



# Residential Use

ACCURATE, COMPACT AND FUNCTIONAL  
FOR EASY AND ERROR FREE READING



Nowadays energy saving and a responsible consumption are a global need.

The water used should be correctly and constantly monitored in order to create awareness of the consumption and enable a responsible and sustainable management.

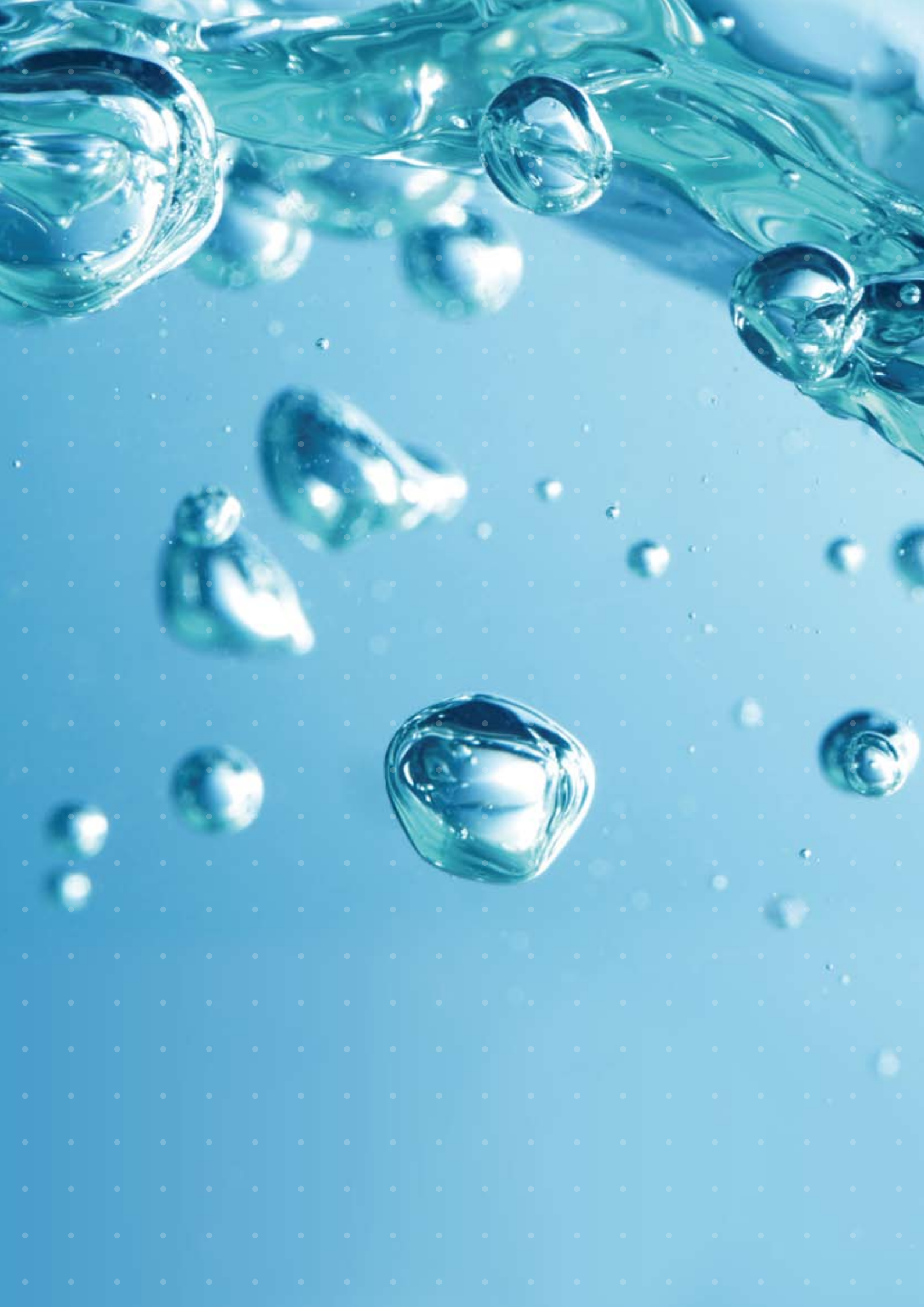
Measurement is the key to safeguard water resources. Maddalena offers metering solutions to enhance water management and ensure public utilities and consumers are aware of consumption. Our innovative technology solutions are designed for maximum efficiency so that not a drop is lost.

