



Ceiling Service systems

Ceiling service solutions for maximum flexibility

Pneumatech Medical Gas Solutions (PMGS) is a global leader in manufacturing medical gas production, delivery and control equipment. Our range of ceiling service systems provide customers with a solution for carrying critical service such as medical gas terminal units and electrical circuitry, that is required for surgical applications.

Medical applications

Mechanical ventilation and drug delivery via a nebuliser.

Surgical applications:

Pneumatic surgical tools (drilling, reaming, sawing, dissecting, tapping and screwing), Pneumatic ceiling pendant operation, Testing of medical devices and High-speed high torque motors.

Pendant systems

PMGS' Articulated arm pendant systems provide large carrying capacity for services such as medical gas, power supplies and video imaging. Pendants are tailor made specific to the customer's needs.

We provide multi-movement arms for operating theatres offering both lateral and cantilever movement. This enables critical services to be placed as close to the patient as possible.

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

Operation

The PMGS multi-movement pendant system comes with colour coded brake joints which

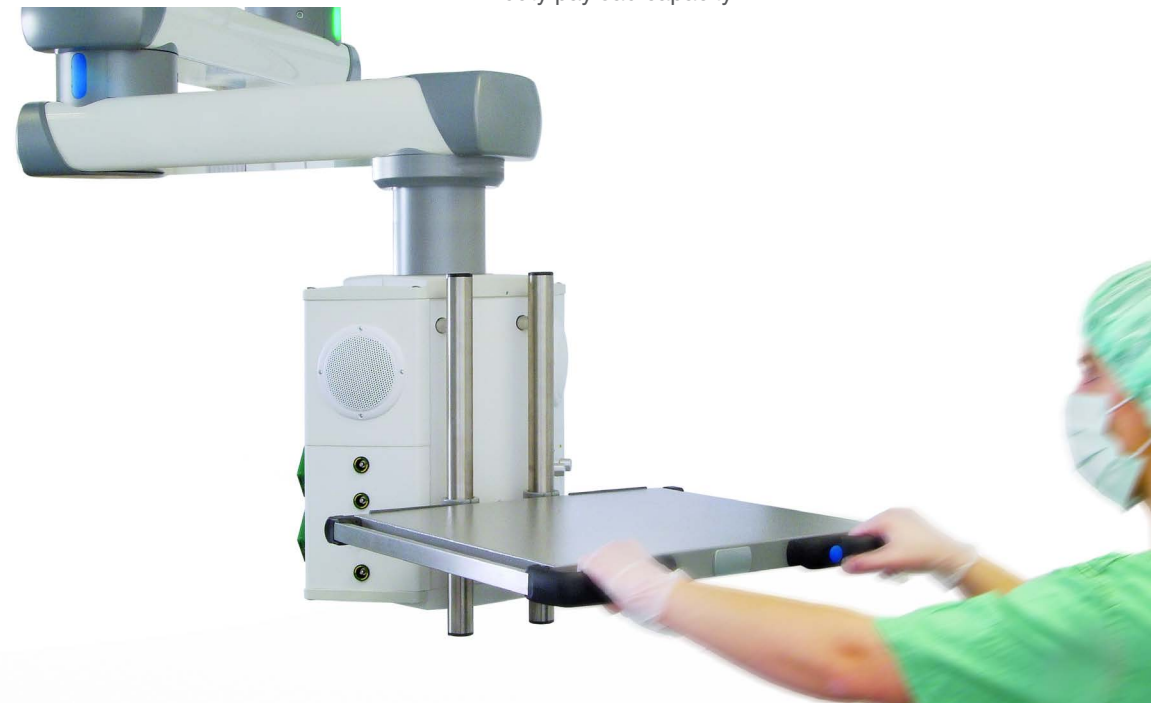
correspond to user buttons mounted in the equipment shelf, making the pendant quick and easy to manoeuvre into position.

Brakes can be either pneumatically driven or with our maintenance free electromagnetic brake system for ease of installation, especially in areas without a high pressure surgical air supply.

Additional equipment such as shelves, lighting, infusion support, lifting devices, etc can all be configured to specific demands.

System Layout

PMGS offers an array of arm lengths. These range from 600mm to 1200mm and can be supplied as solo or dual arm arrangements for maximum flexibility. Both lateral and cantilever arm options are available. All arms can be supplied with a standard or heavy duty payload capacity.



