



■ Production and installation of equipment

■ Industrial automation

■ Design work

### Engineering company "DELTA"

From 2009 renders services in the design, production, installation and commissioning of robotic cells, process equipment and transport systems. And the company also provides full range of activities for the automation of production lines and processes.

### The structure of the company includes

its own design-engineering department, a powerful production base, a division of installation and commissioning. Capacities of the company allow to produce own technological automated complexes and production lines of various configuration and complexity of execution.

### Own logistics service

supply its products to the customer the most effective in each case type of transport, reducing the client to transport component.

## Key directions of activity

### **Production of equipment**

- robotic cells
- transport systems
- conveyer systems
- lifts, lifter any type
- manipulators
- checking tables
- jigs
- logistic jigs

### **Industrial automation**

- robotic solution
- process control systems
- software and hardware complex
- measuring systems
- testing systems
- equipment monitoring system

### **Design work**

- development of robotic cells
- design of non-standard process equipment and jigs
- development of design documentation
- adaptation of foreign equipment to Russian standards
- design of steel structures

### **Installation work**

- complex work on installation of equipment for enterprises
- installation and assembly of metal constructions
- installation/relocation of process equipment
- electrical installation of automatic process control systems
- warranty and service

## Technological possibilities

Our production capacity allow independently perform a full production cycle from procurement operations to assembly and painting.



Production possibilities of production company "DELTA", you can:

- Produce any mechanical and heat treatment
- High quality welding of carbon and stainless steel and aluminum
- Cutting of sheet steel by plasma cutting
- Cutting and bending of sheet metal
- Powder painting



Our products

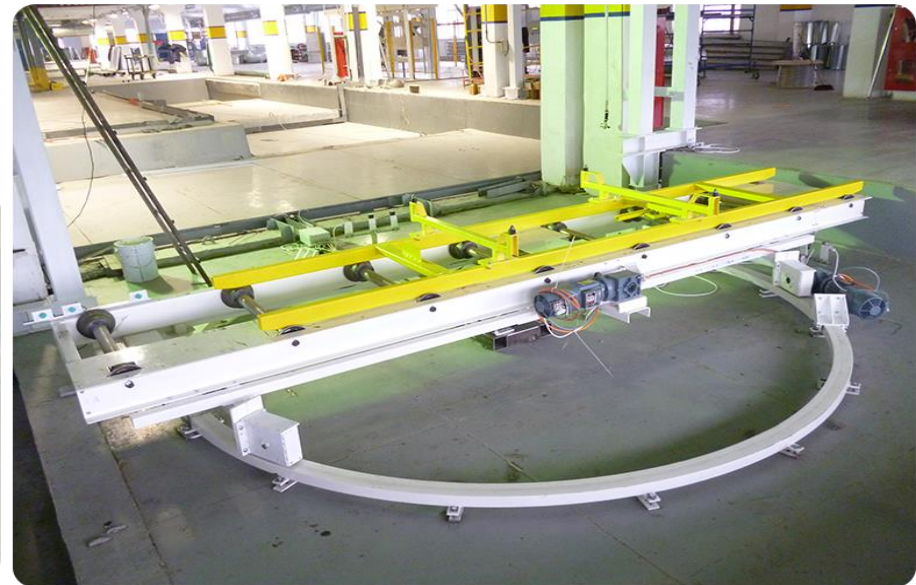
«Process equipment»





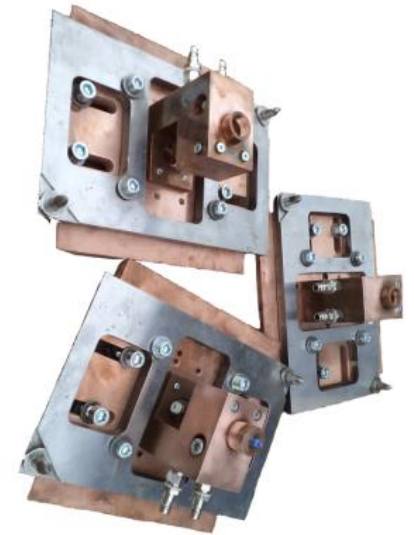
Our products

«Process equipment»





Our products  
«Jigs»







During the existence the production company "DELTA"

proved itself as a reliable and responsible partner. We tried to create and develop new, valuable and mutually beneficial business relationships while continuing to support the already established relationship for years.

## Our partners

Group companies  
«GAZ»



«Schneider Electric»



«ABB Group»

«RENAULT»



«Volkswagen »



«Continental»



With a large number of dealer agreements with leading Russian and world manufacturers, we offer a full range of services in the field of industrial automation and manufacturing equipment for enterprises of all sizes.

PK DELTA is the official partner of «SUHNER»

**SUHNER**®

*Symbol for quality and performance*

Production Company DELTA is the official representative of the Swiss company SUHNER in the Russian Federation. The history of the company has more than 90 years. Products of this brand is known for its excellent Swiss quality.



Our company makes direct deliveries of spindle units, component parts and other products of this brand. Our experts will provide all the necessary technical advice.

We also provide training in line spindle equipment and technological capabilities of products, provide technical advice and support.



PK DELTA is the official partner of «ABB».



PK DELTA is the official distributor and partner of a world brand as ABB. ABB supplies to the market a full range of Russian power equipment of high, medium and low voltage products and technologies for automation of production.



Here you can order a full range of products ABB from single spare parts to the robotized complexes.

Accumulated experience and optimization of production and logistics processes, as well as long-standing and successful relationship with ABB allow us to offer a high level of professional service. Today among the our clients: GAZ Group, Renault, Nissan.

Company «DELTA» - official system integrator company «YASKAWA»

**YASKAWA**

Company "DELTA" is the official system integrator of company YASKAWA.

Company YASKAWA is the leading global manufacturer of robotic equipment and automation components.



You can order the whole range of YASKAWA products from us: from individual spare parts to robotic complexes.

The accumulated work experience and the optimization of production and logistics processes, as well as the long-standing and successful cooperation with ABB, allow us to offer a high level of professional service. Today our clients include: GAZ Group of Companies, Renault, Nissan.



Company «DELTA» - official system integrator company «YASKAWA»

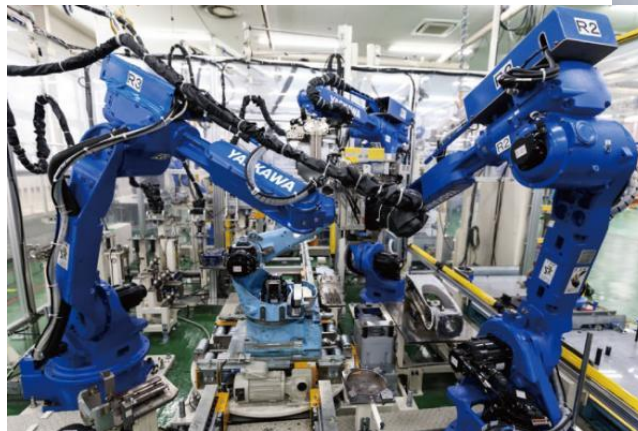
Robotic welding



Equipment service

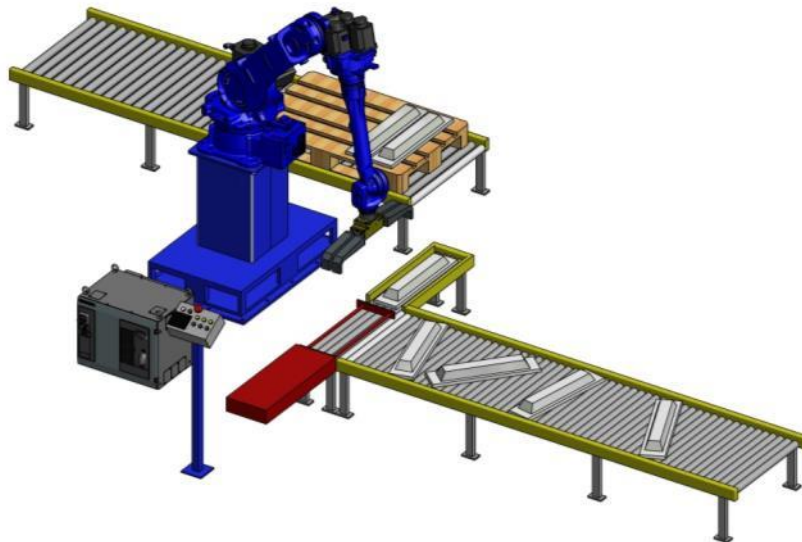


Assembling lines



The introduction of robotic projects is the result of accumulated experience in the implementation of industrial automation projects.

