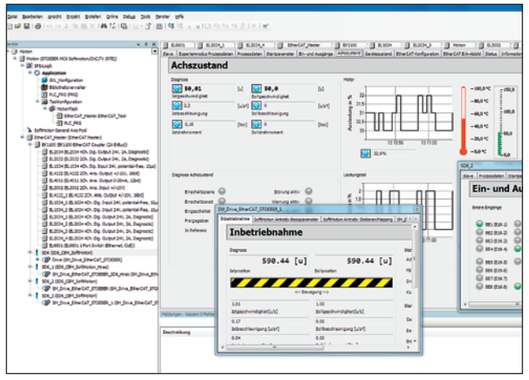
STOBER Motion Control for precise multi-axis operation

The complete controller-based drive technology for automation

STÖBER

AS6 AutomationControlSuite
The multi-axis engineering tool



Universal automation technology for the highest level of efficiency

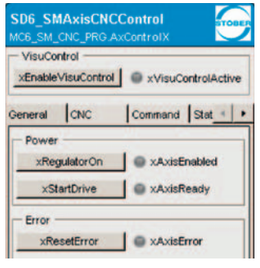
AS6 is the modern engineering tool that the versatile STOBER drive solutions conveniently provide in a single development environment.

AS6 is based on the CODESYS V3 programming and project planning software and supplements its scope of functions with typical STOBER tools as well as the current version of the Drive & Motion library.

AS6 increases the machine performance by approx. 25% when compared with comparable PLC solutions – using powerful technology blocks such as dynamic cam disks, dynamic CNC code interpreters and a variety of transformed axis geometries.

AS6 significantly reduces engineering costs – as a result of multi-function axis blocks with an integrated quick start-up function and direct axis optimization.

AS6 combines the individual drive components into a powerful drive system – AS6 creates synergies and therefore achieves a maximum hardware performance.



CNC and PLCopen® axis control with only one module.

MC6 motion controller
cabinet PC version

The control system for highly dynamic precision axes

The super compact and powerful MC6 motion controller is optimized for operation with the AS6 AutomationControlSuite programming system – a software based on CODESYS V3.
The technical features are impressive: With the efficient convection cooling, a fan is not required.
A quick exchangeable CFast card with extremely fast read and write speeds is used as a storage medium. There is therefore absolutely no need for rotating elements.

No data loss for failure of the 24 vdc power supply.

HMI solutions from third party manufacturers can always be connected. The motion controller is available as a control cabinet PC with an option for easy top-hat rail assembly.

Communication interfaces

MC6 is fitted with connections for communication via EtherCAT® or CANopen® and has USB and RS-232 interfaces for the connection of external bus systems.

Computing power

Due to the scalable performance in the system, the MC6 can cover everything from simple machines with small visualization to machines with complex transformations and CNC interpolation.

Production machines with up to 100 synchronous axes can be realized. The power can be distributed between the visualization, PLC and motion control as desired.

Due to the Dual Core processor, a processing load distribution that is optimized for the runtime is ensured.

MC6 motion controller
as touch panel PC with visualization

MC6 motion controller with touch panel PC for installation in an enclosure

The controller can ideally be used in the touch panel PC design as a master controller as well as the motion controller.

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.

User interface (touch screen HMI)

The touch screen HMI offers a large selection of ready-made visualization elements.

Complete operating masks can be reused as individual visualization elements.

Complex visualization elements can be instantiated by an interface for the parameter transfers.

The multi-lingual visualization is achieved with the integrated editor for text lists.

Access via a web frontend (e.g. mobile phone or browser) to the visualization of the machine is possible.

Naturally this function can be switched off or can occur with verification.

SD6
drive controller

Special for motion control solutions

The SD6 drive controller is equipped with a 32 bit Dual Core processor for all requirements of the movement precision.

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

This allows extremely high dynamics and precision of the drives due to very short settling times for fast reference value changes and step changes in load.

The speed feedback via EnDat® 2.2 encoder allows about 33 million motor positions per revolution to be determined.

The SD6 drive controller operating modes

Interpolated position mode (CANopen®) – the drive follows in position control.

Cyclic synchronous position mode (EtherCAT®) – the drive follows in position control.

