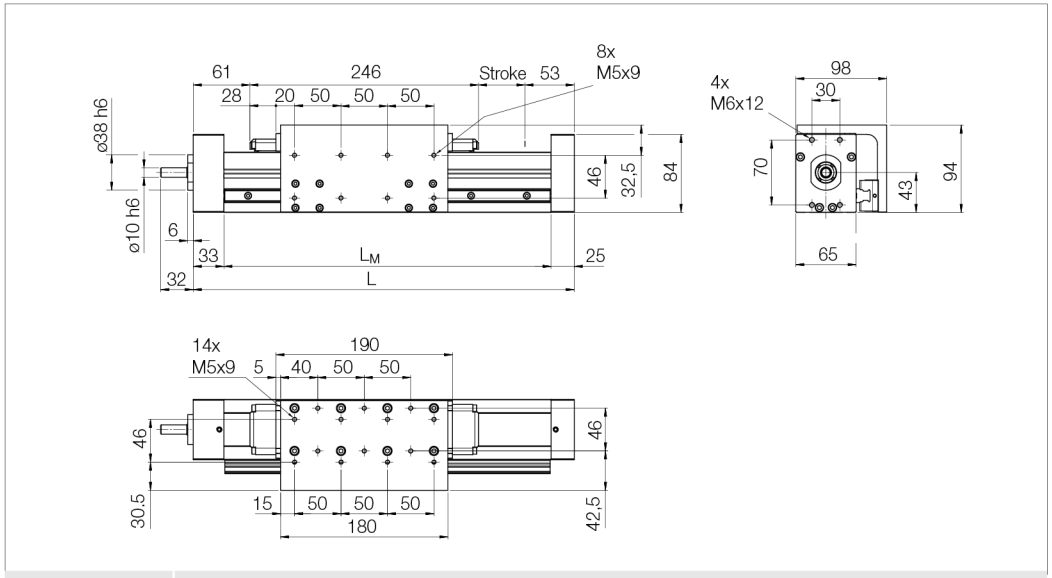
Linear module LM3...BR...L/R... with ball screw drive and lateral support rail left/right



Nominal size	Dimensions				
Designation	L [mm]	L_M [mm]	Length ball screw [mm]	Length steel strip [mm]	Weight [kg]
LM3...BR...L/R	Stroke + 360	L – 58	L + 22	L – 22	6.11 kg + 0.78 kg/100 mm stroke

LM	BSD	Axial load rates		Positioning accuracy	Repeating accuracy	Accelera-tion	Axial play		Idle torque
Size	d x p [mm]	C_0 [N]	C_{dyn} [N]	[µm/mm]	[mm]	a_{max} [m/s²]	Type	Axial play [mm]	[Nm]
LM3...R...	16 x 5	4551	4327	52/300	< 0.03 [1]	10.0	R	< 0.02	0.030
					< 0.01 [1]		V	—	0.100
	16 x 10	4551	4327	52/300	< 0.03 [1]	10.0	R	< 0.02	0.060
					< 0.01 [1]		V	—	0.200
	16 x 16	4551	4327	52/300	< 0.03 [1]	10.0	R	< 0.02	0.120
					< 0.01 [1]		V	—	0.320

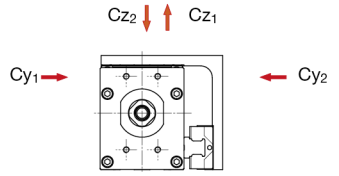
d x p = screw diameter x thread pitch
[1] backlash not factored in

R = reduced axial play
V = preloaded

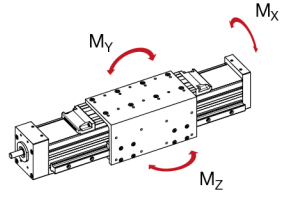
LM	Movement speed		Moments of inertia		Hub max.	Steel strip	Feed and friction force	Moved mass
	Guide	Drive						
Type	v_{max} [m/s]	v_{max} [m/s]	I_Y [cm⁴]	I_Z [cm⁴]	[mm]		F_V [N]	m_b [kg]
LM3...R...L/R	5.0	[2]	64.8	81.9	2000	without	40.00	2.515
						with	50.00	

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

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
LM3...R...L/R	70.0	70.0	36.0	36.0	1456	2778	2778	808	2016	2016

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

Enquiry (technical/quote)

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