



DEVELOPED BY: UAB "EEC ENGINEERING"

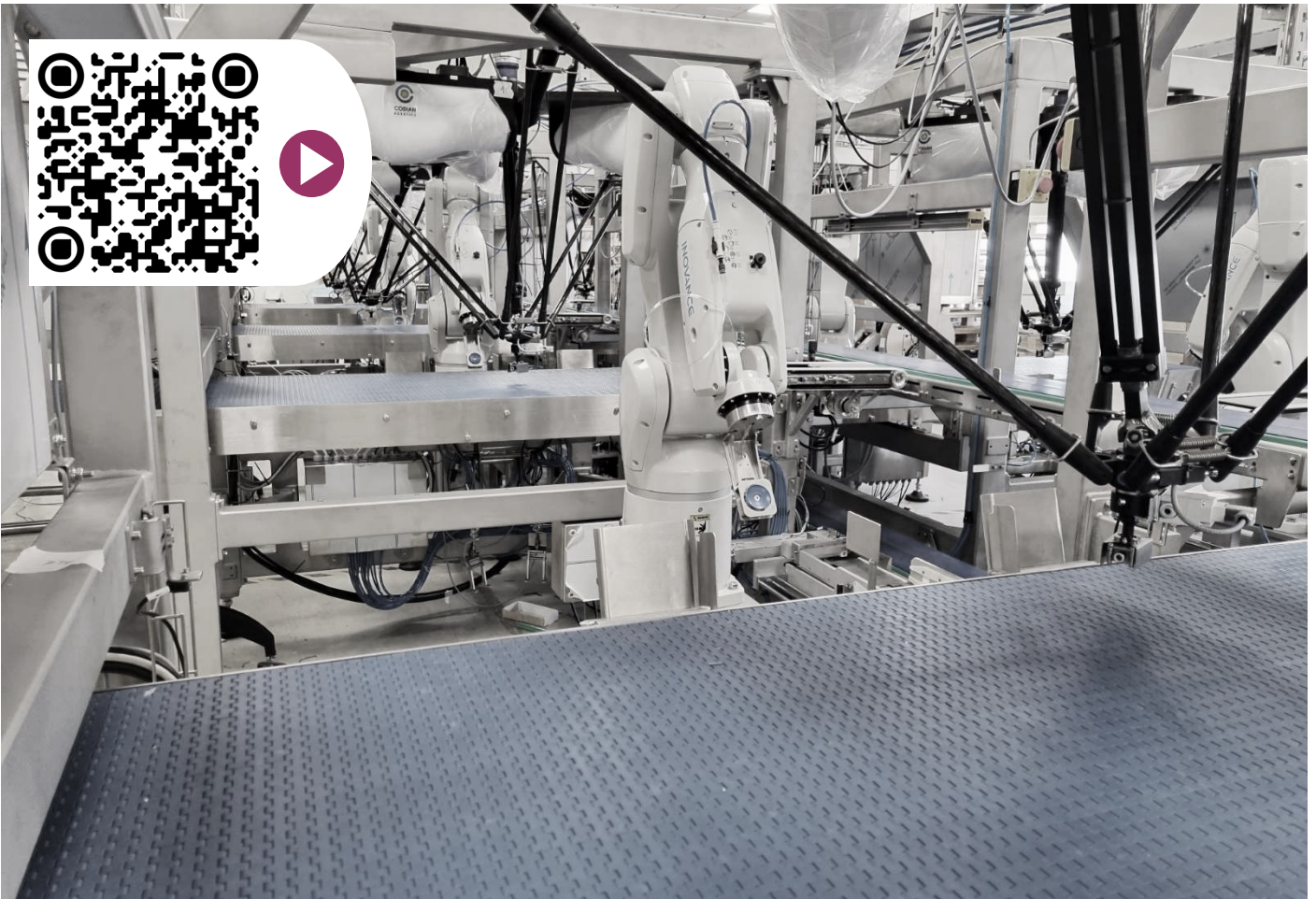
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ROBOTIC SOLUTION FOR PACKAGING PROCESS



ROBOTIC SYSTEM FOR PACKAGING OR STACKING OF PIECE PRODUCTS IN A STACK / TRAY / BOX / BAKING SHEET

• DESIGNED FOR FOOD PROCESSING COMPANIES •



Quick changeover from one container type to another

Stacking by weight or quantity

The system is suitable for installation in compact places

“I cannot say whether things will get better if we change; what I can say is that they must change if they are to get better.”

