Technology for Drive Systems and Automation

Components
and application
solutions

STÖBER

Optimized drive technology for automation, processes and machines

STÖBER

STÖBER control

STÖBER power electronics

NEW

SMS PE Planetary Geared Motor
Acceleration torque: 13 – 305 Nm
Backlash: ≤ 8 – 13 arcmin
Standard helical geared motor

The wide range of STÖBER hardware makes it possible to configure the right actuator technology consistently for every specification.
So costs can be optimized without having to accept technical risks.

All SMS synchronous servo motors with solid shaft can be supplied with a pinion output as an option. An adjustable mounting plate or mounting bracket ensures that the necessary mounting precision is maintained.

Motion Controller MC6
Processor: 1.6 GHz Intel® Atom™ (Z530 series)
Frontside Bus 533 MHz
L2 cache 512 kB
With CODESYS SoftMotion
or CODESYS SoftMotion CNC

SD6 Drive Controller
Designed for Controller Based Mode (CBM)
Rated current 3 to 20 A
DriveControlSuite commissioning software

POSIDYN® SDS 5000 servo inverter
Fully digital, for SMS synchronous servo geared motors
Rated current 1.5 to 60 A
POSITool commissioning software

POSIDRIVE® FDS 5000 frequency inverter
MGS asynchronous geared motors
Motor power 0.37 to 7.5 kW
POSITool commissioning software

SMS Synchronous servo geared motors

SMS P/PA Planetary Geared Motor
Acceleration torque P(A): 25 – 1 600 Nm
Backlash P: ≤ 3 – 5 arcmin
Backlash PA: ≤ 1 – 3 arcmin
Precision for positioning and synchronisation

SMS PH(A) Planetary Geared Motor
Acceleration torque PH(A): 41 – 2 000 Nm
Backlash PH: ≤ 3 – 4 arcmin
Backlash PHA: ≤ 1 – 2 arcmin
Designed for high-performance servo drives

SMS PHQ(A) Planetary Geared Motor
Acceleration torque PHQ(A): 409 – 6 000 Nm
Backlash PHQ: ≤ 3 arcmin
Backlash PHQA: ≤ 1 arcmin
The ultimate servo quattro drive

SMS KL Helical Bevel Geared Motor
Acceleration torque: 33 – 60 Nm
Backlash: ≤ 16 – 20 arcmin
Super compact drive solution for small servo drives

SMS F Offset Helical Geared Motor
Acceleration torque: 36 – 1 100 Nm
Backlash: Reduziert ≤ 5 – 8 arcmin
Servo axis with parallel shaft offset

SMS S Helical Worm Geared Motor
Acceleration torque: 47 – 960 Nm
Compact and cost efficient

SMS PK/PKX
Right-Angle Planetary Geared Motor
Acceleration torque PK: 96 – 2 700 Nm
Acceleration torque PKX: 22 – 3 000 Nm
Backlash PK: ≤ 3.5 – 5 arcmin
Backlash PKX: ≤ 4 – 8.5 arcmin
Large ratio range

SMS PH(Q)K/PHKX
Right-Angle Planetary Geared Motor
Acceleration torque PH(Q)K: 127 – 22 000 Nm
Acceleration torque PHKX: 7 500 Nm
Backlash PH(Q)K: ≤ 3.5 – 4 arcmin
Backlash PHKX: ≤ 3 – 6 arcmin
Lots of variations with low backlash

SMS Right-Angle Servo Geared Motor
Acceleration torque: 48 – 400 Nm
Backlash: ≤ 4 – 6 arcmin
The drive type for high demands

SMS PY Planetary Geared Motor with Hollow Shaft
Acceleration torque: 47 – 500 Nm
Backlash: ≤ 3 – 4 arcmin
Super compact, maximum power density

SMS C Helical Geared Motor
Acceleration torque: 16 – 4 140 Nm
Backlash: ≤ 10 – 20 arcmin
Different housing options

