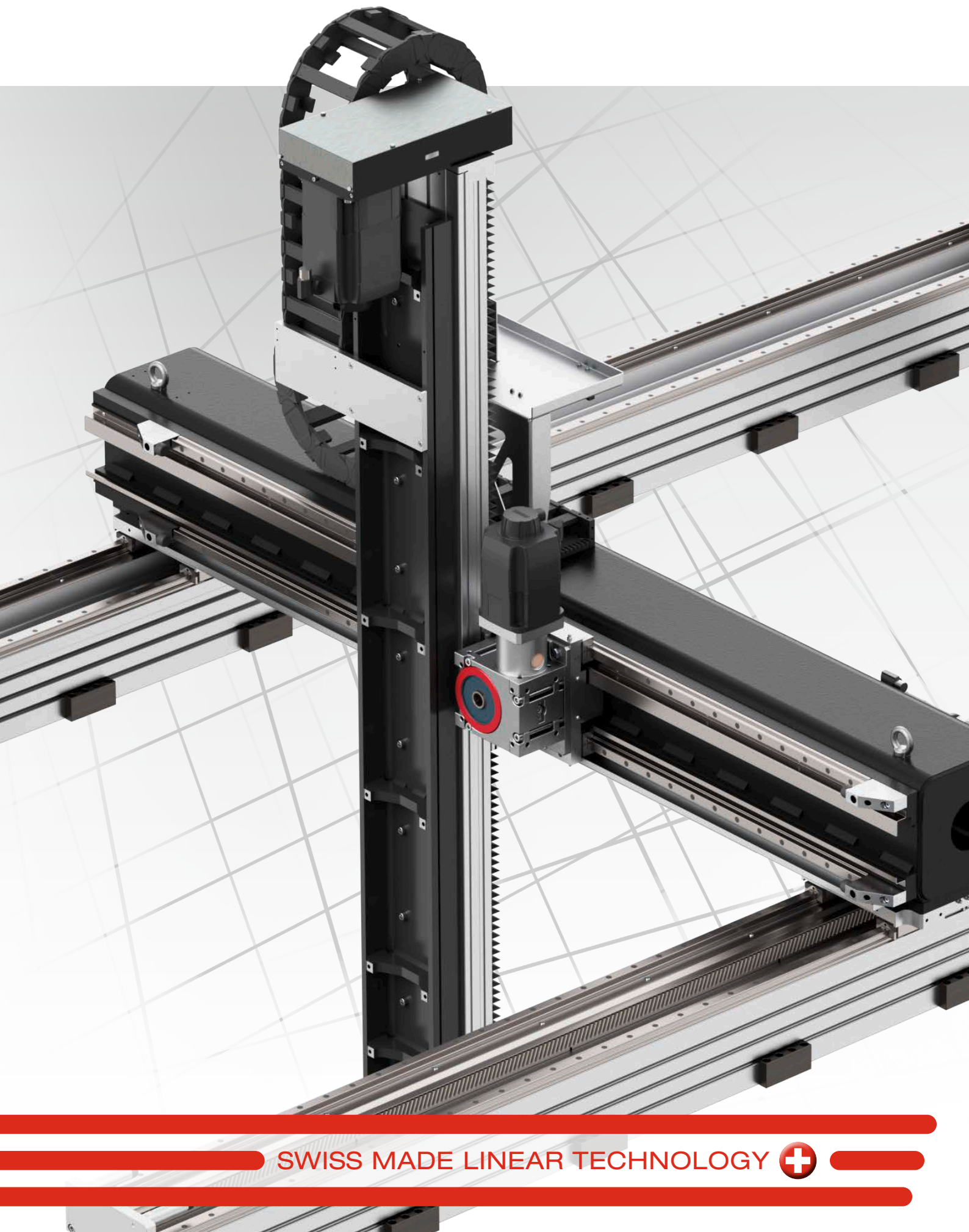
LINE TECH



SWISS MADE LINEAR TECHNOLOGY

LINETECH – SWISS MADE LINEAR TECHNOLOGY

Linear technology from engineering to system solution – 100% Swiss made

Providing movement – linear, high-precision, dynamic, flexible and unfailing – since 1993.

We are THE Swiss linear technology provider, firmly established in our home market and internationally linked with proven distribution partners. 2,000 satisfied customers and over 30,000 successfully completed projects are testimony to our expertise and reliability, from initial consultation to system commissioning and beyond.

"Innovative spirit and the drive to continuously develop are cornerstones of the LINETECH corporate culture, encouraging our staff to cross new boundaries. Only as a high-performance and entrepreneurial-minded team that embraces the individual skills of each member can we be successful – for and with our customers and partners."

Innovation is in our blood. With constant development and quality awareness in all our processes and at all levels, we are a future-oriented and reliable partner for our customers, suppliers and employees – for the success and benefit of all.

LINETECH Linear Units

The basis of the LINETECH product range is a comprehensive assortment of linear and positioning systems developed by our own engineers. LINETECH linear units – modular, ready-to-install linear axes – are 100% Swiss-made in our factory. They satisfy the highest standards of performance, precision and cost-effectiveness.

