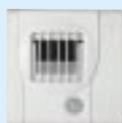


The various components of the CMEV.

Air inlets



Air outlets



Ventilation units (private housing)



Fan units (apartment buildings)

Exchangers



Ducts and Accessories

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CMEV

And your house can breathe!



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ALDES

All about air !

Without being conscious of it, on average, a man breathes in 25,920 times per day. But if air is part of our everyday life, it is rare that we consider it as being one of the essential elements of our well-being. Those who are concerned about their health look for a healthy and well-balanced diet, drink pure water etc, but often they are not breathing healthy air!

And yet...

- **An adult male can go for 60 days without eating, 48 hours without drinking, but only 5 minutes without breathing...**
- Every day a human being breathes in, on average, 20,000 litres of air (in comparison our body only needs 2 litres of water per day).

When we speak of air pollution, we are especially referring to outside pollutants: exhaust gases, industrial fumes etc.

But man passes the majority of his time (90%) in enclosed spaces: offices, homes, schools etc.

It is nowadays necessary to think about the quality of air inside homes... and the ways of improving it!

POLLUTION

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More pollution indoors than outdoors?

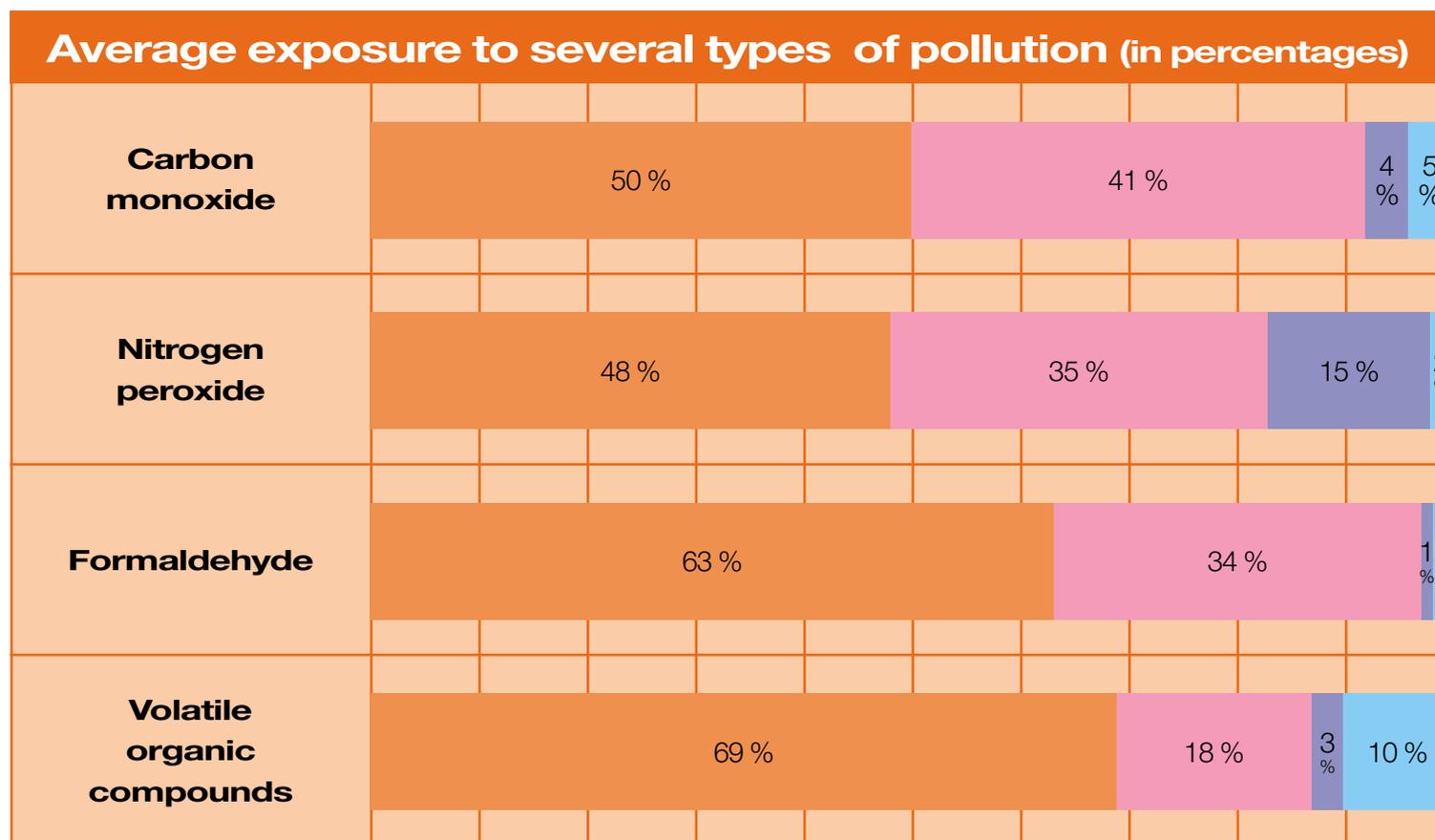
On average, it is inside buildings and more particularly inside housing where one is the most exposed to pollution that is dangerous to health...



