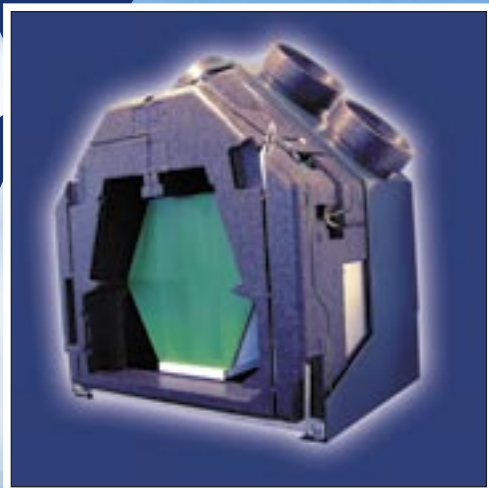
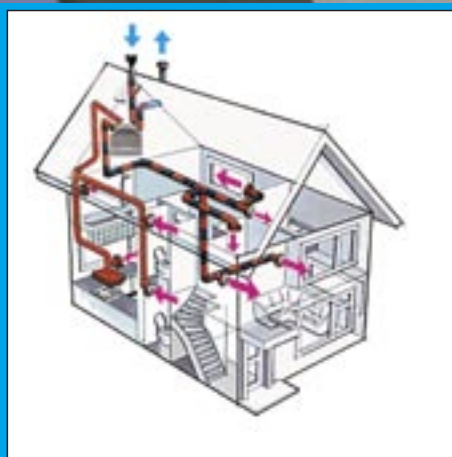


HRC: Evolution in balanced ventilation with heat recovery




ORCON
A breath of fresh air!

The new HRC offers comfort and additional energy efficiency



Schematic diagram of balanced ventilation

Energy efficiency

Energy efficiency is high on the agenda in house construction today. Across Europe Building Regulations and Standards are being constantly tightened to ensure that dwellings have less impact on the environment and use energy efficiently.

One important contribution to achieving the requirements of these new, tighter building standards is made by improving insulation levels and sealing cracks in homes. It is particularly important in these well insulated homes to continuously replace the air in order to maintain the quality of the indoor environment. Opening a window now and again or switching on the cooker extractor hood whilst cooking is not sufficient. What is more, opening a window during the winter is certainly not energy-efficient.

Comfort

The indoor air quality of the home is important to its occupants but as a result of increasingly high levels of insulation, used to reduce wasted heat energy, this air quality has been under attack.

More and more people complain about the negative effects of high humidity and condensation in the home. At the same time, the number of people suffering from chronic respiratory conditions has also increased dramatically. To achieve good ventilation an energy-efficient ventilation system offering a high degree of comfort and indoor air quality is required.

As a result of its own research, Orcon's new HRC has become a high-quality innovative product that scores very highly both in terms of energy efficiency and comfort in the home. The HRC literally stands for heat recovery and comfort; in other words a complete unit.

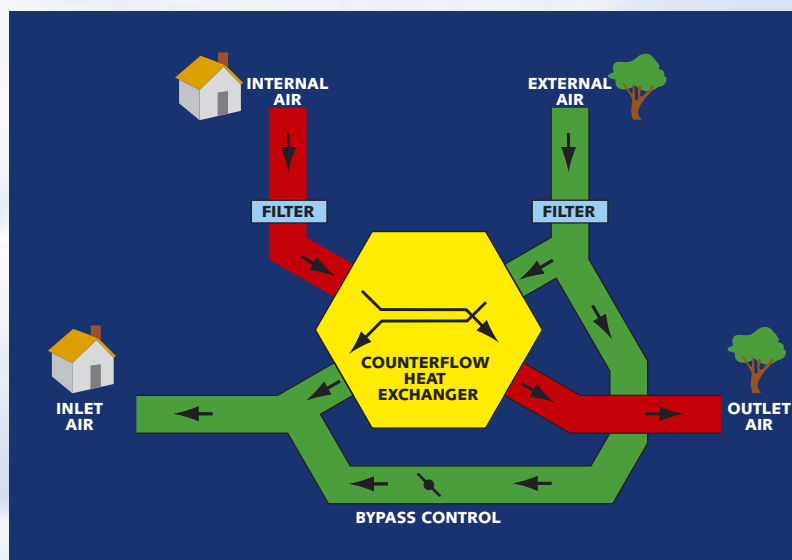
The HRC is a balanced ventilation system with heat recovery. This means that as much freshly filtered external air is fed into the living rooms and bedrooms as stale interior air is extracted from the kitchen, bathroom and toilet. During this process, the heat from



