

LinMot® Industrial Linear Motor Systems



electric linear direct drive system



precision & high dynamics for positioning tasks



freely positionable along the entire stroke



long operational life



IP protection class IP67

Linear motor technology for industrial applications

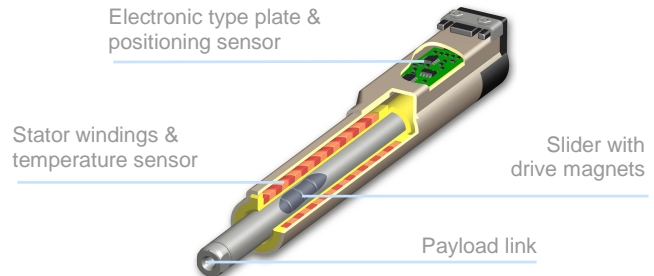
Overview **LinMot®** Industrial Linear Motor Systems







LinMot® linear motor systems are electromagnetic direct drives. The linear motion is generated electromagnetically without use of gear boxes, spindles, tooth belts, racks or cam disks.

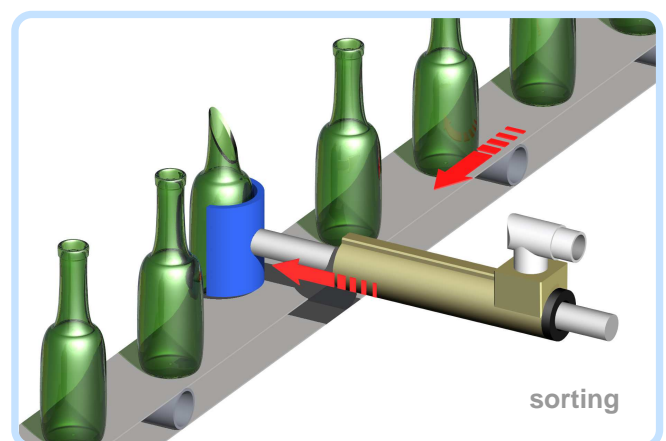
