

Bosch Rexroth

Factory Automation

Consumer Packaged Goods

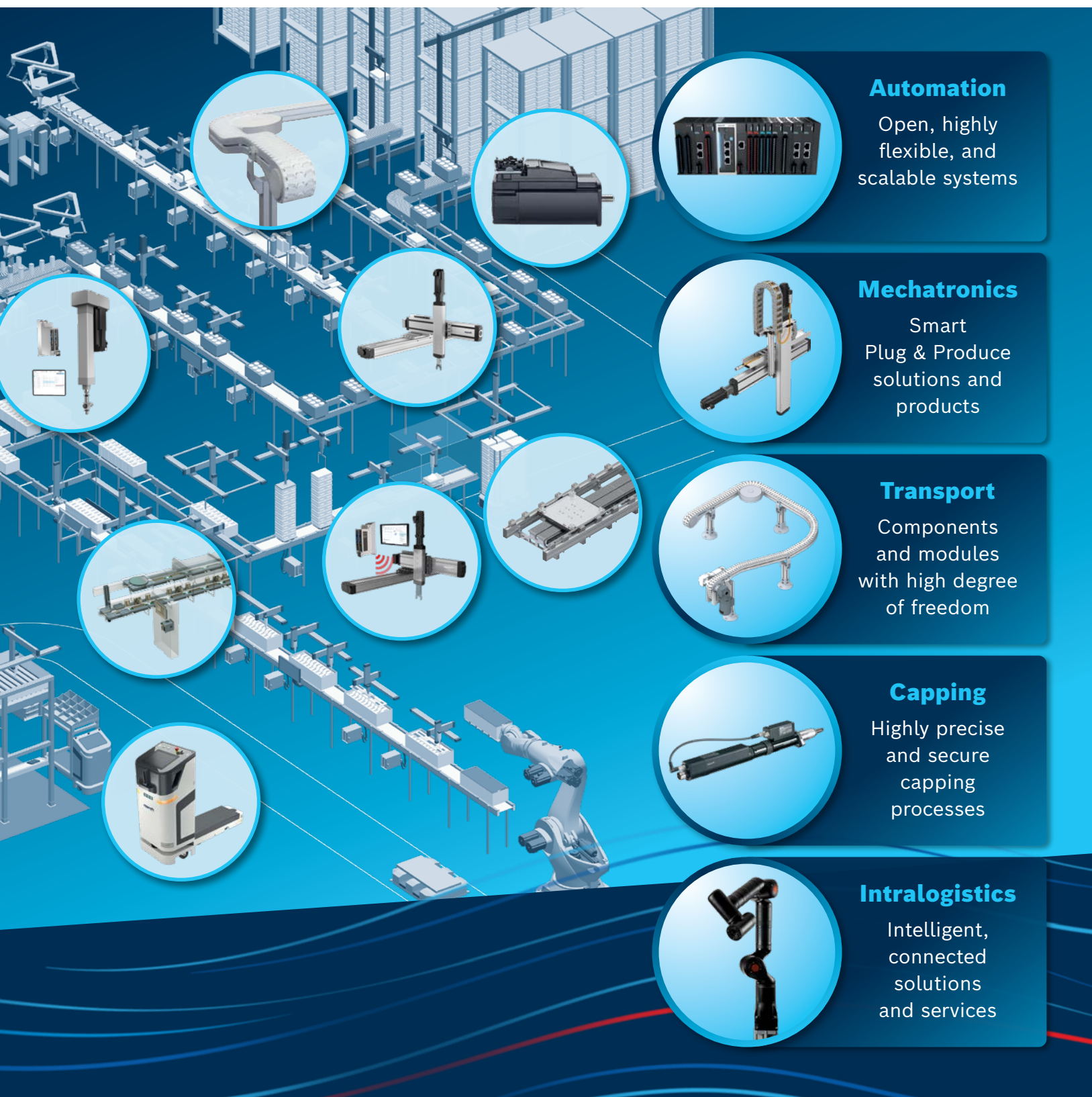


Advanced Technologies for all core processes

ctrlX
AUTOMATION



Complete Factory Automation Solutions for Consumer Packaged Goods



Automation

Open, highly flexible, and scalable systems

Mechatronics

Smart Plug & Produce solutions and products

Transport

Components and modules with high degree of freedom

Capping

Highly precise and secure capping processes

Intralogistics

Intelligent, connected solutions and services

Engineered for Productivity.

