

# HRU ECO 4 Product Guide

System 4

Continuous Mechanical Supply and Extract  
Ventilation with Heat Recovery

Appendix Q Eligible



Climate for life.

# A Climate for life

The zero compromise answer to the zero carbon challenge



**The Itho Group was founded in 1919. In the years since, the company has established itself as the market leader in indoor climate systems. Complementing its unrivalled ventilation systems, Itho also designs and manufactures high efficiency boilers, solar hot water systems, ground source heat pumps and other energy-saving systems at its headquarters in Schiedam, Netherlands. Itho Ventilation Limited, based in Burton on Trent, is the company's first subsidiary outside the Netherlands.**



Reduced energy consumption, yet improved comfort. The healthiest possible interior atmosphere, yet lower running costs.

These are the seemingly contradictory goals that we've been achieving at Itho for more than 90 years, proving that we can enjoy a superior living environment within the home and protect our natural environment.

We call this a Climate for Life. This means that the homes you build can provide fresh, filtered air whilst costing less to ventilate and emitting fewer emissions.

### Build for the future today

By 2016 all new build homes in the UK must be zero carbon – and therefore highly airtight.

Part L of the Building Regulations (England and Wales) has been updated and the Department for Communities and Local Government (CLG) has introduced the Code for Sustainable Homes. These documents show us how to reach the zero carbon target.

### Code for Sustainable Homes – the route to 2016

By the year 2016, all new build homes across the UK must be zero carbon. To achieve this, the Code for Sustainable Homes, published by the Department for Communities and Local Government, sets out

recommended incremental energy efficiency targets that will enable constructors to meet this target.

The table shows the staged percentage reductions in dwelling emission rates proposed by the Code. Building Regulations Part F (ventilation) and Part L (conservation of fuel and power), effective October 2010, call for new homes to make emissions reductions of 25% over Target Emission Rate,

thus making the Code Level 3 target mandatory. It is expected that future updates to the Building Regulations will incorporate the Code's recommendations for Levels 5 and 6 as 2016 approaches.

At Itho, we're already there. The HRU ECO 4 – our continuous mechanical supply and extract ventilation system with heat recovery (MVHR) - is more than ready for the airtight home of 2016.

Code Level	Minimum percentage reduction in Dwelling Emission Rate Over Target Emission Rate
Level 1 (★)	10
Level 2 (★★)	18
Level 3 (★★★)	25
Level 4 (★★★★)	44
Level 5 (★★★★★)	100
Level 6 (★★★★★★)	'Zero Carbon' Home

### HRU ECO 4 variations available

UK CODE	PRODUCT	m3/hr	Voltage
105-0058	HRU ECO 4 (House) 5 core cable	325	230
105-0060	HRU ECO 4 (House) RF	325	230
105-0059	HRU ECO 4 (Apartment) 5 core cable	325	230
105-0061	HRU ECO 4 (Apartment) RF	325	230

### Future proof

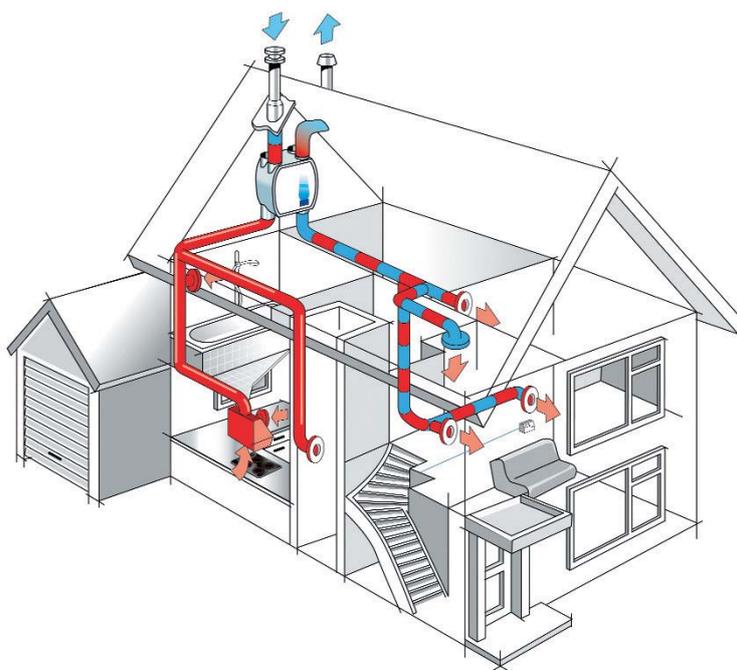
In BRE testing for SAP Appendix Q eligibility, the HRU ECO 4 achieved a specific fan power of  $\leq 0.46$  W/l/s against the 1.0 W/l/s required by the Energy Saving Trust. Thermal heat recovery efficiency, meanwhile, came in at 91% - easily exceeding the prescribed 85%.

You'll find more about the Building Regulations, the Code for Sustainable Homes and SAP Appendix Q in the HRU ECO 4 Technical Guide.

### Cost savings – the home truths

The HRU ECO 4 provides continuous air supply and extraction, removing contaminated, wet air from kitchens, utility rooms, washrooms and bathrooms and other areas of the home. At the same time, it will recover up to 91% of heat from the air on its way out of the building and transfer it into the incoming supply.

All this, on less energy required to power intermittent fans – and



without the need for background ventilators.