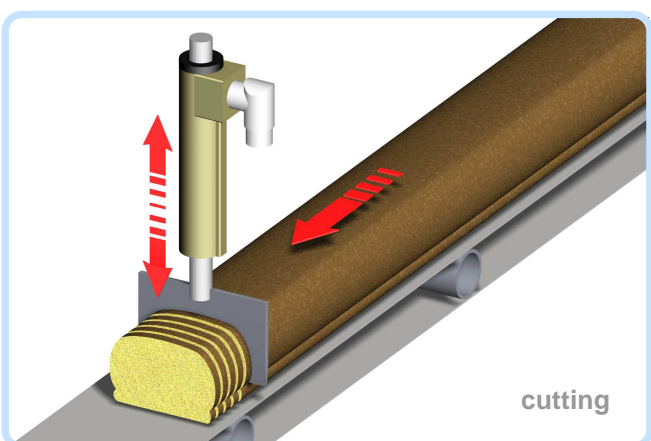
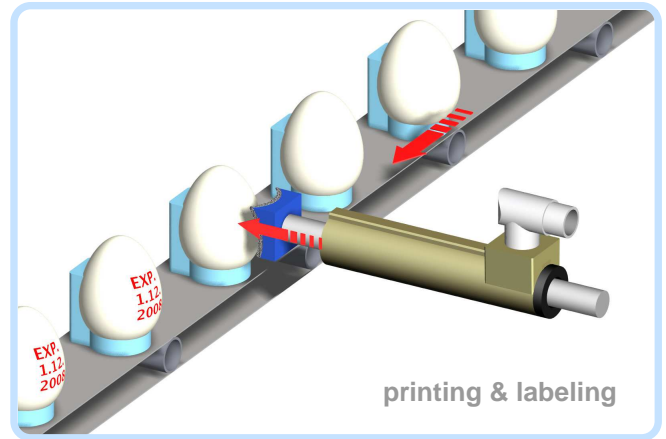
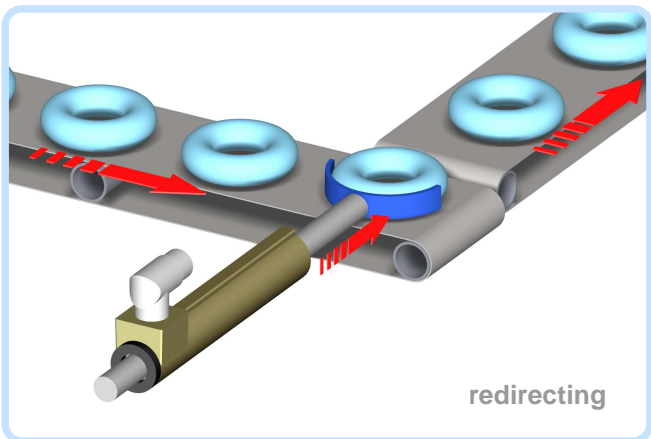
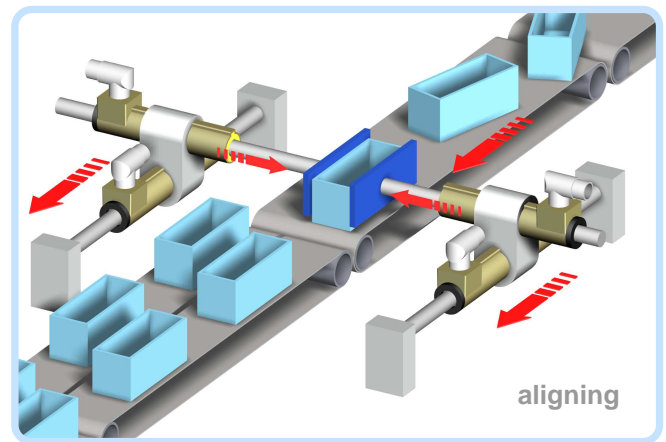
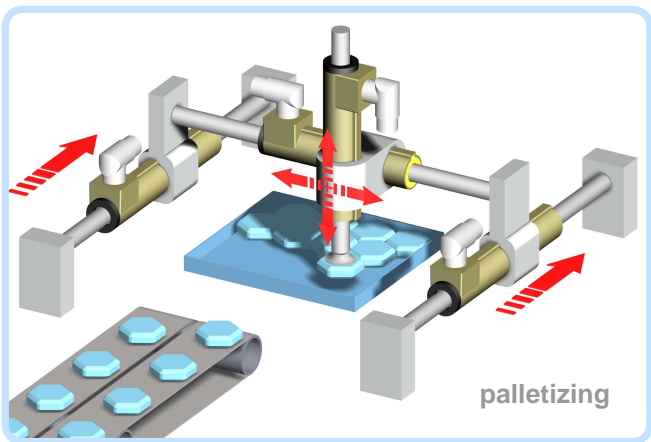
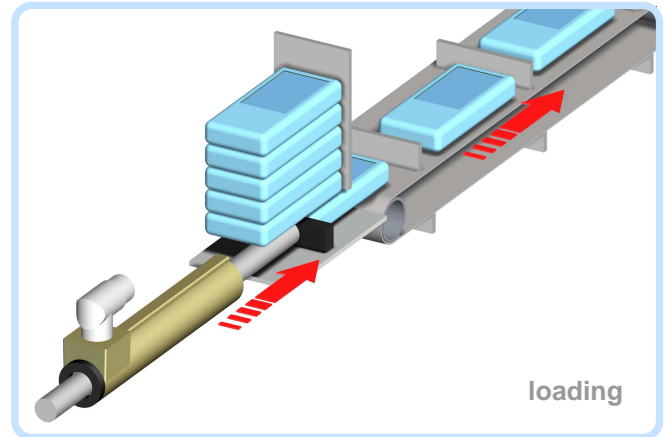
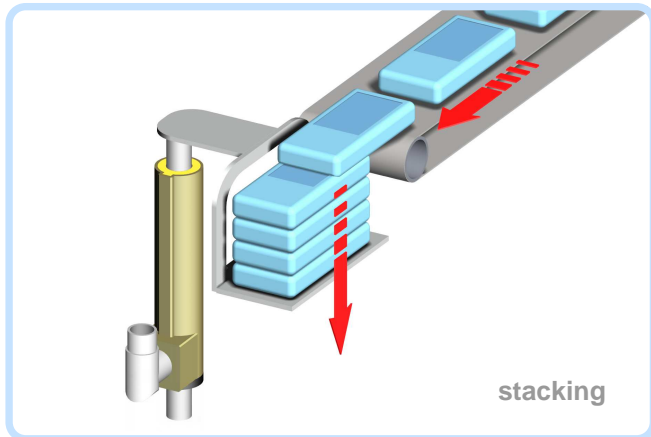
The motor consists of only two parts, the stator and the slider.

The slider is a precise stainless steel tube with integrated neodymium magnets. The stator contains the motor windings, the plain bearings for central slider guidance, positioning sensors, temperature sensors, as well as a microcontroller with integrated type plate.

