



Vireo

Fresh intelligence



www.fresh-intelligence.co.uk

Vireo

Fresh intelligence



Vireo: An elegant 'white good' designed for all types of new homes.

Heat Recovery Ventilation with a fresh and intelligent edge. With the continued focus and drive to build highly insulated dwellings, Heat Recovery Ventilation remains the optimal solution for many homes for energy performance and the provision of good indoor air quality throughout the year.

So, what is different about Vireo's design?

Taking the key stages into consideration, we have concentrated on performance, cost control and long-term reliability. With innovative developments in Greenwood SMART Technology we offer the best solution for all types of housing developments;

- 1 Space saving** – simple to design into cupboards or ceiling applications.
- 2 The quickest install time***.
- 3 A new innovative set-up and commissioning wizard** unlike anything else on the market which dramatically speeds up the set-up process.
Watch the video on our YouTube channel – www.youtube.com/greenwoodairvac
- 4 A universal product** (for left and right handing) which is adapted simply at the touch of a button!

- 5 365 days of filtered air** – even when summer-bypass mode is activated.

With so many things on the agenda, Vireo, derived from its Latin meaning for fresh, new, vigorous and green, is this year's ultimate choice for Heat Recovery Ventilation.

Build Tight – Ventilate Right.



Ask yourself – do you want to specify a Heat Recovery system that meets the challenges of Building Regulations, built with outstanding quality and is true value for money? Then say “hello” to Vireo.

SMART Technology = SMART sense

Enabling a better and easier application of ventilation in new homes.



did you know?

3.29*

that's the number of Vireo units you can install in the time it takes to install just 1 of the other leading MVHR units.

Now that's what we call innovative design.



* BPEC Accredited third party installing Greenwood Vireo and one other market leading MVHR product in a kitchen cupboard in left hand orientation



Guaranteed Installed Performance (GIP)

Ensuring what has been designed for a dwelling is actually what is installed

Greenwood have launched a range of Guaranteed Installed Performance products designed to assist in the delivery of GIP onsite by being adaptive at the point of installation.

Vireo is the latest addition to the GIP product family.

Vireo A Heat Recovery range designed to enable better, easier specification of ventilation in new housing.

1 Easy design

Rely on us to provide expertise on design layout and airflow performance. What's important to you is important to us;

- ✓ An elegant, discreet and compactly designed range consisting of 3 models for apartments and houses – from one single supplier.
- ✓ Airflow performance designed to achieve 2010 ADF Building Regulation requirements – check out if your current specification can meet the new rates.
- ✓ Outstanding Specific Fan Power (SFP) and Heat Exchange efficiencies for true reward in SAP.
- ✓  Greenwood WinterSMART™ technology to protect unit during colder winter months.
- ✓ A completely outstanding and long-term investment in product specification and good indoor air quality.
- ✓ A solution for the kitchen cupboard – easily sited, easily installed and easily accessed.

2 Install and commission

We have concentrated on installer happiness and cost control;

- ✓ Easy fitting in cupboards or ceilings.
- ✓ **Up to 70% quicker install thanks to DISO (Dual Inlet Single Outlet) Technology** – Right to left hand configuration at the touch of a button.



Greenwood CommissionSMART™ is a brand new wizard that follows a step by step set-up process – watch the video on our YouTube channel www.youtube.com/greenwoodairvac

- ✓  With 100% variable airflow setting, we have made it easy to set-up Vireo accurately for Building Regulation and Building Control sign-off, now a fundamental part of compliance.

3 Efficiency in the home

Reliability is on our agenda – we want to make it easy to sign-off and hand over to the homeowner without issue, whilst always ensuring protection of the building and provision of good indoor air quality.

- ✓ **Fresh, Filtered Air 365 days a year**
To ensure comfort all year around, during summer months, the heat recovery mode is by-passed. The integral and replaceable filters within Vireo ensure the supply air is filtered before it enters the property – extremely important in highly insulated dwellings.

What sets Vireo apart from the rest is that the air is filtered 365 days per year – unlike other heat recovery systems that by-pass the heat exchanger **AND the filters** when in summer by-pass mode! *See more on the SMART Technology page.*

- ✓  **Greenwood TimerSMART™**
Is a logical approach to overrun timing in domestic ventilation systems. This SMART technology eliminates nuisance noise and over-ventilation by using duration of occupancy to determine the time the system boosts/overruns rather than a pre-set generic period. E.g. in the bathroom for 5 minutes, overruns for 5 minutes – rather than in the bathroom for 5 minutes and overrunning for 15 minutes.

