Alarmbox

To ensure continuous monitoring of cylinder contents 24hr/day

Compact
Flexible
Easy to install
Simple to use
Safe and secure

The main application for the Air Products Alarmbox is to warn the gas-user when a cylinder (or cylinders) is becoming empty, so that the gas supply is not interrupted. The Alarmbox is normally connected to pressure switches that are mounted on a gas distribution system such as a manifold or pressure regulator.

Audible and visual alarms are given when the pressure switch is activated as the cylinder pressure drops down to the set point.
Specifications

Dimensions
Control panel (WxDxH) = 380 mm x 80 mm x 310 mm
Keypad (WxDxH) = 150 mm x 30 mm x 100 mm

Weight
Control panel: 4.9 kg
Keypad: 300 g

Power supply
Current: 1.5 amp. maximum
Voltage: 240 V AC (± 10%) 50hz

Environment
Temperature range: 0 - 55°C
Location: inside building

Other features

Flexible
Up to 8 Digital Inputs
Easily extended (modular)

Easy to install
Pre-programmed
20 m of cable supplied

Safe and secure
Password protected
Each alarmbox individually tested

Simple to use
Clear LCD screen
Audible and visual alarm

Ordering Information

To order an Air Products Alarmbox, please use reference “Alarmbox”

Pressure switches suitable for your application are supplied as an option and can be mounted on manifold or pressure regulator.

For use in flammable zones, the alarmbox can be fitted with a Zener barrier protection. Anti-explosive pressure switches can also be supplied.

Please contact us for more details.
**Cylinder gas cabinet**

Air Products gas cabinets are designed and built for safe storage and supply of high-purity cylinder gases - inert, toxic, flammable, pyrophoric, corrosive, oxidising and reactive gases. Systems are designed to comply with the most stringent safety requirements.

Our cabinets are coated in epoxy paint, avoiding any corrosion. They also come equipped with an exhaust duct, to allow ventilation of the cabinet, safety glass windows, and the cabinet is lockable allowing access to a restricted number of users. The cabinets can hold between one and four gas cylinders, depending on the model.
Specifications

- Epoxy paint finish
- Exhaust: d = 150 mm
- Safety glass windows
- Lockable door

Ordering information

<table>
<thead>
<tr>
<th>Order code</th>
<th>Number of doors</th>
<th>Number of gas cylinders</th>
<th>Dimensions W x H x D (mm)</th>
</tr>
</thead>
<tbody>
<tr>
<td>E1</td>
<td>1</td>
<td>1</td>
<td>460 x 1860 x 500</td>
</tr>
<tr>
<td>E2</td>
<td>1</td>
<td>2</td>
<td>700 x 1860 x 500</td>
</tr>
<tr>
<td>E2a</td>
<td>2</td>
<td>2</td>
<td>700 x 1860 x 500</td>
</tr>
<tr>
<td>E3</td>
<td>2</td>
<td>3</td>
<td>1000 x 1860 x 500</td>
</tr>
<tr>
<td>E4</td>
<td>2</td>
<td>4</td>
<td>1200 x 1860 x 500</td>
</tr>
</tbody>
</table>

Options

Gas cabinets can either be supplied as stand-alone or as part of a fully integrated system, including regulation equipment like manifolds or customized panels. Please contact Air Products for more details.
Check Valves
Series 010

These check valves (or non-return valves) are used for unidirectional flow. They provide a simple, but effective, leak-tight closure with minimum flow resistance. They are available in brass or stainless steel, depending on the gas service.

Specifications

Material
Body: brass or 316L stainless steel
O-ring: Buna-N® or Viton®

Pressure/Temperature rating
Maximum operating pressure: 210 bar.g
Temperature range:
  Buna-N® O-ring: -23°C to +121°C
  Viton® O-ring: -23°C to +190°C
Cracking pressure: 70 mbar (1 psi)

Ordering Information

<table>
<thead>
<tr>
<th>Order Code</th>
<th>Material</th>
<th>Connections</th>
</tr>
</thead>
<tbody>
<tr>
<td>010-B-1</td>
<td>Brass</td>
<td>1/4 inch NPT male</td>
</tr>
<tr>
<td>010-B-2</td>
<td></td>
<td>1/4 inch NPT female</td>
</tr>
<tr>
<td>010-S-1</td>
<td>316L Stainless steel</td>
<td>1/4 inch NPT male</td>
</tr>
<tr>
<td>010-S-2</td>
<td></td>
<td>1/4 inch NPT female</td>
</tr>
</tbody>
</table>
Adjustable Relief Valves
Series 020

Automatic venting of gas or liquid systems protecting installations from over-pressurisation is the primary application of the Series 020 relief valve. These relief valves are selected to be used in conjunction with any of our regulators to relieve excess downstream pressure due to system malfunction. For other applications it is important to verify the suitability of the relief valve, particularly with regard to maximum flowrate.