LINE TECH linear units are purpose-designed to meet a wide range of performance requirements.
The product range includes

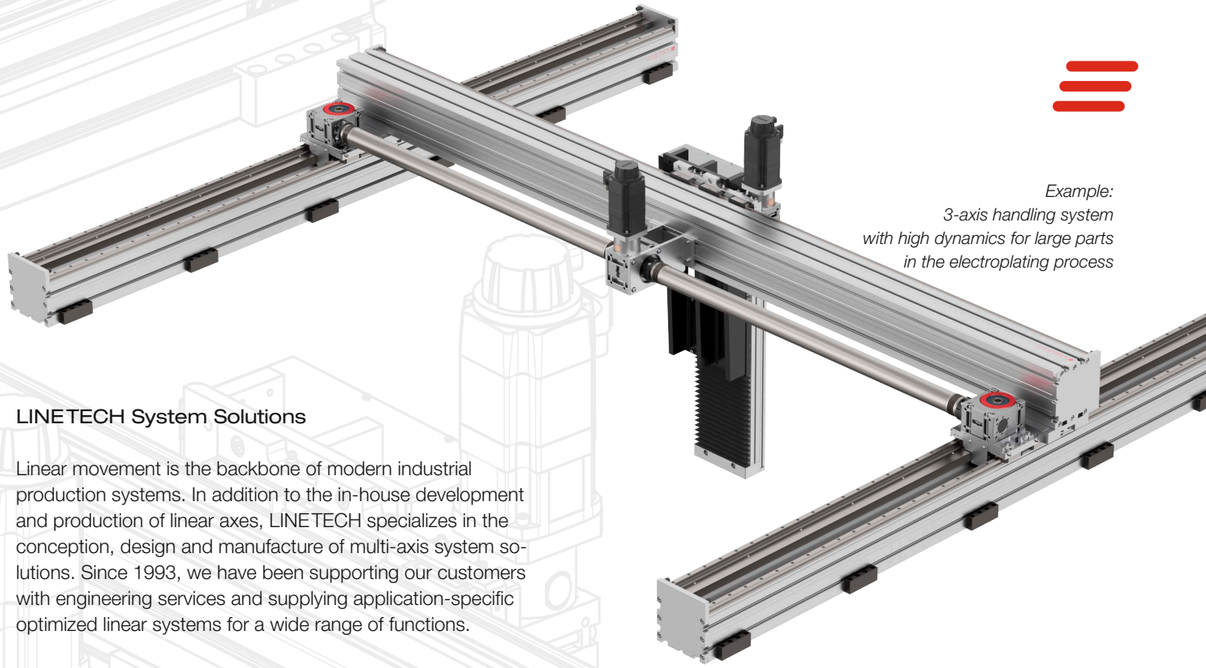
- Linear Modules
- Dynamic Modules
- Bridge Modules
- Compact Units
- Positioning Units.

For technical specifications see pages 4 to 8.

These product lines can be combined and are available in various sizes and versions to meet any application requirements.

Adaptations to meet specific customer needs can be realized flexibly and at short notice thanks to our JIT production facility – from minor additional processing to complete application-specific solutions.

Our customers always benefit from short delivery times thanks to our large warehouse with correspondingly high availability.



Example:
3-axis handling system with high dynamics for large parts in the electroplating process

LINETECH System Solutions

Linear movement is the backbone of modern industrial production systems. In addition to the in-house development and production of linear axes, LINETECH specializes in the conception, design and manufacture of multi-axis system solutions. Since 1993, we have been supporting our customers with engineering services and supplying application-specific optimized linear systems for a wide range of functions.

"Our customers get not just a product but a solution. According to their requirements, we work with passion to develop a custom system – exactly for their needs."

Of course, we also offer to support our customers with system commissioning, and our After Sales Service team is ready to respond rapidly and reliably in the event of any problems or questions throughout the entire service life of our products.

Linear Technology Components (Trade Products)

Thanks to our collaboration with renowned manufacturers such as cpc and NSK, to name the most important ones, we are also a full-service provider of linear technology components for our customers – from standard linear ball bearings to high-performance linear motors.

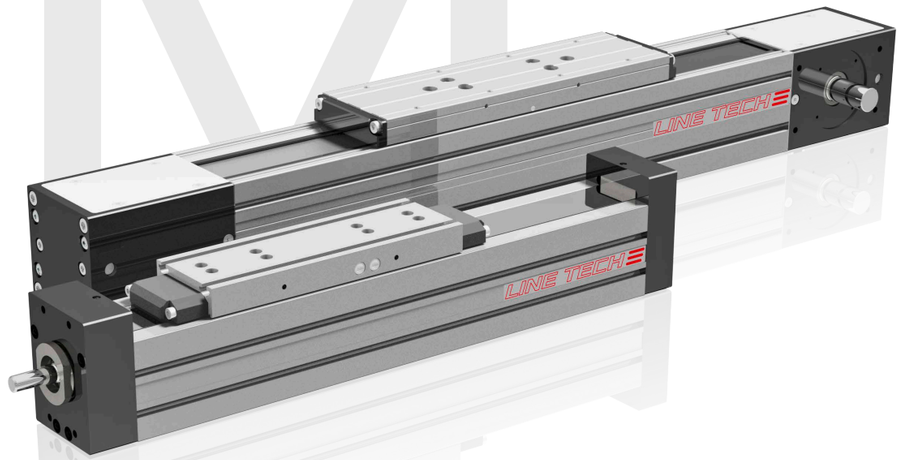
"Commitment and reliability are our top priority, true to our motto: We keep our promises, respond flexibly to our customers' needs and exceed expectations."