Cyclic synchronous velocity mode (EtherCAT®) – the drive follows in speed control.

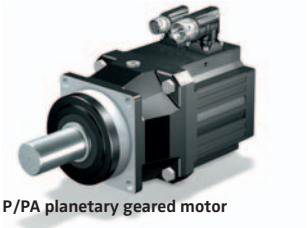
Cyclic synchronous torque mode (EtherCAT®) – the drive follows in torque control.

Jogging/STOBER specific mode – control-independent travel of the drive – e.g. for set up functions and emergency mode.

Homing mode – control-independent referencing by the drive – automatic calculation of the travel profiles.

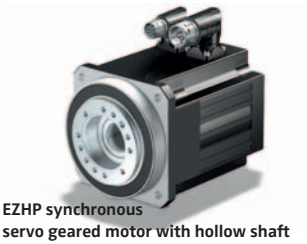
Synchronous servo geared motors for every need

PE planetary geared motor



P/PA planetary geared motor

PH(A) planetary geared motor



EZHP synchronous
servo geared motor with hollow shaft

KL helical bevel geared motor

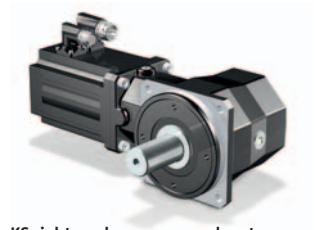
The fusion of drive control and drive engineering systems generates high optimization potential

With their wide selection of right angle and coaxial geared motors, synchronous servo geared motors offer the best choice for application-optimized servo axes.

With the directly attached synchronous servo motors, the synchronous servo geared motors form a torsion-resistant and compact drive unit.

A superlative drive was achieved with the EZHP synchronous servo geared motor with hollow shaft.

As the last link in the chain of controller-based multi-axis operation, the qualified design of each individual servo axis is of crucial importance for functionality and efficiency.



KS right angle servo geared motor

Controller-based applications

Motion control makes most things easier and many things possible

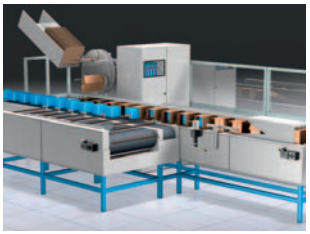
The centralization of all the control engineering drive functions in one program operation makes programming of several axes easier.

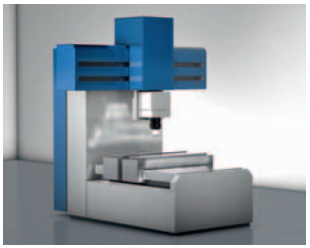
For complex tasks that require high positioning and adjustment accuracy, the motion controller is used as a standard solution.

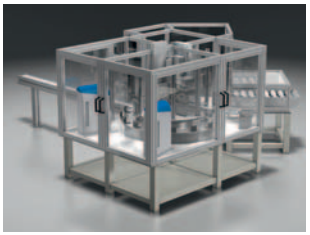
In addition the motion control architecture eases commissioning and supports service if faults occur.

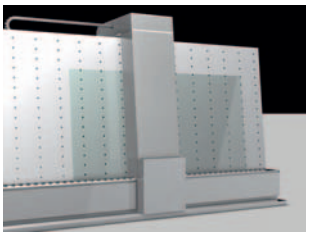
Application examples for controller-based drive technology:

- Travel
- Conveyor
- Synchronized
- Hoist
- Coordinated
- Positioning
- Machine tool
- Winder









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STOBER Service System
The STOBER service system includes 38 competent partners in Germany. As well as commissioning and quick problem solving, they also take care of technology consulting in specific situations.

STOBER service hotline
+49 7231 582-3000

STOBER service specialists can be reached 24/7 and can support you with expertise and assistance if service is required on-site or guide you through appropriate immediate measures on the telephone.

In addition STOBER offers maintenance by remote access for its drive controllers.

STOBER service network
Worldwide support and service for applications are guaranteed by the STOBER INTERNATIONAL SERVICE NETWORK.
More than 80 efficient service partners in 39 countries work in close communication with STOBER.

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