



# **Certificated Specialist in Dwelling Ventilation (CSDV)**

## **Syllabus**

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# ***Introduction***

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The syllabus outlines the knowledge candidates are expected to obtain for the Certificated Specialist in Dwelling Ventilation (CSDV) qualification.

This includes the following modules:

- Building regulations and other key documents
- Diagnosing problems associated with a lack of adequate ventilation in existing dwellings
- Evaluating ventilation in an existing dwelling
- Designing and specifying any additional measures required to provide “adequate ventilation” in an existing dwelling
- Installation, commissioning, certifying and ongoing maintenance of ventilation systems in Dwellings

## **Qualification requirements**

### **Certificated Specialist in Dwelling Ventilation (CSDV)**

To achieve this qualification, candidates need to pass the following assessments:

- 1 x written paper (open book) – this paper will include two scenarios where you will be required to answer a selection of questions.
- 1 x 20 minute practical assessment – candidates will have access to a rig(s) and provide an assessment on suitability and working performance.

Candidates are required to achieve a 50% mark for all elements of the above exams to be awarded the qualification.

**Upon passing this modules the candidate is entitled to use the designation CSDV.**

# CSDV Syllabus

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## 1. Building Regulations and Other Key Documents

A CSDV should have a detailed knowledge of building regulations and other important reference, guidance and specification documents relating to the ventilation of dwellings within the individual countries they work in within the UK. This will include the following:

- 1.1 A history of how ventilation of dwellings has evolved through the years.
- 1.2 All relevant Approved Documents in England and Wales, Building Standards Technical Handbooks in Scotland and Technical Booklets in Northern Ireland.
- 1.3 How to design regulatory compliant ventilation systems for a New Build Dwellings.
- 1.4 PAS 2035.
- 1.5 NHBC/ LABC Standards
- 1.6 Property Care Association Best Practice & Guidance Documents.
- 1.7 Relevant Health & Safety legislation and Best Practice.

## 2. Diagnosing problems associated with a lack of Adequate Ventilation in Existing Dwellings

A CSDV should be able to demonstrate detailed knowledge of:

- 2.1 Temperature, atmospheric moisture, absolute humidity, specific humidity, relative humidity, mixing ratio, dew point and vapour pressure.
- 2.2 Tools used to measure 2.1 and how to use them.
- 2.3 Psychrometric charts and how to extract information from them.
- 2.4 Rising, penetrating and condensation dampness and how to distinguish between them.
- 2.5 Other indoor air pollutants (in addition to excess moisture) e.g. Radon Gas, VOC's and CO<sup>2</sup>.
- 2.6 Tools used to measure 2.5 and how to use them.

## 3. Evaluating Ventilation in an Existing Dwelling

A CSDV should be able to demonstrate detailed knowledge of:

- 3.1 Good occupant interaction during the survey of the dwelling.
- 3.2 What "adequate ventilation" means in different circumstances.
- 3.3 The 4 main methods of ventilation against which existing ventilation purpose provided ventilation measures can be benchmarked:
  - Background Ventilators and Intermittent extract fans and/or continuously running Single Room Heat Recovery Ventilation units in "wet rooms".
  - Continuous Mechanical Extract Ventilation via de-centralised dMEV fans and/or a centralised MEV fan in "Wet Rooms", with/without continuously running Single Room Heat Recovery Ventilation units in "Habitable Rooms"
  - Mechanical Ventilation with Heat Recovery (MVHR).
  - Positive Input Ventilation (PIV).
- 3.4 Evaluating each of the following 7 key constituents of each of the 4 main methods of ventilation in 3.3:
  1. Air Permeability/Infiltration
  2. Purge Ventilation measures in "Habitable Rooms".
  3. Purge Ventilation measures in "Wet Rooms".

4. Internal Air Transfer measures.
  5. Extract Ventilation measures in “Wet Rooms”.
  6. “Whole Dwelling Ventilation” measures – Total Airflow.
  7. “Whole Dwelling Ventilation” measures – Air Distribution.
- 3.5 Measuring “Background Ventilators”.
  - 3.6 Different types of ventilation fans and equipment and how to identify them.
  - 3.7 Airflow measuring tools and how to use them.
  - 3.8 Estimating airflow when measurement is not possible.

#### **4. Designing and Specifying any additional measures required to provide “Adequate Ventilation” in an Existing Dwelling following the evaluation in 3.**

*A CSDV should be able to demonstrate detailed knowledge of:*

- 4.1 Designing and Specifying what additional measures would be required to bring what is already installed and working well up to a level that could be considered capable of providing “Adequate Ventilation” by means of the following 4 main methods of ventilation:
  - Background Ventilators and Intermittent Extract Fans and/or continuously running Single Room Heat Recovery Ventilation units in “Wet Rooms”.
  - Continuous Mechanical Extract Ventilation via de-centralised dMEV fans and/or a centralised MEV fan in “Wet Rooms”, with/without continuously running Single Room Heat Recovery Ventilation units in “Habitable Rooms”
  - Mechanical Ventilation with Heat Recovery (MVHR).
  - Positive Input Ventilation (PIV).

#### **5. Installation, commissioning, certifying and ongoing maintenance of ventilation systems in Dwellings**

*A CSDV should be able to demonstrate detailed knowledge of:*

- 5.1 The installation, commissioning, and certification of ventilation systems in New Build Dwellings. As well as tutorial learning, the CSDV must be able to demonstrate practical on-site experience of installation and commissioning of ventilation systems in New Build Dwellings.
- 5.2 The installation, commissioning, and certification of ventilation equipment in Existing Dwellings. As well as tutorial learning, the CSDV must be able to demonstrate practical on-site experience of installation and commissioning of ventilation systems in Existing Dwellings.
- 5.3 The ongoing maintenance requirements for each of the following 4 main methods of ventilation:
  - A. Background Ventilators and Intermittent Extract Fans and/or continuously running Single Room Heat Recovery Ventilation units in “Wet Rooms”.
  - B. Continuous Mechanical Extract Ventilation via de-centralised dMEV fans and/or a centralised MEV fan in “Wet Rooms”, with/without continuously running Single Room Heat Recovery Ventilation units in “Habitable Rooms”
  - C. Mechanical Ventilation with Heat Recovery (MVHR).
  - D. Positive Input Ventilation (PIV).

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