



SStar™ Drive (Manual Version)

Accurate

Confidently place Deep Brain Stimulating (DBS™**) or lesioning electrodes with assurance of cellular-level target confirmation

Efficient

Perform all electrode operations through an integrated drive and guide tube system using precise, precalibrated components.

Sample additional tracks without repositioning the drive or stereotactic frame.

All components are steam sterilizable or isolated with a pre-sterilized drape sleeve.

Proven

Hundreds of surgical teams already use FHC's innovative microelectrode technology derived from over 38 years experience as the world's leading manufacturer of research and clinical microelectrodes.

Innovative

FHC's research heritage and custom fabrication capabilities allow us to work closely with field leaders to further enhance microTargeting™ technology.

Reliable

FHC supports microTargeting™ products with comprehensive training, technical support and service.

All microTargeting™ products are cleared for clinical use within the United States and European Union.



FHC's SStar™ * (Surgical Targeting) Drive System for manual operation is the next generation of the popular microTargeting™ Drive for precise neurosurgical positioning. Smoothly advance probes such as recording microelectrodes and stimulating or lesion electrodes through long metal bushings.

The SStar™ Drive is compatible with leading industry stereotactic systems through frame adapters secured with a new positive locking clamp. Five electrode positions include a central track aligned with the stereotactic Z axis and 4 parallel tracks offset by 2mm (on center) from the center track. When used with the center and offset positioners, the SStar™ Drive offers **up to 49 targeting options** without stereotactic repositioning. A Lead Holder is provided to position lesion or stimulating electrodes after microelectrode recording without needing to remove the drive.

Two Insertion Tube Sets are available:

- 1) The Single Electrode Insertion Tube Set** includes an insertion tube/stylet, a spacer tube and cleaning tool. An electrode (ordered separately), held in a single electrode carrier (ordered separately), can be positioned in any one of the five tracks and if additional data is required, it can be repositioned in another track. The spacer tube assures alignment of the thinner recording electrode and is removed prior to positioning the stimulating or lesion electrode without removal of the outer guide tube from its final position. Depth stops for custom electrodes are also available.
- 2) The SStar™ Array Electrode Insertion Tube Set** features a simplified 2-tube set that eliminates the need for a lower guide and array spacer tubes. Both tubes are held in the SStar™ Array Locking Carrier with a thumb screw. The microelectrode is inserted into the insertion tube for recording. The electrode and tubes move together in this configuration. When a track is selected, the electrode is removed and the tubes are lifted out with the new SStar™ Array Insertion Tube Extractor. The Lead Insertion Tube/Stylet is then positioned in the same track.

Ergonomic Control

- * Lightweight Frame
- * Low Center of Gravity
- * Locking Stereotactic Frame Adapters
- * Lead Holder positions stimulating lead without removing drive

Ease of Use

- * Accessible Knobs & Scales
- * Combined Wash, Sterilization & Storage
- * Fewer Parts
- * Quick Assembly
- * Improved Array Electrode Insertion Tube System & Locking Carrier
- * Simple Array Tube Extractor



The SStar™ Frame Adapter for Radionics features an expanding fitting

SStar™ Frame Adapters support leading stereotactic frames and are secured with a positive locking clamp.

"Innovation through collaboration"

™* Trademark of FHC, Inc.

™** Trademark of Medtronic, Inc.





STar™ Drive (Manual Version)

Specifications and Ordering information



Specifications

STar™ Drive

Drive travel: 50mm.

Drive advancement knob: 25µm graduation, 1 mm movement per revolution.

Micro-, lesion or lead electrode position: 30 mm from predicted target when drive retracted to 0.00 with electrode fully extended.

Macroelectrode position: position determined from electrode configuration dimensions.

Array spacing: 2.00 mm from center.

Array guide hole diameter: 1.88mm.

Bushing configuration: center hole on stereotactic axis with 4 holes offset by 2.00 mm on center and orthogonal to the center hole.

