

Solutions for the Food and Packaging Industry

Packaging, transporting, handling.



Success all along the line

Final products with ever shorter life cycles, seasonal variations in terms of production numbers and ranges, new materials and production processes – these are the factors that govern the efficiency of manufacturing installations in the food and packaging industries today. Flexible systems are the prerequisite for higher cycle times, quicker format changes and thus higher productivity.

At the same time, the high demands placed on the end product are reflected in the production systems. They must adhere to strict legal, hygienic and production technology requirements. Easy-to-clean, corrosion-resistant machines and components guarantee hygienically flawless final products.

In developing our components we observe the various standards and industry guidelines:

- Hygienic design according to DIN EN 1672-2
- FDA
- 3-A
- EDEHG
- VDMA



Alpine conveyor buffer system

Diverter



EMC electromechanic cylinder



Wedge conveyor

Production process

→ Primary packaging

→ Secondary packaging

→ Transport



Food



Packaging



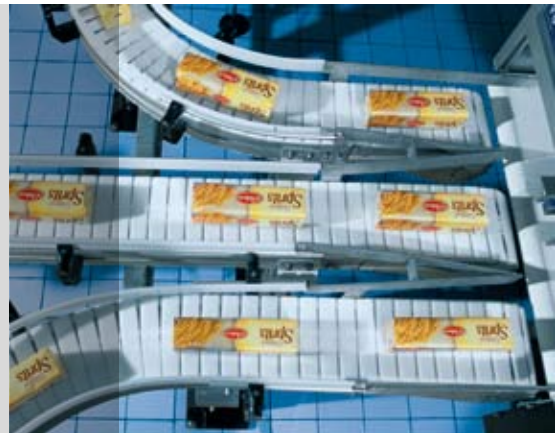
Health



Cosmetics

Segments:

We take all these factors into account when developing industry and customer-specific systems. Our open control and drive concepts, including components from all types of drive technologies, as well as intelligent, flexible linking systems, lay the foundation for productive automation – from manufacturing to packaging, up to palletizing for dispatch. Rexroth – industry expertise for successful solutions across the entire processing chain.



