Raphael
Beyond Valves



Ultraf PRO



IRRIGATION

ULTRAF

Ultrasonic Hydrometer

ULTRAF

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FEATURES

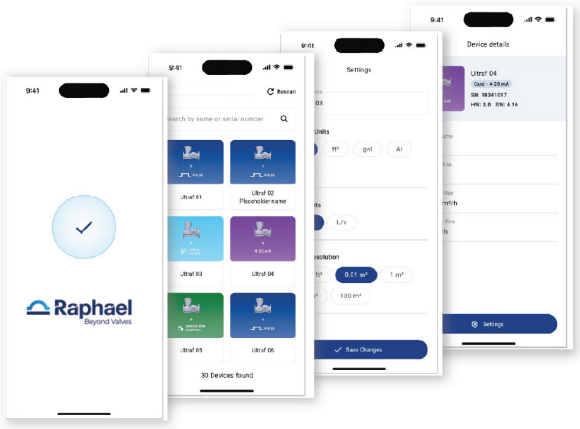
A one of a kind ultrasonic hydrometer which combines in a single small unit: an ultrasonic water meter, a hydraulic valve, and a smart system for water measurement, pressure control and pressure management. Based on RAF series of diaphragm hydraulic valves, Ultraf is battery operated with no moving parts and no maintenance. Ultraf will save installation space and will maintain same accuracy over the years.

Common uses:

- Accurate pressure control
- Flow rate control
- Irrigation controller

Agricultural uses:

- Field crops
- Orchards
- Pivot irrigation systems
- Pump systems

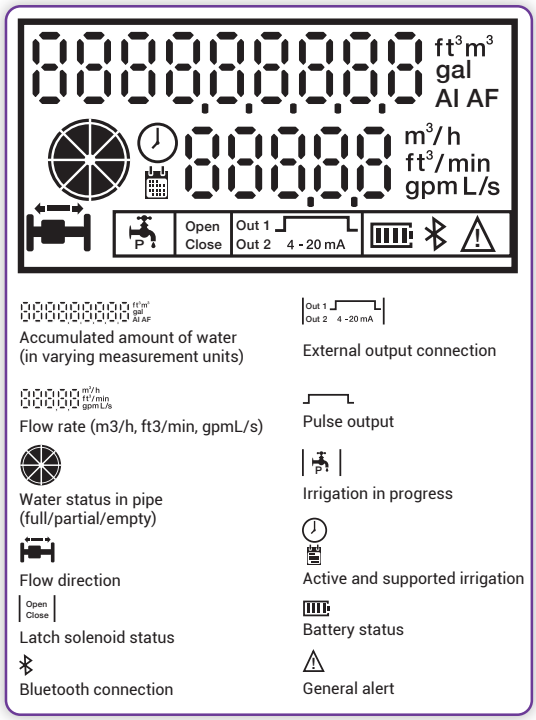


DISPLAY

The display provides ongoing information to the operator in the field, at all times, by two main ways: digital display monitor and output cards.

Information on the digital display:

- Water flow at any given moment.
- Accumulated water volume.
- Battery status.
- Flow in the pipeline (if pipe is full).
- Flow direction.
- Alerts
- Connection status of electrical outputs from Ultraf Pro to external systems, and more.



Extension card options:

- Two digital outputs
- Analog output
- Irrigation controller
- Modbus output

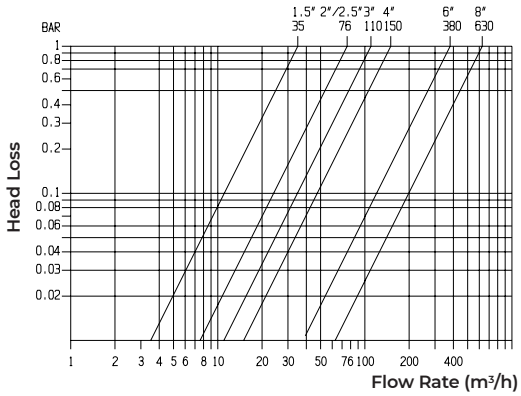
ADVANTAGES

- Simple to install and operate
- Single compact unit, space saving
- No moving parts
- Battery operated with extended battery life
- Minimal maintenance
- IP68 - Tested for submersion in water up to 1 meter for 1 hour
- Bluetooth App for field programing
- Supporting industrial communication protocol – Modbus type

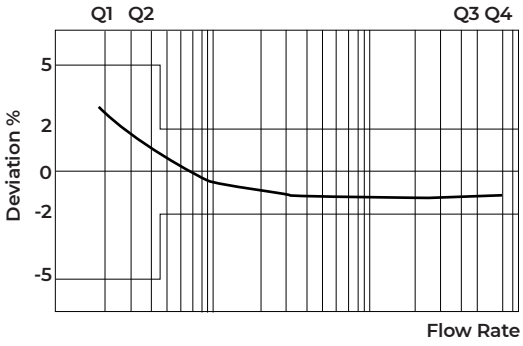
PRODUCT PERFORMANCE

DN [m³/h (GPM)]	40 / 1½“	50 / 2“	80 / 3“	100 / 4“	150 / 6“	200 / 8“
Q1 - Min Flow Rate	0.20 [0.9]	0.32 [1.4]	0.50 [2.2]	0.80 [3.5]	2 [8.81]	3.2 [14.1]
Q2 - Trans. Flow Rate	0.51 [2.3]	0.51 [2.3]	0.81 [3.6]	1.28 [5.6]	3.2 [14.1]	5.12 [22]
Q3 - Nominal Flow Rate	25 [110]	40 [1761	63 [277]	100 [440]	250 [1,100]	400 [1,761]
Q4 - Max. Flow Rate	31.25 [137]	50 [220]	78.8 [346]	125 [550]	312.5 [1,376]	500 [2,201]
R = Q3/Q1	125	125	125	125	125	125

Head Loss



Accuracy



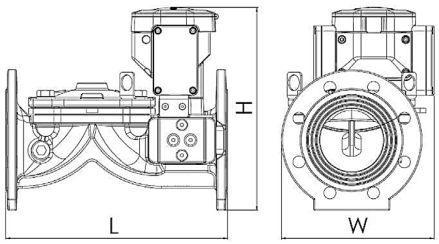
DIMENSIONS & WEIGHT

DN	mm (in)	40 / 1½“	50 / 2“	80 / 3“	100 / 4“	150 / 6“	200 / 8“
Lenght L	mm (in)	250 [10]	250 [10]	300 [12]	350 [14]	500 [20]	600 [24]
Hight H	mm (in)	212 [8.35]	228 [8.98]	300 [11.81]	327 [12.88]	392 [15.43]	425 [16.73]
Width W	mm (in)	190 [7.48]	90 [3.54]	223 [8.78]	240 [9.45]	310 [12.20]	350 [13.78]
Weight	kg (lb)	9.5 [20.9]	10 [22.0]	13.5 [29.8]	21 [46.3]	43 [94.8]	67 [147.7]
End Connections		TH		FL			

STANDARD

MID

Measuring Instrument Directive
2014/32/UE



Providing advanced solutions to customers around the world

North America | **South America** | **Europe** | **Africa** | **Asia** | **Australia**

RAPHAEL, founded in 1949, is the first Israeli manufacturer of water control valves.

RAPHAEL's research department constantly strives to introduce new and innovative products and solutions for water control systems including water works, fire protection and irrigation systems.



Raphael

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