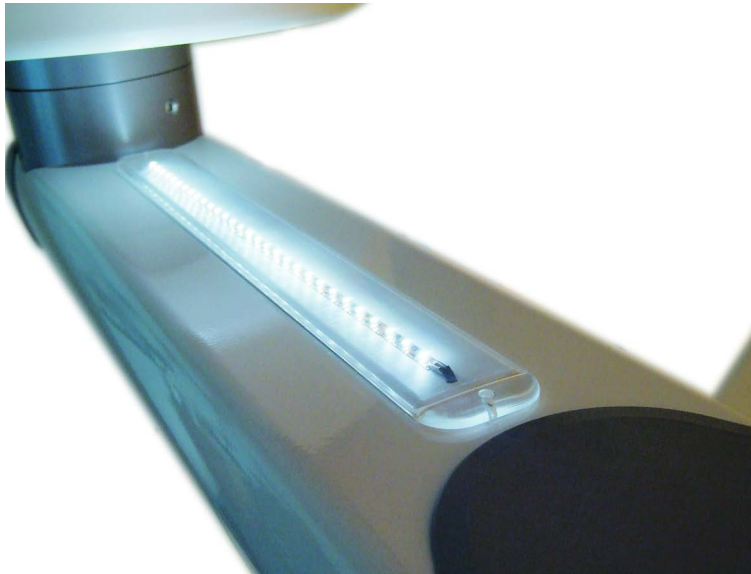
Critical care

For highly demanding areas such as intensive therapy/care units (ITU, ICU), coronary care units (CCU), resuscitation, etc our tandem heavy duty pendant systems can be used. Utilising heavy duty arms load carrying capacity is maximised. These pendant systems are specifically designed to carry a vast array of equipment such as monitoring equipment, infusion support as well as including dual service heads. Our smart service head design means we can add service carrying modules only as needed, providing an ergonomic solution. This means the service head can be expanded to include all the electrical services highly demanding application requires.

Tandem pendant systems are confirmed with a wet and dry side to help manage the large amount of equipment used in these patient critical applications.

For international markets, we offer electrical sockets and medical gas terminal units to almost all know norms.

- **Easy to use** – User brake control buttons are colour coded and correspond with a brake joint.
- **Flexibility** – Heavy duty and standard duty arms from 600mm to 1200mm.
- **Movement** – Heavy duty arms provide 330° rotation, standard duty arms provide 340° rotation and service heads provide 340° rotation.
- **Compliance** – Pendants are CE marked to the medical device directive.



Lighting Solutions

PMGS pendant systems can be equipped with various lighting solutions to assist with room ambience and patient lighting.

Pendant arms can be supplied with integrated room lighting while the service head can be provided with an integrated dimmable LED for low level floor lighting - providing a safe environment for staff while not disturbing the patient.

Integrated Sound System

Our service head can be equipped with an integrated audio system approved for use in OR and ICU - the world's first.

Play your music via a choice of iPod, iPhone or other MP3 players by placing the device into the docking station and operate directly with the infrared remote control.

Great sound quality is provided through four speakers in the service head or via a ceiling mounted spherical speaker.

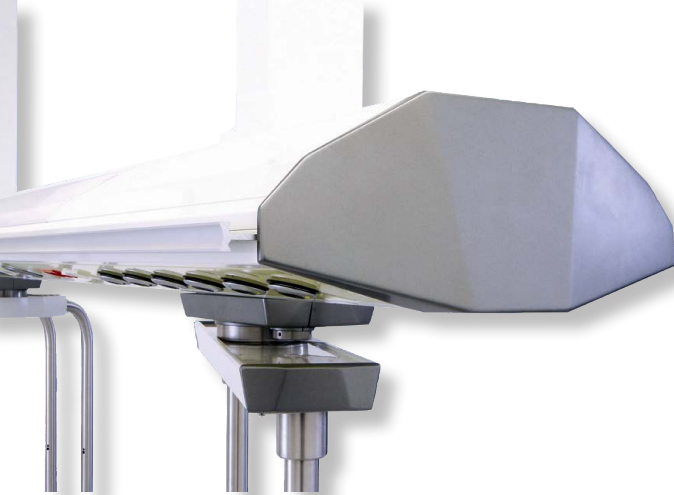
The control surface of the sound system is made with an antimicrobial material which is resistant to cleaning agents.

Compliance

The pendant system is manufactured according to a quality management system compliant to ISO 13485. Moreover, the system is designed following international regulations, including Medical Device Directive MDD 93/42/EEC. The pendant system exceeds requirements of demanding standards, such as:

- BS EN ISO 60601-1
- ISO 11197
- ISO 7396-1
- HTM 02-01
- HTM 2022





Single or Double Sided Housing



Ergonomic Mounting Solutions



Equipment Gliders

Intensive Care Beam

Universal Solution

The PMGS Intensive care beam system provides clear organisation of the workplace, increases patient safety and eases the workload of the user. Beam systems are particularly suitable for intensive care and recovery applications.

