# DEOS AG Case Study

## OPEN*balance* in swimming pools


**De Swaneburg, Coevorden (NED)**

The Dutch System Partner DELTECS Control Systems equipped the municipal swimming pool De Swaneburg with OPENbalance the new cost control system for ventilation facilities developed by DEOS control systems GmbH.

De Swaneburg is a complex sports center with an indoor swimming pool as well as a large sports hall in the municipality Coevorden in the Dutch province Drenthe.

## Optimum climatic conditions - The cost control system for ventilation facilities

The challenge of this project was to find an efficient solution which guarantees permanent savings on energy and operating costs. Because of the high costs for the extensive redevelopment of the old building structure, the management of the swimming pool has to forego one part of the annual budget contributed by the municipality from the year 2015.

That is why the swimming pool was equipped with a perfect efficiency solution which ensures efficient use of energy while creating a comfortable climate for the visitors: OPEN*balance*. This system visualizes all operating conditions and costs in real-time. The air flow could be reduced considerably from 6 times per hour to only 1.25 times per hour. This does not only saves energy but reduces also the chlorine consumption and the pools have no longer to be refilled with water regularly.

The rapid success of the project is connected with the short installation time of the components and the immediate achieved results.

Due to OPEN*balance* the air quality has percetibly improved and the energy consumption has been reduced by 25%.

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Technology for intelligent buildings

# DEOS AG Fallstudie

## OPEN*balance* in Schwimmbädern

As OPEN*balance* also works with standard components, both the integrated air intake ducts on ceiling and the extraction system on the bottom could be preserved. No special air processing systems were needed so that no additional costs arose. The mounted fans simply had to be equipped with frequency controllers so that a continuous regulation of speed will be enabled.

OPEN*balance* continuously measures all operating parameters of the energy supply in the ventilations ducts as well as in the rooms and compares it with the target area values saved in the system. As a result, each air flap is ideally set and the parameters temperature, humidity and air quality are balanced so that the most cost-effective operating point within the system's target area is achieved with the least amount of energy – while ensuring the ideal temperature.

Because of the mixture of different air volume the supplied air can perfectly spread out over the room so that diffuse ventilation arises. Since it is almost never necessary to ventilate at maximum power high, air speed is avoided so that complaints about draft fail to appear.

Due to OPEN*balance* the air quality and with it the comfort of the visitors and employees have considerably improved. Furthermore, the energy consumption has decreased by 25%, whereby the operating costs have significantly declined. Therefore, the renovation has paid for the management of the swimming pool because the cut of the annual budget can be offset by the cost savings.

This ensures nothing stands in the way of having a relaxed day in the swimming paradise.

### Technical data

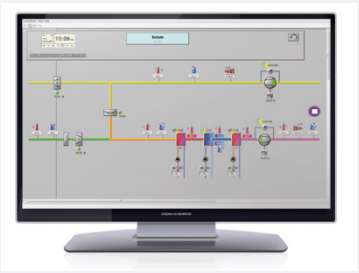
| | |
|---|---|
| Completion | August 2014 |
| Application | Ventilation |
| DEOS Software | OPEN*balance* |

### Our system partner

DELTECS Control Systems

DELTECS Control Systems is a Dutch company established in Rheden.
Although DELTECS is a still young business it has many years of experience in the fields of measurement, control and installation technology.

### Our product



OPEN*balance* balances the parameters temperature, humidity and air volume flow so that the most cost-effective operating point and at the same time a comfortable climate can be achieved at minimum energy consumption.

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