

## Summary of U Value Calculation

Undertaken by Sliders (UK) Limited

Door Style: **Half Moon & Mids**

Capstone door, 44mm, Plastic Frame (PVC Hollow with 3 Chambers)

Calculated following the principles of EN ISO 10077-1:2006

### Basic Dimensions

Width of Opening: 1000 mm

Height of Opening: 2000 mm

### Door Glazing Profile

Number of Spaces: 1 (Double Glazing)

Gas Temperature: 283.15 K (10°C)

Normal Emissivity of Internal Glass Surface: 0.89

Space	Width	Gas Type
1	18 mm	Air Filled

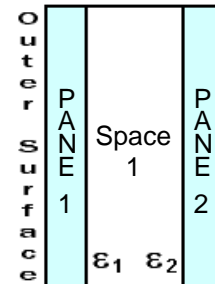
Space	e1	e2
1	0.89 (0.84 corr)	0.89 (0.84 corr)

Pane	Thickness
1	4 mm
2	4 mm

Total Thickness of Glazing: 26 mm

External Heat Transfer Coefficient: 25 W/m<sup>2</sup>.K

Internal Heat Transfer Coefficient: 7.7 W/m<sup>2</sup>.K



### Configuration of Unit: Frame & Pane Areas

Numbers on each frame edge correspond to the Frame Side in the frame table on the next page, and Circled Numbers refer to the Pane in the panes table.



## Summary of U Value Calculation (ctd)

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### Door Frame

Side	A f,i	A f,e	A frame	Int. Frame W	Ext. Frame W	A f,di	A f,de	Thm Break	U frame
1	0.095 m <sup>2</sup>	0.133 m <sup>2</sup>	0.133 m <sup>2</sup>	48 mm	68 mm	-	-	-	2.00 W/m <sup>2</sup> .K
2	0.046 m <sup>2</sup>	0.063 m <sup>2</sup>	0.063 m <sup>2</sup>	48 mm	68 mm	-	-	-	2.00 W/m <sup>2</sup> .K
3	0.095 m <sup>2</sup>	0.133 m <sup>2</sup>	0.133 m <sup>2</sup>	48 mm	68 mm	-	-	-	2.00 W/m <sup>2</sup> .K
4	0.007 m <sup>2</sup>	0.014 m <sup>2</sup>	0.014 m <sup>2</sup>	7 mm	15 mm	0.007 m <sup>2</sup>	0.014 m <sup>2</sup>	0.0 mm	5.88 W/m <sup>2</sup> .K
Cassette	-	-	0.198 m <sup>2</sup>	-	-	-	-	1.51 W/m <sup>2</sup> .K	

$$\sum A_{\text{frame}} : 0.542 \text{ m}^2$$

$$\sum A_{\text{frame}} : U_{\text{frame}} : 1.040 \text{ W/K}$$

### Door Panes

Pane	Type	A panel	U panel	Perimeter	Spacer	PSI
1	Glass	0.299 m <sup>2</sup>	2.740 W/m <sup>2</sup> .K	4.896 m	Aluminium Generic	0.060 W/m.K
2	Glass	1.159 m <sup>2</sup>	0.641 W/m <sup>2</sup> .K	5.698 m	None	0.000 W/m.K

$$\sum A_{\text{frame}} : 1.458 \text{ m}^2$$

$$\sum A_{\text{panel}} \cdot U_{\text{panel}} : 1.563 \text{ W/K}$$

$$\text{Mould value} : 0.046 \text{ W/K}$$

$$\sum I_{\text{panel}} \cdot \psi_{\text{panel}} : 0.294 \text{ W/K}$$

$$\text{Total Thermal Conductance of Glazing} : 5.13 \text{ W/m}^2 \cdot \text{K}$$

**Final U Value for Unit: 1.5 W/m<sup>2</sup>.K**