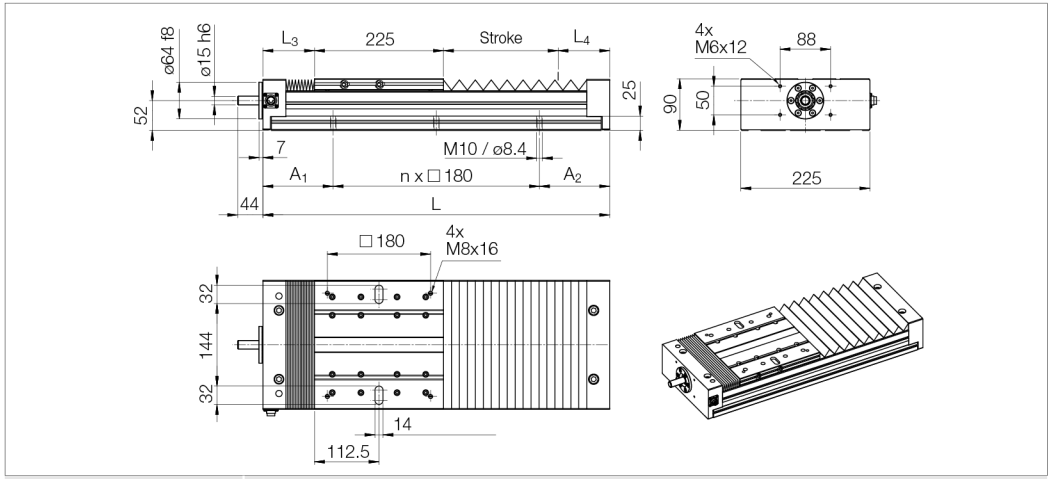
Positioning unit PE3...R... with ball screw drive



Nominal size		Dimensions							
Designation	Stroke [mm]	L [mm]	L_3	L_4	n	A_1	A_2	Ball screw length	Weight [kg]
PE3.4...FR...	50	405	65	65	1	112.5	112.5	429	17.5
with expansion	¦ *	¦ *	¦ *	¦ *	¦ *	¦ *	¦ *	¦ *	¦ *
bellows	3000	4420	597.5	597.5	23	140	140	3926	111.5
PE3.4...NR...	40	405	70	70	1	112.5	112.5	429	17.5
without protec-	¦ *	¦ *	¦ *	¦ *	¦ *	¦ *	¦ *	¦ *	¦ *
tive covering	4055	4420	70	70	23	140	140	4444	111.5

* For intermediate dimensions, see catalogue

CAD data

Enquiry (technical/quote)

PE	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]
	25 x 5						V	–	0.150
PE3...R...	25 x 10	7308	6140	52/300 [2]	< 0.01 [1]	10.0	V	–	0.300
	25 x 25						V	–	0.500

d x p = screw diameter x thread pitch

[1] backlash not factored in

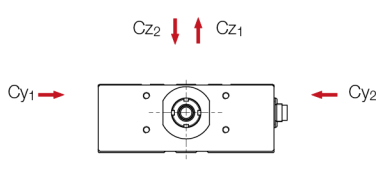
[2] also available with 23 µm / 300 mm

V = preloaded

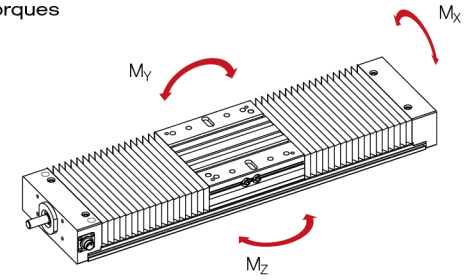
PE	Movement speed		Moments of inertia		Stroke max.	Expansion bellow	Feed and friction force	Moved mass
Type	Guide v_{max} [m/s]	Drive v_{max} [m/s]	I_Y [cm⁴]	I_Z [cm⁴]	[mm]		F_V [N]	m_b [kg]
PE3.4...R...	1.6	[2]	202.8	3940.0	4055	without	15.00	5.470
					3000	with	15.00	

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

Load ratings



Torques



Positioning unit	Maximum permissible force [kN]					Maximum permissible torque [Nm]					
Type	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
PE3.4...R...	59.2	70.5	94.0	41.4	46.8	4757	4617	3877	3157	3065	2691

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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