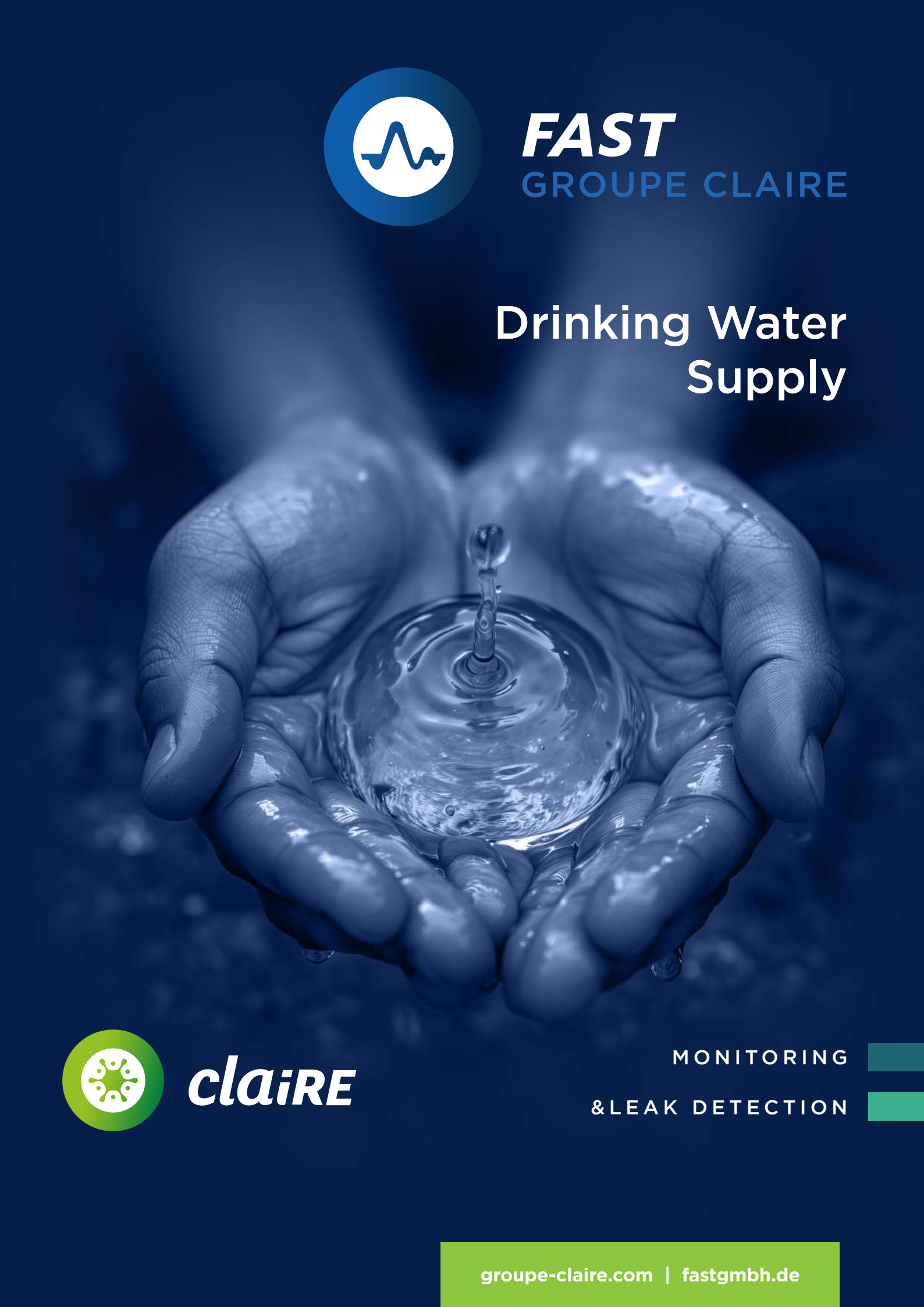
FAST
GROUPE CLAIRE

Drinking Water Supply



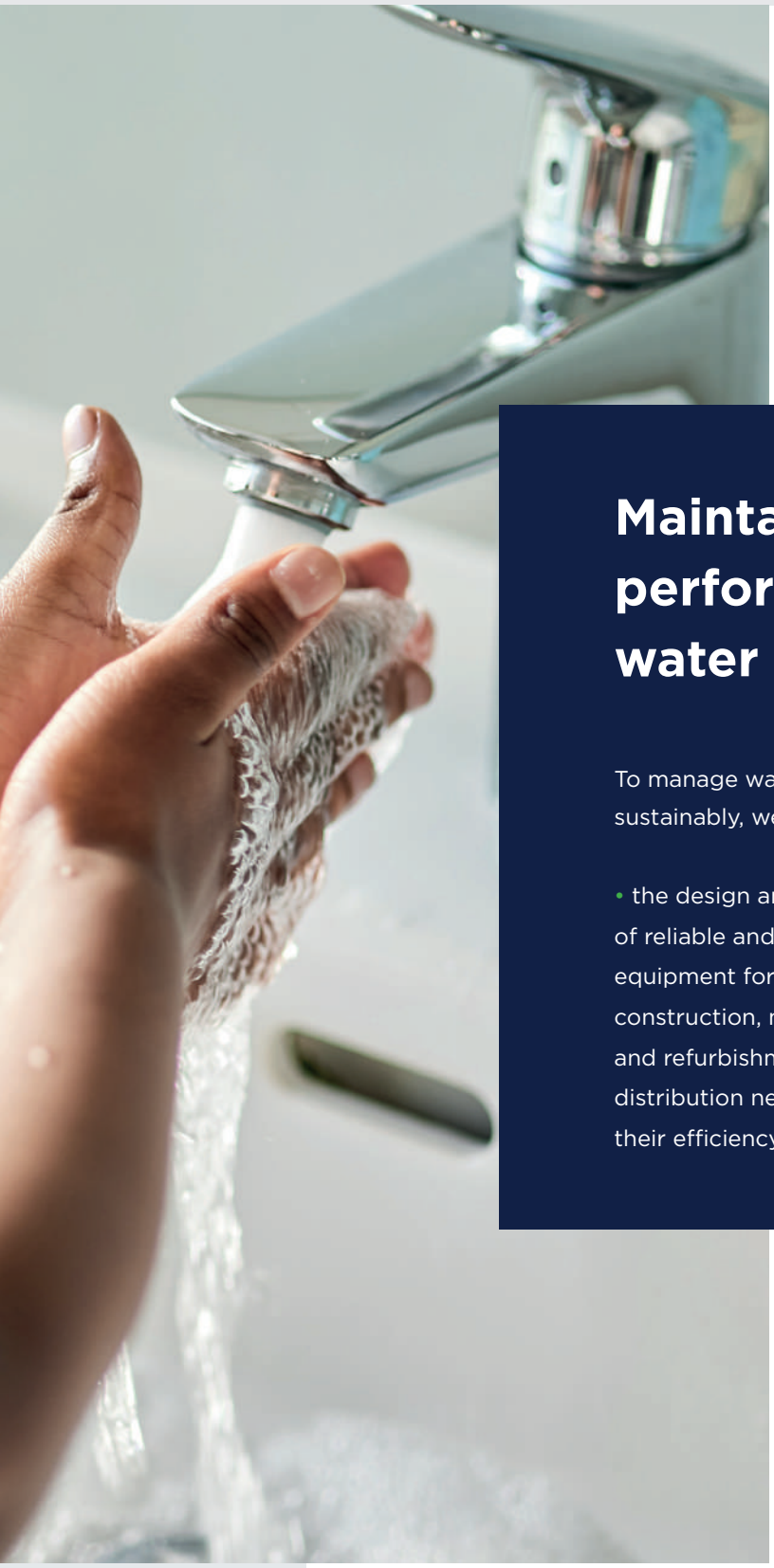
claire

MONITORING
&LEAK DETECTION

groupe-claire.com | fastgmbh.de

claiRE

Let’s conserve the resource together for future generations



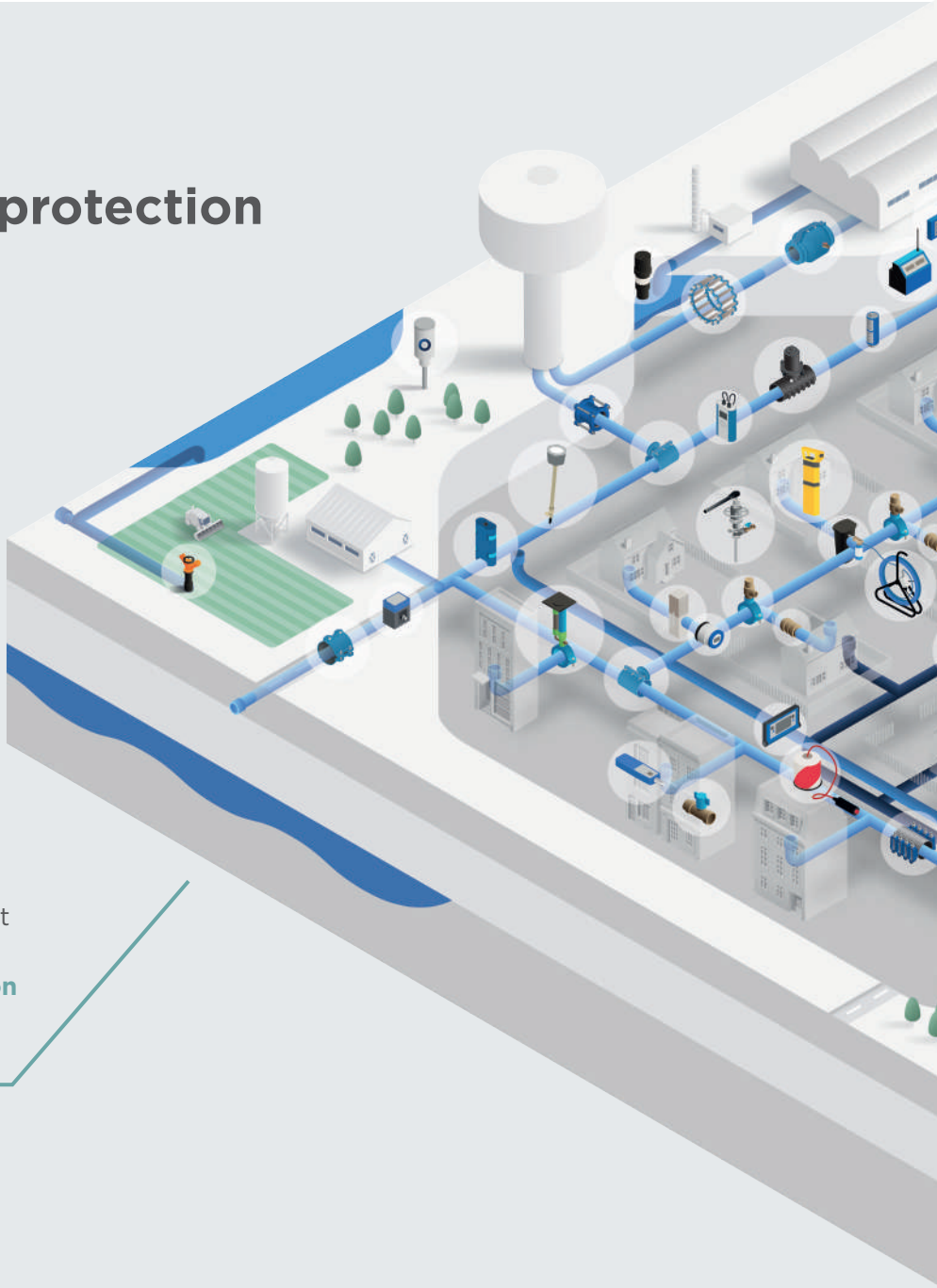
Maintaining the performance of drinking water supply networks

To manage water resources sustainably, we focus on:

- the design and production of reliable and robust equipment for the construction, maintenance, and refurbishment of water distribution networks to ensure their efficiency
- the development of products for diagnostics, monitoring, and management for optimal operation of supply networks
- the provision of data for optimised use of water resources.

Our Mission:
Water resource protection

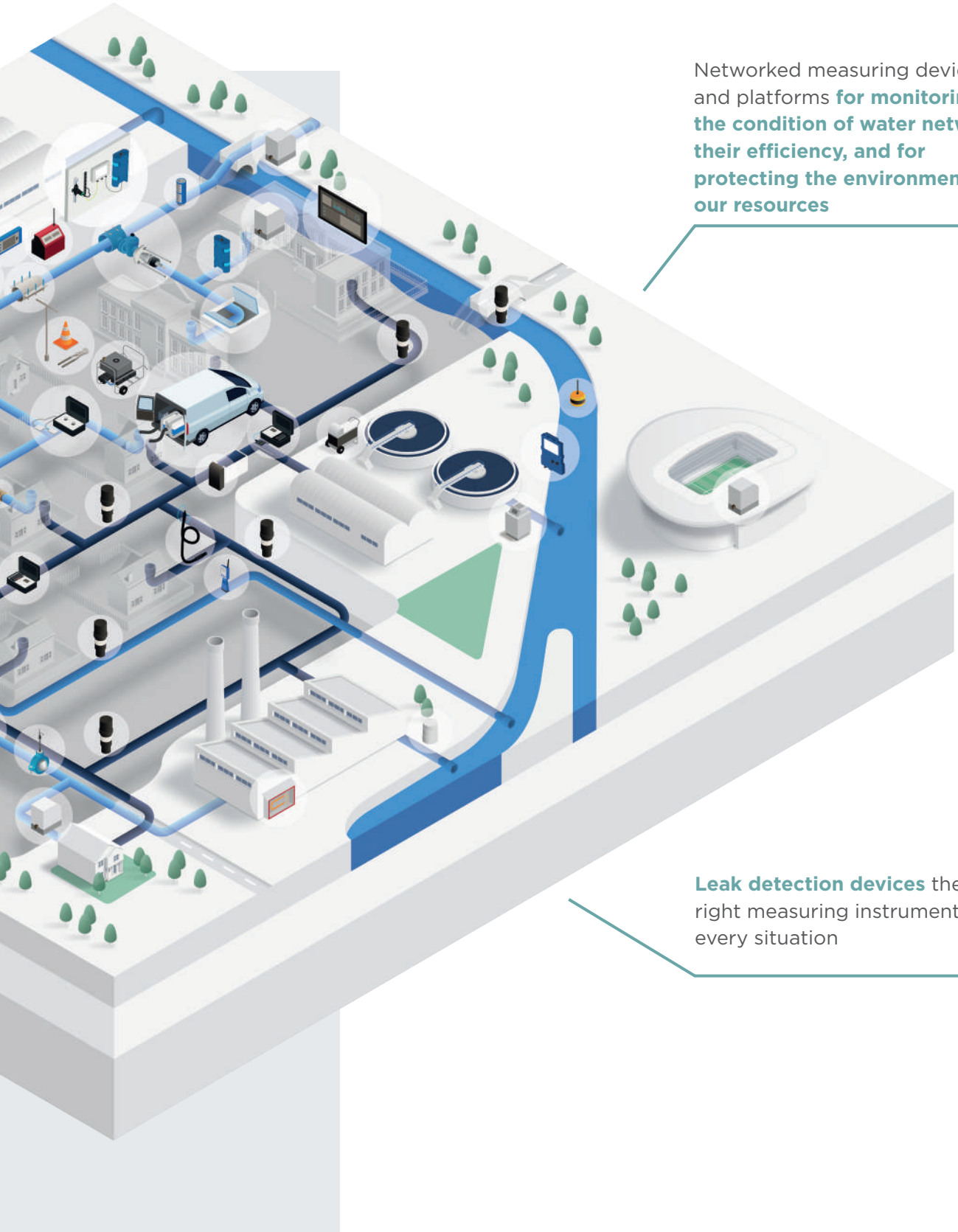
Monitoring of resources **at key points in the drinking water network:** branch lines, connections, house connections, taps



