

Linear Modules

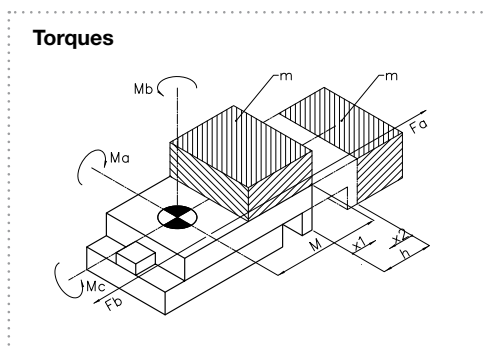
Technical Data – Summary FE Series

		Electric							
		LM 4 SE			LM 6 FE			LM 8 FE	
		SE-30	SE-60	SE-90	FE-90	FE-180	FE-270	FE-60	FE-240
Stroke lengths [mm]: h	0-30	●							
	0-60		●					●	
	0-90			●	●				
	0-180					●			
	0-240								●
	0-270						●		
Theor. force Fa/Fb [N]:	47/47	●	●	●					
	110/110				●	●	●		
	440/440							●	●
Max. permissible mass [kg]:	2	●	●	●					
	5				●	●	●		
	20							●	●
Weight [kg]:		1,1	1,2	1,3	3,3	3,9	4,4	6	8,5
Point of application of force for all torques [mm]:	M	65	65	65	82	82	82	138	138
Max. static Torques [Nm]:	Ma	10	20	20	370	370	370	386	386
	Mb	10	20	20	370	370	370	784	784
	Mc	30	30	30	63	63	63	336	336
Repeat accuracy [mm]:		±0,01	±0,01	±0,01	±0,01	±0,01	±0,01	±0,01	±0,01

This applies to calculations:

* $M_a/M_{a \max} + M_b/M_{b \max} + M_c/M_{c \max} < 1$

* For stresses during the drive of the carriage $M_{\max} = 20\% M_{\max \text{ static}}$

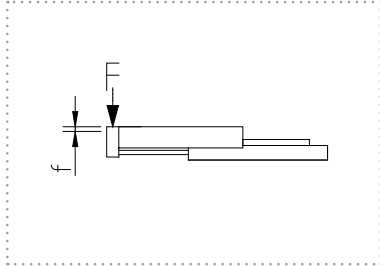


Linear Modules

Load Diagrams

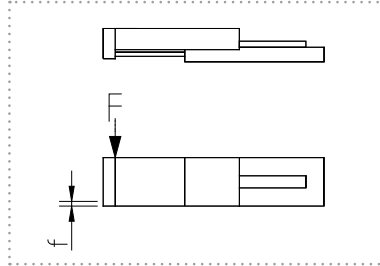
Axial Load

The graph shows the deflection f of the slide under the effect of the force F .



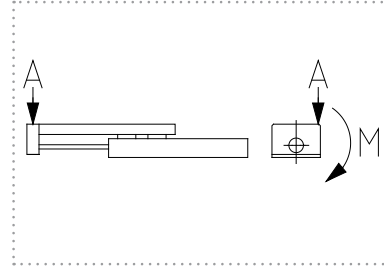
Transverse Load

The graph shows the deflection f of the slide under the effect of the force F .

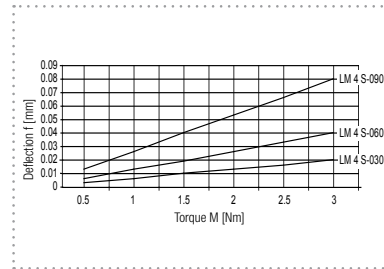
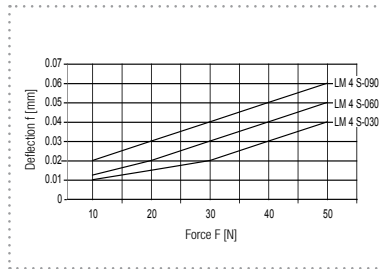
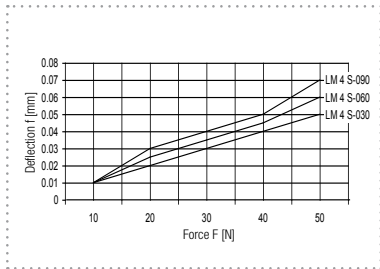


