



SWIFTCLEAN
ACADEMY



ESSENTIAL GUIDE TO CLEANING VENTILATION SYSTEMS

Table of contents

What is a Ventilation System?	1
Components of a Ventilation System	2
Types and Benefits of Ventilation Systems	3
Why should Ventilation Systems be cleaned?	4
How often does a Ventilation System need to be inspected? / What is system quality class ('SQc')?	5
How do we know a system needs to be cleaned?	6
How is a Ventilation System cleaned?	7 - 8
Can anyone clean a Ventilation System?	9

What is a Ventilation System?

Commercial 'heating, ventilation, and air conditioning' (also known as HVAC) systems are designed to circulate air into, out of, or within a building or enclosed space. These systems help maintain air quality, regulate temperature, and control humidity. They are essential for creating a safe, healthy, and comfortable environment for occupants and users of the building.

At Swiftclean not only do we provide **Ventilation cleaning services**, but we have also been active and significant technical contributors to a variety of ventilation hygiene sector standards and guidance documents published by industry bodies; including the TR19® Air specification which is particularly relevant to Ventilation Systems and how they should be cleaned.

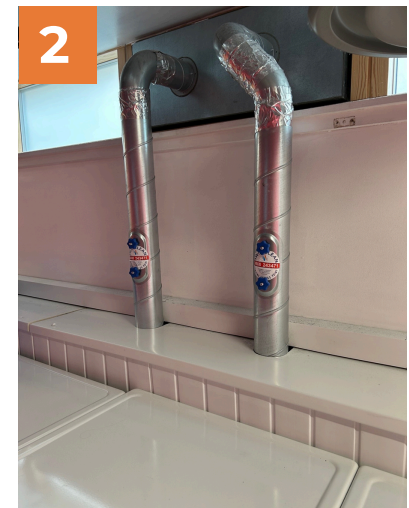
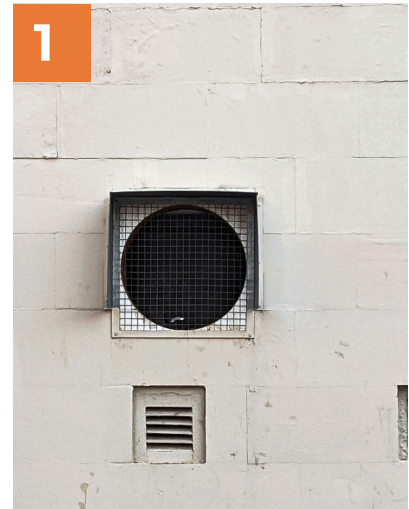


*"Quality training that aligns with industry standards has always been part of Swiftclean's core values, as we have continually advocated for the skills development of individuals within the broader ventilation hygiene sector," explains Richard, the lead trainer at Swiftclean, "We are approved by the **BESA Academy** to deliver both the Air Hygiene **Technician** and **Operative** courses. These courses are designed for individuals working or preparing to enter the building engineering services ventilation hygiene industry. They enable you to demonstrate your compliance with the TR19® Air guidance, and to certify cleaning reports with the vent hygiene register."*

Components of a Ventilation System

General ventilation systems, include but are not limited to, the following components:

1. **Air Inake/Exhaust Vents:** Openings for drawing in fresh air or expelling stale air
2. **Ductwork:** Channels that distribute air throughout the space
3. **Fans/AHUs:** Devices that facilitate air movement (*More Info*)
4. **Filters:** Remove dust, allergens and other contaminants from incoming or circulating air
5. **Dampers:** Control airflow within the system
6. **Heat Recovery Units:** Transfer heat between incoming and outgoing air to improve efficiency.



