

DIRECT DRIVE ABSOLUTE VALUE UNIT

KOLLMORGEN linear motors in linear products made by Mondial

Machinery in a variety of industrial sectors has benefited from the properties, safety standards, compactness and precision of the positioning units driven by KOLLMORGEN linear motors.



The head offices of Mondial Spa in Milan.

Today, the well-known Mondial linear motor modules, long-established on the market, are more efficient and have higher quality standards, smaller dimensions, and an excellent price-quality ratio thanks to the compactness and safety of KOLLMORGEN products.

[Mondial Spa](#) is one of the foremost companies in the power transmission sector. For more than half a century, it has represented leading foreign companies, designing and producing a wide range of specialist products which can meet the most varied demands of many different industrial sectors. It is a parent company of the group of businesses specializing in the design and manufacture of specialist bearings for a number of different industrial applications. Boasting a design department, unusual feature for a distribution company, the Mondial Group works very closely with its clients to meet their needs, optimizing costs and benefits.



May 2014: Mondial needed to **update and expand its range of modules driven by linear motors** and **upgrade the product design and performance** in order to be able to offer customers a **new and improved range of components** in line with trends in the market as well as its own quality standards. The **improved performance of the product** has to be allied with the **affordability** of the proposed solutions; this was to be the key to success.

The Milan-based company began their search for a well-known partner in the market with which to operate in partnership. A meeting with KOLLMORGEN confirmed their interest in collaborating with a leading company capable of producing complete solutions. The result was a winning combination: both players immediately saw opportunities to increase their presence and competitive strength in the Italian market where **the first applications combining the Mondial linear units with KOLLMORGEN linear motors** were introduced **at the start of 2017**.

“The start of this partnership has been very exciting for us” explained Angelo Trombetta, Direct Drives and Mechanical Transmission Manager for Kollmorgen Italia, who has been with the project from the outset. “We have worked well with the Mondial team, mutual sharing has been useful and rewarding for all: this project has been a start, we want to tackle new challenges, continuing to provide the added value which is our hallmark”.



KOLLMORGEN Direct Drive Linear Motor

Complete linear movements with a high level of performance

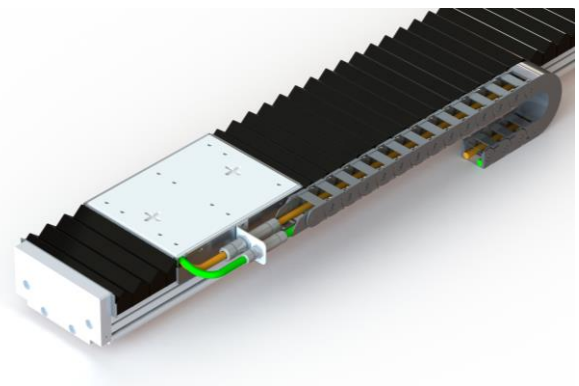
Mondial uses KOLLMORGEN motors in its linear movement systems, which make up one of the most extensive ranges of direct drive linear modules on the Italian market. The benefits of direct drives are clear: very high performance, OEE (overall equipment efficiency) performance, no deterioration in performance over time, providing a transmission with maximum efficiency. The direct drive of a linear motor under

load also means that mechanical transmission components, recirculating ball screws, gears, belts, and other components can be done away with, eliminating mechanical play, increasing rigidity and therefore productivity.

The **linear units** produced can be used in a **wide range of machinery in applications such as printing, packaging, presses, plastic deformation, machine tools, handling, laser cutting, measurement, inspection, milling, assembly, textiles, simulators, and many more.**

Transport and positioning unit MLM7 N

High levels of dynamic performance, considerable load capacity, and precision are the distinguishing features of the new MLM7 N series from Mondial. It is a complete feed and positioning unit, vital for linear movement in precision applications. The base component is made from high-strength extruded aluminium, which can be used as a free-standing element, the profile of which has been designed to suit different types of linear motors. It also provides high translation forces, whilst always ensuring fluidity of movement. The delivery programme, updated by Mondial, is structured in order to satisfy any application requirements in terms of speed, precision of positioning, load capacity, etc.



Transport unit MLM7 N produced by Mondial with Kollmorgen linear motors.

With regard to protection systems, the basic version has been designed with uncovered guide rails and protected recirculating ball slides with standard friction seals. The version with a linear motor has a stainless-steel plate to cover the motor. If the application requires, the MLM7 module can also be fitted with a PVC protective bellows. On request, Mondial can design and produce special protection systems to suit specific safety requirements or working environments. Maintenance is reduced to a minimum with this new range: the different versions incorporate a grease distribution system for all the moving components; the version with a linear motor uses lubricators integrated into the recirculating ball slides. The Mondial linear motor systems can also be fitted with inductive, magnetic, and optic linear encoders.

“KOLLMORGEN components provide the right solution for our manufacturing requirements, upholding the performance of our products and aligning with the quality requirements for the product and its quality certification”, commented Davide Torresan, Linear Systems Product Manager for Mondial Spa.

A [direct drive linear motor](#) is, in fact, a rotary engine laid flat and driven directly under load.

With no mechanical transmission components, the design offers an exceptional level of performance, very high rigidity, dynamic speed, and acceleration, a high level of positioning precision, compact dimensions, low cogging, maintenance-free running, and quiet operation as well as a high degree of precision.

Advantages of the ICH linear motors

- Maintenance free, increased precision and bandwidth
- Uniform speed profile and reduced noise
- Transmission of forces without mechanical components such as couplings, toothed belts, etc.
- No gear reducers, screws, or lubrication
- Increased reliability of the application
- Vast selection of motor sizes with differing power ranges for universal use in all linear drives
- Increase in performance of the entire system
- Compact drive solution with reduced height
- Simple and more compact design of the machine
- Increased bandwidth and response speed compared with ball screw or gear-wheel drives.
- Reduced noise, fewer components and lower overall operating costs



Conclusion

In KOLLMORGEN, Mondial has not only found not only an excellent supplier but a genuine partner with which to offer both solutions in a complementary way: individual components and complete plug-and-play systems.



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ABOUT KOLLMORGEN

Since the company was founded in 1916, the innovative solutions of Kollmorgen have formed the basis for big ideas, as well as improving the overall safety and quality of life of people. Kollmorgen offers continuous development of innovative solutions which are unrivalled in terms of performance, reliability, and ease of use. Crucial for this are valuable know-how of the drive systems and components sector, unmatched quality in the sector and substantial experience in combining and enhancing standard and customised products. We guarantee an unbeatable competitive advantage for machine manufacturers across the world with the highest possible safety standards for our customers. -- For more information, visit the website:

<http://www.kollmorgen.com>

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