LINETECH, your reliable linear technology partner – from engineering to system solution.

Example:
3-axis system consisting of 6 modules for handling battery systems in the e-mobility industry

SN EN ISO 9001:2015
Certified

LINETECH LINEAR MODULES LM...Z... / LM...R...



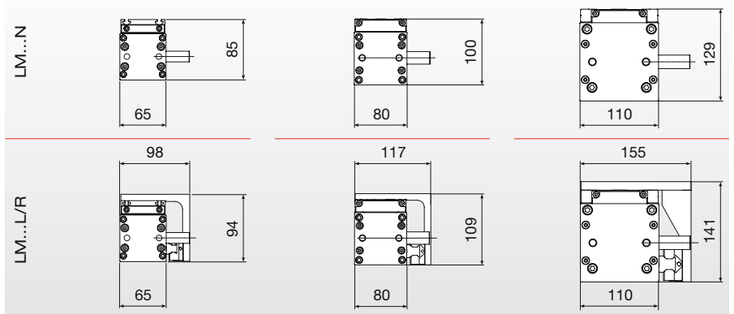
LINETECH Linear Modules
are ideal for applications with greater travel distances, high speeds and medium loads. These ready-to-install, modular linear axes are available with either an integrated (LM...N...) or a second outlying linear rail guide (LM...L/R...), both fitted with 2 runner blocks each. High-performance toothed belts (LM...Z...) or ball screws (LM...R...) are available as drives. Three sizes (LM3, LM4, and LM5) are currently available.

Design and advantages

- Ready-to-install linear modules
- Compact aluminium profile as base carrier
- Aluminium carriage
- Optimal movement characteristics, high load ratings and high rigidity due to one or optionally two zero-play linear rail guides
- Drive via either
  – Toothed belt (LM…Z…)
  – Ball screw (LM…R…)
- Simple gearbox and motor mounting
- Design can be adapted to the application

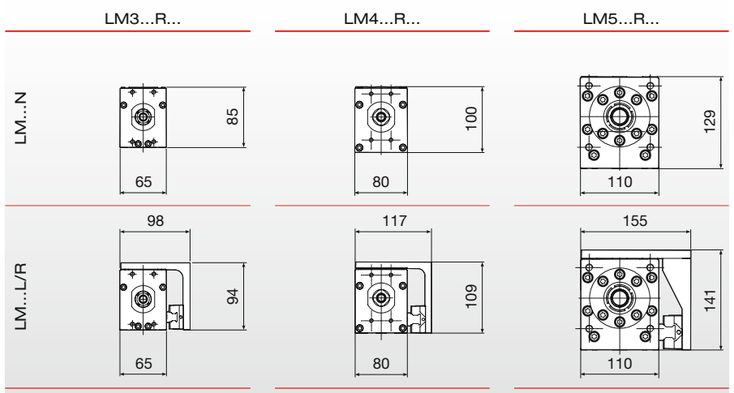
Profiles of Linear Modules LM...Z... with toothed belt drive

LM3...Z... | LM4...Z... | LM5...Z...



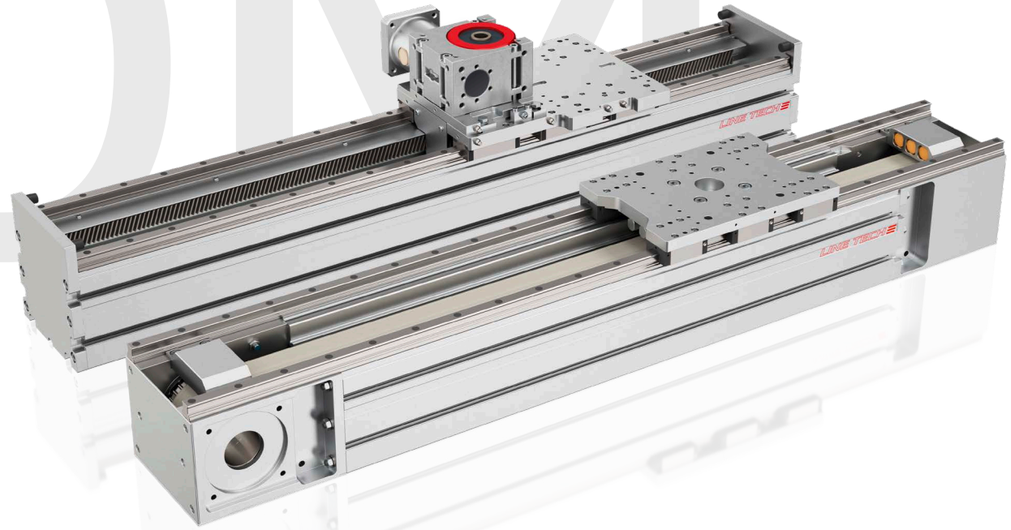
Profiles of Linear Modules LM...R... with ball screw drive

LM3...R... | LM4...R... | LM5...R...



For technical data see pages 10–13

LINETECH DYNAMIC MODULES DM...ZR... / DM...ZS...