Solutions and services to support and help you: **saving water, detecting excessive consumption and leaks, remotely shutting off the water supply**

claiRE

Drinking water **Natural water** **Wastewater**



Networked measuring devices and platforms **for monitoring the condition of water networks, their efficiency, and for protecting the environment and our resources**

Leak detection devices the right measuring instrument for every situation

FAST
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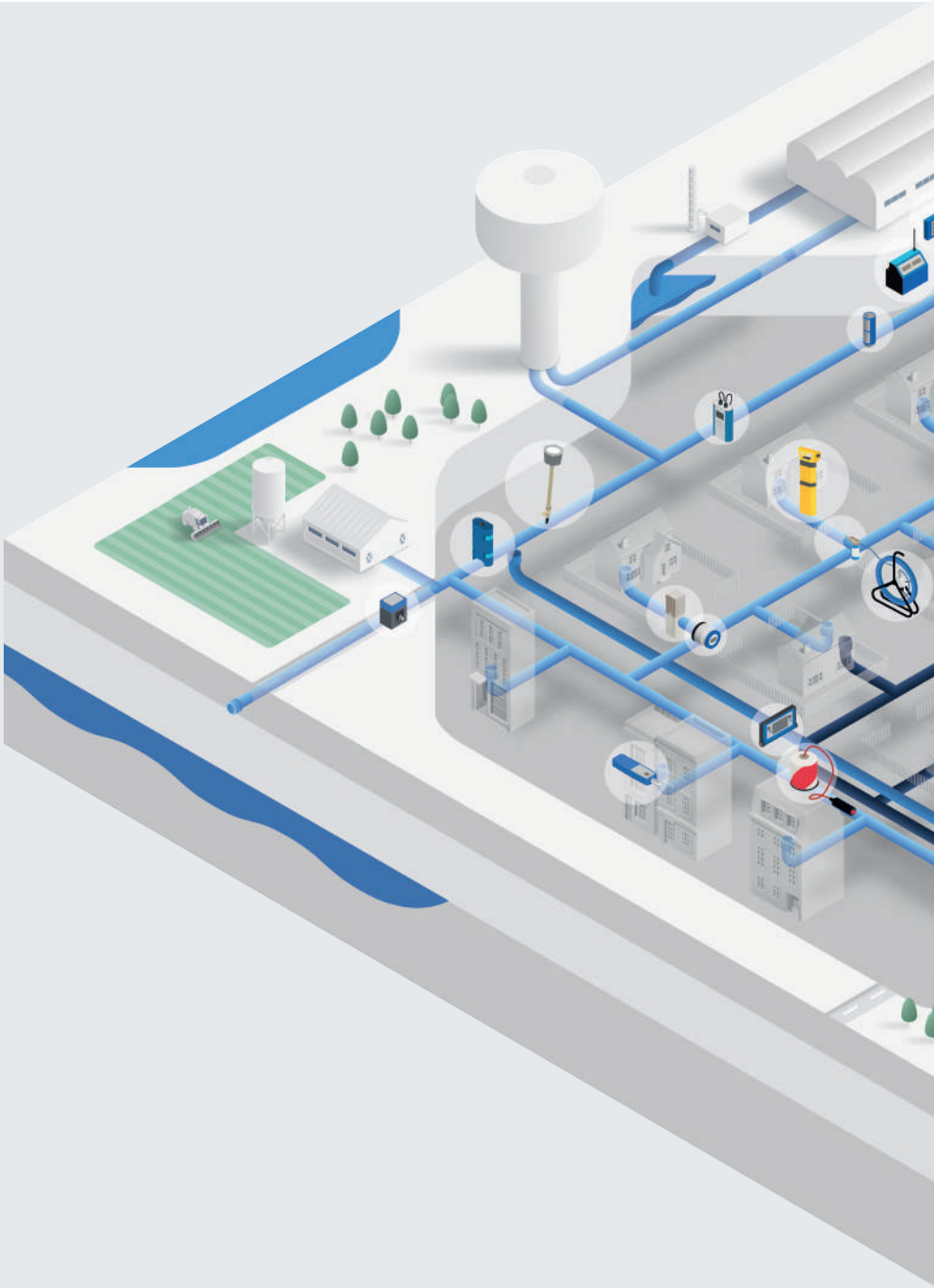
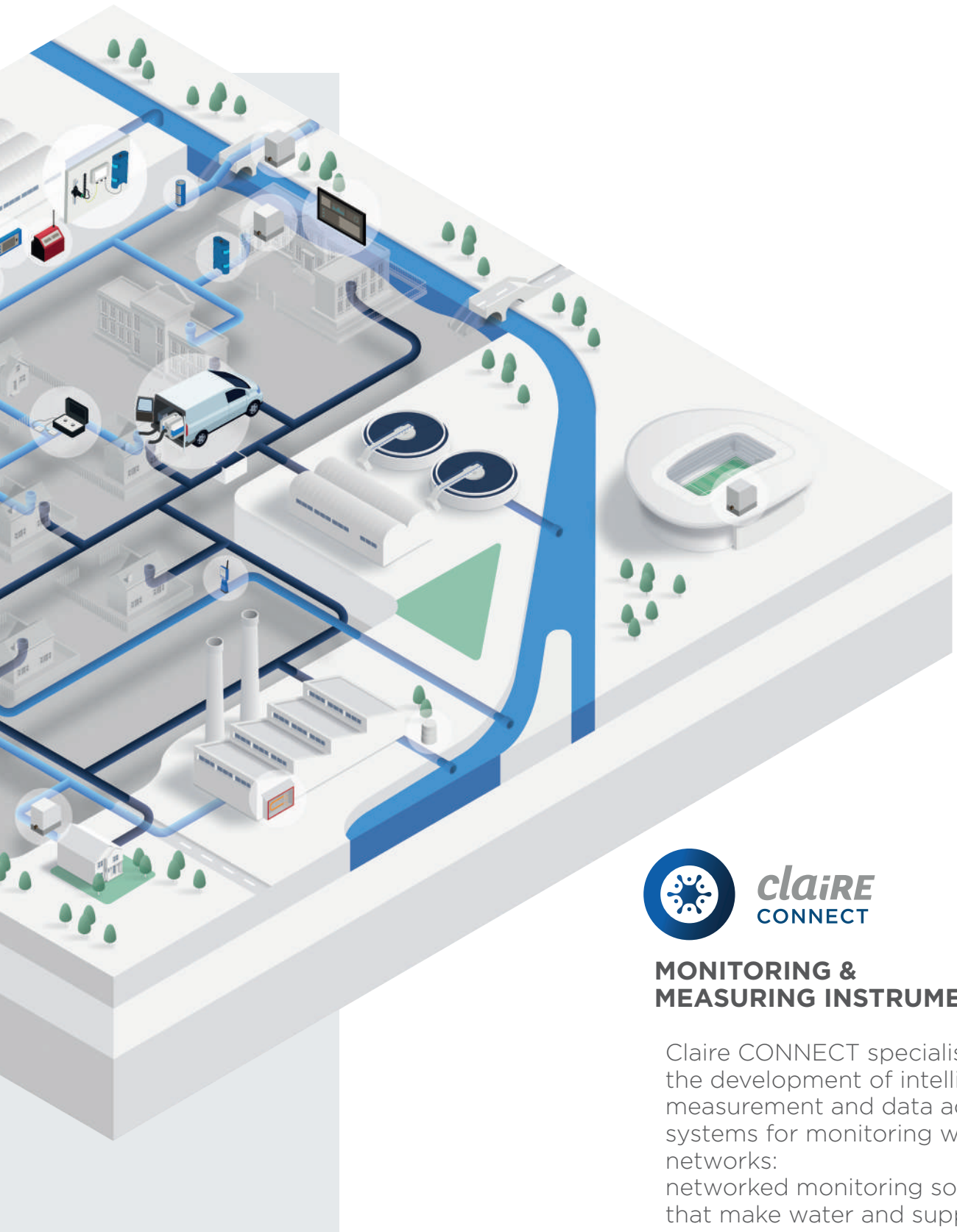
LEAK DETECTION

For over 40 years, FAST GmbH has been developing solutions and equipment for monitoring, pre-locating, correlating, and pinpointing leaks in drinking water pipe networks.
Precise sensor technology and intelligent algorithms developed by FAST enable the accurate localisation of underground leaks.

fastgmbh.de



Drinking water



claiRE CONNECT

MONITORING & MEASURING INSTRUMENTS

Claire CONNECT specialises in the development of intelligent measurement and data acquisition systems for monitoring water networks:
networked monitoring solutions that make water and supply networks transparent, efficient and future-proof.

Our Services

FAST Training Centre

Our customers benefit from our expertise in the application of products and methods for leak detection in drinking water supply networks. All our training courses focus on providing practical experience. The training content we have developed teaches leak and pipe detection methods, as well as the practical application of the devices and systems on-site. We would be delighted to welcome you or your employees to one of our training courses. For questions or further information, please contact us at info@fastgmbh.de. We look forward to hearing from you.

Customised Ijinus Training On-Site

Our qualified training officers are environmental protection experts who will support you at every stage of your project and offer a pre-defined, on-site training programme.

A Customised Offer from Claire

Operators, installers, engineering firms, etc., are offered a customised training programme on the Sainte-Lizaigne campus that includes:

- various modules to choose from: water management, leak detection, setup of data storage systems, training in the operation of monitoring platforms (Ijitrack, Watercloud, Wayve, etc.).
- a customised programme tailored to your project

Leak Detection Training

FAST GmbH invites its customers and all interested parties

to a three-day intensive seminar on water loss reduction at our training centre with its own test track at our headquarters in Langenbrettach near Heilbronn, Germany.

There, we provide information relating to our latest findings on leak detection methods and their application, both theoretically and practically. Participants will have the opportunity to thoroughly test the various devices and systems and receive training from our dedicated instructors on the latest leak detection technologies.

Rental / Customer Service and Support

The Ijinus rental service

provides various systems for measurement campaigns.

The Ijinus, FAST and Wayve customer service offers customers and users

support with the commissioning and optimal use of all products. In addition, we offer fast and straightforward maintenance and repair services for various systems.

FAST
GROUPE CLAIRE

FAST is the specialist for leak detection solutions in drinking water networks, which the company develops, manufactures, and distributes internationally in Germany. The product range includes devices for leak detection and location:
noise loggers for permanent or temporary monitoring of water networks, compact devices for pre-locating and pinpointing leaks, universal locators using acoustic and tracer gas methods, versatile correlators, in-pipe acoustic and optical inspection methods, and pipe locating devices.

We also offer products and services for network diagnostics. Thanks to our expertise, we are also able to design and build customised equipment for service vehicles.

The full innovative power of the Claire Group

Over **50** registered patents
45 employees in the development teams
Around **20** new products every year





Key Content

Optimisation

Monitoring drinking water supply networks is a key component for their sustainable operation. Based on specific parameters such as pressure, flow rate, and noise, a diagnosis of the supply network can be performed, thus identifying water losses.

Such diagnoses are essential for prioritising and planning measures to ensure the safe operation of a pipe network infrastructure.

FAST and CLAIRE CONNECT provide measurement technology that covers **all applications in the field of water supply network monitoring**.

The diagnostic system includes measuring systems for assessing the current condition of the water network.

FLOW AND PRESSURE

A **self-contained flow and pressure logger** with integrated pressure sensor for **sectorisation, LOG BLUE LP,** see p.14

TURBIDITY AND WATER QUALITY

High-precision flow rate, turbidity, and pressure measurements during network flushing for the calculation of condition-based flushing plans. **FLUSHINSPECT,** see p.20

FLOW

An **electromagnetic flow meter** for **sectorisation, HYDRINS 2.1,** see p.16

BLUE & BLUE LP LOGGER

Versatile data logger

The most versatile logger on the market for easy sectorisation

All +

COMPLETE SECTORISATION
at a single monitoring point

AUTONOMOUS, REMOTELY READABLE, AND COMPACT

ADAPTABLE
for different communication networks

EASY INSTALLATION
fast connection and drag-and-drop functionality

EASY MAINTENANCE
via remote diagnostics

MOBILE NETWORK CARD AND BATTERY
replaceable on-site by the user

The BLUE logger is self-contained and, in the LP version, features an integrated pressure sensor. It is an ideal multi-parameter logger for all sectorisation applications: pressure measurement, flow measurement, metering and control.
The BLUE logger records data and transmits it wirelessly or via cellular network.

