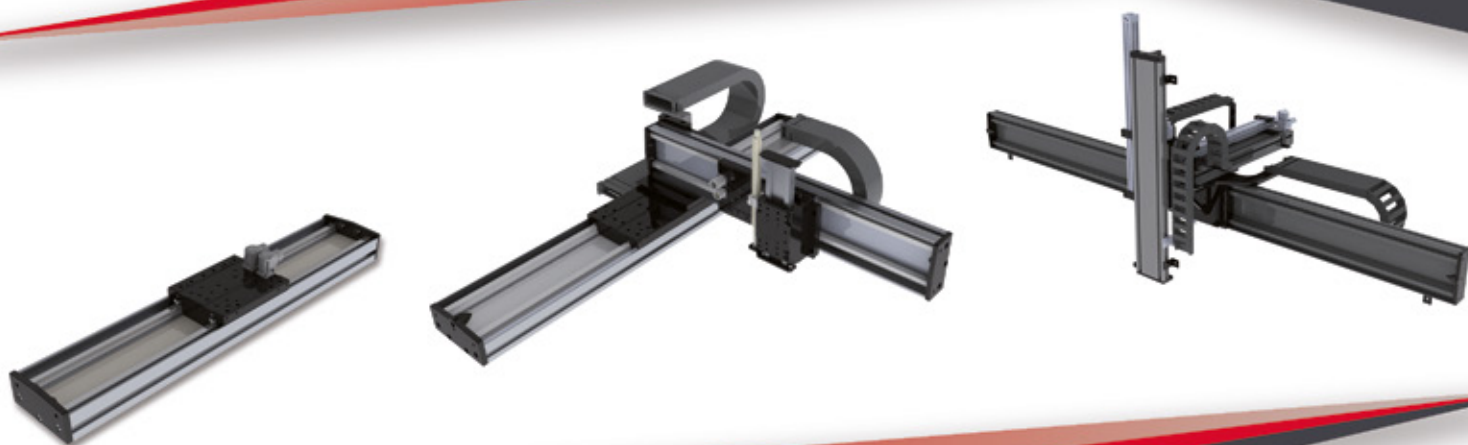


Product Catalogue



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Introduction

The ever-growing needs of machines for automatic assembly, demand high quality and reliance for all components, especially those that perform to make millions of cycles. As a competent partner in electromechanical solutions, SINADRIVES provides innovative products for fast and precise positioning. Thanks to standard plug & play linear units, we can offer customised and flexible solutions for packaging, plastics, pharmaceutical, or photovoltaic sectors.

The aim of SINADRIVES linear units is to make the work of technicians and engineers easier. Ready 3D models, assembled with power chains, as well as different multi axis combinations provide solutions ready for fast and precise positioning. Everything is included: profile, guides, linear motor, measuring system, end blocks, plug M23 connectors, limit switches, and power chain. The linear motor based on synchronous technology, offers considerable advantages in dynamics, accuracy, and durability. The integrated oil supply in the guide allows it to operate without any maintenance. MLE and MLU motors are compatible with the best amplifiers in the world market. Just use your usual amplifier to achieve fast commissioning of your application.

MLE/MCE/MLZ Series

All linear units in the MLE series are fully integrated and ready for plug and play. The powerful iron core motor in combination with the most compact linear unit provide an opportunity to integrate them in high speed applications.

MLU Series

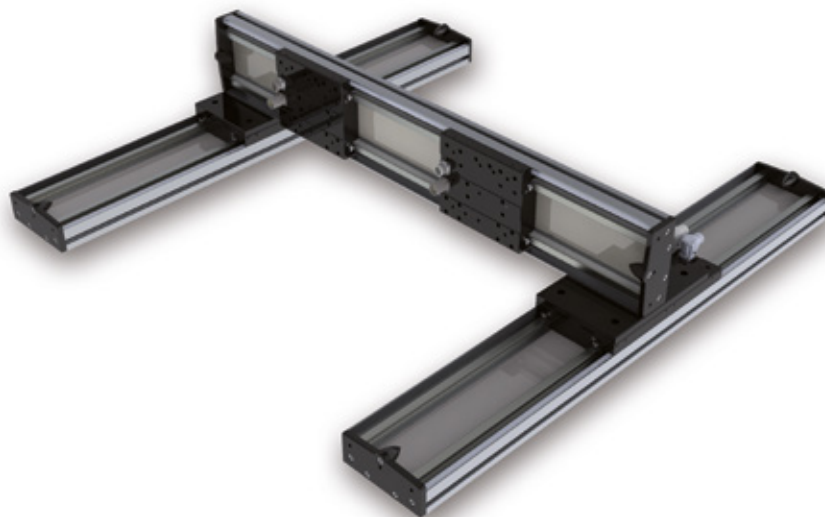
The MLU series are fully integrated linear units with ironless motors. Their lightweight compact design offers a good choice for a wide range of pharmaceutical and medical applications.

MLL/MLLZ Series

The MLL-Series: New price-optimised linear motor axis. Strokes up to 2000 mm are comparable in price with solutions based on tooth belt drives or ball screws. This means that, for the same price, you have the possibility to integrate better and extremely modern Direct Drive technology in your machine.

Systems

Thanks to our standard linear motor stages, we can build complex systems with two or three axes. We have solutions for a wide range of applications, with ready 3D drawings. Please see the next page to find our solutions.



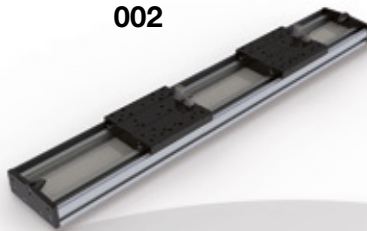
Our Solutions

Innovation & Excellence

001



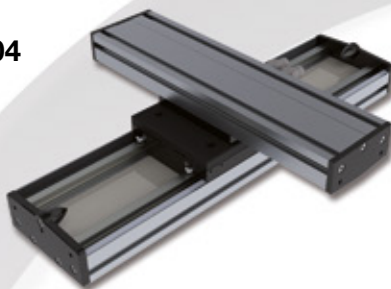
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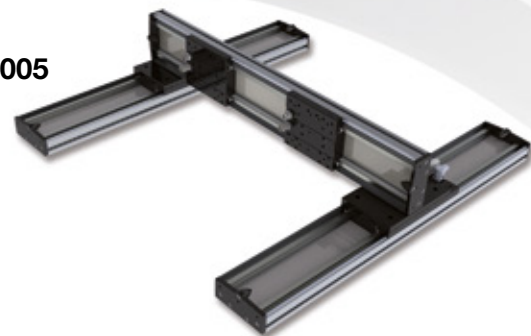
003



004



005



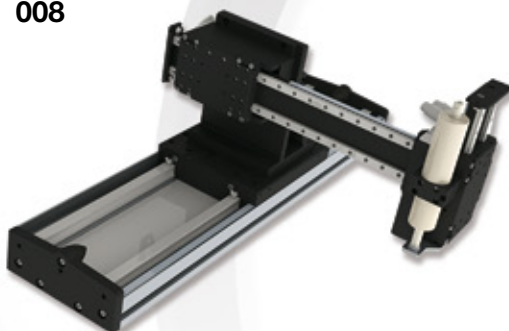
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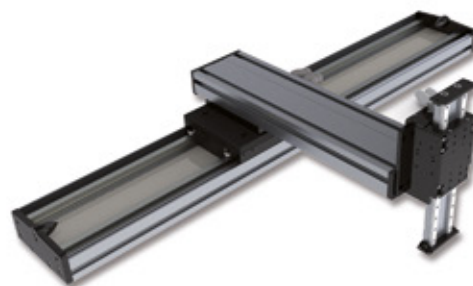
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008



009



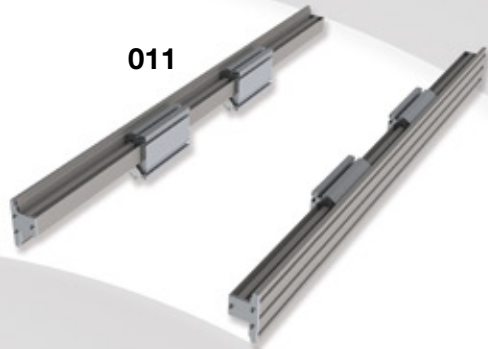
Our Solutions

Innovation & Excellence

010



011



012



013

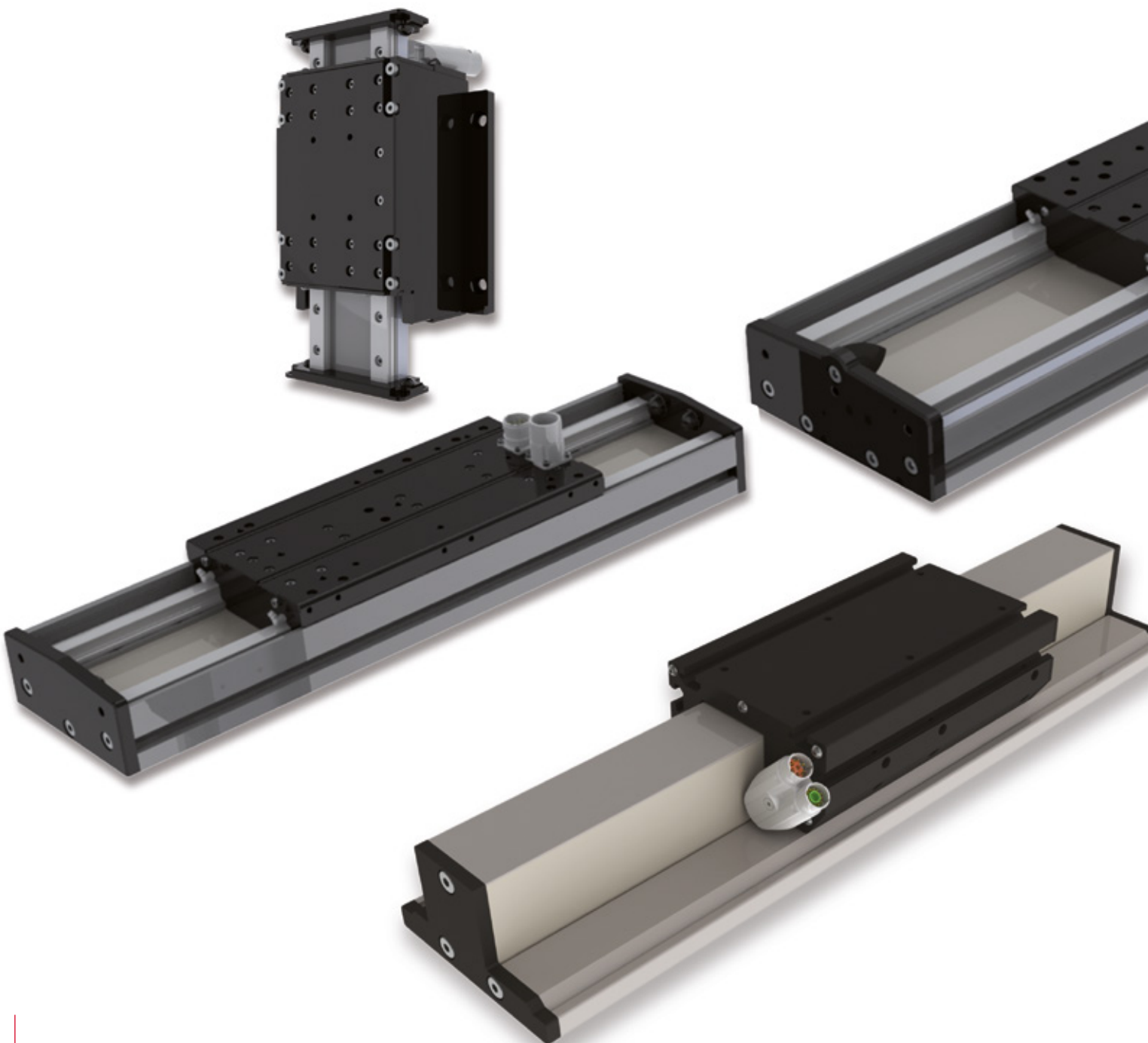


014



MLE & MLZ Series

1. Low maintenance linear units for application with high-dynamic, high-precision and long-life expectancy.
2. Linear units with profile, linear motor, linear guideways, encoder, end switch and power chain.
3. High-end linear motor special for Pick& Place, Semiconductor and/or Pharmaceutical industry.
4. Incremental measuring system with 1 Vpp/TTL output and 1 μm repeatability.
5. Absolute measuring system with EnDat ¹⁾, Drive Cliq ²⁾, Panasonic, SSI, Fanuc, Mitsubishi, BiSS and 0,1 μm resolution.



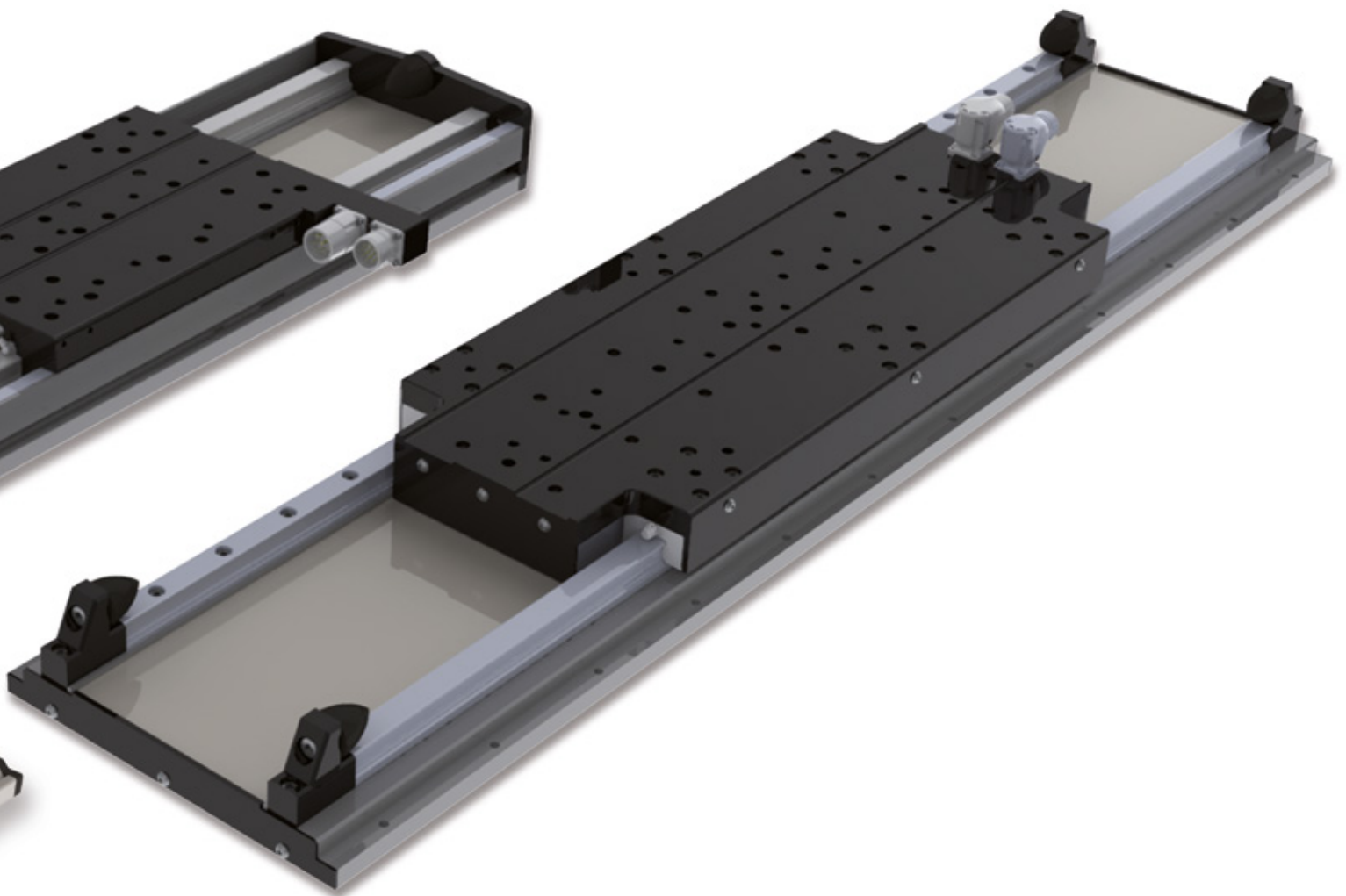
⁽¹⁾ EnDat 2.2 is a protected trademark of the Johannes Heidenhain GmbH company

⁽²⁾ DriveCliq is a protected trademark of the Siemens joint-stock company

>> Compatible Servo amplifiers



>> Operating voltage 24 - 600Vdc, up to 900Vdc for breaking



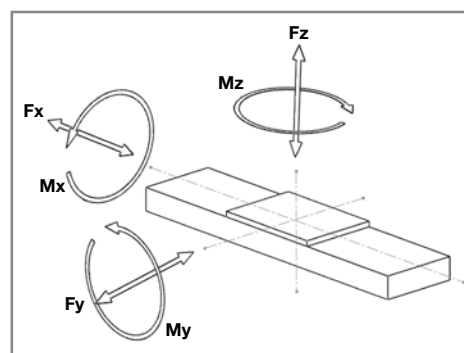
- 6. Completely wired connectors, ready to connect to a servo amplifier.
- 7. Oversized linear guides for high load moments. Low-maintenance up to 10.000 km. Centralised lubrication system possible as an option.
- 8. Completely integrated power chain with mounting plates.
- 9. Optional: stainless linear guideways and protective covers.

MLE 2 linear motor stages

Technical Description



Repeatability of measuring system: $\pm 1 \mu\text{m}$
 Repeatability of linear unit: $\pm 10 \mu\text{m}$
 Maximum speed: 9 m/s
 Maximum acceleration: 95 m/s^2
 Maximum Length without joints: up to 6.000 mm
 Operating voltage: 600Vdc
 Max. Operating voltage: 900Vdc



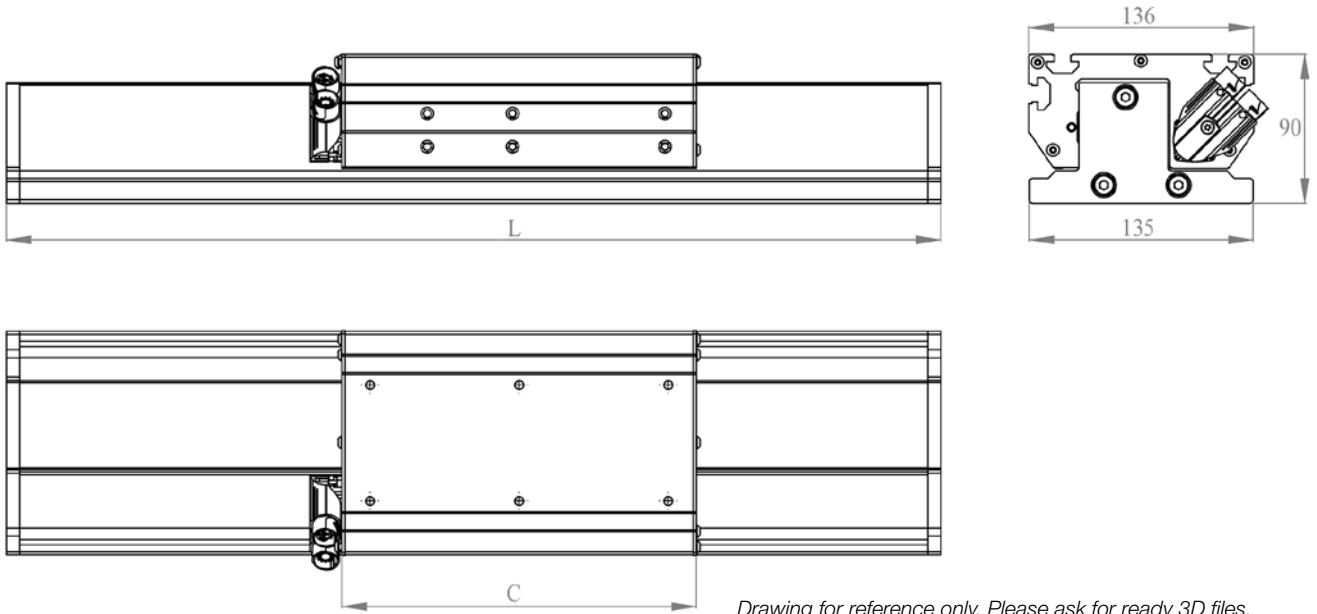
Mechanical specifications

Linear motor stage		MLE 20210	MLE 20210	MLE 20420	MLE 20630
Carriage type		S	R	S	S
Linear motor features					
Maximum speed ¹⁾	m/s	3			
Continuous force aircooled ²⁾	N	105	105	210	315
Peak force	N	210	210	420	630
Nominal current	A	3,0	3,0	6,0	4,5
Peak current	A	6,2	6,2	12,4	9,2
Guidance features					
Fy	N	900	900	900	900
Fz	N	900	900	900	900
Mx	Nm	70	70	70	85
My	Nm	200	300	300	350
Mz	Nm	200	300	300	350
For the sum of all forces and moments:	$\frac{F_{ye}}{F_y} + \frac{F_{ze}}{F_z} + \frac{M_{xe}}{M_x} + \frac{M_{ye}}{M_y} + \frac{M_{ze}}{M_z} < 1$	(Xxe = calculated value) (Xx = max. catalogue value)			
Structure profile features					
Geometrical moments of inertia Lx	mm ⁴	13,43x10 ⁵			
Geometrical moments of inertia Ly	mm ⁴	27,75x10 ⁵			
Elastic module	N/mm ²	70000			
Weight					
Weight of carriage	kg	3,1	4,2	4,5	6,0
Weight of 100 mm	kg	1,25			

⁽¹⁾ for a lifetime > 30.000 Km

⁽²⁾ depending on the application and ambient temperature

Dimensions MLE 2



Choice of stroke

Linear motor stage	MLE 20210	MLE 20210	MLE 20420	MLE 20630
Carriage type	S	R	S	S
Carriage length C, mm	218	316	316	411

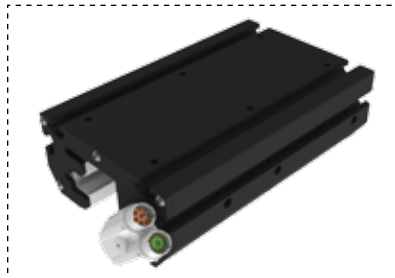
Length, mm	Code	Stroke ¹⁾			
324	00324	70	-	-	-
420	00420	166	68	68	-
564	00564	310	212	212	117
708	00708	454	356	356	261
804	00804	550	452	452	357
948	00948	694	596	596	501
1092	01092	838	740	740	645
1188	01188	934	836	836	741
1332	01332	1078	980	980	885
1476	01476	1222	1124	1124	1029
1572	01572	1318	1220	1220	1125
1716	01716	1462	1364	1364	1269
1860	01860	1606	1508	1508	1413
1956	01956	1702	1604	1604	1509
2100	02100	1846	1748	1748	1653
2244	02244	1990	1892	1892	1797
2340	02340	2086	1988	1988	1893
2484	02484	2230	2132	2132	2037
2628	02628	2374	2276	2276	2181
2724	02724	2470	2372	2372	2277
2868	02868	2614	2516	2516	2421
3012	03012	2758	2660	2660	2565
3108	03108	2854	2756	2756	2661
3252	03252	2998	2900	2900	2805
3396	03396	3142	3044	3044	2949
3492	03492	3238	3140	3140	3045
3636	03636	3382	3284	3284	3189
3780	03780	3526	3428	3428	3333
3876	03876	3622	3524	3524	3429
4020	04020	3766	3668	3668	3573

