RoboMill

CONTENT

3 Introduction

4 Key elements

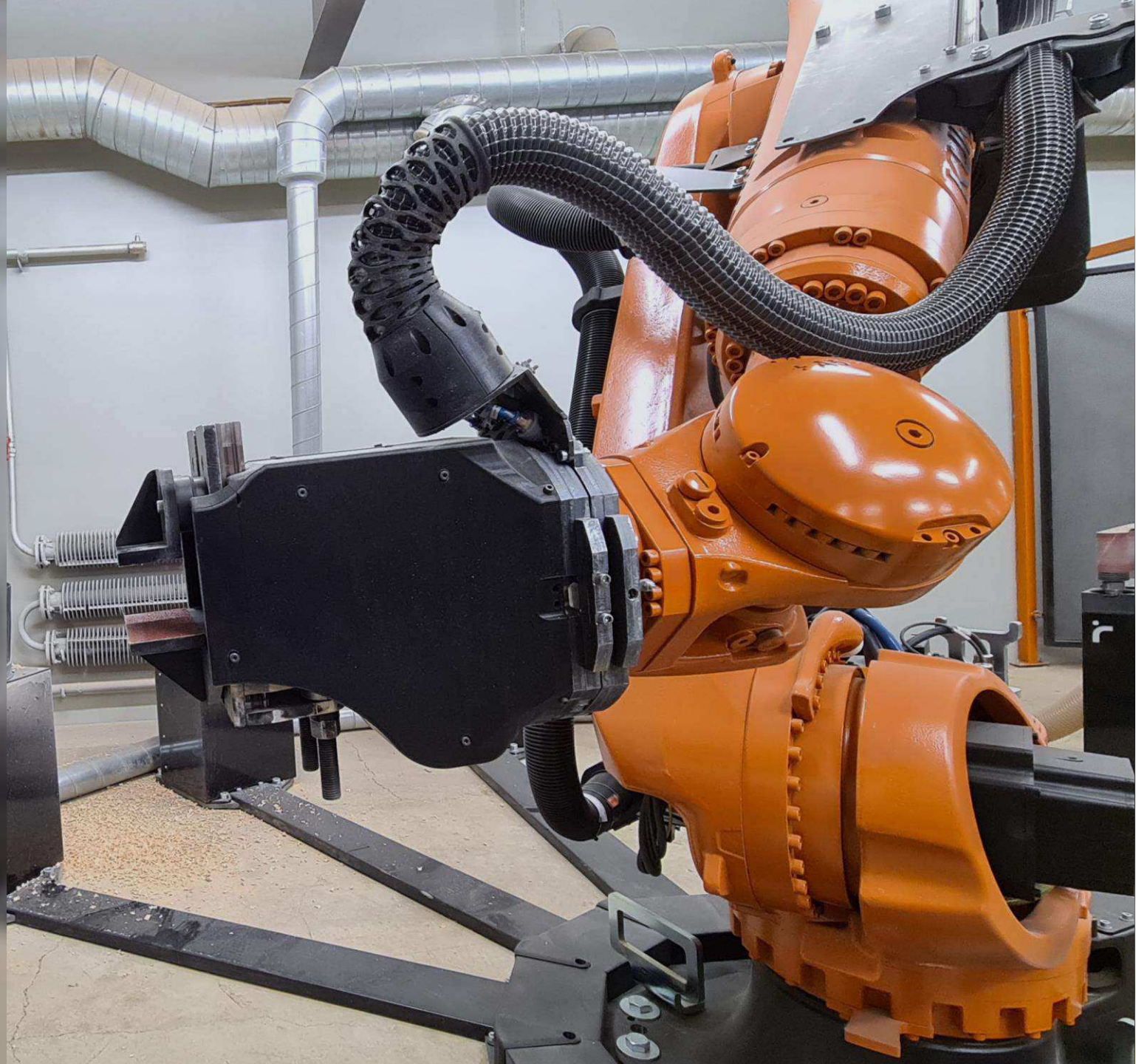
13 Main features

14 RoboMill cell parameters

16 Sustainability

18 Service

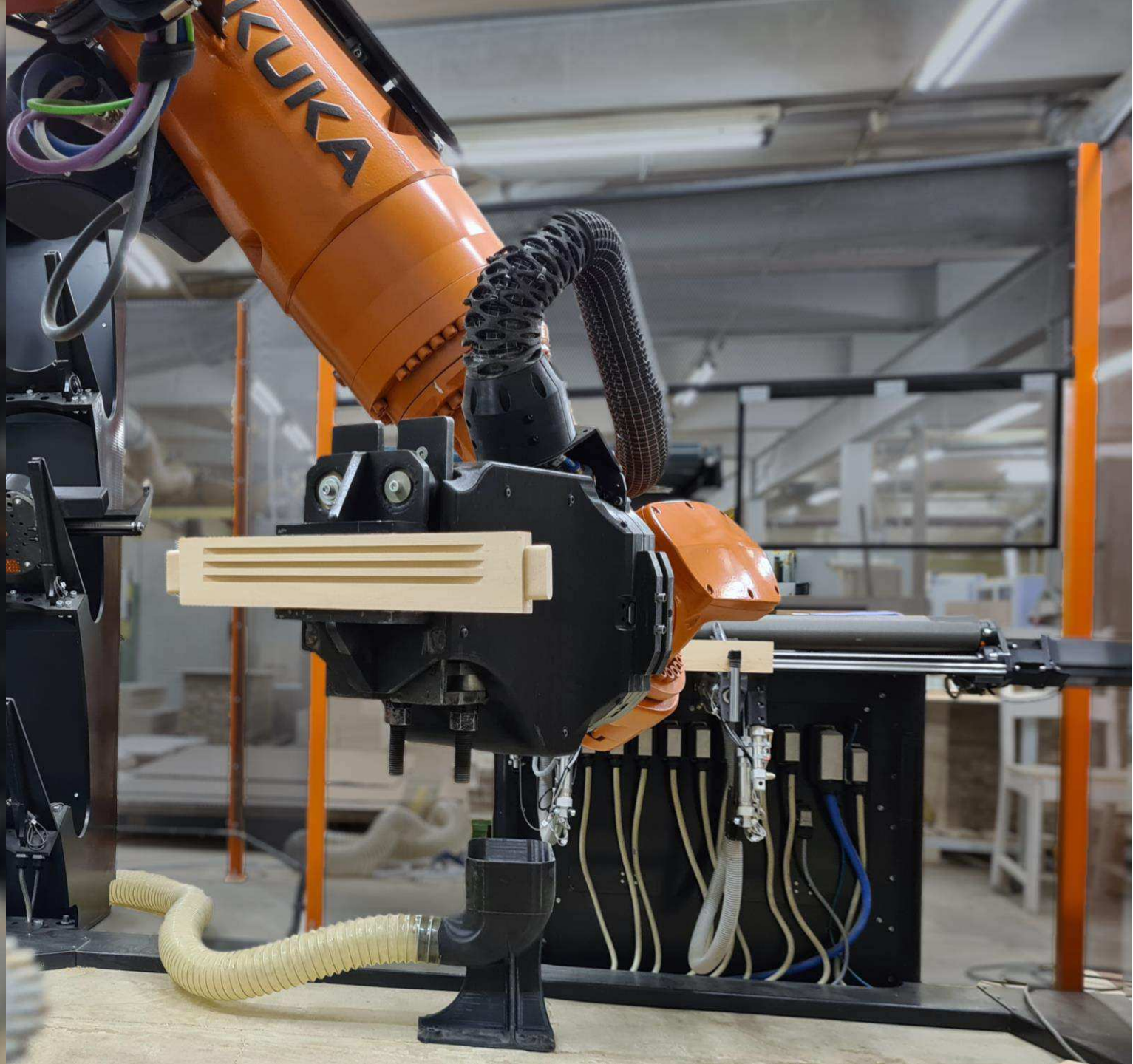
19 Industrial Robotics Company

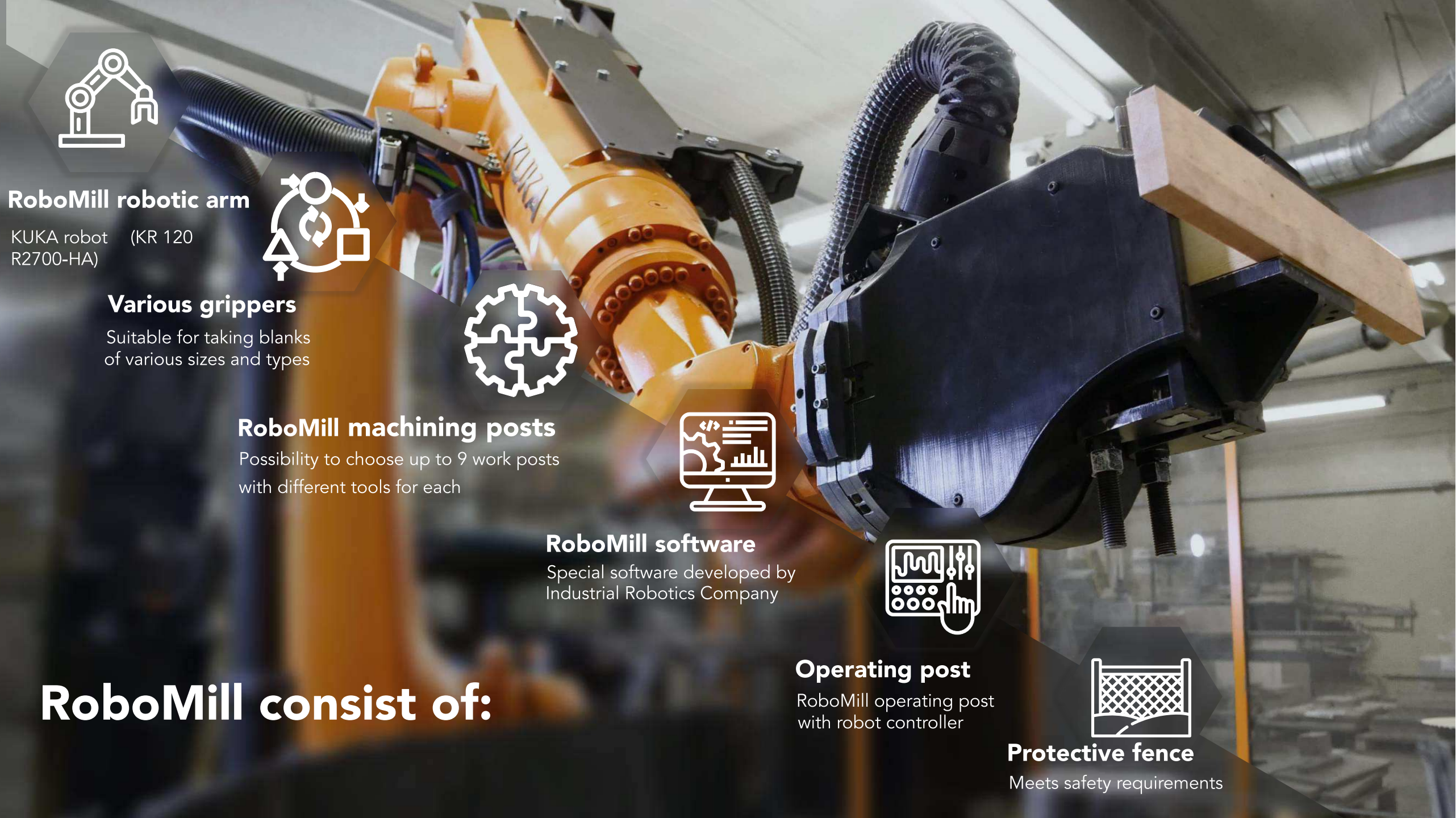


Self-contained robot for processing workpieces

