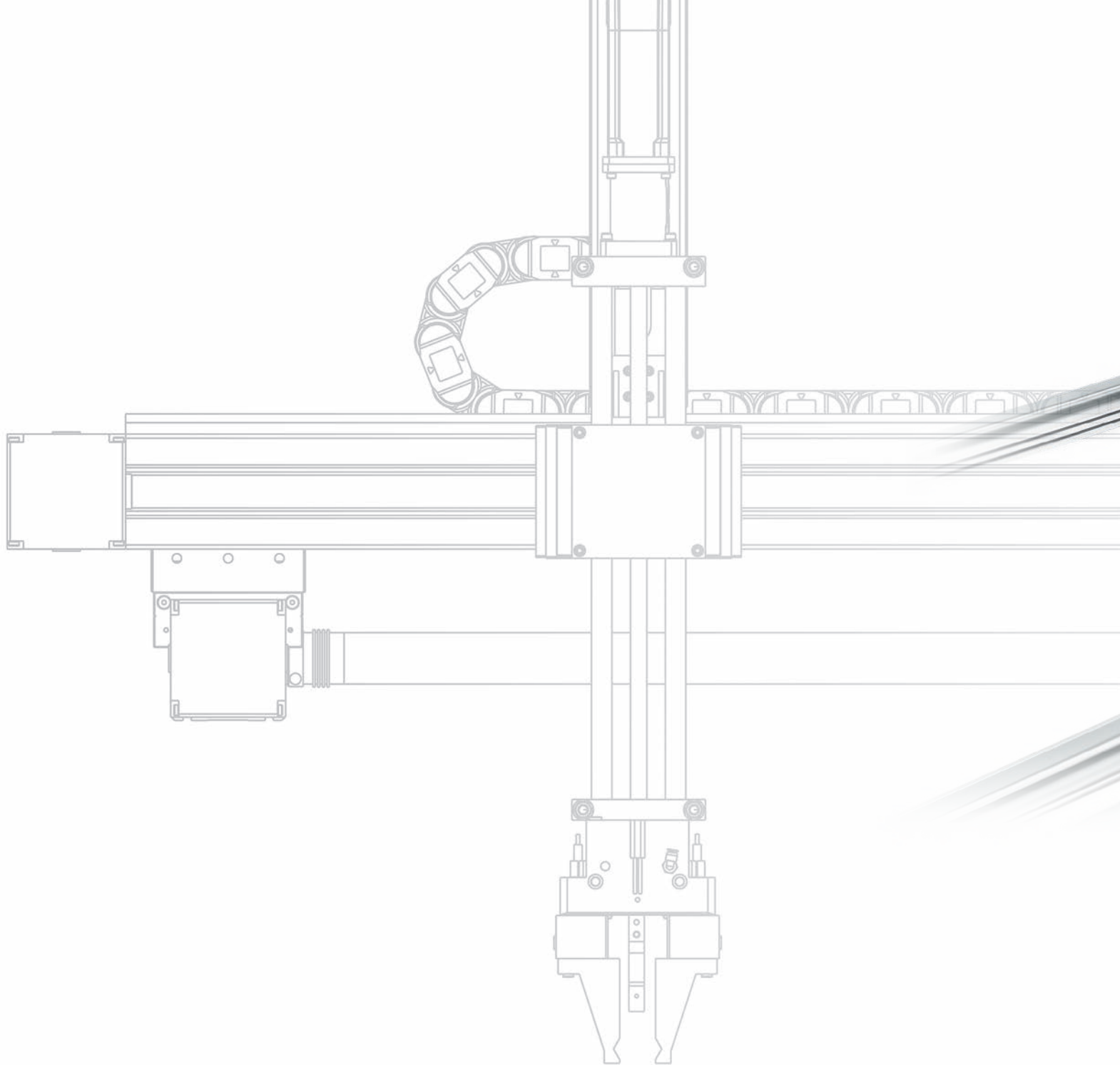
