

Ecological Building Systems

For over 20 years, Ecological Building Systems has been at the forefront of environmental and sustainable building products. As the sole distributor in Ireland and the UK for Pro Clima, Gutex and Diasen products, Ecological supply a range of innovative airtightness solutions and natural insulations backed up with expert technical support. Read more at: www.ecologicalbuildingsystems.com

Technical Product and Sales Support

Full technical support is available for all products. At each stage of your new build or refurbishment project during planning, specification, installation, and build, Ecological provide expert assistance and guidance with specification to optimise outcomes in compliance with building regulations. U-value and WUFI calculations, construction details and specification clauses can also be provided along with technical drawing reviews and in-depth CPD training.

Products have been independently tested and have the following certifications (please see our website for product specific certifications):



For further information contact:

IRELAND

T: +353 (0) 46 9432104

F: +353 (0) 46 9432435

E: info@ecologicalbuildingsystems.com

UK

T: +44 (0) 1228 711511

F: +44 (0) 1228 712280

www.ecologicalbuildingsystems.com

Why Retro EcoWall®?

Retro EcoWall® is an internal insulation system for traditional solid stone or masonry walls. It combines the breathable, insulating and sustainability benefits of each of its components to optimise thermal performance and safely manage moisture. When working with traditional solid walls, it is most important to ensure the insulation system is compatible thermally and from a moisture management perspective.



Retro EcoWall
by Ecological Building Systems

A complete low energy solution for internal wall insulation

Suitable for traditional solid stone and brick walls

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Retro EcoWall® provides the thermal benefit needed to meet U-value targets and provides effective moisture management.



It does this by combining capillary active Diasen Diathonite cork lime thermal plaster with a high-performance vapour open Gutex wood fibre insulation board. With a breathable one-coat lime finishing plaster and plastic free natural paints on top, the entire system is ideally suited to the thermal and moisture requirements of a traditional building.

Key Benefits

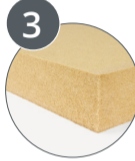



- Optimum use of space with low U-values
- Increased speed of application
- Protection against condensation, mould and building deterioration
- Retains full breathability of traditional walls
- Optimises internal comfort levels
- Is a complete specification solution combining unique properties of insulating cork, lime and wood fibre insulation
- Contains low embodied-carbon, natural insulation materials; each with an Environmental Product Declaration (EPD)

A complete low energy solution for internal wall insulation



Suitable for traditional solid stone and brick walls



- 1  **Dienen Diathonite Thermactive.037**
Lime and cork insulating plaster
- 2  **Gutex Thermoroom Adhesive**
Adhesive mortar for Thermoroom
- 3  **Gutex Thermoroom**
Natural wood fibre insulation boards
- 4  **Lime Green Solo**
One coat lime finishing plaster
- 5  **Reinforcing Mesh**
Embedded within Lime Green Solo
- 6  **Auro Natural Paint**
Breathable natural paint

Retro EcoWall® and U-values

By levelling the wall with faster-drying Dienen Diathonite Thermactive.037 insulating plaster, Retro EcoWall® can achieve improved U-values at reduced thicknesses and save on installation time. For example, combining just 30mm of this insulating plaster with 60mm Gutex Thermoroom wood fibre, improves the U-value for a traditional stone wall from 2.38W/m²K to just 0.35W/m²K.

Prior to the internal application of Retro EcoWall®, it is important to consider and protect exposed external masonry walls from wind driven rain and moisture. This can be achieved by applying a suitable lime plaster, thermal insulation, such as Dienen Diathonite Evolution, external breathable paint, or a breathable transparent surface treatment such as Dienen BKK Eco to the external brick or stone. It's also important to have effective drainage at ground level, with gutters, downpipes and lime pointing effective and well maintained.

The Retro EcoWall® system has also been verified using WUFI hygrothermal modelling on numerous projects by independent consultants and Ecological Building Systems.

Wall Type	Diathonite Thermactive.037 thickness (mm)	Gutex Thermoroom wood fibre thickness (mm)	U-value (W/m ² K)
220mm (brick)	-	-	2.19*
	20	40	0.49
	20	60	0.39
	20	80	0.32
	20	100	0.28

Wall Type	Diathonite Thermactive.037 thickness (mm)	Gutex Thermoroom wood fibre thickness (mm)	U-value (W/m ² K)
500mm (stone)	-	-	2.38*
	30	40	0.44
	30	60	0.35
	30	80	0.30
	30	100	0.26