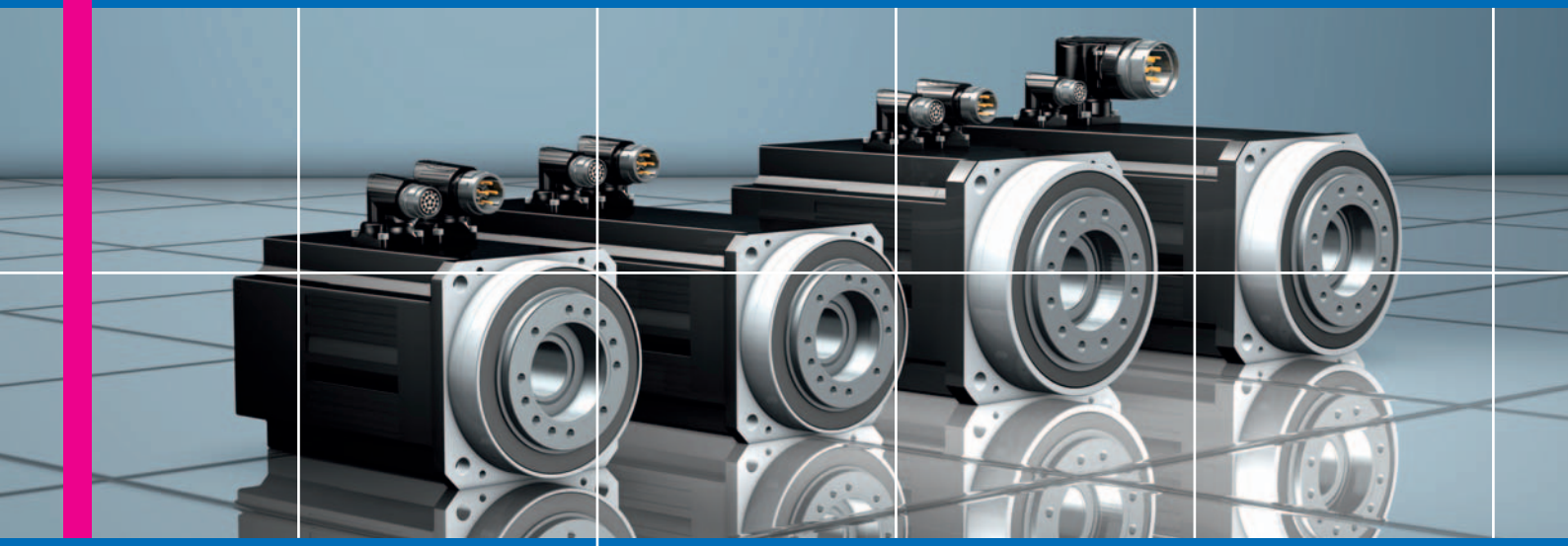
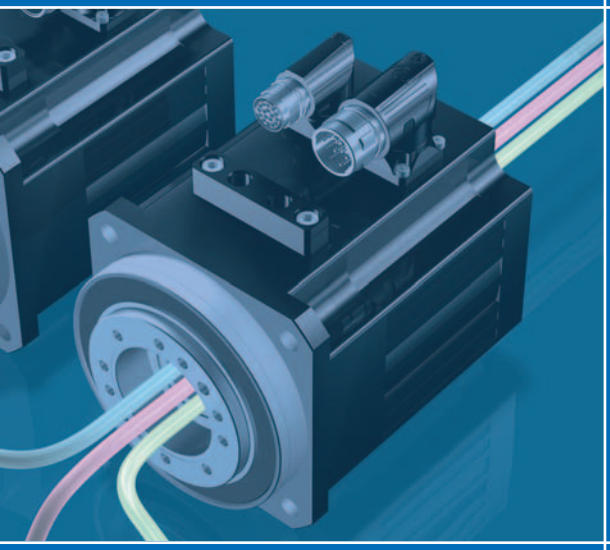
EZHP Synchronous Servo Geared Motors with Hollow Shaft



Super compact synchronous servo geared motors with flange hollow shaft for feeding through media and energy



