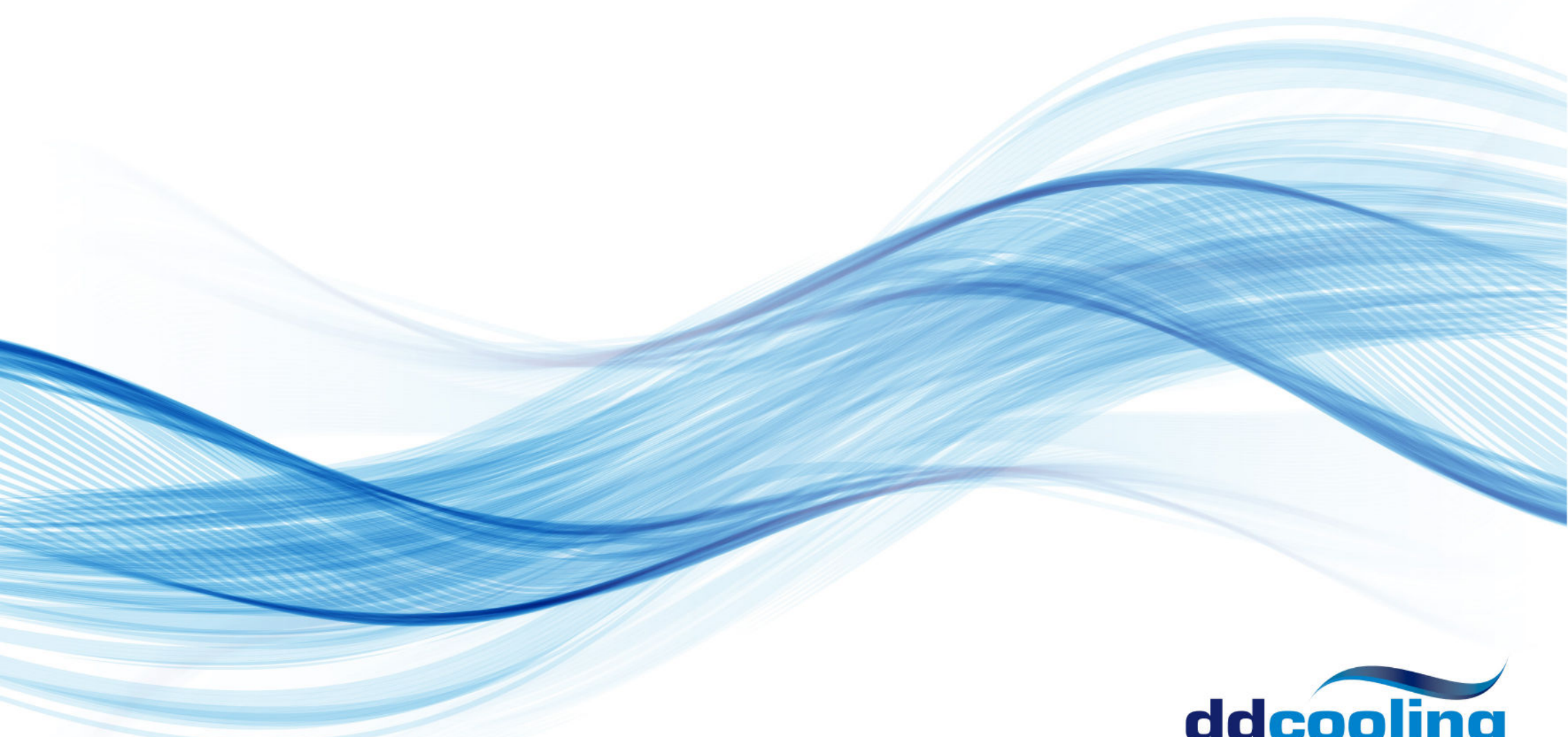


# ventilation





Recover up to 90% of heat  
being lost through extraction  
and transfer to incoming air



A wide-angle photograph of a modern office interior. The space is filled with cubicles, each featuring a light blue desk and a black mesh office chair. The ceiling is white and equipped with numerous rectangular fluorescent light fixtures and air vents. The overall atmosphere is clean and professional. A semi-transparent blue horizontal band is overlaid across the middle of the image, containing white text.

Save up to 30% on capital outlay by  
reducing the heating and cooling loads  
within an occupied space



## **Looking for exceptional ventilation for your commercial premises?**

DD Cooling provide ventilation systems, designed to supply fresh air into your building whilst extracting stale air. With added heat recovery technology, your new ventilation system can recover heating or cooling energy to help warm/cool incoming fresh air.

## **Why is ventilation important?**

Good indoor air quality is vital for any commercial premises, to ensure it functions effectively and efficiently. Ventilation is the process by which 'clean' air is intentionally filtered into a space, and stale air is removed. Effective ventilation is needed to provide Oxygen for metabolism and to dilute metabolic pollutants (carbon dioxide and odour). It allows for maintaining good indoor air quality, by diluting and removing other pollutants emitted within a space. A good ventilation system is a major contributor to the health and comfort of building occupants, with the added bonus that it can be additionally used for cooling and heating.

## **Why isn't natural ventilation effective?**

Natural ventilation proves less effective, as the demand for improved energy efficiency results in increasingly airtight buildings, and so drives the need for mechanical ventilation.

