Closed Panel System

The MBC closed panel system offers a variety of insulation options based around a 140mm stud timber frame. The section below details a 0.14 W/m²K U-Value wall with a 0.14 W/m²K U-Value roof.

Vaulted / Cut Roof
U-Value 0.14W/m²K

140mm Stud Wall
U-Value 0.14W/m²K

140mm Wall System Suitable for all External Leaf Options ie: block work, stone, cement board, timber cladding etc...

Reinforced Concrete Ringbeam

Service Ducts Fitted & brought out 1 meter from edge of EPS

Passive Standard Foundation U-Value
From U-Value 0.105W/m²K - 0.13W/m²K
Passive House Technical Section

Passive Twin Wall
- Delivers a U-Value of 0.12 W/m²K
- Continuous thermal layer envelopes the structure completely
- Suitable for all external finishes ie: Brick, render, Cladding

Passive Foundation
- Delivers a U-Value from 0.105W/m²K – 0.13W/m²K
- Engineered to thermally encase concrete slab in high performance insulation
- Eliminates cold bridge typically found at wall/floor junctions

Passive Standard Roof
U-Value 0.10W/m²K

Passive Standard Twin Wall
U-Value 0.12W/m²K
Passive Standard Twin Wall System
Suitable for all External Leaf Options ie: block work, stone, cement board, timber Cladding etc...

Passive Foundation
U-Value from 0.105W/m²K – 0.13W/m²K
Engineered to thermally encase concrete slab in high performance insulation
Eliminates cold bridge typically found at wall/floor junctions

Breathable wall protects thermal envelope
Roof options

To provide roofing solutions for Cut / Vaulted Roofs and Flat Roofs, MBC utilise open metal web Posi Joists which see parallel timber flanges plated together with an engineered steel web component. The steel webs are plated in a “V” formation, providing a lightweight structural roof joist, or flat roof joist, that can span greater distances in comparison to standard solid joists. Insulation is fitted by MBC within the roof structures, with the insulation located in between the Posi Joists.

Cut / Vaulted Roof System U-Value 0.10W/m²K

25mm x 50mm Counter Batten
Breathable Roofing Membrane
VCL / Ceiling Airtight Membrane
Cellulose Insulation
Engineered Posi Rafter

25mm Ceiling Service Cavity Batten
*Plasterboard Supplied and Fitted by Others

Cut / Vaulted Roof System U-Value 0.14W/m²K

25mm x 50mm Counter Batten
Breathable Roofing Membrane
VCL / Ceiling Airtight Membrane
Cellulose Insulation
Engineered Posi Rafter

25mm Ceiling Service Cavity Batten
*Plasterboard Supplied and Fitted by Others

Posi Joist Flat Roof System U-Value 0.10W/m²K

OSB Deck
50mm minimum furring piece To create fall & full ventilation
Cellulose Insulation
Ceiling VCL / Airtight Membrane
25mm Ceiling Service Cavity Batten

Engineered Posi Joist
PIR Insulation
9mm OSB & Breather Membrane

Posi Joist Flat Roof System U-Value 0.13W/m²K

OSB Deck
50mm minimum furring piece To create fall & full ventilation
Cellulose Insulation
Ceiling VCL / Airtight Membrane
25mm Ceiling Service Cavity Batten

Engineered Posi Joist
PIR Insulation
9mm OSB & Breather Membrane

*Plasterboard Supplied and Fitted by Others
**Wall options**

The MBC closed panel system incorporates many of the philosophies used in the Passive system. All systems offer excellent air tightness and are significantly greater than building regulation requirements.

**Foundations**

The passive foundation delivers a U-Value of 0.105 – 0.13 W/m²K and is designed to complete the continuously insulated envelope of our Passive system, this is achieved as the insulation in the wall sits on the insulation in the foundation, removing what is usually a very difficult junction to overcome thermally. Many of our customers also incorporate the MBC foundation system into their standard timber frame projects, our experience shows that there is huge value in one company taking responsibility for the entire structural thermal envelope of foundations, walls and roof.
Metal Web Joists

MBC Timber Frame design and manufacture metal web joists inhouse, these are used within all of our timber frame systems and are also available on a supply only basis for traditional build projects.

Metal web joists make running services much quicker and easier, they are also able to span great lengths without the need for additional steel work.

Trusses

With our inhouse roof designer and truss press, MBC are able to utilise a wide range of trusses within our projects, these are also available on a supply only basis.

From fink trusses, to attic and raised tie trusses these are manufactured to the highest quality.

Windows

MBC are able to offer a wide range of timber and alu-clad windows, these range from 0.6 W/m2K to 1.2 W/m2K U-Values. Once the windows are installed by MBC, they are sealed in preparation for an air test that is guaranteed as part of the MBC package.