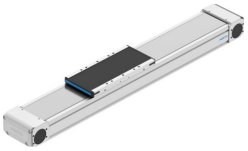
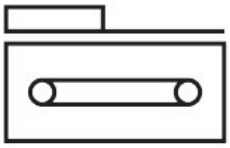
Toothed belt axis
ELGD-TB-KF-WD-120-500-0H-L-PU2

Part number: 8192386





Data sheet

Feature	Value
Effective diameter of drive pinion	38.2 mm
Working stroke	500 mm
Size	120
Stroke reserve	0 mm
Toothed-belt pitch	5 mm
Mounting position	Any
Guide	Recirculating ball bearing guide
Design	Electromechanical linear axis With toothed belt
Type of motor	Stepper motor Servo motor
Functional principle of measuring system	Incremental
Position detection	For inductive sensors
Max. acceleration	100 m/s²
Max. speed	3 m/s
Repetition accuracy	±0.04 mm
Duty cycle	100%
LABS (PWIS) conformity	VDMA24364-C1-L
Suitability for the production of Li-ion batteries	Suitable for battery production with reduced Cu/Zn/Ni values (F1a)
Cleanroom suitability, measured according to ISO 14644-14	Class 4 according to ISO 14644-1 (with vacuum extraction) Class 6 according to ISO 14644-1
Storage temperature	-20 °C...60 °C
Degree of protection	IP40
Ambient temperature	0 °C...60 °C
Impact energy in end positions	0.001 J
Note on the impact energy in the end positions	At maximum homing speed of 0.01 m/s
2nd moment of area Iy	770000 mm⁴
2nd moment of area Iz	5801000 mm⁴
Max. drive torque	9.55 Nm
Max. force Fy	8000 N
Max. force Fz	7200 N
Max. force Fy total axis	5914 N

Feature	Value
Max. force Fz total axis	5280 N
Fy at theoretical life value of 100 km (only guide consideration)	35153 N
Fz at theoretical life value of 100 km (only guide consideration)	35153 N
Max. idle running transfer resistance	72.1 N
Max. moment Mx	330 Nm
Max. moment My	600 Nm
Max. moment Mz	540 Nm
Max. moment Mx total axis	290 Nm
Max. moment My total axis	563 Nm
Max. moment Mz total axis	527 Nm
Mx at theoretical life value of 100 km (only guide consideration)	1459 Nm
My at theoretical life value of 100 km (only guide consideration)	1920 Nm
Mz at theoretical life value of 100 km (only guide consideration)	1920 Nm
Distance between slide surface and guide centre	51 mm
Max. feed force Fx	500 N
Frictional torque independent of load	1.38 Nm
Torsional mass moment of inertia It	383100 mm^4
Mass moment of inertia JH per metre of stroke	0.876 $kgcm^2$
Mass moment of inertia JL per kg of working load	3.648 $kgcm^2$
Mass moment of inertia JO	9.1687 $kgcm^2$
Feed constant	120 mm/U
Reference service life	5000 km
Maintenance interval	Lifetime lubrication
Moving mass	2250 g
Product weight	10395 g
Basic weight for 0 mm stroke	6495 g
Additional weight per 10 mm stroke	78 g
Dynamic deflection (moving load)	0.05% of the axis length, max. 0.5 mm
Static deflection (load in standstill)	0.1% of the axis length
Interface code, actuator	N48
Material end cap	Aluminium gravity die-cast, painted
Material profile	Anodised wrought aluminium alloy
Note on materials	RoHS compliant
Material cover tape	High-alloy stainless steel
Material drive cover	Aluminium gravity die-cast, painted
Material guide slide	Steel
Material guide rail	Steel
Material pulleys	High-alloy stainless steel
Material slide	Wrought aluminium alloy
Material toothed belt	Polyurethane with steel cord