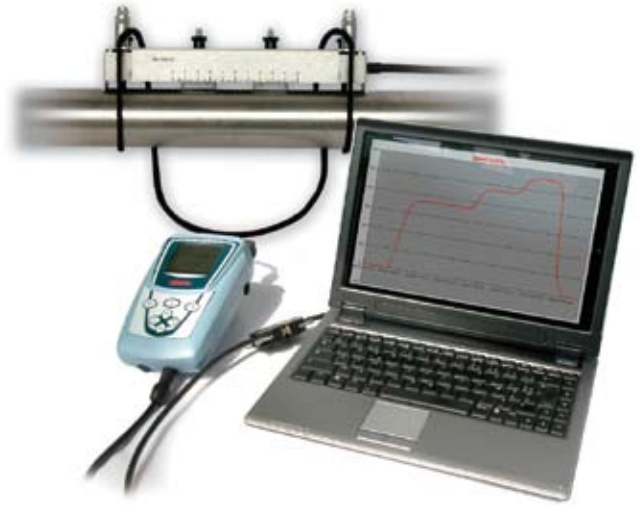


# Ultrasonic portable flowmeter

## UF 801-P



The most advanced portable ultrasonic flowmeter available. Incorporating over 30 years of practical field experience the **UF 801-P is the ideal portable flowmeter** for your diagnosis and monitoring requirements. Featuring **long battery life and clamp-on probe technology** using the measurement principle (Transit Time ultrasonic) which has been Ultraflux's speciality for over 30 years. **User-friendly and ergonomic**, UF 801-P is designed for **ease of use with optimum performance**. The UF 801-P uses Ultraflux's Next Generation Digital Signal Processing (DSP), flows in a wide range of pipe sizes can be measured. The meter gives **accurate, reliable results** even under extreme measurement conditions.

**Versatile, diameters from 10 mm to 10 m, any liquid even non conductive, any pressure**

*Integral data logger, with over 6 months capacity at 2 min intervals*

**Non invasive external probes clamped-on to the pipe**

*Robust, watertight (IP67) control unit enclosure*

**Easy and quick installation resulting in immediate measurement**

*Very lightweight : less than 1 kg*

**User friendly operation, set up by keypad or software**

*Battery life indicator*

*Measuring accuracy : 0.5 %*

**Digital signal processing using multiple processors enhances response time**

*Probes available from -100°C to +200°C (pipe temperature)*

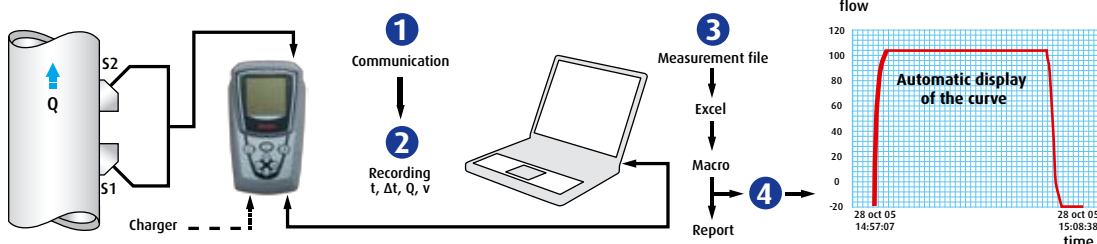
**Possible choice of configuration from previous saved sites**

*High technology probes for difficult applications*

*Optional extra inputs/outputs*

Dual pipe version available

Measurement processing using LS-801-P W software on PC



## FEATURES

**Digital** and graphic LCD display (14 lines x 20 characters)  
- programmable backlight  
**Oscilloscope** function : assist with the diagnosis, installation, and verification  
**Fast and easy** parameter set-up, with a 7-key keyboard  
- with access code option  
**Data logger** 4 MB memory : time & date + 1 to 14 variables (up to 3 variables → 135000 data sets, 14 variables → 36000 data sets)  
**Communication** Windows software : transfer of the contents and export of the logger via software (Excel...)  
**Programmable delayed start** : can be set to start at any hour, time period and alarm time  
**Choice** of 6 languages : French / English / German / Portuguese / Spanish / Italian  
**Battery life** : up to 14h, with indicator  
**Serial link** RS 232 (JBUS/MODBUS)  
**Basic** configuration : 1 analogue output / 2 programmable static relays  
**Additional** inputs/outputs by optional modules

## OPTIONS

Pipe thickness measurement (digital and graphic function)  
Temperature measurement (calorimetric function)  
2 additional input/output functions from the following :  
⇒ 2 static relays usable as frequency outputs (until 1Khz)  
⇒ 2 current inputs 4-20 mA  
⇒ 1 input for 1 probe PT100 (calorimetric)  
⇒ 2 voltage inputs 0 - 5 V  
⇒ 2 contact inputs  
Converter cable RS232 for USB

## PACKAGING

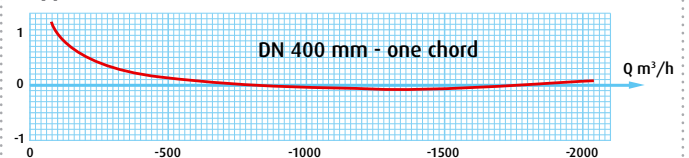
The UF 801-P is supplied in a rigid transportation case (51 x 40 x 13 cm) including :  
⇒ UF 801-P Unit in carrying case  
⇒ 5 m sensor cables to connect the probes to the converter  
⇒ charger and PC cable  
⇒ operating software and user guide on a CD-ROM  
⇒ 2 straps and 1 bottle of coupling agent (80°C max)  
In addition : : probes and specific attachment systems

## SPECIFICATIONS\*

Typical accuracy : 0.5 %  
Bidirectional measurement  
Time resolution : 0.1 ns  
Repeatability : 0.2 %, linearity : 0.1 %  
Choice of the units : from 1 l/d to the 100 m<sup>3</sup>/s  
Volume metering : from 10 ml to 100 m<sup>3</sup>  
Multi-layer pipes : up to 3 materials  
Storage of 3 configurations  
Built-in correction for multi-products or for laminar/turbulent transition flow  
No pressure loss  
No damage to pipe  
No or very low maintenance : no drift in time  
Choice of probes in installation : modes /, V, N and W

\* at reference conditions

### Typical results



## ELECTRICAL CHARACTERISTICS

CE product  
Power supply:  
⇒ Internal battery 12V NiMh  
⇒ Charger 90 - 240 VAC - auxiliary power supply function  
Isolated and active 4-20 mA output current  
Static relays(250 V - 50 mA)

## MECHANICAL CHARACTERISTICS

Robust ABS enclosure with carrying case :  
220 mm x 115 mm x 64 mm  
Weight of unit < 1Kg  
IP67 protection against dust and immersion  
Use temperature : -10°C with 50°C

**Principle : the difference of the transit times of ultrasonic waves**

$$\Delta T = T_{BA} - T_{AB}$$

$$v = f(\Delta T)$$

$$Q = f(v, \phi_i)$$

$$Q = \text{flow}$$

TAB : time of propagation of ultrasound between the 2 probes