Georg Lichtenberg, scientist, philosopher and publicist

The Fourth Industrial Revolution, which is happening in the world right now, leads toward the liberation of the human from routine manual work and toward the increased competitiveness. Helping our customers to keep up with time, we suggest making a transition to Industry 4.0 and to the unmanned production based on our solutions. We would like to introduce one of our solution.

SYSTEM APPLICATION

The system is **designed for stacking piece products** into containers / stacks **by weight and/ or quantity**.

It allows the stacking of products of different shapes, sizes or materials.



Food industry
(bakery, snacks, frozen food, etc.)



Non-food industry

SYSTEM ADVANTAGES

- **Compact system:** the area of the basic module depends on the size of the working area and starts from 800x800 mm².
- **Multiformat system:** possibility to quickly switch from one packaging type to another. One of the implemented systems supports 4 types of packaging.
- **High performance:** up to **2.7 pick & place operations** per second per base module.
- **Increased productivity through parallel operation of several modules:** the possibility of installing several basic modules working on the same conveyor, which will multiply the performance of the system.
- The solution **corresponds to the Industry 4.0 concept:** it is designed to increase the company's production capacity, reduce errors in work, decrease the level of rejection, and free people from routine, repetitive work.

PACKAGING OPTIONS

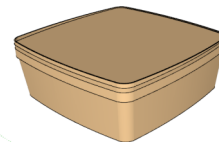
STACKING
CAN BE DONE
BY WEIGHT
OR QUANTITY