Technical Features

__ **Integrate 0-25 bar pressure sensor** for pressure testing of hydrants or pipelines

__ **Compatible with pulse counters** (2 pulse inputs up to 100 Hz)

__ **Compatible with all common MODBUS flow meters**

__ **Open-collector output** to drive a control unit

__ **2 versions:** with and without integrated pressure sensor

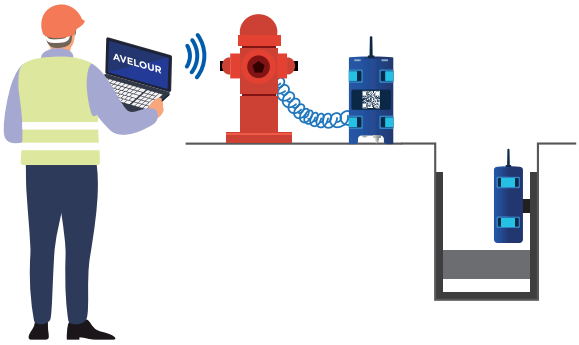
__ **Improved water resistance, IP68** (tested at a depth of 2 metres for 100 days)

__ **Integrated 2G/4G (LTE-M or NB-IoT) mobile network card** for data transmission via GSM/GPRS/FTPs/HTTPS

__ **Management of the data collected** on our IJITRACK platform or on a remote supervision site

Data Management and Monitoring

Connected to hydrants, electromagnetic flow meters and transducers, each sensor/logger is different, allowing data from a wide variety of applications to be recorded.



The **IJITRACK web platform** for displaying and processing data and setting up warning messages

The **WIJI app,** for quickly setting up your IJITRACK account

AVELOUR software for quickly programming sensors and for retrieving and analysing data

WIJI connection kit with radio transmitter, USB cable, antenna or USB stick

High-performance power pack for increased sensor autonomy

External GSM antenna for optimising data transmission from shafts

HYDRINS 2.1

Flow meter

Electromagnetic built-in flow meter for sectorisation

All +

INSTALLATION WITHOUT INTERRUPTION OF SERVICE
easy mounting on drill holes

ROBUST & COMPACT
with digital sensor

ACCURATE MEASUREMENT AT VERY LOW FLOW RATES
in both directions, ideal for monitoring the smallest flow rates at night

LONG BATTERY LIFE
up to 10 years

VERSATILE
usable on pipes from DN100 to over 2000

VOLUME CONTROL
meter performance monitoring

HydrINS 2.1® measures the flow rate of drinking water or raw water, even at very low flow velocities. Its technology enables highly precise bidirectional measurements, ideal for detecting small leaks and for sectorisation.
The device is robust, waterproof, and easily integrated into any remote management system. The electronics offer multiple measurement modes, speed profiles, and continuous self-monitoring of the signal.

Technical Features

__ **Speed measurement** up to 2 cm/s

__ **Bidirectional measuring accuracy** up to 2 mm/s

__ **Integrated temperature measurement** (standard version only)

__ **2 versions:** analogue or digital

__ **Installation on pipes** from 100 to over 2,000 mm

__ **Battery life up to 10 years:** internal lithium battery as standard (external battery optional)

__ **IP68 submersible**

__ **Quick Fix pressure connection included in delivery:** maximum 20 bar

Data Management and Monitoring

The WINFLUID software connects to HYDREKA sensors, recording devices, and flow meters, allowing you to process and analyse the collected data.

LabFLO

Multi-parameter solutions

For measuring drinking water quality

All +

TIME SAVINGS

Plug-and-play system for simple and intuitive operation

INTEGRATED SOLUTION

combination of high-resolution digital sensors and a remote management system

EXTENSIVE COMPATIBILITY

with the most important monitoring systems on the market

REAL-TIME ALARMS

combination of multiple parameters

LabFLO is a temporary or permanent solution for the physico-chemical analysis of drinking water, specifically designed for monitoring drinking water quality in public distribution networks. The autonomous LabFLO system enables professionals in design offices, local authorities, and companies to comply with health regulations set out in Directive (EU) 202/2184. Thanks to its plug-and-play system, measurements of free chlorine, combined chlorine, nitrites, pH, turbidity, and conductivity can be quickly performed and used within the Winfluid NG ecosystem.

Technical Features

__ **Multi-parameter analysis:** free chlorine, combined chlorine, pH, turbidity, conductivity

__ **Condition-based device control**

__ **Connections for up to 4 sensors simultaneously,** with advanced calculations between inputs to facilitate event management

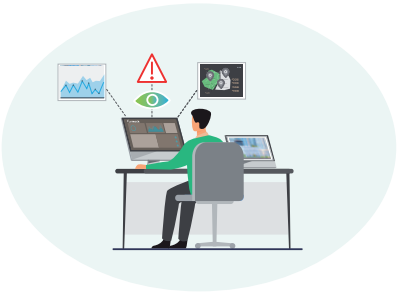
__ **Remote communication:** 4G/3G/2G or local via USB

__ **Remote programming and updating** of firmware and alarms

__ **Battery life up to 5 years**

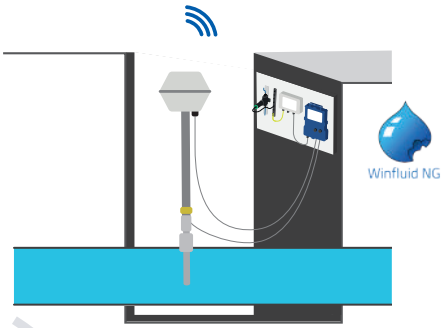
__ **IP68 submersible**

__ **Quick Fix pressure connection included in delivery:** maximum 6 bar



Data Management and Monitoring

HYDREKA sensors, data loggers, and flow meters are displayed using WINFLUID software, allowing collected data to be analysed.



DTU 2 HYDREKA combines various sensor data and sends it to the monitoring platform

HYDRINS HYDREKA electromagnetic flow meter for measuring flow rates

WINFLUID NG HYDREKA web platform, for configuration, display, data processing and setting up warning messages

Compatible monitoring tools: CLIENT, Topkapi, Panorama, Lerne etc.

Topkapi

Panorama Suite

FlushInspect

The multi-parameter measuring device

FlushInspect is a water analysis system for optimising and calculating flushing intervals.

FlushInspect is used to record parameters such as turbidity, flow rate, pressure, and other optional parameters (such as temperature and conductivity) during flushing operations in a water supply network. The data is used to calculate the "demand-based flushing intervals" for the entire network. For the first time, water suppliers now have the opportunity to implement a fully data-driven approach to flushing their networks. This reduces the time, effort, and water resources required for flushing. Flushing with FlushInspect significantly contributes to removing deposits from the pipe system, thus helping water suppliers ensure water quality.

All ⊕

USING THE FLUSHING LEVEL FOR DATA ACQUISITION

based on the turbidity of pipe network sections

THE DATA CAN BE USED TO CREATE

condition-based flushing intervals

A FLUSHING STRATEGY

saves resources, time, and money

A JOINT DEVELOPMENT BY FAST AND TZW

FAST: Flushing level, hardware and data acquisition

TZW-Technologiezentrum Wasser: Methodology, calculation models, and consulting services

Technical Features

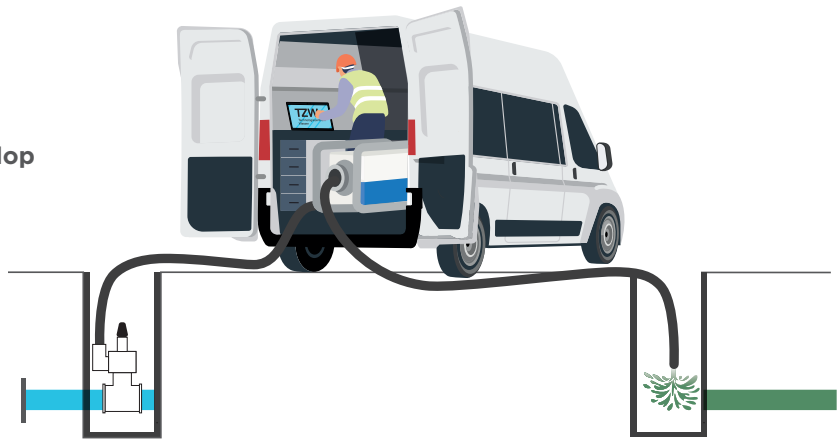
__ **Can be used to create a flushing schedule:** performing flushing with a clear water front

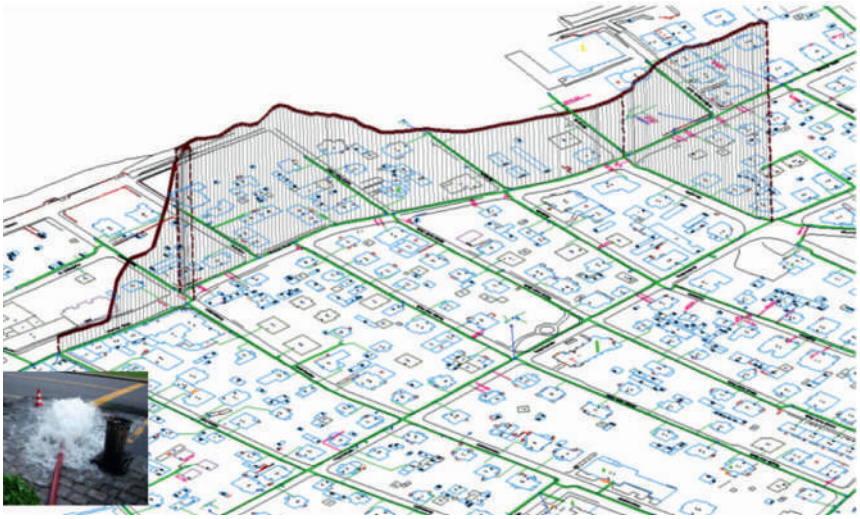
__ **Opening and closing valves** for zone separation

__ **Fitting the FlushInspect** at hydrants or flushing points

Data Management and Monitoring

For recording and analysing data to develop a flushing strategy





TZW
Technologiezentrum Wasser

ZM Ultra

The portable ultrasonic flow meter

The ZM Ultra portable ultrasonic flow meter for high-precision flow measurement

All +

ULTRASONIC FLOW MEASUREMENT
in filled pipes

MEASUREMENT CAPABILITY
on any common pipe material

DATA TRANSFER
via Wi-Fi, GSM, or USB interface

EFFORTLESS OPERATION VIA ANY
Wi-Fi-enabled device

EXTREMELY LONG BATTERY LIFE
with replaceable battery

SUITABLE
for short-term and long-term measurements

The device's ease of use and the quick installation of the clamp-on sensors make it the ideal companion for your measurement campaigns under all conditions. Thanks to its extremely long operating time with the included batteries, the ZM Ultra is perfectly suited for both temporary and permanent installations. Furthermore, its integrated modem offers all the possibilities of modern data transmission. This allows them to efficiently determine their "minimum night consumption" and thus pinpoint leaks in the supply network.

Technical Features

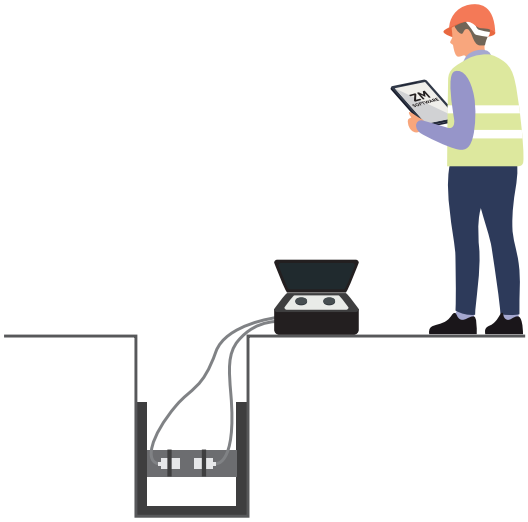
__ **The sensors can be attached to the outside of the pipe (snapped on)**

__ **Setting up the measuring point and programming via Wi-Fi**

__ **Data storage**

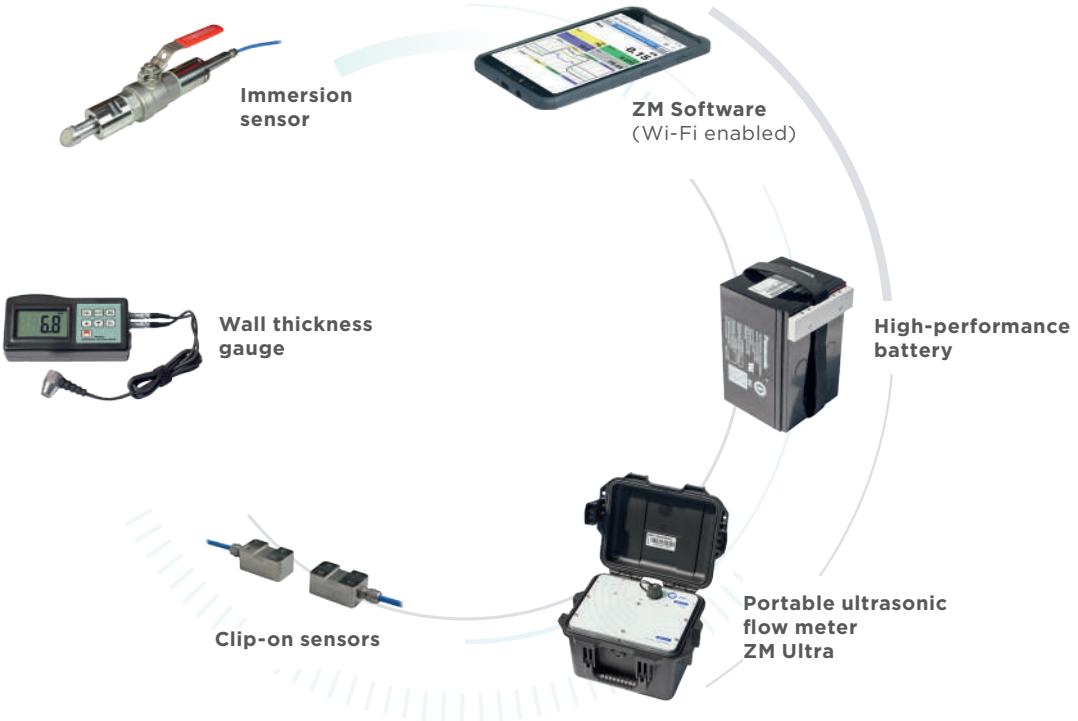
__ **Data can be read via Wi-Fi or USB** and analysed and processed using PC software

__ **Alternative data transmission** to cloud servers via GSM/email



Complementary products

This universal device can be used for both short-term and long-term measurements.



