pressure.
- **Longevity** — Service life for Mighty Pipe is estimated to be up to 50 years.
- **Quick & Simple Installation** — Light-weight and flexible, Mighty Pipe offers speed and ease of installation unmatched by traditional piping materials. Additionally Mighty Pipe can be cut quickly and cleanly allowing pipe lengths to be determined at will on site.
- **Safety Factors** — The polyethylene pipe is hygienic, toxin free, and protect against the growth of microorganisms, thus avoiding contamination. The inner wall is and remains smooth and scale free which allows superior flow performance to metal pipe of the same diameter over the lifetime of the pipe. Below 150 degrees, the pipe will not react to most acid or alkali solutions, enabling the pipe to be used in the chemical industry. The inside layer of aluminum is impermeable to oxygen and other gases.

Mighty Pipe fully meets the ASTM F1282 standard required for the use of composite pipe in compressed gas delivery, including Inert/Oxygen Mix, CO2, Nitrogen, Helium, Argon, Argon/CO2, and other gases in both industrial and specialty gas application.

In addition to providing Mighty Pipe in sizes of 1/2” (1216), 3/4” (2025), and 1” (2632), Precise Equipment Company offers a complete line of compression brass fittings, pipe cutters, reamers, lubricant, etc. Mighty Pipe fittings utilize double “O” rings for maximum seal protection.
**Technical Information & Parts List**

**Flammability Rating** – The Mighty Pipe has a special-purpose fire retardant injected during the manufacturing process which makes the high density polyethylene layer of aluminum polyethylene composite pipe reach a UL94 V-0 rating.

**Gas Service** – Inert gas, compressed air, carbon dioxide, and inert gas and oxygen mix (Maximum oxygen 15%)

**Working Pressure** – Maximum 250 psig @ 70°F (Lower at elevated temperature)

**Burst Pressure** - 1000 psig @ 70°F

**Temperature Range** - -40°C to 60°C (-40°F to 140°F)

**Thermal Conductivity** – 0.45 w/(m.k)

**Coefficient of thermal expansion** – 0.025 mm

**Bend Radius** - ≥ 5D (D = outside diameter)

**Oxygen permeability** – 0

**Coefficient of roughness** – 0.004 mm

**US and Canadian Standards** – ASTM F1282 and CSA B137.9, International standards for other countries available.

**Fittings** – Nickel plated brass for corrosion resistance finish. Mighty Pipe fittings have two O-ring for superior seal, and utilize a split ring and locking nut. Mighty Pipe fitting also incorporates a polyethylene washer located at where the fitting and composite pipe junction to isolate the aluminum inner core from the brass fitting preventing dissimilar metal corrosion.

**US Standard** – ASTM F 1974

**Pipe and Fitting Assemble** – The Mighty Pipe fitting is a compression type fitting using double O-ring seals, a Cring over the pipe and a nut that compresses the C-ring over the O-rings to create a superior seal.

**Bending Mighty Pipe** – Mighty pipe can be is easily bent by hand and will retain its shape after bending. The minimum bend radius is pipe dia. x 5.

**Mighty Pipe Support** – The Mighty Pipe clips are non-magnetic and can be mounted to virtually any surface. The pipe is secured in place by mounting clip locking tabs. Mighty Pipe should be support at a maximum of 8’ intervals.

**Pipe, Full Coil**

<table>
<thead>
<tr>
<th>Size</th>
<th>PEC Part Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>1/²&quot;, 300' Coil</td>
<td>MP-1216-300</td>
</tr>
<tr>
<td>3/4&quot;, 300' Coil</td>
<td>MP-2025-300</td>
</tr>
<tr>
<td>1&quot;, 300' Coil</td>
<td>MP-2632F</td>
</tr>
</tbody>
</table>

**Pipe, Less Than Full Coils**

<table>
<thead>
<tr>
<th>Size</th>
<th>PEC Part Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>1/²&quot;, 100' Coil</td>
<td>MP-1216-100</td>
</tr>
<tr>
<td>3/4&quot;, 150' Coil</td>
<td>MP-2025-150</td>
</tr>
<tr>
<td>1&quot;, 150' Coil</td>
<td>MP-2632HC</td>
</tr>
</tbody>
</table>

