

Maximum power density, lifetime precision and a large hollow shaft

Extension of servo actuators in the popular CanisDrive® Series

Machine manufacturers face growing pressure in the global market in terms of the development of increasingly compact and more cost effective machines and systems. Manufacturers of gears and servo actuators also face these high demands, since drive and control technology now represents a considerable proportion of construction costs. Furthermore, these core components are absolutely crucial for the performance of machines. In particular, the fourth and fifth axes of milling heads on machine tools require robust drives with a large hollow shaft, high protection ratings and a precise gear system. Whether cutting heads, water jet cutting machines or laser cutting systems – compact designs with an output bearing with high tilting capacity are also essential for direct mounting of the tool.

Harmonic Drive AG has stepped up to this challenge, combining the advantages of compact design and performance in an impressive solution in the form of CanisDrive® Servo Actuators. The large hollow shaft as a central feature was a key focus during development of the new servo actuators in the CanisDrive® 50 and CanisDrive® 58 Series. The market requirement for a large hollow shaft has been met and implemented with the development of new gear and motor concepts. The servo actuator has as its core a servo motor which is based on a single tooth winding technology with a segmented stator. The power density of the motor has been maximised by an optimised lamination with sophisticated insulation system and a high copper slot fill factor due to orthocyclic winding.

In addition to the huge increase in performance, servo actuators in the CanisDrive® 50 and 58 Series offer a considerably larger hollow shaft, opening up new and previously unimaginable design opportunities. Servo actuators in the CanisDrive® Series in size 50 have a hollow shaft of 55.5 mm, while size 58 has an even larger 65.5 mm hollow shaft diameter.

The new servo actuators in the CanisDrive® 50 and CanisDrive® 58 Series are the result of continuous further development. In addition to the impressive increase in performance and the considerably larger hollow shaft, the new drive system offers a mechanical interface that is compatible with previous CHA-50 and CHA-58 models. The large centric hollow shaft often simplifies machine design considerably, and offers a cost effective and efficient solution.

Contact:

Harmonic Drive AG · Saskia Andries · Hoenbergstraße 14 · 65555 Limburg/Lahn, Germany
Tel.: +49 (0) 6431 5008-214 · Fax: +49 (0) 6431 5008-119 · E-mail:
www.harmonicdrive.de

In over 45 years of operation, **Harmonic Drive AG** has developed into a solution provider for high-precision drive technology. We offer over 25,000 different product versions, more than 80% of which are customer-specific solutions. The bigger the challenge, the better!



For adaptation to customer specific applications, servo actuators in the CanisDrive® Series also offer numerous possible combinations when it comes to selecting the motor winding, motor feedback system, brake and various sensor, cable and connector options. The flexible configuration ensures compatibility with almost all servo controllers on the market. YukonDrive® Servo Controllers, which are specially tailored to the needs of Harmonic Drive® Servo Actuators, provide a drive system that is pre-assembled and specifically tailored to its performance.

Demanding drive systems from the fields of machine tool building, handling, robotics and medical technology rely on the powerful, durable and robust servo actuators in the CanisDrive® Series.

September 2018

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