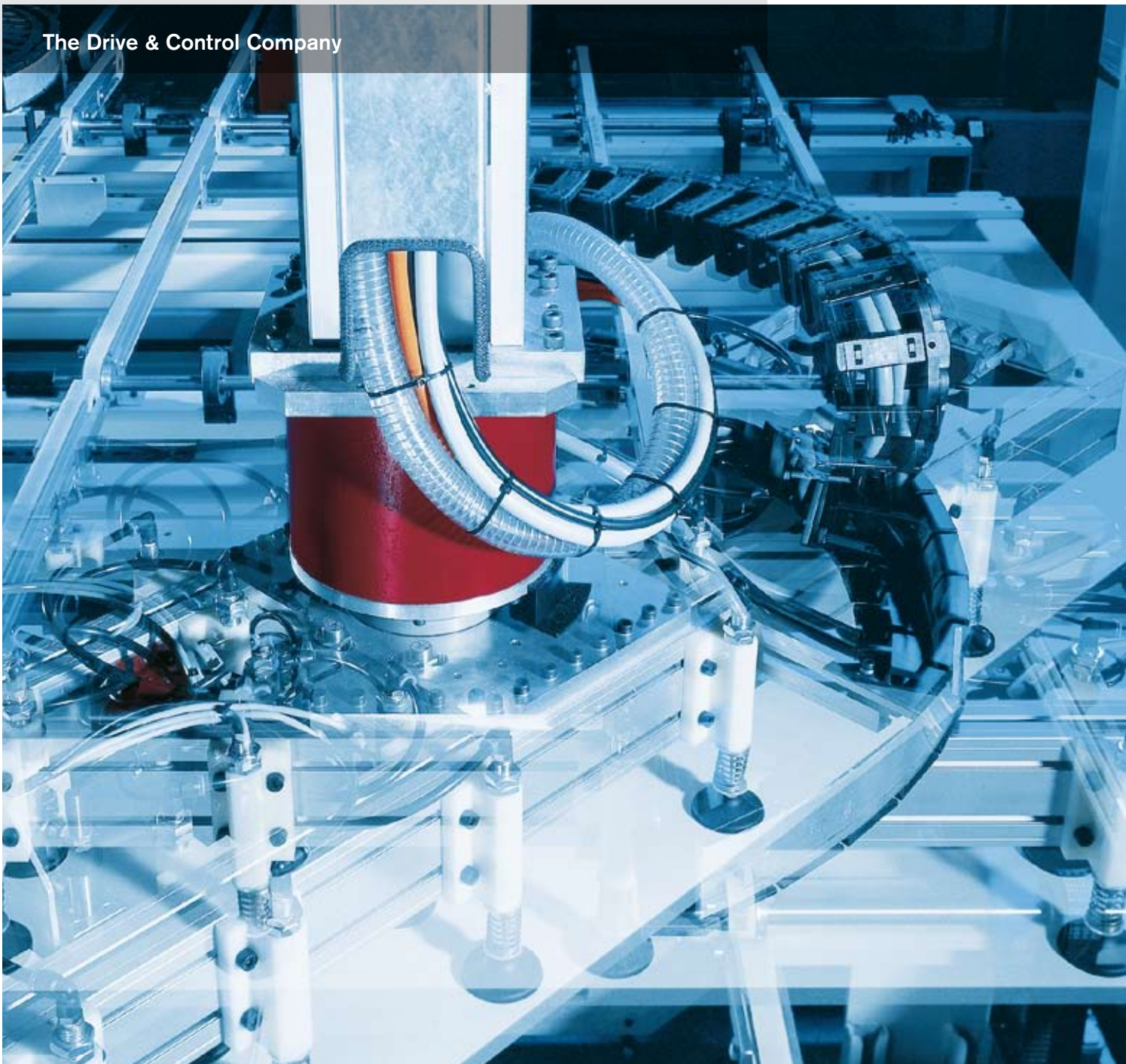


Automation Solutions

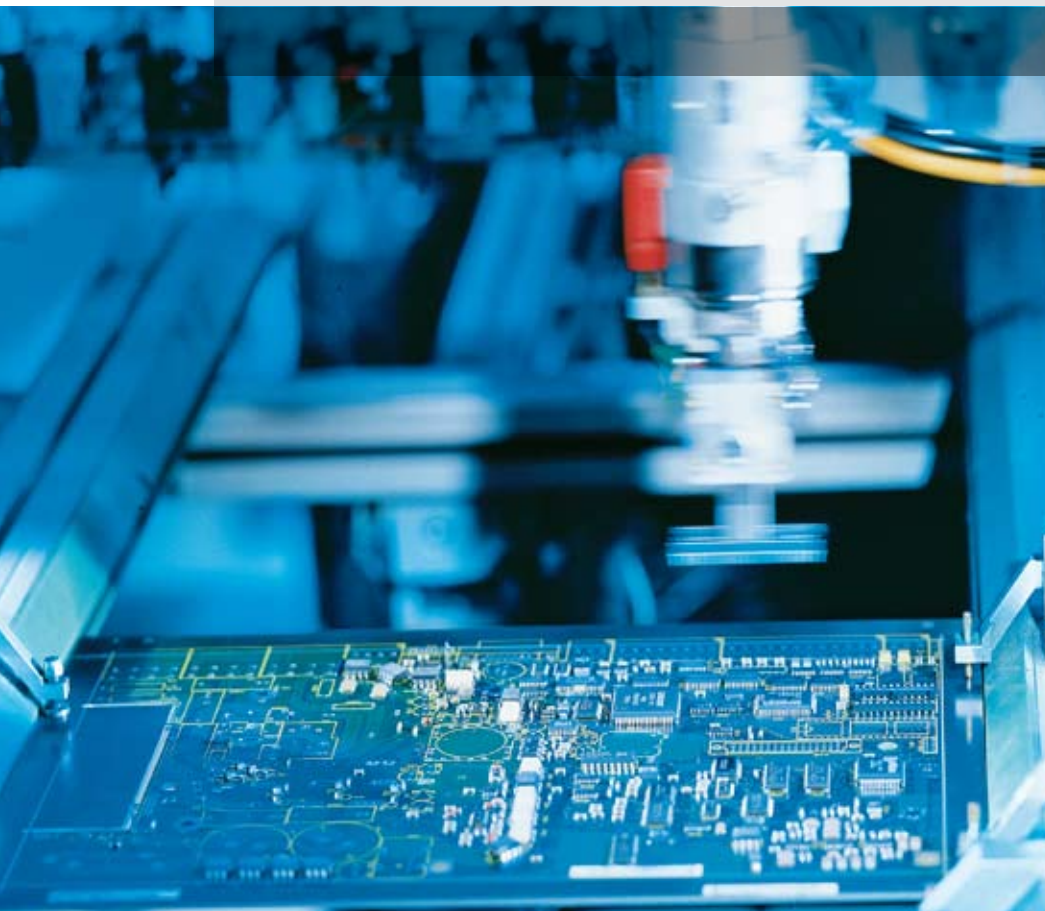
The Drive & Control Company



Individual solutions from a single source – carefully planned and quickly implemented

Flexible automation technology from Rexroth and the know-how of our expert teams make it possible to implement handling systems that are individually tailored down to the smallest detail, all from a single source. Is what you need too unique or complex for standardized solutions? Then make use of our specialists:

Our team of experts combine years of experience and a broad range of knowledge in all modern factory automation applications.



Competence, innovation, solutions

You get everything you need from a single source: custom construction planning down to the last detail and quick implementation.

The result: integrated automation solutions that are pre-tested and ready for use. You can put your ideas into practice faster, reduce engineering costs and increase efficiency.

We offer you a complete automation system, from electrical control and drive technology to pneumatics and linear motion technology.