The new HRC is energy-efficient, offers comfort at home and is easy to operate and install.

the extracted stale interior air is transferred to the freshly filtered replacement air that is being introduced. This results in huge energy savings (see schematic diagram of balanced ventilation).

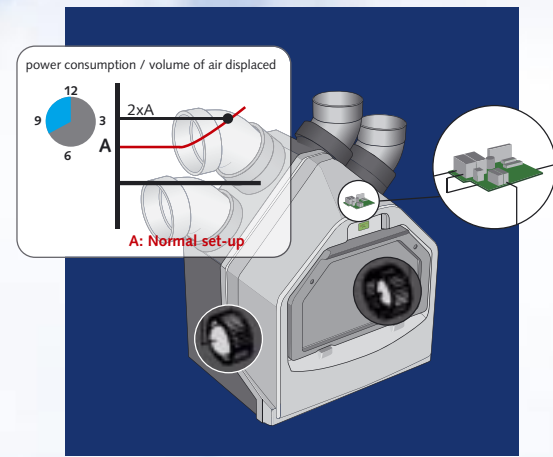
To achieve this transfer of heat, the HRC uses a plastic counterflow heat exchanger. Using this principle, heat recovery efficiency of more than 95% can be attained. In other words: at an external temperature of 0 degrees and an internal temperature of 20 degrees, the inlet



Schematic diagram of balanced ventilation

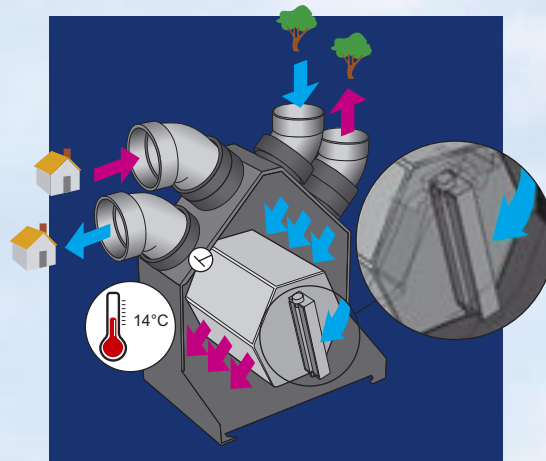
The unique characteristics of the HRC

Over the years our research and development has resulted in innovative products. By listening carefully to the market, Orcon has come up with the ultimate in heat recovery ventilation - the HRC. The HRC is the answer to all applications, be they from housing associations, consultants, architects, fitters or from home owners. Thanks to the handy reversible module, the installer no longer has to worry about right-hand or left-hand models. Thanks to filter timer the occupant knows when it is time to clean the filters. In addition the swivel connection bends, the induct humidistat, the ready-made water trap and the summer bypass all ensure that the HRC meets all of your requirements. These characteristics result in less energy consumption, more comfort, simple installation and less maintenance.