RoboMill is a robotic system that replaces hazardous manual work using a variety of machining tools: cutters, drills, grinding equipment, and more.

Thanks to this system, the accuracy and quality of the final product is maintained in the production facilities 24/7, a stable production flow is ensured, and the number of accidents is reduced. This solution can change even a few workplaces, reducing production costs and the need for human resources.





RoboMill consist of:

RoboMill robotic arm

KUKA robot (KR 120 R2700-HA)

Various grippers

Suitable for taking blanks of various sizes and types

RoboMill machining posts

Possibility to choose up to 9 work posts with different tools for each

RoboMill software

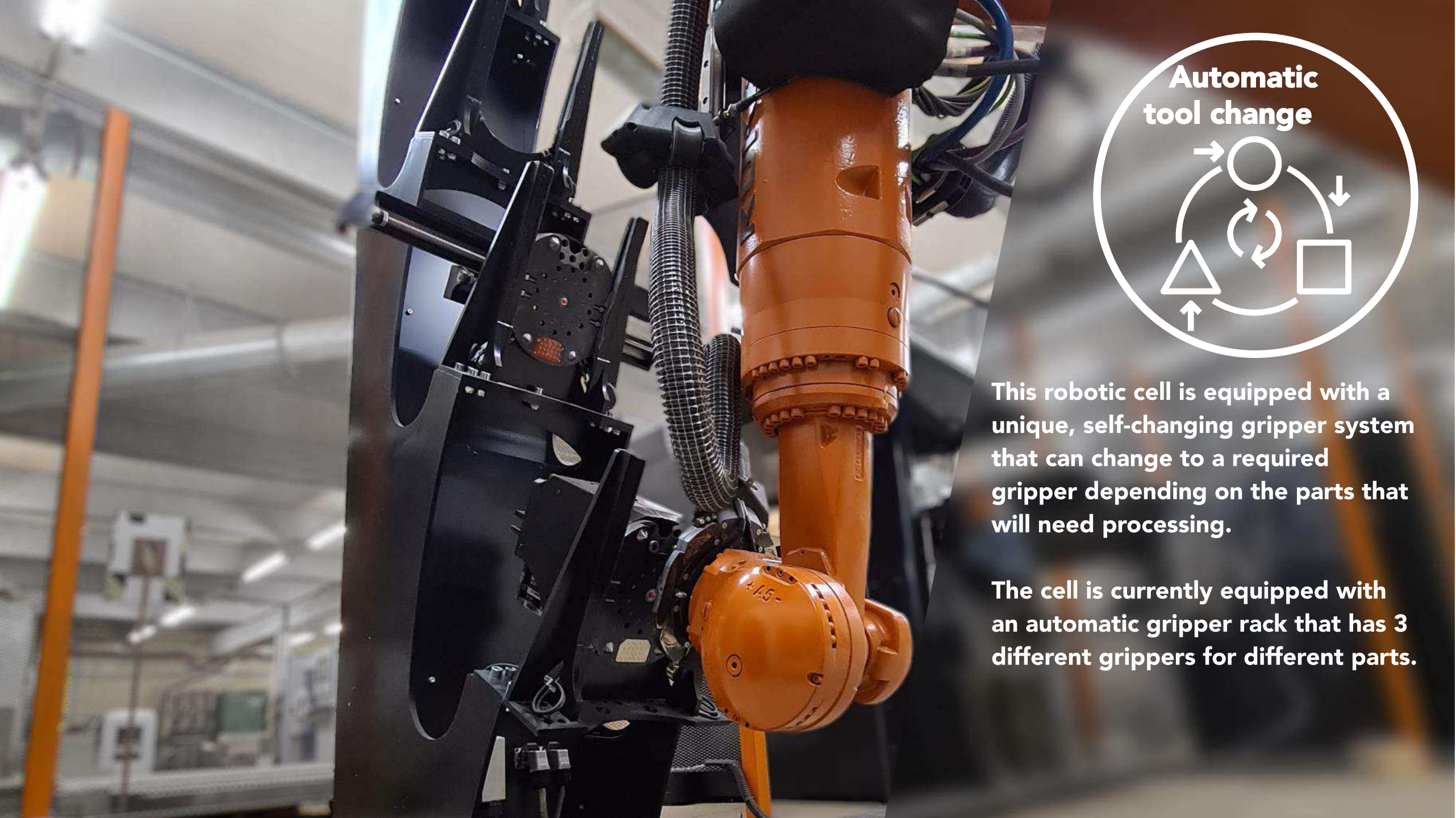
Special software developed by Industrial Robotics Company