¹⁾ Other stroke lengths are available under request

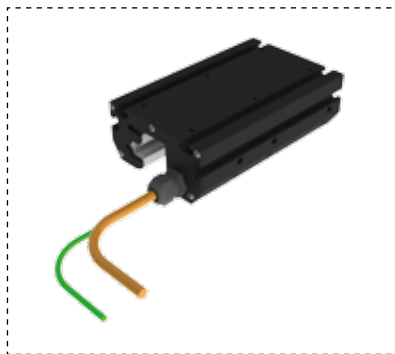
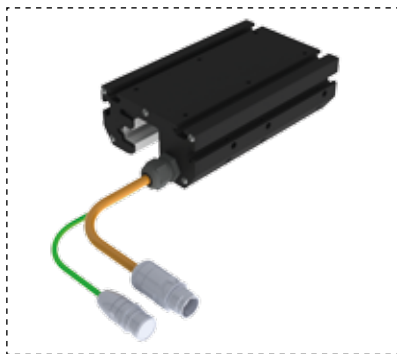
MLE 2 Options

Connector Options

- angled connectors 90° YTEC (1)
- hybrid connector 90° M23 (2)



- cable output with connectors M23 (4)
- cable output without connectors (5)
- cable output with connectors YTEC (6)



Cleanroom Option



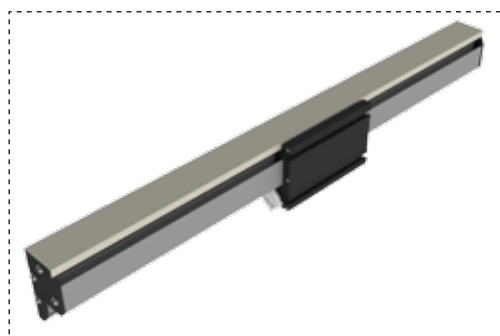
Note! 40mm less stroke

Cover Options

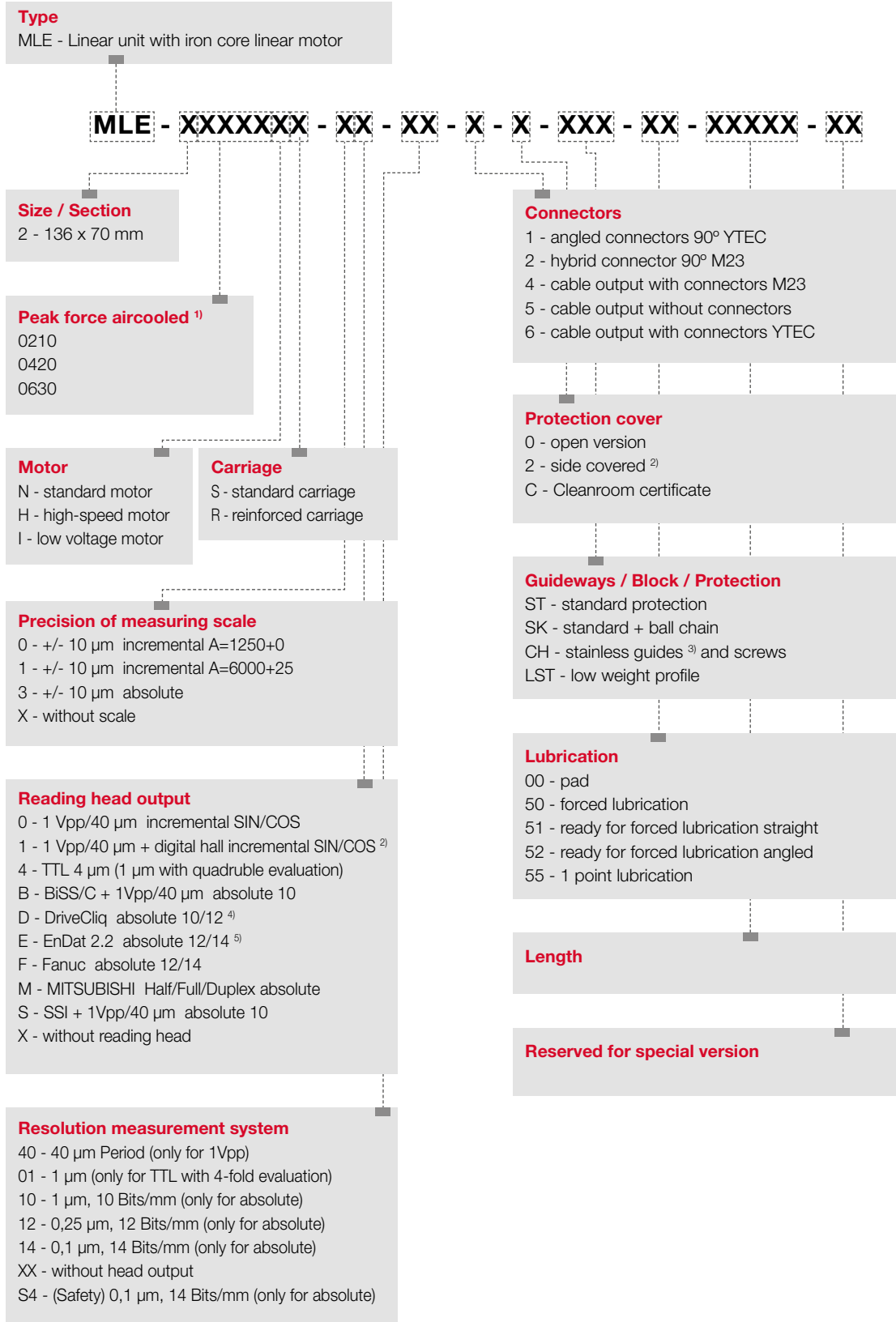
- without cover (0)



- with side cover (2)



Order Code MLE 2



¹⁾ Depends on application and temperature

²⁾ On request

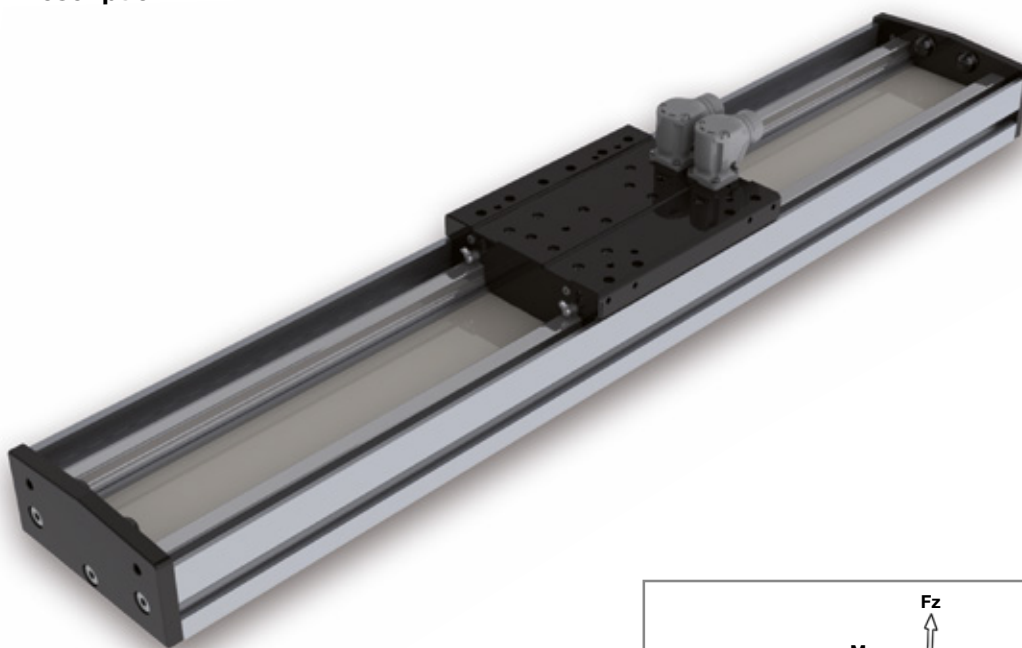
³⁾ Guides, steel body of carriage and balls are made of stainless steel

⁴⁾ DriveCliq is a protected trademark of the Siemens joint-stock company

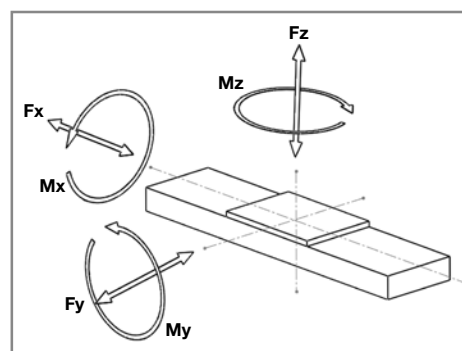
⁵⁾ EnDat 2.2 is a protected trademark of the Johannes Heidenhain GmbH company

MLE 3 linear motor stages

Technical Description



Repeatability of measuring system: $\pm 1 \mu\text{m}$
 Repeatability of linear unit: $\pm 5 \mu\text{m}$
 Maximum speed: 9 m/s
 Maximum acceleration: 110 m/s²
 Maximum Length without joints: up to 3.600 mm
 Operating voltage: 600Vdc
 Max. Operating voltage: 900Vdc



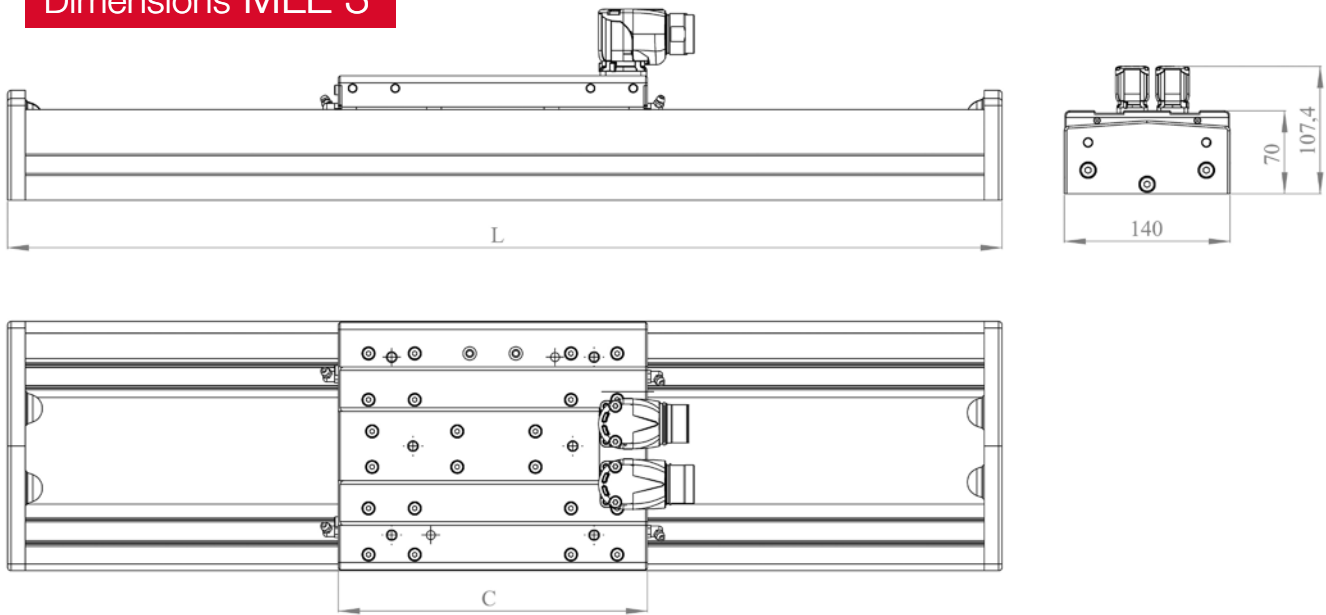
Mechanical specifications

Linear motor stage		MLE 30105		MLE 30210		MLE 30420						
Carriage type		R		S	R	S	R					
Linear motor features												
Maximum speed ¹⁾	m/s	3										
Continuous force aircooled ²⁾	N	55	105		210							
Peak force	N	105	210		420							
Nominal current	A	1,5	3,0		6,0							
Peak current	A	3,1	6,2		12,4							
Guidance features												
Fy	N	1500	1500	1500	1500	1500						
Fz	N	1000	1000	1000	1000	1000						
Mx	Nm	180	180	180	180	180						
My	Nm	280	280	320	320	400						
Mz	Nm	280	280	320	320	400						
For the sum of all forces and moments:		$\frac{F_{ye}}{F_y}$	+	$\frac{F_{ze}}{F_z}$	+	$\frac{M_{xe}}{M_x}$	+	$\frac{M_{ye}}{M_y}$	+	$\frac{M_{ze}}{M_z}$	< 1	(Xxe = calculated value) (Xx = max. catalogue value)
Structure profile features												
Geometrical moments of inertia Lx	mm ⁴	3,72x10 ⁵										
Geometrical moments of inertia Ly	mm ⁴	55,58x10 ⁵										
Elastic module	N/mm ²	70000										
Weight												
Weight of carriage	kg	2,2	2,9	3,1	3,8	4,1						
Weight of 100 mm	kg	1,2										

⁽¹⁾ for a lifetime > 30.000 Km

⁽²⁾ depending on the application and ambient temperature

Dimensions MLE 3



Choice of stroke

Drawing for reference only. Please ask for ready 3D files.

Linear motor stage		MLE 30105		MLE 30210		MLE 30420	
Carriage type		R		S	R	S	R
Carriage length C, mm		182		182	272	272	350
Length, mm	Code	Stroke ¹⁾					
368	00368	146	146	56	56	-	
416	00416	194	194	104	104	26	
512	00512	290	290	200	200	122	
560	00560	338	338	248	248	170	
608	00608	386	386	296	296	218	
656	00656	434	434	344	344	266	
704	00704	482	482	392	392	314	
752	00752	530	530	440	440	362	
800	00800	578	578	488	488	410	
896	00896	674	674	584	584	506	
944	00944	722	722	632	632	554	
1088	01088	866	866	776	776	698	
1184	01184	962	962	872	872	794	
1328	01328	1106	1106	1016	1016	938	
1472	01472	1250	1250	1160	1160	1082	
1568	01568	1346	1346	1256	1256	1178	
1712	01712	1490	1490	1400	1400	1322	
1856	01856	1634	1634	1544	1544	1466	
1952	01952	1730	1730	1640	1640	1562	
2096	02096	1874	1874	1784	1784	1706	
2240	02240	2018	2018	1928	1928	1850	
2336	02336	2114	2114	2024	2024	1946	
2480	02480	2258	2258	2168	2168	2090	
2624	02624	2402	2402	2312	2312	2234	
2720	02720	2498	2498	2408	2408	2330	
2864	02864	2642	2642	2552	2552	2474	
3008	03008	2786	2786	2696	2696	2618	
3104	03104	2882	2882	2792	2792	2714	
3248	03248	3026	3026	2936	2936	2858	
3392	03392	3170	3170	3080	3080	3002	
3488	03488	3266	3266	3176	3176	3098	

¹⁾ Other stroke lengths are available under request

MLE 3 Options

Connector Options

■ straight connectors M23, up (0)



■ angled connectors 90° M23 (1)



■ side connectors M23 (30)



■ side connectors M23, down (31)



■ side connectors M23, up (32)



■ side connectors, hybrid (33)



■ cable output with connectors M23 (4)



■ cable output without connectors (5)

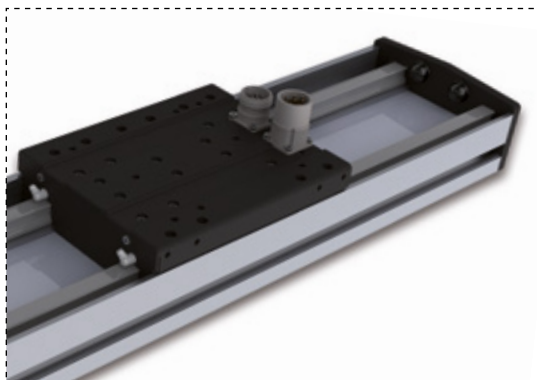


■ cable output with connectors YTEC (6)



Cover Options

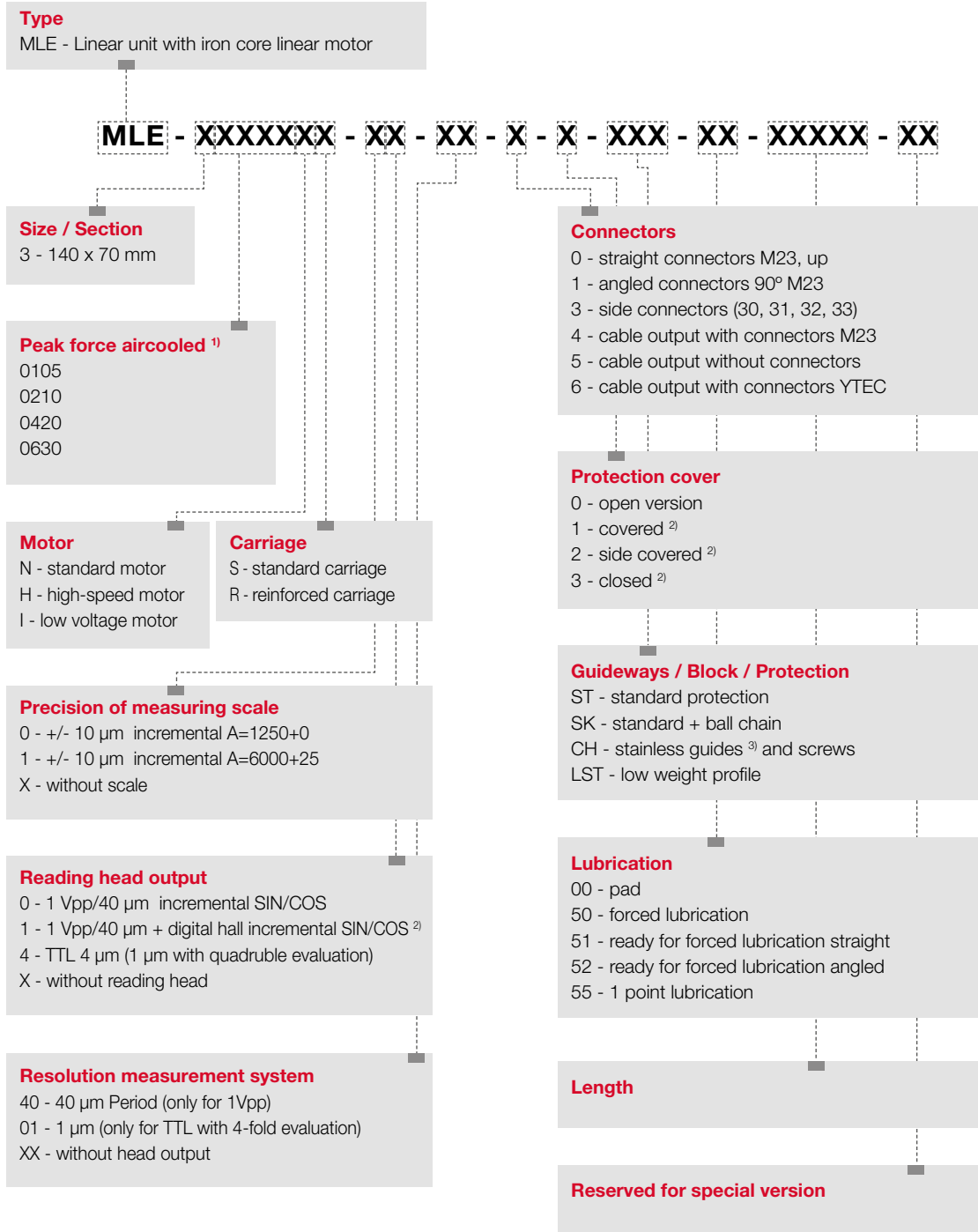
■ open version (0)



■ cover version (1)



Order Code MLE 3



⁽¹⁾ Depends on application and temperature

⁽²⁾ On request

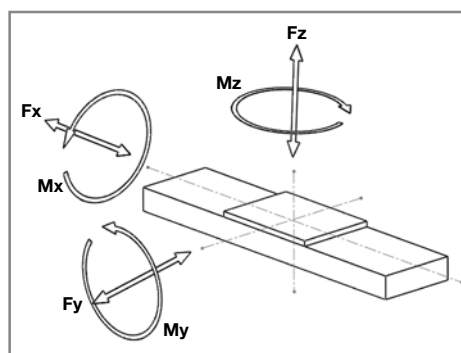
⁽³⁾ Guides, steel body of carriage and balls are made of stainless steel

MLE 5 linear motor stages

Technical Description



Repeatability of measuring system: $\pm 1 \mu\text{m}$
 Repeatability of linear unit: $\pm 5 \mu\text{m}$
 Maximum speed: 6 m/s
 Maximum acceleration: 114 m/s^2
 Maximum Length without joints: up to 6.000 mm
 Operating voltage: 600Vdc
 Max. Operating voltage: 900Vdc



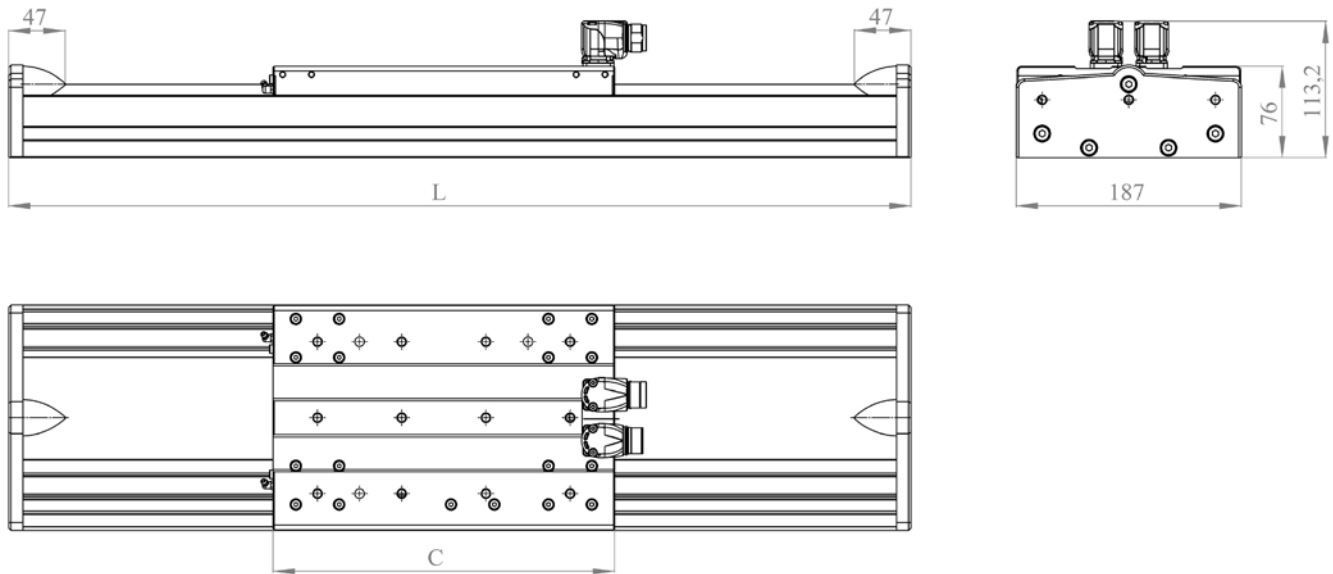
Mechanical specifications

Linear motor stage	MLE 50400		MLE 50600		MLE 50800		MLE 51000		MLE 51200		MLE 51600					
Carriage type	S	R	S	R	S	R	S	R	S	R	S	R				
Linear motor features																
Maximum speed ¹⁾	m/s				3											
Continuous force aircooled ²⁾	N	200		300		400		500		600		800				
Peak force	N	400		600		800		1000		1200		1600				
Nominal current	A	2,3		2,5		4,5		4,7		6,8		9,0				
Peak current	A	5,0		5,0		10,0		10,4		15,0		20,0				
Guidance features																
Fy	N	3000	3000	3000	3000	3000	3000	3000	4500	4500	4500	4500	4500			
Fz	N	2000	2000	2000	2000	2000	2000	2000	3000	3000	3000	3000	3000			
Mx	Nm	450	450	450	450	450	450	450	750	750	750	750	750			
My	Nm	600	700	650	700	700	750	750	1000	1000	1500	1500	2000			
Mz	Nm	600	700	650	700	700	750	750	1000	1000	1500	1500	2000			
For the sum of all forces and moments:	$\frac{F_{ye}}{F_y}$		+	$\frac{F_{ze}}{F_z}$		+	$\frac{M_{xe}}{M_x}$		+	$\frac{M_{ye}}{M_y}$		+	$\frac{M_{ze}}{M_z}$		< 1	(Xxe = calculated value) (Xx = max. catalogue value)
Structure profile features																
Geometrical moments of inertia Lx	mm ⁴											2,7x10 ⁵				
Geometrical moments of inertia Ly	mm ⁴											86,82x10 ⁵				
Elastic module	N/mm ²											70000				
Weight																
Weight of carriage	kg	4,5	4,9	5,2	5,8	6,0	6,4	7,0	8,1	8,7	10,0	14,0	16,0			
Weight of 100 mm	kg											1,7				

⁽¹⁾ for a lifetime > 30.000 Km

⁽²⁾ depending on the application and ambient temperature

Dimensions MLE 5



Drawing for reference only. Please ask for ready 3D files.

