

MESA

MEDICAL ENGINEERING SYSTEMS LIMITED

Planning for a secure future

③ Training Brochure

HTM02-01 Medical Gas Pipeline Systems

Training@mesystems.co.uk

www.mesystems.co.uk

Mission Statement

Medical Engineering Systems 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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Authorised Person (MGPS) Training

The Authorised Person courses are ideal for estates officers and engineers looking to progress their knowledge and understanding of Medical Piped Gas Systems. As required to HTM02-01 standards, Authorised Persons (MGPS) should receive training every three years, further to their initial AP training.

The Authorised Person (MGPS) courses cover all aspects of MGPS as required to HTM02-01 standards. Subjects covered during the course includes:

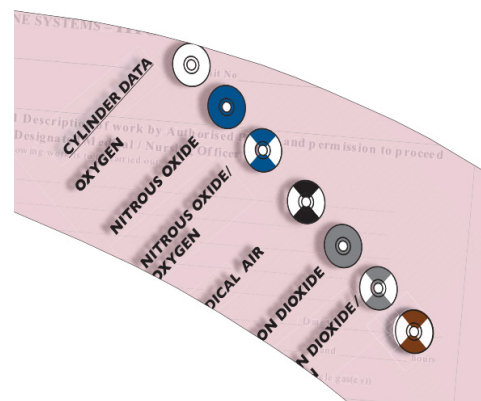
- Duration: 4.5 days
- Bespoke on site for 6 to 12 delegates per session (or join one of our courses)
- Theory, Demonstration, Group Workshop *Practical hands on and Test
- Content:
 - MGPS basic principles
 - Statutory obligations and safe systems operations
 - MGPS design and installation requirements
 - Structure and management of the permit-to-work system
 - Supervision of the Competent Person's (MGPS) work and management of MGPS contracts
 - MGPS equipment performance requirements (plant and pipeline)
 - Technical reporting including system capacities/limitations, upgrading requirements/equipment replacement, system compliance
 - MGPS documentation
 - Emergency procedures
 - MGPS operational policy preparation, implementation and monitoring
 - MGPS testing and quality control requirements
- Course workshop and exercises will consolidate the course learning
- There will be a multi-choice test to conclude the training
- Successful delegates will receive certification

*Practical hands on available at MES dedicated training centre or where spare equipment is available on site.



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Part B: Operational management



Authorised Person Refresher (MGPS) Training

The Authorised Person Refresher course is for estates officers and engineers looking to refresh their knowledge and understanding of Medical Piped Gas Systems. As required to HTM02-01 standards, Authorised Persons (MGPS) should receive training every three years, further to their initial AP training.

The Authorised Person (MGPS) Refresher course cover all aspects of MGPS as required to HTM02-01 standards. Course content covered includes:

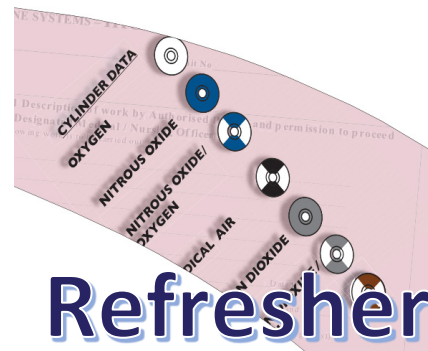
- Duration: 2.5 days
- Bespoke on site for 6 to 12 delegates per session (or join one of our courses)
- Theory, Demonstration, Group Workshop *Practical hands on and Test
- Content:
 - MGPS basic principles
 - Statutory obligations and safe systems operations
 - MGPS design and installation requirements
 - Structure and management of the permit-to-work system
 - Supervision of the Competent Person's (MGPS) work and management of MGPS contracts
 - MGPS equipment performance requirements (plant and pipeline)
 - Technical reporting including system capacities/limitations, upgrading requirements/equipment replacement, system compliance
 - MGPS documentation
 - Emergency procedures
 - MGPS operational policy preparation, implementation and monitoring
 - MGPS testing and quality control requirements
- Course workshop and exercises will consolidate the course learning
- There will be a multi-choice test to conclude the training
- Successful delegates will receive certification

*Practical hands on available at MES dedicated training centre or where spare equipment is available on site.



