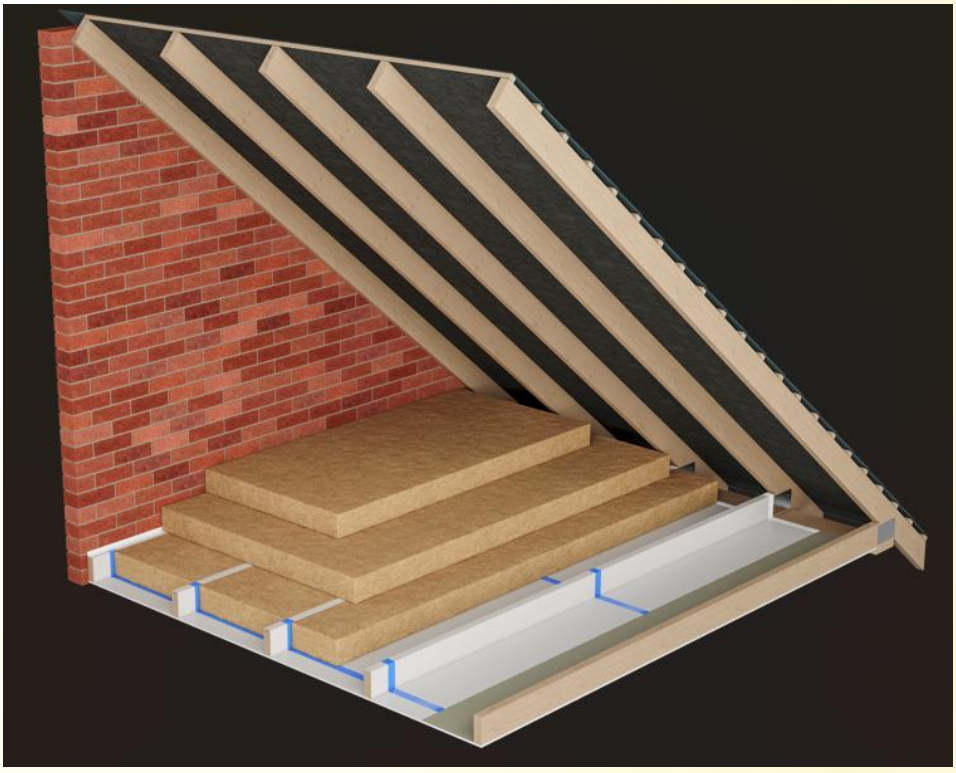
Green Loft System Design Guide



Natural > Breathable > Sustainable

Ezy Fit, Commer House, Tadcaster, LS24 9JF

Ezy Fit Green Loft is comprised of a natural fibre hemp insulation, made with technical hemp fibres. The hemp insulation has very low water vapour diffusion resistance and excellent thermal and acoustic properties. With its outstanding thermal performance and flexibility, it entirely replaces glass and mineral wool insulation

Our natural fibre hemp insulation is medium density, flexible and carbon negative.

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

Benefits:

- A natural and sustainable solution
- Excellent thermal insulation properties
- Excellent acoustic insulation properties
- Carbon negative product
- Fast and simple assembly
- Safe and hygienic to handle
- Long life span
- Low water vapour diffusion resistance
- Ability to adapt to the most complicated construction shape
- Supports a healthy living environment

Technical Details

Ezy Fit Green Loft Batt

Technical data

Thermal Conductivity λ (W/m.K)	0.039, 20-100mm 0.042, 120-140mm
Density ρ	34 kg/m³
Specific Heat Capacity c	2370 J/(kgK)
Vapour Diffusion Resistance μ	1.3
Reaction to Fire	E – PASS
Carbon (A1-3 LCA 2024)	-0.51 kgCO2eq/kg
Sound Reduction	Min 41dB (50mm+)
Sound Absorption	Class C (40mm) – Class A (100mm)

Ezy Fit Green Loft Hatch Insulation

Technical data

Thermal Conductivity λ	0.039 W/m.K
Bulk Density ρ	45 kg/m³
Specific Heat Capacity c	2100 J/(kgK)
Vapour Diffusion Resistance μ	1.3
Sound Reduction	Min 40dB (50mm+)
Reaction to Fire	E - BS EN 13501-1:2018 PASS
Carbon (net negative)	-0.70 kgCO2eq/kg

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General Considerations

Remove any stored items from the loft so you can work in a clean and uncluttered space. Try to work in good lighting and use a portable battery light if necessary.

Measure your cold water tank so that you can fit an appropriate tank jacket. Youll need to insulate tanks and pipes before you start to lay the loft insulation.

Before starting, make sure your loft has ventilation gaps at the eaves or is fitted with loft ventilation. Be sure to maintain this ventilation gap during and fter installation.

If you want to use the loft space to store items, install raised floor loft legs that you can fix boards to, above the insulation. Leave a minimum air gap of 50mm beneath the boards. Alternatively, cover an existing boarded area with insulation boards rather than insulation rolls.

Insulation shouldn't be laid over any electric or high amperage cables. Ideally, cables should be clipped to the roof joists or gently lifted out of the way and then laid over the insulation once it is in position.

If you have recessed lights or downlighters, install down light protectors, being sure to follow the manufactureres instructions.

Do not fit insulation underneath the water tank unless it is in an elevated position.

Ezy Fit Green Loft System Install Method:

Installing the Ezy Fit Green IWI system couldn’t be easier or faster, but with any loft system, preperation is key.

Start by lining your cold water tank with the jacket, following the manufacturers instructions, and insulate any pipes in the loft area with appropriate insulation.

