

# ULTRASONIC PROCESSOR FOR LAB'S





## PASCAL TIERCE

SinapTec president

« For 30 years now, our team made out of researchers and engineers have been working on understanding and making use of power ultrasonic properties. This experience, implemented both in numerous industrial fields and in innovation, highlighted the essential prerequisite which is the mastering of ultrasound at the lab scale, what is the key to success for scale-up and industrial production. »

30 YEARS

+ TEAM  
ULTRASOUND  
EXPERIENCE AND INNOVATION  
KEY FOR SUCCESS

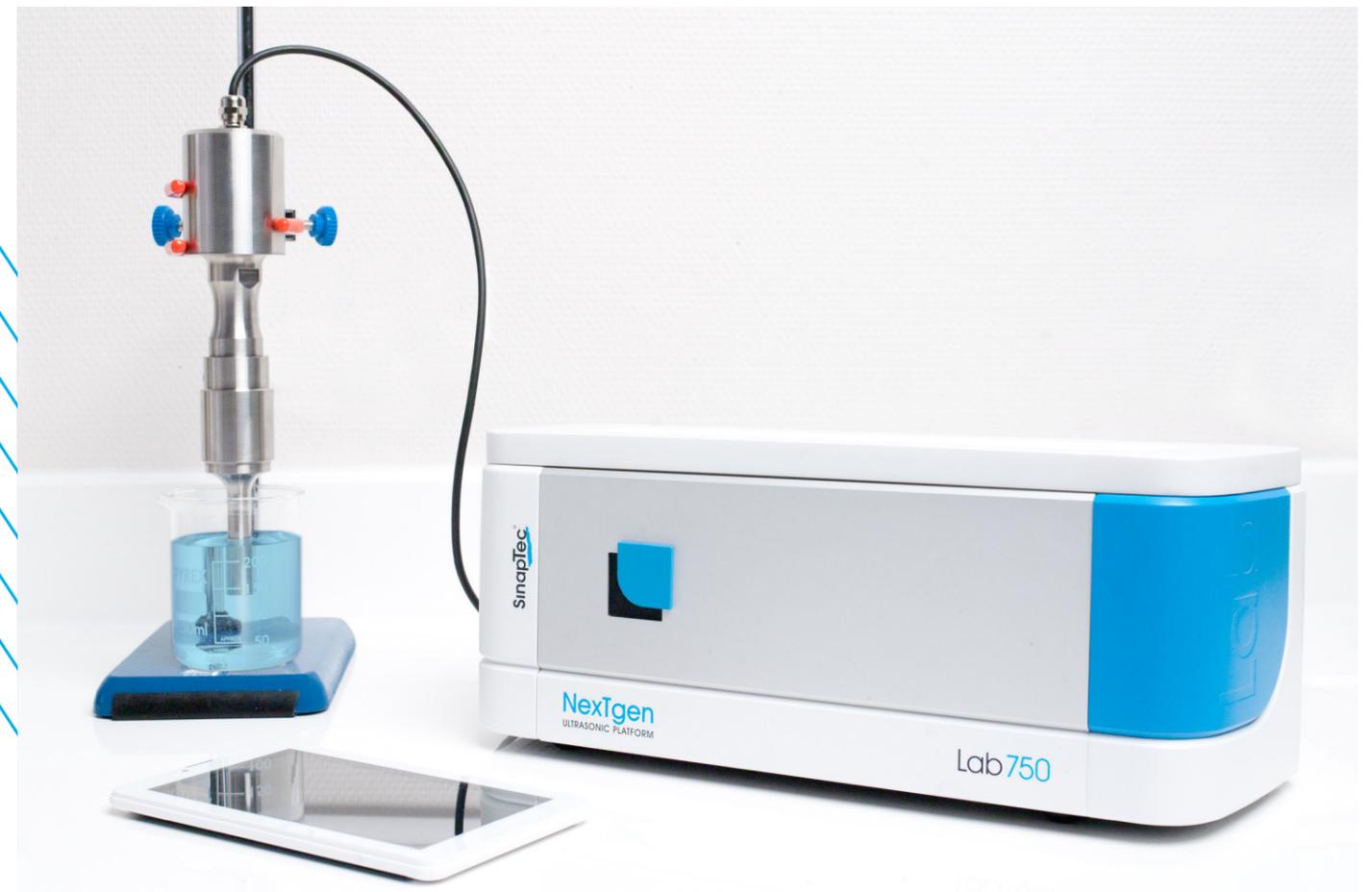
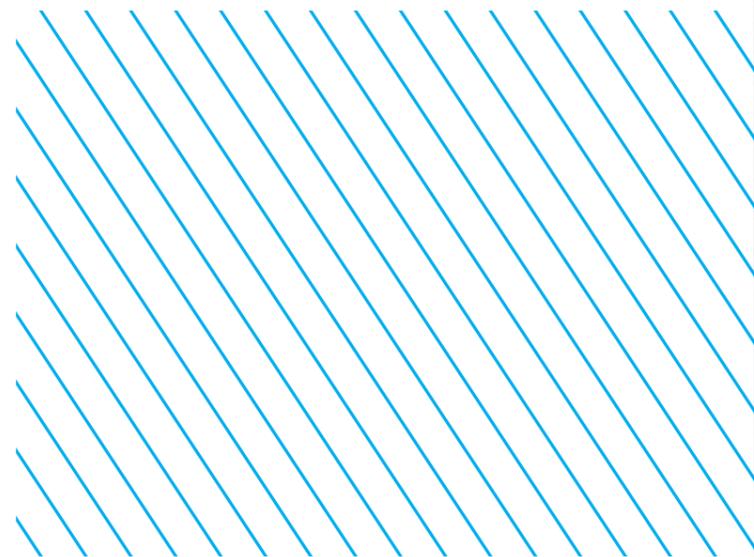
# THE UNIQUE ULTRASONIC PROCESSOR FOR LAB'S

