

**2019**

**GROB**

**ANTRIEBSTECHNIK**

SINSHEIM • GERMANY • WORLDWIDE

**GROB INFORMS YOU**

# EDITORIAL

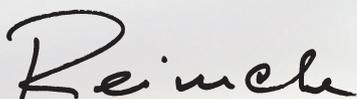
Dear readers,

Dear business partners,

there is a great deal of uncertainty on the global political stage at the moment. In particular, the trade war between the United States and China is currently leading to hesitance on the part of many investors, while here in the EU, too, the forthcoming Brexit is causing uncertainty and thus a deferral of investment in many companies. Not so at GROB! Following the successful market launch of the MINI spindle drive last year to complete our product range in the electro-mechanical drive sector, we have also been able to increase our market share with our existing products - screw jacks, linear chains and electrical cylinders. Not only nationally but also internationally, we are achieving huge growth impetus together with our successful partners. In doing so, of course, we also focused on the further development of the proven drive systems. Customer-oriented, individual solutions are a matter of course for us. Our engineers, technicians and sales employees develop new concepts every day, which are individually adapted to the respective drive problem and installation situation. We would like to present some of our developments and goals to you here.

I hope you will enjoy reading about them.

Best regards,



Managing Director



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## THE TELESCOPIC LINEAR CHAIN

One of Grob's latest developments is the telescopic linear chain. The development took place in close coordination with our mechanical engineering partners and was project-related. With the introduction of the telescopic linear chain we have been able to expand the range of completely pre-assembled user-oriented drive solutions.

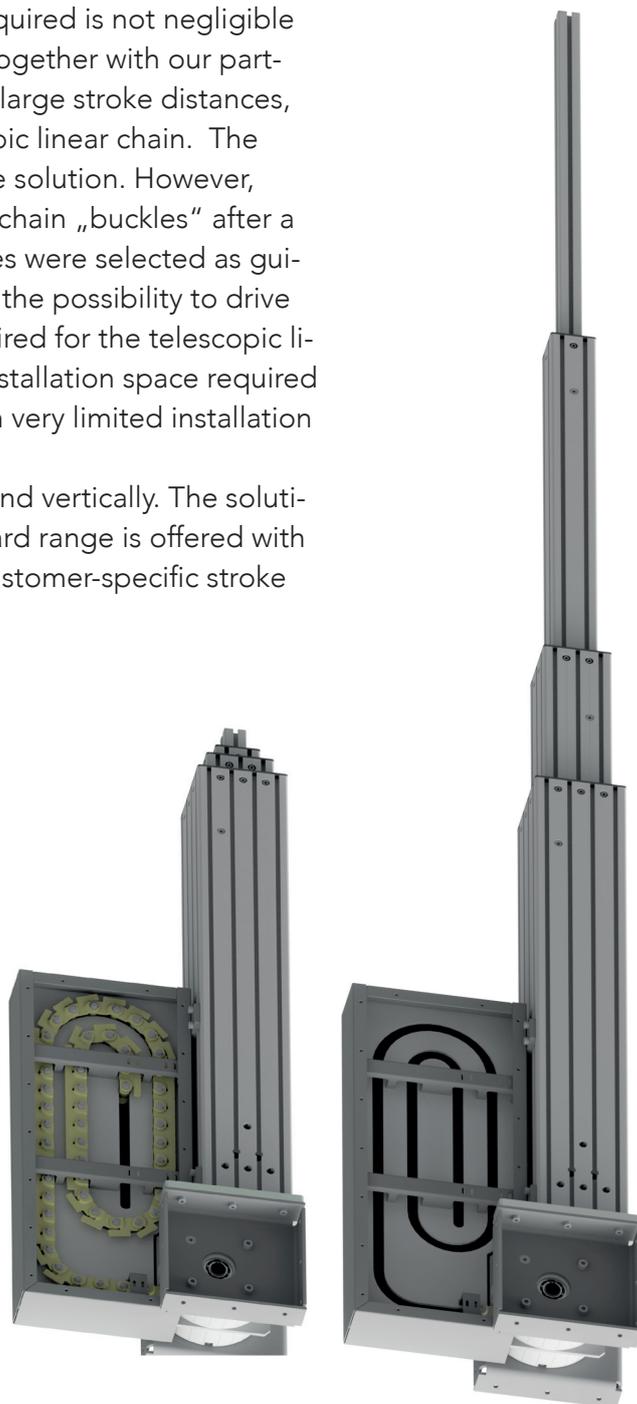
The challenge with many systems is to move a supply unit or feeding device freely into the room without the possibility to set the drive components down or guide them. Other applications are feeding systems with a cross-feeder. In this case the drive solution must not be placed in the movement area. In the past, these applications were frequently implemented with hydraulic cylinders. The disadvantage of this, however, is that the stroke distances are long, as a cylinder with the „stroke + x“ must then be installed on the system. With implemented strokes of 2 - 3 m, the space required is not negligible and often the required installation space is not available. Together with our partners, we looked for a suitable solution that can implement large stroke distances, but in return requires little space. The result is the telescopic linear chain. The linear chain is the central drive component of the complete solution. However, since the chain cannot be moved freely into the room (the chain „buckles“ after a distance of approx. 1000 mm), telescopic aluminium profiles were selected as guides. These commercially available aluminium profiles offer the possibility to drive to exactly the desired position. The installation space required for the telescopic linear chain, including chain storage, is approx. 1/3 of the installation space required for hydraulic cylinders. This enables many applications with very limited installation space geometries to be implemented.