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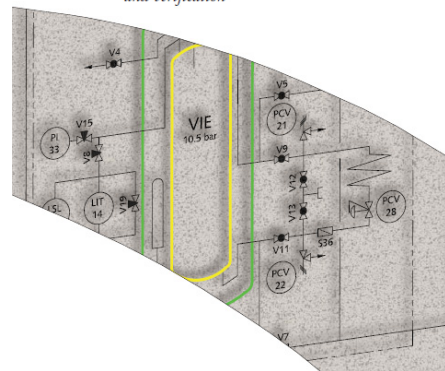
Competent Person Training (Maintenance)

This training course is ideal for estates engineers and sub-contractor engineers who require the knowledge and understanding of Medical Piped Gas Systems, to carry out PPM, servicing and repairs to the MGPS. As required to HTM02-01 standards, Competent Persons (MGPS) should receive repeat training every three years.



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*Part A: Design, installation, validation
and verification*



The Competent Person (MGPS) Maintenance course covers all aspects of MGPS as required by HTM02-01 and the HSWA 1974, to ensure the continued safe operation and use of medical gas pipeline systems.

- Duration: 2.5 days
- Bespoke on site for 6 to 12 delegates per session (or join one of our local courses)
- Theory, Demonstration, Group Workshop *Practical hands on and Test
- Content:
 - Introduction to HTM-02
 - Medical Gas Pipeline Systems Overview
 - Gas & Cylinder Safety
 - Manifold Systems
 - Air & Vacuum Systems
 - AGSS Systems
 - Terminal Units, Hoses, Pendants & Valves
 - Medical Gas Alarms
 - Testing of Medical Gas Pipeline Systems
 - Permit-to-Work
 - Medical Gas Pipeline Systems Maintenance

- Course workshop and exercises will consolidate the course learning
- There will be a multi-choice test to conclude the training
- Successful delegates will receive certification

*Practical hands on available at MES dedicated training centre or where spare equipment is available on site.

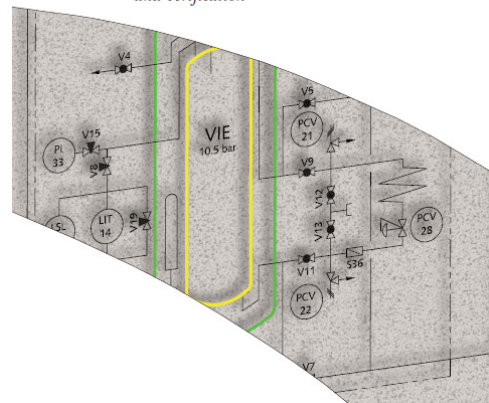
Competent Person Training (Installation)

The CP Installation course is ideal for technicians and engineers who require training on the Installation of Medical Gas Pipeline Systems. As required to HTM02-01 standards, Competent Persons (MGPS) should receive training every three years.



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*Part A: Design, installation, validation
 and verification*



The Competent Person (MGPS) courses cover aspects of installation techniques (required to HTM02-01 standards) including supply equipment, terminal units and an overview of Medical Gas Systems. Subjects covered during the course includes:

- Duration 2 full days
- Bespoke on site for 6 to 12 delegates per session (or join one of our courses)
- Theory, Demonstration, Group Workshop *Practical hands on and Test
- Content:
 - Introduction to HTM-02
 - Medical Gas Pipeline Systems Overview
 - Gas & Cylinder Safety
 - Manifold Systems
 - Air & Vacuum Systems
 - AGSS Systems
 - Terminal Units, Hoses, Pendants & Valves
 - Medical Gas Alarms
 - Testing of Medical Gas Pipeline Systems
 - Permit-to-Work
 - Fluxless Brazing Technique
 - Pipeline Inspection Process
- Course workshop and exercises will consolidate the course learning
- There will be a multi-choice test to conclude the training
- Successful delegates will receive certification

*Practical hands on available at MES dedicated training centre or where spare equipment is available on site.

Competent Person Training (First Line Defence)

The CP FLD (MGPS) course is ideal for on-site technicians and engineers who require training on the Medical Gas Pipeline Systems to enable them to safely react to alarms, investigate the issue and take appropriate action, complete daily and weekly planned preventative maintenance (PPM) checks, repair or replace 2nd fix terminal units whilst working under the Permit To Work (PTW) system. As required to HTM02-01 standards, Competent Persons (MGPS) should receive training every three years.



- Duration: 1 full day training
- Up to 10 delegates per session
- Theory, Demonstration, Group Workshop
Practical hands on and Test
- Content:
 - Introduction to HTM-02
 - Medical Gas Pipeline Systems Overview
 - Identification of Medical Gases & Safety Aspects
 - Permit-to-Work
 - MGPS daily and weekly checks
 - Repair / replace terminal units 2nd fix units
 - Testing of terminal units
- Course workshop and exercises will consolidate the course learning
- There will be a multi-choice test to conclude the training
- Successful delegates will receive certification of completion

Competent Person Training for Ambulance MGPS Systems



We provide the essential training for a CP Piped Medical Gas in Ambulance Vehicles (PMGAV) to repair, replace and test medical gas hoses and equipment in Ambulances.