Specifications

Material
Body: brass, 316L stainless steel
O-ring: Buna-N®, Viton® or Kalrez®

Temperature and flow rating
Temperature rating:
Buna-N® O-ring: -23°C to + 121°C
Viton® O-ring: -23°C to + 190°C
Flow coefficient: CV = 0.35

Ordering Information

<table>
<thead>
<tr>
<th>Order Code</th>
<th>Material</th>
<th>Relief Range (bar.g)</th>
<th>Connections</th>
</tr>
</thead>
<tbody>
<tr>
<td>020-B-1</td>
<td>Brass</td>
<td>0.2 to 40</td>
<td>1/4 inch NPT male</td>
</tr>
<tr>
<td>020-S-2</td>
<td>316L Stainless steel</td>
<td>0.2 to 40</td>
<td>1/4 inch NPT male</td>
</tr>
</tbody>
</table>

Note: Please specify the required relief pressure at time of ordering.

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Fax.: +44 (1270) 614170
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The stainless steel and Teflon®/stainless steel flexible hoses are designed to connect cylinders to regulators and to changeover manifolds in all types of industries: such as quality control and R&D laboratories. The flexible hoses are designed for use on a wide range of high purity compressed gases and liquified gases in maximum safety conditions.
**Specifications**

**Material**
- Inner core: 316L stainless steel or Teflon®
- Outer braid: 316L stainless steel
- Tube extension: 316L stainless steel

**Pressure/temperature rating**
- Maximum working pressure: 300 bar.g
- Testing pressure: 450 bar.g
- Temperature range: -50 °C to +200 °C

**Standard connections**
- Inlet: 1/4 inch NPT female
- Outlet: 1/4 inch NPT male

**Design Features**

Each Air Products’ high pressure flexible is individually tested, cleaned for oxygen service and provided with an anti-whip cable to provide maximum safety in the unlikely event of a serious hose failure. They are designed to be used on changeover-manifolds as well as on regulators mounted on a back plate. The flexible’s lifetime depends both on gas service and on pressurisation/depressurisation cycles’ frequency.

**Ordering Information**

- The stainless steel flexible hose is available in 1 m, 1.5 m and 3.0 m lengths.
- Teflon®/316L stainless steel flexible hose, specially designed for oxygen service, is available in 1.5 m lengths.

<table>
<thead>
<tr>
<th>Order Code</th>
<th>Material</th>
<th>Length (m)</th>
</tr>
</thead>
<tbody>
<tr>
<td>SS100</td>
<td>316L stainless steel</td>
<td>1</td>
</tr>
<tr>
<td>SS150</td>
<td>316L stainless steel</td>
<td>1.5</td>
</tr>
<tr>
<td>SS300</td>
<td>316L stainless steel</td>
<td>3</td>
</tr>
<tr>
<td>TSS150</td>
<td>Teflon®/316L stainless steel</td>
<td>1.5</td>
</tr>
</tbody>
</table>

Other connections are available. Please contact Air Products for details.
Gauges
Series VCR® and G-400

- Broad pressure range
- Brass, stainless steel or Monel®

Air Products has a wide variety of high and low pressure gauges, available in brass, stainless steel, and Monel®. These gauges can also be used individually for pressure indication in high integrity piping systems.
Specifications

Material
- G400 series: brass, 316L stainless steel or Monel®
- VCR® series: 316L stainless steel

Connections
- G400 series: 1/4 inch NPT male, bottom entry
- VCR® series: 1/4 inch VCR female, bottom entry

