



# JORGE LUIS AVILES

## Tooling Engineer

### SKILLS

- Tooling Design
- Reverse Engineering
- Composite Materials, Metals & Polymers
- GD&T
- Welding, Machining, Additive Manufacturing
- Proficiency in SolidWorks, CATIA, CypCut, AutoCAD, Illustrator
- 3D modeling, 2D drafting

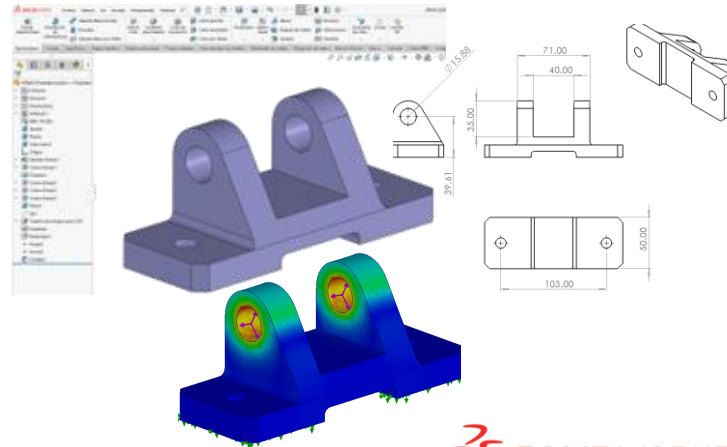
### Contact

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**LinkedIn:** [linkedin.com/in/jorge-aviles-engineer/](https://www.linkedin.com/in/jorge-aviles-engineer/)

**Languages:** Spanish, English

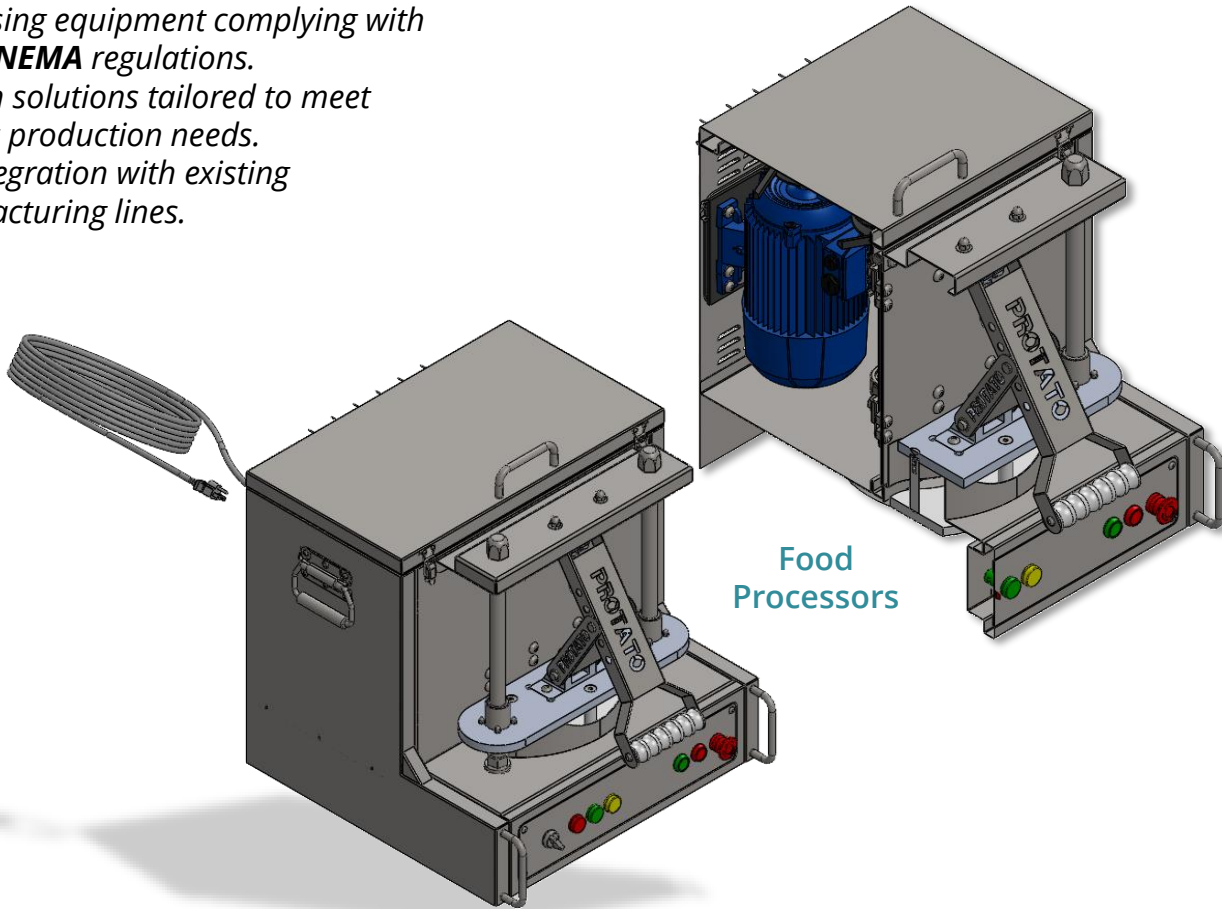
**Location:** San Juan del Río, Querétaro, México



