



AUTOMATION

TRANSFORMING TOGETHER



Delivers reliability, quality, and trust across a range of industries.

Vitro was founded in 1909 and operates four business units that produce high-quality, innovative products and solutions that exceed our customers' expectations: Glass Containers (Cosmetic and Pharmaceutical), Architectural Glass, Automotive Glass, and Diverse Industries (Machinery & Equipment, Automation, Metal mechanics and Chemicals).

Our business units serve various markets and industries, from food and beverages to automobiles to commercial construction. Further, our commitment to sustainability in our operations, manufacturing processes, and product applications enables our customers and us to meet increasingly demanding environmental responsibility and performance goals.



FAMA[®]: a Vitro[®] subsidiary

FAMA[®], born in 1943 as Vitro's subsidiary for in-house machinery manufacturing has a proven track record of creating forward and innovative industrial technology.

Nowadays, we have increased our products and services to the market, in order to provide solutions for diverse industries.

Supporting by 80 years of experience manufacturing high-technology specialized machines and with eyes set on the future, we have extended to other industries besides Vitro to integrate projects that require a high technological capacity and infrastructure.



We at FAMA® transform the productivity of our customers to outstanding levels by gathering state-of-the-art technology and a highly committed workforce that allows us to form strategic alliances to provide integral solutions for diverse industries.



Competitive Advantages

Infrastructure

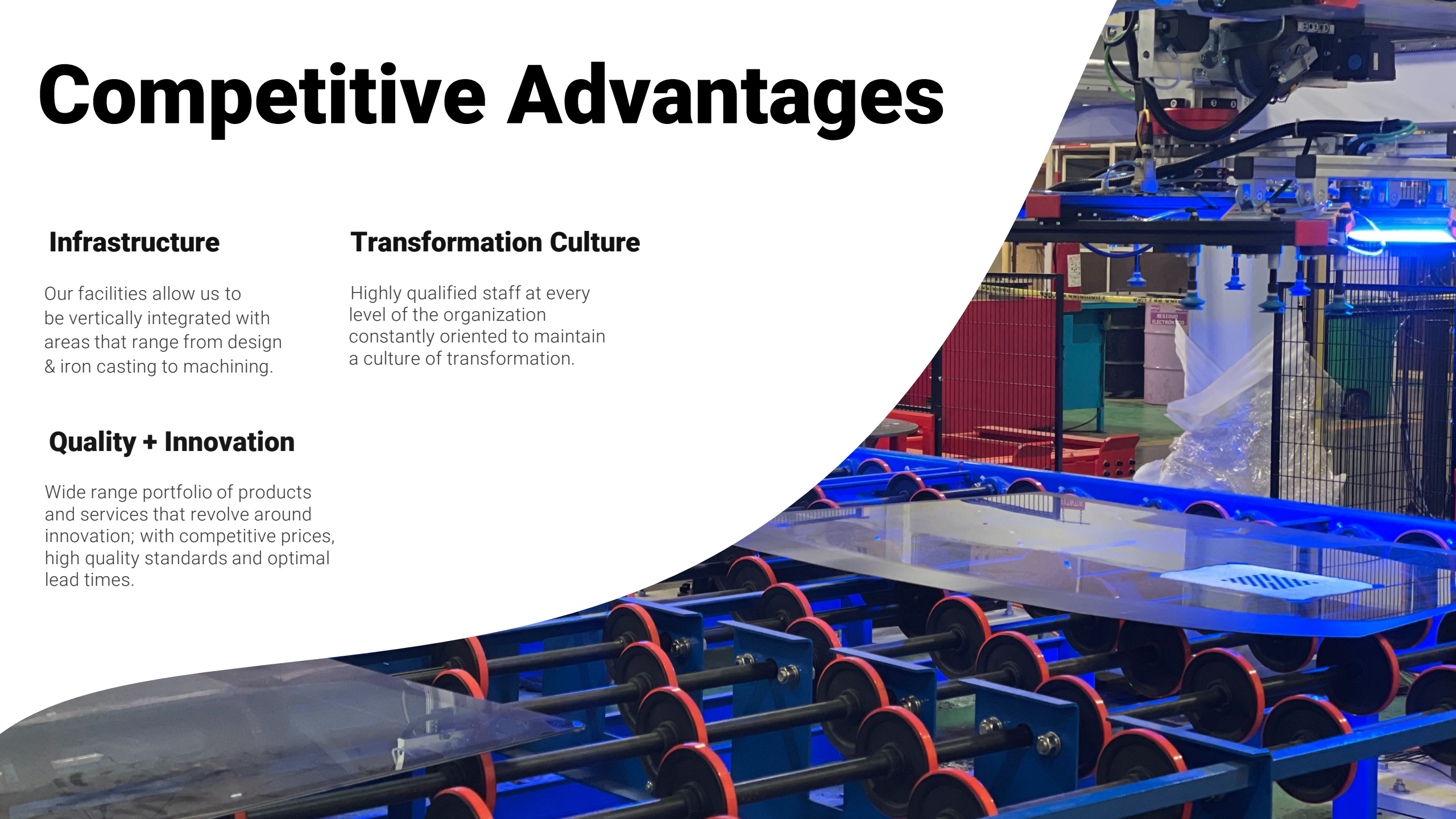
Our facilities allow us to be vertically integrated with areas that range from design & iron casting to machining.

Transformation Culture

Highly qualified staff at every level of the organization constantly oriented to maintain a culture of transformation.

Quality + Innovation

Wide range portfolio of products and services that revolve around innovation; with competitive prices, high quality standards and optimal lead times.





Transforming together



1909

Vitro starts operations.



1943

FAMA® is born as the 'technological arm' of Vitro to provide machinery and equipment for the affiliate companies.



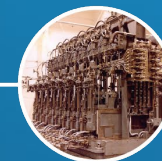
1944

The first foundry was built using a cupola furnace.



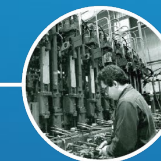
1946

The first two-section IS machine is produced to create new and more efficient machinery for the glass industry.



1950

Mold and machinery exports begin.



1970

Fabricación de Máquinas S.A. starts international operations.



1980

FAMA® joins the globalization process by becoming an exporting company.



2015

FAMA® expands its products and services globally, offering integral solutions for the glass industry.



2017

We expand our product and service portfolio into the market to offer integrated automation solutions in diverse industries.



2018

With 75 years of experience and the sight set on the future, FAMA® reaches out to other industries in the manufacturing sector.



2021

FAMA® expands its automation capabilities with the acquisition of Grupo Gersa Monterrey.



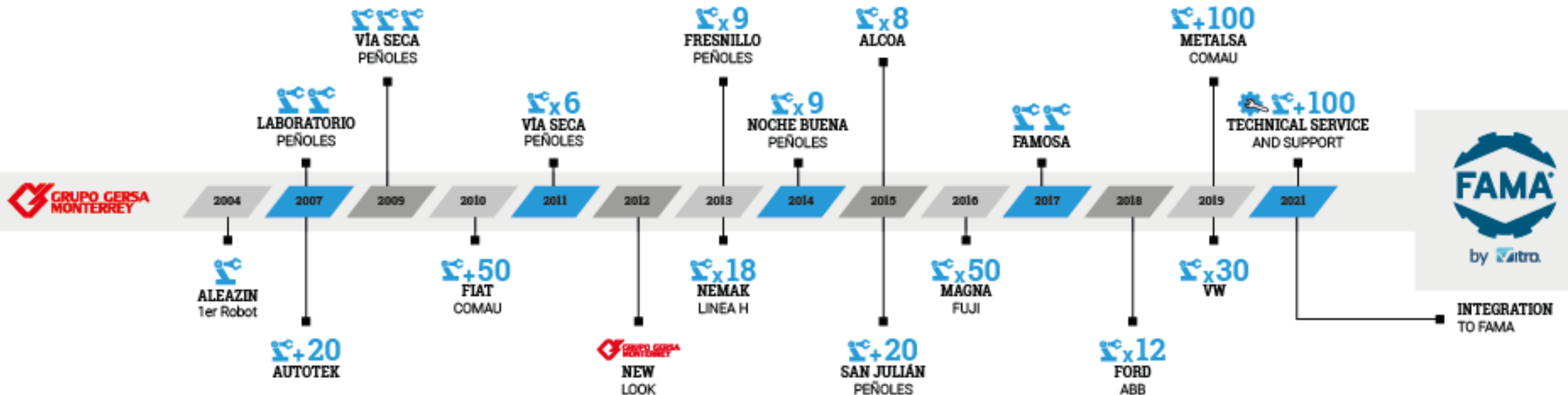
2023

FAMA® keeps growing and being a strategic partner offering machinery and services for the glass industry, metalworking and automation solutions.

FAMA expands its automation capabilities

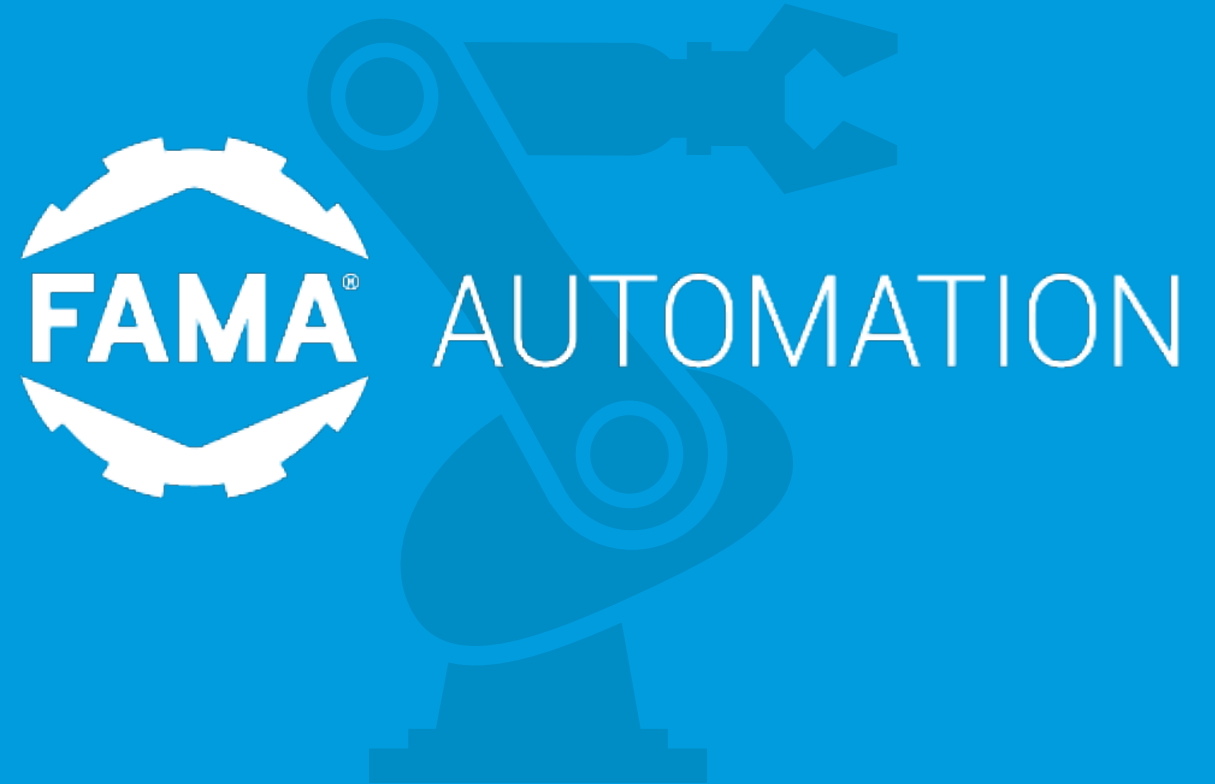
Looking to the future, FAMA acquires Grupo Gersa Monterrey, a company with 18 years of experience and more than 450 projects focused on automation solutions. A consolidated company with a strong customer portfolio that supports its professional management, thanks to people with high skills, tools, and technology.

With the acquisition of Grupo Gersa Monterrey, FAMA seeks to consolidate itself in the market as a strategic partner in Industry 4.0 by becoming a larger company with the full support of Vitro.



We offer control and automation solutions in turnkey projects, precision manufacturing and the development of specialized applications for the industry.

Our main objective is to satisfy the particular needs of our customers; therefore, we have highly trained personnel, software, and design tools that keep us at the edge, along with high-level equipment and infrastructure.



Our Capabilities

From our plant located in Monterrey, Mexico, we provide essential tools for various industries.

- Total assembly area: **10,000 m²**
- Large parts handle up to **50 tons.**
- Total size for machining centers: **15,000 m²**
- We count with **24** CNC machines and **25** conventional machines
- Thermal treatment equipment
- Metalling area for the PTA process
- Skilled experts in mechanical, hydraulic, pneumatic and electronic projects
- Capacity to integrate manufacturing cells for an automation process



Management systems & certifications



Main suppliers and integrated brands



Robotics

ABB

FANUC
Robotics

OMRON

YASKAWA

KUKA

Automation

 **Allen-Bradley**

COGNEX

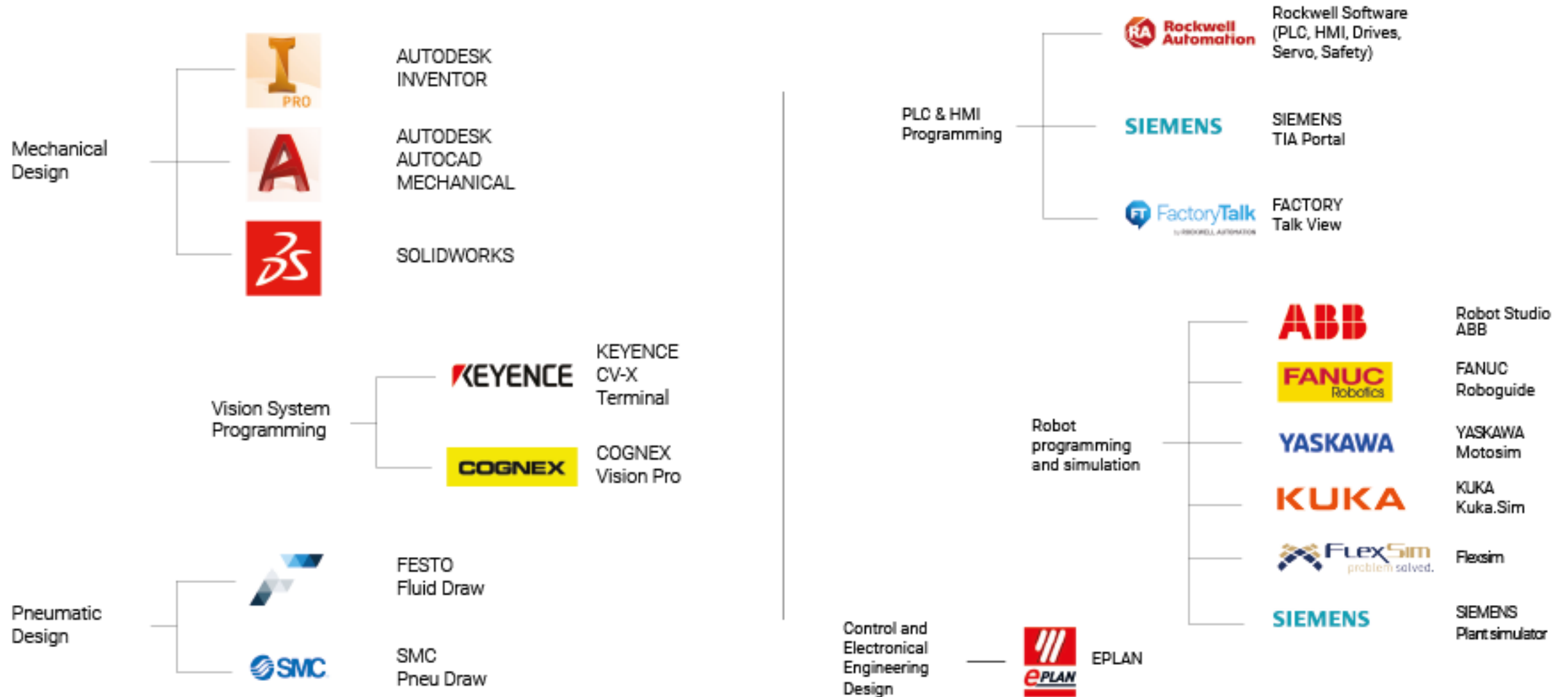
 **Rockwell Automation**

 **KEYENCE**

SIEMENS

FESTO

Software



Integrated Solutions

Specialized automation solutions

Engineering

- System Layout
- Process List
- List of operations
- Equipment List
- Simulations
- Mechanical Design
- Controls design

Construction

- Welding
- Machining
- Assembly
- Interconnection of systems

Integration

- Validation at our facilities
- FAT acceptance tests

Site services

- Installation
- Revalidation
- SAT Acceptance Testing
- PPAP support
- Acceleration ramp support
- Production support

Spare parts & Maintenance

- Documentation
- Remote support
- Spare parts
- Support and maintenance policies
- Small projects & improvements

Capabilities

Material management

- Loading / unloading racks
- Conveyors
- Transfers
- Storage
- Identification and traceability
- Packaging
- Palletizing / depalletizing
- Intralogistics

Machine service

- Feeding
- Download
- Dosing
- Inspection

Metal mechanical processes

- Welding
- Material removal
- Foundry

Component assembly processes

- Assembly lines and cells
- Individual component assembly stations
- Adhesive application
- Testing and inspection
- Traceability
- Andon

Special processes integration

- Dedicated power supply systems
- Washers
- Process equipment
- Heat or cooling tunnels
- Presses
- Screwdrivers



Our strategic partners

Automation solutions in diverse industries.

Subsidiaries

- VAU
- VAQ
- ENV
- DIV



Mobility industry

- OEM
- T1



Original Equipment Manufacturer

- Machinery
- Global integrators
- Digital Solutions



Consumer goods

- Food
- Electronics
- Household equipment & appliances



Mining and Metallurgy

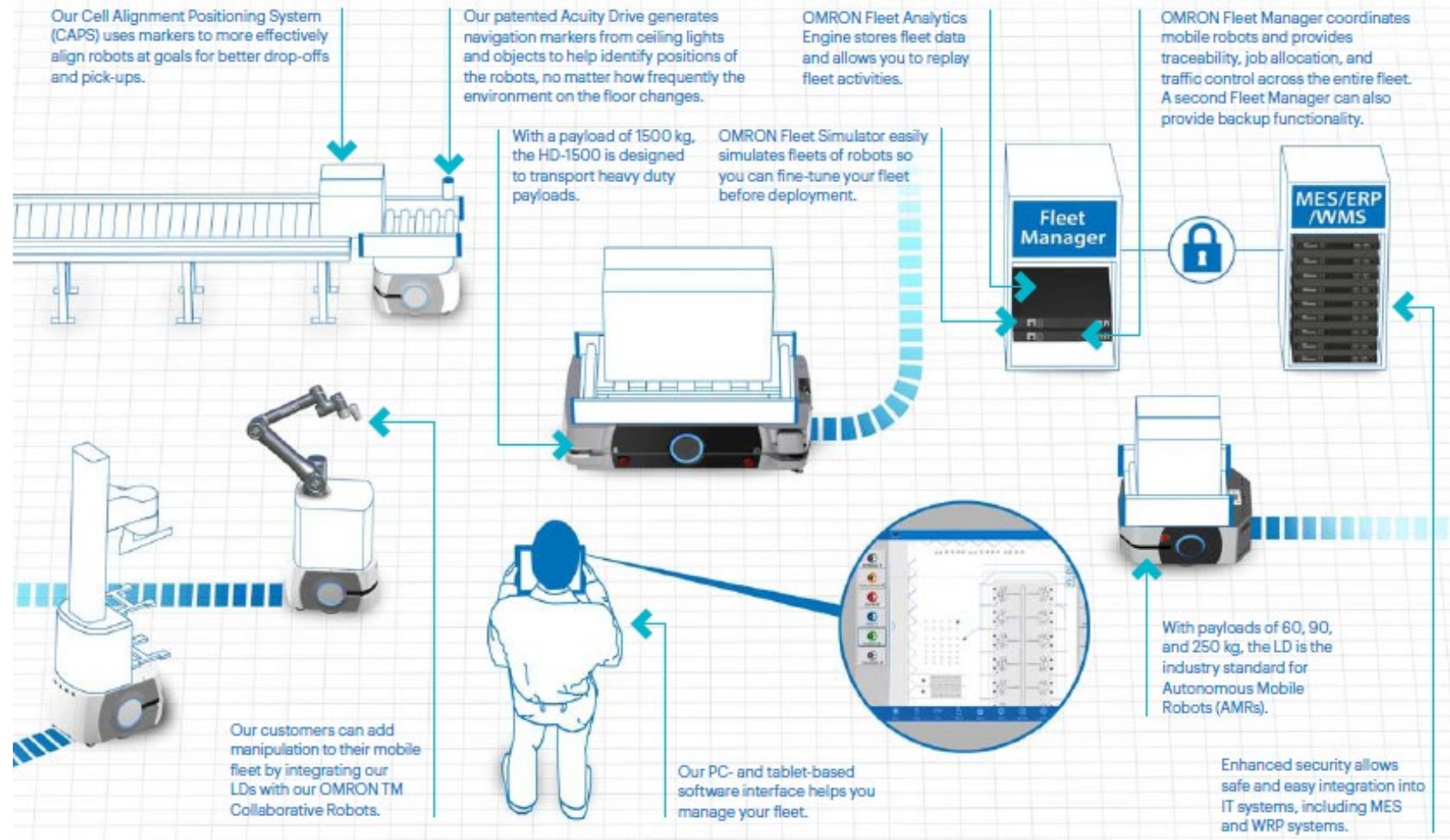
- Precious metals





Intralogistic

Autonomous material transportation





Machine service

- Feeding
- Download
- Dosing
- Inspection



Component assembly processes

- Assembly lines and cells
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Industry 4.0 development



Customer service



01 Remote Support

- Operation monitoring
- Fault diagnosis
- Programming changes
- Software updates
- Trends and statistical analysis
- Security monitoring (users)
- Event log notifications



02 Maintenance Policy

- Predictive maintenance
- Preventive maintenance
- Spare parts



03 Technical Support Services

- Programming
- Electronic diagnosis & control equipment
- Mechanical equipment diagnosis
- Attention to emergencies
- Robot development, programming, configuration, and installation
- On-site support
- Personnel training

R&D / New Product Development

We develop projects and products that fulfill all FAMA's needs for the different business units.

