

## **SOLUTIONS TO MEET NEW U-VALUES AFTER 15<sup>TH</sup> JUNE 2022**

The maximum U-values for new thermal elements have changed and are as follows:

Roof	0.15 W/m <sup>2</sup> K
Wall	0.18 W/m <sup>2</sup> K
Floor	0.18 W/m <sup>2</sup> K
Windows	1.4 W/m <sup>2</sup> K
Rooflights	2.2 W/m <sup>2</sup> K
Doors	1.4 W/m <sup>2</sup> K

The following guidance provides several solutions to the revised requirements on a simple level and may not be suitable for all situations, particularly more complex schemes. Please confirm with the manufacturer for further guidance and suitability.

---

### **Ground Floor in a typical 6.0m extension to a semi-detached house:**

65mm Screed, separation layer, insulation, 150mm concrete slab, DPM, sand blinded hardcore

#### Quote from Part L:

'The U-value of the floor of an extension may be calculated using the exposed perimeter and floor area of the whole enlarged dwelling'

Perimeter	27m
Total floor area	88m <sup>2</sup>

$$P/A \ 27/88 = 0.3$$

**Example solution: 70mm Kingspan K103** (65mm would work, but it is not produced)

---

### **Rockwool solutions:**

Flat roof (warm)      235mm Rockwool Hardrock (may not be a practical solution)

Cavity wall (brick, cavity, aerated blockwork, plasterboard on dabs) : 170mm thick ,  
N.B. need longer cavity wall ties to comply.

Pitched Roof (Loft roll)    300mm thick ceiling level

---

## **Kingspan solutions:**

Guide thicknesses would be

Warm flat roof (GRP) 150mm joists 150mm TR26

Cold flat roof (GRP) 150mm joists 100mm K7 between + 62.5 K118 below

Pitched roof (ventilated 50mm) 150mm rafters 100mm K7 between, 62.5mm K118 below

Pitched roof (nilvent) 150mm rafters 125mm K7 between, 42.5mm K118 below

Cavity wall (102mm brick, 50mm residual cavity, 100mm Aerated block)

- 70mm K108 (i.e. the cavity width would now have to be 120mm wide min)

Cavity wall (102mm brick, 10mm residual cavity, 100mm Aerated block)

- 90mm K106 (i.e. the cavity width could still be 100mm)

Solid wall (215mm Celcon) Blockwork, battens 82.5mm K118

Dormer cheeks (Tile hanging, 90mm studwork)

70mm K112 between, 62.5mm K118 across face

OR

Dormer cheeks (Tile hanging, 150mm studwork)

120mm K112 between, 37.5mm K118 across face