MANAS
Innovation For Future

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EKS 3-20/5-20

Prepaid Water Meters

Advantages of the Electronically Controlled Metering System

The prepaid metering system enables water utilities to improve collection performance without requiring substantial upfront investment. It helps prevent revenue losses, particularly those arising from public and private customers with high water consumption who fail to pay their bills on time.

With prepaid metering, water charges are collected before consumption takes place, allowing water utilities to manage their revenues more effectively. The system is designed to generate sufficient prepaid revenue to offset its own investment costs over time.

Manas Electronically Controlled Water Meters can be easily implemented by metropolitan municipalities, local authorities, cooperatives, residential complexes, housing developments, holiday resorts, villas and apartment buildings.

How Does the ECM System Work?

» The subscriber purchases water credit in their preferred amount, either in cubic metres or monetary value, from an authorised sales point.

» When the subscriber inserts their smart card into the meter, the meter reads the card and permanently stores the loaded credit in its memory. At the same time, the meter transfers up-to-date information to the smart card, including consumption, remaining credit, tampering alerts and battery status.

» The subscriber removes the smart card from the meter. The meter continues to operate as long as the remaining credit is above the predefined critical credit threshold. When the credit falls below this level, the meter alerts the subscriber. When the smart card is reinserted, the meter reads the reserve credit stored on the card. Once the reserve credit is also depleted, the meter closes the valve and notifies the subscriber.

» The valve is not shut off outside business hours or on public holidays. During these periods, water consumption continues and the corresponding charges are recorded as outstanding debt on the subscriber's account.

» When the subscriber returns to a sales point, all information stored on the smart card is transferred to the central database.

» New water credit is loaded onto the smart card, ensuring uninterrupted service.

System Operation and Monitoring

The system is operated and monitored through EPIC II Revenue Collection and Subscriber Management Software, which runs on an ORACLE® database.

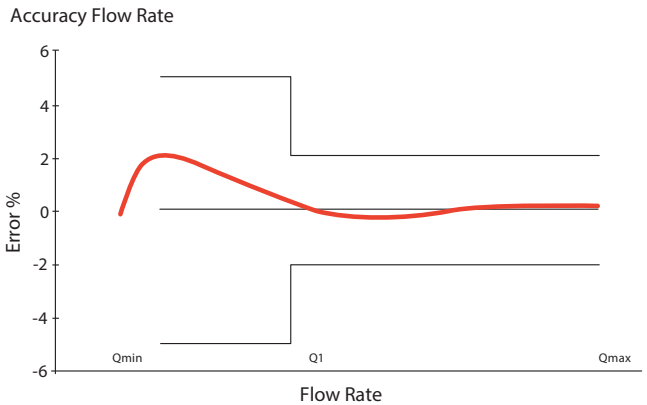
The smart card serves as the primary means of data transfer between the meter and the central system. Using the information collected through smart cards, water utilities can:

Generate statistical data.
Prepare periodic reports.
Access subscriber and regional consumption data.
Monitor meter status.
Track faults, penalty conditions, battery levels and valve positions.
Detect water losses and suspicious consumption patterns.

All data recorded by the system supports more efficient management and planning processes, enabling water utilities to make informed strategic decisions.

Key Benefits

- Prevents water losses, unauthorised usage and meter tampering.
- Reduces operational and management costs while increasing revenue.
- Enhances subscriber satisfaction.



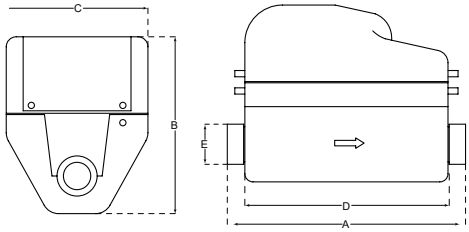
Technical Specifications

	EKS 3-20	EKS 5-20
Dimensions	Width 190 mm Height 160 mm Depth 110 mm	Width 190 mm Height 160 mm Depth 110 mm
Weight	2 kg	2 kg
Q4	3 m³/h	5 m³/h
Q3	1,5 m³/h	2,5 m³/h
Inlet / Outlet	Ø1"	Ø1"
Mechanical Meter	TU4 PWM mechanical meter	
Battery Type	Lithium battery 3.6 V 10.000 mAh	
Battery Life	5 years	
Protection Level	IP 54	
Valve Working Montage	3.0 V	
Pressure	16 Bar (working) 25 Bar (test)	
Screen	10 digits, alphanumeric, LCD with icons & backlight	
Smartcard Reader	ISO 7816, EMV 1.0	
Working Tempature	-100C / +500C (elektronic board)	
Approval	MID approval	
Other Functions	Date-Time Function, two ways communication, buzzer water back flow perception, freeze warning, leakage and excessive consumption detect, data collection, RF memory	
Optional Specifications	Mechanical Index Reading Anti-dismantle security kit Wall mount Kit	

EPIC II

EPIC II is a fast, secure and reliable software platform designed for water management systems.

- Based on the ORACLE® Database System.
- Supports both single-user and multi-user environments.
- Utilises a client-server architecture.
- Enables the management of millions of subscribers without compromising performance.
- Supports optional user and subscriber access via the internet.
- Features a customisable, multilingual user interface.
- Provides a comprehensive, end-to-end management solution for water utilities.



Operations Supported by EPIC II

EPIC II enables users to perform the following operations with ease:

- Water sales and credit loading
- Subscriber management
- Network and infrastructure management
- Water loss and unauthorised consumption monitoring
- Current account management
- Billing
- Unlimited reporting

In addition, EPIC II enables water utilities to manage the collection of property taxes, environmental taxes and other similar revenue streams.

Smart Card

The smart card used in the system is designed to be secure and multifunctional, and complies with the ISO 7816 standard.

MANAS reserves the right to make changes to the catalog content without prior notice.

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