Suitable servo controllers contain the inverter, the positioning control, as well as the interface to machine controls.

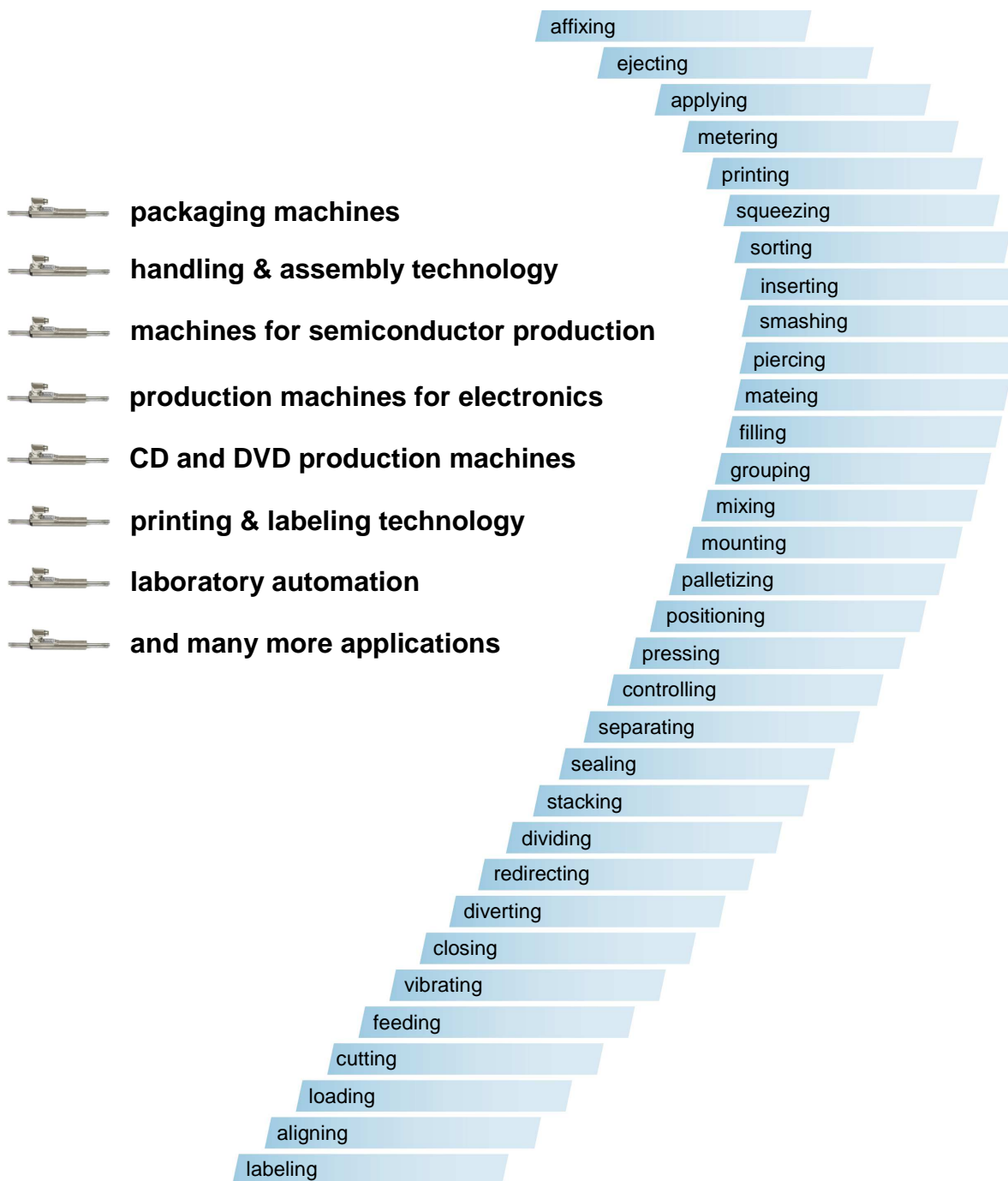


-  **highly flexible**
-  **reliable**
-  **dynamic & precise**
-  **substitution for pneumatics**
-  **substitution for servo motors**
-  **substitution for cam disks**