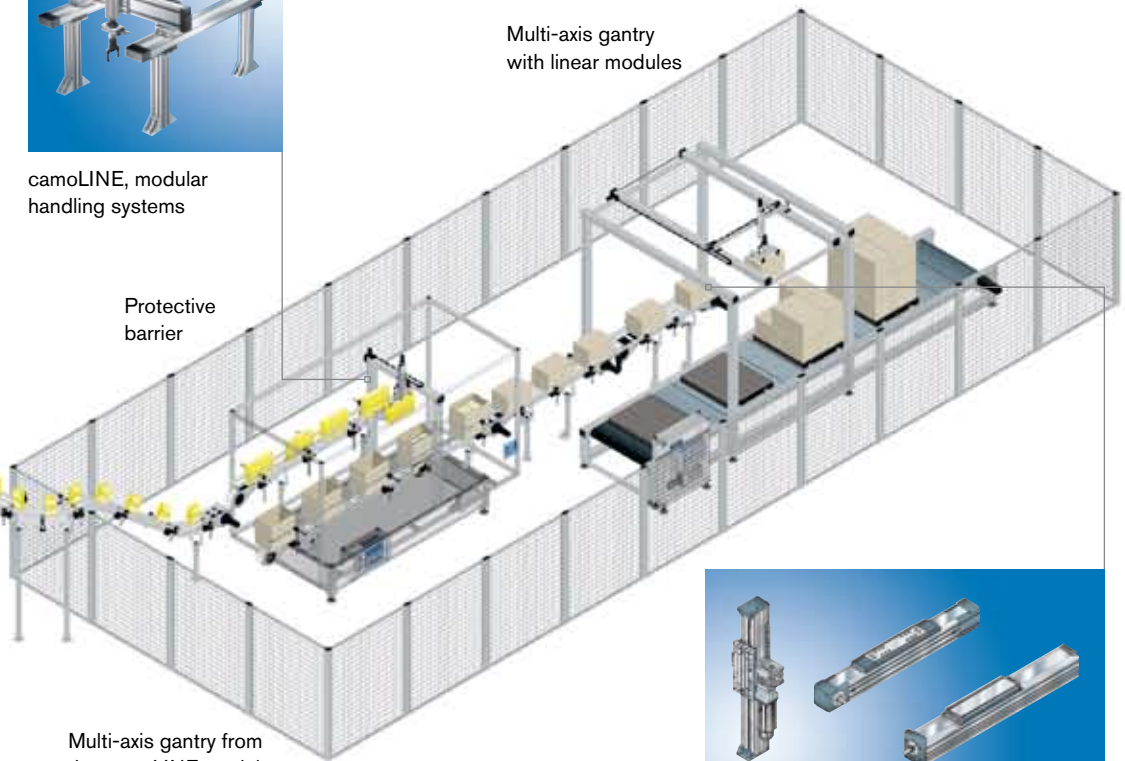
MPS Manual Production Systems



camoLINE, modular handling systems

Multi-axis gantry with linear modules

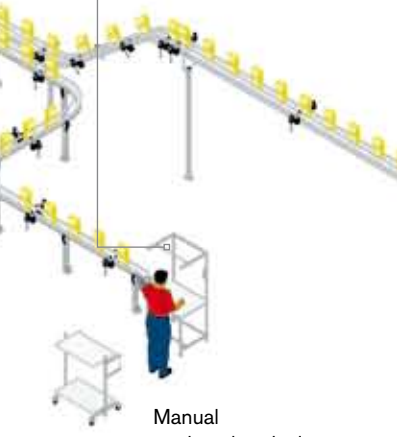
Protective barrier



Multi-axis gantry from the camoLINE modular system



Linear modules for constructing multi-axis palletizing systems



Manual workstation design

→ Final packaging

Primary packaging

The primary packaging stage follows the actual production process and includes a variety of packaging methods. Links with integrated or separate space-saving buffer systems ensure highly efficient processes. Manual workstations can be used effectively for quality control or packaging of smaller batch sizes.

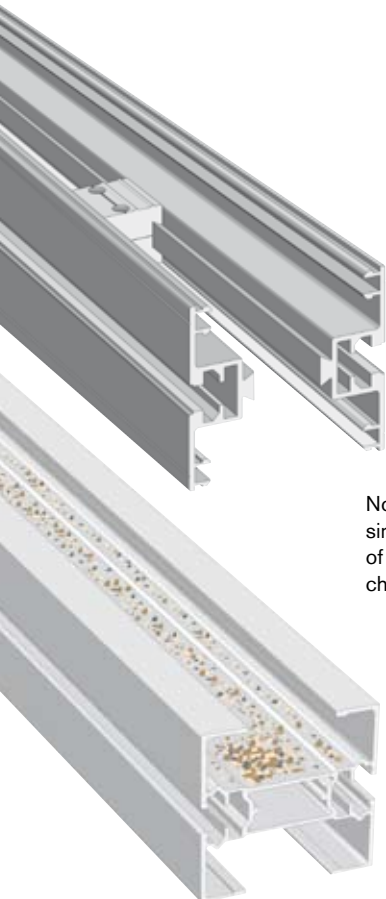
Rexroth offers you particularly low-maintenance and reliable solutions for substantially better throughput and flexibility, providing you with a decisive competitive edge.



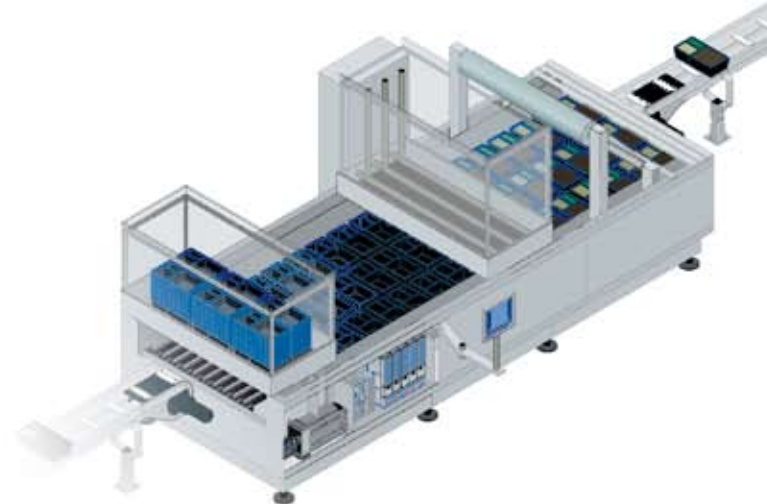
The hygienic VarioFlow stainless steel system transports empty shampoo bottles flexibly and securely to the filling and sealing station



Food & packaging linear module made from an easy-to-clean aluminum profile



No accumulated dirt in hard-to-reach areas, simple cleaning through the open design of the supporting structure in the VarioFlow chain conveyor system



→ Primary packaging

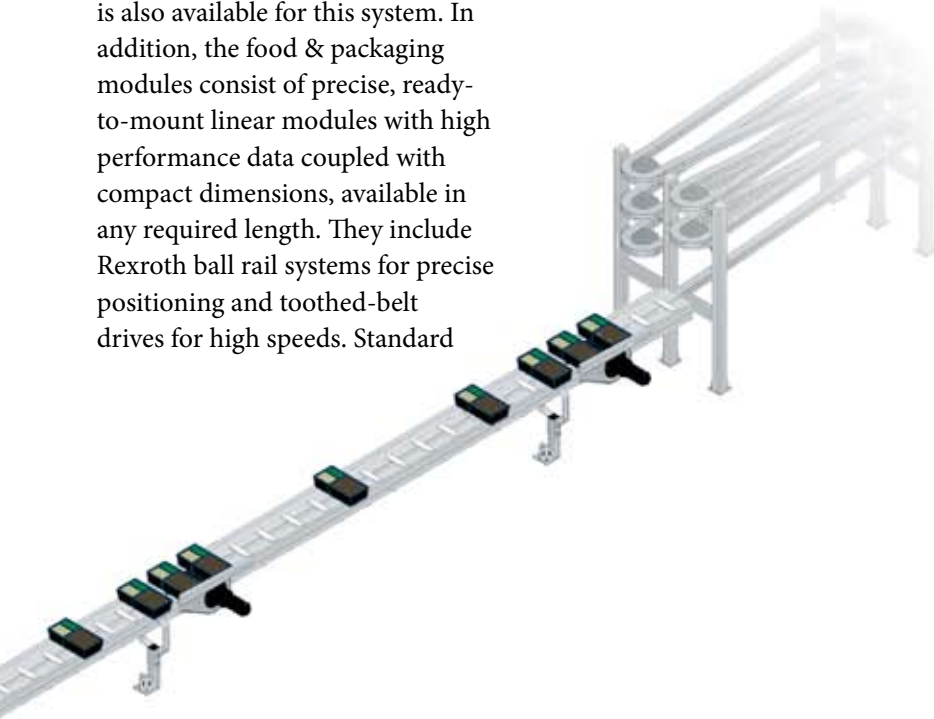


Typical applications for primary packaging

- Filling equipment, liquids
- Filling equipment, dry goods
- Blister machines
- Blow molding machines
- Dosing machines
- Wrapping machines
- Winders
- Tubular bag machines

Food & packaging linear modules have an easy-to-clean aluminum profile. It is designed without grooves and thus has a cohesive, smooth surface. Of course, the proven, stainless steel strip cover for the drive and guide elements is also available for this system. In addition, the food & packaging modules consist of precise, ready-to-mount linear modules with high performance data coupled with compact dimensions, available in any required length. They include Rexroth ball rail systems for precise positioning and toothed-belt drives for high speeds. Standard

peripherals include add-on parts for Rexroth servo motors, suitable regulators, and controls.



Transport and storage in a single system. With controlled speeds, the VarioFlow system adjusts to the production variations of the machines.

Advantages and user benefits:

Food & packaging linear modules

- Smooth surface
- Stainless steel belt cover
- Precise, ready-to-mount linear system

VarioFlow S chain conveyor system

- Stainless steel version available
- Easy-to-clean design
- Flexible application
- Easy to mount



Filling system feed unit for soup powder, double ball rail system on both sides for precise and highly dynamic operation of the unit, powered by a centrally positioned precision ball screw drive

Secondary packaging

Typical applications in the area of secondary packaging include wrapping and packing in crates or cardboard boxes, labeling and palletizing. This is where our linear and assembly technology components are applied. The diverse work processes are often not very complex, yet their speed and cycle times require powerful and robust components. The requirements are therefore as high as in other areas.

Rexroth chain conveyor systems offer flexible, reliable and economic solutions for feeding cartoning machines or the palletizing area, while our handling systems are specialized in fast, yet very precise palletizing.

camoLINE – your individual modular handling system

camoLINE is the ideal solution for various tasks in secondary and final packaging such as cartoning, case packing or palletizing. It is always the right choice for precise grabbing, lifting, turning, positioning or depositing. Whether for pick and place applications or as a line or area gantry – you can implement your task-specific handling system quickly, safely, and economically with the camoLINE modular

system. The modular system contains everything you need.

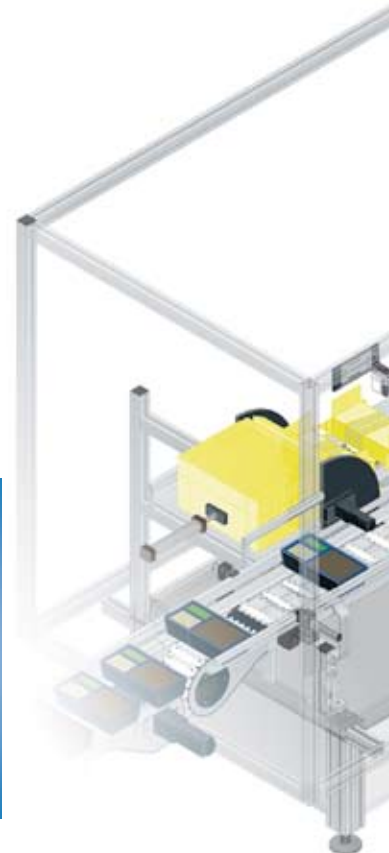
- Electrical and pneumatic axes
- Connection technology and strut profiles
- Ball screw and toothed belt drives
- Servo and stepping motors with various gears



Rexroth provides the electromechanic lifting cylinders as a pure cylinder mechanism or as complete assemblies with flanges or timing belts and a wide range of motors.



The new VKK feed modules from Rexroth reduce the required driving power through their low net weight during movement and enable extremely precise, infinitely variable positioning.





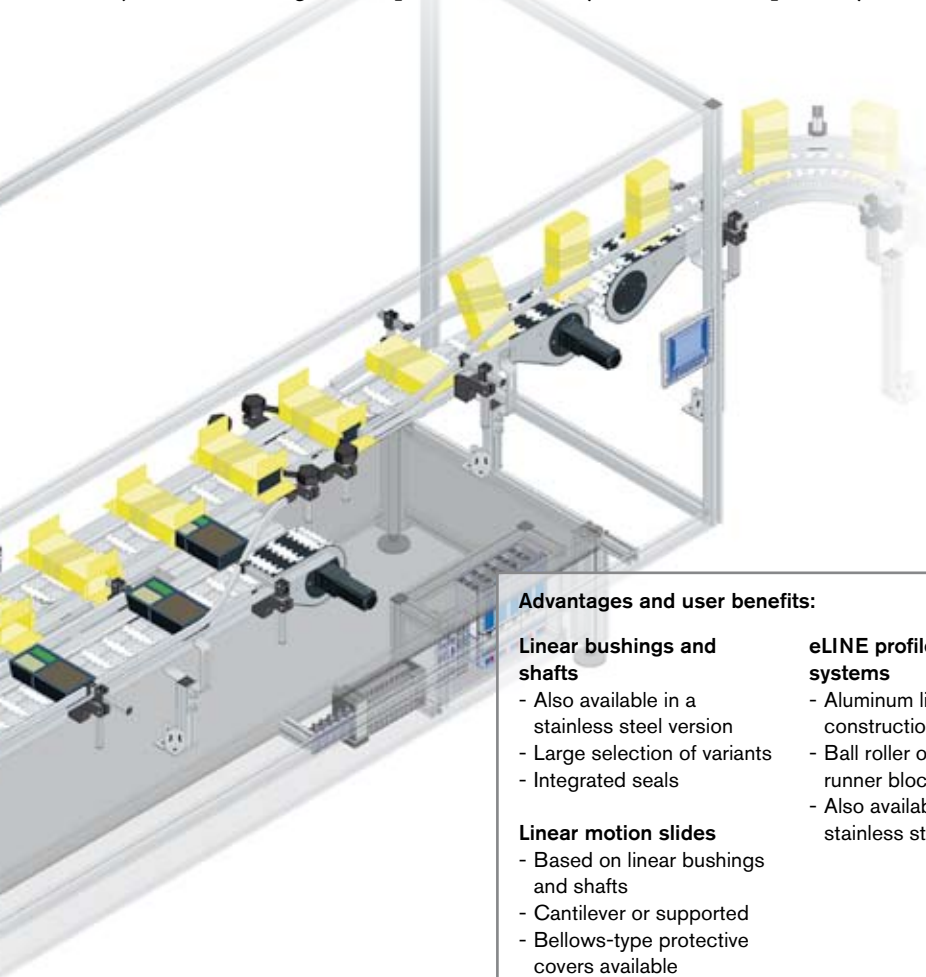
Application areas in secondary packaging

- Cartoners
- Labeling machines
- Cardboard box sealers
- Sleeve systems
- Shrink-wrap machines
- Box aligners
- Tray shrink machines

Linear motion slides, both open – with supported shafts – and closed, for cantilever application, are also available with corrosion-proof shafts or with bellows-type protective covers – the cantilever version is thus protected all around. The linear bushings feature integrated seals that can be adjusted according to the specific

application. Linear bushings are available in various designs including corrosion-proof versions for use on stainless steel shafts. If required, the shafts can be delivered with special finishing. Every product has been proven millions of times. Corrosion-proof eLINE profiled rail systems, or more precisely:

cam roller guides and ball rail systems in an aluminum-based lightweight design with ball tracks made of hardened antifriction bearing steel are the modern representatives of linear motion technology for an ever larger number of new application areas.



Advantages and user benefits:

Linear bushings and shafts

- Also available in a stainless steel version
- Large selection of variants
- Integrated seals

Linear motion slides

- Based on linear bushings and shafts
- Cantilever or supported
- Bellows-type protective covers available

eLINE profiled rail systems

- Aluminum lightweight construction
- Ball roller or cam roller runner block on a rail
- Also available with stainless steel tracks



SOK and SGK linear motion slides, linear bushings and eLINE rail systems for a variety of application areas

Transport

Today, user requirements for transport solutions are more complex than ever. They result from the increasing functionalities of packaging. In addition to the original function of protecting products from damages, consumer goods design aspects are already pre-defined by marketing. What's more, contemporary packaging must fulfill requirements regarding counterfeit protection, anti-theft protection, as well as logistics and consumer information. For this purpose, high-quality packaging materials are equipped with barcodes, RFIDs or holograms. As a result, all processes, especially transport, must be handled carefully, including areas where accumulation operation is required.

VarioFlow – ready for all requirements

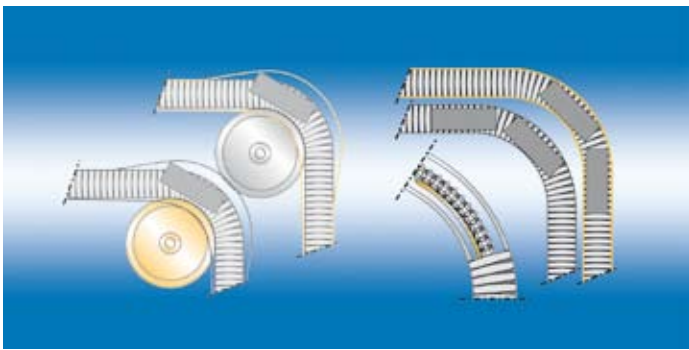
This maintenance-free chain conveyor system provides the ideal basis for all your future tasks. The cardan joint in the chain link enables horizontal and vertical transport. Select the suitable chain from the extensive range of 40 basic types, including chains which are FDA approved. The VarioFlow modular system enables efficient expansion and conversion of conveyor sections, even retroactively. Diverters, stoppers or other components can be integrated into the section as required. All of these components are standardized and quickly available ex store at any time. This saves you time and money whenever changes are introduced to the conveyor section.