Open for Flexibility.



WHY REXROTH?

Bosch Rexroth is a globally established provider of automation solutions for consumer packaged goods. We offer complete cross-technology solutions for packaging, transporting, and palletizing your produced goods.

- We are your one-stop shop for products and solutions
- We have extensive knowledge of consumer packaged goods manufacturing processes
- Deep insight and experience with packaging applications
- We offer solutions – not just a box of parts
- We are a large organization with a global footprint – offering project and service support worldwide

- Flexible and reconfigurable production equipment
- Energy efficient and sustainable solutions
- Solutions built on standard building blocks
- Consistent architecture and open interfaces
- Transparency within your processes through digital excellence
- Proven Rexroth-Quality for high availability
- Total connectivity across all devices
- Connection to MES or ERP
- Exceptional service worldwide
- Highly compatible, proven technologies that continuously increase efficiency
- Modular hardware and software solutions from manual ergonomic up to highly automated production processes
- Optimized processes and material flow through lean, intelligent and connected products for shorter cycle and set-up times
- Innovative autonomous and co-operating solutions



Conveying



Assembly



Intralogistics



Automation & Electrification Solutions for CPG

ctrlX
AUTOMATION

ctrlX AUTOMATION – Two Steps Ahead

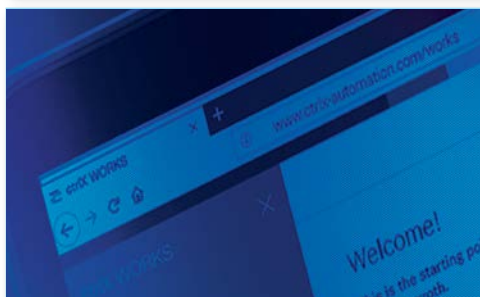
- Enables compact and modular machines with reduced footprint, faster commissioning, and user-choice software
- Offers efficient automation with flexible app-based software architecture
- Allows for data collection and easy monitoring
- Manage secure access and updates of machines with ctrlX Device Portal
- Long machine service life for up to 25 years



ctrlX WORKS

The software and engineering toolbox

- Web-based engineering
- Pre-programmed functions and intuitive programming tools
- Free choice of programming language, including traditional IEC61131 programming
- Easy integration of own and third-party software



ctrlX CORE

All in one: The compact control system for automation

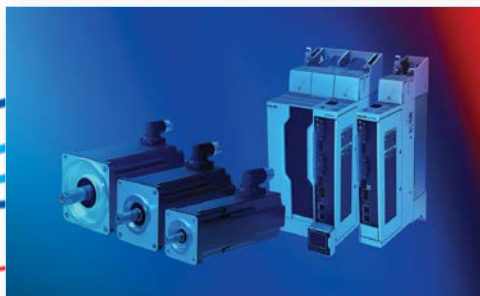
- Multi-core technology for optimum performance
- The system that offers the best possible connectivity on the market
- Open and flexible architecture enables less engineering, fewer components, and higher productivity
- HMI agnostic. Connect with any browser-based phone, tablet, or HMI



ctrlX DRIVE

Scalable and consistent architecture

- Most consistent drive system on the market
- Space savings of up to 50 %
- Reduced wiring and faster engineering
- Broad portfolio of high-performance servo motors



ctrlX World

The most open ecosystem on the market

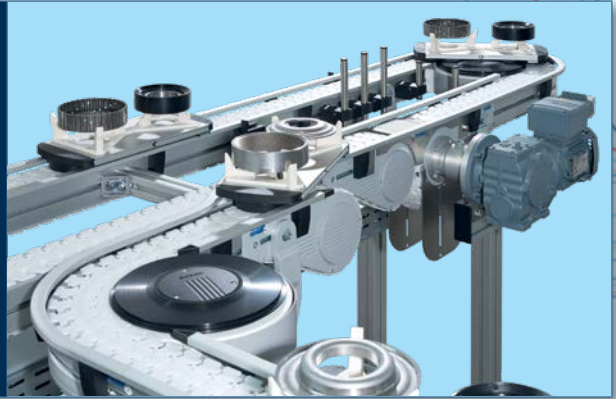
- Innovative solutions from domain experts
- Easily develop with verified Apps
- Collaborative support through ctrlX Developer community