+ RESEARCH AND DEVELOPMENT  
ELECTRONIC AND SOFTWARE ENGINEERS  
SIGNAL PROCESSOR

## ULTRASOUND AND LABORATORY

Our experience in industry combined with our researches on ultrasonic production equipments, convinced us of the importance to develop a totally new and innovative laboratory tool to make it available for the scientific community.

This tool is the result of close collaboration between our electronics and software engineers and our ultrasound experts. The implementation of the latest signal processor technologies and the daily work of our technicians to ensure the quality of ultrasound results permitted to optimize the processor performances at the highest level and to integrate it in innovative functionalities never seen on the market.



“ An excellent understanding of the ultrasound physics mechanisms, associated with the implementation of equipments in many industrial and innovative fields, give us great expertise to develop and manufacture ultrasound energy production systems. ”

## PROCESSOR - POWER

This innovative equipment delivers the best technology thanks to the integration of a signal processor similar to the kind used in smartphones. Every millisecond, this processor ensures that the energy transferred to the media treated is mastered and realised in the best conditions, whatever its complexity. This equipment offers precision and high reactivity to frequency changes induced by the slightest trial conditions modifications.

The PC board, driven by algorithms developed by our engineers, is all the more reliable and robust. The generator maximum power has been designed for high levels and provides an instantaneous intensity permitting to meet the transducer and probe most important requirements...



BLUETOOTH INTERFACE  
PRECISION AND VELOCITY  
RELIABLE AND ROBUST  
FLEXIBILITY

# EQUIPMENTS

To make scale-up easier, the Ultrasonic Processor for Lab's is available in several versions:

**+ THE LABORATORY BEST-SELLER**



### Lab for axial probes

Perfectly adapted to small volumes and high local intensities. The choice of the probe is crucial to its performances. This tool is available in 3 different power and frequency models: Lab120, Lab500, and Lab750.



**+ COMPACT AND CONVIVIAL**

### Lab for radial probe

Friendly to implement, this tool produces an exceptional power density and permits the evaluation of a continuous process.

**+ POWERFUL AND EFFICIENT**



### Lab for pipe processor

Combining efficiency and aesthetics, it is the best tool to realize trials for future industrial scale-up.