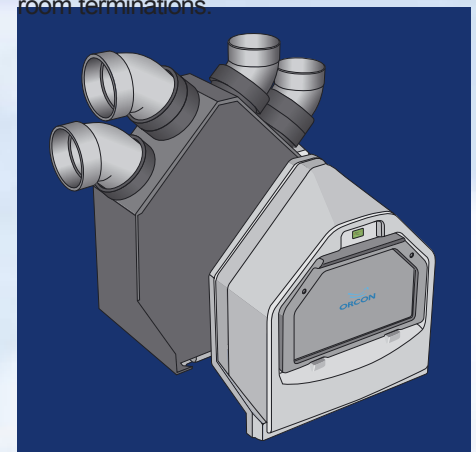
Constant flow dc motors

The fans, which control the inlet and outlet air, are energy-efficient fans that are set once using dipswitches. Constant Flow (CF) means that the fans, once set, will maintain the performance required regardless of installation variations and system changes. If necessary, the fan starts to run faster or slower to achieve the preset air volume. In this way the fans in the HRC always ensure a constant volume of air even when conditions change: for example, due to additional resistance as a result of the build up of dust and fluff at the room terminations.



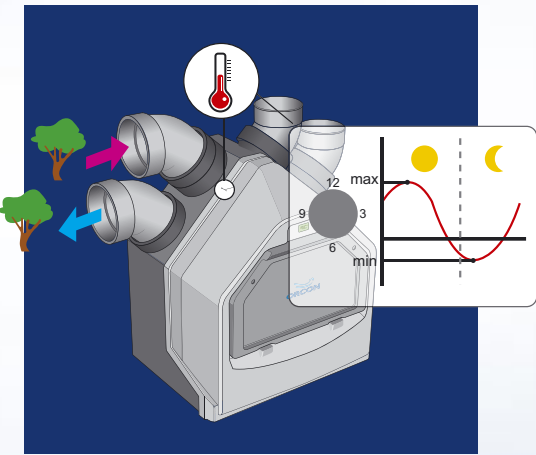
Night-time cooling

The HRC is fitted with a summer bypass. This ensures that the dwelling does not continue to heat up during the summer by blowing cold filtered air into the home during the night. The inlet temperature will never be lower than +14 degrees irrespective of whether the user uses setting 1, 2 or 3. The bypass is fully automated. The fine control of the inlet temperature is controlled by a stepping motor.



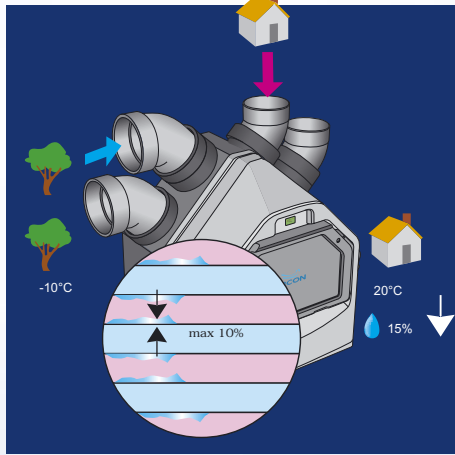
Easy to install and operate

The HRC consists of three components each weighing less than 25 kg. The HRC assembly frame can be supplied as a first-fix so that the ducts can be installed. The high-tech HRC unit can then be supplied to coincide with completion of the dwelling. Thanks to the smart design of the assembly frame, intersecting ducts are prevented. This prevents resistance and frustration. Adjusting them is extremely easy thanks to the CF fans.



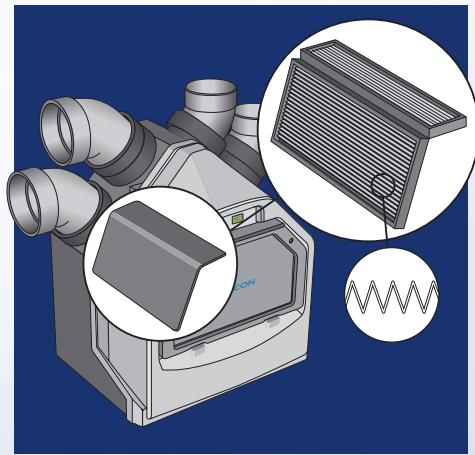
Biorhythmic intelligent control

The HRC is fitted with an intelligent controller. By continuously measuring the external temperature the HRC can differentiate between day and night. This information is stored in the memory as a biorhythm. Following a start-up period of a few days, the HRC will have defined its own site-specific biorhythm.