Choice of stroke

Linear motor stage	MLE 50400		MLE 50600		MLE 50800		MLE 51000		MLE 51200		MLE 51600	
Carriage type	S	R	S	R	S	R	S	R	S	R	S	R
Carriage length C, mm	212	284	234	284	284	334	334	376	376	508	508	570

Length, mm	Code	Stroke ¹⁾										
462	00462	156	84	34	84	84	34	34	-	-	-	-
558	00558	252	180	130	180	180	130	130	88	88	-	-
654	00654	348	276	226	276	276	226	226	184	184	52	52
750	00750	444	372	322	372	372	322	322	280	280	148	148
846	00846	540	468	418	468	468	418	418	376	376	244	244
942	00942	636	564	514	564	564	514	514	472	472	340	340
1038	01038	732	660	610	660	660	610	610	568	568	436	436
1134	01134	828	756	706	756	756	706	706	664	664	532	532
1230	01230	924	852	802	852	852	802	802	760	760	628	628
1326	01326	1020	948	898	948	948	898	898	856	856	724	724
1422	01422	1116	1044	994	1044	1044	994	994	952	952	820	820
1518	01518	1212	1140	1090	1140	1140	1090	1090	1048	1048	916	916
1614	01614	1308	1236	1186	1236	1236	1186	1186	1144	1144	1012	1012
1710	01710	1404	1332	1282	1332	1332	1282	1282	1240	1240	1108	1108
1806	01806	1500	1428	1378	1428	1428	1378	1378	1336	1336	1204	1204
1902	01902	1596	1524	1474	1524	1524	1474	1474	1432	1432	1300	1300
1998	01998	1692	1620	1570	1620	1620	1570	1570	1528	1528	1396	1396
2094	02094	1788	1716	1666	1716	1716	1666	1666	1624	1624	1492	1492
2382	02382	2076	2004	1954	2004	2004	1954	1954	1912	1912	1780	1780
2670	02670	2364	2292	2242	2292	2292	2242	2242	2200	2200	2068	2068
2958	02958	2652	2580	2530	2580	2580	2530	2530	2488	2488	2356	2356
3246	03246	2940	2868	2818	2868	2868	2818	2818	2776	2776	2644	2644
3534	03534	3228	3156	3106	3156	3156	3106	3106	3064	3064	2932	2932
3630	03630	3324	3252	3202	3252	3252	3202	3202	3160	3160	3028	3028

⁽¹⁾ Other stroke lengths are available under request

MLE 5 Options

Connector Options

■ straight connectors M23, up (0)



■ angled connectors 90° M23 (1)



■ side connectors M23 (30)



■ side connectors M23, down (31)



■ side connectors M23, up (32)



■ side connectors, hybrid (33)



■ cable output with connectors M23 (4)



■ cable output without connectors (5)

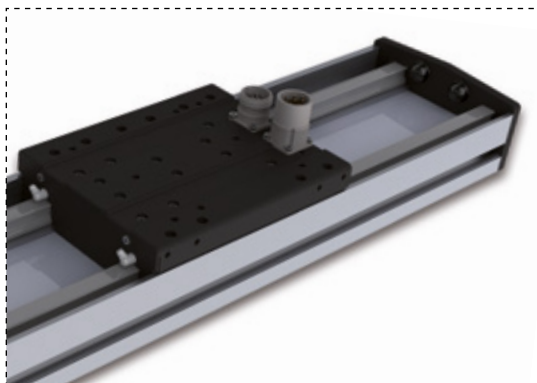


■ cable output with connectors YTEC (6)



Cover Options

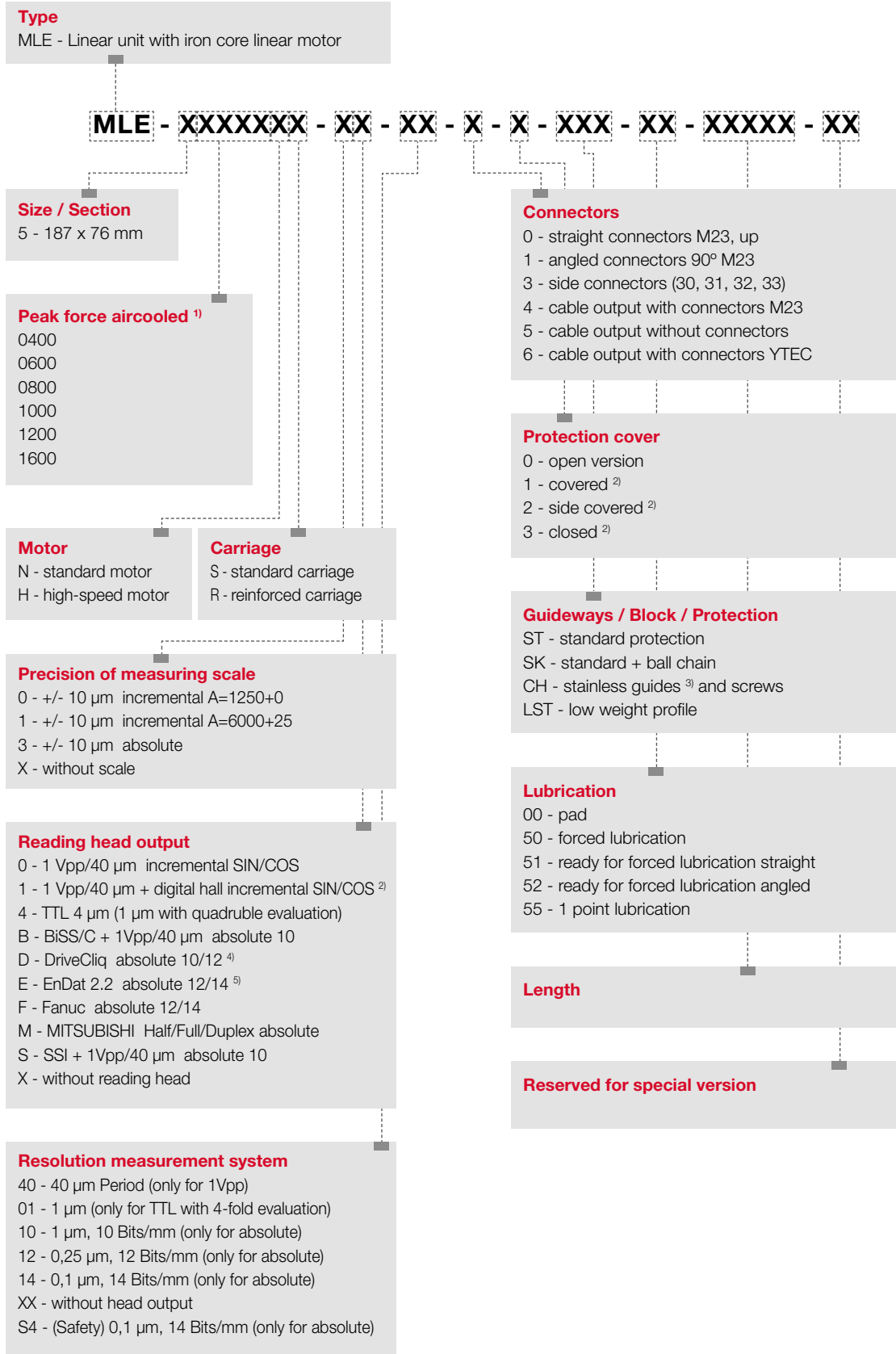
■ open version (0)



■ cover version (1)



Order Code MLE 5



¹⁾ Depends on application and temperature

²⁾ On request

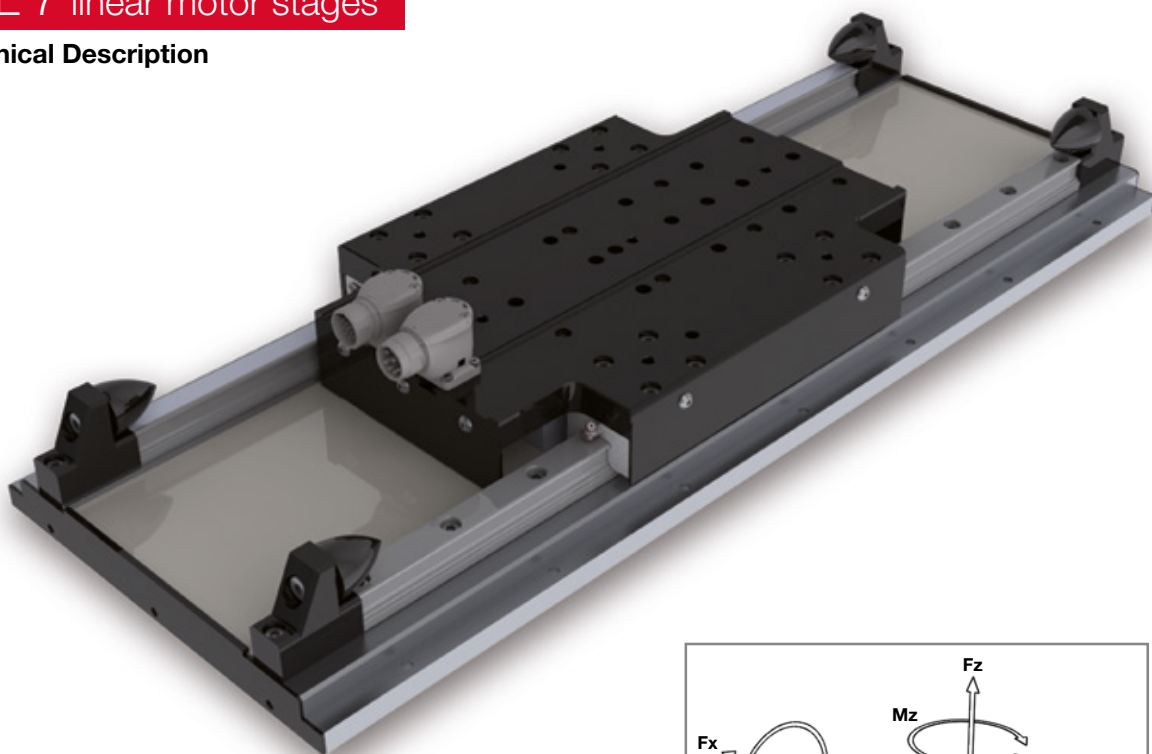
³⁾ Guides, steel body of carriage and balls are made of stainless steel

⁴⁾ DriveCliq is a protected trademark of the Siemens joint-stock company

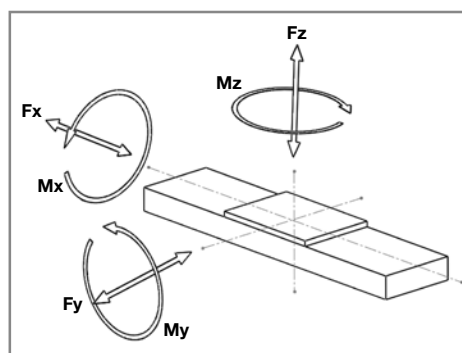
⁵⁾ EnDat 2.2 is a protected trademark of the Johannes Heidenhain GmbH company

MLE 7 linear motor stages

Technical Description



Repeatability of measuring system: $\pm 1 \mu\text{m}$
 Repeatability of linear unit: $\pm 5 \mu\text{m}$
 Maximum speed: 4 m/s
 Maximum acceleration: 186 m/s²
 Maximum Length without joints: up to 6.000 mm
 Operating voltage: 600Vdc
 Max. Operating voltage: 900Vdc



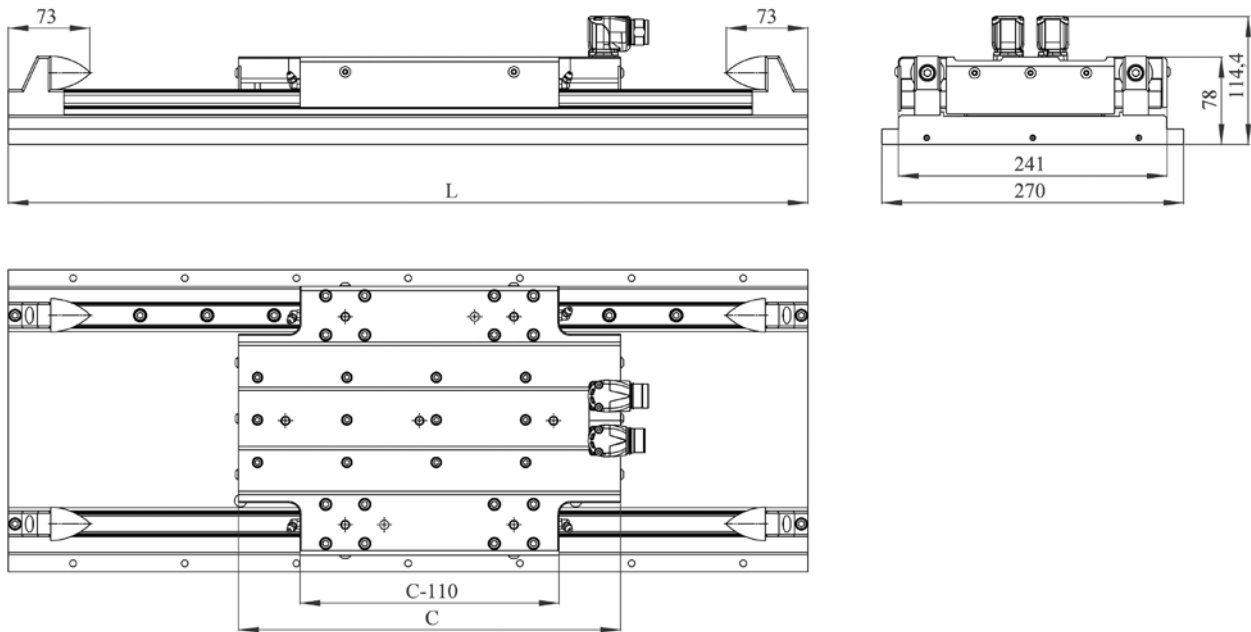
Mechanical specifications

Linear motor stage		MLE 71600	MLE 72000		MLE 74000
Carriage type		R	S	R	S
Linear motor features					
Maximum speed ¹⁾	m/s	3	2,5		2,5
Continuous force aircooled ²⁾	N	400	500		1000
Peak force	N	1600	2000		4000
Nominal current	A	4,1	4,2		8,5
Peak current	A	10	10		20
Guidance features					
Fy	N	5000	5000	7000	7000
Fz	N	3000	3000	5000	5000
Mx	Nm	800	800	1100	1100
My	Nm	900	900	1300	1300
Mz	Nm	900	900	1300	1300
For the sum of all forces and moments:	$\frac{F_{ye}}{F_y} + \frac{F_{ze}}{F_z} + \frac{M_{xe}}{M_x} + \frac{M_{ye}}{M_y} + \frac{M_{ze}}{M_z} < 1$	(Xxe = calculated value) (Xx = max. catalogue value)			
Structure profile features					
Geometrical moments of inertia Lx	mm ⁴	2,30x10 ⁵			
Geometrical moments of inertia Ly	mm ⁴	338,14x10 ⁵			
Elastic module	N/mm ²	70000			
Weight					
Weight of carriage	kg	10,5	11,5	15,0	21,5
Weight of 100 mm	kg	3,0			

⁽¹⁾ for a lifetime > 30.000 Km

⁽²⁾ depending on the application and ambient temperature

Dimensions MLE 7



Choice of stroke

Drawing for reference only. Please ask for ready 3D files.

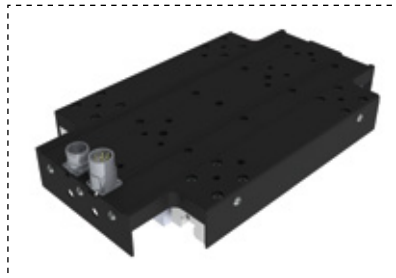
Linear motor stage	MLE 71600		MLE 72000		MLE 74000
Carriage type	R		S	R	S
Carriage length C, mm	342		342	620	620
Length, mm	Code	Stroke ¹⁾			
524	00524	146	146	-	-
716	00716	338	338	60	60
812	00812	434	434	156	156
908	00908	530	530	252	252
1004	01004	626	626	348	348
1100	01100	722	722	444	444
1196	01196	818	818	540	540
1292	01292	914	914	636	636
1388	01388	1010	1010	732	732
1484	01484	1106	1106	828	828
1580	01580	1202	1202	924	924
1676	01676	1298	1298	1020	1020
1772	01772	1394	1394	1116	1116
1868	01868	1490	1490	1212	1212
1964	01964	1586	1586	1308	1308
2060	02060	1682	1682	1404	1404
2156	02156	1778	1778	1500	1500
2252	02252	1874	1874	1596	1596
2348	02348	1970	1970	1692	1692
2444	02444	2066	2066	1788	1788
2636	02636	2258	2258	1980	1980
2732	02732	2354	2354	2076	2076
2828	02828	2450	2450	2172	2172
2924	02924	2546	2546	2268	2268
3020	03020	2642	2642	2364	2364
3116	03116	2738	2738	2460	2460
3212	03212	2834	2834	2556	2556
3308	03308	2930	2930	2652	2652

⁽¹⁾ Other stroke lengths are available under request

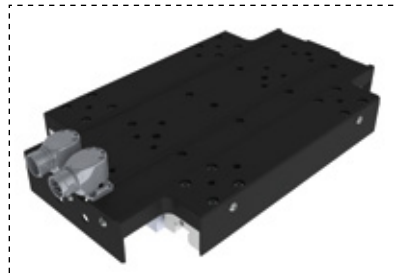
MLE 7 Options

Connector Options

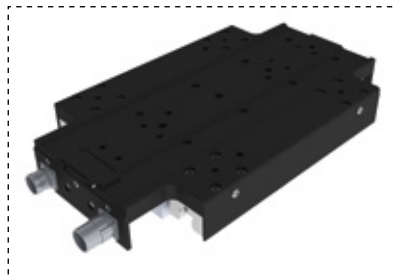
■ **straight connectors M23, up (0)**



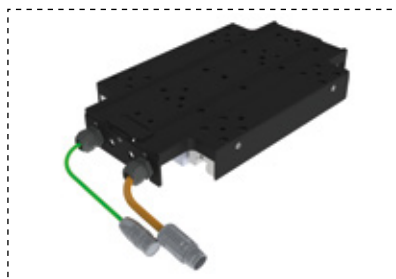
■ **angled connectors 90° M23 (1)**



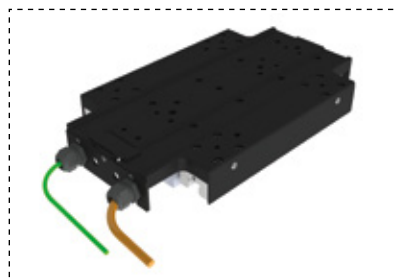
■ **backside connectors M23 (30)**



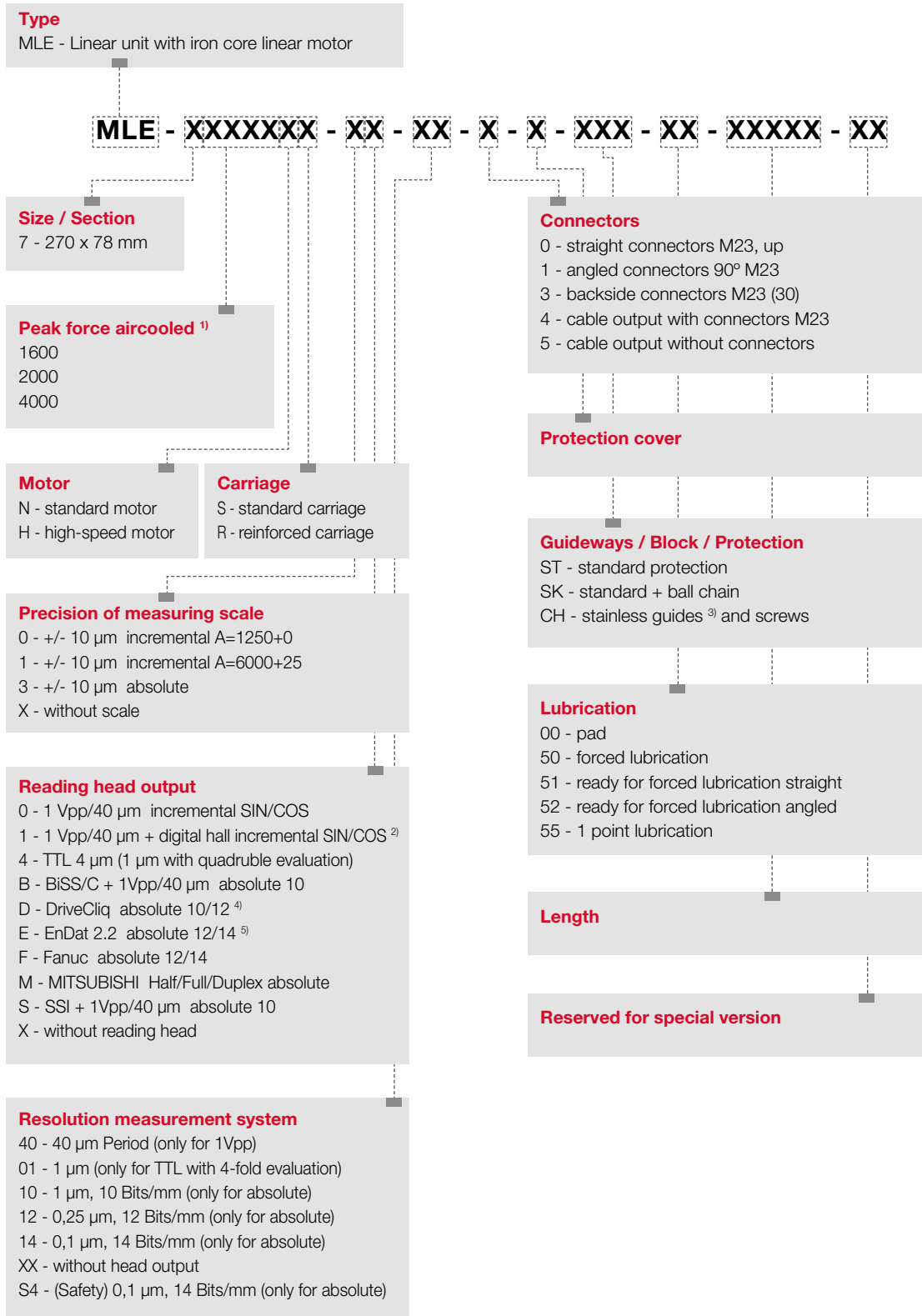
■ **cable output with connectors M23 (4)**



