



STÖBER

Product Release Brief

Introducing Synchronous Servomotor EZ2

TPM Guenter Grossmann

2022



STÖBER

Contents list

Purpose..... 2

EZ2 3

Type Designation 4

Shaft..... 5

Brake 5

Motor feedback..... 6

Receptacle 7

Motor Connection Plan 8

Cable 8

Physical Dimensions..... 8

Protection Rating..... 8

Gearboxes..... 8

Drive Controllers..... 9

Torque Speed Diagramm..... 9

Project Configuration / Sizing 10

Cooling..... 10

Drawings..... 10

Catalogue..... 11

SAP 11

Online configurator..... 11

Price 11

Benefits..... 12

Purpose

- This packet is intended for the STÖBER sales team
- It is a launch guide to the synchronous servomotor EZ2. In it you will find all resources and links to support sales
- **This product is available from May 9, 2022. From this date, quotes can be created and orders will be accepted.**
- This document contains information valid at the time of product launch. Changes during the product lifetime are not updated in this document.

EZ2

STÖBER will offer a new motor size within the synchronous servomotor series EZ. There are two stack lengths: EZ202 and EZ203. The KEM is 40 and the motor is rated for speed 6,000 rpm. The design is capable to work with STÖBER drive controller as well as 3rd party drive controllers. The introduction of the EZ2... is accompanied by a phase out of the ED2... . The goal is, on the one hand, to achieve the fastest possible changeover from ED2... to EZ2... for existing customers as quickly as possible and, on the other hand, to tap new potential.

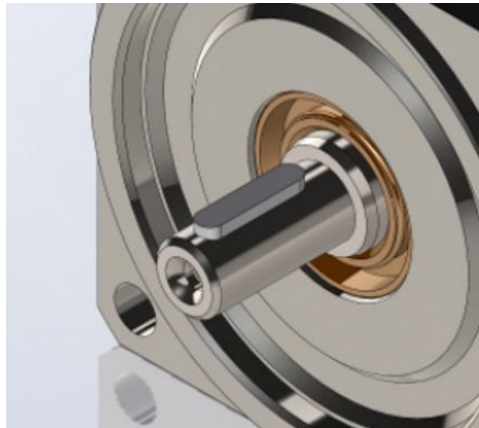
Type Designation

The basic structure of the nomenclature of STOBER motors remains the same.

1	2	3	4	5	6	7	8	9	10		
E	Z	2	0	2	U	D	BB	Q7	O	40	
E	Z										Synchronous servo motor
		2									size 2
			0								generation number
				2							number of rotor segments (in this case 2 segment)
					U						non-ventilated
						D					dynamic
							BB				drive controller code (in this case SI6)
								Q7			encoder code (in this case EnDat EQI1131)
									O P		Brake without brake permanent magnet holding brake
										40	K _{EM} Voltage constant at 1000rpm
											K _{EM} Spannungskonstante bei 1000 Upm

Shaft

Shaft available with and without key.



Shaft is designed for pinion code RC 2. Consequently, only geared motor combinations based on this pinion code are realizable.

Brake

The EZ2... motor use 24VDC permanent magnet holding.
Brake torques depending on motor size / motor torque.

Motor	MB _{stat} [Nm]	MB _{dyn} [Nm]
EZ202	1,2	1,0
EZ203	1,2	1,0

Motor feedback

All Heidenhain encoders of the EZ motors are available.

Inductive encoders: Single turn and multi turn, EndDat 2.1, EnDat 2.2 und EnDat 3.

