CITCO WATER

DIEHL
Metering

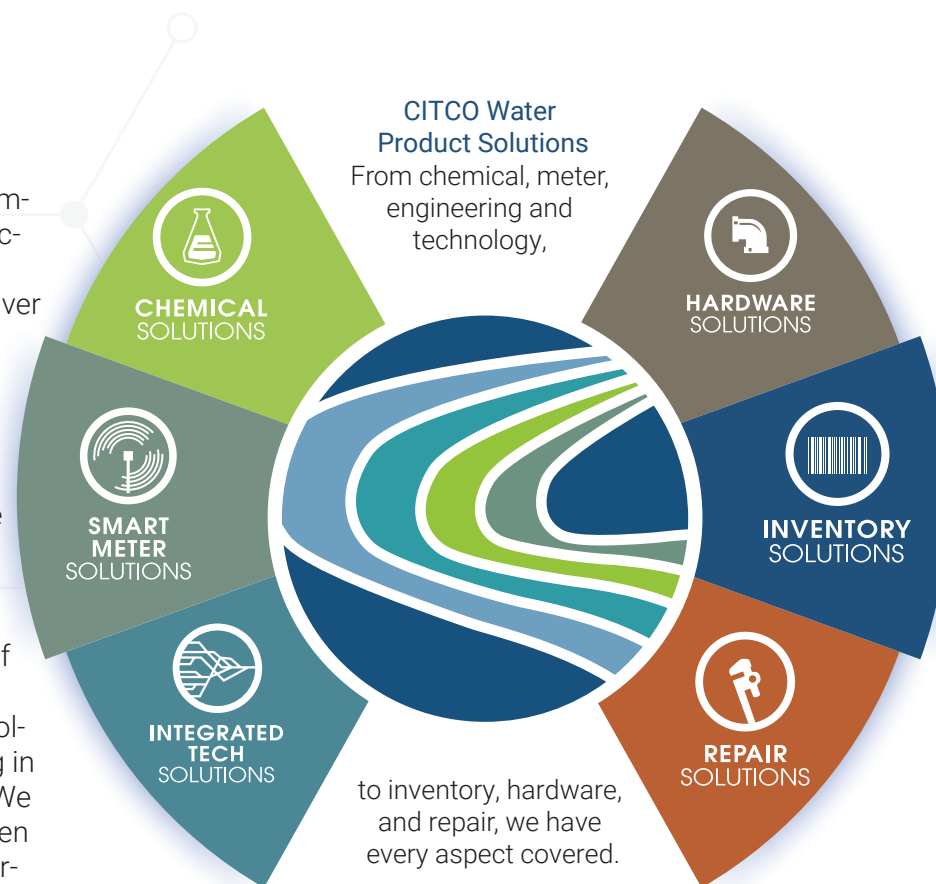EMPOWER A
SUSTAINABLE FUTURE

Our History

1931 - Charles Irving Thornburg created the C.I. Thornburg Company as the experts for pipe, Valves, and fittings in Huntington, West Virginia.

1958 - Web Morrison purchased the company with the vision of providing contractors and municipalities everything they need to take water from the source, deliver it to the consumer, and return it back to the source.

2020 - With Web's vision achieved, we renamed the company CITCO Water to reflect our growth and experience in the water and wastewater industry.

2025 - It's an exciting position to be in-offering our customers a vast array of products and services, from chemicals, supplies, design expertise, smart technology, upgrades, repairs, to even investing in their infrastructure at no cost to them. We now have over 180 employees and eleven full-service branches that serve West Virginia, Kentucky, Tennessee, Indiana, North and South Carolina, and Southern Ohio.

Tomorrow - We will continue to expand our products and solutions to meet our customers ever-evolving needs.

CITCO Water
Product Solutions
From chemical, meter, engineering and technology,

CHEMICAL SOLUTIONS

HARDWARE SOLUTIONS

SMART METER SOLUTIONS

INVENTORY SOLUTIONS

INTEGRATED TECH SOLUTIONS

REPAIR SOLUTIONS

to inventory, hardware, and repair, we have every aspect covered.

Solutions driven.

For the past 60 years, the Morrison family and generations of employees have carried out the goal by consistently developing new solutions for our customers.