DRULO III

Pressure logger

A portable and compact solution for reliable network health monitoring

All +

PERFORMING NETWORK DIAGNOSTICS

OPTIMISING OPERATING COSTS

FAST DATA RECORDING
when an anomaly is detected

EASY TO USE

SIMPLIFIED DATA READING AND ANALYSIS

WIRELESS CHARGING

DRULO III is a high-precision portable device for measuring pressure and temperature in water networks. It is ideal for pressure and leak testing of new pipelines or directly at the point of use, for area monitoring, or for network shutdown and pressure drop tests.
Network data collection: With its integrated data logger, it stores and transmits measurements to the dedicated Drulo Android app and to the WATERCLOUD platform, which collects data from the analysed network.

Technical Features

__ **Real-time display of measurements** on an on-site LCD screen

__ **Storage capacity** of 1.8 million data records

__ **High-precision measurement for pressure tests** (in millibars)

__ **Adjustable measurement interval** from one second to 24 hours (or 10 Hz for event-driven measurement)

__ **Configuration, data collection and retrieval** via the app

__ **Charging** with special base station

__ **Transport case**

Data Management and Monitoring

With the DRULO app, the logger can be conveniently programmed for the measurement campaign, the collected data read out on-site, and analysed directly in the app. Data can be exported **via LTE or Wi-Fi connection** in CSV/TXT format for further analysis or model calculations on a computer.

DRULO III Android-App
for programming, reading, and analysing data

Logger in charging dock DRULO III

Multi-device charging station DRULO III

DRULO with clamp

DRULO in transport case

Precision

Locating devices are necessary to map pipe routes when these are unknown. This is essential for leak detection and subsequent excavation work.

FAST offers
devices for locating pipe infrastructure

Complete systems needed for locating underground pipes and cables.
Pipe locator, metal detector.

PIPES

The pulse wave generator (PWG) can be used for locating all pipe materials, see p.28

METAL OBJECTS

The MD100 can detect ferromagnetic objects, **such as valve caps and valve linkages**, see p.32

PIPES AND CABLES

The vScan locator is used for locating metallic and non-metallic pipelines (in conjunction with a fibre optic probe), see p.30

PWG II

Pulse wave generator

Pipeline detector for all types of pipes

All +

EASY DETECTION OF PIPE SECTIONS

USABLE DURING OPERATION

TRANSMITS ACOUSTIC SIGNALS
to the pipe

INSENSITIVE TO EXTERNAL SIGNALS
e.g., electricity, mobile communications

DETECTION OF PIPE MATERIALS
of all types: PE, PVC, cast iron, steel, and many more.

PIPE LINES
detectable up to 600m

LONG BATTERY LIFE

EASY INSTALLATION
via GeKa coupling

COMPATIBLE
with all commercially available listening devices

The PWG II pulse wave generator is used to locate pipes in drinking water networks. It generates acoustic signals that are transmitted to the pipeline and is therefore suitable for all pipe materials – especially plastic.
In combination with a listening device, the PWG II enables reliable and precise measurement of the pipe's path.

Technical Features

__ **Range:** up to 600 m

__ **Nominal operating pressure:** max. 8 bar

__ **Connection:** GeKa quick coupling

Complementary products

Pulse Wave Generator
PWG II

Complete PWG set
in a transport case

Charger

Quick coupling

Short and long

vScan

The cable locator

For the simple and effective detection of underground cables and pipes

All +

COMPASS DIRECTION INDICATOR
ensures correct alignment over the line

DEPTH MEASUREMENT
at the touch of a button

VISUAL, ACOUSTIC AND VIBRATION ALERTS
for flat-laid cables, signal overload, excessive vibration and overhead lines

SIMPLE 2-BUTTON OPERATION

AUTOMATIC BACKLIGHT
for use in darkness

ROBUST ABS HOUSING
with rubber protective sleeves for all operating conditions

The vScan locator receiver was specifically developed for simple and economical cable and object locating. The robust housing, two-button operation, compass direction indicator, and internal 4 GB data storage make it a useful tool for preventing cable damage and locating cables in everyday field use.
The vScan can be freely configured by the user to suit their needs.

Technical Features

__ **Power and radio mode – for passive detection,** 33 kHz and 131 kHz for active detection

__ **vScan M version for detecting metallic objects**

__ **Rotary knob for adjusting sensitivity**

__ **Paddle controls for mode selection and navigation**

__ **Two push-buttons** – ON/OFF and Depth/Menu/Selection

__ **High-contrast display** with backlight

__ **Compass** – indicates direction of travel using arrows

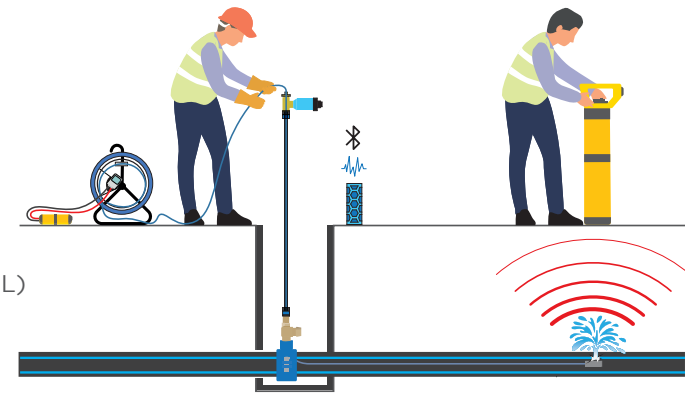
__ **Depth and current measurement**

__ **Both built-in** and detachable speaker

__ **GPS indoor or outdoor antenna (optional)**

__ **Passive signals:** power 50Hz, radio and cathodic protection (CP) 100/120Hz

__ **High-contrast display** for easy signal interpretation



Complementary products

In combination with the FAST PipeMic (Flex, M/L, XL/XXL) pipes and leaks can be located with pinpoint accuracy.

PipeMic FLEX, M/L, XL/XXL

Carrying bag

Receiver

Support for vScan transmitters

Transmitter

Earthing and connection cable

MD100

Metal detector for ferromagnetic objects

The valve rod locator

All +

EASY DETECTION
of metal pipes and access points to the network (street caps, manhole covers, valve rods)

DETECTION DEPTH UP TO 3 M

LIGHTWEIGHT, ERGONOMICALLY DESIGNED
for maximum comfort, even during extended use

HIGH SENSITIVITY
for reliable detection of small, deeply buried objects

USER-FRIENDLY
thanks to robust membrane keypad and LCD display

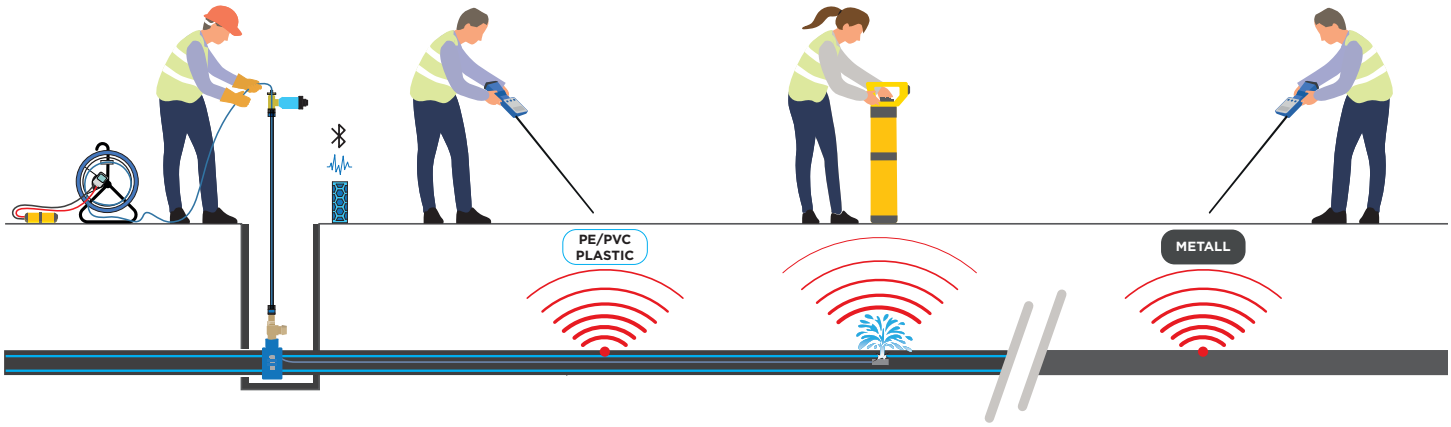
The MD100 is a device for the rapid detection of metallic (ferromagnetic) objects. It simplifies work by reliably locating valve caps, valve rods, buried fittings, pipelines, and other objects such as boundary stones with steel anchors.

Technical Features

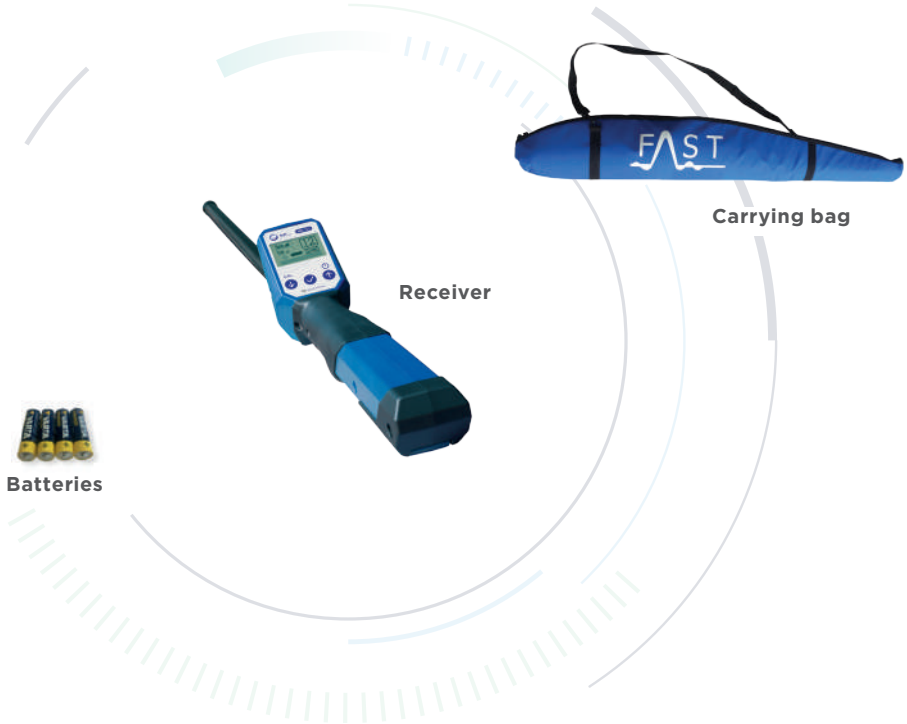
__ **The CAL function** allows interference signals to be attenuated or eliminated

__ **50/60 Hz indicator for power cable**

__ **Battery operated with 4x AA cells**



Complementary products

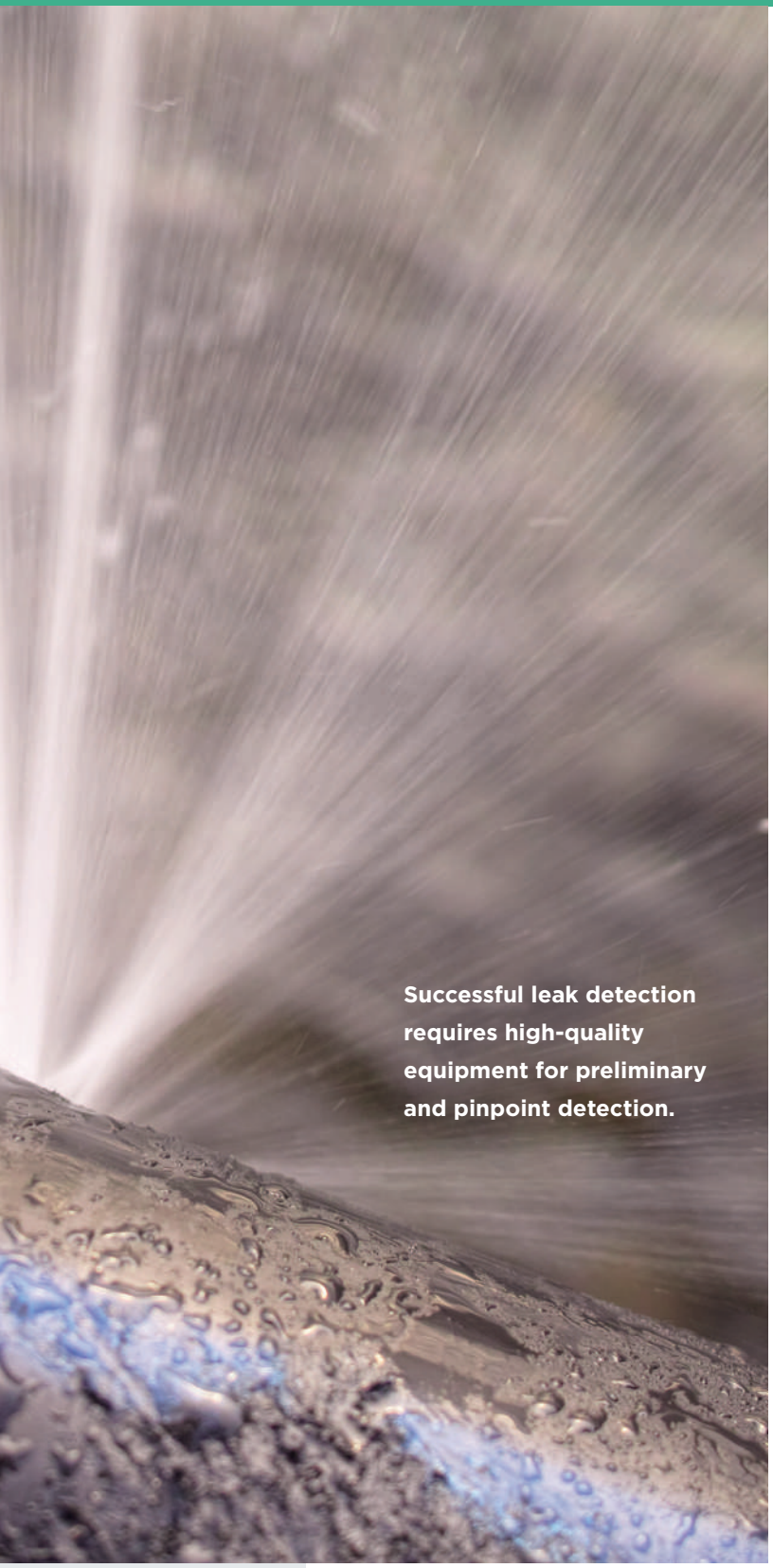


Sustainability

Water losses pose a major challenge, both economically and in terms of sustainability.

