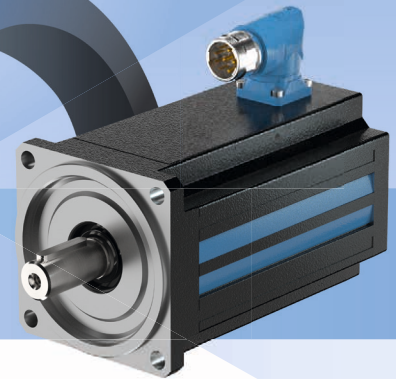


BRIDGE THE GAP

LeanMotor: The New Motor Class

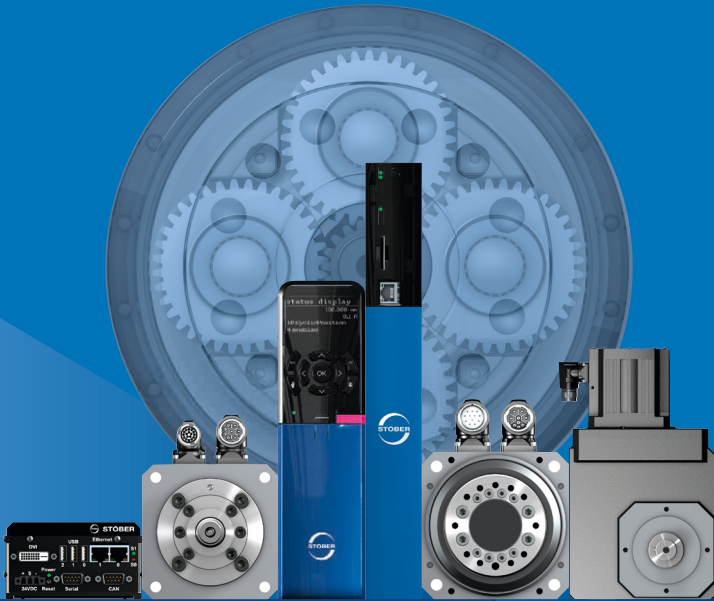
The Bridge to Greater Efficiency

Is an asynchronous motor too big and not efficient enough for you? Or are you looking for an inexpensive and rugged alternative to a synchronous servo motor? Based on the “bridge the gap” principle, STÖBER has brought a new motor class to market. The consistently encoderless LeanMotors are strong and rugged like asynchronous drives and precise and compact like synchronous servo motors. The motors can be used in tasks such as for automation in harsh production environments.



System Technology for Drive and Automation

The most important components and their possible combinations



Your advantages at a glance:

- Up to 96 % efficiency: IE5
- Small space requirement for compact machines
- Dynamic and efficient control
- Long service life
- Low energy consumption
- Up to 30 % more cost-efficient than a comparable synchronous servo motor
- Significantly more rugged
- Withstands high vibrations and oscillations
- Sensorless (no electronics in the motor)
- Requires only a standard power cable



Position determination without an encoder

The compact stand-alone SC6 drive controller allows for sensorless control of the motor. It determines the position and the speed – regardless of the speed.

± 1 % speed accuracy

± 1 ° positioning accuracy



Excellent Drive Technology for Automation, Systems and Machines

STOBER offers a wide range of product variants with a focus on the details to allow a perfect configuration for any actuator system. And that means no compromises! Excellent technical solutions without unnecessary costs.

STOBER Controller

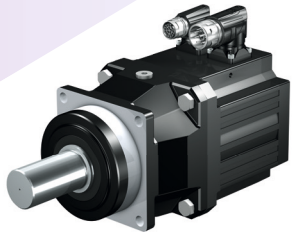
MC6 Motion Controller

Scalable computing power in the system.

It is possible to execute everything from simple synchronous applications to a multi-axis CNC machine. With CODESYS SoftMotion or CODESYS SoftMotion CNC.



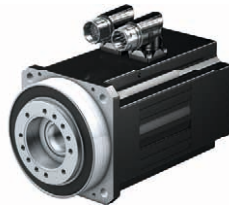
Synchronous Servo Geared Motors



P/PA Planetary Geared Motor

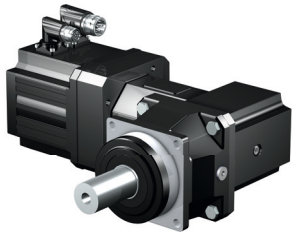
PA acceleration torque: 11 – 3000 Nm
PA acceleration torque: 15 – 1600 Nm
P backlash: $\leq 3 - 8$ arcmin
PA backlash: $\leq 1 - 3$ arcmin

Precision for positioning and constant speed



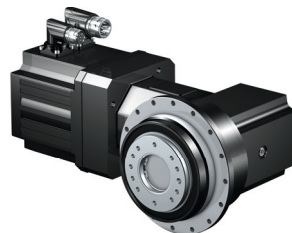
EZHP Planetary Geared Motor with Hollow Shaft

Acceleration torque: 47 – 500 Nm
Backlash: $\leq 3 - 4$ arcmin
Super compact, highest volume output



PK/PKX Right-Angle Planetary Geared Motor

PK acceleration torque: 68 – 2700 Nm
PKX acceleration torque: 11 – 3000 Nm
PK backlash: $\leq 3.5 - 5$ arcmin
PKX backlash: $\leq 4 - 8.5$ arcmin
Large transmission-ratio range



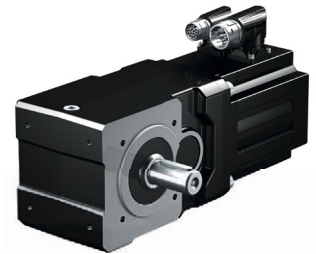
PH(Q)/PHKX Right-Angle Planetary Geared Motor

PHK acceleration torque: 89 – 7500 Nm
PHQK acceleration torque: 123 – 43000 Nm
PHKX acceleration torque: 26 – 7500 Nm
PHK backlash: $\leq 3.5 - 4.5$ arcmin
PHQK backlash: $\leq 3.5 - 4$ arcmin
PHKX backlash: $\leq 3 - 6$ arcmin
Huge potential with low backlash



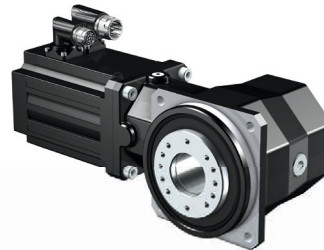
PHQ(A) Planetary Geared Motor

PHQ acceleration torque: 84 – 22000 Nm
PHQA acceleration torque: 84 – 10000 Nm
PHQ backlash: ≤ 3 arcmin
PHQA backlash: $\leq 1 - 1.5$ arcmin
The ultimate quattro servo drive



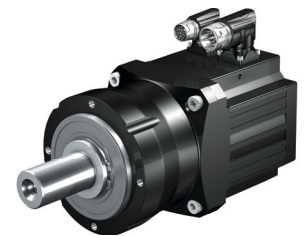
KL Helical Bevel Geared Motor

Acceleration torque: 11 – 65 Nm
Backlash: $\leq 16 - 25$ arcmin
Super compact drive solution for small servo drives



KS Right-Angle Servo Geared Motor

Acceleration torque: 27 – 400 Nm
Backlash: $\leq 4 - 6$ arcmin
The drive type for high demands



PE Planetary Geared Motor

Acceleration torque: 11 – 310 Nm
Backlash: $\leq 8 - 10$ arcmin
Standard helical geared motor

STOBER Power Electronics

SD6 Drive Controller

Powerful stand-alone drive controller that can be custom configured. Optimized for drive-based applications in synchronous operation with up to 8 axes. Available as a single-axis controller in four sizes with a nominal output current up to 85 A.



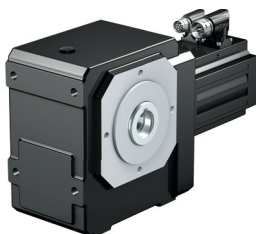
SI6 Drive Controller (Multi-Axis Drive System)

Compact drive controller for drive control in a multi-axis drive system. Optimized for controller-based multi-axis applications > 4 axes. Available in four sizes (as single or double-axis controller) with a nominal output current up to 50 A.



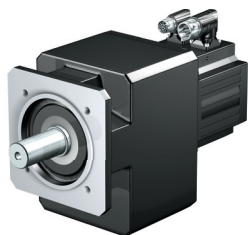
F Offset Helical Geared Motor

Acceleration torque: 19 – 1,100 Nm
Backlash: $\leq 5 - 11$ arcmin
Servo axis with parallel offset



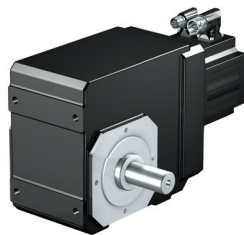
S Helical Worm Geared Motor

Acceleration torque: 28 – 960 Nm
Compact and cost-efficient



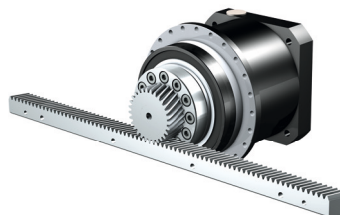
C Helical Geared Motor

Acceleration torque: 8.3 – 6500 Nm
Backlash: $\leq 10 - 20$ arcmin
Compact helical geared motor



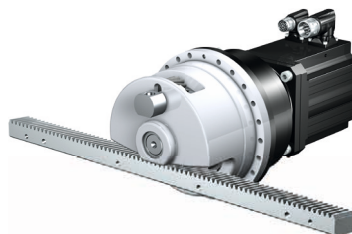
K Helical Bevel Geared Motor

Acceleration torque: 23 – 13200 Nm
Backlash: $\leq 1.5 - 12$ arcmin
Versatile with flange, solid or hollow shaft, etc.



ZTR-PH(A), PHV(A) Rack and Pinion Drive

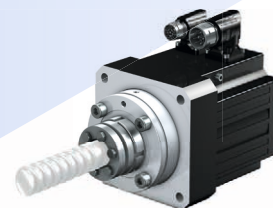
Module: 2 – 8
Feed force: 3.8 – 67 kN
Feed velocity: up to 4.7 m/s
Straight and helical gearing



ZTRS-PH(A) PHV(A), PHQ(A), Rack and Pinion Drive

Module: 2 – 10, Feed force: 16 – 126 kN,
Feed velocity: up to 4.7 m/s
Highest power density thanks to a supporting bearing holder

Motors



EZS Synchronous Servo Motor for Screw Drives

Direct drive of the threaded spindle motor shaft as a blind hole hollow shaft.
Axial forces: 760 – 31271 N
Designed for high axial forces



EZM Synchronous Servo Motor for Screw Drives

Direct drive of the threaded nut.
Axial forces (convection cooling): 751 – 21375 N
For spindle rods of any length

SC6 Drive Controller

Compact stand-alone drive controller for sensorless control of STOBER LeanMotors of the LM series. Optimized for drive-based applications with 2 to 4 axes. Available in three sizes (as single or double-axis controller) with a nominal output current up to 19 A.



POSIDYN® SDS 5000 Servo Inverter

Servo inverter with high dynamics for fully digital servo axes. Offers an isochronic system bus (IGB) for communication between up to 32 servo inverters. Available in four sizes with a nominal output current up to 85 A and a power range up to 45 kW.



POSIDRIVE® FDS 5000 Frequency Inverter

The asynchronous servo axis designed for function. Optimized for asynchronous geared motors with practice-oriented functionality. Available in two sizes with a nominal output current up to 16 A and a power range up to 7.5 kW.



LM LeanMotor

Electric drive without encoder with just one standard power cable. Fanless. Speed accuracy $\pm 1\%$, η up to 96 %, Positioning accuracy $\pm 1^\circ$, Stall torque: 2.48 – 29.9 Nm

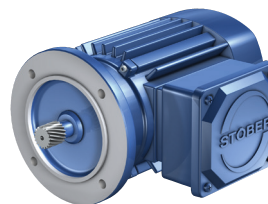
Precise and compact, robust and strong



EZ Synchronous Servo Motor

Highest volume output. High torque. High dynamics. Stall torque: 1.0 – 66.1 Nm

Extremely compact



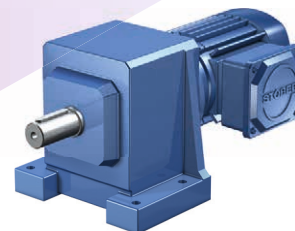
IE2/IE3 Asynchronous Motor

14 selection parameters (standard).

Motor rating: 0.75 – 45 kW

Optional: brake, forced ventilation unit, incremental encoder or multi-turn absolute encoder

Asynchronous Geared Motors



C Helical Geared Motor

Motor rating: 0.12 – 45 kW

Backlash: $\leq 10 - 20$ arcmin

Versatile thanks to housing variants



HIPERFACE DSL One Cable Solution (OCS)

High system accuracy with up to 20 bit resolution (single-turn encoder). Electronic nameplate for fast and reliable commissioning.

Multi-turn encoder with 12 bit resolution

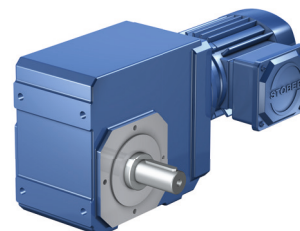


EZHD Synchronous Servo Motor with Hollow Shaft

Super compact with extremely high power density.

Stall torque: 2.6 – 31.1 Nm

Designed for high axial forces



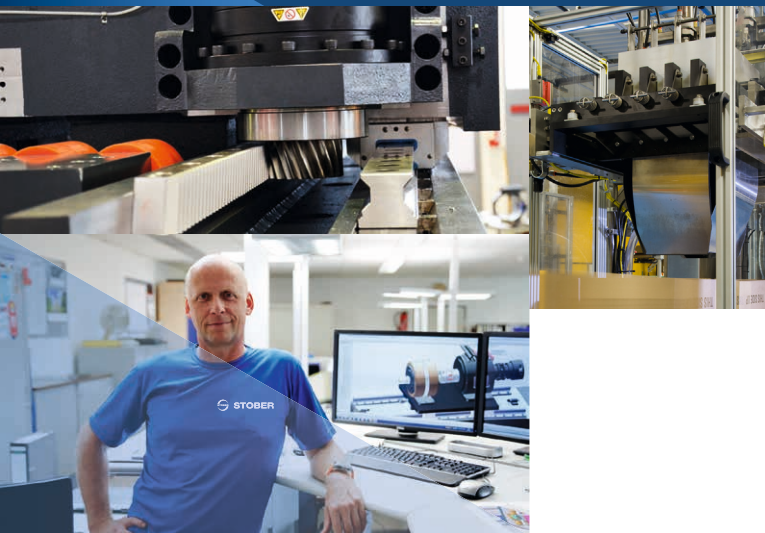
K Helical Bevel Geared Motor

Motor rating: 0.12 – 45 kW

Backlash: $\leq 10 - 12$ arcmin

Highly rigid geared motor

Applications and Solutions



Every drive solution has its own unique character.

During the design phase, it is helpful to talk to a drive professional with experience implementing similar projects. Ask for a STOBER expert that is well-versed in your industry or who already has experience with your specific situation.

