



Manifolds & pressure reducing sets

Providing continuous supply of medical gases

Pneumatech Medical Gas Solutions (PMGS) PureGAS™ Manifolds provide a duty or standby gas supply from two cylinder banks with automatic changeover, local status and remote indicator facility. These manifolds are suitable to supply medical gases for respiratory, clinical and surgical use in healthcare facilities.

Automatic Changeover Manifold (Electronic)



The PMGS PureGAS™ Automatic Manifolds are designed to supply the medical gas pipeline systems with a constant pressure supply via a control panel from two equal cylinder banks.

The changeover from the DUTY to the STANDBY bank of cylinders take place automatically. Automatic changeover from the DUTY to the STANDBY bank occurs at a cylinder pressure that ensures the maximum usage of the contents of the DUTY bank.

The normal operation of the changeover control depends on an electrical supply, the design of the unit ensures that in the event of an electrical supply failure, there is no disruption to the flow of gas into the medical gas pipeline system. Once the supply is restored the original running bank returns on-line.

Systems are tested and verified within our factory and come fully certified for complete peace of mind.

Cylinder Manifold Unit

The cylinder manifold unit accommodates two or more cylinders in each bank. The supplied cylinder racks are powder coated steel and securely support cylinders of varying diameters. The cylinder tailpipes have gas specific connections to the manifold header, and cylinder connections have either Bullnose (BS 341) or Pin-indexed connectors (ISO 407).

Automatic Changeover Unit

The changeover unit supplies medical gas at a constant pressure from either bank of cylinders into the medical gas pipeline system. Each unit has separate pressure regulating valves for each bank of cylinders and the control system is designed for ease of maintenance. Cylinders can be changed, or the pressure regulating valves removed for overhaul without loss of continuity of the gas supply.

The PureGAS™ manifold is protected by glass-reinforced polymer moulding.



Design Features

System flow up to 1,750 l/min at 4 bar.

Full colour, graphical display as standard.

Digital pressure sensors for accurate reading and entire gas usage in cylinders.

Average gas consumption calculation for non-liquefied gases.

Control Panel kit comprises: changeover panel, isolation and relief valve assembly, and manifold connections.

Manifold kit comprises: soldered manifold assemblies, cylinder racks, gas specific tailpipes to most international standards, cylinder restraining chains and cylinder toolkit (where appropriate).

Manifolds extensions available for system expansion.

CGA cylinder connections available on request.

Note: Cylinders are NOT included with PMGS manifolds

Gases and Services

Oxygen

Nitrous Oxide

50% Oxygen / 50% Nitrous Oxide

Medical Air (400 kPa)

Surgical Air (1,100 kPa)

Laboratory

Carbon Dioxide

Nitrogen

Easy Installation

Preinstalled test point protected by fascia panel reduces installation time. Lightweight mounting bracket simplifies installation.

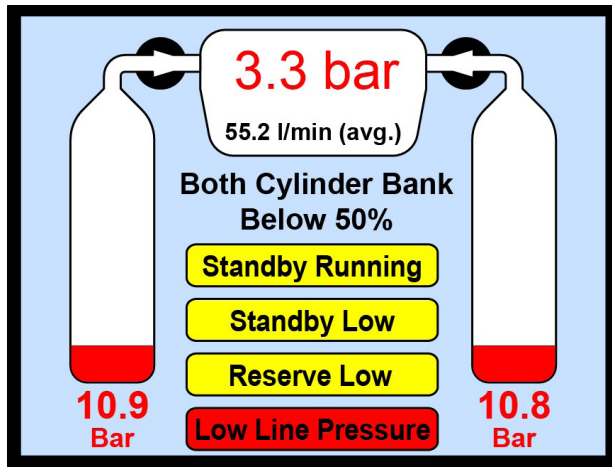
Control System

The Control System located in dedicated enclosure, providing additional protection for electronic components. Manifold status indicators, including gauges, are visible without opening the enclosure.