# FOOD PROCESSING DESIGN SOLUTIONS

## Food Processing Solutions

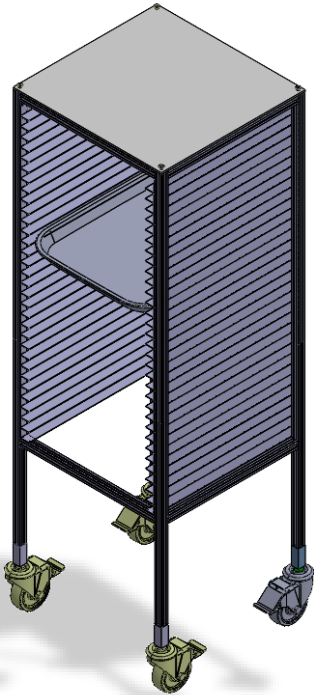
- ⚙️ *Electromechanical design of food processing equipment complying with **FDA & NEMA** regulations.*
- ⚙️ *Custom solutions tailored to meet specific production needs.*
- ⚙️ *Full integration with existing manufacturing lines.*



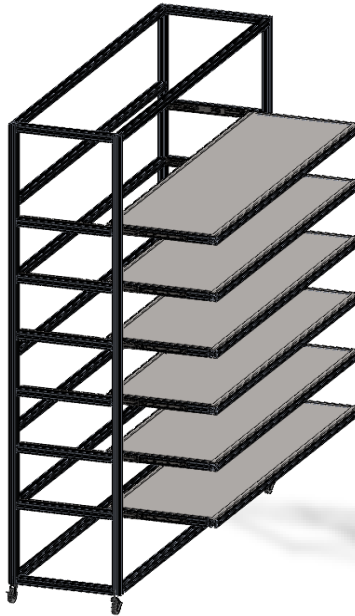
# ALUMINUM FRAMING DESIGN

## Flexible Aluminum Framing Design

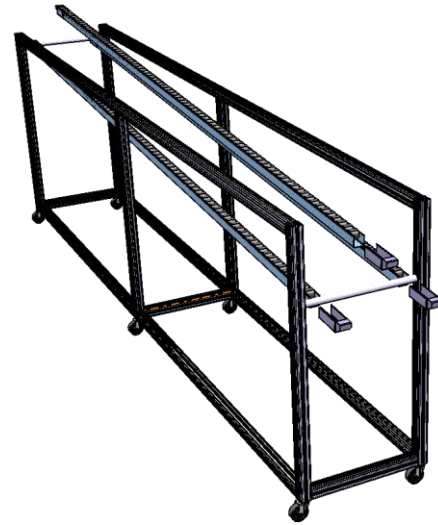
- ⚙️ *Custom industrial furniture designed using aluminum framing (Bosch or generic).*
- ⚙️ *Modular and adaptable to various industrial applications.*
- ⚙️ *Seamless integration with automated systems and workstations*



