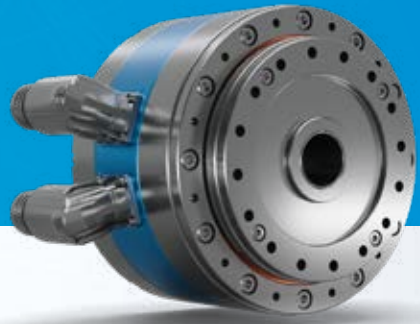


Super-Short Actuator



30% shorter axial length with high performance

The Super-Short Actuator sets new standards in terms of installation space and weight: It is approximately 30% shorter in the axial direction and about 30% lighter than comparable standard actuators. This is made possible by ALVA's GearTorq™ frameless motor, manufactured using patented FiberPrinting™ technology. In combination with the Nabtesco strain wave gear, the actuator offers high power density with minimal installation space. For optimal control, a specially tuned control system from adcos, a Nabtesco Group company, is available. **Super-Short Actuator – Short. Lightweight. Responsive. Precise.**

Performance Components:

Nabtesco strain wave gear with output bearing

Backlash-free power transmission with high peak torques

ALVA GearTorq™ motor with encoder

Compact, lightweight motor design for space-saving integration

Optional digital gear functions

For additional operating and condition data as well as expanded monitoring capabilities

Compact Plug-and-Play Drives

The Super-Short Actuator combines the key drive components into a single compact unit. The gearhead, motor, bearings, and encoder are perfectly matched to one another, reducing the integration effort required on the customer's part. The modular design allows for flexible configurations. A version with a digital gearbox is also available, offering advantages for condition monitoring and predictive maintenance.

Benefits:

- Controllability
- Approximately 30% shorter axial length
- About 30% lighter
- High Peak Torques
- Also available with a Hollow Shaft
- Optimal Interaction Between the Transmission and the Engine
- High Power Density in a compact design

Optional:
External adcos
controller for
optimal motor
performance

The characteristics of ALVA's GearTorq™ frameless motor are taken into account in the control system to ensure efficient motor control. adcos' new RCP (Rapid Control Prototyping) PANTHER platform is available for this purpose. In addition to two redundant 3-phase high-current MOS-FET power stages, PANTHER also features a 3-phase GaN power stage for driving the ALVA motor. Together with the control software tailored to the motor, it enables optimal utilization of the motor's performance.

Applications:

The Super-Short Actuator is ideal for applications with limited axial installation space, low weight requirements, and high dynamic performance demands. Its compact design reduces moving masses and supports lean designs. It is particularly well-suited for dynamic applications with cyclic loads, as well as for mobile systems where every gram counts.

- Cobots
- Humanoid robots and Delta robots
- Exoskeletons
- Pan-and-tilt systems
- Mobile and battery-powered systems
- Lightweight and highly dynamic robot axes

How can we support you?

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