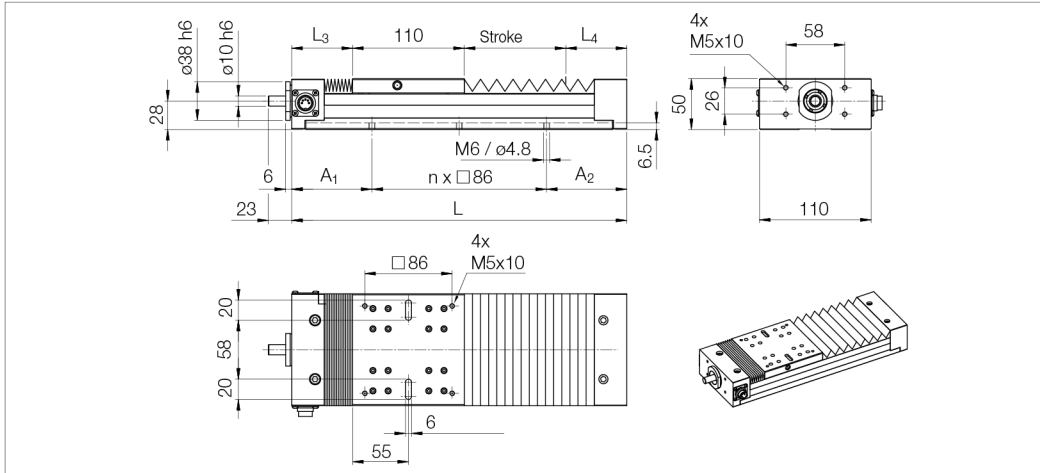


Positioning unit PE1...R... with ball screw drive



Nominal size		Dimensions							
Designation	Stroke [mm]	L [mm]	L ₃	L ₄	n	A ₁	A ₂	Ball screw length	Weight [kg]
PE1.4...FR...	50	255	47.5	47.5	2	41.5	41.5	225	3.0
with expansion bellows	1500	2365	377.5	377.5	26	64.5	64.5	2071	17.2
PE1.4...NR...	50	255	47.5	47.5	2	41.5	41.5	225	3.0
without protective covering	2160	2365	47.5	47.5	26	64.5	64.5	2373	17.2

* For intermediate dimensions, see catalogue

PE Size	BSD d x p [mm]	Axial load rates		Positioning accuracy [µm/mm]	Repeating accuracy [mm]	Acceleration a _{max} [m/s ²]	Axial play		Idle torque [Nm]
		C ₀ [N]	C _{dyn} [N]				Type	Axial play [mm]	
	16 x 5						V	—	0.100
PE1...R...	16 x 10	4551	4327	52/300 ²⁾	< 0.01 ¹⁾	10.0	V	—	0.200
	16 x 16						V	—	0.320

d x p = screw diameter x thread pitch

¹⁾ backlash not factored in

²⁾ also available with 23 µm / 300 mm

V = preloaded

PE Type	Movement speed	Moments of inertia		Stroke max. [mm]	Expansion bellows	Feed and friction force F _V [N]	Moved mass m _b [kg]
	V _{max} [m/s]	Drive V _{max} [m/s]	I _y [cm ⁴]				
PE1.4...R...	1.6	²⁾	8.9	178.2	2160	without	10.00
					1500	with	10.00
							1.100

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

Load ratings

Torques

Positioning unit Type	Maximum permissible force [kN]					Maximum permissible torque [Nm]					
	static		dynamic			static		dynamic			
	C _{y0,1,2}	C _{Z0,1}	C _{Z0,2}	C _{y1,2}	C _{Z1,2}	M _{x0}	M _{y0}	M _{Z0}	M _x	M _y	M _Z
PE1.4...R...	13.8	13.8	13.8	9.2	9.2	422	380	380	281	253	253

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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