

DEDEM
MECHATRONICS



INNOVATIVE
SOLUTIONS

FOR
MECHATRONIC
SYSTEMS

20th
anniversary

Years ago, we had an 83-year old expert master named Ferhat, from whom I learned a lot.
I always called him "Dedem*¹". When he passed away, I decided to name our company
"Dedem" in order to keep his memory alive.

Raşit İMRENCİ

*Dedem means my grandfather in Turkish.

*"For mechatronic solutions specific to manufacturing and assembly lines,
we offer design, manufacturing and software from a single source.
We produce the most economic and efficient long term solutions to meet customer needs."*



We search relentlessly for the harmony of a symphony. Our whole aim is to provide a perfect symphony, a "Mechatronics Symphony" customized to you and your needs.

A Symphony is defined as the simultaneous production of a combination of harmonious sounds".

It is not just the notes; each one has its own unique feeling. What makes a symphony unique is not only the rendering by very talented musicians nor instruments played with very high quality.

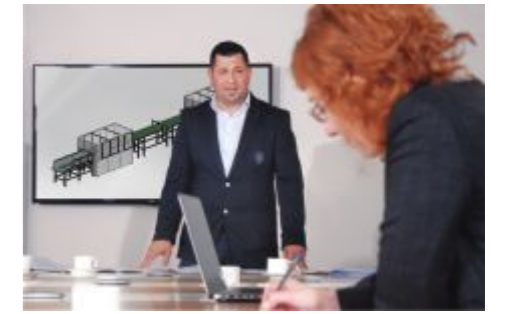
Being knowledgeable and talented, or even being hard working may not be enough to achieve perfection. In fact, what creates the distinction is an invisible, intangible value. What makes one distinguished from the others is to be able to feel, to live in the spirit, to be a part of it.



Dedem Mechatronics, founded in Izmir in 1995, today provides 2500m² of production service on its own land in the ITOB Industrial Zone, with an administrative section of 1300m², for a total factory area of 3800m².

With our expert team, we use a combination of mechanical, electrical - electronics, software and information technologies to produce mechatronic solutions for manufacturing processes.

By working with globally recognized equipment manufacturers, and combining our knowledge and abilities, we produce optimum solutions for higher productivity.



We have standardized our products for production/assembly lines as various conveyors, rotary table systems, product transport vehicles, elevators and lift systems, product rotation/turning systems, elevators, pallet magazines, cartesian robots and other logistics equipment consisting of ancillary elements in order to significantly reduce project realization periods.

In addition, we continue to invest in R&D in order to closely follow technology, add new products to standard ones and support projects on the agenda.



PROJECT SOLUTIONS FROM A SINGLE SOURCE

Concept Creation / Development

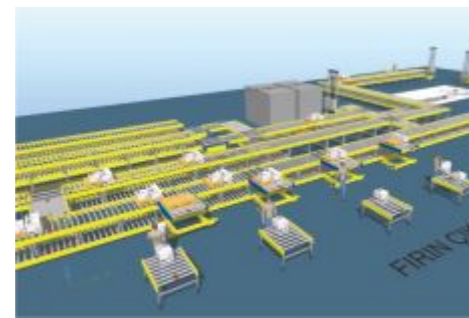
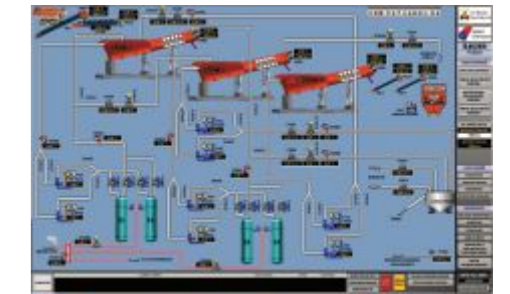
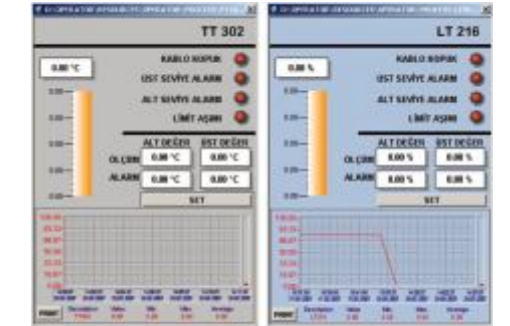
As a best practice, we start by first understanding the customer's needs. We support the investor at the production stage of the project by building a project team consisting of our mechanical, electrical and software experts and the investor company's investment, production and maintenance representatives to create or develop the concept. Thus, we produce the most economical and most efficient long-term solution which meets the customer's needs.



Instrument Selection

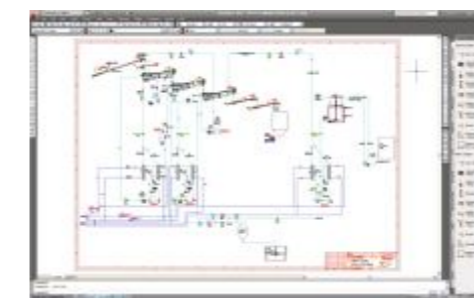


In the installation of process automation, being able to monitor temperature, flow, level, weighing and control values and the selection of necessary instruments to process these values is the most important point. Selection of the wrong instrument can have adverse effects on the entire process flow, quality and efficiency.



3D Simulation

Before submitting a bid, we create a simulation of the project the customer wants. By entering a number of parameters into the program, including actual speed, cycle time of the machines and the processing time of the operators, we provide the simulation of the required system or recommend alternative systems. Thus, by being able to see product flows and bottlenecks that obstruct system operations, we are able to take necessary measures before the system is set up. We also reduce costs and the time required for preparation of bids. A detailed breakdown of the materials required for production also emerges at this stage.

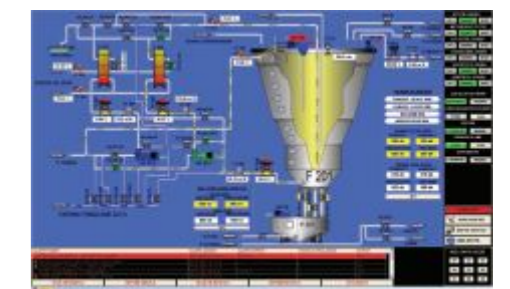


Flow Diagram

A flow diagram is a map that was created for installation of machinery and instruments and automation work on site. After estimation and instrument selection is made, diagram can be prepared on the desired drawing program. If there are deficiencies, they can be seen in greater detail after creation of the flow chart. This brings major benefits to the software development team and the mechanical installation team in the setup phase. After the end of the project, it also helps technical personnel on site in trouble shooting. For us, flow diagrams are of paramount importance for discussing the process to be created and to overcome issues related to difficulties in implementation.

Software

All of the PLC, HMI, motion control, safety, and SCADA software in systems which we set up or develop is provided by our company's experienced team who follow technology trends in response to specific customer needs. . Our aim is to provide added value and long-term solutions based on innovation.





Design

Electrical and mechanical design drawings are created using drawing programs such as e-plan, AutoCAD and SolidWorks. Projects are created on the basis of simplicity, safety and efficiency. Creating lists of materials for projects can facilitate the process of supplying spare parts and materials. Thanks to the care taken in project preparation, interventions can be made more quickly to address needs for project development or modification.



Production

Manufacture of mechanical components and panels of projects we complete the design, is carried out within our company.



Training

After project implementation and startup, we give detailed process training to the customers' technical team.



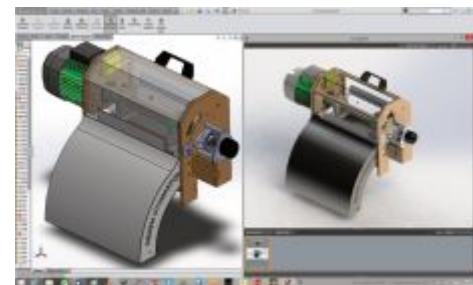
Installation / Startup

Our own team carries out onsite assembly, installation and commissioning of completely manufactured systems.



Service / Maintenance

We provide 24/7 after sales service and periodic maintenance for systems we have set up.





WE KNOW THAT A CHAIN IS ONLY AS STRONG AS ITS WEAKEST LINK

Following rapidly evolving technology day by day and to have the ability to use them, makes it possible to meet the changing needs of today's world and to be competitive.

