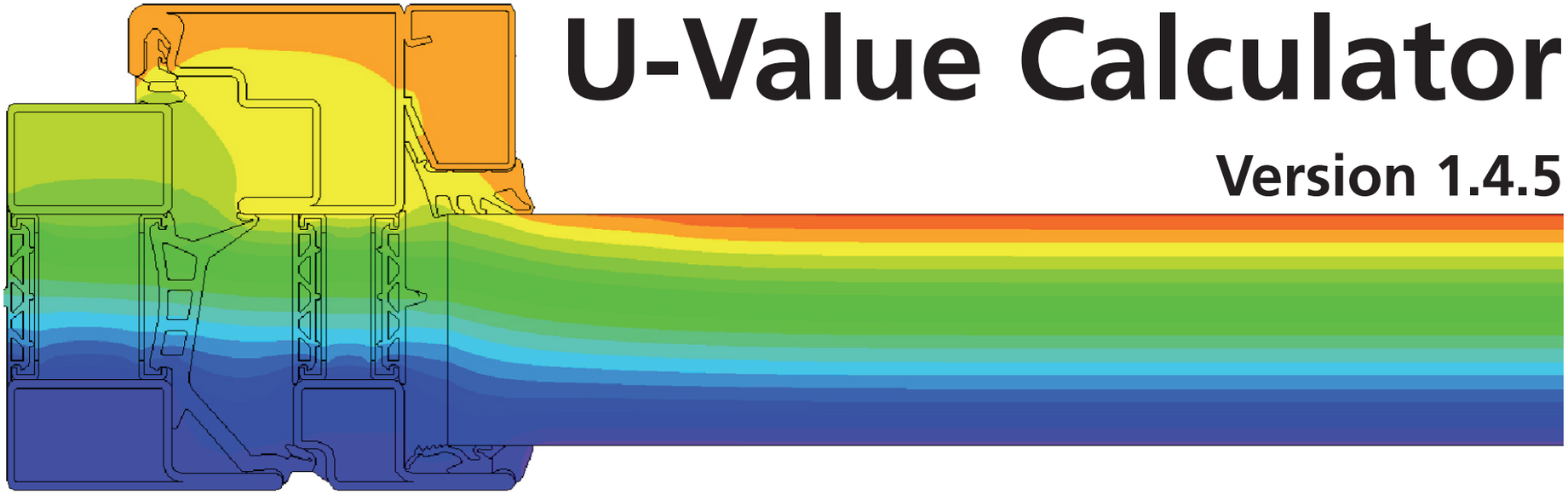
forster

User Guide



U-Value Calculator

Version 1.4.5

Installation

1. The CD starts the installation automatically. Execute the file **autoStartSetup.exe** if Auto Run is disabled
2. Select the language
3. Press the button **Installation**
4. Choose the installation folder
5. An icon called **Forster U-Value Calculator** is created automatically on the desktop
6. The **Product activation** window will appear while starting the software
7. If you have a serial number, enter this in the appropriate field and press OK
8. If you do not have a serial number, click the link **Apply for serial no.**
9. The **Application form** window will appear
10. Fill in all the fields marked with an asterisk
11. If you have an Internet connection, press the **Transmit** button
    The application is transmitted automatically
    You will then receive confirmation of receipt immediately
12. If you do not have an Internet connection, click the **Print** button
    You can send this application by fax or mail
13. You will then receive a serial number by e-mail, fax or mail depending on the option you have chosen
    You then need to enter this in the **Product activation** window

Contents

This programme provides you with a graphic interface and database to help you calculate the total U-value of selected elements made up of thermally insulated Forster profiles.

Update

We will inform you in writing if a new update is available. The Update function can be found in the task bar under **Help**.

Help

The Help function is located in the task bar under **Help**. You can also click the Help button. This file explains all the functions and how to use this software.
For further questions, please contact our Helpline on **+41 71 447 43 36**.