Racks & Carts



General Purpose  
Furniture

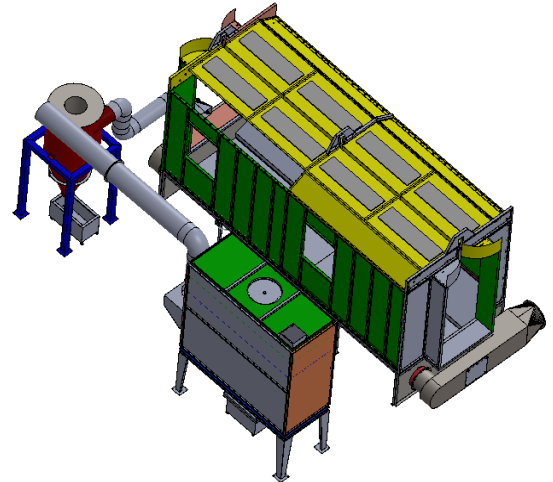
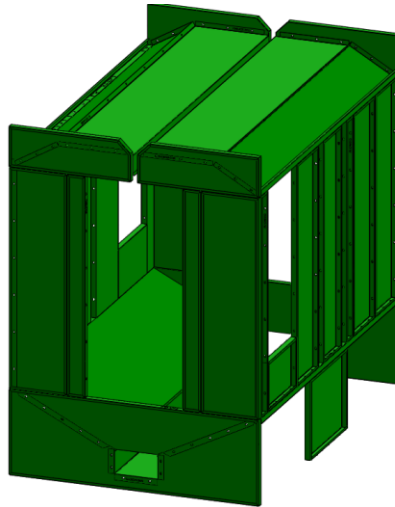
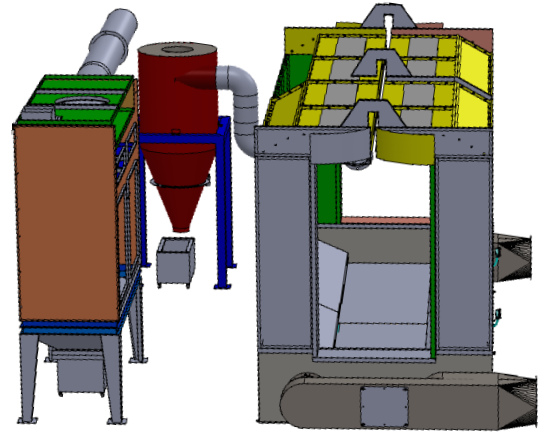


Conveyors

# PROCESS LINE SOLUTIONS DESIGN

## Efficient and Scalable Process Line Solutions

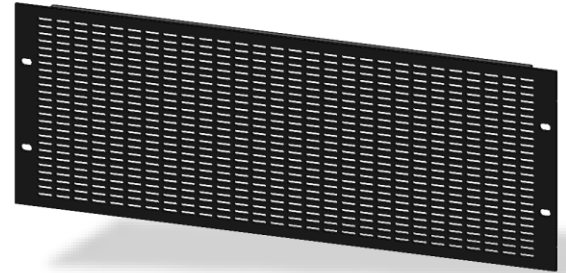
- ⚙️ *Custom-designed equipment for industrial process lines*
- ⚙️ *Optimized for high efficiency, automation, and modular integration. Designed for durability and compliance with industry standards.*
- ⚙️ *Tailored to meet specific manufacturing needs, ensuring seamless production flow.*



