

Reliable Linear Motion For Packaging Machines

In the productivity-driven packaging industry, there are many possible sources of downtime. You can eliminate many of them by selecting failure-resistant linear motion components.

These robust guides and positioning tables have design features that prevent premature failure due to poor lubrication practices or contamination. At the same time, these linear motion components still have to meet the necessary accuracy, precision and load requirements—all of which are on the upswing in packaging applications.

Here's a quick overview of three features you should look for when trying to maximize the lifecycle of linear guides and positioning tables in demanding packaging applications:

Self-lubrication for a maintenance-free life. Despite the best of intentions, inconsistent, inadequate lubrication happens. And it's one of the main causes of premature linear guide failure, which can bring packaging lines to a dead stop.

What's more, the use of lubricants can be problematic in packaging applications, particularly in machines that come in direct contact with the packaged products. So it's especially important to consider linear motion products that offer some sort of internal lubrication mechanism.

Various takes on self-lubricating linear guides have been around for years now, but not all of them are created equal. Some focus on achieving the longest possible maintenance-free intervals. Others focus on a compact design that adds as little as possible to the size of the bearing's mechanical package.

Our C-Lube lubrication technology meets both goals. Offering maintenance intervals up to 5 years or 20,000 km of operation, C-Lube integrates oil-impregnated lubricating elements entirely within the slider housing. The lubricating elements, which are made



TE POSITIONING TABLE FOR PACKAGING APPLICATIONS

For packaging applications that need a compact, cost-effective motion stage, we've introduced the new TE Precision Positioning Table. While not as accurate and precise as our premium stages for the semiconductor industry, it brings extra precision to packaging applications without breaking the bank.

The positioning table's main components are made from highstrength aluminum alloy and feature a slide table inside a U-shaped bed.

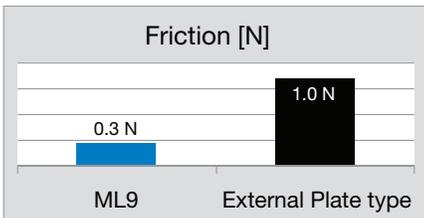
Cost Out. By reducing the parts count and optimizing the geometry of the components, we created a cost-effective positioning stage that still delivers in the accuracy department.

Compact Size. The TE Precision Positioning table has a low cross-sectional height of 26mm for TE50B, 33mm for TE60B and 46mm for TE86B. Sensors can be directly installed on an integrated sensor rail, which contributes to the table's small size.

Excellent Precision. The best repeatability is ± 0.002 millimeters and the positioning accuracy is as good as 0.035 mm. The TE table can be easily customized to meet different application requirements.

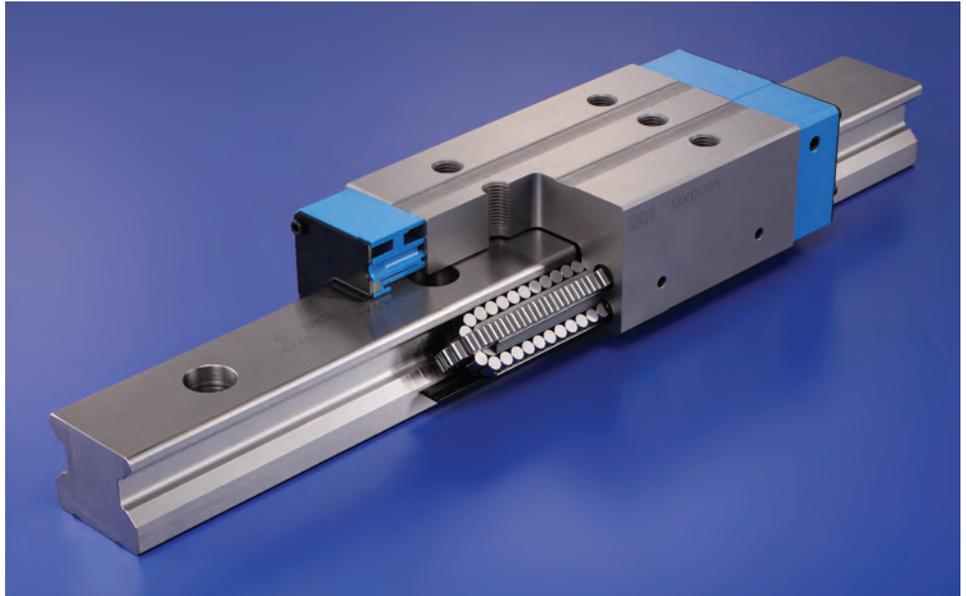
Key features and options include:

- Standard slide table or slide table with flange.
- Number of slide tables.
- Dust protection cover.
- C-Lube built-in lubrication.
- Precision ball screw.
- High-strength aluminum alloy.
- Space-saving motor mount.