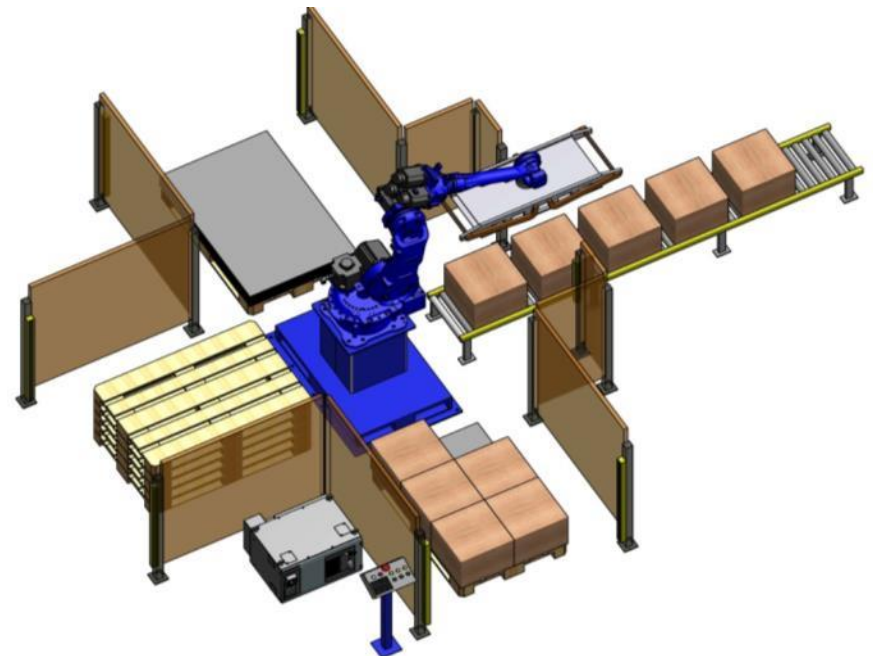
## YASKAWA



## Our services

### «Integration of robotic solution»

We have accumulated experience in production of non-standard industrial equipment, automation and optimization of production and logistics processes. We have strong relationship with leading global producers of robotic equipment. So we offer and successfully carry out projects of creation of robotic cells for various production tasks such as welding, assembling, palletizing, loading/unloading parts and tools and others.





## Our services

### «Production of nonstandard equipment»

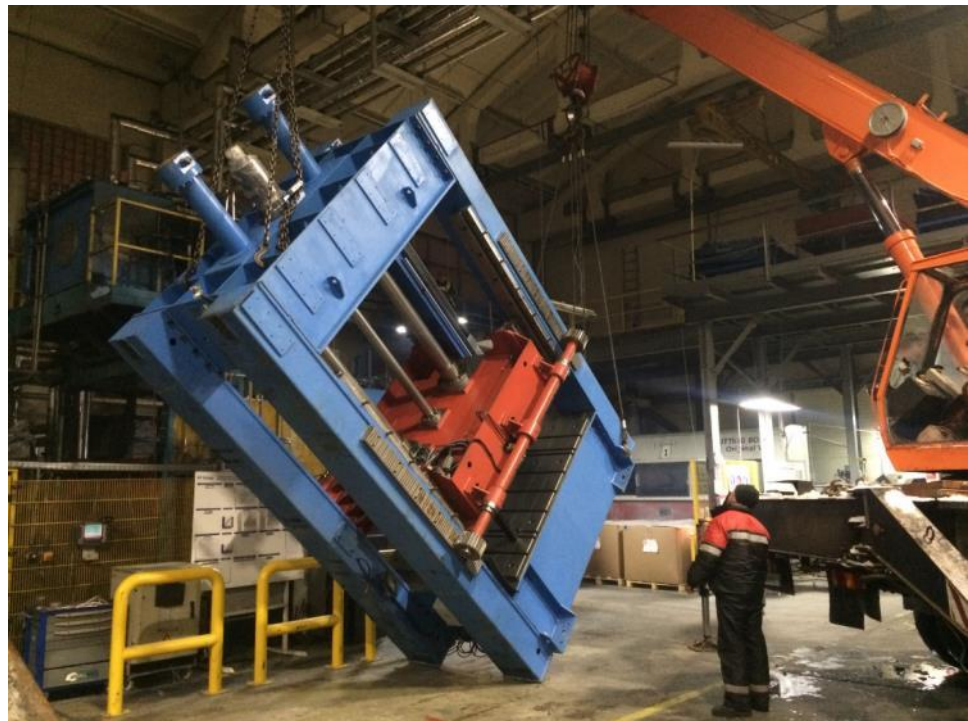
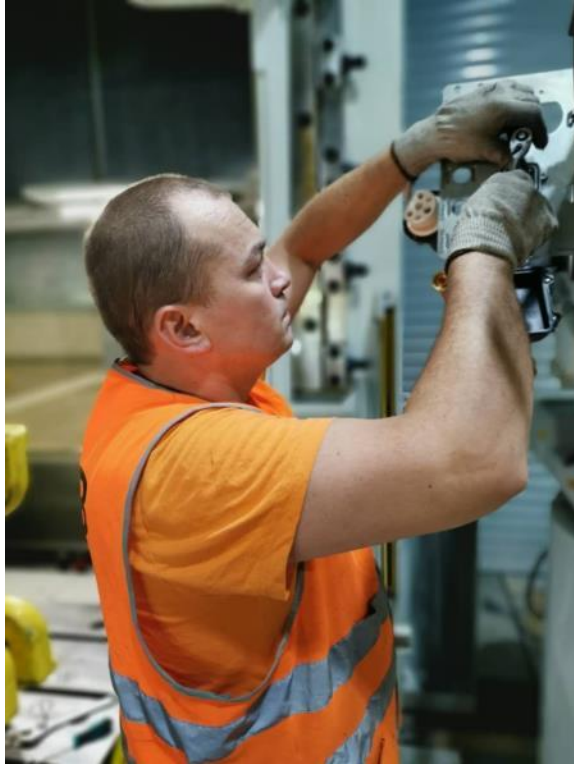
To solve various technological problems, we offer services for the development, production and commissioning of non-standard equipment that will exactly meet the needs of production. We supply lifting and transport equipment, manipulators, automated complex and more.



## Our services

### «Installation & relocation equipment»

We render services in installation, connection and commissioning services for various technological equipment. We have experience in the assembly, installation and repair of press equipment, as well as experience in moving oversized and heavy equipment. We carry out mechanical installation, electrical installation, assembly, connection and test of an automated control system.





