

## LinMot® P Linear Drives



- High dynamics
- Position-controlled
- Electronic cam
- CAN-Bus and PROFIBUS

*LinMot® P: a design element  
for industrial applications*

### LinMot® P drives

The *LinMot® P* drive family comprises electromagnetic direct linear motors with integral position sensing and bearings. Special properties are the extremely high dynamic characteristics:

- acceleration  $>200 \text{ m/s}^2$
- continuous stroking frequency  $>10 \text{ Hz}$
- short-time stroking frequency  $>20 \text{ Hz}$
- stroke range  $>1200 \text{ mm}$



Linear motor *LinMot® P* with associated electronics unit *LinMot® E400*

*LinMot® P* linear motors are intrinsically free of mechanical play, gearing or belt wear. The compact design, enormous acceleration capability and absence of mechanical wearing parts argue the use of *LinMot® P* in areas like:

- textile machinery
- packaging machines
- handling machinery
- robot applications
- laboratory automation
- test systems
- and others



*LinMot® P*: a compact design element for linear motions

Novel machine conceptions can be realized with *LinMot® P*.

More than a mere linear drive, *LinMot® P* is a design element for modern mechatronic engineering. In many cases it replaces conventional answers for linear motions, such as:

- servomotors with belts
- stepper motors with spindles
- mechanical cams
- pneumatic cylinders
- mechanical levers

Linear drive *LinMot® P* as replacement and supplement for conventional technologies



### LinMot® drive families

The proprietary name *LinMot®* comprises various drive families derived from each other modularly and intended primarily for linear motions. They are commissioned and parametered by a configuration software based on MS-Windows.

The associated electronics unit *LinMot® E* is available in graduated performance classes and different variants. Depending on type, up to 4 linear motors or optionally commercial stepper motors and solenoids too may be connected. Possible system interfaces to higher-level PLC, VME or PC control systems are:

- analog interfaces
- digital interfaces
- serial RS-232 and RS-485
- CAN-Bus and PROFIBUS



*LinMot® P: a union of mechanics, electronics, software and the latest production technologies*

Position sensing and bearings are completely integrated on *LinMot® P* motors and protected in a strong steel tube. There is no cable connection to the moving slider. The motors consist of no more than two components sliding inside each other without adjustments:

- the fixed stator with cable link to the electronics unit
- the moving slider

The drives of the *LinMot® P* family boast all building blocks of modern mechanical engineering:

- digital control and regulation
- programmable path curves
- decentral intelligence
- field bus coupling
- electronic CAM (Master Encoder)



*Stator and slide of a LinMot® P02-23 x 160*

*Comprehensive system concept: electronics unit LinMot® E400 with linear motors LinMot® P02-23 x 80 and P01-23 x 160, also commercial stepper motor and solenoid*



