

# EVDOS S.A

EVDOS MECHANICAL CONSTRUCTIONS S.A

## ELECTRONIC IRRIGATION HYDRANT WITH SMART CARD



The constant search for new solutions and the evolution in the field of irrigation have resulted the creation of Electronic Hydrant, which combines the experience and the high technology of our company. Electronic Hydrant is an automatic water measuring and control unit which use a rechargeable smart card or data transmission with GSM / GPRS for irrigation systems.

### ADVANTAGES

Electronic Hydrant with a rechargeable smart card enables the Water Management Organization to sell a specific amount of water to each consumer. With Electronic Hydrant, irrigation water is properly managed without waste and guaranteed payment . The Electronic Hydrant reduce water and water consumption electricity up to 40%. It is a very simple, easy-to-use and economical system of automatic charging consumption.

### OPERATION

The consumer buys the desired amount of water in cubic meters by special software installed in the Water Management Organization.

The Water Management Organization charges the cards of each consumer and collects in advance the corresponding amount. The consumer inserts the smart card into the Electronic Hydrant, program the amount he wishes to consume in a very simple way (with only one button) so that after consumption of the planned quantity of water the Electronic Hydrant close.

After the consumption of selected amount of water Electronic Hydrant will close automatically and user must buy a new amount from the Organization. User unique prepaid card download the credit to the Electronic Hydrant but also has other functions like return of unused credit, cancelation of the irrigation program etc.

#### Examples

- in case of cancelation during the irrigation process, user enters the unique smart card to the Electronic Hydrant to stop and refund.
- In case that another user of the same Electronic Hydrant wants to use it, system indicates the status and the remaining time of the existing process.
- In case of damage or interference (fraud ) Electronic Hydrant will close automatically

When all the cubic meters of the smart card are consumed, the Electronic Hydrant close and the consumer has to recharge the smart card at the Organization. The system can only be switched on and off by the same card.

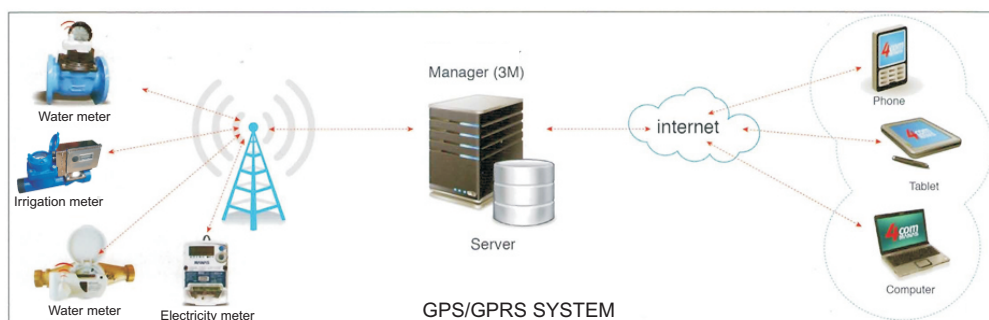
### MEMORY CARD

The memory card is according to ISO 7816 with special coding and accepts unlimited charging. Credit management supported by a dedicated Software installed at Organization and records all data of the system (credit, consumption, dates, payments etc). It is charged with cubic meters through the software and charger of Organization, where there is a detailed record of the data of charges and receipts of each consumer. Each smart card can activate (open and close) one or more Electronic Hydrant in any location.

### SOFTWARE

The main factors of today's smart metering technology can be listed as; accurate measurement, the precise transfer of the collected data and the ability of analyzing transferred data.

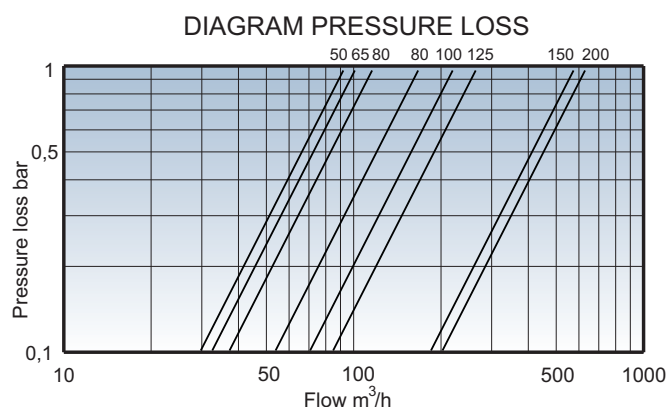
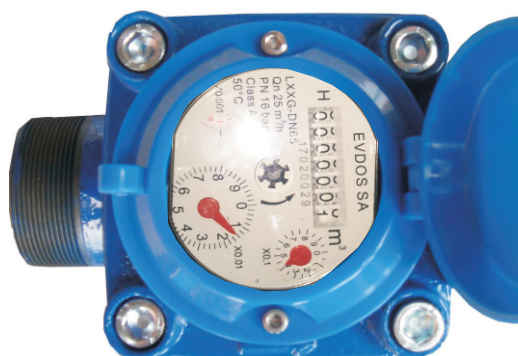
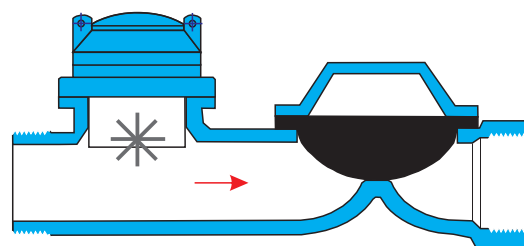
In the fact that utilities, distribution companies and end users have to monitor their consumptions in order to be used efficiently, a web based software has been created that enables water consumptions to be monitored and managed. Users are both able to monitor their consumptions and manage their meters via their mobile phones, tablet pcs and computers.



