



Information on air purifiers/cleaners

A portable air cleaner that contains a high-efficiency particulate air (HEPA) filter may be used in addition to any other ventilation provided to manage risks from respiratory viruses and to prevent the build-up of other particulates. HEPA filters are useful to increase clean air exchange rates in a room and to provide additional air treatment where there are areas of known air stagnation. [Optimising existing mechanical or natural ventilation](#), wherever possible, should remain the priority over air cleaning.

HEPA filters can also be used when needing to close windows and doors or shut off outdoor air supply to air conditioning or other heating, ventilation and air conditioning (HVAC) systems due to external hazards such as bushfire smoke or adverse weather conditions.

For infectious disease risks, it is important that portable air cleaners are used in combination with other public health measures including vaccination, social distancing, limiting occupancy levels, face masks where recommended, good respiratory and hand hygiene, and disinfection of surfaces and objects.

There are many types of portable air cleaners available that are suitable for different settings. A guide to air cleaner purchasing has been produced by [The University of Melbourne \(external link\)](#). Features and factors to consider when selecting a unit include:

1. Purchase units that achieve filtration via mechanical means, such as HEPA air cleaners compliant with [AS 4260-1997 High efficiency particulate air \(HEPA\) filters or described as H13, H14 or medical grade \(external link\)](#). Avoid products that advertise 'HEPA-like' or HEPA-style' filters that do not adhere to filter grading systems, or do not provide crucial information such as mechanical filtering efficiency or coverage.
2. Ensure the capacity, described as either the air exchange rate (ACH) or Clean Air Delivery Rate (CADR), is sufficient for the size of the indoor space where it will be used, as well as number of occupants in that space. The ACH can be calculated by dividing the airflow of the unit at a particular fan speed (m³/hour) by the room volume (m³).
3. Consider noise emissions data in manufacturer manuals, noting that an air cleaner with a larger capacity but used on a lower setting (that still achieves the required air throughput) may be quieter to operate. Alternatively, two smaller, quieter air cleaners may be as effective as a larger air cleaner and have the additional benefit of ensuring good coverage and mixing of air.
4. Surfaces of the cleaners should be impervious and easy-to-clean, for example, "flush" or flat, hard surfaces.
5. Avoid units that include ionisers, plasma/ozone/photocatalytic oxidation/precipitators and UV purification or disinfecting add-ons. Ozone or other chemicals produced from units with these add-on technologies may act as a respiratory irritant.

6. Consider cost, expected delivery times and the availability, delivery and cost of replacement filters – locally-made/supplied products may be preferable.
7. How often filters need to be washed or replaced. Washable filters may not comply with infection prevention and control standards in a health care setting, but may be suitable for a private residence, allied health or non-clinical work areas.

The correct positioning of portable units is vital, and units should be placed in occupied areas, with space around them for air flow and in close proximity to people (or source of infection, if known).

For workplaces and other public or commercial buildings, an occupational hygienist and/or HVAC professional can advise further on capacity, proper positioning and use of portable air cleaners and can develop site specific procedures for cleaning, maintenance and use. Portable HEPA filter units must be properly maintained, and manufacturer instructions followed for filter replacement and safe use. As a precaution, appropriate personal protective equipment (disposable gloves and mask) should be worn when handling filters with any discarded filters, gloves and masks disposed of in a sealed bag.

Further information on ventilation is provided in Information on COVID-19 and building ventilation which includes links to additional information sources on air cleaning from organisations such as the [United States Environmental Protection Agency \(external link\)](#) and the [Chartered Institution of Building Services Engineers \(external link\)](#).

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