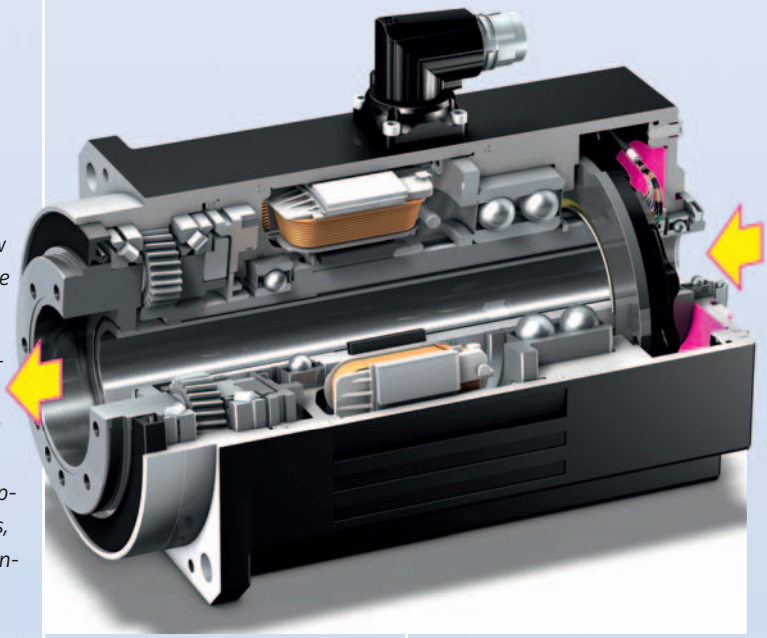
STÖBER

Maximum power density

Servo drive with hollow bore

The generously designed flange hollow shaft for this high-class servo drive makes it possible to provide central supplies (power cables, pipes, hoses), mechanics (drive shafts) and sensors (laser light). To protect these components and media the flange hollow shaft is clad with a continuous pipe rotating with the system.

The advantages of the direct conveyance of media through the motor lie in the significant saving of space and thus the simplified system design. Typical areas of application include industry robotics, processing and tool machines, handling devices and presses.



Synchronous servo geared motor with flange hollow shaft and high-resolution inductive absolute encoder EnDat® 2.2 as a digital feedback system.

The super compact synchronous servo geared motor with hollow shaft

The designers from STOBER developed a highly modern drive with an extremely short length.

A prerequisite for the short design of the motors of this series is the industrial implementation of a tooth winding using orthocyclic linear winding technology. Stator windings with the highest possible copper fill factor can be manufactured and as a result the motor power increases by approx. 80 %. For this reason it is possible to shorten the length of the motor by almost half without reducing the power output.

The excellent behavior of the synchronous servo geared motors is the result of the perfect design, powerful torque, high dynamics and precise constant speed running.

Powerful torque, high stiffness, low total weight

Motor and gear unit are optimized for maximum torque. Even higher continuous and nominal torques can be achieved with optional liquid cooling.

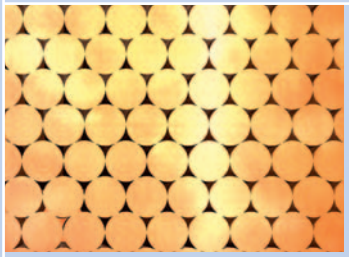
A further plus: the extremely compact structure of the servo drives produces a very high torsional stiffness.

Due to the weight-saving design, this planetary geared motor is particularly suitable for applications in which the drive is also moved.

Planetary gear unit with flange hollow shaft

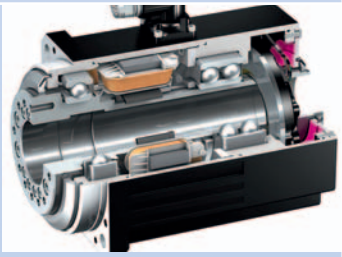
In the same way as the very compactly dimensioned hollow shaft motor, STOBER also designed a short hollow shaft planetary gear unit with high quality bearing technology.

This gear unit can be of a one, two or three-stage design. In all versions it provides a stable output bearing with very high tilting stiffness and a high permissible tilting moment.



Enlarged image of an orthocyclically wound motor coil.

This high quality precision winding technology is used by STOBER for the series production of the EZ and EZHD synchronous servo motors and EZHP synchronous servo geared motors.



Also available as EZHD synchronous servo motor with directly driven flange hollow shaft.

Integrated system technology – from the start

Designed and developed from the know-how of the experienced system manufacturer

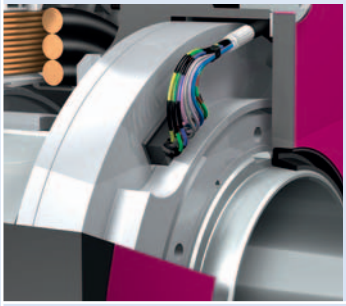
The design and manufacture of this innovate geared motor is based on decades of application experience, paired with mechatronic production know-how and the willingness to tread new paths in drive technology.

Product line:

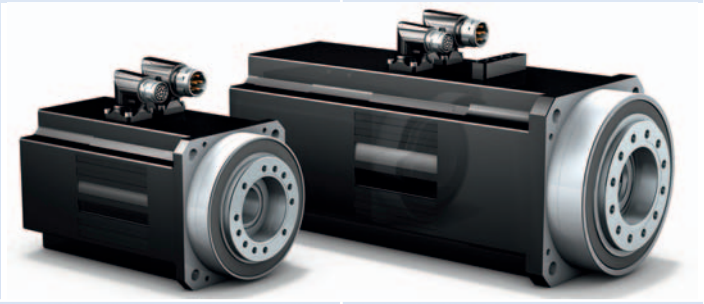
The synchronous servo geared motor is available in sizes 5 and 7.

The hollow bore gear unit can be 1, 2 or 3-stage with the ratios 3, 9 and 27.