Chain variants for different transport tasks, examples

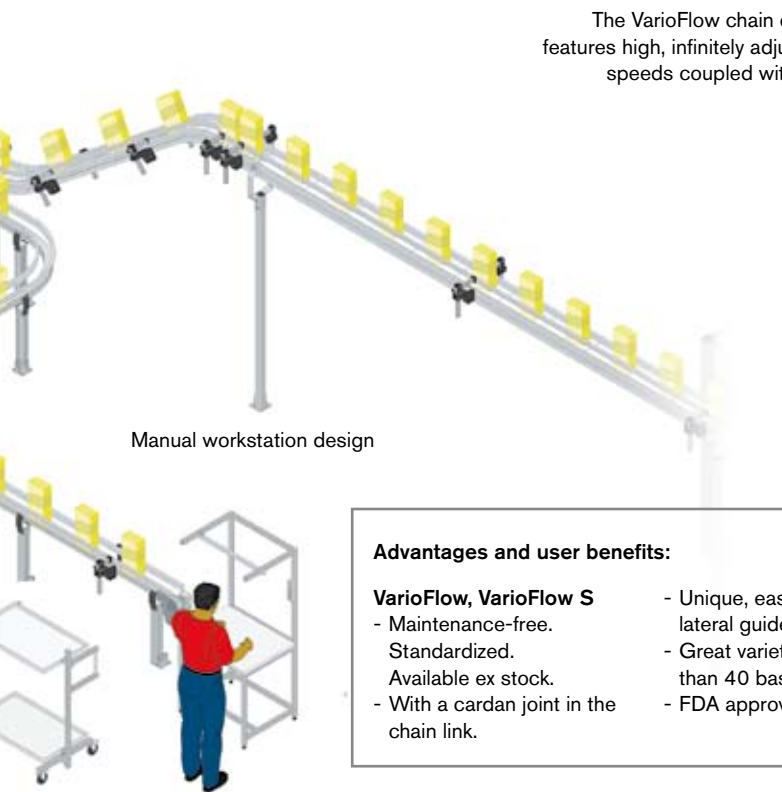
- Horizontal transport: standard chains
- Transport with inclines: static friction chains 40 to 80 shore
- Vertical transport: cleated chains
- Delicate products: flocked conveyer chains
- High accumulation pressure: accumulation roller chains
- Storage: meanders, alpine conveyors
- Passage: wedge conveyors
- Clean room: design according to BRL certification



The new curve technology offers additional space at the inside curve compared to the curve wheel variant. The advantage: unobstructed material transport.

VarioFlow S includes chain variants for a great range of products.

The VarioFlow chain conveyor system features high, infinitely adjustable transport speeds coupled with minimal space requirements.



Manual workstation design

Advantages and user benefits:

VarioFlow, VarioFlow S

- Maintenance-free.
- Standardized.
- Available ex stock.
- With a cardan joint in the chain link.
- Unique, easy-to-clean lateral guide program
- Great variety – more than 40 basic types
- FDA approved



Final packaging

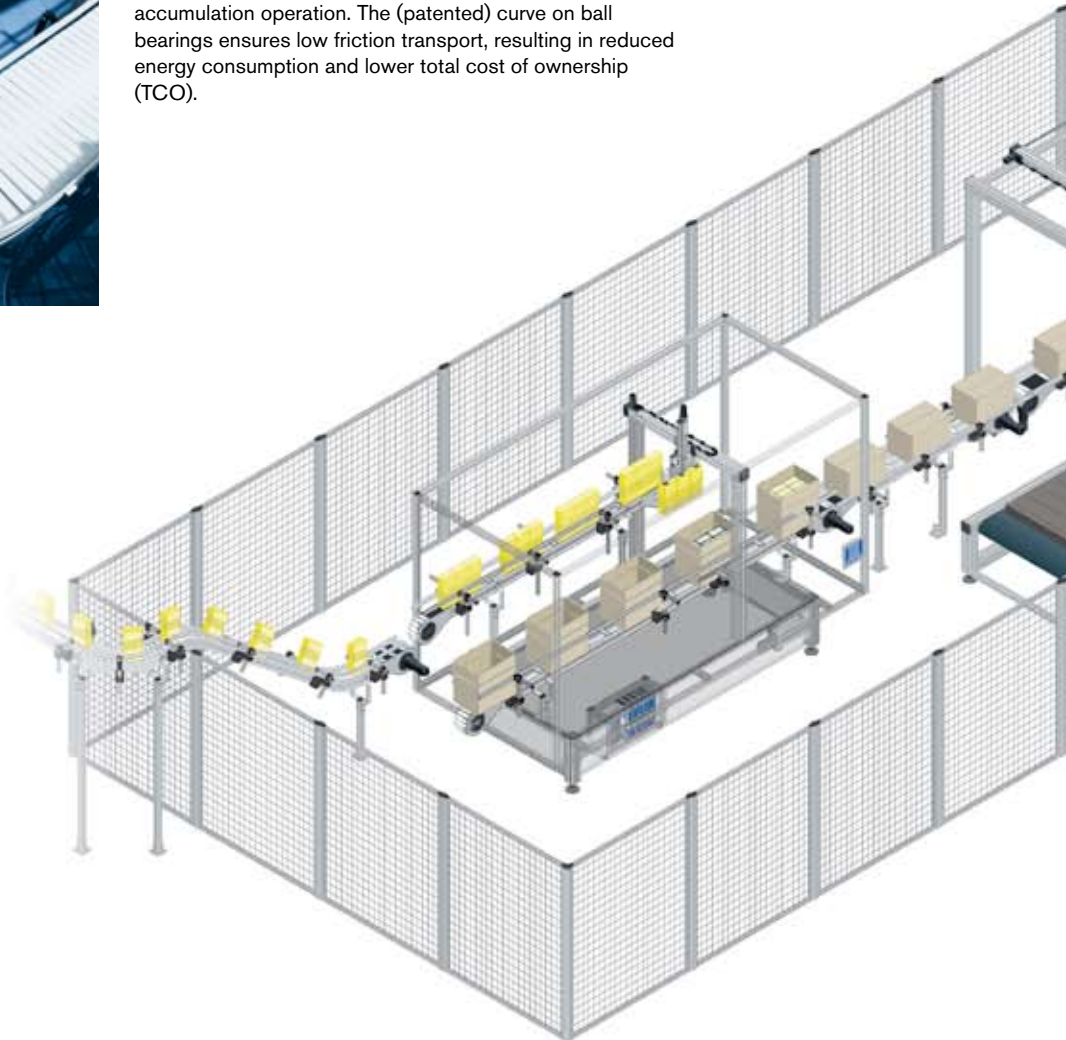
The food and packaging industries require conveyor systems that transport, store and position workpieces horizontally as well as vertically, overcome obstacles and are suitable for small spaces. VarioFlow, the chain conveyor system by Rexroth, meets all these requirements. At the same time, it is more cost effective than other chain conveyor systems – while offering better performance.

