



# CASE STUDY

## INDUSTRY: HEALTHCARE



**CUSTOMER:** Karlsruhe Hospital

**LOCATION:** Karlsruhe, Germany

**BACKGROUND:** Founded in 1907, Karlsruhe Hospital has experienced tremendous growth in patient and staff volumes over the past century; requiring it to continually expand its campus footprint. Previously, Armstrong International installed a duplex Flo-Rite Temp® package to provide domestic hot water for all buildings on Karlsruhe Hospital's campus. While the Flo-Rite Temp® solution was more than adequate at the time, the hospital's significant growth meant that the single location in the boiler house could no longer handle the capacity required. The hospital often found it difficult to regulate the level of flow and temperature of the water to the buildings. The hospital also had issues with supplying enough hot water to where it was most needed. Currently, Karlsruhe Hospital provides over 1,600 beds and has over 4,300 employees.

**SCOPE OF WORK:** Due to the performance and satisfaction with the Flo-Rite Temp®, Karlsruhe Hospital turned to Armstrong when it needed to extend its hot water supply capability. As a result, the hospital developed a long term plan to install individual hot water systems in other buildings to provide closer geographical coverage and improve the regulation and distribution of water with more certainty at the point of use.

Armstrong recommended a Digital-Flo® hot water system combined with an instantaneous heat exchanger and digital control technology of The Brain® Digital Recirculation Valve to deliver excellent flow control and precise hot water temperatures within  $\pm 2^{\circ}\text{F}$  ( $\pm 1^{\circ}\text{C}$ ) at the delivery point. The Brain® can be operated remotely through the building automation system via Modbus®. Temperatures can also be automatically set between 80°F (27°C) and 158°F (70°C).

**BENEFITS:** The Digital-Flo® heat exchanger package consistently delivers hot water at required temperatures while saving energy. Despite the growth of the hospital's campus, Karlsruhe Hospital has also recognized significant energy savings due to the efficiency of the new system. Karlsruhe Hospital's expectations and demands have been fully satisfied by Armstrong's digital hot water solution.

