

### Continuous Running, Energy Efficient, Heat Recovery Ventilator For Houses, Offices And Bungalows Providing Clean Air

#### FEATURES

- Meets Building Regulations requirements
- 4 speed airflow selectable  
290m³/h / 408 m³/h  
522m³/h / 650 m³/h
- Up to 65% Heat Recovery
- Easy to install (no external access required using core drill)
- Whisper quiet
- Continuous running trickle ventilation
- Humidity sensor (preset or adjustable)
- Low running costs
- Tamperproof screws (optional)
- Balanced / positive / negative airflow
- Energy savings
- Security ventilation™ (no need to open windows)
- Health benefit - Produces dramatic improvements of indoor air quality



#### GENERAL

Kair™ K-HRVWH2000 Heat Recovery Ventilators provide a continuous air change, replacing stale moisture laden air with fresh, warmed air from outside.

Kair™ K-HRVWH2000 controls condensation and eradicates mould growth problems in house, offices and bungalows and is an integral part of the Kair Hybrid Heat Recovery Systems.

#### ENERGY EFFICIENCY

Unlike conventional extractor fans which suck out and waste expensively produced heat, Kair K-HRVWH2000 Heat Recovery Ventilators recover up to 65% of exhaust heat, even when operating on boost mode.

The world is becoming increasingly aware of the enormous cost of energy production, and this, plus the use of fossil fuels to generate power, is a momentous environmental issue.

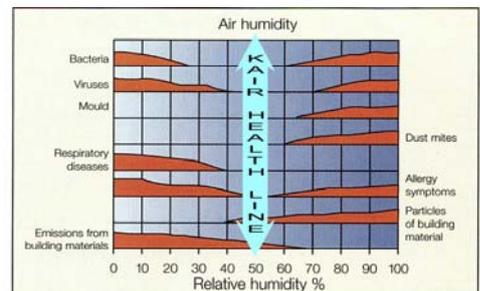
Extractor fans potentially waste over a million kilowatts of energy every year. This is comparable to the total output of two large power stations. Replacing conventional extractor fans with heat recovery systems could save at least half of that energy loss.

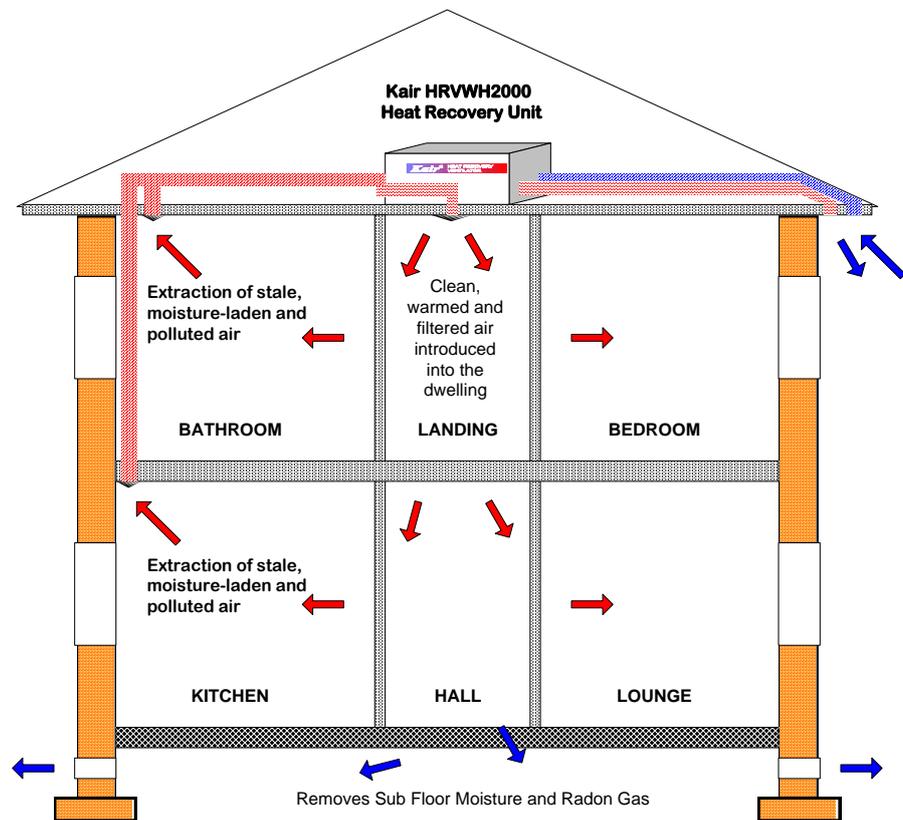
#### HEALTH DIVIDEND

As long ago as 1989, an article in the British Medical Journal referred to the health hazards associated with condensation and mould growth in dwellings. The Statutory Fitness Standard clearly states that dwellings with inadequate ventilation, or condensation and mould growth problems, are unfit for human habitation and Building Regulation Guidelines call for a supply of fresh air and the removal of pollutants.

D.E.T.R Good Practice Note 268, (Energy Efficient Ventilation in Housing) recommends a continuous air change of 0.5 to 1.0 per hour, throughout the entire dwelling, and this is best achieved by using mechanical ventilators.

Kair™ K-HRVWH2000 units, by reducing humidity to optimum levels (Kair Health Line™), eradicate condensation, prohibit mould growth and discourage the spread of bacteria, viruses and dust mite activity.





#### ■ HOW IT WORKS

Kair™ K-HRVWH2000 Heat Recovery Whole House Ventilators provide a continuous air change, replacing stale moisture-laden unhealthy air with filtered, fresh, warmed air from outside the dwelling.

The continuous controlling of Relative Humidity levels ensures that conditions will not exist in which condensation or mould growth problems can develop and thrive.