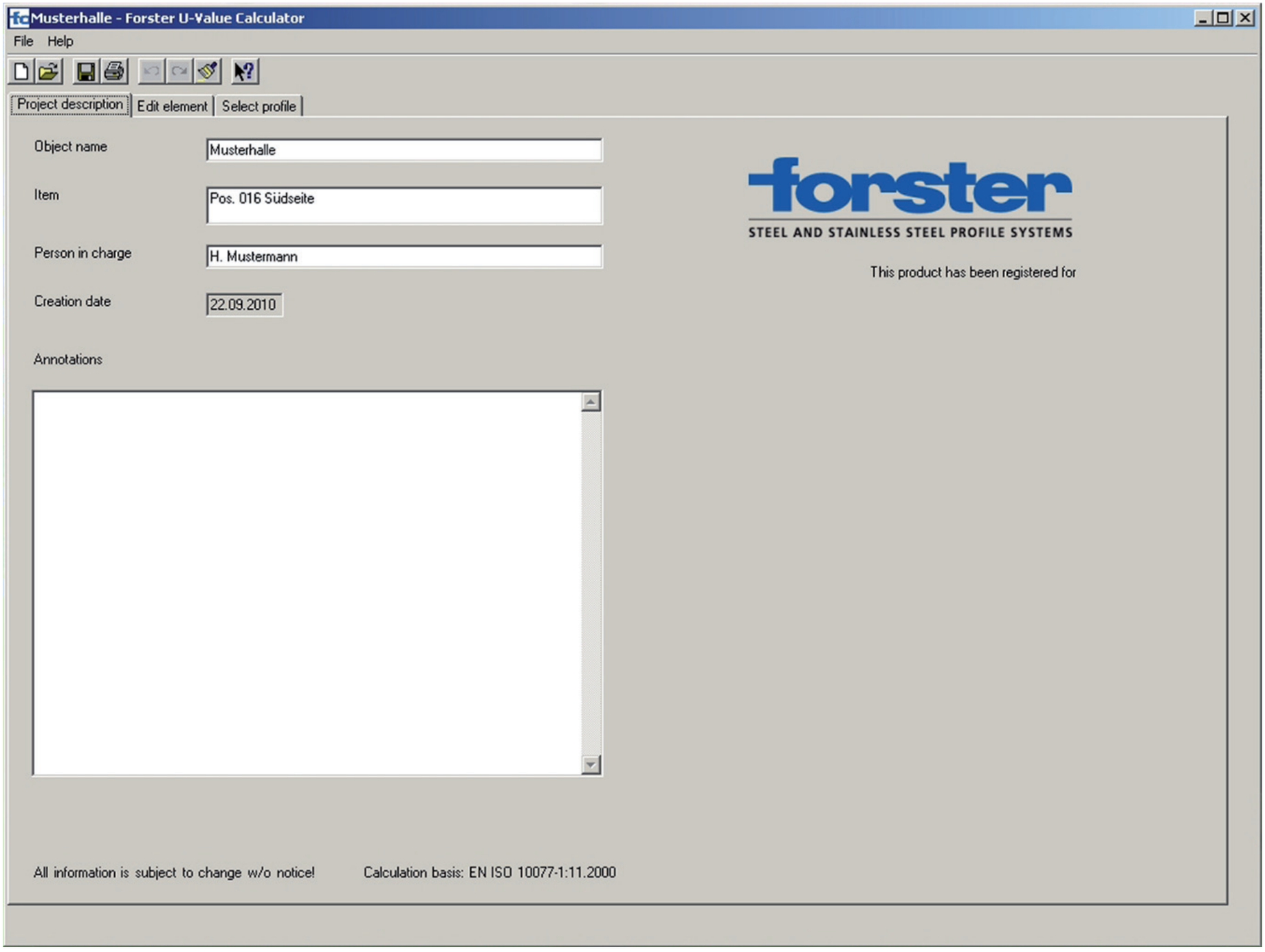
System requirements

Software

- Windows XP
- Windows Vista
- Windows 7
- .NET 4.0 Client (included)

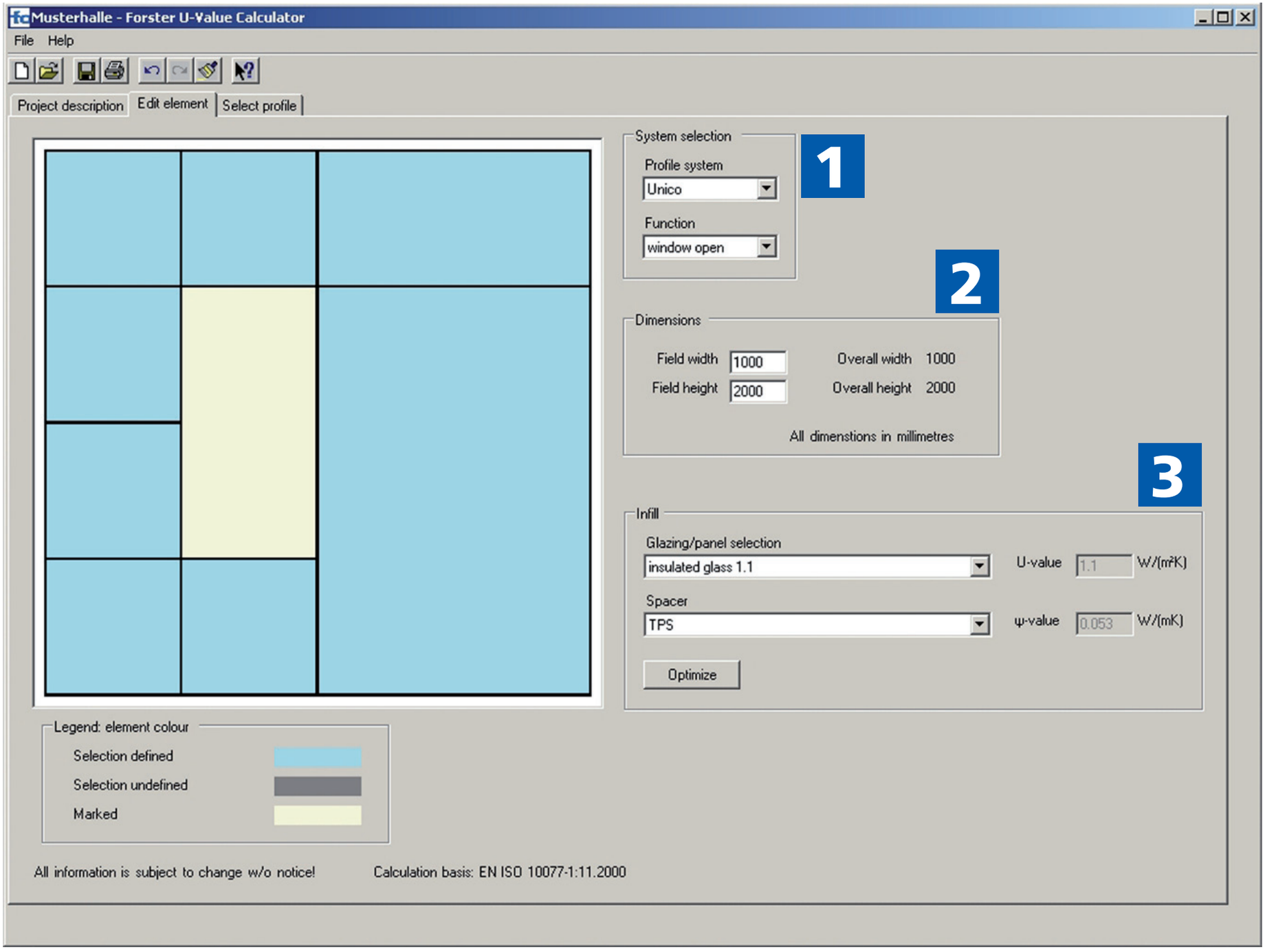
Hardware

- Pentium, 1 GHz
- 512 MB RAM
- 600 MB free hard disk space
- 1024 x 768 resolution
- CD ROM drive