LINETECH Dynamic Modules
are designed for applications with high loads and very short cycle times. Thanks to the special design of the extruded aluminium profiles, the base carriers have very high torsional rigidity and are suitable as long-stroke, self-supporting axes. With two integrated linear rail guides with a total of 4 to 6 runner blocks as well as powerful drives via high-performance rack and pinions (DM...ZS...) or toothed belts (DM...ZR...), LINETECH dynamic modules meet the highest demands in terms of load capacity, dynamics and service life. Two sizes (DM2 and DM3) are currently available.

Design and advantages

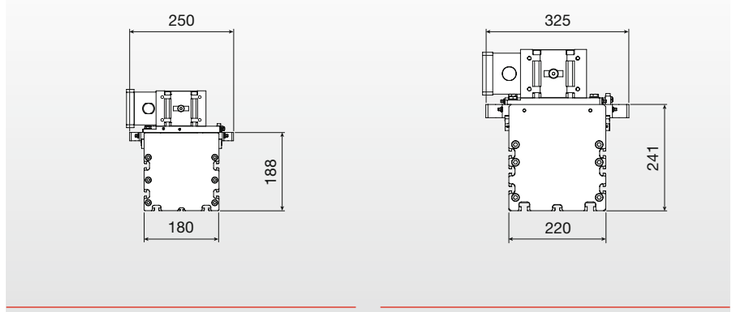
- Ready-to-install dynamic modules
- Torsion-resistant aluminium profile as base carrier
- Aluminium carriage
- Optimal movement characteristics, high load ratings and high rigidity due to two integrated, zero-play linear rail guides with a total of either 4 or 6 runner blocks
- Drive via either
  – Toothed belt (DM…ZR…)
  – Rack and pinion (DM…ZS…)
- Simple gearbox and motor mounting
- Design can be adapted to the application

Profiles of Dynamic Modules DM...ZR... with toothed belt drive

DM2.ZR... | DM3.ZR...

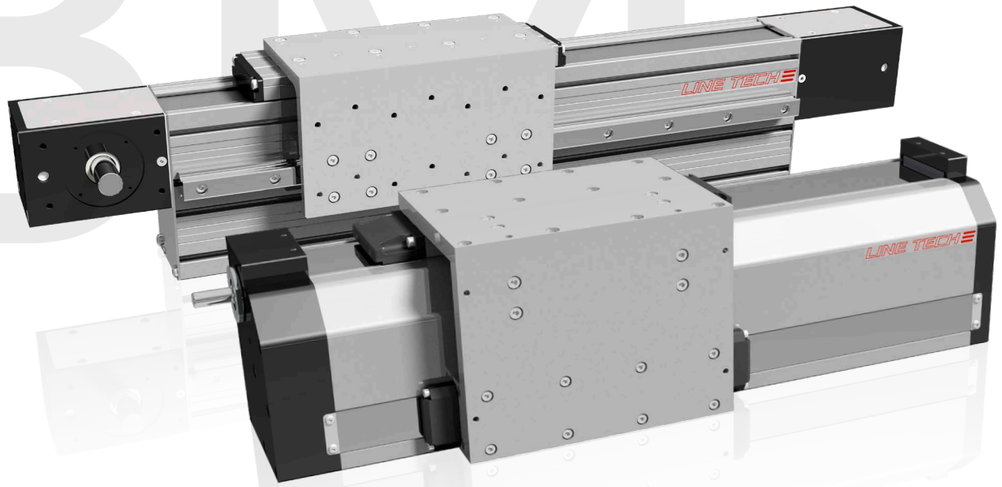
Profiles of Dynamic Modules DM...ZS... with rack and pinion drive

DM2.ZS... | DM3.ZS...



For technical data see pages 10–13

LINETECH BRIDGE MODULES BM...Z... / BM...R...



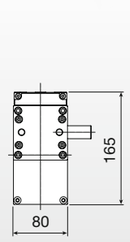
LINETECH Bridge Modules
are especially suitable as self-supporting long-stroke portal axes or axes with higher intrinsic inertia. These ready-to-install, modular linear axes are available in one size (BM4) and provided with an integrated linear rail guide and type-specifically with a second lateral linear rail guide. High-performance toothed belts or ball screws are available as drives.

Design and advantages

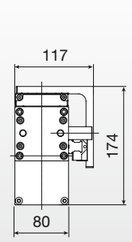
- Ready-to-install bridge modules
- Ultra-strong aluminium profile as base carrier
- Aluminium carriage
- Optimal movement characteristics combined with high load ratings and high rigidity due to either one or two linear rail guides
- Drive via either
  – Toothed belt (BM…Z…)
  – Ball screw (BM…R…)
- Simple gearbox and motor mounting
- Suitable for multi-axis systems
- Design can be adapted to the application

Profiles of Bridge Modules BM...Z... with toothed belt drive

BM4...Z...N...

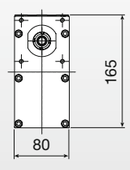


BM4...Z...L/R...

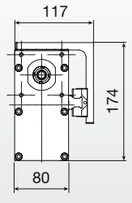


Profiles of Bridge Modules BM...R... with ball screw drive

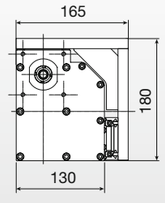
BM4...R...N...