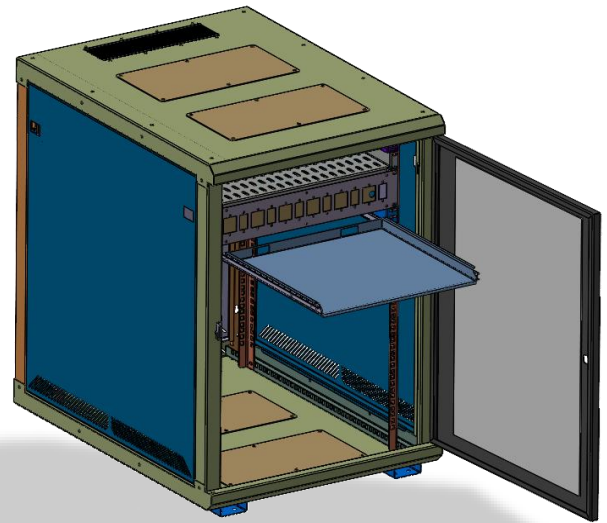
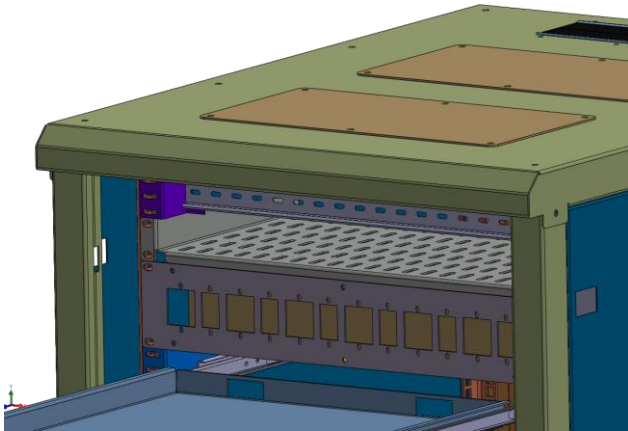
# AUDIO & INFORMATION TECHNOLOGIES EQUIPMENT

## High-Precision Metal Enclosures for IT Infrastructure

- ⚙️ Custom-designed sheet metal enclosures for IT and networking equipment.
- ⚙️ Optimized for airflow, cable management, and secure access.
- ⚙️ Durable, modular, and adaptable to various IT configurations.
- ⚙️ Engineered to meet industry standards for data centers and industrial IT applications.



Audio Rack Accessories



IT Server/Audio Racks

# MATERIAL HANDLING SOLUTIONS

## Innovative Solutions for Efficient Material Transport

- ⚙️ Custom-engineered handling systems for optimized workflow.
- ⚙️ Adjustable, modular, and designed for heavy-duty applications.
- ⚙️ Seamless integration into existing production lines.
- ⚙️ From lifting tables to transport carts, we design solutions tailored to your logistics needs.