This brochure offers a brief overview of:

- System structure
- Components
- Project and calculation tools

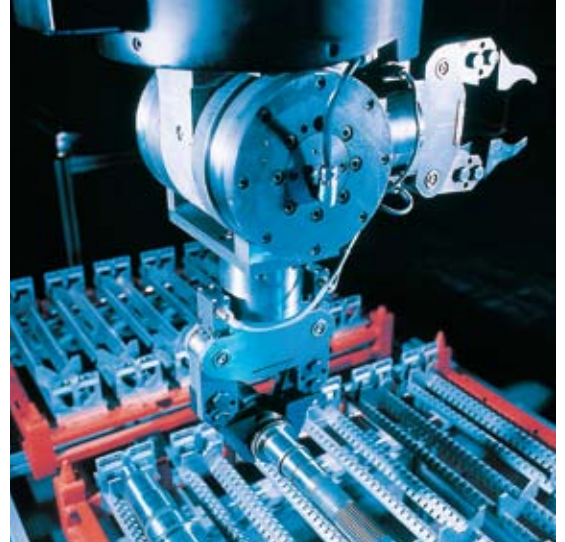


Planning



Our experts support you in planning and implementing complex applications. We created this team specifically for these highly specialized applications and their corresponding challenges. Our engineers bring together years of industry experience with detailed knowledge about the possible uses of Rexroth systems in mechatronic applications. Our goal: To find the best solution for your needs.

Handling



Controlling, driving, positioning and gripping: The Rexroth product range covers all functions of modern handling systems. Take advantage of our innovation to automate production! You can solve most of your assembly problems with highly efficient standardized components. You can also benefit from the competence of our specialists who are familiar with your industry requirements through decades of experience: We develop individual components for you and configure the system according to your needs right down to the last detail.

Assembly



High speeds, extreme acceleration and heavy loads characterize Rexroth's linear system components. They are suited to the widest variety of tasks, whether moving sensitive electronic components or assembling vehicle engines. Control your assembly processes easily, effectively, and safely with our integrated control systems. By intelligently combining technologies, such as pneumatics, or linear systems with toothed belt or ball screw drives, Rexroth opens up boundless opportunities for constructing pick-and-place systems.