The requirement of HTM2022 Sup.2 is for work to be completed by suitably trained and certified personnel i.e. a Competent Person to be assessed and appointed in writing by the Responsible Person or general manager after recommendation by a suitably qualified Engineer (MGPS) who has specialist knowledge of PMGAV.

- Duration: 1 full day training session
- Up to 8 delegates per session
- Group and individual exercises with a practical assessment
 - Introduction to HTM 2022 supplement 2 and general standards
 - Review of Medical Gas Pipeline System
 - The role of the Competent Person
 - Maintenance and repair of terminal units
 - Inspection, Testing and replacement of “Low pressure hoses”
 - Engineering testing of system and terminal units
 - The PMGAV Permit to Work System
 - Materials compatibility
 - CP Assessment – Practical test and written scenario assignment

- Course workshop and exercises will consolidate the course learning
- There will be a multi-choice test to conclude the training
- Successful delegates will receive certification of completion



MGPS Familiarisation Training

This provides essential training for staff requiring additional knowledge of MGPS systems to enable them to assume the role of CP or AP as required by HTM02-01. To enhance or refresh their knowledge of particular areas of MGPS to ensure the safe operation and use of medical gas systems and carry out emergency actions.

This is a bespoke training session. The options below can be tailored to suit your needs:

- 1-day training session
- Up to 10 delegates (room and plant room size permitting)
- Theory, Demonstration, Group Workshop
- Certificate of attendance issued



Option 1 Contents:

- VIE Familiarisation
- VIE emergency actions
- VIE daily and weekly site checks
- VIE exercise



Option 2 Contents:

- Medical Air and Vacuum Plant Familiarisation
- Emergency actions
- Daily and weekly site checks
- Plant exercise

MEDICAL GAS SYSTEMS - HIGH RISK PERMIT TO WORK - In accordance with MCHS2									
Permit No. 000000					Project No. 000000				
Name of the person who issued the permit: [Name]					Name of the person who received the permit: [Name]				
Date of issue: [Date]					Date of expiry: [Date]				
Location: [Location]					Work to be carried out: [Work]				
Risk Assessment: [Risk]					Safety Measures: [Measures]				
Authorised Personnel: [Personnel]					Supervision: [Supervision]				
Status: [Status]					Remarks: [Remarks]				

Option 3 Contents:

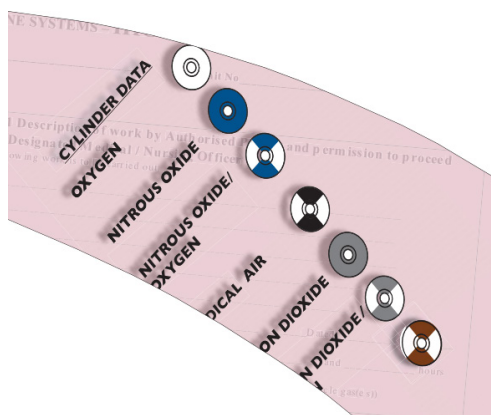
- The Permit to Work (PTW) system
- Completing Low and High Permits correctly
- Use of appropriate engineering tests
- PTW exercise

Responsible Person Training



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This training course is aimed at small healthcare sites with piped medical gas systems, but no on-site Authorised Person (MGPS). Or as a stepping stone for on-site competent persons looking to become Authorised Persons (AP MGPS).

It provides the essential training for site managers and senior staff responsible for the day to day operation of their MGPS on healthcare sites, where they employ a remote Authorised Person (MGPS), or to support the AP (MGPS) for low hazard work out of hours.

Required by HTM02-01 and the HSWA 1974, to ensure the safe operation and use of medical gas pipeline systems and emergency actions.

