

EZS and EZM Ball Screw Motors



For high-precision
direct drive of the
spindle or spindle nut



STÖBER

The latest servo technology for ball screw drives

For spindles of your choice

The universal, super compact STÖBER servo ball screw motors are designed for universal mounting to spindles from many different manufacturers.

For individual solutions

The STÖBER EZS and EZM ball screw motors in 2 sizes (5 and 7) and 3 lengths (power stages) offer a broadly based range for standard applications.

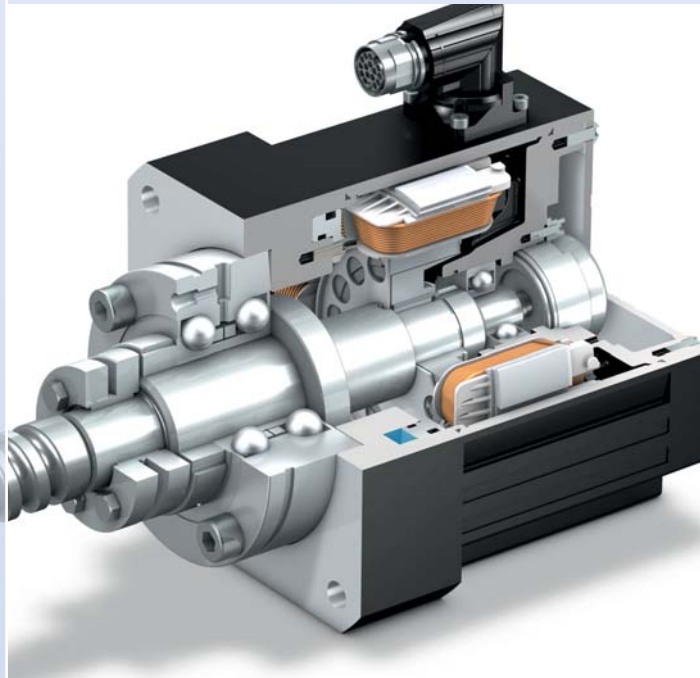
All the models are also available as brake motors.

The options are further increased by a fully integrated liquid cooling system – without changing the dimensions. Forced cooling fans are also available for the EZS ball screw motors.

Direct drive for rotating spindle shafts

The STÖBER EZS ball screw motor has been specially developed for ball screw drives with a rotating spindle shaft.

The motor shaft is in the form of a blind hole hollow shaft. The spindle rod and motor shaft can be connected with a clamping set.



STÖBER EZS 501 ball screw motor with axial angular contact ball bearings to absorb the high axial forces from the ball screw drive

High-efficiency motor engineering

The super compact STÖBER ball screw motors offer an extremely high volume output.

The basis is the industrial application of an orthocyclic tooth winding system.

This new system enables the stator teeth winding to be produced with the maximum possible copper fill factor. This is the basis of the compact, weight-saving construction.

The motor power is about 80% higher than with a conventional winding.



Microsection of an orthocyclically wound motor coil

The motor dynamics can be modified if required

This new motor design provides a balance between powerful torque, high dynamics and precise synchronism. The dynamic behaviour can be modified on the EZS 502/503 and 702/703 models if required.



From left: STÖBER ball screw motors EZS 501, EZS 701 without clamping set, EZS 703 with brake

EZS ball screw motors

Subject	Spindle pitch [mm]	EZS501	EZS502	EZS503	EZS701	EZS702	EZS703
Mountable ball screw drives		25/32			32/40		
Standstill feed force F_{V0} [N] Max. feed force $F_{Vmax} = 2 * F_{V0}$	10	2953	5027	6974	10430	18096	26138
	20	1477	2513	3487	5215	9048	13069
	25	1181	2011	2790	4172	7238	10455
	32	923	1571	2179	3259	5655	8168

Feed rate

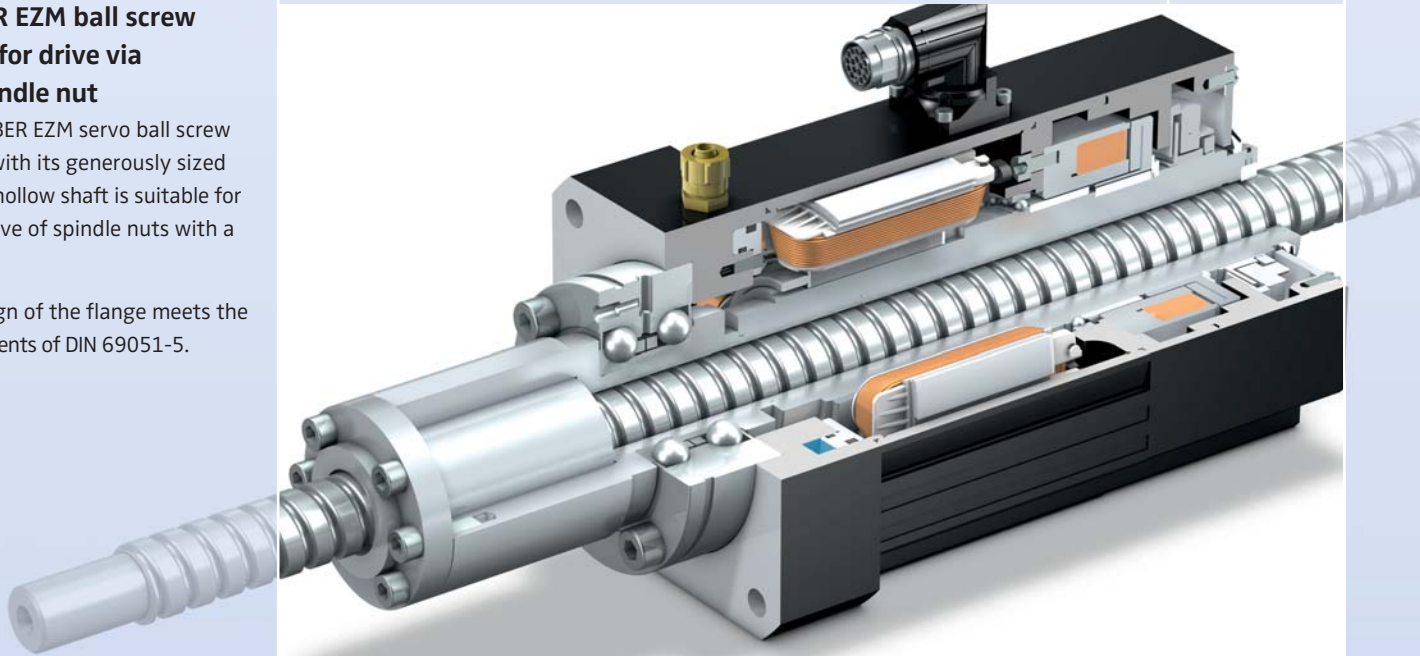
Spindle pitch [mm]	v [m/s] (max.)
10	0.5
20	1.0
25	1.25
32	1.6