**Male Adapter**

<table>
<thead>
<tr>
<th>Size</th>
<th>PEC Part Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>1/²&quot; x 1/²&quot; NPT</td>
<td>MP-MA-1216-1216</td>
</tr>
<tr>
<td>3/4&quot; x 1/²&quot; NPT</td>
<td>MP-MA-2025-1216</td>
</tr>
<tr>
<td>1&quot; x 1/²&quot; NPT</td>
<td>MP-MA-2632-1216</td>
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</tbody>
</table>

**Elbow, Equal**

<table>
<thead>
<tr>
<th>Size</th>
<th>PEC Part Number</th>
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<tbody>
<tr>
<td>1/²&quot; Wall Mount</td>
<td>MP-EL-1216WM</td>
</tr>
<tr>
<td>1/²&quot;</td>
<td>MP-EL-1216</td>
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<tr>
<td>3/4&quot;</td>
<td>MP-EL-2025</td>
</tr>
<tr>
<td>1&quot;</td>
<td>MP-EL-2632</td>
</tr>
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</table>

**Elbow, Reducing**

<table>
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<tr>
<th>Size</th>
<th>PEC Part Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>3/4&quot; x 1/²&quot;</td>
<td>MP-ELR-2025-1216</td>
</tr>
<tr>
<td>1&quot; x 3/4&quot;</td>
<td>MP-ELR-2632-2025</td>
</tr>
</tbody>
</table>

**Tee, Equal**

<table>
<thead>
<tr>
<th>Size</th>
<th>PEC Part Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>1/²&quot;</td>
<td>MP-T-1216</td>
</tr>
<tr>
<td>3/4&quot;</td>
<td>MP-T-2025</td>
</tr>
<tr>
<td>1&quot;</td>
<td>MP-T-2632</td>
</tr>
</tbody>
</table>

**Tee, Reducing**

<table>
<thead>
<tr>
<th>Size</th>
<th>PEC Part Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>3/4&quot; x 3/4&quot; x 1/²&quot;</td>
<td>MP-TR-2025-1216</td>
</tr>
<tr>
<td>1&quot; x 1/²&quot;</td>
<td>MP-TR-2632-1216</td>
</tr>
<tr>
<td>1&quot; x 1/²&quot;</td>
<td>MP-TR-2632-2025</td>
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</table>

**Union**

<table>
<thead>
<tr>
<th>Size</th>
<th>PEC Part Number</th>
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<tbody>
<tr>
<td>1/²&quot;</td>
<td>MP-U-1216</td>
</tr>
<tr>
<td>3/4&quot;</td>
<td>MP-U-2025</td>
</tr>
<tr>
<td>1&quot;</td>
<td>MP-U-2632</td>
</tr>
</tbody>
</table>

**Union Reducing**

<table>
<thead>
<tr>
<th>Size</th>
<th>PEC Part Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>3/4&quot; x 1/²&quot;</td>
<td>MP-UR-2025-1216</td>
</tr>
<tr>
<td>1&quot; x 1/²&quot;</td>
<td>MP-UR-2632-1216</td>
</tr>
<tr>
<td>1&quot; x 3/4&quot;</td>
<td>MP-UR-2632-2025</td>
</tr>
</tbody>
</table>

**Cap**

<table>
<thead>
<tr>
<th>Size</th>
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<tbody>
<tr>
<td>1/²&quot;</td>
<td>MP-C-1216</td>
</tr>
<tr>
<td>3/4&quot;</td>
<td>MP-C-2025</td>
</tr>
<tr>
<td>1&quot;</td>
<td>MP-C-2632</td>
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</table>

**Clic Hangers**

<table>
<thead>
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<th>Size</th>
<th>PEC Part Number</th>
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<tbody>
<tr>
<td>1/²&quot;</td>
<td>MP-CLP-1216</td>
</tr>
<tr>
<td>3/4&quot;</td>
<td>MP-CLP-2025</td>
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<tr>
<td>1&quot;</td>
<td>MP-CLP-2632</td>
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**Ball Valves**