- 1 full day training session
- Up to 10 delegates per session (room size permitting)
- Theory, Demonstration, Group Workshop and Test
- Contents:
 - MGPS basic principles
 - Roles and responsibilities
 - Oversee the routine operation and maintenance of the Medical Gas Systems
 - Minor repair work to the system
 - Reporting faults, cylinders, alarms, piped system
 - Equipment requirements and proper use
 - Implementation of the Permit to work (PTW) system, isolations and contingency planning
 - Emergency situations and operational policy
- Course workshop and exercises will consolidate the course learning
- There will be a multi-choice test to conclude the training
- Successful delegates will receive certification of completion

Designated Nursing / Medical Officer (DNO/DMO) Training



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

For the purposes of MGPS work at ward or department 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 senior DNO or 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

- Duration: Either 1 x 0.5 day session or 2 x 0.5 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
- Course workshop and exercises will consolidate the course learning
- There will be a multi-choice test to conclude the training
- Successful delegates will receive certification of completion

Medical Gas Safety Training – Nurses



Providing essential training for nurses and healthcare staff who use gas cylinders, in handling, storing and using medical gas cylinders, as required by HTM02-01 and the HSWA 1974.

To ensure the safe operation and use of medical gas cylinders, their hazards and emergency actions.

- Duration: Either 1 x 0.5 day session or 2 x 0.5 day sessions in the same day
- Up to 20 delegates per session (room size permitting)
- Theory, Demonstration and Test
- Contents:
 - MGPS, cylinder safety and hazards
 - Colour and labelling identification of Gases
 - Operation of cylinders
 - Safe Storage and handling
 - Practical Session (preparation of cylinders for use)
 - Fault reporting
 - Medical gas pipeline systems basic principals
 - Why a permit to work system is in place
 - Warning alarm actions and isolation valves
 - Gas conservation
 - The safe use of pipeline connected equipment

- Course workshop and exercises will consolidate the course learning
- There will be a multi-choice test to conclude the training
- Successful delegates will receive certification of completion

Medical Gas Safety Training – Porters and Maintenance Technicians



This training course is aimed at all healthcare sites with piped medical gas systems and/or medical gas cylinder holdings.

It provides the essential training for porters and maintenance technicians in handling, storing or using medical gas cylinders, as required by HTM02-01 and the HSWA 1974.

To ensure the safe operation, handling and use of medical gas cylinders their hazards, emergency actions and uses for temporary supplies.

- Duration: Either 1 x 0.5 day session or 2 x 0.5 day sessions in the same day
- Up to 20 delegates per session (room size permitting)
- Theory, Demonstration and Test
- Contents:
 - Hazards of compressed and cryogenic gases
 - Colour and labelling identification of gases
 - Operation of cylinders
 - Safe Storage and handling
 - Practical Session (preparation of cylinders for use)
 - Introduction to piped medical gas systems
 - Warning alarm actions and isolation valves
 - Operation of emergency supplies
 - Practical changing cylinders on manifolds (if required)
 - Why a permit to work system is in place
 - Overview of pipeline connected equipment
- Course workshop and exercises will consolidate the course learning
- There will be a multi-choice test to conclude the training
- Successful delegates will receive certification of completion

Pathology Laboratory Gas Safety Training



This training course is aimed at Pathology and Laboratory departments sites with piped medical gas systems and/or medical gas cylinder holdings.

This provides the essential training for Lab Technicians and Maintenance Technicians in handling, storing or using Lab Gas Cylinders, as required by HTM08-06 and the HSWA 1974, to ensure the safe operation and use of medical gas cylinders their hazards and emergency actions.

- Duration: Either 1 x 0.5 day session or 2 x 0.5 day sessions in the same day
- Up to 15 delegates per session (room size permitting)
- Theory, Demonstration and Test
- Contents:
 - Hazards of compressed and cryogenic gases
 - Colour and labelling identification of Gases
 - Operation of cylinders
 - Safe Storage and handling
 - Practical Session (preparation of cylinders for use)
 - Introduction to piped gas systems
 - Warning alarm actions and isolation valves
 - Operation of emergency supplies
 - Practical changing cylinders on manifolds (if required)
 - Overview of the PLGS permit to work system
- Course workshop and exercises will consolidate the course learning
- There will be a multi-choice test to conclude the training
- Successful delegates will receive certification of completion

Contact Details:

Richard Maycock IEng. MIHEEM

Authorising Engineer (MGPS)

Mob: 07539 076664

Email: richard.maycock@mesystems.co.uk



Yvonne Hobson

Development & Training Coordinator

Tel: 0333 880 4115

Email: yvonne.hobson@mesystems.co.uk



David Cooper

Medical Design Engineer (MGPS)

Mob: 07496 852662

Email: david.cooper@mesystems.co.uk



Brian Armstrong

Associate Consultant AE (MGPS)

Mob: 07402 387171

Email: brian.armstrong@mesystems.co.uk



Email: info@mesystems.co.uk
training@mesystems.co.uk

Web: www.mesystems.co.uk