Musterhalle - Forster U-Value Calculator
File Help
Project description
Edit element
Select profile
Object name
Musterhalle
Item
Pos. 016 Südseite
Person in charge
H. Mustermann
Creation date
22.09.2010
Annotations
forster
STEEL AND STAINLESS STEEL PROFILE SYSTEMS
This product has been registered for
All information is subject to change w/o notice!
Calculation basis: EN ISO 10077-1:11.2000

The project data is included in the “Project description“ register

This offers the facility to selectively describe and separately calculate even complex building units. Likewise, additional data on the project and/or element to be calculated can be entered in the **comments** window. This simplifies the summary of calculations.

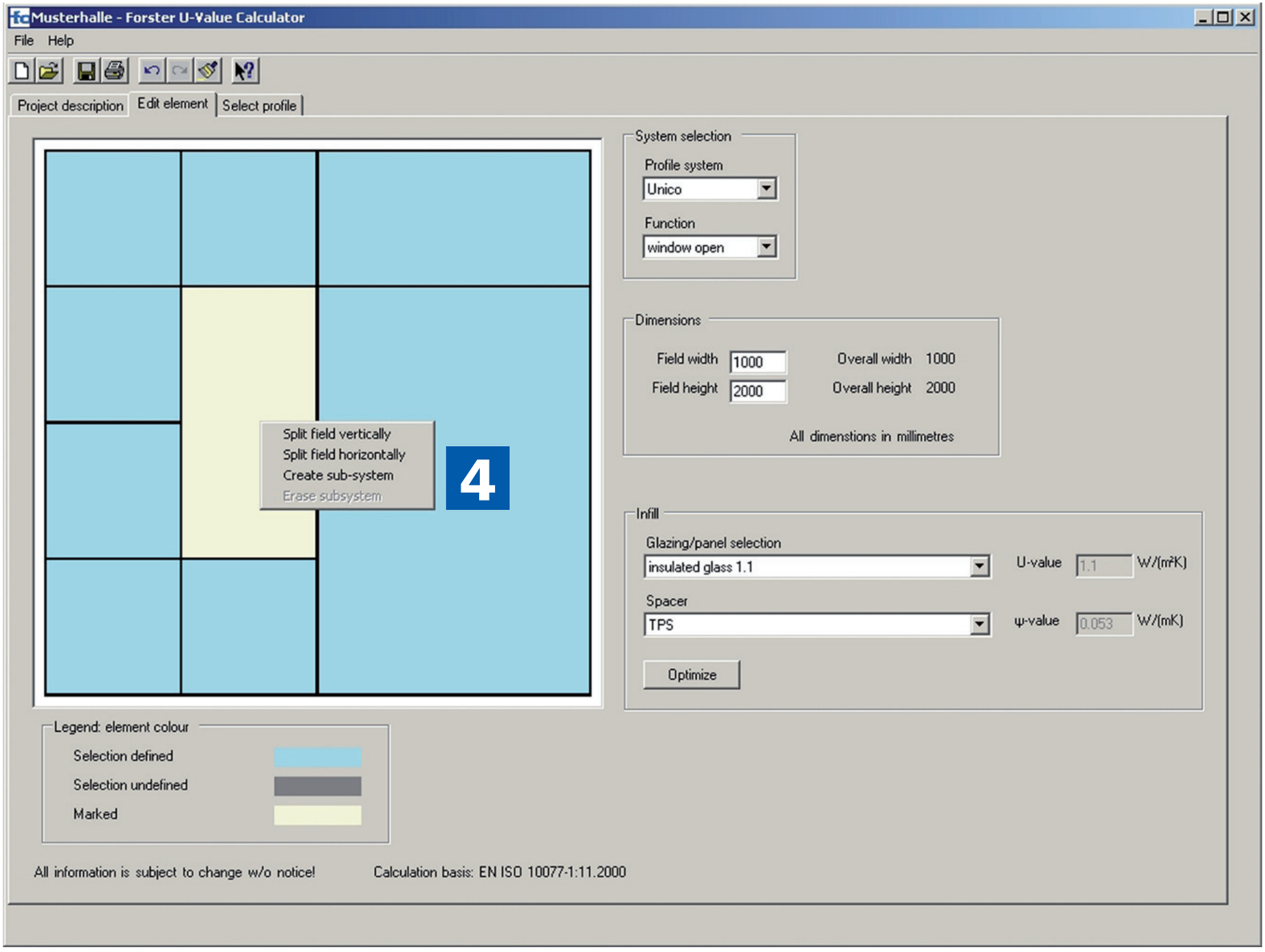

Musterhalle - Forster U-Value Calculator
File Help
Project description
Edit element
Select profile
System selection
Profile system
Unico
Function
window open
1
2
Dimensions
Field width 1000
Field height 2000
Overall width 1000
Overall height 2000
All dimenstions in millimetres
3
Infill
Glazing/panel selection
insulated glass 1.1
U-value 1.1 W/(m²K)
Spacer
TPS
ψ-value 0.053 W/(mK)
Optimize
Legend: element colour
Selection defined
Selection undefined
Marked
All information is subject to change w/o notice!
Calculation basis: EN ISO 10077-1:11.2000