The telescopic linear chain can be used both horizontally and vertically. The solution is based on the linear chain in the size SK08. The standard range is offered with strokes of 1 m, 1.5 m, 2.0 m, 2.5 m and 3.0 m. Of course, customer-specific stroke lengths are also possible.

The compact unit consists of linear chain, aluminium profiles and a chain store. The chain store can be selected in a version lying against the telescope or a version protruding at an angle of 90°. Here, too, the available space plays a major role. Overall, the new complete system provides a high degree of flexibility due to an extensive modular system and numerous options that can be selected on a project-related basis. Options include gear brake motors, gear cam switches, articulated shafts, encoder systems, etc.

There are various ways to connect the telescopic linear chain to the system on site. Whether pawl or dog, many connections are possible today in mechanical engineering.

There is a wide variety of applications for the telescopic linear chain. The feeding of processing machines, the unloading and loading of cross-loading wagons or the supply of tool components are just a small selection of solutions that have been implemented. Are you interested in a consultation? Then please don't hesitate to contact us.



# LINEAR SPINDLE CHAIN DRIVE

## APPLICATION DESCRIPTION OF A LINEAR SPINDLE CHAIN DRIVE



A linear chain is perfectly suited for the flat construction of a scissor lift. It supplies the lifting forces (pressure), saving space in the process, while the scissors of the table guide the load.

Andreas Peukert from the Management Board at GROB Antriebstechnik says that the challenge in this application was the customer's requirement for two linear chains with a common drive to be placed between the two scissors of the lifting table, whilst at the same time considering the tight spatial conditions.

The solution here was a Ku3205 ball screw, whose travelling nut drives the two SK04 linear chains via a dog. The linear chains are deflected 90° by the drive housing and thus lift and lower the platform. The geared motor for the ball screw lies outside the lifting table frame and thus enables this flat design. Due to the tensile load on the ball screw, its cross-section is very small and it is therefore inexpensive to manufacture. The linear chain and ball screw have efficiencies of over 90% and thus enable low drive power.

The service life is prolonged by permanent lubrication of the linear chain and spindle, as well as a special nickel-slide coating of the linear chain bolts and tempered link plates.