Our products are designed and manufactured for maximum functionality, easy operation and easy reading. They provide reliability and precision which are fundamental in the choice of a measuring solution.

Our technologies are designed to achieve the perfection that is at the core of our measuring systems.

# RESIDENTIAL WATER METERS: A RESPONSIBLE CHOICE FOR THE ENVIRONMENT AND THE CONSUMER





Precision is the key to water management and has always been our goal.

We offer a complete range of products for accurate water measurement in residential applications. Our products are designed to help public utilities and consumers to use water responsibly.

Maddalena water meters are compact, functional and designed for remote communication while providing easy and reliable reading both with clean and turbid water. Maddalena water meters are protected by the tamper-proof design.

We have always considered legal and fiscal metrology to be important. Our instruments meet the the performance standards and the metrological requirements of Directive 2004/22/EC (Annex MI-001) and European standard EN 14154.

Our state-of-the-art automation technology is engineered for ultimate precision, which is at the core of our commitment.

# ALWAYS ACCURATE, EFFICIENT AND DESIGNED FOR REMOTE COMMUNICATION FOR EASY DATA COLLECTION



The CD ONE line





### CD SD PLUS

Single jet dry dial water meter; super dry design; magnetic drive; suitable for cold or hot water.



### CD ONE TRP

Single jet water meter; sealed register and fully protected dry dial; mechanical drive design; suitable for cold or hot water.



### DS TRP

Multi-jet water meter; sealed register and fully protected dry dial; mechanical drive design; suitable for cold water.



### DS SD

Multi-jet dry dial water meter; super dry design; magnetic drive; suitable for cold or hot water.



### MVM

Positive displacement rotary piston dry dial water meter; super dry design; magnetic drive; suitable for cold water.



### VTZ AND UP

VTZ is a single jet dry dial meter; super dry design; magnetic drive; suitable for cold or hot water.  
UP is a built in dry dial meter; super dry design; magnetic drive; suitable for cold or hot water.



### ACCESSORIES

A whole range of accessories for batching and remote reading systems.







## C



Single jet super dry magnetic drive water meter. Direct reading on 8 rollers. Size available: 15 mm (Qn 1.5 m³/h) and 20 mm (Qn 2.5 m³/h). Suitable for cold (T30) and hot water (T50). Available upon request with 45-degree reading for easy reading when the meter is installed inside a reduced space.



Single jet dry dial water meters. CD SD PLUS meters utilize a magnetically driven, super dry design. They are designed to measure cold (T50) or hot (T90) water. CD SD PLUS meters combine high performance at low flow rates and maximum resistance to high flow rates and pressure. They ensure readability with water containing small debris.

CD SD PLUS meters are compact-sized, which makes them especially suited for submetering and installation in meter boxes. The compact design is also maintained in pulsed meters.

The whole range meets the requirements of Directive 2004/22/EC (Annex MI-001) and has undergone conformity assessment procedure B+D.

The maximum measuring range  $Q_3/Q_1$  (R) certified is 100 for horizontal position and 50 for vertical position. The  $Q_3$  allows for a wide measuring range and long-term reliability (wear tests are carried out at  $Q_3$ ). CD SD PLUS meters are also certified for use with potable water in accordance with Italian and international regulations.

CD SD PLUS meters are available in two sizes: 15 mm (Q<sub>3</sub> 2.5 m<sup>3</sup>/h) and 20 mm (Q<sub>3</sub> 4 m<sup>3</sup>/h). They also come pre-equipped for retrofitting a pulse emitter (1 pulse/10 litres). The pulse emitter may be fitted without increasing the meter's size and without concealing the dial's inscriptions (conformity marking, technical specifications, serial number in digits and barcode format). CD SD PLUS meters may be provided with an M-Bus or radio module (ARROW Pulse) for data communication.

