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Level 3 Award in the Installation and Maintenance of Air Source Heat Pump Systems (non-refrigerant circuits) (3 days)

Location	Stretford Campus
Course Type	Adult
Department	Plumbing & Gas
Start Date	Friday 1st August 2025
Duration	Part-time, 1 Year
Time	09:00 - 16:30
Fee	£ 90.00 You may be eligible for support with your tuition fees - please visit the college website - funding and finance page for further information
Course Code	TPQ-GT3A-1300

Course Overview

A 3 day course - Heat Pump Technology and Domestic Air Source Heat Pump Designed to give installers the skills and knowledge required to correctly install heat pumps. This course has been designed with the intention of meeting the requirement of the National Occupational Standards and industry working groups. Assessments normally consist of a combination of practical and theory examinations.

Course Requirements

Trainees should have a minimum

N/SVQ Level 2/3 in Plumbing or equivalent earlier certification; or
N/SVQ Level 2/3 in Heating and Ventilating (Domestic Installation) or equivalent earlier certification; or
N/SVQ Level 2/3 in Heating and Ventilating (Industrial and Commercial Installation) or equivalent earlier certification; or
N/SVQ Level 2/3 in Oil-Fired Technical Services or equivalent earlier certification; or
N/SVQ Level 2/3 in Gas Installation and Maintenance or equivalent earlier certification; or
Heating installers with minimum 3 years of experience installing wet central heating systems, evidenced either by manufacturer courses certification or Gas Safe Register, OFTEC, MCS or HETAS registration
AND if not included in the above qualification

Water Regulations/Water Byelaws
Stand-alone technical certificates/Vocationally Related Qualifications (VRQ) (non-competency based) are NOT acceptable.

What You Will Learn

This course covers comprehensive knowledge about heat pumps, including understanding the concept of heat pumps, the principles of the vapour compression system, and the components involved. Students will acquire knowledge about the operational characteristics of different types of heat pump units, system arrangements, and the fundamental principles governing their efficiency and design. Additionally, the course covers topics such as domestic hot water cylinder selection, hydraulic system design, heat pump controls, and planning for heat pump installation. The learners will also be familiarised with the installation, testing, commissioning, handover procedures, routine service, and maintenance, as well as fault diagnosis for heat pump systems. The Air Source Unit focuses specifically on preparatory work for air source heat pump installation, common requirements for hydraulic emitter circuits, installation of non-refrigeration heat pump units, testing, commissioning, routine service, and maintenance for non-refrigerant circuits in air source heat pump systems.

Assessment

Assessments consist of a combination of practical and theory examinations.

Progression

Depending on existing skills and qualifications, candidates may want to progress to either the Full or Defined Scope courses (for example, heating engineers could undertake the full Solar Thermal Hot Water course, or architects the Defined Scope Solar Thermal Hot Water course).

Career Options

After completing the Level 3 Award in the Installation and Maintenance of Air Source Heat Pump Systems (non-refrigerant circuits), individuals can pursue various career options in the field of renewable energy, heating, ventilation, and air conditioning (HVAC), and sustainable technology. Some potential career paths include:

Air Source Heat Pump Installer: Graduates can work as specialised installers, responsible for installing air source heat pump systems in residential, commercial, and industrial settings.

HVAC Technician: The skills gained from the program are relevant for roles as HVAC technicians, where professionals are responsible for installing, maintaining, and repairing heating, ventilation, and air conditioning systems.

Renewable Energy Technician: With a focus on sustainable technology, graduates can explore careers as renewable energy technicians, working with various renewable energy systems, including air source heat pumps.

Maintenance Technician: Individuals can pursue roles focused on the maintenance and servicing of air source heat pump systems, ensuring their optimal performance and longevity.

Energy Efficiency Consultant: Graduates may choose to work as consultants, providing advice on energy-efficient solutions and helping clients optimise their heating systems for better energy conservation.

Building Services Engineer: Professionals can explore roles in designing and implementing heating and ventilation systems for buildings, with a focus on incorporating energy-efficient technologies like air source heat pumps.

Green Building Consultant: Individuals can specialise in advising on sustainable and energy-efficient building practices, with a specific emphasis on heating and cooling systems.

Project Manager (Renewable Energy Projects): Graduates may choose to work as project managers overseeing the implementation of renewable energy projects, including the installation of air source heat pump systems.

Energy Auditor: Professionals can specialize in assessing energy usage in buildings, recommending improvements, and implementing energy-efficient solutions, including air source heat pump systems.

Entrepreneur/Small Business Owner: With the right skills and experience, individuals may consider starting their own business providing installation, maintenance, and consulting services for air source heat pump systems.

These career options provide a diverse range of opportunities for individuals trained in the installation and maintenance of air source heat pump systems, contributing to the growing field of sustainable and

energy-efficient technologies.

Mandatory Units

LCL-R3035: Core unit in Heat Pump Technology (Non-Refrigerant Circuit)
LCL-R3036: Air Source unit in Heat Pump Technology (Non-Refrigerant Circuit)
LCL-R3037: Ground Source Unit in Heat Pump Technology (Non-Refrigerant Circuit)

Contact Details

For further information please contact T: 0161 886 7070 or E: info@trafford.ac.uk

Disclaimer

Although every care has been taken to ensure that the information contained within this document is accurate, there may be changes to this programme and provision. We will endeavour to keep prospective and current students updated where appropriate and when the information becomes available.