## **Why do I need air ventilation in my building?**

Poor indoor air quality can lead to a loss in productivity and low morale, it can be attributed to many problems inside a building such as pollutants known to cause damaging health issues. Plus poor air quality can lead to excess humidity, which causes dampness, rot and mould. This in turn can prove costly to any business and damage the internal environment.



## **What are the regulations I should be aware of?**

In line with Government targets, changes to building regulations have been introduced to improve energy efficiency and reduce carbon emissions. Part L of the Building Regulations calls for buildings to be more airtight and energy efficient. Maintaining good indoor air quality through effective ventilation is vital and MVHR & AHU's are perfectly placed to achieve this. Part L gives guidance on the maximum amount of electricity that an air distribution system should use.

Part F of the Building Regulations focuses on ventilation systems and indoor air quality in both domestic and commercial buildings.

## **What is heat recovery?**

A ventilation system which works by extracting and supplying air to ensure good indoor air quality. A heat recovery system provides fresh filtered air into rooms, whilst retaining heat that would normally be wasted.

Basically, it is an energy recovery ventilation system that uses an air-to-air heat exchanger that recovers normally wasted heat, while at the same time supplying fresh highly filtered air, improving the indoor environment. Heat recovery systems work independently from your heating system, but due to it recovering heat that is usually lost it can have great savings on energy bills.





DD Cooling provide a range of mechanical ventilation products such as: Mechanical Ventilation with Heat Recovery units (MVHR), Air Handling Units (AHU's) and AHU control interfaces. All of these systems have been designed to deliver a fresh air supply to a building, whilst simultaneously extracting stale air in the most efficient manner.

A MVHR system virtually eliminates condensation and mould within a building, by constantly ventilating the space. A MVHR system is extremely efficient and can recover up to 90% of heat being lost through extraction and transferral to incoming air.

DD Cooling offer industry leading Mitsubishi Electric Lossnay Heat Recovery systems, ensuring your building maintains a healthy and comfortable environment. The Mitsubishi Lossnay system utilises paper cores within both its MVHR and AHU systems to provide excellent ventilation alongside a heating and/or cooling system.

**The benefit of the system includes:**

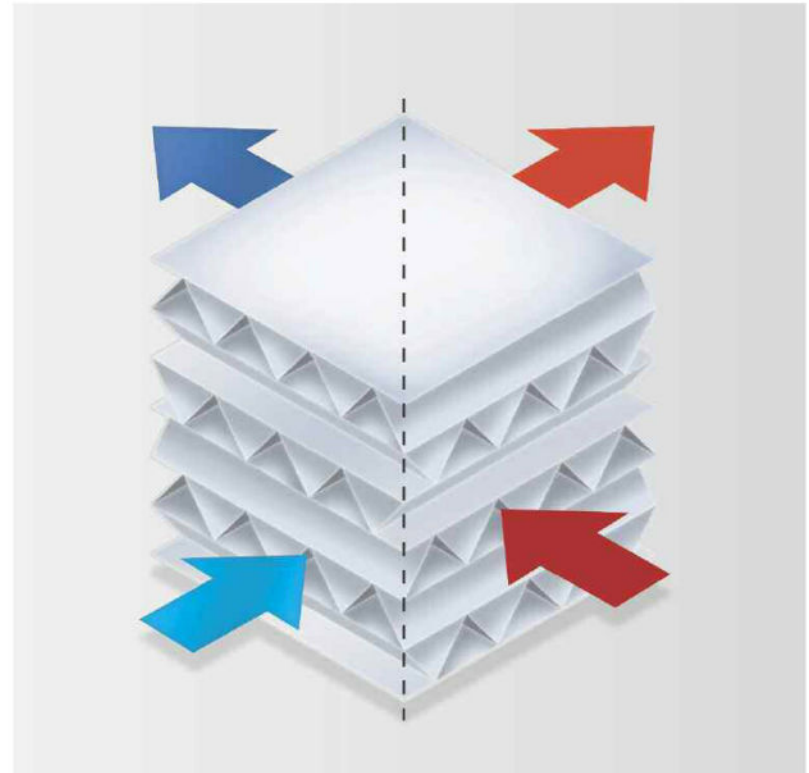
- Clean, fresh air
- Improved air quality and comfort
- Increased climate control
- Energy efficient heat recovery
- Reduced energy bills





## How does Lossnay work?

The technology behind the energy efficiency of the Lossnay core lies in its construction, which enables exchange of both latent heat (humidity/moisture) and sensible heat (temperature) to maintain a comfortable internal environment with minimal energy consumption. As stale air is extracted from the building, heat energy is recovered through the Lossnay paper core and transferred to the incoming fresh air.



The core of the system is made from ultra-thin paper and sits in the centre of the system. Constructed in a corrugated form and layered in alternate directions, the core allows a cross airflow to maximise heat recovery without the supply and exhaust air mixing, ensuring only fresh air is introduced into a building.

## Is a MVHR system noisy?

MVHR systems have minimal noise impacts and should run almost silently.

## What maintenance is needed with a MVHR system?

Apart from keeping all the air vents clear and clean, the only maintenance is periodic filter changes. There are several filters which need to be changed to keep the air flowing properly. How frequently depends on where the building is and how clean the air is in the surrounding area. DD Cooling offer service contracts to maintain your ventilation systems to help insure the system is working correctly and efficiently 24 hours a day, 365 days a year.

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