<table>
<thead>
<tr>
<th>Size</th>
<th>PEC Part Number</th>
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<tbody>
<tr>
<td>1/²&quot; Pipe to Pipe</td>
<td>MP-BV-1216PP</td>
</tr>
<tr>
<td>3/4&quot; Pipe to Pipe</td>
<td>MP-BV-2025PP</td>
</tr>
<tr>
<td>1&quot; Pipe to Pipe</td>
<td>MP-BV-2632PP</td>
</tr>
<tr>
<td>1/²&quot; Pipe to NPT</td>
<td>MP-BV-1216PT</td>
</tr>
<tr>
<td>3/4&quot; Pipe to NPT</td>
<td>MP-BV-2025PT</td>
</tr>
<tr>
<td>1&quot; Pipe to NPT</td>
<td>MP-BV-2632PT</td>
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</tbody>
</table>

**“o” Ring**

<table>
<thead>
<tr>
<th>Size</th>
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<tbody>
<tr>
<td>1/²&quot;</td>
<td>MP-O-1216</td>
</tr>
<tr>
<td>3/4&quot;</td>
<td>MP-O-2025</td>
</tr>
<tr>
<td>1&quot;</td>
<td>MP-O-2632</td>
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</table>

**Other**

<table>
<thead>
<tr>
<th>Size</th>
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<tbody>
<tr>
<td>Cutter</td>
<td>MP-CTR</td>
</tr>
<tr>
<td>Reamer</td>
<td>MP-RMR</td>
</tr>
<tr>
<td>O-Ring Lube</td>
<td>MP-LUB</td>
</tr>
</tbody>
</table>
Precise Equipment Mixers are fixed or variable ratio type that give you the performance you need without electricity, or storage tank. The PEM mixer will provide a constant delivery pressure throughout the flow range. The mixer will shut down in the event of a gas loss.

Accurate to ± 2% at full scale or ± 10% of the minor gas component, whichever is less.
(A 10% minor component will be within a ± 1% of set mixture. A 50% minor component will be accurate at ± 2%)

<table>
<thead>
<tr>
<th>Gas Types</th>
<th>Ratio</th>
<th>SCFH</th>
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</thead>
<tbody>
<tr>
<td>2 Gases</td>
<td>Fixed</td>
<td>740</td>
</tr>
<tr>
<td></td>
<td></td>
<td>1700</td>
</tr>
<tr>
<td>2 Gases</td>
<td>Variable</td>
<td>2300</td>
</tr>
<tr>
<td>3 Gases</td>
<td>Fixed</td>
<td>3400</td>
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<tr>
<td></td>
<td></td>
<td>4800</td>
</tr>
</tbody>
</table>

Can be used with both Inert Gases and Oxygen

<table>
<thead>
<tr>
<th>PEM 300/900 Series</th>
</tr>
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<tbody>
<tr>
<td>SCFH</td>
</tr>
<tr>
<td>Ratio</td>
</tr>
<tr>
<td>Argon, Carbon Dioxide</td>
</tr>
<tr>
<td>Helium Nitrogen</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>PEM “Mini Mixer”</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gas Types</td>
</tr>
<tr>
<td>Ar/CO2</td>
</tr>
<tr>
<td>Ar/O2</td>
</tr>
<tr>
<td>Ar/He</td>
</tr>
</tbody>
</table>
Single and Double outlet are the most common type of station drops and are available in either a “B” size for a hose fitting and flow meters, or a “C” size outlet for a station regulator. Maximum inlet pressure is 200 psig. Each drop comes complete with:

- Master Shut-off Valve
- Check Valve on Oxygen & Fuel Gas
- Individual Shut-off Valve on Multi Outlet Drop
- Dust cap/plug with Chain
- Labeled for Gas Service
- Drip Leg

*Complies with NFPA standards.

The potable Gas Distribution Center is used where permanent station drops are not feasible such as scrap yards, dry docks, and large construction sites.

