

Linear **Motors**

IL⁺ / LM

ETEL

LINEAR MOTORS

Since 1994, ETEL has always been exclusively dedicated to the development of direct drive technologies. During this time, ETEL's linear motors have provided significant performance improvements in many applications across a wide range of high-tech industries.

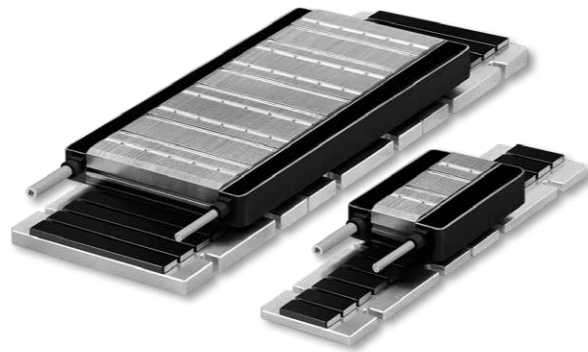


Direct drive technology is nowadays recognized as a leading solution to achieve the high productivity, improved accuracy and increased dynamics that modern machinery has to reach.

Direct drive essentially means that the load and motor are directly connected so that the motor can "directly drive" the payload. This direct coupling eliminates the need for mechanical transmission elements such as leadscrews, timing belts, rack and pinion, etc. Removing mechanical transmission from the motion system opens up important advantages.

ETEL's linear motors offer excellent **reliability** over an extremely **long lifetime**, requiring **no maintenance** during years of operation and significantly increasing machine **productivity**.

ETEL's family of linear motors covers all types of application from the movement of small payloads at **extreme dynamic** speeds to the positioning of larger masses with **sub-micron accuracy** or with a very demanding **speed stability**. In fact, ETEL direct drive products are designed to provide extreme stiffness and **compactness** together with the **highest force density** available on the market. This combination allows you to unlock the next level of performance in your process.



In conclusion, the cost of ownership of a machine equipped with leading products from ETEL is lower than for conventional gear driven systems. In terms of machine performance, ETEL's linear motor range takes your complex machines one step further.

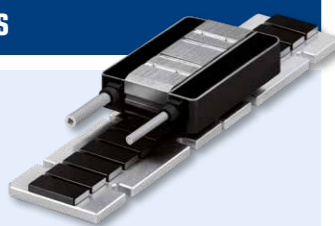
footprint of the machine or the performance of the application that is the primary design requirement.

MOTOR TECHNOLOGY

ETEL's range of linear motors includes both ironcore (called LMx motors) and ironless (called ILx+ motors) technologies. The best option can therefore be selected depending on whether it is the

IRONCORE LINEAR MOTORS

- High force density
- High voltage compliant
- Very low force ripple thanks to ETEL's patented design



IRONLESS LINEAR MOTORS

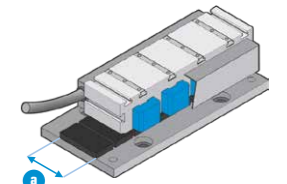
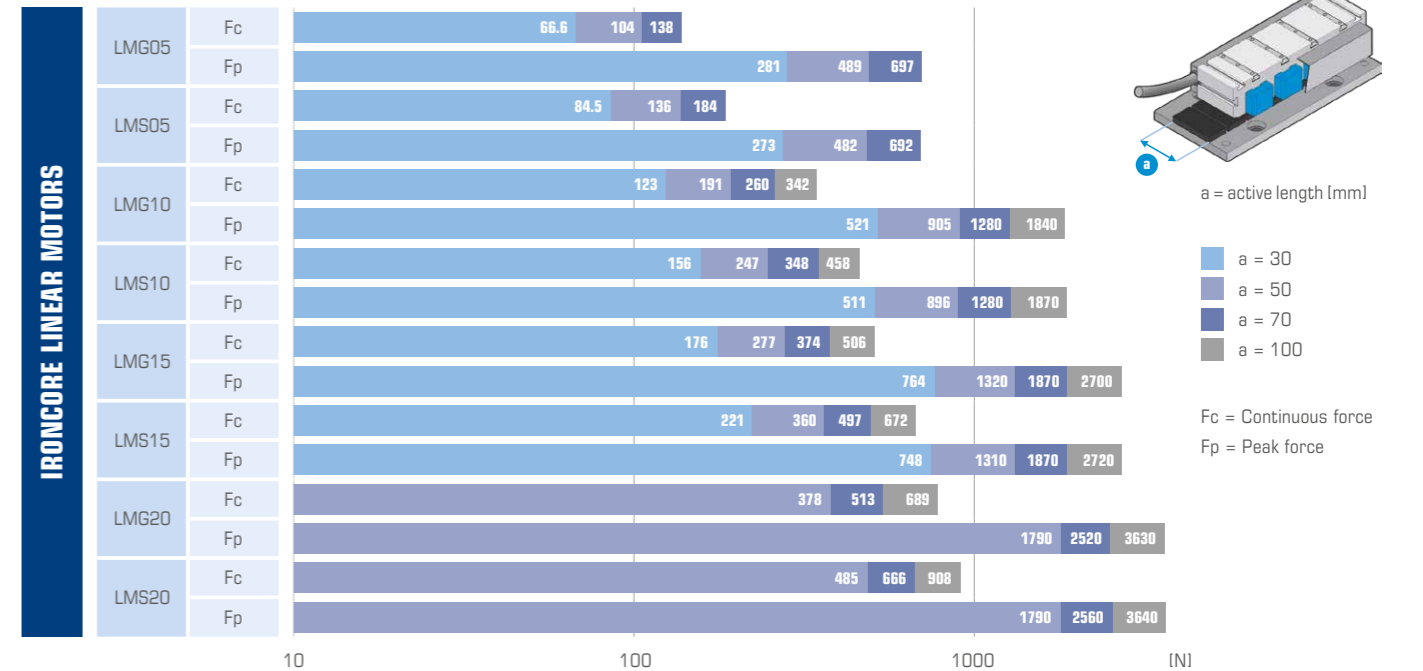
- No attraction force
- High speed stability
- Light moving mass



