

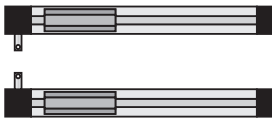
OSP-E..B Linear Drive with Toothed Belt

Size 25, 32, 50



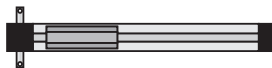
Standard Versions:

- Standard carrier with internal plain bearing guide
- Dovetail profile for mounting of accessories and the actuator itself
- Position of Drive Shafts



Options:

- Tandem-Version
- Bi-parting version for synchronized movements
- Drive shaft with double plain shaft



Forces, loads and moments

$M = F \cdot l$ [Nm]
 $M_x = M_{x \text{ statically}} + M_{x \text{ dynamically}}$
 $M_y = M_{y \text{ statically}} + M_{y \text{ dynamically}}$
 $M_z = M_{z \text{ statically}} + M_{z \text{ dynamically}}$

The distance l (l_x , l_y , l_z) for calculation of moments relates to the centre axis of the linear drive.

Combined Loads

If the linear drive is subjected to several forces, loads and moments at the same time, the maximum load is calculated with the equation shown here.
The maximum permissible loads must not be exceeded.

Performance Overview				
Characteristics	Unit	Description		
Size		OSP-E25B	OSP-E32B	OSP-E50B
Max. speed	[m/s]	2	3	5
Linear motion per revolution, drive shaft	[mm]	60	60	100
Max. rpm drive shaft	[min ⁻¹]	2 000	3 000	3 000
Max. effective action force F_A at speed	< 1 m/s:	[N]	50	150
	1- 2 m/s:	[N]	50	120
	> 2 m/s:	[N]	–	100
No-load torque	[Nm]	0.4	0.5	0.6
Max. acceleration/deceleration	[m/s ²]	10	10	10
Repeatability	[mm/m]	±0.05	±0.05	±0.05
Max. stroke length OSP-E..B	[mm]	3000	5000	5000
Max. stroke length OSP-E..B*	[mm]	2 x 1500	2 x 2500	2 x 2500

* Bi-parting version

Maximum Permissible Torque on Drive Shaft Speed / Stroke												T2
OSP-E25B				OSP-E32B				OSP-E50B				
Speed [m/s]	Torque [Nm]	Stroke [m]	Torque [Nm]	Speed. [m/s]	Torque [Nm]	Stroke [m]	Torque [Nm]	Speed. [m/s]	Torque [Nm]	Stroke [m]	Torque [Nm]	
1	0.9	1	0.9	1	2.3	1	2.3	1	10.0	1	10.0	
2	0.9	2	0.9	2	2.0	2	2.3	2	9.5	2	10.0	
		3	0.9	3	1.8	3	2.3	3	9.0	3	9.0	
						4	2.3	4	8.0	4	7.0	
						5	1.8	5	7.5	5	6.0	

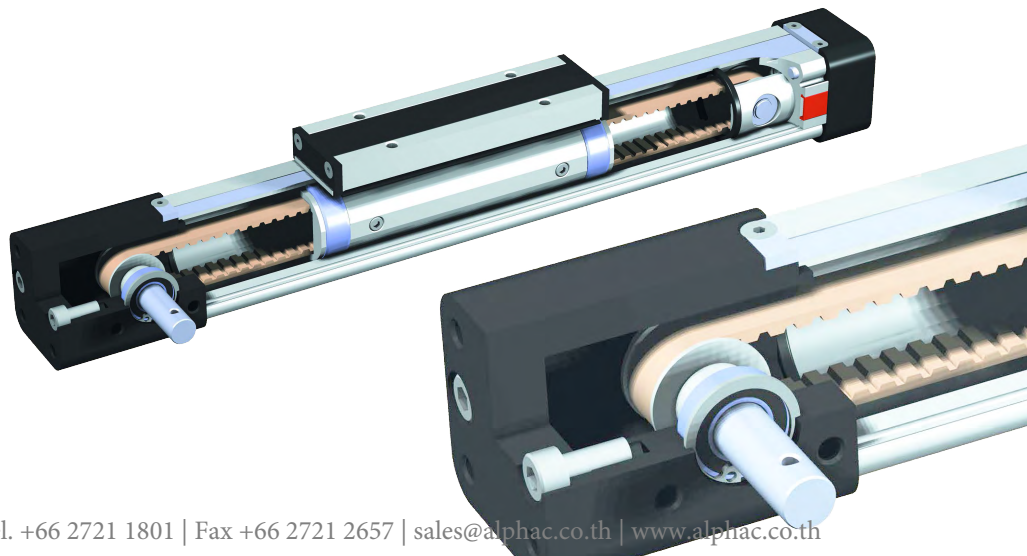
Important:

The maximum permissible moment on the drive shaft is the lowest value of the speed- or stroke-dependent moment value.

