



Commercial MVHR

Buyers Guide



What is MVHR?

MVHR, Mechanical Ventilation Heat Recovery, is a ventilation system that both extracts and supplies air so that a property is provided with the best possible indoor air quality.

Being extremely efficient a MVHR system can recover up to 90% of heat being lost through extraction and transfer this to incoming air.

The indoor climate is of the utmost importance in work places as most of us spend the greater part of our working lives indoors.

Benefits of Commercial MVHR

- Lowering Co2 levels
- Providing thermal comfort
- Providing fresh, filtered air into buildings
- Extracting stale air
- Recovering heat, creating savings on heating bills
- Reducing risks of indoor pollutants entering buildings
- Controllable air flows
- Filters allowing no pollen or harmful particles to enter rooms
- Continuous fresh air reducing airborne bacteria and germs
- Prevents mould and condensation
- Recovery of normally lost heat during cold days
- Fresh air supply reduces airborne bacteria and germs

How Does Commercial MVHR Work?

Heat recovery units are supply and extract systems delivering filtered fresh air into a building whilst extracting stale. Each unit will have a heat recovery element (thermal wheel, plate heat exchanger or run around coil) that is capable of transferring the heat that would otherwise be lost into the incoming air flow.

Thermal wheels are 80-90% efficient and are often used on larger duties where replacing heat loss can be expensive. Plate heat exchangers are typical between 80 and 90% efficient and due to their low profile are ideal for application in ceiling voids or where space is at a premium.

Run-around coil exchangers are used when you need to extract the heat from an exhaust air stream which may be dirty or contaminated, such as extract from a commercial kitchen. In this instance the run-around coil uses water in the exhaust air stream coil to absorb exhaust heat energy which is then pumped to a coil positioned in the supply air stream where heat is transferred.

When needed, a commercial heat recovery system can be adapted to incorporate cooling, additional filtration and sophisticated control packages.

Good Indoor Air Quality (IAQ) has a favourable role in working and learning environments. The effects of outdoor air pollution are widely known to have negative impacts on our health. However, indoor air quality can be up to 5 times worse than outdoor air.

We are familiar with the impacts of outdoor air pollution on our health, but it is becoming increasingly recognised that indoor air quality (IAQ) can be considerably worse than outdoor air pollution. Optimal thermal comfort and good indoor air quality is an essential requirement to promote students' and staff productivity and reduce risks poor health symptoms.



Why Install Commercial MVHR in Commercial Premises?

The indoor climate is of the utmost importance in work places as most of us spend the greater part of our working lives indoors.

“To ensure comfort and a sense of well-being, the air we breathe must be clean, at the right temperature and right humidity levels.”

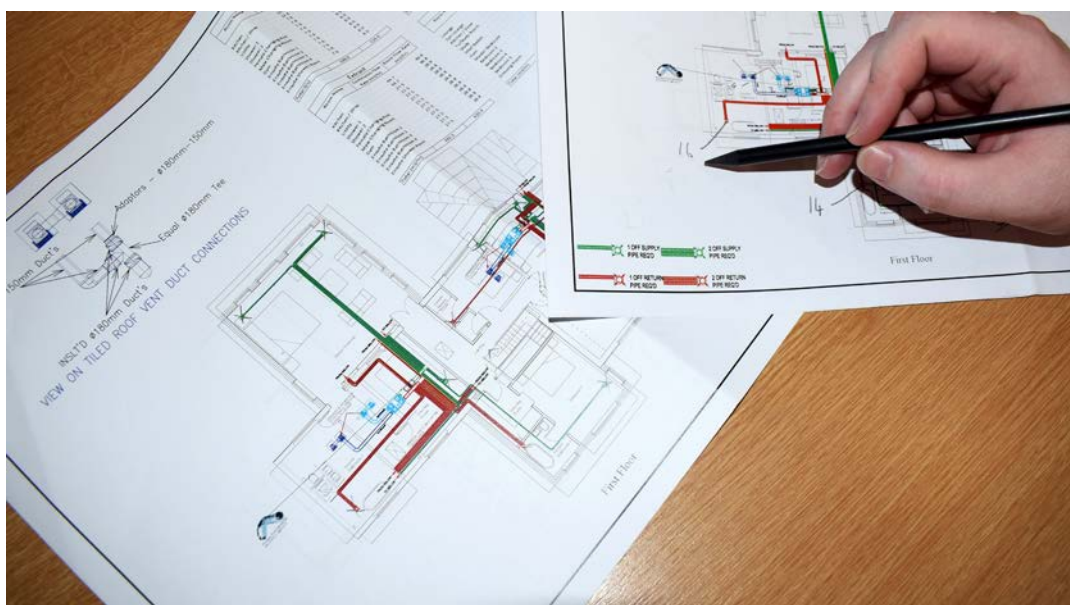
Whatever the situation, Mechanical Ventilation with Heat Recovery (MVHR) solutions can play a significant role because they help create a healthier living and working environment, while contributing to the reduction of a building's carbon emissions and energy usage.

