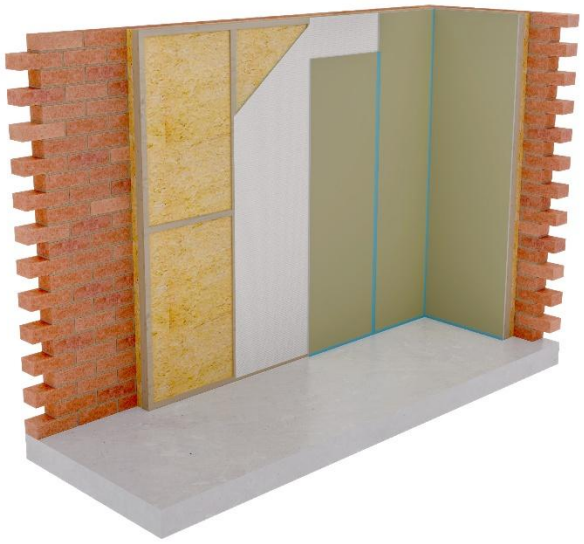
The Ezy Fit Green IWI System



System Installation Manual

Introduction

The new and exclusive Ezy Fit Green IWI is a vapour open, air closed system and the most natural and unique way of insulating internal walls within the industry today.

A fast, simple but most importantly effective way to improve the thermal performance of solid walls within residential properties.

The system comprises of a simple stud and batt install process but using hemp insulation affixed to the timber studs to enhance the materials performance and also eliminate the chances of unvented cavities and cold bridging by "filling" any uneven surfaces beneath the timber stud with the natural 'flex' hemp insulation.

The Ezy Fit Green IWI System uses a natural fibre hemp insulation, that is semi rigid and eco-friendly. Made with technical hemp fibres, the hemp insulation replaces the need for polystyrene, glass and mineral wool insulation & offers excellent thermal performance.

The natural hemp insulation used for the insulation batt is semi rigid and most importantly, carbon negative, made of approximately 85% hemp and 15% recycled binding fibres. The natural hemp insulation used on the back of the studs is flexible, pliable, and easy to cut to size.

In addition to being sustainable, the insulation is safe to handle, versatile, and supports a healthy living environment, helping to create a breathable home.

This installation guidance has been designed for Installers that have undergone system training by the system designer.

For training please contact: support@ezy-fit.co.uk

System Overview

The Ezy Fit Green IWI system comprises of only a few items:

1. Timber studs, with Ezy Fit Hemp Stud Backer affixed & installed against the substrate. (Always ensure the stud is installed to the wall with the hemp stud backer against the substrate)
2. Hemp Insulation Batt that is pressured fitted between the installed timber studs.
3. Reveal board for windows and confined spaces which will not allow a hemp insulation batt to be placed.
4. High mortality sealant to seal the joints between plasterboard to ensure air tightness.
5. We would expect the installing contractor to supply their own plasterboard.
6. Ezy Fit would always recommend the use of an air tightness layer, to enhance the systems effectiveness.

The Ezy Fit Green IWI system hemp batt is a unique product and should not be treated or worked with as you would with a mineral or rock wool product. Please follow the guidance in this installer guide when working with the hemp batt.

Please contact the team at Ezy-Fit if in doubt and always refer to the BEIS Best practice guidance.

Before work is undertaken – General

Care should be taken when unloading and storing all materials by maintaining wrapping and any other protective coverings on the products. This has been placed onto the products to protect them until use.

All insulation components must be cut to provide (once fitted to the relevant element) full and tight to the edge coverage. All plane junctions formed by the installation of plasterboard must be sealed, to each other or an appropriate solid substrate, with the high mortality sealant.

Where internal element faces are not insulated, the plane junctions must still be sealed to provide air tightness to the whole of the room, as far as practical. Similarly, all component penetrations must be made airtight by the application of **the sealant.**

Installers should determine the location of any services behind internal surfaces receiving Green IWI components (prior to any penetrative works) using a multi detector (including live wire sensors) to ensure that pipes and wires are not compromised by fixing the timber studs. We always recommend using a suitably qualified individual at this point.

Pre-Design Survey

Refer to your copy of the pre-design survey prior to the commencement of and during all works. The survey should be completed by a suitably qualified individual, trained to complete the survey.

Risk Assessment

Installers should have a copy of an appropriate risk assessment completed at the point of survey and be fully aware of and be able to reduce any risks indicated.

