We are a turn-key solution provider for industrial automation and intralogistics projects. Having over 30 years of experience in designing, manufacturing and integrating automated machinery and over 4 years of experience in mobile robotics and Industry 4.0 projects, makes us a strong candidate for your next industrial project.

### Intralogistics Systems - Industry 4.0

With the appearance of Mobile Robots there is a need to fundamentally rethink the management of machines and operators in order to drive efficiency and reduce costs. We invested heavily in not only the AMR technology, but to Manufacturing Simulation Software as well that enables us to analyze different manufacturing scenarios to get the best result.
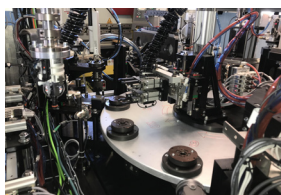
### Autonomous Mobile Robots (AMR)

Our companies' newest direction is the integration of Autonomous Mobile Robots into the factory prodcution. We have integrated individual and fleets of robots for a variety of factory intralogistic applications. We have developed a range of custom made "Top Modules" for robots that enables their seamless integration to the plant for maximizing ROI.

### Industrial Robots - Industrial Vision Systems

We integrate industrial robots from FANUC, TOSHIBA, SMC for part handling and pick and place applications and control them via industrial vision systems from KEYENCE, OMRON or Scorpion Vision if it's required. References include custom end effector developments, precision positioning of electronics components and also the handling of large assemblies weighing over 20kg.

### Industrial Automation

We offer turn-key solutions for your technological problems, such as custom made equipment: rotary indexing tables, assembly lines with conveyor systems for the automotive, electrical and machine industry. Our references can be found in Europe, Asia and America. Our main customers are: HALDEX, DENSO, GE, KNORR BREMSE, JABIL etc.

### Special Machinery

Our main field of activity is to develop and design special machinery, to provide tailor made turn-key solution for our partners. We have developed several solutions for measuring and testing equipment, such as Leak Testers, Force Measurements, etc. We also produce Industrial Cleaners, Washing Machines, which can all be integrated into complex systems.

### Industry 4.0 Products - Software

Without a doubt the future of manufacturing is increasing automation and robotics, having decades of experience designing and building systems for our clients we have identified several requirements that did not exist before, so we developed them. That includes hardware and software soltions that are an essential part of the new generation of factories.
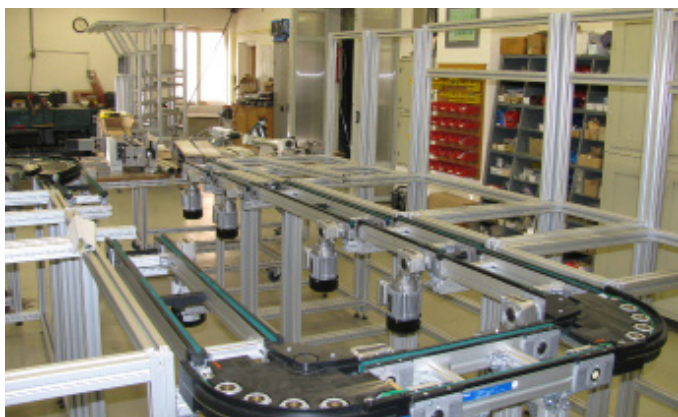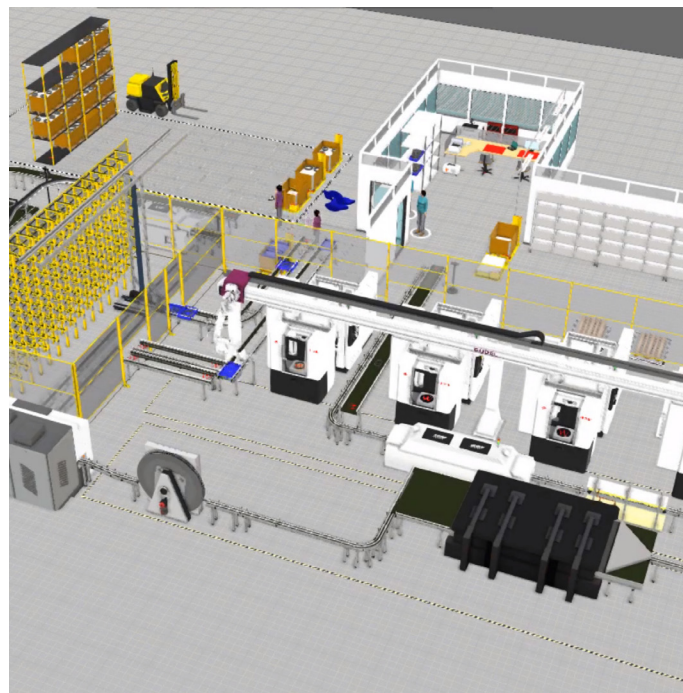
# Intralogistic Systems

With Inudstry 4.0 the intelligent intralogistic systems became very important. We take on such projects from design and analysis to installation and their integration to existing systems.

