

Leksell® Vantage™ Stereotactic System

Elekta



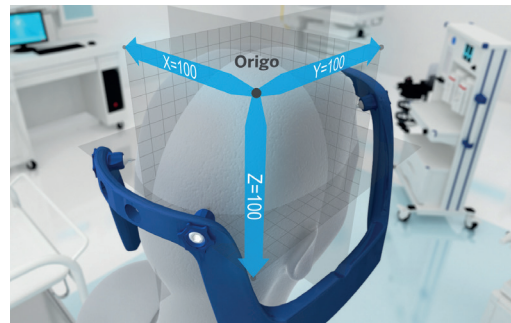
Transform your
neurosurgical workflow

Innovation built on strong foundations

The search for optimal stereotactic neurosurgical treatments is a central focus of both Elekta's history and its present. Leksell® Vantage™ Stereotactic System is an innovative solution that builds on the strong principles and foundations established by the original stereotactic arc system that Professor Lars Leksell created over 60 years ago.

Leksell® Vantage™ provides clinicians with a powerful, versatile tool to ensure a high level of user confidence and a comfortable patient experience.

Innovative material used in the head frame and accessories ensures minimal image distortion and few artifacts, with the added potential to reduce scan time—all leading to improved image quality that allows clinicians to see more anatomy.



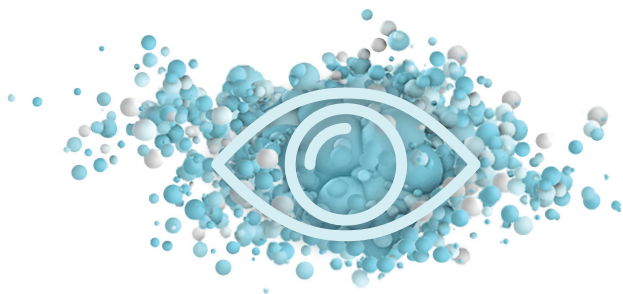
The proven Leksell coordinate system is applied to the Leksell Vantage head frame

“The tools used by the surgeon must be adapted to the task and, where the human brain is concerned, they cannot be too refined.”