BM4...R...L/R...



BM4...R...V/W...



For technical data see pages 10–13

LINETECH COMPACT UNITS KE...Z... / KE...R...

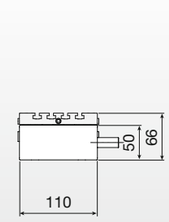
LINETECH Compact Units
are suitable for applications with medium-to-high load and precision requirements. These linear systems have a modular design and are each equipped with two linear rail guides and a total of either 2 or 4 runner blocks. High-performance toothed belts or ball screws of various types are used as drives. The version with toothed belt drive is currently available in one size (KE2...Z...), the version with ball screw in three sizes (KE1...R..., KE2...R... and KE3...R...).

Design and advantages

- Ready-to-install compact units
- Extremely compact design
- Aluminium profile as base carrier
- Aluminium carriage
- Optimal movement characteristics combined with high load ratings and high rigidity due to either 2 (KE…2…) or 4 (KE…4…) integrated runner blocks
- With/without connecting plate (KE…V…)
- Drive via either
  – Toothed belt (KE…Z…)
  – Ball screw (KE…R…)
- Simple gearbox and motor mounting
- Suitable for cross-table mounting and multi-axis systems
- Design can be adapted to the application

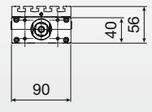
Profile of Compact Unit KE...Z... with toothed belt drive

KE2...Z...

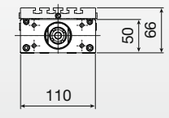


Profiles of Compact Units KE...R... with ball screw drive

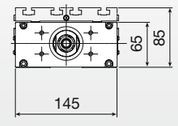
KE1...R...



KE2...R...

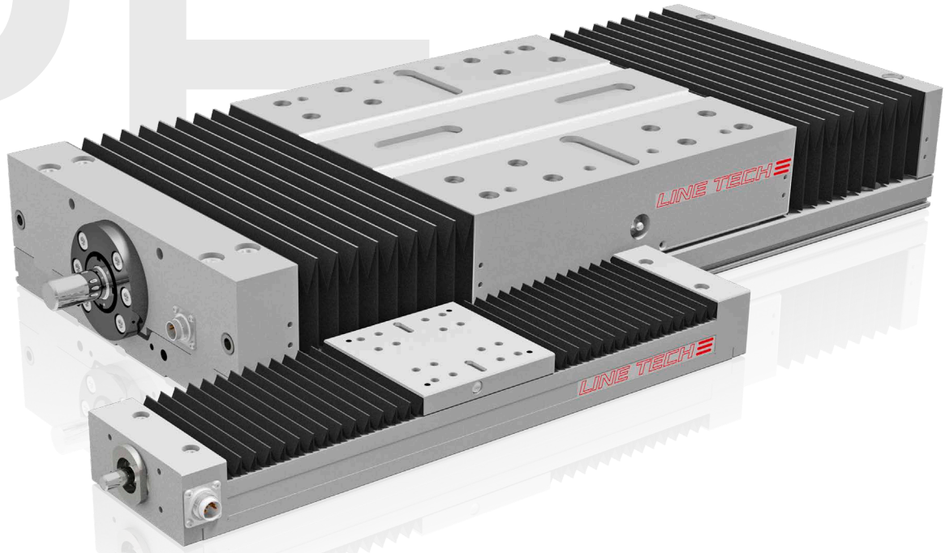


KE3...R...



For technical data see pages 10–13

LINETECH POSITIONING UNITS PE...R...



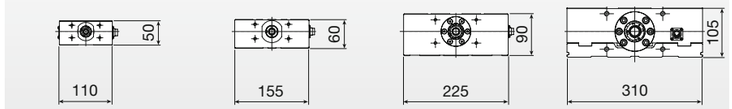
LINETECH Positioning Units are developed for the highest performance and precision requirements. These linear systems, available in four sizes (PE1, PE2, PE3 and PE4), have a modular design and are each equipped with two linear rail guides with a total of 4 runner blocks. Ball screws of various types are used as drives.
LINETECH positioning units are thus particularly suitable for applications with the highest demands on precision, rigidity and load rating.

Design and advantages

- Ready-to-install positioning units
- Compact design
- Solid aluminium profile as base carrier
- Solid aluminium carriage
- High-precision movement combined with highest load ratings and extreme rigidity
- Ball screw drive
- Bellows cover
- Simple gearbox and motor mounting
- Suitable for cross-table mounting and multi-axis systems
- Design can be adapted to the application

