Heating and Ventilation Engineer

A heating and ventilation engineer installs, repairs and maintains systems such as central heating, ventilation, air conditioning and gas. They work in commercial or industrial premises such as schools, sports stadiums, hospitals or factories, fitting large scale boilers and pipe and duct work.

The Work

You could be:

- installing boilers, tanks, pipes, pumps and controls according to the plans
- fitting fan coil, heat recovery and air handling units
- using bending machines to shape large pipes and steel
- using flame cutting equipment to cut pipes and ducting to size
- joining them by soldering or oxy-acetylene and metal arc-welding
- testing that the system is operating properly
- checking equipment for leaks, pinpointing faults and repairing damaged parts
- possibly helping produce quotations and drawing up contracts.

Pay

The figures below are only a guide. Actual pay rates may vary, depending on:

- where you work
- the size of the company or organisation you work for
- the demand for the job.

Starting pay for an apprentice is often based around the National Minimum Wage. The apprentice rate, for those aged under 19 or aged 19 or over and in the first year of their apprenticeship, is £8.00 an hour (1 April 2026).

The starting pay for a qualified engineer can start at around £30,000 a year. With experience this can rise to between £45,000 and £60,000 a year.

Conditions

- You work on building sites in all weathers or in buildings being renovated.
- You have to wear protective gear: goggles, hard hat, safety boots and overalls.
- You lift heavy pipes by hand or using pulleys.
- You will have to bend, kneel and crawl into cramped spaces.
- You work at heights, on scaffolding.
- You work in dusty conditions.
- You have to travel to different places.

Getting In

- The most common route is through a Modern Apprenticeship in Heating, Ventilation, Air Conditioning and Refrigeration (HVACR) (SCQF Level 6).
- Most employers ask for English, Maths and a science or technological subject at National 4 or 5.
- You must pass the industry approved aptitude test before becoming an apprentice.
- Alternatively, studying a relevant HNC (SCQF Level 7) or HND (SCQF Level 8) course in a subject such as mechanical engineering may also give entry.
- In the UK you must hold a current F Gas Certificate to work with air conditioning units. There are three options: City and Guilds, BESA accredited course or LCL Awards. These are offered in various locations.
- You must hold a Construction Skills Certification Scheme (CSCS) card or equivalent to work on a building site. You must pass a health and safety test to qualify for this scheme.
- You will require a satisfactory criminal record check from Disclosure Scotland to show that you are suitable for this type of work. Contact Disclosure Scotland for details on the type you would need.

There are jobs in specialist heating and ventilating firms, local councils and health trusts.

What Does It Take

You should be:

- practical with technical skills
- able to read plans and diagrams and measure accurately
- good at solving problems and calculating figures
- accurate and methodical
- fit and agile
- able to plan your workload and meet deadlines
- responsible about health and safety procedures
- able to work at heights and confined spaces
- able to work alone and as well as part of a team.

Training

- Training during an apprenticeship is mainly on the job with off the job training at college.
- You can study for a SVQ such as Heating and Ventilating: Industrial and Commercial Installation (SCQF Level 6) or Heating and Ventilating: Ductwork, Planning and Installation (SCQF Level 6).

Getting On

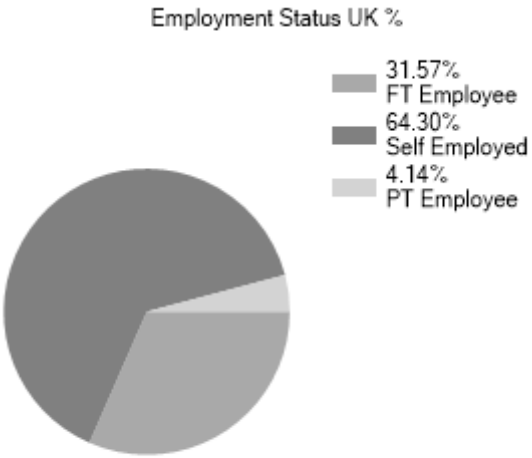
- You may be able to get promotion to site supervisor.
- With experience, you could set up your own company.
- You could take an HNC or HND to move into manufacturing or design. Or you could study for a degree to work in engineering and building services.

Contacts

Air Conditioning and Refrigeration Industry Board (ACRIB)
Website: www.acrib.org.uk

Building Engineering Services Association (BESA)
Website: www.thebesa.com

Statistics



Past Unemployment - Scotland

No Claimant statistics available for Scotland.

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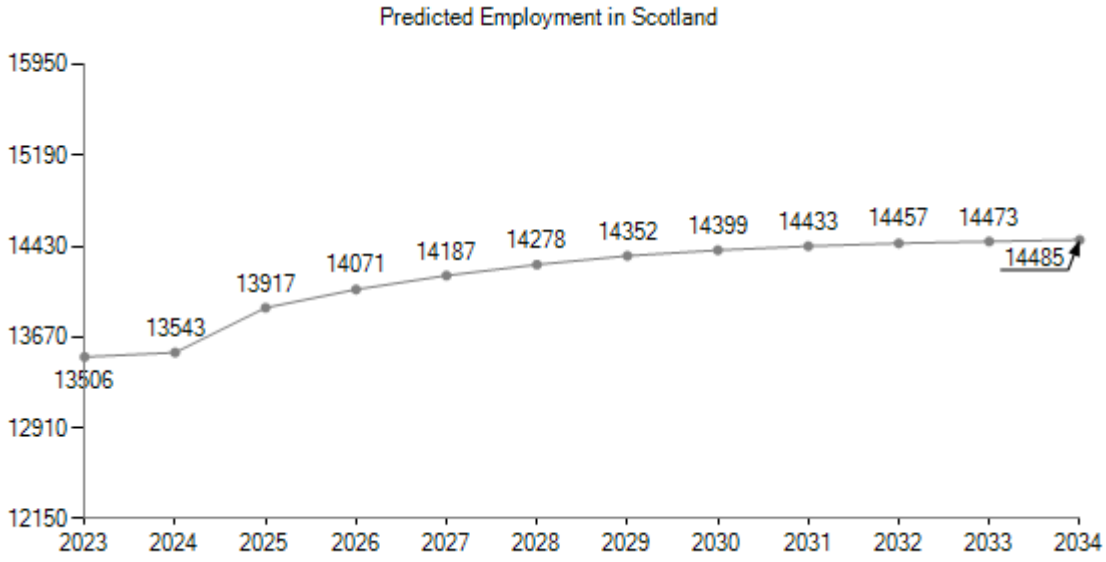

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