



WMD

water management device

The Utility Systems **Water Management Device (WMD)** is a low-cost, intelligent, electronic **control valve** that is capable of controlling the **flow of water** to a domestic consumer at full pressure. It is an **enhanced** development of Utility System's highly successful **Flow Limiter**, of which several hundred thousand have been sold **globally**.





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The WMD is the solution for the management of water supply to domestic or small commercial consumers, and when linked to a pulse output water meter, enables

- leak and tamper detection,
- management of delinquent customers, and most importantly,
- remote data capture and meter control- Automated Meter Reading (AMR) with the ability to provide control, which is the essence of Advanced Metering Infrastructure (AMI).

The WMD can be configured to:

- dispense a fixed daily quantity of water, thereby providing the ability to limit a consumer to a finite (or pre-negotiated) level of supply . This is especially useful in the case of low income consumers who may never be able to afford to pay for water, but nonetheless have the right to be provided with at least a basic level of service
- be linked to a fixed(flat rate) tariff, so as to provide consumers the option to voluntarily limit consumption according to their budget .As with the free basic water allocation, this facilitates budgeting not only by the individual consumer, but by social services agencies, government departments and NGO's.
- provide meter readings by the radio signal to a drive or walk by collector- AMR or AMI
- be shut off remotely , or operate at reduced daily or monthly quantity. This is very useful in managing delinquent customers.
- default to a trickle flow if required, once the full pressure allowance has been consumed. Trickle flow will be approximately 1 litre per hour.

The introduction and implementation of the WMD can overcome some of the common challenges faced by conventional billing systems such as:

- illiteracy,
- poor postal services,
- long revenue collection cycles

and the challenges faced by prepaid meters such as:

- community resistance,
- high acquisition and running costs,
- proprietary management systems,
- the cost and inconvenience associated with having to continually replenish tokens

offering benefits to both the service provider and the consumer.

Benefits to the Service Provider

The WMD offers financial and operational benefits to the service provider:

Financial benefits

- Low cost of acquisition
- Prevents wastage and loss of treated potable water
- Reduces consumption by up to 80%, yet allows some consumers the minimum lifeline quantity
- Capital recovery possible within 6 to 10 months

Operational benefits

- Dispenses a fixed daily amount of water , from 10 litres per day to 50 000 litres per day , at full pressure.
- Accurate water balancing across a zone using synchronised meter readings
- In-field programming, testing, and interrogation
- Automatic Meter Reading (AMR) option allows interrogation via radio link
- Automatic Metering Infrastructure (AMI) option allows
 - parameter configuration and data collection via radio link
 - efficient disconnection/reconnection of supply
- Radio link receiver can be vehicle-mounted or carried by personnel
- No Proprietary Billing System required - current billing systems can be used, as data collected from the meter by means of the Mobile Data Collector (MDC) can be seamlessly integrated into most existing utility and municipal billing systems.

Benefits to the Consumer

- Consumers can budget their daily or monthly consumption through capped daily and/or monthly allowance
- Consumers cannot over-use or over-spend their budget.
- Daily or monthly carry over where service providers allow it
- Accumulation of unused daily allowance which encourages responsible water usage

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Can be used for

- Allocation of a finite or pre-negotiated daily or monthly allowance
- Flat rate billing
- Automated Meter Reading (AMR)
- Advanced metering Infrastructure (AMI)

Data logging feature

- Records hourly consumption for a 90-day period
- Detects leaks (night-flows)
- Allows load profiling
- Helps in payment dispute resolution

Features

- Configurable daily opening time and duration
- Automated control of full-pressure (mains) or semi-pressure (tank) systems
- Laptop interrogation, testing and re-programming in the field using the low cost Field Service Terminal (FST)
- Optional Automatic Meter Readings by radio link
- Supplied pre-programmed to order, but can be reprogrammed in the field or stores
- Daily or monthly limitation between 10 litres to 50,000 litres
- Individual customer leak detection
- Hourly consumption logging (90 days FIFO)
- Incorporates tamper-proofing measures
- Daily carry-over of unused allocation within month
- Indefinite daily carry-over

Technical Specifications

22mm (3/4") male thread	Compatible with Pulse Meter
Glass-reinforced nylon body	Infrared or radio communications
Flow range of 15 l/hr to 5,000 l/hr	Mounting can be vertical or horizontal
Pressure range 0.2 bar to 16 bar	Above or below-ground installation
Data logger - 3,000 hourly reading FIFO	IP68 waterproof rating
Battery life 5-7 years	Meter data - ASCII via USB port
Radio frequency 315/433/868/915 Mhz	

Further Information

Please visit our website at www.utility-systems.co.za

For related information please see our Metering Systems , Field Service Terminal (FST), and Flow Limiter brochures.





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