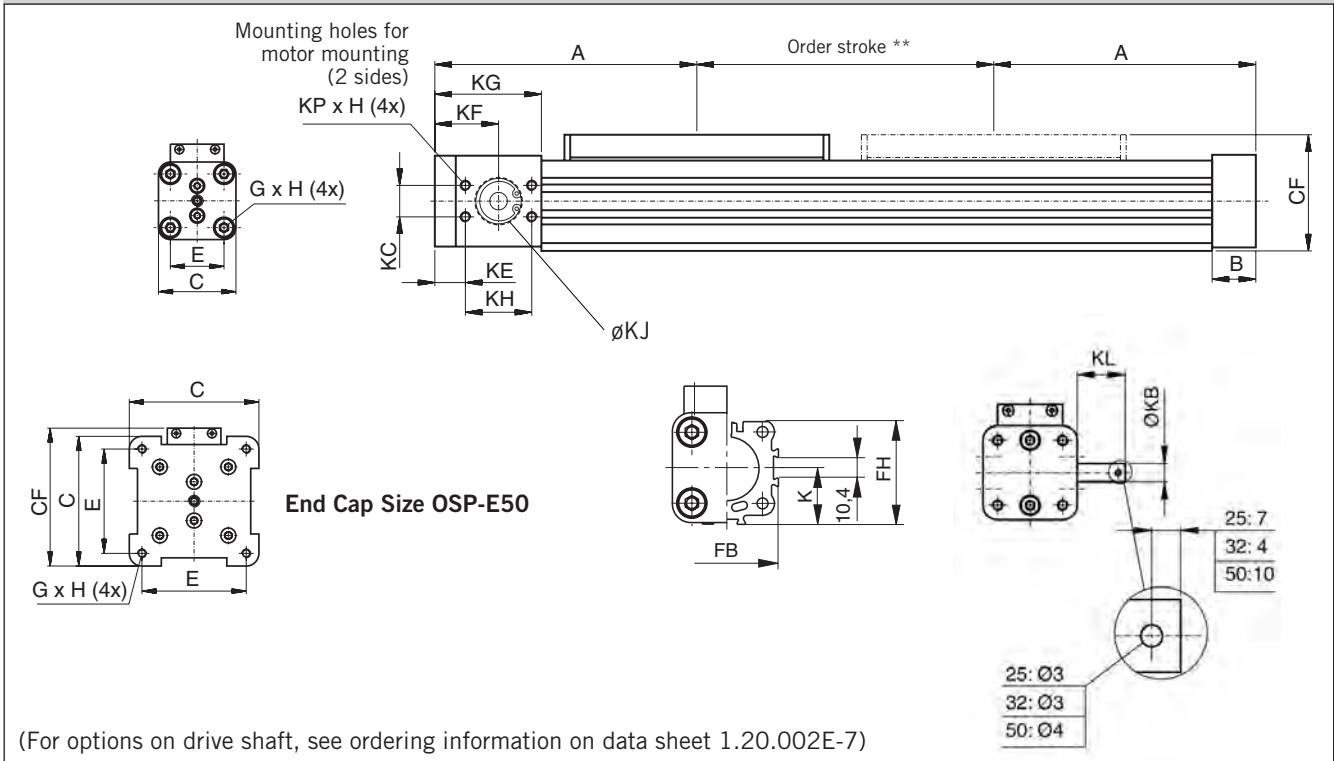
Example above:

OSP-E32B stroke 2 m, required speed 3 m/s;
From table T2: speed 3 m/s gives 1.8 Nm and stroke 2 m gives 2.3 Nm.
Max. torque for this application is 1.8 Nm.

Maximum Permissible Loads					T3
Series	Max. applied load F_z [N]	Max. moments [Nm]			
		M_x	M_y	M_z	
OSP-E25B	160	2	12	8	
OSP-E32B	300	8	25	16	
OSP-E50B	850	16	80	32	
OSP-E..B Bi-partional	The maximum load F must be equally distributed among the two carriers.				



