DC motor of the week.

This week one of the more interesting DC motor and gearbox combinations was this right angle helical and planetary gearhead combination combined with a 400w 48V brushless DC motor.

Custom DC motor and gearhead combinations are one of maxon motor Australia's specialties. Focusing on only the highest quality solutions that offer unrivalled performance characteristics; this combination offers an excellent example. It is clear through the illustration that the quality of the motor and gearhead materials and finish are second to none. This quality level is not skin deep, the state of the art construction of the components in the gearmotor gives this combination extremely high efficiency levels. The brushless motor was supplied to a Perth based mining company who required a motor and gearhead combination with low voltage and high efficiency for an extremely remote solar powered application. The motor and gearheads needed to be maintenance free, sealed for protection from the elements and being connected to a solar and battery power supply, extremely efficient. This efficiency is what lead to the selection of a helical and planetary combination over a worm gearbox. With a right angle transfer requirement due to space constraints and the application mounting restrictions, combined with a 70:1 reduction ratio, a typical worm gearhead would have an efficiency at the torque and speed levels of under 30%. The combination of helical and planetary gearbox units pictured here has an efficiency of 73.5%. The gearhead combination can deliver up to 40Nm with a current consumption of only 5A. The gearhead shaft entry and exit are rubber sealed at 3 points to ensure the sealing is sufficient for fine dust particles associated with the Australian outback and the brushless DC motor has a specific design whereby the windings are thermally bonded to the stator. This allows the winding to dissipate its heat directly into the considerable gearhead mass without the need for any airflow, satisfying another essential requirement for the extreme Australian desert environment.

Contact maxon motor Australia Pty Ltd in our Sydney office for further information or assistance selecting a DC motor and gearhead for your application.

Length of this press release: 397 words

The media release is available on the internet at: www.maxonmotor.com.au
Sealed DC motor and double gearhead combination. © 2012 maxon motor Australia.