

MBC TIMBER FRAME

WE OFFER A COMPLETE THERMALLY EFFICIENT PACKAGE



FOUNDATION



WALL



ROOF



WINDOW



AIRTIGHT

Designed ► Engineered ► Manufactured ► Erected

We manage the entire process



BESPOKE TIMBER FRAME HOUSES AND PASSIVE HOUSES

HIGH PERFORMANCE RANGE

PASSIVHAUS STANDARD

BUILDING FOR A **BETTER FUTURE**



HIGH PERFORMANCE SYSTEM

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

HIGH PERFORMANCE RANGE

Vaulted / Cut Roof U-Value 0.14W/m²K

25x50mm Counter Battens

Breathable Roofing
Membrane

300mm Cellulose Insulation

Engineered Rafter

Eaves Closer

Vapour Control Layer
& Airtight Membrane

25mm Ceiling Service
Cavity Batten

50mm PIR Rigid Insulation
Full Height Between Joists

Airtight Membrane wrapped
around junction of floor joist

35mm Wall Service
Cavity Batten

22mm Chipboard
Flooring Deck

Engineered Open Metal
Web Floor Joist

Ceiling Plasterboard
Supplied & Fitted
by Others

140mm Stud Wall U-Value 0.14W/m²K – 0.11 W/m²k

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

140mm x 38mm
Timber Studs

140mm High Density
Mineral Wool Insulation

9mm OSB External
Sheathing

TF200 Thermo Reflective
Breather Membrane

Perimeter Ringbeam Footing
Installed for Masonry External
Leaf (optional extra)

50mm PIR Rigid Insulation

VCL / Foil Reflective
Airtight Membrane

35mm Service Cavity Batten

Plasterboard Supplied
& Fitted by others

Perimeter landscaping, footpath,
paving & backfilling by others

Reinforced Concrete Ringbeam to
engineers spec

Internal Service Duct

150mm Power Floated
Reinforced Concrete Slab

300mm EPS Insulation

Radon Barrier/DPM

50mm Sand Blinding

150mm Compacted Hardcore
Stone

Service Ducts Fitted & brought
out 1 meter from edge of EPS.
Connection by others

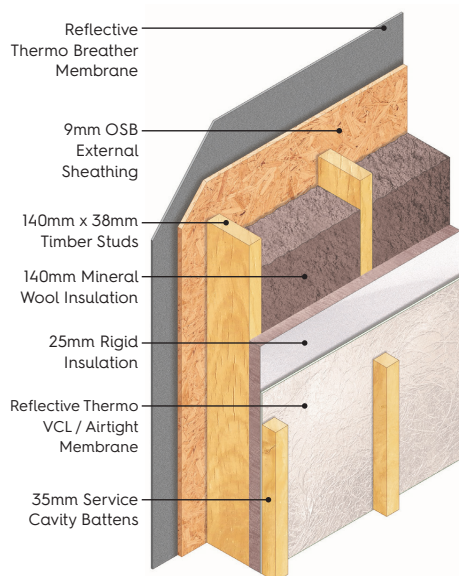
Passive Standard Foundation U-Value From U-Value 0.105W/m²K – 0.15W/m²K



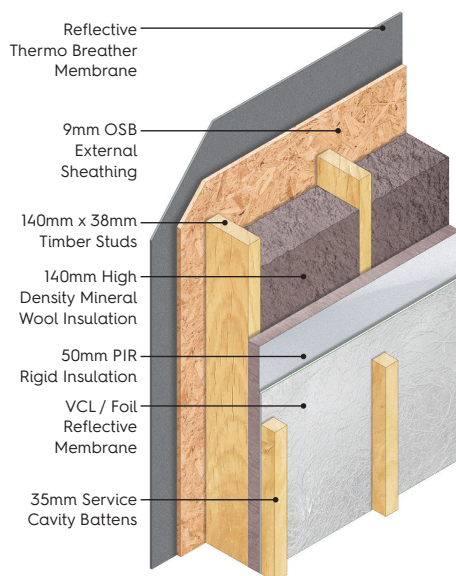
WALL OPTIONS

The MBC High-Performance closed panel system incorporates many philosophies utilised in our Passive Timber Frame system. Both systems offer excellent airtightness and exceed the specifications required by building regulations.