The hollow shaft motors are available in different lengths (1 - 3 and 5). These specifications refer to the number of rotor segments used with graduations each of a length of 25 mm.

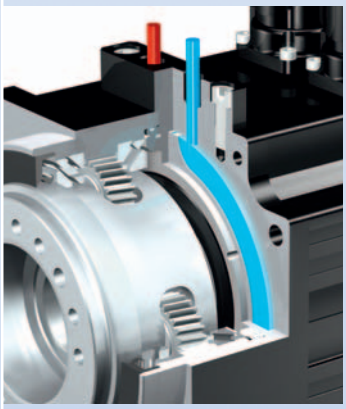


A single-turn absolute encoder with EnDat® protocol is used as the feedback system. Other encoders are available as an option.



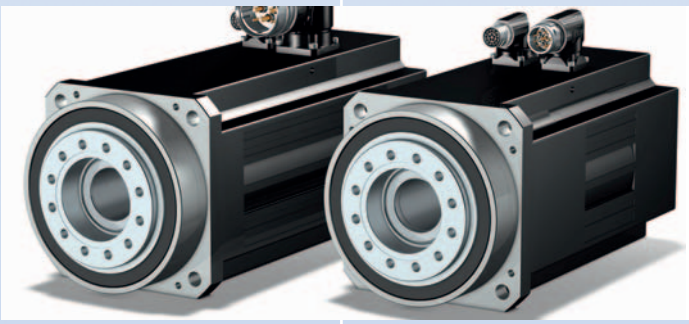
Synchronous servo geared motor in size 5 (1-stage), convection-cooled.

Synchronous servo geared motor in size 7 (3-stage), with adapter for liquid cooling and holding brake.



**As an option the flange between the motor and gear unit can be designed as a liquid cooling feature.
The section shows the cooling channel.**

The heat dissipated can be utilized elsewhere to increase energy efficiency.



The torque and output speed of the geared motor can be optimized by selecting from four motor lengths and three gearbox stages.

The compact design achieves the highest possible power density.

**In the figure on the left:
Synchronous servo geared motor in size 7 (1-stage), with high torque and low ratio.**

**In the figure on the right:
Synchronous servo geared motor in size 7 (3-stage).**

EZHP synchronous servo geared motor

Size		5								7							
Type		EZHP_511			EZHP_512		EZHP_513		EZHP_515	EZHP_711			EZHP_712		EZHP_713		EZHP_715
Length without brake	[mm]	165	189	213	190	214	215	239	265	186	213	241	211	238	236	263	291
Ratio i (1 to 3-stage)	[-]	3	9	27	3	9	3	9	3	3	9	27	3	9	3	9	3
Backlash	[arcmin]	3	4	4	3	4	3	4	3	3	4	4	3	4	3	4	3
Motor speed max.	[1/min]	2000	2700	3500	2000	2700	2000	2700	2000	1600	2000	3000	1600	2000	1600	2000	1600
Acceleration torque	[Nm]	47	140	200	90	200	130	200	190	58	170	500	120	350	190	500	300
Inside-Ø hollow bore	[mm]	28								38							
Weight	[kg]	8	9.6	11	9.2	11	11	13	15	14	17	20	17	20	20	23	26

Performance data at rated speed 3000 min^{-1}

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The consistent solution

As a system manufacturer, STOBER has an extensive product portfolio for digital drive technology.
By fusing control and drive engineering systems, STOBER can offer great potential for optimization.

① MC6 motion controller

The MC6 motion controller uses the AS6 AutomationControlSuite development environment to serve the trend for open systems in the automation world.

② SD6 drive controller

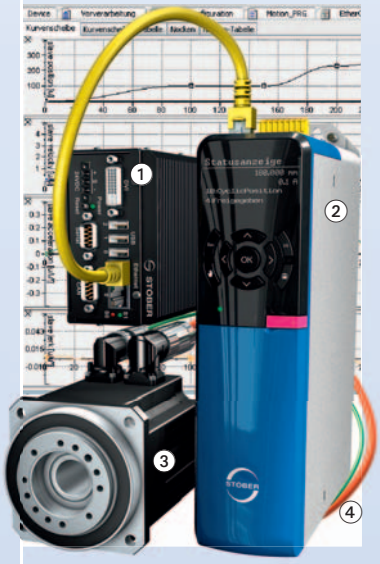
The SD6 offers maximum precision and productivity for automation technology and machine manufacturing despite ever more complex functions. It features a large power range, very good control performance and high ease of service.

③ EZHP synchronous servo geared motor with hollow shaft

Ultra-compact, weight-saving design. The high-class servo drive with a large continuous flanged hollow shaft is well suited for supply line feedthrough.

④ Connection cable

STOBER provides a specially preassembled power and encoder cable for quick, correct assembly.



Service

The STOBER service system includes 38 skilled partners in Germany and more than 80 organizations worldwide in the STOBER SERVICE NETWORK.

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.

24/7 service hotline
+49 180 5 786323

(14 cents/min. on German landline, max. 42 cents/min. on mobile networks)

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