Dial diameter
- 64 mm

Ordering information

<table>
<thead>
<tr>
<th>Series</th>
<th>Material</th>
<th>Order code</th>
<th>Pressure range (bar.g)</th>
</tr>
</thead>
<tbody>
<tr>
<td>G400</td>
<td>Monel®</td>
<td>G402-M</td>
<td>-1 to 3</td>
</tr>
<tr>
<td></td>
<td></td>
<td>G403-M</td>
<td>-1 to 5</td>
</tr>
<tr>
<td></td>
<td></td>
<td>G404-M</td>
<td>-1 to 9</td>
</tr>
<tr>
<td></td>
<td></td>
<td>G406-M</td>
<td>0 to 100</td>
</tr>
<tr>
<td></td>
<td></td>
<td>G407-M</td>
<td>0 to 315</td>
</tr>
<tr>
<td></td>
<td>Brass</td>
<td>G400-B</td>
<td>0 to 1</td>
</tr>
<tr>
<td></td>
<td></td>
<td>G401-B</td>
<td>-1 to 1.5</td>
</tr>
<tr>
<td></td>
<td></td>
<td>G402-B</td>
<td>-1 to 3</td>
</tr>
<tr>
<td></td>
<td></td>
<td>G403-B</td>
<td>-1 to 5</td>
</tr>
<tr>
<td></td>
<td></td>
<td>G404-B</td>
<td>-1 to 9</td>
</tr>
<tr>
<td></td>
<td></td>
<td>G410-B</td>
<td>0 to 40</td>
</tr>
<tr>
<td></td>
<td></td>
<td>G406-B</td>
<td>0 to 100</td>
</tr>
<tr>
<td></td>
<td></td>
<td>G407-B</td>
<td>0 to 315</td>
</tr>
<tr>
<td></td>
<td></td>
<td>G408-B</td>
<td>0 to 420</td>
</tr>
<tr>
<td></td>
<td>316L stainless steel</td>
<td>G400-SS</td>
<td>0 to 1</td>
</tr>
<tr>
<td></td>
<td></td>
<td>G401-SS</td>
<td>-1 to 1.5</td>
</tr>
<tr>
<td></td>
<td></td>
<td>G402-SS</td>
<td>-1 to 3</td>
</tr>
<tr>
<td></td>
<td></td>
<td>G403-SS</td>
<td>-1 to 5</td>
</tr>
<tr>
<td></td>
<td></td>
<td>G404-SS</td>
<td>-1 to 9</td>
</tr>
<tr>
<td></td>
<td></td>
<td>G410-SS</td>
<td>0 to 25</td>
</tr>
<tr>
<td></td>
<td></td>
<td>G405-SS</td>
<td>0 to 40</td>
</tr>
<tr>
<td></td>
<td></td>
<td>G406-SS</td>
<td>0 to 100</td>
</tr>
<tr>
<td></td>
<td></td>
<td>G407-SS</td>
<td>0 to 315</td>
</tr>
<tr>
<td></td>
<td></td>
<td>G408-SS</td>
<td>0 to 420</td>
</tr>
<tr>
<td></td>
<td></td>
<td>G409-SS</td>
<td>0 to 600</td>
</tr>
<tr>
<td></td>
<td>VCR®</td>
<td>S-122-100</td>
<td>-1 to 7</td>
</tr>
<tr>
<td></td>
<td>316L stainless steel</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>S-122-100</td>
<td>-1 to 10</td>
</tr>
<tr>
<td></td>
<td></td>
<td>S-122-4000</td>
<td>0 to 70</td>
</tr>
<tr>
<td></td>
<td></td>
<td>S-122-4000</td>
<td>0 to 280</td>
</tr>
</tbody>
</table>

OPTIONS

- Entry at rear
- Connection 1/4 inch BSP male
- Connection 1/8 inch BSP male

Please contact us for more details.
Manual control valves of the MCV5000 series are used for low pressure gases like butane, ammonia, boron trichloride, etc. Valves are available in brass, stainless steel and Monel®. They can be equipped with a gauge to indicate the cylinder pressure.
Specifications

Material
Body: Chrome plated brass, 316L stainless steel or Monel®
Stem packing: Teflon®
Seals: metal to metal

Connections
Cylinder connection: specific to gas type
Outlet connection: 1/4 inch NPT female

Ordering information

<table>
<thead>
<tr>
<th>Order code</th>
<th>Material</th>
</tr>
</thead>
<tbody>
<tr>
<td>MCV 5001</td>
<td>Chrome plated brass</td>
</tr>
<tr>
<td>MCV 5002</td>
<td>316L stainless steel</td>
</tr>
<tr>
<td>MCV 5003</td>
<td>Monel®</td>
</tr>
</tbody>
</table>

Compression fitting on outlet (available in various sizes)
Outlet connection 1/4 inch NPT male
Inlet gauge (specific to gas type)

At time of ordering, please specify the option chosen by adding the option code as a suffix to the chosen order code.

E.g. A control valve in stainless steel (order code MCV5002) provided with an outlet connection 1/4 inch NPT male (option C) would be ordered with reference MCV5002-C.
Mounted regulators on a back plate

Cylinder regulators

This option is used for easy mounting of a cylinder regulator. The regulator is mounted on a metal back plate 250 mm x 170 mm and provided with a gas name label for clear identification. A high pressure flexible and an appropriate cylinder connection are connected directly to the regulator.

To order

This option (option M) is available with the cylinder regulators from series R400, R500, R600, R700 and R800. A wall mounted cylinder clamp and belt can also be provided to give a complete ready-to-use system. The option is ordered using the suffix -M, for example R405-M.
Mounted regulators on a back plate

Line regulators

This option is particularly useful for easy wall mounting of a line regulator. The regulator is mounted on a metal back plate 250 mm x 170 mm and provided with a gas name label for clear identification.

To order

The option is available with all line regulator series from Air Products. The option is ordered using the suffix -M, for example LR3303-M.