



WHY IS IT SO IMPORTANT TO
VENTILATE?



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The effect of not having good indoor air quality in the home is dramatic. The average person spends 90% of time indoors and breathing in stale contaminated air can lead to health issues. Newer houses have become more air tight which means it is harder to get a fresh air path through the building. Breathing in stale contaminated can lead to health issues.

FACTORS THAT CAN LEAD TO AN UNHEALTHY INDOOR AIR QUALITY CAN INCLUDE:

- Building materials;
- Cigarette fumes;
- Paint fumes;
- Cleaning products (detergenats etc);
- Animals;
- Cooking.

THE EFFECTS OF POOR INDOOR AIR QUALITY CAN LEAD TO A NUMBER OF HEALTH ISSUES AND ALLERGIES:

The air we breathe is vital for our well-being and health. Exposure to a poor indoor environment over long lengths of time could lead to a number of health issues such as:

- Headaches;
- Fatigues;
- Nausea;
- Flu;
- Respiratory Issues such as asthma.





MOULD

Prolonged high levels of humidity and condensation are the main cause of mould growth. Mould spores travel through the air and multiply in damp areas. 1 in 5 homes suffer from issues with mould. Mould is an allergen which can lead to respiratory issues.



CONDENSATION

The appearance of condensation on the inside of windows is a frequent and annoying occurrence. The construction of more airtight homes leads to the reduction of natural ventilation and air infiltration within the property. If ventilation is not correctly designed and installed the condensation levels could increase. Increase in condensation levels can result in damp patches on walls and peeling wallpaper. Ventilation is key to removing excess moisture from the property for comfort and good health.

DUST MITES

The humidity levels within a property are directly linked to the levels of house dust mites and dust mite allergens. By controlling the humidity within the home, dust mites are less able to breed helping asthma sufferers to breathe more easily.



WHAT ARE THE CAUSES OF INDOOR

POLLUTION?



Carpets could harbor dust mites, animal dander and harmful particles.



The volatile organic compounds (VOC's) released from paint fumes can have a serious effect on health when breathed for long periods of time.



Cooking using a gas appliance emits nitrogen dioxide, formaldehyde and carbon monoxide. These can lead to the increase of various respiratory and other health ailments.

The noxious substances are also present in the detergents for the wash in the insecticides and in deodorant spray for the house. The bleaches and enzymes assets contained in these products may cause dermatitis, irritations and allergies.



Printers and copiers may be releasing air pollutants. During the ignition and exercise these devices released into the air fine powders, volatile organic compounds and ozone. Harmful to Health.



HOW TO VENTILATE?



EFFICIENTLY WITH HEAT RECOVERY SYSTEMS

A heat recovery unit is a double flow ventilation unit: it not only delivers fresh air to the rooms, but also extracts stale air. The two flows exchange heat within the machine itself (the heat exchanger) so that the warmer flow delivers a part of its thermal energy to the colder flow. In a typical configuration, the heat recovery unit is not a heat generator nor a chiller, so it must be used in combination with a normal heating or A/C system. The machine has the following main components:

CASING

contains the various components of the machine and insulates it acoustically. It can be made with galvanized sheeting, sheet with a plastic film coating, with single or double panels, or plastic. It may be equipped with acoustic insulation to reduce running noise.

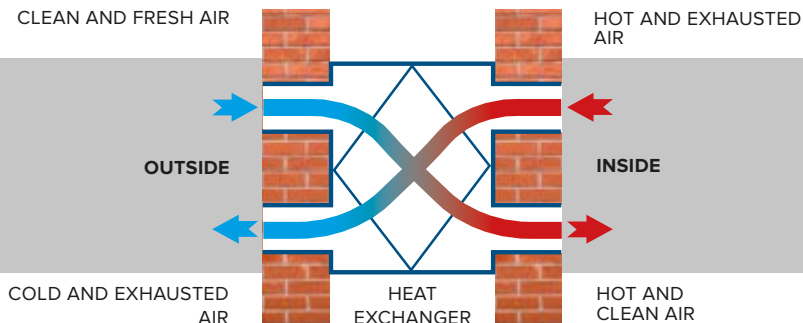
FANS

the fans drive the air: the unit includes an intake fan (delivers air from outdoors to the interior) and an extraction fan (from the interior to outdoors).

Heat exchanger this is the principal component, which provides the exchange of heat energy between the two flows. There are various types of exchanger.

FILTERS

the machine is usually equipped with filters to protect the fan motors against dust, and above all to filter both the extracted and delivered air.



BENEFITS

OF GOOD VENTILATION

ADVANTAGES OF HEAT RECOVERY UNITS

- They are double flow units: they renew the air into the room.
- Filters keep pollution under control.
- They pre-heat or pre-chill the renewed air by recovering energy at zero cost from the extraction flow, energy which would be lost in a ventilation system not equipped with heat recovery.
- Thanks to energy recovery it is possible to use smaller heating and A/C units (boilers, air conditioners, roof-top units, water chillers, etc.).
- They reduce the wear of heating/cooling system equipment.
- Over time, the initial investment is paid back by savings in total running costs.



LIFE QUALITY

Having a well ventilated home ensures the homeowners are breathing in fresh air, therefore leading a healthy and happy lifestyle. Air is Life!



ENERGY SAVING

A typical family home uses no more energy when ventilated with an MVHR system than that of a 60 W lightbulb.



COST SAVINGS

By using an heat recovery system you are recovering heat from the moist stale air and tempering the incoming air. This enables the homeowner to turn the thermostat down therefore saving energy and money.



VORTICE S.p.A
Strada Cerca, 2
Frazione di Zoate
20067 Tribiano
(Milano) Italy
Tel. (+39) 02906991
Fax (+39) 0290699625
vortice.com

VORTICE Limited
Beeches House-Eastern
Avenue Burton on Trent
DE13 0BB United Kingdom
Tel. (+44) 1283-49.29.49
Fax (+44) 1283-54.41.21
vortice.ltd.uk

VORTICE Industrial S.R.L.
Via B. Brugnoli 3,
37063 Isola della Scala
(Verona) Italy
Tel. (+39) 045 6631042
Fax (+39) 045 6631039
vorticeindustrial.com

Ventilación Industrial ind., S.L.
Ctra. Camprodon, s/n 17860
Sant Joan de les Abadesses
(Girona) Spain
Tel. (+34) 972720150
casals.com

VORTICE Latam S.A.
3er Piso, Oficina 9-B
Edificio Meridiano Guachipelín,
Escazú San José Costa Rica
PO Box 10-1251
Tel. (+506) 2201.6219
Fax (+506) 2201.6239
vortice-latam.com

VORTICE Ventilation System
(Changzhou) Co.LTD
No. 388 West Huanghe Road
Building 19, Changzhou
Post Code: 213000 China
Tel. (+86) 0519 88990150
Fax (+86) 0519 88990151
vortice-china.com

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