

INSTALLATION GUIDELINES **IKO ENERTHERM ALU TIMBER FRAME**



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INSTALLATION GUIDELINES

IKO ENERTHERM ALU TIMBER FRAME

General guidelines

Storage

The insulation boards should be stored in such a way to prevent damage. The boards also need to be protected from the weather. If the insulation boards are stored for a longer period, it will be necessary to take measures to protect them from all weather conditions such as direct sunlight.

Procedure

Always work on the insulation boards on a base which is dry and free of dirt. During processing, you need to take measures to prevent damp from penetrating inside the insulation boards. You should allow wet insulation boards to dry before you start work.

General

IKO Enertherm high-performance insulation for homes, offices and other buildings is the most immediate and efficient solution for making savings in energy consumption when considering a buildings structural make-up. Lower energy consumption means lower CO₂ emissions, which are responsible for global warming. This means that good insulation can make a positive contribution to the environment. IKO enertherm can help in reducing this energy consumption. Thanks to special properties creating moisture and mould resistance and dimensional stability, IKO enertherm insulation boards have a long service life, while retaining their energy performance.

Design

Technical approval

IKO enertherm is a 100% CFC, HCFC or HFC-free insulation board with a rigid polyisocyanurate foam core, clad on both sides with various facings depending on the application and waterproof finishing required. With an optimum formulation of raw materials and production parameters, IKO enertherm has an exceptionally fine cell structure created by Micro Cell Technology.

Fire Safety

Fire safety is an important contribution to occupant safety and an important criterion for the building design. The main precondition for increased use of timber for buildings is adequate fire safety. PIR insulation products meet a wide range of fire performance requirements as stipulated by Building Regulations.

IKO enertherm ALU has a reaction to fire class E in accordance with EN 13501-1 and UK Class 1 in accordance with BS 476 - p7. The insulation board has a low to zero smoke emission rate and does not melt or drip. This fire performance is an inherent part of the foam's cell structure.

In well-designed timber frame applications insulation products are not exposed to any fire risk or are protec-

ted by non-combustible materials, Timberframe wall insulation is protected externally by the outer substrate and internally by fire rated Plasterboard.

Vapour and air tightness

In order to guarantee the performance of the insulation, and to prevent moisture problems, the structure needs to be made air- and vapour-tight in a correct manner by using a suitable air and vapour barrier.

A vapour barrier must be fitted on the warm side after installation of the insulation layer, this barrier can be fitted vertically in order to ensure a smooth overlapping where it will be joined, taped and fixed to the timber studs.

Breather Membrane

Always fit a breather membrane in accordance to the manufacturer's guidelines to the outer OSB or Plywood guaranteeing immediate waterproofing. The breather membrane should be fixed to studs with austenitic stainless steel nails or staples at centres no more than 500mm. On areas where sheets are required to be lapped, the following dimensions must be adhered to:

- Vertical Laps - not less than 150mm
- Horizontal laps - not less than 100mm

Ensure the integrity of the breathable membrane by overlapping upper layers over lower layers and staggering vertical joints. Protect timber at wall plate level and mark stud positions for wall tie fixings. Once applied to the wall it should be covered in accordance with the manufacturer's instructions.

Counter Battens

Counter battens are wooden battens which are fixed length wise onto the timber studs over the VCL to create a service void if the service void is not created within the stud and finished in the conventional way of plasterboard and finish.