Insulation shouldn’t be laid over any electric cables. Where possible, clip them to the roof joists or gently lift them out of the way whilst you install, before laying them over the insulation when its in position.

Electric cables give off heat when in use and should be routed where they will not be covered by thermal insulation, so the heat can be dissipated. If cables need to be located within insulation, they should be run in conduit and possibly increased in size. Advice on this should be sought from a qualified electrician. PVC-insulated cables should be located in suitable conduit to avoid being in direct contact with the EZY FIT insulation in order to prevent plasticizer migration which can cause loss of protection to the conductors.

If you have recessed lights or down lighters, install down light protectors, being sure to follow the manufactureres instructions. There should be measures taken to safeguard and prevent air leakage around the lights into the roof voids. These can be covered and sealed with fire rated hoods or caps.

Now the prep work is done, is time to start insulating your loft with the Ezy Fit Green Loft System.

Method 1- Installing an airtight vapour control membrane across the loft floor area will eliminate draughts and safely control the amount of water vapour entering the loft. The membrane should be draped between each set of joists and all overlaps should be taped. Thin strips of hardboard or a similar material can be added at the bottom of the joists and stapled every 100-150mm to hold the membrane tight at the corners for an easier installation.

These strips make it easy to pull the membrane taut without tearing it. Any penetrations through the loft floor that penetrate the membrane should also be taped and sealed. Taping the membrane to the perimeter walls and around the loft hatch is recommended to create a higher level of airtightness and draught prevention.

Once the insulation slab is in position, measure the width of slab you need to fit between the joists; this tends to be either 400mm or 600mm. Then, cut the slab to size using a specilised insulation saw.

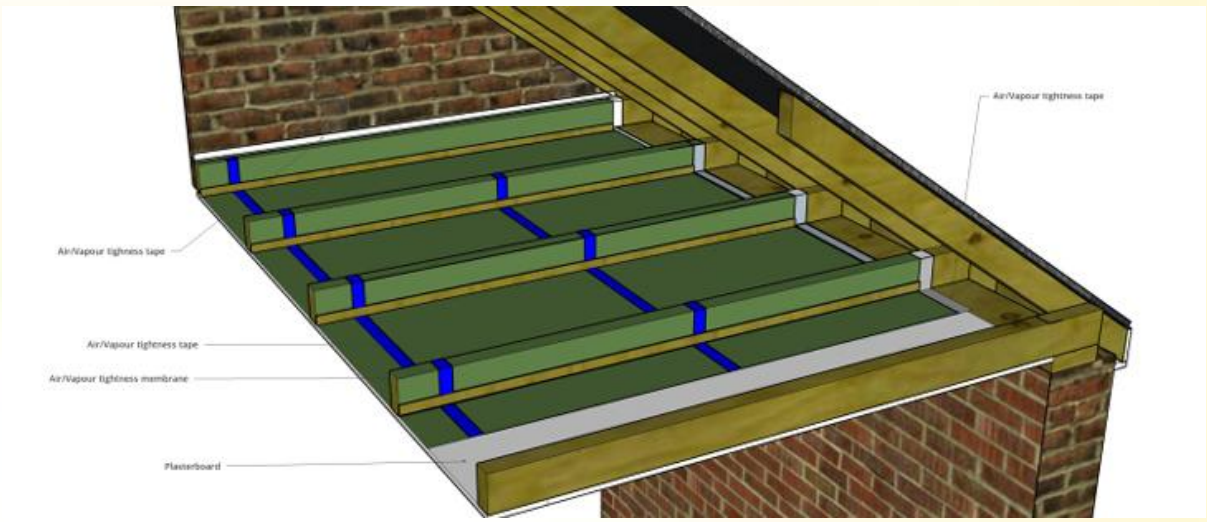
Position the crawling boards in the furthest corner of the loft. You'll need to start laying with a minimum gap of 25mm between the eaves and the insulation to ensure a suitable air gap. Maintain this gap along two opposite sides of the loft.

Make sure that the wall plate is covered, then lay the slabs, moving backwards so you are working towards the centre of the loft to avoid putting your weight directly onto the insulation.

Gently push the insulation so it fits snuggly between the joists, but don't compress it as that will reduce its efficiency.

When you reach a cross beam, to cut the insulation to fit.

Depending on the depth of the joist, repeat the same procedure for the next 100mm slab of insulation, to fill the void. Then for the third layer to achieve the 300mm depth, cross lay the insulation slabs to fill the entire area to be insulated.



Method 2 – The airtight vapour control membrane can also be installed acoross the bottom layer of the insulation slab, level with the existing joists. Simply install the insulation slabs as previously instructed, then add the membrane across the top of these, taping and sealing to ensure the air tightness of the layer. Then simply add the next two layer's of insulation slabs across the top.

If the airtight vapour control membrane is installed flat over the joists, airtight sealing of the perimeter at the eaves cannot be done. It is generally easier to get a timber board, cut notches for the joists and then install that up against the rafters. Them, air/vapour tightness tape should be used to seal the board to the joists, gable wall, and timber wall plate.

Don’t forget the loft hatch! The loft hatch (hinged or push up) should always be insulated for a continous level of insulation throughout the loft area and not to leave a large area of cold bridging. Using the Ezy Fit Green Loft Hatch Insulation Slab can address the issue that arises through uninsulated loft hatches.

Slabs would come in 1200x600 batts, then the installer would need to cut the batt to the size required to fully insulate the loft hatch.

Ezy Fit would recommend bonding the insulation to the loft hatch with a solvant free multi surface grab adheasive, ensuring the insulation is firmly secured to the hatch around the perimeter.

Ezy Fit – Making ECO EZY

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System Supplier Details

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