# CD ONE TRP



## Features

Single jet mechanical drive water meters. CD ONE TRP meters feature a sealed register and a fully protected dry dial design. They are suitable for cold water (T50). CD ONE TRP meters combine high performance at low flow rates and maximum resistance to high flow rates and pressure. Readability is ensured by the tempered mineral glass lens. Unlike plastic lenses it is scratch resistant and does not turn opaque; the surface is also totally smooth for perfect visibility. CD ONE TRP meters are insensitive to external magnetic fields. The dial, the totalizer, the inscriptions and the serial number are in a dry compartment and remain always readable. The serial number is marked on the dial both in digits and barcode format.

## Application

CD ONE TRP meters are especially designed for residential use and where a high performance compact-sized meter is needed. They may be installed in any position (horizontal or vertical); no upstream and downstream straight pipe requirements apply.

## Conformance

The whole range complies with the Directive 2004/22/EC (Annex MI-001) and has undergone conformity assessment procedure B+D. The maximum measuring range  $Q_3/Q_1$  (R) certified is 200 for horizontal position and 100 for vertical position. The  $Q_3$  allows for a wide measuring range and long-term reliability (wear tests are carried out at  $Q_3$ ). CD ONE TRP meters are also certified for use with potable water in accordance with Italian and international regulations.

## Range

CD ONE TRP meters are available in sizes from 15 mm ( $Q_3$  2.5 m<sup>3</sup>/h) to 25 mm ( $Q_3$  6.3 m<sup>3</sup>/h), PN 16. They are also available in a pre-equipped version retrofittable with a pulse emitter (pulses/l: 1/1, 1/10, 1/100, 1/1000).

CD ONE TRP water meters may be equipped with a standard or bidirectional static pulse emitter (pulses/l: 1/1, 1/10) maintaining the mineral glass lens and without concealing the dial's inscriptions (conformity marking, technical data, serial number in digits and barcode format). CD ONE TRP meters may be provided with an M-Bus or radio module (ARROW QuadraPlus) for data communication.

**ALSO AVAILABLE**

## CD ONE TBR

Single jet wet dial water meters; suitable for cold (T30) or hot water (T90). Size available: 15 mm ( $Q_n$  1.5 m<sup>3</sup>/h) to 32 mm ( $Q_n$  5 m<sup>3</sup>/h). Certified to Directive 75/33/EEC, class B approved. Available upon request with initial verification mark.



# DS TRP

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## Features

Multi-jet sealed register fully protected dry dial meters; mechanical drive; suitable for cold water (T50). DS TRP meters combine high performance at low flow rates and maximum resistance to high flow rates and pressure. Readability is ensured by the mineral tempered glass lens which has a flat and smooth surface and, unlike plastic lenses, is scratch resistant and does not turn opaque. DS TRP meters are unaffected by external magnetic interference. The dial, the numbered drums, the fractional dials, the inscriptions and the serial number are not in contact with the water ensuring continued readability. The serial number is marked on the dial both in digits and barcode format.

## Application

DS TRP meters are especially suited for submetering, monitoring and where larger meters are needed. They are typically used by public utilities. DS TRP is designed for horizontal installation; no upstream and downstream straight pipe requirements apply. A special version for vertical installation is also available.

## Conformance

The whole range complies with the Directive 2004/22/EC (Annex MI-001) and has undergone conformity assessment procedure B+D. The maximum measuring range  $Q_3/Q_1$  (R) certified is 200. The  $Q_3$  allows for a wide measuring range and long-term reliability (wear tests are carried out at  $Q_3$ ). DS TRP meters are also certified for use with potable water in accordance with Italian and international regulations.