The elements to be calculated are specified in the “Edit element“ register

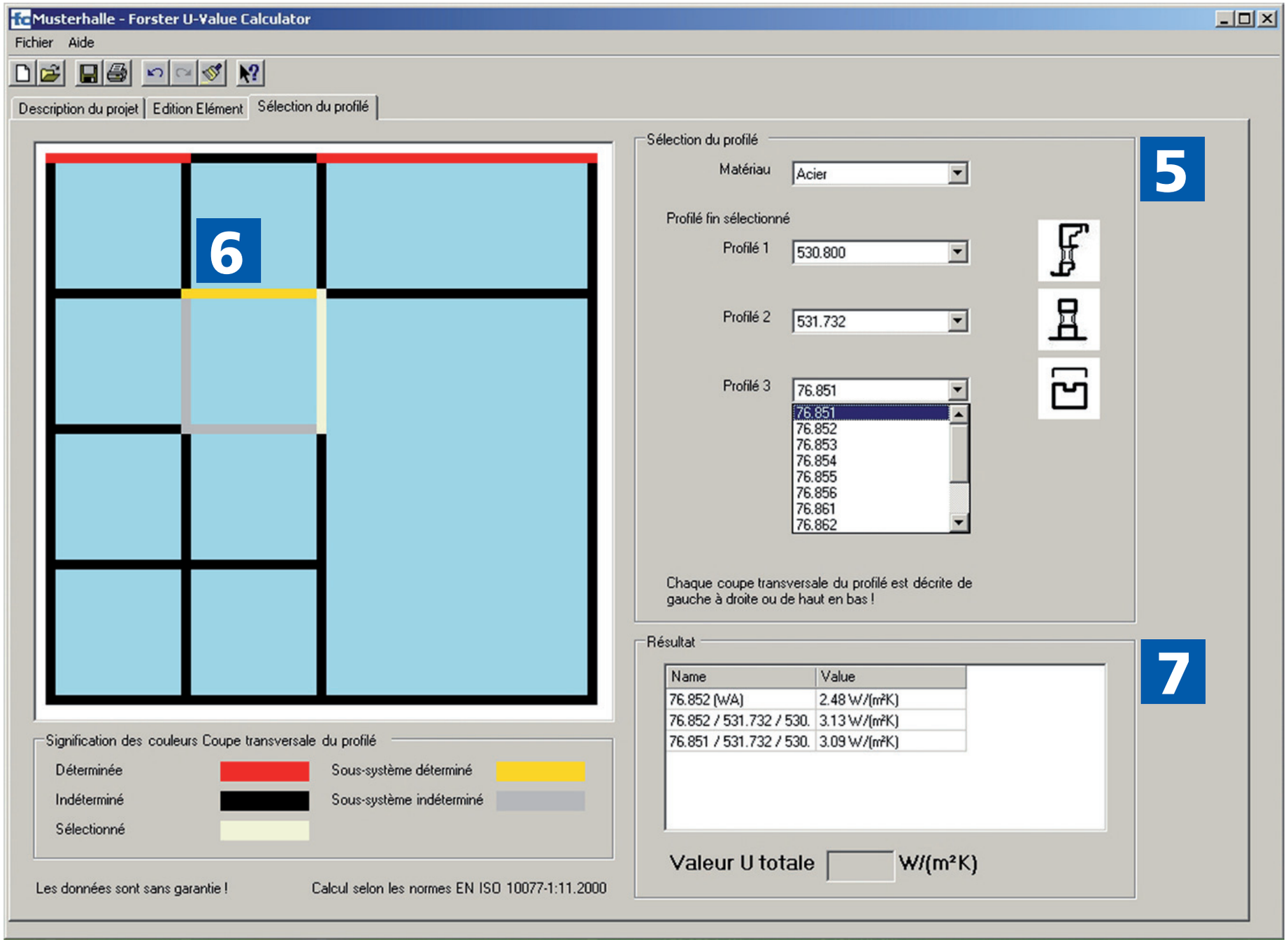
1) The **Profile system** and **Function** are chosen from **System selection**. Established or evident functions of the selected system are picked from **Function**, e.g. a window sash in Forster unico.

2) The dimension units can be modified or changed simply and quickly under **Dimensions**.

3) The filling types and boundary frame systems can be selected from **Infill**. This database contains all commonly used insulating glass, panel filling and spacers. If a required glass type or spacers are not available in this selection, the relevant value can be determined via a free entry.


Musterhalle - Forster U-Value Calculator
File Help
Project description
Edit element
Select profile
Split field vertically
Split field horizontally
Create sub-system
Erase subsystem
4
System selection
Profile system
Unico
Function
window open
Dimensions
Field width 1000
Field height 2000
Overall width 1000
Overall height 2000
All dimenstions in millimetres
Infill
Glazing/panel selection
insulated glass 1.1
U-value 1.1 W/(m²K)
Spacer
TPS
ψ-value 0.053 W/(mK)
Optimize
Legend: element colour
Selection defined
Selection undefined
Marked
All information is subject to change w/o notice!
Calculation basis: EN ISO 10077-1:11.2000

4) Right-clicking brings up several selection terms. One selection option is to split or change the fields, both horizontally and vertically. When a field is selected, it is also possible to add a subsystem, e.g. a window or door or delete an existing subsystem.

