

It's a simple formula: solution-oriented customers need solution-oriented suppliers. At its site in the Hungarian city of Kecskemét, the Hilti company produces chisels, drills and diamond drilling core bits. When it decided to extend its production facilities, it turned to Hoval to provide everything from a single source: this included ventilation and heating systems as well as solar collectors for water heating. Now, the complete system that Hoval has created saves energy, time and money.



Hoval RoofVent® LKW. Supply and extract air handling unit with energy recovery.

Just like Hoval, Hilti has its roots in Liechtenstein – but this isn't the only thing the two companies have in common. They also share a similar corporate philosophy which believes that employees who are enthusiastic about the technology they are working with, and who focus on the needs of the customer, are the key to creating products and systems that frequently surpass customers' expectations.

And the Kecskemét site lives by this principle too. When it took the decision to extend its production facilities, established in 1989, its intention from the very start was to recover heat gains from the production plants and use these for heating purposes. This meant that it would only be necessary to use a heating boiler for covering peak loads. As well as this, the company set out a plan to heat water using solar energy, something that would reduce the amount of required heat output even further. For the planner responsible for the project, working in conjunction with Thermotrade (Hoval's long-standing sales partner in Hungary), opened up the possibility of lowering the original output from 1700 kW to 900 kW – more than enough, according to the thorough calculations that were made, to cover the facilities, even once they had been extended from 2500 to 5200 m². The result is that the site now boasts a Hoval

UltraGas® (900D) condensing boiler – the D stands for "double" to indicate its double-boiler design.

A boiler that does more than just heating

On average, the standard utilisation ratio of the Hoval UltraGas® condensing boiler reaches an impressive 110% (relative to CV). The appliance also features a built-in Hoval aluFer® heat exchanger, which not only has a finned structure that increases the heat exchanger area five times over, but also efficiently cools the exhaust gases flowing through it until they reach condensation point. In turn, the energy that is released as a result can be supplied to



Hoval water heating system using solar energy.

the heating process. For large installations like this one, an UltraGas with dual cascade arrangement is the perfect choice for system integration. Its large water capacity allows for a simple hydraulic connection as well as minimum power consumption, and does away with the need for primary pumps. Its use of just one flue gas conduit for both boilers also makes it extremely easy to work with during extension and renovation activities. Meanwhile, the Top-Tronic® T control feature deals with the task of cascading. And this entire system comes from a single source – a top-class technical solution from Hoval.

30 collectors on the roof

The roof of Hilti's Kecskemét plant now also features 30 solar collectors comprising a total area of 75 m². Water is heated using the energy that these supply. The solar energy itself is stored in buffer tanks, which cover hot water demand.

Making savings through ventilation

The Kecskemét plant extension was carried out in two stages, one involving a 600 m² building for product tests and the other a 3000 m² production hall. The facilities also offer 1600 m² of space for logistics and administration.

Seven Hoval RoofVent® LKW-9 roof ventilation units have been installed for the purpose of ventilating, heating and cooling the new halls. In the case of one hall, erected in the 1990s, the four RoofVent® units it features have been upgraded to LKW types and fitted with state-of-the-art controllers, thus enabling them to remain in use. The ventilation units reduce the temperature stratification in the room, which minimises heat losses via the roof. What is more, they can each be controlled individually, further reducing energy consumption. As a result, this decentralised Hoval RoofVent® roof ventilation system, which does not include any unwieldy air ducts at all, can boast energy-saving credentials that are far superior to its bulky, centralised counterparts. And to top it all off, maintenance can be performed on the units during

production. Since Hoval's complete solution was identified as the right choice for the job, the system has now been installed. Not only does it surpass standard levels of energy efficiency, but the word from employees at Hilti's Kecskemét site is that they are thrilled with the new installation. "We're working in a healthy environment," they state – and no doubt mean this in more ways than one. ■

Long-term benefits

"Our integral solutions make us stand out from the rest and have an impact on price: our customers benefit from not only lower procurement costs, but also lower operating costs.

What is more, the fact that they have just one contact for the entire project makes their lives much easier. With us, scheduling doesn't have to be a headache either – and nor does maintenance work further down the line. Our service technicians are extremely well versed in every area of their work. This keeps the amount of time and effort the customer has to spend to a minimum."

Remo Bettinaglio,
Area Manager for Hoval sales partners
in eastern and northern Europe