

Level 2 NVQ Diploma in Heating and Ventilating - Ductwork Installation (6188-21)

Candidate performance evidence logbook

600/0144/6



www.cityandguilds.com
February 2012
Version 1.0

About City & Guilds

As the UK's leading vocational education organisation, City & Guilds is leading the talent revolution by inspiring people to unlock their potential and develop their skills. We offer over 500 qualifications across 28 industries through 8500 centres worldwide and award around two million certificates every year. City & Guilds is recognised and respected by employers across the world as a sign of quality and exceptional training.

City & Guilds Group

The City & Guilds Group operates from three major hubs: London (servicing Europe, the Caribbean and Americas), Johannesburg (servicing Africa), and Singapore (servicing Asia, Australia and New Zealand). The Group also includes the Institute of Leadership & Management (management and leadership qualifications), City & Guilds Land Based Services (land-based qualifications), the Centre for Skills Development (CSD works to improve the policy and practice of vocational education and training worldwide) and Learning Assistant (an online e-portfolio).

Copyright

The content of this document is, unless otherwise indicated, © The City and Guilds of London Institute and may not be copied, reproduced or distributed without prior written consent. However, approved City & Guilds centres and candidates studying for City & Guilds qualifications may photocopy this document free of charge and/or include a PDF version of it on centre intranets on the following conditions:

- centre staff may copy the material only for the purpose of teaching candidates working towards a City & Guilds qualification, or for internal administration purposes
- candidates may copy the material only for their own use when working towards a City & Guilds qualification

The *Standard Copying Conditions* (see the City & Guilds website) also apply.

Please note: National Occupational Standards are not © The City and Guilds of London Institute. Please check the conditions upon which they may be copied with the relevant Sector Skills Council.

Published by City & Guilds, a registered charity established to promote education and training

Every effort has been made to ensure that the information contained in this publication is true and correct at the time of going to press. However, City & Guilds' products and services are subject to continuous development and improvement and the right is reserved to change products and services from time to time. City & Guilds cannot accept liability for loss or damage arising from the use of information in this publication.

City & Guilds

1 Giltspur Street

London EC1A 9DD

T +44 (0)844 543 0033

F +44 (0)20 7294 2413

www.cityandguilds.com

learnersupport@cityandguilds.com

Level 2 NVQ Diploma in Heating and Ventilating - Ductwork Installation (6188-21)



Candidate performance evidence logbook

www.cityandguilds.com
February 2012
Version 1.0

Qualification title	Number	QAN
Level 2 NVQ Diploma in Heating and Ventilating - Ductwork Installation	6188-21	600/0144/6

City & Guilds
Believe you can



www.cityandguilds.com

Contents

1	About your candidate logbook	5
2	The assessment process	7
3	Using your logbook	8
4	Qualification structures	9
5	Overall Unit Sign-off	10
Unit 210	Apply safe working practices in building services engineering working environment	11
Unit 211	Install industrial and commercial heating and ventilation ductwork	14
	On Site Assessment Plan / Feedback	19
	On Site Observation Report	20
	Supplementary Evidence Sheet	21
	Oral Questioning Supplementary Evidence Sheet	22
	Photographic Supplementary Evidence	23
	Workplace Recorder Details	24
	Assessor Continuation Sheet	25
	Signature Sheet	26
Appendix 1	Summary of City & Guilds assessment policies	27

City & Guilds
Believe you can



www.cityandguilds.com

1 About your candidate logbook

1.1 Contact details

Candidate name	
Candidate enrolment no	
Centre name	
Centre number	
Programme start date	
Date of registration with City & Guilds	

Keep a record of relevant contact details in the space provided below. You may find it helpful to make a note of phone numbers and e-mail addresses here.

Your Assessor(s)	
Your Internal Verifier	
Quality Assurance Contact	

1 About your candidate logbook

1.2 Introduction to the logbook

This logbook will help you complete the units, which are assessed by your performance at work, in the City & Guilds' **Level 2 NVQ Diploma in Heating and Ventilating - Ductwork Installation (6188-21)**. It contains forms you can use to record your evidence of what you have done.

