

Minisonic 2000

ULTRASONIC FIXED FLOW METER



MEDIA
MEASURED
LIQUIDS



PIPE DIAMETERS
UP TO
3 300MM



MODELS
STANDARD
DUAL PIPE
DUAL CHORD



EXPLOSION-PROOF
ENCLOSURE OPTION
AVAILABLE

19"

19" RACK OPTION
AVAILABLE WITH
STANDARD MODEL

SIMPLE

- > Quick and easy installation
- > Intuitive operation

GREAT BENEFITS

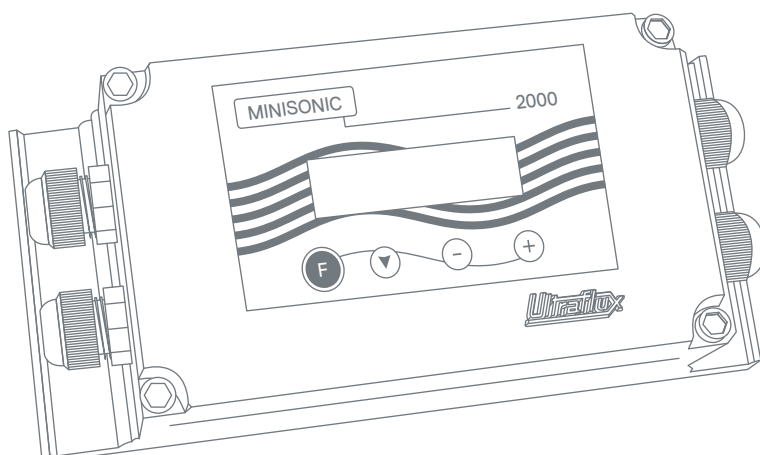
- > Low installation cost
- > No mechanical wear: little or no maintenance
- > Low TCO* in relation to electromagnetic meters

RELIABLE AND ROBUST

- > Automatic zero calibration
- > Signal quality display
- > IP67 cast aluminium enclosure

FLEXIBLE

- > On every type of homogeneous liquid - even non-conductive
- > Non ideal flow conditions taken into account



TYPICAL APPLICATIONS

Drinking water: Flow measurement and metering in treatment works, abstraction metering, system control

Waste water: Flow measurement at pumping stations, in systems, at intakes/outlets in treatment works

Raw water: Flow measurement in fire mains. System supervision.

Hydro Electric: Penstock monitoring

Chemical products, including aggressive liquids: Flow measurement for acids, chlorides

Hydrocarbons: Flow measurement in fuel distribution systems, flow measurement in multi-product pipelines

Refineries: Process flow measurement

* TOTAL COST OF OWNERSHIP

Ultraflux



EXPERT IN FLOW METERS
SINCE 1974

Minisonic 2000

MODEL	STANDARD	DUAL PIPE (IDENTICAL PROBES)	DUAL CHORD
NATURE OF EQUIPMENT	Fixed		
INTERNAL Ø OF PIPE	From 8mm to 3,200mm approximately (depending on wall thickness)		
EXTERNAL Ø OF PIPE	From 10mm to 3,300mm		
INPUTS/OUTPUTS	> 2 current outputs, 4-20mA (1000Ω galvanically isolated as a passive output/impedance of 150Ω as an active output) > 2 static relay outputs (100V - 100mA - 10VA max)		
USE	Flow measurement	Flow measurement in two pipes	Flow measurement with two speed chords
SINGLE OR DUAL PIPE	Single pipe	Dual pipe: for two pipes that might have different diameters and thicknesses, be made of different materials, but which must use same probes	Single pipe
SINGLE OR DUAL CHORD	Single chord	Single chord	Dual chord
COMPATIBLE WITH INTRUSIVE PROBES	Yes		
COMPATIBLE WITH EXTERNAL PROBES	Yes		
IN OPTION, EXPLOSION-PROOF ENCLOSURE	> Available > Certified ATEX EEx d IIC T6	> Available on demand > Please ask us	
IN OPTION, 2U 19" RACK	Available	—	
DISPLAY	> Alphanumeric and graphical (2 lines x 16 characters) > Backlit LCD screen with time delay feature		
SET-UP	> Quick and simple using 4-key touch pad - or - via dedicated software supplied > Possible to build in an access code		
OPERATING SYSTEM	Windows for set-up and saving application data		
7 LANGUAGES	French · English · German · Portuguese · Spanish · Italian · Polish		
SERIAL LINK	RS232 or RS485 to JBUS/MODBUS protocol · 9600 Bauds		
ACCESSORY (OPTIONAL)	1 RS232 to USB converter link cable		
BASIC POWER SUPPLY	Low voltage: 9-36V dc or 7-25V ac (5VA)		
OPTIONAL POWER SUPPLY	18-72V dc or 90-230V ac (5VA)		
ENCLOSURE	Cast aluminium & epoxy paint · 1.5kg · 237 x 108 x 79mm		
EXPLOSION-PROOF ENCLOSURE	Cast aluminium & epoxy paint · 6.6kg · 244 x 130 x 232mm		
PROTECTION	IP67 (except for 19" rack versions)		
TEMPERATURE RANGE	For use from 0°C to 50°C (60°C on demand)		

TECHNOLOGY	PERFORMANCES			
ULTRASONIC TRANSIT TIME > Continuous bidirectional measurement SIGNAL ANALYSIS > By Echo Shape Control (optimisation of the acoustic signal)	ACCURACY > Up to 0.5% REPEATABILITY > Up to 0.1% LINEARITY > Up to 0.1%	TEMPORAL RESOLUTION > Better than 0.1ns TIME BETWEEN EACH FLOW CALCULATION > 500ms	UNITS OF MEASUREMENT > From litres per second to cubic metres per day VOLUME METERING > From a centilitre up to 100 cubic metres	OTHER IMPORTANT INFORMATION > Laminar and turbulent transitions considered (calculation of the Reynolds number) - except for parallel chords > Freedom to mount probes: modes /, V, N and W