Which means that occupants will breathe not only cleaner air, but a sigh of relief when the electricity bill comes in too! Take, for example, a two storey, 3 bed, 5 person home with a total floor area of 88m<sup>2</sup>, including a kitchen and three wet rooms, with an air tightness of more than 3.0 m<sup>3</sup>/h/m<sup>2</sup> @ 50 pascals but less than 10 m<sup>3</sup>/h/m<sup>2</sup>.

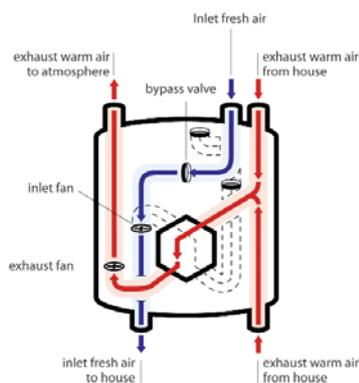
This home requires continuous extraction at 26.5 l/s and the

option to boost to at least 35 l/s. The annual cost of ventilating this home with the HRU ECO 4 is just £17.97.\* This is more than offset by the savings achieved due to the lower heating requirements of the dwelling.

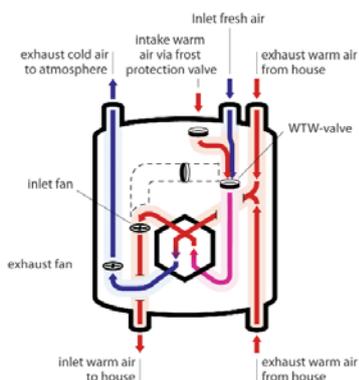
*\*Figures based on single ltho HRU ECO 4 unit consuming 12W on low speed (setting 1) for 22 hours per day and 88W on high speed (setting 3) for two hours per day, consuming 160.2kW annually. Costs based on energy price data published on uSwitch.com on 30 March 2010.*

### Ventilation for all seasons...

Designed with both ends of the temperature gauge in mind, the HRU ECO 4 will keep your occupants comfortable all year round.



Its 100% summer bypass valve diverts incoming air away from the heat exchanger to prevent warm outside air being further heated, while a frost protection



device prevents the unit from freezing during the colder months.

### ...and all types of home

The HRU ECO 4 is available in House and Apartment configurations, both weighing just 25kg. The patented clamp construction is optimised to prevent internal or external leaks.

### Easy living

Occupants can control the HRU ECO 4 with a hard wired three-way switch\* or using a remote wireless controller from any number of rooms, including wet rooms, in the home.

\*multiple switches can be used

The HRU ECO 4's two G3 filters are easy to remove, clean and replace by the occupant without having to remove the front cover.

### Quality Assured

Before leaving our factory in Etten-Leur in the Netherlands, every Itho product is thoroughly tested, logged and tracked.

### Your first replacement filters for FREE

Get your first set of replacement filters FREE when you register your HRU ECO 4 at [www.itho.co.uk](http://www.itho.co.uk).



Choose between G4 (Standard) or F7 (Pollen) filters, both of which fit flush against the unit's front section. This means that they can be removed and replaced simply by pulling the raised handle - with no tools or fiddly dismantling involved.

# Free design service and training



## **Design with confidence**

At Itho, we're not just here to supply you with a ventilation system. We can also design it for you, for FREE. Just send your plans, sketches and estimated dimensions across to us and we'll produce a professional quotation and installation plan. It'll save you time, hassle and money and guarantee that you comply with all current, relevant legislation.

## **Get the full story on ventilation**

If you want to learn about the nitty gritty of ventilation – current regulations, best practice in design and installation and what the future holds - join us at our Burton on Trent office for one or all of our CPD courses:

- Energy Efficient Ventilation & the future of Ventilation Systems.
- Importance of Installation Practice to Maximise System Performances.
- Design Considerations - drawing on best practice in ventilation systems planning.

***To find out more about course content and upcoming dates, apply via our web site ([www.itho.co.uk](http://www.itho.co.uk)) or e-mail us at [info@itho.co.uk](mailto:info@itho.co.uk)***

# Itho and you

Supporting you all the way



At Itho, we'll support you from start to finish: from design, through installation and commission to a full after-sales service.

## **System care**

It's unlikely, but if your Itho system does develop a fault within the two-year warranty period, a qualified engineer will come out and repair or replace the product. This service is completely free of charge, subject to the unit and ducting being correctly installed as per Itho instructions and the SAP Appendix Q Checklist and Guidelines.

## **Guarantees**

Every Itho Ventilation product comes with a two year guarantee which will come into force from the date of installation of your new unit. Within this period, we'll replace defective parts free of charge, subject to terms and conditions.

# Climate for life

## **Vision.**

The ultimate challenge in climate management is the realisation of a comfortable, healthy indoor climate that doesn't use energy. This will have to be solved by reducing energy demands and having very efficient equipment and sustainably created energy. In the long run, only electricity can be generated in a sustainable way, which is why, in our point of view, we are moving towards an 'all electric society'. We are fascinated by this new vision of society and with solving the apparent contradiction between comfort and energy consumption.

## **Mission statement.**

To make the residential environment climate neutral.

## **The development.**

Itho saw in time that climate change also requires companies to change. That is why Itho has transformed itself over a ten-year period from being a Dutch trading company into a self-developing manufacturer that distributes its innovative products throughout Europe, partly through its own outlets.

## **The future.**

The challenge to stop climate change is becoming greater and greater. Because of this the number of innovations will increase and we will introduce these innovations in a growing number of European countries. A lot will be expected of us and we expect to find an increasing number of partners and colleagues that share our vision, motives and vigour.



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