

Clean industrial and commercial ventilation systems

Overview

This standard is for people who clean industrial and commercial ventilation systems.

The person performing this work must be able to comply with the correct procedures and practices for cleaning industrial and commercial ventilation systems. This work must be in accordance with the current versions of the appropriate industry standards and regulations; the specification; industry recognised working practices; the working environment and the natural environment. They must be able to:

- prepare work locations to undertake ductwork cleaning in a safe working environment
- clean various types of ductwork in a variety of different ventilation systems in accordance with the appropriate industry standards
- update and maintain records appropriately
- communicate effectively with work colleagues, customers and supervisors

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Performance criteria

You must be able to:

1. verify that the job information and documentation are current and relevant and that the plant, access equipment and cleaning equipment are fit for purpose
2. confirm before work starts that the work location and work area can be accessed safely and has been checked for the risk to other personnel on the site, and take appropriate action if a risk is present
3. select and use cleaning materials and equipment suitable for the working environment in which the cleaning is taking place
4. safely isolate the system in order for cleaning to be performed
5. produce a risk assessment and method statement for the work to be performed, including the identification and use of personal protective equipment, in accordance with the working environment
6. install access doors to the system where necessary, ensuring they do not compromise the fire-rating of the ductwork
7. clean ventilation system and its components using the appropriate cleaning methods and techniques for the ductwork
8. safely remove grease/contaminants from the system
9. perform the required pre and post cleaning tests to determine the system's surface condition
10. safely reinstate the system and its components after cleaning activities have been completed
11. monitor and record the assessment of ductwork cleanliness
12. comply with industry practices and organisational procedures to ensure the co-ordination of site services and the activities of other trades
13. confirm with the relevant people:
 - those necessary variations to the planned programme of work
 - the correct actions to be taken to ensure that any variations to the planned programme of work will minimise the potential for hazard and risk

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14. implement organisational procedures for the safe transport and/or disposal of waste material in accordance with supplier and manufacturer instructions

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Knowledge and understanding

You need to know and understand:

1. the applications, advantages and limitations of different systems
2. the applications, advantages and limitations of different types of ductwork
3. the applications, advantages and limitations of cleaning methods and techniques in relation to the working environment
4. the appropriate industry standards and regulations relevant to cleaning systems and their component parts
5. how to verify that job information and documentation is current and relevant and that the plant, access equipment and tools are fit for purpose
6. how to produce a risk assessment and method statement for the work to be carried out, including the identification and use of personal protective equipment, in accordance with:
 - the system's design
 - the conditions of the working environment
 - organisational procedures
7. how to safely store cleaning consumables and materials
8. work area preparation requirements and methods
9. how to interpret diagrams and drawings of the system to locate the components that require cleaning
10. the organisational procedures for confirming, before work starts, that the work location and work area can be accessed safely and has been checked for the risk to other personnel on the site, and for taking appropriate action if a risk is present
11. how to safely isolate and reinstate the system
12. the requirements and different types of access to systems
13. the different methods to install access doors in systems
14. how to use different materials and equipment used in cleaning systems
15. the methods and techniques for cleaning systems and their associated

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components

16. the methods and procedures for cleaning, removing and reducing grease in systems
17. the different methods of testing and recording system cleanliness of systems
18. the organisational procedures for confirming with the relevant people the appropriate actions to be taken to ensure that any variations to the planned programme of work will not introduce a hazard and have minimum negative impact on the cleaning work to be undertaken
19. the methods for the safe transport and/or disposal of waste material in accordance with suppliers' and manufacturers' instructions

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Scope/range related to performance criteria

Working Environment (Internal and/or External)

- commercial
- industrial
 - agricultural
 - horticultural
 - leisure and entertainment
 - residential medical and care facilities
 - public services establishments
 - pre-1919 traditional/historic buildings

Systems

- supply
- extract
- re-circulation
- low, medium and high pressure/velocity air
- local exhaust ventilation
- kitchen extract system

Organisational procedures

- information management
- project management
- risk assessment/management
- implementing and monitoring health & safety requirements and issues
- implementing and monitoring issues relating to the natural environment
- customer service
- accident reporting
- emergencies
- communication with relevant people* *

Plant

- generators
- transformers for low voltage hand-tools
- lifting equipment
- access equipment
- air compressors
- steam cleaning equipment
- negative vacuum fan

Testing

- deposit thickness test
- wet film thickness test (for kitchen extract systems)
- vacuum test

Cleaning methods and techniques (wet & dry)

- mechanical brushing method
- compressed air whip/skipper ball method
- manual cleaning methods (e.g. wipe, vacuum, brushing, scrape, air lance)
- chemical (e.g. Biocide disinfection)
- steam/high pressure water wash
- blasting (remote or direct)
- negative pressure extraction

Ductwork

- rectangular
- circular and flat oval
- plastic
- fire rated
- flexible

Access doors

- rectangular doors
- curved doors
- fire rated doors
- saddle doors
- quick release catches
- sealing gasket

Relevant people

- customers/clients
- client representatives
- supervisors
- site/contract manager
- other contractors/trades
- members of the public
- work colleagues

Components

- air handling units
- filters
- terminal units
- attenuator/silencers
- plenum boxes
- dampers
- heater/cooler batteries
- fans/air turning vanes
- fan coil units
- access doors
- kitchen hoods and grease filters

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- building management system sensors* *

Relevant documents

- drawings
- specification
- manufacturer's instructions
- company procedures
- test certificates
- industry standards and codes of practice

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