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Case Grundfos Mixit

 **Economical system operation with remote monitoring**

Continuous system monitoring is essential for heat contracting providers in order to ensure efficient operation. Mixing loops play a key role here, as they have considerable influence on the economic efficiency and CO2 footprint of the system. German energy contracting provider OVE (Bad Rothenfelde) relies on the Grundfos Mixit all-in-one mixing loop solution, which offers comprehensive options for remote monitoring via cloud. The Mixit control unit is fully equipped with valves, sensors, an integrated stepper motor and intelligent temperature control, and it communicates wirelessly with the secondary circuit pump via radio interface.

A key advantage of the solution is the access to over 100 data points from mixer and pump. The current Mixit models are equipped with an on-board RJ45 interface, which can be used to access these data from anywhere using the Grundfos BuildingConnect cloud solution. At OVE, the systems are monitored from the control room at the company's headquarters. "With the cloud solution, we only need an active internet connection and have visualized access to all data points of the mixing loop via the BuildingConnect dashboard," explains Alexander Grafe, Technical Manager at OVE. "This is comparable to other platforms that we use, for example, to control our CHP units or heat pumps. For a mixing loop, however, such a solution is exceptional and very useful."

Easy access and comprehensive control make the solution unique. "For us as a contracting company, it is important to be able to constantly monitor the operation of the mixing loop and optimize it if necessary," says Alexander Grafe. "A traditional loop with individual components requires a BMS for this. This means considerable costs and effort, but in the end you can only control the mixer. With the Grundfos solution, we have much more data points under control, and we also have access to the pump operation. For example, we can continuously monitor the operating times, volume flow, speed and energy consumption of the pump. The bottom line is that the solution makes it very easy to precisely adjust the flow and find the optimum Delta T (spread of flow and return temperature) for efficient operation."

*(A more comprehensive manuscript of this case will be available on request)*

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