Leaks increase operating costs, impair water quality, and can lead to supply interruptions for customers. Active leak detection reduces water losses, increases the performance of the supply network, and supports the sustainable use of water resources. Leak detection is carried out in three successive steps: **monitoring** for the early detection of losses in the pipe network, **pre-localisation** to pinpoint leaks using data loggers, listening devices, etc., **pinpointing** for the exact localisation of the leak using correlator, geophone, tracer gas or PipeMic.

FAST offers a comprehensive range of **measuring devices for the reliable and economical detection of leaks.**



Successful leak detection requires high-quality equipment for preliminary and pinpoint detection.

PRE-LOCATION

A **temporary or permanent monitoring system, the BiDi noise logger,**
see p.36

CORRELATION

The **portable and mobile combination of geophone and correlator LOKAL 400,**
see p.42

PINPOINT DETECTION

PIPEMIC M, the most precise device for locating leaks even under the most difficult conditions (plastic pipes, ambient noise),
see p.46

BiDi LOGGER

Noise logger

Multifunctional logger that monitors water networks for leaks

All +

INSTANT INTERACTION

Within 24 hours of installation, the first data is uploaded to the cloud, thanks to factory pre-configuration

DEPLOYMENT WITHOUT STRUCTURAL MODIFICATIONS

Plug-and-play installation, magnetic vibration or hydrophone sensors

COMPACT AND ROBUST DESIGN

external antenna, IP68 waterproof stainless steel housing, resistance to extreme temperature fluctuations, replaceable batteries

CONTINUOUS AND RELIABLE MONITORING

for early detection

MAXIMUM ADAPTABILITY

various data transmission options (LTE, LoRa, radio) and two sensor versions (structure-borne sound and hydrophone)

Deployed at various accessible points in the network, noise loggers form a permanent or temporary monitoring system. They analyse noises on the (water) pipes at night to detect and pinpoint leaks early. Using their built-in correlation function, noise loggers can even determine the location of the leak.

Technical Features

__ **Versatile applications:**
- **BiDi radio:** Lift & Shift, or via radio network for pre-location and correlation
- **BiDi LTE:** Transmission via mobile network for pre-location and correlation
- **BiDi LoRa:** Transmission via LoRa network for pre-location and on-site correlation

__ **2 sensor versions:** acoustic and hydrophone

__ **Customisable settings**

__ **Sophisticated algorithm:** determines the minimum noise level through 24,000 measurements per night

__ **Configurable multipoint correlation (date, time, etc.)**

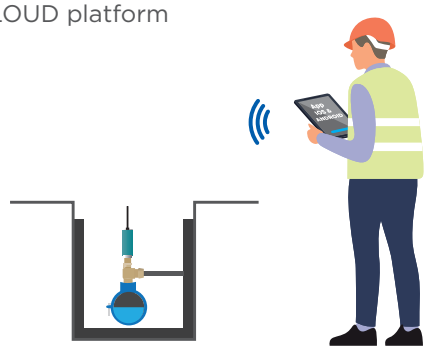
__ **Unique compact size** (40 mm)

__ **Communication and remote transmission:** 433 MHz, LoRa, LTE (CatM1/NB1)

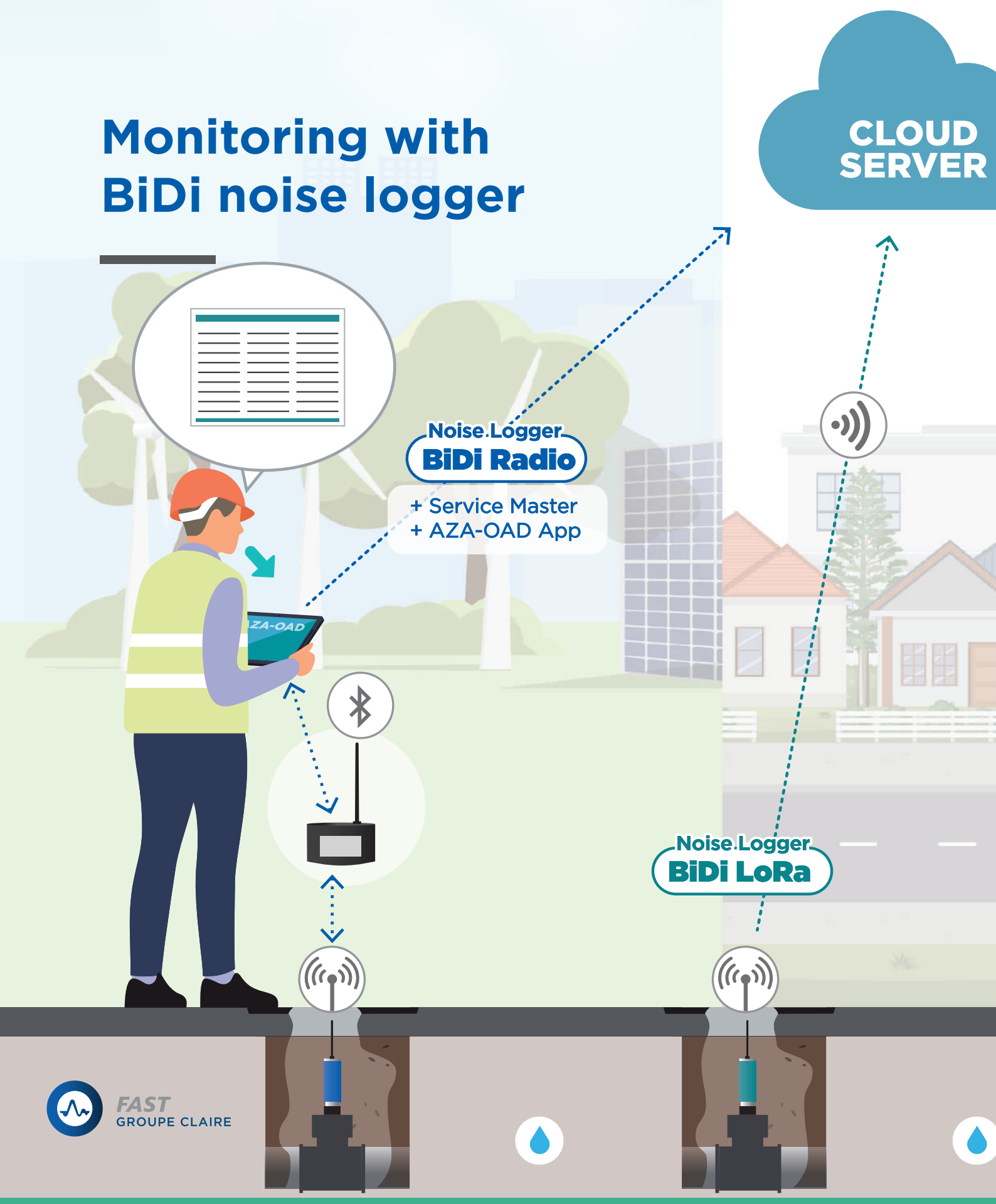
__ **Monitoring and analysis of noise logger data** with the WATERCLOUD platform

Data Management and Monitoring

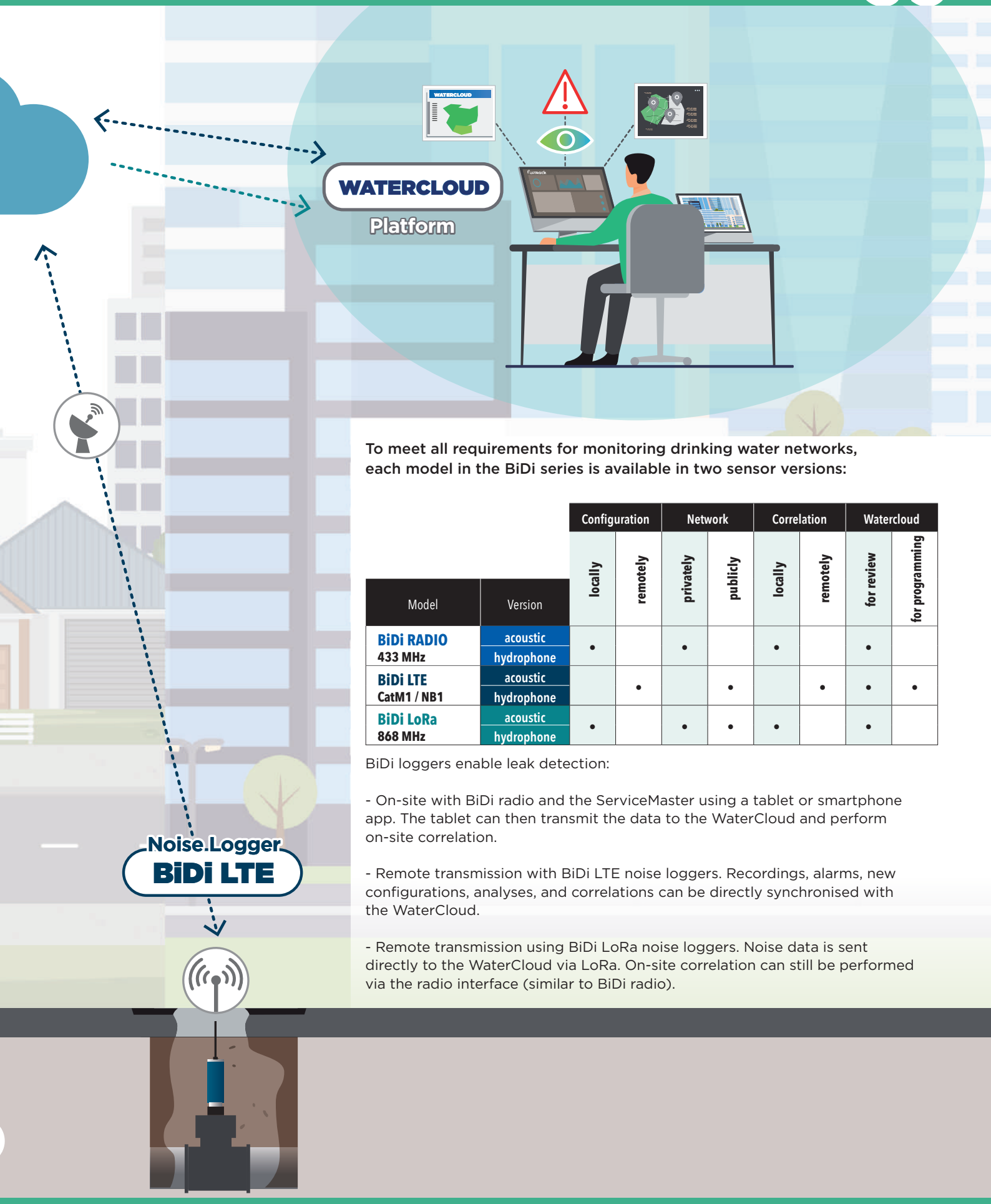
As an additional solution for permanent or temporary use:
The BiDi noise logger.



Monitoring with BiDi noise logger



FAST
GROUPE CLAIRE



To meet all requirements for monitoring drinking water networks, each model in the BiDi series is available in two sensor versions:

		Configuration		Network		Correlation		Watercloud	
Model	Version	locally	remotely	privately	publicly	locally	remotely	for review	for programming
BiDi RADIO 433 MHz	acoustic	•		•		•		•	
	hydrophone								
BiDi LTE CatM1 / NB1	acoustic		•		•		•	•	•
	hydrophone								
BiDi LoRa 868 MHz	acoustic	•		•	•	•		•	
	hydrophone								

BiDi loggers enable leak detection:

- On-site with BiDi radio and the ServiceMaster using a tablet or smartphone app. The tablet can then transmit the data to the WaterCloud and perform on-site correlation.

- Remote transmission with BiDi LTE noise loggers. Recordings, alarms, new configurations, analyses, and correlations can be directly synchronised with the WaterCloud.

- Remote transmission using BiDi LoRa noise loggers. Noise data is sent directly to the WaterCloud via LoRa. On-site correlation can still be performed via the radio interface (similar to BiDi radio).

GEOPHONE

Leak Detection

Intelligent geophones for preliminary location and pinpoint location

Aqua M300

Aqua M100

Aqua M60

All +

AQUA M60

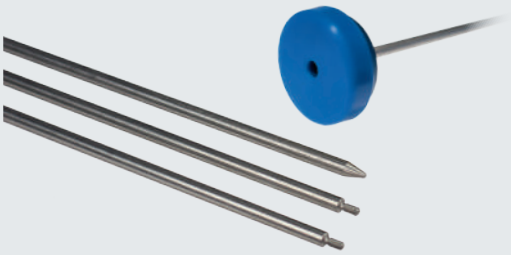
small, light and handy - quick to deploy and precise, thanks to its highly sensitive sensors

AQUA M100 & AQUA M200

compact, robust, and easily transportable for fast and reliable leak detection and pinpointing

AQUA M300

simple and reliable leak detection thanks to its 3-in-1 functionality: Acoustic or tracer gas leak and pipe detection



Conventional mechanical listening device HM II

The AQUA M series includes water leak detection and locating devices for all applications: from the most compact and user-friendly model for everyday use, through essential standard models, to the most advanced and versatile device.