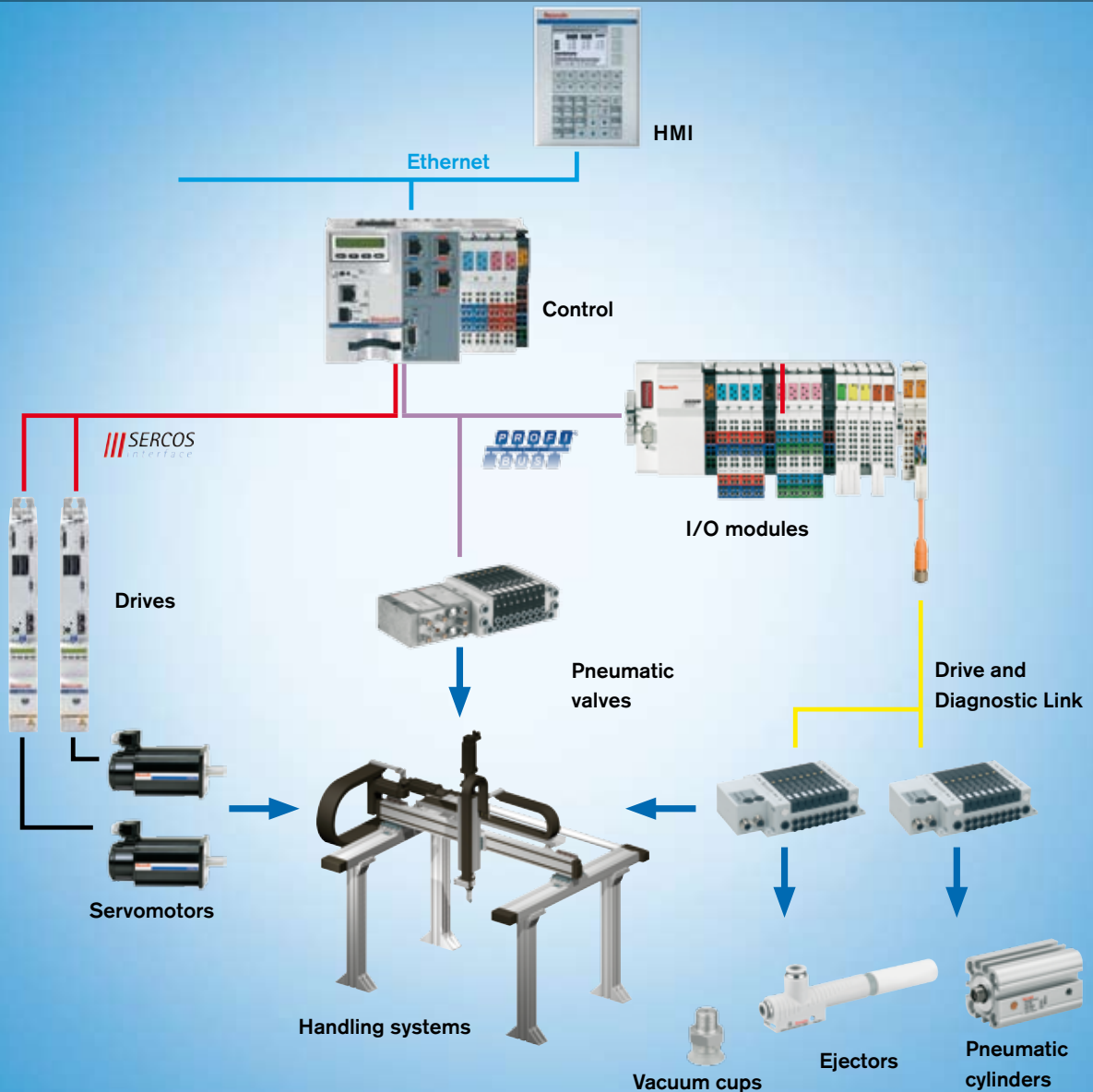
Transport and palletizing



Our team of palletizing experts supports you in planning and constructing application solutions for flexible and efficient palletizing. Innovative products from our automation modules provide compact, fast and safe palletizing systems.

Rexroth automation system

Automation without compromise: Our automation system offers you the basis to quickly and simply configure and assemble your applications. This way you can always use the optimal technology for your application. We provide you with a modular automation system that contains all the components and modules for the field, and control levels with open interfaces.



Quicker planning and configuration

- Configurators for Cartesian motion systems
- Configurator for drive design
- Test and development systems for tightening and press-fit technologies
- Custom electromechanical drives
- Support for sizing pneumatic components
- Calculation program for the entire product range of profiled rail systems
- Planning and development of assembly and workstation systems and transport lines
- Custom electromechanical drives
- Competent specialists

The image displays a collection of software interface screenshots for the Rexroth motion system configurator. The central screenshot shows a main configuration window with a tree view on the left, a central workspace with 3D models of rail systems, and a right-hand panel with various settings and data. Below this, several smaller screenshots highlight specific features:

- Simulation and Data:** A screenshot shows a simulation of a rail system with a table of data below it:

Row	Base	AT	Axis Base	Part	CR	RS	Status
1	KR12	10	1	1	1	1	OK
2	10	1	1	1	1	1	OK
- Graphs and Performance:** A screenshot shows a graph with a bell-shaped curve, likely representing force or torque distribution. Another screenshot shows a bar chart with four bars of varying heights.
- Component Selection:** A screenshot shows a 'Selezione l'applicazione' (Application Selection) window with a grid of application types:
 - Asse Singolo (Single Axis):** Limits: 2-Axis, Corsa [mm] 300, Peso [kg] 2.00. Description: Diverse varianti di montaggio e moduli lineari; Tempi ciclo estremamente brevi; Asse di base rigido, stabile e guida di alta qualità.
 - Pick and place:** Limits: 2-Axis Y-Axis, Corsa [mm] 300, 300, Peso [kg] 2.00. Description: Tempi di ciclo brevi; Peso ridotto dal pezzo da lavorare; Asse di base rigido, stabile e guida di alta qualità.
 - Portale lineare (Linear Portal):** Limits: 2-Axis Y-Axis, Corsa [mm] 300, 900, Peso [kg] 5, 2.00. Description: Corsa lunga in direzione Y; Combinazione versatile di diversi moduli per direzione Z; Ripetibilità fino a 6/25 mm.
 - Asse Singolo (Single Axis):** Limits: 2-Axis Y-Axis X-Axis, Corsa [mm] 300, 200, 900, Peso [kg] 5, 2.00. Description: Raggruppamento di posizioni in uno spazio tridimensionale; Movimento flessibile dall'asse Z tramite pesi guida/valle precise; Montaggio semplice tramite interfaccia standardizzata.
- 3D Models and Assembly:** Several screenshots show 3D CAD models of rail systems, including a '3D Assembly' window showing exploded views of components.