The manifold unit is provided with a full colour graphical display and membrane keyboard display and operates:

1. Cylinders pressure and remain volume (for non-liquefied gases);
2. Line pressure and average gas consumption;
3. Duty bank operating;
4. Duty bank empty (standby bank operating);
5. Standby bank below 10% (duty bank empty);
6. Reserve bank low;
7. Pipeline pressure fault;
8. General service warning (after 40,000 hours / 5 years).

Conditions 2, 3, 4 and 5 can be transmitted into the main alarm system via volt-free contacts. Pressure gauges are also provided to indicate cylinder bank pressures and the distribution pressure.



Design Features

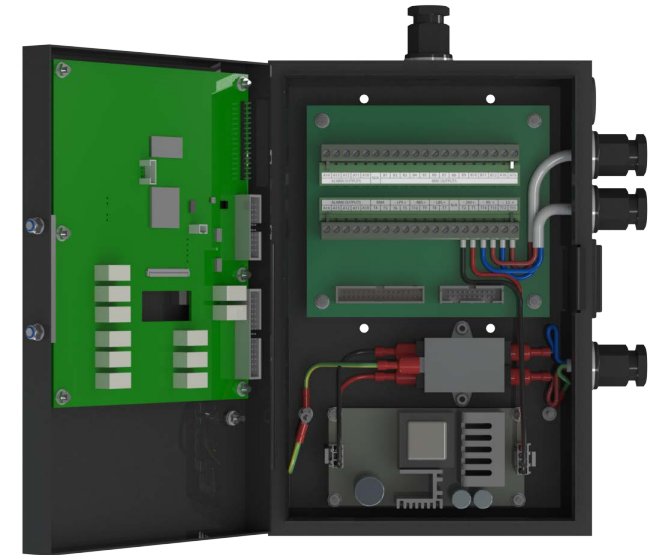
Dedicated enclosure – increased protection.

Dedicated alarm connection board for fast and safe connection.

Power supply : 90 - 285 VAC 50/60Hz – less stock, no errors.

Supporting alarms with/without line monitoring - no additional termination boards.

Dedicated service mode - no alarm transmitted.



Design Features

Digital pressure indication in both headers & line – full control.

Pressure in bar or psi – no need for unit conversion.

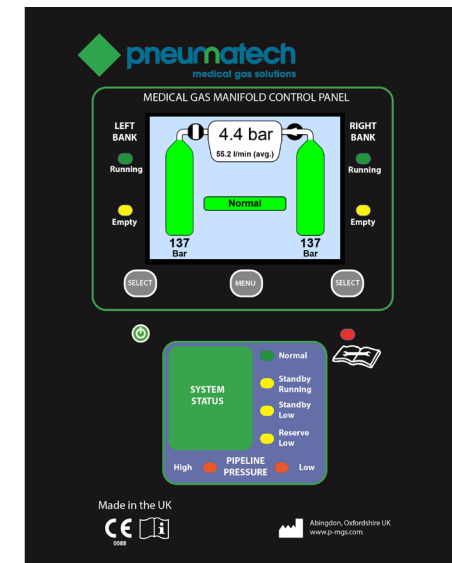
Due and reserve bank status – no doubts about remaining gas volume.

Average gas consumption – costs under control.

Embedded alarm – no additional investments.

Special service mode - no alarm transmitted.

General service warning (every 40,000 / 5 years hours) - in-time reminder, reduces risks.