## Our services

### «Automation of productions»

We provide services for the development of automation systems for production processes. We perform "turnkey", including design, manufacturing, installation, commissioning, warranty and post-warranty service. All projects are accompanied by a full package of technical documentation.

We are developing:

- Automated Stations
- Manipulators
- Process control systems
- Measuring stands (Test stand)
- Assembly stands

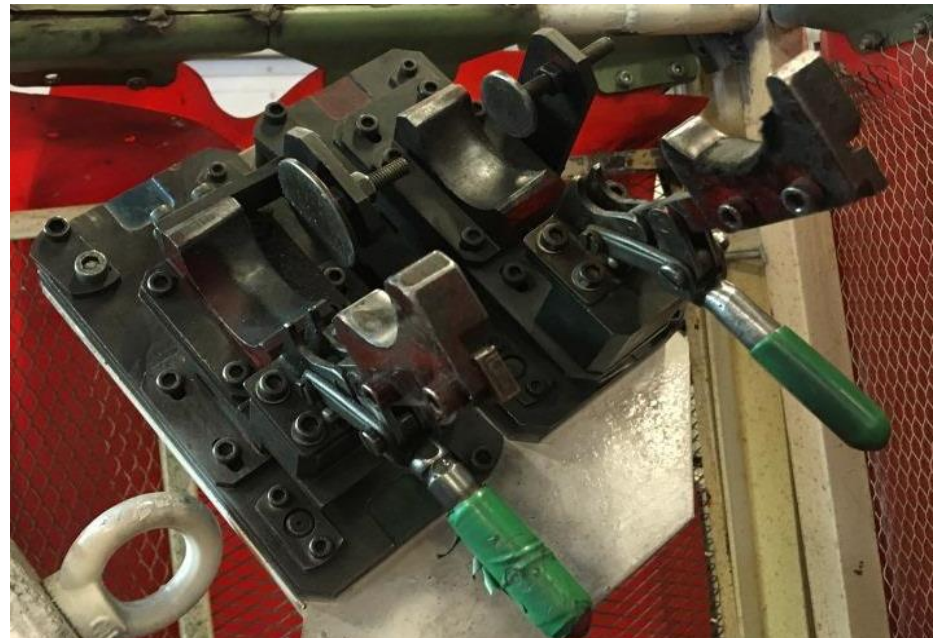




Our services

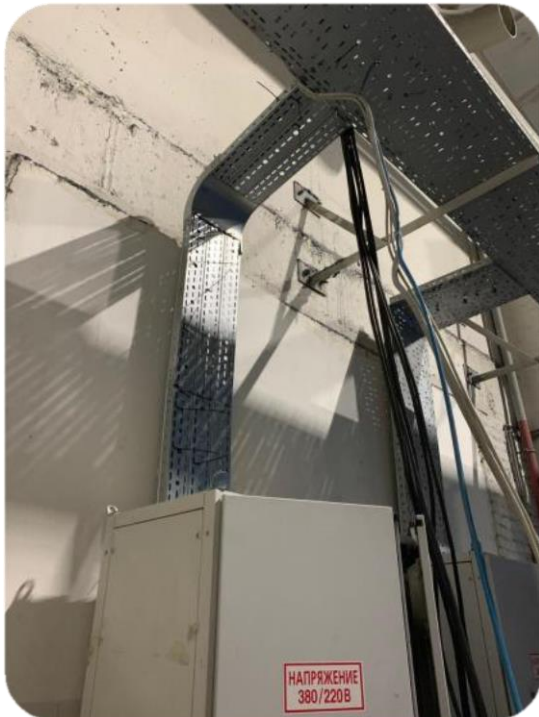
## «Production of manufacturing jigs»

Practically for any technological process, whether assembly or welding, manufacturing jigs are needed, which are necessary for positioning and fixing the assembled elements relative to each other. We are ready to offer services for the development and production of the necessary manufacturing jigs for your technological needs.



## Our services «Installation of utility networks»

Besides production and installation of equipment we render services for laying and connecting utility networks such as electricity, water pipeline, steam, ventilation, etc. Also we have experience in laying stainless pipelines for various purposes and diameters including sterile pipelines (for food industry) and polypropylene pipelines. We use welded or threaded joints while performing the jobs (It depends on the customer's requirements). We perform laying of power cable with cross-section from 1,5 to 50 sq.mm.



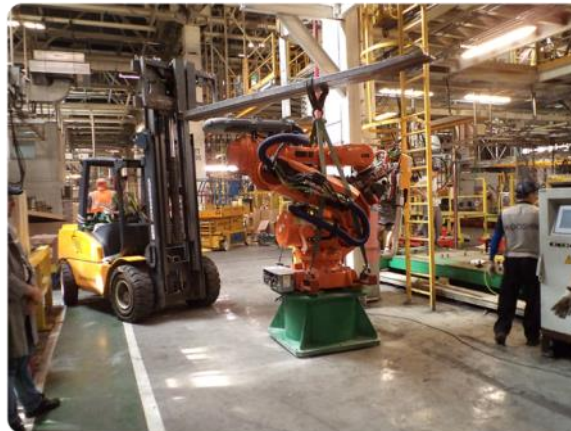


## «Robotization post AG1»



Our company in a short time were produced accurate removal of existing equipment, with the same post performance.

Welding robots, tools for changing welding guns, equipment for electrode sharpening, supporting metal and electrical equipment were installed.



Installation work performed by our employees, together with colleagues from the Korean company Wooshin, who carried out the work and supervising the final commissioning.





## «Automation post of application of mastic»

The works were made "turnkey". From project design to production to assembly, installation and commissioning of equipment post.



Within the project developed and introduced a system of recognition, movement and positioning of car bodies. Were automated processes: movement of the carriage and application of mastic depending on body type.



## «Production of templates headlights for RENAULT»

Our company has developed and produced templates taillights for cars Renault Fluence and Renault Duster.



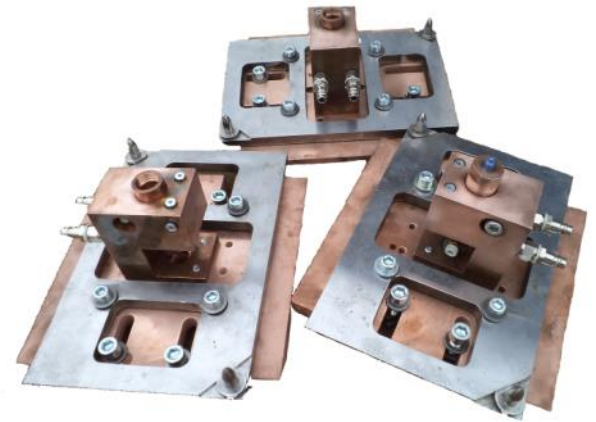
These templates are etalons headlights and used by Renault for the quality control of welding car bodies. Our company provides high quality manufacturing templates and their components with a tolerance of  $\pm 0.2$  mm.



## «Design and manufacturing of jigs and electrodes for spot welding station»

For the project were developed and produced universal bottom electrodes and specific upper electrodes for contact welding using ceramic guides Doceram.

Special feature of our electrodes is possible to regulate the height of the contact surface changeable electrode. It allows using changeable parts for a longer time by regrinding the contact surface.



It was also designed and manufactured a series of technological tools for placing body parts in the process of spot welding.





## Completed projects

### «Skid buffer»



Our company has performed work on the design and manufacture of metal suspended platform for skid buffer (25 units conveyor equipment).



The project also performed a complex of works on installation of metal constructions suspended platform, work on the installation and commissioning of process equipment (roller tables, transborders, lift, scissor lifts), assembly of control panels, installation of electrical and automation systems conveyor line.