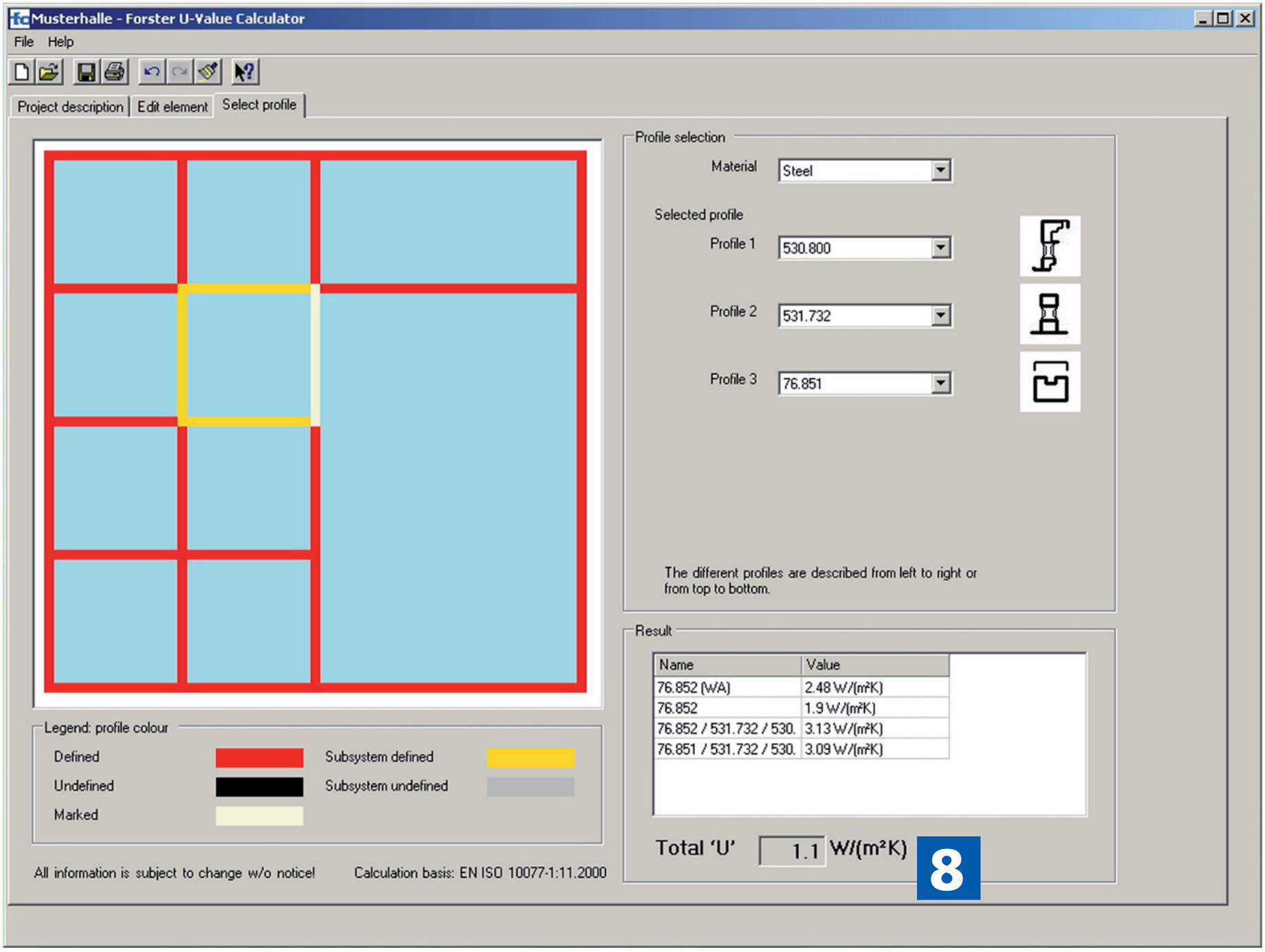

Musterhalle - Forster U-Value Calculator
Fichier
Aide
Description du projet
Edition Elément
Sélection du profilé
6
Sélection du profilé
Matériau
Acier
5
Profilé fin sélectionné
Profilé 1
530.800
Profilé 2
531.732
Profilé 3
76.851
76.851
76.852
76.853
76.854
76.855
76.856
76.861
76.862
Chaque coupe transversale du profilé est décrite de gauche à droite ou de haut en bas !
Résultat
7
Name
Value
76.852 (WA)
2.48 W/(m²K)
76.852 / 531.732 / 530.
3.13 W/(m²K)
76.851 / 531.732 / 530.
3.09 W/(m²K)
Valeur U totale
W/(m²K)
Signification des couleurs Coupe transversale du profilé
Déterminée
Indéterminé
Sélectionné
Sous-système déterminé
Sous-système indéterminé
Les données sont sans garantie !
Calcul selon les normes EN ISO 10077-1:11.2000