Lateral Load

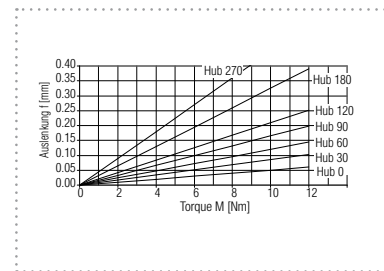
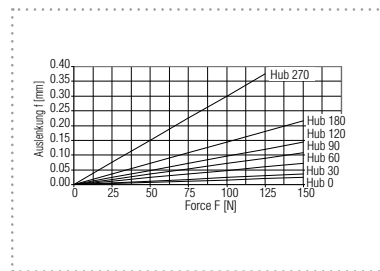
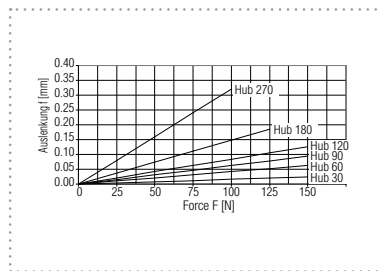
The graph shows the deflection f of the slide at point A under the effect of the torque.



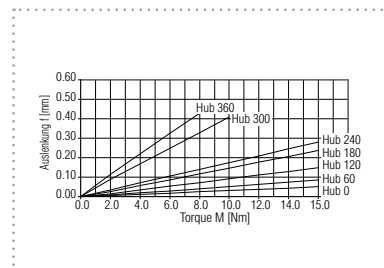
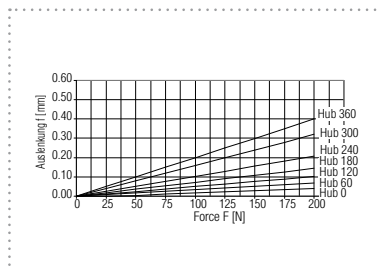
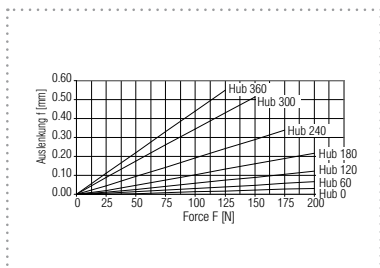
LM 4 SE



LM 6 FE



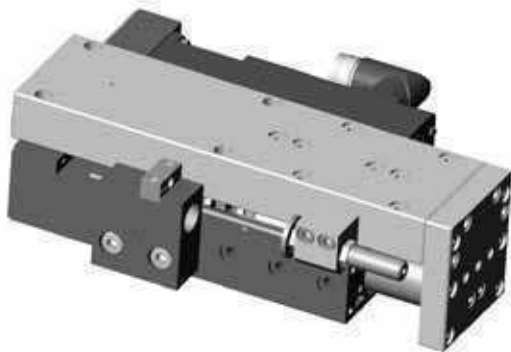
LM 8 FE



Linear Modules

LM 8 FE – Electrical Linear Module

LM 8 FE



Technical data, stroke-independent

Spherical spindle lead	Ø 12x5 mm
Toothed belt ratio	1:1,09
Travel per motor revolution	4.583 mm
Theor. force	Fa, Fb 440 N
Theor. permissible force	Fa, Fb 1660 N
Max. speed (LM 8FE)	0,5 m/s
Max. acceleration/deceleration horizontal	10 m/s ²
Servomotor*	AKM 21C
Motor nominal output	320 W
Nominal speed	8000 min ⁻¹
Nominal torque	0,39 Nm
Static torque	0,48 Nm
Standstill current	1,58 A
Peak current	6,3 A
Electrical connection	230 V AC
Encoder	Several
Brake	24 V DC, 8,4 W
Temperature range	0 to 60° C
Repeat accuracy	-/+ 0,01 mm
Max. permissible mass	20 kg