The GDC can be configured with any combination of gases and size of station drop to meet the gas flow requirements. Each Gas Distribution Center is enclosed in a powder coated steel frame that includes lifting lugs, and an expanded metal protective top.

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Battery Alarm

<table>
<thead>
<tr>
<th>Model Number</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>RW-9V-RF</td>
<td>Nitrogen purge alarm</td>
</tr>
</tbody>
</table>

The RW-9V-RF is a combination regulator flow meter with a 9V battery operated alarm used in purging medical & process gas piping installation. Unit can be used on either high-pressure cylinders or low-pressure gas use on liquid cylinders.

The RW-9V-RF Series meets the National Fire Protection Association, Standard NFPA99, Health Care Facilities, 2005 Edition requirements in Section 5.1.10.5.5 “Nitrogen Purge”.

---

**Single Bank Alarm**

<table>
<thead>
<tr>
<th>Model Number</th>
<th>Description</th>
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</thead>
<tbody>
<tr>
<td>RW-12V</td>
<td>Single Bank Primary/Secondary Changeover Alarm</td>
</tr>
</tbody>
</table>

**Alarm for Industrial Pressure Differentials**

<table>
<thead>
<tr>
<th>Model Number</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>PDH-RW, PDL-RW</td>
<td>Single Bank Alarm &amp; (1) Pressure Switch (Preset)</td>
</tr>
</tbody>
</table>

**Dual Bank Alarm**

<table>
<thead>
<tr>
<th>Model Number</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>RWLV-12V</td>
<td>Single Bank Primary/Secondary Changeover Alarm</td>
</tr>
</tbody>
</table>

**Alarm for High Purity Pressure Differentials**

<table>
<thead>
<tr>
<th>Model Number</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>600-RW, 600S-RW, HPB-RW, HPS-RW</td>
<td>Dual Bank Alarm &amp; (2) Pressure Switch (Preset)</td>
</tr>
</tbody>
</table>

**Strobe for Fully Automatic Manifolds**

<table>
<thead>
<tr>
<th>Model Number</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>LSA-12V</td>
<td>Visual Strobe Alarm</td>
</tr>
<tr>
<td>LSA-12V-H</td>
<td>Visual Strobe Alarm with Horn</td>
</tr>
</tbody>
</table>

**Strobe for Pressure Differentials**

<table>
<thead>
<tr>
<th>Model Number</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>PDH-LSA-125, PDL-LSA-125</td>
<td>Strobe Alarm &amp; (1) Pressure Switch (Preset)</td>
</tr>
<tr>
<td>PDH-LSA-125-H, PDL-LSA-125-H</td>
<td>Strobe Alarm w/Horn &amp; (1) Pressure Switch (Preset)</td>
</tr>
</tbody>
</table>

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The automatic pipeline shutoffs were designed specifically to stop the flow of gas by emergency fire panel or emergency stop switches. Both brass or stainless models include an explosion proof normally closed solenoid valve which will fail safe closed.

**FEATURES**
- Explosion proof valve
- Fail safe closed
- Available for all gasses
- Dual panic switches
  - Low voltage wiring needed
- Available in brass or stainless
  - Depending on gas requirements
- Ability to manage loss of gas due to leaks in the pipeline

**Model Numbers**

<table>
<thead>
<tr>
<th></th>
<th>Brass</th>
<th>Stainless Steel</th>
</tr>
</thead>
<tbody>
<tr>
<td>OES1000B</td>
<td>OES1000S</td>
<td></td>
</tr>
</tbody>
</table>

**APPLICATIONS**

- **Schools/Training Centers**
  - Maintain safety for students working with different gases
- **Fail Safe Shutdown**
  - Loss of power will stop the flow of gas to the pipeline
- **Safety**
  - Ability to shut gas off to the pipeline in an emergency situation
- **Lockable Shutoff**
  - Ability to lock the switches for additional safety

