BACKTOEARTH

HolzCore

Installation Guide

Introduction

HolzCore internal wall insulation is designed to completely change the experience of living in a solid walled building. It dramatically changes the thermal comfort within the building, reduces heat lost to drafts and improves the health and well-being of those inside.

HolzCore combines the amazing benefits of wood fibre insulation with modern methods of construction and hygrothermal simulation (modelling heat and moisture flows) to provide a system that radically reduces heat loss but manages moisture within the walls at the same time. This helps to eliminate mould growth and enables high levels of indoor air quality can be achieved.

The use of hygrothermal simulations makes it often possible to retain existing plasters, which minimises mess and disruption and helps to reduce the carbon emissions associated with installing the system. This also guides which of two vapour regulating airtightness membranes are incorporated into the system.

The HolzCore system incorporates a battened zone on the inside of the airtightness membranes, allowing the installation of services without damaging the integrity of the airtight layer. The rest of the empty space between the battens is filled with a soft, flexible form of wood fibre insulation to further boost insulation levels.

The HolzCore system is finished with standard plasterboard to keep embodied carbon low but practicality high. It can almost eliminate wet trades on site, keeping installation times down to a minimum.

This installation guide should be read alongside the following documents:-

1) HolzCore - Site Assessment Checklist and Guide
2) The HolzCore training course on the Fibres Academy training platform
3) HolzCore - Care & Maintenance Guide

Fibres Academy

As with all systems, it is important to understand how to install them correctly and how to work around penetrations, openings and junctions. This guide is intended to give you a quick overview of the installation procedure to familiarise you with the process. For a more in-depth full installation guide, please complete our free online HolzCore Installation course at the Fibres Academy - Just copy and paste this link into your browser...

https://fibresacademy.co.uk/naturewall-installation-qualification/

The Installation Procedure

Existing wall surfaces

1) Remove all surface attachments such as skirtings, architraves, mouldings, etc. Any existing wiring should be disconnected to avoid the risk of electrocution when drilling in fixings.

2) Remove any wall paper, plasterboard or other wall linings to take the wall surface back to either a flat plastered surface or to bare masonry. Your NSC document will specify this but in general, surfaces painted with thick layers of paint, gloss paint or eggshell should be lightly broken up with a needle gun or concrete scarifier.

3) For solid floors, start the installation by running a strip of the Ampacoll Komprimax joint sealing tape along the bottom edges of the wall. Apply a course of Multipor boards along the entire length of the wall. If starting from a solid ground floor, they should be taken down to the screed layer so any floor covering should be removed in this area.

Ampacoll Komprimax - Joint Sealing Tape
An airtight, expanding PU foam tape, that provides a weathertight and UV stable seal.

4) The Multipor boards are adhesively-fixed to the wall and should be fixed either directly to the surface of clean, dust-free masonry (if the wall is bare) or to a suitably robust clean, dust-free plaster. The plaster can be a strong hydraulic lime render such as the Baumit RK39 or it can be an existing cement based plaster which is the same thickness as any surrounding plaster.

To fit the Multipor boards, apply the adhesive to the back of the boards and comb with a thick-bed adhesive trowel to ensure a 5mm thickness. The adhesive should be combed across the width of the boards, pushed against the wall slightly to the side of where they're needed and then slid 5 to 10mm sideways to remove the air pockets from behind them. Go on to step 6)

Multipor Board and FIX X710 Adhesive

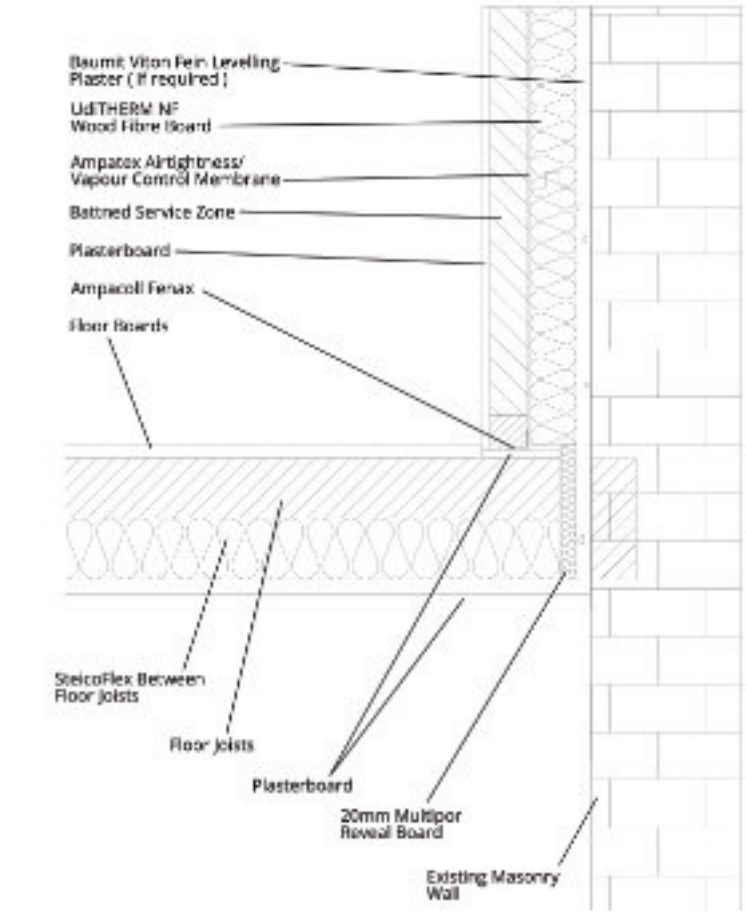
X710 Adhesive combed finish on back of Multipor Board

Multipor board pushed against wall and then across to remove air pockets.

