

Irrigation

# IRRIMATIC DELIVERY UNIT



## Automated in-line delivery unit for irrigation water

IRRIMATIC MID is the new range by Maddalena of **automated** in-line delivery units.

New because it is designed to meet the strict requirements of Directive 2004/22/EC (MID) and the European standard EN 14154.

IRRIMATIC is characterized by an optimal technical solution for use with irrigation water combined with good metrological performance certified according to the European directive and guaranteed long life thanks to the materials used. IRRIMATIC is designed for the automation of intakes and for remote reading: in addition to being equipped with an electronic management system (in combination with the portable terminals), it can be equipped with a second pulser and a radio module for the remote transmission of the recorded volume preserving its mechanical and metrological characteristics and readability.

All this guaranteed by Maddalena: a company that has been producing measuring instruments of the highest grade for a century.



# IRRIMATIC DELIVERY UNIT

The electronic system of local automation for the IRRIMATIC delivery units, developed by Maddalena, represents **an important evolution in the field of electronic equipment for the automated remote management of the delivery of irrigation water**, putting to good use the experience gained in recent years, and it is able to integrate harmoniously and in a synergistic way simplicity of use with management flexibility and sophistication.

The measuring part consists of a meter equipped with a removable tangential helix; the dial is of the dry type with magnetic drive: the only part in contact with water flowing through the pipe is the helix. The readability of the meter is also ensured from the outside without the need to dismantle the case, and is also enabled by the mineral glass lens that, unlike the glass lenses in plastic material, is not subject to scratching and does not become opaque.

IRRIMATIC can be installed both horizontally and vertically.

It is also equipped with a swivel curve for the insertion of a quick spherical semi-coupling connection.

The IRRIMATIC range complies with Directive 2004/22/EC (Annex MI-001) and is certified according to the conformity assessment procedure B+D. The certified ratio Q3/Q1 (R) is 40.

## Structural and operational features

### The unit is made up of:

- Delivery unit IRRIMATIC SIMPLEX that consists of a one-piece body in spheroidal cast iron, a Woltmann meter with removable tangential helix and a hydraulic diaphragm valve. It can also be provided with a flow limiter with a self-modulating ring. The spout can be of the threaded type with the possibility of a 360° rotation, flanged or fitted with a ball joint according to the use. The delivery unit, thanks to the free-flow hydrodynamic body and the low head loss, is particularly suitable for use with murky irrigation water heavy with suspended solids, also of filamentous nature.
  - Protective casing. The delivery unit is enclosed in a rugged stainless steel casing that protects and makes its components inaccessible. The removal of the casing, easy for authorised operators with a special opening key, is impossible for users who cannot access the interior without damaging the components in a visible way. However, users can easily read the consumption recorded by the meter thanks to the visibility of the dial.
  - Electronic control unit with a card powered by a lithium battery, long lasting and easy to replace. The electronic unit is watertight (IP67) and can be equipped with a GSM/GPRS modem.
  - IRRICLIENT electronic card for water drawing, simple or multiple, supplied to the user. Small in size, it is in plastic material. It is equipped with a microprocessor unit, an 8-digit alphanumeric display and two buttons for selection and display of the parameters on which to operate.
- The public utility shall load onto the IRRICLIENT the amount of water that is required by the user and, if necessary, schedule shifts and/or time. The activation of the IRRIMATIC and the water delivery is done by inserting the IRRICLIENT into the special slot. A delay in delivery is programmable by the user. The operation of the IRRICLIENT, depending on the simple or multiple type, is of a maximum of 16 IRRIMATIC with their individual availability and operating parameters, or up to 10 IRRIMATIC having 4 different users. The IRRICLIENT can store up to 2,000 intake operations
- IRRIPLUS electronic card, of a similar size to the IRRICLIENT. It is supplied exclusively to the public utility and enables the operator to access the installed IRRIMATIC delivery units to check their correct operation and provides the ability to change their functions. Another feature of the IRRIPLUS is to download data at the end of each irrigation season in order to provide the public utility with a "history" of each unit.
  - Programming interface: it is the component that allows the public utility, in combination with a PC, to program the IRRICLIENT cards.
  - IRRISOFT is the management software that allows programming of the keys, to manage water delivery, users, and a database containing the information on cadastral data and users' master data.
  - On request, IRRIMATIC can be equipped with a radio transmitter of the ARROW series (see the specific illustration material) for wireless reading of remote data.

## HYDRAULIC PERFORMANCE

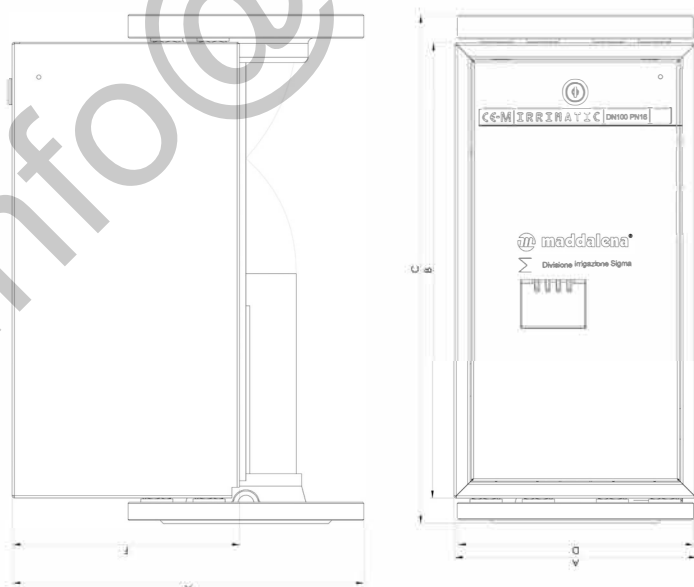
Size	mm	80	100
	in.	3"	4"
Module B No.	TCM 142/13-5129		
Module D No.	0119-SJ-A010-08		
Metrological class - MID	R (Q <sub>3</sub> / Q <sub>1</sub> ) ≤ 40		
Performance in accordance with Directive 2004/22/EC	R 40		
Q <sub>3</sub>	m <sup>3</sup> /h	63	100
Q <sub>4</sub>	m <sup>3</sup> /h	78.80	125
Q <sub>1</sub>	l/h	1.58	3.13
Q <sub>2</sub>	l/h	2.52	5.0

## TECHNICAL FEATURES

Maximum permissible error between Q <sub>1</sub> and Q <sub>2</sub> (excluded)	+/- 5%		
Maximum permissible error between Q <sub>2</sub> (included) and Q <sub>4</sub>	+/- 2% with water temperature ≤ 30°C		
Temperature class	T30		
Pressure loss class (ΔP @ Q <sub>3</sub> )		40	63
Operating pressure	bar	10/16	
Maximum registration	m <sup>3</sup>	10,000,000	10,000,000
Minimum registration	m <sup>3</sup>	0.002	0.002
Limited flow	l/s	10-12	12-14

## DIMENSIONS

		DN 80	DN 100
A	mm	226	226
B	mm	425	425
C	mm	480	480
D	mm	200	220
E	mm	318	330
F	mm	213	213



## AVAILABLE ACCESSORIES



### ARROW RADIO MODULE

Coupled to the pulser allows the remote reading of the meter to which it is paired.



### FLANGE KIT

It consists of two flanges, two rubber gaskets, screws and nuts.



### FLOW STRAIGHTENER

Inserted upstream of the meter allows installation even in the absence of straight pipes.



### GATE S58

Cutting organ specifically designed for irrigation water.

Please refer to the individual data sheet for more information on the available accessories.

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