■ **cable output without connectors (5)**



Order Code MLE 7



¹⁾ Depends on application and temperature

²⁾ On request

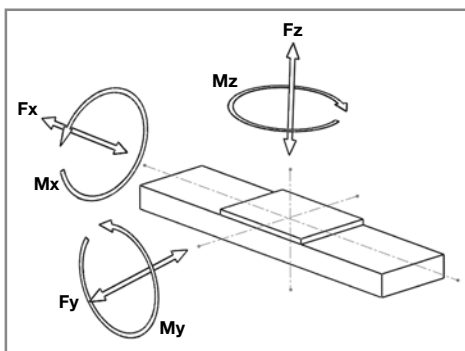
³⁾ Guides, steel body of carriage and balls are made of stainless steel

⁴⁾ DriveCliq is a protected trademark of the Siemens joint-stock company

⁵⁾ EnDat 2.2 is a protected trademark of the Johannes Heidenhain GmbH company

MLZ 2 linear motor stages

Technical Description



Repeatability of measuring system: $\pm 1 \mu\text{m}$
 Repeatability of linear unit: $\pm 5 \mu\text{m}$
 Maximum speed: 9 m/s
 Maximum acceleration: 203 m/s^2
 Maximum stroke: up to 286 mm
 Operating voltage: 600Vdc
 Max. Operating voltage: 900Vdc



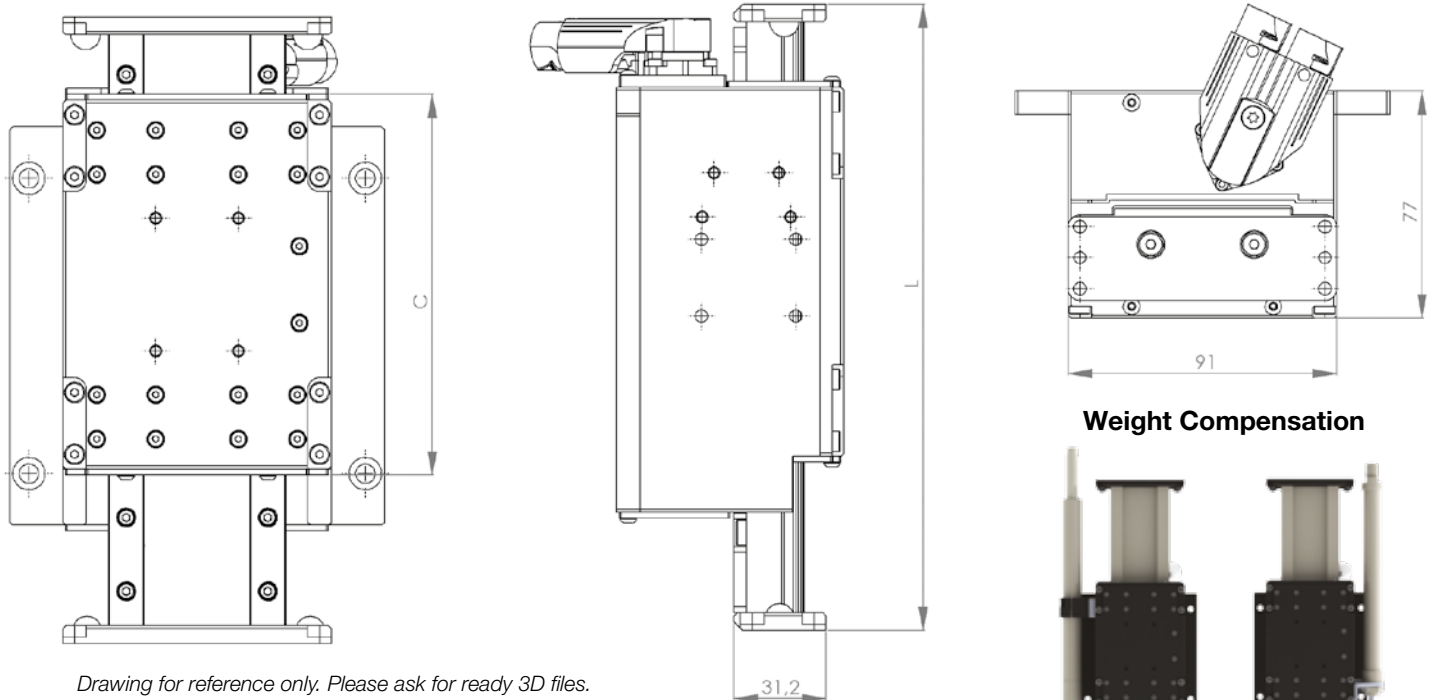
Mechanical specifications

Linear motor stage		MLZ 2010S	MLZ 20210
Carriage type		R	S
Linear motor features			
Maximum speed ¹⁾	m/s	5	5
Continuous force aircooled ²⁾	N	55	105
Peak force Fxp	N	105	210
Nominal current	A	1,5	3,0
Peak current	A	3,1	6,2
Guidance features			
Fy	N	300	300
Fz	N	150	150
Mx	Nm	95	95
My	Nm	160	160
Mz	Nm	160	160
For the sum of all forces and moments:		$\frac{F_{ye}}{F_y} + \frac{F_{ze}}{F_z} + \frac{M_{xe}}{M_x} + \frac{M_{ye}}{M_y} + \frac{M_{ze}}{M_z} < 1$ (Xxe = calculated value) (Xx = max. catalogue value)	
Structure profile features			
Geometrical moments of inertia Lx	mm ⁴	0,55x10 ⁴	
Geometrical moments of inertia Ly	mm ⁴	16,27x10 ⁴	
Elastic module	N/mm ²	70000	

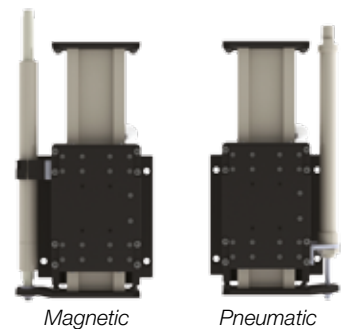
⁽¹⁾ for a lifetime > 30.000 Km

⁽²⁾ depending on the application and ambient temperature

Dimensions MLZ 2



Weight Compensation



Choice of stroke

Linear motor stage		MLZ 20105R / MLZ 20210S					
Length	mm	214	262	310	358	406	454
Stroke ¹⁾	mm	46	94	142	190	238	286
Carriage length, C	mm	156					

Weight

Carriage weight	kg	2,5					
Runner Weight	kg	1,03	1,27	1,50	1,73	1,96	2,19
Total weight	kg	3,53	3,77	4	4,23	4,46	4,69
Pneumatic weight compensation	kg	0,2	0,2	-	-	-	-
Magnetic weight compensation 03	kg	0,08	0,18	0,29	0,29	-	-
Magnetic weight compensation 04, 05, 06	kg	0,44	0,88	1,32	1,32	1,75	1,75

Weight compensation

Pneumatic	Typ	DPN16130	DPN16130	-	-	-	-
Maximum Force	N	50	50	-	-	-	-
Order Code		01	01	-	-	-	-
Magnetic	Typ	D22050	D22130	D22210	D22210	-	-
Maximum Force	N	12	9	7	3	-	-
Order Code		03	03	03	03	-	-
Magnetic	Typ	D40050	D40130	D40200	D40200	D40275	D40275
Maximum Force	N	30	27	25	22	20	17
Order Code		04	04	04	04	04	04 ²⁾
Magnetic	Typ	D50050	D50130	D50200	D50200	D50275	D50275
Maximum Force	N	40	37	35	32	30	27
Order Code		05	05	05	05	05	05 ²⁾
Magnetic	Typ	D60050	D60130	D60200	D60200	D60275	D60275
Maximum Force	N	50	47	45	42	40	37
Order Code		06	06	06	06	06	06 ²⁾

⁽¹⁾ Other stroke lengths are available under request

⁽²⁾ Stroke length of the compensator is limited to 275 mm

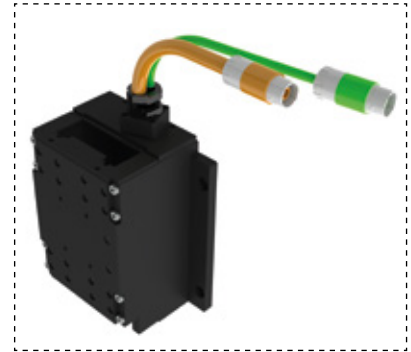
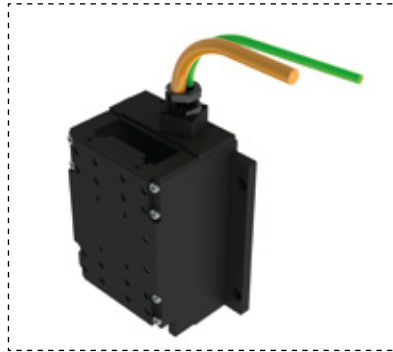
MLZ 2 Options

Connector Options

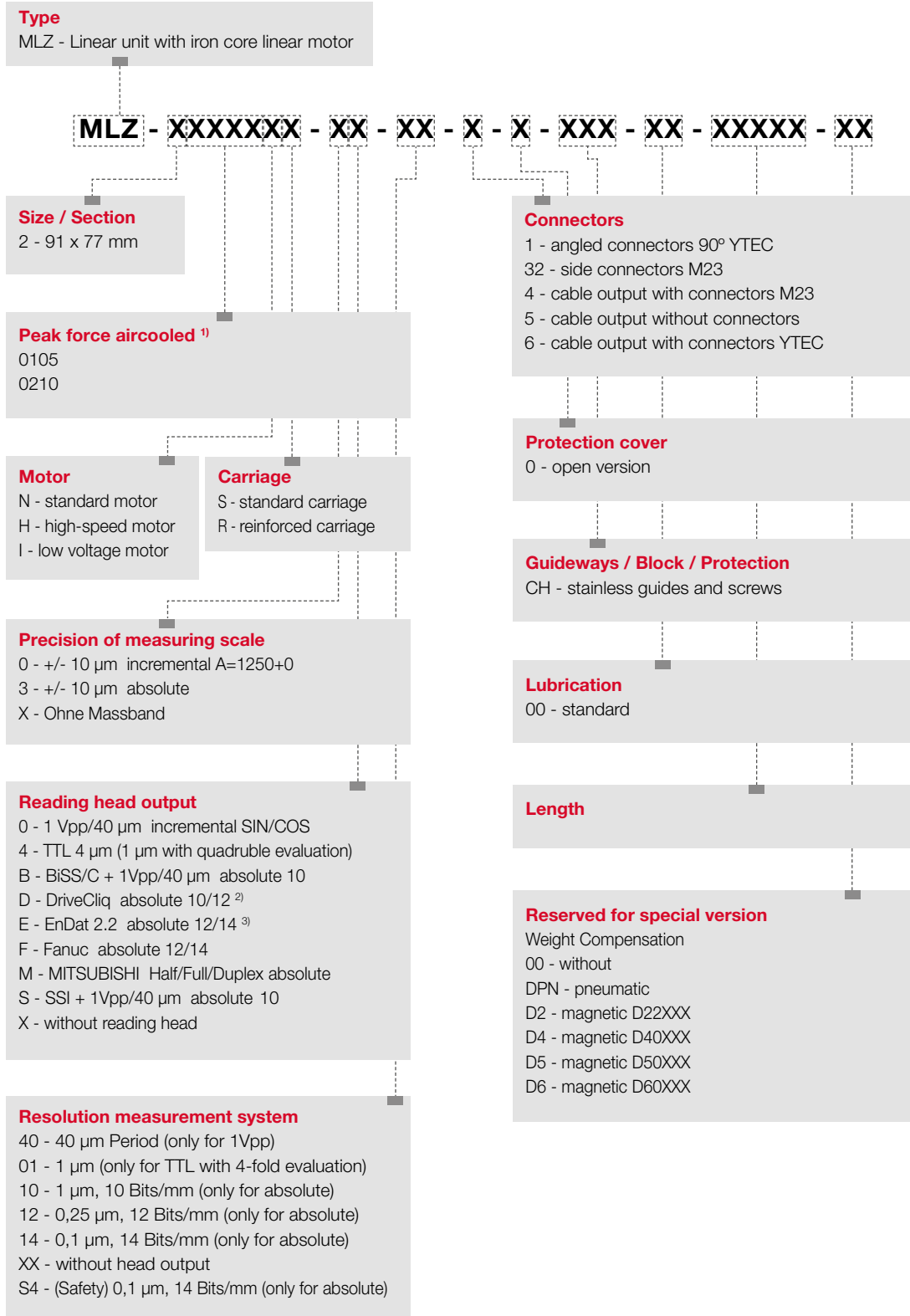
- angled connectors 90° YTEC (1) ■ side connectors M23 (32)



- cable output with connectors M23 (4) ■ cable output without connectors (5) ■ cable output with connectors YTEC (6)



Order Code MLZ 2



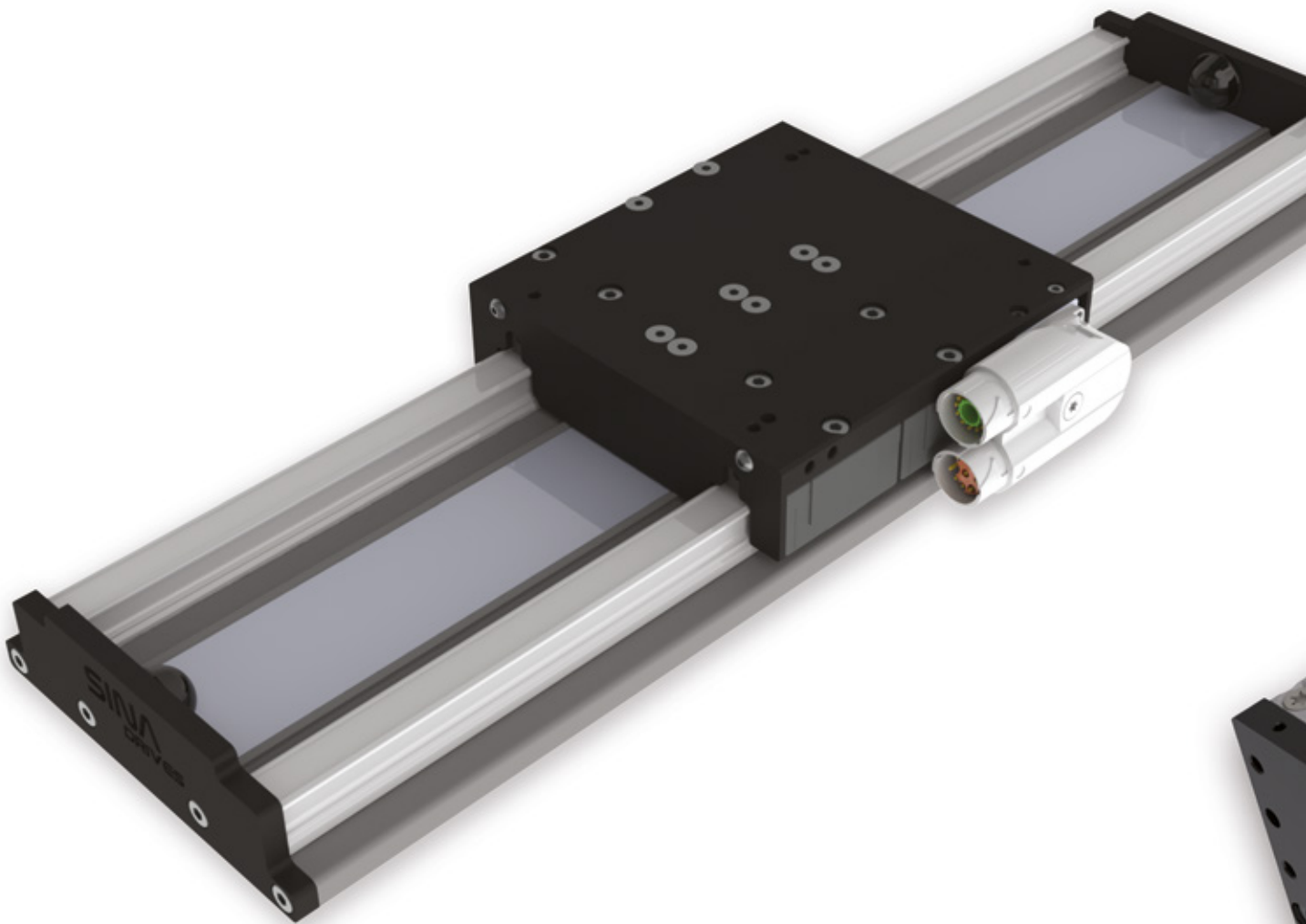
¹⁾ Depends on application and temperature

²⁾ DriveCliq is a protected trademark of the Siemens joint-stock company

³⁾ EnDat 2.2 is a protected trademark of the Johannes Heidenhain GmbH company

MCE & MLU Series

1. Low maintenance linear units for application with high-dynamic, high-precision and long-life expectancy.
2. Linear units with profile, linear motor, linear guideways, encoder, end switch and power chain.
3. High-end linear motor special for Pick& Place, Semiconductor and/or Pharmaceutical industry.
4. Incremental measuring system with 1 Vpp/TTL output and 1 μm repeatability.



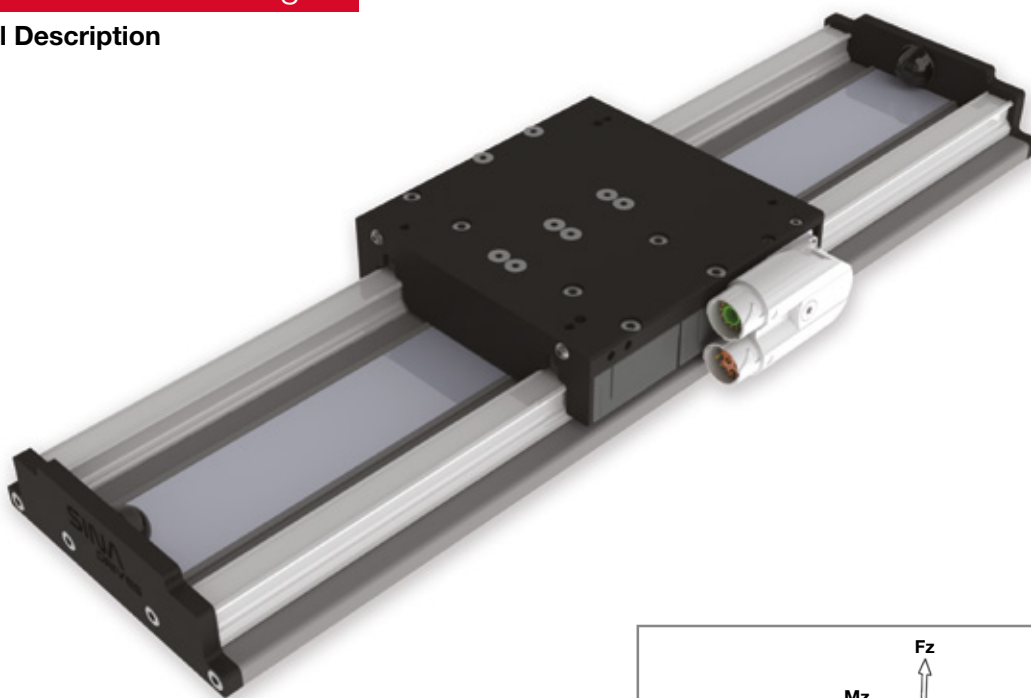
➤➤ Compatible Servo amplifiers



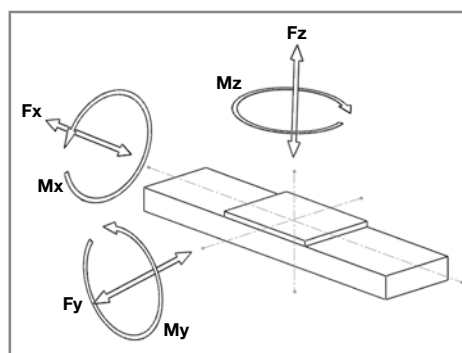
- 5. Completely wired connectors, ready to connect to a servo amplifier.
- 6. Oversized linear guides for high load moments. Low-maintenance up to 10.000 km. Centralised lubrication system possible as an option.
- 7. Completely integrated power chain with mounting plates.
- 8. Optional: stainless linear guideways and protective covers.