Public awareness by all national and international organisations:

Setting up of observatories of the quality of indoor air (OQAI in France, IAQA in the USA, etc.)

International conferences on the quality of indoor air
 1999: Edinburgh (Scotland),
 2002: Monterrey (United States),
 2004: Toronto (Canada),...



Legend: At home (orange), In other premises (pink), Outside (purple), In your car (blue)

Source : ADEME

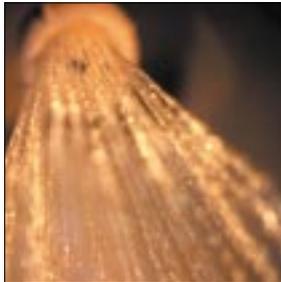
What type of pollution?

Perceptible types of pollution.

These types of pollution are easily detectable and are due to the activity of the occupants.



Kitchen and body
Odours.



Water vapour
contained in the air
or connected with domestic usage
(showers, cooking,
clothes drying etc.).



Tobacco
and cooking
smoke or fumes.

Hidden types of pollution.

These types of pollution, imperceptible to man, represent a very real threat.



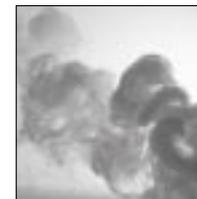
Allergens
insects, animals, pollen etc.



Radon
Radon (a radioactive gas) is naturally
present in the soil.



Volatile organic compounds
Present in cleaning products
and building materials.



Carbon monoxide
"CO" is created when
there is poor functioning
of combustion devices...

What really are the risks?



To health.

Headaches and irritations

A too-high concentration of VOC (3 to 25 mg/m³ of air) causes headaches.

(Institute of environmental medicine of the University of Aarhus, in Denmark)

Allergies

Allergies are classified as being the 4th most prevalent disease in the world by the WHO.

By 2010 half the world's population will be affected.

Throughout the world: 65 to 90% of cases of asthma in children are associated with a sensitivity to mites.

Cancers

Exposure to ambient tobacco smoke increases the rate of mortality from lung cancer of adult non-smokers by 20 to 30%.

United States: "Each year, there have been 22,000 deaths from lung cancer, linked to exposure to radon in homes".

(US Environmental Protection Agency)

For buildings.

Condensation

Water vapour, often in excess and poorly evacuated, can condensate on cold walls. The lowering of the heating temperature and weather stripping of the home increases the risks of condensation.

Degradation

The surfaces and materials impregnated with humidity become deteriorated: wallpaper comes unstuck, painting flakes, wooden surfaces are damaged and insulation degraded.

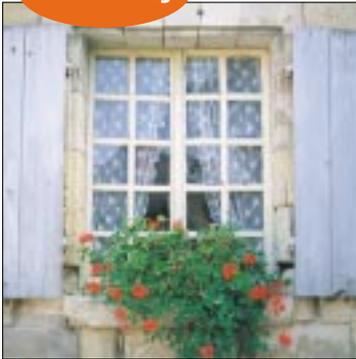
Mildew

Cold walls and heat bridges are home to the development of mildew (angles on walls, behind furniture etc;) themselves the source of allergens.



What has really changed?

The airtight sealing of buildings.

<p>Yesterday</p> 	<p>Nowadays</p> 
<ul style="list-style-type: none"> • No insulation • The air circulates via the leaks in the building • Discomfort and energy wasted • Pollutants do not accumulate 	<ul style="list-style-type: none"> • Insulation • Air no longer circulates • Pollutants become trapped inside the building.

Building constructions are more and more airtight

(double glazing, seals, insulation, building methods etc.)

and without a suitable system, pollutants and humidity increase in the home.

This phenomenon is not only part of new constructions but also **affects renovation work in buildings**, where numerous problems occur because ventilation has not been taken into account.

When replacing your windows, think about equipping them with air inlets combined with a suitably adapted ventilation system.

New types of pollution and even more sensitive populations.

New types of pollutants have made their appearance over the last few years: VOC, synthetic mineral fibres etc.

Everywhere throughout the world, allergies are increasing. In France, the number of persons suffering from allergies has doubled in 20 years.

On an international scale, the number of allergies has doubled in 15 years.



How do we change the air?

Opening the window?



We really don't advise this solution! The quantity of air exhausted is not controlled, air renewal is inefficient and only occasional...

In winter, in addition to the **discomfort**, this practice will lead to a **waste of energy** and therefore additional heating bills... This way of ventilating does not protect you from **outdoor nuisances** (noise, insects, pollution etc.).