Profiles of Positioning Units PE...R... with ball screw drive

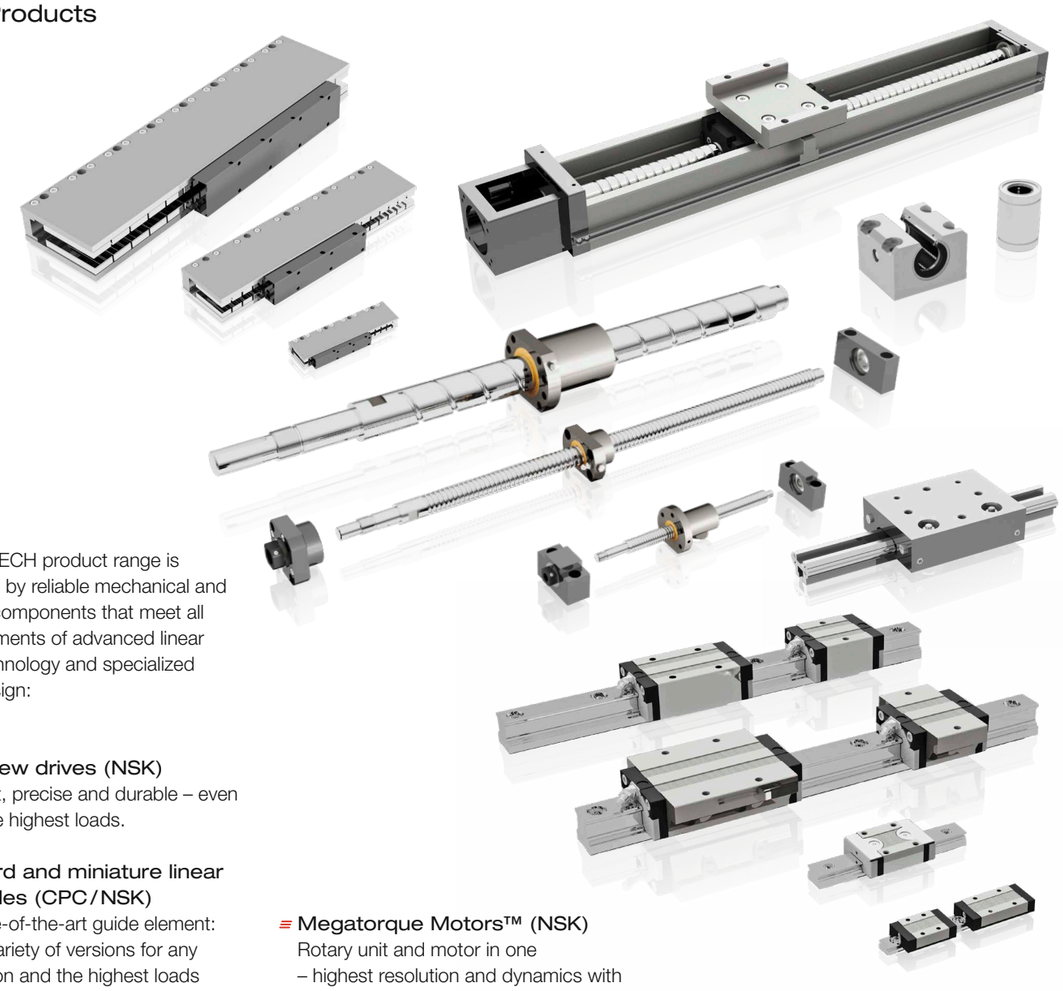
PE1...R... | PE2...R... | PE3...R... | PE4...R...



For technical data see pages 10–13

LINEAR TECHNOLOGY COMPONENTS

Trade Products



The LINE TECH product range is augmented by reliable mechanical and electronic components that meet all the requirements of advanced linear motion technology and specialized system design:

- **Ball screw drives (NSK)**
  Compact, precise and durable – even under the highest loads.

- **Standard and miniature linear rail guides (CPC / NSK)**
  The state-of-the-art guide element: A wide variety of versions for any application and the highest loads – robust and precise with long service life.
  Cutting and machining service for rail guides.

- **Roller guides (CPC / NSK)**
  For the highest requirements for load ratings and rigidity. Durable, quiet and dirt-resistant.
  Cutting and machining service for rail guides.

- **Linear motors (CPC)**
  The powerful drive for highest speeds – quiet, precise, compact and efficient. Ideal for cleanroom applications.

- **Megatorque Motors™ (NSK)**
  Rotary unit and motor in one – highest resolution and dynamics with compact dimensions.

- **Monocarrier (NSK)**
  Compact standard linear axes for building simple linear systems.

- **Bearing units for screw drives (NSK)**
  Upright and flanged bearing units for simple and precise mounting of ball screw drives.

- **Ball bushings, shafts, and accessories**
  The proven standard and special guide elements – precise and highly efficient.

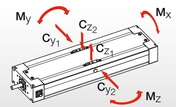
Thanks to our large warehouse with correspondingly high availability, our customers always benefit from quick delivery times.

CPC contracting partner for Switzerland

LINE TECH is the exclusive distributor of the entire CPC product range in Switzerland.

cpc CHIEFTEK PRECISION CO., LTD.