MCE 3 linear motor stages

Technical Description



Repeatability of measuring system: $\pm 1 \mu\text{m}$
 Repeatability of linear unit: $\pm 5 \mu\text{m}$
 Maximum speed: 9 m/s
 Maximum acceleration: 71 m/s^2
 Maximum Length without joints: up to 6.000 mm
 Operating voltage: 600Vdc
 Max. Operating voltage: 900Vdc



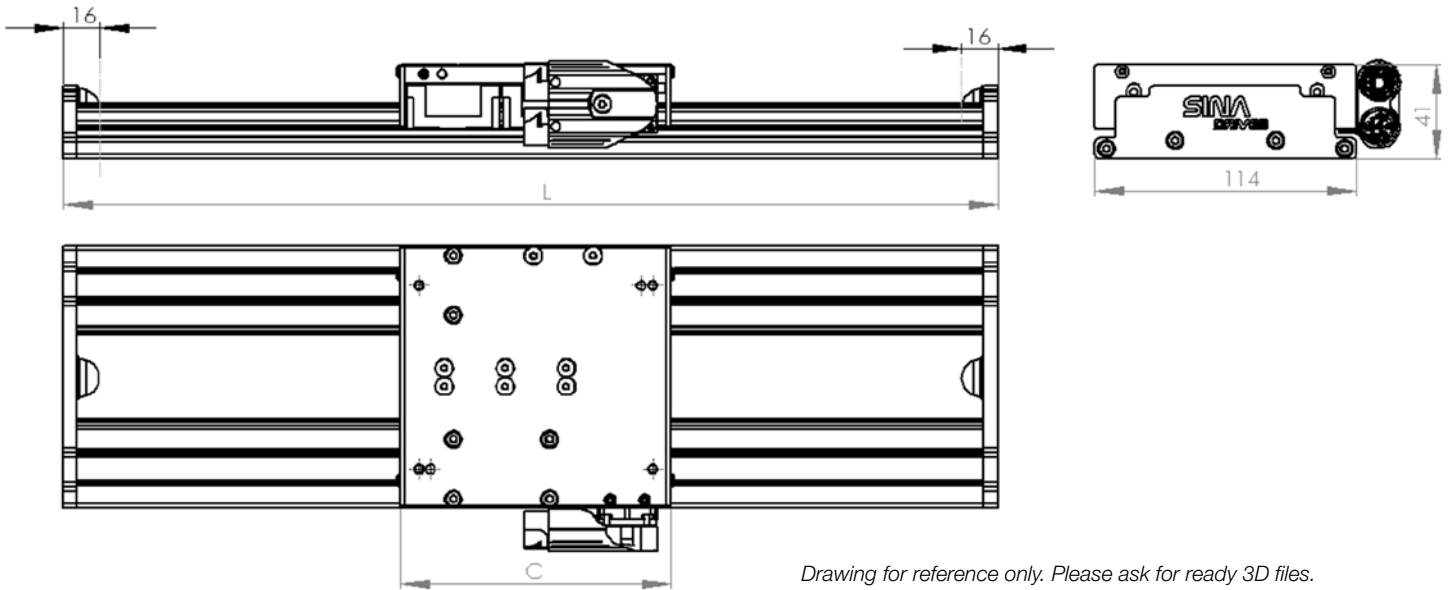
Mechanical specifications

Linear motor stage		MCE 30100
Carriage type		S
Linear motor features		
Maximum speed ¹⁾	m/s	-
Continuous force aircooled ²⁾	N	28
Peak force	N	99
Nominal current	A	1,5
Peak current	A	5,8
Guidance features		
Fy	N	900
Fz	N	500
Mx	Nm	125
My	Nm	200
Mz	Nm	200
For the sum of all forces and moments:		
$\frac{F_{ye}}{F_y} + \frac{F_{ze}}{F_z} + \frac{M_{xe}}{M_x} + \frac{M_{ye}}{M_y} + \frac{M_{ze}}{M_z} < 1$		
Structure profile features		(Xxe = calculated value) (Xx = max. catalogue value)
Geometrical moments of inertia Lx	mm ⁴	0,08x10 ⁵
Geometrical moments of inertia Ly	mm ⁴	8,44x10 ⁵
Elastic module	N/mm ²	70000
Weight		
Weight of carriage	kg	1,4
Weight of 100 mm	kg	0,78

⁽¹⁾ for a lifetime > 30.000 Km

⁽²⁾ depending on the application and ambient temperature

Dimensions MCE 3



Choice of stroke

Linear motor stage	MCE 30100
Carriage type	S
Carriage length C, mm	118
Length, mm	Stroke ¹⁾
160	10
288	138
416	266
544	394
672	522
800	650
928	778
1056	906
1184	1034
1312	1162
1440	1290
1568	1418
1696	1546
1824	1674
1952	1802
2080	1930
2208	2058
2336	2186
2464	2314
2592	2442
2720	2570
2848	2698
2976	2826
3104	2954
3232	3082
3360	3210
3488	3338
3616	3466
3744	3594
3872	3722

⁽¹⁾ other stroke lengths are available under request

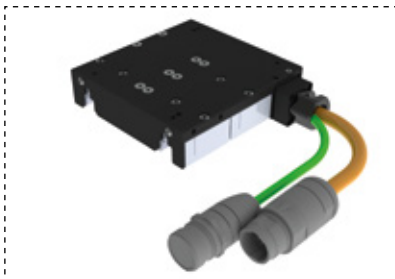
MCE 3 Options

Connector Options

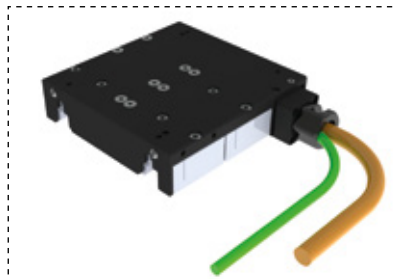
■ angled connectors 90° YTEC (1)



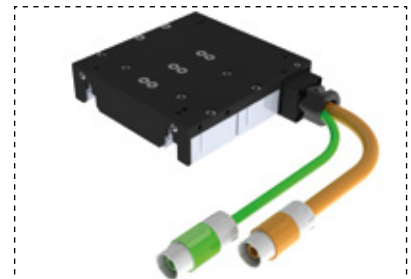
■ cable output with connectors M23 (4)



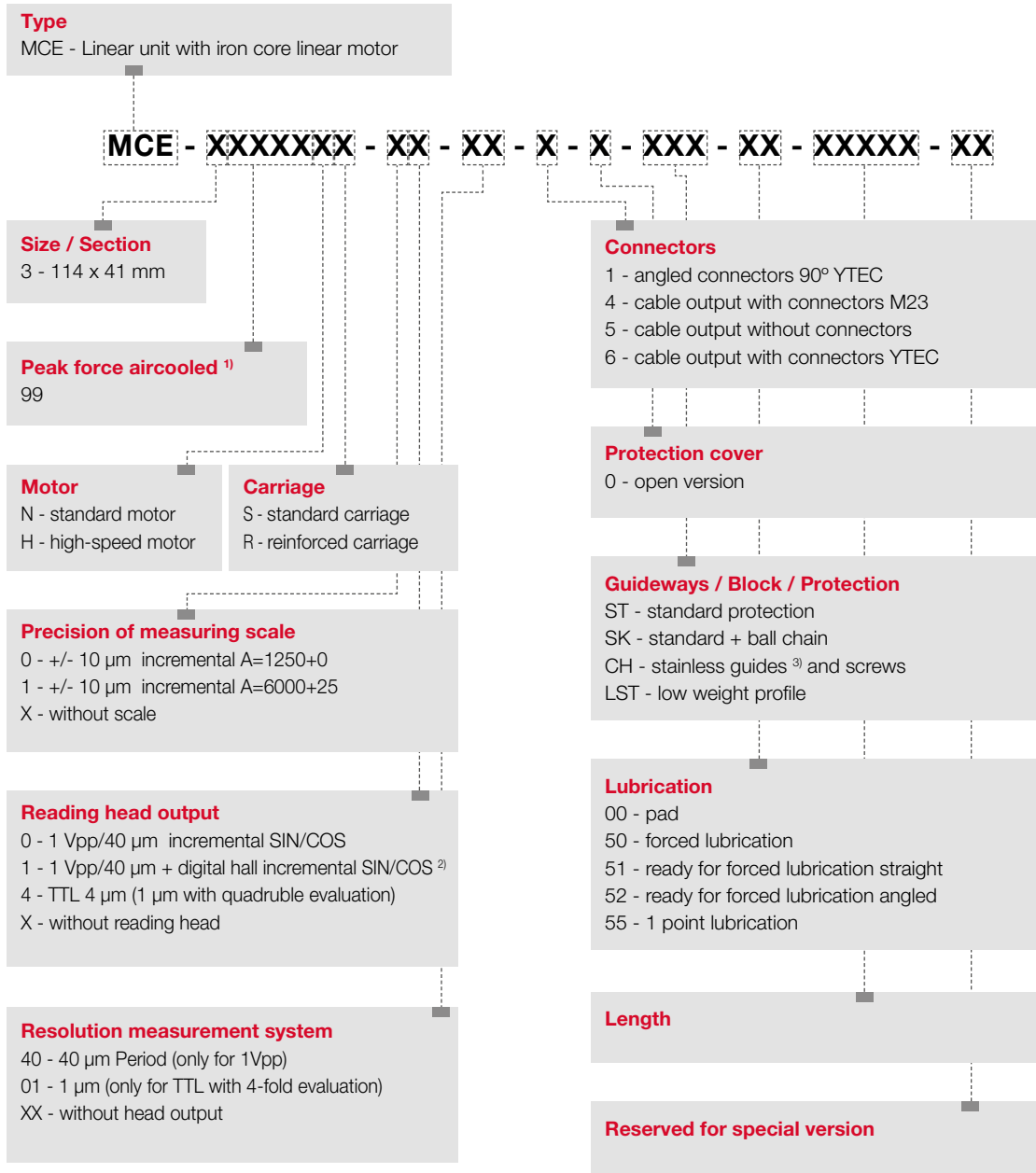
■ cable output without connectors (5)



■ cable output with connectors YTEC (6)



Order Code MCE 3



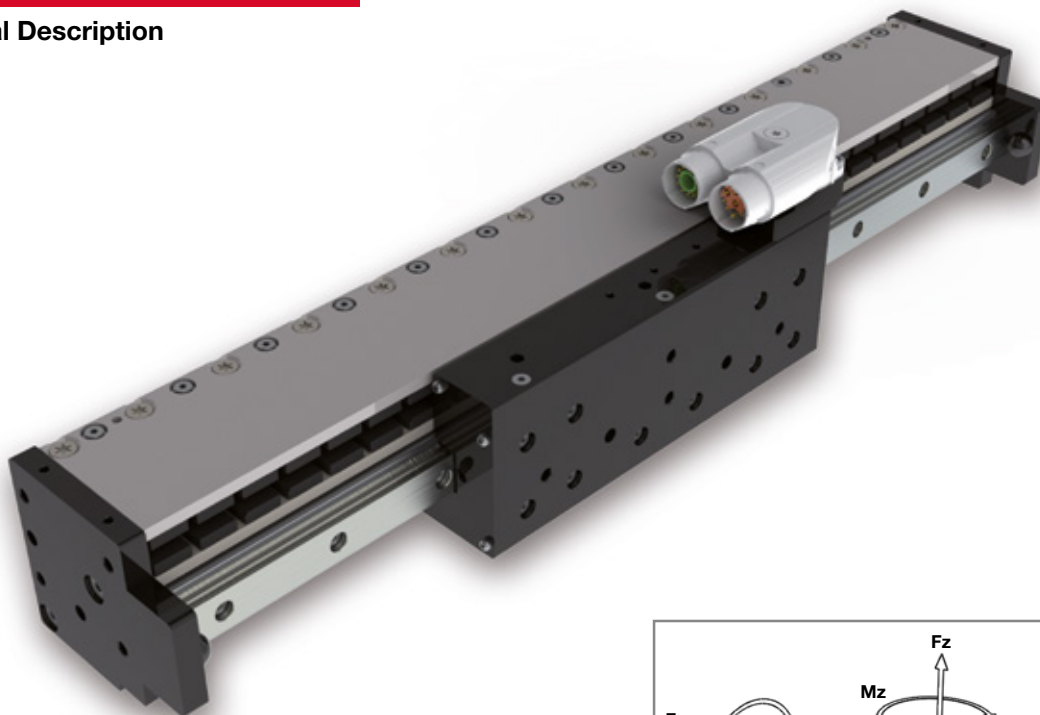
⁽¹⁾ Depends on application and temperature

⁽²⁾ On request

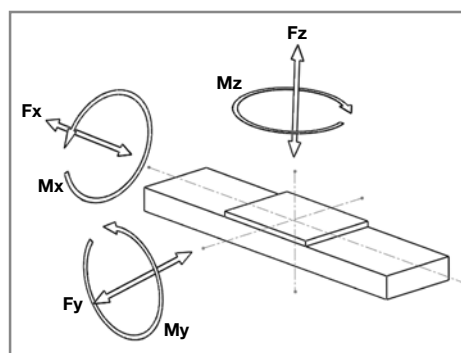
⁽³⁾ Guides, steel body of carriage and balls are made of stainless steel

MLU 3 linear motor stages

Technical Description



Repeatability of measuring system: $\pm 1 \mu\text{m}$
 Repeatability of linear unit: $\pm 10 \mu\text{m}$
 Maximum speed: 9 m/s
 Maximum acceleration: 200 m/s²
 Maximum Length without joints: up to 1.000 mm
 Operating voltage: 300Vdc
 Max. Operating voltage: 300Vdc



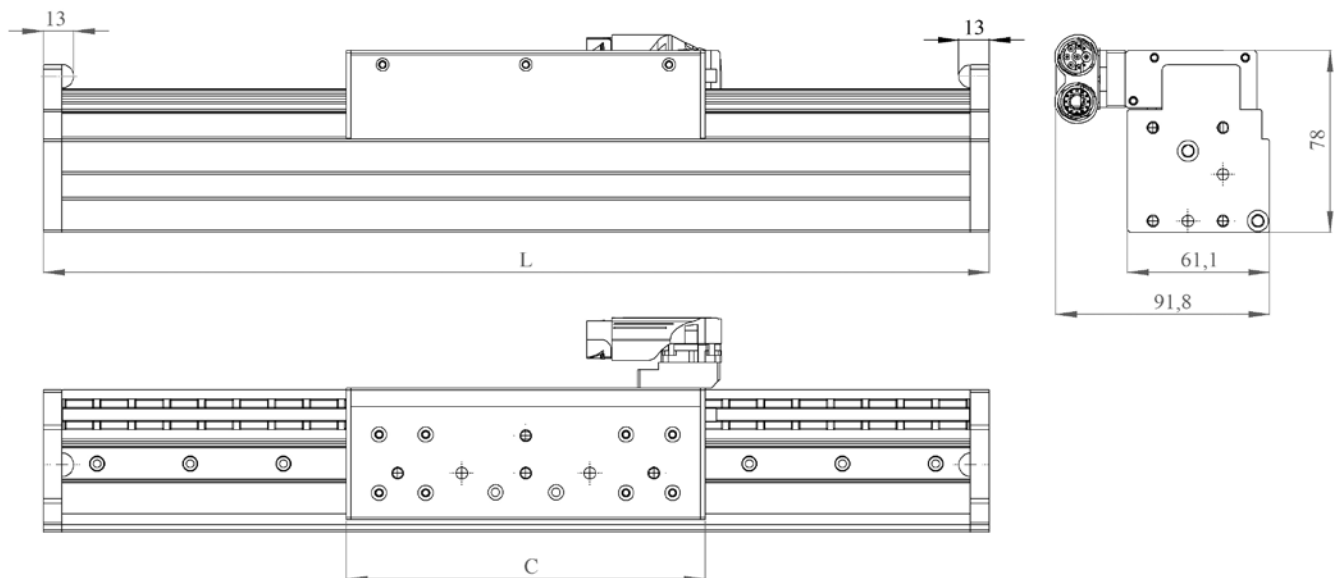
Mechanical specifications

Linear motor stage		MLU30100		MLU30200		MLU30300		MLU30400				
Carriage type		R		S		S		R				
R		S		S		R		S				
Linear motor features												
Maximum speed ¹⁾	m/s	5										
Continuous force aircooled ²⁾	N	29	58		87		116					
Peak force	N	100	200		300		400					
Nominal current	A	0,8	1,6		2,4		3,2					
Peak current	A	2,8	5,5		8,3		11,0					
Guidance features												
Fy	N	520	520	520	520	520	520	520	750			
Fz	N	520	520	520	520	520	520	520	750			
Mx	Nm	15	15	15	15	15	15	15	25			
My	Nm	70	70	87	87	100	100	100	125			
Mz	Nm	70	70	87	87	100	100	100	125			
For the sum of all forces and moments:		$\frac{F_{ye}}{F_y}$	+	$\frac{F_{ze}}{F_z}$	+	$\frac{M_{xe}}{M_x}$	+	$\frac{M_{ye}}{M_y}$	+	$\frac{M_{ze}}{M_z}$	< 1	(Xxe = calculated value) (Xx = max. catalogue value)
Structure profile features												
Geometrical moments of inertia Lx	mm ⁴	1,44x10 ⁵										
Geometrical moments of inertia Ly	mm ⁴	2,42x10 ⁵										
Elastic module	N/mm ²	70000										
Weight												
Weight of carriage	kg	0,6	0,65	1,0	1,5	1,6	2	2,4				
Weight of 100 mm	kg	0,7										

⁽¹⁾ for a lifetime > 30.000 Km

⁽²⁾ depending on the application and ambient temperature

Dimensions MLU 3



Drawing for reference only. Please ask for ready 3D files.

Choice of stroke

Linear motor stage	MLU30100		MLU 30200		MLU 30300		MLU 30400	
Carriage type	R		S	R	S	R	S	R
Carriage length C, mm	154		154	214	214	274	274	324

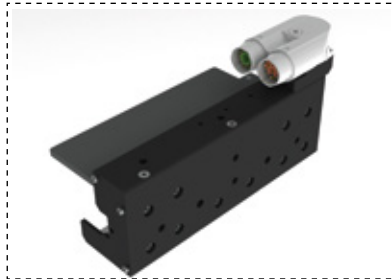
Length, mm	Code	Stroke ¹⁾						
206	00206	26	26	-	-	-	-	-
316	00316	136	136	76	76	16	16	-
406	00406	226	226	166	166	106	106	56
466	00466	286	286	226	226	166	166	116
556	00556	376	376	316	316	256	256	206
616	00616	436	436	376	376	316	316	266
706	00706	526	526	466	466	406	406	356
766	00766	586	586	526	526	466	466	416
796	00796	616	616	556	556	496	496	446
856	00856	676	676	616	616	556	556	506
916	00916	736	736	676	676	616	616	566
946	00946	766	766	706	706	646	646	596
1066	01066	886	886	826	826	766	766	716
1096	01096	916	916	856	856	796	796	746
1186	01186	1006	1006	946	946	886	886	836
1246	01246	1066	1066	1006	1006	946	946	896
1336	01336	1156	1156	1096	1096	1036	1036	986
1486	01486	1306	1306	1246	1246	1186	1186	1136
1576	01576	1396	1396	1336	1336	1276	1276	1226
1636	01636	1456	1456	1396	1396	1336	1336	1286
1726	01726	1546	1546	1486	1486	1426	1426	1376
1876	01876	1696	1696	1636	1636	1576	1576	1526

⁽¹⁾ Other stroke lengths are available under request

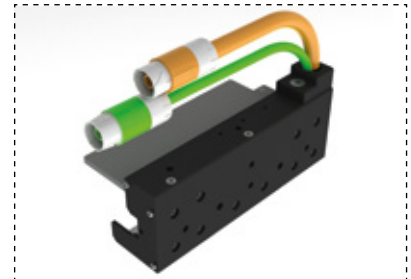
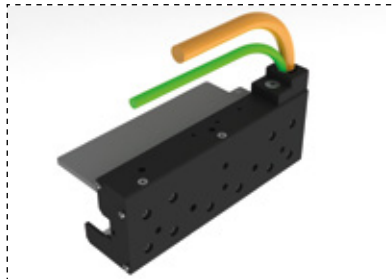
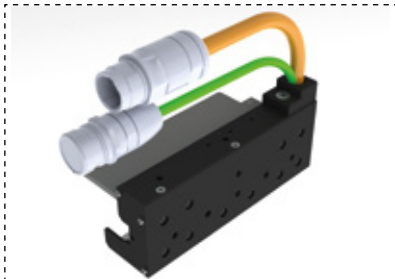
MLU 3 Options

Connector Options

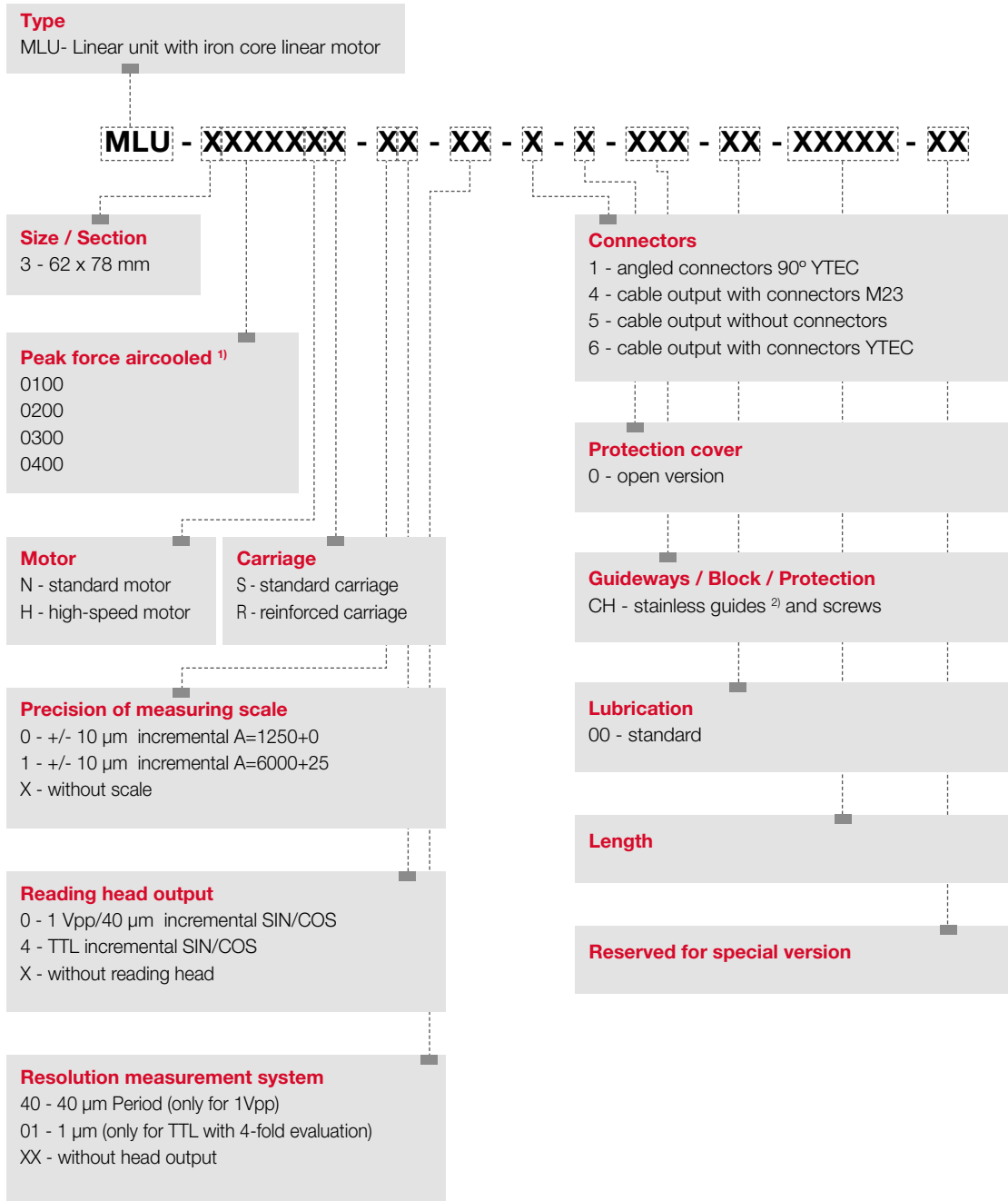
■ angled connectors 90° YTEC (1)