**MATERIALS**

- **Enclosure**
  - NEMA 4X with mounting tabs
- **Power Cord**
  - 6ft. Power cord
- **Solenoid Valve**
  - Brass or stainless steel with explosion proof coil
- **Panic Switches**
  - Metal body with red plastic button which meets NEMA 13

**SYSTEM INCLUDES**

- **Dual Panic Switches**
  - Low voltage wiring needed
- **Emergency Stop Control**
  - Emergency shutoff models have contact points to wire to the building master fire alarm and remote stop switches.
- **Solenoid Valve**
  - Master Fire Panel Interface
## Heaters and Adaptor Block Ordering Information

### 160 CFH Model

<table>
<thead>
<tr>
<th>Model No.</th>
<th>Flow Rate</th>
<th>Outlet</th>
<th>Inlet</th>
</tr>
</thead>
<tbody>
<tr>
<td>HTR160-250</td>
<td>160</td>
<td>1/4&quot; NPTF</td>
<td>1/4&quot; NPTF</td>
</tr>
<tr>
<td>HTR160-320</td>
<td>160</td>
<td>CGA 320 Adapter</td>
<td>CGA 320 Adapter</td>
</tr>
<tr>
<td>HTR160-326</td>
<td>160</td>
<td>CGA 326 Adapter</td>
<td>CGA 326 Adapter</td>
</tr>
</tbody>
</table>

### 1000 CFH Model

<table>
<thead>
<tr>
<th>Model No.</th>
<th>Flow Rate</th>
<th>Outlet</th>
<th>Inlet</th>
</tr>
</thead>
<tbody>
<tr>
<td>HTR1000-320</td>
<td>1000</td>
<td>CGA 320 Adapter</td>
<td>CGA 320 Adapter</td>
</tr>
<tr>
<td>HTR1000-326</td>
<td>1000</td>
<td>CGA 326 Adapter</td>
<td>CGA 326 Adapter</td>
</tr>
</tbody>
</table>

### Adaptor Block

<table>
<thead>
<tr>
<th>Model No.</th>
<th>Outlet</th>
<th>Inlet</th>
</tr>
</thead>
<tbody>
<tr>
<td>HAB1000-320</td>
<td>CGA 320 Adapter</td>
<td>CGA 320 Nut/Nipple</td>
</tr>
<tr>
<td>HAB1000-326</td>
<td>CGA 326 Adapter</td>
<td>CGA 326 Nut/Nipple</td>
</tr>
</tbody>
</table>

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### Station Regulators, Flow Meter, and Pressure Switches

#### Flow Meter

<table>
<thead>
<tr>
<th>Gas Service</th>
<th>Model</th>
<th>Flow Range</th>
</tr>
</thead>
<tbody>
<tr>
<td>Argon/Carbon Dioxide</td>
<td>FM1000A</td>
<td>0-60 CFH</td>
</tr>
</tbody>
</table>

#### Station Regulators

<table>
<thead>
<tr>
<th>Gas Service</th>
<th>Model Number</th>
<th>Delivery Press. psi</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acetylene</td>
<td>SR1000R-15</td>
<td>2-15</td>
</tr>
<tr>
<td>LPG</td>
<td>SR1000Y-80</td>
<td>4-80</td>
</tr>
<tr>
<td>Oxygen</td>
<td>SR1000G-125</td>
<td>5-125</td>
</tr>
<tr>
<td>Inert</td>
<td>SR1000N-125</td>
<td>5-125</td>
</tr>
</tbody>
</table>