For direct drive of the spindle nut

STÖBER EZM ball screw motor for drive via the spindle nut

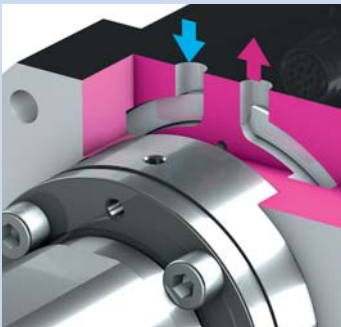
The STÖBER EZM servo ball screw motors with its generously sized flanged hollow shaft is suitable for direct drive of spindle nuts with a flange.

The design of the flange meets the requirements of DIN 69051-5.



STÖBER EZM 502 ball screw motor with liquid cooling, Brake and EnDat® single turn absolute encoder feedback system

With axial angular contact ball bearing to absorb the high axial forces from the ball screw drive. Flanged hollow shafts for different nut designs on request



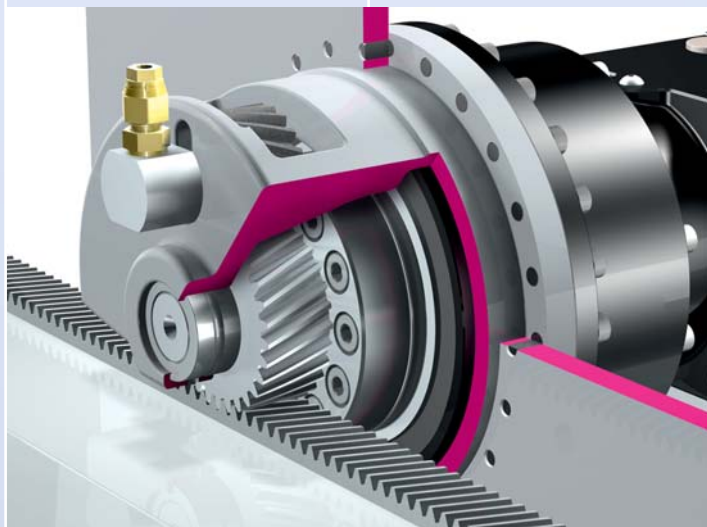
Cross-section: Liquid cooling channel



From left: STÖBER ball screw motors EZM 501, EZM 501 rear view, EZM 502 with brake, EZM 701 with brake

EZM ball screw motors

Subject	Spindle pitch [mm]	EZM501	EZM502	EZM503	EZM701	EZM702	EZM703	Feed rate	
								Spindle pitch [mm]	v [m/s] (max.)
Mountable ball screw drives		25			32			10	0.5
Centring hole diam. / bolt circle		40 / 51			56 / 71			20	1.0
Standstill feed force F_{V0} [N] Max. feed force $F_{Vmax} = 2 * F_{V0}$	10	2953	5027	6974	10430	18096	26138	25	1.25
	20	1477	2513	3487	5215	9048	13069	32	1.6
	25	1181	2011	2790	4172	7238	10455		
	32	923	1571	2179	3259	5655	8168		

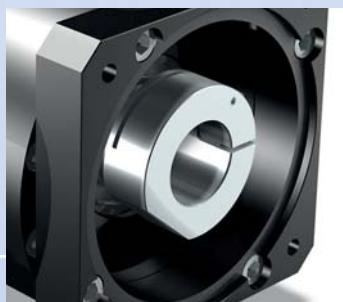


Cross-sectional view: HighForce ZTRS-PHA721 rack and pinion drive and ATLANTA rack

As a partner for machinery and equipment manufacturers, STÖBER also has precision rack and pinion drives in its range

The HighForce ZTRS-PH rack and pinion drive stands out in particular for its innovative concept with a new pinion system and tilting moment reduction through an output bearing housing.

In combination with racks from ATLANTA, a completely new, customized standard for maximum power density and precision has been created.



ME motor adapter for ZTRS-PH with balanced EasyAdapt® motor coupling for all common makes of motors

Service

The STÖBER service system comprises 38 expert partners in Germany and more than 80 companies in the STÖBER SERVICE NETWORK worldwide.

This service concept guarantees local expertise and availability when needed.

The concept is supplemented by the remote maintenance concept for the servo inverters in the POSIDYN® SDS 5000 series.

In general, the service specialists in the Pforzheim factory can be reached at any time via a 24/7 service hotline.

When necessary, a problem can be addressed immediately.

**24/7 service hotline
+49 (0)180 5 786323**

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