Highly-efficient production for your consumer packaged goods

VarioFlow *plus* Conveyors

- Fast and efficient product transport within process stations and between machines.
- Tight turn radius for minimized footprint
- Product can be transported on workpiece pallets or directly on conveyor media
- Configurable for utmost design flexibility
- Chain width: 65, 90, 120, 160, 240, 320 mm
- Speeds up to 100 m/min



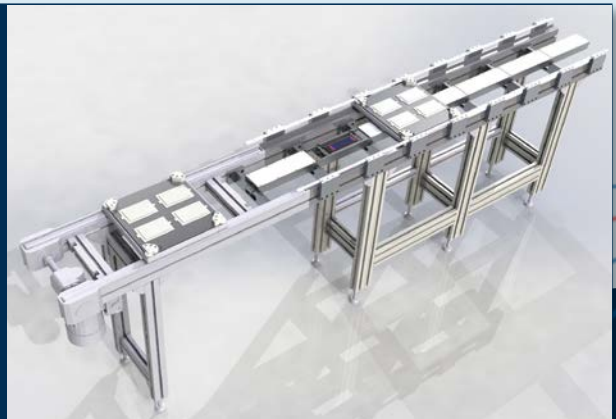
ActiveMover Transfer System

- Highly dynamic and low-vibration transport
- Positioning accuracy ± 0.01 mm
- Speeds up to 150 m/min
- Acceleration of 40 m/s^2 with 1 kg load, 10 m/s^2 with 10 kg payload
- Load per workpiece pallet of up to 10 kg
- Workpiece pallet width of 165 mm to 500 mm
- Asynchronous and synchronous operation
- Open interface: Ethernet/IP, PROFINET, EtherCAT, Sercos, etc.

Flexible Transport System (FTS)

Highly dynamic magnetically propelled transfer system for high throughput machines and assembly lines

- Synchronous and asynchronous bi-direction transfer
- Can be used with standard TS*plus* modules to create a complete loop or as a stand-alone section
- Precise motion profile and stopping control
- Acceleration max. 30 m/s^2
- Speed max. 5 m/s
- Positioning accuracy up to $\pm 20 \mu\text{m}$
- Pallet size from 160×160 mm to 640×640 mm
- Maximum Load: 40kg/carrier



Success Story

Brought together groups of twelve cartons of tea in a limited space precisely and error-free in the cartoner, paying attention to the protection of the carton surface using our VarioFlow *plus* conveyor system for customer Yamamotoyama.

Reliable, safe solutions to improve your productivity



Smart Function Kit for Handling

- One, two, and three axis configurations
- Higher stiffness, dynamics, and accuracy than a 6-axis robot
- Product weight up to 100kg
- Zero programming, open interfaces
- Seamless integration with the Flexible Transport System
- Fast selection, system configuration & servo parametrization
- Ships fully assembled
- Design & Commissioning effort cut by 85%

Smart Flex Effector (SFE)

- Compensation in six degrees of freedom through integrated sensor technology.
- Electromechanical locking of the module.
- Internal calculation of positional deviation from the point coordinate.
- Angular deflection XY $\pm 3,4^\circ$; Z $\pm 6,8^\circ$
- Compensation XY $\pm 3,0$ mm; Z $\pm 3,0$ mm
- Protection class IP54
- Handling weight up to 6 kg



Kassow Robots

- 7-axis design allows for highest possible degree of freedom
- Plug-in configuration
- Intuitive programming with a phone-like user interface
- Easy relocation within a factory thanks to the lightweight design
- Higher productivity



Linear Modules and Cartesian Systems

- Pre-configured components reduce engineering, assembly, and start-up
- LinSelect system configurator for quick BOM and CAD model generation
- Ball screw and belt-driven modules
- High stiffness and system dynamics
- Repeatable to ± 0.05 mm
- Dry room compatibility



Success Story

- Utilized Rexroth ball rail guide to create a highly flexible top-loading system that can be used for application in pharmaceuticals, cosmetics, confectionery, food and others.
- The ball rail allowed for increased dynamics with higher loads and longer travel distances including high positioning and repeatability.
- Customer R.Weiss Germany