Not only has CITCO Water remained family-owned and operated, we have continued the personal face-to-face customer relationships that we were founded on.

Commitment given

At CITCO Water, we listen to our customers. We know their problems and what keeps them awake at night. We strive to develop solutions to those challenges and more. After decades of experience, we are able to anticipate problems and develop unique solutions you don't even know you need yet.

Today, if you are in the water or wastewater business, we have every solution you need—chemicals, meters, engineering and technology, inventory management, Smart City capabilities, hardware, and repair.

AMI vs AMR Summary

The Future Of Water Is Today

CITCO Water is committed to providing our customers the highest quality solutions available along with cutting-edge technology.

We're the exclusive distributor of Diehl Smart Water Meters in Pennsylvania, Ohio, Indiana, North Carolina, South Carolina, Virginia, and all but 11 counties in Tennessee.

The 2 Types of Smart Metering Systems

01 Automated Meter Reading (AMR)

- Improve accurate readings and capture more revenue.
- AMR systems consist of radios/modules installed at residential and commercial meters as well as distribution points within the utility network.
- Endpoints read and store data that's retrieved with mobile, and network devices.
- Radio-read and drive-by technologies.
- Retrieve data electronically to insert intoyour information and control systems.

02 Advanced Metering Infrastructure (AMI)

- The ultimate Smart Water System that you can install.
- AMI systems use technologically advanced meters with powerful long-range radio systems that communicate with a gateways and network devices.
- AMI systems can be configured for large-scale multi-application networks (residential, commercial, and industrial accounts).
- Read meters from your desk in the office.
- Collect real-time data (temperature, pressure, chlorine residual, etc.) anywhere in your system.
- Receive smart water alarms to help you detect issues (customer leaks, reverse flow, tamper detection, empty pipe, etc.) in your distribution system.

- Stop problems as they occur.
- Predict trends and make forecasts.
- Reduce non-revenue water loss.
- Generate revenue and save money

Empowering A Sustainable Future

Product
Data
Sheets

Hydrus 2.0 Ultrasonic Meter
The Best of Two Worlds

Measures. Just better.

Everything that cannot be measured will not be billed. Don't miss a drop.

With Hydrus 2.0 and its enhanced measuring performance, you can provide your customers even more accurate consumption values for billing and decrease non-revenue water.

- Precise ultrasonic measuring technology
- Extended measuring dynamic range of up to R 800
- Minimal starting flow of 1.4 l/h for DN 15
- High overload flow rate of up to 2x Q4
- Full range from DN 15 to DN 50 with all common

Measures. Just longer.

Hydrus 2.0 is a sustainable investment, since this quality product ensures endurance and durability over its entire lifetime. Benefit from exact measuring results for a long time and save costs for meter exchanges

- Long-term measuring stability
- Resistance towards particles
- Ultra-robust and waterproof design (IP 68)
- Lead-free brass construction
- No magnetic manipulation possible
- No air measurement

...Connectivity

Generates information. Just Smarter.

Hydrus 2.0 provides more than only the total water volume for billing. Its smartness creates valuable information about unwanted events which need quick measures, e.g. leakages inside the building.

- Generates billing and metrological information as well as parameters for grid monitoring on-site at the meter or for the overall water network
- Easy-to-read display with new symbols, loops and error & alarm codes
- Extensive data logging functions with hourly, daily, weekly, monthly values and due dates
- Self-check monitoring, e.g. regarding transducers, temperature sensor functionality, occurance of measurement interferences

Transmits information. Just More Efficiently

Hydrus 2.0 provides more than only the total water volume for billing. Its smartness creates valuable information about unwanted events which need quick measures, e.g. leakages inside the building.