Use an extractor?

An extractor (or ventilator) exhausts the air from just one room towards the exterior.

Extraction does not ventilate continuously

because users only switch it on when they notice the pollution (odours, cigarette smoke).

Now, not all pollutants are perceptible to man (radon, VOC).

This type of noisy ventilation does not cleanse the air in the long term and does not ensure either the protection of the building nor ventilation of all of the building.



How do we change the air?

Ventilation by thermal draft?



With the use of ventilation by thermal draft (so-called “natural” way), the outside air enters by grilles placed at the bottom of facade walls. The hot indoor air, being lighter than cold air, leaves by grilles placed in the upper part of the wall.

This system does not ventilate according to your needs but depending on the outdoor climate and the height of the building: this is a **haphazard type of ventilation!**

The airflow is not controlled, and this leads to increased heating costs in winter and an absence of ventilation in summer. This type of ventilation does not allow for outdoor nuisances to be limited: noise, pollution, insects etc.

Continuous Mechanical Extract Ventilation (CMEV), the solution.

The CMEV is changing...

Nowadays, “intelligent” CMEV systems, allow you to even filter the outdoor air, regulate the ventilation depending on the number of occupants, or even recover heat from the exhaust air!

The CMEV is a continuous and controlled type of ventilation in the home. Thanks to a fan and a system for controlling the airflow, **the renewal of air is fully controlled.** This technique permits the indoor temperature to be maintained and ensures high comfort level for the occupants. **Your home benefits from permanent ventilation (365 days/year),** regulated (control over the same quantity of the renewed air) and this for all rooms. This system, being silent, functions quite comfortably all year round.



How does a CME V system work?

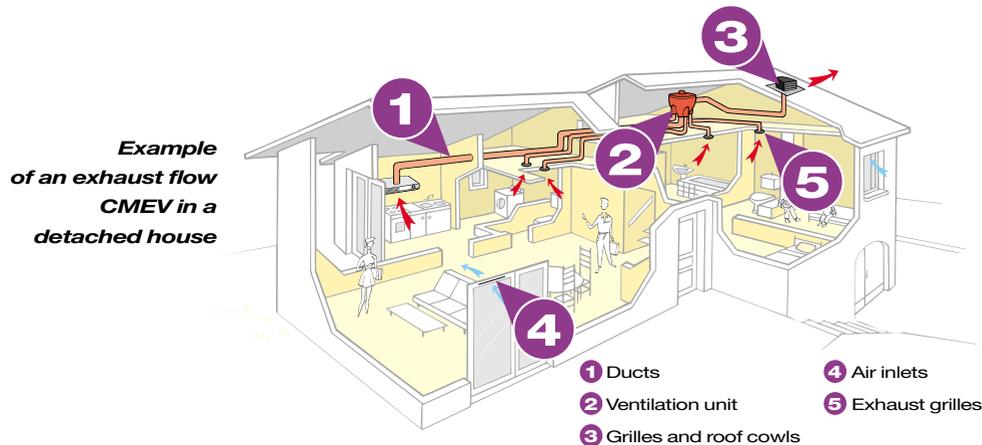
Exhaust flow CMEV.

The outdoor air enters by the air inlet grilles (in the main rooms), crosses the lodging and is then discharged outdoors (via the technical areas) with the aid of a fan.

The exhaust flow CMEV can be either:

Self-balanced: the airflow is maintained constant whatever the outdoor conditions may be (wind, rain) and indoor conditions (number of occupants, humidity)

