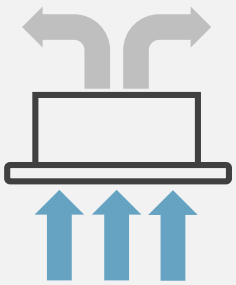
FLÄKTGROUP RECOMMENDATIONS FOR VENTILATION TO **MINIMISE COVID19 TRANSMISSION**

KEY RECOMMENDATIONS

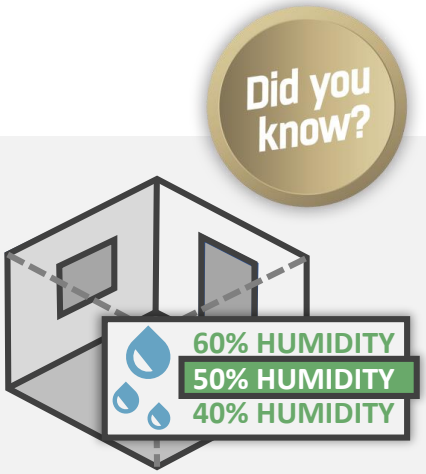


Ensure that the extract ventilation from toilet areas is working correctly

Toilet areas should be under negative pressure to ensure that air is not forced back into an occupied building.

Increase the supply and extract airflow rate

Disable any recirculation sections in central air handling units.



Maintain the internal environment at, ideally 50% relative humidity but, at least between 40% and 60%

TOILETS

In a recently published research paper one of the principle sources of onward transmission in Wuhan hospital was from the toilet areas. Coronavirus is present in Faecal matter and can spread into the atmosphere when the toilet is flushed.

Toilet ventilation should be;

(i) checked to ensure that it is functioning,
(ii) be configured such that the toilet area is under negative pressure so that air is drawn into the toilet area
(iii) HEPA filtered if the exhaust to atmosphere is close to public area or ventilation air inlets.

GENERAL SUPPLY AND EXTRACT

DURING NORMAL OPERATING HOURS

- Maintain temperature set points. Virus infectivity declines with temperature.
- This may require adjustments to thermostats and/or CO2 and PIR sensors.
- Maintain indoor humidity. Numerous research studies show that virus infectivity is lower at relative humidity between 40% and 60% and lowest at 50% RH. Comfort may be compromised is the temperature and humidity are at the higher end of the normal values.
- Ensure that both central and local exhaust systems are working correctly.
- Disable any recirculation sections during operating hours.
- Increase the airflow rate. Care should be taken in areas which are under positive pressure as virus particles may be forced out of rooms into other areas.

GENERAL SUPPLY AND EXTRACT

OUTSIDE OF NORMAL OPERATING HOURS

- Maintain airflow, temperature and humidity outside of normal operating hours. Ideally 24 hours a day. Where this is not possible leave the ventilation on later and turn on earlier. All these criteria reduce the infectivity of virus. Recirculation sections may assist outside of operating hours in maintaining optimal temperature and humidity but should be disabled as soon as a building is occupied.

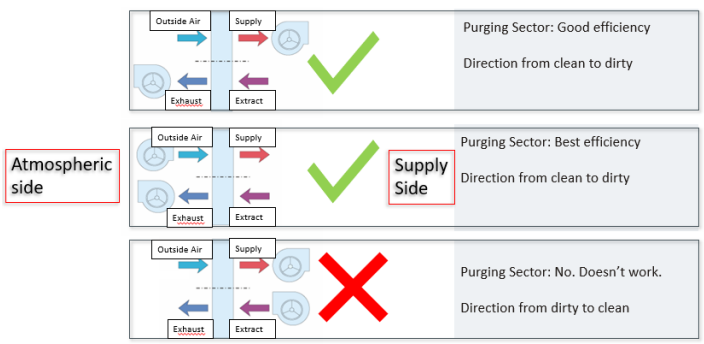
Did you know?

HEAT RECOVERY SYSTEMS IN CENTRAL VENTILATION PLANT

Some organisations have suggested turning off Air Handling Units with thermal wheels. Correctly configured, installed, commissioned and complete with a purge sector thermal wheels leak no more than plate heat exchangers. Some thermal wheels also recover moisture and therefore are beneficial in maintaining indoor humidity.

Recommendations for existing AHUs with thermal wheels

- Check the location of the fans. See below
- Check to see if the rotor has a purge section. See below
- Check the pressure balance to ensure internal airflow is in the direction of clean fresh air to dirty extract air. FläktGroup offer this as a service and can undertake remedial actions as required.



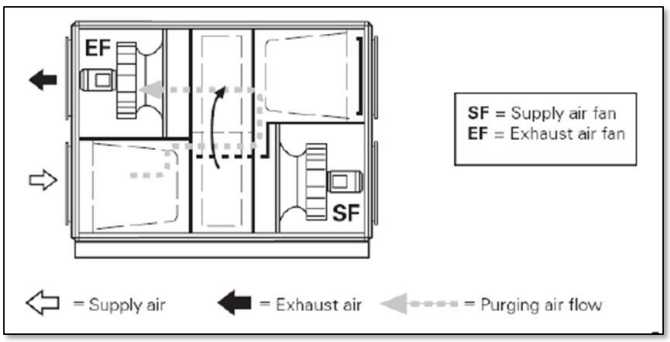
A is the standard configuration supplied by FläktGroup and very low risk

B is an available configuration from FläktGroup and very low risk

C can result in very high recirculation & should be switched off or run as an extract only system

A purge sector is a mechanical device fitted to the thermal wheel to ensure that particles in the extract airstream are purged from the rotor and directed into the exhaust airstream. Correctly configured the extract air transfer rate is less than 1%

All FläktGroup Air Handling Units supplied from our factory in Sweden are fitted with a purge sector.



V1: 2020-05-15 - this information document will be updated as appropriate