- Easy access to electrical and medical gas services;
- Lighting options available;
- Glider system for up to four height adjustable equipment trays, for up to 50kg payload;
- CE (carrier with electrics) Glider system supplied with electrical services at a more convenient working height and integrated cable management system within the trays.

Intensive care beam systems are individually configured to provide maximum flexibility within your workplace.

Specifications:

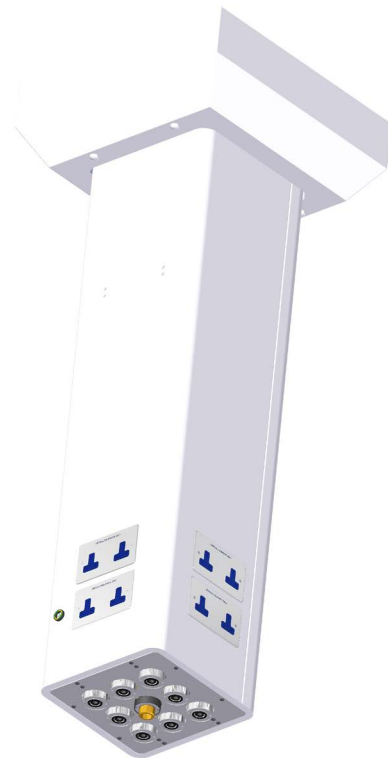
- 2,200mm, 2,800mm, 3,100mm and 3,500mm lengths;
- Space efficient housing, single or double sided;
- Fixed or moveable gliders;
- Standardised rail system which can be positioned as needed.

Ceiling Columns

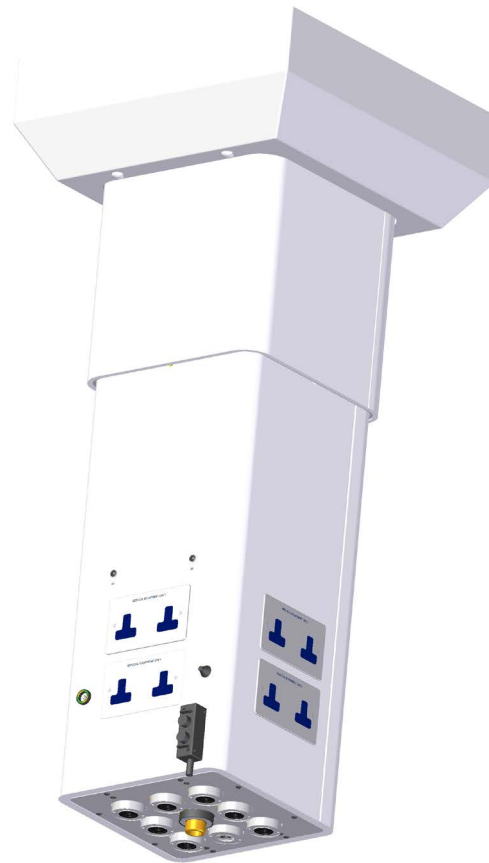
The PMGS ceiling column can be provided as a fixed rigid type or a height adjustable retractable type - depending on the needs of the user.

Both models are provided to a specific length suitable to provide 2,000mm underneath clearance for the safety of the user.

Rigid units are of fixed length whereas the retractable units provides 300mm of vertical movement. Retractable columns are operated by the easy to use pneumatic hand controller, positioned on the bottom of the column.



Rigid Type



Retractable Type

Compliance

- HTM 02-01
- HTM 2022
- C11
- MIEGEN
- BS EN ISO 11197
- BS EN ISO 15908 and 5359
- CE marked to MDD 93/42/EEC

Configured for your needs

The Pneumatic ceiling column is individually configured for the workplace.

Services:

- Up to 9 medical gas terminal units;
- Zeus SP or East SP BS medical gas terminal units as standard - other norms available on request;
- Up to 4 twin electrical sockets as standard
- Double banked option provides up to 8 twin sockets;
- Equipotential earth sockets;
- RJ45 data outlets and other ELV services on request.

Flexible Pendants

Simple and functional

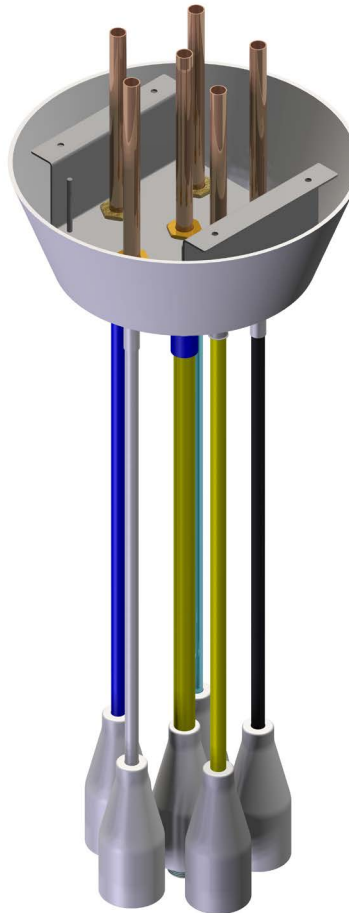
Flexible pendants provide a simple but effective solution where only medical gases are required. These products are often used to compliment the larger multimovement type pendant systems.