The elements to be calculated are specified in the “Select profile“ register

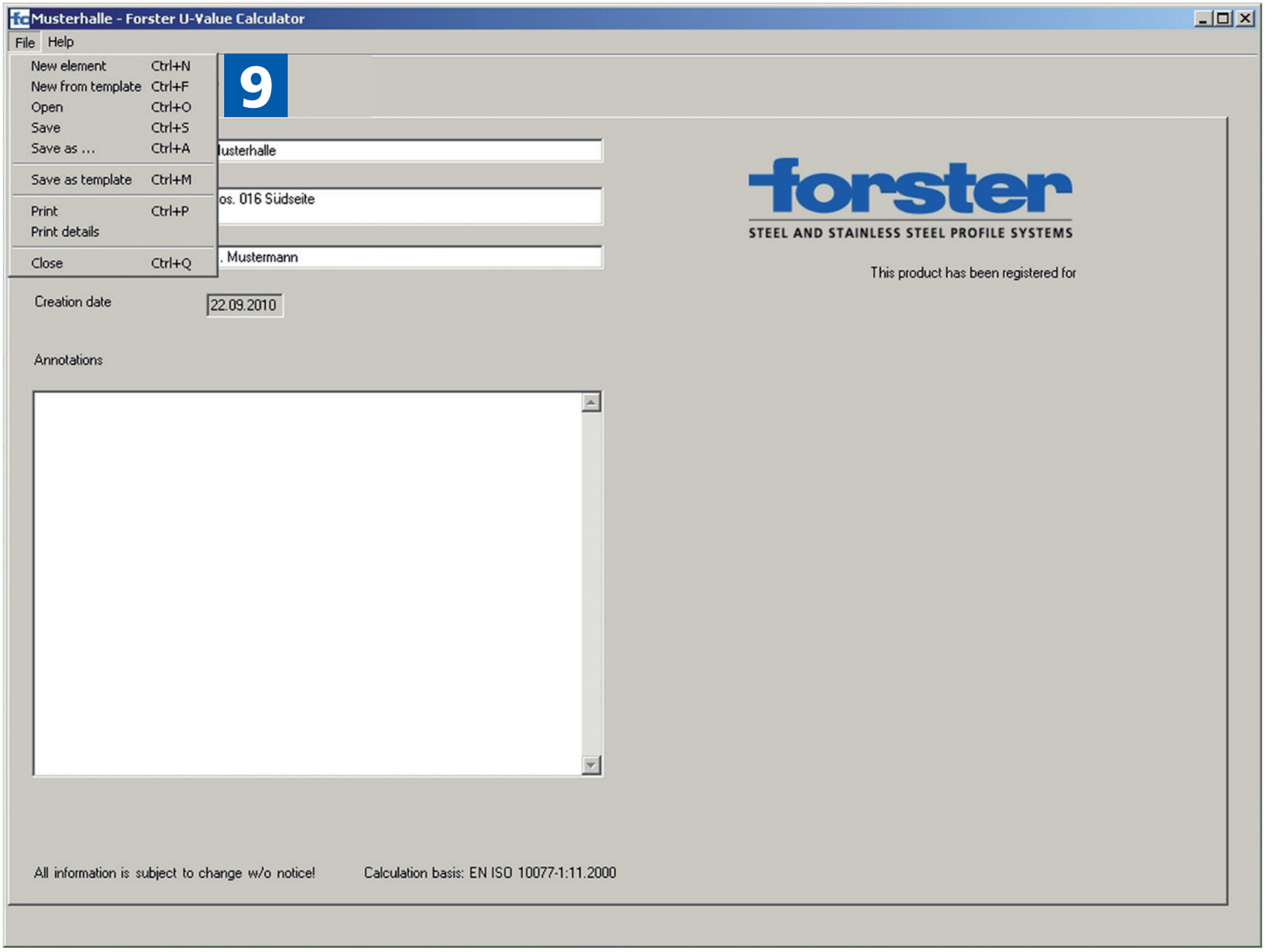
5) The required material quality (steel, stainless steel or combination) is picked from the **Material** selection window. In the **Profile selection**, the profile or the profile combination for usage elements can be specified. The schematic of the profile located in the selection also appears next to the profile number. When the **Selected profile** is clicked, its colour changes from black to red. The profiles which are already speci-fied and those which are still to be selected are identified in this way.

6) The same selection principle also applies for specifying the profile for the subsystem. During profile selection, all profiles used in this combination are displayed here. In the case of the subsystem, the profile already selected is marked in yellow. This identifies immediately where a moving element is located within the frame to be calculated.