Roller Guides for End-Of-Line Packaging

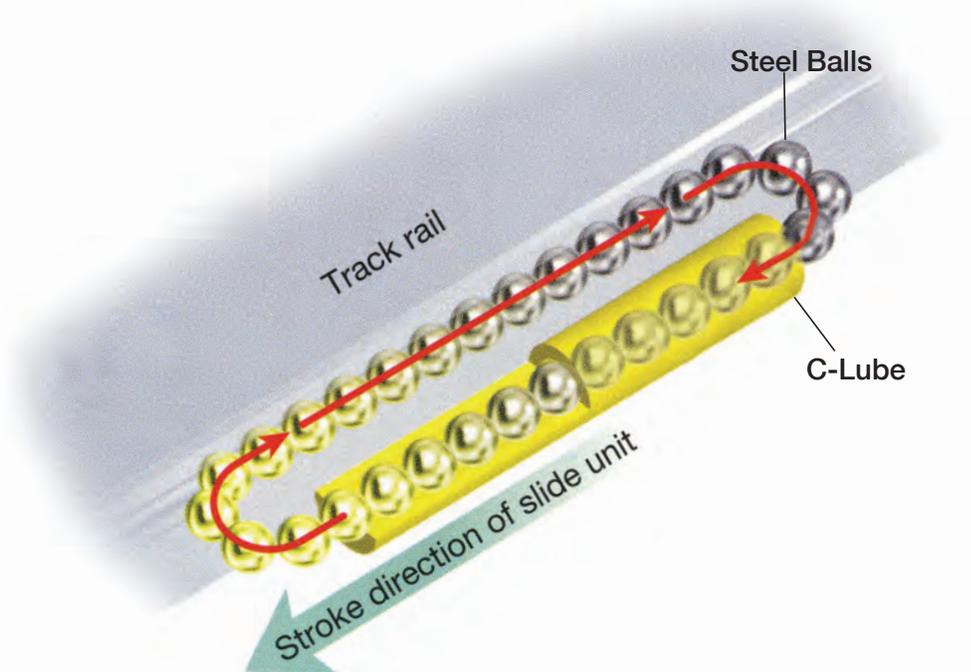
Designed for applications that require maximum stiffness and resistance to heavy loads, the Linear Roller Way Super MX guide features a slider that operates on a balanced set of four cylindrical rollers. Unlike most roller guides, the Super MX line contains our C-Lube technology. In this application, we've incorporated C-Lube as a plate-shaped element housed just behind the slider's end plates. These roller guides are ideal for handling heavy loads in end-of-the-line systems.



from a sintered resin, have an open porous structure that can be impregnated with large amounts of oil. The elements release the impregnated oil slowly through direct, continual contact with the linear guide's internal rolling elements.

Focus on contamination reduction. Packaging applications are highly sensitive to contamination. In large part, that sensitivity has to do with integrity of the packaged product, but it also has implications for productivity. With their fast line speeds, packaging lines can be brought to a halt if contaminants make their way into linear guides. And contaminants of various kinds—such as cardboard particles—are all too common in packaging plants.

To keep contaminants at bay, you may sometimes need linear guides with sealing capabilities. Our Ultra Seal technology, available on many guides suitable for packaging applications, incorporates durable elastomer seals on the ends and undersides of the





slider. In that regard, it's much like many of the linear guide seals on the market. But we take it a step further by precision grinding the rail surfaces, creating a truly flat surface for optimum sealing.

Self-lubricating technologies also play an important role in preventing contamination—the less lubricant that needs to be applied to keep linear axes running smoothly, the less chance stray oil will make its way onto products or packages.

Clearance-type bearings can help. Preloading linear bearings is common in applications that require maximum accuracy, precision and stiffness from every linear motion axis. Packaging machines, however, often have requirements that are easily met by clearance-type guides and motion stages.

With some clearance between the rail and rolling elements, guides will need less linear forces to move the slider at a given speed, which is a nice benefit when it comes to fast-moving packaging machines. The accuracy and precision trade-off will be negligible in most packaging applications. At IKO, many of our linear guides run with a pre-load for use in high-precision applications, but we do offer clearance-type linear motion devices.

Selecting linear bearings that self-lubricate, fight contamination and offer some clearance won't solve all your downtime problems. But they will solve some of them by keeping your linear motion axes running smoothly for the long haul.

For more information on IKO's full range of bearings and linear motion products please visit www.ikont.com or call tel: 800.922.0337.