We use a specialized simulation software when a production needs to be optimized, it allows us to create the virtual model of a production process with realistic 3D models of the different system components such as Industrial robots, CNC machines, Mobile robots, Transport systems, etc. We analyze the different scenarios and we give proposals to improve the manufacturing processes of the entire system

# Mobile Robots

Over the past 4 years we completed over 40 projects in different industries such as the automotive, pharmaceutical and warehouse logistics in Autonomous Mobile Robots (AMR). Some models can carry payloads of up to 1500kg making them an imortant asset in factory automation.





## AGILOX

"We develop and produce intelligent logistics robots."

Agilox is the best solution to move pallets in a factory. Using swarm intelligence without an external control system makes the solution reliable an flexible.

## MiR
MOBILE INDUSTRIAL ROBOTS

"Highly adaptable mobile robots"

MiR mobile robots are a great tool for smart Intralogistics challenges, they can improve greatly the existing factory material supply.

## Geek+

"Creating value through smart logistics"

Geek+ mobile robots are a great choice for warehouse automation and smart logistics with a specific focus on e-store commissioning tasks.

We offer:
- Integration of Mobile Robots to the existing factory processes
- Designing and building custom Top modules that extend the capability of the robots.
- Designing intralogistic systems
- Custom in-house developed software for scheduling and handling Emergency Situations
- Training of personnel
- Service and Maintenance

# Industry 4.0 Products - Software

Industry 4.0 poses unique challenges for manufacturing companies, to solve these challenges we have developed custom software and hardware solutions with our in-house R&D team. These products offer unprecedented capabilities for our clients



## EasyConnect - Scheduler

In order to be able to interface mobile robots to existing ERP and other production management system we have developed the EasyConnect software family that is being used 24/7 by the largest automotive OEM and Tier 1 suppliers.

- Allowes to schedule task
- Full flexibility in changing processes
- Password protectedBrowser UI for easy operator interaction



## EasyConnect - Danger Protocol

There are strict requirement in production regarding emergency situation such as fira alarm or accident response. In case of a PLC control this is a trivial challenge, but in case of Mobile Robots, it isn't. Danger Protocol ensures
- A safe robot halt in case of a fire or emergency alarm
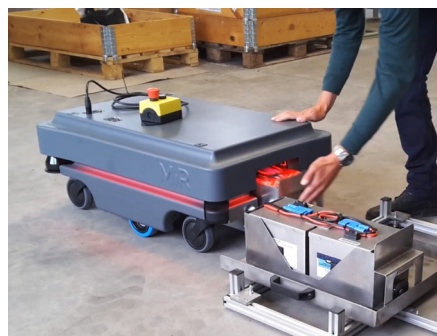- It removes robots from the predefined "Danger Zones" helping evacuation



## Smart Mission Console

This Industry4.0 product is an in-house development that provides an interface between human operators and production line control systems and the Mobile Robots. It has a reliable Ethernet Connection that ensures a robust operation in a congested Wireless network problem that factories face. It can summon a robot if a sensor is activated, or it can be interfaced to a PLC as well.
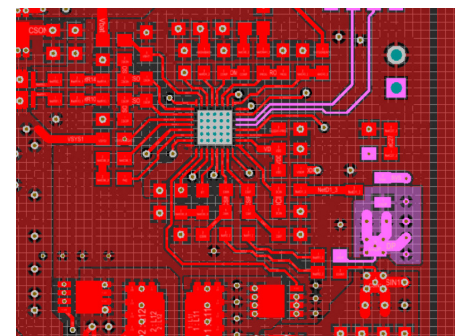


## Anti-Slip solution

Robots deployed in harsh environments such as in the chemical industry the problem of wheel slipping had to be solved. We have come up with a creative solution that significantly increases wheel traction increasing reliability.



## Ultra quick battery changer

The Achilles heel of Robotic applications is the battery. In case of high demand robots can't run a full shift on a single charge. To solve this problem we have developed this solution that allows the change of battery to minutes.



