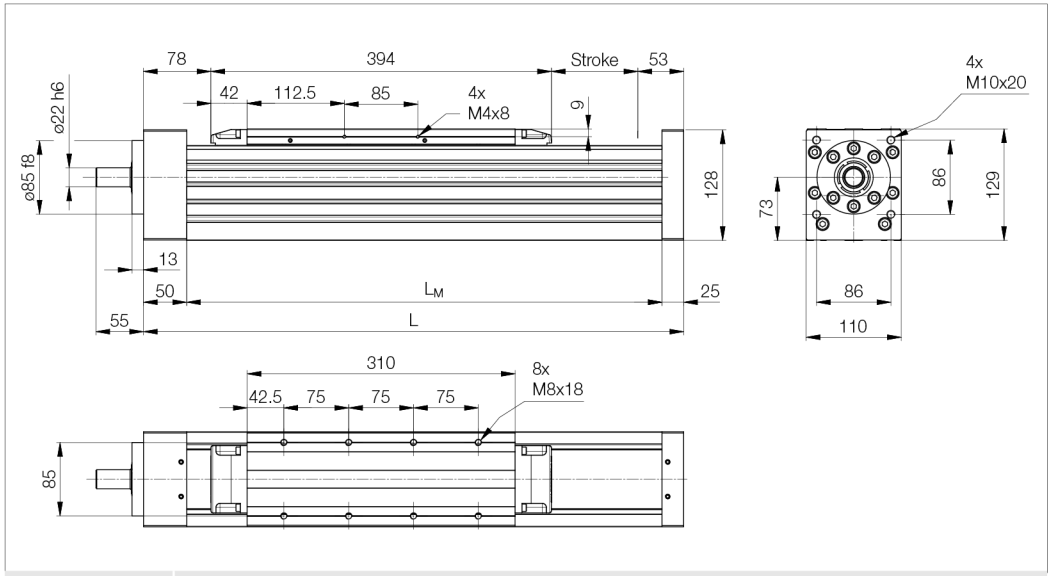
Linear module LM5...BR...N... with ball screw drive



Nominal size	Dimensions				
Designation	L [mm]	L_M [mm]	Length ball screw [mm]	Length steel strip [mm]	Weight [kg]
LM5...BR...N	Stroke + 525	L – 75	L + 50	L – 44	16.8 kg + 1.9 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]
LM5...R...	32 x 5	11538	8947	52/300	< 0.03 1)	10.0	R	< 0.02	0.080
					< 0.01 1)		V	—	0.200
	32 x 10	11538	8947	52/300	< 0.03 1)	10.0	R	< 0.02	0.160
					< 0.01 1)		V	—	0.400
	32 x 20	11538	8947	52/300	< 0.03 1)	10.0	R	< 0.02	0.320
					< 0.01 1)		V	—	0.800
	32 x 32	11538	8947	52/300	< 0.03 1)	10.0	R	< 0.02	0.600
					< 0.01 1)		V	—	1.200

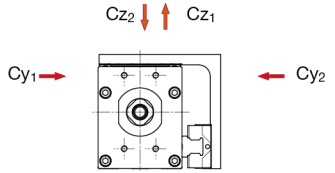
d x p = screw diameter x thread pitch
1) backlash not factored in

R = reduced axial play
V = preloaded

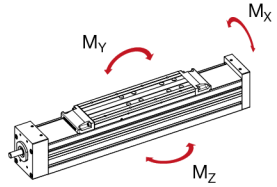
LM	Movement speed		Moments of inertia		Hub max.	Steel strip	Feed and friction force	Moved mass
	Guide	Drive	Z / Y					
Type	v_{max} [m/s]	v_{max} [m/s]	I_Y [cm⁴]	I_Z [cm⁴]	[mm]		F_V [N]	m_b [kg]
LM5...R...N	5.0	2)	432.7	594.0	3000	ohne	30.00	5.330
						mit	40.00	

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
LM5...R...N	85.0	85.0	49.6	49.6	1080	2316	2316	684	2290	2290

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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