- Integrated communication functions for mobile reading and fixed network
- Read-out via radio R4, R4+, mioty4metering, wired M-Bus or L-Bus or Pulse
- High radio range and robustness even for challenging meter installation locations

IZAR Receiver for mobile reading or fixed network

IZAR Software

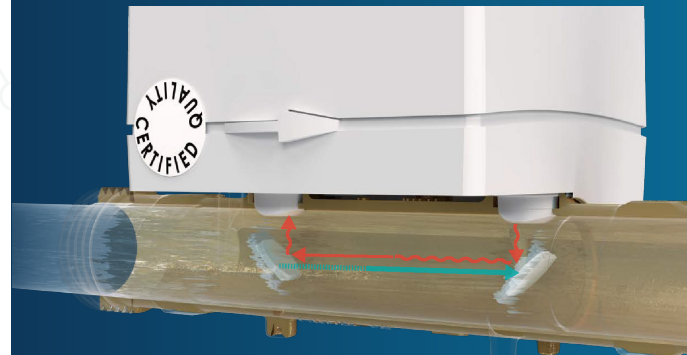## GENERATED INFORMATION FOR YOUR USE CASES

Billing

Consumption Monitoring

Device & Anomalies Monitoring

Water Loss MGMT

Hydrus 2.0 Bulk Smart Meter
The Best of Two Worlds

Measures. Just better.

Everything that cannot be measured will not be billed. Don't miss a drop.

With Hydrus 2.0 Bulk and its enhanced measuring performance, you can provide your customers even more accurate consumption values for billing and decrease non-revenue water.

- Precise ultrasonic measuring technology with two measuring paths
- High measuring dynamic range of up to R 1000
- Minimal starting flow of 15 l/h for DN 50
- High overload flow rate of up to 2x Q4
- Full range from DN 50 to DN 200 with all common body

Measures. Just longer.

Hydrus 2.0 Bulk is a sustainable investment, since this quality product ensures endurance and durability over its entire lifetime. Benefit from exact measuring results for a long time and save costs for meter exchanges.

- Long-term measuring stability
- Resistance towards particles
- Ultra-robust and waterproof design (IP 68)
- Lead-free brass construction
- No magnetic manipulation possible
- No air measurement

...Connectivity

Generates information. Just Smarter.

Hydrus 2.0 Bulk provides more than only the total water volume for billing. Its smartness creates valuable information about unwanted events which need quick measures, e.g. leakages.

- Generates billing and metrological information as well as parameters for grid monitoring on-site at the meter or for the overall water network
- Easy-to-read display with new symbols, loops and error & alarm codes
- Extensive data logging functions with hourly, daily, weekly, monthly values and due dates
- Self-check monitoring with fallback mode.

Transmits information. Just More Efficiently

The combination of Hydrus 2.0 BULK and Diehl Metering's IZAR connectivity solutions makes a powerful system infrastructure that helps you to easily obtain the information of all meters in your distribution network.

- Integrated communication functions for mobile reading and fixed network
- Read-out via via radio R4, R4+, wired M-Bus or L-Bus or Pulse
- High radio range and robustness even for challenging meter installation locations such as pits
- High data granularity and timeliness

IZAR Receiver for mobile reading or fixed network

IZAR Software

GENERATED INFORMATION FOR YOUR USE CASES

Billing

Consumption Monitoring

Device & Anomalies Monitoring

Water Loss MGMT

IZAR@NET 2 SYSTEM

Application

IZAR@NET 2 is the web-based application of CITCO Water / Diehl Metering's Meter Data Management software designed to run locally on utility's servers and PCs. IZAR@NET 2 provides all key features for efficient processing of metering data and easy administration of meter reading via Fixed Network or Walk-By/Drive-By.

The high modularity of IZAR@NET 2 helps to scale the system according to individual demands and gives a high flexibility of administering metering data, read out processes and the supply network.