LINETECH LINEAR UNITS – STANDARD RANGE



		TOOTHED BELT DRIVE												BALL SCREW DRIVE																RACK AND PINION DRIVE	
		LINEAR MODULES LM...Z...						DYNAMIC MODULES DM...ZR...		BRIDGE MODULES BM...Z...		COMPACT UNIT KE...Z...		LINEAR MODULES LM...R...						BRIDGE MODULES BM...R...			COMPACT UNITS KE...R...					POSITIONING UNITS PE...R...				DYNAMIC MODULES DM...ZS...	
Type / Size		LM3..N	LM3..L/R	LM4..N	LM4..L/R	LM5..N	LM5..L/R	DM2	DM3	BM4..N	BM4..L/R	KE2.2	KE2.4	LM3..N	LM3..L/R	LM4..N	LM4..L/R	LM5..N	LM5..L/R	BM4..N	BM4..L/R	BM4..V/W	KE1.2	KE1.4	KE2.2	KE2.4	KE3.2	KE3.4	PE1	PE2	PE3	PE4	DM2	DM3
Profile																																	
Dimensions / Characteristics	Profile cross-section	[mm]	65 x 85	98 x 94	80 x 100	117 x 109	110 x 129	155 x 141	180 x 188	220 x 231	80 x 165	117 x 174	110 x 50		65 x 85	98 x 94	80 x 100	117 x 109	110 x 129	155 x 141	80 x 165	117 x 174	165 x 180	90 x 40		110 x 50		145 x 65		110 x 50	155 x 60	225 x 90	310 x 105	180 x 188	220 x 241
	Max. travel / stroke [3]	[mm]	7650		7580		7530		6360	6250	6180		5700		2000		3000		3000		3000			1315	1250	1375	1290	1850	1750	1500	2000	3000	3000	5550	5450
	Stroke per revolution	[mm]	155		205		296		320	392	205		120		5 / 10 / 16		5 / 20		5 / 10 / 32		20			5 / 10		5 / 10 / 16		5 / 10 / 20		5 / 10 / 16	5 / 20	5 / 10 / 25	5 / 10 / 32	133.332	160.001
	Protective covering	[–]	with / without steel strip						without cover		with / without steel strip		without steel strip		with / without steel strip						with / without steel strip			with / without synthetic ribbons						with / without expansion bellows				without cover	
	Repeating accuracy	[mm]	< 0.20 [4]						± 0.05 [4]		< 0.20 [4]		< 0.20 [4]		< 0.03						< 0.03			< 0.03						< 0.01				± 0.02 [4]	
	Temperature range	[°C]	+5…+80						+5…+80		+5…+80		+5…+80		+5…+80						+5…+80			+5…+80						+5…+80				+5…+80	
Static	Load rating $C_{y\,0,2}$	[kN]	35.0	70.0	59.9	119.9	85.0	170.0	162.0	311.5	59.9	119.9	35	70	35.0	70.0	59.9	119.9	85.0	170.0	59.9	119.9	119.9	11.2	22.5	35.0	70.0	59.9	119.9	13.8	42.5	59.2	230.5	192.6	311.5
	Load rating $C_{z\,0,1}$	[kN]	35.0	70.0	59.9	119.9	85.0	170.0	162.0	311.5	59.9	119.9	35	70	35.0	70.0	59.9	119.9	85.0	170.0	59.9	119.9	119.9	11.2	22.5	35.0	70.0	59.9	119.9	13.8	50.7	70.5	274.5	192.6	311.5
	Load rating $C_{z\,0,2}$	[kN]	35.0	70.0	59.9	119.9	85.0	170.0	162.0	311.5	59.9	119.9	35	70	35.0	70.0	59.9	119.9	85.0	170.0	59.9	119.9	119.9	11.2	22.5	35.0	70.0	59.9	119.9	13.8	67.6	94.0	366	192.6	311.5
	Axial load rating $F_{x\,0}$	[N]	1560		2200		5280		4500	7200	2200		2100		4551		5705		11538		5705			3333		4551		5705		4551	5705	7308	11538	depends on speed and load	
	Torque $M_{x\,0}$	[Nm]	286	1457	646	3030	1080	3356	12310	29600	646	3030	1064	2120	286	1456	646	3030	1080	5588	646	3030	4926	275	550	1064	2120	2427	4854	422	2457	4757	30195	14630	29600
	Torque $M_{y\,0}$	[Nm]	1185	2610	2484	4772	6115	12513	12080	35950	1573	3860	204	1926	1353	2778	1573	3860	2316	8715	1107	3395	3523	60	330	204	1400	266	2100	380	2230	4617	26625	15110	35950
	Torque $M_{z\,0}$	[Nm]	1185	2610	2484	4772	6115	12513	12080	35950	1573	3860	204	1820	1353	2778	1573	3860	2316	8715	1107	3395	3523	60	330	204	1392	266	2100	380	1872	3877	22365	15110	35950
Dynamic [1]	Load rating $C_{y\,1,2}$	[kN]	18.0	36.0	34.2	68.4	49.6	99.2	116.3	208.8	34.2	68.4	18	36	18.0	36.0	34.2	68.4	49.6	99.2	34.2	68.4	68.4	6.5	13.0	18.0	36.0	34.2	68.4	9.2	29.3	41.4	161.9	131.3	208.8
	Load rating $C_{z\,1,2}$	[kN]	18.0	36.0	34.2	68.4	49.6	99.2	116.3	208.8	34.2	68.4	18	36	18.0	36.0	34.2	68.4	49.6	99.2	34.2	68.4	68.4	6.5	13.0	18.0	36.0	34.2	68.4	9.2	33.4	46.8	184.0	131.3	208.8
	Axial load rating F_x	[N]	depends on application						depends on application		depends on application		depends on application		4327		4912		8947		4912			3099		4327		4912		4327	4912	6140	8947	depends on speed and load	
	Torque M_x	[Nm]	160	808	400	1868	684	2136	8840	19840	400	1868	590	1180	160	808	400	1868	684	3552	400	1868	3060	158	316	590	1180	1507	3014	281	1618	3157	20240	9980	19840
	Torque M_y	[Nm]	923	1998	2130	4115	5170	10541	8790	24470	1446	2432	226	1542	1030	2016	1446	3432	2290	7659	1069	3056	3150	35	210	226	1180	202	2044	253	1469	3065	17547	10620	24470
	Torque M_z	[Nm]	923	1998	2130	4115	5170	10541	8790	24470	1446	2432	226	1542	880	2016	1446	3432	2290	7659	1069	3056	3150	35	210	226	1180	202	2044	253	1290	2691	15708	10620	24470
Dynamic	Max. speed [2]	[m/s]	5.0						5.0		5.0		5.0		1.6 [5]						1.6 [5]			1.6 [5]		1.6 [5]				1.6 [5]				5.0	
	Max. acceleration [2]	[m/s²]	50.0						50.0		50.0		50.0		10.0						10.0			10.0						10.0				50.0	