About City & Guilds

City & Guilds is your awarding body for this qualification. City & Guilds is the UK's leading awarding body for vocational qualifications.

Information about City & Guilds and our qualifications is available on our website **www.cityandguilds.com**.

2 The assessment process

The following people at your centre will explain the assessment process and help you achieve your unit(s).

The assessor/tutor

The assessor/tutor is the person you will have the most contact with as you work towards your unit(s). You may have more than one assessor/tutor depending on which unit(s) you take or you may be assessed by a person who is not your tutor.

The internal verifier

The internal verifier maintains the quality of assessment within the centre.

The external verifier

The external verifier works for City & Guilds and helps to ensure that your centre meets the required standards for quality and assessment.

3 Using your logbook

Recording forms

This logbook contains all of the forms you and your assessor will need to plan, review and organise your evidence. Your assessor will be able to help you decide which forms you need to complete and help you fill them in.

Please photocopy these forms as required.

4 Qualification structures

To achieve the **Level 2 NVQ Diploma in Heating and Ventilating Ductwork Installation (6188-21)**, learners must achieve 64 credits from all of the twelve mandatory units in the table shown below. This Logbook includes only those units assessed by performance in the workplace (marked with an *).

Unit accreditation number	City & Guilds unit number	Unit title	Credit value	GLH
J/602/2479	201	Understand and carry out safe working practices in building services engineering	10	88
J/602/2482	202	Understand how to communicate with others within building services engineering	3	28
D/602/2486	203	Understand how to apply environment protection measures within BSE	4	38
J/602/2496	204	Understand how to apply scientific principles within MES	7	66
T/602/2493	*210	Apply safe working practices in building services engineering working environment	2	4
M/602/2721	*211	Install industrial and commercial heating and ventilation ductwork	4	4
J/602/2711	212	Understand industrial and commercial rectangular ductwork installation techniques	9	75
L/602/2712	213	Understand industrial and commercial circular and flat oval ductwork installation techniques	9	75
R/602/2713	214	Understand industrial and commercial air handling unit installation techniques	4	28
D/602/2715	215	Understand industrial and commercial plastic ductwork installation techniques	4	28
H/602/2716	216	Understand industrial and commercial fire rated ductwork installation techniques	4	28
M/602/2718	217	Understand industrial and commercial local exhaust ventilation system installation techniques	4	28

5 Overall Unit Sign-off

The following units are included in the rules of combination for the **Level 2 NVQ Diploma in Heating and Ventilating - Ductwork Installation (6188-21)**. Learners must achieve these portfolio units to contribute towards achievement of the overall qualification.

City & Guilds unit	Unit title	Unit Achieved Yes/No	Assessor Initials	Date
210	Apply safe working practices in building services engineering working environment			
211	Install industrial and commercial heating and ventilation ductwork			

Unit 210

Apply safe working practices in building services engineering working environment

Level: 2

Credit value: 2

UAN: T/602/2493

Outcome 1		Be able to demonstrate personal health and safety precautions in the workplace		
Criteria		Candidate initials	Assessor initials	Evidence reference
1	demonstrate that appropriate personal protective equipment is used throughout work activities			
2	ensure that health & safety precautions are in place:			
	<ul style="list-style-type: none"> • first aid kit provision 			
	<ul style="list-style-type: none"> • fire extinguisher provision 			
3	demonstrate safe manual lifting techniques.			

Outcome 2		Be able to prepare and use access equipment in the workplace		
Criteria		Candidate initials	Assessor initials	Evidence reference
1	use risk assessments to identify safe methods of working at height			
2	check access equipment for safe condition prior to use			
3	perform the safe erection of access equipment			
4	demonstrate the safe use of access equipment.			

Outcome 3		Be able to check that the work area is safe in order to carry out work		
Criteria		Candidate initials	Assessor initials	Evidence reference
1	carry out a check of the work location for health and safety hazards			
2	verify that access and exit routes to and from the immediate work location are safe and free from obstructions			
3	demonstrate safe working practices when working with heat producing equipment.			