Operating post

RoboMill operating post with robot controller

Protective fence

Meets safety requirements

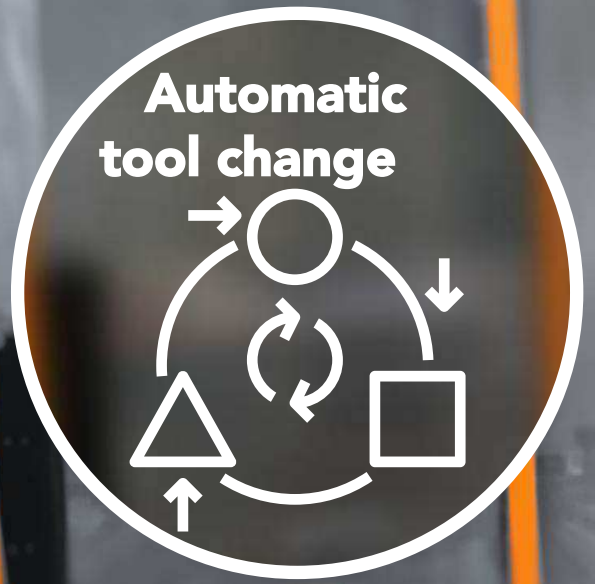


This robotic cell is equipped with a unique, self-changing gripper system that can change to a required gripper depending on the parts that will need processing.

The cell is currently equipped with an automatic gripper rack that has 3 different grippers for different parts.

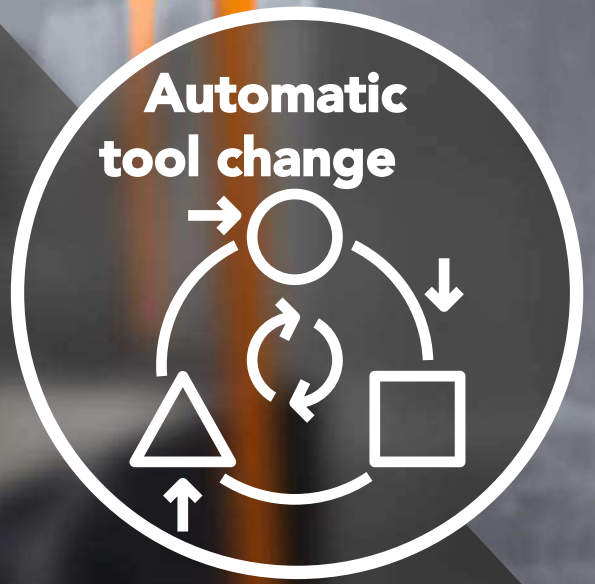
Finger gripper

The workpiece is picked up with the help of a finger in the gripper, after the robot has drilled a technological 22x50mm hole. In this way, the workpiece is processed from 5 sides.