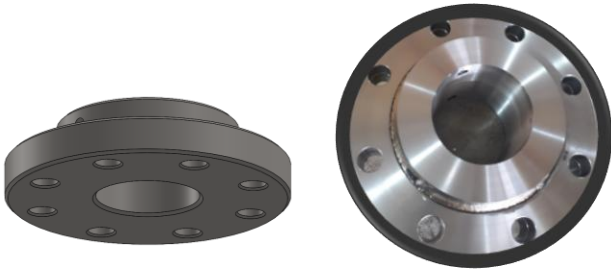


Material Carts

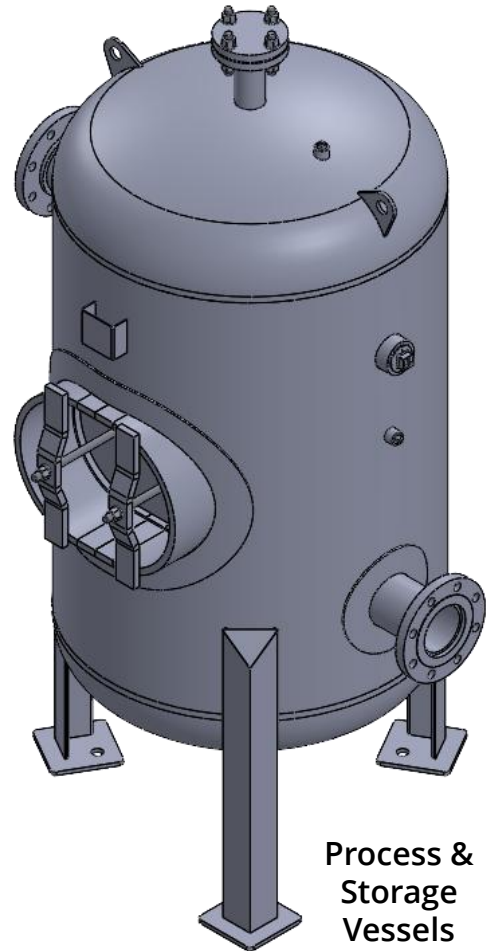
# CHEMICAL PROCESSING SOLUTIONS

## Precision Engineering for Industrial Piping Solutions

- ⚙️ *Custom design and manufacturing of piping, flanges, and containers for chemical processing.*
- ⚙️ *High-pressure stainless-steel components for durability and safety.*
- ⚙️ *Fully integrated solutions tailored to your specific process requirements.*
- ⚙️ *Engineered for resistance to corrosion, extreme temperatures, and high-pressure environments.*



High-Pressure Stainless Steel Pipe Flanges

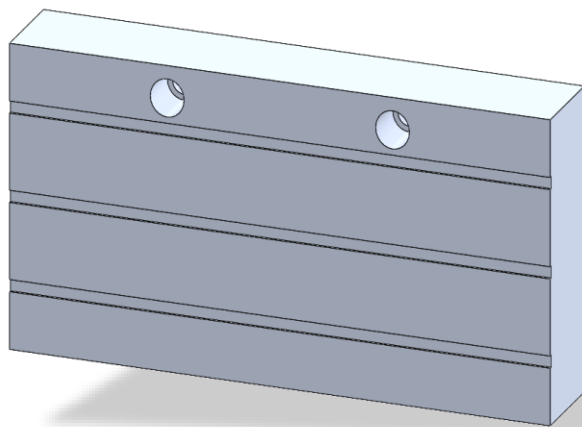
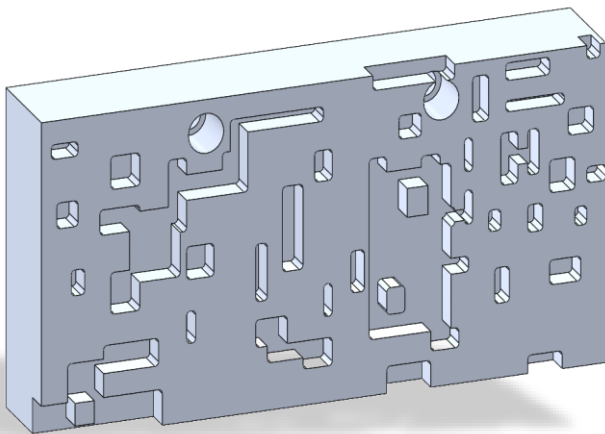


Process & Storage Vessels

# ELECTRONICS MANUFACTURING TOOLING

## Precision SMT Vacuum Plates for Electronics Assembly

- ⚙️ Custom-designed vacuum plates for Surface Mount Technology (SMT) processes.
- ⚙️ Optimized for secure component placement and high-precision assembly.
- ⚙️ Durable materials ensuring stability and longevity in production environments.
- ⚙️ Engineered for efficiency in pick-and-place, soldering, and inspection operations.

