

Section 5

Inspection checklist and air flow measurement test sheet

This inspection checklist and air flow measurement test sheet is divided into three parts:

- **Part 1** is for recording the particulars of the system, the installation address and the installer's details.
- **Part 2a** functions as an installation checklist.
- **Part 2b** is for recording the results of a visual inspection of the installation, and also acts as a pre-test checklist.
- **Part 3** is the approved manner for recording the results of mandatory air flow tests on both intermittent and continuous mechanical ventilation systems in new dwellings, and is the sheet that must be given to the building control body (BCB).

The three parts should be completed in full, and a copy should form part of the Operation and Maintenance manual.

5.1 Checking design against measured air flow rates

For Systems 1, 3 and 4, the measured air flow rates should be recorded on Part 3: *Air flow measurement test details*, as part of the testing and commissioning procedures given in Tables 2, 6 and 8. The measured values will need to be compared with their respective design values. Compliance with the design will be met if the measured air flow rates for each are equal to, or greater than the design value. If any measured value is less than the design value, adjustment should be made to correct the system and all air flows re-measured until they meet the design values. If it is not possible to make adjustment to increase the air flow rate then a note to this effect should be made on the sheet. This may require the person with overall responsibility for the system to carry out remedial works to rectify the cause of the under-performance. The system will need to be re-tested to confirm that the design values have been met.

5.2 Instrument calibration

Measurement of air flows should be performed using equipment that has been calibrated at a UKAS accredited calibration centre. Calibration should be performed annually for each air flow measurement device used to record final air flow rates in Part 3.

5.3 Demonstrating compliance

All three parts of the checklist and test sheet should be completed, with the relevant Parts 2 and 3 signed by a person who is responsible for the inspection and testing of the system that has been installed.

The three-part form needs to be completed for each installation address, and as a minimum a copy of Part 3 should be submitted to the BCB as evidence the installation has been correctly tested and commissioned (as relevant to the system installed).

Part 1 – System details and declarations

1.1 Installation Address Details	
Dwelling name/number	
Street	
Locality	
Town	
County	
Post Code	
1.2 Installation Details	
System classification*	System
<i>Enter System 1 to 4 as defined by Approved Document F 2010</i>	
Manufacturer	
Model numbers	
Serial number (where available)	
Location of fan units	1.
	2.
	3.
	4.
	5.

**Note. If a system has been installed that is not defined by Systems 1 to 4 in Approved Document F, further installation checks and commissioning procedures may be required. Seek particular guidance from the manufacturer for these systems.*

Part 2a – Installation details

2.1 Installation Checklist – General (all Systems)		Tick as appropriate	
Has the system been installed in accordance with manufacturer's requirements?		Yes	No
Have relevant system installation clauses been followed as detailed in Tables 1, 3, 5, and 7 as applicable?		Yes	No
Type of ductwork installed (e.g. rigid, semi-rigid)			
If any deviation from Tables 1, 3, 5 and 7, these should be detailed here			
Description of installed controls (e.g. timer, central control, humidistat, PIR, etc)			
Location of manual/override controls			
2.2 Installation Engineer's Details			
Name			
Company			
Address Line 1			
Address Line 2			
Telephone Number			
Post Code			
Signature			
Competent Person Scheme/ Registration Number (if applicable)			
Date of Installation (completion)			

Part 2b – Inspection of installation

This section should be completed before completing Part 3.

2.3a Visual Inspections – General (all Systems)		
Total installed equivalent area of background ventilators in dwelling?		mm
Total floor area of dwelling?		m²
Does the total installed equivalent ventilator area meet the requirements given in Tables 5.2a, 5.2b, or 5.2c in ADF?	Yes	No
Have all background ventilators been left in the open position?	Yes	No
Have the correct number and location of extract fans/terminals been installed that satisfy Table 5.2a in ADF?	Yes	No
Is the installation complete with no obvious defects present?	Yes	No
Do all internal doors have sufficient undercut to allow air transfer between rooms (i.e. 10 mm over and above final floor finish)?	Yes	No
Has all protection/packaging been removed (including from background ventilators) such that system is fully functional?	Yes	No
For ducted systems, has the ductwork installation been installed in such manner that air resistance and leakage is kept to a minimum?	Yes	No
Are the correct number and size of background ventilators provided that satisfy ADF?	Yes	No
Has the entire system been installed such that there is sufficient access for routine maintenance and repair/replacement of components?	Yes	No
2.3b Visual Inspections – General (Systems 3 and 4 only)		
Have appropriate air terminal devices been installed to allow system balance?	Yes	No
Has the heat recovery unit (System 4 only) and all ductwork been effectively insulated where installed in unheated spaces?	Yes	No
Condensate connection is complete and drains to an appropriate location (System 4 only)?	Yes	No
2.3c Other Inspections – General (Systems 1, 3 and 4 only)		
Upon initial start up, was any abnormal sound or vibration experienced, or unusual smells detected?	Yes	No

2.3d Inspector's Details	
Name	
Company	
Address Line 1	
Address Line 2	
Telephone Number	
Post Code	
Signature	
Competent Person Scheme/ Registration Number (if applicable)	
Date of Inspection (completion)	

Part 3 – Air flow measurement test and commissioning details

3.1 Test Equipment				
Schedule of air flow measurement equipment used (model and serial number)			Date of last UKAS calibration	
1.				
2.				
3.				
3.2 Air Flow Measurements – System 1 only				
Fan Reference (as 1.2)	Measured Extract Rate (l/s)	Design Extract Rate (l/s) Refer to Table 5.1a in ADF		
Extract Fan 1				
Extract Fan 2				
Extract Fan 3				
Extract Fan 4				
Extract Fan 5				
<i>For kitchen extract canopies, only the highest setting needs to be recorded.</i>				
3.3 Air Flow Measurements (Extract) – Systems 3 and 4 only				
Room Reference (location of terminals)	Measured Air Flow High Rate (l/s)	Design Air Flow High Rate (l/s)	Measured Air Flow Low Rate (l/s)	Design Air Flow Low Rate (l/s)
Kitchen				
Bathroom				
En Suite				
Utility				
Other...				
Other...				
Other...				

3.4 Air Flow Measurements (Supply) – System 4 only

Room Reference (location of terminals)	Measured Air Flow High Rate (l/s)	Design Air Flow High Rate (l/s)	Measured Air Flow Low Rate (l/s)	Design Air Flow Low Rate (l/s)
Living Room 1				
Living Room 2 (if present)				
Dining Room				
Bedroom 1				
Bedroom 2				
Bedroom 3				
Bedroom 4				
Bedroom 5				
Study				
Other...				

3.5 Commissioning – Systems 3 and 4 only

Have controls been set-up in accordance with the manufacturer's recommendations?	Yes	No
Have all distribution grilles been locked to prevent unauthorised adjustment?	Yes	No

3.6 Test Engineer's Details

Name	
Company	
Address Line 1	
Address Line 2	
Telephone Number	
Post Code	
Signature	
Competent Person Scheme/Registration Number (if applicable)	
Date of Test	