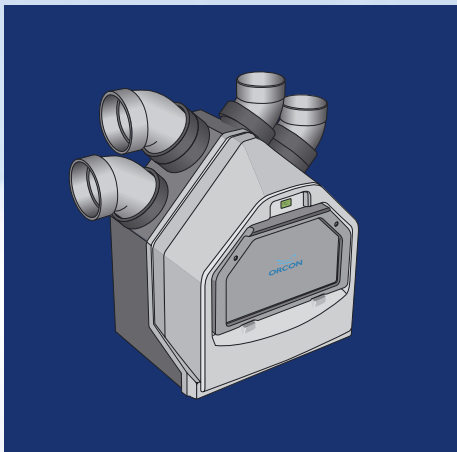
Intelligent defrost cycle

The HRC is fitted with 4 temperature sensors and 1 humidity sensor. As a result the HRC knows precisely when conditions mean that the heat exchanger could see a build up of frost, that would adversely affect performance. The HRC unit has its own biorhythm and is thus able to select the optimum time to run through a defrost cycle; not during the night but at the warmest time of the day. In brief, the defrost cycle is brought forward or deferred (by using its own biorhythm) to allow the HRC to complete an energy-efficient defrost cycle.



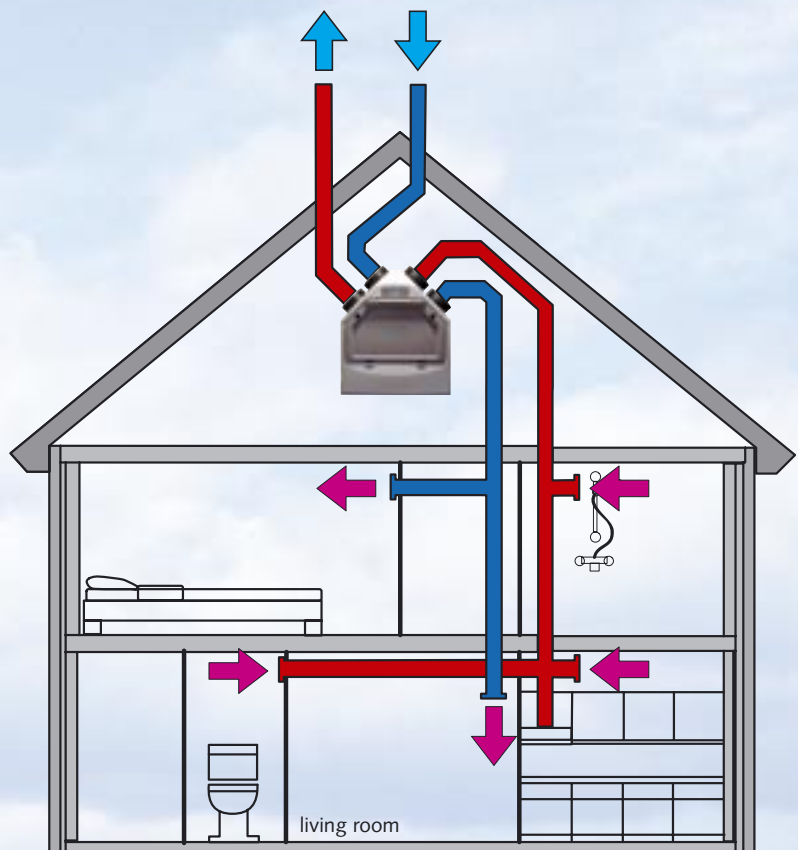
Display

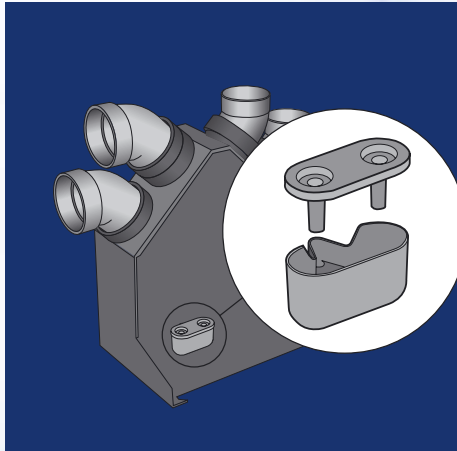
The installer or end-user can see the current state of the HRC on the cover-mounted display. Error codes also provide information about any system fault, should one occur. The service indicator on the display informs the occupant when to clean the filters.