Innovative components for cutting edge automation systems

Rexroth offers you specific components for all areas of automation. From process control to handling – comprehensive and cross-technological.

Control and visualization

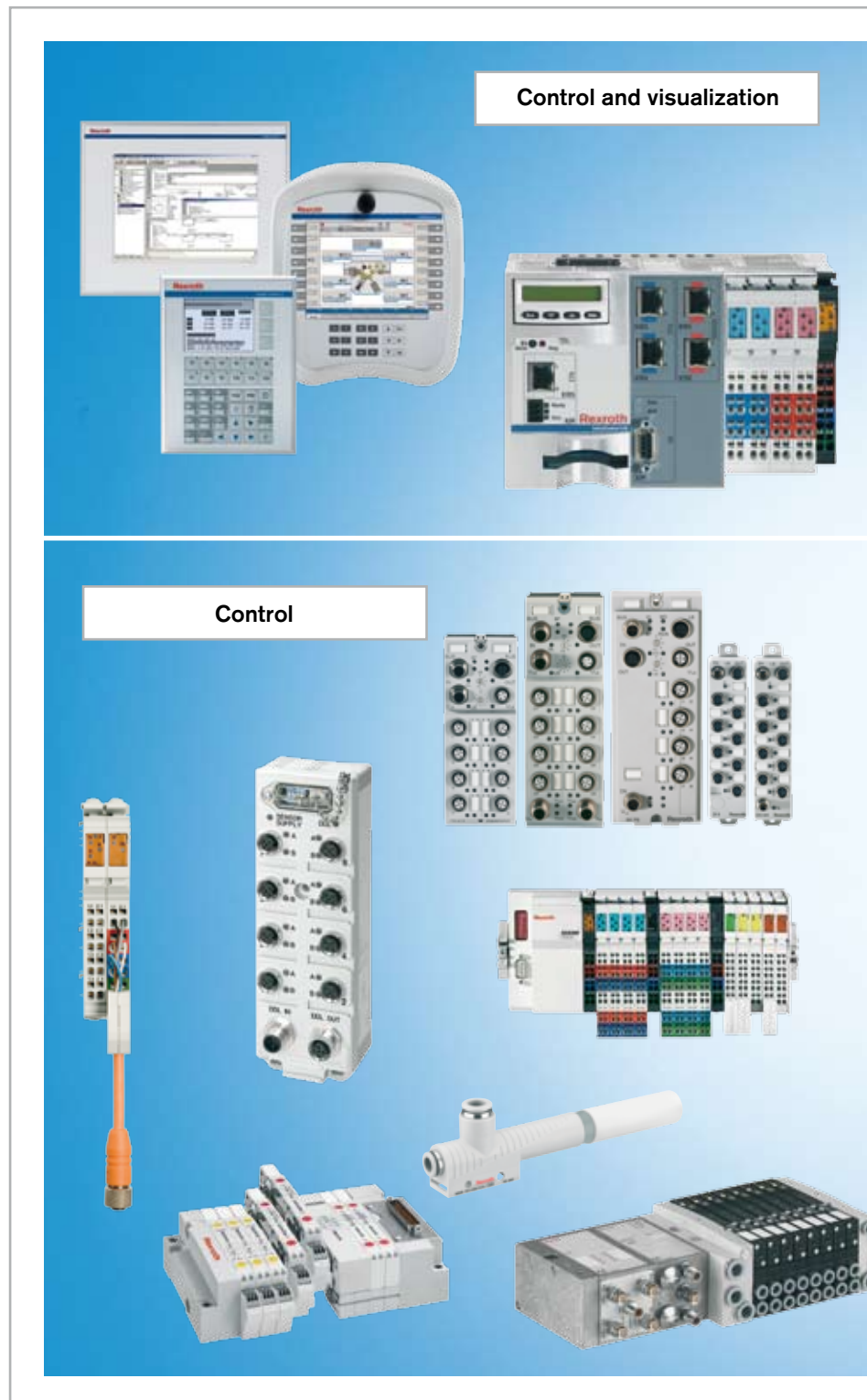
- Drive-based, controller-based and PC-based control systems
- Consistent visualization concept from small control terminals to industrial PC