Professor Lars Leksell

Elekta Founder
1907–1986



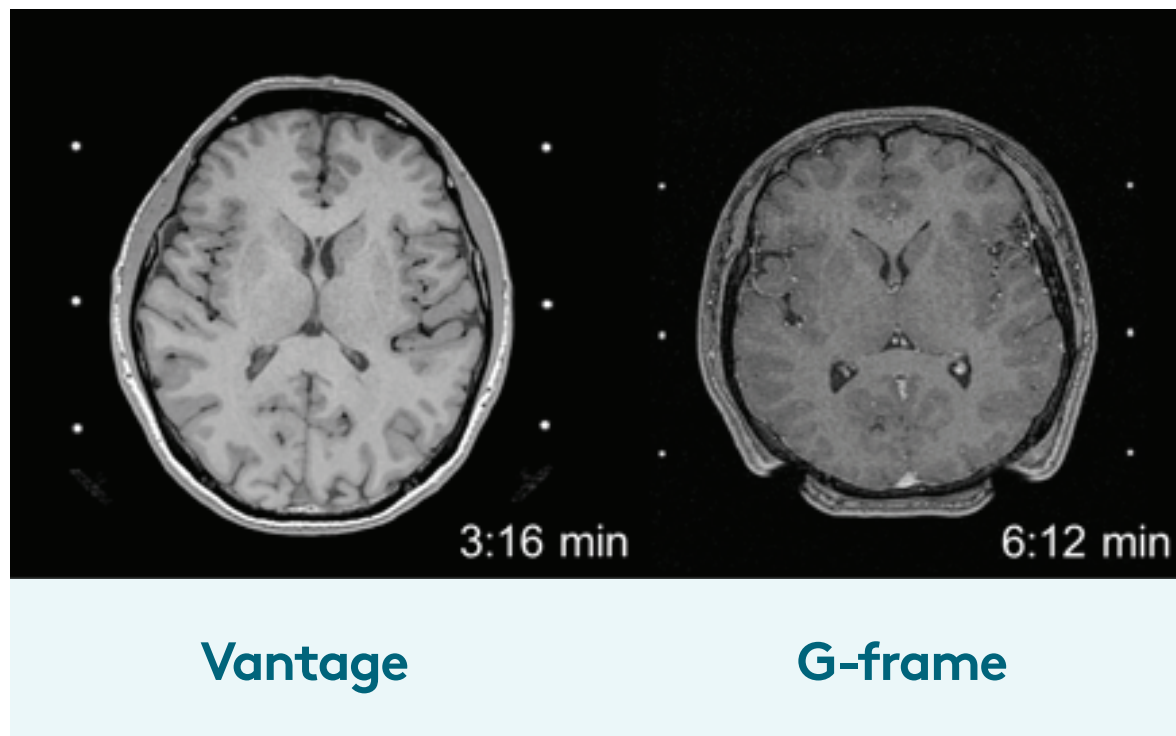


Fast high-quality imaging

Expanding stereotactic neuroimaging capabilities

- Innovative, non-metallic materials increase the potential to acquire high quality stereotactic images with 3.0T MRI scanners, in 50% less scan time compared to images acquired with 1.5T scanners.*
- Use of images with high signal-to-noise ratio, provides the potential for better target delineation in functional neurosurgical procedures (Longi M et al. 2015)
- Minimal loss of signal around the FirmFix pin tip volume
- Coordinate referencing with minimal artifacts in diagnostic CT imaging

*Images from 1.5T and 3.0T MR scanners provided by Ola Norbeck, MRI Physicist at the Department of Neuroradiology, Karolinska University Hospital. PhD student at the Department of Clinical Neuroscience, Karolinska Institutet, Sweden

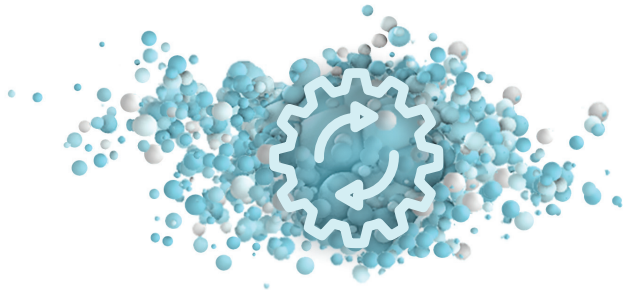


Providing essential accuracy and precision

- Proven technology based on the well-known Leksell Coordinate System and robust center-of-arc principle
- Vernier scales allow the user to set target coordinates with submillimeter accuracy

Enhancing clinician confidence and control

- Minimal artifacts and distortions in stereotactic images together with efficient workflows inspire clinical confidence



User-friendly and smooth workflows

Embracing simplicity and ease of use

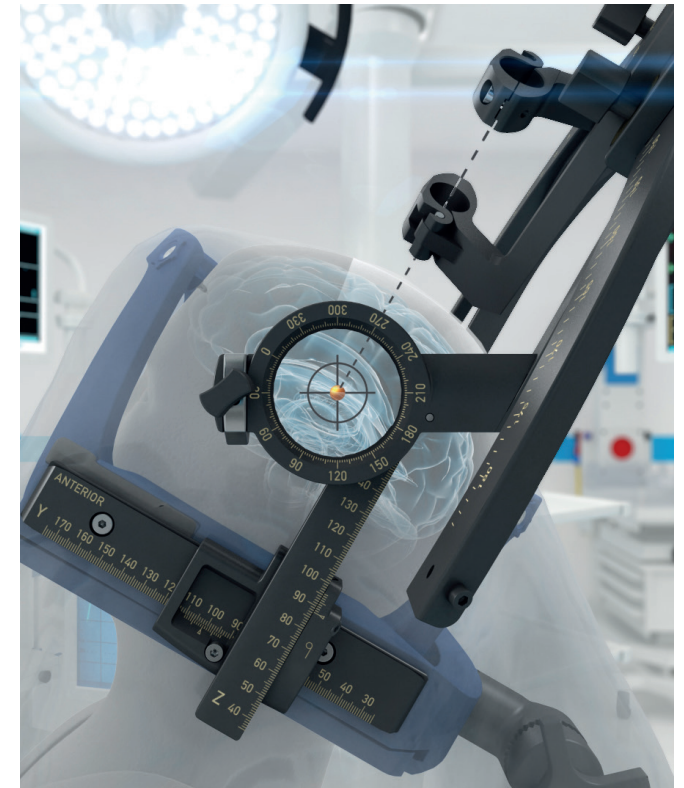
- Easy assembly with a one-piece head frame
- Click-on arc enables fast and reliable docking to head frame
- Pre-sterilized FirmFix™ pins and inserts are provided—no sterilization is required at site
- Quick selection of pin length for frame fixation with FirmFix™ Ruler

