

# Case Study

April 2016



## Huf Haus, Germany

Intelligent sensor system guarantees high air quality

## Healthy air thanks to Healthbox

The better the insulation and the more air-tight the building envelope, the more important it is to keep control of the air quality in the living areas. In energy-efficient and thus airtight buildings, the humidity, odours, CO<sub>2</sub> and VOC (volatile organic compounds) may reach higher concentrations. This can lead to fatigue, problems with concentration or the formation of mould.

### Small, affordable and smart

With the Healthbox, RENSON is launching a small and affordable system for single-family homes or private homes. The demand-controlled exhaust device is combined by default with Invisivent AKD ventilation systems which ensure the supply of fresh air. The Healthbox, with its sensors, simultaneously ensures the removal of contaminated air. Ultimately, as demonstrated by a team of researchers at the Fraunhofer Institute for Building Physics in Stuttgart, Germany, the Healthbox has approximately the same energy efficiency as a complex system with heat recovery. In a Huf Haus building project in Montabaur with 44 residential units, the installation of a Healthbox, including all necessary channels, takes no more than one day to complete. And when the system is put into operation, you need barely seven minutes on average to automatically calibrate the system with its intelligent controls and sensors. Thanks to its construction depth of only 18 cm, the installation in the Huf building in Montabaur was built into the lowered ceiling.

### Pioneer in the sector of prefabricated housing

For years now, Huf-Haus has been building ventilation systems into buildings. The sensor-controlled Healthbox is combined by default with RENSON air supply systems which are integrated into the windows. All this guarantees high living comfort in the familiar Huf style.

*Georg Huf: "We saw that the RENSON system had a demand-controlled operation, an approach that was to our taste. Supplying fresh air through systems integrated into windows and discharging polluted air through a ventilation system that is controlled by sensors, is a technology that has proven its worth in the past. Our homes are also becoming ever more airtight. I have become convinced that this technology will be indispensable in the future."*



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Creating healthy spaces