

GIZMATIC

Custom Machine Engineering & CNC Manufacturing

MARKUŠEVEČKI POPOVEC 62, 10040 ZAGREB, CROATIA

WWW.GIZMATIC.HR

What We Offer

IDEA



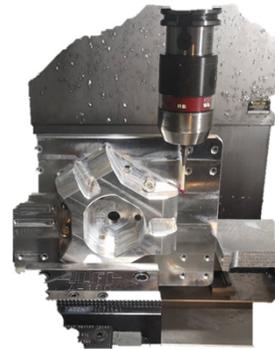
Planning
Concept
Brainstorming

DESIGN



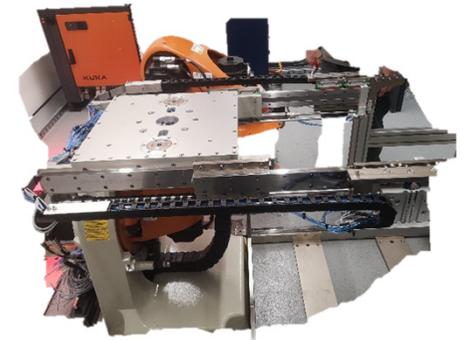
3D Design
Simulation
Calculation

MANUFACTURING



CNC
Milling
Turning

PRODUCT



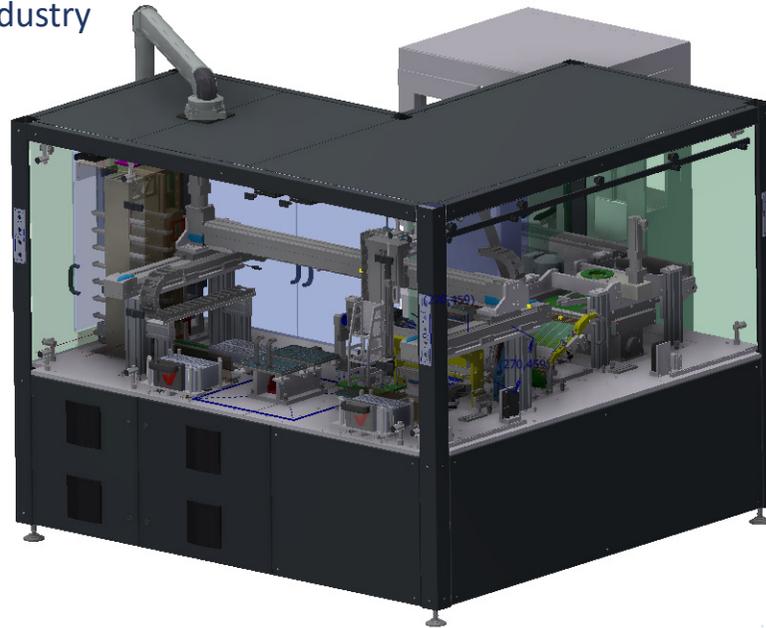
Assembly
Training
Commissioning

GIZMATIC

Key Projects & Capabilities

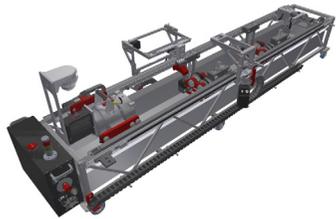
- Custom machine design
- Automated Inspection Machines for Nuclear Power Plants
- Batteries laser welding for Automotive industry
- Automation & Robotics integration
- Transport Systems
- Pick and Place Machine
- Conveyors – Belt and Mechanical
- Pneumatic Driven Machines
- CNC Machine Tending

- IN-HOUSE MANUFACTURING
- Assembling
- Commissioning

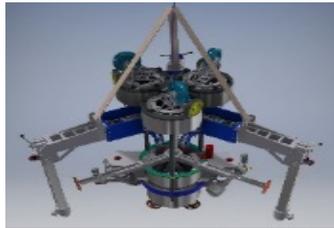


GIZMATIC

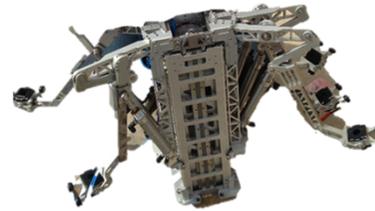
Nuclear Power Plant – Automated Inspection



- Automated inspection of screws M16-M170
- Custom gearboxes
- CNC machined parts manufactured by GIZMATIC d.o.o.



