

# MICOS

MOTION CONTROL & OPTICS **USA**

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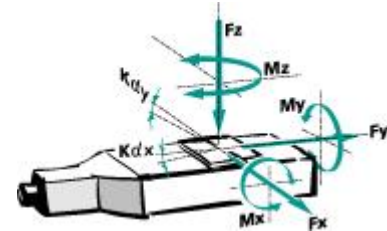
◀ 4.020 ▶ **Linear Motor Stage LMS-300**

Direct Drives



### Key features

- Linear motor with glass scale
- Travel range up to 815 mm
- Maximum speed 800 mm/sec
- Load capacity up to 200 kg
- Bi-directional repeatability +/- 0.2 µm
- Linear recirculating ball system
- Special, tempered Aluminium
- Limit switches integrated
- Module combination



### FACTS

Load Characteristics	Fx (N)	Fy (N) (Peak)	Fy (N) (Con.)	Fz (N)	Mx (N)	My (Nm)	Mz (Nm)	kax (µrad/Nm)	kay (µrad/Nm)
<u>LM-020</u>	900	400	77	2000	110	200	110	25	20

### DESCRIPTION

Linear Stages of the structural series **LMS-300** and LMS-180 are mainly employed for modern electronic production and laser application. Combined with direct-driven Rotation Stages UPR of MICOS, high dynamic precise positioning systems can be configured resulting in an efficient production. Linear Stages LMS-300 and LMS-180 are driven by linear motors without iron. They are controlled

With this, a higher system accuracy can be achieved. Especially significant is a very quiet and dynamic smooth movement. Optionally the Linear Stage LMS-300 can be equipped with a second linear motor resulting in higher speeds, high dynamic processing and more power. All Linear Stages of the structural series LMS are equipped with inductive travel-limit switch and protection against

by closed loop modus. The linear measuring system with very high accuracy is installed between the guides.

damage.

#### Technical data

Travel Range (mm)	415	615	815
Bi-directional Repeatability ( $\mu\text{m}$ )	+/- 0.2		
Accuracy per 100 mm ( $\mu\text{m}$ )	+/- 1		
Velocity Range (mm/sec)	0.001 ... 800		
Straightness / Flatness ( $\mu\text{m}$ )	+/- 5	+/- 6	+/- 8
Pitch ( $\mu\text{rad}$ )	+/- 100	+/- 110	+/- 120
Yaw ( $\mu\text{rad}$ )	+/- 120		

#### Speed max. (mm/sec)

<u>LM-020</u>	800		
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#### Resolution Closed-Loop ( $\mu\text{m}$ )

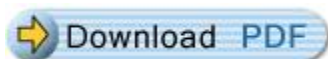
<u>LS-030</u> , Linear glass scale (25-times interpolation)	0.08		
Reference mark	center		

#### Winding Constant

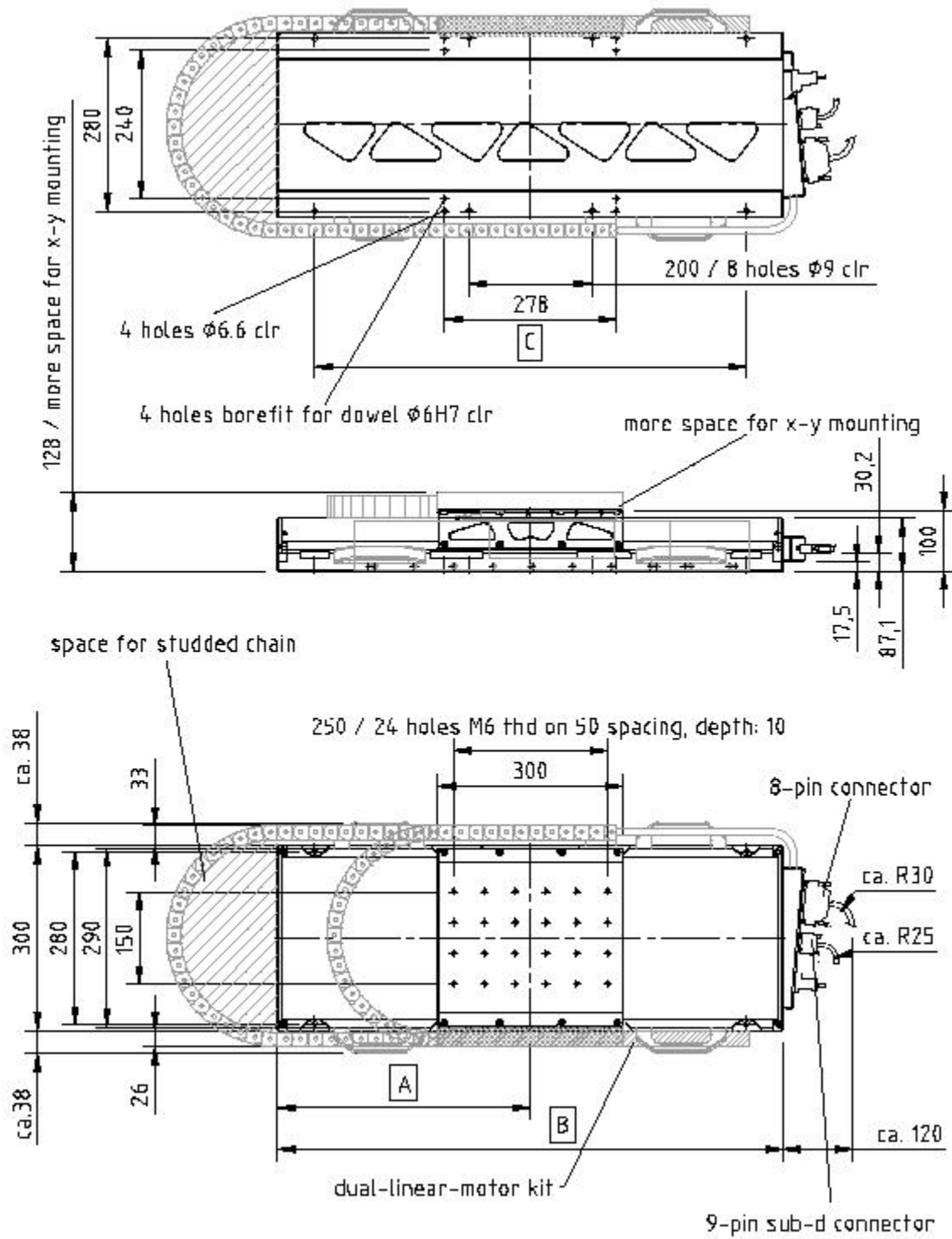
Force constant (Nm/Ams)	25.1		
Back EMF constant, peak value V/(m/s)*	20.5		
Electrical resistance at 80° (Ohm)*	3.77		
Electrical inductance (mH)*	1.15		
Continuous current at 80° (Ams)	4.3		

