

## U-value calculation

by BRE U-value Calculator version 2.04a

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Filename: C:\Users\Ecohome\Documents\YBS DATA\0.18 U-Value - TyvaQuilt Min 75mm Deep Rafters.uva (File saved: 05 Apr 2016 12:35)

### Element type: Roof - Pitched roof - insulated slope, sloping ceiling

Calculation Method: BS EN ISO 6946

### TyvaQuilt Batten & Counter Batten - 75mm Rafters

Ecohome BreatherQuilt

75mm Mineral wool (0.032)

SuperQuilt LG Spec

Layer	d (mm)	$\lambda$ layer	$\lambda$ bridge	Fraction	R layer	R bridge	Description
					0.100		Rsi
1	12.5	0.190			0.066		12.5mm Plasterboard
2	25	R-value	0.130	0.0630	0.490	0.192	25mm Batten
3	12	R-value	R-value	0.0120	1.520	0.670	SuperQuilt LG Spec
4	25	R-value	0.130	0.0630	0.490	0.192	25mm Batten
5	75	0.032	0.130	0.0830	2.344	0.577	75mm Rafters / Mineral wool
(0.032)							
6	14	R-value	0.130	0.0630	1.166	0.108	BreatherQuilt
7	44	R-value					Tile Batten & Counter Batten
8	15	1.000					Tiles (Clay)
					<u>0.100 #</u>		Rse
	<u>223 mm</u>	(total roof thickness)			6.276		

# this resistance substitutes for Rse and the resistance of layers 7-8 because of the ventilated air layer (layer 7)

Total resistance: Upper limit: 5.945 Lower limit: 5.245 Ratio: 1.133 Average: 5.595 m<sup>2</sup>K/W

U-value (uncorrected) 0.179

#### U-value corrections

Air gaps in layer 5  $\Delta U = 0.000$  (Level 0)

No fixings in layer 5

Total  $\Delta U$  0.000

U-value (corrected) 0.179

**U-value (rounded) 0.18 W/m<sup>2</sup>K**

Calculated by: