

Linear Modules with Intermediate Positions

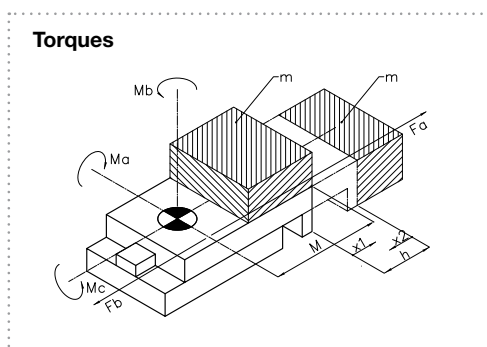
Technical Data – Summary S-Series

		Pneumatic							
		LM 4 S ZA		LM 5 S ZA			LM 6 S ZA		
		S 60 ZA	S 90 ZA	S 60 ZA	S 90 ZA	S 120 ZA	S 60 ZA	S 120 ZA	S 180 ZA
Stroke lengths h [mm]:	0-30								
	0-60	•		•			•		
	0-90		•		•				
	0-120					•		•	
	0-180								•
Theor. force Fa/Fb [N]: (pneumatic design at 5 bar)	100/86	•	•						
	157/131			•	•	•			
	245/206						•	•	•
Max. permissible mass [kg]:	2	•	•						
	4			•	•	•			
	6						•	•	•
Cylinder diameter [mm]:	1x16	•	•						
	1x20			•	•	•			
	1x25						•	•	•
Air consumption per cycle at 5 bar and nominal stroke [NI]:		0.12	0.18	0.2	0.3	0.4	0.3	0.6	0.9
Weight [kg]:		0.8	0.9	1.2	1.4	1.6	2.1	2.6	3.2
Point of application of force for all torques [mm]:	M	65	70	70	75	75	105	120	120
Max. static Torques [Nm]:	Ma	20	20	25	25	25	60	60	80
	Mb	20	20	25	25	25	60	60	80
	Mc	30	30	80	80	80	100	100	100
Front stop range of adjustment [mm]:	x2	0-60	0-90	0-60	0-90	0-120	0-60	0-120	0-180
Rear stop range of adjustment [mm]:	x1	0-30	0-30	0-40	0-40	0-40	0-30	0-60	0-60
Repeat accuracy [mm]:		±0,01	±0,01	±0,01	±0,01	±0,01	±0,01	±0,01	±0,01

This applies to calculations:

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

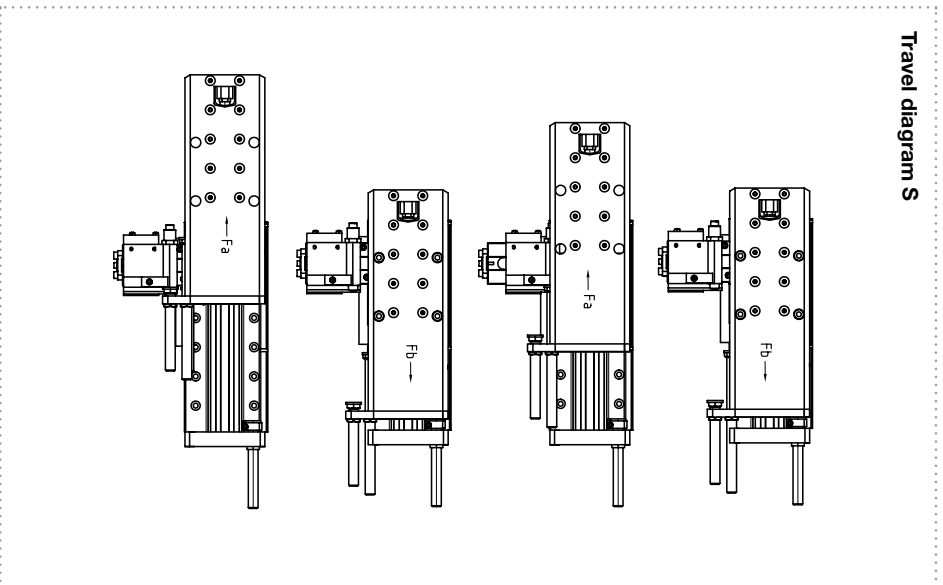
* For stresses during the drive of the carriage $M_{\max} = 20\% M_{\max \text{ static}}$