Interior finish

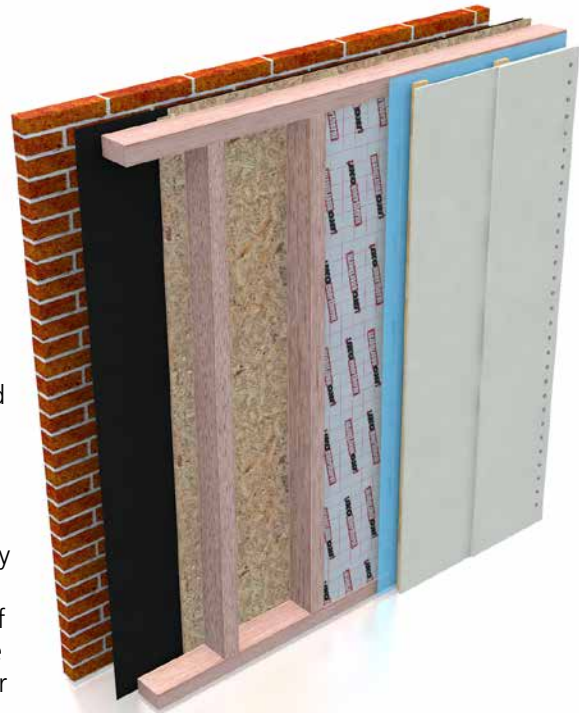
The composition and properties of the interior finish are determined by the final use of the building and will closely depend on aesthetic criteria and fire safety requirements. All finishing materials must be affixed to the stud or counter battens according to the manufacturer's specifications.

Timber frame systems with masonry outer leaf

Installation Details

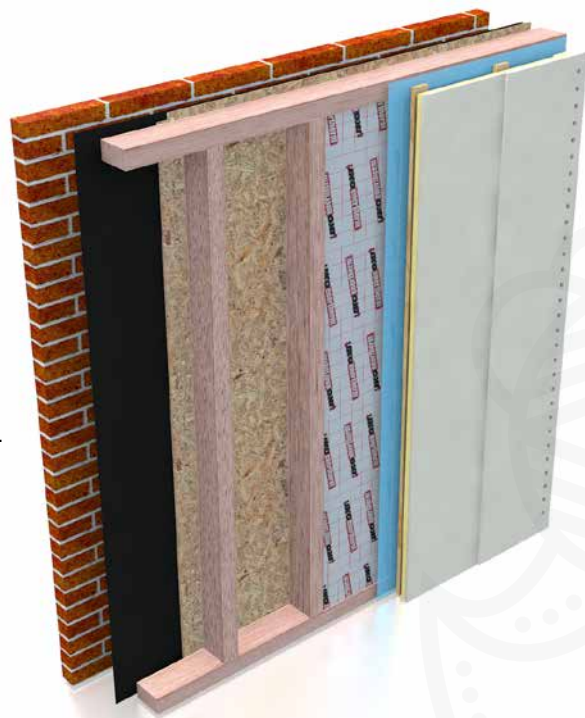
IKO Enertherm ALU Insulation between Timber Studs only

- Measure the exact distance between studs to allow for variances and achieve tightly fitted IKO enertherm insulation boards.
- Cut the IKO enertherm insulation boards to required measurements.
- Install IKO enertherm insulation board tightly between the studs, pushing the board back to the OSB/ plywood sheathing.
- Fix treated soft timber stop battens inside the studs providing not fully filled to prevent the boards moving within the cavity.
- Ensure IKO enertherm insulation board edges are tightly butted and fill gaps with PU foam.
- Services can be installed in the cavity if not fully filled, if fully filled with IKO Enertherm Insulation Board a service void can be installed by fixing a 38mm x 38mm counter batten onto the timber studs.
- If only installing IKO enertherm insulation between studs a Vapour Control Layer (VCL) should be installed over the timber frame studs (warm side) and finished with plasterboard.
- Tape joints and maintain plasterboard finish



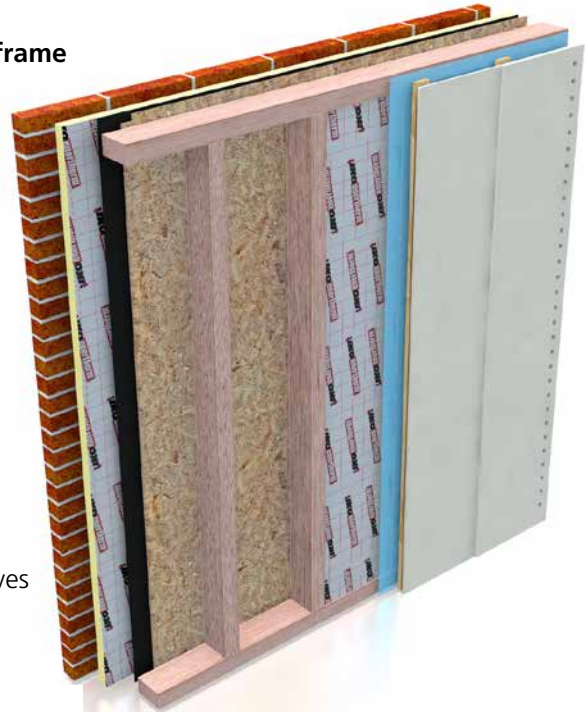
IKO enertherm ALU between studs, and IKO enertherm PB (composite) fixed as insulated dry lining over the internal face of the studs

