



Level 3 NVO Diploma in

ENGINEERING

Installation and Commissioning

Qualification Specification

Overview

This qualification involves the skills and knowledge to work effectively in a range of installation and commissioning activities.

Typical Job

The qualification is applicable to a variety of engineering installation and commissioning occupations dependent on the pathway chosen.

Qualification code:	501/0733/1
Level:	3
Total qualification time:	1490 Hours
Guided learning hours:	302
Credits:	149
Minimum age	16

Issue 1.1

Purpose of the qualification

What does this qualification cover?

The qualification consists of five pathways to achieve the qualification, covering equipment installation, commissioning, traction lift installation, hydraulic lift installation, and escalator installation and commissioning. This qualification focuses on practical skills and knowledge. This ensures that when the learner completes the qualification they will have gained practical experience and some expectation of some of the situations that they could face in a job role within the sector. It covers the advanced level knowledge and understanding of a broad range of engineering competencies and has been developed in consultation with colleges, training associations and industry to ensure that it meets the needs of the engineering sector. This qualification forms part of a Semta Apprenticeship.

Who supports this qualification?

The qualification is supported by the Engineering Council, and recognised by the Institute of Mechanical Engineers (IMechE) for EngTech status.

What could this qualification lead to?

Progress onto other engineering based qualifications such as:

- EAL Certificate and Diplomas in Engineering and Technology subjects
- EAL qualifications in Business-Improvement Techniques

Entry Requirements

Learners must have the potential to achieve the assessment criteria set out in the units.

How is the qualification achieved?

The learner must present evidence (portfolio) which clearly shows they have met the assessment criteria and learning outcomes. The learner must achieve the mandatory and optional units relevant to their pathway (occupational role).

What will be assessed?

All evidence submitted by the learner against the assessment criteria.

How will it be assessed?

Evidence for this qualification will be assessed in accordance with the SEMTA engineering assessment strategy, which has been created from engagement with stakeholders (employers etc.) in the engineering sector.

The qualification is not graded and only a pass can be achieved – which indicates the learner's competence.

Structure

This qualification can be obtained by following either one of the following pathways. The learner is required to complete the mandatory assessment routes, and may also be able to choose from a selection of optional assessment routes.

Pathway ICA: Equipment Installation

Mandatory assessment routes: All FOUR assessment routes must be completed:

EAL code	Assessment route title	Level	Credit value	Guided learning hours	Ofqual code
QICM3/001	Complying with Statutory Regulations and Organisational Safety Requirements	2	5	35	A/601/5013
QICM3/002	Using and Interpreting Engineering Data and Documentation	2	5	25	Y/601/5102
QICM3/003	Working Efficiently and Effectively in Engineering	3	5	25	K/601/5055
QICM3/004	Handing Over and Confirming Completion of Installation or Commissioning Activities	3	20	35	D/601/0547

Optional assessment routes: One of the following assessment routes must be taken:

QICM3/005	Installing Mechanical Equipment	3	118	224	K/601/0549
QICM3/006	Installing Electrical/Electronic Equipment	3	118	224	D/601/0550
QICM3/007	Installing Equipment to Produce an Engineered System	3	123	259	M/601/0553
QICM3/008	Installing Instrumentation and Control Equipment	3	115	196	A/601/0555
QICM3/009	Installing Fluid Power Equipment	3	115	196	J/601/0557
QICM3/010	Installing Process Controller Equipment	3	118	224	L/601/0558
QICM3/011	Installing Emergency Electrical Power Generation Equipment	3	114	182	R/601/0559
QICM3/012	Installing Environmental Pollution Control Equipment	3	114	182	J/601/0560
QICM3/013	Installing Workplace Environmental Control Equipment	3	118	224	L/601/0561
QICM3/014	Installing Heating and Ventilation Equipment	3	118	224	R/601/0562
QICM3/015	Installing Air Conditioning and Ventilation Equipment	3	118	224	D/601/0564
QICM3/016	Installing Compressed Air Equipment	3	114	182	H/601/0565
QICM3/017	Installing Waste/Foul Water Distribution Equipment	3	114	182	K/601/0566
QICM3/018	Installing Fresh Water Distribution Equipment	3	114	182	M/601/0567



QICM3/019	Installing Refrigeration Equipment	3	114	182	A/601/0572
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Pathway ICB: Commissioning

Mandatory assessment routes: All FOUR assessment routes must be completed:

EAL code	Assessment route title	Level	Credit value	Guided learning hours	Ofqual code
QICM3/001	Complying with Statutory Regulations and Organisational Safety Requirements	2	5	35	A/601/5013
QICM3/002	Using and Interpreting Engineering Data and Documentation	2	5	25	Y/601/5102
QICM3/003	Working Efficiently and Effectively in Engineering	3	5	25	K/601/5055
QICM3/004	Handing Over and Confirming Completion of Installation or Commissioning Activities	3	20	35	D/601/0547

Optional assessment routes: One of the following assessment routes must be taken:

QICM3/020	Commissioning Mechanical Equipment and Systems	3	118	224	F/601/0573
QICM3/021	Commissioning Electrical/Electronic Equipment and Systems	3	118	224	J/601/0574
QICM3/022	Commissioning Engineered Systems	3	123	259	L/601/0575
QICM3/023	Commissioning Process Controller Equipment and Systems	3	118	224	R/601/0576
QICM3/024	Commissioning Instrumentation and Control Equipment and Systems	3	115	196	R/601/0626
QICM3/025	Commissioning Fluid Power Equipment and Systems	3	115	196	Y/601/0627
QICM3/026	Commissioning Emergency Electrical Power Generation Equipment and Systems	3	114	182	D/601/0628
QICM3/027	Commissioning Environmental Pollution Control Equipment and Systems	3	114	182	D/601/0631
QICM3/028	Commissioning Workplace Environmental Control Equipment and Systems	3	118	224	H/601/0632
QICM3/029	Commissioning Heating and Ventilation Equipment and Systems	3	118	224	J/601/0638
QICM3/030	Commissioning Air Conditioning and Ventilation Equipment and Systems	3	118	224	L/601/0642
QICM3/031	Commissioning Compressed Air Equipment and Systems	3	114	182	Y/601/0644
QICM3/032	Commissioning Waste/Foul Water Distribution Equipment and Systems	3	114	182	K/601/0650
QICM3/033	Commissioning Fresh Water Distribution Equipment and Systems	3	114	182	F/601/0654



QICM3/034	Commissioning Refrigeration Equipment and Systems	3	114	182	Y/601/0658
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Pathway ICC: Traction Lift Installation

Mandatory assessment routes: All FOUR assessment routes must be completed:

EAL code	Assessment route title	Level	Credit value	Guided learning hours	Ofqual code
QICM3/001	Complying with Statutory Regulations and Organisational Safety Requirements	2	5	35	A/601/5013
QICM3/002	Using and Interpreting Engineering Data and Documentation	2	5	25	Y/601/5102
QICM3/003	Working Efficiently and Effectively in Engineering	3	5	25	K/601/5055
QICM3/004	Handing Over and Confirming Completion of Installation or Commissioning Activities	3	20	35	D/601/0547

Optional assessment routes: All of the following assessment routes must be taken:

QICM3/035	Carrying Out Fault Diagnosis on Lift Installations	3	50	60	R/601/0660
QICM3/036	Measuring and Setting Out Lift Installations	3	23	63	M/601/0665
QICM3/037	Installing Lift Well and Ancillary Equipment	3	25	84	A/601/0667
QICM3/038	Installing Traction Lift Equipment	3	25	84	F/601/0668
QICM3/039	Installing Lift Ropes and Chains	3	25	84	J/601/0669
QICM3/040	Installing Lift Doors, Frames and Ancillary Components	3	25	84	J/601/0672
QICM3/041	Checking and Setting Lift Installations	3	25	77	L/601/0673

Pathway ICD: Hydraulic Lift Installation

Mandatory assessment routes: All FOUR assessment routes must be completed:

EAL code	Assessment route title	Level	Credit value	Guided learning hours	Ofqual code
QICM3/001	Complying with Statutory Regulations and Organisational Safety Requirements	2	5	35	A/601/5013
QICM3/002	Using and Interpreting Engineering Data and Documentation	2	5	25	Y/601/5102
QICM3/003	Working Efficiently and Effectively in Engineering	3	5	25	K/601/5055
QICM3/004	Handing Over and Confirming Completion of Installation or Commissioning Activities	3	20	35	D/601/0547

Optional assessment routes: All of the following assessment routes must be taken:

QICM3/035	Carrying Out Fault Diagnosis on Lift Installations	3	50	60	R/601/0660
QICM3/036	Measuring and Setting Out Lift Installations	3	23	63	M/601/0665
QICM3/037	Installing Lift Well and Ancillary Equipment	3	25	84	A/601/0667
QICM3/039	Installing Lift Ropes and Chains	3	25	84	J/601/0669
QICM3/040	Installing Lift Doors, Frames and Ancillary Components	3	25	84	J/601/0672
QICM3/041	Checking and Setting Lift Installations	3	25	77	L/601/0673
QICM3/042	Installing Hydraulic Lift Equipment	3	25	84	R/601/0674

Pathway ICE: Escalator Installation and Commissioning

Mandatory assessment routes: All FOUR assessment routes must be completed:

EAL code	Assessment route title	Level	Credit value	Guided learning hours	Ofqual code
QICM3/001	Complying with Statutory Regulations and Organisational Safety Requirements	2	5	35	A/601/5013
QICM3/002	Using and Interpreting Engineering Data and Documentation	2	5	25	Y/601/5102
QICM3/003	Working Efficiently and Effectively in Engineering	3	5	25	K/601/5055
QICM3/004	Handing Over and Confirming Completion of Installation or Commissioning Activities	3	20	35	D/601/0547

Optional assessment routes: All of the following assessment routes must be taken:

QICM3/043	Carrying Out Fault Diagnosis on Escalator Installations	3	50	60	H/601/0677
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QICM3/044	Installing Escalator Equipment	3	33	161	H/601/0680
QICM3/045	Commissioning Escalator Installations	3	100	182	A/601/0684