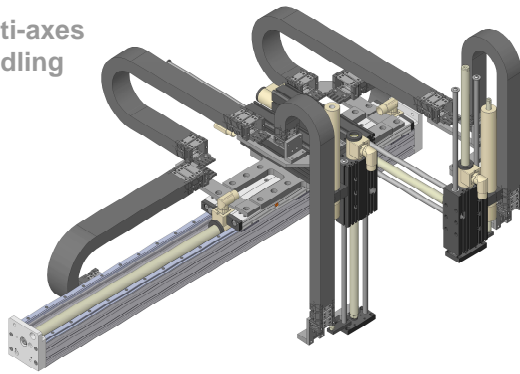


Fields of application for **LinMot®** linear drives systems

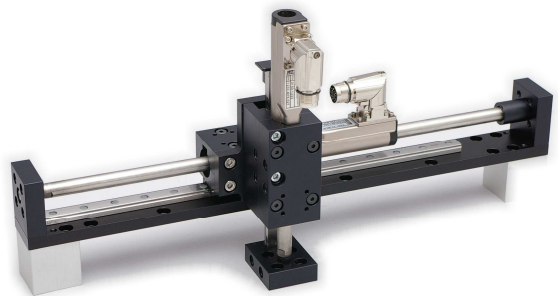
LinMot® linear motors are designed for rough and demanding environments. The drive systems are distinguished by their excellent technical features, low-maintenance operations and extremely long operational life.



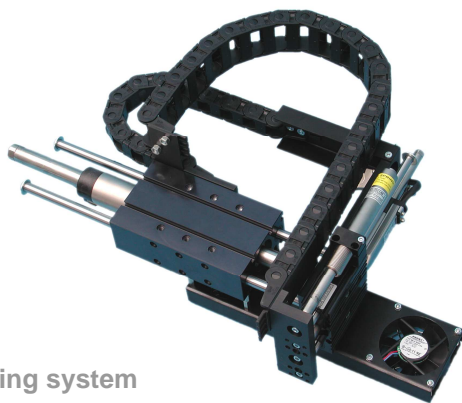
multi-axes
handling



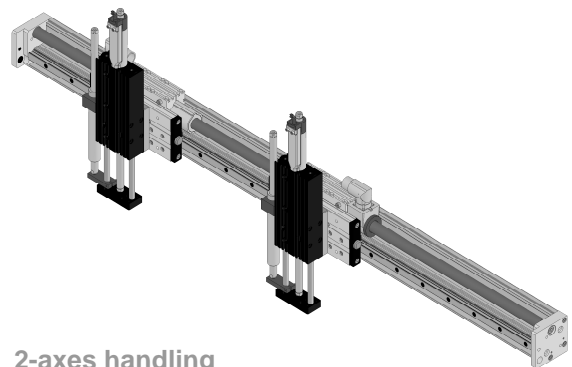
assembly
module



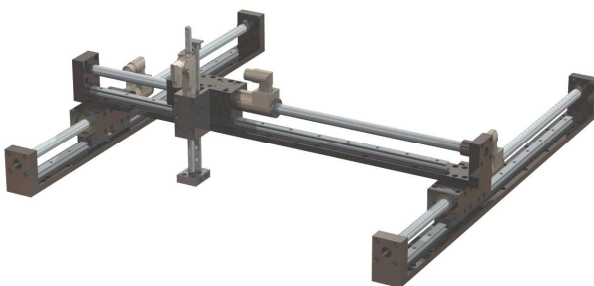
labeling system



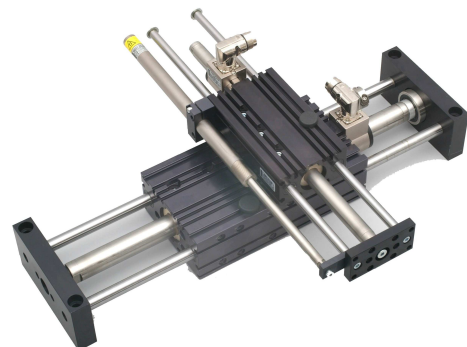
2-axes handling



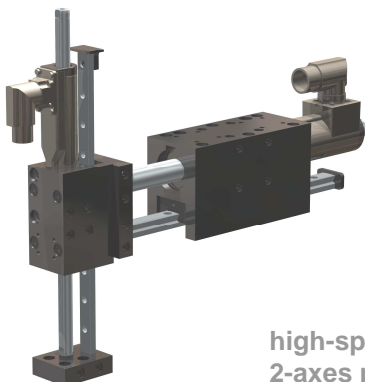
gantry portal



X-Z handling



high-speed
2-axes pick&place



4-axes kinematics
robot



Linear motors for general applications

LinMot® linear motors are brushless synchronous motors with integrated position sensors, overload protection and an electronic type plate. The linear motion is generated via electromagnetic force without any mechanical elements.

