Media Release

DC gearmotor for medical tools.

Interesting small DC servo gear motor combination for medical hand tool.

This example DC motor and gearhead combination has interesting features and modifications for specialised medical hand tool applications. Manufactured specifically for an acetabulum reaming tool, a device used in surgical procedures of the concave surface of the pelvis. Also known as the ball and socket joint in the hip, this surface is renewed with a power tool during hip replacement procedures. The task requires considerable speed and torque and traditional tools have many shortcomings in this area which limit the processes efficiency of this operation. The gearhead manufactured by maxon motor is a modified with a special hardened stainless steel shaft sleeve and mounting threads. The entire gearbox assembly is designed for sterilisation with steam at 100% humidity, at pressures of 2.3 bar, and temperatures over 134°C. In order to generate the high torque required from the gearmotor combination a special adaption plate, drive pinion and motor shaft were manufactured to suit the powerful 4 pole brushless DC motor. This motor has efficiency levels up to 90% and a power rating of 200w from only 30mm diameter and a weight of 300g. The motor is capable of speeds up to 25000rpm and has a continuous torque rating of 130mNm. Used with a 10A maxon motor speed controller the small motor and gearhead assembly produces intermittent torque figures in the application to 10Nm.

Contact maxon motor Australia for assistance with DC motors for difficult requirements.

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

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EC-4 pole 200w 30mm Brushless DC motor
305013X rear mounting holes enlarged to
M2.5 + EC 22M Sterilisable planetary gearhead 62:1 305139X 6mm shaft. x6 M2.5 mounting holes.