SMS K Helical Bevel Geared Motor
Acceleration torque: 33 – 6 875 Nm
Backlash: reduced class I ≤ 1.5 – 6 arcmin
Versatile with flanged, solid or hollow shaft

Linear Drives

ZTR-PH(A), PHV(A) Rack and Pinion Drive
Module 2 – 8
Feed force: 5.5 – 56 kN
Feed velocity: to 4.7 m/s
Helical and spur gearing

EZS Synchronous Servo Motor
Rotating threaded screw drive
Motor shaft as blind hole hollow shaft
Feed force at standstill: 923 – 26 138 N
Designed for high thrust forces

ZTRS-PH(A) PHV(A), PHQ(A)
HighForce Rack and Pinion Drive
Module: 2 – 10, Feed force: 16 – 124 kN
Feed velocity: to 4.7 m/s
Helical and spur gearing

EZM Synchronous Servo Motor
Screw nut driven by flanged hollow shaft
Feed force at standstill: 923 – 26 138 N
For any threaded screw length

Motors

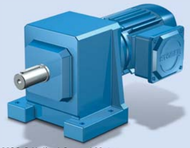
EZ/EZF Synchronous Servo Motor
Super compact, with maximum power density
Stall torque EZ: 0.95 – 66.1 Nm
Stall torque EZF: 4.30 – 27.6 Nm
Super compact, also with hollow shaft

MGS IE2 Asynchronous Motor
14 selection parameters (standard)
Motor power: 0.75 – 45 kW
Optional: brake, forced cooling fan, incremental encoder or multiturn absolute encoder

ED Synchronous Servo Motor
Slim design, high torque
6 sizes: ED 202 – ED 808
Stall torque: 0.48 – 86.4 Nm
Optimized for applications with high dynamics

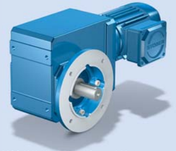
EK Synchronous Servo Motor
Compact design, high power density
3 sizes: EK 501 – EK 803
Stall torque: 3.36 – 35 Nm
Excellent runout at low speeds

MGS Asynchronous Geared Motors

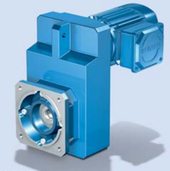


MGS C Helical Geared Motor
Motor power: 0.12 – 45 kW
Backlash: ≤ 10 – 20 arcmin
Versatile, with different housing options

MGS S Helical Worm Geared Motor
Motor power: 0.12 – 5.5 kW
Compact and cost efficient for standard tasks



MGS K Helical Bevel Geared Motor
Motor power: 0.12 – 45 kW
Backlash: ≤ 10 – 12 arcmin
Highly rigid geared motor



MGS F Offset Helical Geared Motor
Motor power: 0.12 – 9.2 kW
Backlash: ≤ 10 – 11 arcmin
Particularly suitable as travel drive

STÖBER industrial automation for complete motion control solution

The fusion of drive control and drive engineering systems

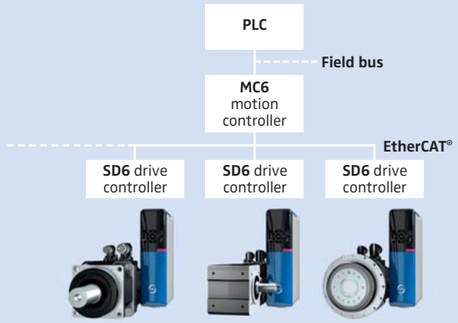
With the development of the new MC6 motion controller and its integration in the STÖBER product portfolio user friendly engineering solutions can be offered for drive engineering systems from a single source.

At STÖBER software-aided automation know-how is combined with the expertise in selecting the best solution for each individual axis.

Motion control makes some things easier and many things possible

The centralization of all the control engineering drive functions in one program makes programming of several axes easier in many cases.

For complex interlocking automation functions with high positioning or setting accuracy requirements the use of one or more motion controllers is a necessary pre-condition (embedded systems).



NEW MC6 Motion Controller with CODESYS programming system

The new control system for highly dynamic precision axes

The super compact, powerful motion controller is optimized for operation with the CODESYS V3 programming system.

