



Micropositioning Devices

STar™ Drive System



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The STar™ Drive system provides neurosurgeons with precise guidance and positioning of microelectrodes, stimulating electrodes or other tools for use on standard stereotactic systems.

The STar Drive system consists of three main components, a stereotactic system adapter with guidance, a micro drive and accessories, and a sterilization/storage case with tools. Together these components provide a complete solution that is accurate and easy to use.

When used for placement of DBS leads, the STar Drive system supports two different electrode insertion tube options: single and array. The single insertion tube is inserted prior to microelectrode recording (MER) and remains in place through lead implantation. Array insertion tubes are inserted prior to MER as a group. Once a final track has been selected the array insertion tube is replaced with a lead insertion tube to implant the lead.

The STar Drive system is designed to work with FHC microTargeting™ electrodes and insertion tube sets which are sold in pre-configured lengths to eliminate the need for pre-operative measurement or setup.

STar™ Drive System for precise neuromodulation targeting

- Streamlined design for optimal stability, ease of use, quick assembly and maintenance
- Ergonomic features for easy access to controls, scales, locking knobs and insertion tubes
- Simplified STar Array Electrode Insertion Tube Set eliminates the need for a lower guide and array spacer tubes
- Exceptionally quiet when using power assist accessories to advance microelectrodes in an array configuration

Stereotactic system adapter and guidance

Key components of the STar Drive system are the individual stereotactic frame adapters that provide accurate guidance using a single-piece stainless-steel Ben-Gun Array. The Ben-Gun array consists of 5 parallel trajectories: a central track aligned with the stereotactic Z axis and 4 parallel tracks offset 2mm from the center track. The outer tracks are oriented in a plus (“+”) configuration which can be aligned to the patient anatomy or rotated 45° in a cross (“x”) orientation.

For additional flexibility FHC also offers “offsetting” adapters for some stereotactic systems which provide two separate Ben-Gun array positioners. The center positioner provides normal trajectory options while the offset positioner moves the entire Ben-Gun array 3mm off-set center in 45° increments. Together the two positioners provide 49 parallel track options without stereotactic repositioning.



Micro drive and accessories

FHC offers two drive options: The STar Drive Motor/Encoder and the STar Drive Manual version. Both feature a lightweight frame, low center of gravity, dual scales and easily accessible knob controls facilitate smooth operation. Both drives can be configured to support either single insertion or array insertion tube sets with the appropriate electrode carrier, provided separately.



STar Drive Manual

STar Drive Motor/Encoder

The STar Drive Motor/Encoder adds a second larger manual positioning control to the base of the drive. It also provides optional connection for the microTargeting Controller Power Assist System 2.0 which allows remote operation and display of drive position.

A separate lead holder and lead measurement fixture is also include with the STar Drive. The lead holder is used to support and position the lead at target depth while providing sufficient clearance for the insertion tube to be raised above the scalp while the lead is secured. The lead measurement fixture, used with the lead holder, allows quick and easy positioning of the lead depth stop on the lead.

Sterilization/storage case and tools

The STar Drive system is also provided with sterilization and storage case that holds and safeguards all drive system components and minimizes handling during automatic wash and steam sterilization procedures. Cleaning brushes are also provided to aid manual cleaning.



Ordering Information:

ST-DS-ME – STar Drive System - Motor/Encoder **or**
 ST-DS-MA – STar Drive System - Manual
Individual parts are also available separately, contact FHC for details

Stereotactic Adapters (one required):

- 70-FA-RD – STar Frame Adapter for Radionics CRW™
- 70-FA-RD-01 – STar Offset Frame Adapter for Radionics CRW™
- 70-FA-LX – STar Frame Adapter for Leksell Stereotactic System® with lower arm bushing
- 70-FA-LX-01 – STar Offset Frame Adapter for Leksell Stereotactic System®
- 70-FA-RM – STar Frame Adapter for Leibinger RM™
- 70-FA-ZD – STar Frame Adapter for Leibinger ZD™
- 70-FA-SF – STar Drive microTargeting Platform Adapter Kit

Additional Parts for DBS lead implantation:

- 70-AC-AR – Array Electrode Carrier **or**
- 70-AC-01 – Single Electrode Carrier
- Insertion tube set(s)
- Microelectrodes

Additional Parts for DBS lead implantation:

- 66-DS-PA – microTargeting Controller Power Assist System 2.0
(for use with ST-DS-ME only)

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 **FHC, Inc.**
 1201 Main Street
 Bowdoin, ME 04287 USA
 Fax: +1-207-666-8292
 www.fh-co.com

 **FHC Europe**
 (TERMOBIT PROD srl)
 42A Barbu Vacarescu Str, 3rd Fl
 Bucharest 020281 Sector 2
 Romania

FHC Latin America
 Calle 6 Sur Cra 43 A-200
 Edificio LUGO Oficina 1406
 Medellín-Colombia