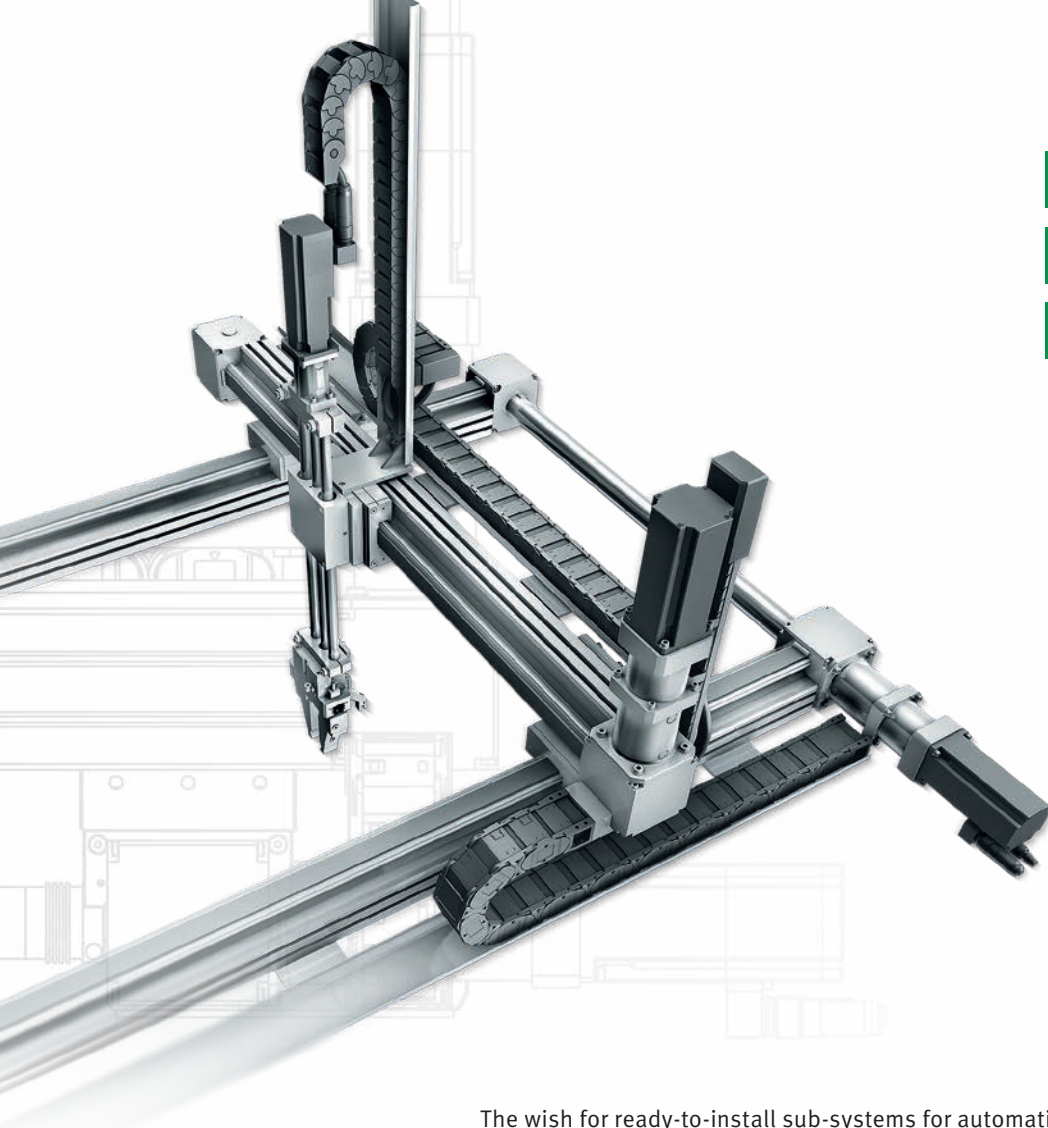


