

Bonn, 28 November 2013

## Assessing windows with a mobile measurement device

New software calculates energy savings

Until now, planners have lacked suitable tools for assessing whether to replace windows when refurbishing buildings. The newly published BINE-Projektinfo brochure “Making well-informed decisions when refurbishing windows” (15/2013) presents the Uwin software program. Uwin determines possible savings when refurbishing windows and facades. The base data for the calculations is provided by a mobile measurement device that measures the thermal insulation value  $U_g$  for the glazing.

In just a few minutes, the Uglass device records the current heat transfer coefficient for the window glass. The process has been developed by scientists at ZAE Bayern and Stuttgart University of Applied Sciences. A measurement sensor with is fixed to the inner and outer panes with suction pumps. The sensor heats the glazing on the one side and measures the increase in temperature on the other side. The thermal insulation value is determined from the change in temperature across time. The measurement device can record U-values for all standard double-and triple-glazed systems. It is currently in the test phase.

The measured thermal insulation value is incorporated into the software calculations along with factors such as the materials, frame size and type of installation. Based on the results, the software assesses the window or the complete facade in terms of their energy efficiency. These values can be compared with those of the desired replacement window. Energy consultants and designers therefore now have a tool available to them that can be helpful both during day-to-day consulting and when making investment decisions.

The BINE Projektinfo brochure, which can be obtained free of charge from the BINE Information Service at FIZ Karlsruhe, is available online at [www.bine.info](http://www.bine.info) or by calling +49 (0)228 92379-0. The brochure cover and additional image material can also be downloaded from the press section in this Web portal.

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