linear motors		Article-No.		Max. Stroke [inches] (mm)	Peak Force* [lbs] (N)	Max. Acceleration** [10 <sup>3</sup> in/s <sup>2</sup> ] (m/s <sup>2</sup> )	Slider Mass [lbs] (g)	Slider Diameter [inches] (mm)	Slider Length [inches] (mm)	Stator Mass [lbs] (g)	Stator Diameter*** [inches] (mm)	Stator Length [inches] (mm)
P01-23x80	P01-23x80/30x90	0150-1101	▲	3.5 (90)	7.4 (33)	11.0 (280)	0.26 (118)	0.47 (12)	6.7 (170)	0.6 (265)	0.9 (23)	7.0 (177)
	P01-23x80/50x110	0150-1102	▲	4.3 (110)	7.4 (33)	9.6 (245)	0.30 (135)		7.5 (190)			
	P01-23x80/80x140	0150-1123	▲	5.5 (140)	7.4 (33)	7.6 (194)	0.38 (171)		10.6 (270)			
P01-23x80/150x210	0150-1125	▲	8.3 (210)	7.4 (33)	5.9 (151)	1.49 (220)	0.47 (12)	11.4 (290)	1.0 (450)	0.9 (23)	10.2 (258)	
P01-23x160/70x70	0150-1105	▲	2.8 (70)	5.6 (25)	8.8 (223)	0.25 (112)		7.9 (200)				
P01-23x160/40x100	0150-1106	▲	3.9 (100)	7.4 (33)	9.5 (242)	0.30 (137)		9.1 (230)				
P01-23x160/0x140	0150-1107	▲	5.5 (140)	10.0 (44)	10.2 (259)	0.38 (171)		10.6 (270)				
P01-23x160/70x210	0150-1119	▲	8.3 (210)	10.0 (44)	7.9 (201)	0.49 (220)		11.4 (290)				
P01-23x160/130x270	0150-1127	○	10.6 (270)	10.0 (44)	6.4 (163)	0.60 (271)		13.8 (350)				
P01-23x160/200x340	0150-1129	○	13.4 (340)	10.0 (44)	5.3 (134)	0.37 (330)	16.5 (420)	0.79 (20)	1.6 (740)	1.5 (37)	8.9 (227)	
P01-37x120/20x100	0150-1147	▲	1.6 (40)	27.4 (122)	9.7 (247)	1.09 (496)	12.0 (305)					
P01-37x120/80x160	0150-1149	▲	3.9 (100)	27.4 (122)	7.6 (193)	1.40 (635)	14.4 (365)					
P01-37x120/180x260	0150-1151	▲	7.9 (200)	27.4 (122)	5.8 (148)	1.83 (829)	15.6 (395)					
P01-37x120/280x360	0150-1153	○	11.8 (300)	27.4 (122)	6.5 (165)	2.35 (1064)	19.7 (500)					
P01-37x120/380x460	0150-1155	○	15.7 (400)	27.4 (122)	6.5 (165)	2.86 (1297)	23.6 (600)					
P01-37x120/480x560	0150-1157	○	19.7 (500)	27.4 (122)	6.5 (165)	3.37 (1529)	27.6 (700)					
P01-37x120/580x660	0150-1159	○	23.6 (600)	27.4 (122)	6.5 (165)	3.88 (1762)	31.5 (800)					
P01-37x120/680x760	0150-1161	○	27.5 (700)	27.4 (122)	6.5 (165)	4.40 (1994)	35.4 (900)					
P01-37x120/780x860	0150-1163	○	31.5 (800)	27.4 (122)	6.5 (165)	4.91 (2227)	39.4 (1000)					
P01-37x120/980x1060	0150-1165	○	39.4 (1000)	27.4 (122)	6.5 (165)	5.93 (2692)	47.2 (1200)					
P01-37x120/1180x1260	0150-1167	○	47.2 (1200)	27.4 (122)	6.5 (165)	6.96 (3157)	55.1 (1400)					
P01-37x120/1380x1460	0150-1169	○	55.1 (1400)	27.4 (122)	6.5 (165)	8.00 (3622)	63.0 (1600)					
P01-37x240/100x100	0150-1111	▲	3.9 (100)	26.7 (119)	9.4 (240)	1.09 (496)	12.0 (305)					0.79 (20)
P01-37x240/40x160	0150-1112	▲	6.3 (160)	38.2 (170)	10.6 (268)	1.40 (635)	14.4 (365)					
P01-37x240/60x260	0150-1117	▲	10.2 (260)	45.8 (204)	9.7 (246)	1.83 (829)	15.6 (395)					
P01-37x240/160x360	0150-1131	○	14.2 (360)	45.8 (204)	7.6 (192)	2.35 (1064)	19.7 (500)					
P01-37x240/260x460	0150-1133	○	18.1 (460)	45.8 (204)	6.2 (157)	2.86 (1297)	23.6 (600)					
P01-37x240/360x560	0150-1135	○	22.0 (560)	45.8 (204)	5.8 (147)	3.37 (1525)	27.6 (700)					
P01-37x240/460x660	0150-1121	○	26.0 (660)	45.8 (204)	5.8 (147)	3.88 (1762)	31.5 (800)					
P01-37x240/560x760	0150-1137	○	29.9 (760)	45.8 (204)	5.8 (147)	4.40 (1994)	35.4 (900)					
P01-37x240/660x860	0150-1139	○	33.9 (860)	45.8 (204)	5.8 (147)	4.91 (2227)	39.4 (1000)					
P01-37x240/860x1060	0150-1141	○	41.7 (1060)	45.8 (204)	5.8 (147)	5.93 (2692)	47.2 (1200)					
P01-37x240/1060x1260	0150-1143	○	49.6 (1260)	45.8 (204)	5.8 (147)	6.96 (3157)	55.1 (1400)					
P01-37x240/1260x1460	0150-1145	○	57.5 (1460)	45.8 (204)	5.8 (147)	8.00 (3622)	63.0 (1600)					

\* for P01-23x.. at 48 V and P01-37x.. at 72 V      \*\* for motors greater than P01-37x120/180x260, resp. P01-37x240/260x460: stator acceleration  
 \*\*\* see data sheet      ▲ 'off-the-shelf' type      ○ on demande

electronics units	Electronics type ▶	Series 100			Series 1000		
	Unit	E100	E200	E400	E1000	E2000	E4000
Motor Channels		1	2	4	1	2	4
Max. Current	[A]	3			6		
Supply Voltage Logic	[V]	24-48			24-48		
Supply Voltage Power	[V]	24-48			48-72		
Width	[in] (mm)	2.2 (56)	2.7 (70)		3.5 (90)		
Width (without heat sink)	[in] (mm)	2.2 (56)			2.5 (64)		
Height	[in] (mm)	8.3 (210)			13 (330)		
Height (without fixings)	[in] (mm)	6.9 (175)			11.6 (295)		
Depth	[in] (mm)	4.7 (120)			7 (179)		



Contact [ONExia, Inc.](http://ONExia.com) for more information  
 Offices in West Chester, PA and Melville, NY

Tel. 800-242-3332 · Fax 610-344-7472 · Email: [info@onexia.com](mailto:info@onexia.com) · Homepage: [www.onexia.com](http://www.onexia.com)