### FURTHER TECHNICAL DATA:

Lifting load F	= 5 kN (Druck)
Stroke	= 500 mm
Stroke speed	= 70 mm/s
Number of strokes	= 500/Tag

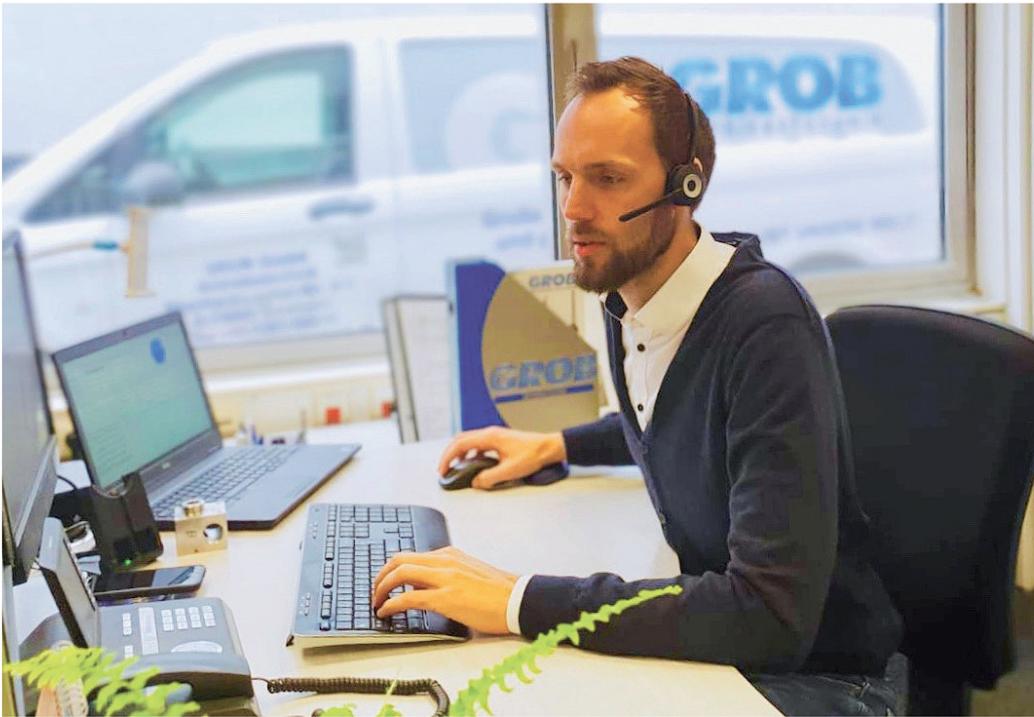
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# EVERYDAY LIFE WITH THE GROBIANS

## WHO LIKES TO WAIT?

Sounds familiar? - you've almost completed your design and it's 3.30 pm on Thursday afternoon. The only thing missing now is your supplier's price, delivery time and CAD model. Then everything would be complete and you could finish your project and pass it on to your project manager. Unfortunately, however, you have to wait – and it doesn't look like anything further will happen before Monday. Does that feel good? Probably not – and that set us thinking in Sales.



We asked ourselves: „Who likes to wait?“ With this sales slogan in mind, we are trying in 2019 to adapt processes and tools so that you no longer have to wait 24 hours for your quote. In doing so, we would like to provide you with different ways to get your quote and your CAD data quickly. On the one hand, of course, the usual way by email or telephone is still available. On the other, there will also be possibilities in the future to contact us online and via our GROB app with a specific product enquiry or to query the price directly online..

By the way, in order to make your project implementation as pleasant as possible, you currently benefit with us from the shortest delivery times on the market.



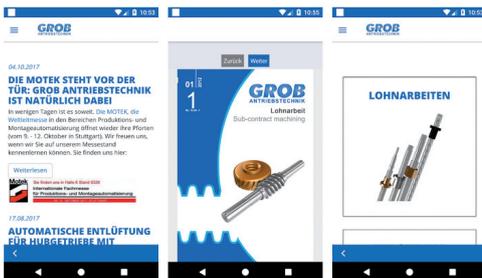
GROB Antriebstechnik

econsor mobile GmbH Tools

USK ab 0 Jahren

Zur Wunschliste hinzufügen

Installieren



[www.grob-antriebstechnik.de](http://www.grob-antriebstechnik.de)



## PRODUCT DEVELOPMENT – LINEARMOVER:

### *Moving vertical loads even more flexibly and at a lower cost*

So that you can move your load even more efficiently and flexibly, we consider it our duty as your innovative partner to constantly push further developments and new ones forward.