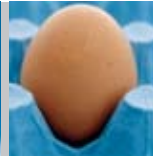



The extensive range of chains comprises wide chains suitable for transporting larger objects, including accumulation operation. The (patented) curve on ball bearings ensures low friction transport, resulting in reduced energy consumption and lower total cost of ownership (TCO).



The extensive VarioFlow product range also offers polymer chains suitable for transport of smaller goods and sensitive accumulation situations.



				
<p>Applications in final packaging</p>	<ul style="list-style-type: none"> • Palletizers • Case packers 	<ul style="list-style-type: none"> • Robot handling • Stretch winders • Gantry robots 		

Depending on the load, linear modules can be set up as a cantilever system extending up to 7 meters without additional support, which makes them ideal for constructing large-scale gantry robots, for example for palletizing.



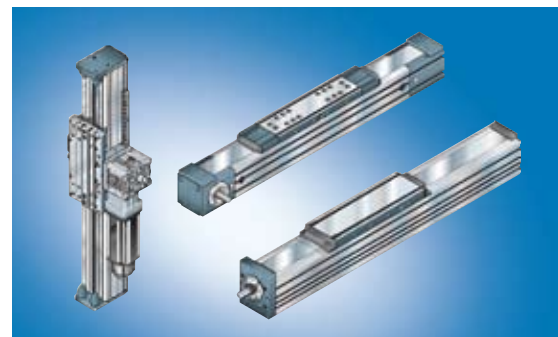
The camoLINE modular system: the quick and easy method to create an application-specific handling system



Precise positioning in the covering box with handling units from the camoLine modular system. Easy to configure, simple to order, and quickly mounted thanks to its "Easy-2-Combine" technology.



CKK compact module



Linear modules for constructing multi-axis palletizing systems

We take you securely to any desired goal

We do not only deliver powerful components and systems for the food and packaging industry, but also provide expert services. As a reliable partner who supports you right from the start – and who will work with you to develop the best possible solution for your individual requirements and tasks. Quick, friendly, and uncomplicated.

Our range of services

Pre-sales

- Technical consulting
- Feasibility studies
- Planning, system design, offer preparation

Processing

- Project planning and implementation
- On-schedule delivery
- System assembly, start-up
- Final inspection, final inspection protocol

Aftersales

- Project-specific aftersales support
- Service concept



You are familiar with your available space, your production environment and specific problems – then let us work together to find the best solution for you.

Our specialized industry teams collaborate closely with you to develop individual drive and control concepts for your project.

Your project is in the best of hands

Whether you entrust us with the complete planning and implementation of your project or prefer to handle these tasks yourself – we facilitate your work in all cases. For example by providing you with powerful, user-friendly software for system planning and chain conveyor calculation, as well as planning assistance for handling systems.

Our success factors

- Industry and application expertise
- Innovative, market-oriented products and technologies
- Professional project management
- International network



FMSsoft: the professional software for planning, layout and construction of systems from assembly technology components



MTpro is a software used for planning assembly systems: from selection to configuration and ordering of the products



Competent staff with industry expertise handle the detailed system planning and design based on individual requirements.

