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Press Release

Mars landing explained.

All landings on Mars are difficult. For NASA's Perseverance Rover, set to land on Mars on February 19, 2021 at 7.30am AEST, this one is particularly tense.

With the biggest supersonic parachute ever sent to another planet, the first helicopter drone Ingenuity onboard, the touchdown site the most challenging terrain on Mars ever attempted and with maxon DC motors onboard, this is one landing not to be missed!

Dr Carlos Bacigalupo, Astrophysicist and Head of R&D at maxon Group, Australia, talks us through the complex landing sequence. Watch the video here.

The intense Entry, Descent, and Landing phase, known as EDL, begins when the spacecraft reaches the top of Mars' atmosphere. It takes approximately seven minutes to enter the atmosphere and land safely on the ground – and these have been referred to as the seven minutes of terror. During these nail biting minutes, the spacecraft autonomously lands itself and until the data is received that Perseverance has landed safely, this window of lagged communication is wait-and-see if the spacecraft has crashed or landed safely.

Dr Bacigalupo also takes us through the maxon brushed and brushless motors that will be used for numerous mission-critical tasks. They will power the small robotic arm in the rover moving the soil samples from station to station and for sealing and depositing the sample containers. There are also six 10mm DC micromotors used to control the tilt of the rotor blades, which determines the direction of Ingenuity's flight.

Images courtesy NASA/JPL-Caltech/ University of Arizona. With thanks to NASA Jet Propulsion Laboratory (California Institute of Technology), ES/DLR/FU Berlin, maxon Group, Mark Sheppard. Music from Bensound.com and zapsplat.com.

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The press release is available on the internet at: www.maxongroup.net.au

Dr Carlos Bacigalupo Astrophysicist and Head of R&D at maxon Group Australia, talks us through the complex landing sequence © maxon Group

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The Swiss specialist for quality drives

maxon is a developer and manufacturer of brushed and brushless DC motors. as well as gearheads, encoders, controllers, and entire mechatronic systems. maxon drives are used wherever the requirements are particularly high: in NASA's Mars rovers, in surgical power tools, in humanoid robots and in precision industrial applications, for example. To maintain its leadership in this demanding market, the company invests a considerable share of its annual revenue in research and development. Worldwide, maxon has more than 3000 employees at nine production sites and is represented by sales companies in more than 30 countries.