

DC motor with right angle gear and planetary gear.

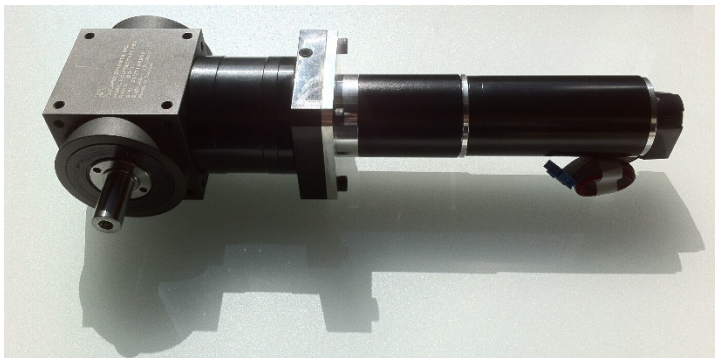
A unique DC motor and gearhead combination developed for an Australian customer providing solutions for robotic rehabilitation.

When high power levels and tight space constraints are required, maxon motor tailor a solution. maxon motor Australia recently developed this motor and dual gearhead design for a robotic exoskeleton application for rehabilitation of children with disabilities. Gearing with the high efficiency level of over 98% on the right angle transfer has been achieved with the use of an sealed, oil filled helical bevel design. A custom adaptor section has then been specifically manufactured to affix a 52mm 113:1 ceramic planetary gearhead at the helical gearbox input. The use of ceramic components within the planetary gearhead increases the lifespan typically by three times compared to traditional steel planetary gearboxes. The 50mm diameter 48V 200W DC maxon motor also achieves the high efficiency of 94%. maxon motor are renowned for high efficiency DC motors but the careful design and selection of the drivetrain components in this gear motor system has set new benchmarks. A common 500cpt incremental encoder has been fitted to the motor back shaft and when combined with the gear ratio and maxon motor control software quad counting, gives a system positioning capability of 0.001 degree. Such a fine positioning capability is also only possible with the assistance of the patented maxon motor rhombic coreless winding that gives a completely smooth motion void of any mechanical detent or magnetic cogging.

For assistance with the design and supply of customised DC gear motor combinations contact maxon motor Australia Ph: +61 2 9457 7477.

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



DC motor with right angle gear and inline gear combined © 2016 maxon motor

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