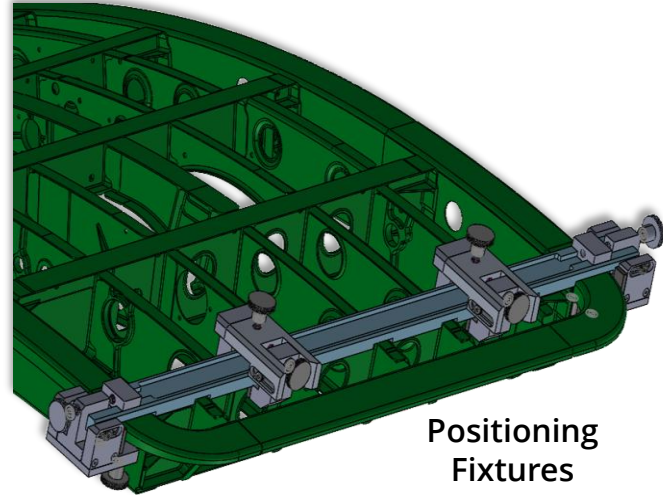


SMT Vacuum Plates

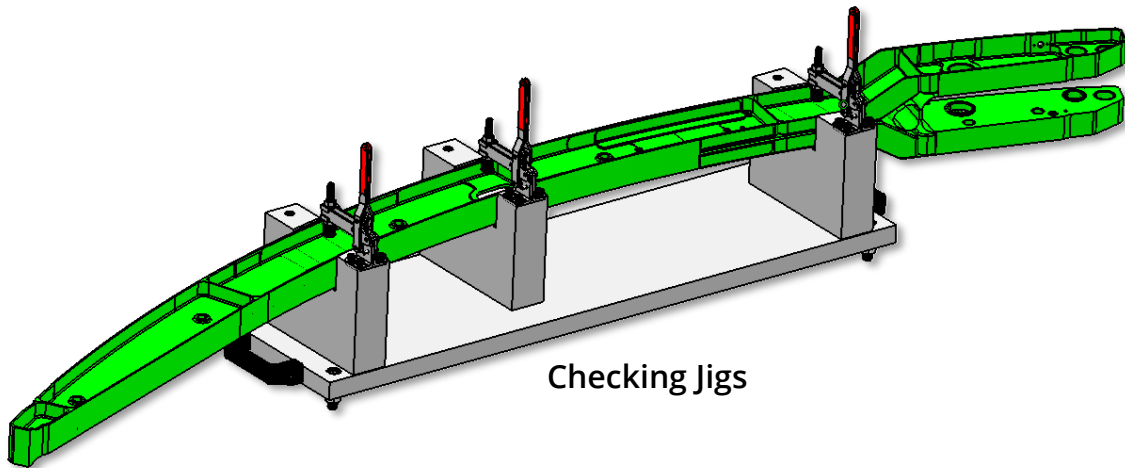
# AEROSPACE MANUFACTURING TOOLING

## Precision Fixtures for Assembly, Positioning, and Inspection

- ⚙️ **Custom-designed tooling** for aerospace component manufacturing.
- ⚙️ **High-precision** positioning fixtures for accurate assembly alignment.
- ⚙️ Checking jigs for **quality assurance** and dimensional verification.
- ⚙️ **Ergonomic assembly** workstations for improved efficiency and workflow.
- ⚙️ **Optimized** for aircraft structural components, ensuring accuracy and repeatability in production.



Positioning Fixtures



Checking Jigs

# FINITE ELEMENT ANALYSIS (FEA) & SIMULATION

## Finite Element Analysis for Mechanical Structures

- ⚙️ **Structural Integrity Validation:** Stress, deformation, and fatigue analysis to ensure your designs meet safety and performance standards.
- ⚙️ **Optimized Material Usage:** Reduce costs by simulating different materials and geometries without physical prototypes.
- ⚙️ **Dynamic Load Scenarios:** Test your components under real-world conditions (vibrations, thermal effects, or impacts).
- ⚙️ **Clear Reporting:** Detailed visual results and actionable insights for informed decision-making.