Easy control

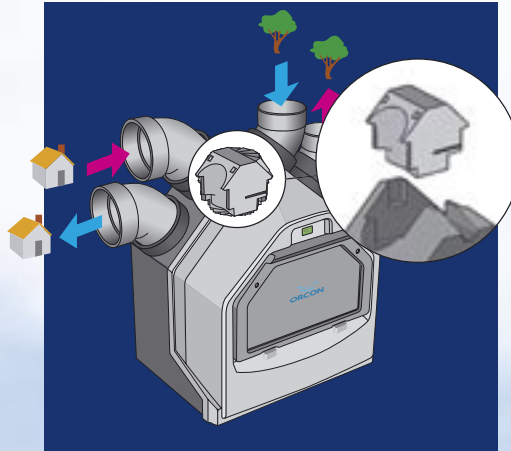
The HRC is fitted, as standard, with a three-speed controller and humidity sensor. When the unit detects that the extract air humidity increases, for example when showering, the fan automatically switches up a speed to increase the ventilation rate and compensate for the increased humidity level. The fan continues to operate at this speed for 30 minutes and then reverts to its previous speed setting.





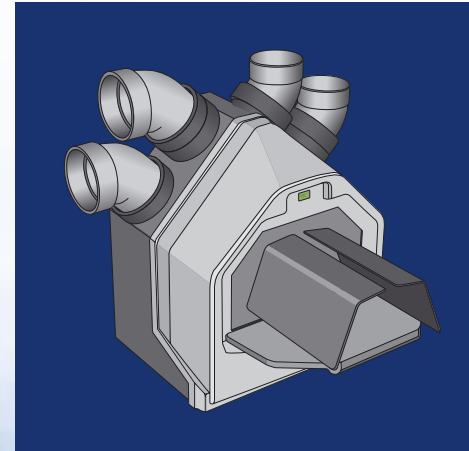
Water trap:

Discharging condensation couldn't be easier thanks to the water trap incorporated in the design. The water trap is clicked on to the base of the HRC and is very easy to remove for service and maintenance.



Reversible module:

The HRC is suitable for both left-handed and right-handed installations, using a handy reversible module: The 'outlet to inlet', 'inlet to outlet' principle. This means that to operate the module the configuration of the HRC changes from a left-hand to a right-hand design. The configuration is determined by the magnets in the reversible module.



Service and maintenance

The filter valve is very easy to access. A sticker is located on the inside of the filter valve listing the most important error codes for fans, bypass, temperature sensors, humidity sensor, configuration errors and filter warnings. All electronic components can easily be accessed and are located on the dry top surface.



More information:

A set of installation instructions and user operation and maintenance instructions are available for more detailed technical information and end-user information.

Technical information

Technical information

Air volume

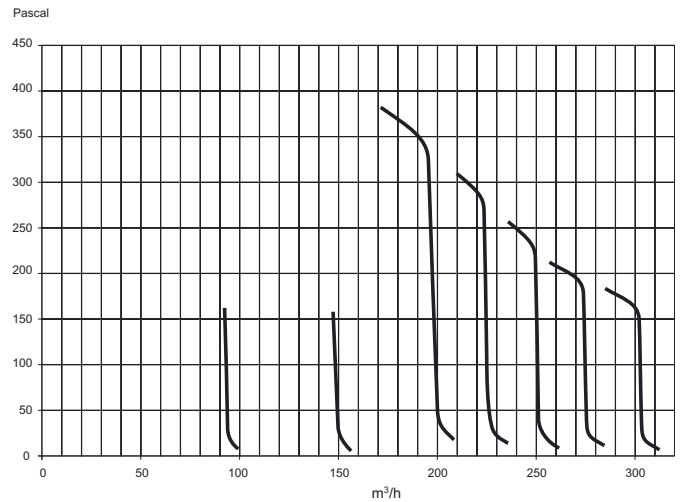
low: 90 m³/h
 medium: 150 m³/h
 high: 200-225-250-275-300 m³/h