Technical Features

AQUA M300

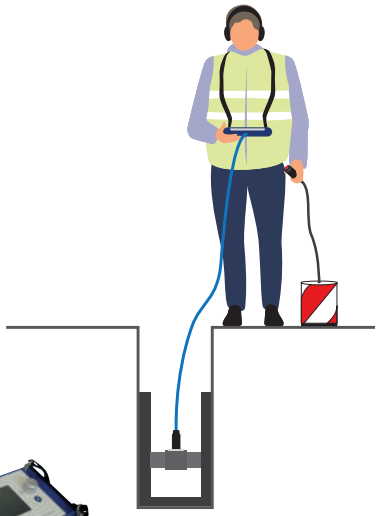
__ **Acoustic leak detection and pinpointing** detection using a tracer gas (H2)
__ **Colour touchscreen** and multi-function rotary knob
__ **Automatic or expert mode**

AQUA M100 & M200

__ **Acoustic leak detection**
__ **Extremely easy to use**
__ **Professional sound quality** with pre-set filter levels

AQUA M60

__ **High sensitivity**
__ **Bluetooth wireless technology**
__ **Can be used with an external sensor and MIN function** as a geophone



Complementary products

Each device is different and allows all users to detect and/or locate leaks in a variety of situations.

LOKAL 400

Multi-functional correlator

The ingenious combination of geophone and correlator

All +

HIGH USER-FRIENDLINESS
thanks to its high-contrast, backlit colour display

COMFORTABLE OPERATION
thanks to its multi-function rotary knob and touchscreen

VERSATILE APPLICATION
with ground microphone for confirming leak detection

EASY HANDLING
automatic or expert mode

PRECISE CORRELATION
with just a few clicks

ALSO USABLE WITH PLASTIC PIPES
thanks to the optional hydrophone kit

The LOKAL 400 is a versatile leak detection device: Leaks can first be correlated and located, and then confirmed with a ground microphone. The correlator is easy to use and enables fast and precise leak detection. It is quick to set up and immediately ready for use, impresses with its high accuracy and multi-point correlation, and delivers reliable measurement results even in heavy traffic.

Technical Features

__ **2-in-1 system:** correlator and geophone

__ **Pre-location with listening stick, ground microphone, or MB6 universal transducer**

__ **MB6 transmitter and sensor measuring boxes** are installed at network access points

__ **Possibility of 3-point FFT correlation** with a third measuring box

__ **Confirmation and highly precise detection** of leaks using a geophone

__ **"Trans-auto" function** for precise measurement even in road traffic

__ **Storage of correlations** and subsequent updating of parameters for recalculating the correlation and for generating a report

Complementary products

This versatile device first locates leaks using acoustic correlation and then confirms the position by targeted listening.

LOKAL 200 PC

The High-Performance Correlator

The LOKAL 200 PC is a portable correlator for measuring leaks for professional users

All +

HIGH-PERFORMANCE SYSTEM WITH ACCOMPANYING PC SOFTWARE
for precise correlation even over long distances (FFT functions, analogue and digital filters)

IN A SHOCK-RESISTANT ABS CASE

INTEGRATED LONG-LIFE BATTERY

EXPERT MODE
automatic or manual

THREE-POINT CORRELATION
possible with a third measuring box

PRECISE CORRELATION
even on large main lines (e.g., via hydrophone sensors, optional)

The high-performance correlator is housed in a shock-resistant ABS case. The device is designed for intensive use by professional users, yet remains user-friendly. It can also be permanently installed in vehicles and is suitable for measurements even under the most challenging conditions.

Technical Features

__ **Installation of MB6 transmitters** using **structure-borne sound transducers at pre-located sensor points**

__ **Possibility of three-point correlation** with yellow MB6 transmitter

__ **High-precision leak detection and pinpointing** with a geophone from the AQUA M series

__ **"Trans-auto" function** for precise measurement even in road traffic

__ **Storage of correlations** and the ability to update parameters in order to recalculate a correlation retrospectively and print a report

Complementary products

This versatile device enables highly precise leak detection through acoustic correlation.

PIPEMIC

Pinpoint leak location

Locates leaks with unprecedented precision

PIPEMIC FLEX

PIPEMIC M/L

PIPEMIC XL/XXL

PipeMic devices enable the detection of pressurised pipelines and the reliable detection and precise measurement of leaks. The easy-to-use systems are extremely efficient at leak detection. There's a suitable version for every type of pipeline.
The FLEX version is particularly well-suited for house connections and pipelines with tight bends.

All ⊕

FLEXIBLE
suitable for the most challenging conditions

3-IN-1 FUNCTION
acoustic leak detection + pipe tracing + endpoint determination

EFFECTIVE ON ALL TYPES OF PIPES
PE / PVC / Metal

EASY AND QUICK INSTALLATION
with pressure lock and integrated disinfection

EXTREME RANGE
available with up to 300m cable

DETECTS MULTIPLE LEAKS
in a single step

Technical Features

__ **5 sizes available:** M, L, XL, XXL, FLEX

__ **Suitable for all pipe materials** PE / PVC / metal

__ **Easy insertion of the probe at an access point (e.g. water meter)**

__ **Detectable probe** for very high precision (accurate to one centimetre)

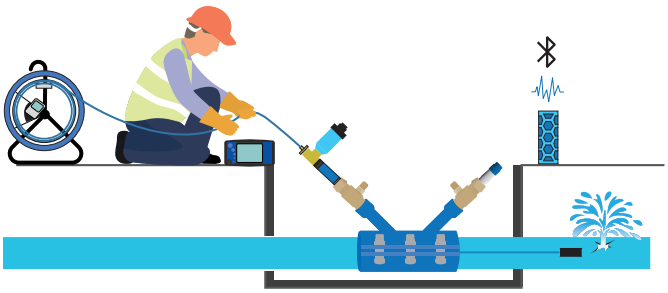
__ **Various lengths available:** 50m / 80m / 150m / 300m for pipes from DN15 to over DN300

__ **Leakage sound transmission** to a Bluetooth device (headphones or speakers)

__ **Integrated meter counter and disinfection system**

__ **Accessory case:** flexible connector, quick-release coupling, charging accessories, and 9V battery

Complementary products



DTS / DAS

Fibre optic sensors

DTS and DAS expand the range of options for continuous and seamless monitoring of critical infrastructure. The laser-based devices transform a conventional fibre optic cable into a high-performance, continuous sensor – either outside or inside the pipelines.

All +

THE NEXT LEVEL OF LEAK DETECTION
with an excellent cost-benefit ratio

SUPERIOR SIGNAL-TO-NOISE RATIO (SNR)
ideal for phase-based systems

INTELLIGENT EVENT DETECTION
through self-learning algorithms (AI)

EXTREMELY LOW FALSE ALARM RATE (FAR)

REDUCED TIME REQUIRED
for commissioning and set-up

OPTION TO INTEGRATE WITH
third-party software or customised cloud-based solutions

HIGH-PERFORMANCE LASER
with reduced power consumption

Distributed sensing systems detect either temperature and temperature fluctuations (DTS) or vibrations/acoustic signatures and temperature fluctuations (DAS) along optical fibres. Existing fibre optic networks along the infrastructure, or even retrofitted fibre optic cables inside water pipes, are used as continuous temperature and noise sensors to collect real-time data. Classification algorithms are used to register and locate local events such as leaks, tapping attempts, unauthorised withdrawals (water theft), or other deviations from normal behaviour.

Technical Features

__ **Available in single-channel and multi-channel versions**

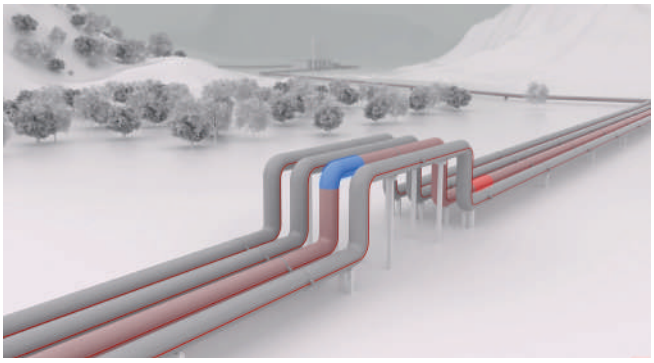
__ **Offers a measurement range of up to 100 km** with two simultaneous channels (DAS) or 12 channels (DTS)

__ **Intelligent self-diagnosis**

__ **Low optical output power** (Class 1 laser product)

__ **Standard single-mode/multi-mode fibre optic cables** can be used

__ Fibre optic installation outside or inside the pipeline



VEHICLE CONVERSION

Leak detection, flushing, maintenance

FAST offers individually equipped vehicles for daily use in leak detection, flushing, or maintenance work.

All +

HIGH-QUALITY, CUSTOMISED DESIGN

for all types of vehicles using flexible aluminium construction

DIRECT ACCESS TO ALL EQUIPMENT ELEMENTS

for efficient and ergonomic work

SELF-SUFFICIENT POWER SUPPLY

for daily use and operation of all measuring devices on site

INTEGRATION

of various measuring systems and work equipment in one vehicle

OPTIMISED SPACE LAYOUT

Thoughtfully designed down to the last detail

Thanks to its customisable design, the measuring cart is ideally suited for all daily tasks in the pipe network. It offers a compact solution while adhering to all safety requirements (load securing, construction site safety, etc.).

Technical Features

__ **Rapid on-site intervention**

__ **Selection of various components, tailored to different tasks**

__ **Monitoring and data analysis** from the vehicle

__ **Planning and design in collaboration** with the client. "Nothing is impossible."

__ **Assembly and installation by experienced FAST staff**

Conversion examples

The software and applications enable comprehensive remote analysis of transmitted data from the locally installed measuring devices.

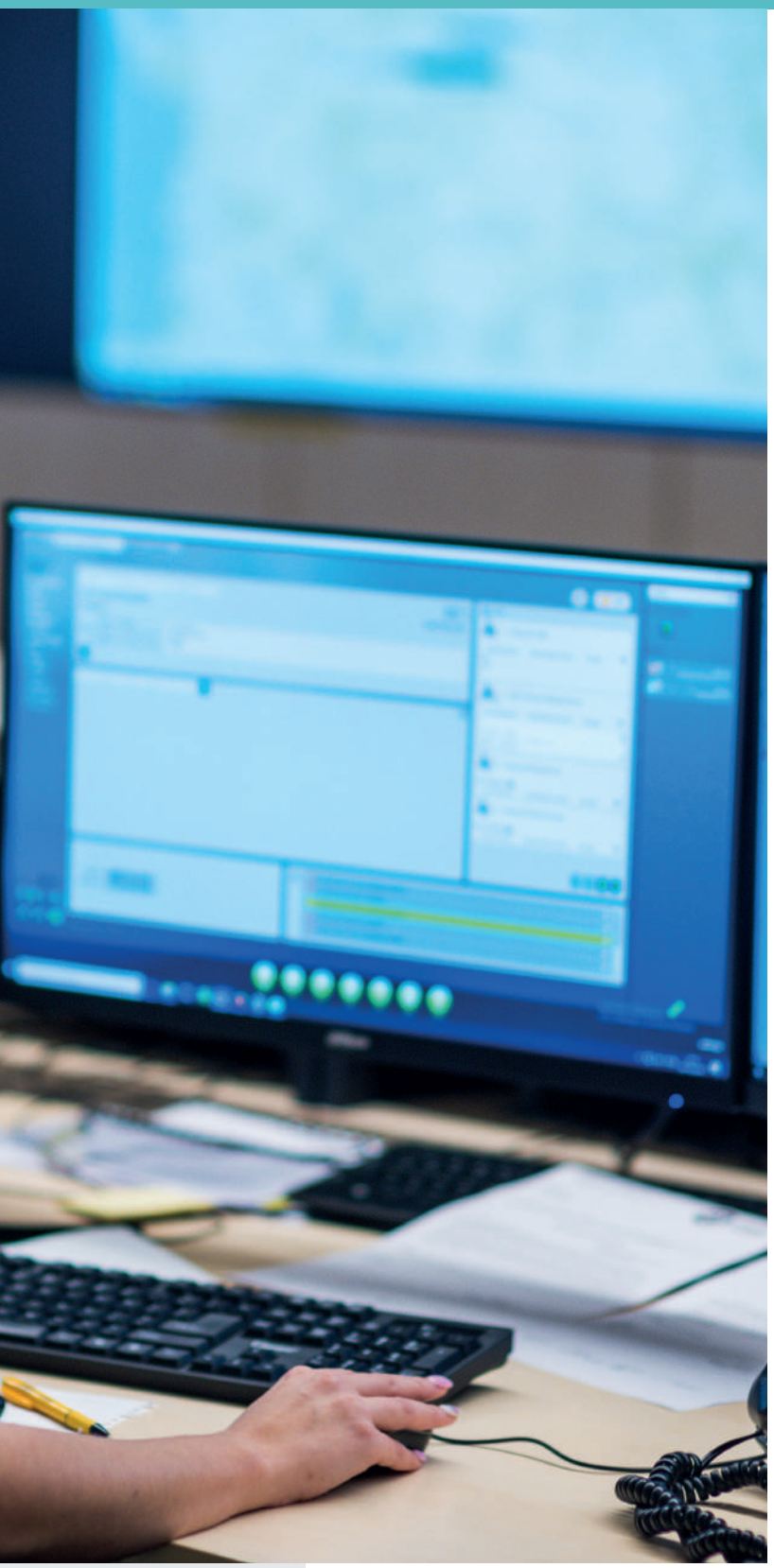
Analysis

A wide range of devices and software solutions can be deployed at various points in the water supply network for monitoring purposes. This can be done continuously or as a temporary installation. The sensors measure various parameters, which are then evaluated by central (cloud) software. If irregularities occur, the user is notified and can react quickly.

Monitoring applications (cloud-based or on-device) display and visualise the collected sensor data for the user. Integrated analysis tools enable rapid data evaluation.

The collected data provides users with decision support for managing the water network, particularly regarding the prioritisation of measures. It reduces response times when irregularities occur.

