

Unseen helpers - DC motors in our everyday lives.

It may surprise you to know how many micro DC motors are in the environment around us.

As we go about our daily lives, we might not stop to think about the effect DC motors have on our everyday living both in the home and outside of it. From opening blinds, taking a picture, playing with model railways, taking a shower, having pizza delivered from a delivery robot, playing music on a record player, crossing the road, riding an e-bike, eating a kebab, keeping safe with CCTV, using prosthetics or driving in your car!

Shower systems

A massage brush system that can be installed in almost any shower with brushes that rotate, adapt to the body and move up and down the shower.



The brush rotation and the automatic height adjustment are each handled by a DC motor with a planetary gearhead.



Model trains

Not your average model train, these are built as exact replicas of Swiss trains.



The maxon brushed DC motors in the trains are robust, withstanding high temperatures and overvoltage without interruption.



Companion/ household robots

Companion robots recognise gestures and words and can respond to them even by way of dancing and singing!



The communicative robot contains several brush-less pancake DC motors. The flat out runner design gives a high torque per volume ratio and is perfect for robotic applications.



Digital cameras

The DC motors made by maxon found inside the camera, that ensure there are no chromatic aberrations (or “color fringing”) in the recordings.

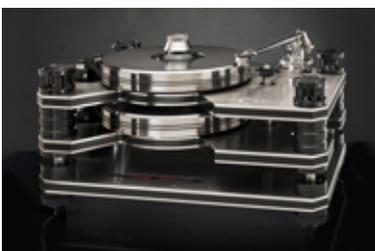


maxon RE8 motors with MR encoder and GP8 A planetary gearhead were selected for the small size and compact drive unit that fits within the camera casing. The brushed DC motors drive spindles in the sensor assembly that moves the camera filter into place in front of the image sensor and back again.



Record players

A very special high-end design turntable, the Kronos record player gives an unrivalled level of precision, owing to its unique design and high-tech components. Its turntables are driven by two maxon DC motors.



Maxon's brushed DC motor was selected for their ironless winding, zero cogging torque, efficiency, power and compact dimensions.



<p>Delivery robots</p> <p>Still in the development phase, the possibility of robotic vehicles autonomously delivering goods to homes is getting closer to reality.</p> 	<p>The wheels in a delivery robot currently in the test phase are driven by maxon DC motors and components.</p> 
<p>Transporting patients</p> <p>Special stretcher lift gurneys are adjustable electronically and help move patients in and out of ambulances.</p> 	<p>Each gurney is equipped with two customised RE-40 brushed DC motors.</p> 
<p>Crossing the road</p> <p>An aid installed at traffic lights makes it easy for blind people to determine when it is safe to cross the road.</p> 	<p>Underneath a little box, a pin powered by a maxon motor rotates when the light is green. Pedestrians can “read” the status with their fingers.</p> 

Riding an E-bike

BIKEDRIVE is an electric drive with a powerful rear wheel motor, battery and PowerGrip that can be fitted to nearly any bike.



The same principals were applied from the expertise gained in the maxon Mars/ Space division. BIKEDRIVE provides nearly 50 Nm torque, weighs less than 6kgs and achieves nearly 90% efficiency.



Security systems

Surveillance cameras secure public places, historical buildings or airports. At busy intersections, traffic monitoring by video camera is vital.



Maxon A-max DC motors are behind the cameras' ability to swivel.

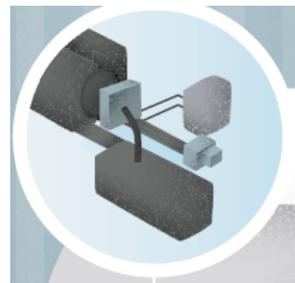


Less exhaust fumes from trucks

CO2 emissions are an increasing burden on the environment and it is no secret that we need to find the solution to decrease these emissions.



In many trucks, exhaust gas treatment for diesel motors is implemented with an injection pump driven by maxon products.



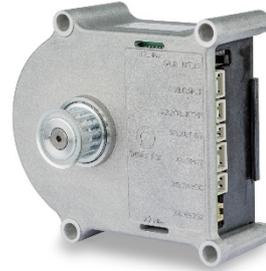
<p>Grabbing a kebab for lunch</p> <p>Electric kebab knives smoothly cut off the roasted meat.</p> 	<p>maxon technology helps to make the knife work. The main requirement is heat resistance, but that is no problem for drive systems that run smoothly even on Mars.</p> 
<p>Prosthetic Limbs</p> <p>Customers work with maxon to produce realistic prosthetic limbs containing high-precision motors that give the wearer more stability and add quality of life.</p> 	<p>Maxon DC motors and planetary gearheads feature in the i-Limb, that was worn by model Rebekah Marine. The first model wearing a prosthetic limb to walk NYFW runway.</p> 
<p>Wind protection in convertible cars</p> <p>Automatic wind deflectors reduce the turbulence inside the car.</p>	<p>This is activated by a customer-specific maxon drive system.</p>
<p>Motorised blinds</p> <p>At home the blinds open and close at the press of a button or are triggered by a sensor.</p>	<p>Controlling the blinds are maxon Actuators. Usually maxon brushless pancake (flat) motors are found in electric blinds. With a compact size these DC motors have the necessary torque and power.</p>

Elevator doors

Maxon brushless DC motors and encoders drive lift doors open and closed.



A motor installed in the cab opens and closes both the doors of the cab and the doors at each particular floor. The requirements of the motor are very specific: small yet powerful, reliable, energy-saving and intelligent.



Door locking systems

High-security locks have doors that can be opened with a keycard or fingerprint. RL safe doors rely on maxon brushed DC gear motors for their security locking mechanism.



The locking system uses tiny DC motors with diameters of 10 to 20mm sometimes combined with a gearhead. These drives have to perform reliably for thousands and thousands of operating cycles. Their ironless windings make them very energy efficient.



3D Printers

Used by engineers to quickly and effectively make prototypes. The printer creates layers of liquid or solid substances which are then hardened.



The high-precision axis control in 3D printers is handled by brushless DC motors in combination with encoders and fast positioning controllers.

For more information contact maxon motor Australia on tel. +61 2 9457 7477.

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

maxon motor Australia Pty Ltd

Unit 1, 12-14 Beaumont Road

Mt Kuring-Gai NSW 2080

Tel: +61 2 9457 7477

Fax: +61 2 9457 8366

info.au@maxonmotor.com

www.maxonmotor.com.au

Twitter [@maxonmotoraust](https://twitter.com/maxonmotoraust)