Gripper with horizontally moving fingers

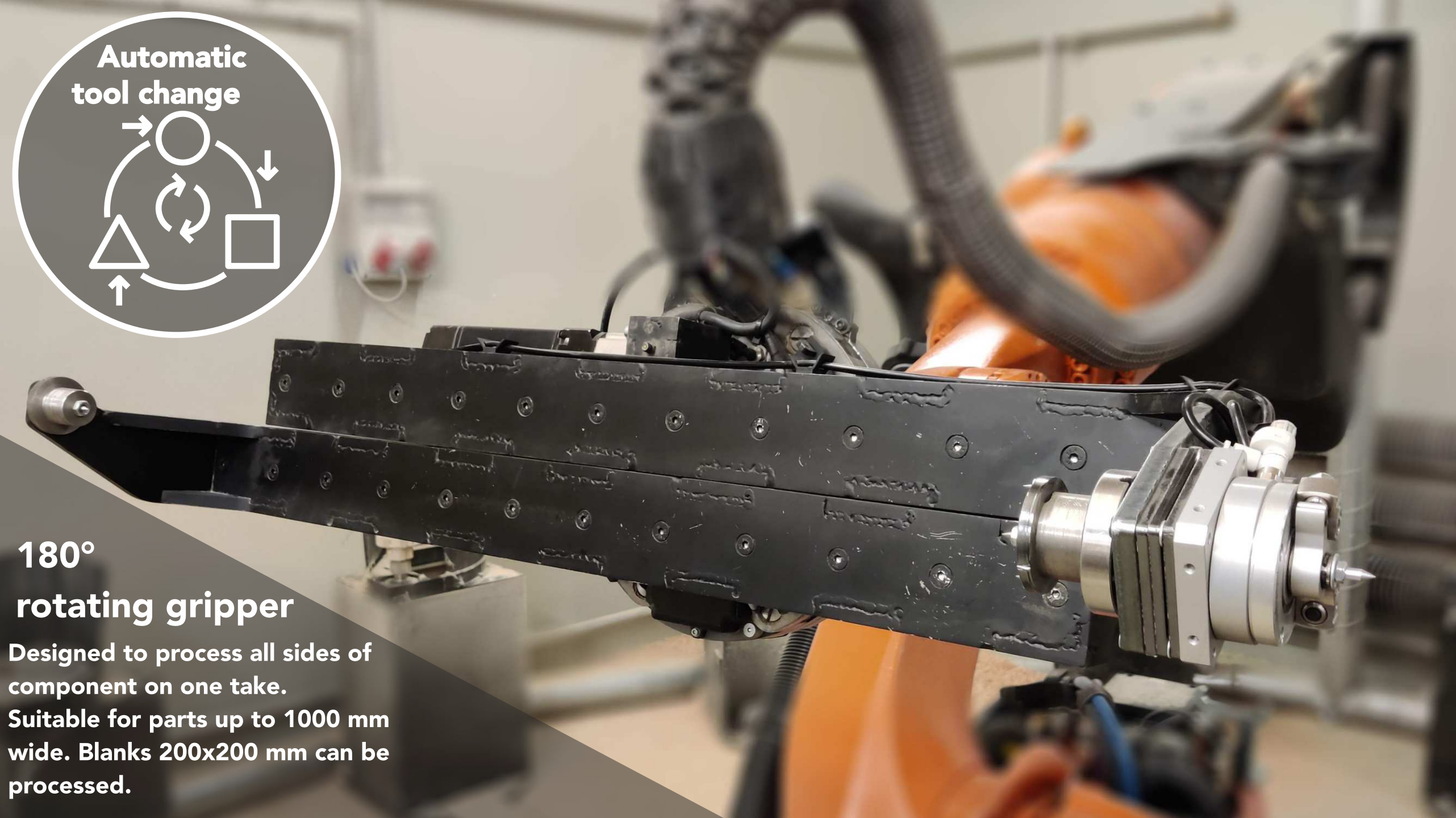
Suitable for workpieces, the lengths of which can vary from 100 to 800 mm, for compression at the ends. The workpiece taken with the help of this gripper can be processed from 4 sides.



Gripper with vertically moving plates

Designed to machine the ends of the workpieces and the front of the workpiece.

Gripper working part opening stroke from 5 to 135 mm; working part depth without inserts – 75 mm; working part width without inserts – 120 mm.



180°
rotating gripper

Designed to process all sides of component on one take. Suitable for parts up to 1000 mm wide. Blanks 200x200 mm can be processed.

Replaceable workstations

The robot is placed in the center with the possibility of rotating around its axis in 360 degrees to reach all the work posts placed around it.
These posts can be fitted with various tools for milling, drilling (multi-spindle), cutting, grinding, forging, assembly of parts, etc., as required.

Automated feeding and removal of workpieces

An automated workpiece feeding and removal system with universal positioning ensures independent robot operation, even when there is no operator nearby.
The lower part of the conveyor L2000 x W800 x H900 mm is filled with blanks, and the finished products are placed on the upper part of the conveyor L2000 x W800 x H1300 mm.

