

# FLUXUS® WD – Precise monitoring of district metered areas (DMAs)

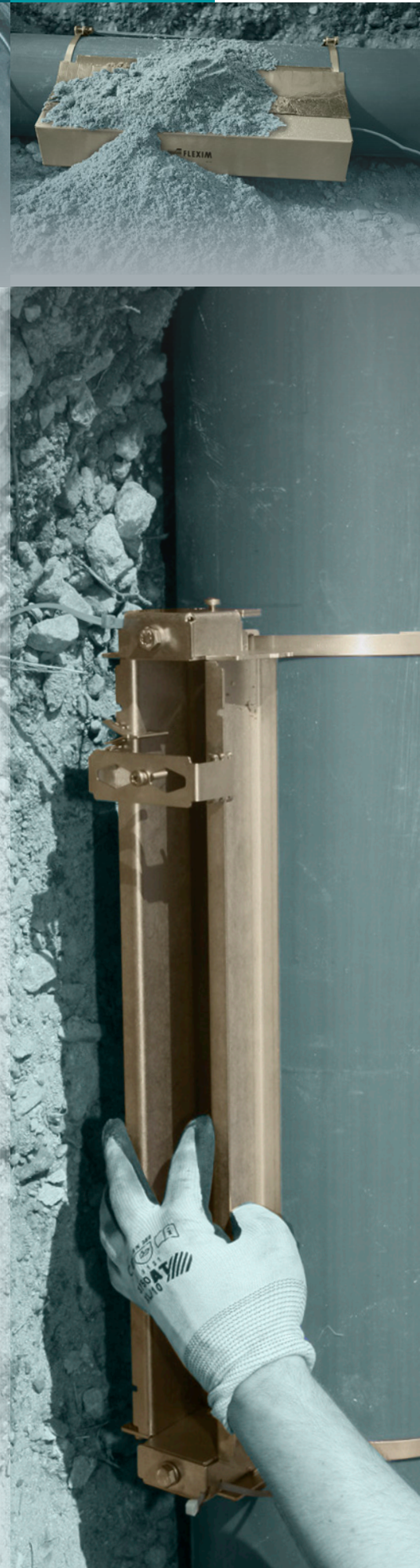
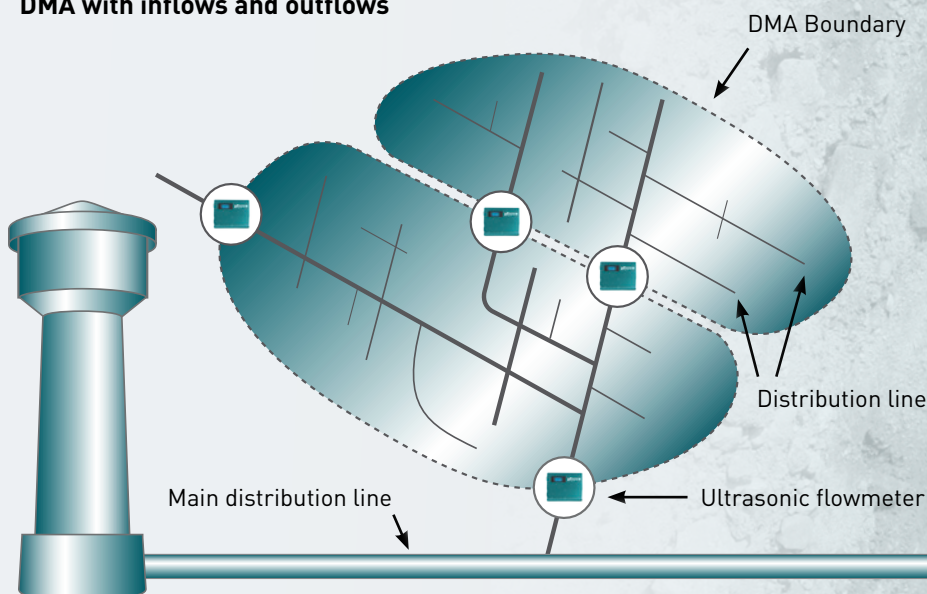
Permanent ultrasonic water flow meter

## Improving minimum night flow monitoring

- Ideal for minimum night flow monitoring (down to 0.01 m/s)
- Bidirectional measurements with excellent accuracy and repeatability
- No zero calibration needed and no zero drift
- Fast and very cost-efficient installation procedure
- For detailed technical information on the FLUXUS® WD see the product brochure ([www.flexim.com](http://www.flexim.com))

The FLUXUS® WD is the ideal solution for network monitoring staff, non-revenue water managers, and utilities in general who need more flow measuring points and better low flow accuracy. Creating new district metered areas (DMAs) or reducing their size can be achieved quickly and cost-efficiently with the FLUXUS® WD, as the installation takes place without supply interruption or pipe work

### DMA with inflows and outflows





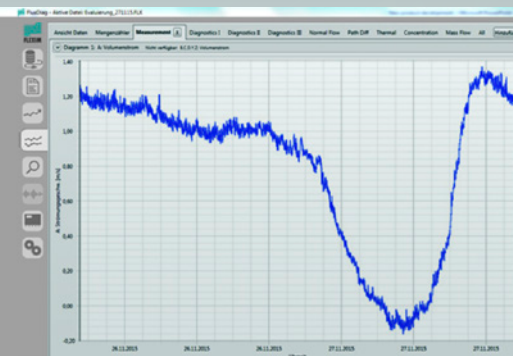
## Monitoring DMA inflows and outflows

Today an increasing amount of utilities are trying to create new DMAs and reduce the size of existing DMAs, allowing them to better monitor their network and, especially, identify districts with changes in consumption. The smaller the DMA is, the more precisely it can be monitored and the more significant the evaluation of measurements such as minimum night flow becomes, which is a key figure for non-revenue water analysis.

But it is often impossible for utilities to separate districts with valves, as this would lead to hydraulic problems in the network (e.g. stagnant water). Furthermore, installing new valves is both expensive and impractical, as it requires supply interruptions and excavation work, which is especially problematic in an urban setting. So instead of installing more valves to physically create new DMAs, many utilities choose to monitor both the inflow and outflow of districts, thereby creating virtual DMAs.

## Cost-efficient installation of flow measurement points

The FLUXUS® WD ultrasonic flow meter is the ideal instrument for cost-efficiently creating virtual DMAs, as it is installed without the need for supply interruption or pipe work. When using conventional magnetic or mechanical flow meters the costs of pipe cutting, excavation and road works are usually higher than the instrument costs. This is not the case with ultrasonic flow meters, which can be installed in a shorter time and with less hassle and expense, than with any other flow monitoring technology.



## Extremely accurate bidirectional low flow measurements

Flow velocities during the night can become very low. The introduction of water-saving equipment and an increased public desire to save resources has further reduced the amount of water consumed. This often leads to situations where the minimum night flow drops below 0.1 m/s. In some cases during the night, due to changes of the pressure situation within the network, the flow direction is even reversed.

The minimum measurable flow rate of many common technologies is about 0.3 m/s, which often makes them unsuitable for minimum night flow monitoring. For the FLUXUS® WD such low flows are no problem, as it measures flow velocities down to 0.01 m/s. Together with its excellent repeatability, bidirectional flow measurement capability and very large turndown this makes the FLUXUS® WD perfectly suited for the precise monitoring of DMAs and for non-revenue water analysis.