The motor components are built in metal tubes, which protect them from environmental influences and dirt.

The motors are available with angle connectors or with cable connectors.










motors with cable connectors

short stator type



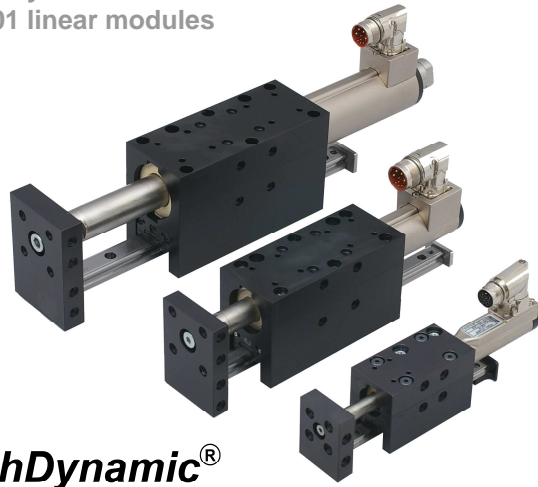
motors with angle connectors

-  **linear direct drive**
-  **integrated positioning sensor**
-  **freely positionable along the entire stroke**
-  **max. speed 4 m/s**
-  **max. acceleration 600 m/s²**
-  **long operational life**
-  **IP protection class IP67**

Linear modules, linear guides & precision linear guides

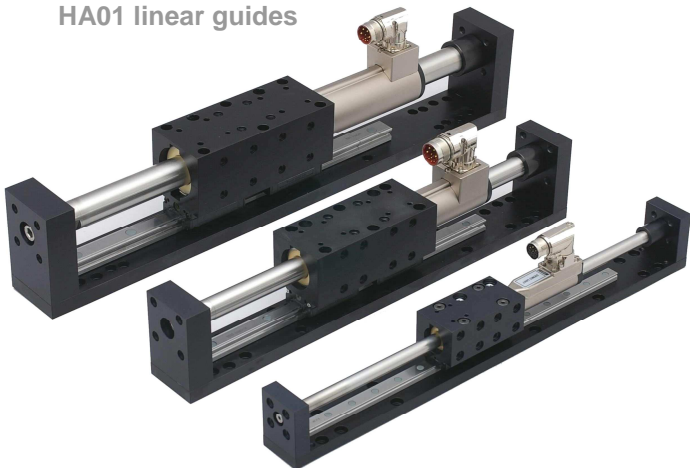
HM01 HighDynamic[®] linear modules consist of HD01 guides with integrated LinMot[®] motors. The guides are designed with only one moving rail and two ball caged carriages. Because the rail serves as a carrying element, the moving masses are very low. This guarantees high stiffness and a small installation cross section. The kinematic ratings are 5 m/s and 150 m/s². A combination of modules into multi-axes systems is very simple, due to all of the HM01 modules being compatible with each other.

HighDynamic[®]
HM01 linear modules



HighDynamic[®]

HighDynamic[®]
HA01 linear guides



HA01 HighDynamic[®] linear guides are designed for long stroke applications. They consist of HF01 guides with integrated LinMot[®] motors. The guides are equipped with only one guide rail and two ball caged carriages. The moving masses are very low and high stiffness is given, despite a small installation cross section. Combining any HA01 linear guides and HM01 linear modules into multi-axes systems is easily possible, due to all components being compatible with each other.

HighDynamic[®]

HighDynamic[®] precision linear guides LA00 and LA01 are very stiff linear guides with integrated LinMot[®] motors. High guide accuracy, high dynamics and low moving masses enable assembly of very fast and dynamic handling systems. In combination with HM01 linear modules and HA01 linear guides, the modular assembly of handling systems is easily possible.

HighDynamic[®]
precision linear guides
LA00 & LA01



HighDynamic[®]

