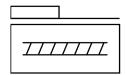
Ball screw linear actuator ELGT-BS-90-350-20P

Part number: 8124424







Data sheet

Size 90 Stroke reserve 0 mm Reversing backlash 150 µm Screw diameter 15 mm Spindle pitch 20 mm/U Mounting position Any Suide Recirculating ball bearing guide Electromechanical linear axis with ball screw Motor type Stepper motor Servo motor Spindle type Ball screw Wariants Metals with copper, zinc or nickel as main constituent are excluded from use. Exceptions are nickel in steel, chemically nickel-plated surfaces, printed circuit boards, cables, electrical plug connectors and coils. Max. sceleration 15 m/s² Max. speed 1 m/s Repetition accuracy 20.02 mm Duty cycle 100% LABS (PWIS) conformity VDMA24364 zone III Suitability for the production of Li-ion batteries Metals with more than 1% copper, zinc or nickel by mass are excluded from use. Exceptions are nickel in steel, chemically nickel-plated surfaces, printed circuit boards, cables, electrical plug connectors and coils. Max. speed 1 m/s Repetition accuracy 20.02 mm Duty cycle 100% Metals with more than 1% copper, zinc or nickel by mass are excluded from use. Exceptions are nickel in steel, chemically nickel-plated surfaces, printed circuit boards, cables, electrical plug connectors and coils Cleanroom class Class 6 according to ISO 14644-1 Degree of protection 1P20 Ambient temperature 0 °C50 °C Continuous feed force 810 N 631000 mm² end moment of area ly 631000 mm² 1948000 mm²	Feature	Value
Stroke reserve 0 mm Reversing backlash 150 μm Screw diameter 15 mm Spindle pitch 20 mm/U Mounting position Any Suide Recirculating ball bearing guide Electromechanical linear axis with ball screw Motor type Stepper motor Servo motor Spindle type Ball screw Mariants Metals with copper, zinc or nickel as main constituent are excluded from use. Exceptions are nickel in steel, chemically nickel-plated surfaces, printed circuit boards, cables, electrical plug connectors and coils. Max. acceleration 15 m/s² Max. speed 3000 1/min Max. speed 1 m/s Repetition accuracy 20.02 mm Duty cycle 100% ABS (PWIS) conformity VDMA24364 zone III Suitability for the production of Li-ion batteries Metals with more than 1% copper, zinc or nickel by mass are excluded from use. Exceptions are nickel in steel, chemically nickel-plated surfaces, printed circuit boards, cables, electrical plug connectors and coils. Cleanroom class Class 6 according to ISO 14644-1 Degree of protection IP20 Ambient temperature 0 o°C50 °C And moment of area ly 631000 mm² 2nd moment of area ly 1948000 mm²	Working stroke	350 mm
Reversing backlash 50 pm 60	Size	90
Screw diameter 15 mm Spindle pitch 20 mm/U Mounting position Any Suide Recirculating ball bearing guide Structural design Electromechanical linear axis with ball screw Motor type Stepper motor Servo motor Spindle type Ball screw Metals with copper, zinc or nickel as main constituent are excluded from use. Exceptions are nickel in steet, chemically nickel-plated surfaces, printed circuit boards, cables, electrical plug connectors and coils. Max. acceleration 15 m/s² Max. rotational speed 3000 1/min Max. speed 1 m/s Repetition accuracy ±0.02 mm Outy cycle 100% Chaps (PWIS) conformity VDMA24364 zone III Metals with more than 1% copper, zinc or nickel by mass are excluded from use. Exceptions are nickel in steel, chemically nickel-plated surfaces, printed circuit boards, cables, electrical plug connectors and coils. Clean control of Li-ion batteries Metals with more than 1% copper, zinc or nickel by mass are excluded from use. Exceptions are nickel in steel, chemically nickel-plated surfaces, printed circuit boards, cables, electrical plug connectors and coils Clean control of Li-ion batteries Plated surfaces, printed circuit boards, cables, electrical plug connectors and coils Clean control of Li-ion batteries Plated surfaces, printed circuit boards, cables, electrical plug connectors and coils Clean control of Li-ion batteries Plated surfaces, printed circuit boards, cables, electrical plug connectors and coils Clean control of Li-ion batteries Plated surfaces, printed circuit boards, cables, electrical plug connectors and coils Clean control of Li-ion batteries Plated Surfaces, printed circuit boards, cables, electrical plug connectors and coils Clean control of Li-ion batteries Plated Surfaces, printed circuit boards, cables, electrical plug connectors and coils Clean control of Li-ion batteries Plated Surfaces, printed circuit boards, cables, electrical plug connectors and coils	Stroke reserve	0 mm