# TECHNICAL CHARACTERISTICS

## Ultrasonic Processor for Lab's

TECHNICAL INFORMATIONS	Lab120 for axial probes	Lab500 for axial probes	Lab750 for axial probes	Lab750 for Radial probe	Lab750 for pipe processor
Standard probe	Probe 3mm	Probe 13mm	Probe 20mm		
Max displacement	140µm	140µm	60µm		
Max Volume power				750W/l	660W/l

## NexTgen Ultrasonic Power Supply

Max RMS Power (W)	120	500	750	750	750
Frequency (kHz)	35	20	20	20	22
Continuous mode	yes	yes	yes	yes	yes
Pulse mode	yes	yes	yes	yes	yes
Voltage (v)	110-240	220-240	220-240	220-240	220-240
Other voltage	-	On request	On request	On request	On request
Dimensions(LxWxH))	330x145x148mm		390x145x148mm		
Weight	3,5kg	4,3kg	4,5kg	4,5kg	4,5kg
Remote start/stop	Pushbutton/Footswitch (Option)				
Touch screen interface	LabTablet				
Communication and control	Ethernet	Ethernet	Ethernet	Ethernet	Ethernet
PC soft « nextgen advanced »	Optional	Optional	Optional	Optional	Optional
Temperature sensor	Optional	Optional	Optional	Optional	Included

### MONITORING

Digital processor Based	Digital signal Processor
Automatic tuning	Yes (start frequency and max-min frequency are adjustable with «advanced software»)
Phase control	Real time phase/ frequency control
Automatic Amplitude Compensation	Real time output displacement or power control

### CONTROL / SETTING PARAMETER

	Managed by our software PC «Advanced»
Frequency	Set the Auto-tune range
Power/Amplitude	10% to 100% max power
Timer	from 0,5s to 10h
Pulse/cycle repetition	from 1 to 10000
Multiple sequencer program	up to 10 programs
Start/Stop	Dry contact/footswitch (option)
Stop conditions	Pushbutton/Footswitch/Software/Time/Energy/Temperature (with external sensor: option) setting
Start conditions	Pushbutton/Footswitch/Software/Temperature (with temperature sensor) setting

### DATA TREATMENT

	Managed by our software PC «Advanced»
On request Real time Display	3 real time curves during the process :
Post treatment data:	Excel exportation for statistical post analysis:
Frequency measurement	Parameters : Frequency/Phase
Wattmeter/Amplitude	RMS Power on transducer/Amplitude
Energy measurement	Energy with possible stop conditions on Energy level
Temperature measurement	With external sensor* (option)
Elapsed time indicator	Yes

\*Included with lab750 for pipe

# LABTABLET - BLUETOOTH - INTERFACE

To make it intuitive, the electronic generator is directly driven by a touchpad. Connected via bluetooth, the touchpad allows to make adjustments closer to the lab bench and to change the test conditions with great flexibility.

The intuitive interface promotes a fast handling of the equipment. Only the essential information appears on screen, to change instantaneously the settings, visualize and follow tests conditions...



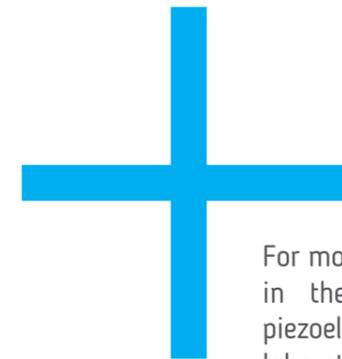
EASE OF USE  
INTUITIVE  
TRACEABILITY



## NETWORKING

The device has an Ethernet connection which, associated to the "NexTgen Advanced" PC software, facilitates the subsequent processing of all ultrasonic data, temperature...

Save and find all the information that are related to previous trials, ensure traceability using the data export...



For more than 30 years, SinapTec have been specializing in the development of innovative ultrasonic and piezoelectric solutions, intended to industry and research laboratories.

Since our beginnings, we made a point of honour working with our clients, whether for the implementation of new products or the development of customized solutions.

Today, this collaborative spirit, the know-how of our expert engineers' team, a complete technology mastering and the use of specific tools and software enable us to guaranty our clients optimal and adapted solutions.

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