Ensuring maximum efficiency in our system setup and products, can only be made possible by combining advanced engineering expertise and experience with equipments which requires specific knowledge, capability and R&D.

We are continuously developing and renewing our products and services, which we offer in a wide range from right product selection, to after sales services with our international experience and strength, in cooperation with our solution partners.

By combining our knowledge and capabilities, along with the experience of world-recognized equipment manufacturers, we offer the optimum solutions to your productivity goals.



• **PHOENIX CONTACT**

We have worked together for 10 years as a system integrator and project partner with Phoenix Contact who provides our current inverters, CPU and Remote I/Os. In addition, we use PHONIEX CONTACT products in all of our terminal connections and labeling systems.

• **SIGMATEK**

We are the Turkish representative of SIGMATEK, which offers the compact, modular and robust "integrated automation solutions" ensuring essential flexibility and efficiency for machine manufacturing.

Thanks to simplified programming, we are able to significantly reduce development time and your machine's time to market.

• **BONFIGLIOLI**

We produce our conveyors, gearboxes and engine choices in accordance with the mechanical design features of BONFIGLIOLI. BONFIGLIOLI supplies our motors and gears.

• **FESTO**

We use FESTO products in all of our pneumatic component products. Also, FESTO supplies us with customized manufacturing of products outside of their standard products.

• **SICK**

We use SICK products, offering more efficient design possibilities for intelligent sensors and sensor solutions for factory, logistics and process automation.

• **INKOL**

INKOL, which can produce at standards of protection up to IP 66, manufactures sheet metal components of our electric panels requiring special production, and sheet metal cabinets and sheet metal covers for machines.

• **TEKNOPAN**

Production and after sales requirements of all electricity and automation equipment supply is covered by TEKNOPAN, the dealer for several brands such as Phoenix Contact, Allen-Bradley and Eaton.

• **INTRALOX**

We have an application partnership for Turkey with INTRALOX.

INTRALOX supplies all modular belts required for ordering and sorting of products in production and packaging lines.

For projects requiring speed and efficiency, we use INTRALOX products so that our customers will be able to access spare parts easily from all over the world.

• **FLEXLINK**

We have a strategic partnership for Turkey with FLEXLINK.

For products under 30 kg, FLEXLINK has gained importance for speed and efficiency in projects, and is the world leader in its field in the flexible conveyor sector and is a product for which our customers can easily find spare parts anywhere in the world.

We have successfully completed many joint projects both domestically and abroad, especially in the Tobacco, Food, Cleaning, and Automotive sectors projects with FLEXLINK.

• **INTERROLL**

In the production of our conveyors, according to the characteristics of the product to be transported, especially the selection of rollers and all roller auxiliary equipment, we work with INTERROLL. INTERROLL supplies all our rollers and roller ancillary equipment.



THE NEEDS ARE ENDLESS; SO ARE THE SOLUTIONS...

We provide a wide range of different services in different paths, from engineering and technical consulting services for mechanical and automation solutions to the installations of conveyor systems, service and maintenance, to modification implementations.

We are realizing important projects of multinational companies in the Tobacco industry, white goods industry, seed industry, food industry, and automotive industry.

OUR PRODUCTION & ASSEMBLY LINE SOLUTIONS



● CONVEYOR SYSTEMS



We design and manufacture, implement and commission conveyor systems and equipment to be the most accurate and efficient according to the physical characteristics of the product to be transported.

● FLEXIBLE CONVEYOR SYSTEMS

We design and implement projects with flexible conveyor systems especially for the food industry and transport for the food industry and fast moving consumer goods (FMCG).



We provide service with FlexLink as the exclusive systems integrator in Turkey and Intralox as a systems partner, who provide service and representatives all over the world and implementation of efficient high modular conveyor systems.

● SORTING SYSTEMS

According to the classification of products, we combine mechanics and automation to provide application of horizontal, vertical or circular layout of sorter systems for targeted performance and optimal environmental conditions.



● CUSTOM SOLUTIONS FOR MANUFACTURING

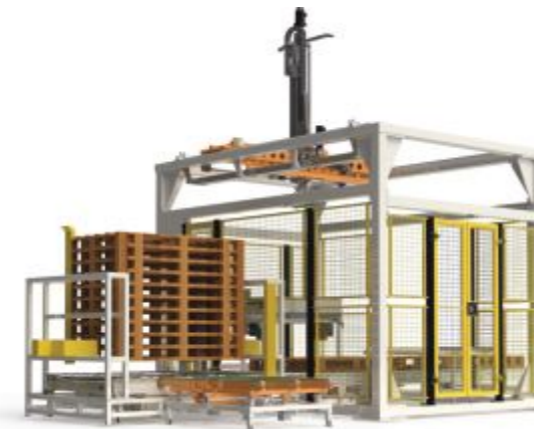
We offer specific solutions to increase efficiency in the production process or provide mechatronics improvements in the existing system.



According to customer needs, we also provide custom mechanical manufacturing and automation modifications. hizmetleri de vermekteyiz.

● ROBOTICS SOLUTIONS

As Dedem Mechatronic, we offer Cartesian Robot, 6 Axis Robots, Scara and Delta Robot types and turnkey solutions.



● MACHINE AUTOMATION



We focus on complete automation solutions with an integrated engineering environment and integrated SIGMATEK driver technology. In this way, we reduce the time spent on engineering and significantly increase your machine's performance.

● ELECTRICAL AND AUTOMATION SOLUTIONS

A very important factor that will affect electrical equipment to be installed in a structure open to development is future capacity, increased production & integration with future technology.



We design and apply low voltage systems, lighting and low current systems, that are the most accurate, efficient and engineered to meet future needs.

● TECHNICAL SERVICES

Losses of plant downtime can be prevented thanks to planned maintenance, predictive maintenance and preventive maintenance.

We offer reliable and quick solutions to your problems with our after-sales, service and maintenance team dedicated to excellence, minimizing unplanned production system downtime and increasing your productivity.



● PRODUCTIVITY SOLUTIONS



As a company with varied industry experience and incorporates and applies automation in its own structure and implement, we offer continuous and project-based consulting and correct application ideas, investment feasibility studies and accurate project investment services for presently working businesses to increase the productivity of businesses.

● TRAINING SERVICES



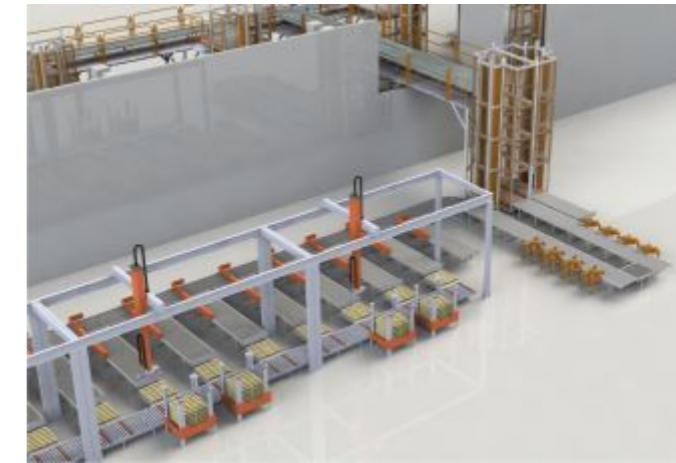
Besides offering training particular to our own software, we also provide software and automation training for our customers.

We provide basic and higher level PLC training for different brands (Siemens, Schneider, Sigmatek, Pheonix Contact, Beckhoff).

● **PRODUCTION/ASSEMBLY LINE LOGISTICS EQUIPMENT**



We have standardized the production of various conveyors commonly used for production lines, rotary table systems, product handling cars, elevators and lift systems, product rotation/flip systems, elevators, pallet magazines, logistics equipment consisting of Cartesian robots and other auxiliary elements. As a result, we have significantly reduced project realization time.