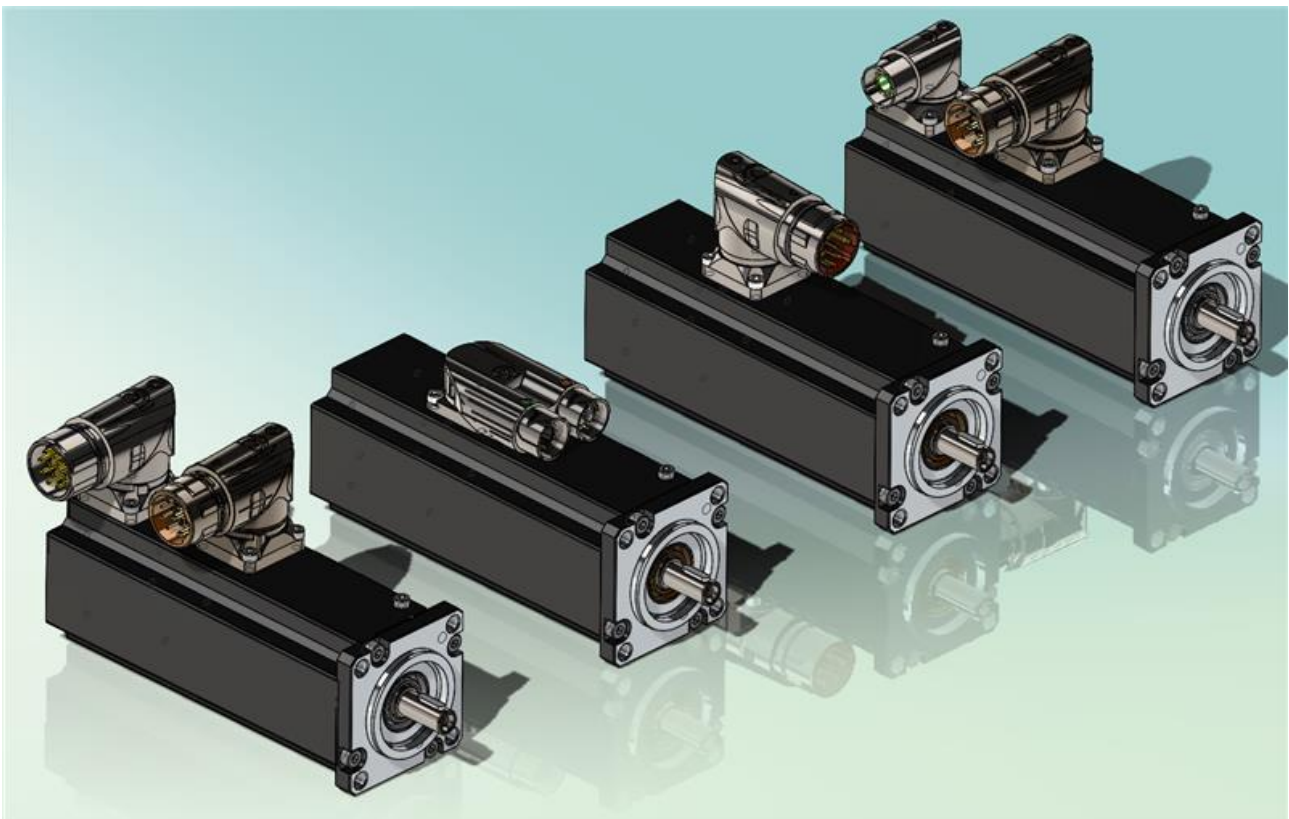
Optical encoders: Single turn and multi turn, EndDat 2.1 und EnDat 2.2

Resolver

Sick Stegmann encoders with Hiperface or Hiperface DSL protocol are not part of this product release.

Receptacle

The proven industry standard of speed connectors and self-locking connectors from TE Connectivity are used. These connectors are also already used in the existing motor program. Depending on the selection of the encoder and the drive controller, different connector types and connector sizes are provided.



Motor Connection Plan

The already existing motor connection diagrams for the respective drive controllers and encoders are updated.

Cable

Cable selection in the SAP configurator as well as in the online configurator is identical in procedure to the existing EZ motors.

Physical Dimensions

As indicated in the catalog.

Protection Rating

IP56 standard, IP66 as an option.

Gearboxes

The gear motor combinations are essentially the same as in the ED motor series for the ED2.... Anyway a few gearmotor combinations cannot be realized. Reasons are the motor nominal speed of 6,000 rpm and that an insertion pinion is only available for pinion code RC 2.

The possible combinations are listed in the performance overviews of the catalog.

