

# Medical Engineering Services Ltd

## Company Profile



### Mission Statement

Medical Engineering Services Limited provides a range of medical gas pipeline system (MGPS) services to the NHS and Private Healthcare industry. Our aim is to work closely with your management team and staff, assessing and assisting in maintaining system compliance to ensure patient and staff safety.



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## Authorising Engineer Services



Our qualified Authorising Engineer in accordance with chapter 7 of HTM02-01, Medical Gas Pipeline Systems (MGPS), has specialist knowledge of MGPS, for which your Authorised Person(s) (MGPS) will assume responsibility on appointment. As an independent AE appointed by your management team our service will be to performing assessments of your Authorised Person(s) (MGPS), recommend to your Executive Manager that the AP is able to be appointed in writing. Our AE will work with your team providing ongoing technical support. Elements provided for this service include:

### A – Authorising Engineer Initial Site Assessment

Initial site assessment is one day on site at the start of the contract to assess the following:

- Current site systems overview assessment
- Documentation overview
- Staff level and MGPS Contractor information review
- Initial assessment report
- Ongoing annual technical phone and email support (office hours)

This provision consolidates the relationship and information required to provide support to the APs and will be required at the start of any contract where AP assessments are not immediately due.

### B – Authorising Engineer AP Assessments

Your Authorising Engineer will visit your site and spend some time with the Senior/Lead AP reviewing site documentation and the site systems, time will then be spent with each of the remaining AP's (MGPS) to conduct their assessments. A formal report and letters will be drafted off site and sent in to the senior/lead AP for each AP. If required and included APs will be assessed on additional sites for familiarisation to be signed off for those sites.

The programme would involve:

- Completion of a scenario and personal profile prior to meeting and discussion.
- MGPS Documentation review (Permits, As-fitted Drawings, Specifications etc).
- Assessment of the individuals training certificates.
- Tour of site to assess AP site knowledge with verbal assessment “what if, what next” situations.
- Review and debrief
- Forward letter of recommendation and certificate of appointment to Chief Exec for counter-signature/ final approval.



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#### C – AE Annual Site Audit

The annual system review will verify procedures and ensure documentation and system controls are in place. An annual one-day site audit together with a brief report will be completed to include:

- Site systems overview assessment
- Documentation overview
- Staff level and MGPS Contractor information review
- Annual audit report
- Ongoing annual technical phone and email support (office hours)

#### D - Additional Consultancy Days

Additional consultation is a provision that may be required from time to time, a provision for a number of day can be added to the AE service for such occasions and invoiced as and when used.

Items may include:

- Additional on-site visits
- Systems and design verification
- Project meeting attendance
- Medical gas committee meeting attendance
- Other medical gas consultancy as required

### Drawings, Design & Specifications

#### **Drawing Services**

A vital requirement for your APs to be able to manage your MGPS safely and efficiently, especially during shutdowns and emergencies.

As a requirement of HTM02-01 and the Pressure System Safety Regulations, up-to-date drawings and records are required. We can provide some or all of the following to enhance and complete your drawings, or start completely from scratch:

- Systems survey, mark-up and update existing drawings
- Full site survey and production of As-Fitted Drawings
- Produce Schematic Drawings
- Produce Isometric Drawings, Flow and Pressure drops
- Apply “Traffolyte” engraved labelling to each AVSU and accessible line valve and compile a valve log

MGPS Drawings will be completed using industry standard blocks and symbols, contain the required details, be suitable layered and where required valves will be renumbered into one style and a complete valve log produced. Traffolyte style engraved labelling can be fixed to every AVSU if required.



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## Design & Specifications

We can provide design or validation of design services to ensure your system meets the current HTM02-01 and clinical needs. This can include some or all but is not limited to the following:

- Site survey for siting of VIE or new Plant
- Compound, Plant and Manifold room requirements
- MGPS Flow calculations and pipe sizing
- Source equipment sizing and specification
- Main, Ready to use and Local cylinder storage
- Installations and maintenance requirements

## Compliance Audit & Risk Assessment (CA/RA)



Before upgrading, adding to, modifying your MGPS or if you have inherited an existing system, our compliance audit and risk assessment services will detail all aspects of your MGPS that requires attention. The benefit of our full compliance audit allows a holistic approach to plan and schedule upgrades that will optimize your current system and reduce unnecessary spend.

CA/RAs can be tailored to your requirements full, partial, source equipment only or specific areas, call for more details.

Executive management and boards are under increased scrutiny from a range of stakeholders who are looking for assurance that internal controls are in place, to ensure adherence with laws and regulations, reducing the risks associated with non-compliance.