Heat recovery systems are very popular with school classrooms and offices by keeping Co2 levels below 1000 and filtering the air to below PM2.5 providing the ideal environment for optimal concentration and awareness.

Commercial Ventilation Design Service

BPC can help design and specify a heat recovery system on small and medium sized projects, on large or complex systems we can work with your consultant and technical designer to choose a suitable system that fits within your budget.

By sending us your plans it will ensure that you get the correct system for your property so that your unit will provide the correct airflow for the size of your project and how many rooms in your home.



Commercial Installation

MVHR systems are suitable for installation in all types of building. The best time to install a ventilation system is at the time of the building but systems can also be retrofitted.

We have an installation service carried out by our own network of trained and certified installers throughout the UK and Ireland that can either install the complete system or just connect the unit and commission for you at an affordable cost.



Types of Commercial MVHR Units

Plate heat exchangers are up to 95% efficient and due to their low profile are ideal for application in ceiling voids or where space is at a premium.

Thermal wheels are 70-90% efficient and are often used on larger duties like swimming pools and factories where replacing heat losses can be expensive.

Run-around coil exchangers are used when you need to extract the heat from an exhaust air stream which may be dirty or contaminated, such as extract from a commercial kitchen. In this instance the run-around coil uses water in the exhaust air stream coil to absorb exhaust heat energy which is then pumped to a coil positioned in the supply air stream where heat is transferred.

When needed, a commercial heat recovery system can be adapted to incorporate cooling, heating, additional filtration and sophisticated control packages.

The Komfovent RHP unit range is unlike any other MVHR products currently on the market as this range provides cooling, ventilation and supplementary heating, ventilation whereas most units will only recover heat. This innovative unit range has an integrated heat pump as well as a rotary heat exchanger, meaning this unit has two energy recovery stages. RHP units use only perfectly balanced fans with unique geometry fans ensuring low noise level.

Commercial Heat Recovery FAQ's

Why it is important to have ventilation in commercial buildings?

Having ventilation in commercial buildings is important as we spend up to 90% of our time indoors, and often work places, such as offices, is where we spend a lot of our day. It is important for workers to be provided with adequate ventilation to ensure good air quality, increase productivity and reduce tiredness. Having good indoor air quality creates a healthier working environment. This also applies in applications such as schools as ventilation will ensure healthy levels of CO2 so that teachers and pupils are able to teach and learn in a healthy environment for concentration.

Are MVHR systems noisy?

MVHR systems emit small amounts of noise as a result of their continuous extraction. However, modern day MVHR systems are designed to be as quiet and unnoticeable as possible in order to maintain a peaceful working environment. As expected, larger units for bigger premises may be louder than an average residential type unit but it is unlikely in a commercial building that you would even be able to hear the unit running.

Are MVHR systems difficult to maintain?

No, maintenance of an MVHR system is straightforward. The filters must be replaced or cleaned once or twice a year, a procedure which only takes a few minutes. MVHR systems are generally quite reliable, as they consist of only one moving part, which is the fan.

Are Heat Recovery Systems expensive?

The cost of a heat recovery system is entirely dependent on the size of the building that you intend to ventilate. It is important to consider the amount of money saved through reduced heating costs as a result of the Heat Recovery System. BPC have one of the largest ranges of commercial MVHR units available that include units suitable for offices of 20 people at below £1,000 (excluding ducting) to complex demand-controlled systems with cooling and heating at over £10,000.

Will ventilation system suit any type of commercial application?

We have a large range of available units suitable for all sizes and types of commercial applications. You can install a ventilation system to any new commercial building, and ventilation system can be retrofitted to most applications. We recommend retrofitting at time of refurbishment due to duct runs. If retrofitting we also need to highlight the importance of having room for ducting in roof spaces, voids or areas that large-scale commercial ducting systems will fit.