Should any other risk present itself on the day of installation, Installers must assess the risk and take the necessary steps to reduce the risk to an acceptable level

Required tools

As an example, but this list is for guidance only. Each site is different.

- Hand Tools
- Battery operated drills / drivers and cutting equipment
- Plastering tools
- Access equipment
- Access platforms
- Harness and safety equipment and training required
- Personal protective equipment
- Suitable Dust masks
- Dust suits
- Safety Goggles
- Hearing protection
- Hard hat
- Hi-Vis
- Safety Boots

Installing the Ezy Fit Green IWI system

- **Step 1** (Preparation) – Ensure that the wall the insulation is free from wallpaper, any signs of condensation and any indications that damp may be present. If there is wallpaper present, please make sure it is removed before adding insulation to a wall. Try to avoid using steam to remove wallpaper as that can add condensation to a room, if steam is required to remove the wallpaper, then please leave for one to two days before applying insulation to ensure the insulation does not trap any condensation. If there is a painted wall, again try to scratch the surface of the wall which again allows the insulation to be placed against the original plaster rather than a coat of paint at all points. 100% coverage of all outer walls must be ensured, thus avoiding any risk of cold bridging. No parge coat is required on any wall prior to the installation of the Ezy-Fit Green IWI system however the wall must be dry and free from any damp or risk of damp.

- Ensure the system is above a working damp proof course. Should you be required to insulate below ground level please speak to a qualified individual who can help with the design of this space.

- Plan the installation of all timber studs so that you are avoiding any risk of drilling through embedded electricity cables or pipes. Ensure surface mounted services have been checked by a suitably competent person to ensure adding the insulation will not compromise safety and their performance. If required, reroute electrical services to on top of the insulation should this be requested by a suitably qualified individual. Always ensure services are safe to work near or around before any work commences.

- Remove all curtains, radiators, and electrical outlet fronts, ensuring that these are removed by a professional who can disconnect services from them first and make it safe to work in that area.

- At this point should the work area be thoroughly prepared you can focus on adding the insulation to the walls. This preparation would also include the marking position of any pattress boxes so that not covered by timber studs.

- Care shall be taken in the overall design and construction of junctions with other elements and openings to ensure a 100% coverage of outer walls is maintained with the installation of the system.

- **Step 2** - Create the frame for the system by loosely screw fixing 100x50mm timber studs horizontally to the floor and ceiling level of the existing wall, then vertically at 570mm centres & horizontally at 1200 mm centres, ensuring the vertical studs are cut and installed so as to be in close contact with the horizontal studs.

- **Step 3** – Remove the timber studs from the wall, mark on the side of the stud the location of the hole, to locate position when timber backer has been affixed, and cut strips of our hemp stud backer to size, and affix to the back of the timber studs with our stainless-steel fixing, ensuring full coverage of the stud with insulation. Premark by cutting or scoring a cross on the hemp where the fixing for the timber will pass through, so that the drill bit does not come into contact with the insulation, eliminating the risk of it catching and tearing.

- **Step 4** – Re affix the timber studs, with the hemp stud backer attached to the wall. The studs should always be installed with the hemp stud backer against the substrate.

- **Step 5** – Pressure fit the hemp batt between the studs, completely filling the insulation zone and ensuring there are no gaps between the batt and studs. Where the hemp batts require cutting, they should be cut 10mm wider than the space they intend to fill.

- **Step 6** – Install the membrane (to the warm side of the insulation) with stainless steel fixings into the timber studs. Tape all edges and planes down to create the airtight layer and seal any penetrations in the membrane with appropriate tape.

- **Step 7** - Fit a 12.5mm plasterboard (BS EN 520) by screwing into the timber studs using drywall or wood screws and cover the entire face of the installed insulation system.

- **Step 8** – Seal all planes, edges, and joints of plasterboard our IWI sealant (polyacrylate-base adhesive sealant for plasterboard which is blue in colour) this is high mortality sealant, to prevent air leakage.

- **Step 9** - Check all trunked air vents to verify they are clear and unobstructed; apply mastic sealant around windows, door frames, etc.

Fixing Radiators – All fixtures can be re-fitted the studs with appropriate fixings.

Picture rails and Dado Rails- These can be fixed back onto the plastered finish with either silicon or Grab adhesive.