### Hydraulic valve - water meter

Special design of a single chamber hydraulic valve with built-in water meter in a single body. The water meter is a puddle type suitable for irrigation.

The measures of the water meter are obvious so that the cubic meters which have been consumed can be controlled (Mechanical and Electronic Meter Comparison).



Our company has a contemporary, fully automated test bench for the calibration of water meters.

### Electronic unit

The module is equipped with an LCD display and gives the choice of the cubic capacity that the user wants to consume so that after the selected cubes have finished, the Electronic Hydrant will be automatically shut down. It works with batteries that can easily be disconnected, so they can be replaced immediately.

### Card slot

The card reader is according to ISO 7816.



### Memory card

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Each smart card can activate ( open and close ) one or more Electronic Hydrant in any location.

### Ductile iron box

The display and the batteries are mounted in a heavy duty water tight ductile iron box, to protect against the harsh weather operation conditions .

### Handling

Operation and programming is done by a single button.

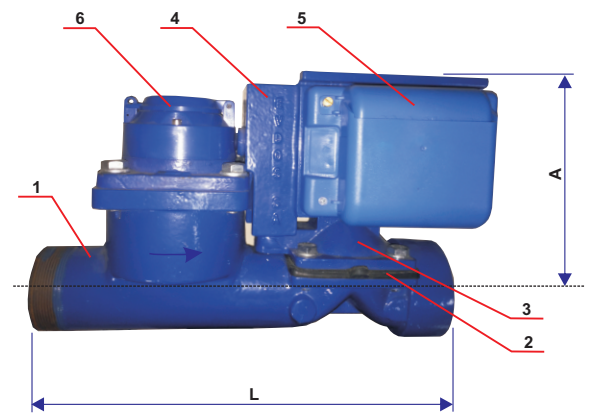


**TECHNICAL DATA**

DN mm	50	65	80	100	125	150	200	250	300
Normal flowrate Qp m <sup>3</sup> /h	15	25	40	60	100	150	250	400	600
Minimum flowrate Qnin m <sup>3</sup> /h	1,2	2,0	3,2	4,8	8,0	12,0	20,0	32,0	48
Transitional flowrate Qt m <sup>3</sup> /h	4,5	7,5	12	18	30	45	75	120	180
Maximum flow rate Qs max.m <sup>3</sup> /h	30	50	80	120	200	300	500	800	1200

POS	DN 50	DN 65	DN 2 1/2''	DN 80/65	DN 80	DN 100
L	380	380	395	380	450	480
A	200	200	200	200	210	210

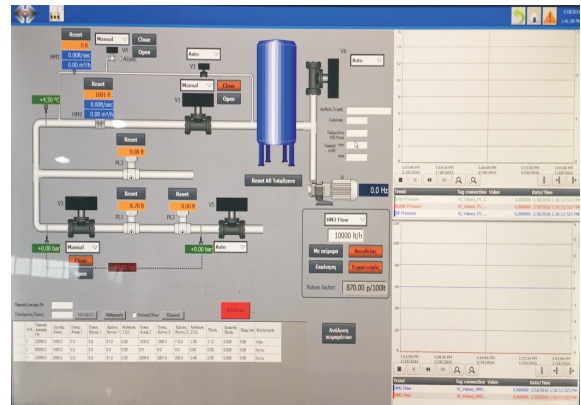
Pos	Description	Material
1	Body valve-meter	D.I GGG 40 EN 1563
2	Diaphragm	N.B.R
3	Cover	D.I GGG 40 EN 1563
4	Box	D.I GGG 40 EN 1563
5	Electronic unit	
6	Meter	Cast iron - steel



DN	50 - 65 - 80 - 100 - 150 - 200 Flanged 2 1/2'' inlet male , 2 1/2'' outlet female
Battery life	5 years
Pressure	1,5 - 16 bar
Screen	10 digits , alphanumeric , LCD with icons & backlight
Smart card reader	ISO 7816
Working temperature	-10° C / +50° C
Other Functions	GPRS (option)



Test bench



Test bench software