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Celera Motion Introduces Pre-Engineered, High Torque Density, Low Cogging Direct Drive Motors

Celera Motion launches Omni+ Series, the next generation of direct drive motors ideal for medical and industrial applications.

BEDFORD, Mass. (March 1, 2021) Celera Motion, a leader in precision motion component and sub-system solutions and a business unit of Novanta Corporation, introduces a new direct drive motor platform, the Omni+™ Series to its line of direct drive, frameless motor kits.

System engineers looking for the “magic combination” of motion smoothness and torque density will be interested in the next generation Omni+ direct drive motor series. Omni+ delivers minimal cogging and high torque density, resulting in smooth motion, lower power dissipation and decreased temperature rise.

Efficient and powerful, the Omni+ Series is pre-engineered for optimal system integration and is offered in a range of axial lengths and winding options. Applications that are well suited for the motor series include geared robotic joints, direct drive rotary stages or actuators that are typically found in satellite, communications, and surveillance equipment – both air and ground.

Unlike other frameless motor offerings that make you choose between form factor and performance, the Omni+ Series is designed to maximize ID to OD ratio without compromising torque density, resulting in thin cross-section form factors, allowing for design flexibility as well a convenience for routing cables, optics and other system elements. It is ideal for medical robotic joint applications where temperature control and smooth motion are absolute requirements. Industrial applications benefit from more torque out per unit volume and increased design flexibility.

The new Omni+ Series allows users to easily integrate the frameless motor kit technology and benefit from an efficient utilization of space while providing high speeds, fast acceleration, superior mechanical stiffness, reduced settling times, increased system performance and throughput.

“Customer demands continue to increase for smooth motion, lower power dissipation and decreased temperature rise. The Omni+ Series with its minimal cogging and high torque density better meet customer requirements in critical component applications,” said Mike Mainvielle, VP Product Management & Marketing, Celera Motion. “Pre-engineered and compatible with many gears and drives, Omni+ offers fast and easy system integration - giving our customers a competitive advantage.”

The Omni+ Series will be available in multiple frame sizes with 60 mm being the first frame size introduced. Additional frame sizes will soon be made available.

For more information visit: <https://www.celeramotion.com/omni-plus-series/>

About Celera Motion

Celera Motion, headquartered in Bedford, Massachusetts, is a market leading provider of motion control components and subsystems for OEMs serving a variety of medical and advanced industrial markets. Celera Motion offers precision encoders, motors, and customized mechatronic solutions that help customers solve challenging motion control problems. For more information, visit www.celeramotion.com

About Novanta

Novanta is a trusted technology partner to OEMs in the medical and advanced industrial technology markets, with deep proprietary expertise in photonics, vision and precision motion technologies. For more information, visit www.novanta.com.

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