5) For uninsulated, suspended ground floors and party floors, remove floor boards around the perimeter of the walls. A 20mm Multipor board should be bonded to the surface of the wall through the full depth of the suspended floor, whether this is between joists or running parallel with joists. To do this ensure there is a robust hydraulic lime plaster, such as Baumit RK39, within the floor zone on to which the Multipor boards can be bonded.

The 20mm Multipor boards should protrude above the floor joists by 12mm or the thickness of the plasterboard used in the system. A continuous strip of plasterboard to the full depth of the system should then be laid over the joists and butted up to the inside face of the Multipor. Do not let the plasterboard touch the existing wall surface.

Where joists are running parallel with the external wall, this step may involve adding additional timber to increase the width of the existing joists so as the floor boards are supported without being under the HolzCore insulation.



HolzCore
Party Floor Detail
Section View
17/03/2025

BACKTOEARTH
7 Turn Lane, Silverton,
Exeter, Devon
EX5 4HY
01392 561703
chris@backtoearth.co.uk

6) To flatten the wall above the Multipor, we recommend using the Baumit Viton Fein plaster. This should be kept as thin as practicable to create a flat surface and left to dry until firm to the touch but not necessarily bone dry.

The room should be well ventilated during this process as drying is extended by cold, damp conditions. The Viton Fein plaster hardens by drying and if the space is cold and unventilated it will not dry.

If the wall is very uneven and requires more than 5-10mm of plaster to flatten it, a coat of hydraulic lime plaster or cement and lime plaster should be applied to the wall to build it out first. If this differs from what is detailed on the NSC document, please confirm with us before proceeding.

Baumit Viton Fein

A fine clay base coat that is a healthier alternative to cement or gypsum plasters, while also adding thermal mass and moisture control.

7) The first course of boards should have the T&G profile cut off the bottom edge and the side that meets the adjacent wall. If abutting the course of Multipor boards, use a thin bed of multipor adhesive to joint between the wood fibre boards and Multipor. If the Multipor is omitted, press the wood fibre boards firmly against the Komprimax jointing tape.

Push the boards into place, check the boards lie flat against the surface and fix with two Fischer Termoz insulation fixings, evenly spaced through the centre line of the board.

Only loosely tighten the fixings until all adjacent boards are in place so that the T&G connection can be made. Over-tightening the fixings will make fitting adjacent boards difficult and result in gaps between boards, which should be avoided.

8) Fit the wood fibre boards to the walls, butting firmly up against any partitions and perimeters and cutting them to over-sail any openings by 20mm or so. Once all of the boards are fitted, the excess wood fibre board can be cut back flush to the reveal with a power saw or a multi-tool.

Take the boards up through any suspended floors by cutting back the ceilings and floorboards.

9) Cut the 20mm reveal boards to fit your reveals and before installing, run the Ampacoll Komprimax joint sealing tape around the perimeter of your frame. Apply a thin layer of Baumit MC55 contact mortar to the back of the reveal board where you're bonding to masonry and the UdiSPECIAL ADHESIVE where you're bonding to wood fibre. Do the same on the surface of the reveal and push the two together, making sure you press firmly against the joint sealing tape.

All the materials needed for application of the reveal boards.

MC55 and UdiAdhesive applied to both the reveal board and to the surface of the reveal.

Reveal board in place pushed firmly against the Komprimax on window frame.

10) Firmly apply strips of Ampacoll DT double sided tape to the surface of the wood fibre boards at roughly 1m centres. Apply to the perimeter of each wall and around the perimeters of any openings. Cut strips of membrane to fit, remove the release paper from the tape and press the membrane into position, ensuring at least 100mm overlaps are maintained between the strips.

11) The membrane should be cut neatly to fit between any joists in suspended floors and sealed to the joists and around all perimeters with the Ampacoll Fenax 40/60 tape. Cut neatly around any window or door openings and seal the membrane to the surface of the reveal boards with more of the Fenax 40/60 tape.

12) The Ampacoll Fenax 12/63 tape should be used to seal around the perimeter of the window, sealing it back to the surface of the reveal boards. The corners and any joins in the reveal boards should be sealed with more of the Ampacoll Fenax 40/60 tape.

