Linear module LM4...BR...L/R... with ball screw drive and lateral support rail left/right

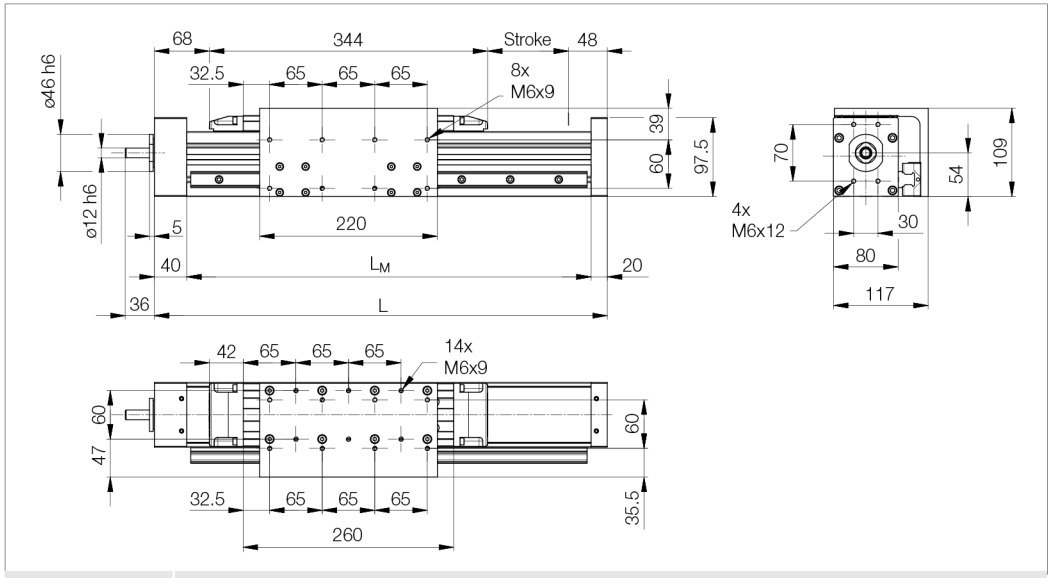
LM	BSD	Axial load rates		Positioning accuracy	Repeating accuracy	Accelera-tion	Axial play		Idle torque
Size	d x p	C_0	C_{dyn}			a_{max}	Type	Axial play	
	[mm]	[N]	[N]	[µm/mm]	[mm]	[m/s²]		[mm]	[Nm]
LM4...R...	20 x 5	5705	4912	52/300	< 0.03 [1]	10.0	R	< 0.02	0.050
					< 0.01 [1]		V	—	0.120
	20 x 20	5705	4912	52/300	< 0.03 [1]	10.0	R	< 0.02	0.200
					< 0.01 [1]		V	—	0.400

d x p = screw diameter x thread pitch
[1] backlash not factored in

R = reduced axial play
V = preloaded

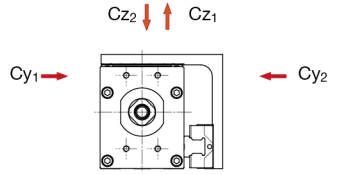
LM	Movement speed		Moments of inertia		Hub max.	Steel strip	Feed and friction force	Moved mass
	Guide	Drive						
Type	v_{max} [m/s]	v_{max} [m/s]	I_Y [cm⁴]	I_Z [cm⁴]	[mm]		F_V [N]	m_b [kg]
LM4...R...L/R	5.0	[2]	107.6	153.4	3000	ohne	50.00	4.225
						mit	60.00	

[2] for ball screw drive, dependent on rotational speed characteristics, spindle length and relevant critical rotational speed.

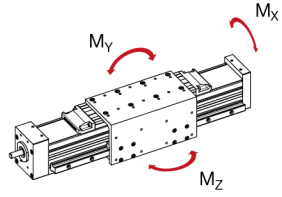


Nominal size	Dimensions				
Designation	L	L_M	Length ball screw	Length steel strip	Weight
	[mm]	[mm]	[mm]	[mm]	[kg]
LM4...BR...L/R	Stroke + 460	L – 60	L + 30	L – 22	10.46 kg + 1.18 kg/100 mm stroke

Load ratings



Torques



Linear modul	Maximum permissible load [kN]				Maximum permissible torque [Nm]					
Type	static		dynamic		static			dynamic		
	$C_{y0\,1,2}$	$C_{z0\,1,2}$	$C_{y\,1,2}$	$C_{z\,1,2}$	M_{x0}	M_{y0}	M_{z0}	M_x	M_y	M_z
LM4...R...L/R	119.9	119.9	68.4	68.4	3030	3860	3860	1868	3432	3432

The determination of dynamic load ratings and torques is based on a 50,000 m stroke. If comparative values must be calculated for a 100,000 m stroke, the values for M_x, M_y, M_z and C must be divided by the factor 1.26.

With a view to serviceable life, loads of less than 20% of the dynamic load ratings have generally proved to be expedient.

CAD data

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