CONVEYORS



STRAIGHT CONVEYORS

- Roller Conveyors
 - Chain Driven
 - O-Ring Driven
 - Non-Driven
- Belt Conveyors
 - PVC Belt
 - Modular
- Wide Load Conveyors
 - Chain Conveyor
 - Trigger Belt Conveyor
 - Pallet Conveyors

RADIUS CONVEYORS

- Roller Conveyors
 - Chain Driven
 - Non-Driven

ROTARY TABLE SYSTEMS



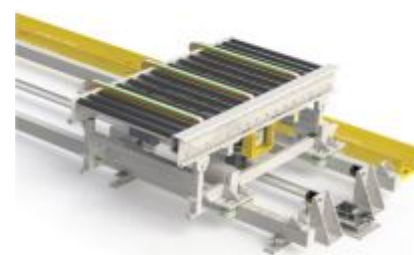
ROLLER

- Integrated Lifting Rotary Module
- External Rotation Module
- Multipurpose

BELT

- External Rotation Module

SHUTTLE CONVEYORS



LIFT AND ELEVATOR SYSTEMS



LIFTS

- Pneumatic
- Electrical

ELEVATORS

- Chian Driven
- Trapezoidal Screw Driven
- Continuous Elevator



SCISSOR PLATFORMS

- Hydraulic
- Pneumatic

PRODUCT INVERSION AND ROTATION SYSTEMS



PRODUCT INVERSION SYSTEM



PRODUCT ROTATION SYSTEM



TILT SYSTEM

BUCKET ELEVATORS

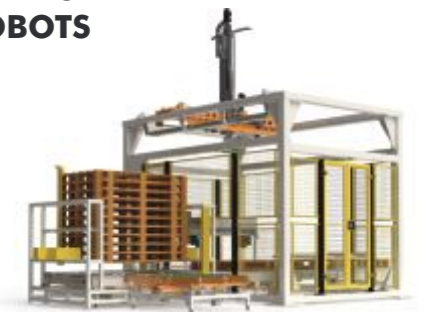


TYPE Z / TYPE C BUCKET ELEVATOR



VIBRATION CONVEYOR

CARTESIAN ROBOTS

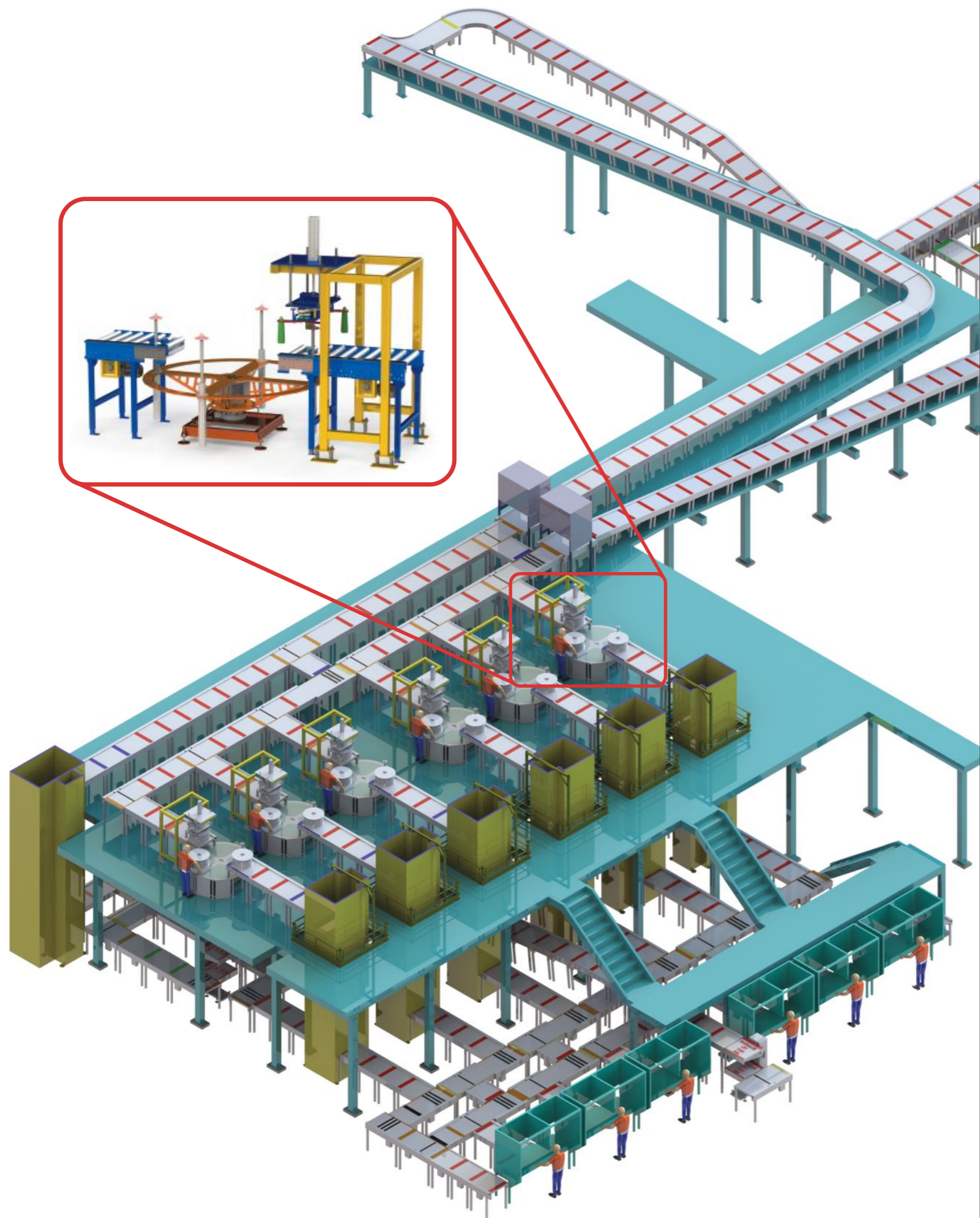


PALETTE MAGAZINES



AUXILIARY EQUIPMENT

- AUTOMATIC PRODUCT TRANSITION
- PNEUMATIC PUSHER
- STOPPER
- CENTERING SYSTEM



"Production lines have had the opportunity to make production faster and better with conveyor systems."

Automation has had an important place at the intersection of Industrial and Mechanical Engineering, which had to work in harmony with conveyor technology and equipment on these lines.

● PRODUCTION LINES

We combine automation, mechanics, energy efficiency, ease of maintenance, considering durability and simplicity and design production lines and install systems in the most efficient way.

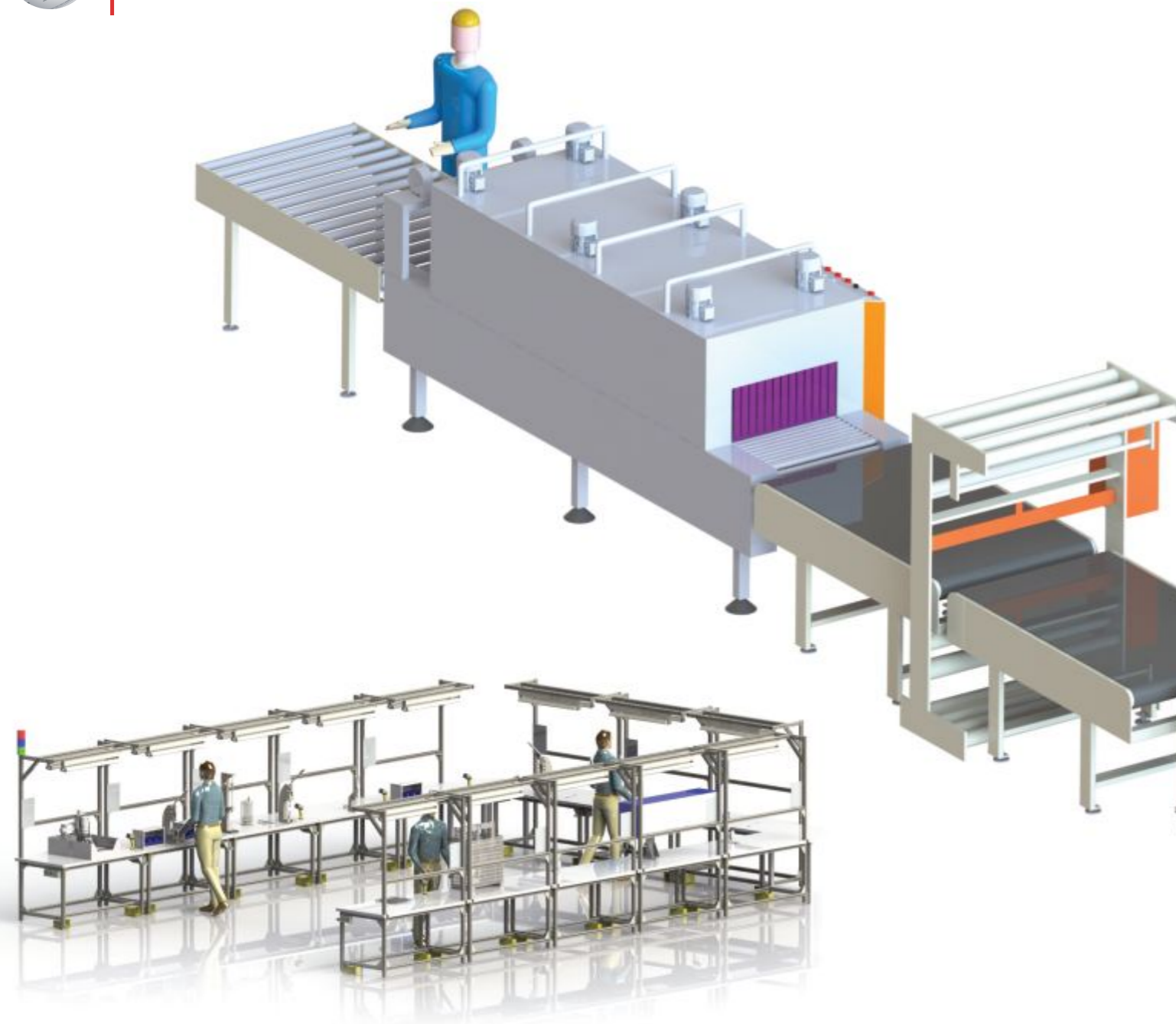
From tire rims to white goods, automotive industry products, tobacco, from paper to beet seed plants, we have established and commissioned production lines up in many different sectors.

