LM3S.. series electric cylinders

Electric cylinders in the LM3S.. series combine a modular design with excellent dynamics and precision. They are systematically designed for use with servomotors and are suitable for different servomotor and gear ratio variants – from compact servomotor mounting to efficient high-performance solutions.
The combination of flexibility and robust mechanical properties makes the LM3S.. series perfect for a wide range of applications – from packaging and metalworking to automated production processes.

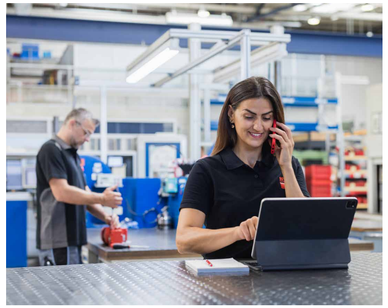
LM3S.. series electric cylinders – serial and parallel designs

Find out more now

sew-eurodrive.de/electric-cylinders-lm3s

Service worldwide

The extensive SEW-EURODRIVE network is at your service. We offer professional advice, deliver motors, gear units, and spare parts on time, and provide reliable maintenance – no matter where in the world our systems are in operation.



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We keep it simple

LM3S.. series electric cylinders
Interview with an expert

→2/2026

Modular electric cylinders for any application and a variety of travel profiles

Answers to the top ten questions about the new generation of electric cylinders – the LM3S.. series

Raphael Dohn
Product Manager
SEW-EURODRIVE

LM3S.. installed in a brick grapple

What requirements do electric cylinders have to meet?

Raphael Dohn: First of all, electric cylinders have to precisely convert electrical energy into linear motion so they can lift, lower, move, and position objects and loads in automated processes. Examples include lifting components, moving welding tongs in welding robots, and positioning packages in logistics applications. Electric cylinders are efficient and clean low-noise alternatives to pneumatic and hydraulic systems. These wide-ranging potential uses determine the additional requirements – efficiency, strength, precision, and variability. Electric cylinders must work with power and precision at variable speeds, in processes that require soft starts and stops, for instance. The high forces must be transmitted reliably and with excellent precision. Only then can a vehicle body be accurately placed into, and positioned in, a robotic welding plant, for example. A robust design is also vital, because many of these automated work steps take place in harsh industrial environments – just think of the permanent exposure to dust and vibrations. A further advantage of these cylinders is their energy efficiency. They are more economical and require less maintenance than hydraulic or pneumatic systems. They are also easy to integrate into cutting-edge control systems.

Why is the CMS.. series being replaced by the LM3S.. series?

Dohn: In a nutshell, because we listen to our customers. We are guided by the experiences, expectations, and needs of everyone who works with our products and solutions. Developing a new generation of electric cylinders wasn't just necessary from a technical perspective – we also felt it was important to create a standardized series. The new LM3S.. series can now be integrated more smoothly and easily into configuration and planning processes. This also improves our international scalability. We are working hard on fully integrating our new electric cylinders into the SEW-Workbench planning and configuration tool and our "DriveConfigurator" online product configurator.

What is the difference between the CMS.. series and the new LM3S.. series?

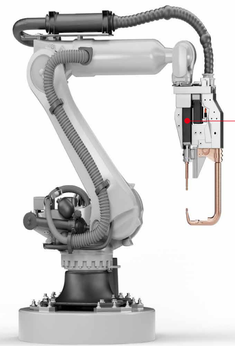
Dohn: LM3S.. is a standardized, modular series that we have created with the specific aim of reducing complexity – totally true to our "We keep it simple" motto. We made a point of simplifying things compared with the previous series of electric cylinders, which included both the modular CMSMB and the CMSB with integrated motor. The CMSB variant involved a great deal of in-house product management work and was therefore discontinued. The LM3S.. series completely plugs the gap this left. Unlike the CMSB, it is not a motor, but a linear gear unit pure and simple. That makes technical implementation a much more streamlined process. What's more, we were able to cut manufacturing costs thanks to optimized lubrication with different variants. A further advantage is that the new series is more robust. Among other things, we achieved this by using a cardan joint.

