

HYDROMIL COCCINELLE

AUTOMATED WATER SUPPLY UNIT



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Hydromil Coccinelle is an electronic system designed for the automation of irrigation water supply units developed by Maddalena S.p.A. It is an evolution in the field of electronic systems for the automated management of irrigation water supply as it combines ease of use and flexibility.

MAIN COMPONENTS *(standard version)*

Water supply unit HYDROBLOC

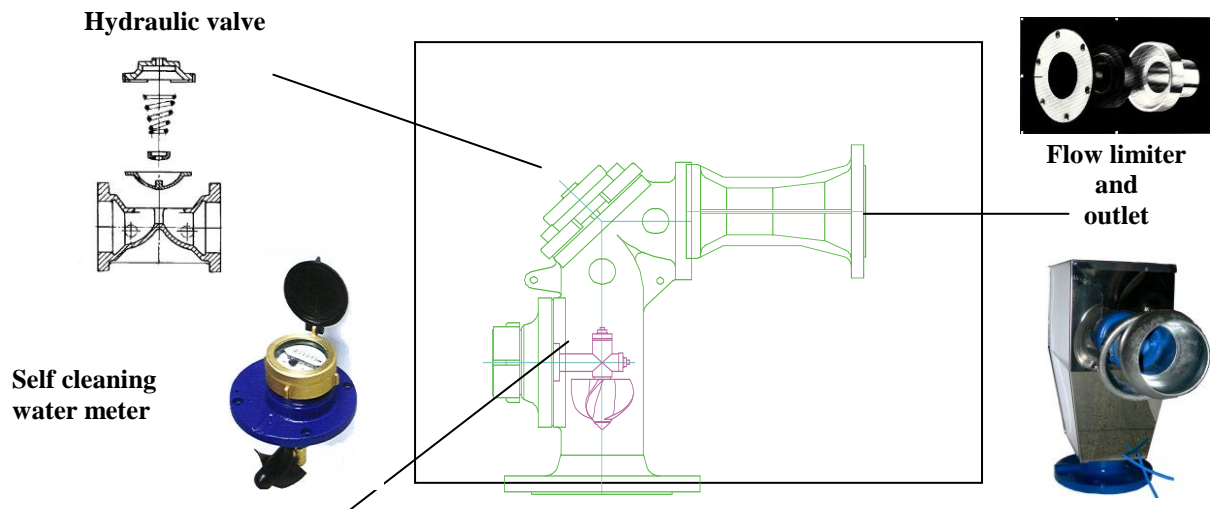
Electronic control unit MIL-MEMORY

Housing

C-MIL access electronic keys

MIL-BOX programming unit and HYDROMIL v3.1 software

- **HYDROBLOC supply unit** – It consists of a cast iron body, a self-cleaning 3-blade **Woltmann** water meter with interchangeable mechanism and a **hydraulic membrane valve**. It is also available with a **modulating ring flow limiter**. The outlet can be provided flanged, threaded or with spherical connection depending on the application. The hydrodynamic profile and the low head loss ensure a safe use even in case of turbid water.



HYDRAULIC CHARACTERISTICS

Size	mm	80	10
Length	mm	300	350
Qmin	l/s	2	2.5
Qn	l/s	8	15
Qmax	l/s	17	30
Limitation range	l/s	8-10	8-10

Flow limiter

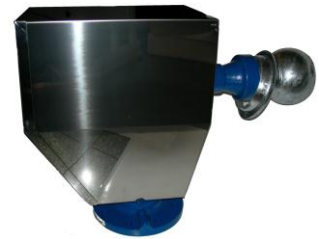
Max. differential pressure	6 bar
Head loss at Qn	<0.2 bar
Operation range	-0% +15% at Qn

Other limitation range options available on request

Accuracy	± 5% limitation range between Qmin and Qmax
Max. reading	999,999 m ³ (DN 80 mm ÷ 100 mm)

- **MIL MEMORY electronic control unit** designed for supply, metering and registration of water consumption. It consists of a circuit board equipped with a microprocessor, EEPROM non-volatile memories, a programming keypad and a display suitable for operating outdoors. The control unit is powered by a long-life lithium battery.

- **Housing** – The supply unit is contained in a robust, stainless steel housing. It can be removed only by means of a key thus avoiding tampering or damage caused by unauthorized operators. An alarm signal is emitted in case of tampering.



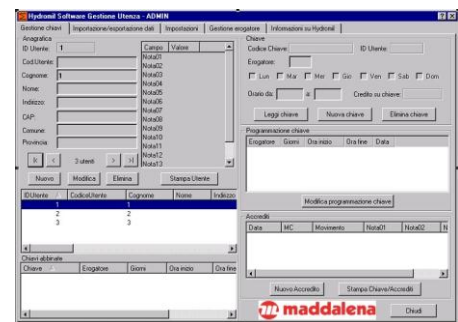
- **C-MIL access electronic key** – 3 versions are available:
 - 1- **User key:** it enables the user to supply the water autonomously, depending on the turns and volume limits set by the public utility.
 - 2- **Management key:** it enables the public utility to access the delivery units of a given area to assess their functionality.
 - 3- **Operator key:** it is supplied to the public utility to collect records from the water supply units. The key does not allow any modification to operative parameters.



- **MILBOX system programming unit** – it enables the public utility to program the access keys using HYDROMIL v3.1 operative software.



- **HYDROMIL v3.1 software** – designed for the complete management of access electronic keys. It enables the creation and modification of archives with information on the users of a water distribution system/network and on the parameters of their keys.



SUPPLY UNIT EQUIPPED WITH GSM REMOTE CONTROL SYSTEM (optional)

This version is designed to transmit information directly to the data processing centre of the public utility thus enabling a strict control on the water supply and on the parameters of the supply units. Information is exchanged via **GSM** network (via SMS).

Communication is bidirectional: the control centre can transmit information to set or modify the operative parameters of users; the electronic control unit can transmit information on the irrigation activities of the users and possible alarms due to flaws, tampering, etc.

The system is powered by a lithium battery.



HYDROMIL COCCINELLE (*both versions*)

TECHNICAL AND CONSTRUCTION CHARACTERISTICS

Low-power CPU with C MOS technology microprocessors
High precision real time clock
EEPROM non-volatile memory for the storage of the software, of configuration data and historical records
Long-life lithium replaceable battery (12 years)
Keypad with protected keys for the modification of the maximum volume or maximum time of irrigation
Data record before memory overflow: 1500 based on LIFO method
Serial communication interface for key configuration and data download
Programming environment: Windows

ELECTRICAL CHARACTERISTICS

Power:

- 3.4 - 4 VDC
- 350 mA during data transmission (GPRS 4+1)
- <5 mA when not running
- Temperature range – running: from $-25\text{ }^{\circ}\text{C}$ to $+55\text{ }^{\circ}\text{C}$
- Temperature range – not running: from $-40\text{ }^{\circ}\text{C}$ to $+85\text{ }^{\circ}\text{C}$