

MULTICAL® 601

Cooling metering with ULTRAFLOW®



High temperatures

and humidity challenge the electronics of flow parts used for measurement of cooling. MULTICAL® 601 & ULTRAFLOW® based on ultrasonics provide you with a moisture resistant flow part.

High resistance

to moisture penetration is the ultimate demand to Kamstrup cooling meters. Moisture resistance guarantees longevity as well as exact measuring and billing – even when exposed to condensation under extreme climatic conditions.

High accuracy

of measuring and easy access to consumption data contribute to keeping the annual operating costs at a minimum. High accuracy – the quality mark of MULTICAL® 601 & ULTRAFLOW® – secures the ultimate solution to trustworthy billing.



MULTICAL® 601 and ULTRAFLOW® – the perfect couple for your cooling metering

The calculator MULTICAL® 601

Kamstrup's cooling meters provide you with state of the art cooling technology. The advanced calculator, MULTICAL® 601, is used together with the complete range of flow sensors, and even at extreme low temperature differences, the measuring accuracy is second to none.

The flow sensor ULTRAFLOW®

The ULTRAFLOW® range comprises flow sensors between q_p 1.5 and 1000 m^3/h . ULTRAFLOW® is used for measurement of cooling in all water based plants with flow temperatures from 2°C to 50°C.

The measurement conversion is performed by Kamstrup's unique ASIC design, providing the best functionalities like absolute time measurements and self-diagnostics.

The accuracy Class 2 as well as the wide dynamic measuring range (q_p/q_i 100:1) and the high permanent overload capability (q_s/q_p 2:1) are standard features of all flow sensors.

Our cooling meters are divided into two groups by size and construction type:

Cooling meters – q_p 1.5 to 40 m^3/h

In order to ensure immunity against flow disturbances – and thus obtain the most precise measurements – cooling meters DN15-20 utilise the single beam ultrasonic principle, while cooling meters DN25-80 use the triangle beam principle. ULTRAFLOW® is a moisture resistant flow part, as the signal converter is located in the base of the calculator.

Cooling meters – q_p 60 to 1000 m^3/h

The measuring method used in the large cooling meters is the dual beam ultrasonic principle which ensures a very high accuracy and furthermore provides the flow meters with high resistance against flow disturbances. The encapsulated signal converter, located on the flow meter, transmits calibrated pulses to the calculator.



MULTICAL® 601



Flow sensors ULTRAFLOW®
 q_p 1.5 to 40 m^3/h



Flow sensors ULTRAFLOW®
 q_p 60 to 1000 m^3/h

High demands require high standards

Moisture resistance

High temperatures and humidity do not have a chance against MULTICAL® 601 and ULTRAFLOW® for cooling. Thanks to its unique design and distinctive electronics, ULTRAFLOW® is resistant to moisture penetration. In other words, ULTRAFLOW® is the right choice for you who demand moisture resistant flow parts, exact measuring and operating stability.

Ultrasonics

More than 15 years of experience has proved that the ultrasonic principle is the most reliable one in the long term. The flow is measured using bidirectional ultrasonic technique based on the transit time method. Two ultrasonic transducers are used to send the sound signal both against and with the flow direction.

Memory

MULTICAL® 601 stores all consumption data for 460 days, 36 months and 15 years – hourly information is available as an option. Analysis of these registers permits closer understanding of energy usage through trouble-shooting, diagnostics and tamper detection.

Accuracy

The unique temperature measuring circuit and precisely paired sensors guarantee accurate cooling measurements, even at temperature differences below 1K. The long-term stability and accuracy of the flow meter are maintained even at flow rates twice the nominal flow rate.

Dual Interface

MULTICAL® 601 is able to perform data communication on two ports simultaneously, e.g. LonWorks for Building Management Systems and M-Bus for billing purposes. This ensures ultimate data reliability at the lowest possible cost.

Remote reading

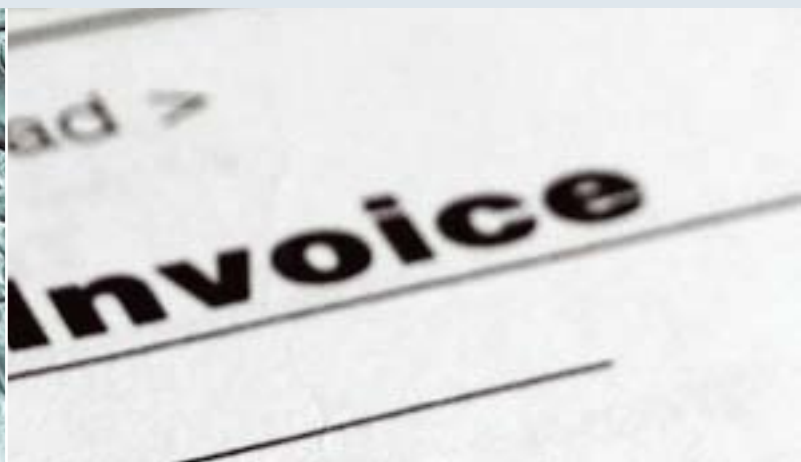
MULTICAL® 601 provides you with reliable remote reading options such as radio, GSM/GPRS, M-Bus, LonWorks or one of Kamstrup's network solutions, which deliver meter data to a central system without human intervention.

Tamper protection

MULTICAL® 601 is equipped with an info event counter which reveals and registers all irregularities, among those tamper attempts in the shape of systematic cutoffs. Registration of error codes combined with compulsory sealing ensures high tamper protection.

Billing

Accurate measurements aim at enhancing the consumers' confidence in the accuracy of billing. This leads to reduced consumer complaints as well as reduced revenue leakage. The perfect couple – MULTICAL® 601 and ULTRAFLOW® – informs you of accurate energy usage and provides you with trustworthy billing, any time.





Our ultrasonic cooling solution – your **ultra** strong partner

Kamstrup is a world leading manufacturer of energy meters and system solutions for energy metering.

We operate within heat, cooling, water, electricity and gas measuring and offer customized AMR solutions and metering services.

We are represented in 60 countries worldwide by Kamstrup sales and subsidiary companies or through distributors.

All employees work hard to offer the very best service and to respond to global market information provided by our trusted partners. In this way, we maintain a strong mutual cooperation.

The Kamstrup brand

– when you demand quality, reliability, innovation and partnership.