## «Installation of ABB-equipment for press-shop»

Installation of ABB-equipment for press-shop of press line of OJSC "AvtoVAZ". Our company as the official distributor and partner of ABB were produced works on installation of mechanical and electrical parts of the project L4 press line. Including was made installation and connection of robot stations.



Installation work performed by our employees, together with colleagues from ABB Spain company, who carried out the work and supervising the final commissioning.





### «Supply of equipment for painting workshops of Volkswagen and Skoda»

In the short time for JSC "Automobile Factory" GAZ " was supplied equipment for the organization of the production line in the workshop painting car bodies Volkswagen and Skoda.



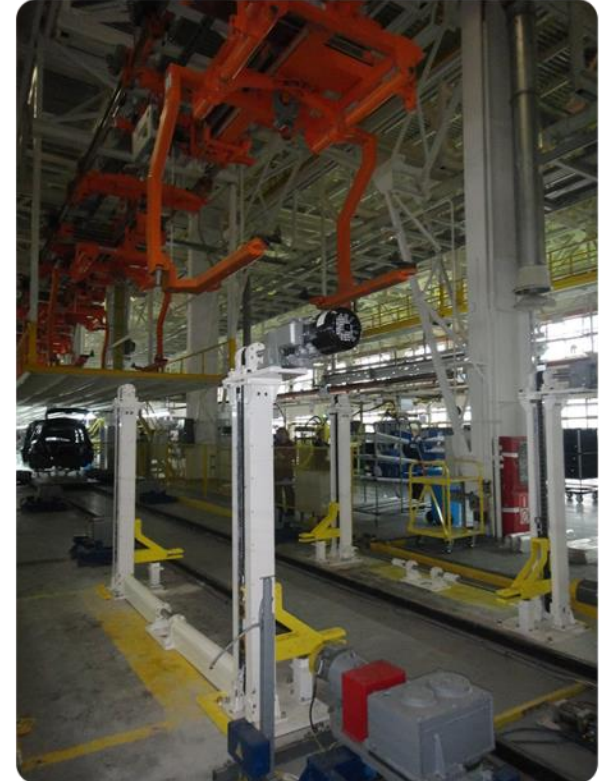
20 units were built conveyor equipment. The works on mechanical installation, electrical installation and automation, as well as work on the start-up line.





## «Complex lifting of car body»

For JSC "Automobile Factory" GAZ " manufactured and installed complex lifting Volkswagen and Skoda. Complex is designed to work with the body of car Skoda Yeti; Volkswagen JETTA; Skoda Octavia.



Electrical installation works and commissioning were carried out together with the employees of " Automobile Factory" GAZ ".



## «Installations of ABB-equipment for FORD-company»

The company took part in an international project to equip of the finish operation-shop of engine parts FORD. Work was carried out on a new line «Engine manufacturing» factory LLC «Ford Sollers Elabuga»

Our staff together with colleagues from ABB completed installation and commissioning of robotic cell.



The complex is part of the set of finish cleaning the engine cylinder block and combustion head FORD before assembly.





### «Installation of equipment at the TOYOTA-factory»

The complex of installation works on the setup of the process equipment on the chassis line was performed on TOYOTA-factory in St. Petersburg.

The following works were performed: mechanical and electrical installation equipment, power connection, setup of lift for motor engine & back axle, setup of manipulator for installation motor engine, installation of filling stations of gear box, installation of stands for assembly & arrangement of attachment lug, installation of assembly lines for front & rear suspensions, installation of equipment for setup of seats & doors.



We have done the works on modification of exist equipment, equipment adjustment & start-up production. Works were carried out in cooperation with Japanese engineers from TOYOTA TSUSHO factory. They marked the work of our specialists very high.





### «Installation Conveyor of doors at the NISSAN-factory»

At the NISSAN plant in St. Petersburg, a door assembly conveyor was installed and put into operation. The following parts were mounted: carrying irons & service platforms, drive units and chain tensioners, chains & transport trolleys. Lifts and loading/unloading devices for trolleys were assembled.



The work was carried out under the supervision of DÜRR engineers. They marked the work of our specialists very high.



**AVTOVAZ**

## «Installations of ABB-equipment for stamping shop of press-line L21»

At the AVTOVAZ plant in Togliatti, the L21 project on the robotization of the AIDA press-line was realized. The set of works included the following stages: the installation of 8 robots with feed & delivery tables, the installation of control panels and the installation of automatic control systems of process & safety systems.



The work was carried out in a high-quality and on time. Quality of work and qualifications of our employees were highly appreciated by representatives of the customer's company and employees of ABB.





## «Moving-up the slitting line of metal from Romania to Russia»

Throughout the project work was carried out on power-cut, deinstallation & pacing the the slitting line of metal. The line was situated in Romania. Our specialists designed and manufactured supporting structures (platforms, columns and frames) for the installation of line in manufacturing in the Leningrad region.



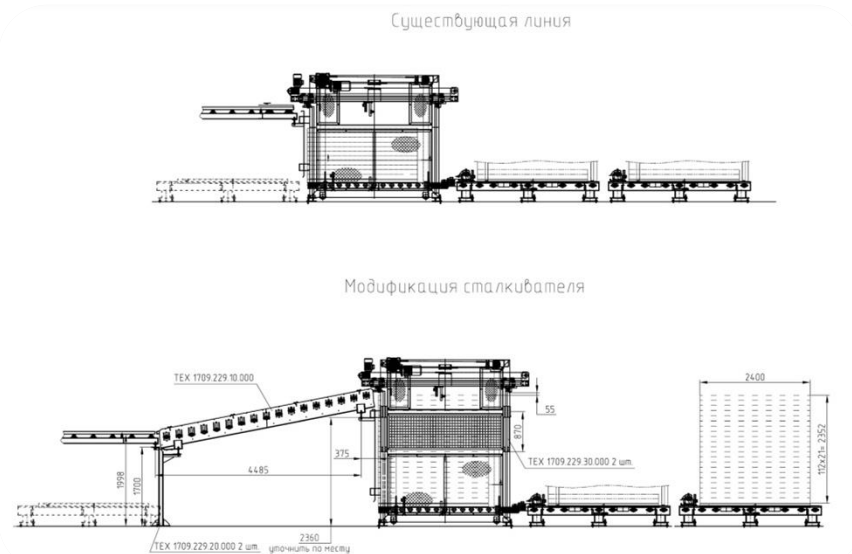
We performed works on the installation of metal structures and transported equipment, as well as work on connecting and commissioning the line on a new site.





## «Re-equipement the pusher in the order to increase the line capacity »

Work was done to modernize existing equipment in the order to increase the capacity of the sandwich panel production line:  
Increased the height of pusher, installed unique feed table with curved surface for feeding mineral wool mats.



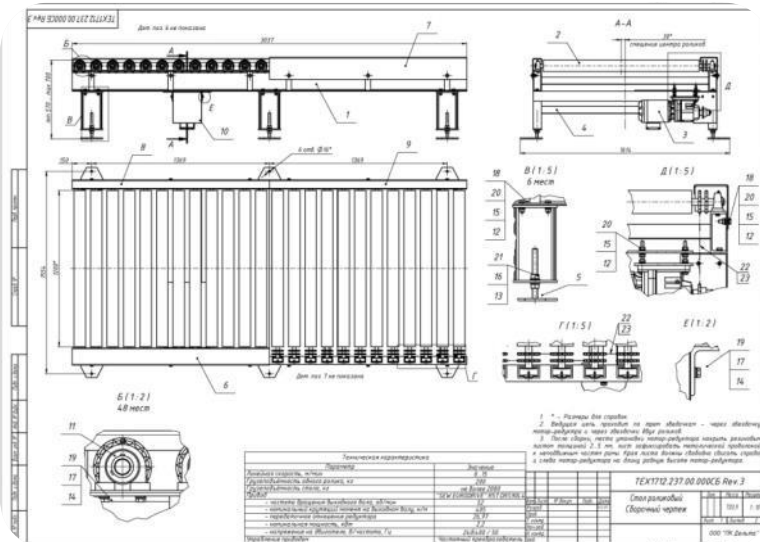
We carried out work on the design of all structures, the manufacture of components, installation was carried out, and commissioning was performed. The modernized equipment was put into operation.