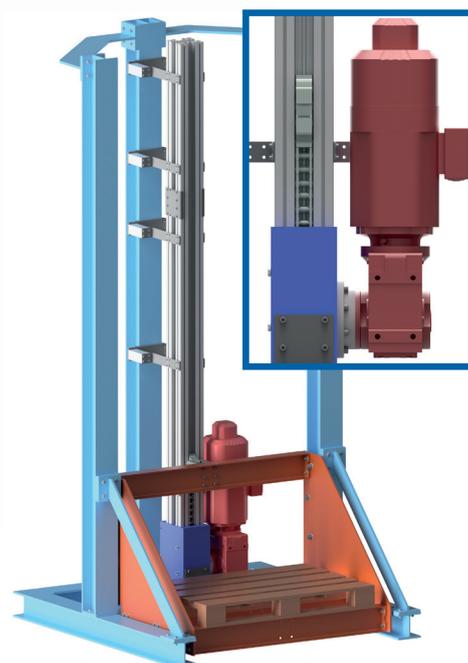
In this context, we would like to introduce our new development to you - the LinearMover.

The LinearMover is designed to traverse large vertical stroke lengths in a specially developed guide system. It will enable you to move vertical loads even more flexibly and at a lower cost than with hydraulic solutions.

The LinearMover features a specially designed guide rail system that offers high flexibility with long strokes, reducing your transport costs and assembly work.

A compact design is achieved through the use of a hollow shaft motor. Thanks to an oil-tight drive housing and a sufficient supply of lubricant to the linear chain, the LinearMover has a low maintenance requirement and a long service life.

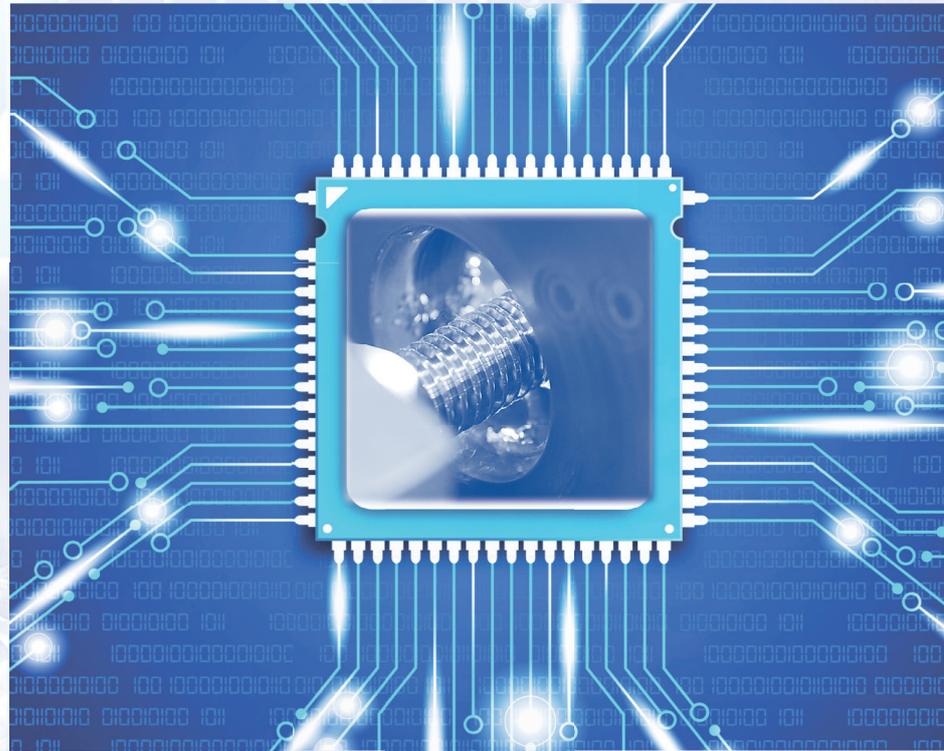
For this development we have made use of our two proven linear chain sizes SK12 and SK35, which are driven in an entirely newly designed housing designed to meet the requirements.



