

Renishaw is a precision engineering company that supplies highly accurate measurement systems to the aerospace and automotive industries. Its commitment to advanced metrology and precision instruments has taken its expertise into healthcare: Renishaw Raman spectrometers and prostheses digitization and manufacturing systems are supplied to the scientific and dentistry communities.

From when a neurosurgeon first came to Renishaw to discuss how we might create products to improve the way functional neurosurgery is performed, Renishaw committed itself to a product portfolio which reflects the needs of its customers to deliver just that.

A shared passion led to a commitment to invest in *delivering precision* for functional neurosurgery now and in the future.

1. Epilepsy surgery in children: results and predictors of outcome on seizures. Cossu, M., Lo Russo, G., Francione, S., Mai, R., Nobili, L., Sartori, I., et al. *Epilepsia*, 49(1):65-72, 2008PMID:17645538 DOI: 10.1111/j.1528-1167.2007.01207.x
2. Stereo-EEG in children. [Stereo-electroencephalography in children] Cossu, M., Cardinale, F., Castana, L., Nobili, L., Sartori, I., Lo Russo, G. *Child's Nervous System* 22(8):766-778, 2006PMID :16786369DOI : 10.1007/s00381-006-0127-2
3. Stereoelectroencephalography in the presurgical evaluation of children with drug-resistant focal epilepsy. Cossu, M., Cardinale, F., Colombo, N., Mai, R., Nobili, L., Sartori, I., Lo Russo, G. *Journal of neurosurgery*, 103(4 Suppl):333-43, 2005PMID:16270685 DOI:
4. The application accuracy of the neuro | mate® robot – A quantitative comparison with frameless and frame-based surgical localization systems. Li, Q. H., Zamorano, L., Pandya, A., Perez, R., Gong, J., Diaz, F. *Computer aided surgery* 7(2):90-8, 2002
5. Use of the neuro | mate® stereotactic robot in a frameless mode for functional neurosurgery Varna, T. R., Eldridge, P. *International Journal of Medical Robotics*, 2(2):107-113, 2006
6. Surgical management of hypothalamic hamartomas with epilepsy: the stereoelectroencephalographic approach. Procaccini, E., Dorfmueller, G., Fohlen, M., Bulteau, C., & Delalande, O. *Neurosurgery*, 59 (Supplement 2):ONS336-ONS346, 2006
7. Surgical disconnection of hypothalamic hamartomas. (Article in French) Dorfmueller, G., Fohlen, M., Bulteau, C., Delalande, O., *Neuro-Chirurgie*, 54(3):315-9, 2008 PMID:18452954 DOI: 10.1016/j.neuchi.2008.02.043
8. Frameless stereotactic robot-guided placement of depth electrodes for stereoelectroencephalography in presurgical assessment of children with refractory partial epilepsy Dorfmueller, G., Bulteau, C., Fohlen, M., Jalin, C., Delalande, O. In *Abstracts of the 7th European Congress on Epileptology*, Helsinki. *Epilepsia*, 47(S3): 4, 2006

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● Renishaw locations

neuro | mate®
stereotactic robot



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The neuro | mate[®] stereotactic robot provides a platform solution for a broad range of functional neurosurgical procedures.

neuro | mate[®] has been used in thousands of electrode implantation procedures for Deep Brain Stimulation (DBS), and Stereo Electro-Encephalography (SEEG), as well as Motor Cortex Stimulation (MCS), neuro-endoscopy, radio-surgery, biopsy, and Transcranial Magnetic Stimulation (TMS).

neuro | mate[®] provides consistent, rapid, precise targeting and reduces clinical complication rates in stereotactic procedures^{2/3/6/7}.

neuro | mate[®] can be used with a stereotactic frame, or in frameless mode for reduced patient trauma. It is also compatible with procedures using both general and local anaesthesia^{4/5}.

neuro | mate[®] is in constant use in most centres where it is in operation and has pride of place as the cornerstone of functional and stereotactic procedures.

neuro | mate[®] is the only neurosurgical robot with FDA and CE approval.