## «Modernization of the open air conveyor»

Kingspan - Plant for the production of sandwich panels.

The complex of works on replacing the outdated gravity conveyor with a new driving roller conveyor has been completed. The conveyor consists of 5 tables with a chain driven for roller rotation. The total length of the new conveyor is 15 m.



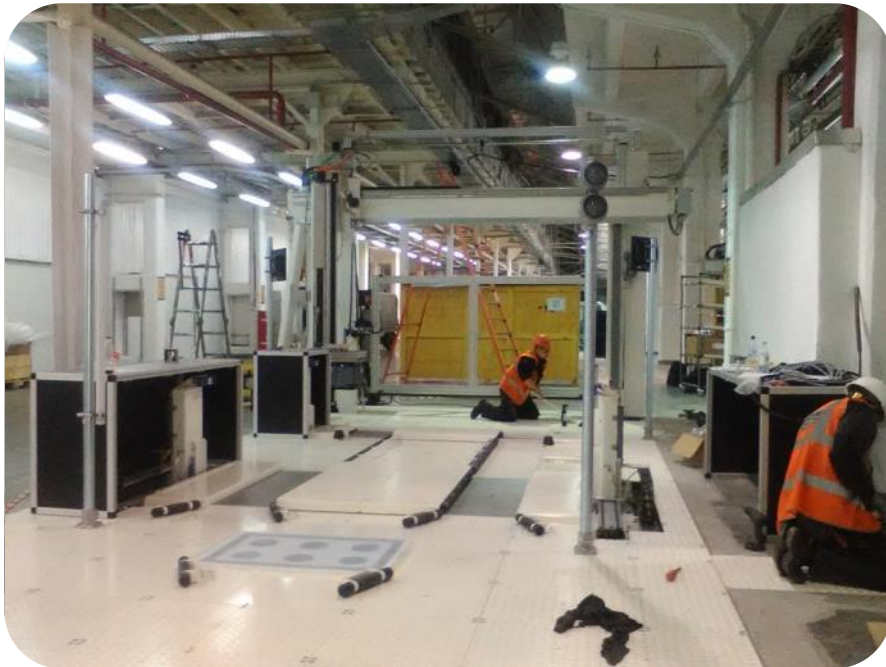
The scope of work included the design, manufacture, installation and commissioning of a new powered conveyor.



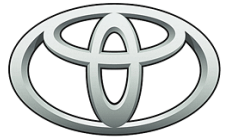
## «The installation of measuring stand»



Commissioned by the Belgian company BEP EUROPE, our specialists carried out a complex of works on installation and adjustment of the measuring stand. Also, the design and manufacture of a power frame to placement the test caliber was completed. Installation and configuration have been completed.





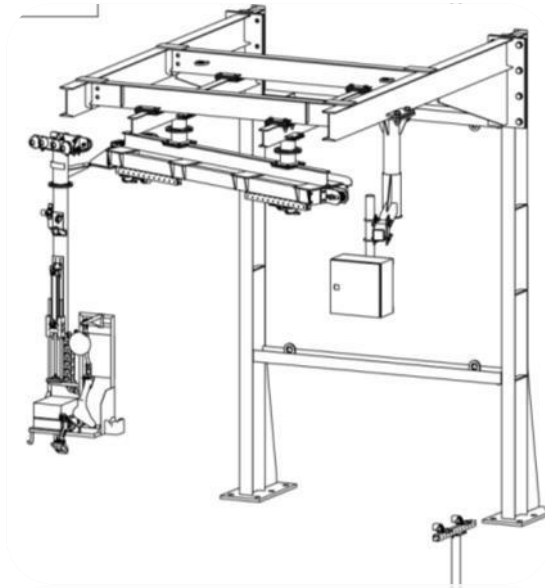


TOYOTA



TOYOTA TSUSHO

For TOYOTA-factory in St. Petersburg our company has completed a set of works on the design, manufacture and integration of Manipulator and automated control system.



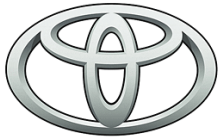
Manipulator is necessary for safe advance of tools to the operator's work area to prevent damage to the car body during technological operations.

Completed projects

## «Manipulator»



«Equipment for assembly of suspension»



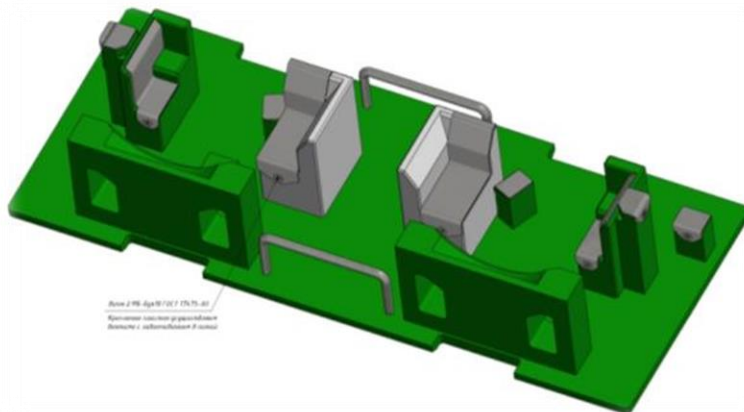
**TOYOTA**



**TOYOTA TSUSHO**



Within the project we have developed the design documentation, manufactured parts, made assembly and finishing equipment. Equipment is used for assembling elements of car's suspension.







TOYOTA



TOYOTA TSUSHO

### «Re-equipment of the area of the mobile unit»

Works on the re-equipment of this section were performed due to the increase in weight of the components of the mobile filling station.

New power structure and transport system designed, manufactured and installed.

Setup and commissioning work completed.