Spindle pitch Mounting position Any Recirculating ball bearing guide Electromechanical linear axis with ball screw Motor type Stepper motor Servo motor Spindle type Ball screw Metals with copper, zinc or nickel as main constituent are excluded from use. Exceptions are nickel in steel, chemically nickel-plated surfaces, printed circuit boards, cables, electrical plug connectors and coils. Max. acceleration Max. speed Max. rotational speed Max. speed 1 m/s Repetition accuracy 20.02 mm Duty cycle 100% LABS (PWIS) conformity VDMA24364 zone III Suitability for the production of Li-ion batteries Metals with more than 1% copper, zinc or nickel by mass are excluded from use. Exceptions are nickel in steel, chemically nickel-plated surfaces, printed circuit boards, cables, electrical plug connectors and coils Cleanroom class Class 6 according to ISO 14644-1 Degree of protection Ambient temperature 0 °C50 °C Continuous feed force 810 N 2nd moment of area ly 2nd moment of area ly 2nd moment of area ly 2nd moment of area lz 1948000 mm ⁴	Reversing backlash	150 μm
Any Suide Recirculating ball bearing guide Electromechanical linear axis with ball screw Motor type Stepper motor Servo motor Spindle type Ball screw Variants Metals with copper, zinc or nickel as main constituent are excluded from use. Exceptions are nickel in steel, chemically nickel-plated surfaces, printed circuit boards, cables, electrical plug connectors and coils. Max. acceleration 15 m/s² Max. rotational speed 3000 1/min Max. speed 1 m/s Repetition accuracy ±0.02 mm Duty cycle 100% LABS (PWIS) conformity VDMA24364 zone III Suitability for the production of Li-ion batteries Metals with more than 1% copper, zinc or nickel by mass are excluded from use. Exceptions are nickel in steel, chemically nickel-plated surfaces, printed circuit boards, cables, electrical plug connectors and coils Cleanroom class Cleas 6 according to ISO 14644-1 Degree of protection IP20 Ambient temperature 0 °C50 °C Continuous feed force 810 N end moment of area ly 2nd moment of area ly 2nd moment of area lz 1948000 mm ⁴	Screw diameter	15 mm
Recirculating ball bearing guide Electromechanical linear axis with ball screw Motor type Stepper motor Servo motor Spindle type Ball screw Variants Metals with copper, zinc or nickel as main constituent are excluded from use. Exceptions are nickel in steel, chemically nickel-plated surfaces, printed circuit boards, cables, electrical plug connectors and coils. Max. acceleration 15 m/s² Max. rotational speed 3000 1/min Max. speed 1 m/s Repetition accuracy ±0.02 mm Duty cycle 100% VDMA24364 zone III Suitability for the production of Li-ion batteries Metals with more than 1% copper, zinc or nickel by mass are excluded from use. Exceptions are nickel in steel, chemically nickel-plated surfaces, printed circuit boards, cables, electrical plug connectors and coils Cleanroom class Class 6 according to ISO 14644-1 Degree of protection IP20 Ambient temperature 0 °C50 °C Continuous feed force 810 N 631000 mm ⁴ 2nd moment of area ly 2nd moment of area ly 1948000 mm ⁴	Spindle pitch	20 mm/U
Electromechanical linear axis with ball screw Stepper motor Servo motor Spindle type Ball screw Variants Metals with copper, zinc or nickel as main constituent are excluded from use. Exceptions are nickel in steel, chemically nickel-plated surfaces, printed circuit boards, cables, electrical plug connectors and coils. Max. acceleration 15 m/s² Max. rotational speed 3000 1/min Max. speed 1 m/s Repetition accuracy 20.02 mm Duty cycle 100% CLABS (PWIS) conformity VDMA24364 zone III Suitability for the production of Li-ion batteries Metals with more than 1% copper, zinc or nickel by mass are excluded from use. Exceptions are nickel in steel, chemically nickel-plated surfaces, printed circuit boards, cables, electrical plug connectors and coils Cleanroom class Class 6 according to ISO 14644-1 Degree of protection IP20 Ambient temperature 0 °C50 °C Continuous feed force 810 N 631000 mm ⁴ 2nd moment of area ly 2nd moment of area lz 1948000 mm ⁴	Mounting position	Any