- Manipulator for automated inspection of nuclear reactor vessel shell, nozzles & bottom
- 2x ABB robots with custom sleds
- Custom high accuracy winch



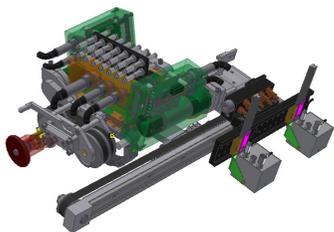
- End Effector for UT – VT Inspection of Nozzle and Shell
- Dual telescopic extensions
- 10 pneumatic operations



- Sphere Inspection UT module



- IGUS TRIFLEX custom manipulation
- PARKER pneumatic motor
- Electrical servo motor
- Up to 15m vertical
- Automatic up & down



- Automated shell UT-VT inspection scanner
- Magnetic grippers or
- Suction grippers

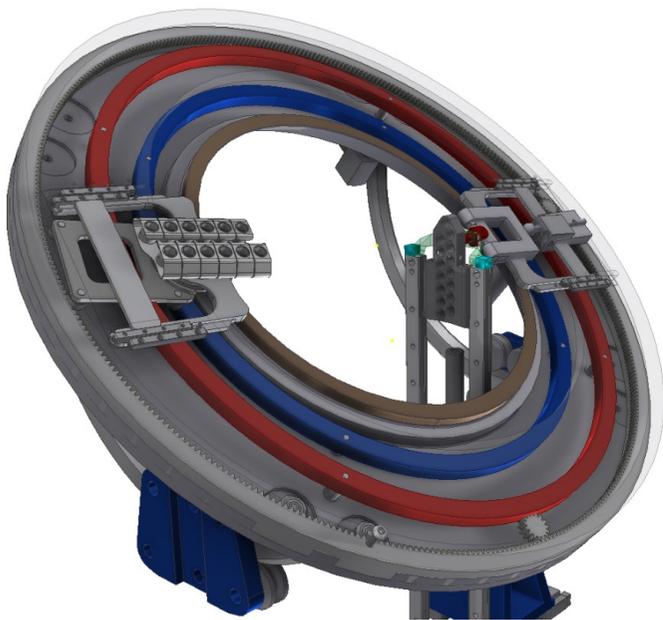


- Manual pipe UT Inspection scanner
- Dual axis
- External encoders

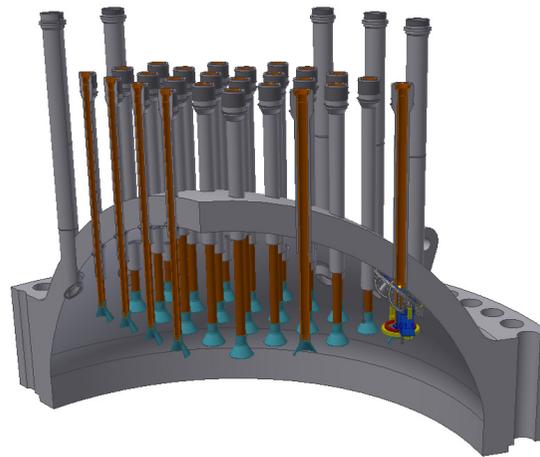
Designed during tenure as Mechanical Engineer at HRID-NDT d.o.o.

GIZMATIC

Nuclear Reactor Head – J Weld inspection



- Mechanical plate module
- Adjusting mechanically to different “ellipse-like” curves



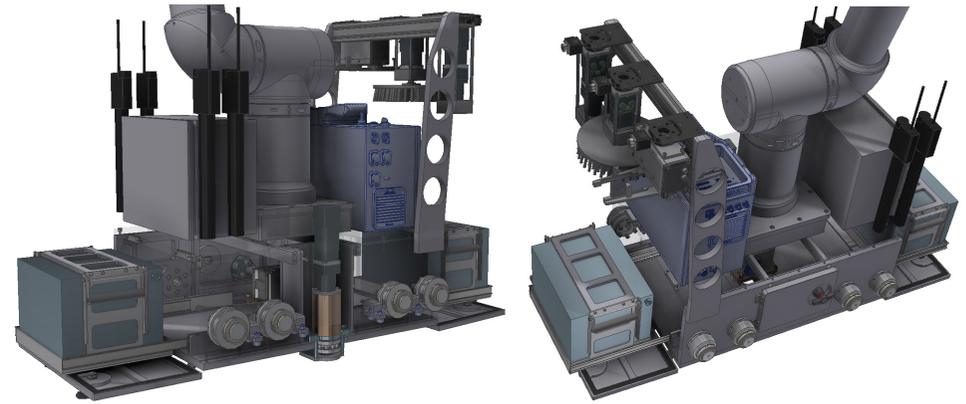
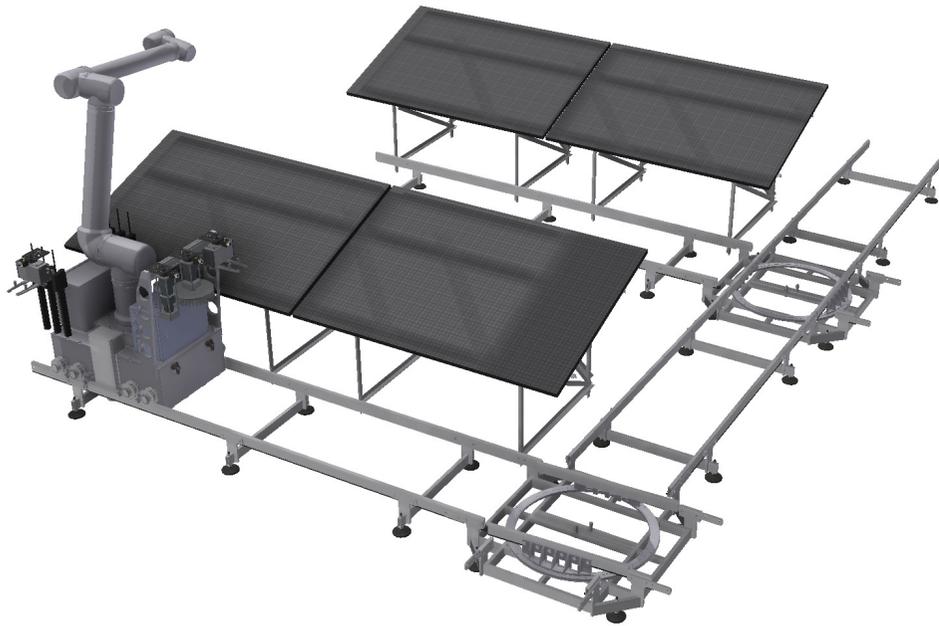
- Nuclear reactor head
¼ section



- J WELD probe that adapts to all surface irregularities - coil by coil
- Double suspension

GIZMATIC

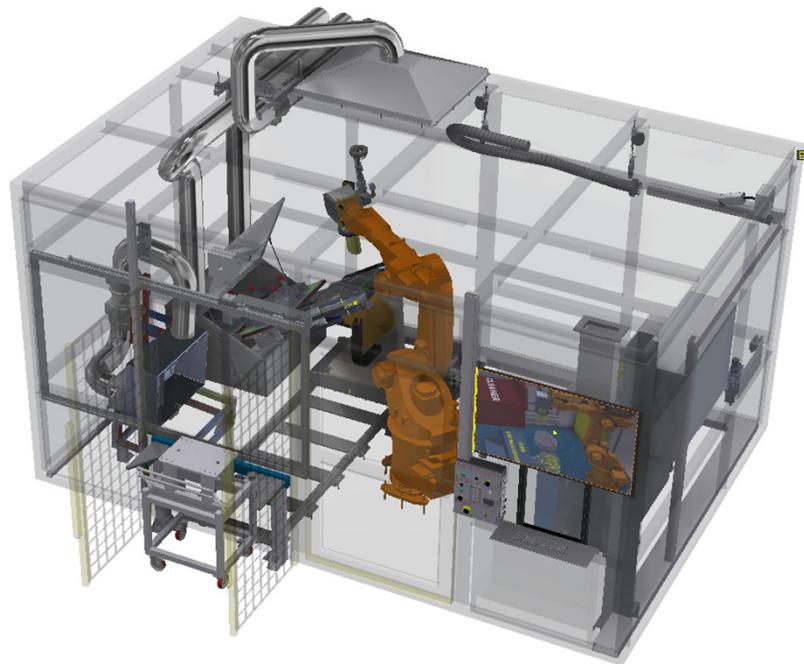
Agricultural Robot Platform - AGROLIROS



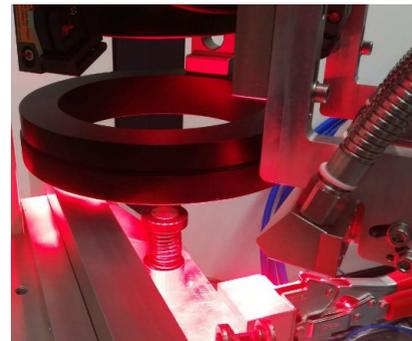
- Mechanical design and structural components for EU-funded autonomous agricultural robot (AGROLIROS).
- Custom carrier frame
- Solar panel mounting structure
- Robotic arm integration

