

**Generic Wall**

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Section: **X S-Wall 0.17 215b25c100i25c15p**

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**GENERAL DATA**Element type: **external wall**Direction of heat flow: **horizontal**Number of layers: **five**Internal surface resistance  $R_{si} [m^2 K/W] = 0.13$ External surface resistance  $R_{se} [m^2 K/W] = 0.04$ **CALCULATIONS**

N° of bridged layers / N° of thermal paths = 1 / 2

Upper limit of resistance  $R_{upper} [m^2 K/W] = 5.88$ Lower limit of resistance  $R_{lower} [m^2 K/W] = 5.88$ Total resistance of element  $R_T [m^2 K/W] = 5.88$ Basic U-value of element  $U_{basic} [W/m^2 K] = 0.17$ 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  $[mm] = 380$ **RESULTS****Final U-value of element  $U_{final} [W/m^2 K] = 0.17$** **Minimum mass of element  $[kg/m^2] = 382$** 

Internal surface, $R_{si} [m^2 K/W] = 0.13$			
Layer 1	Material type:	<b>continuous material</b>	Thickness $[mm] = 215$ Air: Fixings:
	Material:	<b>brickwork (outer leaf)</b>	Ther. conductivity K = <b>0.770</b>
	N/A		Thermal resistance R = <b>0.279</b>
Layer 2	Material type:	<b>airspace</b>	Thickness $[mm] = 25$ Air: Fixings:
	Material:	<b>unventilated air layer ( &lt;=300mm)</b>	Ther. conductivity K =
	N/A		Thermal resistance R = <b>0.185</b>
Layer 3	Material type:	<b>continuous insulation</b>	Thickness $[mm] = 100$ Air: Fixings:
	Manufacturer:	<b>TYPE: Kingspan products</b>	Ther. conductivity K = <b>0.020</b>
	Product:	<b>Kooltherm K8 cavity board (foil faced) ( &gt;=45mm)</b>	Thermal resistance R = <b>5.000</b>
Layer 4	Material type:	<b>airspace</b>	Thickness $[mm] = 25$ Air: Fixings:
	Material:	<b>unventilated air layer ( &lt;=300mm)</b>	Ther. conductivity K =
	N/A		Thermal resistance R = <b>0.185</b>
Layer 5	Material type:	<b>continuous material</b>	Thickness $[mm] = 15$ Air: Fixings:
	Material:	<b>plasterboard</b>	Ther. conductivity K = <b>0.250</b>
	N/A		Thermal resistance R = <b>0.060</b>
External surface, $R_{se} [m^2 K/W] = 0.04$			

\* - indicates bridged layer.