Programming of the application is carried out on a PC (CODESYS programming level).

The technical features are impressive: With the efficient convection cooling, a fan is not required. A solid state drive (SSD) is used as the storage medium. With this hardware rotating parts could be completely eliminated.

HMI panels from other manufacturers can also be connected.

Computing power:
Up to 10 axes
with complex robotic functions
(path control)

Up to 100 axes
for cyclic cams and automatic functions to a certain extent

Touch screen panel design

For applications with a parameterization requirement, the panel version is particularly suitable as a visual sensitive interface and represents a contemporary form of user-friendly interaction.

This user interface offers

- Large selection of ready-made visualization elements
- Generation of graphical user screens in the IEC 61131-3 tool with integrated visualization editor
- Reuse of complete graphical user screens as an individual visualization element
- Portraying of complex visualization elements through interface for parameter transfer

CODESYS

MC6 motion controller
cabinet PC version
(DIN rail mounting)

MC6 motion controller
touch screen panel version

NEW SD6 drive controller for motion control applications

32-bit Dual-Core control performance for maximum motion precision and smoothness

The processor of the SD6 drive controller processes the EnDat® 2.2 encoder data with maximum accuracy. It allows about 33 million positions per revolution to be determined.

Position, speed and torque control of the servo axes are calculated at a cycle time of 62.5 µs (16 kHz).

The new drive controller allows extremely high dynamics and precision of the servo axes due to very short settling times for fast reference value and load changes.

Modular flexibility and options

The SD6 drive controller stands out for its proven board architecture and its universal options.

So every single system axis in the configuration can have the best design.

A control for a 24 V holding brake is integrated (< = 2.5 A)

A non-wearing, fully electronic interface is provided as standard for the *Safe Torque Off* (STO) safety function (response time < 10 ms). The safety relevant functions were developed jointly with Pilz GmbH & Co. KG.

pilz
the spirit of safety

Safety board connector

Central commissioning of a CODESYS multiaxis application

STÖBER multiaxis operation

NEW Components for rack and pinion drives and screw drives

Rack and pinion drives for tooling machines, robotics and automation

Linear drives with gear racks are used in many different applications.

The permissible linear backlash of the rack and pinion system is basically determined by the factors gear unit backlash, diameter of the output pinion and the design and quality class of the gear rack.

Depending on the shaft design and the backlash of the suitable gear unit STÖBER offers pinion systems for flanged shaft mounting and another version for solid shaft gear units.

For fine-tuned accurate installation of the pinion adjustable system mounting plates are used.

Pinion for solid shaft

Mounting plate

ZTRS-PH(A), PHV(A), PHQ(A)
HighForce Rack and Pinion Drive
Other versions: ZTR-PH(A), PHV(A) and ZR
(pinion attached to flanged shaft)

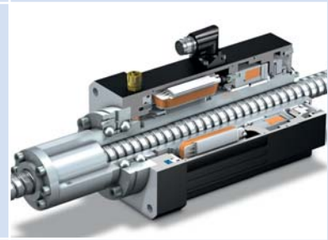
Synchronous servo motors for superior screw drives

The ultra-compact synchronous servo motors for screw drives are designed for universal mounting to screws from many different manufacturers.

The EZS version comes with a clamping set for fixing the threaded screw. The motor shaft is in the form of a blind hole hollow shaft. A clamping set connects the threaded screw and the motor shaft.

EZS Synchronous Servo Motor

The EZM synchronous servo motor is suitable for direct drive of the screw nut. With its generously sized flanged hollow shaft taking up the screw this synchronous servo motor can be used for screw of any length.



EZM Synchronous Servo Motor
Driven screw nut

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For a global telephone presence 24/7 and out of hours emergencies, expert STÖBER technology advisers are available to offer help and advice to customers and users at any time.

STÖBER service network
Support and service for worldwide installations are guaranteed by the STÖBER INTERNATIONAL SERVICE NETWORK.
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