GIZMATIC

Industrial Robotics



- Complete laser welding cell for EV / hybrid vehicle batteries KUKA robot, TRUMPF laser, custom DKP-400 positioner



GIZMATIC

Laser Welding Cabin - safety class 1

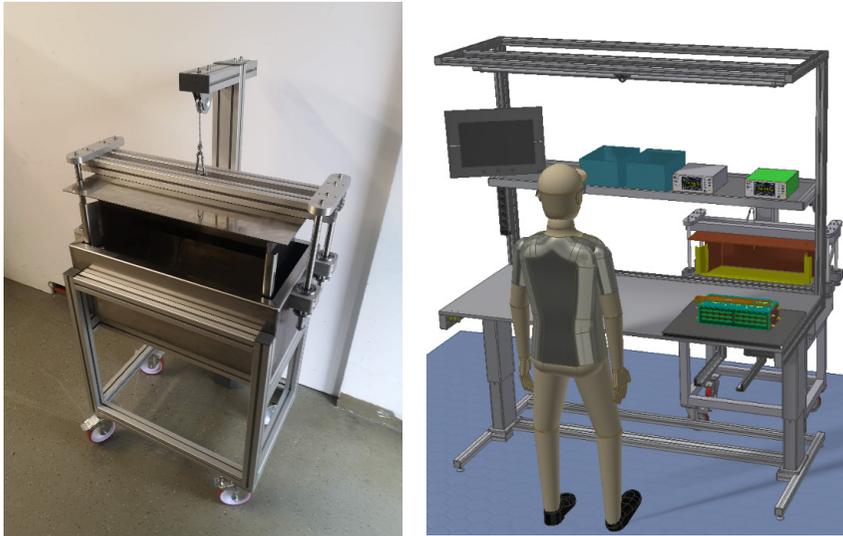


- Vehicle batteries welding cabin
- Safety class 1- not allowed any light to come out
- Quick manufacturing / installation
- Custom design
- Negative or positive cabin pressure - depending on the surrounding space

GIZMATIC

Fire Extinguisher for Batteries

PORTABLE FIRE EXTINGUISHER



- For single battery module
- Levelling with operator table
- Push inside and go
- Possible recirculation with outside air