Pictures and light weight fixings – Can be fitted using the relevant plasterboard fixing.

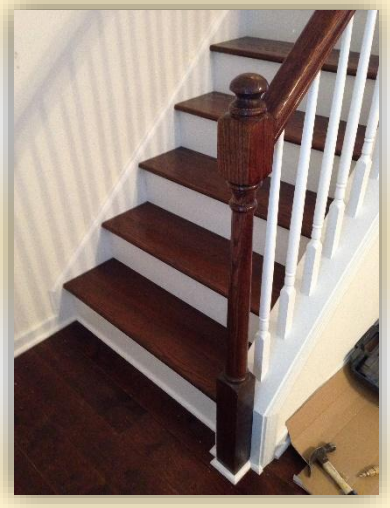
Electrical Cables – These are usually within the wall however these can be pulled through the Green IWI system to surface mount the sockets. Cables with a high amp rating such as cookers, electric car chargers and showers need to be routed by a fully trained and competent Electrician.

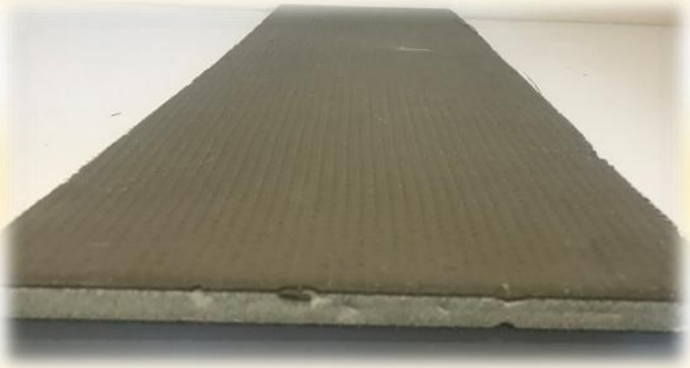
If there are high amperage cables that are surfaced mounted, we recommend consultation with a qualified Electrician who can advise of any requirements to have those cables moved to the outside of the insulation.

Walls & Ceilings are more straight forward but the installer must ensure the space above a ceiling and below the floor above has sufficient insulation added to avoid any potential cold bridging. If access is not available from above them, we recommend accessing this area from below as a skim of plaster will be used across the wall and this, along with plasterboard can “make good” any area accessed from the ceiling.

Areas of limited space

To assist with these areas, you can also use Ezy Fit reveal board which assists in areas where the standard Green IWI system cannot physically be used. We always recommend using the full system build up in all cases but understand there are limitations to space at times and using a reveal board is far better than no insulation at all. We recommend a full bed of adhesive plus mechanical fixing be used if a reveal board is the only solution due to space issues.





Combustion appliances – It is imperative that ventilation requirements of gas, oil or coal fired combustion appliances are not compromised by the installation of Ezy Fit Green IWI system and that the system does not interfere with the supply of fresh air to the appliance. Recommendations, guidance, and compliance to building regulations for the ventilation of combustion appliances can be found in building regulations and must be adhered to.

High amperage cables – Always consult with a qualified Electrician when dealing with high amperage cables that may be impacted by the addition of insulation to an outer wall. Insulation added to the outer cover of an electricity cable can reduce its performance so we would always recommend using professionals to either move a high amperage cable or confirm its suitability to be “wrapped” by the insulation.

Water and Gas pipes – As with the electricity running within the house you may also have services such as gas and water that need to be considered before adding insulation. We always recommend using the professional services of a suitably qualified engineer to ascertain what is required in dealing with these service pipes.

If in doubt always utilise the services of a Competent and suitably qualified person when dealing with gas, water, and electricity.

Flues – Care must always be taken to ensure that flues and ventilation measures for all appliances are not blocked or in any way compromised. Always check with the manufacturer if in doubt.

Installation Quality Checks

Regular site installation quality control should be undertaken by the approved installing Company. This shall be based on visual inspections at key installation stages, to check on:

- Product Compliance (Correct products used at correct stages)
- Specification Compliance (Design compliance and technically competent)
- Installation Compliance (Line and level, smooth application of materials with an even coverage)

Completion

At completion documentation should be provided to the householder to include:

- The property address
- The Building Owner
- The System Designer
- The System Supplier
- The System Installer with full address
- The system components
- The date of installation

Should you need further information please contact Ezy-Fit via

sales@ezy-fit.co.uk