Intuitive and efficient workflow

- X-, Y-, and Z-scales are easily accessible in the sterile field for fast and easy adjustment of coordinates during bilateral procedures
- The proven technology is based on the center-of-arc principle
- Potential for reduced workflow/treatment time
- Appropriate for a range of procedures, including DBS, SEEG and posterior fossa trajectories

Expertly designed with safety in mind

- The unique draping ensures a secure sterile interface in the operating room
- The open-face design allows anesthesiologists easy access to airways
- Robust click-on mechanism reduces risk of improper assembly of arc system



The intact sterile interface clearly separates the non-sterile head frame and its OR adapter from the sterile arc system

“Mounting the arc feels solid and robust—it is beautifully engineered!”

Dr. Ludvic Zrinzo

National Hospital of Neurology and Neurosurgery
Queen Square, London, UK



FirmFix lengths and ruler



Comfortable patient experience



Open-face design

- Clear access to nose, eyes and mouth, allowing the patient to easily eat, drink or read during the pre-operative period
- Patient's facial expressions are clearly visible throughout surgery
- Free access to nose and mouth for surgeries carried out under general anesthesia

Potential to reduce overall treatment time

- Fast frame attachment saves setup time
- Innovative material enables short imaging time

Improving patient comfort

- Innovative materials minimize magnetically-induced radio frequency heating
- New MRI coil adapters reduce intrusion on patient shoulders

Designed for excellence

Fewer components helps shorten assembly and preparation time and reduces the risk of parts being misplaced during cleaning and sterilization.

CT accessories

Leksell Vantage CT-accessories enable stereotactic coordinate referencing in imaging with intraoperative CT and diagnostic CT scanners. The CT accessories are compatible with various models of CT scanner tables. The Frame Holder interface for CT scanning ensures firm attachment and immobilization during stereotactic CT scanning.

MR accessories

User-friendly MR accessories provide fiducial-based MR imaging with few restrictions. Chosen materials minimize magnetically-induced radio frequency heating during imaging. The MR accessories set includes a fiducial box and four coil adapters that are compatible with different MR coils.

Leksell® Vantage™ head frame

The Leksell Vantage head frame is made of glass fiber reinforced epoxy, enabling fast high-quality imaging. A range of presterilized, disposable FirmFix head fixing pins ensure flexibility in fitting to a variety of head shapes and sizes. A Velcro band supports easy frame positioning.

Leksell® Vantage™ Arc System

The Leksell Vantage Arc System is made of aluminium and has an elegant click-on mechanism. All X-, Y, and Z-scales on the Leksell Vantage arc are visible and accessible above the sterile draping, enabling smooth coordinate changes during procedures. During surgery, Leksell Vantage Stereotactic System is attached to the operating table by the Frame Holder, which is made of glass fiber laminate with details in glass fiber-reinforced polyamide.



Compatibility supports seamless integration

Leksell Vantage Stereotactic System is fully compatible with Elekta neurosurgical instruments.

1. Injection/Aspiration needle kit

The kit contains a set of neurosurgical instruments designed for injection as well as for diagnostic and therapeutic punctures, aspirations and evacuations. The cannula is equipped with a Luer lock connector to accommodate the use of auxiliary components.

2. Biopsies

Leksell Vantage Stereotactic System provides the neurosurgeon with reusable and disposable biopsy instrumentation.