We use many of the products we design and manufacture, such as roller and/or Modular Belt Conveyors, Elevators, the Shuttles, Stoppers, Rotation Units, Rotating Table in our own production lines.

We transfer information about the project to the customer by starting with simulation programs to simulate the project before the production line for line balancing by specifying values for all lines and points of disruption.

We work with our customers in a healthy and harmonious way on project management from the design of production lines through the process up to the delivery of the work.





● ASSEMBLY LINES

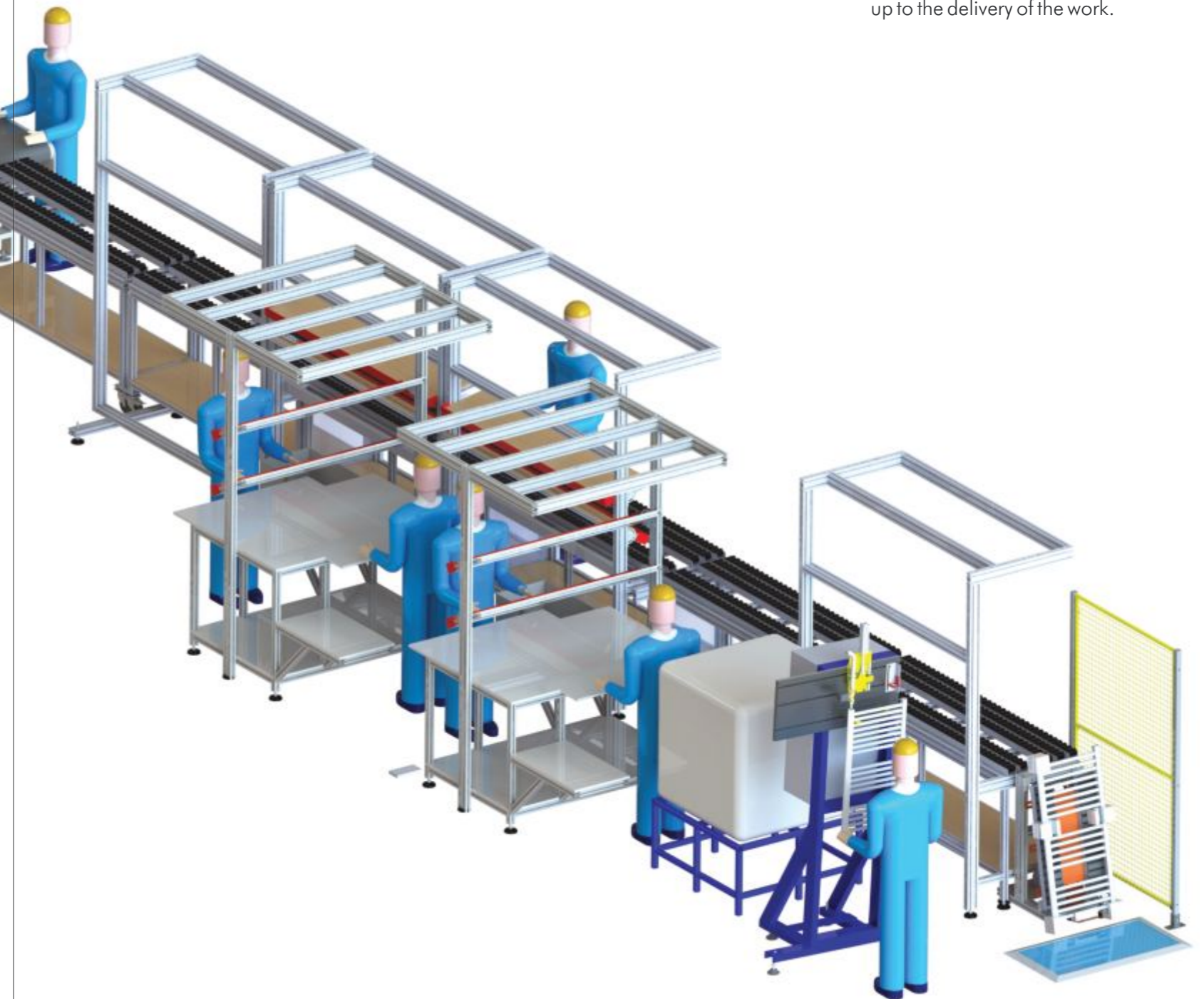
"With developing technology, visual and auditory warning systems, productivity monitoring, line balancing and automatic quality control systems can be added to assembly lines."

Automation and mechanical solutions for quality control and to prevent operator errors are now requirements of the assembly line.

We design and build efficient systems by integrating POKA YOKE and ANDON systems on assembly lines.

By simulating the assembly line at the beginning of the project we transfer knowledge to our customers before the project with the simulation programs for line balancing by specifying values for all lines and points of disruption.

We work with our customers in a healthy and harmonious way on project management from the design of assembly lines through the process up to the delivery of the work.