Features

- Facilitates multi utility approach by managing all media in one system (Water,Thermal Energy, Gas, Power)
- High scalable software design focused on mass data management
- Integrated map view for easy organisation of devices and readout tours
- High-performant analysis engine e.g. for leakage detection and to avoid energy losses
- In-built task scheduler to facilitate meter import/export and analysis jobs
- Instant graphical representation of meter data
- Interactive Dashboard for important information
- Alarm monitoring to notify on problems in the meter network
- Use REST API for easily connecting third party software and a quick implementation process
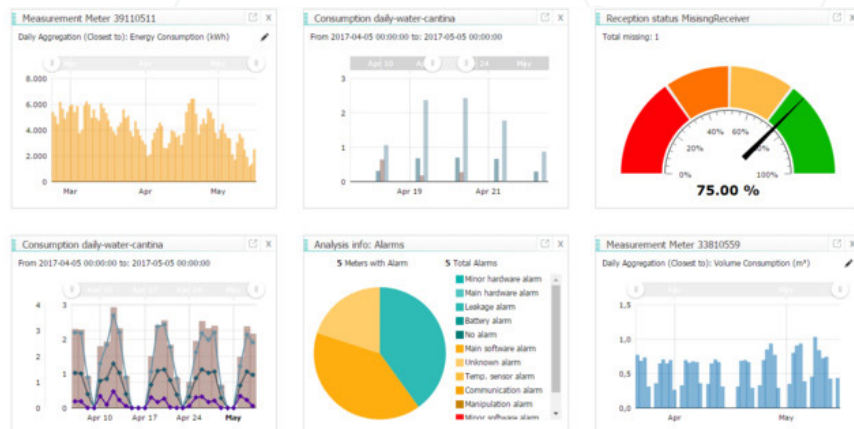
Basic Package Features

- Customizable Import from .csv and export to .csv and .xls
- Fuzzy search and multiple filtering options
- Integrated map view for meters, read out tours and data concentrators
- Dashboard view for system monitoring
- Pre-defined graphics to visualize meter readings and consumptions
- In-built task scheduler to automate e.g. import/export or analysis jobs
- Standard analyses, e.g. to compare meter consumptions, to detect alarms or to find missing meter reads
- Email notification on meter readings, alarms or analysis results
- Pre-defined analysis for consumption comparisons and missing meters
- Management of meter replacements in combination with IZAR@MOBILE 2 software
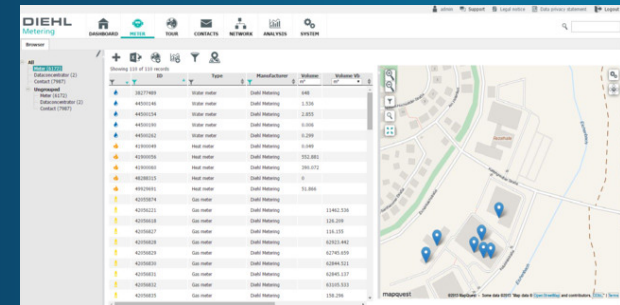- Storage and display of additional meter information from the field, e.g. photos, comments

Available Modules

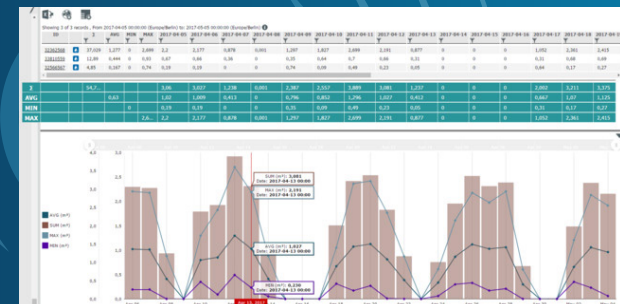| IZAR@NET 2	
Mobile	Enables integration of Diehl's mobile application IZAR@MOBILE 2 for the organization of Walk-by / Drive-by tours and meter replacements
Fixed	Utilize file-based FTP server import in a fexed network installtion including automatized import and direct readout of IZAR center logging data
On-Demand Reading	Connect directly to IZAR center via RS232, USB, LAN or modem for direct (live) meter readout via M-Bus
Smart Analysis	Create individual analyses for leakage reporting, virtual meters, heat network monitoring and optimisation and other media specific analysis
API Rest	Exchange data based on RESTful web service interface between 3rd party software (e.g. billing/consumer management software) and IZAR@NET 2

Application Screenshots: Dashboard

Meter Management

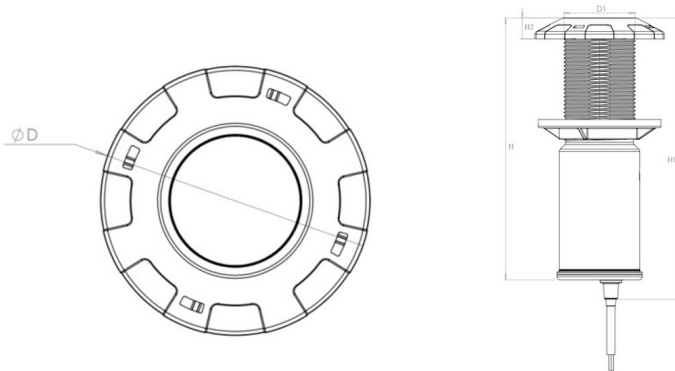## Analysis

Meter Details

IZAR STELLA MIU SYSTEM

Application

The IZAR STELLA MIU is a wireless communication device which provides long range communication for water meter reading in AMR (mobile) and AMI (fixed network) applications.

