

A new laser navigation system for image guided medical procedures.

Maxon brushless DC motors, gearheads and encoders are at work in a laser system for CT-guided procedures.

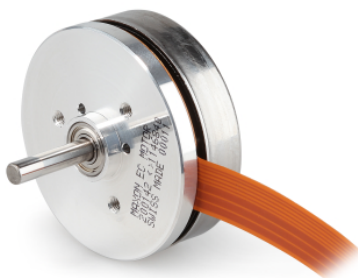
Doctors rely upon high-resolution CT images, for example, to guide biopsies, make diagnoses or for pain relief therapies. After identifying an area for biopsy, surgeons ascertain how to reach the area, where to place the needle tip, what angle to follow and how to minimise damage to healthy tissue. To combat these issues with pin-point technology, a German company designed an automated laser-guided system consisting of a ceiling mounted arc-shaped rail on which a motorised laser positioning unit is affixed. The laser guides the entry point, depth and angle for a needle that is 0.7mm thin.

A brushless maxon DC motor combination, selected for the small size and reliability of operation, meticulously drives the unit on the arc's rail, which holds the rotary laser. The brushless flat EC motor with a diameter of 45mm is fitted with a planetary gearhead and MR Encoder. Two more brushless maxon DC motors control the rotation of the laser mirrors, the EC-max 16 fitted with a GP 16A planetary gearhead and MR encoder. These brushless DC motors allow for exact positioning of the laser beam and are controlled using three EPOS2 Modules.

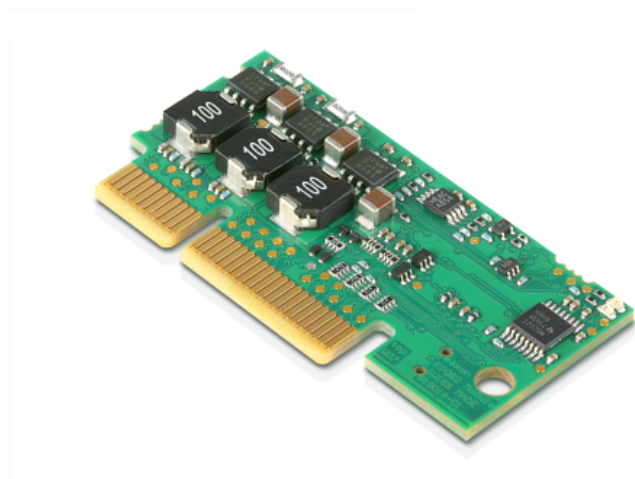
For more information on medical application technology speak to a maxon motor Engineer on Tel. +61 2 9457 7477.

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The media release is available on the internet at: www.maxonmotor.com.au



*The EC 45 flat brushless flat motor Ø45 mm,
GS45 planetary gearhead and EPOS2 Module 36/2
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After the radiologist has determined the needle's path on the CT planning images, the laser head moves into position on the arced rail and projects a laser dot on the patient's skin.

The laser navigation system © maxon motor

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