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Case Grundfos Mixit

Efficient heat distribution via cloud control

With an often heterogeneous stock of buildings and a wide variety of consumers, hospitals place high demands on efficient heating operation. The example of a modernization project at German Bergmannsheil und Kinderklinik Buer (Gelsenkirchen) shows the role played by intelligent control of mixing loops. "Large parts of our heat distribution system were still from the 1970s," explains Gerrit Neugebauer, Technical Manager at the hospital. "We could only adjust the heat centrally via the heat exchangers. As a result, we had to supply all heating loops with a flow temperature of around 75 degrees."

The heat distribution system of the hospital was modernized during summer of 2022. Key to the project was installing Grundfos Mixit in all heating loops. Mixit is an all-in-one mixing loop solution with all the necessary components already integrated in the control unit. Key advantage is the intelligent control. Mixer and secondary circuit pump provide more than 100 data points that can be used to optimize the operation of the system. The hospital uses Grundfos BuildingConnect (GBC) for this. The cloud platform provides access to all data from the mixer and pump as well as advanced possibilities to control and optimize operation even without a BMS. The Mixit control unit connects to BuildingConnect via its integrated Ethernet interface.

"We don't have an overall BMS for heating and cooling, but only individual control technologies for the different systems," says Gerrit Neugebauer. "We opted for BuildingConnect because it requires little effort, offers more extensive options for monitoring and control and, as a cloud solution, can be handled independent of location."

The individual control of each heating loop opens up considerable savings potential. "With the old heat distribution system, we never knew exactly where we were reaching which temperature and where which quantities of heat were being consumed," says Gerrit Neugebauer. "With the data that BuildingConnect provides us with, we can allocate the heat quantities to different



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consumers. This is very helpful both for energy savings and for internal cost transparency. Before the modernization, we needed a flow temperature of almost 75 degrees, today we manage with around 10 degrees less. We can already say that we are saving at least 20 percent of heat with the new heat distribution system."

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

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