

# **ComfortDisc™**

**Heating - Air Conditioning - HRV**



***Ideal for passive houses and low energy homes***



***Delivering Conditioned Air for  
Comfort, Efficiency and Economy***



# ComfortDisc™

Heating - Air Conditioning - HRV

## About ComfortDisc

ComfortDisc is an innovative energy efficient small or mini duct distribution system that can provide heating, cooling, air filtration, fresh air, dehumidification, humidification and air purification. ComfortDisc eliminates the need for radiators, under floor heating, ductless split systems and fan coils in residential, commercial and school buildings.

## Options

Using a combination of compact modules and accessories a complete indoor comfort and air quality system can be assembled. Modules available are supply fan, hot water, chilled water, heat pump, mixing box, heat recovery core and heat recovery exhaust fan. These can be assembled in a variety of configurations – horizontal, stacked horizontal or vertical.

## Heat Sources

ComfortDisc can use a variety of heat sources including hot water from oil, gas or wood pellet boilers, ground source or air source heat pumps. In addition, heating and cooling can be provided by air to refrigerant (direct expansion DX) heat pumps or geothermal DX heat pumps. Cooling sources can be from chilled water, air source or geothermal heat pumps.

## Heat Recovery (HRV)

The high efficiency heat recovery ventilation (HRV) core is made from 100% aluminium and offers ventilation rates up to 750 M3/Hr. It also has the ability to work with incoming air temperatures as low as -8C. The high pressure fans in the HRV fan module offer the ability to have long exhaust duct runs and multiple extract points. A carbon dioxide (CO2) sensor controls the building ventilation rate to maintain ventilation levels at their optimum level and minimize running costs.

## Efficient Economical Control

Control of the various modules is handled by a Programmable Logic Controller (PLC) with customized software. The PLC interfaces heating and cooling sources and can modulate their output to maintain a constant supply air temperature. Duct pressure is regulated by a sensor that maintains the pre-programmed duct static pressure in heat, cool or heat recovery mode. This further increases the energy efficiency of the ComfortDisc by keeping the duct pressure constant and regulating fan motor speed as zones open and close on multi zone installations.

## Construction

All modules feature 1.2mm galvanized steel construction with 19mm closed cell foam for superior thermal insulation and sound isolation. All modules connect together with a high strength cam-lock mechanism and have resilient gaskets for a completely air tight seal. The supply fan module and heat recovery exhaust fan modules feature ebm-papst EC fan motors. This award winning motor technology is the ultimate in controllability, performance and energy efficiency.



This home with failed under floor heating was retrofitted with ComfortDisc.



ComfortDisc outlets in ceiling both side of fire place.



Close-up of ComfortDisc outlets.



Outlets are placed out of traffic areas and in corners to deliver comfort without draughts.



ComfortDisc outlets can be placed in groups of two in ceilings or walls.

# ComfortDisc™

Heating - Air Conditioning - HRV

## Duct Distribution

The ComfortDisc air handling unit and coils combined with 300mm, 250mm, 200mm or 150mm main supply tubing (plenum) deliver heated, cooled and fresh air into the conditioned space via 110mm small flexible tubing terminating in a 125mm diameter outlet. It delivers a single column of air from each outlet located at the perimeter of the room. This ensures even air temperature with no draughts or complaints from the occupants.

## How it works

A concentrated column of warmed or cooled air is delivered at “high velocity” out of the outlets via the duct distribution system. This column of air is similar to the concentrated column or jet of air flow you get from a hair dryer, but in the case of ComfortDisc, without the noise!

The column of air delivered from the outlets has an effect on the room air. It causes the room air to be gently pulled towards the column exiting the outlet. This causes gentle and even mixing of room air from up to four meters away.

The air movement towards the exiting column of air from the outlets is so slow it is unnoticeable.

We recommend that the outlets are placed in the corners of a room or either side of a door or window, out of any traffic areas so the column of air is not blowing on anyone.

## History

With over 20 years experience in heating, air conditioning and ventilation in North America and Europe, the designer EJ Fidgeon has combined the very best in European technology and components to bring ComfortDisc to the marketplace. In 2001 EJ Fidgeon was the first company to bring small duct high velocity systems (SDHV) into Europe.

ComfortDisc was engineered by EJ Fidgeon to eliminate the limitations of North American manufactured products used in the European market place by providing efficiency, reliability, controllability and installation flexibility.

The system is manufactured in Ireland at an ISO 9001:2008 and ISO 14001 facility. The production facility uses the latest in technology to produce the ComfortDisc modules. The ComfortDisc is CE certified and meets all applicable European standards for product safety and energy efficiency.

## Further Information:

Visit [www.comfortdisc.com](http://www.comfortdisc.com) to find your local distributor or contractor



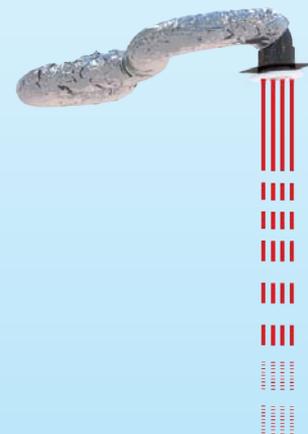
ComfortDisc (3 modules) shown in horizontal configuration in attic.



Main Ducting (250mm) and sound attenuated flex tubing in attic.



Flexible sound attenuated tubing delivers air to outlets.



Air is delivered in a concentrated column causing the room air to mix evenly.

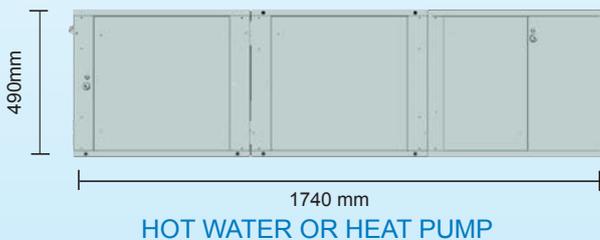
## ComfortDisc Options

- Hot water heating
- Heat pump heating and cooling
- Chilled water cooling
- Heat Recovery Ventilation (HRV)
- Hot water heating + HRV
- Chilled water cooling plus HRV
- Heat pump heating and cooling + hot water heating
- Heat pump heating and cooling + hot water heating + HRV

Use Boilers or Heat Pumps or Solar



## ComfortDisc Dimensions



European Designed and Manufactured.

- Heating
- Air Conditioning
- Heat Recovery (HRV)
- Air Purification

Suitable for:

**Passive Houses - New Construction**  
**Renovations - Retrofits**  
**Residential or Commercial**



Would you like  
comfort from  
head to toe?

**ComfortDisc**  
outlets in ceiling.

**ComfortDisc**  
is the answer!

**ComfortDisc.com**

Curraghbrack  
Rathconnell  
Mullingar  
Co. Westmeath  
Ireland

T: +353 44 9384881  
T: UK 02033 936224  
E: [info@comfortdisc.com](mailto:info@comfortdisc.com)  
[www.comfortdisc.com](http://www.comfortdisc.com)

**No Radiators**  
**No Underfloor Heating**

Finally, an intelligent heating, air conditioning and heat recovery system that gives you choices:  
Use any heat pump, wood pellet boiler, solid fuel boiler, oil or gas boiler as your heat source. ComfortDisc is an air distribution system giving you tremendous flexibility by delivering comfort from any heating and cooling source.