To address this, some organisations are implementing a regulatory compliance framework. This involves developing and establishing a compliance methodology, policies, procedures and a training programme. The benefits to this include:

Reduce corporate oversight and guidance for compliance activities,  
Improved efficiencies and effectiveness,  
Increased employee awareness of regulatory compliance requirements and issues, and  
the minimisation or mitigation of legal, reputational, or financial risks.

Whilst the compliance function plays a second line of defence role within corporate governance, it also has a place in the first line of defence for its own activities with ownership, responsibility and accountability for directly assessing, controlling and mitigating risks.



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## MGPS Consultancy



Additional consultancy for MGPS can be provided as required from time to time. This can cover a variety of requirements and situations some of which are detailed below, items may include:

- Additional on-site visits
- AP (MGPS) for new construction or additions
- Witnessing MGPS commissioning tests
- Additional AP (MGPS) assistance on site for large projects or shutdowns
- Systems and design verification
- Project management
- Project meeting attendance
- Medical gas committee meeting attendance
- Other medical gas consultancy as required

## Designated Nursing Officer (DNO) Training



The DNO is the hospital Senior Nurse Manager, a Senior Nurse Manager or the Senior (night) Nurse in charge of a ward, with whom the AP-MGPS liaises on any matters affecting the MGPS.

For the purposes of MGPS work at ward level, the Senior Nurse Manager, will have jurisdiction over most MGPS work. This will include all planned and emergency local work in normal working hours.

In the event of a planned interruption involving more than one ward, e.g. for a major shutdown, the DMO will be consulted. The person assuming this responsibility will liaise with other clinical staff as necessary.

This training provides the essential training for department managers and nurses in charge of a ward or department, as required by HTM02-01 and the HSWA 1974, to ensure the safe operation and use of their medical gas systems and emergency actions

- Either 1 x ½ day session or 2 x ½ day sessions in the same day
- Up to 20 delegates per session (room size permitting)
- Theory, Demonstration, \*Group Workshop and Test
- Contents:
  - MGPS basic principles
  - Roles and responsibilities
  - Reporting faults, cylinders, alarms, piped system
  - Equipment requirements and proper use
  - \*Permit to work (PTW) system, isolations and contingency planning
  - Emergency situations and operational policy
  - Anaesthetic gas scavenging systems
  - Certificate of completion issued



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## Cylinder Storage and Optimisation



Having the right level of cylinder is a fine balance between day to day use, emergency stock, cylinder safety and rental costs. Our cylinder optimisation service looks at all these aspects and gives recommendations to have the right stock, stored safely in the right place and have the right procedure in place to be able to react to emergency situations. We will look at the following elements:

- The level of cylinder usage
- The storage areas
- Ordering, administration and delivery
- Cylinder type, quantity and use on wards
- Cylinder safety, security and compliance of accommodation
- Product Storage and Segregation
- Racking and supports

## Policies and Procedures

It is essential that every site has a functional operational policy for medical gas pipeline systems as detailed in HTM02-01. The sample operational policy in the HTM forms a good basis but lacks the specific detail of your systems and individual operational considerations. Our service is to prepare your operational policy to meet your needs and the needs of your stakeholders. Where required we can also assist in the implementation of the policy. We would:

- Visit site to gather your local system details
- Meet with stakeholders to determine site responsibilities
- Review other documentation you have to ensure the policy fits
- Draft a policy and procedural document that incorporates emergency actions etc for you to review and have signed off
- Optional assistance presenting the policy to the stakeholders to assist implementation

Note: If you have a policy in place we can review and give recommendations or review and modify as required.



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## Equipment Supplies

Along with the services offered by Medical Engineering Systems we can also supply the following equipment on request. It may just be a one off purchase where you don't want to set up a new supplier of ongoing supply of goods.

- Cylinder trolleys
- Cylinder racking
- Cylinder Cages and Stores
- SOT
  - Flowmeters
  - Regulators
  - Suction controllers
  - Hoses
  - etc.
- MGPS Test Equipment
  - Medical Gas Test & Commissioning Kit (Analogue or Digital)
  - Flow Rate Pressure Drop
  - AGSS Test Kits
  - Anti-Confusion Probes & NIST
  - Particulate and Purging Test Kit
  - Pressure Drop Test Kit
- Exposure to Waste Anaesthetic Gas Personal Monitoring
  - Nitrous Oxide Personal Monitor
  - Gas Anaesthetic Agent Personal Monitor