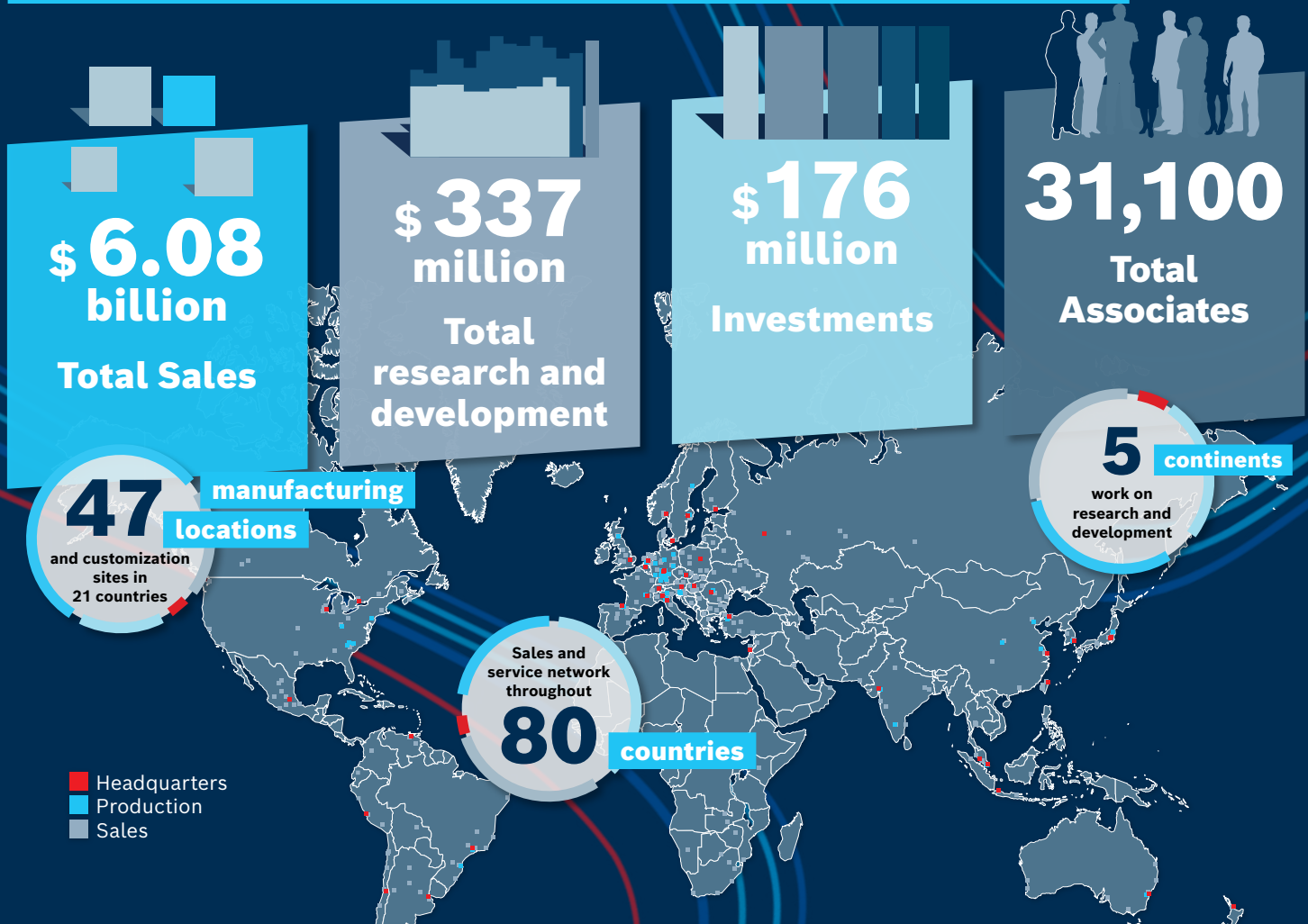


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Bosch Rexroth – Your Global Partner



Bosch Rexroth combines the ability to link global resources with local support – thanks to global product platforms, local added value, and the ability to coordinate projects spanning borders and to bundle the necessary resources. We are present in over 80 countries, guaranteeing competent advice and support, as well as, fast service anywhere in the world. Bosch Rexroth develops and produces locally adapted products based on global engineering teams in Europe, the Americas, and Asia.

With the services we offer, we work alongside machinery manufacturers and end users around the world and ensure the success of international projects.