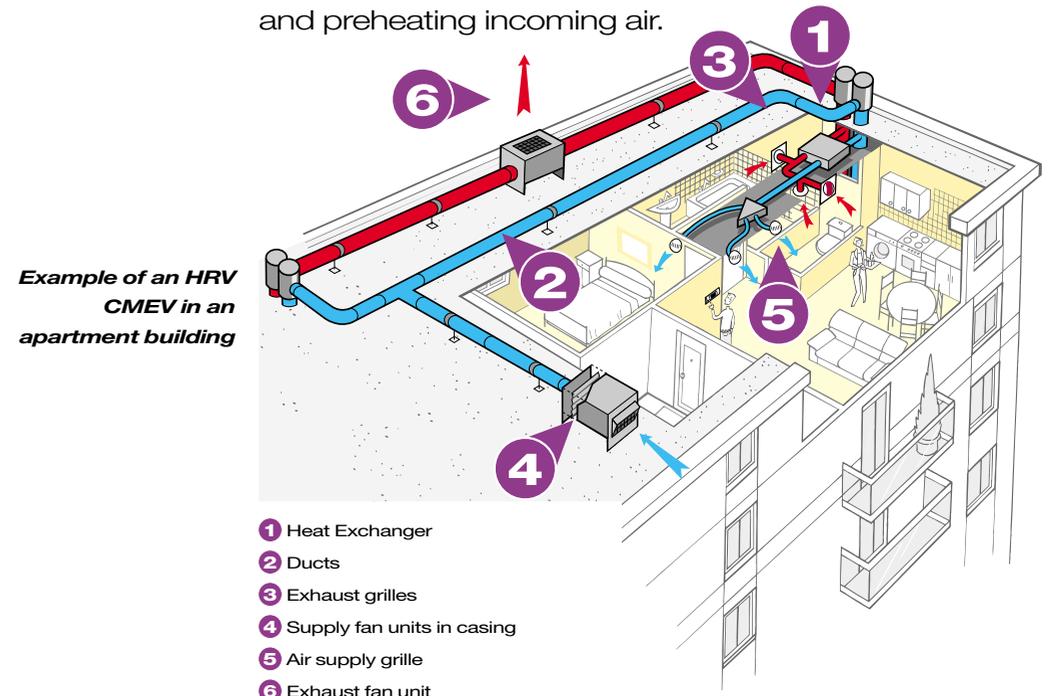
Humidity-controlled: The airflow automatically adapts to the occupants' needs (depending on the variation in the rate of humidity) providing comfort and energy savings.



This type of CMEV can also be installed in collective housing (apartment buildings).

Static Heat Recovery Ventilation CMEV.

The presence of a heat exchanger allows for the recovery of the heat from the exhaust air, and so “heats” the incoming air before it arrives inside the home. This technique allows you to make important energy savings and gives you optimum comfort by filtering and preheating incoming air.



This type of CMEV can also be installed in private housing.

How do you use a CMEV correctly?

For efficient ventilation, leave your CMEV on all the time...

Your home needs to be aerated continuously (even when you are not inside!).

If the ventilation is stopped, various types of humidity and pollution stagnate in the lodging.

365 d/yr

Result of this: mildew will progressively form, damaging the building, and the quality of your air will get worse and worse. Stopping the CMEV may also lead to large amounts of condensation forming in the ducts resulting in water damage.

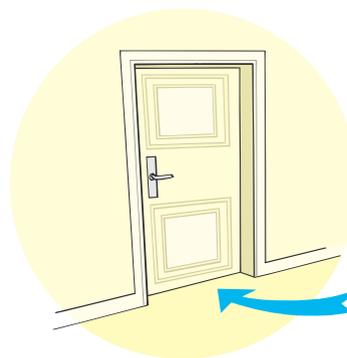
Avoid blocking up air inlets or grilles...

By preventing air entering or leaving, you are depriving your home of ventilation, you are preventing it from breathing. Consequently: you find yourself in a lodging that "traps" pollutants (because of the airtight sealing) and your air is no longer renewed correctly.

Cookerhoods and clothes dryers must not be connected to the CMEV...

By carrying out this type of connection, you risk disturbing the correct functioning of the CMEV. Ventilation of your home is no longer carried out correctly. This is manifested by the rejection of pollutants into other rooms in your home, or into your neighbours' apartments.

Provide for an air passage under the doors (clearance).



In order to function fully and so ventilate all of your home, the air must be able to circulate from one room to another. By leaving free a small clearance or passage under each door, (about 20 mm) you will ensure a high quality of ventilation in your home.

How do you maintain the CMEV?

What you need to clean

Frequency

Air outlets
(Kitchen, Bathroom, WC)

Clean with hot soapy water
every 6 months

Air inlets
(Bedrooms, lounge)

Dust every 3 months

Filters
(CMEV Heat Recovery Ventilation)

Clean every 3 months
and replace if necessary

In private houses

The fan or ventilation unit
(Attic or garage)

Clean the fan's impeller every year

In apartment buildings

**Inspection, cleaning
and overall adjustment of the installation
by a professional**

Every 3 years

A well-maintained ventilation system, is the assurance of a healthy home and a better quality of the air!

Questions/Answers



Does a CMEV consume a lot of energy?

A standard CMEV unit does not consume any more electricity than a light bulb conventional type (60 watts). By controlling air renewal **the CMEV is the optimal solution for obtaining healthy air at the least cost.**

The static HRV CMEV allows you even to recover heat from exhaust air in order to heat the incoming outdoor air, giving you even more energy savings.



Is the CMEV noisy?

Let's just say that a ventilation system is in no way an annoying source of noise.

If such is the case, it is preferable that you contact your installer to carry out tests: the system is perhaps poorly designed, certain elements clogged up or the fan blades bent.



What should I do if stains appear around my electrical sockets or my skirting boards?

We would advise you to be vigilant, because these stains may be the sign of an imbalance within your home.
It is important to check that your air inlets are not obstructed or clogged up, if so, the air infiltrates itself by other places (like electric sockets for instance).