

Linear unit with linear motor

iLD 50-6



Features

- Robust design in industrial quality
- Pinpoint positioning accuracy
- Wear-free design with no mechanical connecting links
- high dynamic acceleration up to 30 m/s²
- Multi-motor operation with multiple, separately moveable slides
- Extendable to 15 m travel

Options:

- Complete linear unit (see Order Information Table)
- Energy guide chain + guide plate to required length
- Brake
- Control package Metronix ARS 2310 (3-phase, 6 kVA, incl. configuration software)
- diverse Control packages (1- and 3-phase, up to 6 kVA)
- Drive controller ISEL iMD 40
- CAN CPC 12 positioning module
- Cable set iLD 50-6 for ISEL iMD 40

General

Linear units with linear motors are advantageous in precisely those areas where linear units with typical spindle drives are limited - they achieve high values of acceleration, offer pinpoint positioning and operate practically wear-free due to the absence of mechanical linkages.

Linear motors are increasingly used in linear technology machine tool applications, positioning systems and handling systems. Linear units with profile guides are particularly suitable for use in both machine tools and positioning systems.

isel iLD series linear units are constructed from rigid aluminium profiles. Guides consist of proven guide rails and recirculating ball shaft slots. A magnetic length-measuring system is also included. In this regard, isel linear motor units have the advantage of greater acceleration and higher traverse velocity. Iron-core linear motors can produce very high forces. An integrated brake is offered as an option, to allow the iLD to also be used in the vertical mode. The "made by isel" concept stands for optimum price/performance-ratio. This in turn means very short amortisation periods for customers.

Ordering data

Part number	L	L1
237110 0069	691	181
237110 0089	892	382
237110 0109	1094	584
237110 0129	1296	786
237110 0149	1497	987
237110 0169	1699	1189
237110 0190	1900	1390
237110 0210	2102	1592
237110 0230	2304	1794
237110 0250	2505	1995
237110 0270	2707	2197
237110 0290	2908	2398
237110 0311	3110	2600
237110 0331	3312	2802
237110 0351	3513	3003

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Technical specification

General	
Areas of application	Positioning axes for the semiconductor industry and for general industrial applications, CNC machine axis
Processing speed (m/s)	to 4.5
Acceleration (m/s)	to 30
Repeatability (mm)	< 0.01
Process path (mm)	181 to 3003, optionally extendible to 15000
Drive electronics	Servo amplifier, communication via CAN bus or analogue input (+/- 10 V)
Maintenance	Maintenance-free, rapid component replacement (MTTR approx. 2 hours)
Mechanics	
Profile	Bend-proof hollow chamber profile (isel ILF 6), straightness of 0.1 mm per 1 m length, Bending max. 0.2 mm per 1 m length under 50 kg load, max. load 100 kg
Guides	Profile rail guide Series 15 to DIN EN 120/20
Mechanical brake (optional)	Profile guide brake, pneumatically operated, Braking power Z-axis < 0.1 mm stationary, 50 mm at full speed
Stop position damping	Adjustable or parabolic spring for opposite side + pneumatic spring respectively
Installation options	X-axis, X,Y-axis, Z-axis
Maximum adjustment force	285 N
Electronics	
Limit position switch	inductive with adjustable limit position, circular plug connection (8x8x40)
Magnetic strip	isel MS 50
Linear motor	isel LS 50, iron core linear motor with magnetic rails, with or without audio signal, nominal current 6 A, peak current 15 A, max. feed force 600 N
Length measuring system	isel IMS, incremental measuring system
Motor / encoder connection	Protection type IP 67, M23 connecting socket for motor and encoder cable
Energy chain	Optional
Supported interfaces	Standard RS422 A/A, B, /B optional z, /z, Option SIN/COS 1Vss +20%, -40%, Z and /Z Right-sign

Dimensioned drawing

