



# MULTICAL® 601 & ULTRAFLOW® 14 Cooling

- Moisture resistant flowpart
- Ultrasonic flow sensor
- Large dynamic range
- Exceptionally accurate
- Longevity
- 24 VAC or 10 years' battery supply
- Data logging for 460 days, 36 months and 15 years
- Room for two extra plug-in modules
  - Top module: Clock back-up, CE+CV outputs and M-Bus
  - Base module: M-Bus, LonWorks and pulse inputs for electricity and water meters

## APPLICATION

MULTICAL® 601 and ULTRAFLOW® 14 are used for measurement of cooling in all water based plants with flow temperatures from 2°C to 50°C and with ULTRAFLOW® 14 between qp 1.5 m³/h and qp 40 m³/h.

The meter is simple to install, read and test. MULTICAL® 601 and ULTRAFLOW® 14 contributes to keeping the annual operating costs at a minimum with its unique combination of high measuring accuracy and long lifetime. MULTICAL® 601 receives volume pulses from the connected ULTRAFLOW® 14 and calculates the energy for every pre-determined water volume. The energy calculation includes temperature mea-

surements in flow and return as well as correction for density and heat content according to EN 1434.

MULTICAL® 601 and ULTRAFLOW® 14 can be supplied by either battery or 24 VAC.

MULTICAL® 601 can be supplied with two internal modules – a top module with clock backup, pulse outputs or M-Bus and a base module with M-Bus or LonWorks. Furthermore, the base module includes two additional pulse inputs for connection of water and electricity meters, making it possible to collect all consumption data with one single automatic data reading.

ULTRAFLOW® 14 is a static flow sen-

sor based on the ultrasonic measuring principle for use in cooling installations where water is used as the energy conveying medium.

The flow is measured using bidirectional ultrasonic technique based on the transit time method, with proven long-term stability and accuracy. Two ultrasonic transducers are used to send the sound signal both against and with the flow direction.

The ultrasonic signal travelling with the flow direction reaches the opposite transducer first. The time difference between the two signals can be converted into a flow velocity and thus a volume.