3. Elekta MicroDrive™

A variety of instruments are available for DBS electrode implantation. The Elekta MicroDrive provides exact positioning of electrodes in the brain when performing Micro Electrode Recording (MER), macrostimulation and lead electrode implantation.

4. DBS lead implantation

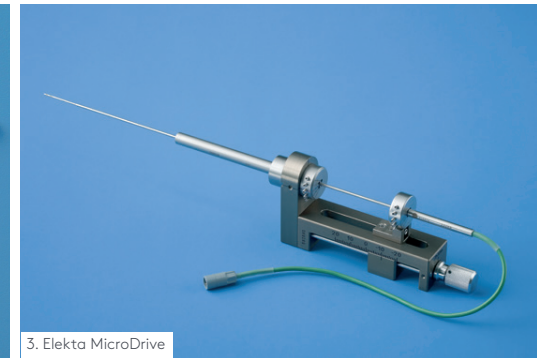
The insertion cannula kit is designed to obtain safe, accurate guidance of implants, electrodes or catheters using stereotactic technique. A stylet is used to seal the inner cannula during insertion in the patient's brain.

5. Salcman Twist Drill kit

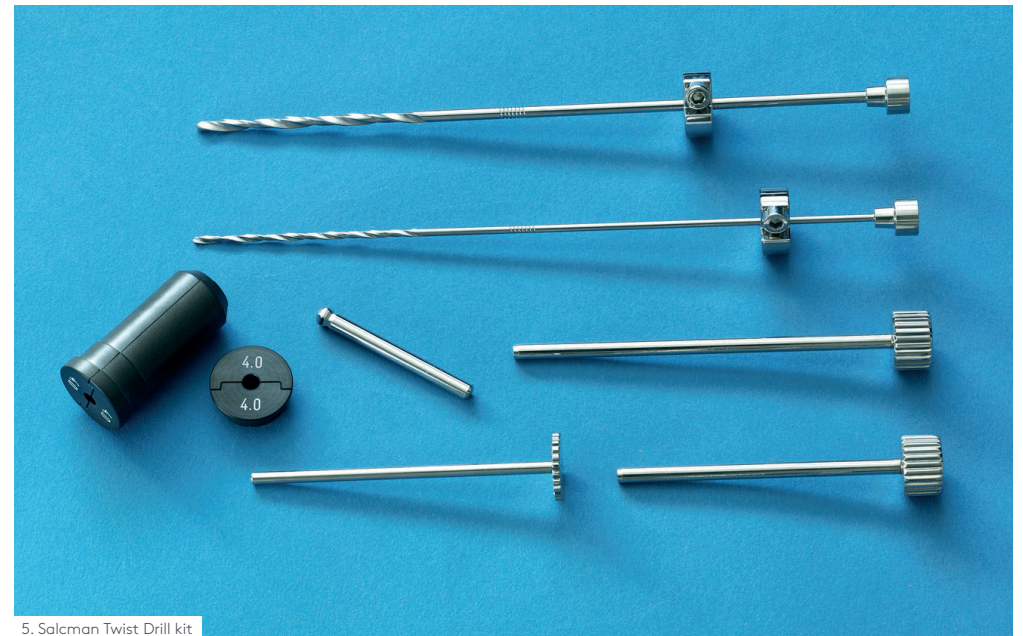
The Salcman Twist Drill kit enables the surgeon to place a twist drill hole with a suitable diameter at a predetermined place and angle. This may be useful for taking multiple biopsies from different targets in one trajectory, electrode implantation and other minimally invasive neurosurgical procedures.



2. Biopsies



3. Elekta MicroDrive



5. Salcman Twist Drill kit



1. Injection/Aspiration needle kit



4. DBS implantations

As a leader in precision radiation therapy, Elekta is committed to ensuring every patient has access to the best cancer care possible. We openly collaborate with customers to advance sustainable, outcome-driven and cost-efficient solutions to meet evolving patient needs, improve lives and bring hope to everyone dealing with cancer. To us, it's personal, and our global team of 4,700 employees combine passion, science, and imagination to profoundly change cancer care.

We don't just build technology, we build hope.



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