

Exablate Neuro Data Sheet

Focused ultrasound guided by MRI

Compatible with select General Electric and Siemens Healthineers MR scanners¹



Exablate Neuro uses focused ultrasound to treat patients with medication-refractory essential tremor and tremor-dominant Parkinson's disease without incisions, implants or radiation guided by MR imaging.

SYSTEM COMPONENTS



HELMET SYSTEM

The Helmet System includes the helmet-shaped focused ultrasound transducer on a mechanical positioning unit.

To transfer and dock the Helmet System to the MRI table, the MRI Table Adapter Baseplate is locked into place on the MRI table.



STORAGE TRANSFER CART

The Storage Transfer Cart (STC) enables safe transport and docking of the helmet system to the MRI table and allows for safe storage of the transducer when not in use.

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FRONT END UNIT

This unit contains the programmable power module that shapes and drives the acoustic beam, as well as the water system that is used to cool the patient's scalp during the procedure. It is installed in the MR room next to the MRI scanner.



OPERATOR CONSOLE

This computer workstation is for planning and monitoring the treatment. It is located next to the MRI workstation in the MRI Control Room.



STEREOTACTIC FRAME

The stereotactic frame helps ensure patient is immobilized during the procedure for safe treatment.



EQUIPMENT CABINET

The equipment cabinet contains the electrical and electronic components which control system operation. It is installed in the MR Equipment Room.



COOLING UNIT

The cooling unit provides the Front End Unit with coolant and vacuum lines to allow cooling of the power amplifiers and degassing of the water interface that helps cool the patient's skull. The cooling unit is installed in the MR equipment room.

OPERATIONAL SPECIFICATIONS



- FOCUSED ULTRASOUND TRANSDUCER SYSTEM
- Helmet-shaped phased array transducer with 1024 elements, which can be controlled individually to refocus the ultrasound beams to a common focal point
- Ultrasound frequency 620-720Khz
- Ultrasound pulses from 5 to 60 second duration are delivered to ablate the target area by multiple sonications
- Four mechanical degrees of freedom for access to treatment target: linear motion along 3 axes: superior-inferior, right-left and anterior-posterior axes and angular motion of the pitch axis
- Focal spot location is controlled by electronic steering

MAIN SOFTWARE FEATURES

ACCURATE PLANNING

- Treatment planning is performed on high resolution MR images of target areas with fusion of pretreatment CT and MRI images
- Pre-treatment planning module personalizes treatment parameters according to patient anatomy
- Visual archive stored for treatment replay and assessment

REAL-TIME MRI THERMAL FEEDBACK

MR thermometry provides real-time temperature feedback. This allows adjustment of parameters as needed during treatment.

MR IMAGING GUIDANCE

- Precise identification of targeted anatomy
- Visualization of beam path for verification
- Clear differentiation between treated and non-treated area



TECHNICAL REQUIREMENTS

ELECTRICAL REQUIREMENTS

Operator console is powered from a grounded wall outlet, 50/60 Hz, 115/230 VAC. Equipment cabinet is powered by 3ø 480VAC x 50A or 3ø 400/380 "VAC x 60A 50/60 Hz from a permanent connection and protected by a dedicated circuit breaker.

COMPATIBILITY

Exablate Neuro is compatible with select General Electric and Siemens MRI scanners¹. The MR must have an operational body coil. Requires specific operating software and an additional accessory package for each MRI scanner².

SPECIFICATIONS	DIMENSIONS	WEIGHT
Helmet System	W 110 x H 60 x D 70	~55 Kg
Storage Transfer Cart	W 110 x H 130 x D 75	~170 Kg
Equipment Cabinet	W 60 x H 190 x D 85	~550 Kg
Cooling Unit	W 40 x H 118 x D 75	~180 Kg
Front End Unit:	W 120 x H 136 x D 90	~400 Kg
Operator Console	H 35 x W 37 x D 10 cm	~15 Kg

Note: For full technical specifications and dimensions refer to Exablate Neuro Site Planning Considerations P/N 703A0172



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