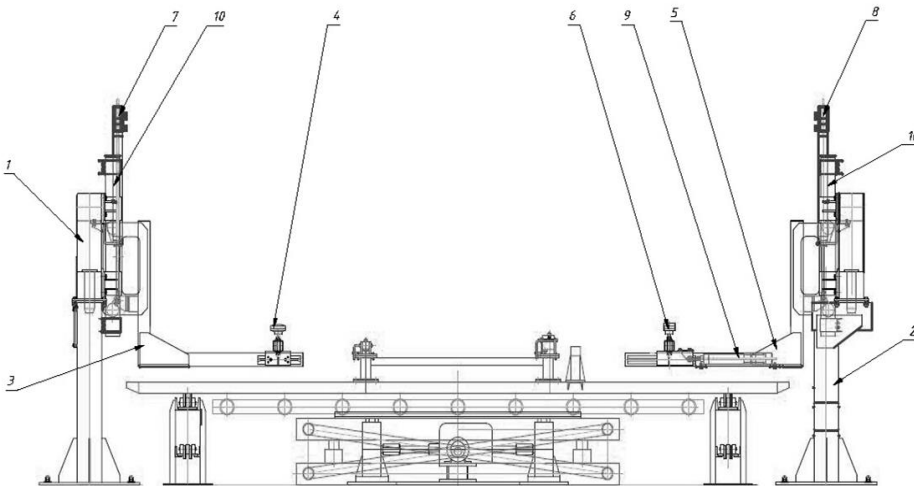






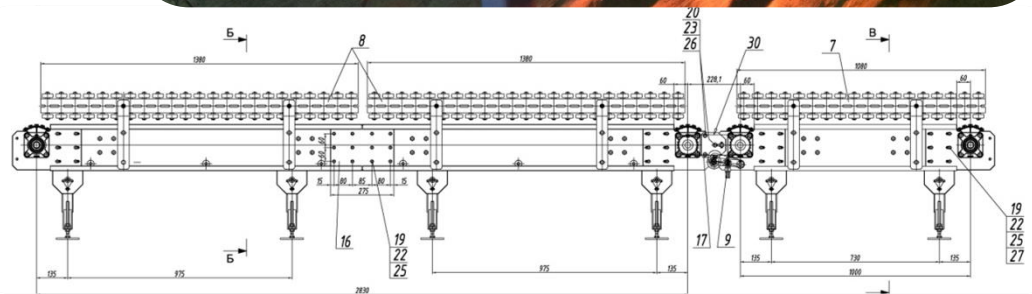
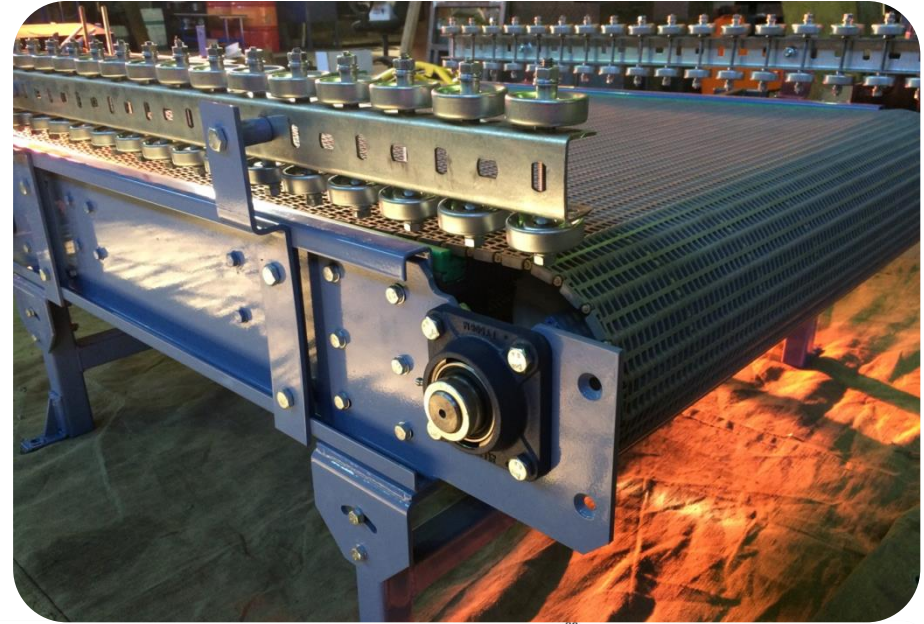
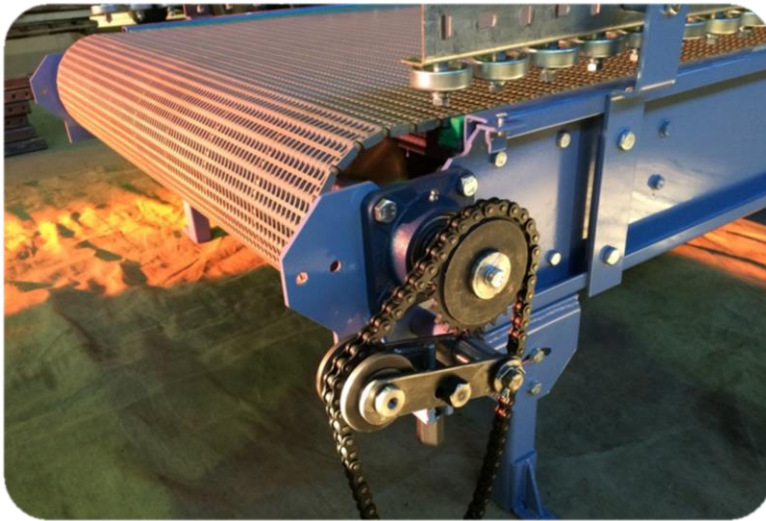
## «Stand of change of skids»

The automated complex of change of skids is designed, manufactured and put into operation. The complex allows in automatic and manual mode to change of skids. The control system makes identification the carbody and controls the unique two-post lift. The control system of the stand is integrated into the existing control system of the conveyor equipment.



**Continental**

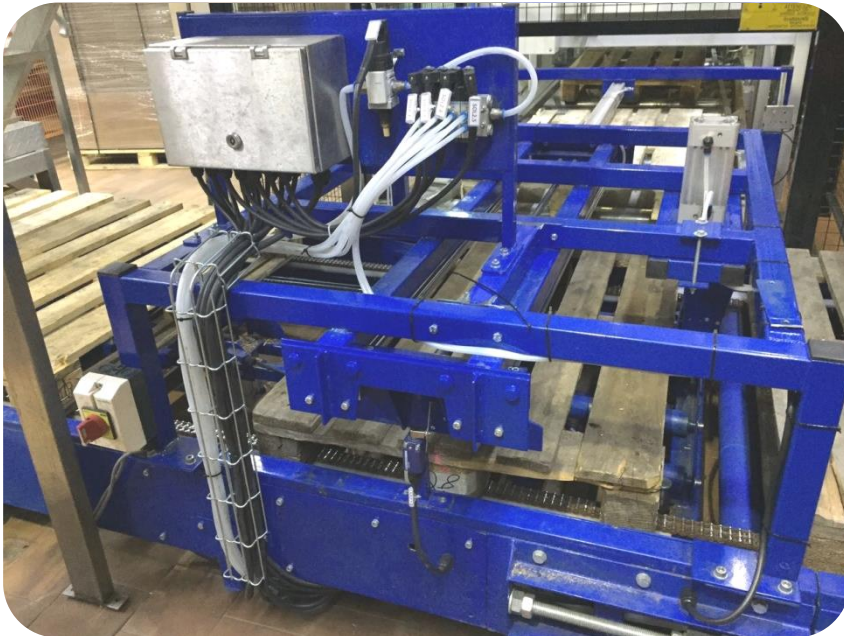
«Belt conveyor»



For Continental-factory we designed and manufactured Belt conveyor for replacement of finished products. The design and workmanship were highly recommended by the customer.