Outcome 4	Be able to liaise with those responsible for health and safety in the workplace			
Criteria		Candidate initials	Assessor initials	Evidence reference
1	demonstrate methods of recording accidents in the accident book in accordance with company procedures			
2	demonstrate methods of reporting hazards and accidents in accordance with company procedures.			

Unit 210

Apply safe working practices in building services engineering working environment

Declaration

I confirm that the evidence supplied for this unit is authentic and a true representation of my own work. The work logged is my own work carried out during my normal work duties.

The answers in the question bank are my own work and discussed with my assessor on completion. I have been observed in my workplace by my assessor on several occasions.

Candidate Name:	
Candidate Signature:	
Date:	

I confirm that this candidate has achieved all the requirements of this unit with the evidence listed. Assessment was conducted under the specified conditions and context, and is valid, authentic, reliable, current and sufficient.

Assessor Name:	
Assessor Signature:	
Date:	

IV Name:	
IV Signature:	
Date:	

Unit 211

Install industrial and commercial heating and ventilation ductwork

Level: 2

Credit value: 4

UAN: M/602/2721

Outcome 1	Be able to complete preparation work for rectangular, circular or flat oval ductwork systems			
Criteria		Candidate initials	Assessor initials	Evidence reference
1	check the work location and report factors that will impact on the work to the supervisor or line manager			
2	source appropriate job information and documentation for the installation of one of the following rectangular, circular or flat oval ductwork systems:			
	<ul style="list-style-type: none"> supply 			
	<ul style="list-style-type: none"> extract 			
	<ul style="list-style-type: none"> kitchen extract 			
	<ul style="list-style-type: none"> low, medium and high pressure/velocity air systems 			
	job information and documentation including:			
	<ul style="list-style-type: none"> codes of practice 			
	<ul style="list-style-type: none"> industry standards 			
	<ul style="list-style-type: none"> industry guides/good practice guides 			
3	use job information and documentation to ensure that the following are fit for purpose:			
	<ul style="list-style-type: none"> equipment 			
	<ul style="list-style-type: none"> tools 			
4	identify the points in the work process where liaison with other persons may be necessary:			
	<ul style="list-style-type: none"> customers/clients 			
	<ul style="list-style-type: none"> other site workers 			
	<ul style="list-style-type: none"> supervisor or line manager 			
5	demonstrate that job information on key aspects of the work has been issued to relevant people including user instructions or manufacturer's instructions			

6	demonstrate that authorisation has been obtained from the relevant person(s) prior to commencement of the work, from at least one of the following:			
	<ul style="list-style-type: none"> customers/clients 			
	<ul style="list-style-type: none"> other site workers 			
	<ul style="list-style-type: none"> supervisor or line manager 			
7	note any pre work damage or defects to existing equipment or building features, should it exist, and report to job supervisor or line manager			
8	demonstrate that suitable personal protective equipment has been worn throughout the duration of work preparation activities			
9	check that the materials needed to complete the job are free from damage and report any defects to a supervisor or line manager. From materials for rectangular, circular and flat oval ductwork which include any one from:			
	<ul style="list-style-type: none"> stainless steel 			
	<ul style="list-style-type: none"> galvanised steel 			
	<ul style="list-style-type: none"> aluminium 			
10	complete preparatory work for the installation of rectangular, circular or flat ductwork systems to include:			
	<ul style="list-style-type: none"> use of material and equipment requisites where appropriate 			
	<ul style="list-style-type: none"> confirmation that the selection of material, equipment and components are compatible to the installation 			
	<ul style="list-style-type: none"> confirmation that the work location is ready for installation activities 			
	<ul style="list-style-type: none"> confirmation of secure site storage for tools, equipment, materials and components 			
	<ul style="list-style-type: none"> confirmation of suitable access equipment 			
	<ul style="list-style-type: none"> confirmation of suitable lifting equipment where required. 			