**INDUSTRY 4.0:****DIGITAL AND INNOVATIVE FURTHER DEVELOPMENT OF OUR GROB PRODUCTS**

Due to technological change, every company will be confronted sooner or later by digitisation and Industry 4.0. Digital technologies are advancing at a rapid pace worldwide, which is why GROB, too, has centralised this topic in its corporate activities.

So that we can offer you more innovative products, we are developing 'smart products' in the course of the omnipresent Industry 4.0 by digitising our GROB products. Above all, we are focusing on the digitisation of the processes for the maintenance of our linear drives in order to minimise complex and expensive system failures. Our linear drives are equipped with sensors and our many years of know-how in the field of linear drive technology.



We are developing an overall system for monitoring the gearbox condition, which communicates directly with the plant operator's controller or shares information with it directly. This system is intended to monitor and diagnose the gearbox condition. For example, we want to make the maintenance work on our linear drives more efficient, because nowadays information about the lubrication level, the temperature of the components or the service life of the wearing components is still mainly determined in a conventional way using analogue measurement technology.

Thus, the above information is to be mapped in real time in order to make maintenance more predictable. In this way, faults can be predicted in the ideal case and can be rectified before an unplanned plant shut-down occurs.

Our goal is to relieve you of the work that the maintenance process entails and to offer you an agile system that enables you to avoid unnecessary downtimes in advance and operate your systems with maximum reliability, so that you can save time and costs.

In the course of Industry 4.0, there is an opportunity and a possibility to make the current production processes more flexible, more individual and faster, which is why GROB will be advancing digitisation as a pioneer in linear drive technology.

ände im Vorfeld vermeidet und Ihre Anlagen mit höchster Zuverlässigkeit betreibt, damit Sie Zeit und Kosten einsparen können.

**YOU CAN ALSO FIND US**



**Sie finden uns in Halle 6**

**Stand 6325**

Internationale Fachmesse  
für Produktions- und Montageautomatisierung

**38. Motek**

07.-10. Oktober 2019  
Stuttgart

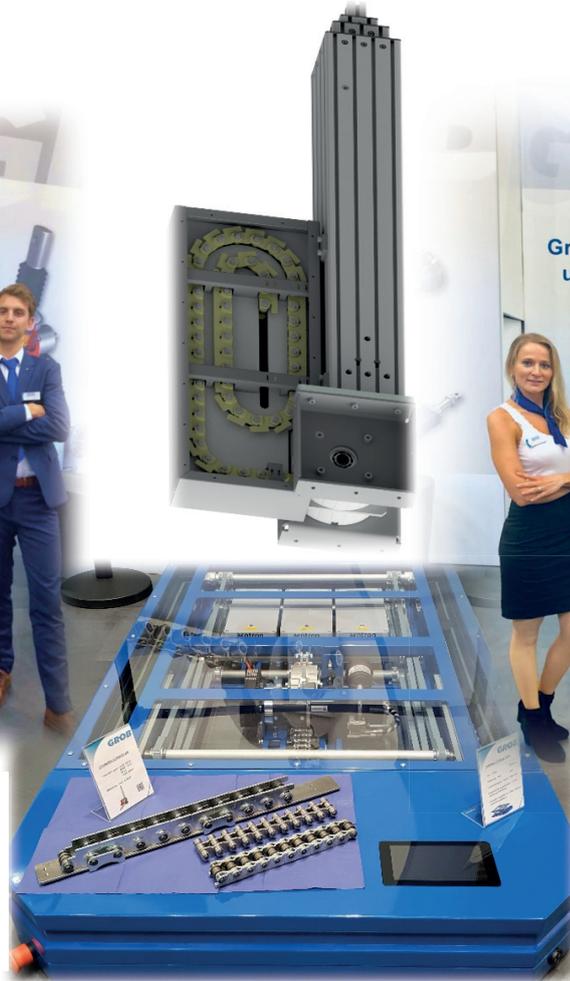
Save The Date!

## MOTEK 2018

## in Stuttgart



With our highlights:



Telescopic linear chain  
and lifting table



Our end-of-year celebration 2018



We would like to thank our employees for their long-standing loyalty and extraordinary commitment!!!