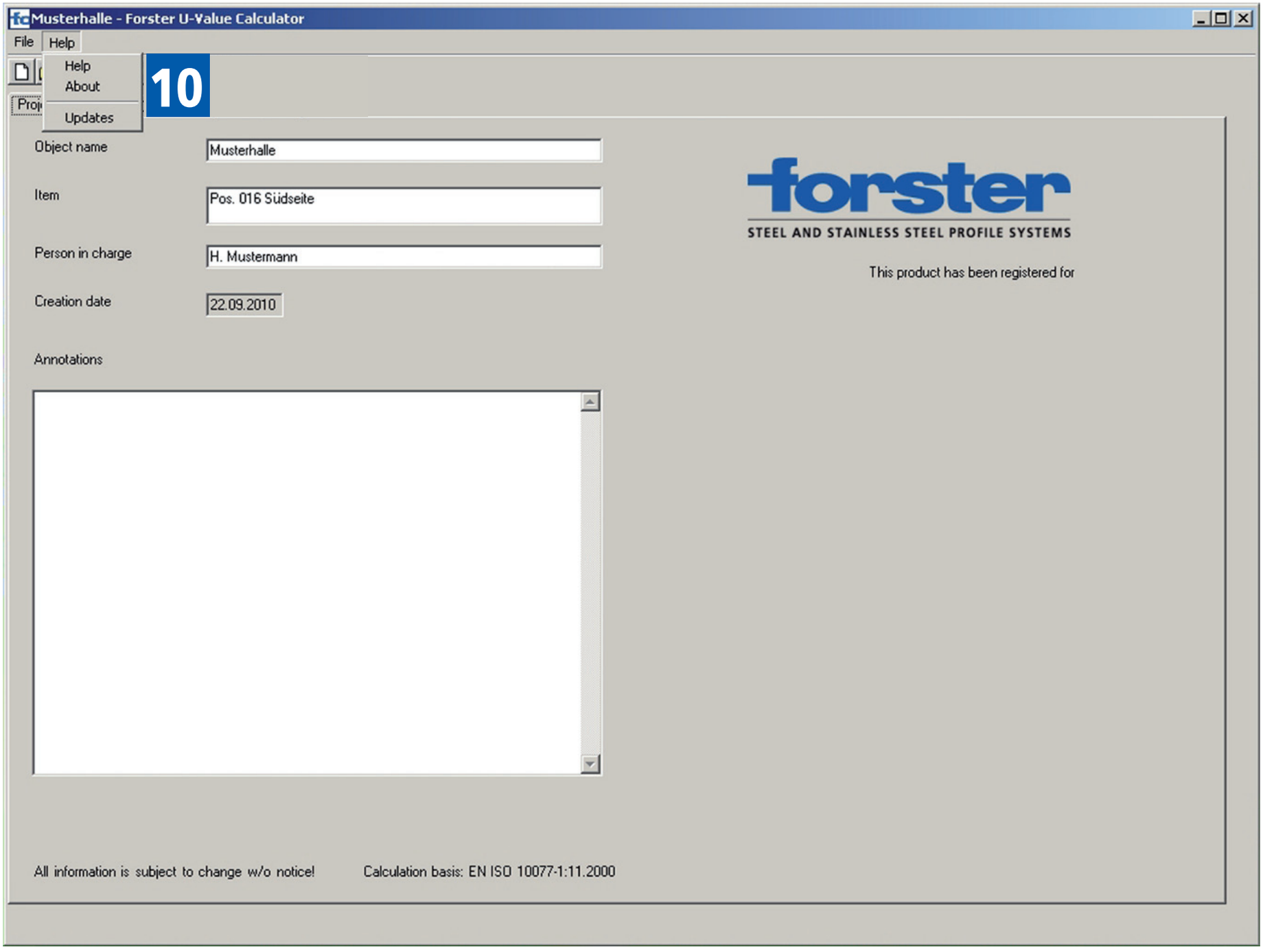
7) The **Result** window shows all U_f-values of individual profiles and profile combinations that are already specified and selected in the element. These windows are used for additional information and checking purposes.

