**New drinking water measurement valve using ultrasound**

Two new valve series – BOA-Control EKB and BOA-Control IMS EKB – will be unveiled to interested specialists by KSB SE & Co. KGaA, Frankenthal, Germany, at this year’s ISH trade fair (10 to 15 March). The new valves are destined for use in drinking water supply systems, air-conditioning systems and cooling circuits. They offer shut-off, balancing and measuring functions all in a single valve. This saves both space and money since there is no need to install additional valves and measuring instruments.

The valve series uses ultrasound waves to record the flow rate via transit time difference measurement. The gathered data can either be saved on site using a mobile measuring computer or continuously transferred to a control station via a stationary measuring computer.

Two sensors attached to the valve enable ultrasonic sensor measurement. Unlike in hydraulic differential pressure measurement, the valve and the measuring computer are connected by electric cables. This eliminates leakage and allows the flow rate to be determined while the handwheel is being moved, irrespective of the valve travel positions and minimum differential pressures.

The sensors can be attached in two different ways. BOA-Control EKB is suitable for mobile ultrasound measurement, and the sensors are attached to the valve body via a magnetic connector only if required. This allows the flow rate to be consecutively measured on any number of valves using a BOATRONIC MS measuring computer and a set of sensors.

An alternative is the BOA-Control IMS EKB variant with sensors permanently connected to the valve body. So in addition to a mobile measurement set-up using BOATRONIC MS, permanent measurement with the help of the BOATRONIC MS-420 measuring computer is possible. The computer continuously transmits the flow rate and temperature values via a 4 - 20 mA signal to a higher-level system. This solution requires no additional measuring instrument to be installed in the pipe. Combined with an intelligent electric actuator, the valve can also be used as a fully automatic control and measurement unit.

Valve sizes DN 15-100 are DIN-DVGW-approved for drinking water in accordance with DIN 3546-1. The elastomers and plastic parts in contact with the fluid handled and the (EKB) body coating comply with the KTW recommendations.

The valves also satisfy the safety requirements of Annex I of the European Pressure Equipment Directive 2014/68/EU (PED) for fluids in Group 2.

Photo: By using ultrasonic sensors, BOA-Control EKB and BOA-Control IMS EKB offer shut-off, balancing and measuring functions all in a single valve. © KSB SE & Co. KGaA, Frankenthal