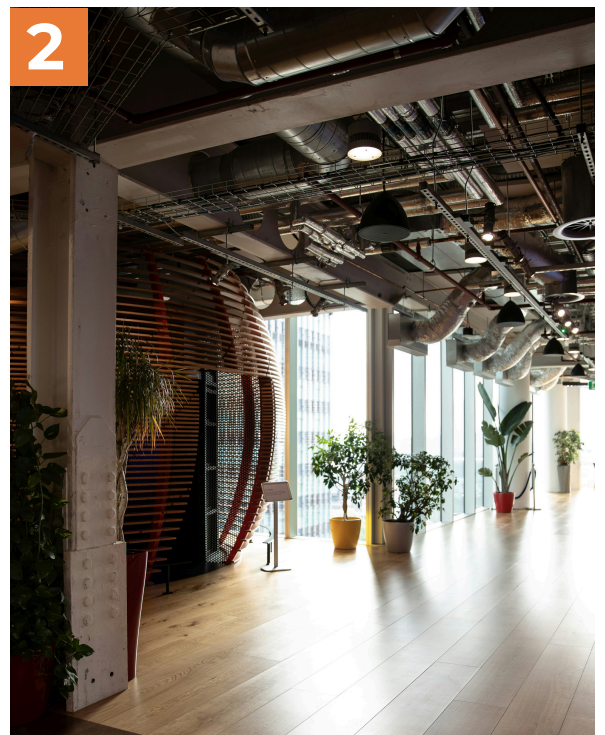
Types of Ventilation Systems

- **Exhaust Ventilation:** Removes stale air (e.g., bathroom or kitchen).
- **Supply Ventilation:** Introduces fresh air into the building.
- **Recirculation Ventilation:** Combines supply and exhaust systems for efficient air exchange.



Benefits of Ventilation Systems

- **Improves** air quality by removing pollutants, allergens, and moisture.
- **Reduces** odours and contaminants.
- **Prevents** mould growth by managing humidity.
- **Supports** energy efficiency in heating or cooling.



Why should Ventilation Systems be cleaned?

Over time, ductwork will develop a build-up of dirt that can include dust, bacteria and indoor pollutants such as mould spores. Older ductwork which has never been cleaned may also contain construction debris. When this is left it can affect the efficiency of ventilation systems and have a negative impact on the air quality.

BESA specification TR19® Air helps us understand the requirements around system cleanliness, encompassing various Regulations and ACOPs. Swiftclean Academy hosts Air Hygiene courses on behalf of BESA with content that includes Ventilation System cleaning, testing and reporting. More information can be found [here](#).

Regulation 5 (Maintenance of workplace, and of equipment, devices and systems) of the Workplace (Health, Safety and Welfare) Regulations 1992, imposes a duty to clean mechanical ventilation systems 'as appropriate'.

Regulation 6 (Ventilation) states:
'effective and suitable provision shall be made to ensure that every enclosed workplace is ventilated by a sufficient quantity of fresh or purified air'.

ACOP 6 (52) relating to Regulation 6 of the Workplace (Health, Safety and Welfare) Regulations, 1992 states that 'mechanical ventilation systems (including air conditioning systems) should be regularly and properly cleaned, tested and maintained to ensure that they are kept clean and free from anything which may contaminate the air'.



How often does a Ventilation System need to be inspected?

Table 6 from **TR19® Air** gives us the recommended minimum regular inspection/monitoring intervals (in months) according to system (cleanliness) quality class ('SQc')

SQc	Inspection and Testing intervals (months)					
	AHU	Filters ⁽²⁾	Wet areas ⁽¹⁾	Ducts	Fire Dampers	Terminals
Low	24	12	12	48	12	48
Medium	12	12	6	24 ⁽³⁾	12	24 ⁽³⁾
High	12	6	6	12 ⁽⁴⁾	12	12 ⁽⁴⁾

What is system quality class ('SQc')?