Linear motors & linear modules for food-manufacturing and beverage applications



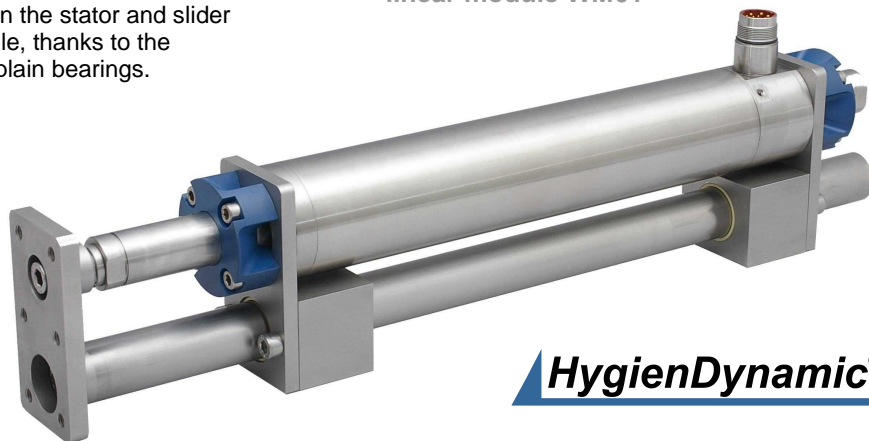
stainless steel motor

LinMot® stainless steel motors are based on standard LinMot® linear motors. Equipped with optional water cooling, high continuous forces are possible. Due to a universal mechanical construction, bearing concepts provided by the customer, as well as standard plain bearings are usable. With these direct drives, dynamic dosing and feeding applications can be realized in wet areas of filling and packaging machines.

WM01 HygienDynamic® linear modules are hygienically designed linear modules, intended for food-manufacturing and beverage applications. Due to their stainless steel design, the linear modules are predestinated for WashDown applications.

A cleaning gap between the stator and slider is provided. Cleaning between the stator and slider during operations is possible, thanks to the constructive design of the plain bearings.