Control

- Modular I/O technology for control cabinet assembly (IP20) or field use (IP67)
- Consistent communication via SERCOS III, Ethernet TCP/IP or field bus
- Pneumatic solenoid valves with multi-pin or field bus interface

Handling and motion

- Pneumatic and electro-mechanical linear systems
- Electrical and pneumatic rotary systems
- Pneumatic gripping systems
- Vacuum handling systems
- Linear guides
- Ball screw drives
- Intelligent servodrives and frequency converters
- Highly dynamic servomotors



Handling and motion



Control and visualization

IndraControl V

Rexroth IndraControl V is the comprehensive range of HMI devices for individual control, operation and monitoring in all industry sectors. The range extends from controller-based devices to compact embedded PCs to high-performance industrial PCs. With scalable hardware and software, IndraControl V can be



IndraControl V

Control

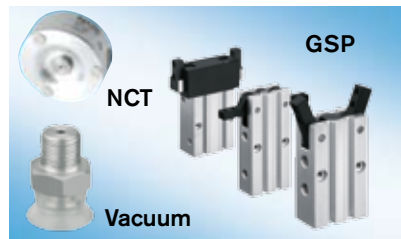
Fieldline

Rexroth Fieldline in protection class IP67 permits extremely reliable installation close to the machine, even in harsh environmental conditions.



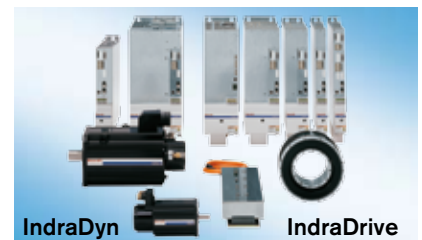
Fieldline

Handling and motion



Gripping technology

The spectrum ranges from the GSP series of mechanical grippers, to the wide variety of vacuum cups, all the way to the NCT non-contact handling technology.



Electrical drives

Intelligent IndraDrive servodrives and frequency converters, as well as the comprehensive IndraDyn motor program, make the highest level of dynamics possible.

adjusted exactly to your machine-specific requirements.

IndraControl L

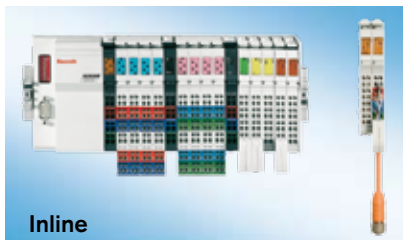
IndraControl L is the flexible, configurable hardware platform for open control architectures.

It does not matter whether you want to implement a motion, robot or logic control application – you always use the same hardware, and



IndraControl L

the software alone determines your application. For optimal application adjustment, we offer a control platform with different performance levels to choose from. The open architecture and varied function modules make integration into heterogeneous system landscapes simple.



Inline

Inline

Rexroth Inline is the flexible modular I/O system with protection class IP20 for time-saving control cabinet installation.



HF03

LS04

Valve terminal systems

The compact valve terminal systems LS04 and HF03 offer all the necessary valve functions and electrical connection options.



EBS

Vacuum generation

The compact vacuum generator EBS works using the Venturi principle and can be connected directly to the vacuum cup.



RCM

CKP

RTC

MSC

Pneumatically driven axes

Pneumatic components for rotary and linear motion: MSC mini slide, RTC and CKP rodless cylinders and RCM rotary modules.



CKK

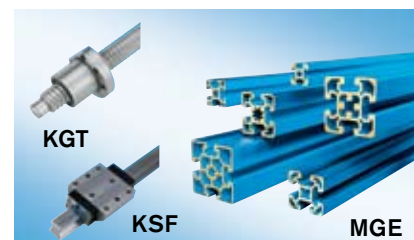
SGO

MKK/MKR

TKK

Electrically driven axes

Linear systems have integrated guides and drive elements, which reduce adjustment and assembly effort. They have been proven in a wide array of applications.