■ cable output with connectors M23 (4) ■ cable output without connectors (5) ■ cable output with connectors YTEC (6)



Order Code MLU 3

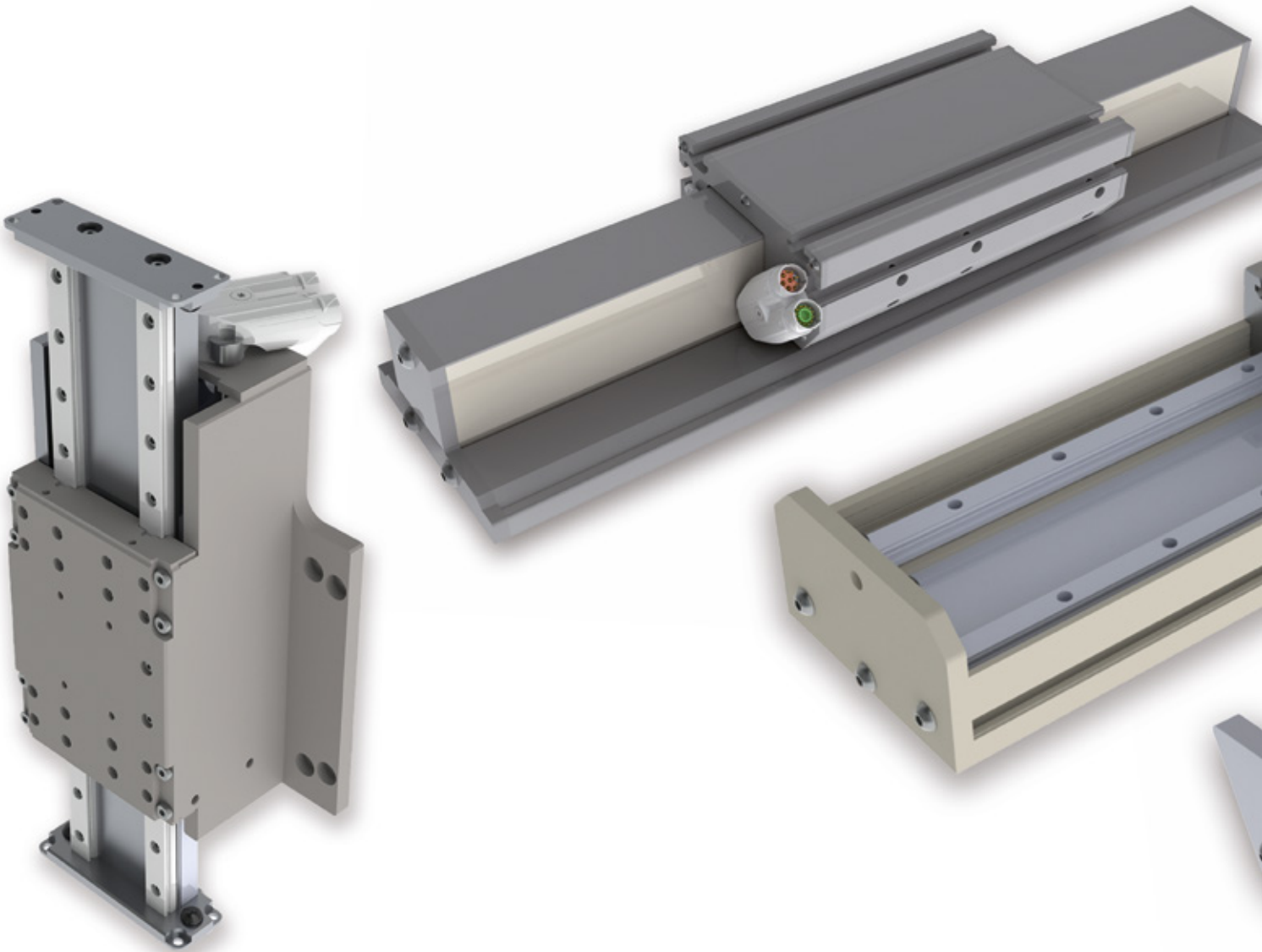


⁽¹⁾ Depends on application and temperature

⁽²⁾ Guides, steel body of carriage and balls are made of stainless steel

MLL & MLLZ Series

1. Price-optimised linear motor stages for applications with high dynamics.
2. Linear stages with structure profile, linear motor, linear guideways, measuring system and connectors.
3. Light and compact modular construction system for 2-3 axis portals.
4. Incremental measurement system with 1Vpp (SIN/COS) or TTL output.
5. Absolute measuring system with EnDat ¹⁾, Drive Cliq ²⁾, Panasonic, SSI, Fanuc, Mitsubishi, BiSS and 0,1 µm resolution.



⁽¹⁾ EnDat 2.2 is a protected trademark of the Johannes Heidenhain GmbH company

⁽²⁾ DriveCliq is a protected trademark of the Siemens joint-stock company

Compatible Servo amplifiers



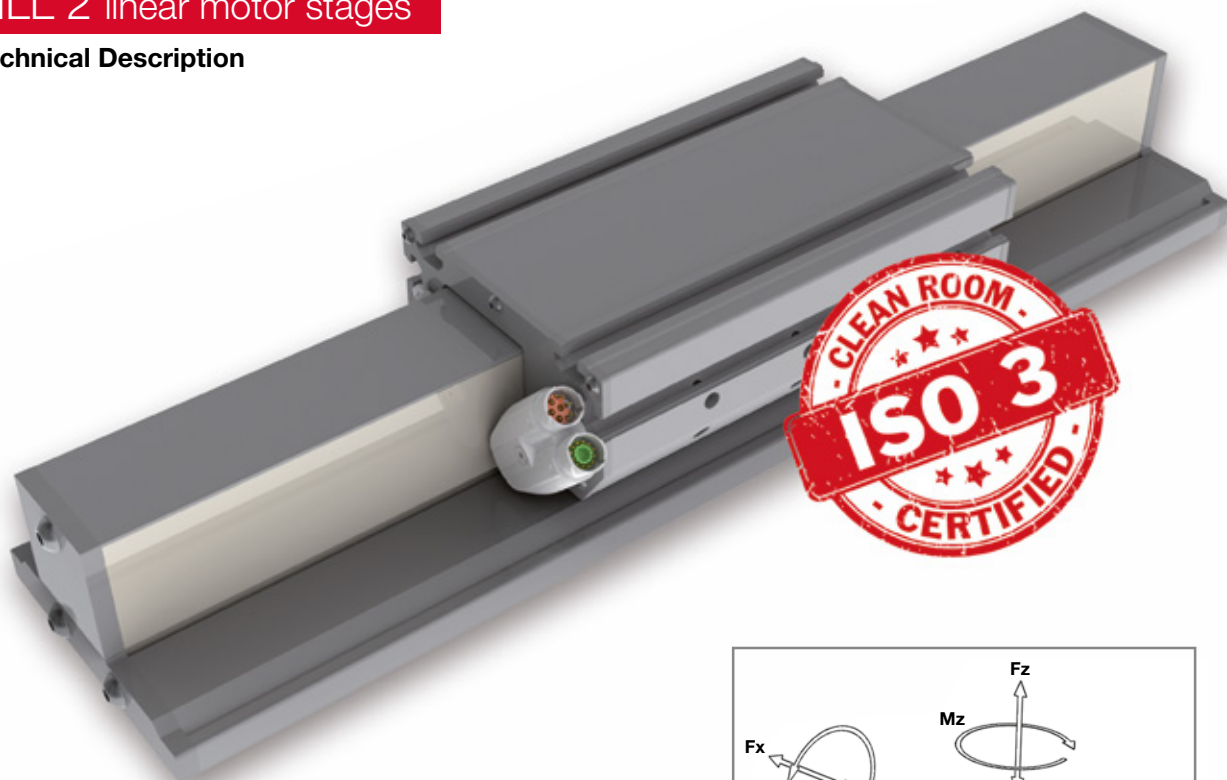
Operating voltage 24 - 600Vdc, up to 900Vdc for breaking



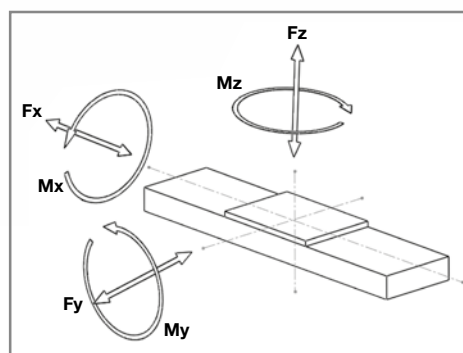
- 6. Magnets covered with stainless band to protect from dust and pollution.
- 7. Covered motor and measurement system.
Carriages with optional integrated permanent lubrication system.
- 8. Wired connectors for power and measuring system connection.
Customer-specific pinout is possible.

MLL 2 linear motor stages

Technical Description



Repeatability of measuring system: $\pm 30 \mu\text{m}$
 Repeatability of linear unit: $\pm 100 \mu\text{m}$
 Maximum speed: 9 m/s
 Maximum acceleration: 88 m/s²
 Maximum Length without joints: up to 6.000 mm
 Operating voltage: 600Vdc
 Max. Operating voltage: 900Vdc



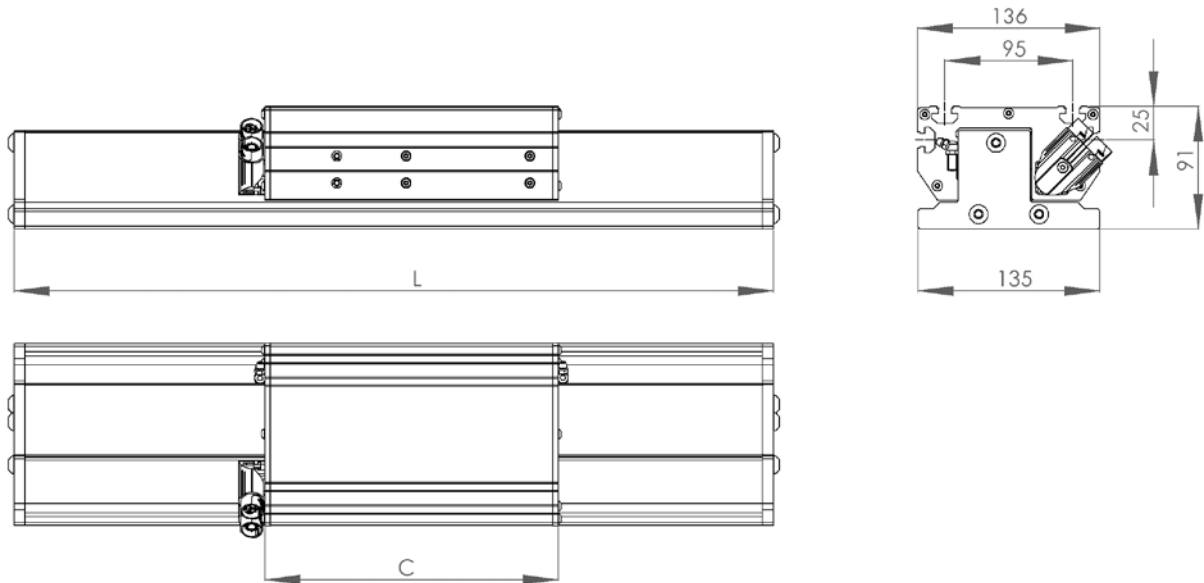
Mechanical specifications

Linear motor stage		MLL 20210	MLL 20210	MLL 20420	MLL 20630
Carriage type		S	R	S	S
Linear motor features					
Maximum speed ¹⁾	m/s	3			
Continuous force aircooled ²⁾	N	105	105	210	315
Peak force	N	210	210	420	630
Nominal current	A	3,0	3,0	6,0	4,5
Peak current	A	6,2	6,2	12,4	9,2
Guidance features					
Fy	N	900	900	900	900
Fz	N	900	900	900	900
Mx	Nm	70	70	70	85
My	Nm	200	300	300	350
Mz	Nm	200	300	300	350
For the sum of all forces and moments:	$\frac{F_{ye}}{F_y} + \frac{F_{ze}}{F_z} + \frac{M_{xe}}{M_x} + \frac{M_{ye}}{M_y} + \frac{M_{ze}}{M_z} < 1$ (Xxe = calculated value) (Xx = max. catalogue value)				
Structure profile features					
Geometrical moments of inertia Lx	mm ⁴	13,43x10 ⁵			
Geometrical moments of inertia Ly	mm ⁴	27,75x10 ⁵			
Elastic module	N/mm ²	70000			
Weight					
Weight of carriage	kg	3,1	4,2	4,5	6,2
Weight of 100 mm	kg	1,25			

⁽¹⁾ for a lifetime > 30.000 Km

⁽²⁾ depending on the application and ambient temperature

Dimensions MLL 2



Drawing for reference only. Please ask for ready 3D files.

Choice of stroke

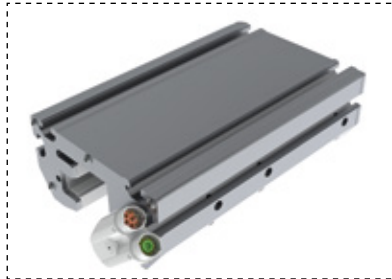
Linear motor stage	MLL 20210	MLL 20210	MLL 20420	MLL 20630
Carriage type	S	R	S	S
Carriage length C, mm	218	316	316	411
Length, mm	Code	Stroke ¹⁾		
324	00324	70	-	-
420	00420	166	68	-
564	00564	310	212	117
708	00708	454	356	261
804	00804	550	452	357
948	00948	694	596	501
1092	01092	838	740	645
1188	01188	934	836	741
1332	01332	1078	980	885
1476	01476	1222	1124	1029
1572	01572	1318	1220	1125
1716	01716	1462	1364	1269
1860	01860	1606	1508	1413
1956	01956	1702	1604	1509
2100	02100	1846	1748	1653
2244	02244	1990	1892	1797
2340	02340	2086	1988	1893
2484	02484	2230	2132	2037
2628	02628	2374	2276	2181
2724	02724	2470	2372	2277
2868	02868	2614	2516	2421
3012	03012	2758	2660	2565
3108	03108	2854	2756	2661
3252	03252	2998	2900	2805
3396	03396	3142	3044	2949
3492	03492	3238	3140	3045
3636	03636	3382	3284	3189
3780	03780	3526	3428	3333
3876	03876	3622	3524	3429
4020	04020	3766	3668	3573

⁽¹⁾ Other stroke lengths are available under request

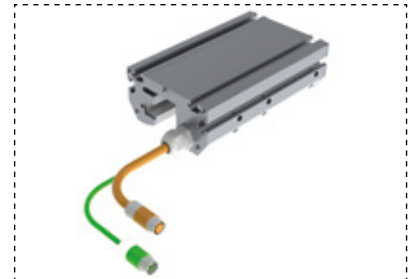
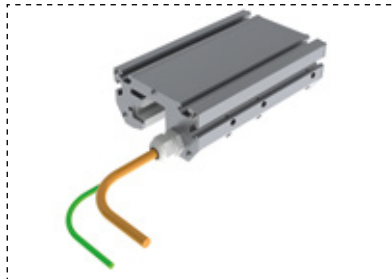
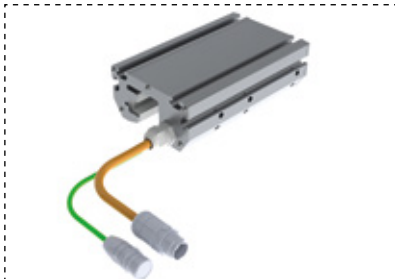
MLL 2 Options

Connector Options

■ angled connectors 90° YTEC (1)



■ cable output with connectors M23 (4) ■ cable output without connectors (5) ■ cable output with connectors YTEC (6)



Cleanroom Option



Note! 40mm less stroke

Cover Options

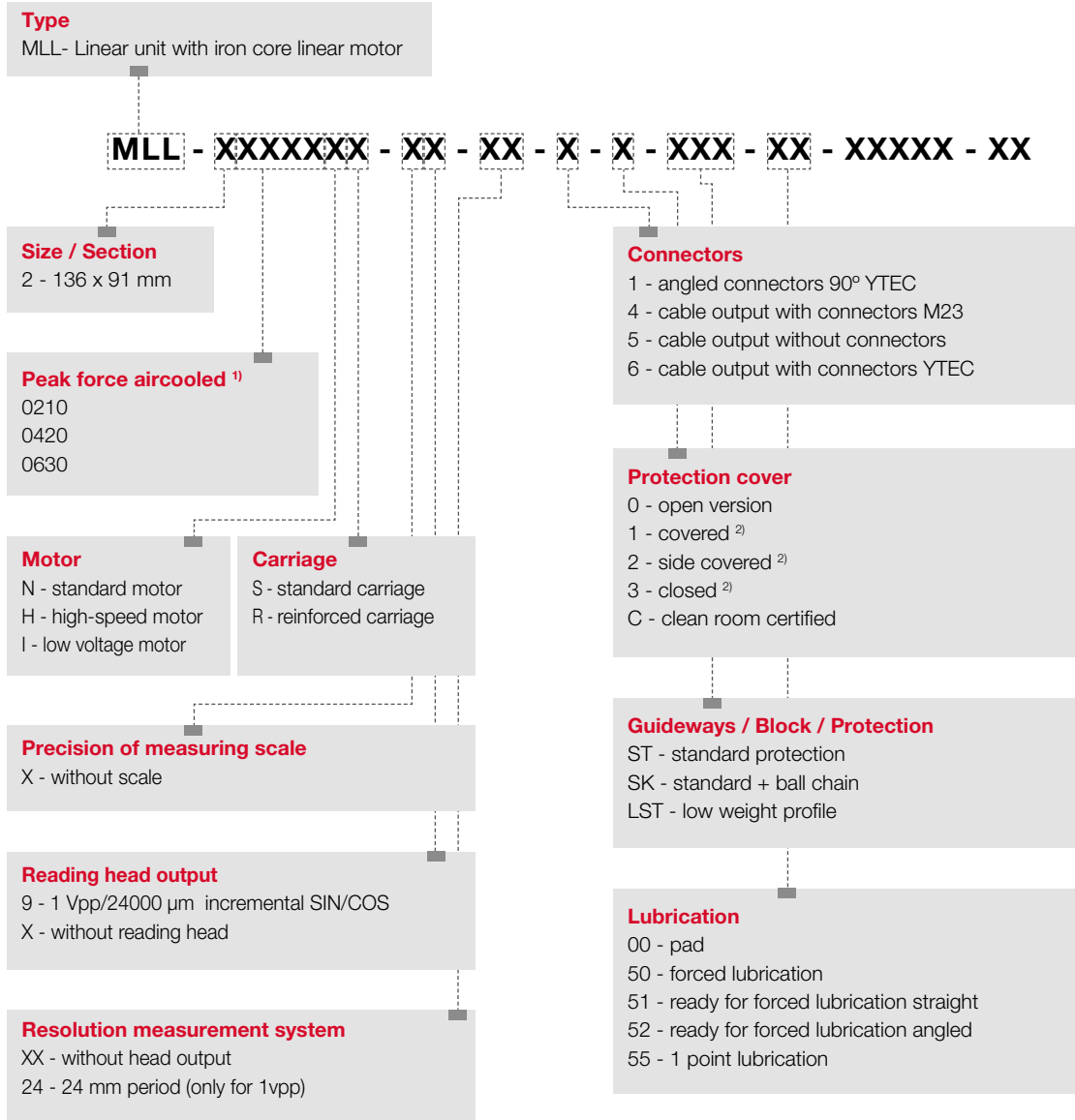
■ without cover (0)



■ with side cover (2)



Order Code MLL 2

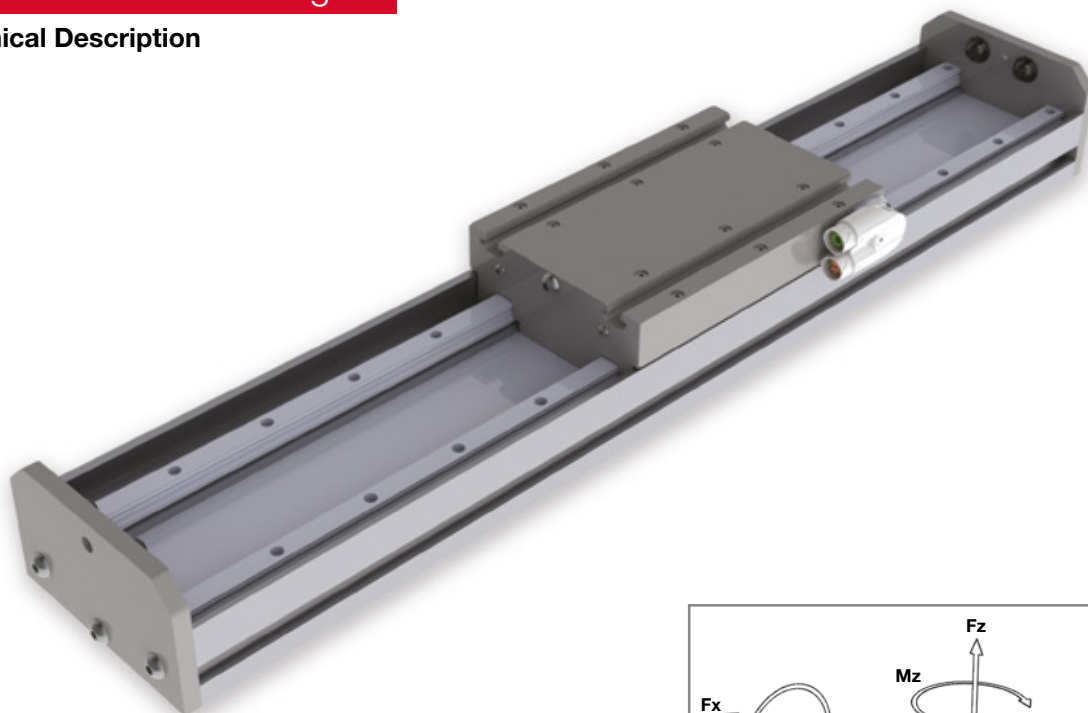


⁽¹⁾ Depends on application and temperature

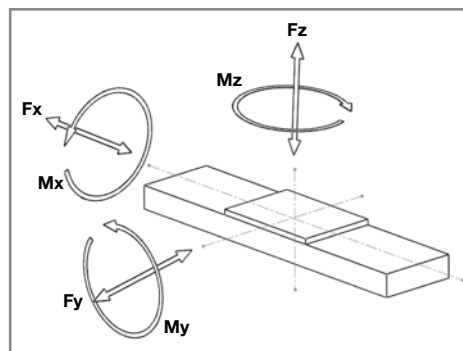
⁽²⁾ On request

MLL 3 linear motor stages

Technical Description



Repeatability of measuring system: $\pm 30 \mu\text{m}$
 Repeatability of linear unit: $\pm 100 \mu\text{m}$
 Maximum speed: 3 m/s
 Maximum acceleration: 86 m/s^2
 Maximum Length without joints: up to 3.600 mm
 Operating voltage: 600Vdc
 Max. Operating voltage: 900Vdc