Greenwood SMART Technology

Easier, better, smarter

Vireo is the latest product to include Greenwood SMART Technology; a fusion of sensors, controls and design features that bring simplicity and assurance of a better ventilation solution.

Visit our **YouTube channel** to watch all our videos, including the Vireo Commissioning Wizard – www.youtube.com/greenwoodairvac



Greenwood SummerSMART™

The benefit of recovering heat in the winter and cooler months contributes to efficiency and comfort. In summer however, this is not necessarily needed and Vireo changes the way it operates by by-passing the heat recovery function.

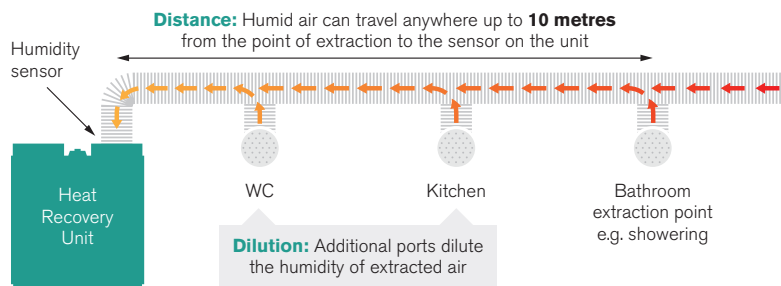
What sets Vireo apart from the rest is that when in Greenwood SummerSMART™ mode it continues to filter the air! This is extremely important in highly insulated dwellings for those suffering from allergies, especially at a time when filtration is most crucial!

Greenwood HumidiSMART™

Greenwood HumidiSMART™ uses the installed environment to boost ventilation, only ever reacting to man-made spikes. In whole house systems such as MVHR, this SMART humidity sensing is more effective – but why?

Distance and Dilution

- Humidity sensors are located in the unit, therefore humid air can have to travel up to 10m before it reaches the sensor to determine whether boost needs to activate.
- Traditional humidity sensors are waiting for a pre-set point to be reached for activation.
- By the time it has travelled this **distance**, humidity levels may have reduced.
- Additional extract ports linked to the main extract run (branched effect) will continue to draw in air, **further diluting** any humid air travelling to the sensor.
- **Distance and Dilution** impact humidity levels that are used to activate boost in rooms where it is needed.



Greenwood HumidiSMART™ activates boost by knowing what the normal level of humidity is and then reacting to man-made spikes from this point. Even if humidity levels are reduced, the rapid increase will always be recognised and boost ventilation when it is needed.

New Greenwood CommissionSMART™

the most intelligent I&C Wizard ever!

Vireo includes the newest and most innovative version of Greenwood CommissionSMART™ technology to date.

A clever LCD control button takes you through a step-by-step process for set-up and commissioning. So simple, and so quick, that everything is done at the touch of a button – even the handing of the unit e.g. right or left hand configuration.



GIP Ducting

How clean is your air?

Think
SystemThink
UnitThink
Ducting

MVHR systems require maintenance at intervals during their lifecycle and it is part of the Building Regulation requirements that end users understand how to operate and maintain the systems that have been installed. The parts that commonly require servicing and maintenance are;



Heat Exchanger

Cleaning and replacing during a 10 year cycle



Filters

Cleaning every six months and replaced every year



But what about maintaining the **ducting**? And how easily can it be cleaned?

Heat Recovery is a system – the unit and the ducting – and it is these two components that deliver ventilation to the home! Ducting is as important as the unit – in fact it's all about the whole system for Guaranteed Installed Performance. Ducting impacts;

1 Long term provision of indoor air quality

2 Efficiency and airflow performance

3 Speed and ease of installation

With Building Regulations driving the development of highly efficient homes e.g. Code Level 4 and above, systems such as MVHR could be the sole source of ventilation in a home. More than just hot air, Heat Recovery Ventilation acts as a balanced ventilation system both supplying and extracting air within a property.

“Ducting is usually installed within the fabric of the building and may not easily be replaced or maintained”.



GIP Ducting The end of fussy, ineffective installations and the only type of ducting that can be cleaned

Our GIP Ducting has been designed to be cleaned easily without affecting the installation, with independent tests certifying **95–98%*** of dust build up from the interior of the ducting tubes can be removed as a result of its patented smooth interior.

Traditional ducting systems require individual connections to be made during installation and the quality of the installation has an impact on performance.

Not only does sealant have to be used onsite, but with every ducting connection point there is also a risk of air leakage and an increase in installation time.