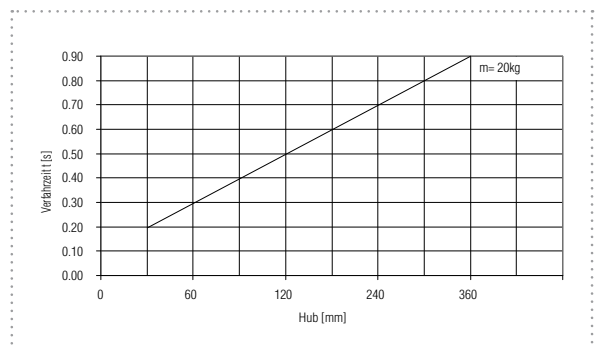
*Inquiry for other motors

Technical data, stroke-dependent

See page 56

Permissible travel time

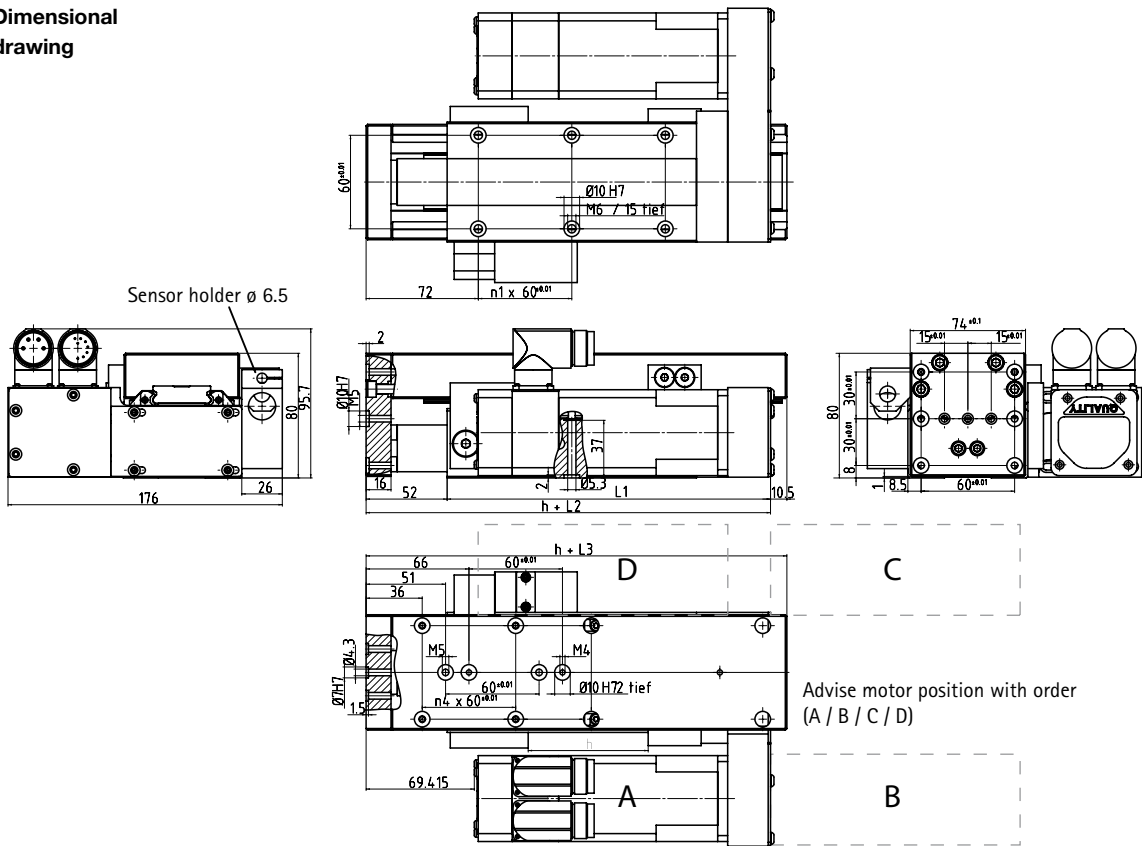
The travel time t determined from the diagram may not be undershot.



Linear Modules

LM 8 FE – Electrical Linear Module

Dimensional drawing



Designation	h	l1	l2	l3	n1
LM 8 FE-60	77	207	260	270	2
LM 8 FE-240	257	387	440	450	5

Options

Drag chain cable Motor	L = 5 m	309 0039
Drag chain cable Motor	L = 10 m	309 0040
Drag chain cable Encoder	L = 5 m	309 0041
Drag chain cable Encoder	L = 10 m	309 0042

Designation Order number

LM 8 FE-60	309 0043
LM 8 FE-240	309 0044
LM 8 FE-60 B	309 0045 incl. holding brake
LM 8 FE-240 B	309 0046 incl. holding brake

Accessories

Centering ring Ø 10	300 1522
Centering coupling ZK 5/6	300 2478
Limit switch	300 1845

See chapter Accessories

Scope of supply

Linear module LM 8 FE
incl. Servo motor



Scope of supply external

Power Unit



Recommendation:
Servostar 300 (Danaher Motion)
Servostar 400 with Resolver

Mains connection

Profi-Bus
Puls-
direction
+/- 10V
CAN open
RS 232

Master Controller