«Automated transport system»



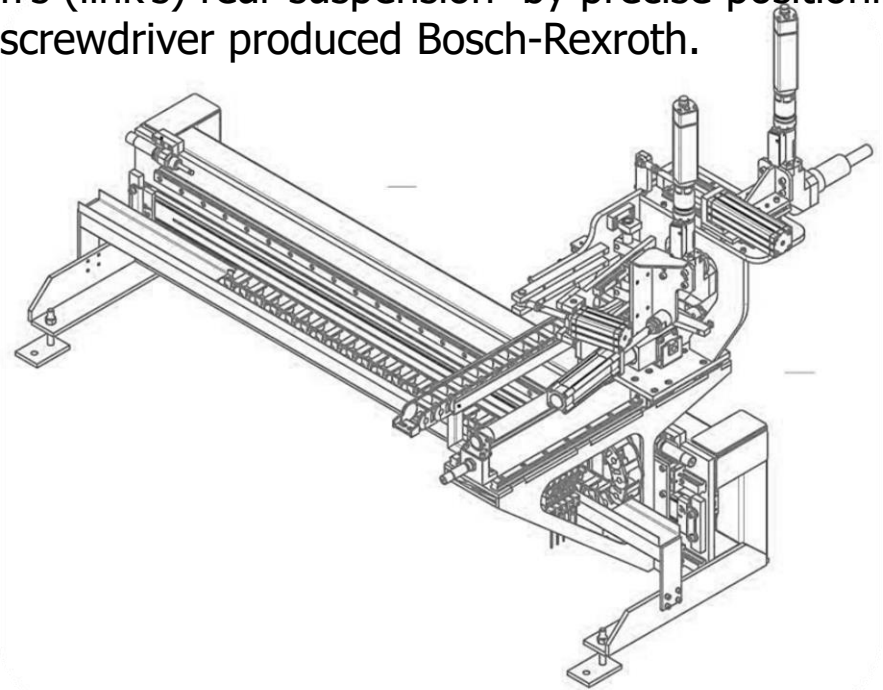
We performed work replacing the old worn-out conveyor with an automated modular transport system for feeding pallets to palletizers. We designed and manufactured the system ourselves. Turning on conveyor drives and supplying empty pallets exists locally in the work area of a particular palletizer. The transport system includes driving chain tables with an individual drive, lifts, kickoff, shut-off stoppers, automated control system cabinet and local control cabinets. We designed and manufactured the new system. Performed works on start-up and commissioning, customer training.



## «Automatic stand of bolts' tightening»

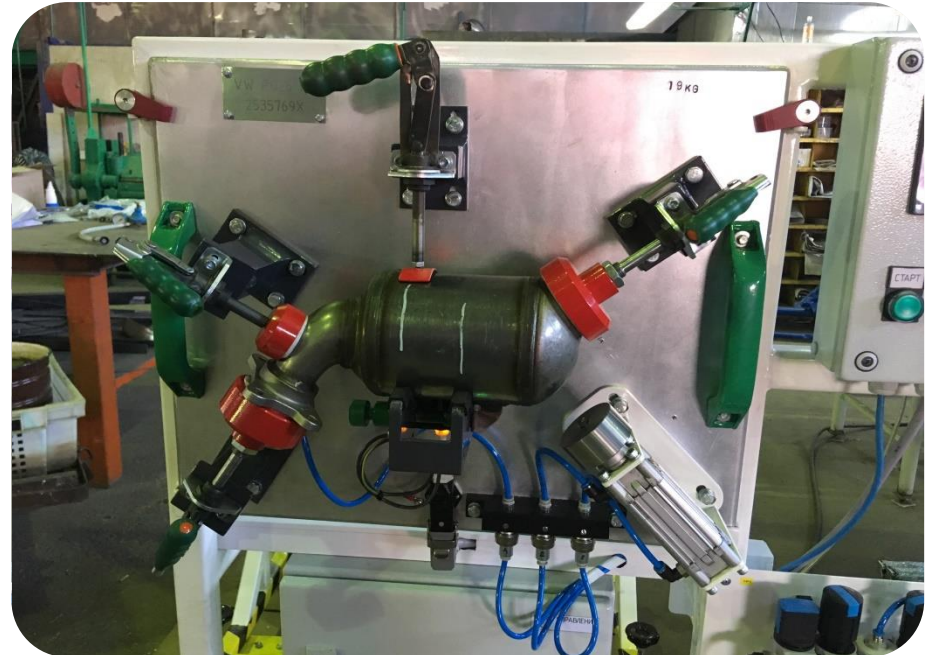
Our company successfully completed the design, production and commissioning works for **Automatic stand of bolts' tightening**.

Full name of project: Automatic positioning of screwdriver for automatic clamping of arm's (link's) rear suspension to cam. The stand is designed for automation screw-operation of bolts' tightening to arm's (link's) rear suspension by precise positioning of screwdriver produced Bosch-Rexroth.



## Completed projects

### «Leak test stand»



The stand is designed for leak test of weld joints of element's exhaust system in vehicles. Stand consists of frame, puller tooling, electric cabinet, operator's panel, pneumatic unit and percussion mechanism of marking.



«Automation of Dry chamber»



Our company completed the complex works on the automation of Dry chamber. We changed the dimensions of the dry chamber and its design. Also we installed automated system for monitoring the availability of parts in the chamber and system for moving charge cars with parts according to a given algorithm.



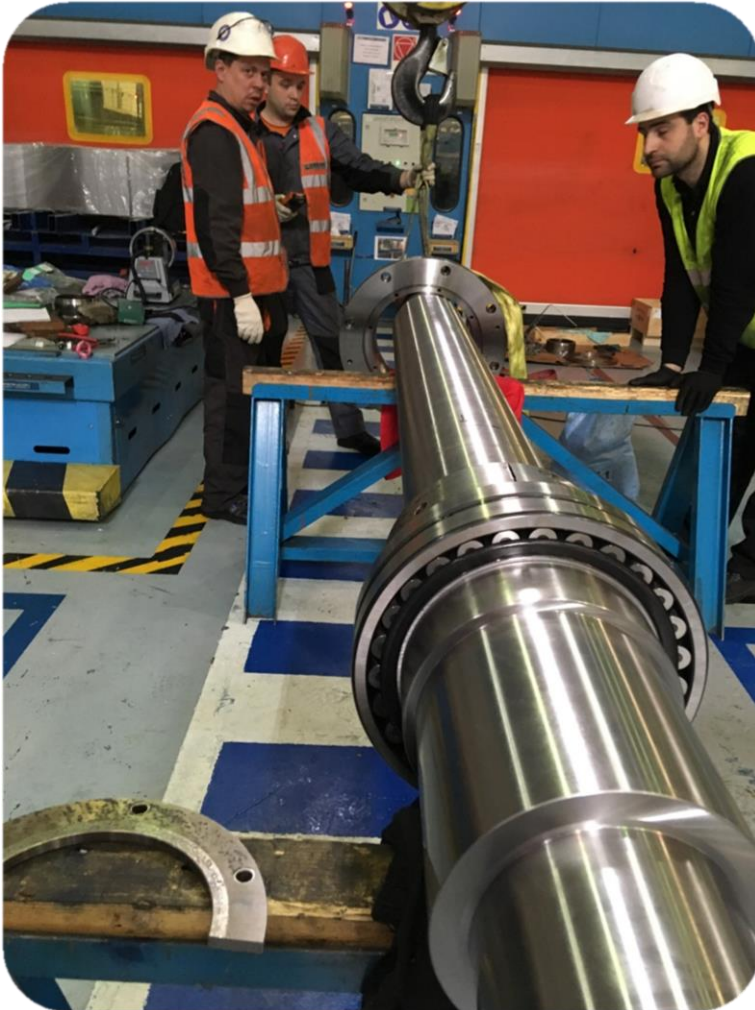
## «Door's illumination test stand »

We designed the lift-table for function check of Door's illumination modules: the module is installed on it, connected to the stand and the door is checked. The lift-table control system is connected to robotic welding cell and has the ability to exchange information. информацией.



