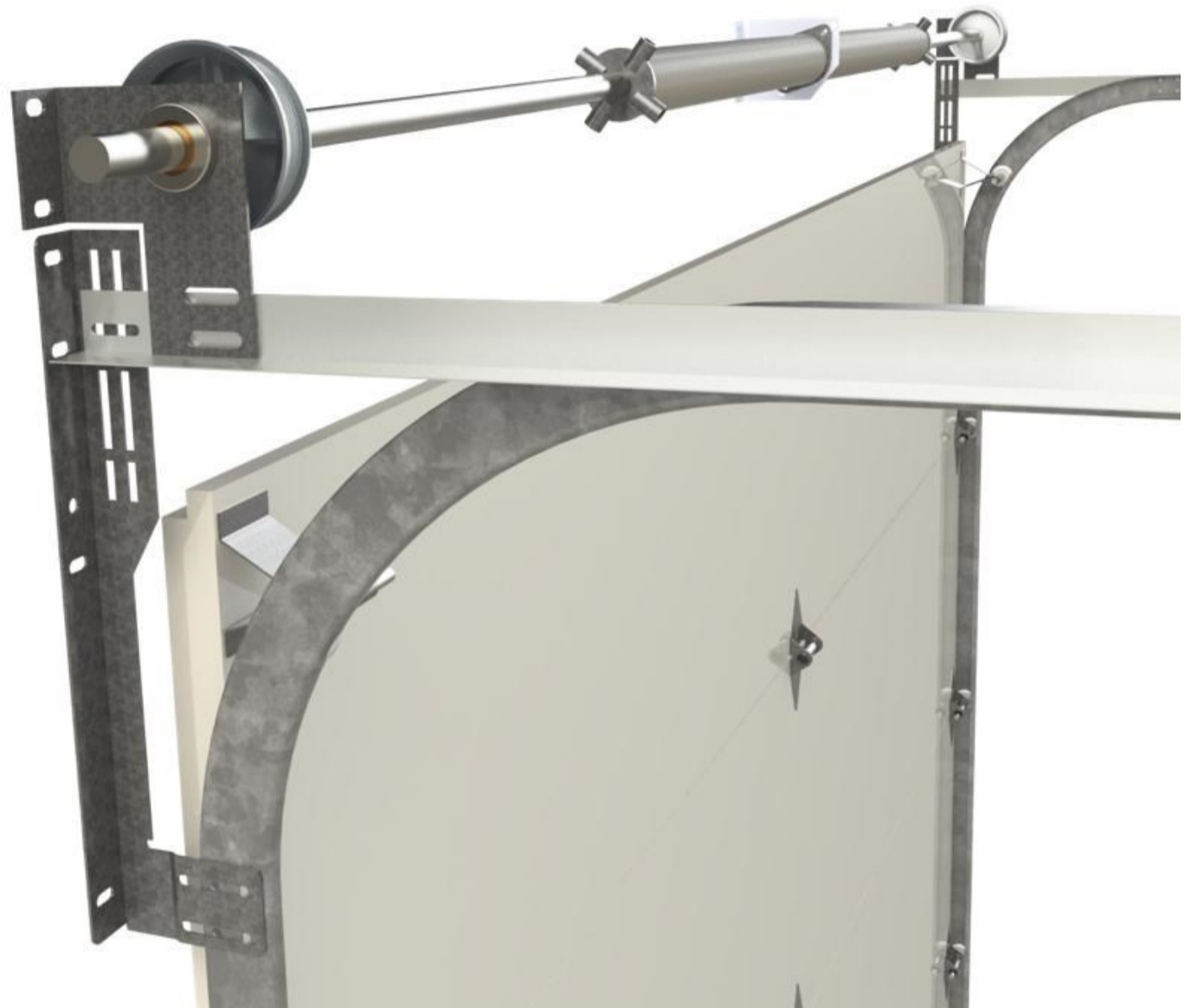


MECHANICAL ENGINEER - JORGE FILIPIGH

PORTFOLIO

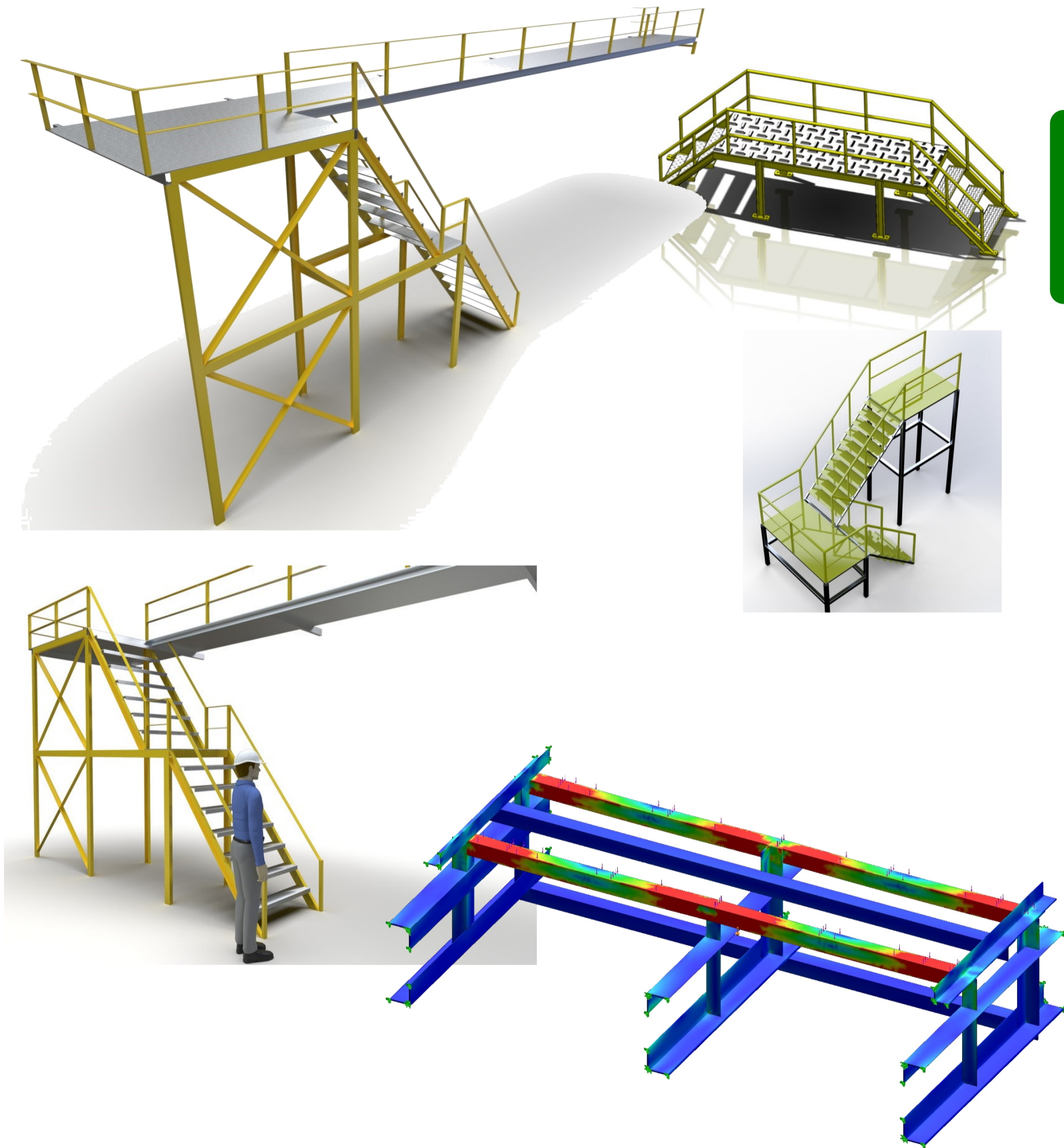


In the realm of mechanical design, we find a captivating symphony of disciplines intertwining