Claire Connect provides **industry-specific devices for remote monitoring of your infrastructure** and enables rapid **intervention.**

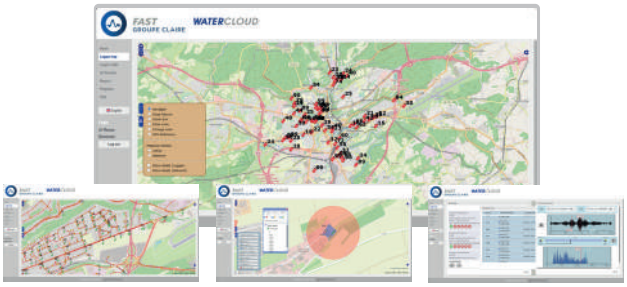


IJITRACK

The **IJITRACK platform visualises sensor data clearly and in a structured manner,** see p.60

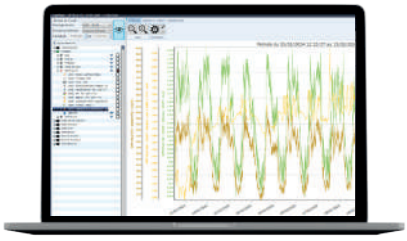
WATERCLOUD

The **WATERCLOUD platform enables clear, centralised management of all noise loggers and other measuring devices from any location with internet access,** see p.62



WINFLUID NG

A **software suite for visualising and analysing environmental measurements: WINFLUID NG,** see p.64



AVELOUR Software

Configuration of devices

The professional tool for local or remote configuration of sensors and loggers

All +

INTUITIVE USER INTERFACE

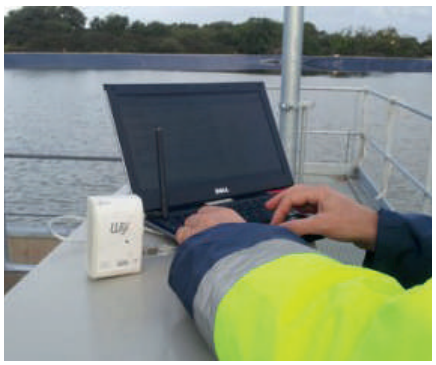
UNIQUE CONFIGURATION TOOL
compatible with all IJINUS sensors

QUICK AND EASY CONFIGURATION

SETTINGS ARE SAVED
so they can be duplicated for multiple sensors

GRAPHICAL DISPLAY OF YOUR DATA
including comparison of multiple devices

SECURITY IS GUARANTEED
thanks to configuration and monitoring



AVELOUR is the software application for configuring Ijinus sensors, loggers, and other products. It can be used to store data and analyse data sets. Furthermore, the software allows exporting to Excel files or generating reports. Multiple configuration options are available, and settings can be saved for duplication across multiple sensors. Sensors are configured locally via radio or remotely using a data logger, thus collecting your data.

Technical Features

__ **Instant wireless connection of sensors on-site** using the connection kit or the WIJI USB stick

__ **Multi-curve display of your data**

__ **Capture of indexed data**

__ **Data recovery**

__ **Exporting data** in GIF, JPEG, Excel, or CSV format

__ **Updates:** availability is reported with each connection

__ **Required operating system:** Windows 7 or higher

Data Management and Monitoring

The AVELOUR software application is connected to the IJINUS sensors and data loggers, enabling the analysis and export of data from a variety of applications.

IJINUS LOG BLUE data logger for collecting sensor data and remote data transmission

The **IJITRACK web platform** for storing, displaying, and processing data, as well as for setting up alerts

The **WIJI app,** for quickly setting up your IJITRACK account

AVELOUR software for quickly programming sensors and retrieving, analysing, and exporting data

Compatible with CLIENT monitoring tools: Topkapi, Panorama, Dev-IO (OPC-UA, Osisoft, Ifix, WinCC Wonderware, etc.)

Topkapi

Panorama Suite

DEVIO

WIJI connection kit with radio transmitter, USB cable, antenna or USB stick

AVELOUR REMOTE Software

Configuration of devices

The professional tool for remote configuration of sensors and loggers

All +

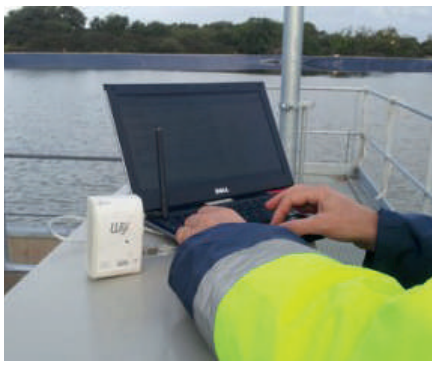
UNIQUE CONFIGURATION TOOL
compatible with all IJINUS sensors

QUICK AND EASY CONFIGURATION

SETTINGS ARE SAVED
so they can be duplicated for multiple sensors

GRAPHICAL DISPLAY OF YOUR DATA
including comparison of multiple devices

COMPATIBLE WITH OTHER MONITORING TOOLS
Topkapi, Panorama, Dev-IO (OPC-UA, Osisoft, Ifix, WinCC Wonderware, etc.)



The REMOTE version of the AVELOUR software enables remote configuration and activation of measuring devices in the field. This standalone system, including cellular communication, allows new AVELOUR configurations to be shared with the IJITRACK platform or the customer's monitoring tool. Collecting data according to the new configurations facilitates the optimisation of devices in the network without requiring on-site intervention. Multiple configuration options are available, and settings can be saved for reuse across multiple sensors.

Technical Features

__ **Instant wireless connection of nearby sensors** using the connection kit or the WIJI USB stick

__ **Multi-curve display of your data**

__ **Capture of indexed data**

__ **Only retrieval of difference data**

__ **Exporting data** in GIF, JPEG, Excel, or CSV format

__ **Updates:** availability is reported with each connection

__ **Required operating system:** Windows 7 or higher

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Compatible with CLIENT monitoring tools: Topkapi, Panorama, Dev-IO (OPC-UA, Osisoft, Ifix, WinCC Wonderware, etc.)

Topkapi

Panorama

WIJI connection kit with radio transmitter, USB cable, antenna or USB stick

WIJI, AZA-OAD and WAYVE Apps

Referencing measuring devices

Practical software and applications for configuring sensors and loggers

All +

WIJI APP

QUICK INTEGRATION

thanks to the QR code, which is scanned to activate automatic GPS tracking

ON-SITE RESPONSIVENESS

thanks to the installation photos, the sensor is easy to locate

AZA-OAD APP

QUICK DISPLAY

of measurements on the tablet

DATA VISUALISATION

historical measurements, correlations, and noise files

WAYVE APP

PROGRAMMING OF OPERATING TIMES

automatic flushing processes, openings based on a temperature threshold, depending on the connected box models

SYSTEM CONTROL AND AUTOMATIC ACTIONS

in case of a leak

Each app allows you to quickly configure sensors and loggers within a user account. They are essential for activating real-time notifications and alerts, optimally monitoring sensitive points in the network, displaying the latest data sent by the sensors, and viewing configured alarms.

Technical Features

__ **Configuration of sensors and loggers**

__ **Visualisation of the latest data, historical and statistical data**

__ **Device and sensor tracking**

__ **Notifications and alerts**

__ **User management**

__ **Available in several languages**

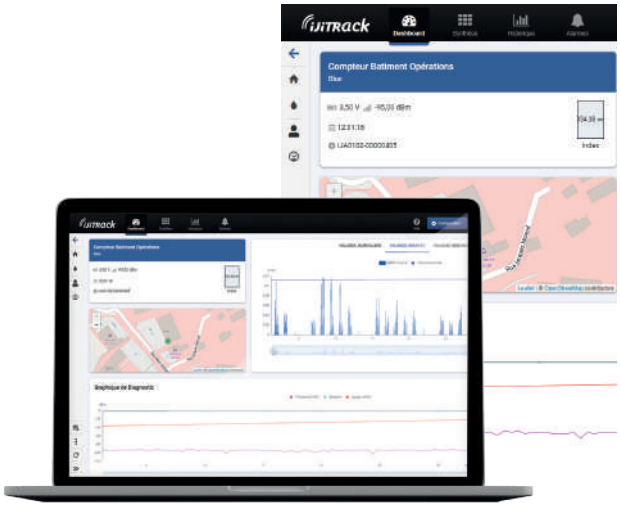
Data Management and Monitoring

Each application is linked to the sensors and loggers and their specific platform, enabling quick configuration of the devices and/or visualisation of the data.

IJITRACK Platform

Remote Data Monitoring

Monitoring platform for sensors and loggers



All +

UNIQUE MONITORING TOOL
for natural water, drinking water and wastewater networks

COMPATIBLE
with all IJINUS sensors and data loggers

QUICK AND EASY CONFIGURATION
thanks to a simple, intuitive user interface

INDIVIDUAL VIEW
of your data with export functions

FAST ON-SITE RESPONSE
thanks to alarm notifications

OPERATOR RELIABILITY
through remote monitoring and control

IJITRACK is a web-based platform that compiles your sensor data and displays it for analysis and evaluation. Monitoring of the pipeline network can be customised by configuring alerts to prioritise on-site actions. The platform allows you to locate sensors on a map and quickly evaluate their measurements using multi-curve graphs. It also simplifies the creation and management of customer accounts.

Technical Features

__ **Bundling of data measured and recorded by multiple sensors and loggers**

__ **Automated, individual management** of networked WAYVE boxes

__ **Display data on a map, as a table, or as an object**

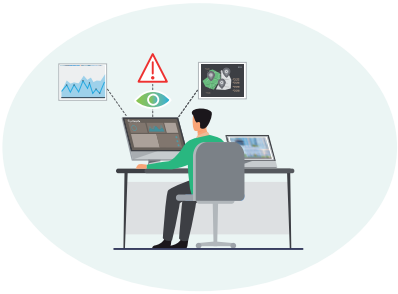
__ **Exporting data:** GIF, JPEG, Excel, and CSV formats, graphics – by sensor, by group, within a date range; can be automated via HTTP request

__ **Importing data:** via SMS, GPRS (FTP), LTE-M, NB-IoT

__ **Multiple curve display:** up to 7 curves

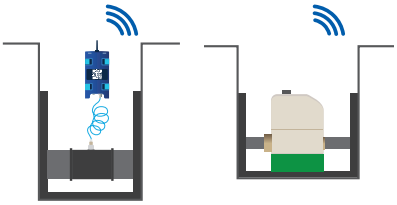
__ **Multiple customer accounts or groups** with different authorisation levels

__ **Alarm recipients:** up to 20 phone numbers or email addresses can be stored



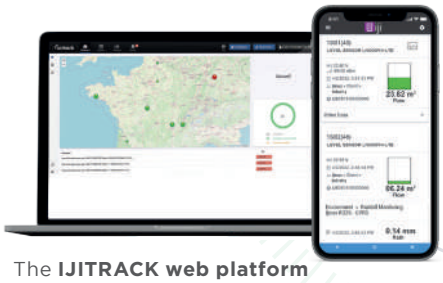
Data Management and Monitoring

The IJITRACK platform communicates with IJINUS sensors and loggers, enabling the display and processing of data from a wide variety of applications.



IJINUS BLUE data loggers collect data from various sensors before transmitting it via mobile network

SAVE, MOVE, CLEAN and TEMP BOXES, for 3 valve positions: open, closed, and limited flow



The **IJITRACK web platform** for displaying and processing data and setting up alerts

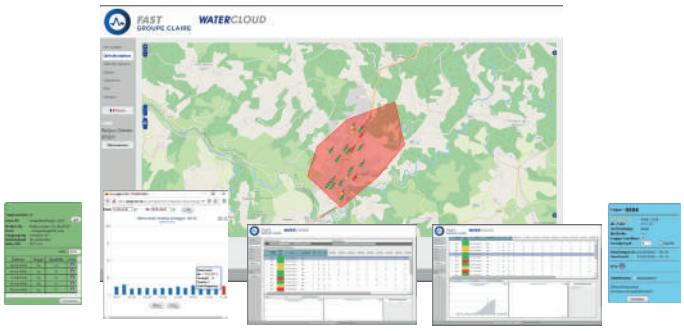
The **WIJI app,** for quickly setting up your IJITRACK account

The **WAYVE app,** for programming opening times, automatic leak detection, system control, collecting historical and statistical data, and geolocating the box

WATERCLOUD Platform

Remote Data Monitoring

The intuitive monitoring platform for leak detection



All +

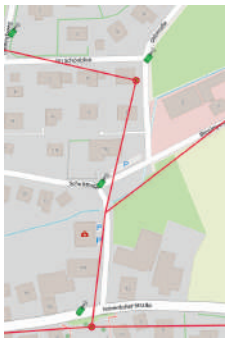
CONTINUOUS MONITORING OF THE PIPELINE NETWORK
for early leak detection

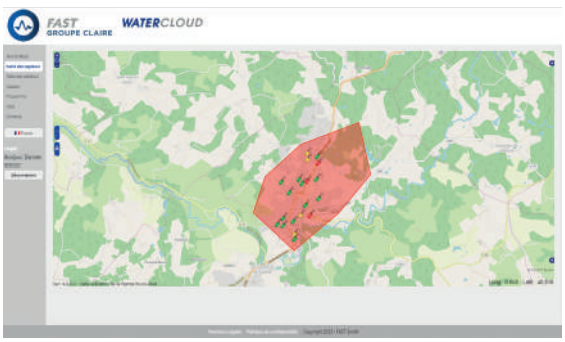
CLEAR PLATFORM
with access to measurement data on a map, by sector, and with table and graph analysis

AUDIO RECORDINGS AND CORRELATION
of leak sounds available (BIDI Logger)

AUTOMATIC RETRIEVAL
of measured values

DATABASE CREATION
measurement history and actions taken





**WATERCLOUD is a web-based platform for the remote monitoring of water supply networks. The collected data is visualised on a map and managed centrally. This enables the early detection of leaks in water networks.
The WATERCLOUD online application improves response times, sets the right priorities, and optimises operating costs.**

Technical Features

__ **Retrieving measurement data** via radio, LoRa, or LTE – see illustration on p. 38

__ **Creating a WATERCLOUD account using FAST**

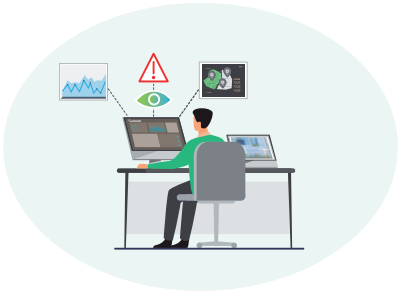
__ **Option to create different user levels** (administrator, guest, etc.)

__ **GPS referencing of devices** (loggers) on the WATERCLOUD map

__ **Data analysis** with leak status display and advanced analysis functions

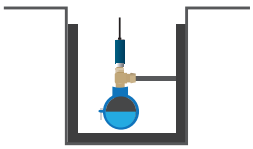
__ **Configurable alarm notifications via email**

__ **User-friendly platform** with remote access to sensors (for example, remote correlation)



Data Management and Monitoring

The WATERCLOUD platform enables the display and analysis of data from a wide variety of different applications.