Materials: type 6061 aluminum with Nituff and Nickel plating, Radel, Type 316 Stainless Steel,

Single electrode IT set:

Insertion tube dimensions/material: 1.8 mm OD, 1.6 mm ID/ type 304 Stainless Steel.

Spacer tube dimensions/material: 1.5 mm OD, 1mm ID/ type 304 Stainless Steel.

Electrode carrier material: Nickel plated brass

Electrode stops material: Radel with type 304 Stainless Steel fastener.

STar™ Array Electrode IT set:

Array Insertion Guide Tube
Dimensions/material: 1.8 mm OD, 0.9 mm ID/type 304 Stainless Steel

Array Electrode Insertion Tube
Dimensions/material: 0.89 mm OD; 0.6 mm ID/ type 304 Stainless Steel.

Lead Electrode IT:

Dimensions/material: 1.8 mm OD, 1.6 mm ID/ type 304 Stainless Steel.

STar™ Array Locking Carrier material: Nickel plated brass.

STar™ SteriSuite:

Material: Electropolished Stainless Steel

Insert: Nylabond coated Stainless Steel

Ordering Information

ST-DS-MA microTargeting™ STar™ Drive System including: microTargeting™ STar™ Drive, Lead Holder with Depth Stop (1.8 mmØ), Verification Probe, STar™ SteriSuite Case, Cleaning Brushes (3), Lead Measuring Fixture, and spare knobs. (All items are also available individually.)

Stereotactic Adapters (one required):

- 70-FA-RD STar™ Frame Adapter for Radionics CRW™ (expanding)
- 70-FA-RD-01 STar™ Offset Frame Adapter for Radionics CRW™ (expanding)
- 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 Platform Adapter Kit for use with FHC's frameless stereotactic Platform

Insertion Tube Sets and Carriers: (one Tube Set & one Carrier needed)

Array Configuration

70-AC-AR Star™ Array Locking Carrier

Array (Sterile)

70-IT-ARP Sterile STar™ Array Electrode Insertion Tube and Stylet (pk 5)

70-CN-ET Sterile STar™ Array Insertion Tube Extractor (pk 5)

66-IT-1019 Sterile Lead Insertion Tube and Stylet (pk 5)

Array (Non-Sterile)

70-IT-AR Non-Sterile STar™ Array Electrode Insertion Tube Set: including six array insertion guide tubes, six array electrode insertion tubes and stylets, one Lead Insertion Tube and Stylet, and two STar™ Array Tube Extractors

Single Configuration

70-AC-01 Star™ Single Electrode Carriers

Single (Sterile)

66-IT-01P Sterile Single Electrode Insertion Tube Set including one insertion tube, stylet, spacer tube (pk 5).

Single (Non-Sterile)

66-IT-01 Non-Sterile Single Electrode Insertion Tube Set including one insertion tube, stylet, spacer tube and cleaning tool.

Also required:

Microelectrodes such as:

mT type D (AR2) (Medtronic #22670):

mT type D (BP7) (Medtronic #34680):

microTargeting™ Array Electrode

microTargeting™ Single Electrode

Use STar™ Array Electrode Insertion Tube Sets with the STar™ Drive Manual Version. MicroTargeting™ Array Insertion Tubes are not compatible with the manual version.



The STar™ SteriSuite Case safeguards all Drive System components and minimizes handling while traveling through an automatic wash and into steam sterilization and storage.

"Innovation through collaboration"



FHC, Inc.
1201 Main Street
Bowdoin, ME 04287
Fax (207) 666-8292
Email: fhcinc@fh-co.com
www.fh-co.com



24 hour technical services:
1-800-326-2905 (US & Can)
(207) 666-8190



FHC Europe
(THERMOBIT PROD srl)
129 Barbu Vacarescu Str, Sector 2
Bucharest 020272
Romania