## Custom Development

Having multiple years of experince in integrating mobile robots and in developing custom hardware and software solutions for mobile robotic applications feel free to approach us with your unique requirement.
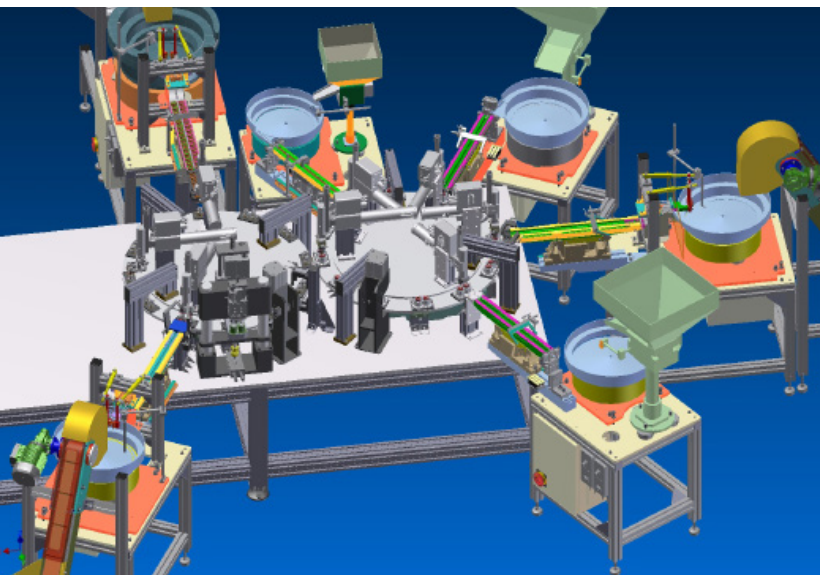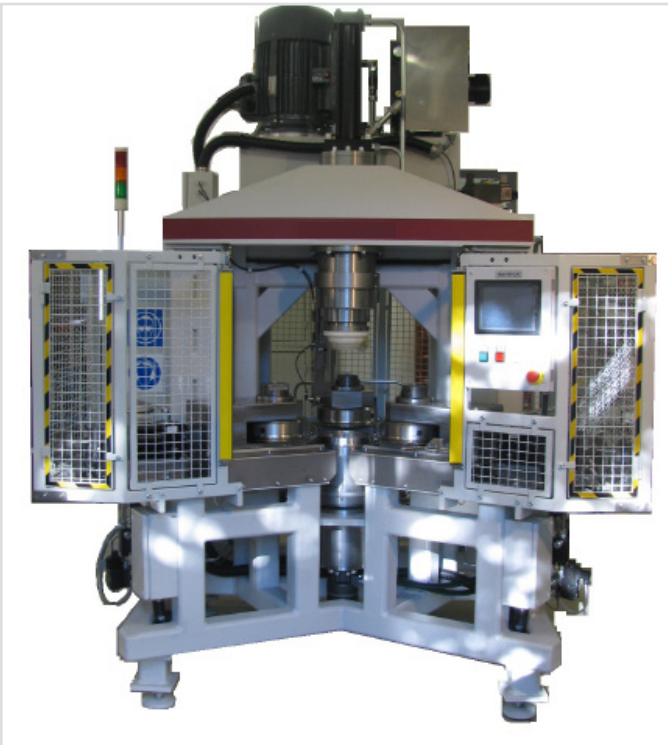
# Industrial Automation - Systems

Our projects are used in a wide spectrum of industries in clean rooms, precision diesel engine assembly lines to heavy-duty airbrake assembly lines. As we have an outstanding in house team of Mechanical, Electrical, Control engineers with expereinced Mechanical and Electrical Technicians and a fully equipped workshop with CNCs, water-jet cutter, cold forming machines, etc. making us a turn-key automation solution provider. Projects include: diese pump, air-brake, filter and injector assembly lines.