HygienDynamic®
linear module WM01



HygienDynamic®



ideal for FDA applications



max. acceleration 150 m/s²



long operational life - no gears or gaskets



IP protection class IP69K

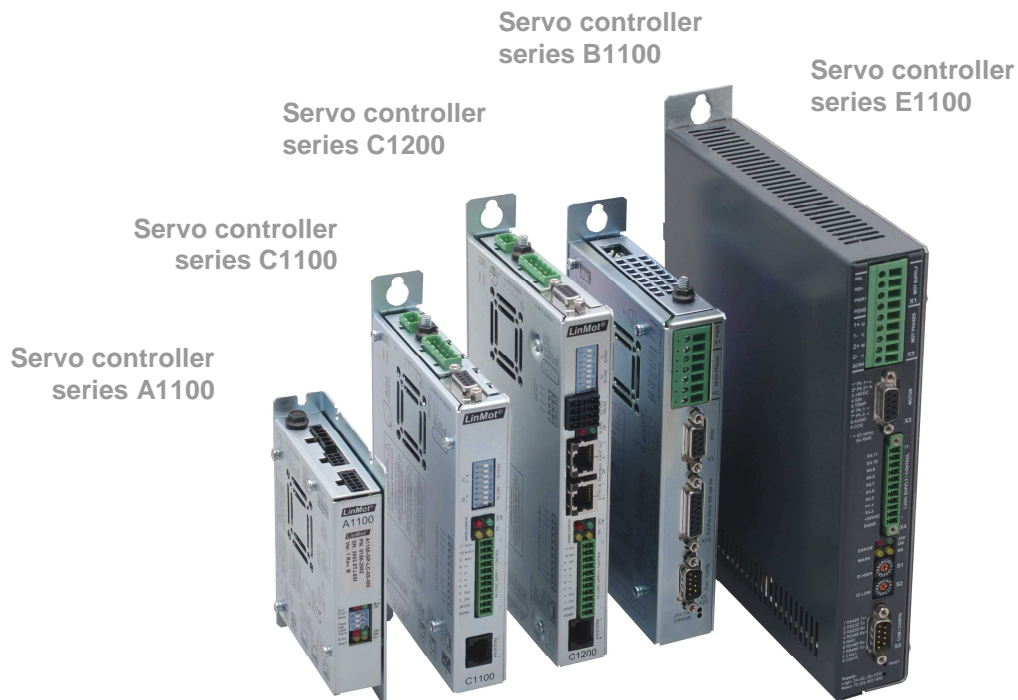
Motor data Overview

Motor type	peak force dep. on controller [N]	cont. force natuarl /fan cooling [N]	stator diameter [mm]	stator length [mm]	stator mass [g]	slider diameter [mm]	max. deliverable slider length [mm]	slider mass per 100mm length [g]	IP pro- tection class
P01-23x80 series									
P01-23Sx80/XXXxYYY	44	9 / 16	23	105	245	12	850	80	IP20
P01-23x80/XXXxYYY	44	9 / 16	23	162	265	12	850	80	IP67
P01-23x80F/XXXxYYY- HP	67	15 / 25	23	162	265	12	850	80	IP67
P01-23x160 series									
P01-23x160/XXXxYYY	63	17 / 32	23	242	450	12	850	80	IP67
P01-23x160F/XXXxYYY	86	17 / 32	23	242	450	12	850	80	IP67
P01-23x160H/XXXxYYY- HP	137	31 / 48	23	242	450	12	850	80	IP67
P01-37x120 series									
P01-37x120/XXXxYYY	163	29 / 54	37	216	740	20 / 19	1.600	223	IP67
P01-37x120F/XXXxYYY- HP	255	51 / 92	37	216	740	20 / 19	1.600	223	IP67
P01-37x240 series									
P01-37x240/XXXxYYY	203	53 / 100	37	336	1.385	20 / 19	1.600	223	IP67
P01-37x240F/XXXxYYY	308	53 / 100	37	336	1.385	20 / 19	1.600	224	IP67
P01-48x240 series									
P01-48x240/XXXxYYY	585	145 / 258	48	290	1.930	28 / 27	2.000	450	IP67
P01-48x240F/XXXxYYY	550	145 / 258	48	290	1.930	28 / 27	2.000	450	IP67
P01-48x360 series									
P01-48x360F/XXXxYYY	1.024	203 / 354	48	410	2.880	28 / 27	2.000	450	IP67
P01-37x120 stainless steel									
P01-37x120F-XXXxYYY- SSC	210	24 / 65	48	248	2.200	19	1.000	198	IP69K
P01-48x240 stainless steel									
P01-48x240F-XXXxYYY- SSC	496	86 / 241	60	345	3.710	27	2.000	416	IP69K
P01-48x360 stainless steel									
P01-48x360F-XXXxYYY- SSC	888	129 / 360	60	465	5.000	27	2.000	416	IP69K

XXX: short stroke range SS for maximum force
YYY: maximum stroke with reduced force at the edges.

The stator length is referring to the version with angle connectors.
Available stroke lengths are disclosed in the respective data sheets.
Technical changes reserved!

Servo Controllers



RS 232



CANopen

EtherCAT

RS 485



ETHERNET
POWERLINK

SERCOS
interface

A high diversity of controllers enables fast and easy realization of applications, as well as highly complex and precise multi-axes applications with synchronization to the main shaft.

The connection to machine controls can be made via manual or digital interfaces, fieldbusses or ETHERNET. The diversity of interfaces and protocols ensures the easy integration in a high-level PLC system, an industrial computer or a proprietary control.



