

HEAT PUMPS

This course has been designed for individuals looking for re-certification in their competence to work on the supply, design, installation, commissioning and handover of heat pump systems not exceeding 45Kw in size.

Who should attend?

The course is ideal for experienced plumbing and heating engineers looking for re-certification of their knowledge and understanding of heat pumps with a view to applying for Competent Person/MCS/Green Deal registration.

What will I learn?

The training and assessment have been designed to provide the necessary skills for the design, installation, testing, commissioning, handover, servicing and fault-finding of ground and air source heat pump systems in accordance with the latest NOS/QCF criteria and MCS scheme requirements.

Pre-requisites

- A certificate of competence in Heat Pumps (GSAHP)
- The following pre-requisites must have been maintained where applicable
- A certificate of competence for the installation of unvented hot water systems
- WRAS approved Water Regulations qualification
- An Energy Efficiency qualification issued by a 17024 UKAS accredited body
- An independently accredited Health and Safety qualification covering Working at Heights, CoSHH and Manual Handling qualifications

Benefits

Successful candidates will be able to demonstrate competence to work on the supply, design, installation, commissioning and handover of heat pump systems.

COURSE PROGRAMME

Day 1

- Fundamental working principles of heat pump systems
- Fundamental requirements of building location/building features for the potential to install heat pump systems
- Regulatory requirements
- Typical advantages and disadvantages of heat pump systems
- Health and safety risks and safe systems of work
- Requirements of relevant regulations/standards relating to practical installation, testing and commissioning activities for heat pump installation work

Day 2

- Purpose and operational characteristics of heat pump unit and system components
- Different types of heat pump units and system arrangements for hydraulic emitter circuits
- Fundamental principles of heat pump selection and system design
- Fundamental design principles for ground source 'closed loop' heat pump collector circuit design and component sizing
- Layouts of 'open loop' water-filled heat pump collector circuits
- Fundamental air source heat pump design considerations
- Preparatory work required for heat pump installations
- Installation, testing, commissioning and handover requirements
- Planning and preparation for the installation of heat pumps (non-refrigerant circuits)
- Requirements for routine service and maintenance
- Diagnosing and rectifying faults.

Day 3

- Heat loss design calculations for domestic dwellings
- Calculation of hot water requirements and determination of storage vessel sizing
- Improving insulation levels to minimise heat loss through building fabric and optimised heat pump choices
- Calculating energy output from traditional radiators to take into account the lower level of energy generated by heat pumps

Day 4

- Theory and practical assessment

What do I need to bring with me?

- Current Heat Pump Certificate
- Scientific calculator (not part of a smart phone application)
- 2 passport sized photo's
- Note taking material (recording devices not allowed)

Note: Course includes NICEIC Heat Pump Learners Guide (RRP £35).

Assessment body:

NICEIC

Why train with us?

We provide:

- Highly-skilled, qualified lecturers
- Purpose-built training facilities
- One-stop-shop for NICEIC enquiries
- Lunch and refreshments provided