



A MICROMEGA Group Company

WATER MANAGEMENT DEVICE (WMD)

Cost-effective water management

The Utility Systems water management device, the WMD, is the original, remote communicating electronic water control valve and Standard Transfer Specification (STS) Association prepayment water device.



2nd Floor, Highland House
43 Alexander Road, Westmead
+27 (0) 1 700 4143 +27 (0)31 700 4147
enquiries@utility-systems.co.za
www.utility-systems.co.za



The WMD is the solution for the management of water supply to domestic or small commercial consumers. There is a large and proven deployment of Utility Systems WMDs in the field, successfully installed in a number of different environments and capable of controlling the flow of water to a domestic consumer at full pressure.

When linked to a pulse output water meter, the Utility Systems WMD enables two-way communication, configuration and valve control as well as the option for STS-approved prepaid water supply. This cost-effective, smart meter is then able to provide:

- » Free basic water
- » Prepaid water metering
- » Advanced metering infrastructure through automated meter reading (AMR), remote data capture and meter control
- » A cost-effective means to manage supply to delinquent customers
- » Leak and tamper detection

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 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 NGOs
- » Provide meter readings by radio signal or the global system for mobile communications (GSM) to a drive by or walk by collector, or through a fixed network
- » Operate at reduced daily or monthly quantity; this is very useful in managing delinquent customers
- » For larger bore meters Utility Systems has developed the Bulk WMD, integrating the WMD control unit with larger valves for bulk water management and prepaid water

Overcomes common challenges

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

- » Illiteracy
- » Poor postal services
- » Long revenue collection cycles

Benefits to the service provider

Financial benefits:

- » Low cost of acquisition
- » Prevents wastage and loss of treated potable water
- » Capital recovery possible within a few 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
- » AMR option allows data upload 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 fixed, 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 customer

- » Consumers can budget their daily or monthly consumption through capped daily and/or monthly allowance
- » Consumers cannot over-use or over-spend their budget if they are on flow-limitation or prepaid options
- » Daily or monthly carry-over where service providers allow it
- » Accumulation of unused daily allowance, which encourages responsible water usage

Can be used for

- » Allocation of a finite or negotiated daily or monthly allowance
- » Flat rate billing
- » AMR
- » AMI

Data logging

- » Records hourly consumption for a one-year period
- » Detects leaks (night-flows)
- » Allows consumption 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 and testing in the field using the low cost Utility Systems field service terminal (FST)
- » Supplied to order, and can be configured in the field or in stores
- » Optional AMR
- » Prepaid water option using STS tokens, when used in conjunction with Utility Systems in-home user-interface unit (UIU)
- » Free basic water with daily or monthly limitation or two daily allocation options
- » Emergency and lifeline water with overall limit and allocation options
- » Daily carry-over of unused allocation within month
- » Individual customer leak detection
- » Tamper detection, with tamper event log
- » Wireless remote or onsite data retrieval and configuration
- » 365 days of hourly data logging
- » Remote valve control for disconnection and reconnection of supply
- » SANS certified, STS Association approved

Technical specifications

- » 22mm and 25mm NSP and BSP thread
- » Compatible with pulse meter
- » Glass-reinforced nylon body
- » Infrared or radio communications
- » Switching range of 10 litres per hour to 5,000 litres per hour
- » Mounting can be vertical or horizontal
- » Pressure range 0.2 bar to 16 bar
- » Above- or below-ground installation
- » Data logger – 365 days of hourly consumption data
- » IP68 waterproof rating
- » Battery life of seven to nine years (dependent on use)
- » Radio frequency 433MHz
- » Operating temperature -10°C to 50°C
- » In excess of 10,000 valve operations