control over position, speed, acceleration & force



motion profiles & oscillations



electronic cam disk with synchronization to the main shaft



digital trigger inputs & analog setpoint



serial communication, fieldbusses & industrial ETHERNET

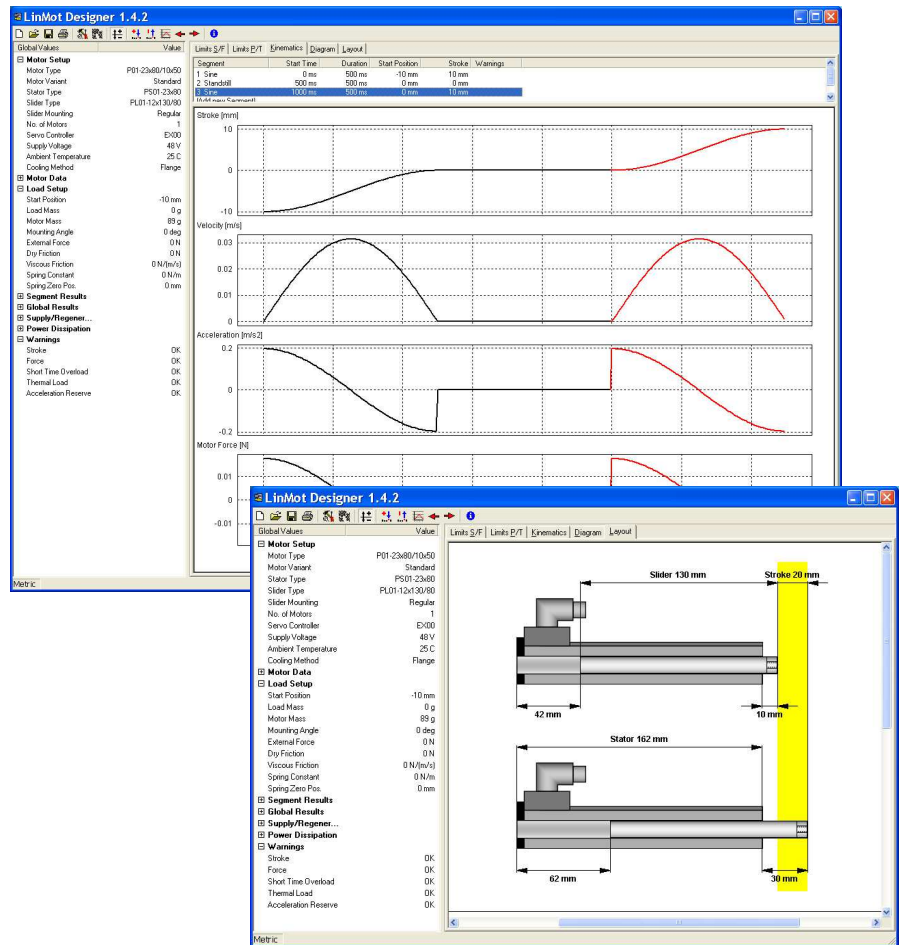
Software

Design Software

With the LinMot® Designer a configuration tool for linear motions is provided.

Applications can be analyzed within seconds and optimized by various criteria.

Suitable LinMot® drive components are chosen in the integrated data base, without the need to perform complex calculations manually.

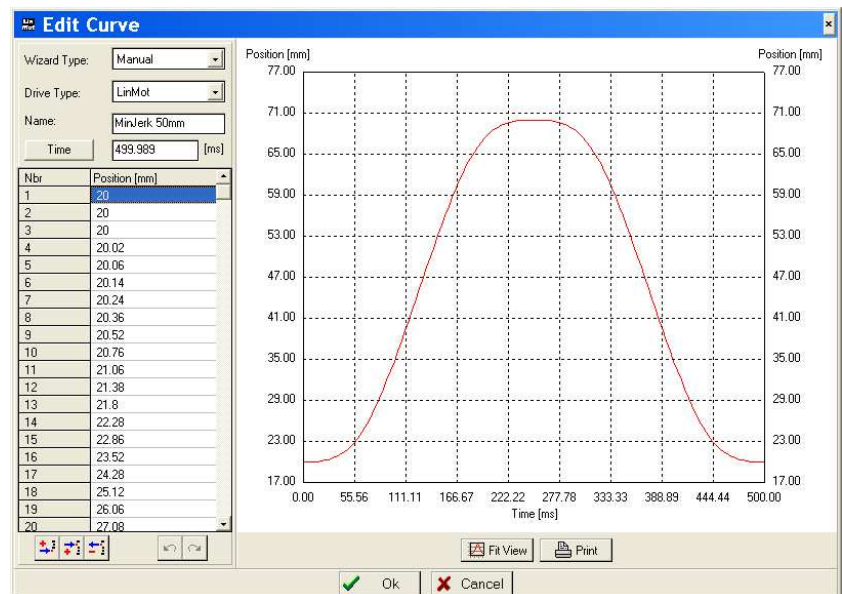


Operation & Parameterization Software

Geared to the user and his needs, two different versions of the operation and parameterization software are available.

A simple version allows beginners to realize the desired point-to-point motions.

Seasoned users can configure complex drive tasks and motions with the parameterization software LinMot® Talk.



**System integrator &
importer of LinMot® &
MagSpring® products
since 1999**



Power supplies



Controllers

**Linear motor systems
from a single source!**



Motor cables

**JUNG ANTRIEBSTECHNIK U.
AUTOMATION GMBH**

Felsweg 18
D-35435 Wettenberg

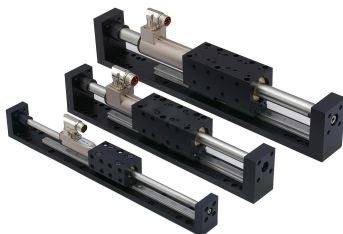
Tel.: +49-(0)641-48017-0
Fax: +49-(0)641-48017-15
eMail: ja2@ja2-gmbh.de
Web: www.ja2-gmbh.de
www.lin-mot.de

distributed by:

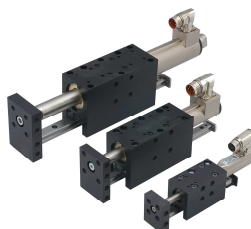
LinMot® und MagSpring® are registered
trademarks of NTI AG LinMot.
Technical changes reserved!
Revision: 19.11.2017 / ss021117



Motors



Linear guides



Linear modules



Flanges

Linear Motor Systems from a single source