Automation

- Specialized automation consulting
- New technologies and product development
- Customized solutions evaluated and formulated
- Productivity problem-solving proposals
- Competitive advantage development



Our Experience

Product Packaging Systems

- Mobile option
- Pallet or unit delivery
- Manual and automatic unloading
- Distributor/product selector
- Packaging handling of different types of packaging pre-formed:
 - Cardboard box
 - Thermoformed plastics
 - Divided tray
- Packaging capacity up to 500 pcs x min.



Palletizing Systems

- Mobile option
- Pallet or unit delivery
- Manual and automatic unloading
- Distributor/product sorter
- Handling of different types of pre-formed packaging:
 - Cardboard box
 - Thermoformed plastics
 - Divided tray
- Packing capacity up to 500 pcs x min.

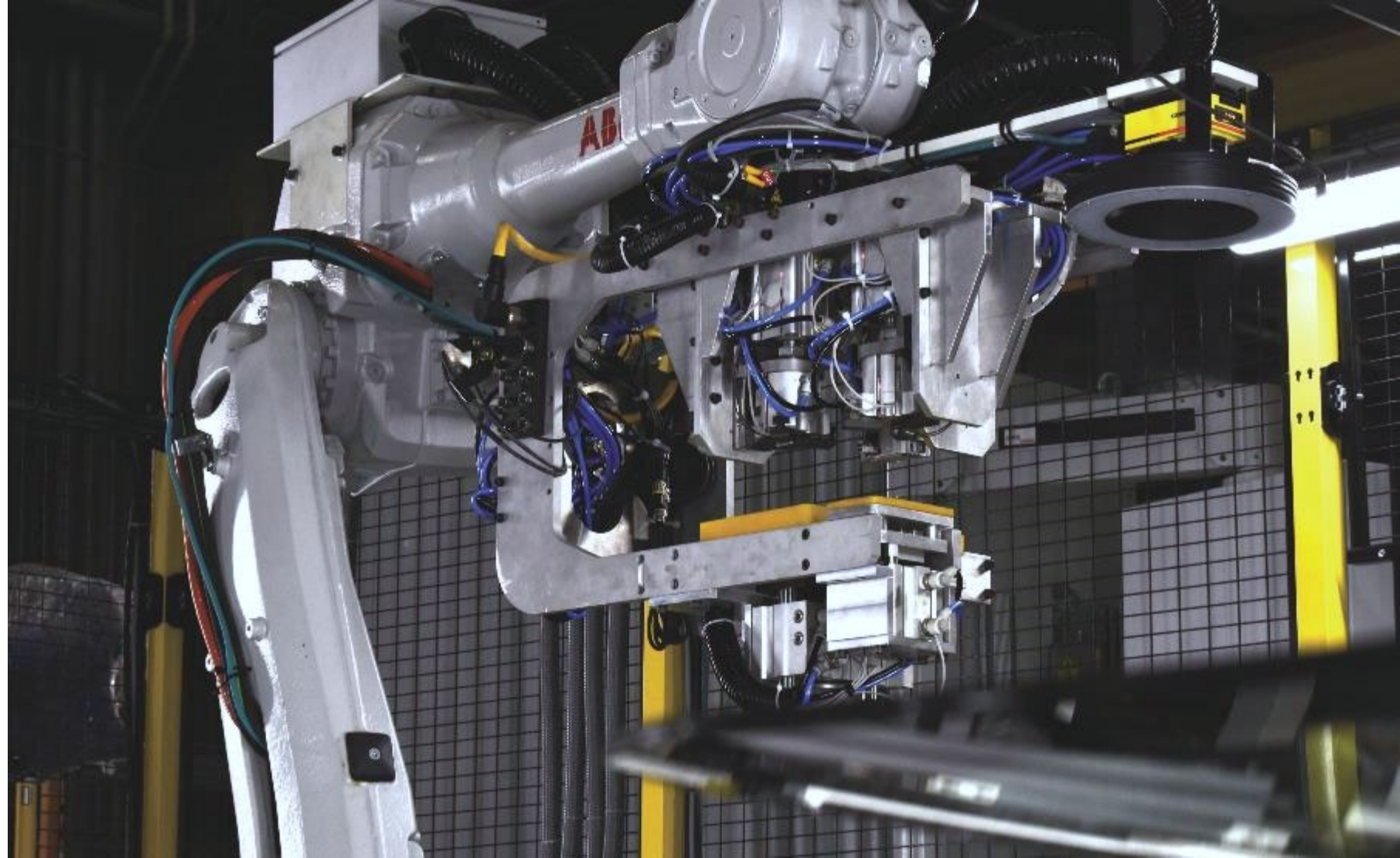




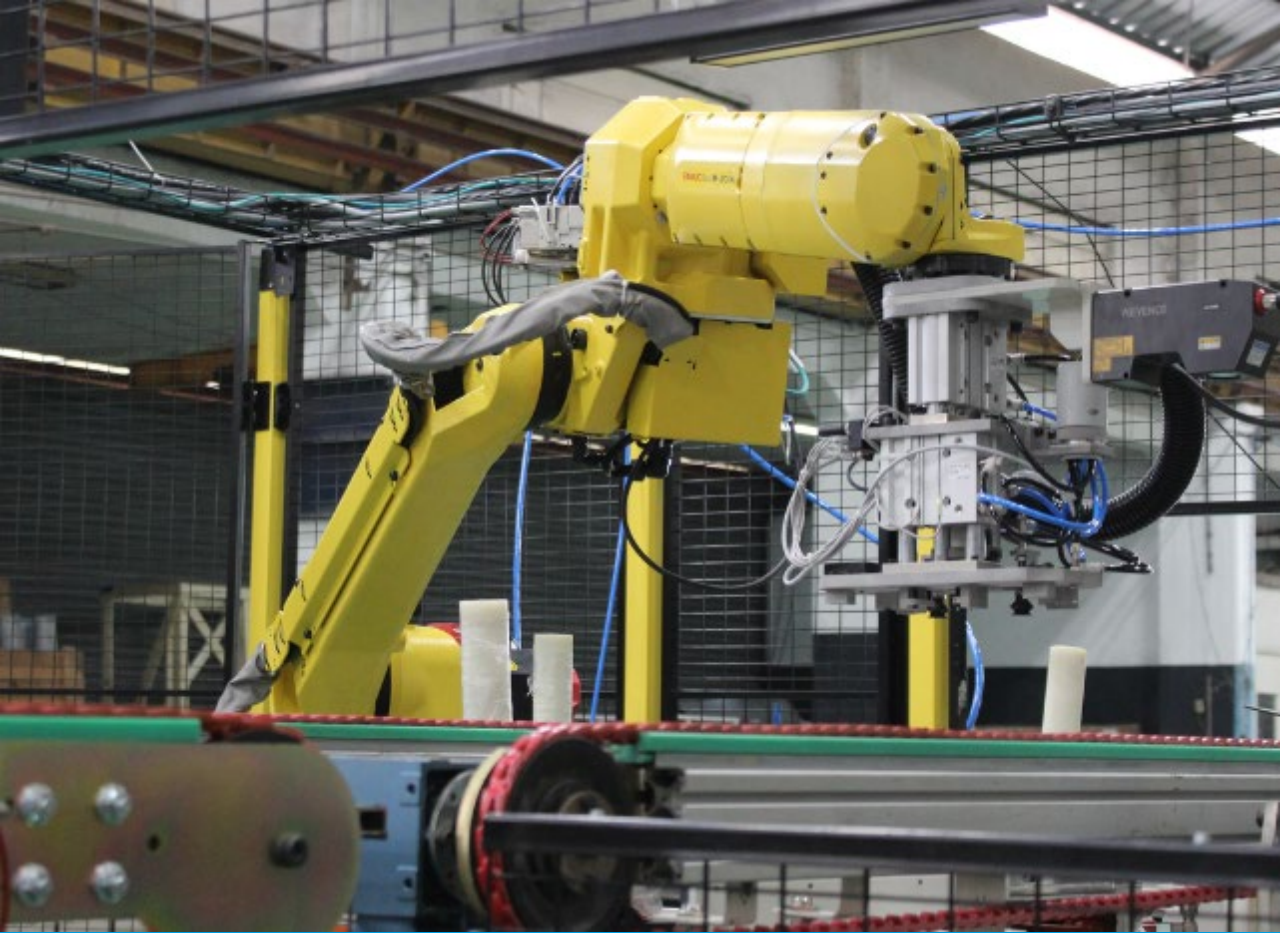
- Handling of jumbo windshield glass
- Rack feeding up to 7 ton
- Simultaneous in-line loading and cutting
- Product output to conveyor or rack
- Compact and adaptable design

Glass Cutting Cell

- Product cutting
- Seal and glue applications
- Product-adaptive tooling technology
- Quality testing