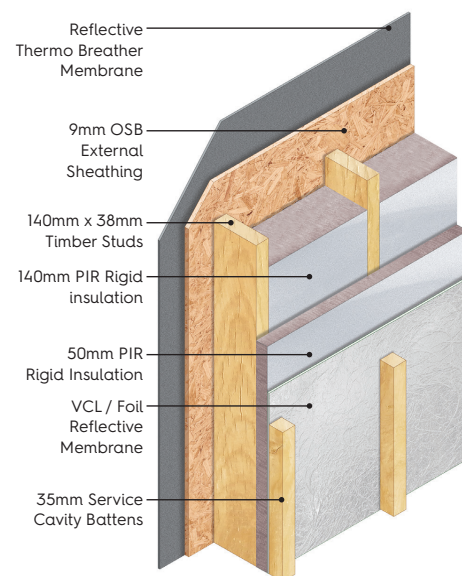
0.17W/m²K U-Value



0.14W/m²K U-Value



0.11W/m²K U-Value



FOUNDATIONS

The MBC Passive Standard Foundation system delivers a U-value of 0.105W/m²K to 0.15W/m²K. The foundation design continues the thermal envelope within our Passive Timber Frame system. The insulation within the Passive wall overlaps the insulation in the foundation, removing what is usually a complicated junction

to achieve thermal continuity. Many MBC customers incorporate our Passive Foundation system with their High-Performance Timber Frame system. Our experience shows considerable benefits in one company taking responsibility for the entire structural thermal envelope.





