

# ULTRAFLOW® 44



New flow sensor family DN15-125 for cooling and combined heat/cooling installations



Do you prefer waterproof flow sensors that, for some types, have a reduced weight and pressure loss and a higher dynamic range? And what about reducing your costs of your new cooling installation while mounting one of the temperature sensors directly into the flow sensor for  $q_p$  1.5...10 m<sup>3</sup>/h instead of investing in a ball valve, T-piece or other additional equipment?

Kamstrup has developed a new flow sensor family: ULTRAFLOW® 44 (DN15-125,  $q_p$  1.5...100 m<sup>3</sup>/h). It has been designed from the start with a clear focus on condensation protection. Together with our existing temperature sensor pairs and separate calculators MULTICAL® 603 and MULTICAL® 803, ULTRAFLOW® 44 will complete our new and strong solution for cooling and combined heat/cooling meters. The flow sensor is approved according to EN 1434 for both MID heat (DK-0200-MI004-044) and BEK-1178 cooling (TS 27.02 014). These approvals demonstrate that ULTRAFLOW® 44 can also be utilized as a flow sensor for combined heat/cooling meters. ULTRAFLOW® 44 will replace the current flow sensors ULTRAFLOW® 14 and ULTRAFLOW® 34 in their respective markets.

ULTRAFLOW® 44 is prepared for even harsh climatic environments for cooling meters like in the APAC countries. The IP class of the flow sensor is IP68 including its electronics box. Technically, this challenge has been solved by protecting the transducers with gel and grease like in our flow sensors for the cooling meters MULTICAL® 302-C and MULTICAL® 403-C.

In addition, the PCB of the separate flow sensor ULTRAFLOW® 44 is physically separated from the meter housing, removing it from the most exposed part of the cooling meter with respect to condensation. This is a clear design improvement compared to ULTRAFLOW® 34 where the PCB – although well protected by gel – is still mounted in a plastic casing directly on the meter housing. The PCB of ULTRAFLOW® 14 is also separated from the meter housing exposed to condensation. However, the separated electronics box of ULTRAFLOW® 44 is lightweight compared with the bottom of MULTICAL® 602 or Pulse Transmitter 6699-617/618. It can even be considered as an integrated part of the cable.

Thus, please welcome ULTRAFLOW® 44 together with MULTICAL® 603 or 803 as your preferred choice for cooling or combined heat/cooling installations. Further benefits and technical details of ULTRAFLOW® 44 can be found in the available documentation.

## ULTRAFLOW® 44 is your right choice for cooling meters

- **It reduces loss of your valuable and cost-intensive cooling energy**  
ULTRAFLOW® 44 is waterproof (IP68) and allows to be completely insulated.
- **It reduces your installation costs**  
With the ability to mount one temperature sensor directly in the flow sensor ( $q_p$  1.5...10 m<sup>3</sup>/h), an additional ball valve, T-piece or similar is not necessary in new installations.
- **It reduces the pressure loss (and thereby operation costs for pumps) in your installation**  
Flow sensors with  $q_p$  1.5 and 6 m<sup>3</sup>/h have reduced their pressure loss by more than one half to below 0.1 bar @  $q_p$
- **It ensures to bill also low quantities of cooling energy correctly**  
The approved dynamic range for  $q_p$  2.5 and 3.5 m<sup>3</sup>/h is increased to  $q_p:q_i = 250:1$ .



### Additional values of ULTRAFLOW® 44 compared with ULTRAFLOW® 14

- **Ensure the quality of your flow sensor by approval certificates**  
The approvals of ULTRAFLOW® 44 ensure measuring accuracy and durability upon severe standardized influences/disturbances according to the most recent EN 1434.
- **Simplify your installation with a real split meter**  
The 3-wire cable of ULTRAFLOW® 44 is mounted (and can easily be dismounted for the purpose of installation) on screw terminals in the MULTICAL® calculator. Allows easy exchange of either flow sensor or calculator and installation of the calculator behind walls with a tiny hole for cables only.
- **Get all benefits and functionalities of our most recent calculators, MULTICAL® 603 and 803**  
ULTRAFLOW® 44 is easily combined with MULTICAL® 603 and 803 by simply mounting the 3-wire cables on screw terminals in the MULTICAL® calculator. Together with a temperature sensor pair from Kamstrup, you will get a real split cooling meter.

## Think forward

### Kamstrup A/S

Industrivej 28, Stilling  
DK-8660 Skanderborg  
T: +45 89 93 10 00  
F: +45 89 93 10 01  
info@kamstrup.com  
kamstrup.com