Outcome 2	Be able to install industrial and commercial rectangular, circular or flat oval ductwork systems			
Criteria		Candidate initials	Assessor initials	Evidence reference
1	confirm job information appropriate to the installation process is available			
2	demonstrate that materials, tools and equipment necessary for the installation of rectangular, circular or flat oval ductwork systems:			
	<ul style="list-style-type: none"> are available as required 			
	<ul style="list-style-type: none"> are safely and securely stored 			
	<ul style="list-style-type: none"> meet industry requirements 			
	<ul style="list-style-type: none"> are fit for intended purpose 			
3	install rectangular and circular or flat oval ductwork in one of the following materials:			
	<ul style="list-style-type: none"> stainless steel 			
	<ul style="list-style-type: none"> galvanised steel 			
	<ul style="list-style-type: none"> aluminium 			
	for the following systems:			
	<ul style="list-style-type: none"> supply extract 			
4	complete jointing for rectangular, circular or flat oval ductwork including:			
	<ul style="list-style-type: none"> flanges 			
	<ul style="list-style-type: none"> slip joints 			
	<ul style="list-style-type: none"> methods of sealing joints to industry specifications 			
5	position and fix a minimum of:			
	<ul style="list-style-type: none"> one small air handling unit 			
	<ul style="list-style-type: none"> one fan 			
	and at least four of the following components:			
	<ul style="list-style-type: none"> attenuator 			
	<ul style="list-style-type: none"> heater / filter / cooler batteries 			
	<ul style="list-style-type: none"> fan coil units 			
	<ul style="list-style-type: none"> variable air volume units 			
	<ul style="list-style-type: none"> regulating/ motorised dampers 			
	<ul style="list-style-type: none"> fire dampers 			
	<ul style="list-style-type: none"> kitchen hoods and grease filters 			
<ul style="list-style-type: none"> access doors 				
<ul style="list-style-type: none"> terminal unit/grilles/diffusers to industry specifications 				

6	position and fix appropriate hangers or supports for rectangular, circular or flat oval ductwork systems installations for:			
	<ul style="list-style-type: none"> horizontally mounted ductwork 			
	<ul style="list-style-type: none"> vertically mounted ductwork 			
7	perform connections for rectangular, circular or flat oval ductwork to:			
	<ul style="list-style-type: none"> small air handling units or fans 			
	<ul style="list-style-type: none"> building openings 			
8	demonstrate that all aspects of the installation process conforms with industry requirements, including:			
	<ul style="list-style-type: none"> codes of practice 			
	<ul style="list-style-type: none"> industry standards 			
	<ul style="list-style-type: none"> industry guides/good practice guides 			
9	apply methods of working to ensure that any damage to customer/client property and building features is avoided during work activities			
10	report problems which may affect the progress of the installation to the immediate job supervisor or line manager.			

Outcome 3 Be able to complete soundness tests on industrial and commercial rectangular, circular or flat oval ductwork systems				
Criteria		Candidate initials	Assessor initials	Evidence reference
1	conduct visual inspections of rectangular, circular or flat oval supply systems and confirm compliance with industry requirements			
2	confirm that the ductwork system is ready to receive soundness tests			
3	apply a soundness test to a rectangular, circular or flat oval supply system in accordance with industry standards, guides and good practice guide			
4	complete test sheet documentation in accordance with appropriate industry specifications/guides			
5	conduct checks to confirm:			
	<ul style="list-style-type: none"> system cleanliness 			
	<ul style="list-style-type: none"> un-commissioned systems and components cannot be activated. 			

Unit 211

Install industrial and commercial heating and ventilation ductwork

Declaration

I confirm that the evidence supplied for this unit is authentic and a true representation of my own work. The work logged is my own work carried out during my normal work duties.

The answers in the question bank are my own work and discussed with my assessor on completion. I have been observed in my workplace by my assessor on several occasions.

