



# Steel Frame Solutions

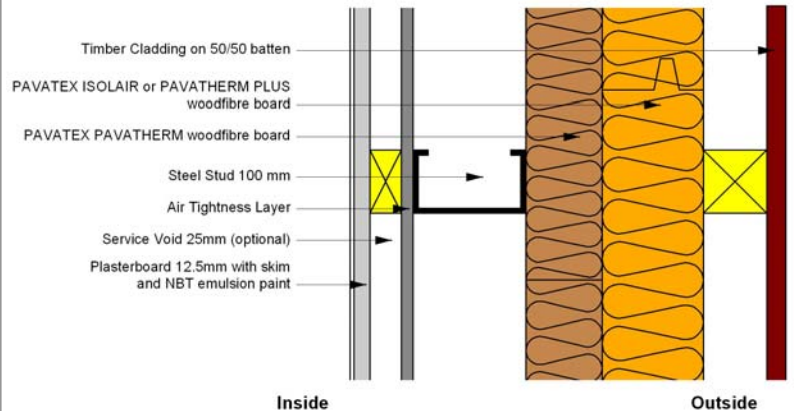
## PAVACLAD / System description:

NBT Steel Frame Pavaclad System is for light steel buildings externally finished with any type of cladding including facing bricks, rendered blockwork, timber boards or shingles, tile, terracotta claddings, metal sheet etc.

Pavaclad systems use NBT Pavatex woodfibre boards over the outside of the frame in a continuous layer to give an unbridged thermal shell, with excellent breathability and acoustic insulation.

The airtightness layer is on the inside of the frame and it is optional whether to install a service void on the inside of this layer for easy service alterations.

### NBT Steel Frame PAVACLAD System



### System Application:

NBT Steel Frame Pavaclad System can be used with any conventional light steel frame design. The same limitations apply as to all light steel frame applications. With certain cladding materials, multi occupancy applications require fire stops between units in the external cavity. Contact NBT for further details.

### System Benefits:

- Excellent thermal performance, with very low thermal bridging, enabling very slim construction for new Part L compliance
- Alternatively very high thermal shell performance possible in slim and cost effective way.
- Excellent airtightness by design
- Excellent acoustic insulation
- Good overheating control
- Fully breathing construction
- Full design and site support from NBT
- Full systems parts from NBT
- Tried and tested system, fully certified

### Environmental Performance:

Woodfibre boards are non-toxic, contain over 95% waste wood from sustainable forests, and lock up 1.2 tonnes of CO<sub>2</sub> for every tonne of boards produced. They are BREEAM Green Guide, and WRAP assessed.

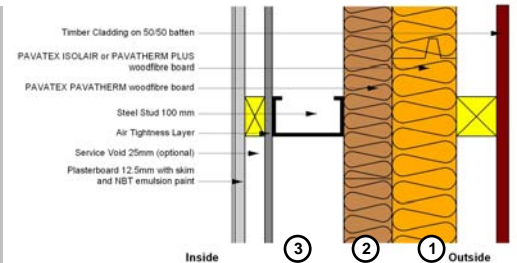




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## Technical details: Thermal values

Insulation Layer ①	100mm Pavatherm Plus	60mm Pavatherm Plus	60mm Pavatherm Plus	60mm Pavatherm Plus
Insulation Layer ②	-	60mm Pavatherm	80mm Pavatherm	100mm Pavatherm
U-Value* [W/m²K]	0.36	0.29	0.25	0.23
Decrement Factor	0.72	0.62	0.51	0.42
Decrement Delay [h]	5.1	6.3	7.6	8.8
Admittance [W/m²K]	1.29	1.22	1.23	1.23



Insulation Layer ①	80mm Pavatherm Plus	100mm Pavatherm Plus	60mm Pavatherm Plus	100mm Pavatherm Plus
Insulation Layer ②	100mm Pavatherm	100mm Pavatherm	100mm Pavatherm	100mm Pavatherm
Insulation Layer ③	-	-	100mm Isonat	100mm Isonat
U-Value* [W/m²K]	0.20	0.19	0.17	0.14
Decrement Factor	0.32	0.25	0.23	0.13
Decrement Delay [h]	10.2	11.5	11.3	14.0
Admittance [W/m²K]	1.23	1.23	0.96	0.96

Calculation of  $\gamma$  values is available for specific build ups, enabling better thermal performance (New Part L) calculations and/or thinner structures. Please contact NBT for further information

\*based on JPA calculation with 0.3% cavity bridging (steel), warm frame solution. Isonat insulation has a k value of 0.039W/mK. Other vapour open insulations can be substituted. Contact NBT

### Full System Components:

**Insulation boards:** Interlocking, waterproof Isolair boards (22, 35mm) and Pavatherm Plus boards (60, 80, 100mm), and square edged backing insulation Pavatherm boards (20 to 100mm).

**Tapes and papers:** Pavatape for exposed edges, and a selection of airtightness papers and tapes

**Fixings:** A range of specialist screw fixings for different board thicknesses and claddings

**Infill insulation:** NBT provide natural insulation materials such as Hemp Cotton, Sheepswool and Cellulose

**Plaster boards and paints:** NBT can provide clay boards, plasters and trade environmental paints for internal walls

**Steel frames:** NBT do not provide steel frames, but work with manufacturers to ensure correct designs

### NBT Support:

**Design support:** Full design support including drawings review, assistance with detailing, and thermal bridging (New Part L) and interstitial moisture calculations

**Training:** either at NBT or on site for applicators, site managers etc

**Site Support:** NBT will assist on site, giving advice on technical, application and quality issues.

**Approved Applicators:** NBT have a list of trained and approved applicators for the various systems processes.



PAVACLAD - Park End Street, Oxford