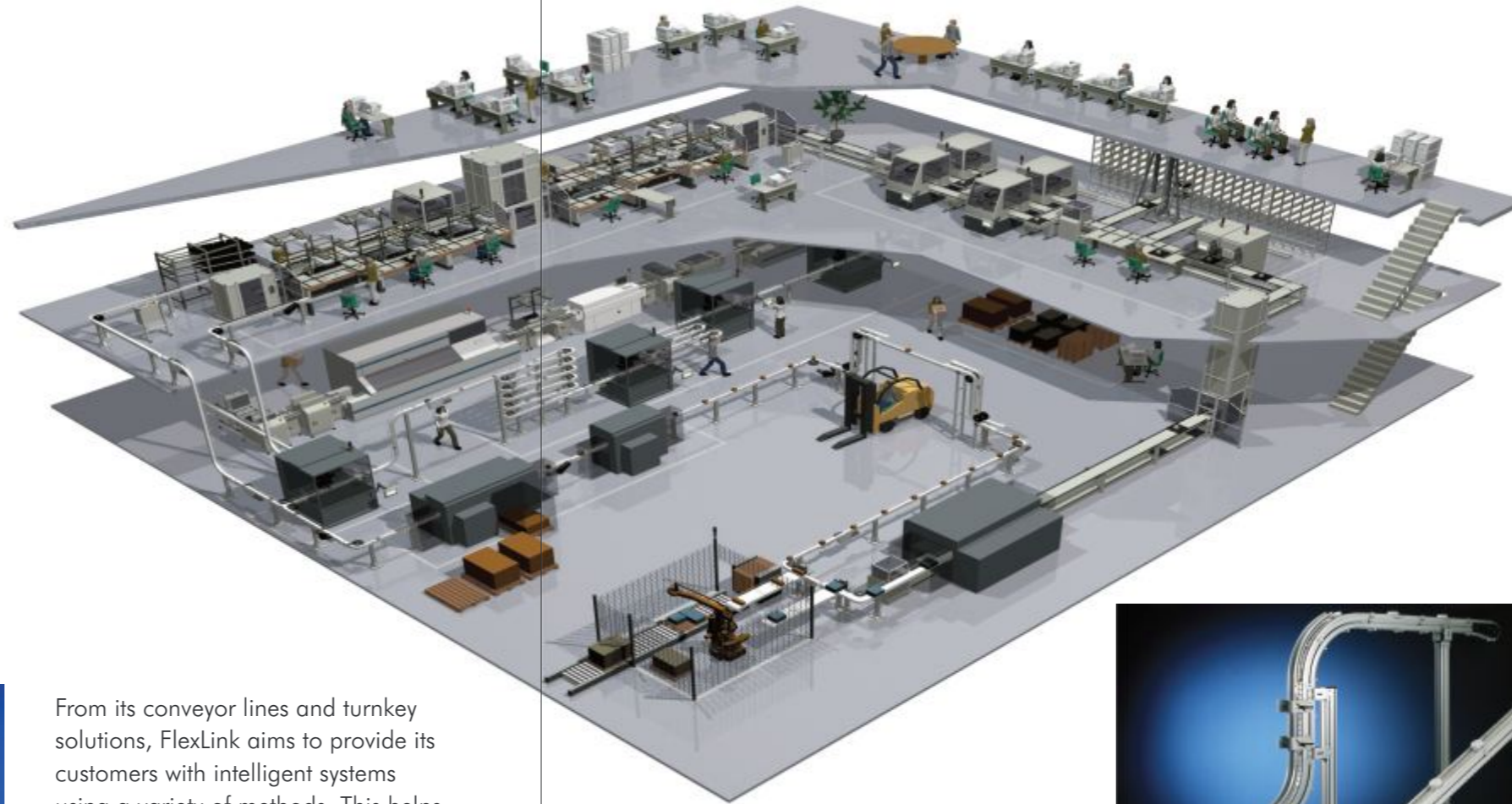
DEDEM
MECHATRONICS

FlexLink®



We provide service with FlexLink, which has service and representatives all over the world, to implement efficient high modular conveyor systems, as the exclusive systems integrator in Turkey.

By providing different solutions in their area of expertise for specialty and high-speed (120m/min), light product transport (max. 30kg), flexible, light and hygienic solutions FlexLink's patented module offers conveyor systems for Dedem Mechatronics customers as a turnkey or custom project.



From its conveyor lines and turnkey solutions, FlexLink aims to provide its customers with intelligent systems using a variety of methods. This helps to bring the material and information flow in your manufacturing processes to an optimum level. In addition, these solutions can be either small-scale, or plant-wide turn-key systems.

By using FlexLink equipment tracking software with the available Youtilize®, you can make the best use of all resources and significantly increase line efficiency.

Youtilize® combines the functions of Escort memory (RFID tags), hardware controls (PLCs) and business application software (ERP etc.).



● **FLEXIBLE CONVEYOR SYSTEMS**



• **Industry Solutions**

The reliability and wide product range of our standardized solution that shows that we are an ideal partner for different types of industry.

• **Buffer Systems**

Buffer systems are used for temporary storage of products in a process, such as between machines with different cycle times. The spool systems (buffers) are also necessary for pausing the machine. There are different solutions for spool systems.

• **Lifting Systems**

Both vertical and horizontal deviation of both devices and mixers, are used to keep the flow of products in different machines and existing products in a desired format. DFCTM technology, (the concept of dynamic flow) patented by FlexLink is used to create a dynamic high-speed distribution.

• **Distribution Systems**

In some special cases specific manufacturing or modification are necessary to increase production efficiency.

We provide custom manufacturing and automation modification services to improve productivity according to customer needs.

• **Palletizing Systems**

FlexLink offers palletizing products and also full product manipulation capabilities at all stages of production.

In order to supply the best robots on the market, FlexLink has entered into cooperation with major robot providers such as ABB and Fanuc. A robot can usually handle a 50 kg product load alone.

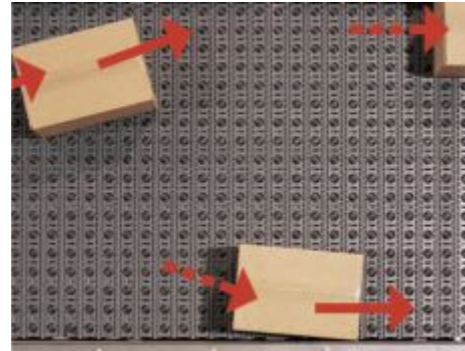
• **Re-Routing Systems**

Rotating Systems are used in reorientation of products, to return such packages to regulate supply of the subsequent packaging machine.

Products can be repositioned horizontally from a straight position or can be turned around in a reverse direction or they can turn around in the direction of transport.

• **For inside Bottle Compressed Air**

For bottle blowing rotating fittings is a solution for transport and processing of all kinds of packaging (glass, plastic, metal) and by adapting a variety of options and by provides machinery and production flow of the actual requirements, and communication among the machines.



ARB™ Technology
Activated Roller Belt™ (ARB) is our patented, award-winning technology that upgrades older methods of package aligning, sorting, switching, turning, merging, and descrambling. Intralox systems provide smaller footprints, lower costs, and greater capacity, flexibility, and safety. In addition to belting, we now offer complete ARB equipment solutions, as well as full layout reviews using our proprietary physics based emulation software.



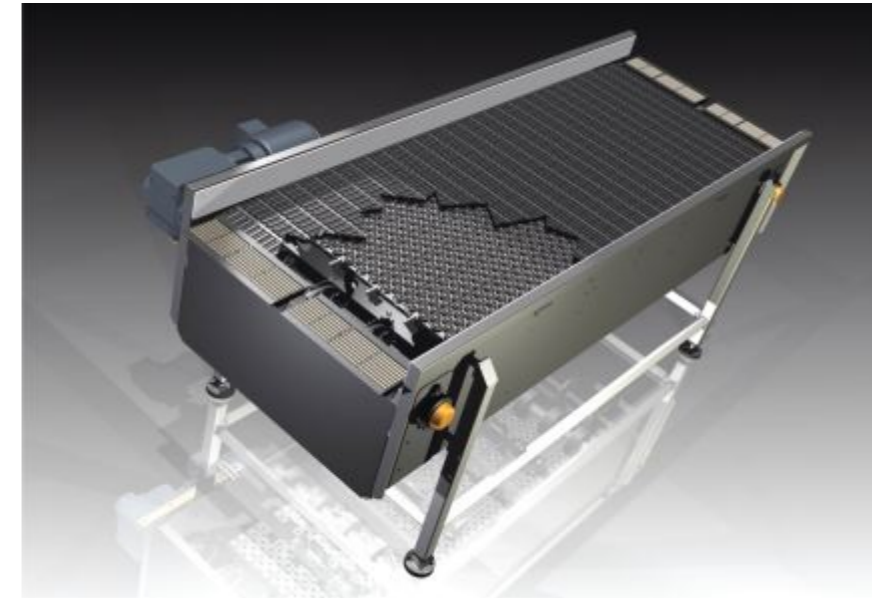
Modular Plastic Belting Technology
Since our founder invented it, modular plastic belting (MPB) has proven to be a long-lasting, low-maintenance, safe and hygienic conveyance solution. Its versatility has enabled us to continually expand our product line with application-specific MPB innovations like Spiralox® spiral belting and the Abrasion Resistant System.



Thermodrive® Technology
Intralox ThermoDrive belting is the ideal solution for hygiene-critical applications in food processing. Like MPB, it offers all the benefits of sprocket-driven, low tension operation. The difference is in the belt surface. ThermoDrive belts feature a homogenous, thermoplastic flat belt surface that is 100% closed. In addition to providing food safety advantages, ThermoDrive belts are also a great solution for troughing applications.

● **FLEXIBLE CONVEYOR SYSTEMS**

" INTRALOX Modular Plastic Conveyor Belt Products increase productivity, lowering downtime to a minimum, we create high economic value associated with optimizing your conveyor system services and solutions."



Intralox transportation solutions offer many advantages over alternative metal belt solutions for all needs.

