

Vargbroskolan is heated by body heat

Vargbroskolan in the municipality of Storfors is not an ordinary school. It is the only one of its kind. The school was finished in January of 2008 and is built with the latest environmental- and energy technology. The building is super insulated, very energy-saving and ventilated by hybrid ventilation.

300 students in the intermediate- and senior levels of the comprehensive school daily stay in the building, whose total area is about 4000 square meters.

The premises are airy with windows even indoors into every classroom. No humming fans are heard as the fan system is underground in long culverts, which extend below the school.

The air is taken in from a small pavilion in the middle of the schoolyard and then led through the underground concrete culverts for nearly 100 meters before it is let into the classroom.

There are two ways to benefit from this: in the winter the air is heated underground before it reaches the classrooms and in the summer it is cooled down.

Furthermore, assisting fans are placed underground which makes the system almost noiseless.

The 300 students and their teachers partly heat the school with their own body heat.

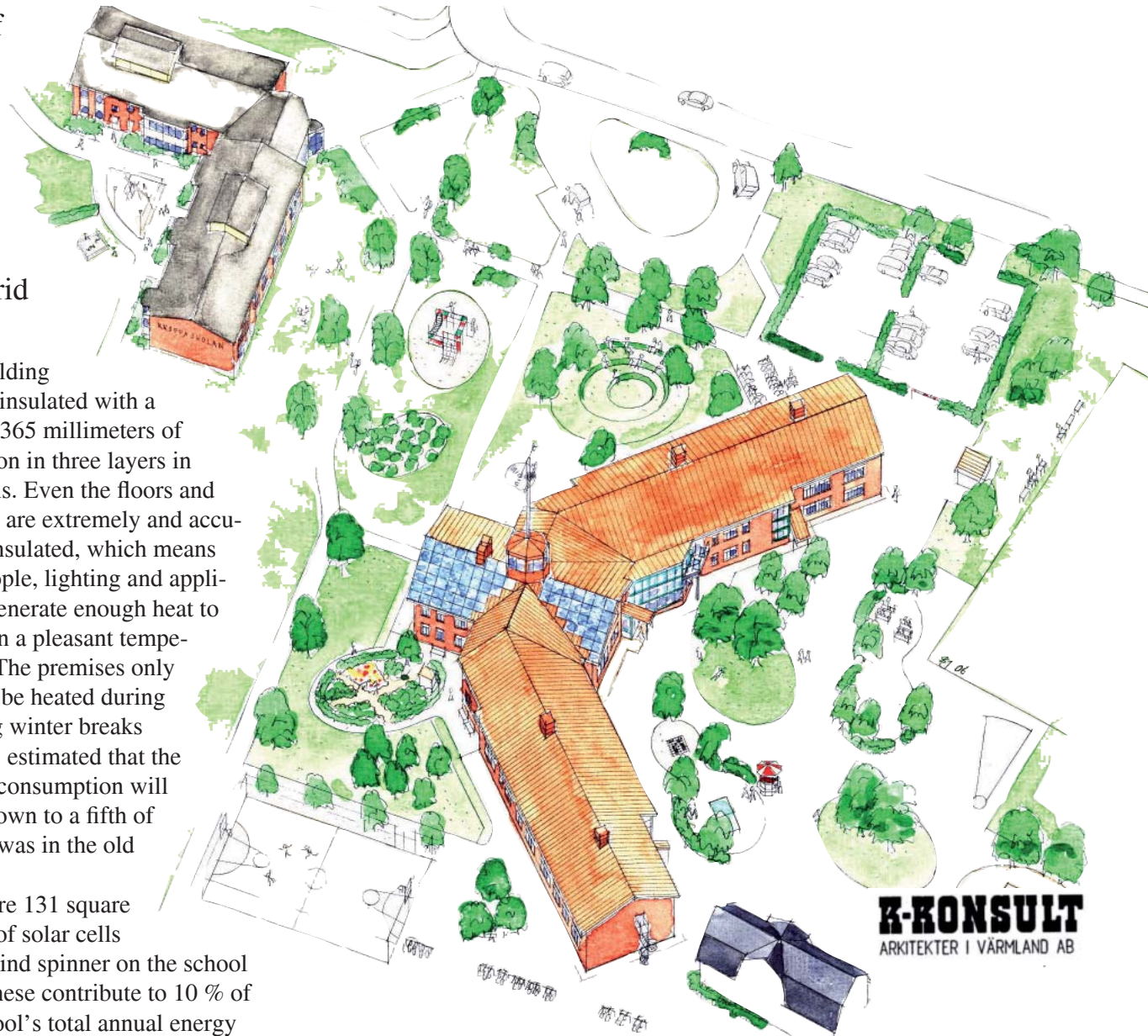
The building is superinsulated with a total of 365 millimeters of insulation in three layers in the walls. Even the floors and ceilings are extremely and accurately insulated, which means that people, lighting and appliances generate enough heat to maintain a pleasant temperature. The premises only need to be heated during the long winter breaks and it is estimated that the energy consumption will come down to a fifth of what it was in the old school.

There are 131 square meters of solar cells and a wind spinner on the school roof. These contribute to 10 % of the school's total annual energy need. The solar cells will generate energy that besides the investment will not cost the school anything for its estimated lifetime of 35 years. There is a smaller educational

unit connected to the outside solar collector in the glassed-in "green room". This makes it possible for the students to study solar energy and wind power and follow the production and consumption of energy in an educational way. The students will also be able to perform laboratory experiments.

But it is not only the technical conditions that have been thought of. The teachers have been highly involved in shaping what the municipality wants to make the "best school in the region". Air and space are essential ideas and in the school centre there is a student café and a lot of space for for example student exhibitions. The aesthetic subjects

are placed in the centre, in the heart of the house, and the entire house is designed to enable the modern pedagogy that is carried out at the school. In addition, the corridors are light and clean since the students walk around in their socks or slippers. The entire construction of the school has cost about 66 million SEK. Storfors received 7,2 million SEK from the Department of Nature Conservation through a subsidy called "Klimbidrag" for the superinsulation combined with the hybrid ventilation. The municipality also received a subsidy from IVL/The Department of Energy for measuring and evaluating for two years.



It is possible to play ball games in the big schoolyard.



The cafeteria is located in the main body of the house and is a natural meeting place for the 300 students.



The classrooms are light and airy with windows that face the corridors.