## Completed projects

### «Press Repair»



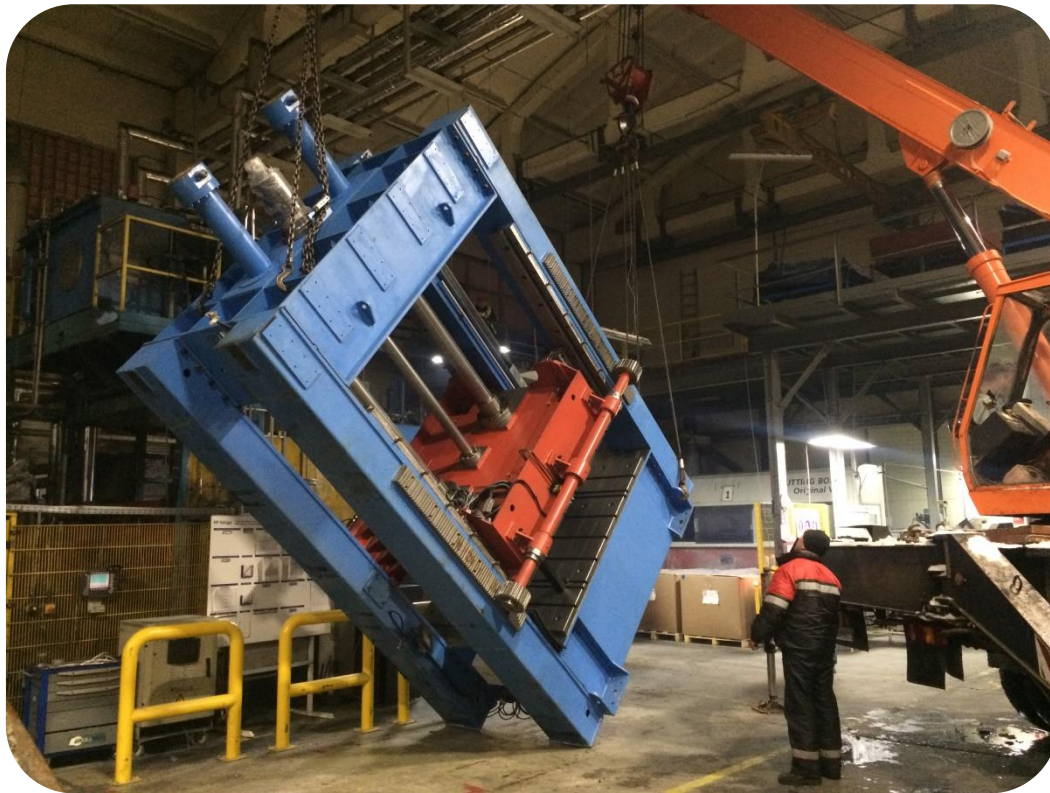
Our employees, together with Fagor engineers, completed the replacement of the main shaft of the sheet metal stamping press. The work was carried out at the Gestamp factory in Kaluga. The professionalism and quality of our work was highly appreciated by the Spanish engineers of Fagor.



## Adler Pelzer Group

## Completed projects

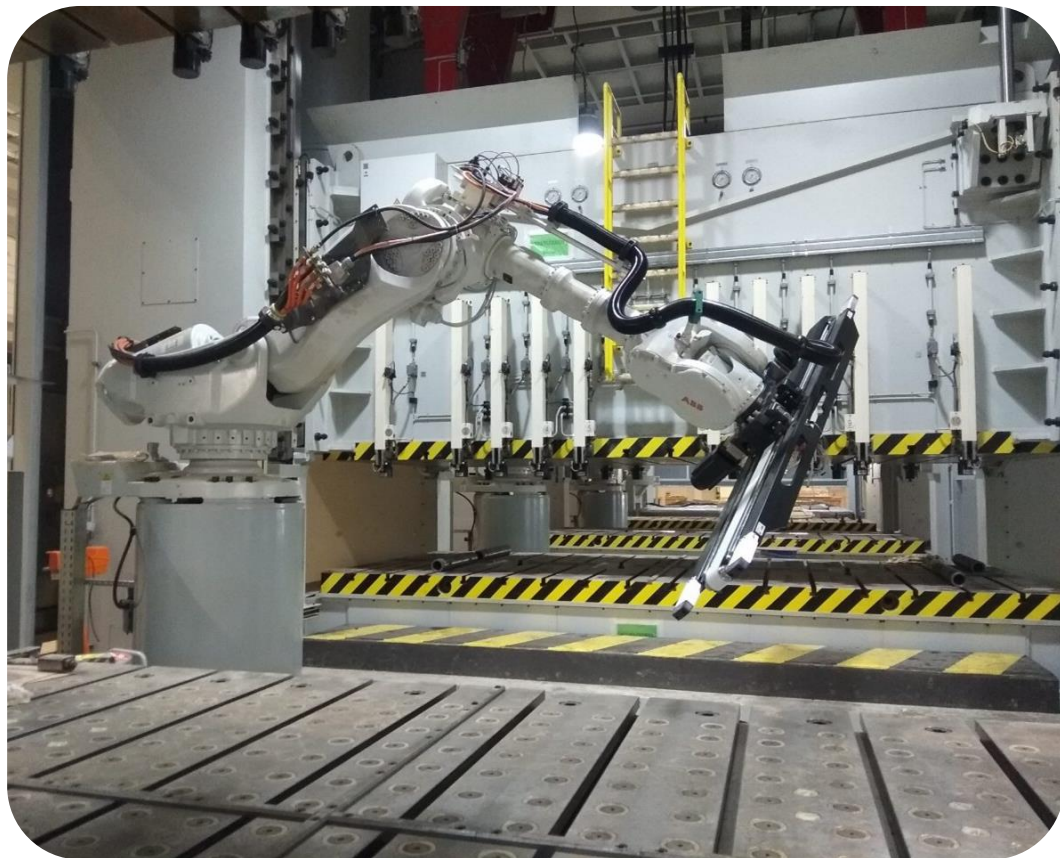
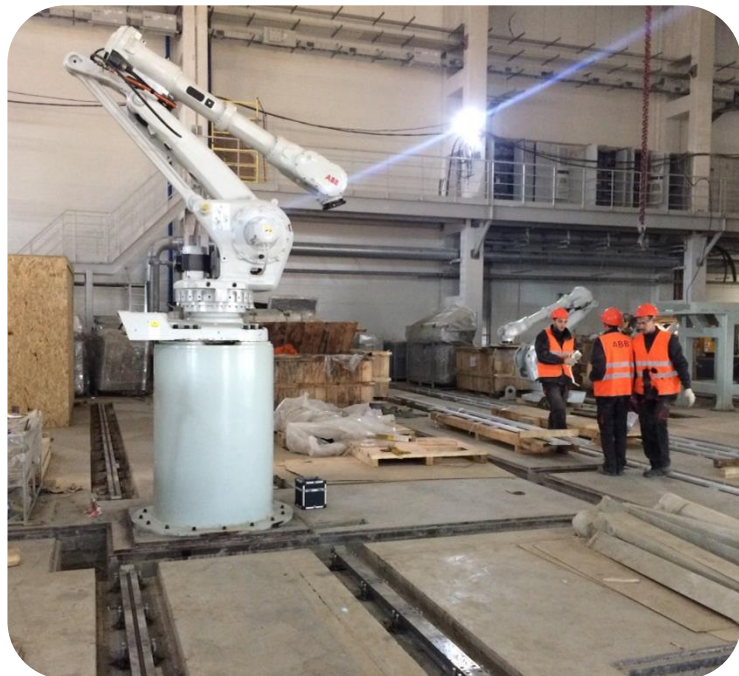
### «Moving of equipment»



Location: Plant for the production of car noise isolation elements in Kaluga.

Employees of our company completed a set of works in a short time: Works on shutting down, disassembling, dismantling, moving, assembling and starting up technological equipment, as well as works on moving and assembling presses.





Location: At the new **HAVAL plant** in the Tula region.

The engineers of our company, together with Chinese colleagues from ABB, performed the following works: Installation, commissioning and debugging of a robotic line that serves stamping presses. We performed a whole range of works on installation, connection and start-up robots. Also we completed the installation and configuration of the entire snap-in.



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