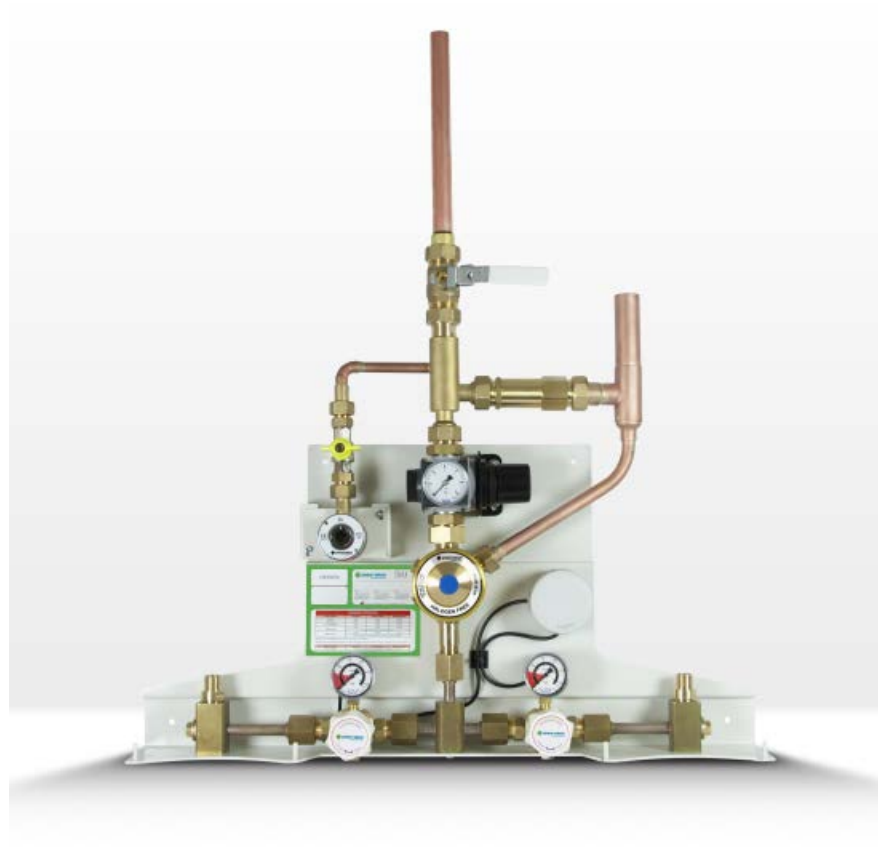


Emergency Reserve Manifold

The PMGS Emergency Reserve Manifold (ERM) provides a continuous supply of medical gas from high pressure cylinders into the medical gas pipeline system at a constant pressure.

The ERM is connected to the medical gas pipeline system via a non-return valve. One cylinder valve can be opened with the other closed as a spare. Changeover can be carried out manually when one bank of the cylinders is empty.

The ERM is typically used as a reserve or backup gas supply, usually to a high demand system.



Design

The control assembly within the ERM regulates and controls the flow of gas from the cylinder header manifold. An integrated cylinder header manifold supports high pressure cylinders in racks and provides a gas specific connection, by means of manifold headers and tailpipes to either side of the control/regulator assembly.

The PMGS emergency reserve manifold has two gauges, one to indicate the pressure in the cylinder and the other to show the regulated pressure being supplied into the medical gas pipeline system. Monitoring is provided to detect when the pressure in the cylinder has fallen to a predetermined level, with contacts for transmission to the main alarm.

Design Features

Headers are complete with gas specific cylinder connections for flexible nickel tailpipes.

Entire metal construction.

Non-return valves fitted to each tailpipe connection

East terminal unit test point fitted.

Pre-wired terminal block for alarm output to the automatic changeover manifold.

Complete manifold fitted to a wall mounting plate.

Easy Installation

Copper stub pipes for ease of connection to medical gas pipeline system using inert gas jointing procedures.