Candidate Name:	
Candidate Signature:	
Date:	

I confirm that this candidate has achieved all the requirements of this unit with the evidence listed. Assessment was conducted under the specified conditions and context, and is valid, authentic, reliable, current and sufficient.

Assessor Name:	
Assessor Signature:	
Date:	

IV Name:	
IV Signature:	
Date:	

On Site Assessment Plan / Feedback



Evidence Reference:	
---------------------	--

Qualification:
Level:

Qualification number:

Candidate name:
Assessor name:

Date:

Candidate prepared for assessment (Provide details below)	Yes / No	Candidate requires support	Yes / No
Candidate briefed on appeals procedure	Yes / No	Support required	

Assessment Location / Address and postcode:

Type of work to be carried out:

Assessor Feedback:
(Use Assessor continuation sheet if required)

Forward Planning:

Candidate Signature:		
Assessor Signature:		Date:
IV/IQA Name:	IV/IQA Signature:	Date:

On Site Observation Report



Evidence Reference:	<input type="text"/>
---------------------	----------------------

Qualification:
Level:

Qualification number:

Candidate name:
Assessor name:

Date:

Candidate prepared for assessment (Provide details below)	Yes / No	Candidate requires support	Yes / No
Candidate briefed on appeals procedure	Yes / No	Support required	

Assessment Location / Address and postcode:

Assessor observation:
(Use Assessor continuation sheet if required)

Outcome/ Criteria

Candidate Signature:		
Assessor Signature:		Date:
IV/IQA Name:	IV/IQA Signature:	Date:

Supplementary Evidence Sheet



Evidence Reference:	
---------------------	--

Qualification:
Level:

Qualification number:

Candidate name:
Assessor name:

Date:

Unit Number:

Completed by: (please tick)

Candidate Workplace Recorder Witness

Written Evidence:

Outcome/ Criteria

Candidate Signature:	
Assessor / Workplace Recorder Name:	
Assessor / Workplace Recorder Signature:	Date:
IV/IQA Name:	IV/IQA Signature: Date:

Oral Questioning Supplementary Evidence Sheet



Evidence Reference:	
---------------------	--

Qualification:
Level:

Qualification number:

Candidate name:
Assessor name:

Date:

Unit Number:

Assessor question:

Candidate answer:

Outcome/ Criteria

Candidate Signature:		
Assessor Signature:		Date:
IV/IQA Name:	IV/IQA Signature:	Date:

Photographic Supplementary Evidence



Evidence Reference:	
---------------------	--

Scheme / Award:

Scheme Number:

Level:

Candidate Name:

Unit Number:

Brief description of task being carried out in the photograph (to be completed by candidate):

(Attach Photo in this Box)

Location of photograph:

Candidate Signature:		
Assessor Signature:		Date:
IV/IQA Name:	IV/IQA Signature:	Date:

Workplace Recorder Details



I confirm I am suitably experienced or qualified in line with the industry requirements to act as a witness for this learner. I acknowledge that I will only counter sign documentation requested by the learner where to my knowledge only the learner has completed the work and on the understanding that the work has been carried out to the acceptable standard.

Workplace Recorder Name:	
Workplace Recorder Signature:	Date:

I confirm I am suitably experienced or qualified in line with the industry requirements to act as a witness for this learner. I acknowledge that I will only counter sign documentation requested by the learner where to my knowledge only the learner has completed the work and on the understanding that the work has been carried out to the acceptable standard.

Workplace Recorder Name:	
Workplace Recorder Signature:	Date:

I confirm I am suitably experienced or qualified in line with the industry requirements to act as a witness for this learner. I acknowledge that I will only counter sign documentation requested by the learner where to my knowledge only the learner has completed the work and on the understanding that the work has been carried out to the acceptable standard.

Workplace Recorder Name:	
Workplace Recorder Signature:	Date:

Assessor Continuation Sheet
 On Site Assessment Plan/Feedback
 On Site Observation



Evidence Reference:	
---------------------	--

Assessor Briefing and Report	Criteria Observed		Assessment
	Outcome	Criteria	Method

Candidate Signature:		
Assessor Signature:		Date:
IV/IQA Name:	IV/IQA Signature:	Date:

Signature Sheet



Anyone who witnesses and signs a piece of the candidate's evidence must provide a specimen signature in the table below.

