



SEK - STANDARD SOLUTIONS FOR ENERGY EFFICIENT HEATING AND COOLING WITH HEAT PUMPS

Annual Report 2008

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SUMMARY

Cooling in residential buildings is not very common yet in Switzerland. However market and research show some activities to integrate cooling options into building technology. The aim of the project is to define standard systems for heating and cooling with heat pumps applied to different low energy buildings and the deduction of design guidelines.

During the reporting period work has been carried out in the field of literature and market survey, preparation and implementing of a field measurement and in the field of simulations and a calculation method. In the supplementary market survey the heat pump units and configurations have been updated. With a literature review the used and available calculation and simulation models have been examined and current market developments have been put together with planning practice. A residential building in the canton St. Gallen has been defined by our industry partner and instrumented field measurement this year. In 2008 the development of the simulation models continued with a validation of the building model and an enhancement of the HVAC models according to the systems identified in the annual report in 2007.

The calculation method derived in the SFOE-Project "Calculation method for the seasonal performance of heat pump compact units and validation" has been published as European standard EN 15316-4-2 in September 2008. Due to the delayed begin of the field measurement in 2008 the focus was shifted from the derivation of design guidelines to the practical experience in the field.