104 connections with traditional rigid ducting**



18 connections with GIP ComfoTube Ducting**

Other key benefits

- Radial design – meaning individual runs to each room
- Flexible to be installed without the need for bend connection components
- Can be easily maintained



Clinside

* Independently tested by Institute for the Ruhrgebiet, Germany

** Based on a typical 4 bedroom property with kitchen and three wet rooms

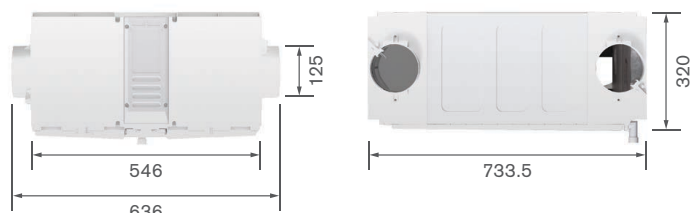
Vireo HR155CM



Physical specification

All measurements in millimetres

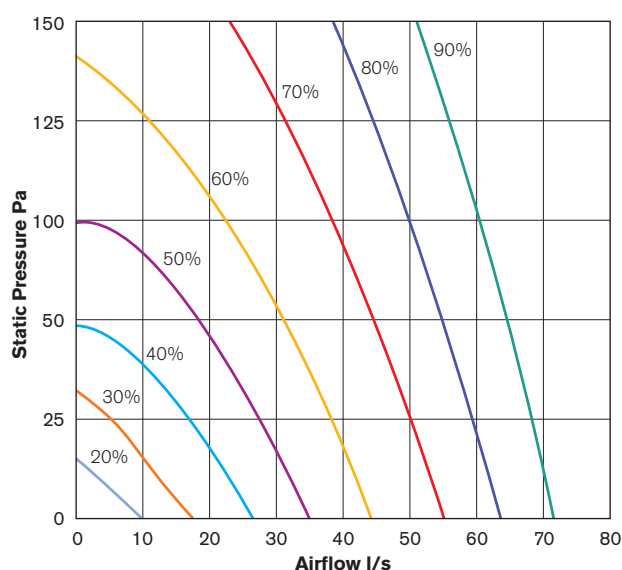
Weight: 20kg
Materials: ABS outer casing



Performance

Model	Energy consumption Watts			Sound pressure level @ 3m dB(A)			
	Trickle*	Boost*	Max	Low	Trickle*	Boost*	Max
HR155CM	15	56	160	9.3	18	32.5	41.5

* Default Airflow Settings: 33% Trickle & 66% Boost.



SAP Appendix Q Performance**

Exhaust terminal configuration (W/I/s)	Specific fan power efficiency (%)	Heat exchanger performance compliant	Energy Saving Trust best practice
Kitchen + 1 additional wet room	0.73	93	Yes
Kitchen + 2 additional wet rooms	0.73	92	Yes
Kitchen + 3 additional wet rooms	0.79	91	Yes
Kitchen + 4 additional wet rooms	0.90	90	Yes

Full product specification available on request

© Copyright Greenwood Air Management Ltd 2013

All information believed to be correct at the time of going to press. E&OE. All goods are sold according to Greenwood Air Management Ltd's Standard Conditions of Sale (available on request). All dimensions are in millimetres unless otherwise shown. Greenwood Air Management Ltd reserves the right to change specifications and prices without prior notice.

Greenwood Air Management Ltd
Registered Office: Greenwood House,
Brookside Avenue, Rustington,
West Sussex BN16 3LF
Registered in England No. 2479072

Phone 01903 771021
Fax 01903 782398
Email info@greenwood.co.uk
Web www.greenwood.co.uk

Greenwood Air Management
is a Zehnder Group Company
www.zehnder.co.uk

** Information extracted from the full SAP Appendix Q report (www.sap-appendixq.org.uk) as at March 2013

Installation

Wiring: Must comply with IEE Regulations

Fuse: 3 Amp (when unit is supplied from a 6A lighting circuit, no local fuse is required)

Electrical specification: 230V~50Hz Class II

Installation:

- Supplied with fixing bracket to allow screw fixing for increased support
- Install using rigid aluminium, PVC, galvanised or semi-rigid plastic ducting
- Install in ceiling void
- Installation and user manuals supplied with each unit

Right, all that's left to sort out are your ancillaries...