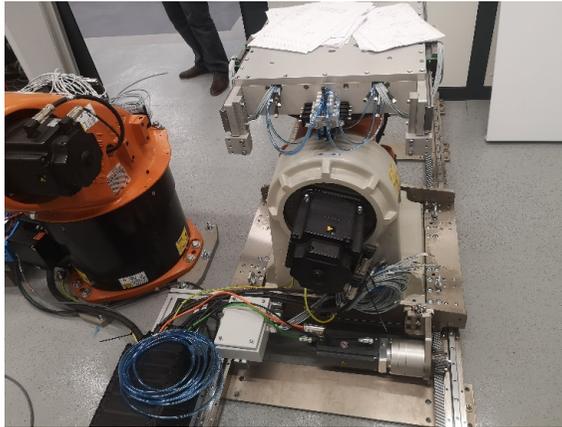


FIXED POSITION FIRE EXTINGUISHER

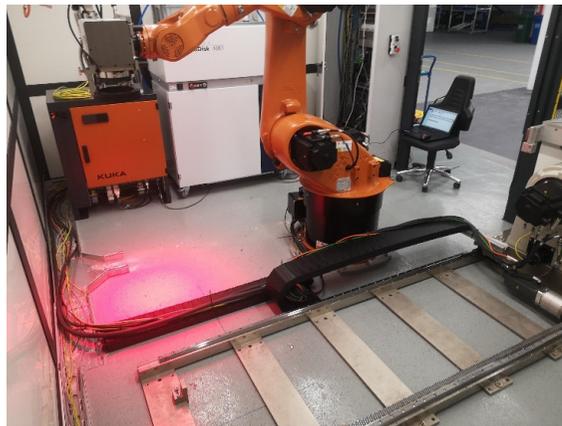
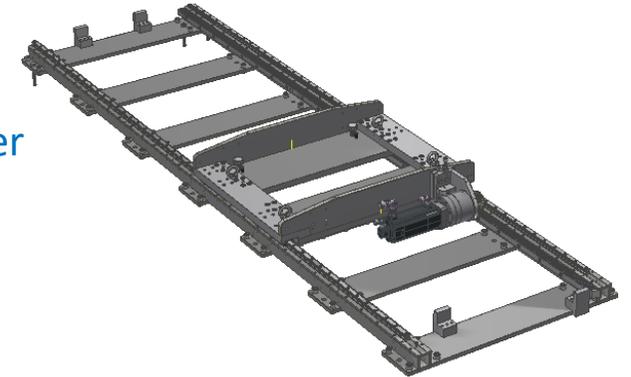
- For large batteries (or throwing together with the jig)
- With or without guidance - bumpers
- Recirculation with outside air (with or without filters)

GIZMATIC

Bottom Axis – for KUKA DKP 400

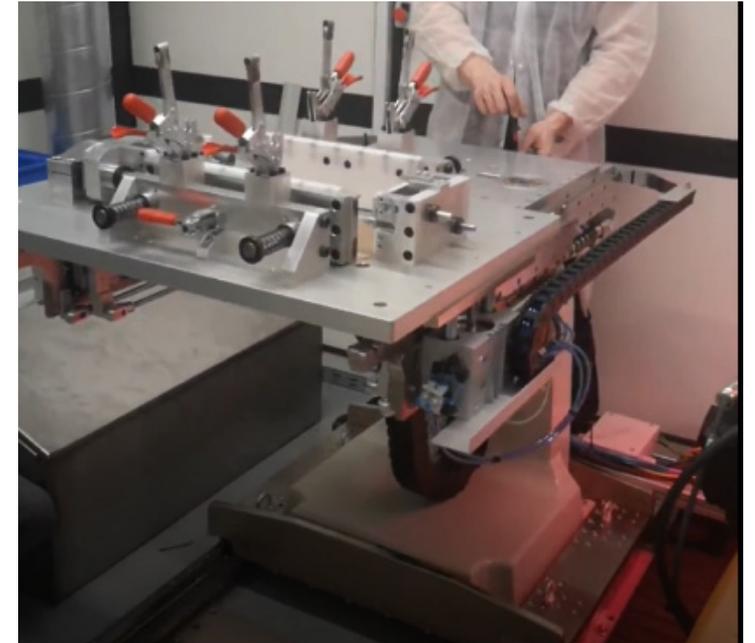
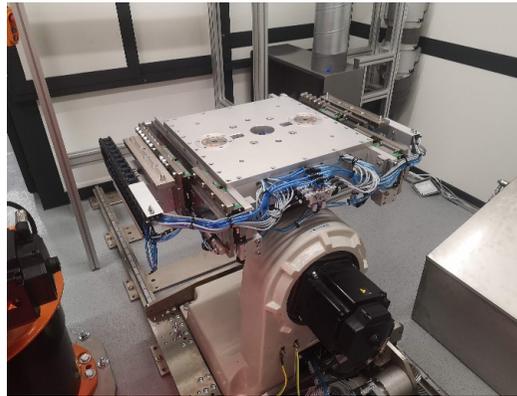
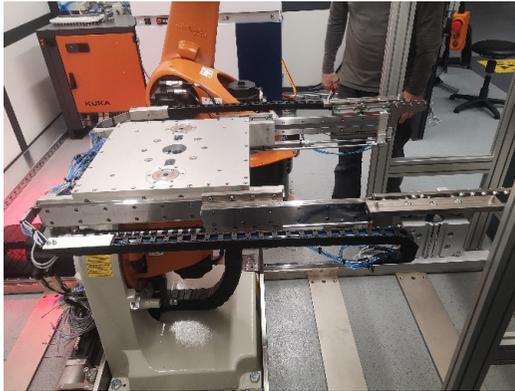


- For **KUKA DKP 400** – two axis positioner
- Up to 1m/sec speed
- Up to 500kg carriage
- Possible installation on uneven floor
- Length up to 50m with several sections
- Rack and pinion design
- High accuracy
- Siemens motor