1



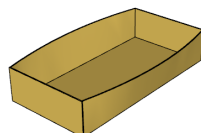
STACK

3



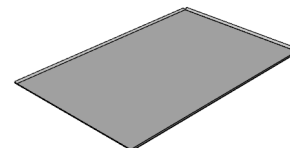
BOX

2



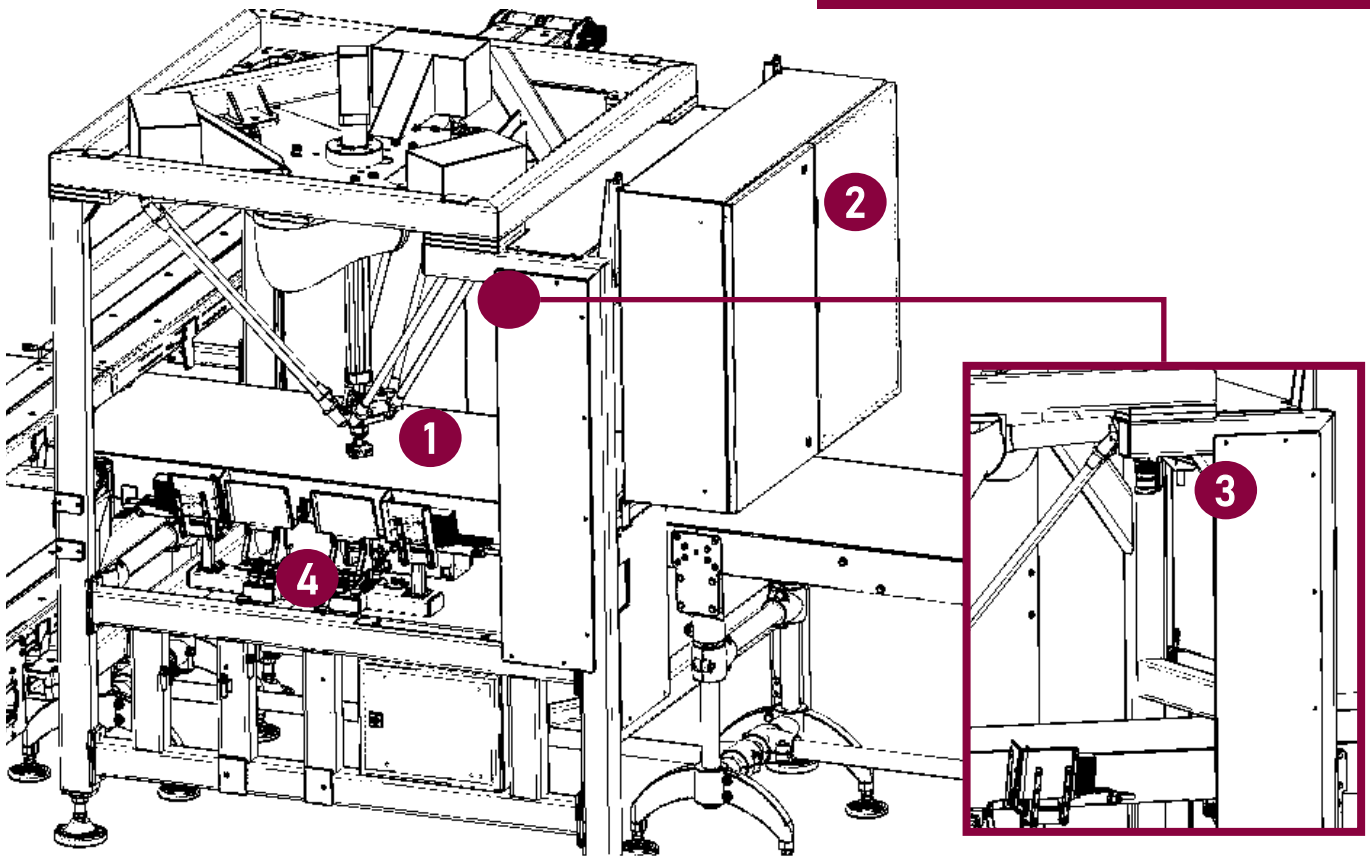
TRAY

4



BAKING SHEET

- Possible option of products stacking is adding an interlayer between two layers.
- The products can be stacked flat or on edge.
- The stacked products can be transported for further packaging in a flow-pack.



Minimum system configuration: one basic module. The number of base modules is determined based on the task.

One basic module consists of three basic elements:

- 1 Robot that performs stacking products in a stack / tray / box / baking sheet.**
Robot type: DELTA*. Robot brand: as agreed with the customer.
**With the DELTA robot, a more compact and faster solution can be realized. However, in agreement with the customer and depending on the task, this system can be based on the SCARA robot to obtain a more economical solution.*
- 2 Control cabinet:** includes control system for the robot and auxiliary systems, the vision system controller. It is connected to the overall system via a fast network (EtherCAT, PROFINET, Ethernet).
- 3 Vision system:** includes a vision camera and backlight located above the product infeed conveyor and a controller installed in the control cabinet. It allows to determine the location of the product on the infeed conveyor and, if necessary, to visually assess the quality of the product.
- 4 Place where products are stacked in a stack / tray / box / baking sheet,** i.e. the place where the support for the stack / tray / box / baking sheet is installed. In order to achieve continuity of the stacking process, usually 2 places are installed.

