

# Kair™ Trakmaster Ventilator

## Model: KHRVF100

**DATA SHEET**

**Continuous Running, Energy Efficient, Heat Recovery Ventilator For Basements, Cellars, Flats And Bungalows etc.**

### ■ FEATURES

- Meets Building Regulations requirements
- Up to 65% Heat Recovery
- Easy to install (no external access required - 102mm core drill)
- Whisper quiet
- Continuous running trickle ventilation
- Humidity sensor (preset or adjustable)
- Low running costs
- Tamperproof screws (optional)
- Balanced or positive airflow
- Energy savings
- Security ventilation™ (no need to open windows)
- Health benefit - produces dramatic improvements of indoor air quality

### ■ GENERAL

Kair™ Trakmaster KHRVF100 Heat Recovery Ventilators provide a continuous air change, replacing stale moisture-laden air with fresh, warmed air from outside.

When basements/cellars have been tanked and waterproofed condensation can often be problem, Kair™ Trakmaster KHRVF100 will control these problems as well as condensation problems in small flats and bungalows and are an integral part of the Kair 'Hybrid' Heat Recovery Systems (See separate Data sheet).

### ■ ENERGY EFFICIENCY

Unlike conventional extractor fans which suck out and waste expensively produced heat, KairTrakmaster KHRVF100 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.

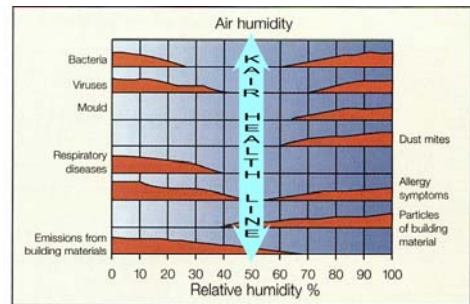


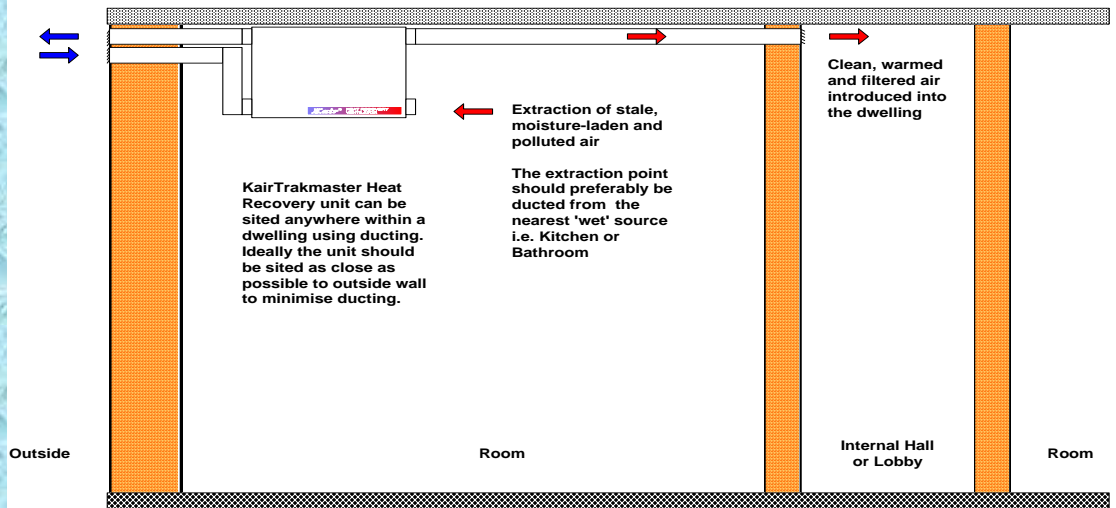
### ■ HEALTH DIVIDEND

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, condensation and mould growth problems are unfit for human habitation and Building Regulation Guidelines require a supply of fresh air and the removal of pollutants.

Kair™ Trakmaster KHRVF100 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. By expelling dust particles, gasses and other household pollutants, the units create a dramatic improvement in the quality of the indoor air supply.