The result: high-quality solutions tailored to your applications that meet the highest demands on efficiency and reliability.

Use the unique complete package

Bosch Rexroth AG is the global market leader and at the same time the only equipment provider worldwide offering customers drive and control solutions from a single source. Utilize our power of innovation. Benefit from our comprehensive expertise in the areas of hydraulics, electric drives and controls, as well as pneumatics. You can rely on our products and services that have been proven for many years and in a wide variety of applications in the food and packaging industries. Rexroth – The Drive & Control Company.



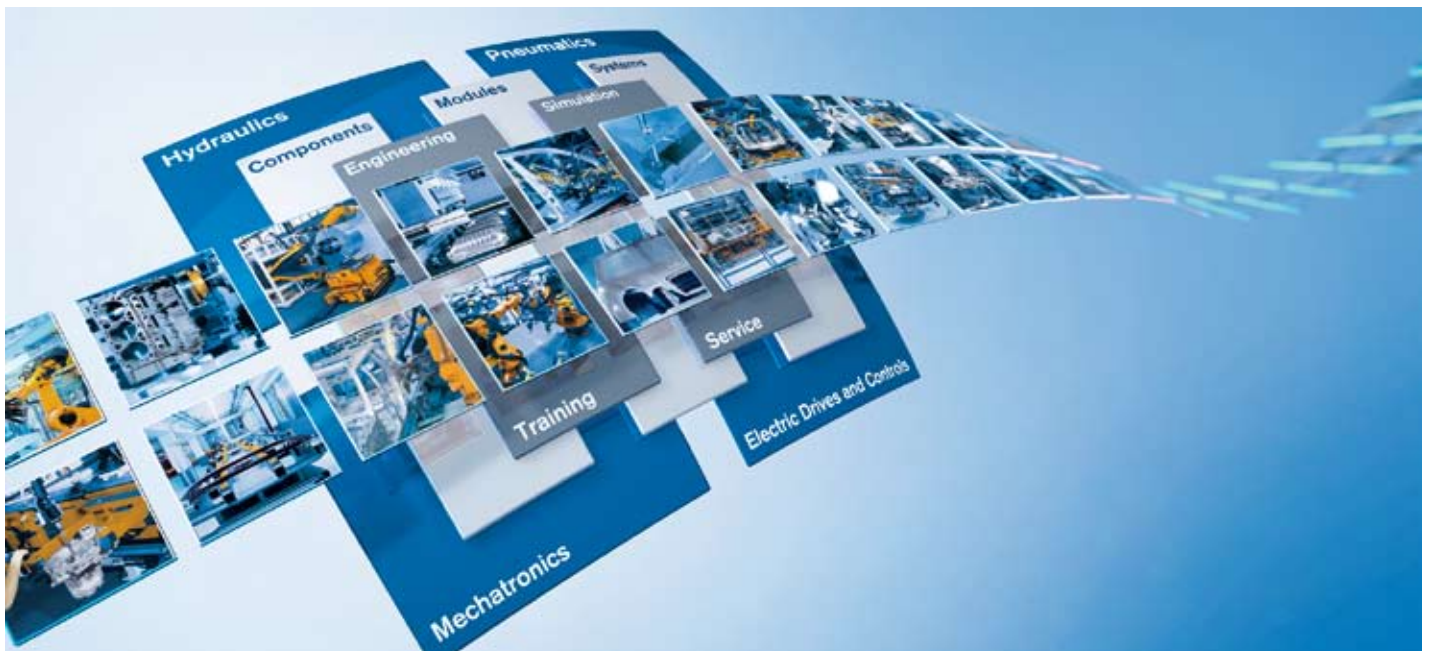
Electric drive and control technology



Linear and assembly technology



Pneumatics





You manufacture and we make sure that everything runs smoothly.

We are there for you. Around the clock and wherever you are manufacturing. We offer you comprehensive support ranging from competent consulting

and project planning, to start-up and training, as well as our quick and reliable maintenance, repair and spare parts service. A closely meshed network of service locations in more than 80 countries ensures uninterrupted service and fast assistance around the globe.

Our service staff is available around the clock, seven days a week, and, if needed, at your location within a short time. As you can see: even in times of emergency you are safe with Rexroth. That's a promise.

Global availability and global service
 – two of many arguments in favor of
 Rexroth



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