Linear Drive with Toothed Belt - Basic Unit
Series OSP-E..B



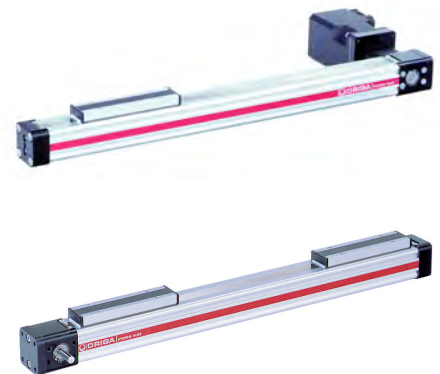
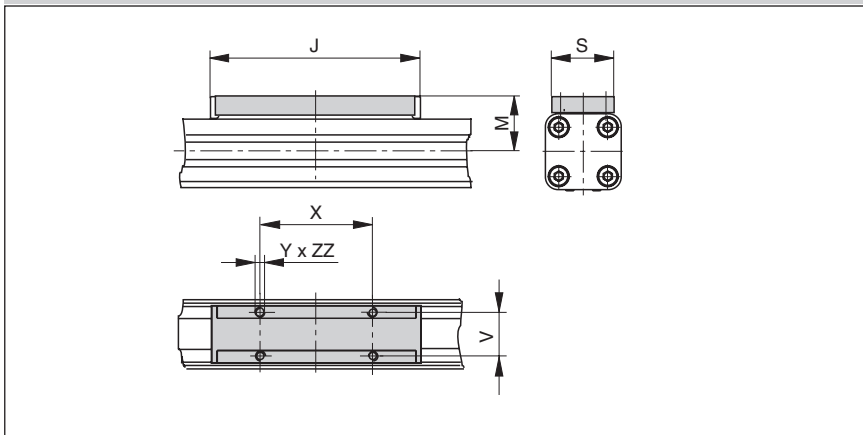
*** Note:**

The mechanical end position must not be used as a mechanical end stop. Allow an additional safety clearance at both ends equivalent to the linear movement of one revolution of the drive shaft, but at least 100 mm.

Order stroke = required travel + 2 x safety distance.

The use of an AC motor with frequency converter normally requires a larger safety clearance than that required for servo systems. For further information please contact you local HOERBIGER-ORIGA representative.

Standard Carrier
Series OSP-E..B



Dimension Table [mm]

Series	A	B	C	E	G x H	J	K	M	S	V	X	Y	CF
OSP-E25B	125	22	41	27	M5 x 10	117	21.5	31	33	25	65	M5	52.5
OSP-E32B	150	25	52	36	M6 x 12	152	28.5	38	36	27	90	M6	66.5
OSP-E50B	200	25	87	70	M6 x 12	200	43	49	36	27	110	M6	92.5

Series	FB	FH	KB	KC	KE	KF	KG	KH	KJ	KL	KM _{min}	KM _{emp.}	KP x H	ZZ
OSP-E25B	40	39.5	10 ₁₆	15	22	37	57	30	19 ^{H7}	24	130	190	M5 x 10	8
OSP-E32B	52	51.7	10 ₁₆	18	17.5	36.5	61	38	26 ^{H7}	26	170	230	M6 x 12	10
OSP-E50B	76	77	16 ₁₈	32	23.5	48.5	85	50	40 ^{H7}	34	220	320	M8 x 12	10

ORIGA SYSTEM PLUS OSP-E

Electric Drives

OSP-E..B Toothed Belt
High Speed



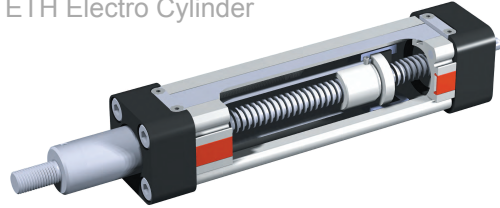
OSP-E..SB Ball Screw
High Force



OSP-E..BH2 Belt Heavy Duty
Single Rail, Recirculating Ball Bearing Guide



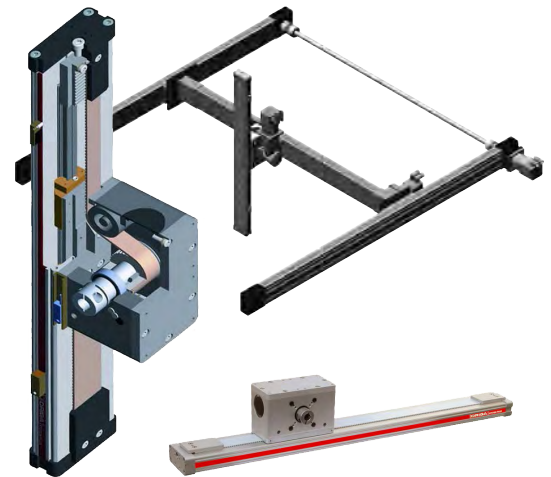
OSP-E..SBR Rod Screw
ETH Electro Cylinder



HMR High Moment Rodless
Double Rails, Recirculating Ball Bearing Guide



OSP-E..BV Belt Vertical
Vertical Lifting in Multi-Axis



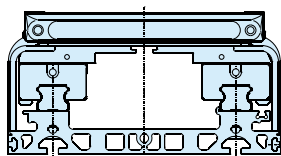
HMR-B Belt
Fast & Positioning



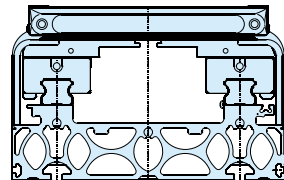
HMR-S Screw
Force & Precision



HMR Basic
Direct mounting on the machine bed



HMR Reinforce
Self-supporting systems



Multi-Axis Systems
XYZ: HMR, BH2, BV, OSP-E with Guide