## Range

DS TRP meters are available in sizes from 15 mm ( $Q_3$  2.5 m<sup>3</sup>/h) to 50 mm ( $Q_3$  25 m<sup>3</sup>/h), PN 16. They are also available in a pre-equipped version retrofittable with a pulse emitter (pulses/l: 1/1, 1/10, 1/100, 1/1000).

DS TRP water meters may be equipped with a standard or bidirectional static pulse emitter (pulses/l: 1/1, 1/10) maintaining the mineral glass lens and without concealing the dial's inscriptions (conformity marking, technical data, serial number in digits and barcode format). DS TRP meters may be provided with an M-Bus or radio module (ARROW QuadraPlus) for data communication.



**ALSO AVAILABLE**

## DS TBR

Multi-jet dry dial water meters; suitable for cold water (T30). Size: 15 mm ( $Q_n$  1.5 m<sup>3</sup>/h) to 50 mm ( $Q_n$  15 m<sup>3</sup>/h). Flanged or threaded connections are available on 50 mm meters. Certified to Directive 75/33/EEC, class B approved. Available upon request with initial verification mark.



# DS SD

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## Features

Multi-jet sealed register permanently protected dial meters; magnetically driven super dry design; suitable for cold water (T30). DS SD meters combine high performance at low flow rates and maximum resistance to high flow rates and pressure. Readability is guaranteed even with water containing small debris.

## Application

DS SD meters are especially suited for submetering, monitoring and where larger meters are needed. DS SD meters are designed for horizontal installation; no upstream and downstream straight pipe requirements apply.

## Conformance

DS SD meters comply with Directive 75/33/EEC and are class B approved. All meters are individually tested at three flow rates. Our testing benches comply with the valid standards. DS SD meters are tested to meet Kiwa requirements on magnetic interference. They are also certified for use with potable water in accordance with Italian and international regulations.

## Range

Size available: 15 mm (Q<sub>n</sub> 1.5 m<sup>3</sup>/h) to 50 mm (Q<sub>n</sub> 15 m<sup>3</sup>/h), PN 16.

DS SD meters also come in a special version retrofittable with a pulse emitter.

DS SD meters may be provided with an M-Bus or radio module (ARROW Pulse) for data communication.

**ALSO AVAILABLE**

## DS MTW

Multi-jet super dry water meters; magnetic drive design.

Size available: 15 mm (Q<sub>3</sub> 2.5 m<sup>3</sup>/h) to 2" (Q<sub>3</sub> 25 m<sup>3</sup>/h). Designed for cold water (T50) and hot water (T90). Certified to Directive 2004/22/EC, conformity assessment procedure B+D.





# MVM

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## Features

Positive displacement rotary piston water meter; super dry design; magnetic drive; suitable for cold water (T50).

As a positive displacement water meter MVM ensures high metrological performance and flexibility within a wide range of flowrates. The measuring chamber has been designed to achieve high metrological performance in terms of measuring range and accuracy. IP-68 rated version also available.

The dial is available upon request with 45-degree reading (in order to facilitate reading when the meter is installed inside a reduced space).

Different arrangement options of black and red numbered drums are available.

MID inscriptions are on the cover. They are not in contact with the water and are protected by a lid, therefore resulting always legible.

The serial number is marked on the dial both in digits and barcode format.



## Application

MVM meters are especially designed to achieve high metrological performance within a wide range of flow rates and sensitivity to low flow rates (lower than 1 litre/hour). They are especially suited for submetering and monitoring.

They may be installed in horizontal or vertical position (same performance);

no upstream and downstream straight pipe requirements apply.

Coaxial design also available.

## Conformance

MVM water meters meet the requirements of Directive 2004/22/EC, Annex MI-001, and have undergone conformity assessment procedure B+D.

The maximum measuring range  $Q_3/Q_1$  (R) certified is 800. They are also certified for use with potable water in accordance with Italian and international regulations.



