

**Generic Flat Roof**

Rev:

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0.00

Section: **X F-B0Wall 0.13 3f18t50c160i25c15p**

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GENERAL DATA

Element type: **roof**
 Direction of heat flow: **upwards**
 Number of layers: **six**
 Internal surface resistance $R_{si} [m^2 K/W] = 0.10$
 External surface resistance $R_{se} [m^2 K/W] = 0.04$

ROOF DATARoof type: **standard****CALCULATIONS**

N° of bridged layers / N° of thermal paths = N/A
 Upper limit of resistance $R_{upper} [m^2 K/W] = 7.69$
 Lower limit of resistance $R_{lower} [m^2 K/W] = 7.69$
 Total resistance of element $R_T [m^2 K/W] = 7.69$
 Basic U-value of element $U_{basic} [W/m^2 K] = 0.13$
 Correction for air voids $\Delta U_g [W/m^2 K] = 0.000$
 Correction for fasteners $\Delta U_f [W/m^2 K] = 0.000$
 Total corrections $\Delta U_g + \Delta U_f [W/m^2 K] = < 3\%$
 Total element thickness $[mm] = 389$

RESULTS

Final U-value of element $U_{final} [W/m^2 K] = 0.13$
 Minimum mass of element $[kg/m^2] = N/A$

Internal surface, $R_{si} [m^2 K/W] = 0.10$			
Layer 1	Material type:	continuous material (loft)	Thickness $[mm] = 15$ Air: Fixings:
	Material:	plasterboard	Ther. conductivity $K = 0.250$
	N/A		Thermal resistance $R = 0.060$
Layer 2	Material type:	airspace	Thickness $[mm] = 175$ Air: Fixings:
	Material:	unventilated air layer (<=300mm)	Ther. conductivity $K =$
	N/A		Thermal resistance $R = 0.163$
Layer 3	Material type:	continuous material (loft)	Thickness $[mm] = 18$ Air: Fixings:
	Material:	plywood	Ther. conductivity $K = 0.130$
	N/A		Thermal resistance $R = 0.138$
Layer 4	Material type:	continuous insulation	Thickness $[mm] = 160$ Air: Fixings:
	Manufacturer:	TYPE: Celotex products	Ther. conductivity $K = 0.023$
	Product:	Celotex tuff-R GA3080	Thermal resistance $R = 6.900$
Layer 5	Material type:	continuous material (loft)	Thickness $[mm] = 18$ Air: Fixings:
	Material:	plywood	Ther. conductivity $K = 0.130$
	N/A		Thermal resistance $R = 0.138$
Layer 6	Material type:	continuous material (loft)	Thickness $[mm] = 3$ Air: Fixings:
	Material:	mineral felt	Ther. conductivity $K =$
	N/A		Thermal resistance $R = 0.150$
* - indicates bridged layer. External surface, $R_{se} [m^2 K/W] = 0.04$			