



The Operating Room of the Future. Image Guided Acoustic Surgery



Personalized Image Guided Acoustic Surgery for Targeted Results

ExAblate® OR is a non-invasive Operating Room.

An ExAblate OR system can house multiple indications utilizing a single table with application specific cradles that are interfaced with the standard table. ExAblate OR offers both commercially approved and research treatment options for a multitude of clinical indications such as: uterine fibroids and adenomyosis, breast cancer, prostate cancer, pain palliation of bone metastases and various other indications.

The ExAblate OR is an image guided acoustic surgery system employing MR guided focused ultrasound technology that combines MRI – to visualize the body anatomy, plan the treatment and monitor treatment outcome in real time – and high intensity focused ultrasound to thermally ablate tumors inside the body non-invasively. MR thermometry, allows the physician to control and adjust the treatment in real time to ensure that the targeted tissue is treated and surrounding non targeted tissue is spared.

ExAblate offers patients effective and proven treatment:

- Non-invasive procedure
- No general anesthesia or hospitalization required
- Planning, treatment and monitoring done in real time
- Significantly safer than invasive surgery
- Less side effects and complications compared to alternative treatments
- Short recovery time

System components

Patient table	The patient table is the common platform shared by all application specific cradles. The table is docked to the MR for the therapy procedure.
Cradles	The ergonomic cradle contains the focused ultrasound transducer and the robotic system. The cradles are interchangeable and can be easily upgraded.
Cradle Storage and Replacement Rack	Cradle Storage and Replacement Rack (CSRR) houses multiple cradles in a rack for storing and switching cradles.
Operator console	The operator console enables the physician to control and monitor the treatment and MR imaging. It is located in the control room.
Equipment cabinet	The equipment cabinet contains the electrical components which control the system operation, located in the equipment room.
Water system	The water system is used for degassing, cooling and acoustic coupling.
Accessories	<ul style="list-style-type: none">• Imaging coils• Patient mattresses & positioning aids• Disposable treatment supplies

Operational specifications

Focused Ultrasound transducer system	<ul style="list-style-type: none">• Phased array transducer• Focal spot location is controlled by robotic system and/or electronic steering• Focal depth and spot size is controlled electronically to optimize treatment• Beam sculpturing by switching off part of the transducer aperture to overcome obstacles for wider patient selection and greater treatment volume• 5 axis robotic transducer for a more efficient and safer procedure
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Main software features

Accurate planning	<ul style="list-style-type: none">• Treatment planning is performed on high resolution MR images which show the tumor and surrounding organs.• Automatic 3D treatment planner to ensure effective and safe treatment in minimal time
Thermal feedback	<ul style="list-style-type: none">• MR thermometry for real-time treatment outcome monitoring allowing treatment control in real time
Visualization	<ul style="list-style-type: none">• Precise identification of targeted anatomy• Visualization of beam path for safe treatment planning• Clear differentiation between treated and non-treated areas
Precise targeting	<ul style="list-style-type: none">• Imaging in 3 orientations for precise tumor targeting

Electrical requirements

Operator workstation powered from 50/60 Hz, 115 VAC, Power Distribution Unit (PDU) powered from mains 3 phases 480/400/208 VAC, 10 KVA

Compatibility

GE 1.5T, 3.0T, MR 750, 450 and 450WB Imaging systems, running current GE supported software

System dimensions

Patient table: 97x30x54 in, 246x76x137 cm, Weight: 849 lb, 385 kg

Equipment Cabinet: 45x30x71 in, 114x77x180 cm, Weight: 639 lb, 290 kg

Water system: 75x39x51 in, 191x98x130 cm, Weight: 346 lb, 157 kg

Power Distribution Unit (PDU): 35x29x42 in, 88x73x107 cm, Weight: 397 lb, 180 kg

Operator Console and accessories: 7x39x50 in, 19x100x126 cm, Weight: 331 lb, 150 kg

CSRR unit: 1.00 m x 2.50 m (39.4"x98"), Weight: approx. 1 ton

Become a research partner

A variety of InSightec sponsored research options as well as physician initiated options are available with ExAblate OR.

For more information, please contact us at info@insightec.com or visit our website www.insightec.com

Corporate offices: InSightec Ltd.

5 Nahum Heth St., Tirat Carmel 39120, Israel | Tel: 972-4-8131313 | Fax: 972-4-8131322

Email: info@insightec.com | www.insightec.com

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