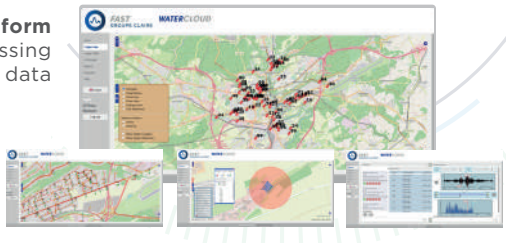
FAST BIDI WIRELESS logger, for transmitting measurement data wirelessly

FAST BiDi LTE logger, for transmitting measurements via LTE mobile network

FAST BiDi LoRa logger, for transmitting measured values via LoRaWAN

AZA-OAD app for receiving and viewing data on-site and importing

WATERCLOUD web platform for displaying and processing logger data



WINFLUID NG Software

Remote Data Monitoring

The intelligent ecosystem for Hydreka sensors and loggers

All +

CENTRAL REMOTE CONTROL
configuration, reading, synchronisation

ADVANCED DATA PROCESSING
precise and customised processing (correlation, asynchronous management, etc.)

COMMISSIONING SUPPORT
thanks to a simple, intuitive user interface

OPTIMISED REPORTING
customisable protocol configuration

UNIVERSAL
with many devices on the market

EFFICIENT
multiple users possible, flexible data collection (remotely, locally, manually)

WINFLUID NG is a comprehensive software solution for managing environmental measurement data. It enables the configuration, automatic acquisition, analysis, and visualisation of data from a wide variety of devices (flow meters, probes, sensors, data loggers, etc.). Through its integration with the Webfluid2 cloud, it offers synchronised, secure, and continuous access to data. The simplified user interface and advanced processing tools make hydrological studies easier. Thanks to its sharing capabilities, it's a complete solution for managers, laboratories, and engineering offices.

Technical Features

__ **Display of recorded data** measured by various sensors and loggers

__ **Displaying data** on maps, in tables, or as objects

__ **Data export:** CSV format, graphics

__ **Synchronisation of Windfluid NG and Webfluid NG**

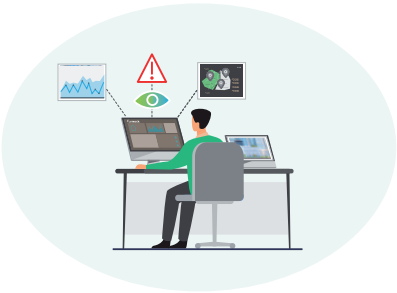
__ **Data processing tools and automatic reporting**

__ **Multiple curve display:** up to 7 curves in one graph

__ **Multiple customer accounts or groups** with different permissions and warning messages

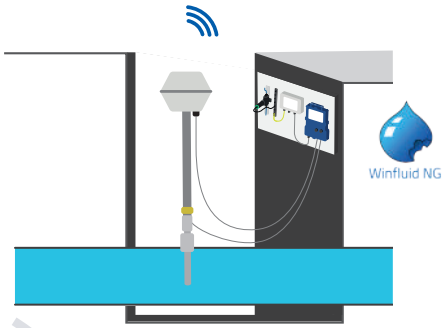
__ **Data security** via a secure HTTPS connection

__ **Programming assistant**



Data Management and Monitoring

The WINFLUID software is connected to HYDREKA sensors, data loggers and flow meters, enabling the programming and analysis of the collected data.



HYDREKA DTU 2,
controller for transmitting the recorded data

HYDRINS 2.1 HYDREKA
flow meter for leak detection and zoned water network

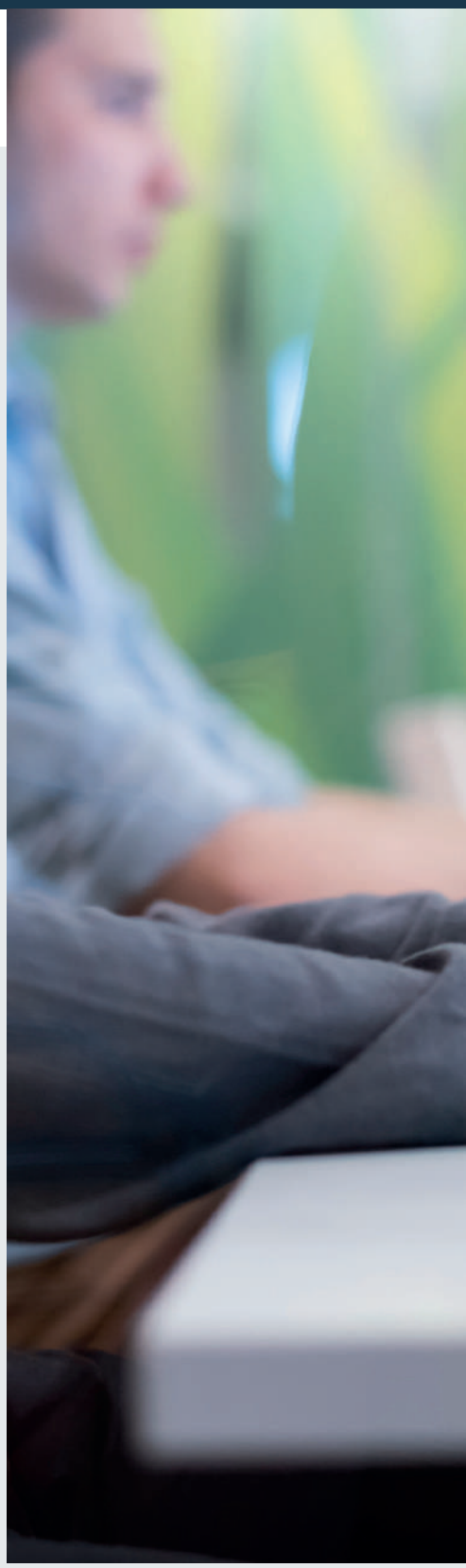
WINFLUID web platform
for displaying and processing data and setting up alerts

Conserving resources

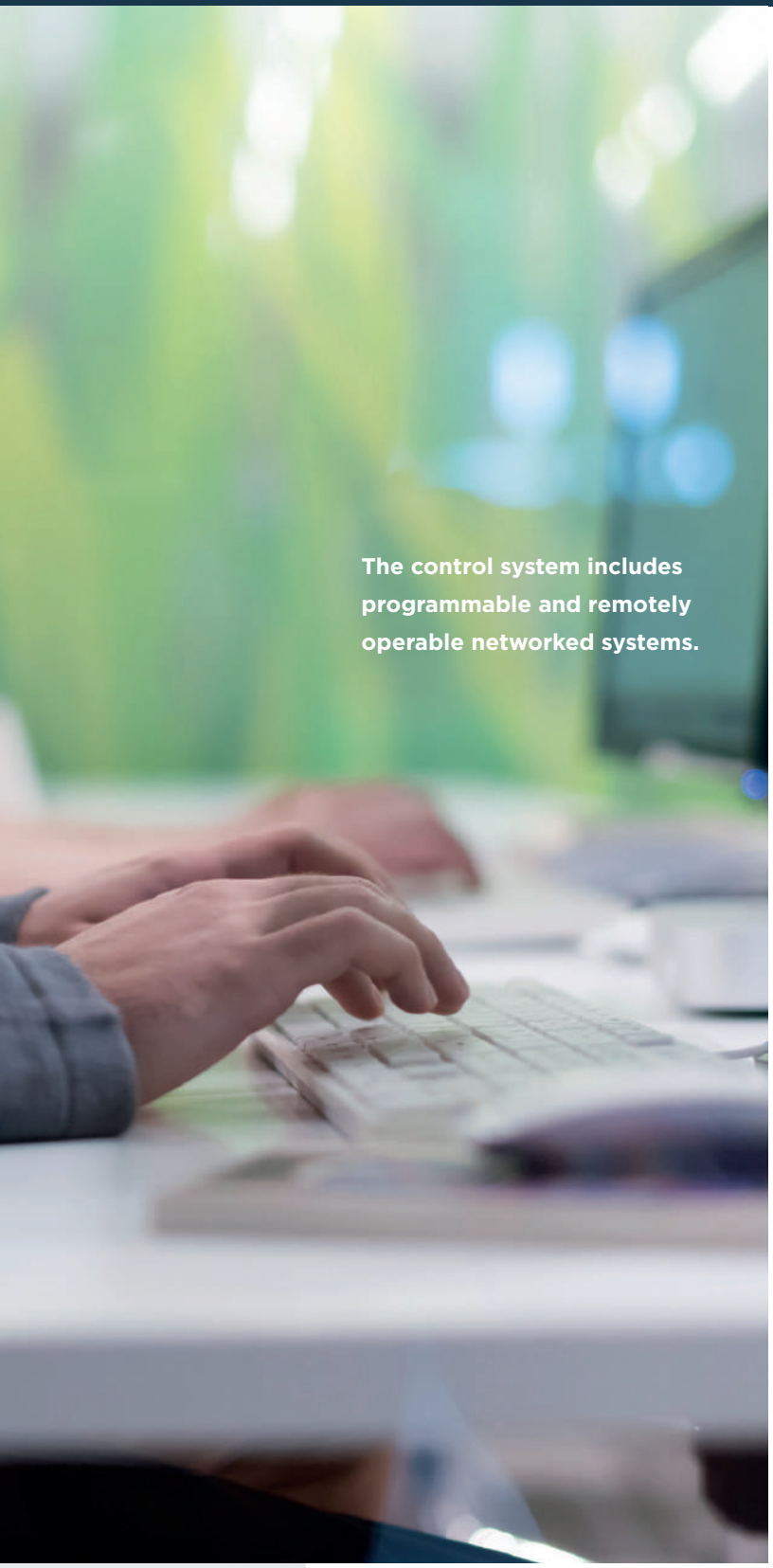
Improving the performance of drinking water networks also means having autonomous, remotely controlled systems that can take rapid action when needed.

These types of systems minimise operating costs by reducing travel requirements, optimise water consumption, limit the risk of leaks and the associated damage, and ensure better water quality.

These intelligent and controlled applications are designed for a range of uses and can be deployed in public spaces (schools, stadiums, parks, cemeteries, etc.), factories, remote properties, individual homes, and within the core network. Low-flow, above-ground networks.



Wayve offers smart boxes for automated and user-specific management of water supply networks.



The control system includes programmable and remotely operable networked systems.

SAVE

The **SAVE box: a turnkey solution for saving water,** see p.68

CLEAN

The **CLEAN box: a system for the automatic management of network flushing,** see p.68

TEMP

TEMP: the **box that protects water and pipes from frost and high temperatures,** see p.68

WAYVE networked boxes

Remote control

Remote monitoring and control of unusual water consumption and automation of maintenance work.

SAVE

MOVE

CLEAN

TEMP

4 turnkey solutions

SAVE BOX

management of consumption and leak detection in public and private properties, especially those used only seasonally or located in remote areas

MOVE BOX

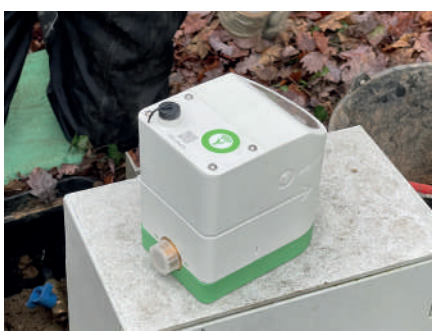
opens the water distribution system upon motion detection in public places and remote locations

CLEAN BOX

maintains water quality in the drinking water network (e.g., stagnant water, etc.)

TEMP BOX

protects water quality and pipes exposed to extreme conditions (frost, heat, etc.).



- Automatic, autonomous system
- Automatic water replenishment
- Maintenance of pipes and water quality
- Control of consumption and operating costs
- Remote management results in fewer on-site visits
- Continuous monitoring of the water supply

Technical Features

__ **Networked and remotely controlled valves**

__ **Consumption measurement and monitoring**

__ **3 valve positions:** open, closed, and limited flow

__ **Alarm for unusual consumption**

__ **Programming of routine maintenance tasks** (flushing, opening at specific times, frost-related actions, etc.)

__ **Battery life** > 2 years and automatic maintenance, with replaceable battery

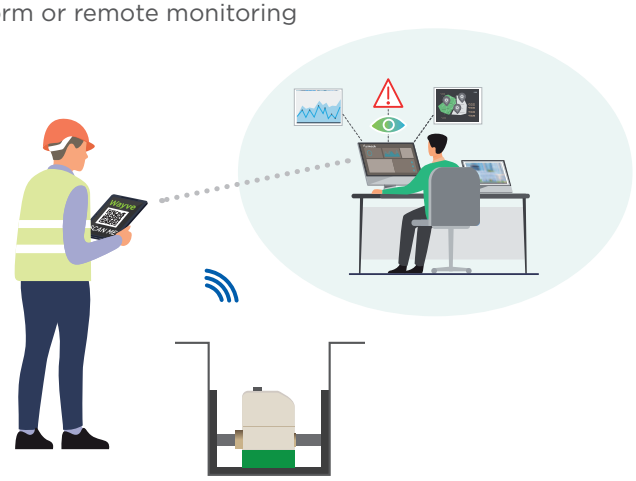
__ **Waterproof according to** IP67 (with sensor) / IP68 (without sensor)

__ **GSM communication**

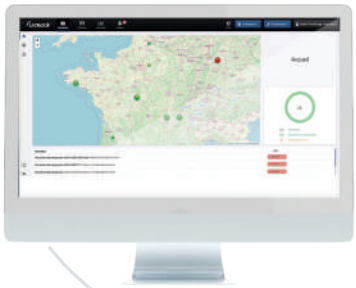
__ **Management of the collected data** on our IJITRACK platform or remote monitoring

Data Management and Monitoring

Each box enables the collection and transmission of data from various applications, as well as the receipt of new settings for opening/closing the water pipes.



SAVE, MOVE, CLEAN and TEMP BOXES, for 3 valve positions: open, closed, and limited flow.



IJITRACK web platform for remote control of the boxes, monitoring and alarm notification in case of leaks in the system, recording of historical and statistical data, geolocation of the devices

The **WAYVE app,** for programming opening times, automatic leak detection, system control, collecting historical and statistical data, and geolocating the box

Alphanumeric content

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