

# TOOsonix System ONE-R



## HIFU R&D

*A scalable HIFU platform  
for fundamental R&D and  
Small-Animal Research*

Fact sheet



# System ONE-R

## HIFU

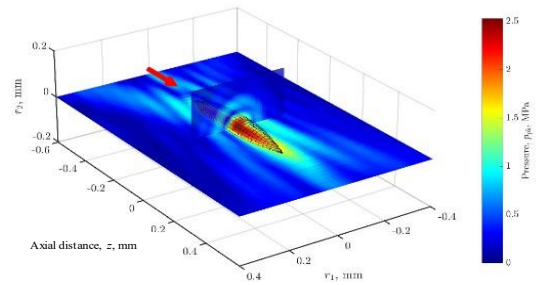
HIFU

Performance

Software

### HIFU Research

- Fundamental HIFU research
- Small-animal model research
- Ultrasound mediated drug delivery
- Sonochemistry



Focal zone reconstructed from planar scans of the pressure field created by a 20 MHz TOOsonix HIFU transducer.

## RESEARCH PLATFORM

System ONE-R is designed as a stand-alone 20 MHz HIFU system, but with customizable hardware and transducers to suit any specific high-frequency HIFU research needs.

It comes ready-to-use with preinstalled software, allowing intuitive control of treatments from a responsive touchscreen PC. Plus, it can include a real-time microscope video-feed of the sonication area for exceptionally precise targeting.

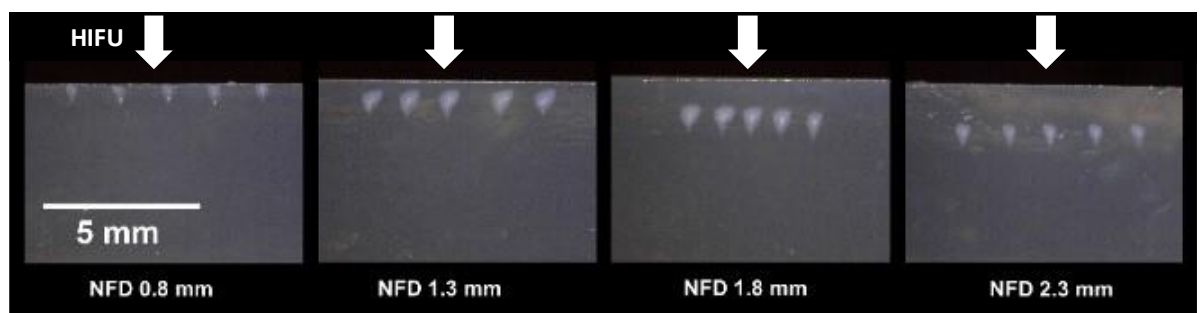
Talk to our engineering team to hear about options for customization.



The TOOsonix Software with real-time optical video feed of the area being sonicated.

## Discuss with us

- What frequency do you need?
- What acoustic power do you need?
- What focal size do you need?
- What focal shape do you need?
- What duty cycles are relevant?
- How should the system fit in the lab?



Focal zones of various nominal focal depth (NFD) created by TOOsonix 20 MHz HIFU transducers. The substrates are tissue mimicking phantom gel with a transition point of 65 °C.

# System ONE-R

## Spec

Overview of specifications and possible ranges for System ONE-R.  
Talk to our engineering team to specify a system to fit a specific research need.

System

Handpiece

Regulatory information

Parameter	Description
<b>System</b>	
Intended use	Research Only Equipment
Output RF frequency	5 – 25 MHz
Input power supply	230 VAC, 50 Hz
Total System Maximum Power	520 W
Operating conditions	15 – 35 °C, 10 – 75 %RH
Max. Dimension (W x D x H)	600 x 800 x 1800 mm <sup>3</sup>
Worksurface size	55.6 x 59.6 cm
Workspace height adjustment	80 – 110 cm, Manual adjustment
Additional Load Capacity	max 5 kg
Warranty of combined system and its units	1 Year
Total weight of system	60 kg
<b>Handpiece and HIFU Capabilities</b>	
Cable length	2 m
Cable jacket material	Medical Grade Silicone
Handpiece Material	Medical Grade Polyamide
Integrated Optical Video Feed	1280p x 960p
Nominal Focal Depth Range	0.5 - 6.0 mm
HIFU Operating Frequency Range	5 - 25 MHz
Maximum dose duration	1000 ms
Maximum Acoustic Power	9 W ± 10%
Maximum Acoustic Energy	6.0 J ± 10%
Modes of operation	Single Shot Mode, Repeated Shot Mode
Dose Activation Method	Mechanical Footswitch
Shelf life (stored in empty and dry condition)	1 year
Total Energy Credit	30 kJ
IP Rating	IP 62
Weight	0.3 kg
<b>Panel PC and User Software</b>	
PC Type	Touchscreen, all-in-one
Software	TOOsonix Software ver.1 or above
IP Rating	IP 65
Weight	7.0 kg
<b>Compliance</b>	
Certification Type	CE Mark Directive 2014/35/EU Directive 2014/30/EU
Electrical Safety Standard	EN 61010-1 : 2010
EMC Standard	EN 61326-1 : 2013
Country of Origin	Denmark



# About TOOsonix



TOOsonix is a Danish registered company founded in 2017 on the foundations of strong technical knowledge in ultrasound and medical device technology.

Our mission is to create better lives with high frequency ultrasound therapy.

We are located in the DTU Science Park approximately 25 km north of Copenhagen, Denmark, a campus hosting a wide range of international companies within the medical device- biotechnology- and pharmaceutical industries.



*TOOsonix has been ISO13485:2016 certified since 2018*

*Please Note: TOOsonix System ONE-R is a laboratory equipment meant for research-use only. It should be operated by qualified and trained professionals only.*

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