Gases and Services

Oxygen

Nitrous Oxide

50% Oxygen / 50% Nitrous Oxide

Medical Air & Surgical Air

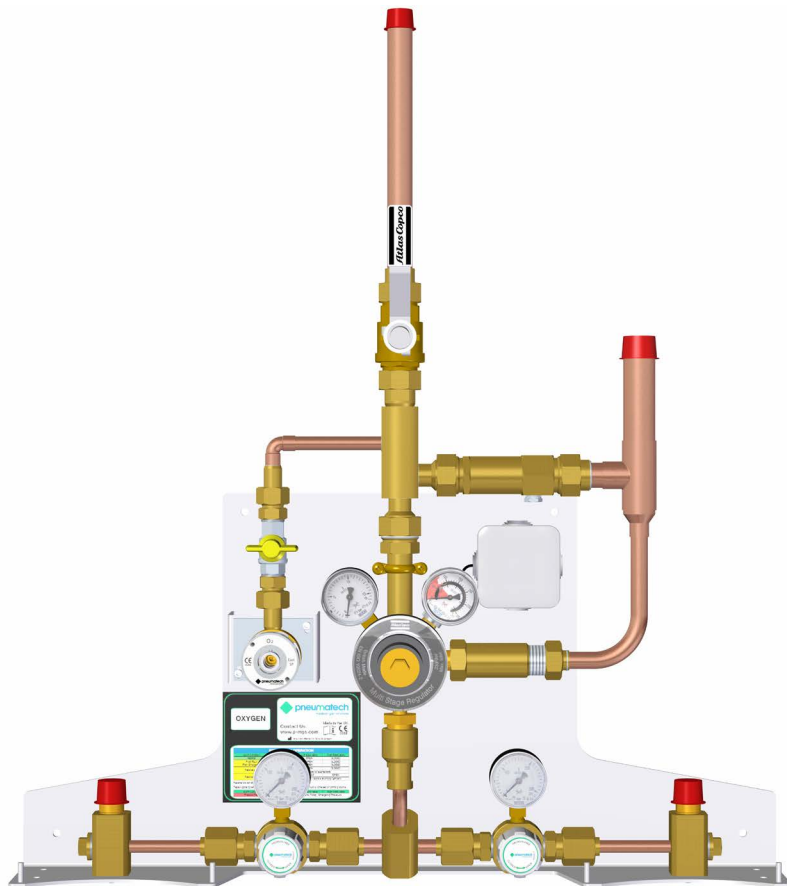
Carbon Dioxide

Nitrogen

Emergency Reserve Manifold Lite

ERM Lite

The new, simplified version of PMGS Emergency Reserve Manifold (ERM Lite) developed to be used in a small hospitals and clinics. The main difference between ERM Lite and a Standard version is its usage of a multistage regulator.



Design Features

Embedded test connection - savings on installation.

Phthalate free multistage regulator.

Pressure gauges to track pressure in each bank individually.

Standard pressure switches included to connect to alarm system (automatic manifold).

Prepiped vents - faster installation.



Pressure Reducing Sets

The PMGS Pressure Reducing Set provides reliable pressure reduction of medical gases between the supply source and the distribution system.



Simplex Pressure Reducing Set comprises an in-line pressure regulator, with downstream pressure gauge.

A pressure relief valve, capable of passing the full flow of the regulator is installed downstream of the regulator and isolation valves are fitted upstream of the regulator and downstream of the pressure relief valve. The PMGS Duplex Pressure Reducing Set has two branches as described, connected to the MGPS in parallel, in order to allow maintenance on the components of one branch while the gas flow is maintained in the other branch.

Ball valves are full bore and operate from fully open to fully closed with a quarter turn of the handle.



Design Features

- Pressure relief valves fitted as standard.
- Quarter turn ball valves fitted as standard.
- Duplex unit baseplate mounted as standard.
- Padlocks available to allow locking of the valves in both the open and closed positions.
- Easy to read pressure gauges.

Easy installation

- Baseplate mounted duplex unit.
- Simplex unit mounted via munsen rings.
- Supplied with copper stub pipes for ease of installing using inert gas jointing procedures.

Compliance

HTM02-01, HTM2022, C11 and all related BS EN ISO standards.

Service and maintenance

Throughout the UK our network of service engineers provides full Service and Maintenance support of the highest quality.

Outside the UK our fully trained distributors provide a similar local service.

One year warranty from date of manufacture, excluding components designated as service items to be replaced by the customer as part of the published service schedule.



www.p-mgs.com

The colour of the actual products may vary from the colour shown in this brochure. Slight differences in detail might appear.