

Your Natural and Hybrid Ventilation system explained:

Natural ventilation uses the forces of nature to efficiently ventilate a room to achieve superb air quality and thermal comfort. Hybrid technologies use low energy fans as an additional boost to the natural elements/weather. A building requires adequate ventilation all-year-round to provide fresh air to all occupants/equipment/furnishings and to ensure a healthy internal environment with good Indoor Air Quality. During the Summer, ventilation also helps to keep the room cool by flushing out the heat generated by either the occupants or the equipment inside the building.

Natural and Hybrid Ventilation is quite different to air conditioning. Air conditioning is designed to maintain a constant temperature regardless of the outside temperature and uses electricity and gas to do so.

How the NVHR® system works:



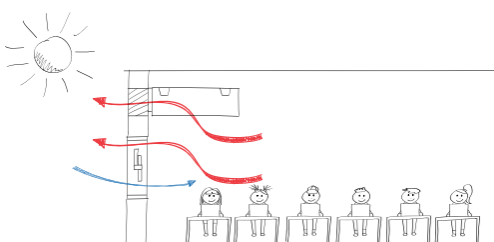
The NVHR® unit is installed in, or just below a ceiling, this provides an air pathway to the exterior of the building. The system operates in different modes depending on the outside temperature.

In Summer, air is brought in through the windows and exits through the NVHR® unit. This works because room air is lighter than exterior air, in addition heat rises. The amount of ventilation is controlled by the NVHR® and how many windows are open. In warmer Summer months the unit brings air in at night, cooling the room so it is a comfortable temperature ready for use in the morning. Pressing the **'Boost'** button activates the ventilation for 30 minutes.

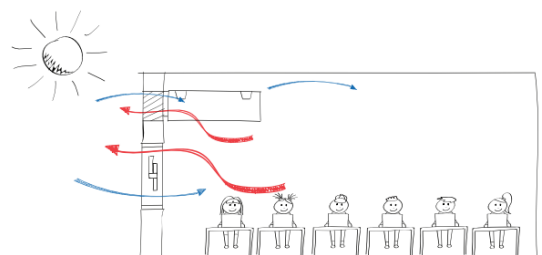
During cold Winter months, the system works to reduce the chance of cold drafts by bringing fresh air in at high level and mixing it with the warm air already in the building. Your windows should be closed.

Illustration of Summer and Winter Operating Modes

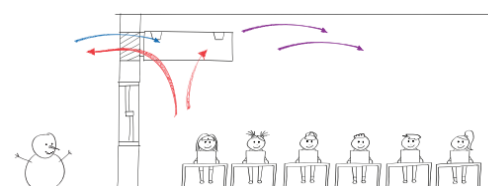
Summer - Upwards displacement ventilation






Summer – Boost Mode



Winter - mixing ventilation



Key

-  The process of the air in heat recovery and/or heat recycling mode
-  Fresh air entering the building
-  Exhaust air leaving the building

The Controller for your Natural and Hybrid Ventilation system (NVHR®)

Here is an image of the controller for your NVHR® system. The lights act as a guide.



Active indicator: This is on when the damper is open and the fans are operating.

Open Windows: When this light is on, it is recommended that you open some windows. You only need to open all windows if it is warm outside. The more windows you open, the more fresh air you will get in the room.

Key and Settings functions: These are only to be used by the Facilities Manager.

Stand by function: If the light is on, the system is not operating and you should liaise with your Facilities Manager to ensure adequate ventilation is restored to the room.

Boost function: Clicking the Boost button will give you more ventilation for 30 minutes, a green light should appear. The 30 minute indicator light will also go green.

Sleep function: Clicking the Sleep button will give you no ventilation for 30 minutes, a yellow light should appear. The 30 minute indicator light will go green.

Timer function: Three operating time options are available, 30 minutes, 1 hour or continuously until the end of the day.

Please note, if there is a red indicator light in the bottom right corner of the controller you should contact your Facilities Manager.

Night-cool: The system has an in-built capability to night-cool, please see below description.

SEN Dark mode: Pressing the Settings/Gear button when the system is in Auto/Boost or Sleep enables SEN Dark option.

The Temperature and CO₂ Sensor



This is what your Temperature and CO₂ Sensor looks like. It is an intelligent sensor that analyses the environment and sends signals to the NVHR® unit so it knows when to ventilate. This determines how the unit works along with the external temperature reading.

You do not need to switch this off at night. The sensors in the room detect when ventilation is required. When ventilation is not required, the unit will not ventilate.

During Summer, the system has an in-built capability to **night-cool**. The unit will attempt to get the room temperature down to 18°C during the night, ensuring a comfortable indoor temperature at the start of the day. If you switch the Sensor or the NVHR® off, it will not be able to do this.

Please liaise with your Facilities Manager if you have any issues operating your ventilation system.

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