



Sales Release: SR1093

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Introducing the ML18, the newest, and smallest, member of the I-Force ironless linear motor family.



Rohnert Park, CA June 19, 2015— Parker's Electromechanical Division North America is pleased to announce the release of the ML18 ironless linear motor. At a height of 35mm and width of 18mm, the ML18 offers a more compact solution for your application needs.

ML18 series standard features include:

- Three coils lengths supporting a variety of force requirements
- 6.8 to 16.7 N of rated force, up to 50 N of peak force
- Two modular magnet track lengths of 80 and 120mm provide unlimited travel
- Internal hall effects and thermal protection
- Optimized for operation from 24 to 80 VDC
- CE and RoHS compliant

The ML18 is the same linear motor that is used in Parkers mSR100 linear motor driven stage. The combination of size and all the features mentioned above make the ML18 ideal for a number of high-tech industries, such as life science, semiconductor, and electronics manufacturing.

For more information on Parker's ML18 motor, please visit www.parkermotion.com/ml18

Note: All information in this bulletin is considered proprietary and not intended for unauthorized distribution

General Performance Specifications

Shown here are the performance specifications for the ML18. Consult the catalog posted to www.parkermotion.com/ml18 for full product details.

Performance

	Units	ML18 Models Sizes		
		ML18-2	ML18-3	ML18-5
Peak Force ¹⁾	N	20.3	33.2	50.1
Continuous Force ²⁾	N	6.8	11.1	16.7
Peak Power	W	400	660	1000
Continuous Power	W	20	33	50

Electrical Performance

Model	Units	ML18-2	ML18-3	ML18-5
Number of Poles		2	3	5
Peak Current ^{3) 4) 5)}	Amps	4.7	5.0	9.3
Continuous Current ²⁾	Amps RMS	1.11	1.17	2.18
Force Constant (Peak) ⁴⁾	N/Amps	4.33	6.67	5.41
Back EMF ^{6) 7)}	V/m/s	5	7.7	6.3
Resistance @25C (Phase to Phase) ⁸⁾	Ohms	4.4	6.3	2.82
Inductance (Phase to Phase) ³⁾	mH	0.75	1	0.38
Electrical Time Constant	millisecs	0.17	0.16	0.13
Motor Constant	N/sqrt (watt)	2.38	3.07	3.72
Maximum Bus Voltage	VDC	80	80	80

Thermal*

Model	Units	ML18-2	ML18-3	ML18-5
Thermal Resistance Wind-Amb	°C/W	8.9	5.53	3.57
Thermal Time Constant (Min)		8	15	10
Maximum Winding Temperature	°C	125	125	125

* Use Parker's MotionSizer software for the most accurate estimate of coil temperature for a particular motion profile.

Mechanical

Model	Units	ML18-2	ML18-3	ML18-5
Coil Weight	kg (lb)	0.04 (0.09)	0.07 (0.15)	0.1 (0.22)
Coil Length	mm (in)	63 (2.48)	83 (3.27)	123 (4.84)
Attractive Force ⁹⁾	N (lbf)	0	0	0
Electrical Cycle Length ¹⁰⁾	mm (in)	40 (1.57)	40 (1.57)	40 (1.57)

Part Numbering, Availability, Pricing and Ordering

The ML18 can be configured and ordered via Parker's Extranet Tool. A separate copy of the price list can be found under the 'Extranet Only' section. The lead time for the ML18 will be approximately 2-3 weeks.

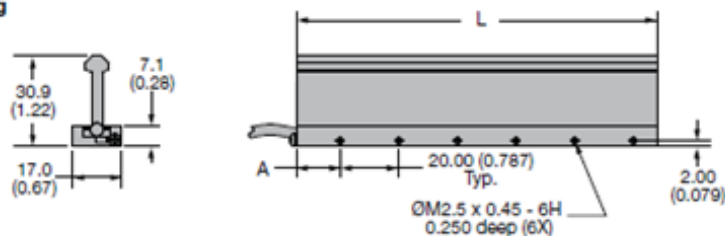
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Dimensions

Dimensions are shown below. Catalog and drawings can be found on the ML18 product page located at www.parkermotion.com/ml18

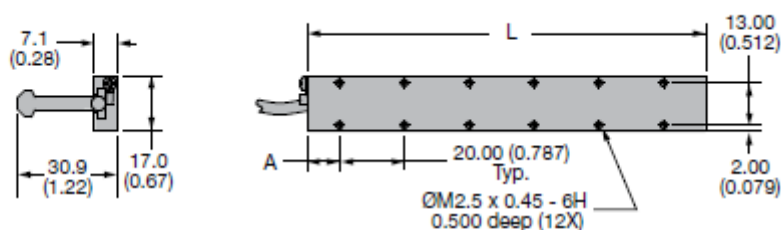
Coil Dimensions — mm (in)

Side Mounting



Coil Size	Dimensions mm (in)		
	L	A	# of Holes
18-2	63 (2.48)	11.5 (0.453)	3
18-3	83 (3.27)	10.0 (0.394)	4
18-5	123 (4.84)	10.0 (0.394)	6

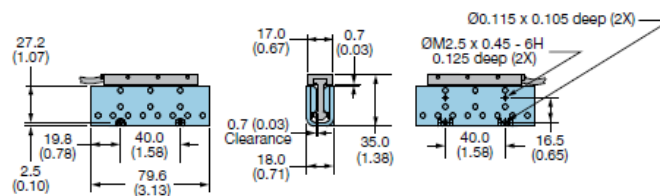
Top Mounting



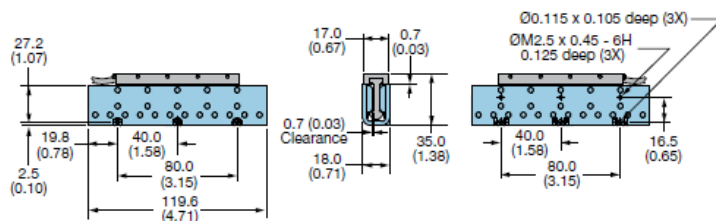
Coil Size	Dimensions mm (in)		
	L	A	# of Hole Pairs
18-2	63 (2.48)	16.5 (0.650)	3
18-3	83 (3.27)	15.0 (0.591)	4
18-5	123 (4.84)	15.0 (0.591)	6

Magnet Track with Coil Dimensions — mm (in)

ML18080



ML18120



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About Parker Electromechanical

A division of Parker Hannifin Corporation's Automation Group since 1987, Electromechanical Automation is a pioneer, developer and manufacturer of full-spectrum computer-based motion controllers, servo/step motor drives, servo motors and human machine interfaces, positioning systems, gearheads and gear motors. These products automate the manufacturing of a significant fraction of the world's goods and services. Electromechanical Automation products are sold via independent authorized Automation Technology Centers—a group of nearly 100 professional, highly trained organizations with more than 135 points-of presence throughout the world. An informative and up-to-date Web site with downloadable libraries, tutorials, and background information on motion control and automation is located at www.parkermotion.com.

About Parker Hannifin

With annual sales exceeding \$13 billion in fiscal year 2014, Parker Hannifin is the world's leading diversified manufacturer of motion and control technologies and systems, providing precision-engineering solutions for a wide variety of mobile, industrial and aerospace markets. The company employs approximately 57,500 people in 50 countries around the world. Parker's engineering expertise and broad range of core technologies uniquely positions the company to solve some of the world's greatest engineering challenges. By partnering with customers, Parker improves their productivity and profitability and seeks new ways to solve humanity's biggest challenges. For more information, visit the company's Web site at www.parker.com/aboutus.

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