



# Level 3 Diploma in **PLUMBING AND DOMESTIC HEATING**

## Qualification Specification

### Overview

The qualification is based on the Plumbing and Domestic Heating Technician Standard which describe the skills, knowledge and understanding to undertake a particular job or task to a nationally recognised level of competence. This qualification requires occupational evidence.

### Typical Job

Domestic Heating Engineer, Domestic Heating Installer, Plumbing and Domestic Heating Installer, Plumbing and Domestic Heating Engineer

Qualification code:	603/4028/9
Level:	3
Total qualification time:	1825
Guided learning hours:	1467
Minimum learning age:	16



## Purpose of qualification

The qualification provides learners with practical experience of plumbing and domestic heating and an expectation of some of the situations that they could face as a plumber or domestic heating engineer in the building services sector. More specifically, it provides learners with the required underpinning knowledge and related practical skills they will need to prove competence and to subsequently pursue a career in this occupational area.

Key topics include planning, selection, installation, commissioning, service and maintenance techniques for cold water, hot water, central heating and above ground drainage systems.

### What does this qualification cover?

This qualification has THIRTEEN core mandatory units, that will be delivered over four phases with an optional pathway in Natural Gas, environmental technologies, oil and solid fuel. This will provide learners with the competence to work in the plumbing industry at the level achieved, the structure is listed from page 3.

### Who is this qualification for?

This qualification is predominantly for learners who want to be plumbers and domestic heating engineers working in the BSE industry. The qualification may also be suitable for learners who are interested in plumbing and domestic heating and/or are considering a career change. The qualification has been specifically designed as a competence component in the Apprenticeship Standard..

It is suitable for learners aged:

- 16-18
- 19+

### Who supports this qualification?

This qualification is:

- Accredited by Ofqual at level 3
- Is supported by Industry and forms part of their Apprenticeship Standard
- Has been developed in conjunction with industry and training providers.

## What could this qualification lead to?

### Typical job roles include:

Domestic Heating Engineer, Domestic Heating Installer, Plumbing and Domestic Heating Installer, Plumbing and Domestic Heating Engineer

This qualification relates to:

- EAL Level 1 Diploma in Plumbing
- EAL Level 3 Diploma in Plumbing and Heating
- EAL Level 2 NVQ Diploma in Plumbing and Heating
- EAL Level 3 NVQ Diploma in Heating

## Entry requirements

Learners must be at least 16 years old. There are no formal entry requirements for this qualification. However, learners must have the potential to achieve all aspects of the qualification. In particular, learners should be able to demonstrate that they have the minimum levels of literacy and numeracy required to comply with the health and safety aspects of the scheme, the completion of the learning outcomes, and the assessments.

## How is the qualification achieved?

This qualification will be achieved when the learner has successfully completed:

- The four Phases, including any related Centre marked assignments/practical tests and externally marked exams.
- ONE of the four pathways, including any related Centre marked assignments/practical tests, portfolio development and on-site practical assessments

## What will be assessed?

This qualification is made up of units to which appropriate assessment methods have been applied. The units contain the learning outcomes and the assessment criteria that the learner is to be assessed against.

All learning outcomes within the qualification will be assessed. In order to meet this requirement these have been compiled in phases, the learner must achieve each phase in order to progress onto the next phase assessments

It is advised that centres should maintain an assessment and feedback record for each learner. This will detail the evidence evaluated against the learning outcome and the feedback given to the learner. All learner evidence must be available to the EAL External Quality Assurer.

## How will it be assessed?

Where appropriate, learners will be assessed in naturally occurring planned activities carrying out their work tasks. Assessment against the learning outcomes of the qualification may be through practical observation and oral questioning. Performance evidence may be provided by the employer in partnership with the approved centre staff where established performance management processes are used by the employer to monitor staff performance.

The internal assessments will be a combination of on-screen exams, written and short answers and simulated practical assessments

There internal assessments are a combination of EAL Set and Centre Marked, Centre Devised and Marked and the on-screen exam is marked by EAL and all other internal assessments are marked by members of the delivery team at the Centre.

Where the assessment takes the form of written/short answer or multiple choice question papers, these must be treated as controlled assessments.

## Structure

The qualification will be obtained by the learner once they have completed the mandatory units and one pathway.

Before a learner undertakes an optional pathway they must first complete all the mandatory units, which will be delivered and assessed across the 4 phases, details on the outline structure can be found below.

Achievement of the qualification will require at least 1467 Guided Learning Hours (GLH) and has 1825 hours Total Qualification Time.

### Mandatory units: this unit must be completed:

Unit	Unit title	GLH	Ofqual Code
PDH3-001	Health and safety systems	88	Y/617/4394
PDH3-002	Common processes and techniques	88	D/617/4395
PDH3-003	Scientific principles	70	H/617/4396
PDH3-004	Planning and supervision	54	K/617/4397
PDH3-005	Cold water systems	138	M/617/4398
PDH3-006	Hot water systems	138	T/617/4399
PDH3-007	Central heating systems	180	D/617/4400
PDH3-008	Rainwater systems	30	H/617/4401
PDH3-009	Sanitation systems	106	K/617/4402
PDH3-010	Environmental technology systems	15	M/617/4403
PDH3-011	Domestic fuel systems	30	T/617/4404
PDH3-012	Electrical work and the control of plumbing and domestic heating systems	70	A/617/4405
PDH3-013	Install, commission, service and maintain domestic plumbing and heating systems	60	F/617/4406

## Structure

Learners must complete the mandatory units as outlined in the following phases

### Phase One: Health and Safety:

The learner must achieve this phase before attempting any further phase assessment requirements.