Fan speed max. 3000 rpm

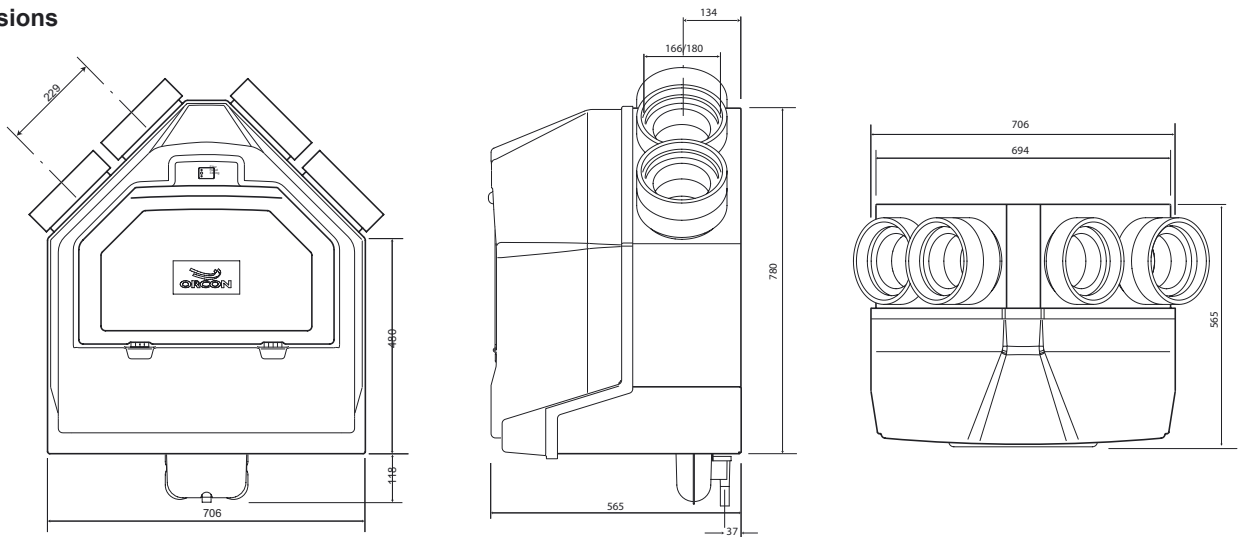
Mains voltage 230V~ 50 Hz

Power consumption at 225 m³/h 120 Pa: 70 Watt

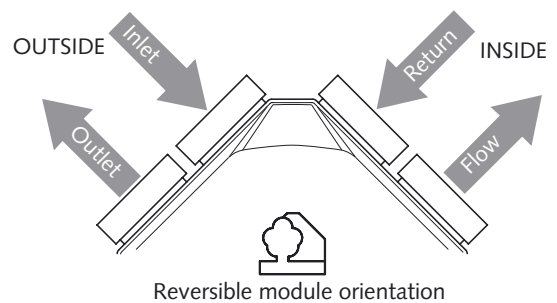
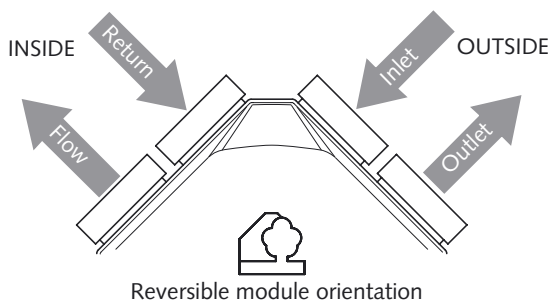
Nominal current: 0.22 Amps



Dimensions



Duct connections



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