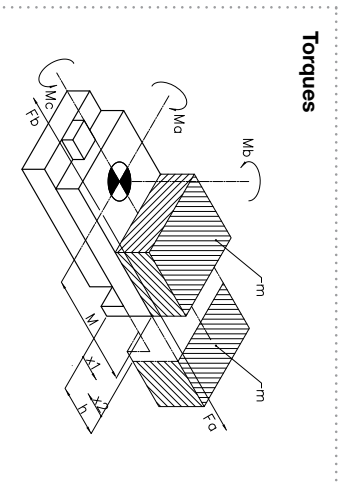
Linear Modules with Intermediate Positions

Technical Data – Summary

Travel diagram S



Torques



Load diagrams for S-Series, refer to page 37

Linear Modules with Intermediate Positions

LM 5 S ZA – Pneumatic Linear Module with Intermediate Position

LM 5 S ZA



Technical data, stroke-independent

Cylinder diameter	1 x Ø20 mm	
Theor. force (at 5 bar)	Fa	157 N
	Fb	131 N
Max. speed	0,5 m/s	
Pneumatic connections	M5	
Medium	Compressed-air filtered, oiled or non-oiled	
Operating pressure range	3 to 7 bar	
Temperature range	0 – 60° C	
Repeat accuracy	+/-0.01 mm	
Max. permissible mass	4 kg	

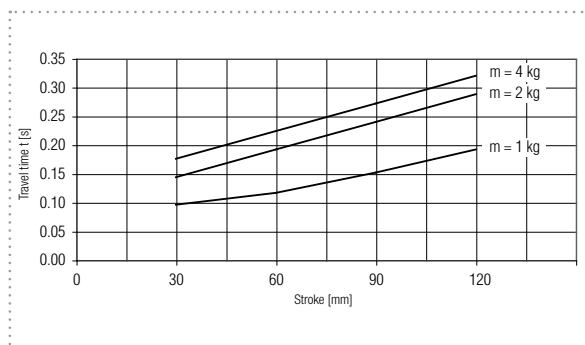
Technical data, stroke-dependent

See page 68

Permissible travel time t relative to the stroke length and the additional mass m

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

Recommendation: When selecting the module, the travel time t should be assumed as being 20% more.

