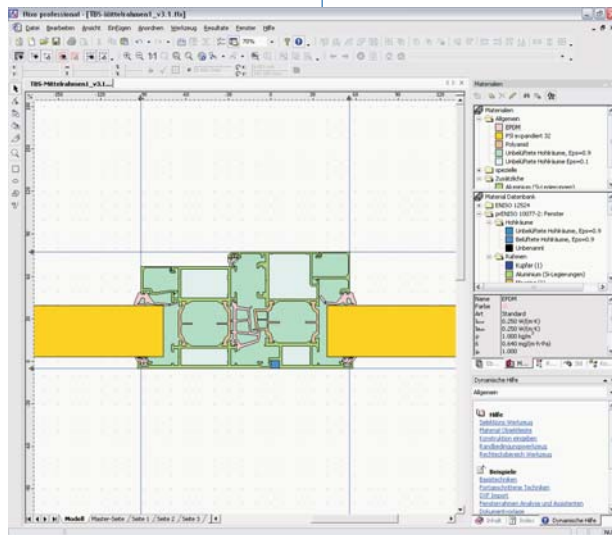
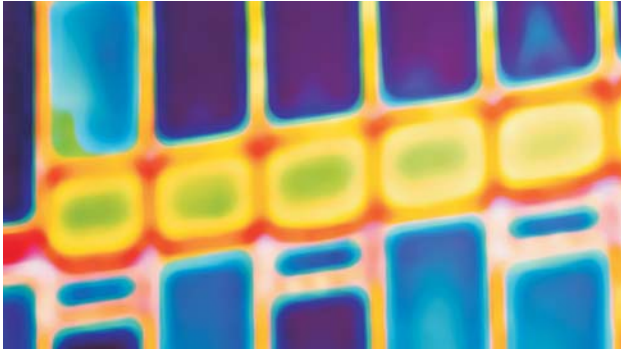


flixo professional

The thermal analysis and reporting program



flixo produces thermal-hygro analyses of the component and façade cross-sections, and it also calculates frame U-values according to prEN ISO 10077-2. It has been developed by architects, computer scientists and physicists, for architects, planners, energy consultants and building physicists.

For example, **flixo** can detect thermal bridges in the planning stage that then can be eliminated through design changes. Consequently, building failures can be prevented and heating energy can also be saved.

A further use of **flixo** is relevant to hygro-analysis, with which, for example, temperature minima on the internal surfaces of a cross-section can be determined in order to avoid the formation of condensed water or mildew.

flixo analyzes two-dimensional component nodes for steady state boundary conditions (room temperatures and thermal transfer coefficients).

Features

Computation of temperatures with the finite element method (triangular elements); iterative solution of the linear equation system using an optimized, conjugated gradient technique.

Automatic grid refinement at critical points.

Computation of equivalent thermal conductivities for air cavities, automatic subdivision of air cavities and automatic placement of boundary conditions according to EN ISO 10077-2.

Validated thermal bridge program according to EN ISO 10211-1 and 10077-2 standards.

Unrestricted number of nodal temperatures (depending on the hardware used).

Consideration of materials with orthotropic material properties.

Intelligent cursor with tooltips for the explanation of workflows

DXF-Import: Finding of smallest two-dimensional elements with assignment of materials. Scaling of construction based on the default size of a freely selected dimension.

Numerous assistants, pre-designed components, integrated and dynamic help, permit one to save time and work faster.

Inputs

flixo is subdivided into a design section and a report section. The physical situation (geometry, boundary conditions, materials) is defined in the design part. The results can be interactively combined in the reports. Elements, which arise in all reports, can be defined in a master report.

The physical situation can either be imported via DXF files or be directly entered and processed with the integrated CAD editor.

The integrated and expandable component library of flixo enables components to be simply transferred using the mouse (drag & drop) into the current design.

The CAD editor/layout editor supports the following familiar concepts:

Layers: Objects can be arranged on various layers and the layers can be selectively visible or hidden, printed and frozen.

Snapping possibilities: Objects can be aligned with various auxiliary objects such as auxiliary lines, grids and special points on adjacent objects.

Associative elements such as local results and isotherms.

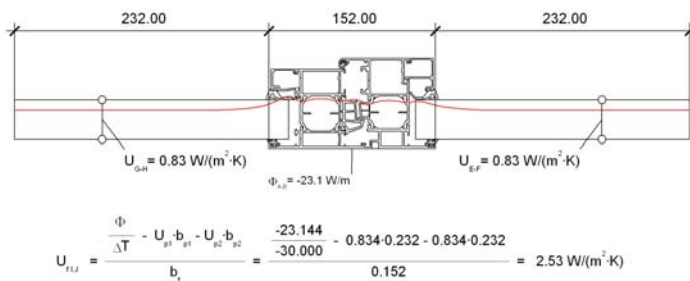
Mouse and keyboard-controlled input.

Geometrical operations such as grouping, merging, cutting, differences between objects.

A material database with more than 1000 materials from various standards (EN ISO 12524, EN ISO 10077-2, EN ISO 673, EN 6946, DIN 4108-4) is available

The creation and use of parametric objects let you generate variations of a single construction quickly and simply.

With user or predefined document templates and embedded fields, you can generate reports tailored to your needs. After successful calculation, the report will be automatically generated.



Resultats

Isotherms and temperature color images of any building detail for qualitative thermal assessment and optimization.

Temperatures at freely determined design points.

Heat flux density at freely determined design points.

Minimum and maximum surface temperatures at freely determined design boundaries and critical room humidities for the assessment of possible mildew formation and condensation problems.

Heat flow at freely determined boundary lines.

Thermal transmission coefficients for quantifying thermal bridging effects: "U-value" (with various boundary conditions to also analyze the critical surface temperature) and the length-related "Ψ-value" (also for models with more than two room temperatures)

Automatic calculation of frame U-values according to pr EN ISO 10077-2

Integration into the MS-Windows environment

Well-known operation and concepts from the MS Office products:

Copy/Cut and Paste as well as Undo/Redo of the last actions.

Different flixo documents can be edited in parallel.

Exchange of flixo data (design details, results) via the clipboard or using drag & drop. For example, results can be integrated directly in a Word document or copied or moved from one design to another.

System requirements

flixo needs 30MB on disk in addition to those resources needed by the operating system. However, the more powerful the machine, the faster complex computations can be carried out.

flixo runs under Windows NT, Windows 2000 and Windows XP.

Contact

Infomind GmbH
Bauphysik
Weberstrasse 10
CH-8004 Zurich
Tel.: +41 (1) 241 24 86
Fax: +41 (1) 241 24 89
info@infomind.ch
http://www.infomind.ch