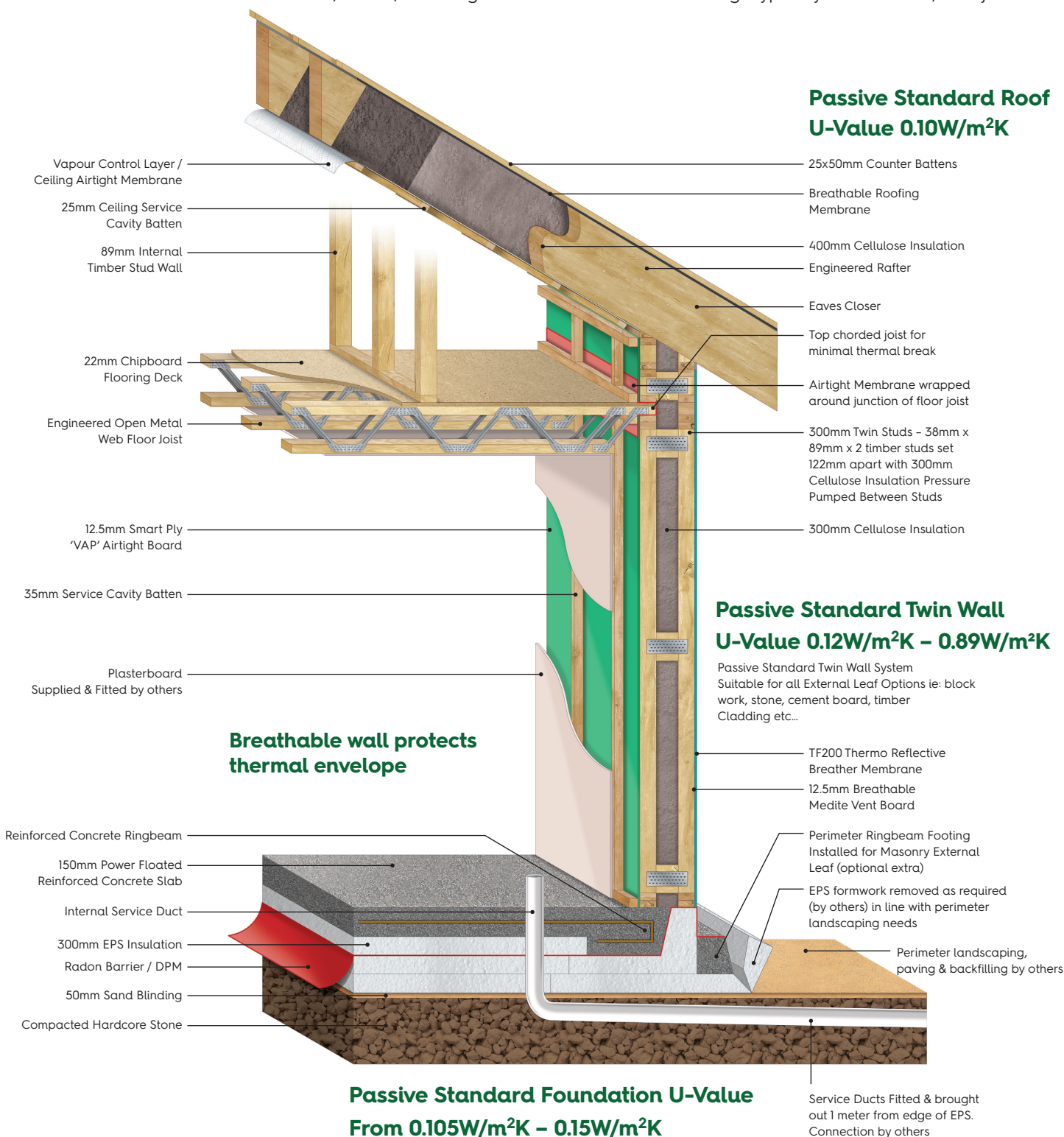
PASSIVE HOUSE TECHNICAL SECTION

Passive Twin Wall

- Delivers a U-Value of $0.12 \text{ W/m}^2\text{K}$
- Continuous pumped cellulose insulation envelopes the structure completely
- Suitable for all external finishes ie: Brick, render, Cladding

Passive Foundation

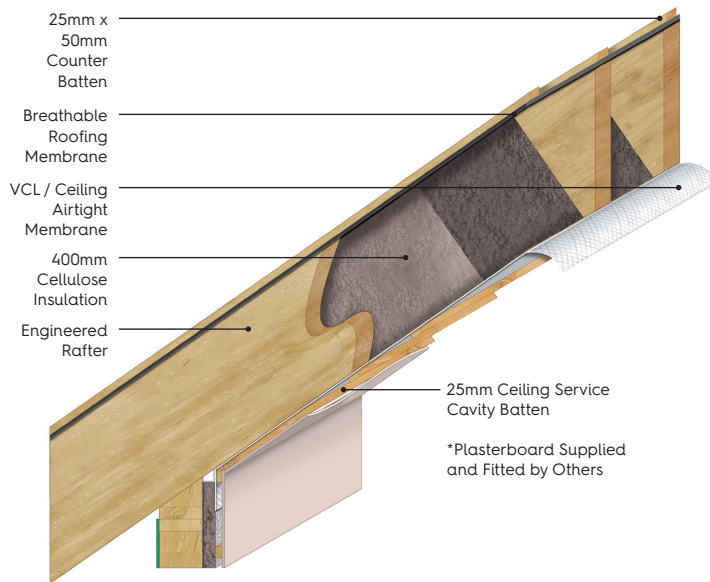
- Delivers a U-Value from $0.105 \text{ W/m}^2\text{K}$ – $0.15 \text{ W/m}^2\text{K}$
- Engineered to thermally encase concrete slab in high performance EPS insulation
- Eliminates cold bridge typically found at wall/floor junctions



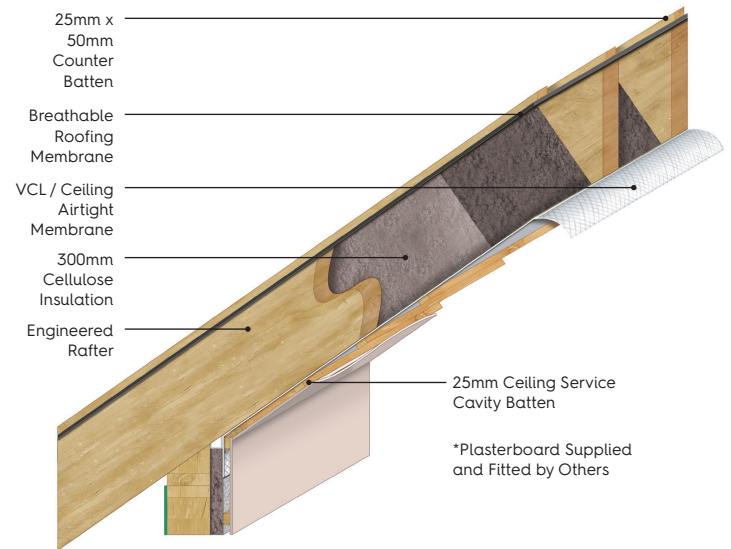


ROOF OPTIONS

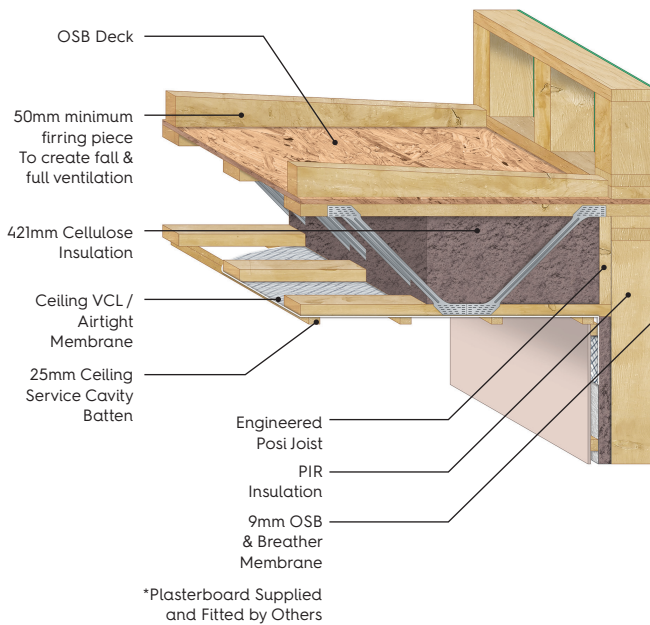
Cut / Vaulted Roof System U-Value 0.10W/m²K



