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GLAZED BALCONIES SAVE ENERGY

Glazing in balconies can save huge amounts of energy, according to a study conducted by Tampere University of Technology. The saving on heating costs can amount to as much as 10.7 percent.

The study was carried out in Finland and then compared with a German study. Using field measurements and computer simulations, a comparison was made of energy consumption for glazed and unglazed balconies. The study also examined the impact of the type of balcony, levels of heat insulation and the aspect of the balcony on energy saving. On average, the study showed that glazing in a balcony saved 5.9 percent of heating energy.

The greatest effect on the results comes when the occupier draws input air for the apartment from a glazed balcony. In the best case, the balcony forms an effective windbreak and the temperature in the room off the balcony can then be lowered by a whole degree.

Glazing inset balconies is usually more effective than glazing protruding balconies. Balconies with a southerly aspect save rather more energy than balconies facing other directions, but the savings are still considerable for all types of glazed balcony. The seal provided by the glazing was also studied and it was found that larger gaps had hardly any meaningful impact on the energy savings.

The Finnish results were then compared with prefabricated buildings in Berlin that were comparable with the Finnish buildings in the study. In Berlin, balcony glazing brought savings on heat energy of between 5.6 percent and 12 percent. Buildings with balconies facing south and that drew their input air via the balcony benefitted most from the glazing. The saving on heating energy amounted to 8.2 percent on average, even more than the figure in Finland.

The results of the study, published in Tampere, show that glazing in balconies makes sound financial sense, particularly in all tower blocks from the 1960s and 1970s. In addition to the energy savings, the glazing cuts wear and tear on the balcony, which can delay the need for balcony refurbishment. On the other hand, the glazing itself will require some renovation work over time.