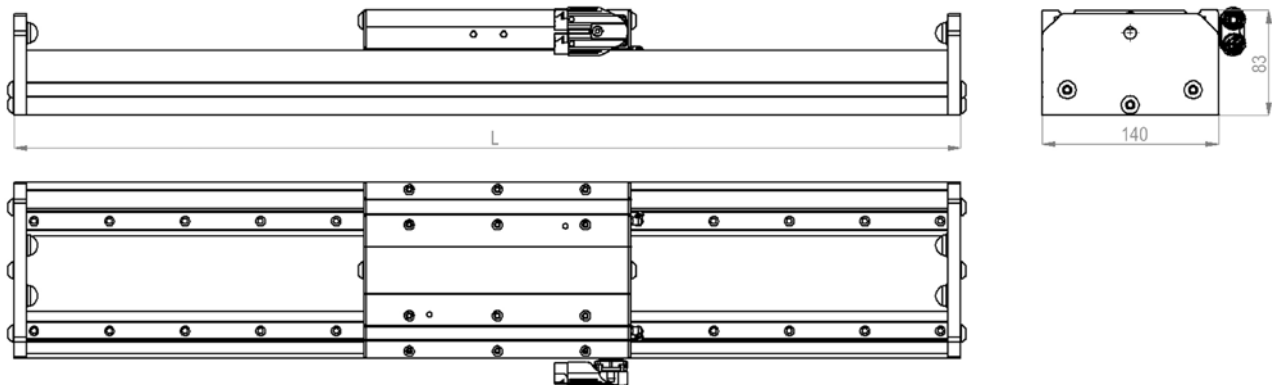
Mechanical specifications

Linear motor stage		MLL 30210	MLL 30420	MLL 30630
Carriage type		S	S	S
Linear motor features				
Maximum speed ¹⁾	m/s	3		
Continuous force aircooled ²⁾	N	105	210	315
Peak force	N	210	420	630
Nominal current	A	3,0	6,0	4,5
Peak current	A	6,2	12,4	9,2
Guidance features				
Fy	N	1200	1200	1800
Fz	N	600	600	900
Mx	Nm	180	180	200
My	Nm	200	250	300
Mz	Nm	200	250	300
For the sum of all forces and moments:	$\frac{F_{ye}}{F_y} + \frac{F_{ze}}{F_z} + \frac{M_{xe}}{M_x} + \frac{M_{ye}}{M_y} + \frac{M_{ze}}{M_z} < 1$ (Xxe = calculated value) (Xx = max. catalogue value)			
Structure profile features				
Geometrical moments of inertia Lx	mm ⁴	3,72x10 ⁵		
Geometrical moments of inertia Ly	mm ⁴	55,58x10 ⁵		
Elastic module	N/mm ²	70000		
Weight				
Weight of carriage	kg	3,2	4,7	6,2
Weight of 100 mm	kg	1,1		

⁽¹⁾ for a lifetime > 30.000 Km

⁽²⁾ depending on the application and ambient temperature

Dimensions MLL 3



Drawing for reference only. Please ask for ready 3D files.

Choice of stroke

Linear motor stage	MLL 30210	MLL 30420	MLL 30630
Carriage type	S	S	S
Carriage length C, mm	212	310	406

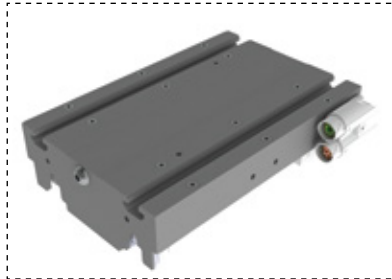
Length, mm	Code	Stroke ¹⁾	
320	00320	68	-
368	00368	116	18
416	00416	164	66
512	00512	260	162
560	00560	308	210
608	00608	356	258
656	00656	404	306
704	00704	452	354
752	00752	500	402
800	00800	548	450
896	00896	644	546
944	00944	692	594
992	00992	740	642
1040	01040	788	690
1088	01088	836	738
1136	01136	884	786
1184	01184	932	834
1280	01280	1028	930
1328	01328	1076	978
1376	01376	1124	1026
1472	01472	1220	1122
1568	01568	1316	1218
1712	01712	1460	1362
1856	01856	1604	1506
1952	01952	1700	1602
2096	02096	1844	1746
2240	02240	1988	1890
2336	02336	2084	1986
2480	02480	2228	2130
2624	02624	2372	2274
2720	02720	2468	2370
2864	02864	2612	2514
3008	03008	2756	2658
3104	03104	2852	2754
3248	03248	2996	2898
3392	03392	3140	3042
3488	03488	3236	3138
3584	03584	3332	3234

⁽¹⁾ Other stroke lengths are available under request

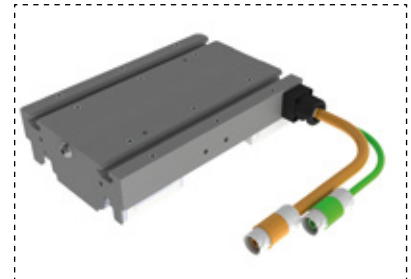
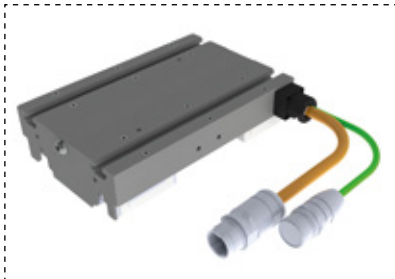
MLL 3 Options

Connector Options

■ angled connectors 90° YTEC (1)

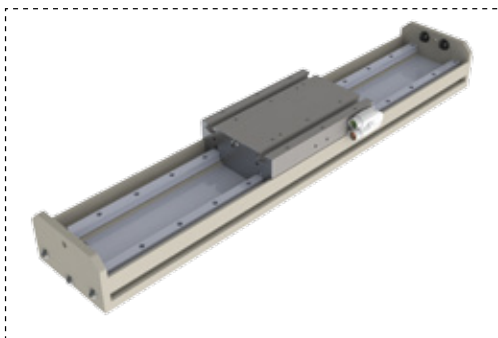


■ cable output with connectors M23 (4) ■ cable output without connectors (5) ■ cable output with connectors YTEC (6)

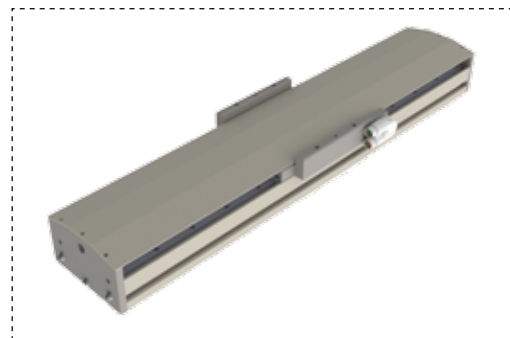


Cover Options

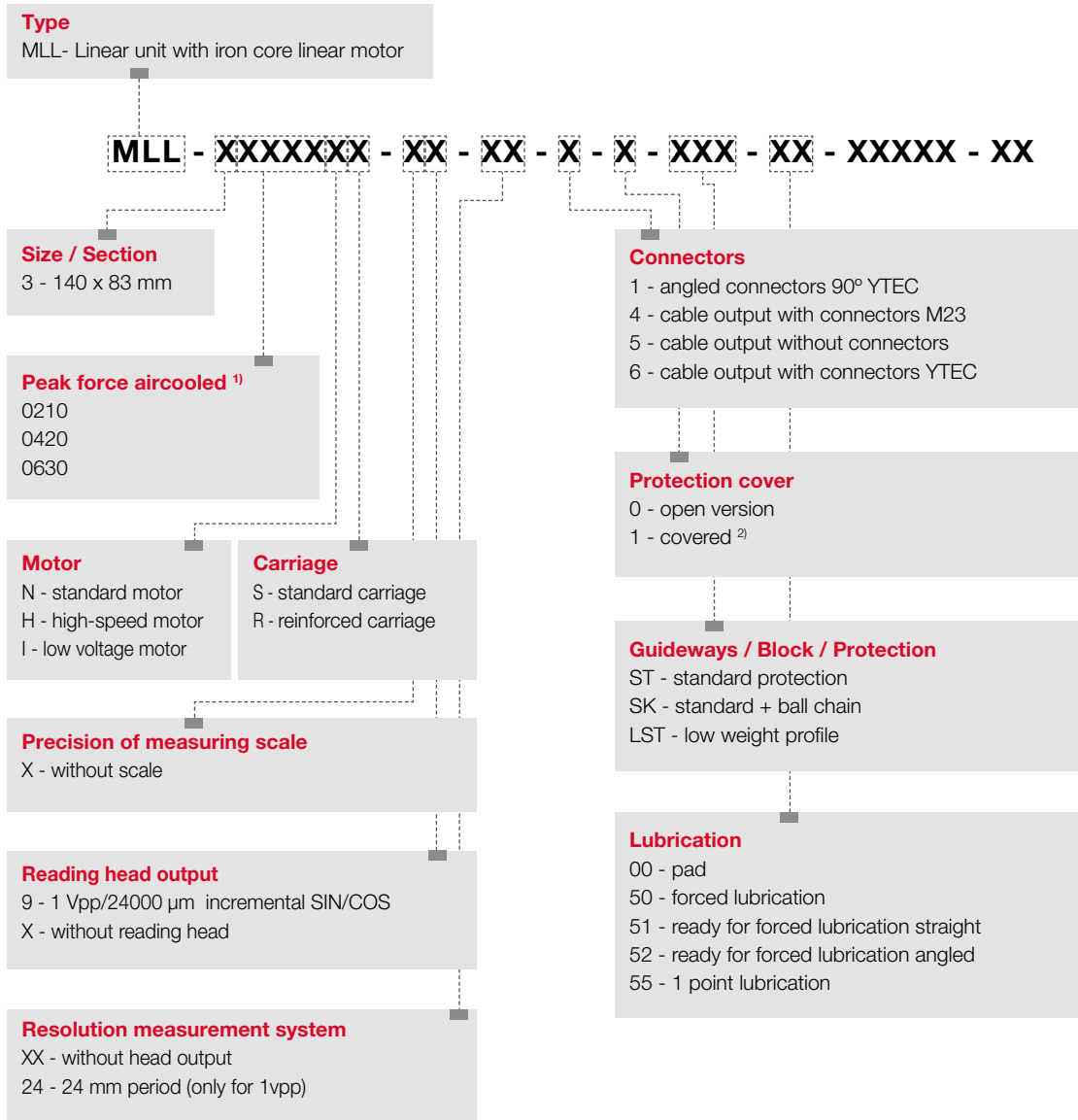
■ without cover (0)



■ with cover (1)



Order Code MLL 3

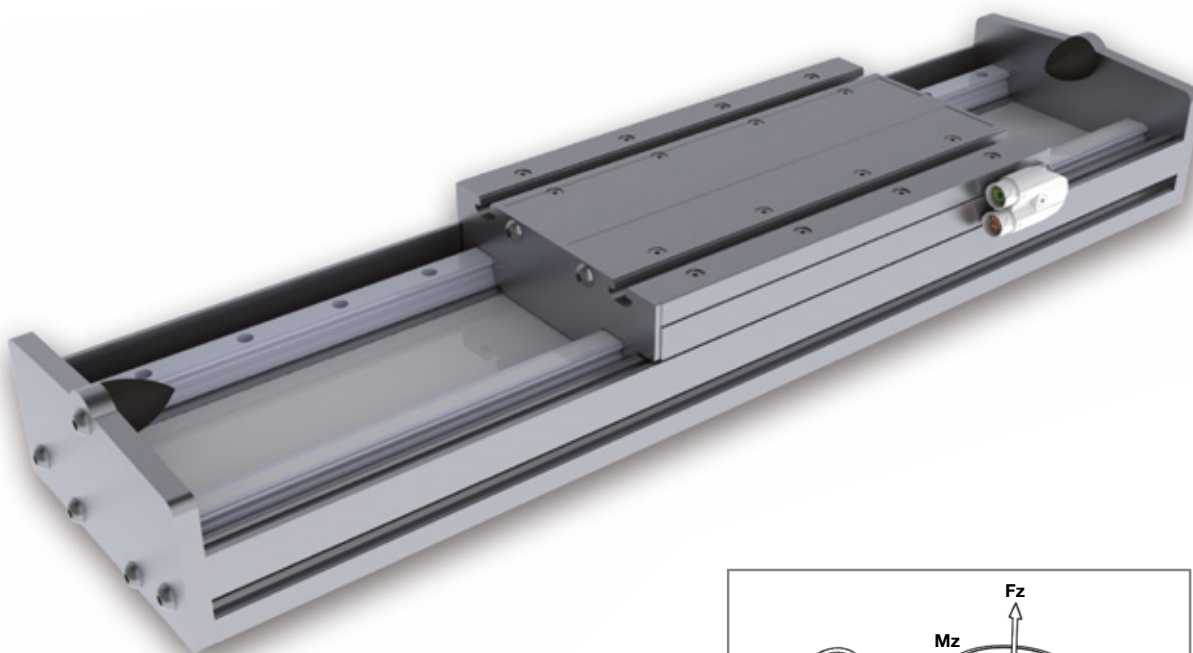


⁽¹⁾ Depends on application and temperature

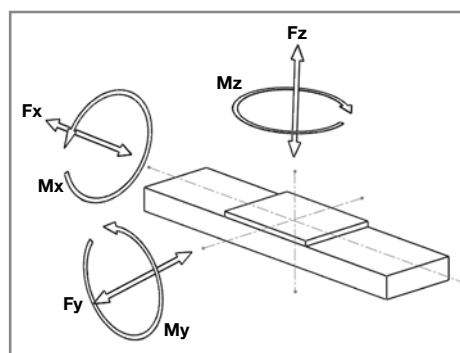
⁽²⁾ On request

MLL 5 linear motor stages

Technical Description



Repeatability of measuring system: $\pm 30 \mu\text{m}$
 Repeatability of linear unit: $\pm 100 \mu\text{m}$
 Maximum speed: 3 m/s
 Maximum acceleration: 127 m/s^2
 Maximum Length without joints: up to 6.000 mm
 Operating voltage: 600Vdc
 Max. Operating voltage: 900Vdc



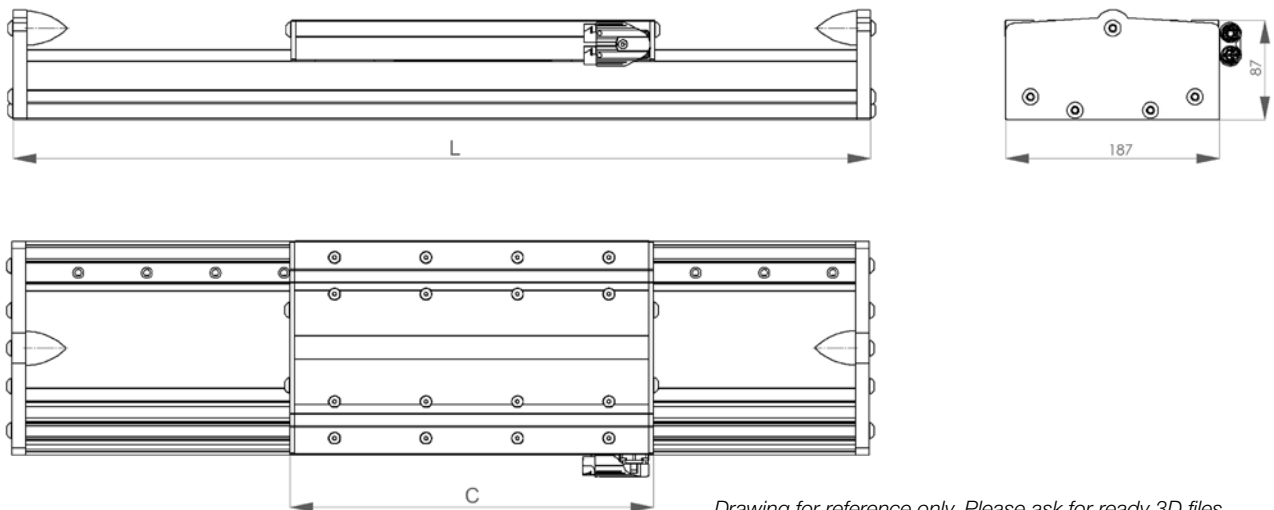
Mechanical specifications

Linear motor stage		MLL 50400	MLL 50800	MLL 51000	MLL 51200
Carriage type		S	S	S	S
Linear motor features					
Maximum speed ¹⁾	m/s	3			
Continuous force aircooled ²⁾	N	200	400	500	600
Peak force	N	400	800	1000	1200
Nominal current	A	2,26	4,5	4,7	6,8
Peak current	A	5,0	10,0	10,4	15,0
Guidance features					
Fy	N	2000	2000	2000	3000
Fz	N	1000	1000	1000	1500
Mx	Nm	300	300	300	450
My	Nm	400	450	500	600
Mz	Nm	400	450	500	600
For the sum of all forces and moments:	$\frac{F_{ye}}{F_y} + \frac{F_{ze}}{F_z} + \frac{M_{xe}}{M_x} + \frac{M_{ye}}{M_y} + \frac{M_{ze}}{M_z} < 1$ (Xxe = calculated value) (Xx = max. catalogue value)				
Structure profile features					
Geometrical moments of inertia Lx	mm ⁴	2,70x10 ⁵			
Geometrical moments of inertia Ly	mm ⁴	86,82x10 ⁵			
Elastic module	N/mm ²	70000			
Weight					
Weight of carriage	kg	4,7	6,8	7,9	9,4
Weight of 100 mm	kg	1,7			

⁽¹⁾ for a lifetime > 30.000 Km

⁽²⁾ depending on the application and ambient temperature

Dimensions MLL 5



Drawing for reference only. Please ask for ready 3D files.

Choice of stroke

Linear motor stage	MLL 50400	MLL 50800	MLL 51000	MLL 51200
Carriage type	S	S	S	S
Carriage length C, mm	220	318	364	410

Length, mm	Code	Stroke ¹⁾			
462	00462	148	50	-	-
558	00558	244	146	100	54
654	00654	340	242	196	150
750	00750	436	338	292	246
846	00846	532	434	388	342
942	00942	628	530	484	438
1038	01038	724	626	580	534
1134	01134	820	722	676	630
1230	01230	916	818	772	726
1326	01326	1012	914	868	822
1422	01422	1108	1010	964	918
1518	01518	1204	1106	1060	1014
1614	01614	1300	1202	1156	1110
1710	01710	1396	1298	1252	1206
1806	01806	1492	1394	1346	1302
1902	01902	1588	1490	1444	1398
1998	01998	1684	1586	1540	1494
2094	02094	1780	1682	1636	1590
2190	02190	1876	1778	1732	1686
2286	02286	1972	1874	1828	1782
2382	02382	2068	1970	1924	1878
2478	02478	2164	2066	2020	1974
2574	02574	2260	2162	2116	2070
2670	02670	2356	2258	2212	2166
2766	02766	2452	2354	2308	2262
2862	02862	2548	2450	2404	2358
2958	02958	2644	2546	2500	2454
3054	03054	2740	2642	2596	2550
3150	03150	2836	2738	2692	2646
3246	03246	2932	2834	2788	2742
3342	03342	3028	2930	2884	2838
3438	03438	3124	3026	2980	2934
3534	03534	3220	3122	3076	3030

⁽¹⁾ Other stroke lengths are available under request

MLL 5 Options

Connector Options

■ angled connectors 90° YTEC (1)



■ cable output with connectors M23 (4) ■ cable output without connectors (5) ■ cable output with connectors YTEC (6)

