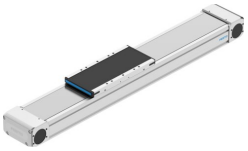
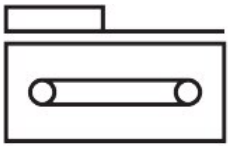
Toothed belt axis
ELGD-TB-KF-WD-120-500-0H-L-PU2

Part number: 8192386





Data sheet

Feature	Value
Drive pinion effective diameter	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
Structural design	Electromechanical linear axis with toothed belt
Motor type	Stepper motor Servo motor
Measuring principle of linear potentiometer	Incremental
Position sensing	For inductive proximity sensors
Max. acceleration	50 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)
Storage temperature	-20 °C...60 °C
Degree of protection	IP40
Ambient temperature	0 °C...60 °C
Impact energy in the end positions	1 mJ
Note on the impact energy in the end positions	At maximum speed of the reference run of 0.01 m/s
2nd moment of area Iy	77090000 mm⁴
2nd moment of area Iz	5801000 mm⁴
Max. driving torque	9.55 Nm
Max. force Fy	8000 N
Max. force Fz	7200 N
Max. force Fy total axis	5914 N
Max. force Fz total axis	9071 N
Fy with theoretical service life of 100 km (from a guide perspective only)	35153 N

Feature	Value
Fz with theoretical service life of 100 km (from a guide perspective only)	35153 N
Max. no-load resistance to shifting	72.1 N
Max. torque Mx	330 Nm
Max. torque My	600 Nm
Max. torque Mz	540 Nm
Max. moment Mx total axis	356 Nm
Max. moment My total axis	563 Nm
Max. moment Mz total axis	527 Nm
Mx with theoretical service life of 100 km (from a guide perspective only)	1459 Nm
My with theoretical service life of 100 km (from a guide perspective only)	1920 Nm
Mz with theoretical service life of 100 km (from a guide perspective only)	1920 Nm
Distance between slide surface and guide center	51 mm
Max. feed force Fx	500 N
No-load driving torque	1.38 Nm
Torsion moment of inertia It	383100 mm^4
Mass moment of inertia JH per meter of stroke	0.876 $kgcm^2$
Mass moment of inertia JL per kg of payload	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	Life-time lubrication
Moving mass	1957 g
Product weight	10395 g
Basic weight with 0 mm stroke	6495 g
Additional weight per 10 mm stroke	78 g
Dynamic deflection (load moved)	0.05% of axis length, maximum 0.5 mm
Static deflection (load at standstill)	0.1 % of axis length
Interface code, actuator	N48
Material of end caps	Aluminum gravity die-cast, painted
Profile material	Wrought aluminum alloy, anodized
Note on materials	RoHS-compliant
Cover strip material	High-alloy stainless steel
Drive cover material	Aluminum gravity die-cast, painted
Slide carriage material	Steel
Guide rail material	Steel
Belt pulley material	High-alloy stainless steel
Slide material	Wrought aluminum alloy
Toothed belt material	Polyurethane with steel cord