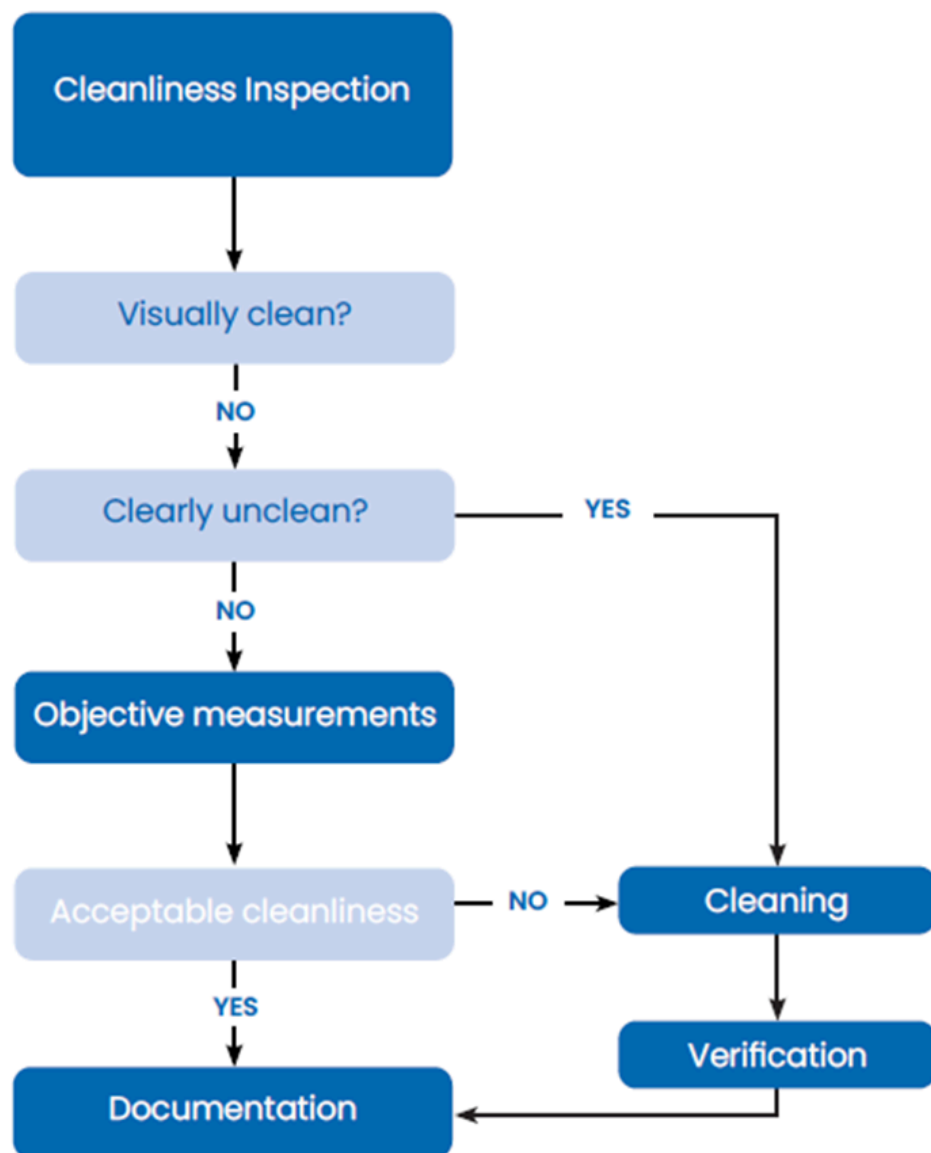
BS EN 15780 has a requirement to categorise each system type as Low, Medium, or High class depending on the areas being served. When categorising your ventilation systems with cleanliness quality classes you should consider the following examples and select appropriate SQc's that are most appropriate to the various systems serving the different zones of your building(s):

SQc	Typical examples
Low	Rooms with only intermittent occupancy, e.g. storage rooms
Medium	Offices, hotels, restaurants, schools, theatres, residential homes, shopping areas, exhibition buildings, sport buildings, general
High	Critical healthcare areas in hospitals, general working areas in industries, laboratories, treatment areas in hospitals, high quality offices

How do we know a system needs to be cleaned?

