

Title: Requirements for commissioning appliances connected to custom built or specialist chimney/flue systems

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The Technical Bulletin (TB) is intended to give guidance when commissioning gas appliances installed to custom built or specialist flue systems.

Introduction

This Technical Bulletin has been developed to outline the responsibilities of Gas Safe registered businesses when commissioning gas appliances installed to custom built/specialist chimney/flue systems. These may serve more than one appliance and are predominately found within the non-domestic sector but may also include domestic installations such as Communal Flue Systems (CFS).

Note 1: For the purpose of the Technical Bulletin, specialist chimney/flue systems comprise of:

- *Custom built chimneys that are non-certified as defined in BS EN 15287 Chimneys. Design, installation and commissioning of chimneys⁽¹⁾*
- *System chimneys that have not been certified to an appropriate Standard (for example BS EN 1856-1 Chimneys. Requirements for metal chimneys - System chimney products⁽²⁾)*
- *Those that have not been designed by the relevant appliance manufacturer*

Background

When Gas Safe registered engineers commission an appliance installed to a chimney/flue system it is important that the correct commissioning process is followed in accordance with both the appliance and chimney/flue manufacturer installation instructions and relevant industry Standards. The Approved Code Of Practice (ACOP) to Gas Safety (Installation and Use) Regulations 1998⁽³⁾ (GSIUR) Regulation 27 (1) states "..... *This requirement applies however the connection is made (eg it covers equally where an appliance is fitted to an existing flue, and where a flue is fitted to an existing appliance). In each case, the necessary tests and examinations should be carried out both before and after the appliance has been fitted. Reference should be made to appropriate standards and the manufacturers' instructions*"

Most modern appliances now incorporate a fan, such as in a pre-mix condensing appliance, and these help to assist and safely remove the products of combustion. In many cases chimney/flue systems will therefore operate under a positive pressure and will require the flue specialist to design, validate, and certify the installation differently to meet the appliance manufacturer installation requirements.

As a result, the testing and commissioning procedures to establish safe operation differ from that of traditional open flued natural draught installations, which could be tested

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utilising a series of smoke tests to establish safe function of certain types of chimney/flue systems designed by specialists, which would not be sufficient to validate a positive pressure chimney/flue system.

Appliance Commissioning and Testing

The chimney/flue type and its intended operation will need to be verified by the Gas Safe registered engineer when commissioning an installed appliance in accordance with Regulation 26(9)(a) of GSIUR⁽³⁾, which states ‘*Where a person performs work on a gas appliance he shall immediately thereafter examine- (a) the effectiveness of any flue;...*’.

The Gas Safe registered engineer shall confirm that the chimney/flue has been appropriately validated and certified by the system designer and/or installer of the chimney/flue system, prior to the appliance commissioning process. An example of the requirements (where applicable) could include, but are not limited to:

- The installer of the chimney/flue system
- Suitability of flue supports and any structural steel work
- Correct jointing methods have been used
- Suitability of termination
- Data plate information relevant and installed
- Adequate ventilation
- Adequate test points installed
- CO detection
- Condensate drainage correct materials
- Any required System Design Verification Notice (SDVN) has been issued
- Relevant tests have been carried out

Note 2: A custom built or specialist chimney/flue system designed to operate under a positive pressure may need to be tested by means of a leak rate pressure test(s). For testing methods for these types of chimney/flue systems, refer to IGEM/UP/10 Edition 4 Installation of flued gas appliances in industrial and commercial premises⁽⁴⁾.

Note 3: It is a requirement that each component of the flue is certified for its intended use.

Any specific appliance manufacturer tests and checks defined within the relevant manufacturer installation requirements should be carried out and recorded as part of the commissioning procedure. Alternative flue systems may have different testing methods, such as those specifically designed and provided by the appliance manufacturer.

The Gas Safe registered engineer responsible for commissioning the appliance should as a minimum complete the checklist in Appendix 1 and provide this as part of the installation handover process.

All relevant information should also be retained within the relevant site technical file.

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Bibliography

- (1) BS EN 15287 Chimneys. Design, installation and commissioning of chimneys
- (2) BS EN 1856-1 Chimneys. Requirements for metal chimneys - System chimney products
- (3) Gas Safety (Installation and Use) Regulations 1998
- (4) IGEN/UP/10 Installation of Flue gas appliances in industrial and commercial premises
- (5) TB 1000 - An introduction to Gas Safe Register Technical Bulletins

Note: Gas Safe Register Technical Bulletins and the Legislative, Normative & Informative Document List can be viewed at:
<https://www.gassaferegister.co.uk/sign-in/> - login and visit the Technical Information area

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APPENDIX 1

Pre-commissioning checklist for appliances connected to specialist chimney/flue systems		
Requirements	Yes	No
Is there a record to confirm the design of the installed chimney/flue system? <i>This may also include any schematics/drawings and maintenance requirements for the chimney/flue system as well as any specific design agreements in writing from the appliance manufacturer. A full visual inspection of the flue to confirm the installation meets the design is required.</i>	Y	N
Is there a chimney/flue test record? <i>E.g., A leakage test record for positive pressure systems or smoke test records for negative pressure systems?</i>	Y	N
Are suitable flue test points installed along the chimney/flue route? <i>E.g., For flue gas analysis and, where required, pressure sampling test points.</i>	Y	N
Is the chimney/flue system installed correctly to avoid the formation of excessive condensate or premature failure? <i>E.g., Adequate support, suitable fall on flue system and appropriate drainage.</i>	Y	N
Is there a chimney/flue data plate which includes the specification of the chimney/flue design? <i>E.g., Fixed to the flue or adjacent in a prominent location.</i>	Y	N
All answers are Yes (Y)	Proceed with commissioning	
Any answers are No (N)	Do Not commission	
Company name:		
Gas Safe registration number:		
Licence number:		
Engineer name (PRINT NAME):	Date:	
Engineer signature:		
Responsible person name:		
Installation address:		