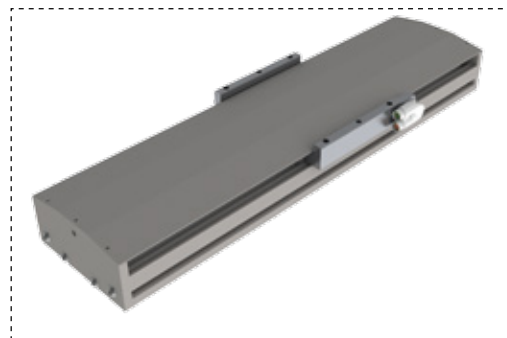


Cover Options

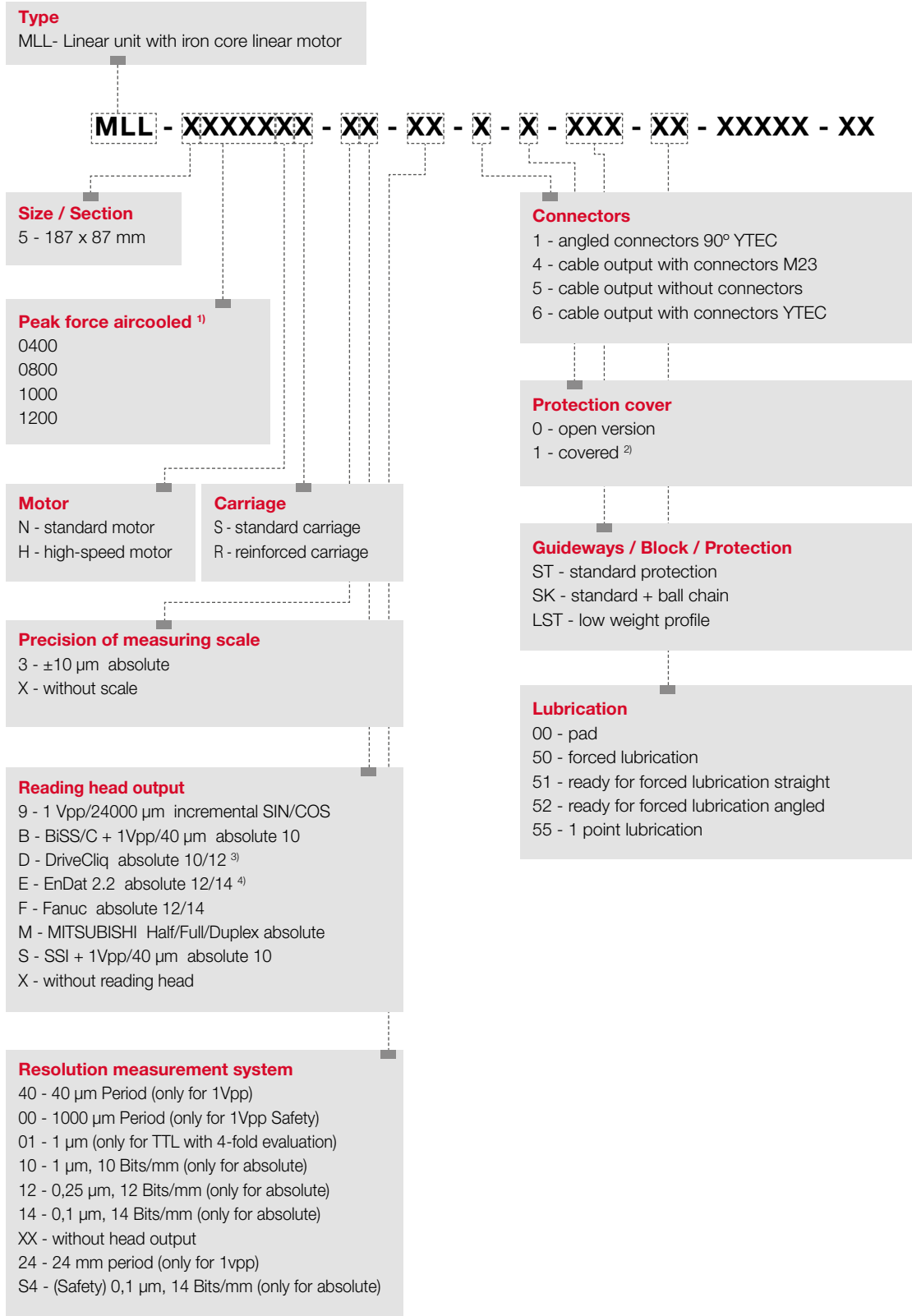
■ without cover (0)



■ with cover (1)



Order Code MLL 5



¹⁾ Depends on application and temperature

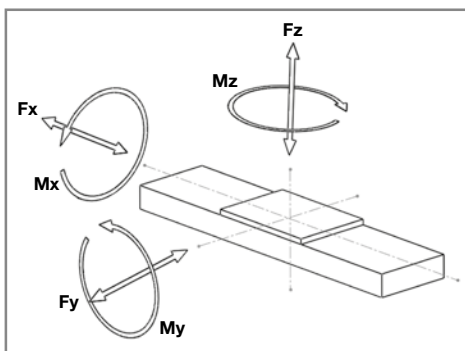
²⁾ On request

³⁾ DriveCliq is a protected trademark of the Siemens joint-stock company

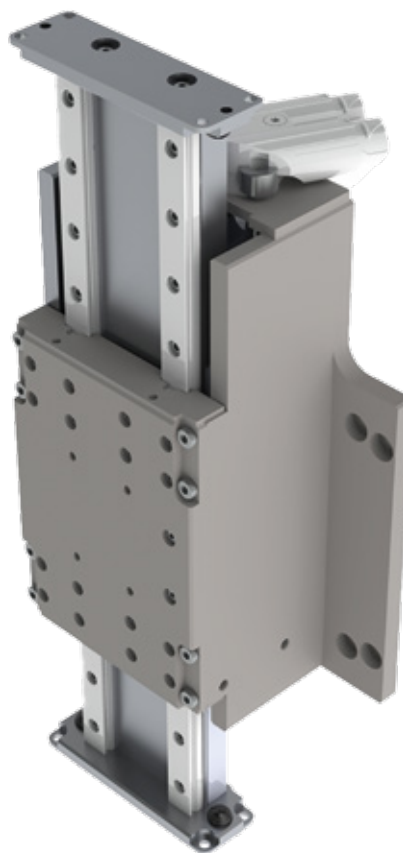
⁴⁾ EnDat 2.2 is a protected trademark of the Johannes Heidenhain GmbH company

MLLZ 2 linear motor stages

Technical Description



Repeatability of measuring system: $\pm 30 \mu\text{m}$
 Repeatability of linear unit: $\pm 100 \mu\text{m}$
 Maximum speed: 9 m/s
 Maximum acceleration: 200 m/s^2
 Maximum stroke: up to 232 mm
 Operating voltage: 600Vdc
 Max. Operating voltage: 900Vdc



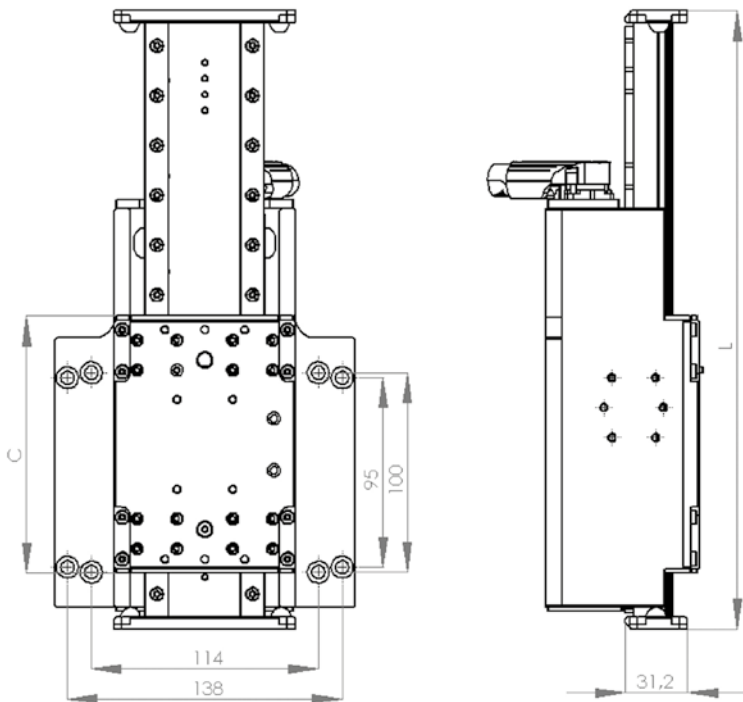
Mechanical specifications

Linear motor stage		MLLZ 2010S	MLLZ 20210
Carriage type		R	S
Linear motor features			
Maximum speed ¹⁾	m/s	3	3
Continuous force aircooled ²⁾	N	55	105
Peak force	N	105	210
Nominal current	A	1,5	3,0
Peak current	A	3,1	6,2
Guidance features			
Fy	N	300	300
Fz	N	150	150
Mx	Nm	95	95
My	Nm	160	160
Mz	Nm	160	160
For the sum of all forces and moments:	$\frac{F_{ye}}{F_y} + \frac{F_{ze}}{F_z} + \frac{M_{xe}}{M_x} + \frac{M_{ye}}{M_y} + \frac{M_{ze}}{M_z} < 1$ (Xxe = calculated value) (Xx = max. catalogue value)		
Structure profile features			
Geometrical moments of inertia Lx	mm ⁴	0,55x10 ⁴	
Geometrical moments of inertia Ly	mm ⁴	16,27x10 ⁴	
Elastic module	N/mm ²	70000	

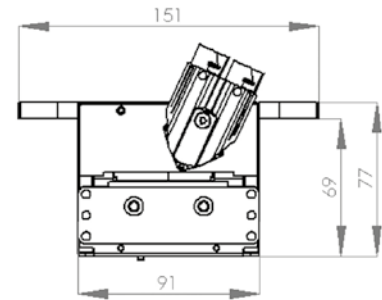
⁽¹⁾ for a lifetime > 30.000 Km

⁽²⁾ depending on the application and ambient temperature

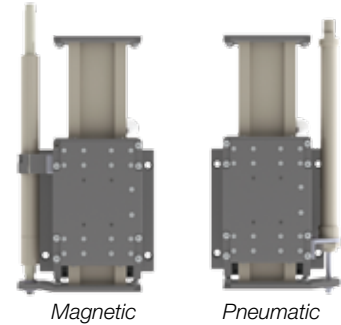
Dimensions MLLZ 2



Drawing for reference only. Please ask for ready 3D files.



Weight Compensation



Choice of stroke

Linear motor stage		MLLZ 20105R / MLLZ 20210S				
Length	mm	262	310	358	406	454
Stroke ¹⁾	mm	40	80	136	184	232
Carriage length, C	mm	156				

Weight

Carriage weight	kg	2,8				
Runner Weight	kg	1,27	1,5	1,73	1,96	2,19
Total weight	kg	4,07	4,3	4,53	4,76	4,99
Pneumatic weight compensation	kg	0,2	-	-	-	-
Magnetic weight compensation 03	kg	0,18	0,29	0,29	-	-
Magnetic weight compensation 04, 05, 06	kg	0,88	1,32	1,32	1,75	1,75

Weight compensation

Pneumatic	Typ	DPN16130	-	-	-	-
Maximum Force	N	50	-	-	-	-
Order Code		01	-	-	-	-
Magnetic	Typ	D22130	D22210	D22210	-	-
Maximum Force	N	9	7	3	-	-
Order Code		03	03	03	-	-
Magnetic	Typ	D40130	D40200	D40200	D40275	D40275
Maximum Force	N	27	25	22	20	17
Order Code		04	04	04	04	04 ²⁾
Magnetic	Typ	D50130	D50200	D50200	D50275	D50275
Maximum Force	N	37	35	32	30	27
Order Code		05	05	05	05	05 ²⁾
Magnetic	Typ	D60130	D60200	D60200	D60275	D60275
Maximum Force	N	47	45	42	40	37
Order Code		06	06	06	06	06 ²⁾

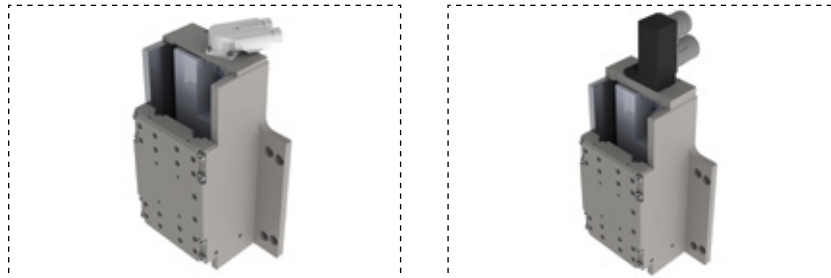
¹⁾ Other stroke lengths are available under request

²⁾ Stroke length of the compensator is limited to 275 mm

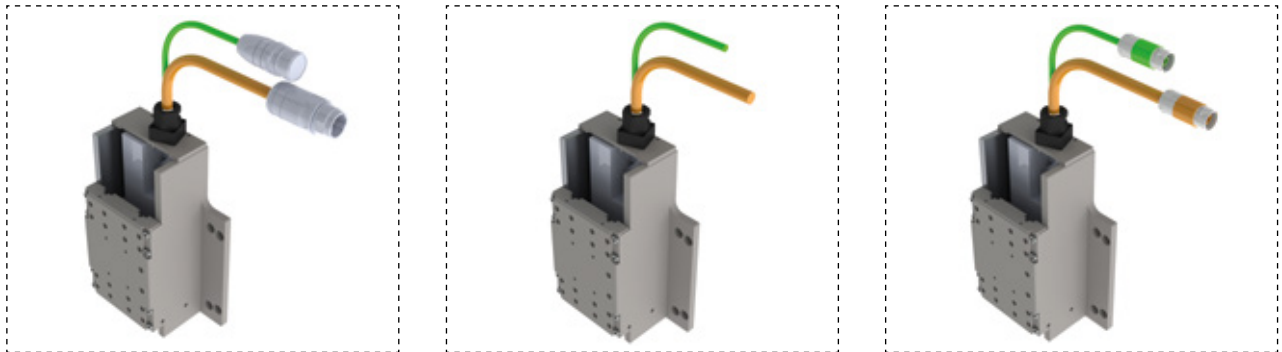
MLLZ 2 Options

Connector Options

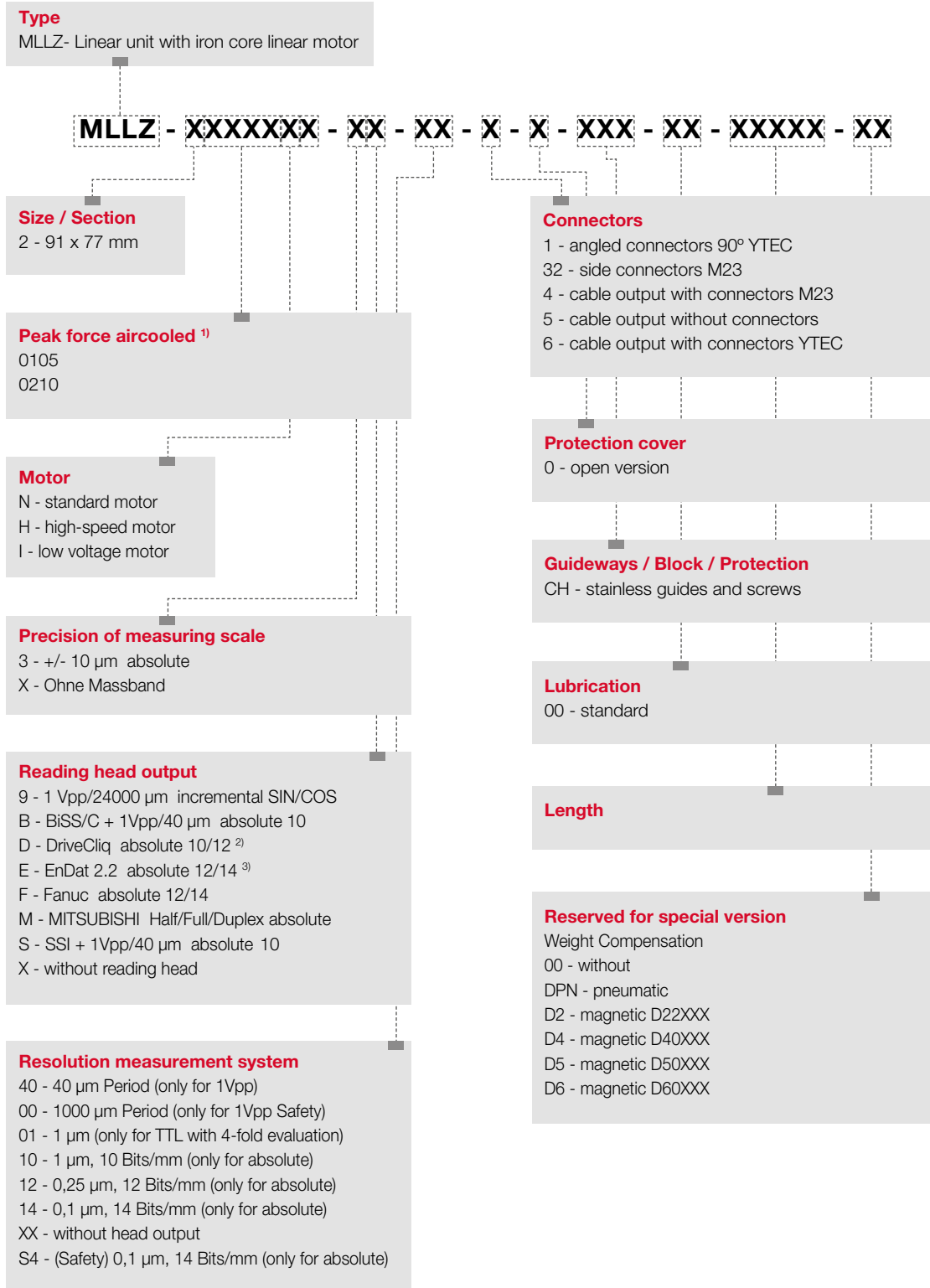
- angled connectors 90° YTEC (1) ■ side connectors M23 (32)



- cable output with connectors M23 (4) ■ cable output without connectors (5) ■ cable output with connectors YTEC (6)



Order Code MLLZ 2



¹⁾ Depends on application and temperature

²⁾ DriveCliq is a protected trademark of the Siemens joint-stock company

³⁾ EnDat 2.2 is a protected trademark of the Johannes Heidenhain GmbH company

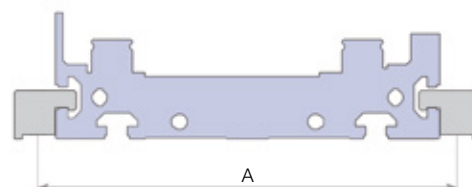
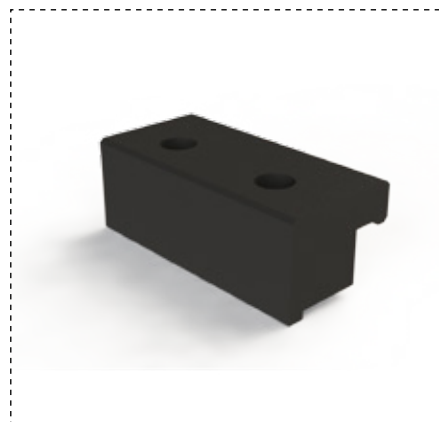
Accessories

T-slot nut M5, M6 and M8



Type	Part number
T-slot nut M8, 10 units pack	KTM0810
T-slot nut M6, 10 units pack	KTM0610
T-slot nut M5, 10 units pack	KTM0510

Mounting Set



Linear Unit	Part number	A
MLE2/MLL2	AC03-2501	152
MLE3/MLL3	AC03-2501	157
MLE5/MLL5	AC03-2501	204

Mounting Plate



Type	Part number
Flat	AC01-Fxx000
Square	AC01-Sxx000
Lateral	AC01-Lxx000

Brakes



Linear Unit	Part number
MLE3/MLL3	S-SBRAKE15
MLE5/MLL5	S-SBRAKE20
MLE7	S-SBRAKE25

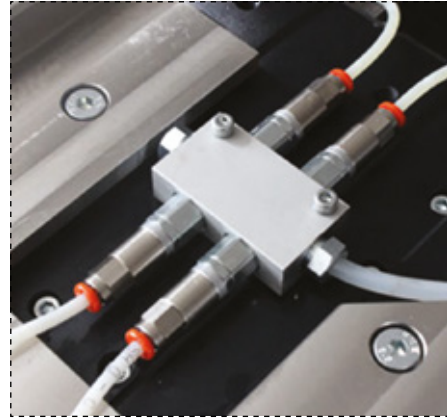
Accessories

■ Limit Switch



Description	Part number
Limit Switch set for MLE2	A00502-05
Limit Switch set for MLE3	A00502-02
Limit Switch set for MLE5	A00502-01
Limit Switch set for MLE7	A00502-04
Limit Switch set for MLU3	A00502-03
Limit Switch	A00502-10

■ Central Lubrication



Description	Part number
Unit with 4 carriages	S-SOIL00
Unit with 6 carriages	S-SOIL03

■ Power Cable



Description	Part number
Cable for power, M23 connector, L=10m	AC05-PM0010
Cable for power, Y TEC connector, L=10m	AC05-PY0010

■ Encoder Cable



Description	Part number
Cable for encoder, M23 connector, L=10m	AC05-EM0010
Cable for encoder, Y TEC connector, L=10m	AC05-EY0010

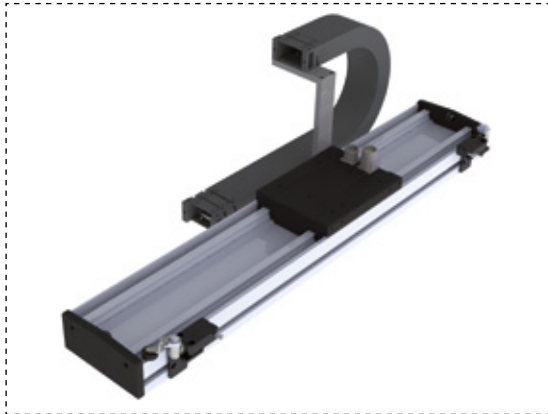
Accessories

Power Chain

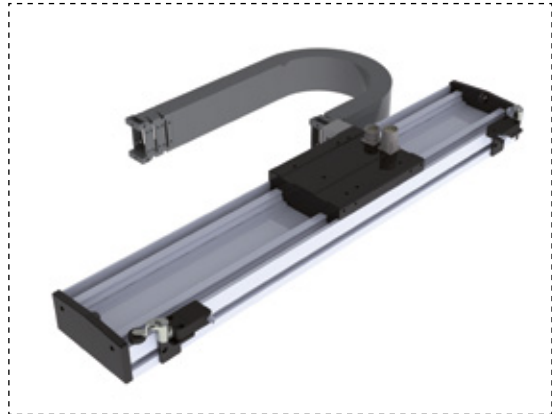
We also offer the possibility to fix the power chain directly with special support.

Mounting Possibilities

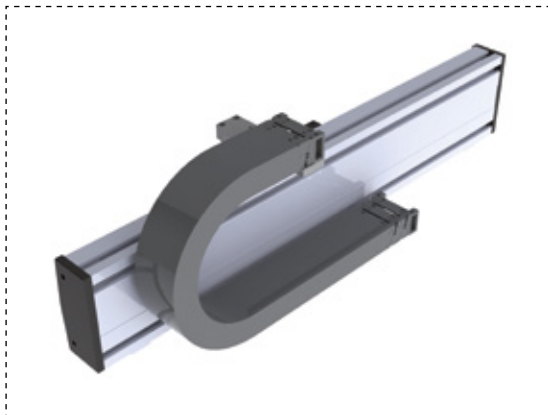
H - horizontally mounted (H05A)



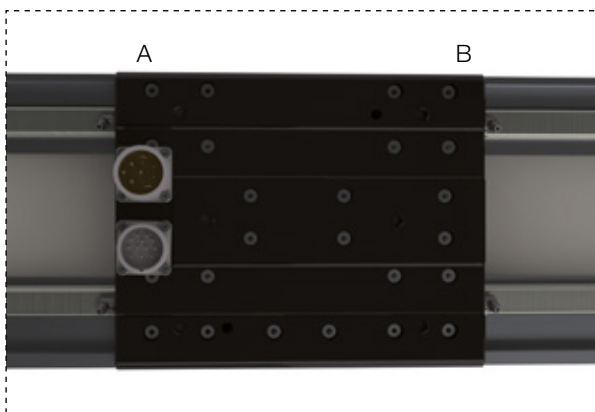
V - vertically mounted (V05A)



S - side mounted (S06A)



Mounting Position of Power Chain





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Innovation & Excellence

Linear Units based on Direct Drives technology

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