

## U-VALUE EXTENSION

The U-value extension developed by Infissoft, the official distribution partner of Klaes Italy allows a more detailed calculation of the U-value.


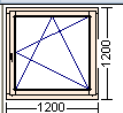

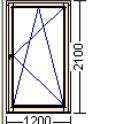

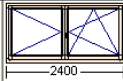
The extension provides the following functionality:

- Definition of the  $U_f$ -value per Profile Group and wood type
- Definition of the PSI-value of the edge seal for double and triple glasses per profile group
- Definition of the U-value and the transmission values (ttg / gg) of the single glasses
- Assignment of fixed edge-seal to a certain type of glass
- Calculation of the U-value
- Definition of  $E_{ref}$  value per profile group and wood type

Furthermore a flexible report generator is used to provide the opportunity to rapidly design your own print form.

**An example of a printout is given on the following screenshots:**

(1) The order in KLAES:

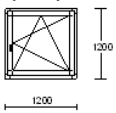
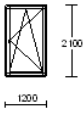
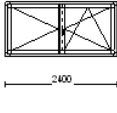
Position	Anzahl	Info	Artikel	Beschreibung
1	1			<b>Fenster einflügelig, zum Drehen und Ankippen</b> Maß: 1200 x 1200mm Holzart: IV78 - Fichte Farbe: grund. farblos Füllung: 4-20Ar-4 Alu Beschlag: Drehkipp Fenster rechts
2	1			<b>Balkontür einflügelig, zum Drehen und Ankippen mit Maico Transitschwelle</b> Maß: 1200 x 2100mm Holzart: IV78 - Fichte Farbe: grund. farblos Füllung: 4-20Ar-4 Alu Beschlag: Drehkipp Fenster rechts
3	1			<b>Fenster zweiflügelig, zum Drehen und Ankippen</b> Maß: 2400 x 1200mm Holzart: IV78 - Fichte Farbe: grund. farblos Füllung: 2 * 4-20Ar-4 Alu Beschlag: Stulp links, Drehkipp Tür Schwelle rechts

(2) U value:

Calculation of the Coefficient of Thermal Conduction  
by EN ISO 10077-2 (Directive 2002/91/EC)

Order: **AU-30010** Customer: **Mol Dam**  
 User: **SADMIN** Building Site: **Dam** Date: **27.07.2011**

<b>Profile Data:</b>	Profile group: <b>IV78</b>	<b>Fichte</b>	Uf profile: <b>1,7 W/m²K</b>	Profile area: <b>33,67 %</b>
<b>Glass Data:</b>	Glass: <b>1,1-4</b>		Ug glass: <b>1,1 W/m²K</b>	Glass area: <b>66,33 %</b>
<b>Edge Seal Data:</b>	Edge seal: <b>Thermix</b>		Psi-value: <b>0,040 W/(mK)</b>	

Item	Pcs.	U-value-Data		Areas		%	TOTALS		
	1	U-value Profile (Uf)	1,7 W/m²K	Profile area (Af)	0,54 m²	37,66 %	Total area (Af+Ag)	1,44 m²	
		Glass perimeter (Lg)	3,79 lm	Glass area (Ag)	0,90 m²	62,34 %	Glass quota (Ag/Aw)	62,34 %	
		<i>Glass description</i> ----- Ug LT value g-value Psi ----- Edge Seal							
		4-20Ar-4 Alu	1,1 W/m²K	70 %	60 %	0,04 W/(mK)	Thermix		
									U-value (W/m²K) <b>1,43</b>
	1	U-value Profile (Uf)	1,7 W/m²K	Profile area (Af)	0,78 m²	30,77 %	Total area (Af+Ag)	2,52 m²	
		Glass perimeter (Lg)	5,56 lm	Glass area (Ag)	1,74 m²	69,23 %	Glass quota (Ag/Aw)	69,23 %	
		<i>Glass description</i> ----- Ug LT value g-value Psi ----- Edge Seal							
		4-20Ar-4 Alu	1,1 W/m²K	70 %	60 %	0,04 W/(mK)	Thermix		
									U-value (W/m²K) <b>1,37</b>
	1	U-value Profile (Uf)	1,7 W/m²K	Profile area (Af)	0,99 m²	34,21 %	Total area (Af+Ag)	2,88 m²	
		Glass perimeter (Lg)	7,79 lm	Glass area (Ag)	1,89 m²	65,79 %	Glass quota (Ag/Aw)	65,79 %	
		<i>Glass description</i> ----- Ug LT value g-value Psi ----- Edge Seal							
		4-20Ar-4 Alu	1,1 W/m²K	70 %	60 %	0,04 W/(mK)	Thermix		
									U-value (W/m²K) <b>1,41</b>

<b>Average coefficient of thermal conduction calculated on all items</b>	$U_w = \frac{Af \cdot U_f + Ag \cdot U_g + Lg \cdot \Psi}{Af + Ag} = 1,41 \text{ W/m}^2\text{K}$
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