All medical gas hose assemblies are factory tested and manufactured to BS EN ISO 15908 and BS EN ISO 5359. Hoses are colour coded in line with HTM02-01.

Hose assemblies are provided complete with NIST connections on either side to ensure quality control - no crimping processes need to be undertaken on-site.

Services:

- Oxygen
- Nitrous Oxide
- 50% Oxygen / 50% Nitrous Oxide
- Air 400 kPa (4 bar)
- Air 700 kPa (7 bar)
- Medical Vacuum
- AGSS
- Nitrogen
- Carbon Dioxide



Ceiling Service Kits

The PMGS ceiling service kit includes a degreased copper to brass NIST connection complete with an internal check valve, for ease of connection and medical gas hose maintenance or installation.



Hose Assemblies

The Pureline medical gas hose assembly is installed within all moveable ceiling service devices such as an articulated arm pendant, retractable ceiling column and flexible pendant.

Materials are phthalate-free to prevent leeching and static dissipation is achieved by using an ESD material which prevents the risk of static build up.

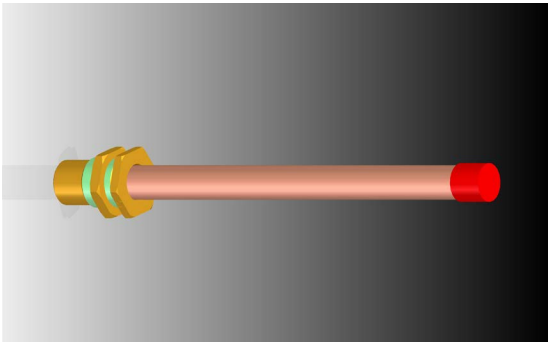
Oversized hose bores for surgical air minimise pressure losses, providing higher flow rates required for precision and demanding surgical tools. Vacuum hose assemblies and AGSS hoses are also large bore to help reduce pressure drop.

Pureline hose assemblies can be made to any length suitable for installation in OEM pendant systems, with multiple NIST options such as female, male, straight or 90° connection.

All hoses are colour coded to HTM02-01 standards.

Compliance:

- HTM 02-01, HTM 2022, C11
- BS EN ISO 11197
- BS EN ISO 15908 and 5359
- CE marked to MDD 93/42/EEC



Hose Specifications

Gas Type	Nominal Dimensions
Oxygen	6.7 mm ID, 12.7 mm OD
Nitrous Oxide	6.7 mm ID, 12.7 mm OD
50% Oxygen / 50% Nitrous Oxide	6.7 mm ID, 12.7 mm OD
Air 400 kpa (4 bar)	6.7 mm ID, 12.7 mm OD
Air 700 kpa (7 bar)	8.0 mm ID, 14.0 mm OD
Vacuum	8.0 mm ID, 14.0 mm OD
Nitrogen	8.0 mm ID, 14.0 mm OD
Carbon Dioxide	6.7 mm ID, 12.7 mm OD
AGSS	12.5 mm ID, 19.0 mm OD

Gas Type	Colour Heat Shrink	
Oxygen	White	White
Nitrous Oxide	Blue	Blue
50% Oxygen / 50% Nitrous Oxide	White/Blue	Clear
Air 400 kpa (4 bar)	Black	Black/ White
Air 700 kpa (7 bar)	Black	Black/ White
Vacuum	Yellow	Yellow
Nitrogen	Black	Clear
Carbon Dioxide	Grey	Clear
AGSS	Yellow	Yellow/Blue

Ceiling Service Systems

Key Points

Factory tested and certified.

Bespoke design offering flexibility.

Easy to install.

Services to UK & all major norms.

User-friendly operation.

Large range of options.

Maintenance free bearings and brake system.

Easy installation

Pre-piped and pre-wired systems.

Equipment set-up can be performed on site.

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.

Comprehensive one-year warranty and technical support.

Compliance

Medical Device Directive MDD 93/42/EEC.

ISO 13485; ISO 11197, ISO 7396-1, ISO 60601-1.

HTM 02-01 & HTM 2022.



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.