<b>Material</b>	Special Aluminium, black anodized		
<b>Weight (kg)</b>	38.7	58	75

**Note:** \* Terminal to terminal



Travel ranges	A (mm)	B (mm)	C (mm)
415 mm	410	820	700
615 mm	510	1020	900
815 mm	610	1220	1100

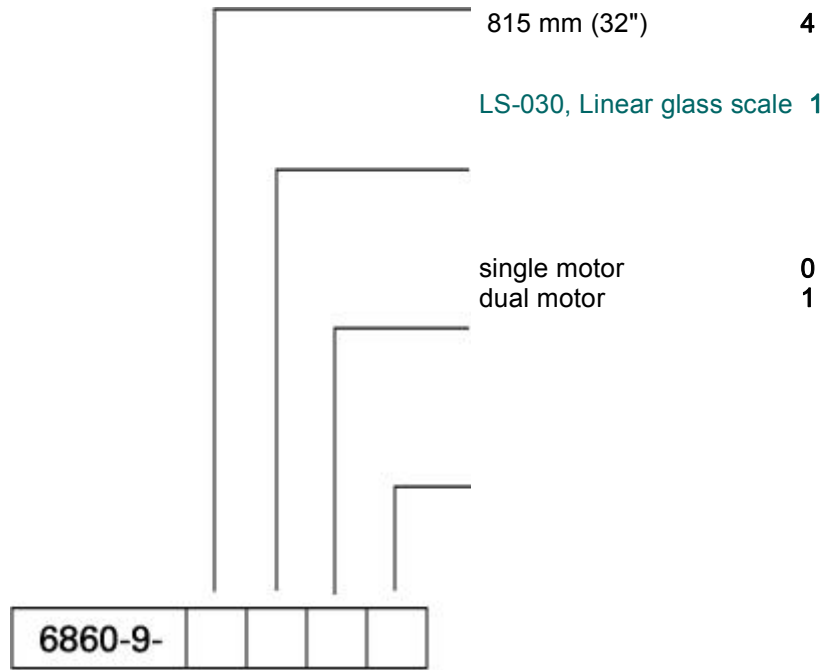
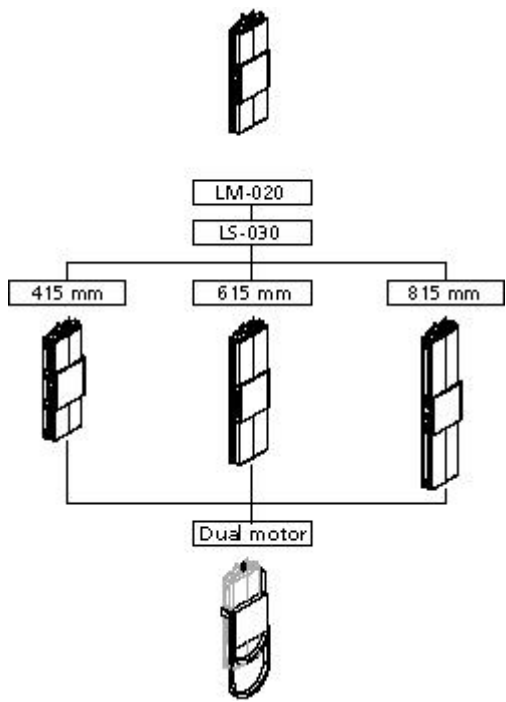


LM-020

LMS-300 Ordering information

LM-020 1

415 mm (16") 2  
 615 mm (24") 3



Founded in 1990, MICOS specializes in the development, manufacturing and marketing of ultra-high precision positioning components and systems for research and industry. We are experts in vacuum, ultra-high vacuum, clean room, and extreme climate environments down to 77 Kelvin. ▶▶

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