

## System Technology for Drive and Automation

**The most important components and their possible combinations**



**BETTER SAFE THAN SORRY**  
Play it safe with the SD6 drive controller



**better safe than sorry**

Are you safe?

Play it safe with the  
SD6 drive controller

The SD6 drive controller offers innovative, encoder-independent safety functions and safe brake management for up to two brakes. The comprehensive safety functions meet the requirements of EN 61800-5-2 and are certified in accordance with SIL 3, PL e (Cat. 4).

In addition, you benefit from:

- Control of linear and rotary synchronous servo motors and asynchronous motors
- Isochronic system bus (IGB) for parameterization and multi-axis applications
- Flexible DC link connection using Quick DC-Link for multi-axis applications
- A convenient operating unit consisting of graphical display and keys
- Paramodul removable data storage for quick commissioning and efficient service

**PILZ**  
THE SPIRIT OF SAFETY

Safety technology  
in cooperation with  
Pilz GmbH & Co. KG



# 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

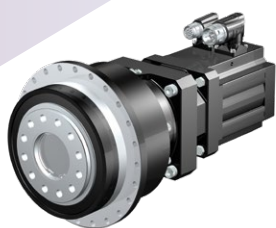
### MC6 Motion Controller

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.

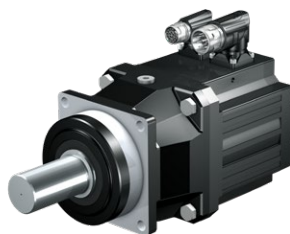


## Synchronous Servo Geared Motors



### PH/PHQ(A) Planetary Geared Motor

PH/PHQ acceleration torque: 24 – 26000 Nm  
PHA/PHQA acceleration torque: 24 – 10000 Nm  
PH/PHQ backlash: 3 – 4 arcmin  
PHA/PHQA backlash: 1 – 2 arcmin  
**The ultimate – quattro - servodrive**



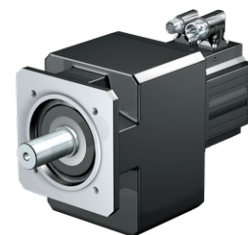
### P/PA Planetary Geared Motor

P acceleration torque: 11 – 3000 Nm  
PA acceleration torque: 15 – 1600 Nm  
P backlash: ≤ 3 – 8 arcmin  
PA backlash: ≤ 1 – 3 arcmin  
**Precision for positioning and constant speed**



### PE Planetary Geared Motor

Acceleration torque: 11 – 310 Nm  
Backlash: ≤ 8 – 10 arcmin  
**Standard helical geared motor**



### C Helical Geared Motor

Acceleration torque: 8.3 – 6500 Nm  
Backlash: ≤ 10 – 20 arcmin  
**Compact helical geared motor**



### PH(Q)K/PHKX

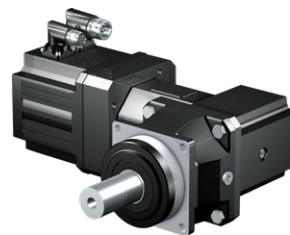
#### Right-Angle Planetary Geared Motor

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



### KS Right-Angle Servo Geared Motor

Acceleration torque: 27 – 400 Nm  
Backlash: ≤ 4 – 6 arcmin  
**The drive type for high demands**



### PK/PKX Right-Angle Planetary Geared Motor

PK acceleration torque: 68 – 2700 Nm  
PKX acceleration torque: 11 – 3000 Nm  
PK backlash: ≤ 3.5 – 5 arcmin  
PKX backlash: ≤ 4 – 8.5 arcmin



### KL Helical Bevel Geared Motor

Acceleration torque: 11 – 65 Nm  
Backlash: ≤ 16 – 25 arcmin  
**Super compact drive solution for small servo drives**

# 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.

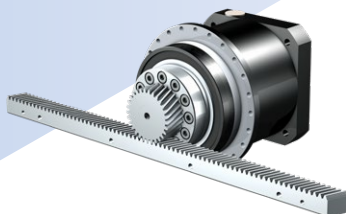


## Rack and Pinion Drives



### F Offset Helical Geared Motor

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



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

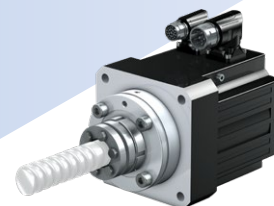
Module: 2 – 8  
Feed force: 3.8 – 67 kN  
Feed velocity: up to 4.7 m/s  
Straight and helical gearing



### ZV-KS Rack and Pinion Drive

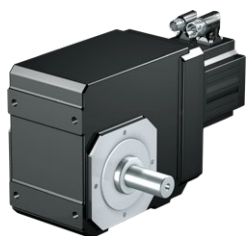
Module: 2 – 4  
Feed force: 3.2 – 12 kN  
Feed velocity: 0.07 – 3 m/s  
Compact, no offset

## Motors



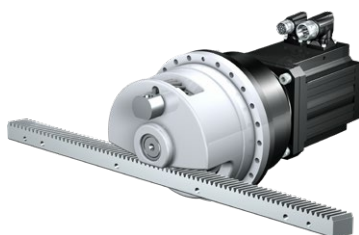
### EZS Synchronous Servo Motor for Screw Drives

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



### K Helical Bevel Geared Motor

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



### 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



### ZV-P(A) Rack and Pinion Drive

Module: 2 - 4  
Feed force: 1.7 – 16 kN,  
Feed velocity: 0.14 – 4.9 m/s  
Precision for typical servo applications



### 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  $\pm 1\%$ , up to 96 %, Positioning accuracy  $\pm 1^\circ$ , Stall torque: 2.48 – 29.9 Nm

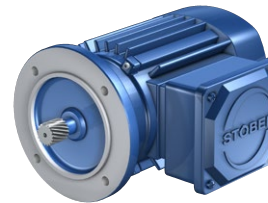
**Precise and compact, robust and strong**



### EZ Synchronous Servo Motor

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

**Extremely compact**



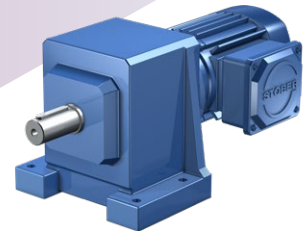
### IE2/IE3 Asynchronous Motor

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**

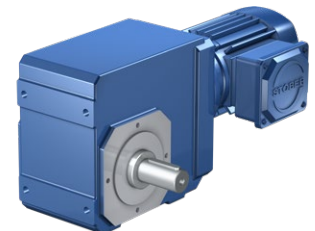


### EZHD Synchronous Servo Motor with Hollow Shaft

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

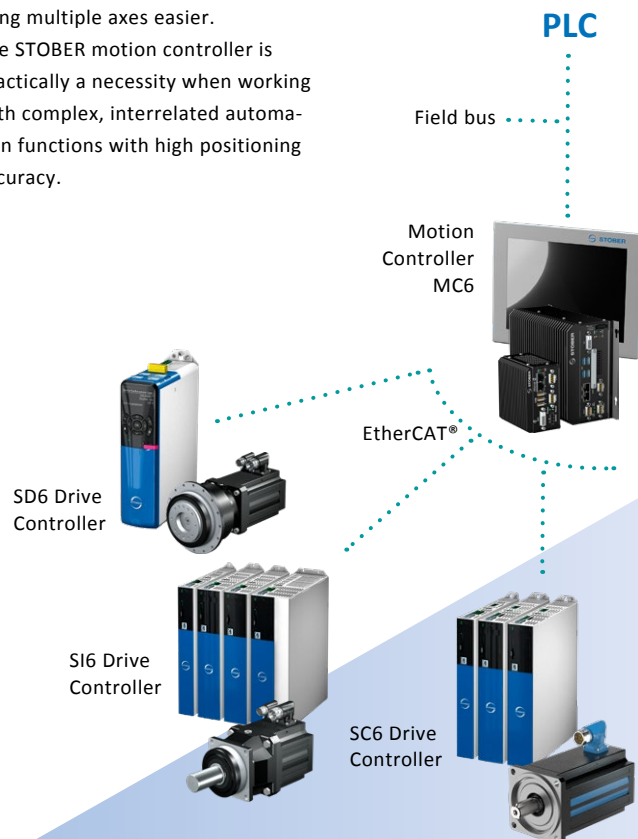
The STOBER MC6 Motion Controller enables convenient, efficient engineering in the design of drive technology. It results in lean, economical complete solutions.

### 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](http://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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