KGT

KSF

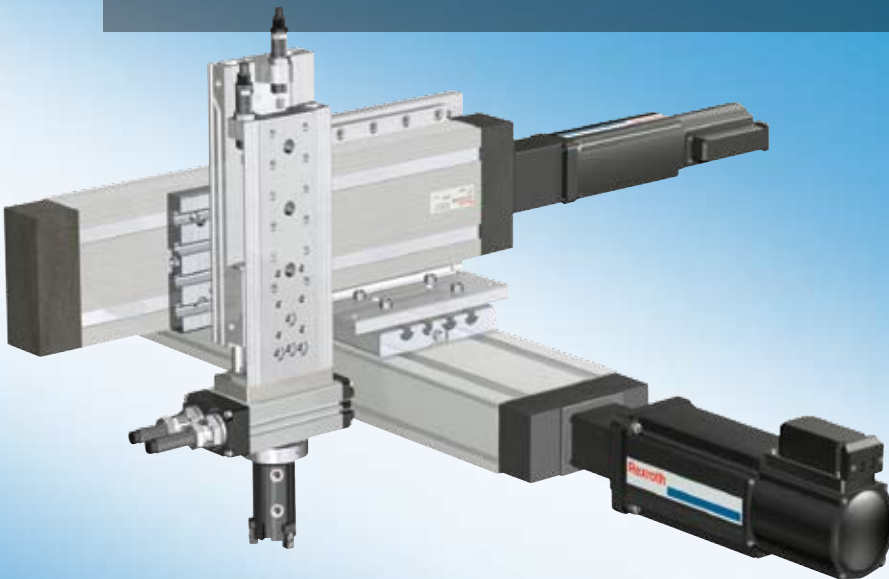
MGE

Basic mechanical components

No matter what you are building or must set into motion, we have precise motion elements and modular systems that are perfect for your application.

Cartesian automation system

camoLINE is a standardized automation solution from Bosch Rexroth: The flexible system is based on Rexroth components and offers you the necessary freedom to create all types of handling systems. It is equipped with the standardized Easy-2-Combine interface, which allows our components to be quickly and easily connected with one another – without costly transition plates.



Specific applications

Our expert team supports you in planning highly demanding applications.

Individual solutions

Benefit from our automation team's expertise when searching for the right standardized parts and developing special elements for your solution.

Design planning

We use CAD tools in design planning and calculate every detail of the application.

Coordination

We coordinate detailed planning with the customer.

Specific applications

Individual solutions

Design planning

Coordination

Assembly

We manufacture individual elements, add the necessary components and assemble the application.

Function tests

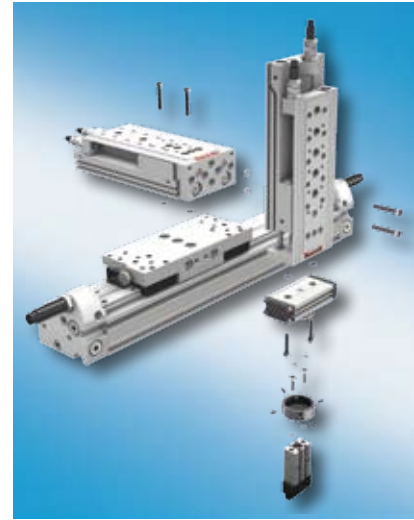
After assembly, we conduct comprehensive function tests. You receive a pre-assembled system, tested from top to bottom, that you can start using immediately.

Control

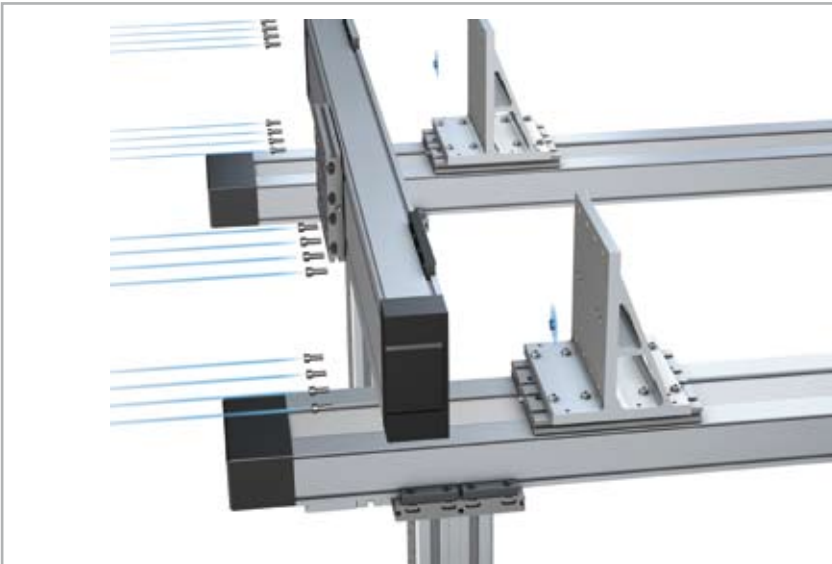
The highly scalable IndraMotion system is available as a control option. IndraMotion for Handling software is easy to program and covers every need, even complex motion control.