What does "We keep it simple" mean in the context of the new LM3S.. series?

Dohn: With the launch of our LM3S.. electric cylinders, we are deliberately placing modularity center stage. Our new series of electric cylinders completely eliminates the need for integrated variants. Besides substantially reducing the amount of development, production, and product management work required, this also makes the LM3S.. series far less complex and therefore also less susceptible to issues. The new LM3S.. electric cylinders are therefore all about modularity and efficiency. One specific example of this is the new product manual. Whereas the documentation for the previous series – consisting of a catalog and operating instructions – amounted to a total of around 430 pages, it's just 130 pages for the LM3S.. series.

Doesn't using simpler technology make the system more prone to issues?

Dohn: Just because things aren't complex now, that doesn't mean they're worse. Quite the opposite, in fact. One particular feature of the new LM3S.. series is that we are still using oil to lubricate the spindle. This is a technical USP and offers numerous benefits. Thanks to system improvements, for instance, we have been able to eliminate the oil pumping system that was previously needed. That means fewer components, fewer processing steps, and far fewer restrictions for our customers. All in all, this simplification makes the LM3S.. more robust and therefore less susceptible to operating issues.



LM3S.. used in a welding tong drive

What are typical applications for electric cylinders, and which applications is the new LM3S.. series aimed at?

Dohn: Fundamentally, the LM3S.. series is suitable for all typical electric cylinder applications, including simple ones, which don't present any problems.
When combined with high-performance servomotors, however, the new series is primarily designed for demanding areas of use, where it is completely at home. It is ideal for complex travel profiles that require a high level of performance and precision. Typical examples include welding tong drives and assembly presses, where precise force control and high force precision are vital.

What are the standout features of oil lubrication?

Dohn: One big advantage for our customers is the maintenance-free oil lubrication of LM3S.. solutions throughout their entire service life. Since it ensures better dissipation of heat from the recirculating ball screw than traditional grease lubrication, oil improves the performance of the entire system. Our tests show that an oil-lubricated spindle drive achieves almost double the service life of grease-lubricated variants. In addition to this, lower and more uniform friction boosts efficiency and improves force precision. In many applications, precise control of force is possible even without using a force sensor.

Does oil lubrication have any disadvantages?

Dohn: Leaks have occasionally occurred in the past. In the vast majority of cases, these were the result of impermissible overhung loads. We identified this problem and believe we have now eliminated it. How? The cardan joint that is included as standard in the new generation can compensate for overhung loads more effectively. In combination with oil lubrication, it's an ingenious solution that is intended to boost operational reliability. For applications and sectors that specifically rule out oil lubrication, we also offer the option of LM3S.. series electric cylinders with grease-only lubrication – when a particularly long service life is not a priority, for instance.

What support is available when planners and project managers are seeking the right solution for a project?

Dohn: The SEW-Workbench planning and configuration tool offers planners and project managers optimum support. Using this tool, they can configure LM3S.. electric cylinders to precisely suit customers' application requirements and circumstances and integrate these cylinders into the overall system. The responsible SEW-EURODRIVE sales engineers take care of project planning. They support customers throughout the entire process, acting as their personal specialist contacts.

How does the new LM3S.. series fit into SEW-EURODRIVE's modular philosophy?

Dohn: SEW-EURODRIVE customers don't just get an electric cylinder – they get yet another element that can be fully integrated into the MOVI-C® modular automation system. This covers everything from linear gear units, motor adapters, and servomotors to inverters, controllers, and MOVILINK® DDI encoders. As a result, SEW-EURODRIVE doesn't just supply a mechanical component, but an end-to-end system in which all components and modules are perfectly coordinated. Thanks to their modularity, the new LM3S.. electric cylinders fit seamlessly into our modular philosophy and can be combined with servomotors in a variety of dimensions as well as different overall sizes, lubrication types, stroke lengths, and spindle pitches. The focus is always on the specific requirements of the relevant application.