### Energy saving with a Health dividend.





### ■ HOW IT WORKS

Kair™ Trakmaster KHRVF100 Heat Recovery Room 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

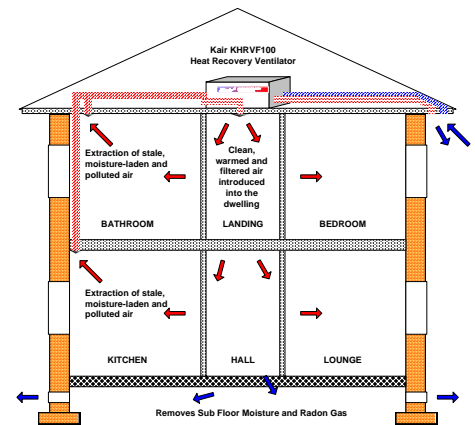
A variety of manual or automatic controls are available including:

- Two speed switch for manual override.
- Automatic switching two speed humidistat
- Independent switching for input or extract motors to vary pressures for Summer / Winter settings – internal bathrooms / kitchens variable life styles – multiple occupancy.

### ■ INSTALLATION

The KairTrakmaster is designed for easy installation by use of 102mm core drilled holes. Installation is undertaken entirely within a building with no requirement for external access, thus reducing installation costs on high-rise applications.

The Kair™ Trakmaster is factory set to provide a positive pressure facility to combat the ingress of radon gas and increase heat exchange efficiency. 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.

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

Kair™ Trakmaster KHRVF100 Ventilator can be serviced and maintained from inside the building with no requirement for external access.

### ■ ELECTRICAL SAFETY

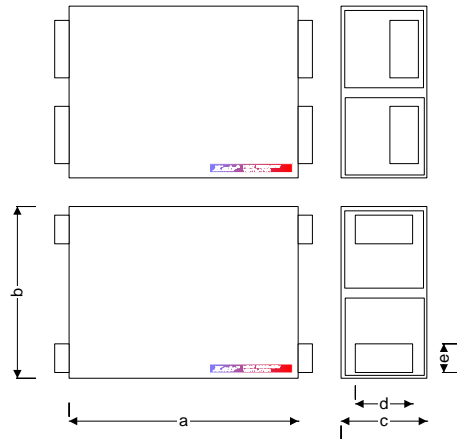
Installation can be carried out by a suitably qualified craftsman and connected to electrical supply by an electrician in accordance with IEE Regulations.

## ■ REGULATIONS

The unit meets Building Regulations.

## ■ DIMENSIONS

Note: For ease of installation, all four rectangular spigots and both internal motors, can be rotated by 90° to enable tight fitting against ceiling or walls.



Dimensions (mm)				
a	b	c	d	e
380	290	156	100	50

## ■ PERFORMANCE

KHRVF100	Trickle	Boost
<i>Airflow</i>	33m <sup>3</sup> /h	100m <sup>3</sup> /h
<i>Watts</i>	11	55
<i>dBA</i>	23	42
<i>Heat Exchange efficiency</i>	Up to 65%	
<i>Typical performance figures</i>		

## ■ 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'

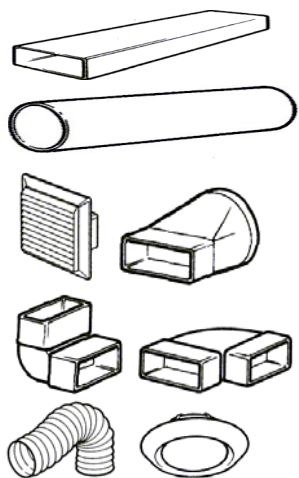




The fresh air supply rate should not normally fall below 5 to 8 l/s per occupant. This is best achieved by creating continuous air changes of 0.5 to 1.0 every hour, throughout the entire dwelling as specified in D.E.T.R. Good Practice Note 268.

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. The KHRVF100 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	 <p>Stock Code: Various Full ancillary list available on request</p>
Hour meter	 <p>Stock code: K-HRM-240 To verify continuous use or record interruptions to electricity supply</p>
RH meter	 <p>Stock code: K-SE-PTHGM To measure the Relative Humidity and temperature</p>
Humidity Control	 <p>Stock code: K-HC Automatic humidistat to switch ventilation modes</p>
Switch control	 <p>Stock Code: K-2SPC Two speed switch control</p>



## Kair™ Trakmaster KHRVF100 Ducted Heat Recovery Ventilator

Manufactured in the EC for  
Kair Ventilation Limited.  
Patents applied for.

Kair™ reserves the right to change the  
design and performance of these products  
without prior notice.  
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