GIZMATIC

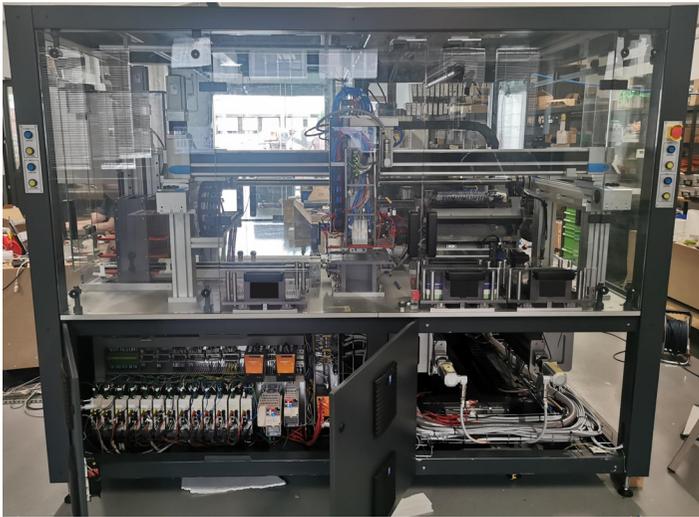
Telescopic Arms & Lifting – for KUKA DKP 400



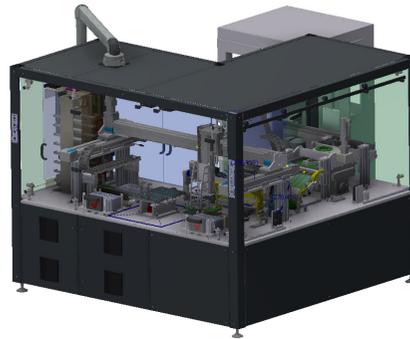
- For vehicle battery welding jig
- Installation on **KUKA DKP 400** – two axis positioner
- Synchronized telescopic pneumatic operation
- Synchronized vertical pneumatic operation
- Up to 70kg load - fully extracted
- Zero point bottom clamping

GIZMATIC

PTC – VISION Inspection and packaging



- Multiple size PTC operation
- Schmersal safety switch on windows and drawers
- Custom machine vision solution design
- Sample evaluation and feasibility tests
- Image analysis software
- System integration and commissioning



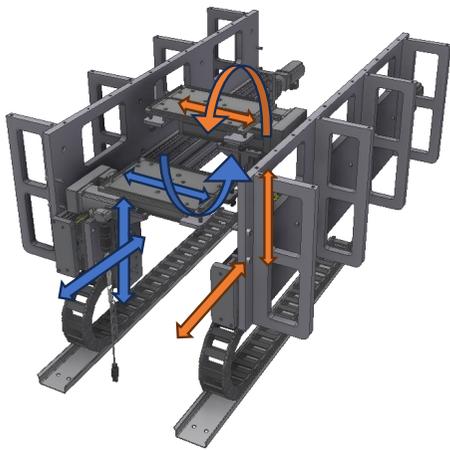
ROLLER and SLOPE with 2 setups

- Multiple size PTC operation
- Schmersal safety switches on windows and drawers
- Servo driven rotational axis
- Pneumatically operated extension of vacuum pads

GIZMATIC

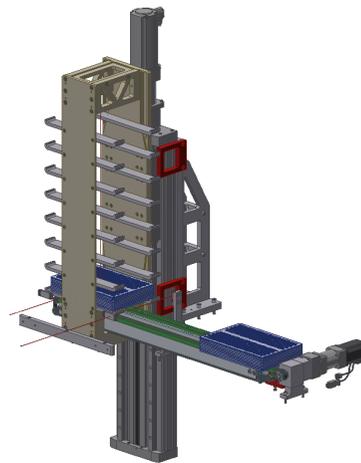
Transport systems – Material manipulation

Custom transport and manipulation solutions for industrial applications



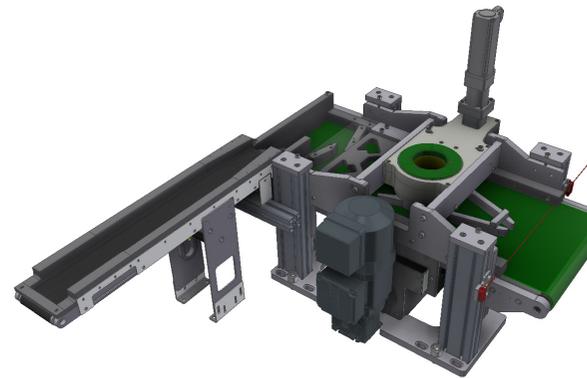
Mechanical Conveyor

- Dual set of 3 axis with interchangeable positions
- Servo drives



Vertical - Horizontal Conveyor

- Vertical ballscrew servo driven conveyor
- Horizontal servo driven belt conveyor



