

neuromate® Gen III stereotactic robot - key features



About the *neuromate* Gen III stereotactic robot

Designed specifically for neurosurgery, the *neuromate* robot can be used for a range of stereotactic procedures, including stereoelectroencephalography (SEEG), deep brain stimulation (DBS) and biopsy. The *neuromate* robot has both FDA clearance for sale in the USA and CE mark. Systems are installed in several countries worldwide. Before the installation of a *neuromate* system, our engineering team will evaluate your surgical workflows and, wherever possible, provide solutions to ensure optimal integration into your method of surgery. We also offer a strong international support team who can provide regular services and training to help keep operations running smoothly.

Surgical applications

- Stereotactic neurosurgery procedures
 - DBS, SEEG, biopsy;
 - Research and development applications, including investigational intraparenchymal drug delivery

System benefits

- Complete procedure solution
 - Procedure specific modules / tools
 - Comprehensive surgical planning
 - Integrates with intraoperative imaging workflows
 - Frame-based patient registration
- Significant time saving when implanting multiple trajectories
- Compact, easy to manoeuvre and easy to clean
- Designed for quick parts replacement
- Quick to set up and operate
- On-board system diagnostics
- Customisable
 - Dimensions
 - Frame adaptors
 - Imaging modalities
 - Tool holders for standard or custom tools
- Strong international clinical support team
- Superior CT/MRI fusion with *neuroinspire*™ surgical planning software¹. Please see additional *neuroinspire* key features document.



neuromate robot accessories

Safety features

- Used in over 10,000 procedures²
- Anti-collision system
- Constant accuracy checking with redundant encoders
- Safety line constantly monitoring the status of mechanical and electrical components
- Remote control with safety trigger
- Non-backdrivable joints with no backlash ensure immediate, stiff mechanical locking in case of error condition or power outage
- Full image guidance during planning and operation



neuromate robot with sterile drape

As a replacement for the targeting arc of a stereotactic frame or for a tracking system, *neuromate* offers the following safety benefits:

- Regular calibration ensures system remains within accuracy specifications
- Reduced risk of invisible mechanical damage or wear (compared to a stereotactic frame arc)
- No need for error-prone writing down or setting of target co-ordinates
- Stable mechanical attachment (compared to a stereotactic frame or clamping systems used with a navigation system)
- Stiff tool holding



neuroinspire stereotactic planning software

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References

¹Geervarghese R, O’Gorman Tuura R, Lumsden D, et al. Stereotactic and Functional Neurosurgery. 2016; 94: 159-163

² Renishaw field service data

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