13) With all of the membrane taped, insulate any partition walls. Masonry partitions should have 5-600mm of plaster removed from the surface and the 20mm reveal boards bonded to the surface. Using a notched trowel, apply a thin layer of Baumit MC55 to the back of the reveal boards and a similar amount to the surface of the wall, pushing the two together as soon as possible whilst still wet.

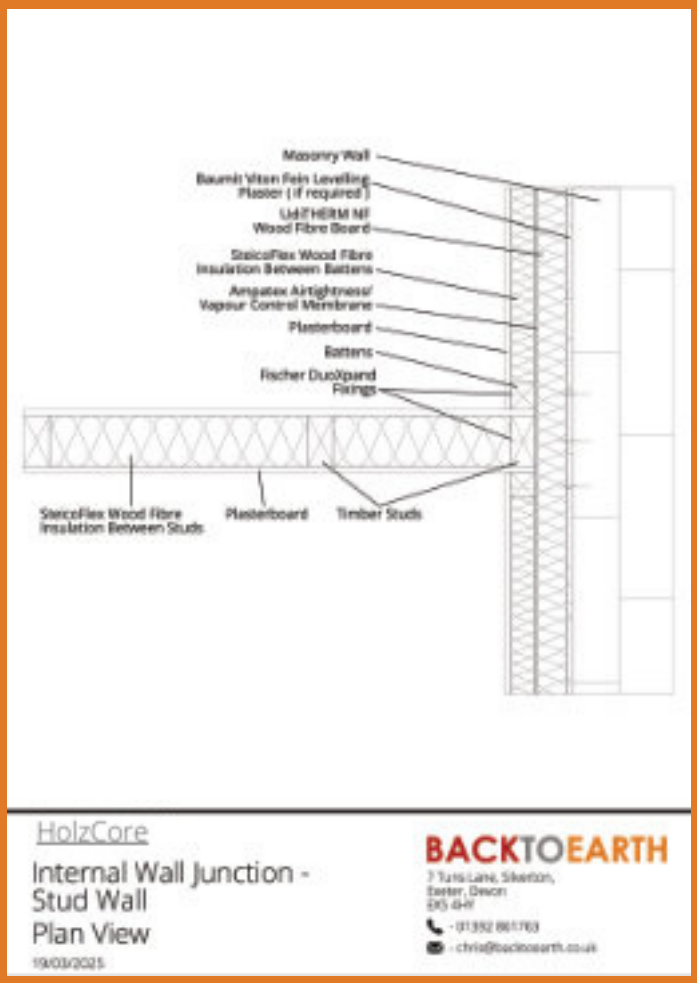
▲ First course of membrane.

▲ Ampacoll Fenax sealing membrane to reveal boards.

▲ Reveal Boards insulating partition wall.

Timber partitions should be cut back to let the main UdiTHERM NF Boards and the membrane pass through and can be built back against the surface of the insulation.

If the studs require fixing back to the masonry wall, use the Fischer DuoXpand frame fixings to hold in place and seal any penetrations in the membrane caused by the fixing of the stud.



14) Install sole plate and header plate battens (thickness detailed in the NSC document) to the surface of the wall (allowing for gaps where services are required) and then install battens at 600mm centres.

Drill 8mm holes at 500mm vertical centres through the battens and the UdiTHERM insulation with a wood drill. Drill to the full depth of the screws using a masonry bit and then install the Fischer DuoXpand fixings, tightening so that the battens fit snugly against the surface but not so that they squash the wood fibre boards.

With all of the vertical battens installed, openings should be framed out with horizontal battens as necessary. Around window openings, frame fixings should be angled away from the opening to prevent damage to the masonry by the fixings.

15) With the battens installed any services should be fixed to the sides of the battens with appropriate clips. All electrical wiring must be in plastic or metal conduit and any pipework must be pressure-tested before installation of the plasterboard layer to ensure leaks are not built in and left un-detected.

16) Once services are installed in the correct position, install the SteicoFlex flexible insulation between battens. The thickness will be detailed in the NSC document but is usually the same depth as the battens. Where the insulation needs cutting, cut it 10-15mm wider than the gap between the battens to ensure a snug fit. Plastering scrim tape can be stapled to the surface of the battens to hold the insulation in place if required. Ensure space is left within the insulation layer for any back-boxes that will be installed in the plasterboard.

17) Install plasterboard to the battens, fixing with drywall screws that are no longer than the depth of the battens to limit the number of holes in the membrane.

Cut out holes into the plasterboard for socket or switch back-boxes and install standard plasterboard back-boxes.

18) Around openings, cut plasterboard to the required size to fit within the reveal. Screw the inner edge to the battens framing out the opening but use construction adhesive or UdiSPECIAL ADHESIVE to bond the plasterboard to the wood fibre boards.

19) Skim the plasterboard with ordinary Multi-Finish plaster and decorate with breathable paint, such as acrylic matt paint. Do not use gloss or eggshell paints as these can be quite vapour impermeable and may affect the functioning of the wall.

SteicoFlex 036

Flexible wood fibre insulation, fully filling voids.

▲ Space cut out of flex for sockets.

▲ Back boxes installed onto plasterboard.

▲ Finished HolzCore.