Belt Conveyors

- Automatic balancing components left-to-right for even feeding
- Custom rotary belt axis with servo drive



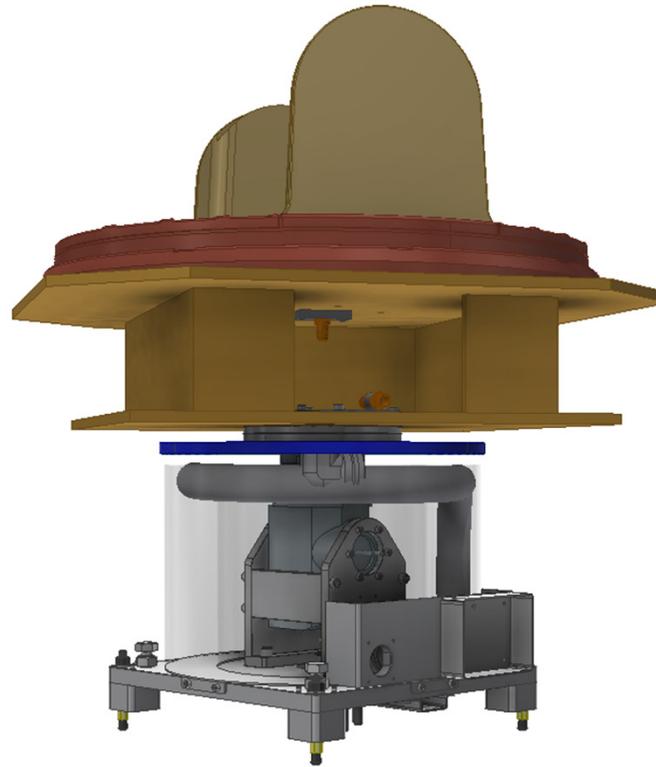
Pick & Place

- High speed pick and place
- 3 servo drive FESTO axes
- Vacuum pads

GIZMATIC

Industrial Turntable

- 400deg rotation
- Up to 360deg / sec
- 200kg load



GIZMATIC

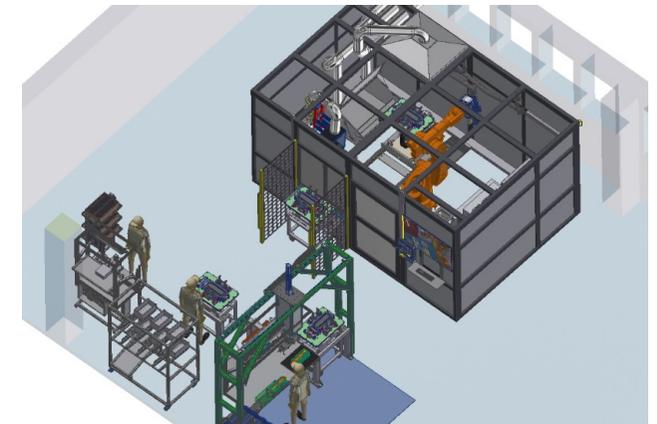
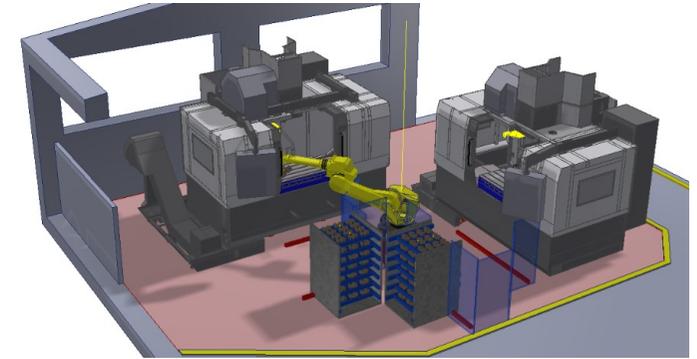
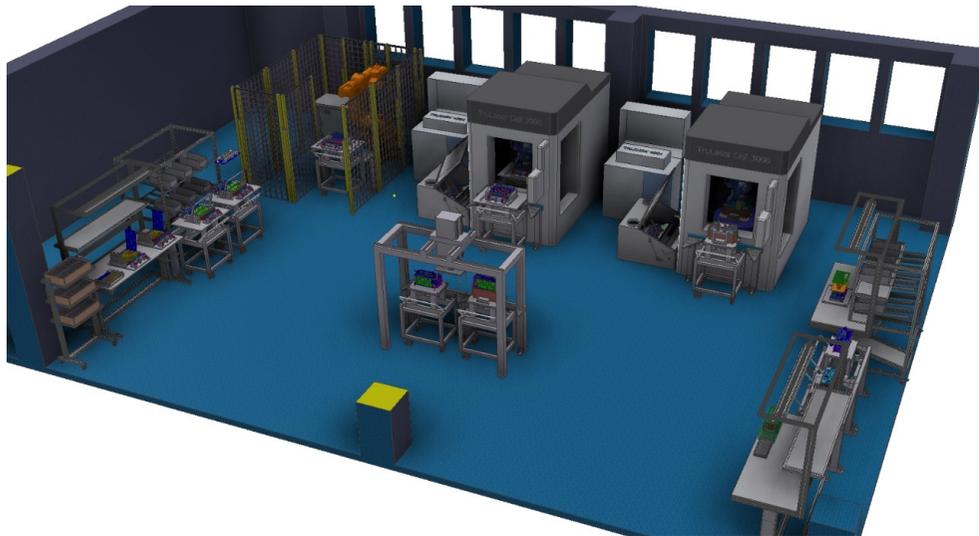
LLD - V2 - Leg Length Discrepancy