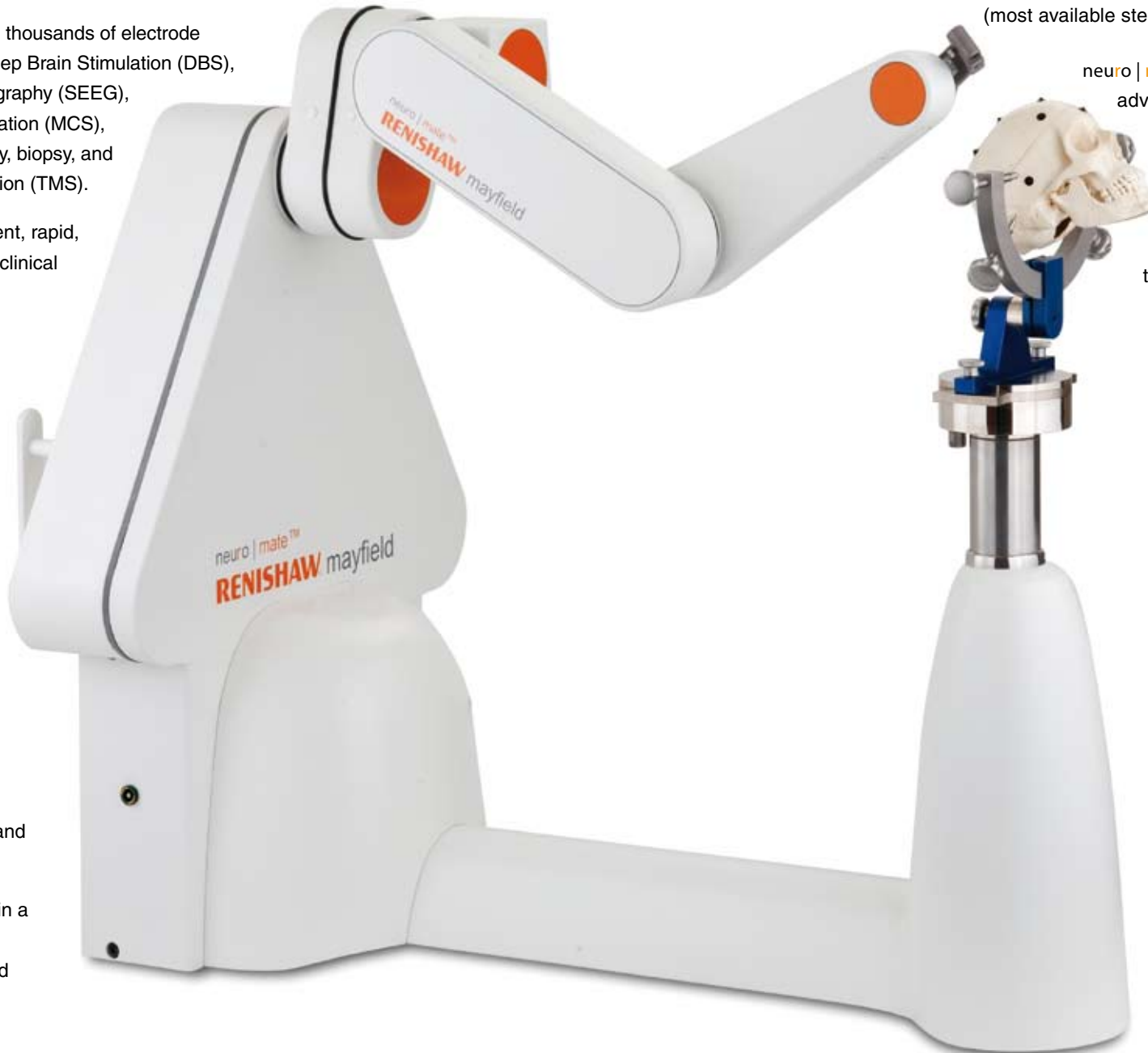
neuro | mate[®] is manufactured in a ISO 13485:2003 compliant environment and it is registered as a Class 2b medical device.

Robotic surgery is capable of delivering greater accuracy and consistency than conventional methods, improving outcomes and reducing ongoing care costs^{1/2/3/6/7/8}.

neuro | mate[®] is supplied with a state-of-the-art navigation and planning system that supports 2D and 3D image registration and frame-based or frameless navigation (most available stereotactic frames are supported).

neuro | mate[®] provides economic advantages in efficiency, increased precision and improved quality^{1/2/3}.

Renishaw has made a long term commitment to delivering precision engineered products that support innovative neurosurgery.



delivering precision