Operating post

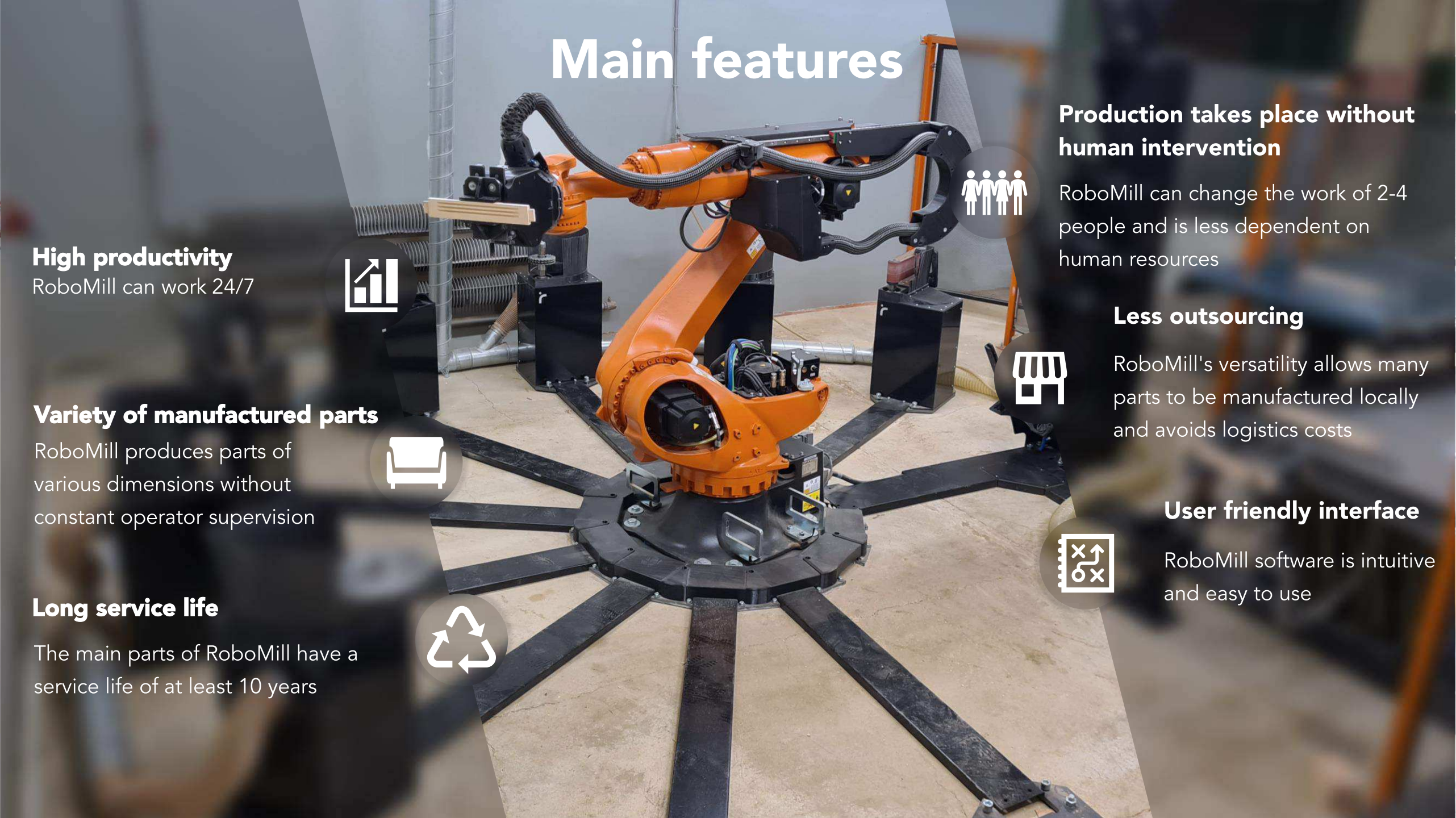
Computerized operator's workplace with integrated robot controller KR C4 and software developed by Industrial Robotics Company to control RoboMill cell.

User-friendly software environment - operated via a touch screen.

RoboMill software

- Production order management
- Production order database
- „SprutCam" software for the description of the workpiece processing process
- Automatic production time forecast
- Production task planning
- „Push Bullet" - fault and standard information reporting system
- Database of production error messages

Main features



High productivity
RoboMill can work 24/7

Variety of manufactured parts
RoboMill produces parts of various dimensions without constant operator supervision

Long service life

The main parts of RoboMill have a service life of at least 10 years

Production takes place without human intervention

RoboMill can change the work of 2-4 people and is less dependent on human resources

