



WUFI® operates according to international standards and is applied worldwide.



Our Cooperation Partners



Finland



France



Norway



Japan



Poland



New Zealand



Sweden



South Korea



Italy

WUFI® in Standards and Guidelines

Hygrothermal simulations are state-of-the-art. References to standards and guidelines include:

EN 15026: Hygrothermal performance of building components and building elements - Assessment of moisture transfer by numerical simulation.

WTA-Guideline 6-2-01/E: Simulation of Heat and Moisture Transfer (www.wta.de).

ASHRAE Draft Standard 160P: Design Criteria for Moisture Control in Buildings.

WUFI® Seminars

IBP, ORNL and cooperation partners provide seminars for continuous education in hygrothermics and WUFI® application at many locations worldwide.

WUFI® Licenses

A license is required for commercial application of WUFI®. Details can be found on our homepage or by inquiry to one of the following contact persons:

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WUFI® on the Web

Further information and application examples, seminar schedule, etc. can be found on our homepage:

www.WUFI.com
www.WUFI-Forum.com
www.WUFI-Wiki.com

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Hygrothermal Building Envelope and Indoor Climate Simulation



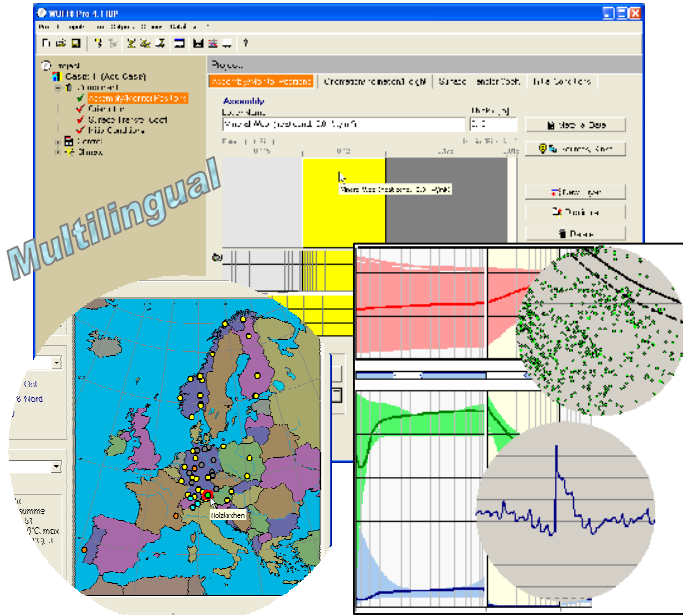
WUFI® PRO, 2D, Plus

Check the hygrothermal performance of your design in compliance with EN 15026.





WUFI[®] Pro



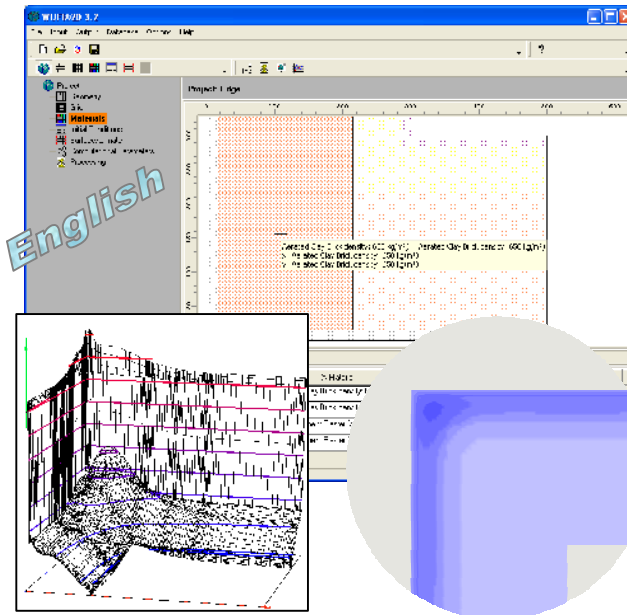
WUFI[®] Pro is the standard tool for the one-dimensional hygrothermal evaluation of building envelopes. Previous methods (e.g. „Glaser“) consider only the risk of condensation under steady state conditions. Important physical phenomena like moisture storage and capillary transport are disregarded. The same is true for relevant climate effects like wind-driven rain and solar radiation.

WUFI[®] Pro calculates the dynamic hygrothermal behavior of building assemblies using real climatic conditions. Thus you can evaluate the performance of your design under any climate and predict:

- drying time of construction moisture
- possible condensation problems
- water absorption due to driving rain
- moisture influence on thermal performance
- long term system behavior or hygrothermal consequences of construction modifications.



WUFI[®] 2D



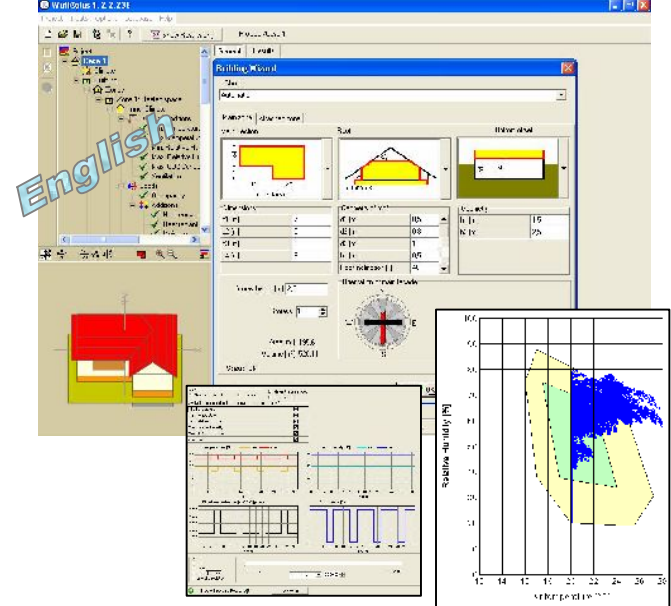
Some constructions cannot be modeled accurately by one-dimensional simulation. In these cases two-dimensional calculations with WUFI[®] 2D should be performed. Application examples are:

- moisture conditions at structural and geometrical thermal bridges.
- timber framed constructions with multiple insulation layers.
- building components with anisotropic materials.

Creating a two-dimensional model, however, is considerably more complex, and the calculation time is much longer than in WUFI[®] Pro. We recommend sufficient experience with WUFI[®] Pro before using WUFI[®] 2D.

Some two-dimensional effects (e.g. heat and moisture exchange in ventilated cavities, rain water penetration) are also implemented in a simplified way in WUFI[®] Pro.

WUFI[®] Plus



WUFI[®] Plus is a new holistic model that considers all hygrothermal interactions between the indoor air and the building envelope in detail. It analyzes the wall, roof and basement components and the indoor conditions with different heating and air-conditioning approaches. The advantage is that it employs the same structure we have used so far for WUFI[®] Pro. Users can become whole building energy and moisture experts at the same time. Application examples are:

- how is the risk of mould growth related to ventilation strategies?
- can moisture buffering interior lining materials help to improve indoor comfort and reduce energy consumption?
- what additional ventilation is necessary to take care of construction moisture or other extraordinary moisture sources?