with ball screw Stepper motor Servo motor Spindle type Ball screw Watals with copper, zinc or nickel as main constituent are excluded from use. Exceptions are nickel in steel, chemically nickel-plated surfaces, printed circuit boards, cables, electrical plug connectors and coils. Wax. acceleration 15 m/s² Wax. rotational speed 3000 1/min Max. speed 1 m/s Repetition accuracy 20.02 mm Duty cycle 100% CABS (PWIS) conformity VDMA24364 zone III Suitability for the production of Li-ion batteries Metals with more than 1% copper, zinc or nickel by mass are excluded from use. Exceptions are nickel in steel, chemically nickel-plated surfaces, printed circuit boards, cables, electrical plug connectors and coils Cleanroom class Class 6 according to ISO 14644-1 Degree of protection IP20 Ambient temperature 0 °C50 °C Continuous feed force 810 N 631000 mm ⁴ 2nd moment of area ly 2nd moment of area lz 1948000 mm ⁴	Guide	Recirculating ball bearing guide
Servo motor Spindle type Ball screw Metals with copper, zinc or nickel as main constituent are excluded from use. Exceptions are nickel in steel, chemically nickel-plated surfaces, printed circuit boards, cables, electrical plug connectors and coils. Max. acceleration Max. rotational speed Max. speed Sepetition accuracy 1 m/s Repetition accuracy 20.02 mm Duty cycle 100% LABS (PWIS) conformity VDMA24364 zone III Metals with more than 1% copper, zinc or nickel by mass are excluded from use. Exceptions are nickel in steel, chemically nickel-plated surfaces, printed circuit boards, cables, electrical plug connectors and coils Cleanroom class Class 6 according to ISO 14644-1 Degree of protection IP20 Ambient temperature 0 °C50 °C Continuous feed force 810 N 2nd moment of area ly 2nd moment of area lz 1948000 mm ⁴	Structural design	
Metals with copper, zinc or nickel as main constituent are excluded from use. Exceptions are nickel in steel, chemically nickel-plated surfaces, printed circuit boards, cables, electrical plug connectors and coils. Max. acceleration 15 m/s² Max. rotational speed 3000 1/min Max. speed 1 m/s Repetition accuracy ±0.02 mm Duty cycle 100% LABS (PWIS) conformity VDMA24364 zone III Suitability for the production of Li-ion batteries Metals with more than 1% copper, zinc or nickel by mass are excluded from use. Exceptions are nickel in steel, chemically nickel-plated surfaces, printed circuit boards, cables, electrical plug connectors and coils Cleanroom class Class 6 according to ISO 14644-1 Degree of protection IP20 Ambient temperature 0 °C50 °C Continuous feed force 810 N 2nd moment of area ly 2nd moment of area lz 1948000 mm ⁴	Motor type	1 17
use. Exceptions are nickel in steel, chemically nickel-plated surfaces, printed circuit boards, cables, electrical plug connectors and coils. Max. acceleration 15 m/s² Max. rotational speed 3000 1/min Max. speed 1 m/s Repetition accuracy ±0.02 mm Outy cycle 100% LABS (PWIS) conformity VDMA24364 zone III Suitability for the production of Li-ion batteries Metals with more than 1% copper, zinc or nickel by mass are excluded from use. Exceptions are nickel in steel, chemically nickel-plated surfaces, printed circuit boards, cables, electrical plug connectors and coils Cleanroom class Class 6 according to ISO 14644-1 Degree of protection IP20 Ambient temperature 0 °C50 °C Continuous feed force 810 N 2nd moment of area ly 2nd moment of area lz 1948000 mm ⁴	Spindle type	Ball screw
Max. rotational speed Max. speed 1 m/s 40.02 mm Duty cycle 100% LABS (PWIS) conformity Suitability for the production of Li-ion batteries Metals with more than 1% copper, zinc or nickel by mass are excluded from use. Exceptions are nickel in steel, chemically nickel-plated surfaces, printed circuit boards, cables, electrical plug connectors and coils Cleanroom class Class 6 according to ISO 14644-1 Degree of protection IP20 Ambient temperature 0 °C50 °C Continuous feed force 810 N 2nd moment of area ly 2nd moment of area lz 1948000 mm ⁴	Variants	
Max. speed 1 m/s Repetition accuracy ±0.02 mm Duty cycle 100% ABS (PWIS) conformity VDMA24364 zone III Suitability for the production of Li-ion batteries Metals with more than 1% copper, zinc or nickel by mass are excluded from use. Exceptions are nickel in steel, chemically nickel-plated surfaces, printed circuit boards, cables, electrical plug connectors and coils Cleanroom class Class 6 according to ISO 14644-1 Degree of protection IP20 Ambient temperature 0°C50°C Continuous feed force 810 N Cand moment of area ly 631000 mm ⁴ Pand moment of area Iz 1948000 mm ⁴	Max. acceleration	15 m/s ²