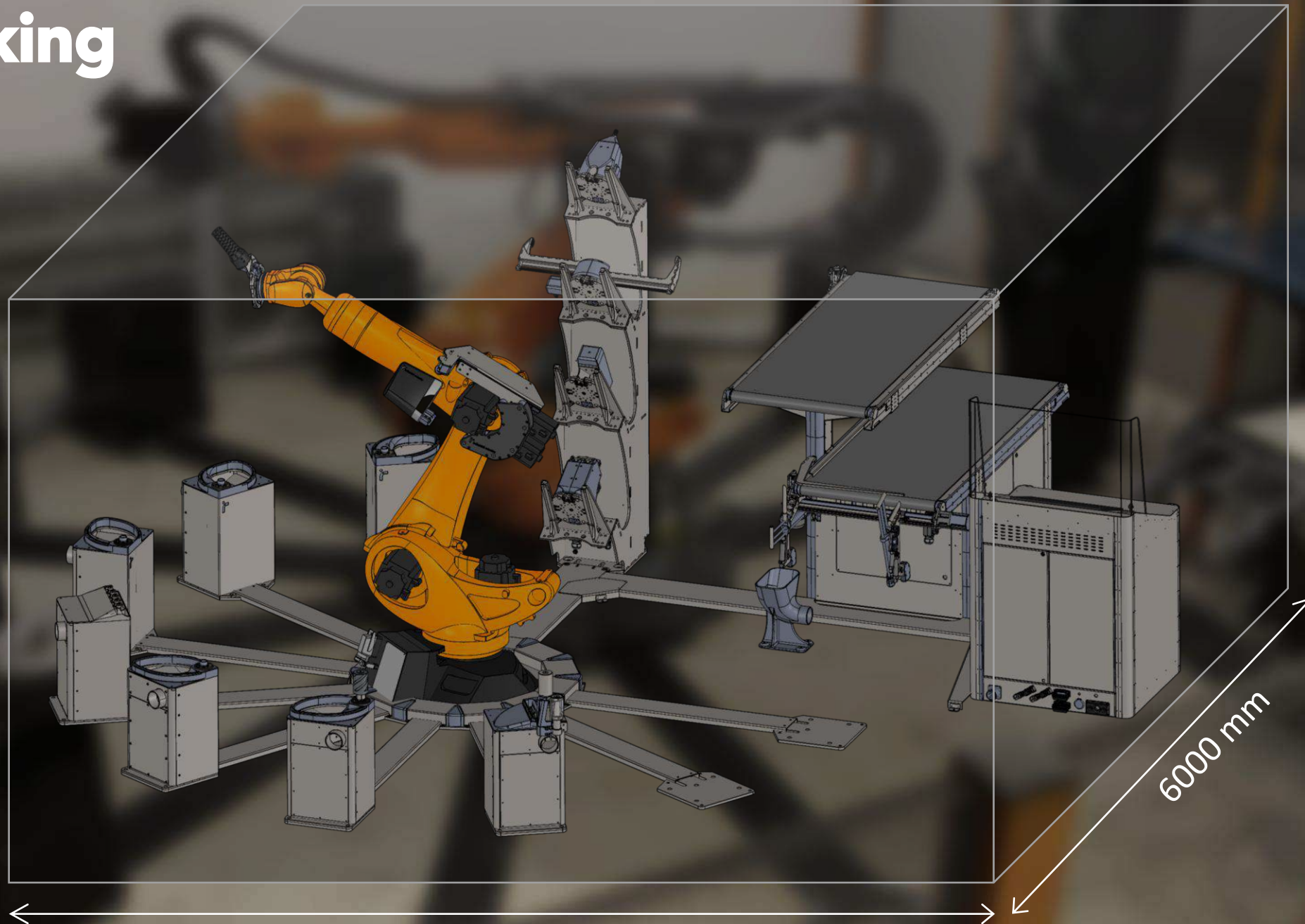
Less outsourcing

RoboMill's versatility allows many parts to be manufactured locally and avoids logistics costs

User friendly interface

RoboMill software is intuitive and easy to use

Cell working area



RoboMill parameters

Robot model	KR 120 R2700
Working area, mm	6000 x 6000 x 3000
Conveyor filled with product blanks, mm	2000 x 800 x 900
Conveyor filled with products, mm	2000 x 800 x1300
Modifications to machining posts are possible	Milling, belt sanding, drilling (5 spindles / on site), cutting, universal spindle, etc.

Machining post parameters

Cang type	ER16, ER32
Spindle power	7,5 kW/1,5 kW
Number of turns in one minute	0 - 18 000 rpm
Compressed air	6 bar

Operating requirements

Elektric	400V, 3F, 32A
Compressed air min permeability	360 L/min, 6 bar. (inner diameter of the hose 8mm)
Compressed air dryness	0 °C dew point
Environmental settings	10-30 °C, humidity 20-80%
Basis	Reinforced concrete > 200mm

Operating parameters

Electricity consumption	6-10 kWh
Compressed air consumption	1 L/min

Benefits

Higher productivity

RoboMill can work independently and without interruptions 24/7

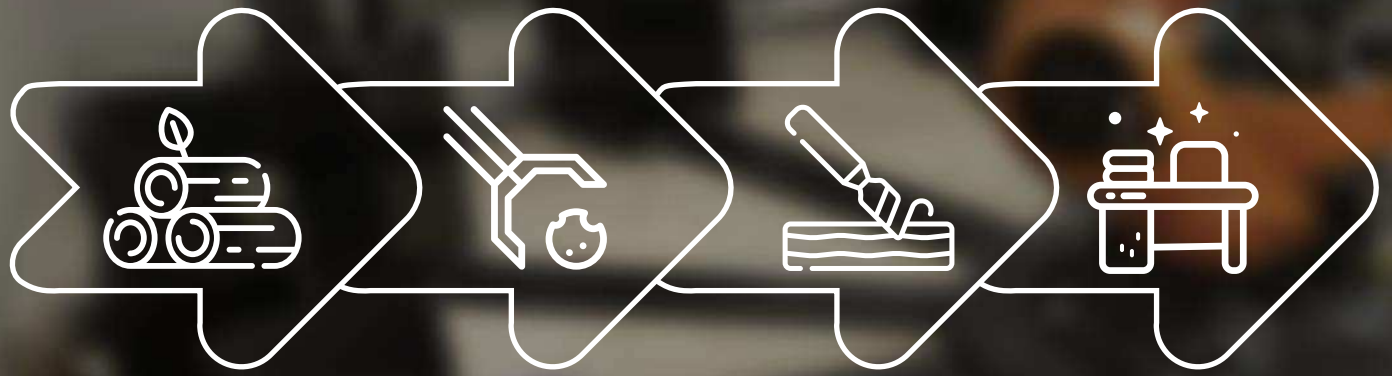
No production of product templates required

Working time is reduced as parts do not require the production of templates and the workpiece placing before machining

A safer working environment for employees

RoboMill takes over hazardous work at the machine - reducing the risk of accidents to workers

RoboMill – solution # 1 for your production



- If you are looking for an innovative and efficient solution for workpiece processing
- If you have difficulty finding production staff
- If you want your employees to do more skilled and value-added jobs
- If you plan to expand the range of products
- If you are planning to expand your business

Service

Remote service team

Remote Service Team - Ready to respond to a fault message within 4 business hours

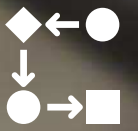
industrial robotics®

On-site service team

Service team consisting of a mechanical engineer, an automation engineer and a programmer - ready to respond to a fault message within 2 working days