## From Components to Systems

System solutions – cost-effective and ready-to-fit

**SCHAEFFLER**





- Standard systems
- Individual solutions
- Partnership

The wish for ready-to-install sub-systems for automating production processes is rapidly increasing. These ideally include engineering, drive technology, and a full range of services. Schaeffler has created a dedicated “Industry 4.0” business sector for this purpose, which also comprises the Competence Center at the Schaeffler location in Homburg/Saar. The experts here have specialized in driven linear units and project-based complete mechatronic systems – for simple sequences of moments through to highly-complex handling tasks.

## From components to systems. Just as you require.

### Schaeffler system platform

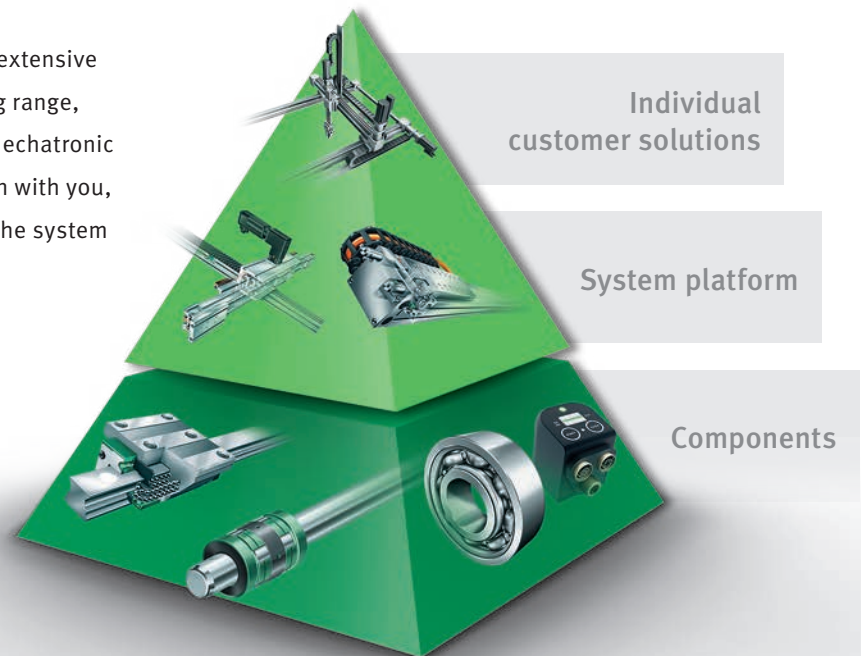
Our broad product range has many benefits for you. Our engineers have access to both the linear technology range and the international Schaeffler Group's entire range of products and services. This allows us to put together the optimum combination of mechanical systems (such as customizable linear actuators and linear tables), drives, drive technology, as well as sensor and control systems. The result: Fully functional, cost-effective solutions.

### Customer-specific system solutions

If the right solution still can't be found in the extensive selection of system solutions from our catalog range, we will develop and manufacture individual mechatronic systems for you instead. In close collaboration with you, we will take on the entire project planning of the system

solution, which will be focused on your requirements and needs. This has several advantages for you:

- Perfectly matched components
- Time savings during planning and production
- Professional mounting and initial operation
- Worldwide network of services