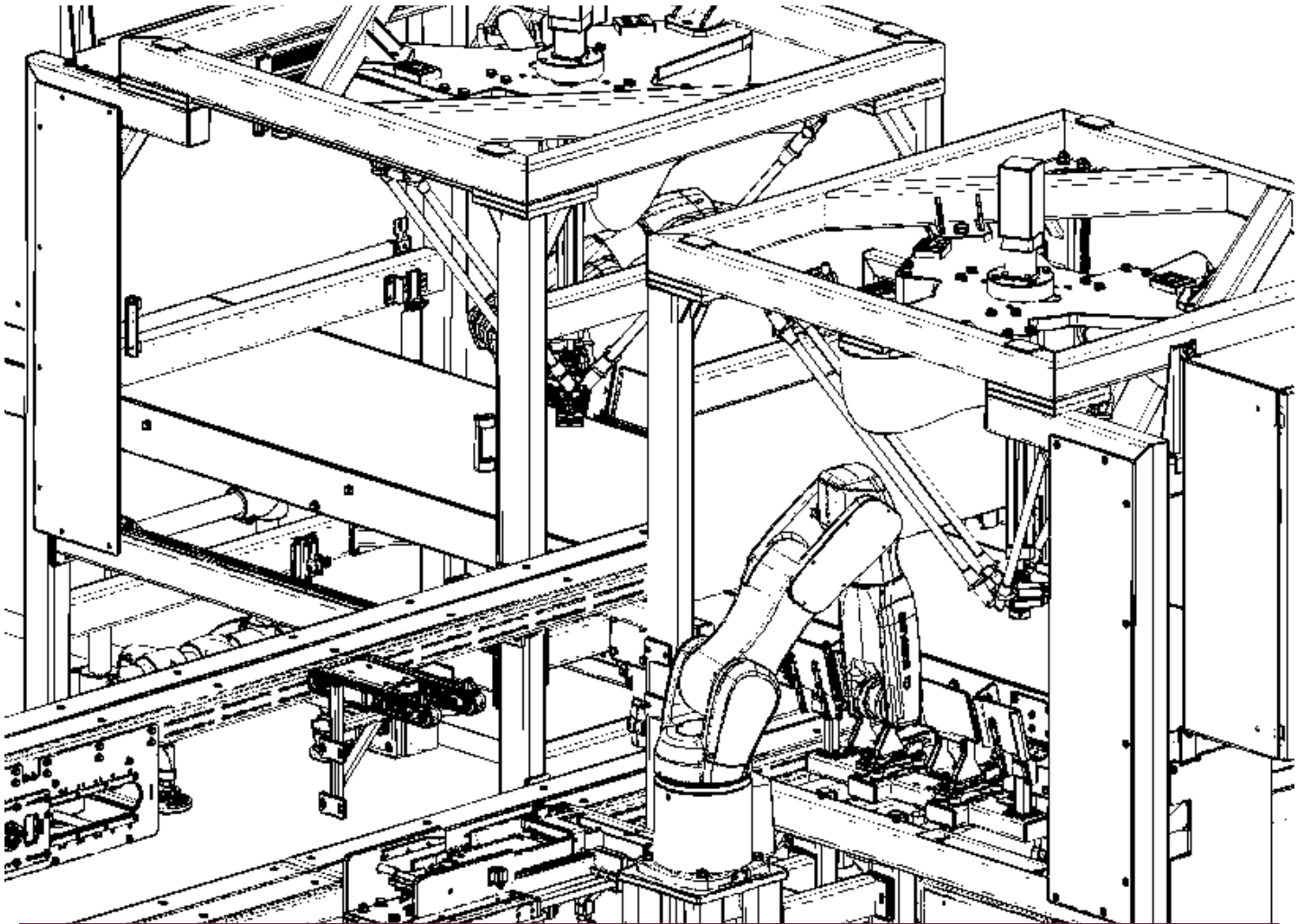
BASIC MODULE OPTIONS

- Weighing module for stacking products on a weight basis, i.e. stacking process stops when the set weight is reached.
- Loading robot for feeding and returning containers to the stacking area.
- Empty container pick-up device from the empty container conveyor.
- A device for loading filled containers onto the finished product conveyor.

ROBOTIC SYSTEM OPTIONS

- Empty container feeding conveyor.
- Feeder of empty containers to the empty container conveyor. There can be multiple feeders for duplication or when using several container options.
- Conveyor for dispensing finished products.
- Post of placing labels into container (when it is necessary to add a label or information brochure to a container).
- Cover placement post, if the box assumes a cover.
- Flowpack pairing system.
- Post for stacking primary packaging into cardboard boxes.
- Palletizer for placing cardboard boxes with products on pallets.
- To ensure smooth operation of the system, sensor and vision-based monitoring systems are installed at all locations to remove rejects and eliminate accidents.

The selection of options is made by our engineers according to the task and requirements of the Customer. The selected options will be shown in the technical proposal and agreed with the Customer.



IS THIS SOLUTION SUITABLE FOR YOUR TASK?

Are you interested in developing your production and are you considering options for optimizing your packaging process? Then we would be happy to provide you with a free consultation on the application of this solution to your production process.

For this, please send us a request to info@euroec.lt with a description of the task, including the following details:

- ◆ Type of product (including dimensions, weight, material) with photo
- ◆ Packaging form (including dimensions, weight, material) with photo
- ◆ Type of packaging (by weight / by quantity)
- ◆ Required performance
- ◆ Information on how the products are fed for packaging (dimensions of the conveyor or other device used to feed the products and video)

Our experts will analyze the information provided and, as soon as possible, prepare a detailed proposal for the application of this system to your production process.

UAB “EEC Engineering” specializes in the development and implementation of solutions for production automation (automatic warehouses, vision systems, product packaging systems, etc.). Working since 2012, the company has managed to establish itself as a reliable supplier and develop a portfolio of solutions for implementation at production enterprises. The catalog of solutions for review is available by QR code, as well as on the company's website.