- Electronic cam disk
- Winding
- Positioning
- Synchronous run
- Conveying and moving
- CNC
- Coordinate transformation
- Flying shear
- Flying saws
- Rotating shear
- Pick and place



The STOBER System

STOBER has its roots in the development and construction of geared motors. For more than 30 years, we have been developing and producing suitable drive controllers for these applications. Connected through plug and play, these STOBER components form reliable drive systems.

STOBER Industrial Automation as a Complete Motion-Control Solution

Melding drive control and drive technology

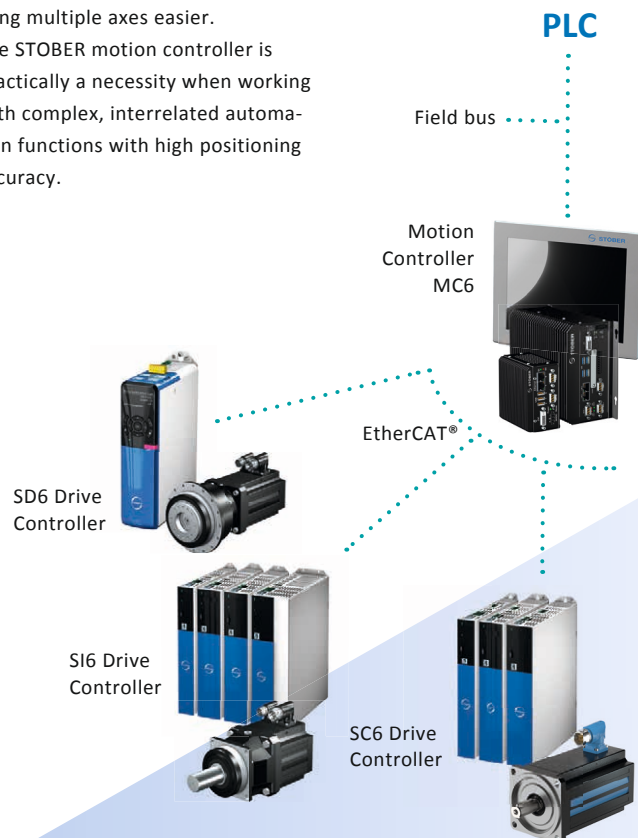
The STOBER MC6 Motion Controller enables convenient, efficient engineering in the design of drive technology. It results in lean, economical complete solutions.

Motion Control makes some things easier and makes many things possible

All control-related drive functions are gathered into a central program sequence (embedded systems).

In many cases, this makes programming multiple axes easier.

The STOBER motion controller is practically a necessity when working with complex, interrelated automation functions with high positioning accuracy.



You Can Trust in STÖBER

www.stober.com



**STÖBER
Team spirit**

Productive teamwork

**Grounded
innovative power**

Reliability

Dynamics

Dedication

Technical qualification

Friendly, clear communication

STÖBER in motion

STÖBER has been building excellent drive technology for over 80 years. As a medium-sized, owner-operated company, STÖBER understands the needs of its customers. Our customers can find certified experts in every area, whether in research and development, production, technical consultation or design support. We revel in innovation while bearing tradition in mind. We continue to push ourselves forward and to refine our products further. We do this by implementing suggestions from real-world use, giving due consideration to customer requests and constantly seeking out even better solutions. This is all made possible by the competitive spirit with which we face every exciting challenge.

STÖBER Service

The STÖBER service network includes 38 trusted partners in Germany. They guide you through commissioning, available on-site in case of faults and offer expert technical advice.

Service Hotline

+49 7231 582-3000

The STÖBER service specialists can be reached around the clock and if needed, they can be on-site quickly. Thanks to their experience, they are often able to guide your employees through suitable immediate measures over the phone. What's more, STÖBER drive controllers allow for maintenance via remote access.

STÖBER Service Network

The STÖBER INTERNATIONAL SERVICE NETWORK offers worldwide support and service.

It includes over 80 top-performing service partners in 39 countries.

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