Features

- Standard LoRa® two-way wireless communication
- End-to-end information security including authentication, integrity protection, replay attack and encrypted messages
- Mushroom housing for pit installation
- Wall mount adaptor for basement / wall installation
- Migrates from mobile to fixed network to Smart City
- Stores up to 90 days of hourly data
- Supports firmware upgrade Over the Air (OTA)
- Compatible with Diehl HYDRUS and 3rd party meters
- Complies with FCC part 15 non-license 915MHz radio frequency.

IZAR STELLA MOTION SYSTEM

Application

IZAR STELLA MOTION is a gateway device specifically designed to collect meter readings and alarm data from IZAR STELLA MIU devices. IZAR STELLA MOTION can be quickly deployed in any type of vehicle. IZAR STELLA MOTION collects the IZAR STELLA MIU data and transfers it to IZAR@NET 2 management software.

- Two-way LoRa® communication with IZAR STELLA MIU
- Secured communication between IZAR STELLA MOTION and IZAR@MOBILE 2
- Supports parameter configuration Over The Air (OTA)
- Supports firmware upgrade OTA
- REST API over Wi-Fi, Bluetooth® or Ethernet
- Complies with FCC part 15
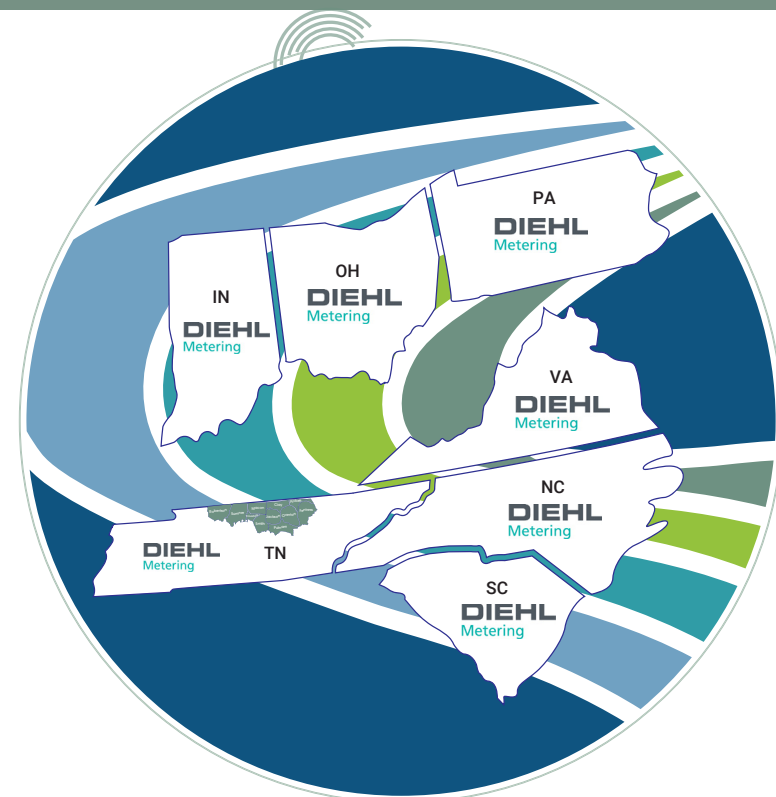
Operating Principle

IZAR STELLA MOTION communicates via LoRa® to the IZAR STELLA MIU to receive metering and alarm data for transfer to the IZAR@NET 2 software solution. IZAR@NET 2 enables the processing and analysis of the collected data.

IZAR@MOBILE 2

smart in solutions

Smart Meter Support

CITCO WATER

DIEHL Metering

DIEHL Metering

Solutions driven. Commitment given.