#### ■ CONTROL

A range of controls are available:

- a) Two or four speed Independent switches for input or extract motors to create increased positive or negative pressures. Ranging from 290m<sup>3</sup>/h to 650m<sup>3</sup>/h.
- b) Humidity sensor – two speeds (trickle or boost)

#### ■ INSTALLATION

The Kair K-HRVWH2000 is designed for easy installation by use of 152mm and 102mm core drilled holes.

Installation can be undertaken entirely within a building with no requirement for external access, thus reducing installation costs on high-rise applications.

The unit can be easily unassembled where required to fit through narrow loft openings.

Full installation instructions are provided with the unit.

#### ■ SPECIFICATIONS

Please see separate specification clause leaflet.

#### ■ MAINTENANCE

Filters should be removed at 6 to 12 month intervals subject to site conditions and replaced or cleaned with a domestic vacuum cleaner or washed if exceptionally dirty. Filters are housed externally in easily accessible filter casings.



The motors are guaranteed for 5 years and are fitted with 'Sealed for Life' bearings, which do not require maintenance or lubrication.

Kair™ K-HRVWH2000 Ventilator can be serviced and maintained from inside the building with no requirement for external access.

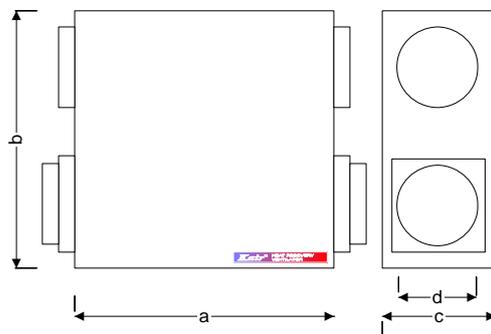
## ■ ELECTRICAL SAFETY

Installation can be carried out by a suitably qualified craftsman and connected to electrical supply by an electrician in accordance with IEE Regulations.

## ■ REGULATIONS

The unit meets current Building Regulations for complete whole house air changes, also D.E.T.R Energy Efficient Ventilation in Houses Good Practice Guidelines, Statutory Fitness Standards requirements and N.H.S Health Strategy requirements.

## ■ DIMENSIONS



Dimensions (mm)			
a	b	c	d
505	510	255	150

## ■ PERFORMANCE

Speed	Airflow m <sup>3</sup> /h	dBA	Heat Recovery
1	290	23	Up to 65%
2	408	35	
3	522	46	
4	650	58	
Voltage	230V		
<i>Typical Performance figures</i> Assuming an average of 80% trickle and 20% boost speed. Test with outside air temperature at 7°C and inside room temperature at 23°C			

## ■ WHY SPECIFY Kair™

Ventilation is necessary to maintain a healthy and comfortable internal environment and to rapidly remove pollutants such as moisture, volatile organic compounds (VOC's), allergens such as dust, oxides of nitrogen, carbon monoxide, carbon dioxide, tobacco smoke and unpleasant odours.

Moisture is generally assumed to be the most significant of these pollutants because of the high rates of generation from cooking, bathing, washing, drying etc., and the consequential condensation and mould growth problems. It follows that if the ventilation strategy is based on controlling this principle pollutant by heat recovery input / extract ventilation then logically the other indoor pollutants will also be adequately controlled.

Stale air, and air which is hot or humid, should be replaced at a reasonable rate.

Good ventilation means providing a balance between energy efficient and healthy indoor air best summed up by the catchphrase 'build tight – ventilate right'.

The fresh air supply rate should not normally fall below 5 to 8 l/s per occupant, best achieved by creating continuous air changes of 0.5 to 1.0 every hour, throughout the entire dwelling, as specified in D.E.T.R Good Practice Note 268.

Although Building Regulations relate to new buildings, the guidance on ventilation is applicable to existing dwellings and most important of all, the regulations are concerned with minimising the risk to health from the build up of pollutants. K-HRVWH2000 satisfies all of these criteria.

## ■ REFERENCES

- i. Statutory Fitness Standards – Housing Act 1985
- ii. Department Of The Environment F1 Guidance – Means Of Ventilation
- iii. Airborne Fungal Glossary – Basic Facts About Mould –TRD
- iv. Housing Act – (COSHH) Control Of Substances Hazardous To Health Regulations – 1988
- v. Optimum Relative Humidity Guide KTIC
- vi. Building Research Establishment. Digest 297 'Surface Condensation And Mould Growth In Dwellings'
- vii. NHS – A Health Strategy For London
- viii. DETR – Energy Efficient Ventilation In Housing – Good Practise Guide 268
- ix. Home Energy Conservation Act 1985
- x. British Standards Institution. BS 5250. 'Control Of Condensation In Buildings'. BSI, London, 1989
- xi. Perera M D A E S And Parkins L M. 'Build Tight – Ventilate Right'. Building Services Journal, June 1992. – CIBSE, London, 1992
- xii. Property Associated Technical Standards

## ■ ACCESSORIES

Example ducting accessories



Full ancillary list available on request

Stock code:  
K-HRM240



To verify continuous use or record interruptions to electricity supply

Stock code:  
K-HC



Automatic humidistat to switch ventilation modes

Stock Code:  
K-5SPC



Five Speed Switch control including off

Stock Code:  
K-2SPC



Two speed switch control

Stock Code:  
DH150-1.2



In Line Electric duct Heater

Stock Code:  
DUCWHB-200



In Line Water to Air heat exchanger / Heater

Manufactured by

**Kair**<sup>TM</sup>  
VENTILATION LIMITED

www.kair.co.uk

Patent applied for.  
Kair<sup>TM</sup> reserve the right to change the design of these products without prior notice.

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**Kair<sup>TM</sup> Whole House Ventilator**  
**Model: K-HRVWH2000**

**Available From:**