GD8 Modular rectangular and round 125mm lightweight PVC ducting system



Galvanised Ducting A range of galvanised ducting



GFA5.3 or GFA5.10 Flexible 125mm aluminium ducting



GFA5.10I Insulated flexible 125mm aluminium ducting



GS2 2 position switch available for controlling trickle and boost speed



KE125 Ceiling mounted supply valves



KSOP125 Fire rated kitchen extract valves



KSO125 Ceiling mounted extract valves



GG68 125mm ceiling mounted extract valves



GIP Ducting A range of semi-rigid ducting – Flat 51 or ComfoTube

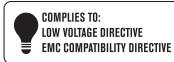
Order code: **HR155CM**

Patents registered:
1018932.2, 1221651.1, 1221652.9, 1303584.5

www.fresh-intelligence.co.uk



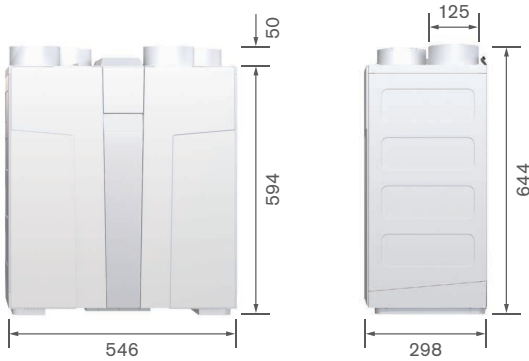
Vireo HR155WM



Physical specification

All measurements in millimetres

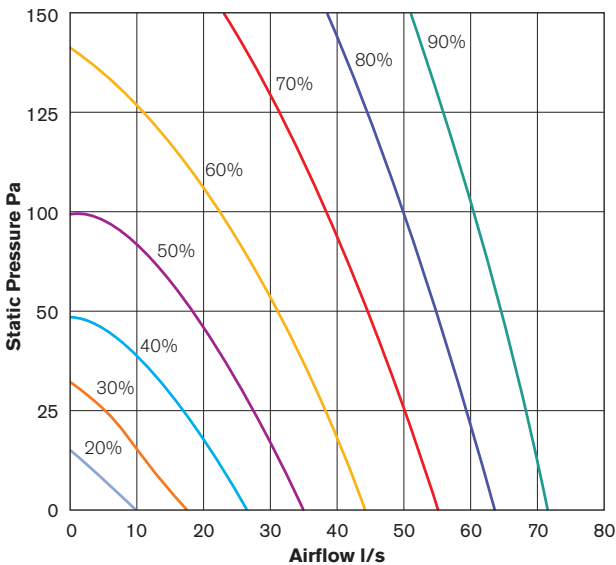
Weight: 20kg
Materials: ABS outer casing



Performance

Model	Energy consumption Watts			Sound pressure level @ 3m dB(A)			
	Trickle*	Boost*	Max	Low	Trickle*	Boost*	Max
HR155WM	16	62.8	160	10.5	22.9	37.1	45.7

* Default Airflow Settings: 33% Trickle & 66% Boost.



SAP Appendix Q Performance**

Exhaust terminal configuration (W/l/s)	Specific fan power efficiency (%)	Heat exchanger performance compliant	Energy Saving Trust best practice
Kitchen + 1 additional wet room	0.75	93	Yes
Kitchen + 2 additional wet rooms	0.77	92	Yes
Kitchen + 3 additional wet rooms	0.85	91	Yes
Kitchen + 4 additional wet rooms	0.98	90	Yes

Full product specification available on request

Installation

Wiring: Must comply with IEE Regulations

Fuse: 3 Amp (when unit is supplied from a 6A lighting circuit, no local fuse is required)

Electrical specification: 230V~50Hz Class II

Installation:

- Supplied with fixing bracket to allow screw fixing for increased support
- Install using rigid aluminium, PVC, galvanised or semi-rigid plastic ducting
- Install in wall or cupboard space
- Installation and user manuals supplied with each unit

Right, all that's left to sort out are your ancillaries...