The indicated values are standard values. For special solutions please contact our technical sales team.

[1] Regarding durability we recommend loads of max. 20% of the dynamic load ratings

[2] Higher requirements on request

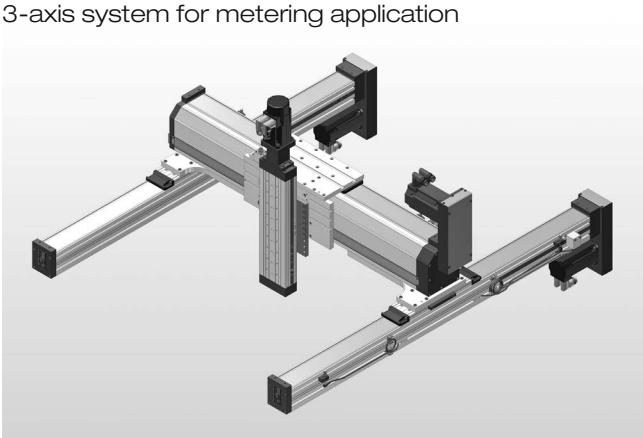
[3] Longer strokes possible with butt-jointed profiles

[4] per 1000 mm stroke

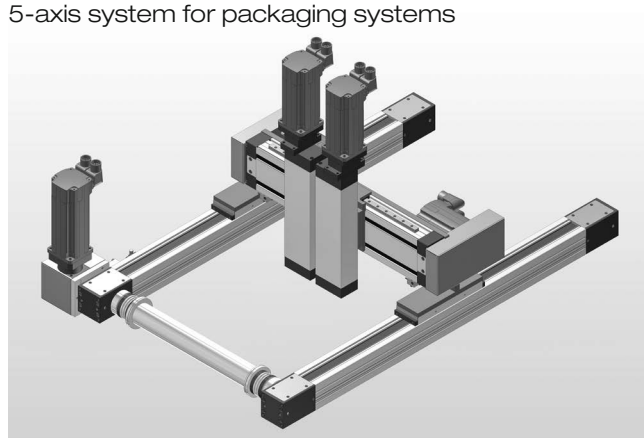
[5] Depends on rotational speed characteristics and the critical rotational speed

Further application examples

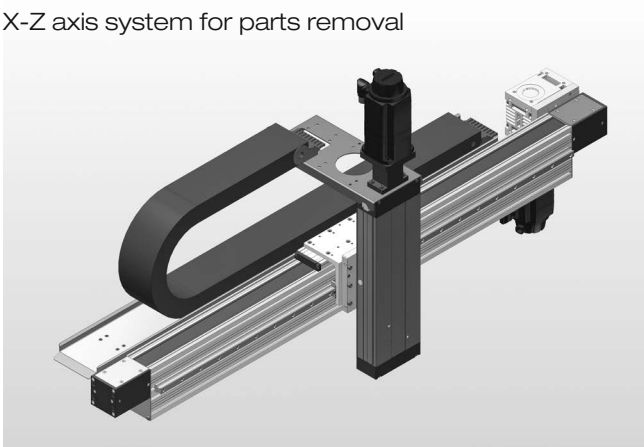
3-axis system for metering application



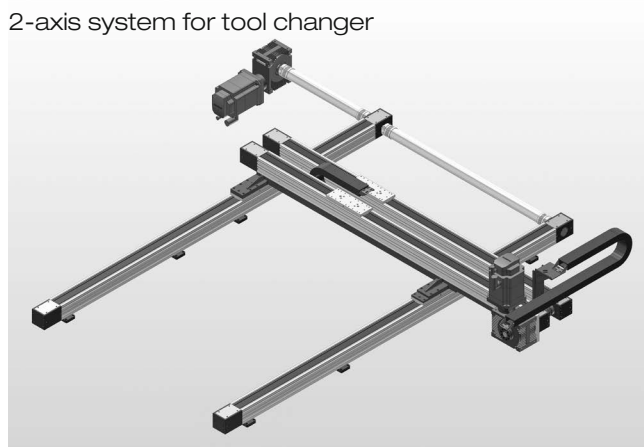
5-axis system for packaging systems



X-Z axis system for parts removal



2-axis system for tool changer



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