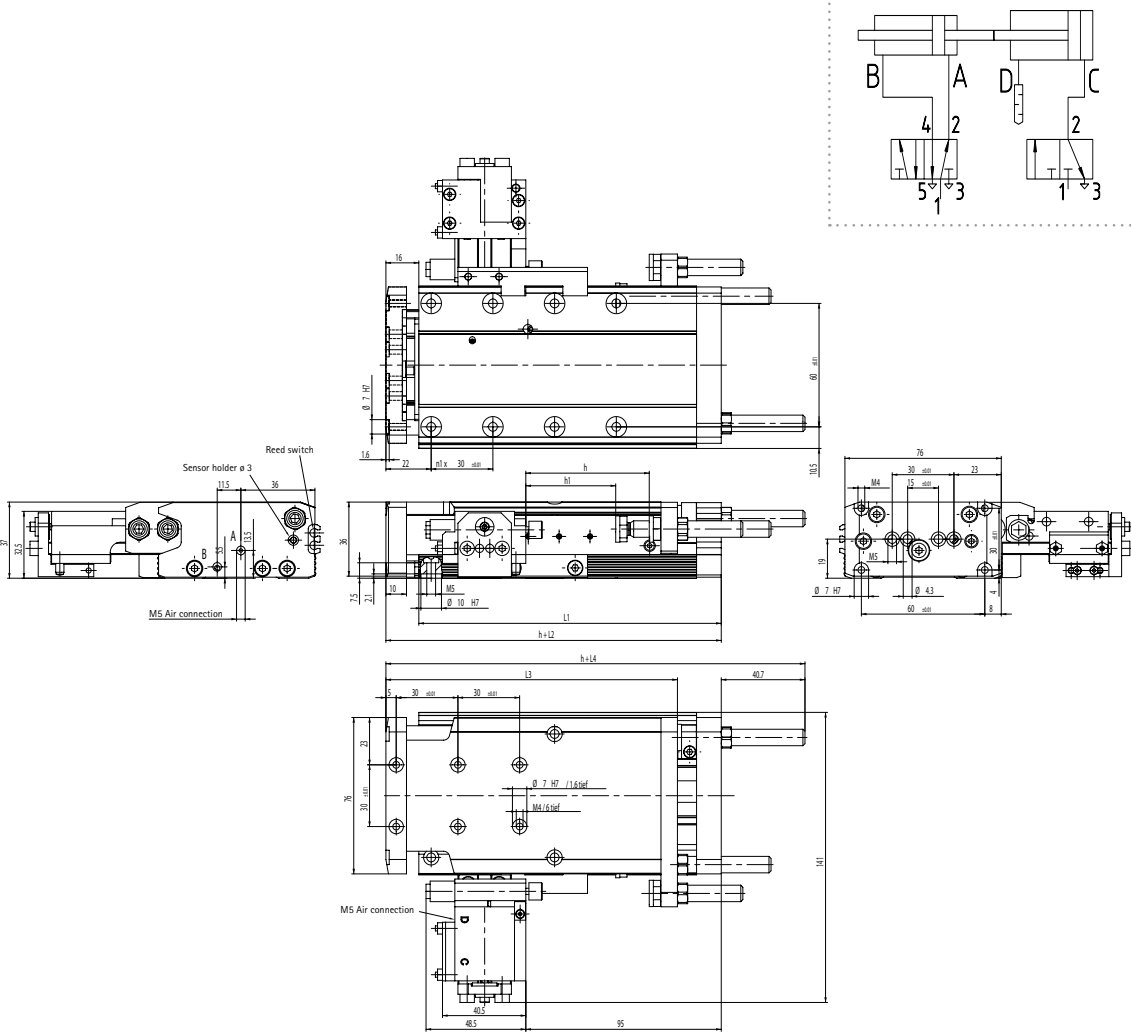


Permissible travel time t = travel time without valve switching time, at nominal pressure 6 bar.

Linear Modules with Intermediate Positions

LM 5 S-ZA – Pneumatic Linear Module with Intermediate Position

Massbild und Pneumatikschema



Designation	h	l ₁	l ₂	l ₃	l ₄	n ₁	n ₂
LM 5 S-60 ZA	60	147.0	163.0	142.0	204.0	3	0
LM 5 S-90 ZA	90	181.0	197.5	176.0	238.0	4	1
LM 5 S-120 ZA	120	211.0	227.0	206.0	268.0	5	2

Designation	Order number
LM 5 S-60 ZA	303 8001
LM 5 S-90 ZA	303 9508
LM 5 S-120 ZA	303 9513

incl. hydraulic shock absorber and 4 centering rings Ø10

Accessories	
Centering ring Ø 10	300 1522
Limit switch Ø 3	300 3162
Reed switch	300 1288 for flute
Centering coupling ZK 5/6	300 1845
Shock absorber	303 5678

See chapter Accessories

Overview

Linear Axes
pneum. / electr.

Linear Modules
pneum. / electr.

Linear Modules
with Intermediate
Positions

Rotary Modules

Grippers

Basic Elements

Accessories