Unit	Unit title	Ofqual code
PDH3-001	Health and safety systems	Y/617/4394

### Phase One: Core units:

This phase is made up of a selection of learning outcomes and assessment criteria from the following units

The learner must achieve this phase before attempting any phase two assessment requirements.

Unit	Unit title	Ofqual code
PDH3-002	Common Processes and Techniques	D/617/4395
PDH3-003	Scientific principles	H/617/4396
PDH3-004	Planning and Supervision	K/617/4397
PDH3-005	Cold Water Systems	M/617/4398
PDH3-006	Hot Water Systems	T/617/4399
PDH3-007	Central Heating Systems	D/617/4400
PDH3-008	Rainwater Systems	H/617/4401
PDH3-009	Sanitation Systems	K/617/4402

## Structure

Learners must complete the mandatory units as outlined in the following phases

### Phase Two: Core units:

This phase is made up of a selection of learning outcomes and assessment criteria from the following units

The learner must achieve this phase before attempting any phase three assessment requirements.

Unit	Unit title	Ofqual code
PDH3-003	Scientific principles	H/617/4396
PDH3-005	Cold Water Systems	M/617/4398
PDH3-006	Hot Water Systems	T/617/4399
PDH3-007	Central Heating Systems	D/617/4400
PDH3-008	Rainwater Systems	H/617/4401
PDH3-009	Sanitation Systems	K/617/4402

### Phase Three: Core units:

This phase is made up of a selection of learning outcomes and assessment criteria from the following units

The learner must achieve this phase before attempting any phase four assessment requirements.

Unit	Unit title	Ofqual code
PDH3-005	Cold Water Systems	M/617/4398
PDH3-006	Hot Water Systems	T/617/4399
PDH3-007	Central Heating Systems	D/617/4400
PDH3-008	Rainwater Systems	H/617/4401
PDH3-009	Sanitation Systems	K/617/4402
PDH3-010	Environmental technology systems	M/617/4403
PDH3-011	Domestic fuel systems	T/617/4404
PDH3-012	Electrical work and the control of plumbing and domestic heating systems	A/617/4405
PDH3-013	Install, commission, service and maintain domestic plumbing and heating systems	F/617/4406

## Structure

Learners must also take the following specific mandatory units within their chosen pathway

### Phase Four: Pathways:

Mandatory for **all** Pathways:

Unit	Unit title	Ofqual code
PDH3-004	Planning and Supervision	K/617/4397

### Pathway Option: (GAS) Natural Gas:

Unit	Unit title	GLH	Ofqual code
PDH3-014	Specific Domestic Core Safety for Natural Gas.	190	J/617/4407
PDH3-015	Install and maintain gas water heating and wet central heating appliances	260	L/617/4408

**Completion of this Qualification Combination will satisfy the criteria to register on the Gas Safe competent person scheme for: CCN1, CENWAT1**

### Pathway Option: (ENV) Environmental Technologies:

Unit	Unit title	GLH	Ofqual code
PDH3-016	Air Source Heat Pump Systems	160	R/617/4409
PDH3-017	Rainwater harvesting and greywater reuse systems	130	J/617/4410
PDH3-018	Solar Thermal Hot Water Systems	160	L/617/4411

**Completion of this Qualification Combination will satisfy the criteria to register on the MCS competent person scheme for: Solar Thermal Nominated Technical Persons and Heat Pump Nominated Technical Persons.**

### Pathway Option: (OIL) Oil

Unit	Unit title	GLH	Ofqual code
PDH3-019	Core principles of oil fuel systems for dwellings (safety and efficiency)	170	R/617/4412
PDH3-020	Install, commission, maintain and service oil systems and appliances in the work place	230	Y/617/4413

**Completion of this Qualification Combination will satisfy the criteria to register on an OFTEC competent person scheme for: OFT10-10 Commission, service, maintenance of single stage pressure jet appliances and OFT10-105E Installation of oil combustion appliances, heating and vented hot water systems and OFT10-600a Installation of oil storage tanks and supply systems to fixed combustion appliances**

## Structure

Learners must also take the following specific mandatory units within their chosen pathway

### Phase Four: Pathways continued:

#### Pathway Option: (SOL) Solid Fuel

Unit	Unit title	GLH	Ofqual code
PDH3-021	Safety principles (solid mineral fuel and biomass combustion)	170	D/617/4414
PDH3-022	Plan, install, commission, service and maintain solid mineral fuel and biomass combustion appliances	230	H/617/4415

**Completion of this Qualification Combination will satisfy the HETAS competency requirements for: HETAS Dry Appliance Installer (includes service and maintenance competency), HETAS Wet Appliance Installer (includes service and maintenance competency), HETAS Biomass Installer, HETAS System Chimney**