Fig. 1 Decision flow chart to maintain cleanliness of ventilation systems from **TR19® Air** illustrates the decision-making process to control and maintain cleanliness of a ventilation system.

If measurements are taken to decide the level of contamination/dust accumulation, the results will be compared to **Table 7** Acceptable contamination levels in Existing Ductwork from **TR19® Air** to decide if cleaning is appropriate. Methods for **EVT** (European Vacuum Test) and **DTT** (Deposit Thickness Test) can be seen on our YouTube channel [here](#).



How is a Ventilation System cleaned?

1. Inspection and Assessment

- Visual Inspection: Check for dirt, blockages, or damage in the ductwork, vents, and filters.
- Air Quality Tests (if needed): Measure particle levels or contamination.
- Use cameras or scopes for remote areas that are difficult to access.

2. Preparation

- Turn Off the System: Isolate AHU(s)/Fans associated with the system(s) to prevent air circulation during cleaning.
- Protect Areas: Cover furniture, equipment, and floors to prevent dust contamination.
- Access Points: Open duct access panels or create new ones for easier cleaning.

3. Cleaning Process

- Vacuum Systems:
 - Use industrial vacuums with HEPA filters to remove dust and debris.
 - Negative air pressure systems can be applied to prevent particles from spreading during cleaning.
- Mechanical Brushes:
 - Insert rotating brushes into ducts to dislodge stubborn debris or dirt.
- Compressed Air Tools:
 - Blow air into ducts to move debris toward the vacuum system.
- Vents/Grilles
 - Remove and wash with soap and water.
 - Use a brush or vacuum to clean areas around the vents.

Filters

- Replace disposable filters or clean reusable ones with water and detergent.
- Check filter specifications to ensure proper maintenance.

Fans, Motors, and Coils

- Wipe down fans, blower motors, and coils with a cleaning agent to remove dust or grease buildup.
- Use coil cleaners for evaporator or condenser coils in HVAC systems.

How is a Ventilation System cleaned?

4. Special Considerations

Mould or Bacteria

- Use antimicrobial sprays or fogging equipment to sanitise the system (fogging not to be used in healthcare premises as stated in **HTM 03-01: Note 4**).
- Replace heavily contaminated components (e.g., mouldy insulation).

Heat Recovery Units

- Wash or replace heat exchange cores.
- Vacuum and clean surrounding areas.

5. Post-Cleaning Tasks

- System Inspection: Ensure all debris has been removed and components are reassembled properly.
- Test the System: Reinstate power and turn on the ventilation system to check airflow and efficiency.
- Documentation: Record the cleaning process, including photos in a post works verification report (PWVR); for **compliance** and future reference.

SWIFTCLEAN

Ventilation Risk Assessment

Swiftclean UK Ltd
Swiftclean - Aviation Way Southend-On-Sea

Date


Contract No.

Work Order No.

Job No.

Site Contact

Site Actions / Overall Comments



Can anyone clean a Ventilation System?

For compliance of any works, to assert that services conform to the TR19® specification, the relevant organisation or individual **must**:

- Be a member of an appropriate trade body e.g. the Building Engineering Services Association (**BESA**) or a comparable body.
- Ensure any work undertaken conforms to the **TR19® Air** specification.
- All companies offering Ventilation Hygiene services specifying compliance with TR19 Air Specifications must be registered on the Ventilation Hygiene Register (VHR), [which can be found here](#).

We hope this helps clear things up, but if you're still not sure if your system needs a clean, you can [contact us](#) today, or even try using our Ductwork Cleaning Compliance Checker:


[Compliance Checker: Ductwork Cleaning – Swiftclean \(UK\) Limited](#)

Contact Information

 0800 243 471

 info@swiftclean.co.uk

 www.swiftclean.co.uk

 Compliance House, Aviation Way
Southend-On-Sea, Essex
SS2 6UN