Drive Controllers

The EZ2... can be operated with the actual STÖBER drive controllers as well as 3rd party drive controllers (Beckhoff, B+R, Bosch, Kollmorgen, Siemens).

Torque Speed Diagramm

As indicated in the catalog.

The EZ2... motors are a derivative of the ED2... motors.

Torque discrepancies between the ED2... motors and the EZ2... motors were found during the standard

qualification tests for new products. Verification of the discrepancy revealed that the EZ motors do not have less torque than the ED motors! The ED motors were and are too well rated! Torques determined with the current measuring system show that both ED2... as well as EZ2... have the same torque values. The absolute values of EZ202 are 10%, those of EZ2022 are 5% below the values, which were determined for ED2... motors in the year 2002.

During the changeover from ED2... to EZ2... in existing applications, there is no difference in thermal behavior to consider.

Project Configuration / Sizing

Motor selection follows the same rules as for the other EZ motor sizes.

Servosoft: The basic data for motors and geared motors are calculated. The data will be available in the Servosoft database in time for the product release date. The design process will follow the same procedure as usual.

Cooling

IC 410 convection cooling. No cooling options available.

Drawings

Drawings and information on dimensions can be obtained via the online configurator, drawings@stoerber.de, and in the catalog.

Catalogue

PDF catalogs are available at the time of product release.

SAP

Quotations and orders can be processed from the release date.

Online configurator

As of the release date, products can be selected and requested via the Stober website.

Price

Gross prices listed in the table. The usual discounts can be applied.

EZ202	450	EUR
EZ203	480	EUR

Enc. Multi. induktiv EQI 1131 OCS	266	EUR
Encoder multi-turn inductive	201	EUR
Encoder multi-turn inductive FMA	364	EUR
Encoder multi-turn optical	341	EUR
Encoder multi-turn optical FMA	665	EUR
Encoder resolver	111	EUR
Encoder single-turn inductive	111	EUR
Encoder single-turn optical	302	EUR
Encoder single-turn optical FMA	626	EUR
Mating connector	135	EUR
Configuration 3p. drive controller	70	EUR
Permanent magnet brake	225	EUR
Protection class IP65	40	EUR
Protection class IP66	40	EUR
Solid shaft with key	55	EUR

Benefits

Feature	Benefit
One receptacle	Compact Size One cable solution suitable
One cable solution	50% less cables Reduction of size / cost of the cable drag chain. Weight reduction in cable drag chain leads to less power consumption and reduced cost of ownership. Less installation overhead saves time and money. Less installation error saves time and money. Saving raw material in production process of cables to protect environment. Environmentally friendly disposal due to reduced amount of raw material. Less system cost
Smaller cabinet terminals	Reducing the size of the control cabinet
Fan free operation	Low noise No unwanted air flow High protection rate
Fast commissioning	Electronic nameplate simplifies commissioning by transferring the important drive parameters to the drive controller.
Integrated in STOBER geared motor direct attachment	Great variety of gearbox solution and ratios to adapt motor power to the machine. Considering design requirements of the machine. Matching inertia for best performance. High machine output and high-quality production process.
Integrated in STOBER System Solution	Suitable for direct mounting on STOBER gearboxes and for connection to STOBER drive controllers. Exchange of motor and gearbox

	parameters via the electronic nameplate of the motor saves time and incorrect entries during commissioning.
High energy efficiency	Reduced Total Cost of Ownership. Less heat dissipation.
Low weight	Realization of new machine design ideas by replacing asynchronous motor solutions
Small dimensions	Realization of new machine design ideas
One Cable Solution	Solution with latest encoder technology EnDat 3 used in the Stober System.
Two Cable Solution	Solutions with EnDat 2.1, EnDat 2.2 and Resolver for Stober System, Stober compatible and 3rd party solutions.



STÖBER Antriebstechnik
GmbH + Co. KG
Kieselbronner Straße 12
75177 Pforzheim
Deutschland
Tel. +49 7231 582-0
mail@stoeber.de
www.stoeber.com

24h Service Hotline
+49 7231 582-3000



STÖBER