OUR WAY OF WORKING

Describe us your task and we will find the best solution for you, show it to you and adjust the solution according to your requirements.

SERVICES WE PROPOSE AFTER COMMISSIONING :



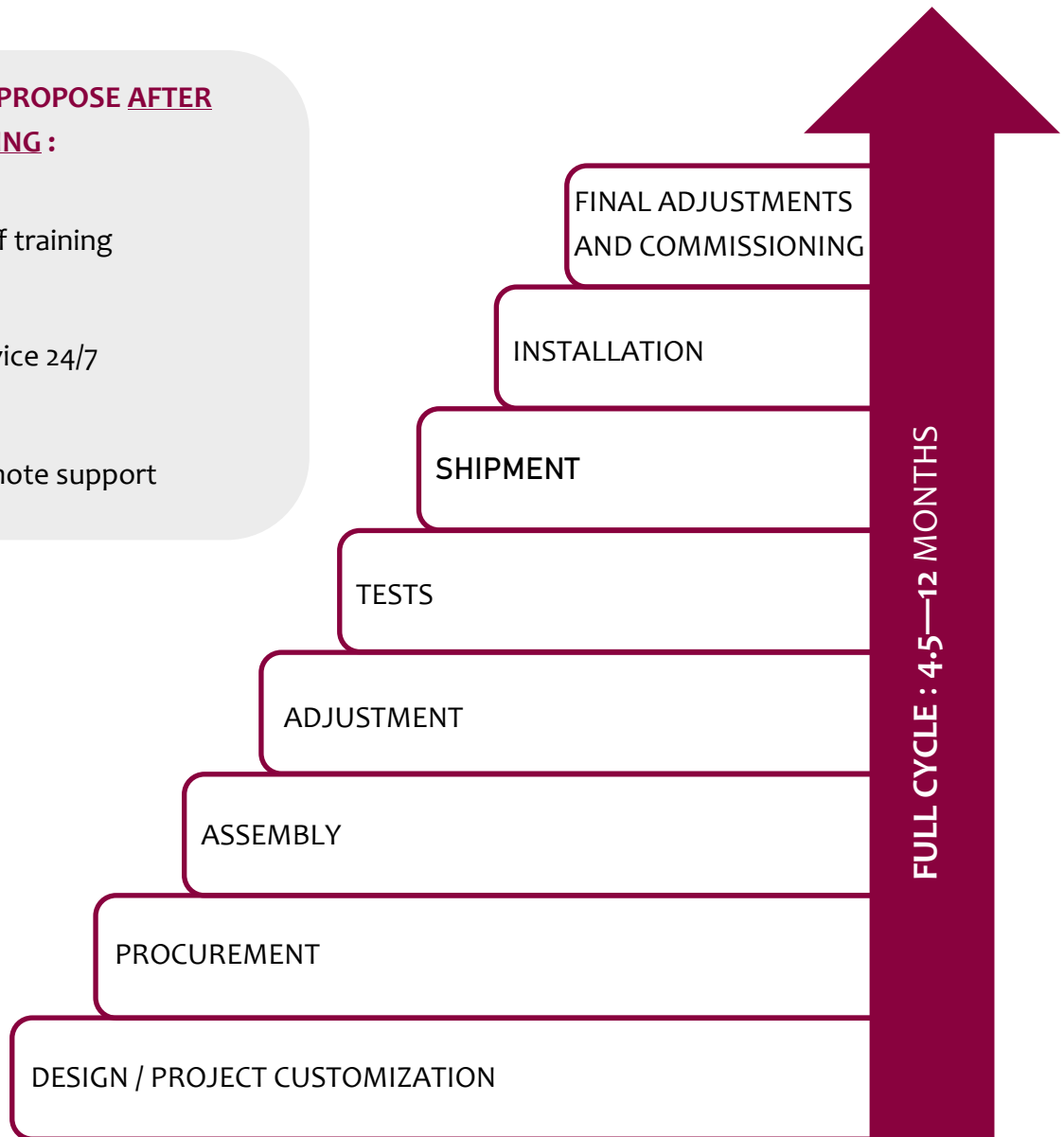
Staff training



Service 24/7



Remote support



We look forward to your inquiries!

Respectfully,

EEC Engineering

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