Our modular plastic solutions include:

- Flat Screen alternatives to traditional wire Belt Applications
- Spiral Solutions
- Pasteurizer Solutions
- High Temperature Belt Applications
- Belt Applications for Narrow Transportation Applications



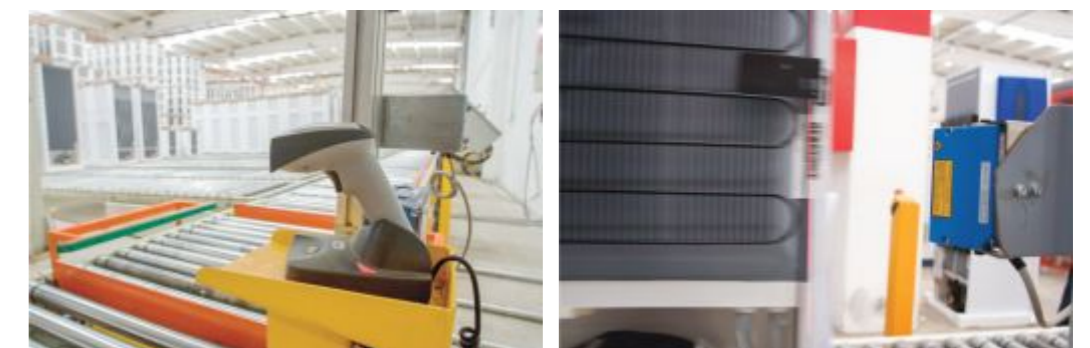
● **SORTER SYSTEMS**

"We are minimizing the costs related to the potential increase in capacity of the Sorter systems with flexible module system designs."

The process begins with the random installation of barcode products on the conveyor belt.

While products move on conveyor belts, the barcode readers identify and classify the product.

Classified products, pass through conveyor lines and reach the desired location on the conveyor.





Product Conversion System
A system that reverses products coming from the line requiring processing from different divisions, without the need for an operator.

Product Identification System

A necessary turning system in automatic working lines to monitor and direct products.



Product Control Unit

Provides ergonomic ease and the quickest way for the products to come in front of the operator. With this unit we are able to give operators more time and ability to improve quality.



● **CUSTOM MANUFACTURING SOLUTIONS**

Continuous Elevator

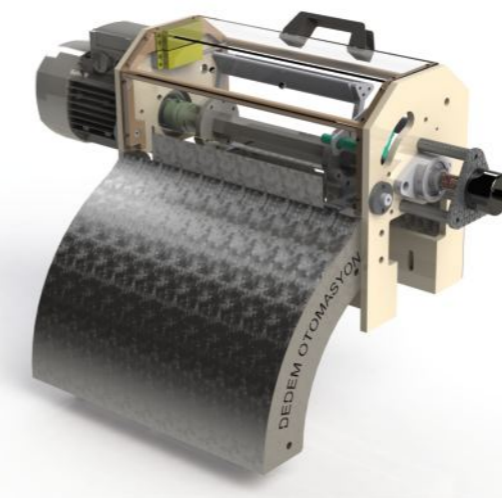
Speed and continuity in the vertical transportation system is a key product for the desired spots.

Products from small boxes to white goods are received from the conveyor at ground level, leaving the conveyor at the desired height. Approximate capacity is 1200 products/ hour.



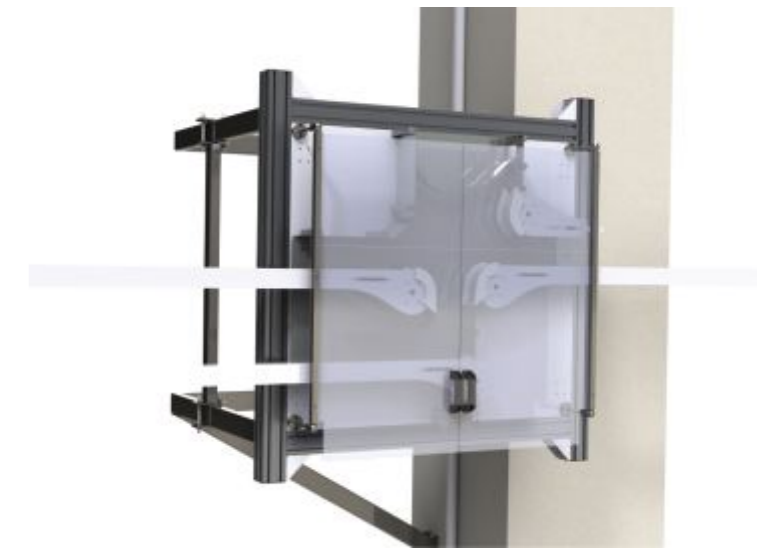
For machinery or equipment not found in our standard product line, and for mechanical design, electrical and automation fields, we do R&D work.

We equip the solutions we provide with product tracking systems. This way, we track problems occurring during production, provide feedback about issues and increase productivity.



Rotary Pusher

Rotary Pusher is used in rapid separation, especially for food products and is widely used in the cigarette industry. The system that runs on Servolog Mode with an AC motor has the ability to separate about 6000ad products per hour.



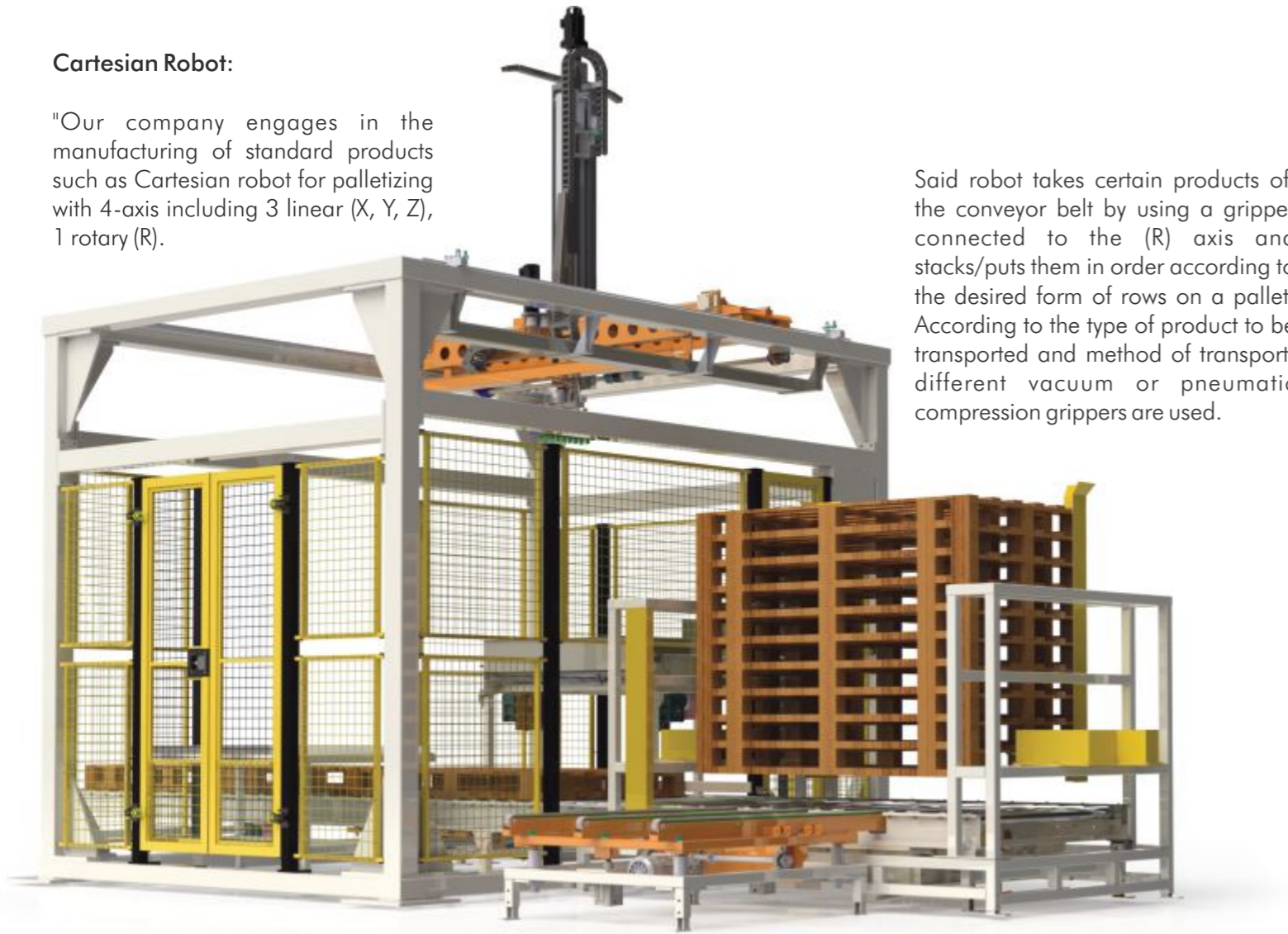
Cigarette and Filter Hoopers

Spoon System Hoopers are used to manage entry and direction of cigarettes or filter products. These products are single input double output, double input, single output or are manufactured in one or more different combinations of output.

