HTM 03-01 – Annual Inspection and Verification Requirements

The Requirement for Inspection & Verification

All ventilation systems should be subject to at least a simple visual inspection annually. The scope of the inspection depends of use of the area served by the system.

All critical ventilation systems should be inspected quarterly and verified at least annually. In some circumstances the verification may need to be carried out more frequently.

The quarterly inspection is straight forward and on site maintenance staff should be trained to carry this out and keep an inspection log.

The purpose of the annual verification of critical systems requires a higher level of competence and training to ensure:

- minimum standards are being maintained specific to the application
- the system is operating to an acceptable performance level
- the system remains fit for purpose.

What is a Critical Ventilation System?

'The loss of service from such a system would seriously degrade the ability of the premises to deliver optimal healthcare' (HTM 03-01 Part B Section 4.8).

Critical systems include:

- operating theatres of any type, including rooms used for interventional investigations
- patient isolation facility of any type;
- critical care, intensive treatment or high dependency unit;
- neonatal unit;
- Category 3 or 4 containment laboratories or rooms;
- pharmacy aseptic suite;
- inspection and packing room in a sterile services department;
- MRI, CAT and other types of emerging imaging technologies that require particularly stable environmental conditions to remain within calibration;
- any system classified as an LEV system under the COSHH Regulations;
- any other system that clearly meets the definition.

Operating Theatres

Of all the critical systems defined by HTM 03-01, Operating Theatres are the most sensitive and require a high level of competency to verify compliance and problem solve defects in performance.

HTM03-01 has detailed information on how an operating theatre must perform and be inspected to ensure performance levels are maintained.

Key Requirements:

- Air volumes and air change rates must be at least 75% of the design
- Room pressure differential must ensure a flow from clean to less clean areas
- Supply and extract diffusers must be clean
- Pressure stabilisers must be clean and operate correctly
- The surgeons panel must be free of faults
- There should be no siginificant visible faults in the fabric of the suite
- Doors must close completely

Isolation Facilities

The current standard for Isolation Facilities, *HBN 4; Supplement 1 (2005); Isolation facilities in an acute setting,* provides detailed design guidance and recommended acceptance testing requirements. All Isolation facilities require an annual inspection for HTM compliance. Those that protect staff against

In terms of infection control, isolation rooms are used to protect

- a patient with a susceptibility to infection from other sources – source isolation
- from a patient that presents an infection risk to others – protective isolation

HBN 4 defines two types of facility:

1. Enhanced single room with en-suite facilities

An enhanced single room with en-suite sanitary facilities having extract ventilation is a simple, cost effective way to provide isolation, and will meet the needs of most patients on general wards. This type of facility will only offer 'protective isolation'.

2. Isolation Suite - Enhanced single room with en-suite facilities and ventilated lobby

An enhanced single room with a positive pressure ventilated entry lobby and en-suite facilities with extract ventilation provides both source and protective isolation. The positive pressure lobby ensures that air from the corridor does not enter the isolation room, and that
air from the room does not escape into the corridor. This simple design enables the suite to be used for both 'source isolation' and 'protective isolation' without the need for switchable ventilation or special training for staff. It also provides safe isolation for patients whose exact condition is unknown.

Isolation facilities that provide protective isolation for infectious patients are also classed as Local Exhaust Ventilation (LEV) Systems and require specialist testing and comprehensive service records to comply with COSHH regulations.

Air Handling Plant Serving a Critical System

Part B of HTM 03-01 also requires air handling plant to be formally inspected annually. The inspection must be thorough and a detailed record must be kept answering all the questions listed in HTM 03-01 Part B.

Theatre Sterile Services Units (TSSU) & Hospital Sterilisation Service Units (HSSU)

These facilities have specific airflow performance requirements to ensure airborne contamination is controlled. HBN 13 'Sterile Services Departments' details the deign and operating principals for these departments.

The accepted standard for environmental control is BS EN ISO 14644 with special attention being paid to particle contamination levels. The inspection, assembly and packing (IAP) room standards are set at Class 8 (ISO 14644). It is also importance to ensure that microbial contamination levels are also routinely monitored and maintained within defined levels.

Other important environmental specifications include:

- Temperature and humidity levels
- Room pressure differentials
- Air change rates
- Lighting levels