- Orthopedic device



GIZMATIC

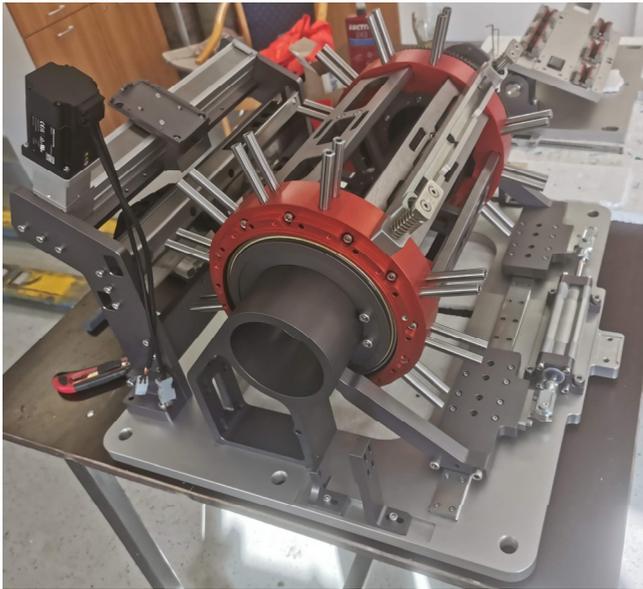
Project Planning



- Designing and suggesting multiple rough versions to help customer planning final solution

GIZMATIC

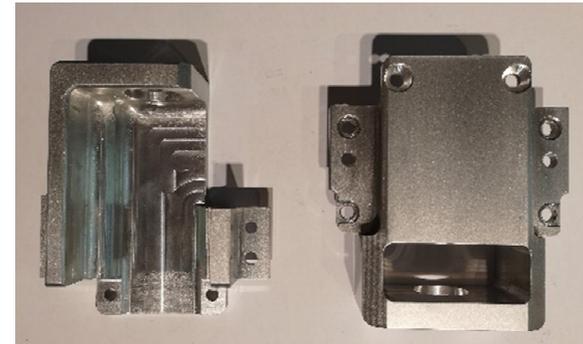
CNC Machining & Assembling



- $\pm 0,01\text{mm}$ tolerance
- Great surface finish
- 1000x600x600mm

GIZMATIC

CNC Machining



GIZMATIC

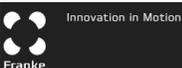
Workshop & Office



GIZMATIC

Ready to collaborate on your next project?

Engineering



Control



Partners



Manufacturing



CAD/CAM



GIZMATIC

Contact us for custom solutions



Andrija Papec M.Sc.M.E.
Owner / CEO

Markuševečki Popovec 62
10040 Zagreb
Croatia

GSM: +385 98 740 195

andrija.papec@gizmatic.hr

www.gizmatic.hr

GIZMATIC