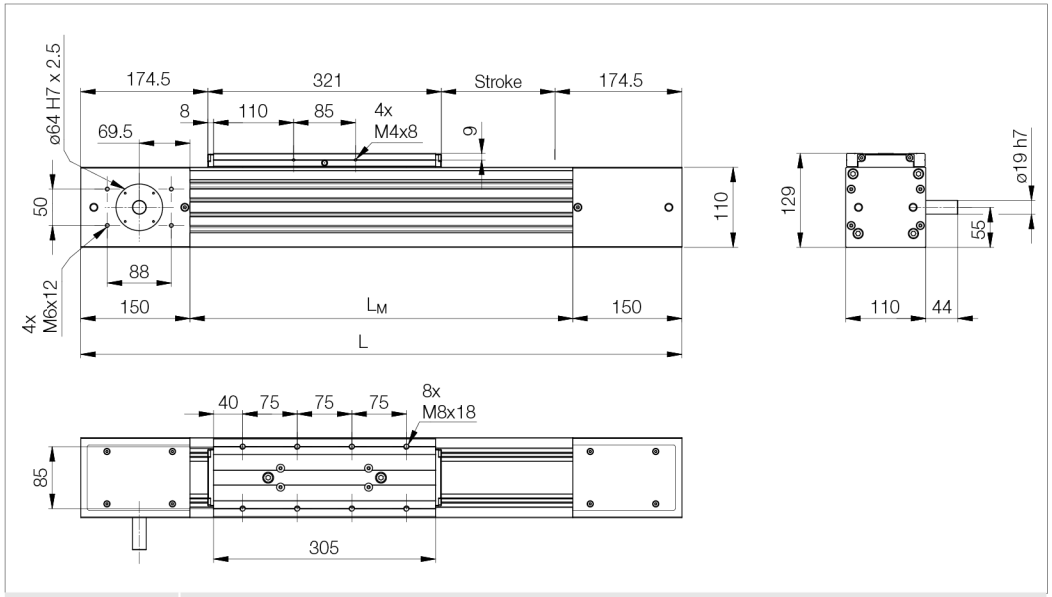
# Linear module LM5...NZ...N XL with toothed belt drive




| Nominal size | Dimensions | | | |
|---|---|---|---|---|
| Designation | L [mm] | $L_M$ [mm] | Belt length [mm] | Weight [kg] |
| LM5...NZ...N | Stroke + 670 | L – 300 | 2 x Stroke + 1144 | 18.60 kg + 1.48 kg/100 mm Stroke |

Variants/dimensions with protective strip (LM5...BZ...N) see catalogue

XL Please contact LINE TECH for Consulting & Engineering →

Enquiry (technical/quote)

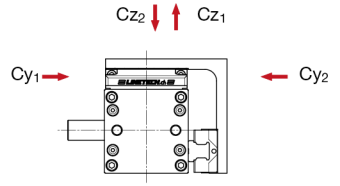
| LM | Toothed belt drive | | | | Axial load | Positioning accuracy | Repeating accuracy | Acceler-ation |
|---|---|---|---|---|---|---|---|---|
| Size | Type/division | Pinion $d_3 \times l_R$ [mm] | Stroke/rev [mm] | Tension [3] [mm/m] | F [N] | [µ/mm] | .../1000 mm [mm] | $a_{max}$ [m/s²] |
| LM5...Z... | STD8M | 94.22 x 60 | 296 | 0.059 | ... [1] | 200/1000 [2] | < 0.20 [2] | 50.0 [1] |

$d_3 \times l_R$ = pinion diameter x pinion width
1) depending on speed and load
2) backlash not factored in
3) belt tension/metre [mm/m] per 100 N tensile force

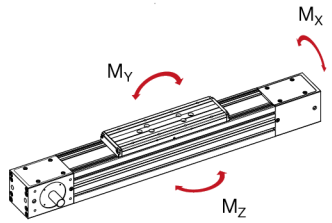
| LM | Movement speed | | Moments of inertia | | Stroke max. | Steel strip | Feed and friction force | Moved mass |
|---|---|---|---|---|---|---|---|---|
| | Guide | Drive | Z / Y | | | | | |
| Type | $v_{max}$ [m/s] | $v_{max}$ [m/s] | $I_Y$ [cm⁴] | $I_Z$ [cm⁴] | [mm] | | $F_V$ [N] | $m_b$ [kg] |
| LM5...Z...N | 5.0 | 4) | 451.9 | 623.9 | XL: 15280 | without | 30.00 | 4.100 |
| | | | | | | with | 40.00 | 4.140 |

4) for toothed belt drive, dependent on load and speed and permissible movement speed of the linear guide

Load ratings




Torques




| Linear modul | Maximum permissible load [kN] | | | | Maximum permissible torque [Nm] | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Type | static | | dynamic | | static | | | dynamic | | |
| | $C_{y_{0\,1,2}}$ | $C_{z_{0\,1,2}}$ | $C_{y_{1,2}}$ | $C_{z_{1,2}}$ | $M_{x_0}$ | $M_{y_0}$ | $M_{z_0}$ | $M_x$ | $M_y$ | $M_z$ |
| LM5...Z...N | 85.0 | 85.0 | 49.6 | 49.6 | 1080 | 6115 | 6115 | 684 | 5170 | 5170 |

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.

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