- Follow installation instructions for IKO Enertherm insulation between studs
- Install timber noggings where joints between IKO enertherm GYPSUM boards are unsupported.
- Fix IKO Enertherm Insulated Plasterboard to the internal studs / noggings using drywall screws at 300mm centres, penetrating 25mm into the timber.
- Tape joints and maintain plasterboard finish.



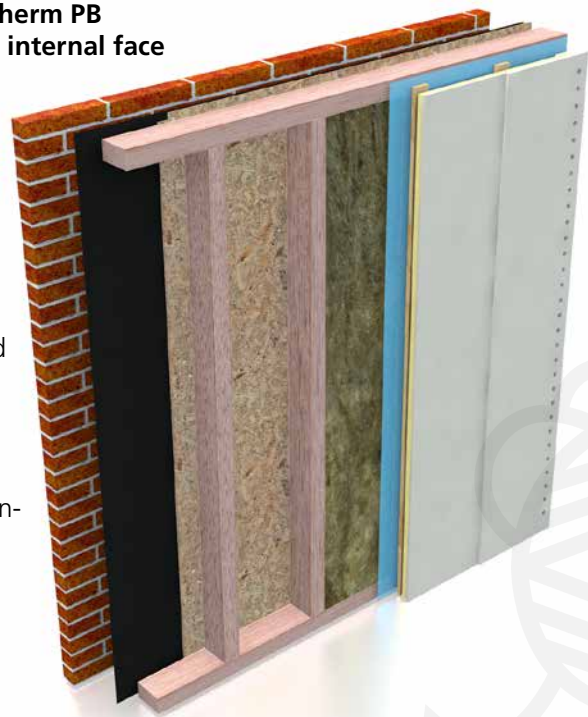
IKO Enertherm ALU as outer sheathing over timber frame

- Between timber studs (if required)
- See between stud applications as described.
- Fix IKO Enertherm to the external surface of the timber frame construction, this must be on the outside of the breathable membrane, OSB or plywood sheathing.
- Fix in accordance with the frame manufacturers recommendations. However in the absence of any other guidance please note the following.
- Use large galvanised clout nails to temporarily fix IKO Enertherm insulation boards prior to the boards being tied into the masonry leaf with an appropriate timber frame wall tie.
- Ensure that fixings synchronise with timber studs, head rails and sole plates.
- Install the outer leaf of masonry in the conventional manner using appropriate wall ties to hold the two leaves together as described in the manufacturers guidelines.



Glass Mineral Fibre between studs and IKO Enertherm PB (composite) fixed as insulated dry lining over the internal face of the studs

- Measure the exact distance between studs to allow for variances.
- Fully install Glass mineral fibre tightly between the studs, pushing the mineral fibre flush to the back of the OSB/ plywood sheathing.
- Fix a vapour Control Layer (VCL) over the timber studs frame (warm side)
- Services can be installed by creation of a service void by fixing a 38mm x 38mm counter batten onto the timber studs.
- Install timber noggings where joints between IKO enertherm GYPSUM boards are unsupported.
- Fix IKO Enertherm Insulated Plasterboard to the counter battens using drywall screws at 300mm centres, penetrating 25mm into the timber.
- Tape joints and maintain plasterboard finish



SITE WORKING PRACTICE

At the completion of each day's work, or whenever work is interrupted for extended periods of time, board edges and joints should be protected.

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