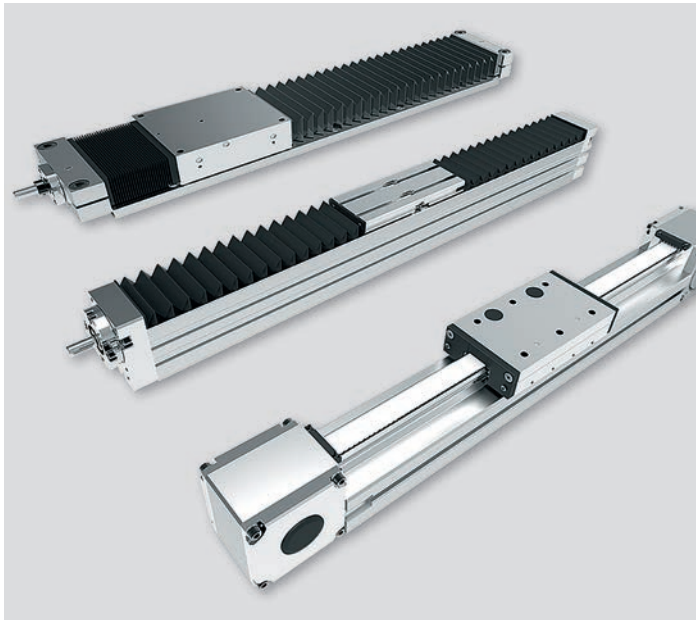
## AL1 – the indispensable compendium

Our 900-page “Driven Linear Units” catalog is a true compendium. The AL1 catalog contains all of our expertise in the field of standardized linear units, including all of the technical principles. Combination tables for proven drive combinations that provide assistance during the selection process can be found in the “Electric Drive Technology” section. A range of suitable control systems, motors, drives, and accessories for drive regulation complete this comprehensive publication. This makes even individual mechatronic solutions possible. The following section contains a brief overview.





Schaeffler compact actuator type MKUVS.-KGT



Overview of Schaeffler's linear actuators

## Linear actuators

Our range of linear actuators includes support rail cross-sections from 40 mm to 415 mm:

- Miniature actuators for very small design envelopes
- Linear actuators with monorail or track roller guidance systems, using toothed belt drive or ball screw drive systems
- Actuators with additional functions such as low noise, high speed, and opposing carriages (clamping actuators)
- Telescopic actuators with a stroke that is greater than twice the total length of the base support rail
- Heavy duty actuators in a tandem design, e.g. for peripheral equipment in machine tools, automation engineering, and assembly equipment with high demands in terms of masses, forces, and moment load carrying capacity

## Linear tables

Linear tables are mostly found in applications that involve short stroke lengths. We divide these into two groups:

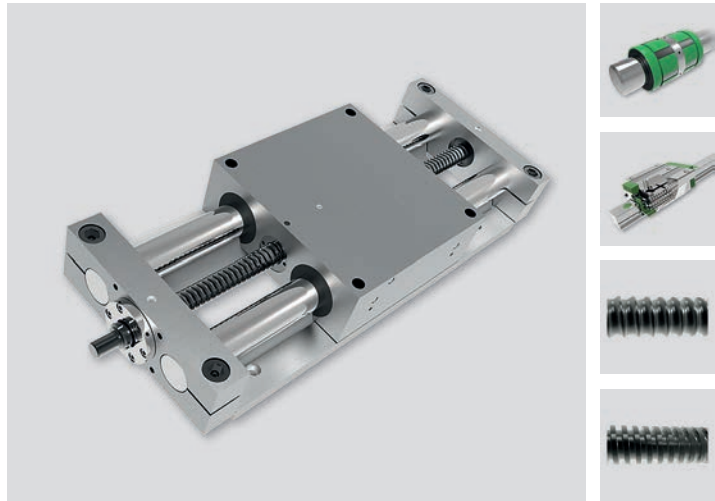
- Linear tables with shaft guidance for low to medium loads and moment loads – available with a ball/trapezoidal screw drive or without a drive
- Precision linear tables with a high load carrying capacity, which are based on linear recirculating ball bearing and guideway assemblies and driven using a ball screw drive

## Drive technology and accessories

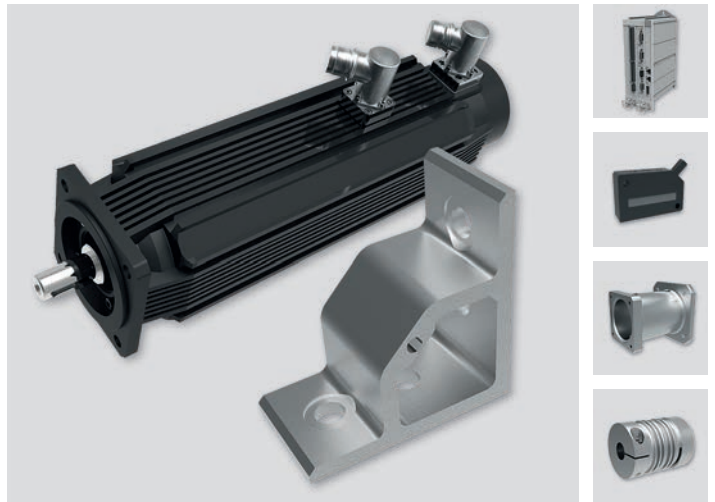
We also offer all the right accessories for every driven linear unit:

- Mechanical accessories such as fixing elements and connection brackets for connecting the units to the adjacent construction or to other linear units
- Couplings, coupling housings, and belt gearing that are used to mount the drives
- Electric drive components such as motors, motor and gearbox units, and control systems

All of the accessories in our range have been carefully matched to one another. This means that we can quickly and flexibly put together the perfect solution for you.



Schaeffler linear table type LTS..-TR



Electric drive technology and mechanical accessories

## ▶ Cutting equipment

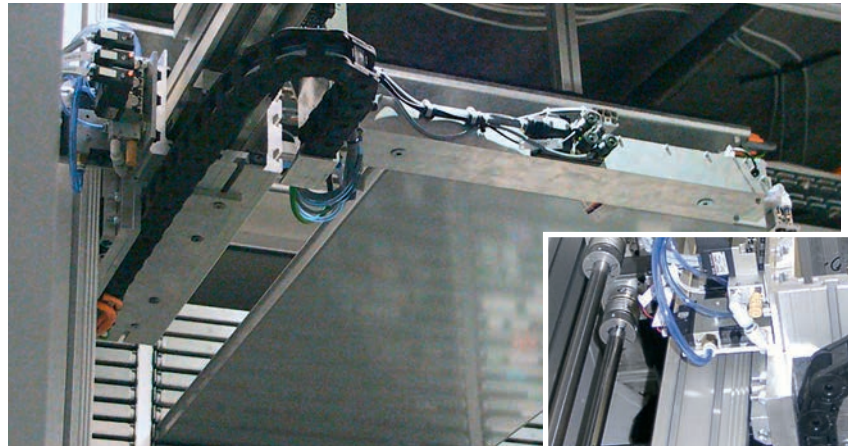
Christoph Dingeldein (Kluth): “We were quickly able to find a solution here that was very good in terms of both technology and practical suitability, and this allowed us to double our output. Thanks to the use of standard linear actuators, we were also able to simplify the machine’s adjacent construction – a rationalization effect from which our customers naturally also benefit. Schaeffler worked with us to configure and assemble the driven actuators, so everything was delivered to us exactly according to our specifications.”



The cutting frame comprises two Schaeffler MKUVE20-B-ZR linear actuators, each equipped with a gripper system and nine single-wire feed units.

## ▶ Pharmaceuticals handling

Picking systems for pharmaceutical products require positioning accuracy to within 0.1 mm. This is just one of many requirements. The machine manufacturer S&T HMR relies completely on Schaeffler’s expertise here and, thanks to the linear actuators that are delivered ready to install, benefits from a greatly reduced outlay for design, mechanical manufacture, assembly, and initial operation; when support is needed, the Competence Center in Homburg is always on hand to provide application engineering and service expertise.

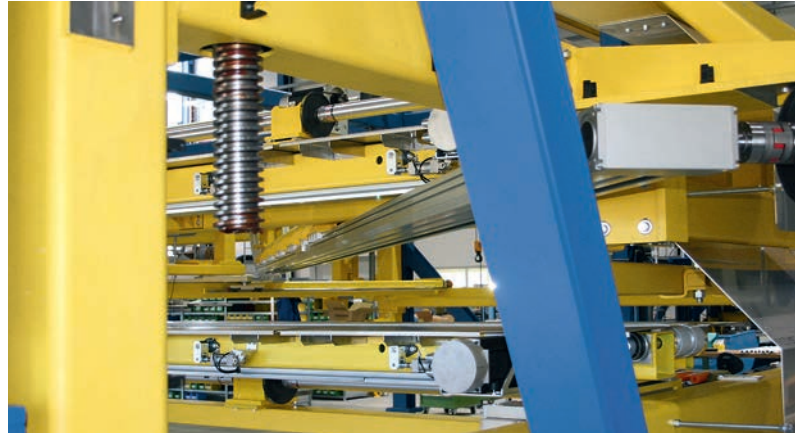


Schaeffler linear actuators in use: Opening drawers in a pharmaceutical storage facility using MTKUSE25-ZS telescopic actuators