## Range

MVM meters are available in sizes from 15 mm ( $Q_3$  2.5 m<sup>3</sup>/h) to 40 mm ( $Q_3$  16 m<sup>3</sup>/h), PN 16. They also come in a pre-equipped version retrofittable with a pulse emitter. They may be equipped with a standard or bidirectional static pulse emitter. MVM meters may be provided with an M-Bus or radio module for data communication.

ALSO AVAILABLE

## MVM MANIFOLD

Positive displacement rotary piston meter; coaxial design.

Size:  $Q_3$ =2.5 m<sup>3</sup>/h; designed for cold water (T50).

Certified to Directive 2004/22/EC, conformity assessment procedure B+D.

The maximum measuring range  $Q_3/Q_1$  (R) certified is 800.



# VTZ



## Features

VTZ is a water meter designed for easy installation. It consists of three main components.

- **Single jet dry dial magnetic drive water meter** (super dry design); suitable for cold (T30) or hot water (T90).
- **Chrome plated brass valve connector** equipped with a tap to open/close the valve.
- **Extension kit** to fit the valve connector into the shut-off valve housing; available in several sizes (25, 40, 60, 80 and 100 mm).

## Application

VTZ is a coaxial water meter designed to measure the consumption of a single tap, for example on a sink or bathtub.

VTZ can be mounted where shut-off valves or gate valves are found.

It is especially designed to be retrofitted to an existing shut-off valve.

It is equipped with a chrome plated connector that replaces the existing tap.

## Conformance

VTZ meters comply with Directives 75/33/EEC and 79/830/EEC and are class B approved. All meters are individually tested at three flow rates.

Our testing benches comply with the valid standards. VTZ meters are provided with initial verification mark.

## Range

Size: Qn 1.5 m<sup>3</sup>/h. Available in a pre-equipped version for retrofitting a pulse emitter (1 pulse/10 litres).

# UP

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## Features

Dry dial built in water meter; super dry magnetic drive design.

## Application

This meter is specifically designed for wall installation. It is compact-sized and the design makes it suitable for home installation and facilitates reading.

## Conformance

UP meters comply with Directives 75/33/EEC and 79/830/EEC and are class A approved. All meters are tested individually at three flow rates. Our testing benches comply with the valid standards. UP meters are provided with initial verification mark.

## Range

Size: Qn 1.5 m<sup>3</sup>/h. Brass body with threaded connections (15 mm or 20 mm) or weldable connections (22 mm).













# ACCESSORIES

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## BATCHING AND REMOTE READING

	CD SD PLUS	CD ONE TRP	DS TRP	DS SD / MTW	MVM	VTZ
 PULSE EMITTER	X					X
 PULSE EMITTER		X	X	X	X	
 STATIC PULSE EMITTER		X	X		X	
 ARROW RADIO MODULE	X	X	X	X	X	X
 M-BUS MODULE	X	X	X	X	X	X

## MECHANICAL ACCESSORIES

 NON-RETURN VALVE	X	X	X	X	X	
 COUPLINGS	X	X	X	X	X	
 SEALS	X	X	X	X	X	



# MADDALENA'S PRODUCT RANGE

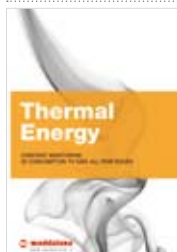
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## RESIDENTIAL USE

Accurate, compact and functional water meters for easy and error free reading

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## THERMAL ENERGY

Constant monitoring of consumption to save all year round

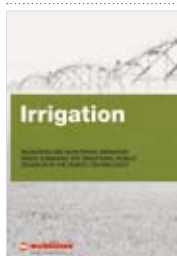
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## BULK METERS

Bulk meters mean large numbers and large consumption

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## IRRIGATION

Measuring and monitoring irrigation water combining the traditional robust design with the newest technologies

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## INDUSTRY

Versatile instruments to simplify industrial activities

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## INSTRUMENTS

Special purpose instruments for accurate measurement of liquids

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## SYSTEMS

Systems designed for monitoring, remote control, remote reading and metrological verification

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ISO 9001 - Cert. n° 0773/4



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