We solve technological problems such as screw driving, riveting, pressing, our main suppliers are: Atlas Copco, Stöger, Deprag, Baltec, Omron, Festo, SMC, Toshiba products
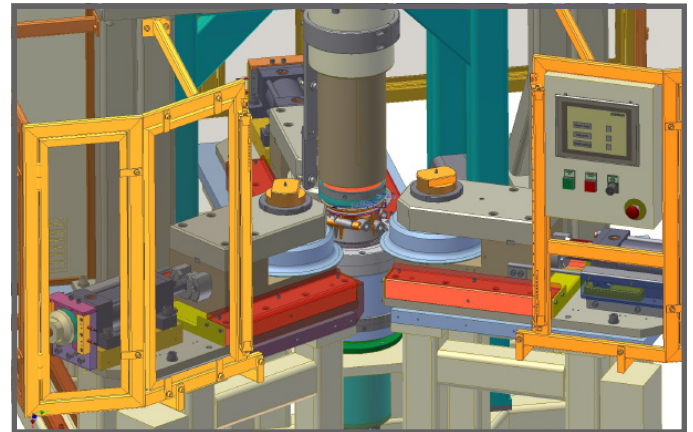
## Intelligent Human Workstations

Besides designing and building fuly automated assembly lines there is a need for intelligent human workstations with Poke-Yoke quality assurance. Over the years we have deeloped a number of such projects as well.
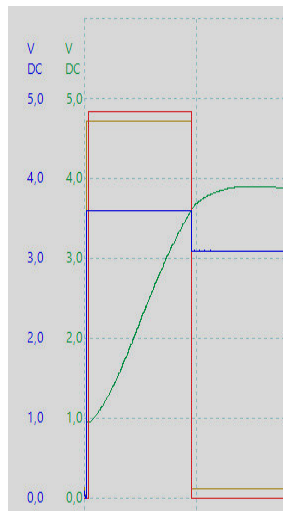
# Special Machinery

In production there is always a need for unique, custom made machines because of the growing complexity and sophistication of products. Our professional staff of engineers and technicians have decades of experience in machine design and manufacturing.





**We gained experience in the following technologies:**

- Part cleaning and washing
- Hydraulic cold forming machines
- Riveting and Screw-driving
- Welding and Ultrasonic welding
- Pallettizing machines and Robotic Cells
- Painting machines
- Packaging and labeling machines
- Indexing assembly machines







## Testers

While quality assurance such as Poke-Yoke are a natural component of assembly and manufacturing, often the end product must be tested at the end of the prodcution line, these tests include:

- Functional testing
- measuring of electrical parameters
- Leak testing
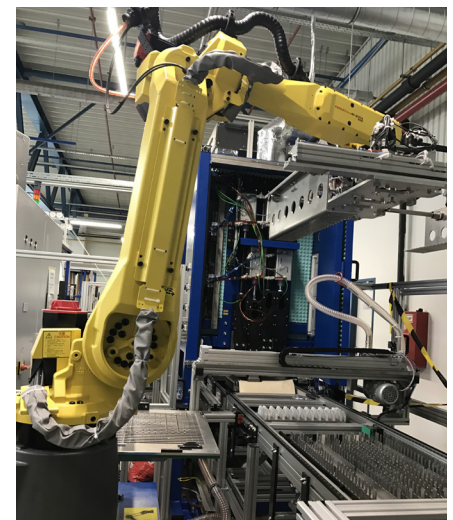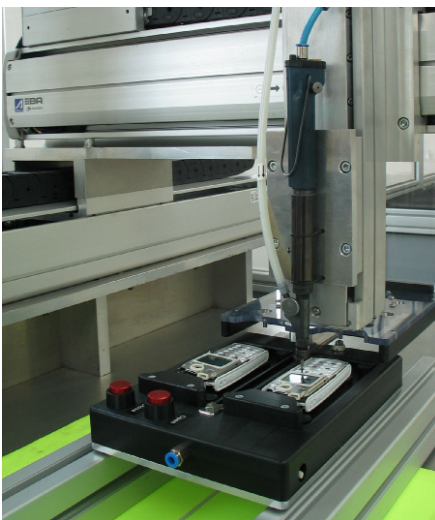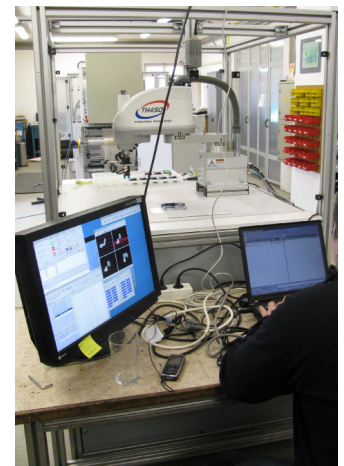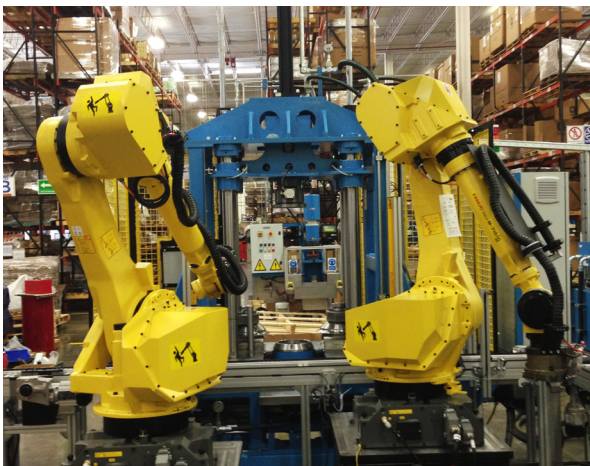- Other physical parameter testing such as noise or force