Repetition accuracy ±0.02 mm Duty cycle LABS (PWIS) conformity WDMA24364 zone III Metals with more than 1% copper, zinc or nickel by mass are excluded from use. Exceptions are nickel in steel, chemically nickel-plated surfaces, printed circuit boards, cables, electrical plug connectors and coils Cleanroom class Class 6 according to ISO 14644-1 Degree of protection IP20 Ambient temperature O °C50 °C Continuous feed force 810 N 631000 mm ⁴ 2nd moment of area Iz 1948000 mm ⁴	Max. rotational speed	3000 1/min
Duty cycle LABS (PWIS) conformity WDMA24364 zone III Metals with more than 1% copper, zinc or nickel by mass are excluded from use. Exceptions are nickel in steel, chemically nickel-plated surfaces, printed circuit boards, cables, electrical plug connectors and coils Cleanroom class Class 6 according to ISO 14644-1 Degree of protection IP20 Ambient temperature O°C50°C Continuous feed force 810 N 2nd moment of area ly 2nd moment of area lz 1948000 mm ⁴	Max. speed	1 m/s
ABS (PWIS) conformity VDMA24364 zone III Metals with more than 1% copper, zinc or nickel by mass are excluded from use. Exceptions are nickel in steel, chemically nickel-plated surfaces, printed circuit boards, cables, electrical plug connectors and coils Cleanroom class Class 6 according to ISO 14644-1 Degree of protection IP20 Ambient temperature O °C50 °C Continuous feed force 810 N 2nd moment of area Iy 2nd moment of area Iz 1948000 mm ⁴	Repetition accuracy	±0.02 mm
Metals with more than 1% copper, zinc or nickel by mass are excluded from use. Exceptions are nickel in steel, chemically nickel-plated surfaces, printed circuit boards, cables, electrical plug connectors and coils Cleanroom class Class 6 according to ISO 14644-1 Degree of protection IP20 Ambient temperature 0 °C50 °C Continuous feed force 810 N 2nd moment of area ly 631000 mm ⁴ 2nd moment of area Iz 1948000 mm ⁴	Duty cycle	100%
from use. Exceptions are nickel in steel, chemically nickel-plated surfaces, printed circuit boards, cables, electrical plug connectors and coils Cleanroom class Class 6 according to ISO 14644-1 IP20 Ambient temperature O °C50 °C Continuous feed force 810 N 2nd moment of area ly 2nd moment of area Iz 1948000 mm ⁴	LABS (PWIS) conformity	VDMA24364 zone III
Degree of protection IP20 Ambient temperature 0 °C50 °C Continuous feed force 810 N 2nd moment of area ly 631000 mm ⁴ 2nd moment of area lz 1948000 mm ⁴	Suitability for the production of Li-ion batteries	from use. Exceptions are nickel in steel, chemically nickel-plated surfaces, printed circuit boards, cables, electrical plug connectors and
Ambient temperature 0 °C50 °C Continuous feed force 810 N 2nd moment of area ly 631000 mm ⁴ 2nd moment of area lz 1948000 mm ⁴	Cleanroom class	Class 6 according to ISO 14644-1
Continuous feed force 810 N 2nd moment of area ly 631000 mm ⁴ 2nd moment of area lz 1948000 mm ⁴	Degree of protection	IP20
2nd moment of area ly 2nd moment of area lz 1948000 mm ⁴	Ambient temperature	0 °C50 °C
2nd moment of area Iz 1948000 mm⁴	Continuous feed force	810 N
	2nd moment of area ly	631000 mm⁴
No-load torque at maximum travel speed 0.2 Nm	2nd moment of area Iz	1948000 mm⁴
	No-load torque at maximum travel speed	0.2 Nm

Feature	Value
No-load torque at minimum travel speed	0.04 Nm
Max. force Fy	4710 N
Max. force Fz	5600 N
Fy with theoretical service life of 100 km (from a guide perspective only)	17352 N
Fz with theoretical service life of 100 km (from a guide perspective only)	20631 N
Max. torque Mx	65 Nm
Max. torque My	51 Nm
Max. torque Mz	51 Nm
Mx with theoretical service life of 100 km (from a guide perspective only)	239 Nm
My with theoretical service life of 100 km (from a guide perspective only)	188 Nm
Mz with theoretical service life of 100 km (from a guide perspective only)	188 Nm
Max. radial force on actuator shaft	290 N
Max. feed force Fx	810 N
Torsion moment of inertia It	151000 mm⁴
Mass moment of inertia JH per meter of stroke	0.2522 kgcm ²
Mass moment of inertia JL per kg of payload	0.1013 kgcm²
Mass moment of inertia JO	0.2291 kgcm ²
Feed constant	20 mm/U
Moving mass	1645 g
Product weight	7934 g
Basic weight with 0 mm stroke	4353 g
Additional weight per 10 mm stroke	104 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	T46
Material of end caps	Die cast aluminum, painted
Profile material	Wrought aluminum alloy, anodized
Note on materials	RoHS-compliant
Drive cover material	Die cast aluminum, painted
Slide carriage material	Steel
Guide rail material	Steel
Slide material	Wrought aluminum alloy, anodized
Spindle nut material	Steel
Spindle material	Steel