## ► Precision handling

Andreas Dietrich (Tuboly-Astronic AG):  
“The free and positionally correct handling of our cut sheet metal products requires large-format machines with a sufficient range of travel. Linear guidance systems with outstanding performance are needed here – and that is what Schaeffler’s complete linear actuators deliver in the form of a ready-to-fit system. The Schaeffler specialists continuously supported us throughout every phase of the project.”



A Schaeffler MDKUSE25-3ZR tandem linear actuator ensures precise longitudinal-to-transverse handling of sheet metal transformer parts.

## ► Diagnostic device

AAD was looking for a long-term partner for the development and production of a driven guidance system in large quantities and wanted the entire project to be carried out externally. In order to minimize logistics and mounting costs, a high-precision plug & play system was needed. Schaeffler delivered the 3-axis linear system – weighing just four kilograms – ready for operation: Completely assembled and including the stepper motors, the limit switches, and the electric cabling and plugs.



The analysis slides are processed in the diagnostic device for milk products (right). The entire mechatronic positioning unit (above) was supplied by Schaeffler.



## STP – Systems: The partner network

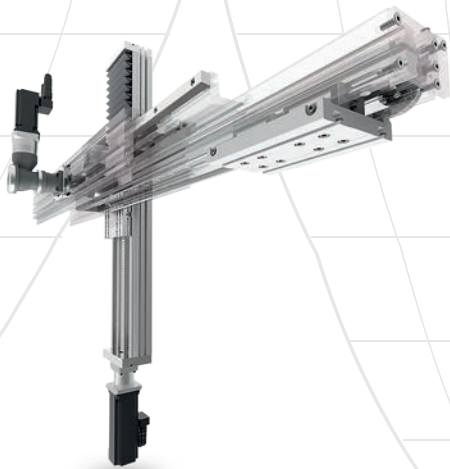
Are you in special machinery or maintenance and looking for individual or small volume production solutions that are available quickly, flexibly, and in Schaeffler quality?

Our partners in the “Schaeffler Technology Partner (STP) – Systems” network fulfill precisely these requirements with their own expertise and with modular systems including tools such as calculation programs and training courses from Schaeffler. They are equipped with our system modules including the appropriate calculation tools – and they are always up to date thanks to Schaeffler training courses.

Our “STP – Systems” partners speak your language and understand your requirements. This provides a sound basis

for selecting, combining, and adjusting all the products and systems in such a way that they will ultimately become an ideal solution for your application. You will receive your individual system ready for operation from one source, and of course in Schaeffler quality. “STP – Systems” partners support your entire project, from initial technical consultation to concept development, engineering, and production through to initial operation and service. This also includes any customer-specific adjustments that may be required.

You too can benefit from the synergies available in our partner network, where every member represents Schaeffler quality standards.



A man in a tan work jacket and white gloves is working in a factory. He is leaning over a workbench, handling several long, silver aluminum profiles. The background shows a complex industrial environment with overhead structures, pipes, and lighting. The man's name tag reads "M. BRESSEL-SCHMIDT".

- Flexible

- Reliable

- In Schaeffler quality

## More information



### **Driven linear units: AL1 catalog**

[www.schaeffler.de/en/system\\_solutions](http://www.schaeffler.de/en/system_solutions)



### **BEARINX calculation for linear systems: The online version is available free of charge and provides fast access**

<https://bearinx-online-easy-linearsystem.schaeffler.com>



### **Schaeffler Technology Partners – Systems: Names and addresses**

[www.schaeffler.de/en/stp-systems](http://www.schaeffler.de/en/stp-systems)

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