

Technical Bulletin 152

Developed by the Large Business Forum (LBF)

Title: Securing and Sealing horizontal chimney terminations

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This Technical Bulletin has been written by the Large Business Forum (LBF) to provide industry guidance on securing and sealing horizontal chimney terminations.

Introduction

This Technical Bulletin has been written by the Large Business Forum (LBF) to provide guidance for Gas Safe registered engineers to ensure horizontal chimneys and their terminations are correctly **secured and sealed**.

This Technical Bulletin focuses on the installation of a chimney system through exterior walls of traditional or similar construction e.g. brick/blockwork cavity walls only and does not pertain to chimney systems passing through internal walls/structures where additional considerations may need to be given such as fire stopping.

Securing and Sealing of chimneys:

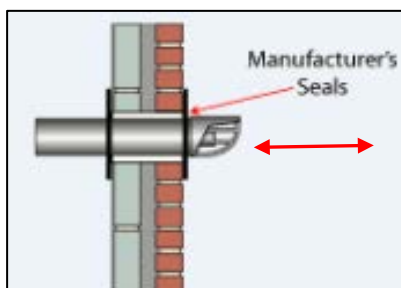
When fitting a chimney there are two distinct and separate requirements for the installer to consider:

1. Weather proofing of the termination to prevent weather and/or combustion product entry.
2. Security of the chimney to prevent disconnection.

Often the manufacturer's instructions will offer guidance on the above especially when extended chimney/flue runs are used. Manufacturer's guidance shall be followed; however, to give greater consideration to 1 & 2 above:

Weather proofing of the termination to prevent weather and/or combustion product entry:

A correctly installed weather collar will prevent ingress of weather and combustion products. In isolation this may not ensure the chimney is secure.

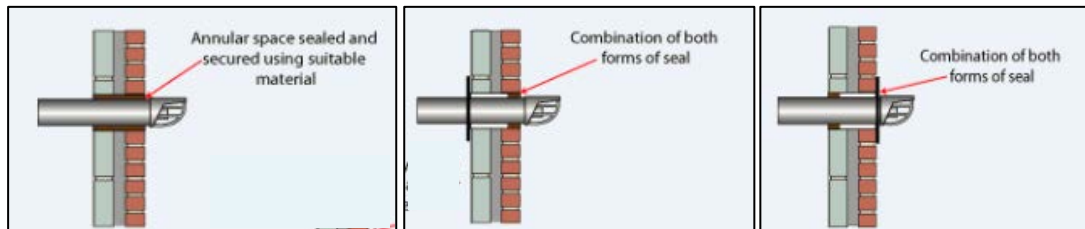


Although these seals may make the chimney weathertight they may not prevent lateral movement 'as shown by the arrows' which would enable easy disconnection.

Security of the chimney to prevent disconnection:

Some chimneys require screws in the joints to ensure they remain intact however others are push-fit. If there is doubt the manufacturer of the appliance shall be consulted to confirm whether or not screws are required.

In such instances the ability of the chimney to retain its integrity should be considered e.g. push-fit with only a rubber weather collar for a seal (as shown above) could become disconnected or could be disconnected by a person either internally, or externally from the property. Use of sand and cement to seal the chimney to the fabric of the building would satisfy both **1** and **2** above. The diagrams below show how sealing the chimney to the fabric of the building secures the chimney.



The installation of a proprietary chimney clamp or the installation of an approved terminal guard may also help mitigate the risk.

BS 5440 Part 1: 2008⁽¹⁾ does not state exactly what material is to be used to seal and secure. Where a manufacturer provides specific guidance on how to correctly seal and secure the chimney then this guidance shall be followed.

Note 1: Where a terminal guard is required it should be of a material able withstand corrosive properties of condensing products of combustion.

Note 2: Most external manufactures weather seals will require work to secure the chimney to the building fabric e.g. sand and cement.

Note 3: Inspection by Gas Safe Register looks to determine whether the installation meets the criteria of both BS 5440 Part 1: 2008⁽¹⁾ and that of any guidance provided by the appliance manufacturer so that the chimney is secure, stable and adequately sealed to the fabric of the building. This approach is considered appropriate and fully supported by the Large Business Forum.

Figure 1



Figure 1 shows examples of correctly Secured and Sealed chimneys.

Figure 2



Figure 2 shows examples of incorrectly Secured and Sealed chimneys.

Entry of combustion products:

Where an inadequately sealed and/or secured chimney is encountered and products of combustion have been **confirmed** as entering the property then this is an immediately dangerous situation and appropriate actions must be taken to make the appliance safe (disconnection or rectification). Guidance is provided in the current Gas Industry Unsafe Situations Procedure (**GIUSP**)⁽³⁾. Attach the appropriate warning label to the appliance and complete/issue a warning notice.

Where an inadequately sealed and/or secured chimney is encountered and the entry of products of combustion into the property has **not** been confirmed, then the installation should be risk assessed and the appropriate information given/action taken based on the level of risk identified.

Sealing the annular space around a chimney with 'sealants' other than sand and cement:

If during installation Gas Safe registered engineers are unable confirm the suitability a sealant, e.g. an expanding foam product or silicone, from both the boiler and sealant manufacturers then the sealant product should not be used.

Due to shrinkage, and potential UV degradation etc, where a Gas Safe registered business encounters an installation where the chimney has been sealed to the structure using sealant, it should be inspected to ensure integrity of the seal is maintained.

Note 4: The GIUSP (*IGEM/G/11*)⁽³⁾ can be viewed at: <https://www.gassaferegister.co.uk/sign-in/> - login and visit the Technical Information area.

Note 5: Similar legislative requirements apply in other geographical areas covered by Gas Safe Register. For details of current gas safety legislation, building legislation and industry standards for the geographical areas covered by Gas Safe Register, see the *Legislative, Normative & Informative Document List (LNIDL)*⁽⁴⁾ at: <https://www.gassaferegister.co.uk/sign-in/> - login and visit the Technical Information area.

Note 6: For general information about the process behind the development of Gas Safe Register Technical Bulletins and the expectations for all Stakeholders, see *TB 1000*⁽⁵⁾ at: <https://www.gassaferegister.co.uk/sign-in/> - login and visit the Technical Information area.

Bibliography

- (1) BS 5440-1: 2008 – Flueing and ventilation for gas appliances of rated input not exceeding 70 kW net (1st, 2nd and 3rd family gases). Part 1 - Specification for installation of gas appliances to chimneys and for maintenance of chimneys
- (2) BS 7967:2015 Guide for the use of electronic portable combustion gas analysers for the measurement of carbon monoxide in dwellings and the combustion performance of domestic gas-fired appliances
- (3) IGEM/G/11 – The Gas Industry Unsafe Situations Procedure
- (4) LNIDL – Gas Safe Register Legislative, Normative & Informative Document List
- (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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Page 3 of 3

TECHNICAL BULLETIN 152