Software service

Repair of mechanical equipment



Maintenance

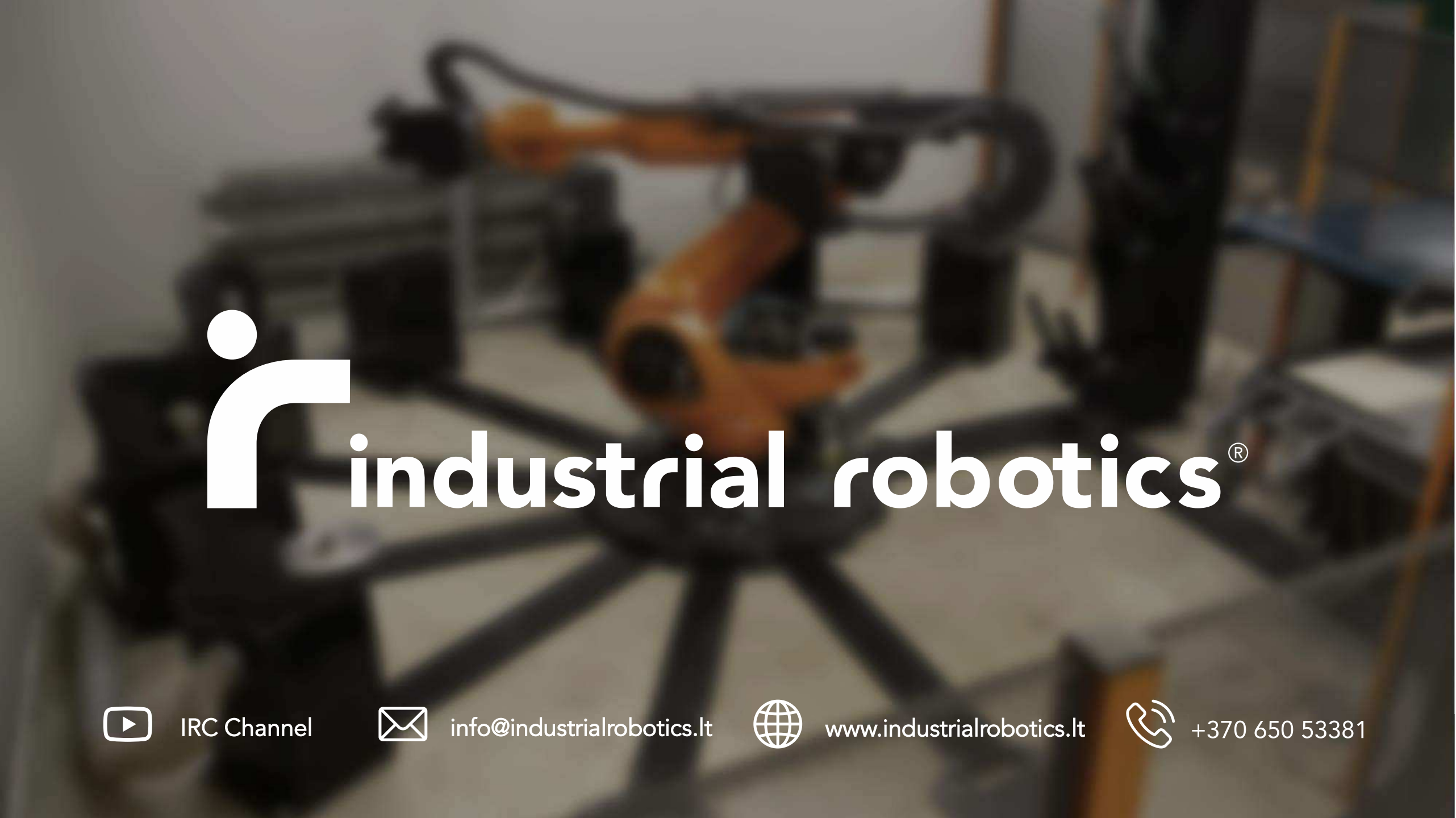
industrial robotics®

Ltd “Industrial Robotics Company” is a company that develops innovative and advanced robotics solutions for industrial manufacturers to automate manual work and increase efficiency. Robots allow automating the production, painting, sanding and cutting of corrugated cardboard packaging. Thanks to the robotic solutions we develop, it is possible to perform difficult and complex work efficiently, raise the qualification of people, increase the productivity of the company, ensure the production flow and become a modern and competitive factory.

The team of Industrial Robotics Company consists of design engineers, electrical engineers, automation engineers, software engineers, robotics programmers, furniture production technologists, financiers, project managers and salespeople.

Currently, the company's product range consists of five different solutions:

- “**RoboCut**” - a solution to automate the production and preparation of corrugated cardboard packaging.
- “**RoboMill**” - robots that ensure precise and automated work with various components. This type of robot allows you to cut, drill, mill, turn, grind, forge or even assemble.
- “**RoboSpray**” – a device that automatically performs the process of coating components or surfaces with various materials. Perfect for glueing, painting, etc.
- “**RoboSand**” - is a robot that facilitates sanding, which makes it possible to process the surface of a wide variety of shapes and materials.
- “**EasyToTeach**” - is one of the most advanced technologies for convenient and fast training of robots. Thanks to artificial intelligence, this system can analyze the actions performed in space and turn them into a digital program that can be processed by robots.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