

VENTILATION CHECKLIST

Specific features of ventilation systems to be considered for food manufacturing premises include:

- Weather and pest-proofing of air inlets and outlets.
- Direction of prevailing winds.
- Effective sealing of all openings, particularly large freight doors.
- The use of air locks within the building between sections.
- The need for high pressure air showers inside the building.
- Whether incoming air requires filtration and to what purity.
- Determination whether a purified, recycled air system or a through-flow filtered air system best meets requirements.
- Minimum internal distance of separation between air inlets and outlets.
- Positioning of inlets and outlets respective to the process within a space.
- The suitability and maintenance of different types of air filters.
- The appropriate number of air changes per hour.
- Design, fabrication and routing of the ducting used in air transfer.
- Air flow over exposed product.
- Location of exhaust fans in 'high-load' areas of production.
- Minimisation of wet floors, open drains.
- Isolation of open processes that emit large amounts of heat or moisture into the air – they may need to be serviced by special ventilation.
- Negative air pressure drawing unfiltered air into processing areas where product is exposed can cause microbiological contamination.
- Using dehumidifiers instead of exhaust fans in areas of high humidity as the latter may create negative air pressure within the facility, so whenever a door or window is opened air may be drawn in that contains dust, pollutants, bacteria, mould, or insects.

- Filtered air to create positive internal air pressure to prevent the ingress of airborne contaminants, particularly into high-care or product packing areas.
- Volume of supply air to exceed the exhaust air capacity in order to maintain positive internal air pressure is dependent upon altitude of factory.
- Odour control of any recirculated air as well as any exhaust air.
- Periodic maintenance of ductwork to ensure absence of mould and pests.
- High dust load in surrounding environment can contribute to ventilation and filtration costs.
- Position air intakes so they are away from any exhaust outlets on neighbouring sites and where they will not pick up vehicle exhaust.
- Separate HVAC system necessary for non food production areas.
- Whether economies are gained by incorporating process energy (heat or cold) into the VAC system.