MOTOR SELECTION CHART

ETEL's range of linear motors is one of the widest in the market and certainly the most consistent and easy to use. Not only is it easy to find the motor best suited to a given application, but moving from one motor type to another requires very little design effort.

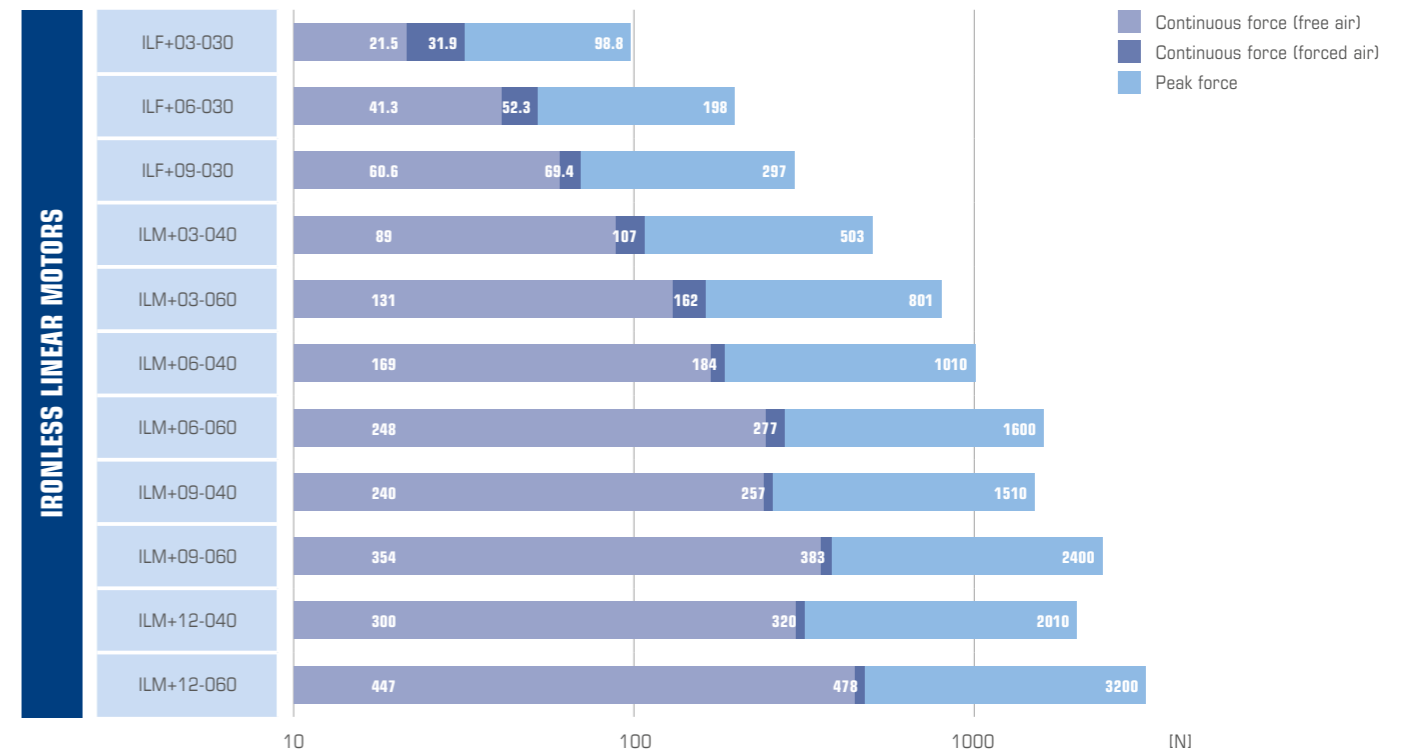
For example, the LMS and LMG ranges are designed to provide different levels of performance but with the same mechanical interface and within the same footprint.



a = active length (mm)

- a = 30
- a = 50
- a = 70
- a = 100

Fc = Continuous force
Fp = Peak force



- Continuous force (free air)
- Continuous force (forced air)
- Peak force



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