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Pressurisation & Water Quality > Balancing & Control > Thermostatic Control

ENGINEERING ADVANTAGE



Immediate results prove the benefits of know-how



FACTS

Project Type:	Office building renovation
Location:	Százhalombatta, Hungary
Consultant:	Kálmán és Társa
Contractor:	Kalotherm
Owner:	MOL Hungarian Oil and Gas Corporation
Customer Investment:	€ 15,000
Payback Time:	5 years
Products: Balancing and Control:	STAD, STAF and STAP
Thermostatic Control:	Standard Heimeier Thermostatic Valve and Thermostatic Head K

When MOL Hungarian Oil and Gas corporation wanted to increase HVAC efficiency systems in four buildings, TA Hydronics proved just how big a difference balancing know-how could make.

Using one building to demonstrate the benefits, TA Hydronics delivered energy savings of over 27% in the first heating season.

At a time when hydronic balancing was a relatively new concept in Hungary, TA Hydronics began talking to MOL, one of the biggest energy companies in Central and Eastern Europe, about the energy savings a well-balanced system could generate.

Intrigued by the potential benefits and impressed by TA Hydronics' know-how and track record of delivering integrated solutions, MOL asked TA Hydronics to help make sure that a HVAC renovation project in one of four office buildings in Százhalombatta would result in a well-balanced, energy-efficient system.

The challenge

The entire system had to be renovated and TA Hydronics had to deliver a new hydronic solution that would deliver significant energy savings and better room temperature control.

The savings had to be big enough to completely convince the customer of the benefits of TA Hydronics' balancing method – and win the contract to balance the other three buildings' systems too.

The solution

TA Hydronics worked closely with the HVAC designer from the outset of the project, providing advice from the initial design phase all the way to the system balancing process.

The TA Hydronics team provided full design support, including technical advice and assistance via TA Select with selecting and sizing new balancing valves and differential pressure controllers. The team also helped define where the components should be positioned in the system to ensure accurate balancing.

In addition, new thermostatic radiator valves were selected and installed to enable precise temperature control in each room.

Finally, TA Hydronics provided installation support to ensure that new components were installed correctly and assisted in the commissioning phase with proven balancing expertise. The TA Hydronics team stayed involved until the very end of the project to ensure trouble-free operation from the minute the system was taken into use.

The outcome

The renovated system delivered outstanding efficiency and increased indoor climate comfort right from the very first heating season. As one of the other buildings in the complex was comparable in size, orientation and system design as the renovated building, MOL was able to evaluate the savings gained by comparing the energy consumption of the two buildings.

The result? Energy savings of over 27% in the renovated building.

Comparison of energy consumption, October 2002 – April 2003

	Building size	Energy consumption
Office Building A: (after renovation)	9696 m ³	584,3 GJ
Office Building B:	11053 m ³	921,6 GJ

With this evidence in hand, MOL recognised the benefits TA Hydronics' know-how could bring and implemented the same type of solution in the system renovations of the three other buildings in the complex – delivering greater savings and increased comfort for even more people.