Witnesses relationship to candidate eg supervisor, customer, lecturer, assessor	Name	Signature	Date

Appendix 1 Summary of City & Guilds assessment policies

Health and Safety

All centres have to make sure that they provide a safe and healthy environment for learning, including induction and assessment. City & Guilds external verifiers check this when they visit assessment centres.

Equal Opportunities

Your centre will have an equal opportunities policy. Your centre will explain this to you during your induction, and may give you a copy of the policy.

City & Guilds equal opportunities policy is available from our website www.cityandguilds.com, City & Guilds Customer Relations Team or your centre.

Access to assessment

City & Guilds qualifications are open to all candidates, whatever their gender, race, creed, age or special needs. Some candidates may need extra help with their assessment, for example, a person with a visual impairment may need a reader.

If you think you will need alternative assessment arrangements because you have special needs, you should discuss this with your centre during your induction, and record this on your assessment plan. City & Guilds will allow centres to make alternative arrangements for you if you are eligible and if the qualification allows for this. This must be agreed before you start your qualification.

City & Guilds guidance and regulations document *Access to assessment and qualifications* is available on the City & Guilds website www.cityandguilds.com, from the City & Guilds Customer Relations Team or your centre.

Complaints and appeals

Centres must have a policy and procedure to deal with any complaints you may have. You may feel you have not been assessed fairly, or may want to appeal against an assessment decision if you do not agree with your assessor.

These procedures will be explained during induction and you will be provided with information about the Quality Assurance Co-ordinator within your centre who is responsible for this.

Most complaints and appeals can be resolved within the centre, but if you follow the centre procedure and are still not satisfied you can complain to City & Guilds.

Our complaints policy is on our website www.cityandguilds.com or is available from the City & Guilds Customer Relations Team or your centre.

Useful contacts

UK learners

General qualification information

T: +44 (0)844 543 0033

E: learnersupport@cityandguilds.com

International learners

General qualification information

T: +44 (0)844 543 0033

F: +44 (0)20 7294 2413

E: intcg@cityandguilds.com

Centres

Exam entries, Certificates, Registrations/enrolment, Invoices, Missing or late exam materials, Nominal roll reports, Results

T: +44 (0)844 543 0000

F: +44 (0)20 7294 2413

E: centresupport@cityandguilds.com

Single subject qualifications

Exam entries, Results, Certification, Missing or late exam materials, Incorrect exam papers, Forms request (BB, results entry), Exam date and time change

T: +44 (0)844 543 0000

F: +44 (0)20 7294 2413

F: +44 (0)20 7294 2404 (BB forms)

E: singlesubjects@cityandguilds.com

International awards

Results, Entries, Enrolments, Invoices, Missing or late exam materials, Nominal roll reports

T: +44 (0)844 543 0000

F: +44 (0)20 7294 2413

E: intops@cityandguilds.com

Walled Garden

Re-issue of password or username, Technical problems, Entries, Results, e-assessment, Navigation, User/menu option, Problems

T: +44 (0)844 543 0000

F: +44 (0)20 7294 2413

E: walledgarden@cityandguilds.com

Employer

Employer solutions, Mapping, Accreditation, Development Skills, Consultancy

T: +44 (0)121 503 8993

E: business@cityandguilds.com

Publications

Logbooks, Centre documents, Forms, Free literature

T: +44 (0)844 543 0000

F: +44 (0)20 7294 2413

If you have a complaint, or any suggestions for improvement about any of the services that City & Guilds provides, email: feedbackandcomplaints@cityandguilds.com

**Published by City & Guilds
1 Giltspur Street
London
EC1A 9DD
T +44 (0)844 543 0033
F +44 (0)20 7294 2413
www.cityandguilds.com**

**City & Guilds is a registered charity
established to promote education
and training**

LB-02-6188