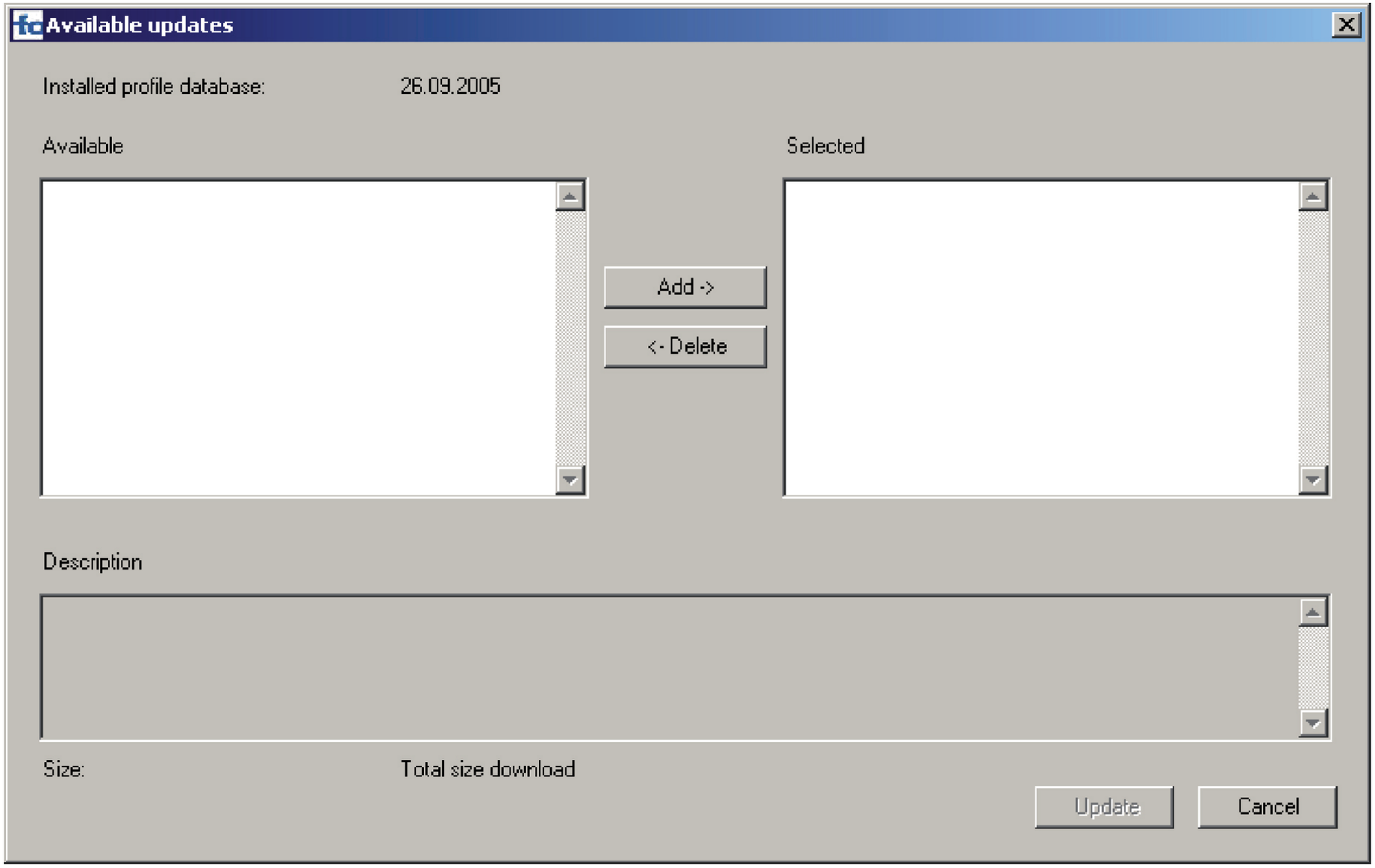

Musterhalle - Forster U-Value Calculator
File Help
Project description
Edit element
Select profile
Profile selection
Material
Steel
Selected profile
Profile 1
530.800
Profile 2
531.732
Profile 3
76.851
The different profiles are described from left to right or from top to bottom.
Result
Name
Value
76.852 (WA)
2.48 W/(m²K)
76.852
1.9 W/(m²K)
76.852 / 531.732 / 530.
3.13 W/(m²K)
76.851 / 531.732 / 530.
3.09 W/(m²K)
Total 'U'
1.1
W/(m²K)
8
Legend: profile colour
Defined
Undefined
Marked
Subsystem defined
Subsystem undefined
All information is subject to change w/o notice!
Calculation basis: EN ISO 10077-1:11.2000

8) Once all profiles in the element are selected and specified, the entire U-value of the element appears in the **Total U-value** window. The result of this calculation can be printed in one of two ways.


Musterhalle - Forster U-Value Calculator
File
Help
New element Ctrl+N
New from template Ctrl+F
Open Ctrl+O
Save Ctrl+S
Save as ... Ctrl+A
Save as template Ctrl+M
Print Ctrl+P
Print details
Close Ctrl+Q
9
usterhalle
os. 016 Südseite
. Mustermann
Creation date
22.09.2010
Annotations
forster
STEEL AND STAINLESS STEEL PROFILE SYSTEMS
This product has been registered for
All information is subject to change w/o notice!
Calculation basis: EN ISO 10077-1:11.2000

9) Left-clicking on **File** brings up different memory functions. **Save** and **Save As** saves the file. The default path is the **masterElements** folder. The **Save as template** function enables a personal library to be created with template types. These template types can be viewed and opened in **New from template**.


Musterhalle - Forster U-Value Calculator
File
Help
Help
About
Updates
10
Object name
Musterhalle
Item
Pos. 016 Südseite
Person in charge
H. Mustermann
Creation date
22.09.2010
Annotations
forster
STEEL AND STAINLESS STEEL PROFILE SYSTEMS
This product has been registered for
All information is subject to change w/o notice!
Calculation basis: EN ISO 10077-1:11.2000



10) Left-clicking on **Help** brings up the **Updates** function selection. All updates are displayed under **Available**. The **Add** and **Remove** buttons can be used to select updates. This function is used to update both program and data from the database.

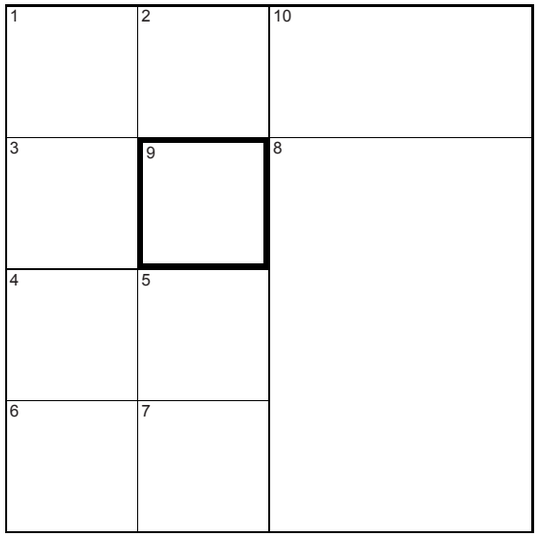
U-value calculation

Project description

Object name	Musterhalle
Item	Pos. 016 Südseite
Person in charge	H. Mustermann
Creation date	22.09.2010

Project description

Width	4000 mm
Height	4000 mm



Component overview

	U-frame Ø / ψ Ø	Area / length	Percent of area
Profiles	2.296 W/(m²K)	1.75 m²	11 %
Infills (glazing/panel)	0.6 W/(m²K)	14.25 m²	89 %
Spacers	0.08 W/(mK)	50.79 m	

Resultant heat transfer

Calculation basis: EN ISO 10077-1:11.2000

U-total 1.1 W/(m²K)

Annotations

Please note:
This preliminary thermal calculation is based on tested and calculated profiles. Legal claims cannot be derived from using the calculation. The contractor in charge has to check any data determined for correctness, or have them checked by an approved building physics expert.

forster
STEEL AND STAINLESS STEEL PROFILE SYSTEMS

Forster Profile systems
P.O. Box 400
CH-9320 Arbon

Telephone +41 71 447 41 41
Fax +41 71 447 44 78
www.forster-profile.ch

Once the values have been calculated, the file can be printed on one page. As well as a diagram, all key data for the calculated element are displayed here. Besides the calculated overall U-value, the project description (data on project and element), the overview of the components (U_f-value for the frame, filling and spacers, data on area and profile length) of the element is also displayed here.
As well as this "simple" output, each individual field of the element can be output on a separate page. This enables individual fields to be analysed and evaluated.

Forster Profilsysteme AG | CH-9320 Arbon
info@forster.ch | www.forster-profile.ch

908393/2000/10-10