

IGEM/UP/19
Communication 1773

***Design and application of interlock
devices and associated systems used with
gas appliance installations in commercial
catering establishments***



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SECTION 1 : INTRODUCTION

- 1.1 The content of this Standard has been developed by the Institution of Gas Engineers and Managers (IGEM) in conjunction with Gas Safe Register and representatives from the catering industry. Gas Safe Register issued a Technical Bulletin TB 140, which replaced Health and Safety Executive (HSE) guidance note CAIS 23 for the catering sector regarding the necessary advice for gas installers and designers; CAIS 23 has been revised and reissued for caterers and this Standard replaces TB 140.
- 1.2 Catering establishments are generally defined as those preparing meals for the public other than in domestic situations, see clause 3.3.5. BS 6173, as currently written, is not intended to apply to dwellings or primarily domestic premises, such as those in Bed & Breakfast installations. For these latter installations, reference has in the past been made to standards such as BS 5440-2 and BS 6172, however many installations may border on commercial activities due to their high cooking loads. The aim of this Standard is to clarify some of the options and requirements for new and existing installations, both large and small.
- 1.3 It is possible that natural ventilation could achieve adequate air quality, in a kitchen environment but, for small spaces with a large cooker or large catering installations, the fitting of mechanical ventilation would normally be required. This may require extract canopies, but special care will be needed to ensure good air movement within the space to ensure a safe working environment.
- 1.4 The application of mechanical ventilation in the majority of cases will require the fitting of associated interlocks to ensure the safety of staff in respect of the air quality of their working environment.
- 1.5 This Standard is not intended to deal with mechanical ventilation systems in domestic applications although the principles of safety may be similar if increased ventilation is necessary to meet the desired air quality.
- 1.6 This Standard has been drafted by a Panel appointed by the Institution of Gas Engineers and Managers' (IGEM's) Gas Utilization Committee, subsequently approved by that Committee and published by the authority of the Council of IGEM.
- 1.7 This Standard makes use of the terms "must", "shall" and "should" notwithstanding Sub-Section 1.9,
- the term "must" identifies a requirement by law in Great Britain (GB) at the time of publication
 - the term "shall" prescribes a requirement which, it is intended, will be complied with in full and without deviation
 - the term "should" prescribes a requirement which, it is intended, will be complied with unless, after prior consideration, deviation is considered to be acceptable.
- Such terms may have different meanings when used in legislation, or HSE ACoPs or guidance, and reference needs to be made to such statutory legislation or official guidance for information on legal obligations.
- 1.8 The primary responsibility for compliance with legal duties rests with the employer. The fact that certain employees, for example "responsible engineers" (e.g. suitably Gas Safe registered) are allowed to exercise their professional judgement does not allow employers to abrogate their primary responsibilities.

Employers must:

- have done everything to ensure, so far as is reasonably practicable, that there are no better protective measures that can be taken other than relying on the exercise of professional judgement by “responsible engineers”
- have done everything to ensure, so far as is reasonably practicable that “responsible engineers” have the skills, training, experience and personal qualities necessary for the proper exercise of professional judgement
- have systems and procedures in place to ensure that the exercise of professional judgement by “responsible engineers” is subject to appropriate monitoring and review
- not require “responsible engineers” to undertake tasks which would necessitate the exercise of professional judgement that is not within their competence. There should be written procedures defining the extent to which “responsible engineers” can exercise their professional judgement. When “responsible engineers” are asked to undertake tasks which deviate from this they should refer the matter for higher review.

1.9 Notwithstanding Sub-Section 1.7, this Standard does not make obligatory the use of any method or specification against the judgement of the “responsible engineer”. New and improved practices may be adopted prior to this Standard being updated. Amendments to this Standard will be issued when necessary and their publication will be announced in the Journal of IGEM and elsewhere as appropriate.

1.10 It is now widely accepted that the majority of accidents in industry are in some measure attributable to human as well as technical factors in the sense that people’s actions initiated or contributed to the accidents or people might have acted better to avert them.

It is therefore necessary to give proper consideration to the management of these human factors and to the control of risk. Further advice may be found in HSG65 and HSG48.

1.11 Requests for interpretation of this Standard in relation to matters within its scope, but not precisely covered by the current text, should be addressed in writing to Technical Services, IGEM, IGEM House, High Street, Kegworth, Derbyshire, DE74 2DA and will be submitted to the relevant Committee for consideration and advice, but in the context that the final responsibility is that of the engineer concerned. If any advice is given by or on behalf of IGEM, this does not relieve the responsible engineer of any of his or her obligations.

1.12 This Standard was published in October 2014.

SECTION 2 : SCOPE

- 2.1 This Standard provides requirements for the design and application of various air flow and air quality interlock devices and associated systems used in conjunction with gas appliance installations in new commercial catering establishments, (see Glossary in Appendix 1).

Note 1: Catering establishments will normally fall within the definition of a 'Food Business' in The Food Safety (General Food Hygiene) Regulations.

Note 2: This Standard does not apply to mobile catering installations or transportable temporary event catering installations. See Nationwide Caterers Association (NACSS) guidance.

- 2.2 This Standard applies to replacement of, or extension to, existing installations. It is not retrospective, but it is recommended that existing installations be modified to meet this Standard, when appropriate.

Note: Standards rarely cover the retrospective issue of existing installations. They can, however, set a basis for consideration of performance upon which a risk assessment can be developed. Where appropriate, ventilation checks for CO₂ levels need to be performed.

It can be argued that any improvements in safety are better than none at all. It may be unreasonable to expect that an old installation is brought right up-to-date in all respects. Where a major refurbishment of the installation takes place, it would be reasonable to consider the installation as a new installation, as far as is reasonably practicable.

- 2.3 This standard provides the requirements for air quality testing of new and existing commercial catering establishments.

- 2.4 This Standard applies to installations of maximum operating pressure (MOP) not exceeding 100 mbar supplied with heavier and lighter than air flammable gases such as Towns (manufactured) gas, Natural Gas (NG), Liquefied Petroleum Gas (LPG), LPG/air and biogases.

- 2.5 Pressures quoted are gauge pressures unless otherwise stated.

- 2.6 Italicised text is informative and does not represent formal requirements.

- 2.7 Appendices are informative and do not represent formal requirements unless specifically referenced in the main sections via the prescriptive terms "must", "shall" or "should".