GD8 Modular rectangular and round 125mm lightweight PVC ducting system



Galvanised Ducting A range of galvanised ducting



GFA5.3 or GFA5.10 Flexible 125mm aluminium ducting



GFA5.10I Insulated flexible 125mm aluminium ducting



GS2 2 position switch available for controlling trickle and boost speed



KE125 Ceiling mounted supply valves



KSOP125 Fire rated kitchen extract valves



KSO125 Ceiling mounted extract valves



GG68 125mm ceiling mounted extract valves



GIP Ducting A range of semi-rigid ducting – Flat 51 or ComfoTube

Order code: **HR155WM**

Patents registered:
1018932.2, 1221651.1, 1221652.9, 1303584.5

www.fresh-intelligence.co.uk

** Information extracted from the full SAP Appendix Q report (www.sap-appendixq.org.uk) as at March 2013

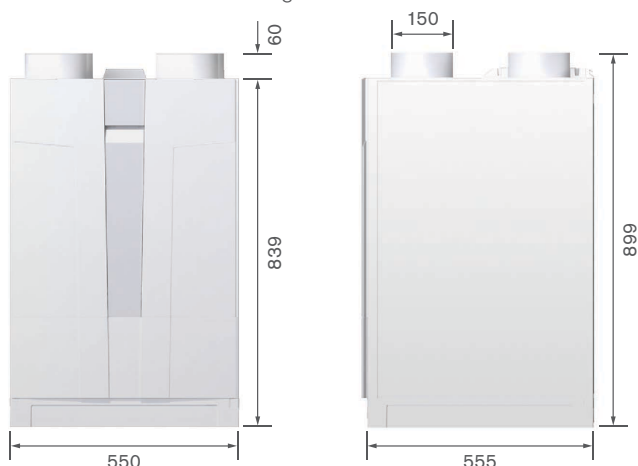
Vireo HR185WM



Physical specification

All measurements in millimetres

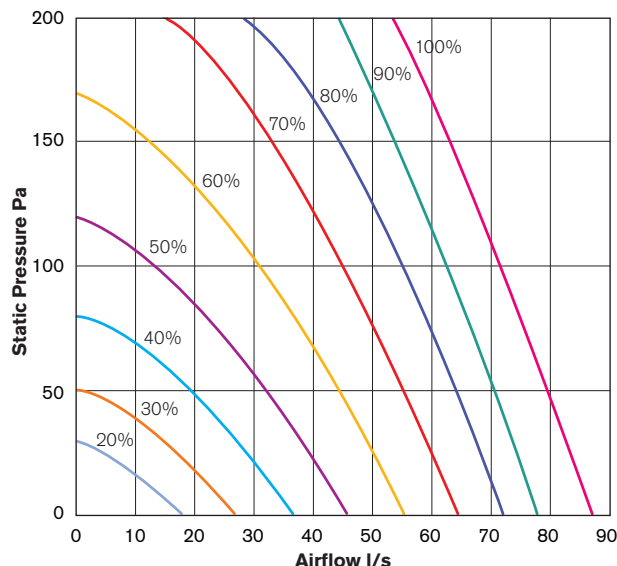
Weight: 30kg
Materials: ABS outer casing



Performance

Model	Energy consumption Watts			Sound pressure level @ 3m dB(A)			
	Trickle*	Boost*	Max	Low	Trickle*	Boost*	Max
HR185WM	14.2	61.4	160	11	22.5	38	46

* Default Airflow Settings: 33% Trickle & 66% Boost.



SAP Appendix Q Performance**

Exhaust terminal configuration (W/I/s)	Specific fan power efficiency (%)	Heat exchanger performance compliant	Energy Saving Trust best practice
Kitchen + 1 additional wet room	0.60	92	Yes
Kitchen + 2 additional wet rooms	0.57	92	Yes
Kitchen + 3 additional wet rooms	0.62	91	Yes
Kitchen + 4 additional wet rooms	0.70	91	Yes
Kitchen + 5 additional wet rooms	0.81	91	Yes
Kitchen + 6 additional wet rooms	0.95	91	Yes
Kitchen + 7 additional wet rooms	1.14	90	No

** Information extracted from the full SAP Appendix Q report (www.sap-appendixq.org.uk) as at March 2013

Installation

Wiring: Must comply with IEE Regulations

Fuse: 3 Amp (when unit is supplied from a 6A lighting circuit, no local fuse is required)

Electrical specification: 230V~50Hz Class II

Installation:

- Supplied with fixing bracket to allow screw fixing for increased support
- Install using rigid aluminium, PVC, galvanised or semi-rigid plastic ducting
- Install in wall or cupboard space
- Installation and user manuals supplied with each unit

Right, all that's left to sort out are your ancillaries...



GD8 Modular rectangular and round 125mm lightweight PVC ducting system



Galvanised Ducting A range of galvanised ducting



GFA5.3 or GFA5.10 Flexible 125mm aluminium ducting



GFA5.10I Insulated flexible 125mm aluminium ducting



GS2 2 position switch available for controlling trickle and boost speed



CR150125 150mm - 125mm ceiling reducer



KE125/KE150 Ceiling mounted supply valves



KSOP125/KSOP150 Fire rated kitchen extract valves



KSO125/KSO150 Ceiling mounted extract valves



GG68 125mm ceiling mounted extract valves



GIP Ducting A range of semi-rigid ducting - Flat 51 or ComfoTube

Order code: **HR185WM**

Patents registered:
1018932.2, 1221651.1, 1221652.9, 1303584.5

Full product specification available on request

www.fresh-intelligence.co.uk