Cartesian Robot:

"Our company engages in the manufacturing of standard products such as Cartesian robot for palletizing with 4-axis including 3 linear (X, Y, Z), 1 rotary (R).

Said robot takes certain products off the conveyor belt by using a gripper connected to the (R) axis and stacks/puts them in order according to the desired form of rows on a pallet. According to the type of product to be transported and method of transport, different vacuum or pneumatic compression grippers are used.



Scara and Delta robots (Parallel Manipulator):

With one or more actions per second, up to a maximum of 1m² workspace these robot types are ideal for loads up to 1 kg.

They are extensively used in packaging, box placement and cover insert applications. Even if two robot types are manufactured with different chassis, they are close to each other in terms of speed and performance.



ROBOTICS SOLUTIONS

"In addition to the value robots add to quality and efficiency, they also replace humans in performing dangerous tasks such as welding, assembly and palletizing and thus their contribution to workplace safety is important."

Industrial robot selection is a complex process that requires the evaluation of several qualifications.

In selecting a robot in accordance with the application and production environment, the requirement must be determined through a careful study.

The correct model can be selected considering features such as price, load capacity, speed, the robot's weight and material, the drive system, size, accuracy, geometric skills, programming flexibility, machine-human interface and using decision analysis methods with multiple criteria.

Wrong robot selection, faulty frame or gripper production are all factors that could drag the project to failure. Programming of the robot and its integration into the system to which it is added is also important. Working with more than one company on a robot project also brings problems with it.

At Dedem Mechatronic, we provide professional solutions to all these issues.



6 axis robots:

The standard robot can carry up to 300 kg capacity. Palletizing, painting, welding, liquid sealing are used in many sectors such as materials transport. According to the application when arm's length and load capacity is determined, an appropriate brand and model will be determined. Cycle times will shows differences based on weight and distance.



More flexibility and higher productivity
for your machine
Fully Integrated Automation System



Our control system offers the right CPU for any task: compact controls, control panels or IPCs whether with single or multi-core processors. Scalability and consistency means that compatibility with the application software is guaranteed. The I/O modules are also available in two series and various configurations..



For human-machine interfaces, a broad product palette is available: from small units with 3.5" displays to high-resolution touch panels with a display up to 24" with different touch technologies. In addition to classic visualization, the ETV control panels also perform control tasks. Naturally customer-specific variants are possible, for example, HMIs that are especially designed for the strict requirements of the food and pharmaceutical industries.



With the modern Motion Control System, SIGMATEK offers complete drive solutions: motors, servo drives and software interact perfectly and are seamlessly integrated into the control system. This results in highly dynamic motion processes from one source. Engineering is simple. The precision, flexibility and efficiency of the machines are increased.



SIGMATEK has fully integrated Safety into the automation solution: Safety CPU, Safety I/Os and drives with integrated Safety technology. For networking, the real-time Ethernet bus VARAN is used, which can transport standard as well as Safety data - the need for separate wiring is therefore eliminated. The modern Safety technology simplifies machine construction and results in significantly easier engineering.

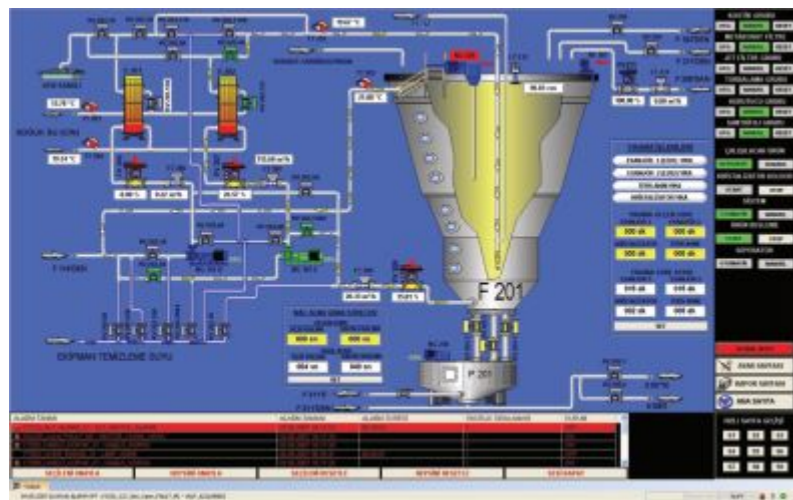


The Ethernet technology based VARAN bus system was designed for flexible and modular machine concepts. Today, integrated hard real-time capable communication is the key to modern automation systems. With cycle times of 100 μs and less than 100 ns of jitter, machines are more productive and precise. VARAN also gives the user complete freedom during project development through various network topologies.



The all-in-one engineering tool LASAL allows machine concepts to be realized quickly and efficiently: PLC programming, HMI, motion control, Safety, diagnostics and service. In 2000, SIGMATEK was the first to introduce object oriented programming to industrial automation. The reusability of the software modules helps to reduce the engineering time and costs significantly.





● **ELECTRICAL AND AUTOMATION SOLUTIONS**

Our Dedem mechatronic systems are the most efficient and energy-saving and can establish a high level of automation and electricity for your facility.

"The systems established with our company, are designed using engineering calculations and company experience to be open to expansion to adapt to the development of the age."

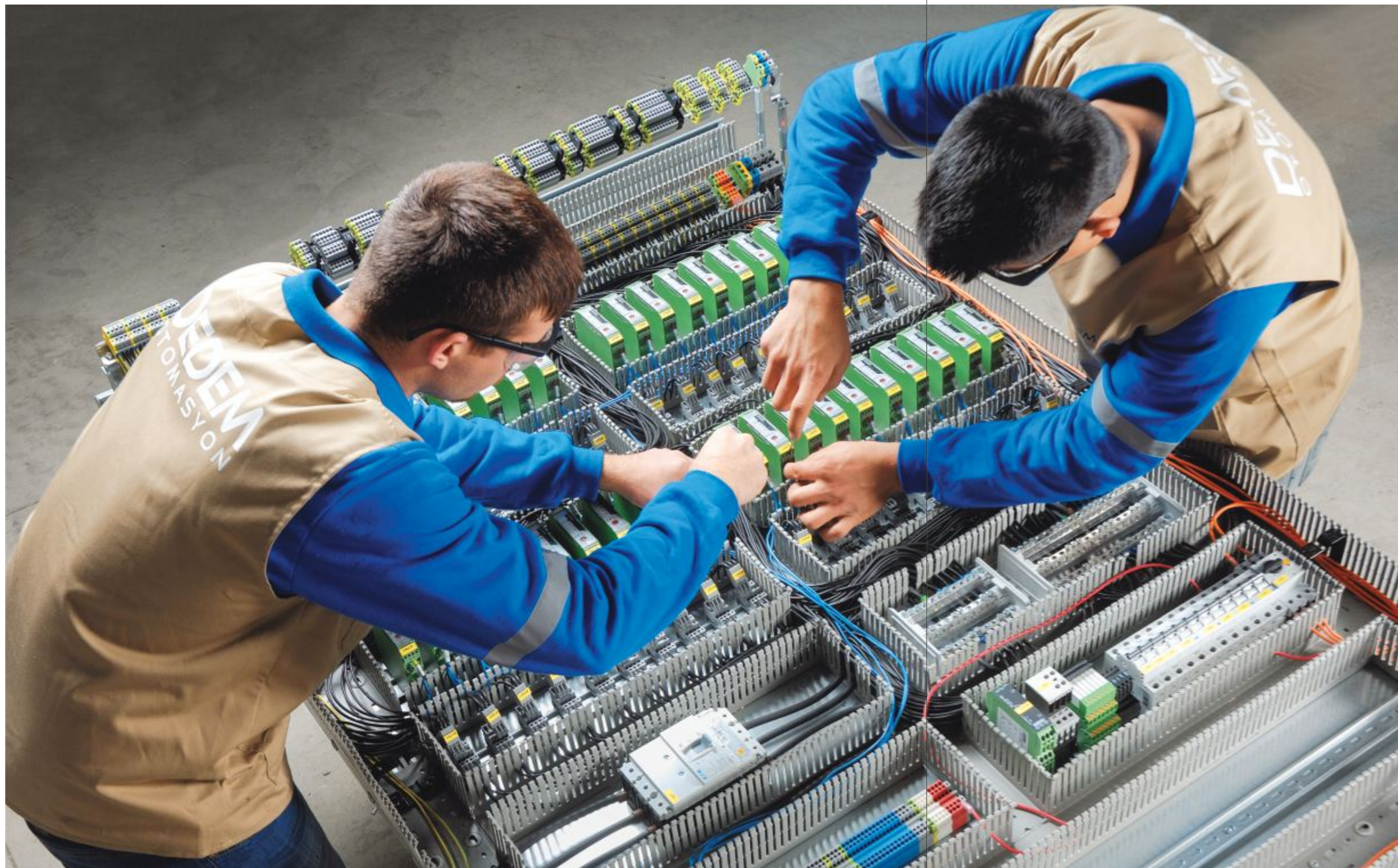
With our experienced staff that follows technology trends we offer automation and electrical solutions.

