



Digital Hot Water Innovation

Customer: Marriott

Location: Aberdeen, United Kingdom

Problem: The newly built Marriott Courtyard hotel in Aberdeen opened in late 2013, and required a superior, more efficient hot water system compared to systems normally found in similar hotels. Typical hot water systems produce hot water in a buffer tank using boiler water through a heat exchanger and a primary three port valve linked to a temperature sensor and control panel. These systems can cause temperature variations that could potentially create an uncomfortable showering experience at a minimum, or lead to scalding in the extreme. To avoid potential scalding and to maintain precise water temperature control, The Brain® Model DRV80 was installed between the buffer tank and the shower supply line.



Scope of Work: Marriott International has selected The Brain® Model DRV80 Digital Recirculating Valve from Armstrong International, as its corporate standard domestic hot water temperature control device for all Marriott branded hotels. With The Brain®, Marriott provides excellent guest comfort, safety and satisfaction by delivering domestic hot water maintained at a constant temperature of 125°F (52°C) with no fluctuations.

Benefits: The digital technology of The Brain® provides greater temperature control accuracy within $\pm 2^\circ\text{F}$ ($\pm 1^\circ\text{C}$) at point of delivery to ensure the most comfortable showering conditions for Marriott's guests. The Brain® can be directly connected to a Building Automation System (BAS) or Brainscan®, Armstrong's web-based software to monitor and report the condition of the hot water system. The Brain® features an automatic shut-off of hot water in the event of electrical power failure or a high temperature alarm. The valve outlet temperature can be set between 80°F (27°C) and 158°F (70°C) and is tamper-proof. A built-in disinfection mode within the valve allows easy management of a thermal disinfection regime.