#### Pressure Switches

<table>
<thead>
<tr>
<th>Model No.</th>
<th>Actuation Range-psi*</th>
<th>Max Inlet Pres-psi</th>
<th>Inlet Port NPT</th>
<th>Conn. Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>PSB-1-30-600</td>
<td>30-600</td>
<td>2500</td>
<td>1/8”</td>
<td>NEMA 1</td>
</tr>
<tr>
<td>PSB-4-30-600</td>
<td>30-600</td>
<td>2500</td>
<td>1/8”</td>
<td>NEMA 4</td>
</tr>
<tr>
<td>PSB-1-100-1500</td>
<td>100-1500</td>
<td>8000</td>
<td>1/4”</td>
<td>NEMA 1</td>
</tr>
<tr>
<td>PSB-4-100-1500</td>
<td>100-1500</td>
<td>8000</td>
<td>1/4”</td>
<td>NEMA 4</td>
</tr>
<tr>
<td>PSB-1-10-150</td>
<td>10-150</td>
<td>1500</td>
<td>1/8”</td>
<td>NEMA 1</td>
</tr>
<tr>
<td>PSB-4-10-150</td>
<td>10-150</td>
<td>1500</td>
<td>1/8”</td>
<td>NEMA 4</td>
</tr>
<tr>
<td>PSB-1-5-35</td>
<td>5-35</td>
<td>1000</td>
<td>1/8”</td>
<td>NEMA 1</td>
</tr>
<tr>
<td>PSB-4-5-35</td>
<td>5-35</td>
<td>1000</td>
<td>1/8”</td>
<td>NEMA 4</td>
</tr>
</tbody>
</table>

1000, 1500, 2500 Max. psi switches have Buna-N diaphragms and have actuation range of ±1% 8000 Max. psi switches have Type 303 stainless steel piston and have actuation range of ±1.5%

*UL recognized, CSA certified, and CE approved

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Flashback Arrestors and Flashback Assemblies

### Flashback Arrestor Only

<table>
<thead>
<tr>
<th>Model No.</th>
<th>Type</th>
<th>Inlet/Outlet</th>
<th>Flow Rate (Air)</th>
</tr>
</thead>
<tbody>
<tr>
<td>FBA-STD</td>
<td>Fuel Gas (Except Propylene)</td>
<td>1” NPT (F)</td>
<td>1000 CFH @ 50 PSIG</td>
</tr>
<tr>
<td>FBA-PE</td>
<td>Propylene Only</td>
<td>3/4” NPT (F)</td>
<td>1000 CFH @ 50 PSIG</td>
</tr>
<tr>
<td>FBA-HP</td>
<td>High Pressure (Except Propylene)</td>
<td>1” NPT (F)</td>
<td>1000 CFH @ 140 PSIG</td>
</tr>
</tbody>
</table>

PEC flashback arrester assembly with relief valve meets the NFPA 51 PF device requirements in a fuel gas manifold or bulk supply application.

### Flashback Arrestor with Relief Valve

<table>
<thead>
<tr>
<th>Model No.</th>
<th>Type</th>
<th>Inlet/Outlet</th>
<th>Flow Rate (Air)</th>
<th>Relief Valve</th>
</tr>
</thead>
<tbody>
<tr>
<td>FBA-R-25</td>
<td>Acetylene</td>
<td>1” NPT (F)</td>
<td>1000 CFH @ 15 PSIG</td>
<td>25 PSIG RV</td>
</tr>
<tr>
<td>FBA-Y-75</td>
<td>LPG</td>
<td>1” NPT (F)</td>
<td>1000 CFH @ 50 PSIG</td>
<td>75 PSIG RV</td>
</tr>
<tr>
<td>FBA-PE-75</td>
<td>Propylene Only</td>
<td>3/4” NPT (F)</td>
<td>1000 CFH @ 50 PSIG</td>
<td>75 PSIG RV</td>
</tr>
<tr>
<td>FBA-HP-200</td>
<td>High Pressure</td>
<td>1” NPT (F)</td>
<td>1000 CFH @ 140 PSIG</td>
<td>200 PSIG RV</td>
</tr>
</tbody>
</table>
Pigtail Ordering Table
(pigtails are flexible stainless steel braided hose & have 3 inner cores available)

<table>
<thead>
<tr>
<th>Type</th>
<th>1st End</th>
<th>2nd End</th>
<th>Length</th>
</tr>
</thead>
<tbody>
<tr>
<td>Teflon—TF</td>
<td>4M</td>
<td>540CV</td>
<td>24&quot;</td>
</tr>
</tbody>
</table>

Part Number Example:

24” Teflon Pigtail, 1/4” NPT(M) x 540CV

Industrial

<table>
<thead>
<tr>
<th>Type</th>
<th>1st End</th>
<th>2nd End</th>
<th>Length</th>
</tr>
</thead>
</table>

Medical

<table>
<thead>
<tr>
<th>Type</th>
<th>1st End</th>
<th>2nd End</th>
<th>Length</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rigid Copper—RC</td>
<td>540</td>
<td>540</td>
<td>24”</td>
</tr>
</tbody>
</table>

Specialty Gas

<table>
<thead>
<tr>
<th>Type</th>
<th>1st End</th>
<th>2nd End</th>
<th>Length</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Type</th>
<th>1st End</th>
<th>2nd End</th>
<th>Length</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stainless Steel w/brass nut &amp; nipples—SB</td>
<td>4M, 4F, 320, 350, 540, 580, 590</td>
<td>4M, 4F, 320CV, 350CV, 540CV, 580CV, 590CV</td>
<td>24”, 36”, 48”, 72”</td>
</tr>
</tbody>
</table>

Max working pressure: 3000 PSIG

4M—1/4” NPTM
4F—1/4” NPTF
(FA)—Dry Flame Arrester with CV (Acetylene Only)

Note: Pigtails are oxygen cleaned, capped, and bagged.

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Bypass Valve Ordering Information

<table>
<thead>
<tr>
<th>Model No.</th>
<th>Size</th>
</tr>
</thead>
<tbody>
<tr>
<td>BPV1000-2</td>
<td>1/2&quot; NPT</td>
</tr>
</tbody>
</table>

Bypass valves can be installed on the outlet of any automatic manifold system. This allows shutdown of the manifold system and access to temporary gas source.

The tee purge assembly can be installed between the cylinder pigtail and header inlet of any manifold pigtail. System is purged of atmospheric contaminants after cylinder change out.

Tee Purges

<table>
<thead>
<tr>
<th>Model Number</th>
<th>Size</th>
</tr>
</thead>
<tbody>
<tr>
<td>TP1000L (Left Hand)</td>
<td>1/4&quot;</td>
</tr>
<tr>
<td>TP1000R (Right Hand)</td>
<td>1/4&quot;</td>
</tr>
</tbody>
</table>

Brass Relief

<table>
<thead>
<tr>
<th>Model</th>
<th>Inlet</th>
<th>Outlet</th>
<th>PSIG</th>
</tr>
</thead>
<tbody>
<tr>
<td>RVK-25</td>
<td>1/2&quot; NPT (M)</td>
<td>1/2&quot; NPT (F)</td>
<td>25 (Fixed)</td>
</tr>
<tr>
<td>RVK-50</td>
<td>1/2&quot; NPT (M)</td>
<td>1/2&quot; NPT (F)</td>
<td>50 (Fixed)</td>
</tr>
<tr>
<td>RVK-75</td>
<td>1/2&quot; NPT (M)</td>
<td>1/2&quot; NPT (F)</td>
<td>75 (Fixed)</td>
</tr>
<tr>
<td>RVK-200</td>
<td>1/4&quot; NPT (M)</td>
<td>1/4&quot; NPT (M)</td>
<td>200 (Fixed)</td>
</tr>
<tr>
<td>RV-30-500</td>
<td>1/4&quot; NPT (M)</td>
<td>1/4&quot; NPT (M)</td>
<td>30-500 (Adjust.)</td>
</tr>
<tr>
<td>RV-30-500</td>
<td>1/4&quot; NPT (M)</td>
<td>1/4&quot; NPT (M)</td>
<td>30-500 (Adjust.)</td>
</tr>
</tbody>
</table>

Stainless Steel

<table>
<thead>
<tr>
<th>Model</th>
<th>Inlet</th>
<th>Outlet</th>
<th>PSIG</th>
</tr>
</thead>
<tbody>
<tr>
<td>RVS-30-500</td>
<td>1/4&quot; NPT (M)</td>
<td>1/4&quot; NPT (M)</td>
<td>30-500 (Adjust.)</td>
</tr>
</tbody>
</table>