Application

Benefit from the advantages of a solution from Bosch Rexroth, which can be easily integrated into your application.

**Automation system**

IndraMotion for Handling is our system solution for efficient coordination of axis motion in fully automated production. This intelligent concept is based on standardized control and drive platforms, as well as international software standards. These components, which are all precisely coordinated, give you the freedom to implement any type of handling application.



Coordination

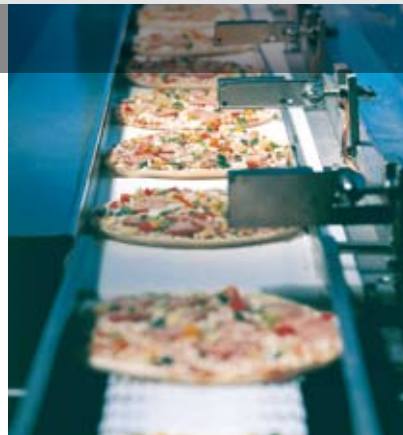
Assembly

Function tests

Application

Automation competence for your industry

We are at home in all industries and represented by competent solutions. This is not only true in classic industry sectors, but also in the modern industries of tomorrow, such as solar and semiconductor technology.



Automotive

Many processes, one automation partner: Rexroth offers automation components and system solutions that are perfectly coordinated with each other for all production areas in automobile manufacturing.

A perfect coordination of all drive and control technologies increases productivity.

Food and packaging

The food and packaging industry places particularly high demands on automation technology. Foods must be packaged in an environment that conforms to comprehensive legal guidelines and international standards for safety, quality and hygiene. Then there is the huge variety of products to be packaged, which is subject to constant change. In spite of all this, packaging solutions must be very efficient to resist the cost pressure that characterizes the industry. Increase your productivity with intelligent Rexroth solutions.

Solar technology

Rexroth offers solutions for the complete production process within the solar industry – from gentle handling of wafers under cleanroom conditions, to vibration-free transport of panels and efficient quality control. Various drive and control technologies can be connected together depending on the task at hand. Whether heat-resistant belts, non-contact transport through a cleansing bath or independent flow control for conveyor segments – best-in-class solutions get the most out of each step in the process.

Processing and transport

Tightening

Foolproof tightening with systems. A clear system design, orderly arrangement of operation and display elements, as well as simple and flexible parameterization, enable intuitive operation of everything from controls to tools. Reliable and quick commissioning increases flexibility for adaptation to new tasks – making an important contribution to reducing the total cost of ownership.



Press-fit

The Rexroth press-fit system is particularly well-suited for use in automated production lines. A modular design comprised of individual components simplifies integration in the overall assembly line and ensures easy integration of additional components in the future.



Chain transfer system

Our convincing VarioFlow chain transfer system will win you over with facts: lower costs compared to other chain systems with better performance. Thanks to its extremely strong chain, VarioFlow can achieve significantly high chain tensile forces. A closed surface allows small components to be transported perfectly, as well. Another outstanding feature of VarioFlow is its flexibility: The transfer system can be easily adapted to the desired application. VarioFlow thus masters even the most critical transport sections.



TSsolar

Solar modules place the highest demands on material transport within and between the individual workstations. The large glass plates must be moved without any vibration, shock or subject to bending, and are extremely sensitive to contamination. With TSsolar, Rexroth has developed an intelligent transfer system especially adapted to the needs of the photovoltaic industry.



Transfer system

Rexroth transfer systems are designed for linked production processes. A variable modular system enables flexible configuration and short cycle times. Rexroth also offers optimal support: From hardware to software and from planning to installation.

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Subject to modification.
Printed in Germany.
Order no.
R499050646/2008-08/EN