Over the years we have built up significant expertise in developing special testers with low cycle times and reliability in mind. We have successfully interfaced our testers into our clients ERP systems

# Industrial Robots

We have completed numerous robotics projects involving 5 and 6 axis humanoid type robots, SCARA robots and also the conventional XYZ Cartesian robots. We developed intelligent end effectors for our clients' unique requirements ranging from handling small parts We use Collaboriative Robots widely in automatied assembly and test systems.

On the assembly lines the positioning of parts is done by industrial robots and pick & place units equipped with intelligent end effectors and grippers. We design and integrate robotic cells with FANUC, TOSHIBA, Universal Robot, FESTO, and other manufacturers products.
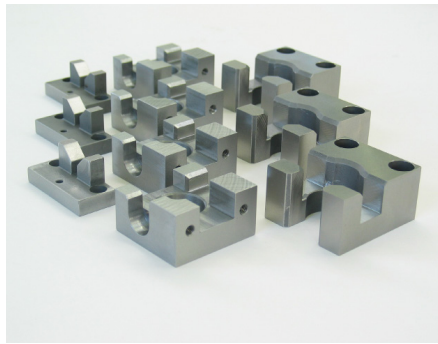
UNIVERSAL ROBOTS

TOSHIBA

DENSO robotics

FESTO

Rexroth Bosch Group

FANUC ROBOTICS

# Component Production

For quality assurance and for faster turnaround times we manufacture the parts for our projects in our well equipped machine shop. We have a wide selection of machines enabling us to be self scufficient when it comes to manufacturing of our projects.
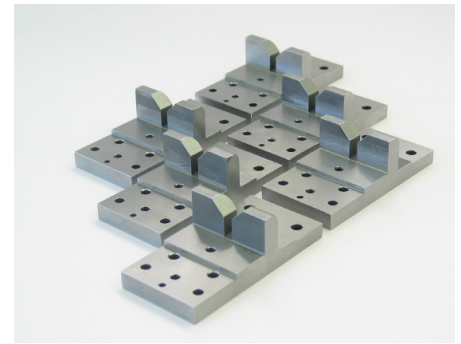






## Jigs & Fixtures

Jigs and fixtures are an essential part of a semi or fully automated assembly line. We have a well equipped workshop to produce and to assemble these crucial system components.
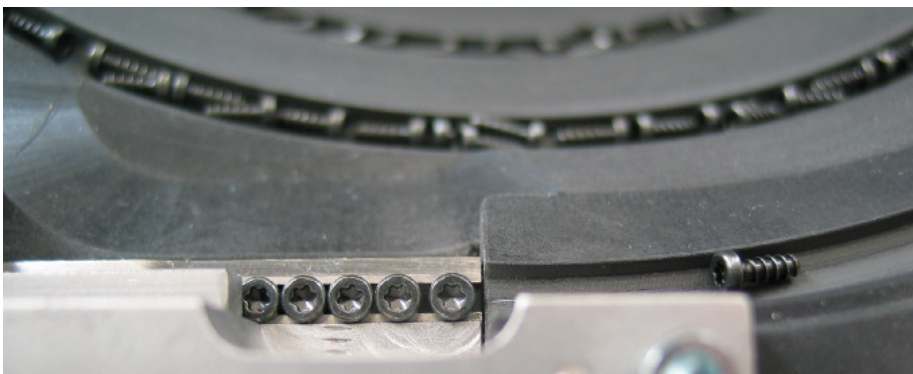
## Machined Parts

Our machine shop is well suitable to produc small and medium lots of parts. The CNC machines enable us to provide the technologization of bowl feeders.

Apart from manufacturing parts for our industrial automation projects, we also take on external CNC jobs to fill in the gaps of our machine time.







## Vibratory Feeders

Assembly automation machines need automatically fed parts for optimal operation. We have a broad experience in the technologization of vibratory bowl feeders for small and medium parts