Our services in the automation area;

- PLC software (process, machine, system)
- SCADA software
- Motion control software
- Andon software
- Efficiency monitoring software
- Automation panel production

Our services in the electrical field;

- Production of low voltage panels
- Lighting systems
- Low current systems (fire detection, data, camera, Access control, telephone, etc.)
- Low voltage systems
- Turnkey electrical systems for industrial plants





● **TECHNICAL SERVICES**

"We have the knowledge and skills in different industries to be able to address technical service requests on an international scale."

We offer a wide range of technical services from machine transport and installation, transport and installation of complete industrial plants, handling and installation of electricity related to the current system to make mechanical or automated revisions, to providing technical staff equipped to address fault conditions or maintenance times.

- Machine/plant transportation and installation
- System revision
- Production support
- Periodic maintenance services
- Service (7 days, 24 hours)





● PRODUCTIVITY SOLUTIONS

Changing competitive conditions in recent years has increased the importance of improving efficiency in relation to increasing labor and energy costs.

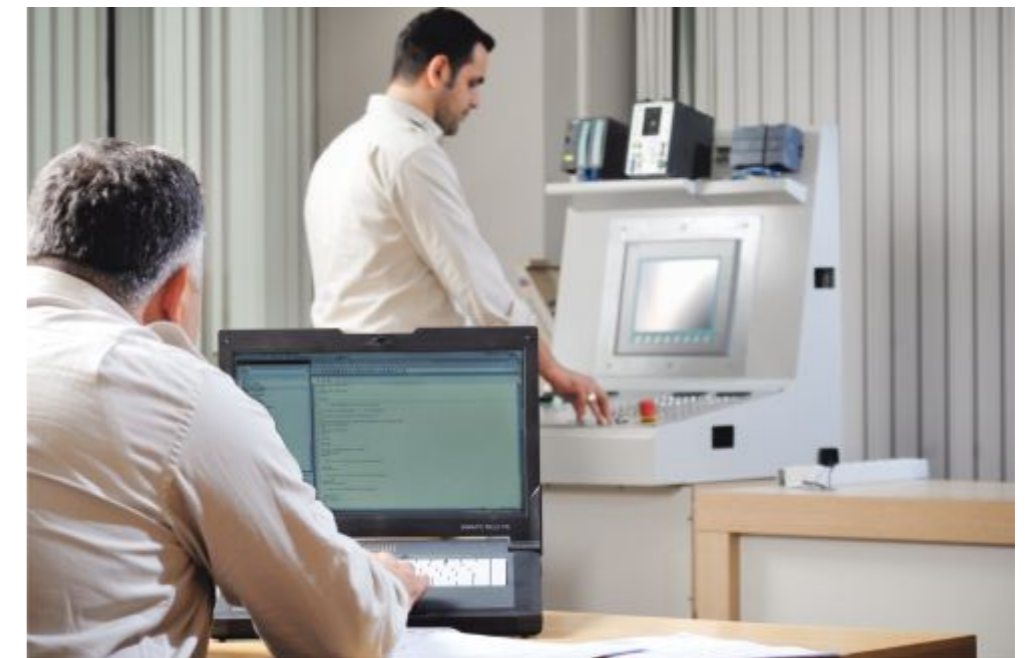
Energy efficiency is not a new concept for us. We have tried for many years to improve the efficiency of any system that we set up.

"In the systems we have established or improved, our goals have been low energy consumption or high efficiency and service and minimizing service returns."

There are a number of factors influencing the energy efficiency of a process. Correct component selection and system design are important. For example; when selecting an engine, associating the load to choose the right engine and transmission, select the appropriate conveyor products during mechanical design to prevent frictional losses, moving components are increasing in operation, other unnecessary components should not be working.

We use high quality equipment in the right places, we create software process-related scenarios with our professional project team in their respective areas of expertise. We review existing system or those to be installed at the process design and simulation stage, find problems and bottlenecks and develop analyses and solutions.

We assess better known technology and integrate it into systems we set up. These studies allow us to provide traceability and bring energy savings and flexibility to the facility. After commissioning we complete the selection of the correct maintenance intervals and at the end of the system setup, thanks to the training we have provided, we prepare documents according to the rules of the system and efficiently complete whatever is necessary for the operation of the system.





● TRAINING SERVICES

Automation Training

Including basic and advanced levels, and issues, automation training is provided by our team of experts in their field for the following brands. Also according to the expectations and needs of the training, we also organize private indoor group trainings for companies.

Brands for which training is provided;

- Sigmatek
- Beckhoff
- Siemens
- Phoenix Contact
- Schneider

Subjects on which Training is given;

- PLC
- HMI
- Scada
- Motion
- Communication

Mechatronics System Training

Dedem offers detailed training on the following issues to its customers based on mechatronic systems it builds.

- Lecture on process design and P & I diagrams.
- Introduction to field instruments and calibration.
- Formula creation and reporting.
- Fault and maintenance training.



Automotive



- CMS Jant
- Assan Hanil
- Cummins
- Gates Power
- Delphi (Flexlink)
- Atlas Copco (Flexlink)
- Maxion Wheels

Fast Moving Consumer Goods (FMCG)



- Henkel (Flexlink)
- Ülker (Flexlink)
- Algida (Flexlink)
- Ferrero Rocher
- Tadım (Flexlink)
- Hızal Un
- Hazal Un
- Tezcan Un
- Pastavilla
- Altınçam Ekmek

Tobacco



- JTI
- Philsa
- British American Tobacco
- Imperial Tobacco
- Rodop
- Altab
- Öz Ege
- Sunel
- Sarper
- ITC
- Alliance One
- Socotab

Agriculture



- KWS
- Monsanto
- Öztoprak Sera
- Antalya Tarım

Energy



- Enercon
- İzmir Jeotermal

Construction



- AKG
- Fibrosan
- İzole Kiremit
- Ekor Geri Dönüşüm

Paper, Printing/Publishing



- Ve-Ge
- Alkim
- Kaplamin
- Tetrapak
- Esetetik Yayıncılık

Chemical/Plastic Products



- Eti Maden
- Egepen
- Winsa
- Alta Metal (MK Mühendislik)
- İlksan
- Naka Katodik Koruma
- Akyel

White Goods / Durable Consumer Goods



- Indesit Company
- Vestel
- Larth Havlupan
- Form Group
- Uğur Soğutma

Defense



- Anatolia Fişek

Electrical / Electronic



- Schneider
- Alstom

Machine



- HLM
- Temcon
- Ve-Ge
- Eksen
- Lodos
- SFA
- Edvan Vantilatör
- Teknokrom
- HAUS
- STM
- DMS
- Amros

● OUR REFERENCES



● **INTERNATIONAL EXPERIENCE**







DEDEM

MECHATRONICS

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