
Overview

This standard is about commissioning gas systems, installations and components. It is for the commercial property and leisure accommodation parts of the non-residential downstream gas industry. It can apply to gas systems, installations and components for any type of fuel gas or combinations of fuel gas.

It includes carrying out pre-commissioning checks, identifying and resolving problems with gas systems, installations and components, liaising with people from other trades and handing over commissioned systems to users.

This standard is for those who commission gas systems, installations or components in non-residential downstream, commercial properties or leisure accommodation.

Performance criteria

You must be able to:

1. work in line with plans, safe systems of work and risk assessments
2. confirm gas systems, installations and components comply with industry standards
3. check and confirm that conditions within gas systems, installations and components meet safety requirements
4. carry out tightness testing and purging procedures which confirm the integrity of installed gas systems, installations and components at the appropriate pressure for the gas being supplied
5. confirm with input services personnel that the integrity and conditions in associated electricity, water, ventilation and flue/extraction systems will permit safe pre commissioning
6. select and use tools and equipment that are appropriate for commissioning activities
7. check and confirm that gas system operating pressures meet industry standards
8. check and confirm appliance gas operating pressures and heat inputs meet industry standards and manufacturers' requirements
9. check combustion performance meets requirements using visual checks and flue gas analysis
10. confirm combustion ventilation and flue/extraction systems' performance against manufacturers' and industry standard requirements using combustion and atmosphere analysis
11. confirm that gas systems, installations and components function and operate in accordance with safety and industry requirements and manufacturers' instructions
12. liaise and cooperate with people from other trades at appropriate points in the work
13. verify that existing electrical, water, ventilation and flue/extraction systems, installations and components function and operate in accordance with safety requirements, industry requirements and manufacturers' instructions
14. test and confirm that safety devices, gas shut off valves and interlocks are operating as per specification
15. resolve problems in accordance with approved procedures where checks and tests reveal gas appliance, gas system or components:
 - 15.1. do not meet design requirements
 - 15.2. have defects or deficiencies
 - 15.3. cannot be restored to full performance
16. reporting problems you cannot rectify to responsible person(s)
17. liaise with responsible person(s) and others who will be affected by the work activities to minimise disruption to work
18. comply with authorisation and verification processes that ensure correct working practices of other input services
19. advise all people who are affected by work about any delays as soon as they occur

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20. report any delays in work schedules to job supervisors in line with agreed reporting procedures
 21. advise responsible person(s) of any unsafe situations, and actions required to remedy those situations, without delay
 22. complete required records and documentation for gas systems, installations and components
 23. interact with customers at appropriate times during your work
 24. instruct all responsible person(s) on the correct operation and ongoing procedures for appliances and gas systems and provide them with copies of appliance literature

Knowledge and understanding

You need to know and understand:

1. regulations and guidance governing health and safety in the workplace, environmental protection and the use of risk assessments
2. legislation covering general responsibilities for own safety and that of others
3. the industry standards and stages involved in pre-commissioning and commissioning new and existing gas systems, installations and components
4. how to use plans, safe systems of work and risk assessments
5. the tools and equipment necessary to provide safe access to work at heights or in restricted or confined spaces
6. methods of working which protect the building décor, customer property and existing systems and components
7. the tools, equipment, materials and components required for commissioning activities
8. the care and maintenance requirements of tools and equipment, and checks for safe condition
9. how to secure and store tools, equipment, materials and components to meet safety requirements and minimise loss or wastage
10. steps to take when required materials, components, tools and equipment are not available on site
11. potential hazards that could arise from commissioning activities
12. how to access and interpret required information including statutory and normative documents, industry standards, guidance documents and manufacturers' instructions
13. the range of commercial gas systems, installations and components their typical uses and how they operate
14. the need to liaise with others whose procedures or routines may be affected by the suspension of the gas appliance and gas system operation
15. the points in the commissioning process where co-operation and liaison with other input service personnel about electricity, water, kitchen ventilation and flue/extraction systems may be required
16. the procedures and work methods for connecting commercial gas appliances to both new and existing input services including gas, water, electric, ventilation and flue/extraction systems
17. the routines and sequences for commissioning commercial gas appliances, gas systems, installations and components in accordance with manufacturers' specification and industry standards
18. the procedures for checking the correct, safe operation and performance of commercial gas appliances, gas systems, installations and components against the design specification
19. normal gas pressures in the geographical area in which you are working and procedures for checking and confirming gas system operating pressures
20. procedures for checking and confirming appliance operating pressure and heat input

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21. tests, checks and use of flue gas analysers to confirm the suitability of the gas combustion performance
 22. tests, checks and use of atmosphere analysers to confirm the integrity, suitability and performance of ventilation and flue/extraction systems
 23. gas system, installation and component handover procedures and associated documentation
 24. how to demonstrate the operation of commercial gas appliances, gas systems, installations and components to end users and the implications of the shift system on the delivery of handover training
 25. steps to take when problems arise in the work activities
 26. job management structures and methods of reporting and recording job progress or problems delaying progress
 27. how to apply gas industry procedures for unsafe situations and isolate unsafe gas appliances, gas systems, components and appliances
 28. processes, procedures, equipment and legislative requirements for applying tightness testing and purging to appliances, gas systems, installations and components
 29. processes and procedures, equipment and legislative requirements for applying electrical tests to appliances, electrical systems, installations and components to ensure safe functioning
 30. how to communicate with customers and when it is appropriate to do so

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Suite	Industrial and Commercial Gas Utilisation
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