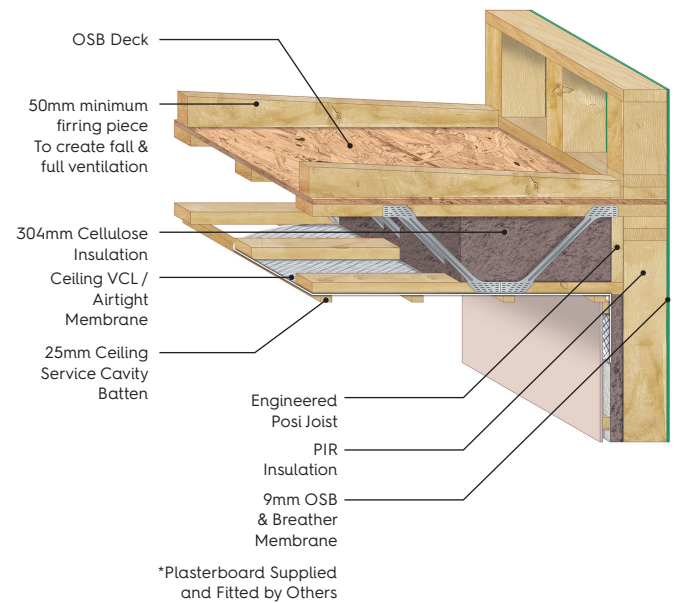
Cut / Vaulted Roof System U-Value 0.14W/m²K



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



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

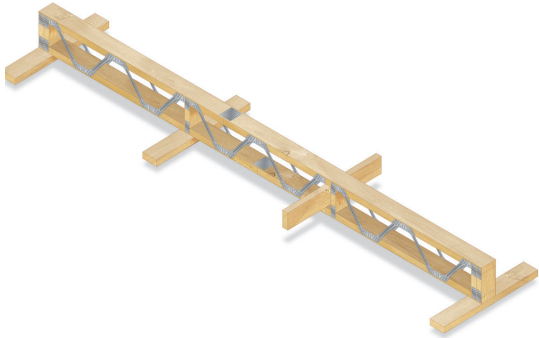




METAL WEB JOISTS

MBC Timber Frame designs and manufactures metal web joists used in all of our timber frame systems. We can also design and manufacture metal web joists on a supply-only basis for traditional masonry projects.

A significant benefit of using metal web joists is that running services through joists is quick and easy. They can also span greater lengths, reducing the need for additional steelwork.



TRUSSES

With our in-house roof design team and Truss Press, MBC can design and fabricate bespoke trusses to meet your specific design requirements.

From Fink Trusses to Attic and Raised-Tie Trusses, we manufacture to the highest quality.



WINDOWS & DOORS

MBC can offer a wide range of Windows & Doors including Rationel® & VELFAC® timber, alu-clad and composite windows ranging from U-value 0.78W/m2K to 1.3W/m2K.

Once the windows are installed by MBC, they are sealed in preparation for an airtightness test.



AIRTIGHTNESS

All MBC homes come with excellent levels of airtightness as standard. The MBC High-Performance Timber Frame System offers industry-leading airtightness, with a maximum of 3 Air Changes Per Hour (ACPH), enabling the integration of Mechanical Ventilation with Heat Recovery systems (MVHR). Passivhaus takes this airtightness to a whole new level. MBC guarantee a maximum of 0.6 Air Changes Per Hour (ACPH) for our Passive Timber Frame system, in line with Passivhaus Certification.



Est. 2002

MBC Timber Frame UK Ltd.
Quedgeley Court, Shepherd Road,
Gloucester GL2 5EL

We provide dedicated support and guidance throughout the construction journey

Our super-insulated, precision-engineered MBC Timber Frame Homes are at the forefront of innovation and design – all at an affordable cost. Perfect for self-builders looking to benefit from huge energy savings.

Please email us your project drawings for a free quotation
info@mbctimberframe.co.uk or call **01452 346499**

Learn more at **www.mbctimberframe.co.uk**

