Sometimes, air handling units and recirculation sections are equipped with return air filters. This should not be a reason to keep recirculation dampers open as these filters normally do not filter out viral material effectively since they have coarse or medium filter efficiencies (G4/M5 or ISO coarse/ePM10 filter class).

In air systems and air-and-water systems where central recirculation cannot be avoided because of limited cooling or heating capacity, the outdoor air fraction has to be increased as much as possible and additional measures are recommended for return air filtering. To completely remove particles and viruses from the return air, HEPA filters would be needed. However, due to a higher pressure drop and special required filter frames, HEPA filters are usually not easy to install in existing systems. Alternatively, duct installation of disinfection devices, such as ultraviolet germicidal irradiation (UVGI) also called germicidal ultraviolet (GUV), may be used. It is essential that this equipment is correctly sized and installed. If technically possible, it is preferred to mount a higher-class filter in existing frames and to increase exhaust fan pressure without reducing the airflow rate. A minimum improvement is the replacement of existing low-efficiency return air filters with ePM1 80% (former F8) filters. The filters of the former F8 class have a reasonable capture efficiency for virus-laden particles (capture efficiency 65-90% for PM1).

4.6 Room level circulation: fan coil, split and induction units

In rooms with fan coils only or split units (all-water or direct expansion systems), the first priority is to achieve adequate outdoor air ventilation. In such systems, the fan coils or split units are usually independent of mechanical ventilation which in some cases even might not exist, and there are two possible options to achieve ventilation:

1. Active operation of window opening together with the installation of CO_2 monitors as indicators of outdoor air ventilation;
2. Installation of a standalone mechanical ventilation system (either local or centralised without recirculation, according to its technical feasibility). This is the only way to ensure a sufficient outdoor air supply in the rooms at all times.

If option 1 is used, CO_2 monitors are important, because fan coils and split units with both cooling or heating functions improve thermal comfort, and it may take too long before occupants perceive poor air quality and lack of ventilation[xlv]. During hours of occupation leave windows partially open (if openable) to increase the level of ventilation. See an example of a CO_2 monitor in Appendix 4, Figure 17.

Fan coil units have coarse filters that practically do not filter smaller particles but may still collect potentially contaminated particles. Standard maintenance procedures are to be followed with recommendations provided in Section 4.9.

Split units and sometimes fan coils may cause high air velocities. In common spaces (larger rooms with fan coil or split units occupied by many persons), in the case of local air velocities of 0.3 m/s or more, directed air flows from one person to another should be avoided with workplaces arrangements or air jet adjustments.

4.7 Duct cleaning has no practical effect

There have been some overreactive statements recommending cleaning ventilation ducts to avoid SARS-CoV-2 transmission via ventilation systems. Duct cleaning is not effective against room-to-room infection because the ventilation system is not a contamination source if the above guidance about heat recovery and recirculation is followed. Viruses attached to small particles will not deposit easily in ventilation ducts and will normally be carried out by the airflow.[xlvi]. Therefore, no changes are needed to normal duct cleaning and maintenance procedures. Much more important is to increase the outside air supply and to avoid recirculation of air according to the recommendations above.

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出典：REHVA COVID-19 guidance document., 17 November 2020., Belgium: Federation of European Heating, Ventilation and Air Conditioning Associations.