Special Process Cells



Bonding Component Cell

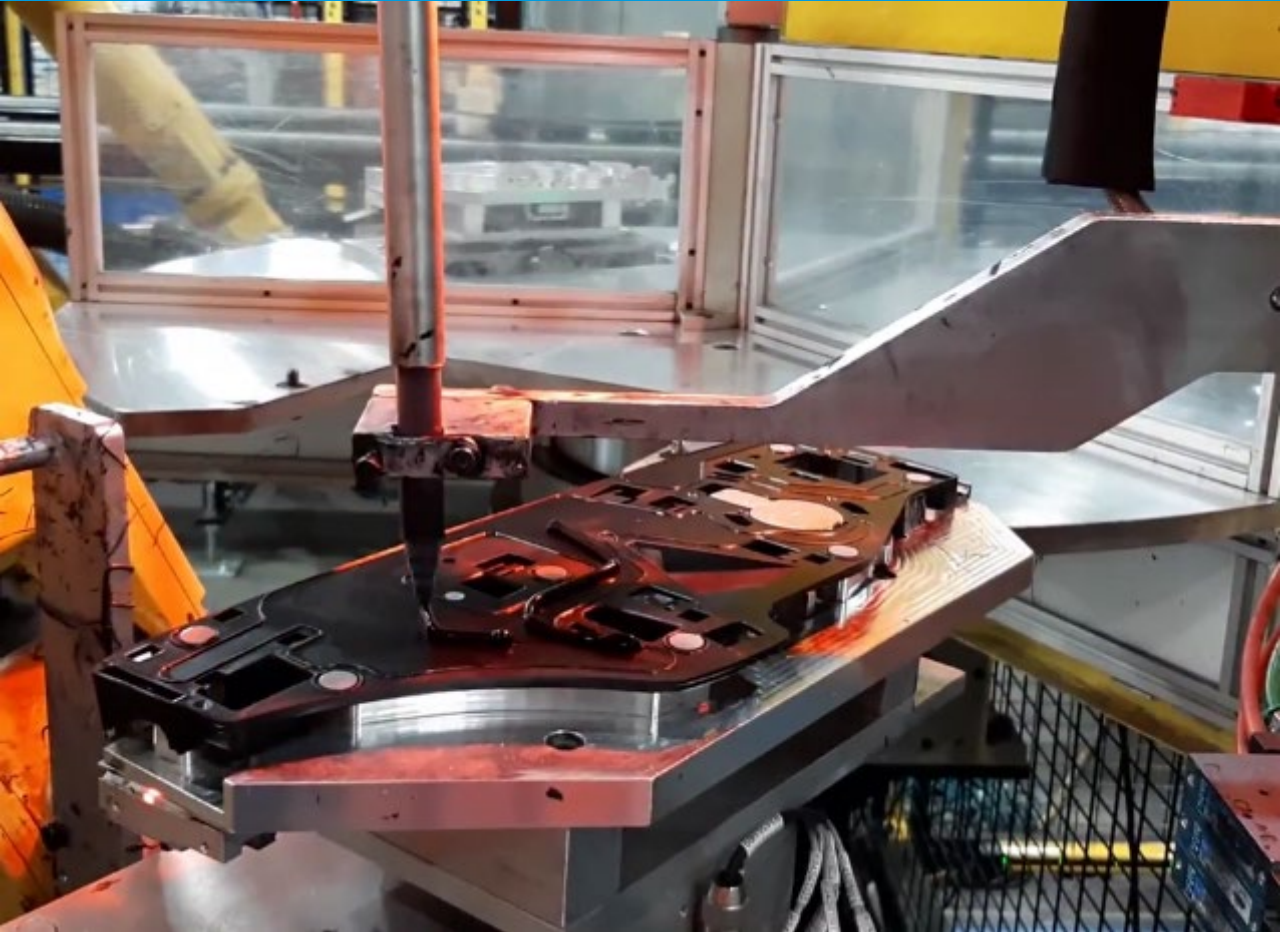
- Feed buffer handling
- Application of component with controlled force
- Handling of solid and liquid glue at different temperatures
- Controlled glue application
- Glue application inspection system
- A 3-dimensional position inspection system
- Gluing accuracy down to 0.2 mm
- Compact and adaptable design
- Mobile option

Assembly Lines

- Bracket
 - Pin
 - Foam & lace
 - Primer application
 - Holder application
 - Inspection stations
 - Electrical
 - Dimensional
 - Screen printing, primer, and glue
 - QR code reading and legal seal
 - Thermal
 - Rejection system
 - Integration to MES systems



Seal and Glue Applications



- Fixed or mobile applicator system
- High application speeds
- High application accuracy
- Dispenser with volume control and storage reservoir
- Static vision inspection of routes and beads
- Dynamic laser inspection of routing and bead dimensions
- Manual or automatic feeding of components

Automatic Primer Applicator

- The versatility of clear & black primer application
- Inspection and correction of application
- Defined and characterized patterns
- High speed, excellent performance
- Automatic applicator changeover





Welding Cells

- Robotic welding cells for:
 - MIG
 - SPOT

Material handling



Automated mining laboratories

- Sampling, crushing and pulverizing cell mines



Ingot palletizing





8 FAMA[®] YEARS



Follow us!
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