with unparalleled grace. At its heart, mechanical design is the art of crafting elegant machinery, an intricate dance of gears, levers, and systems that resonate with precision and purpose.

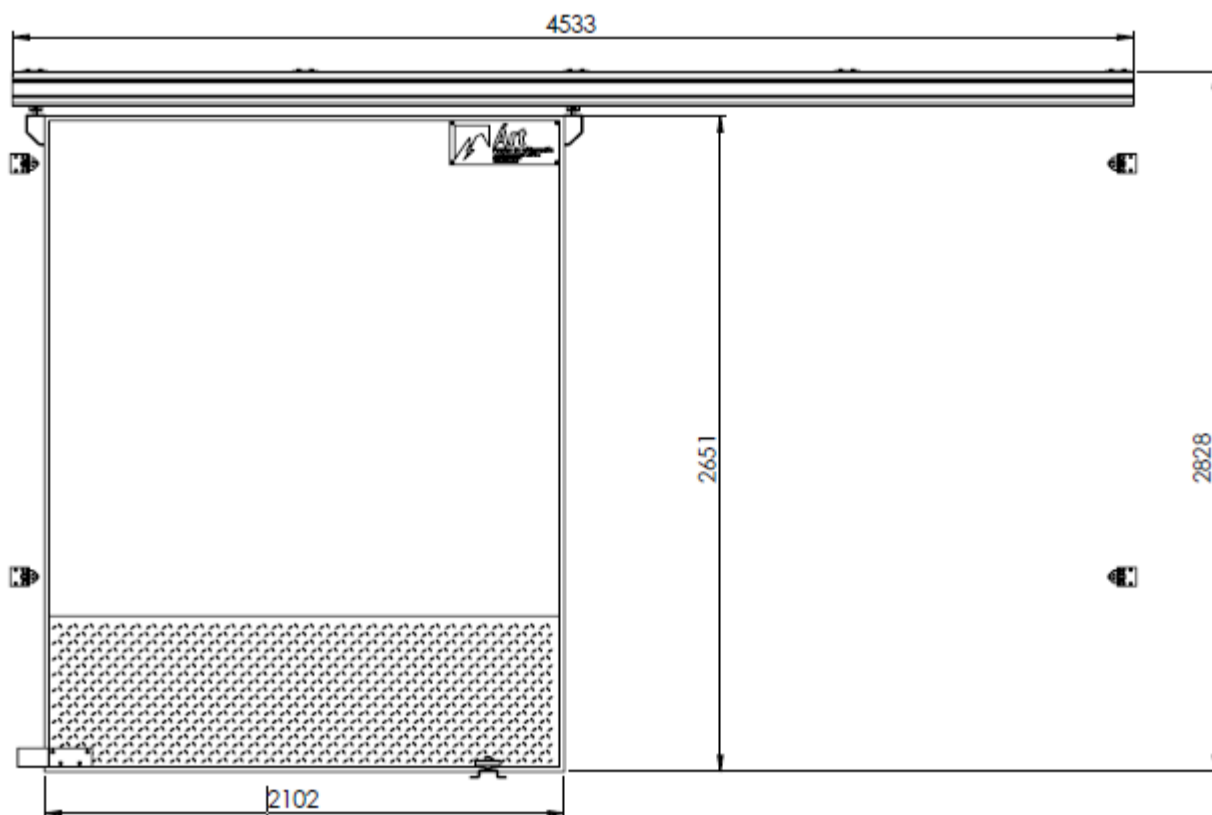
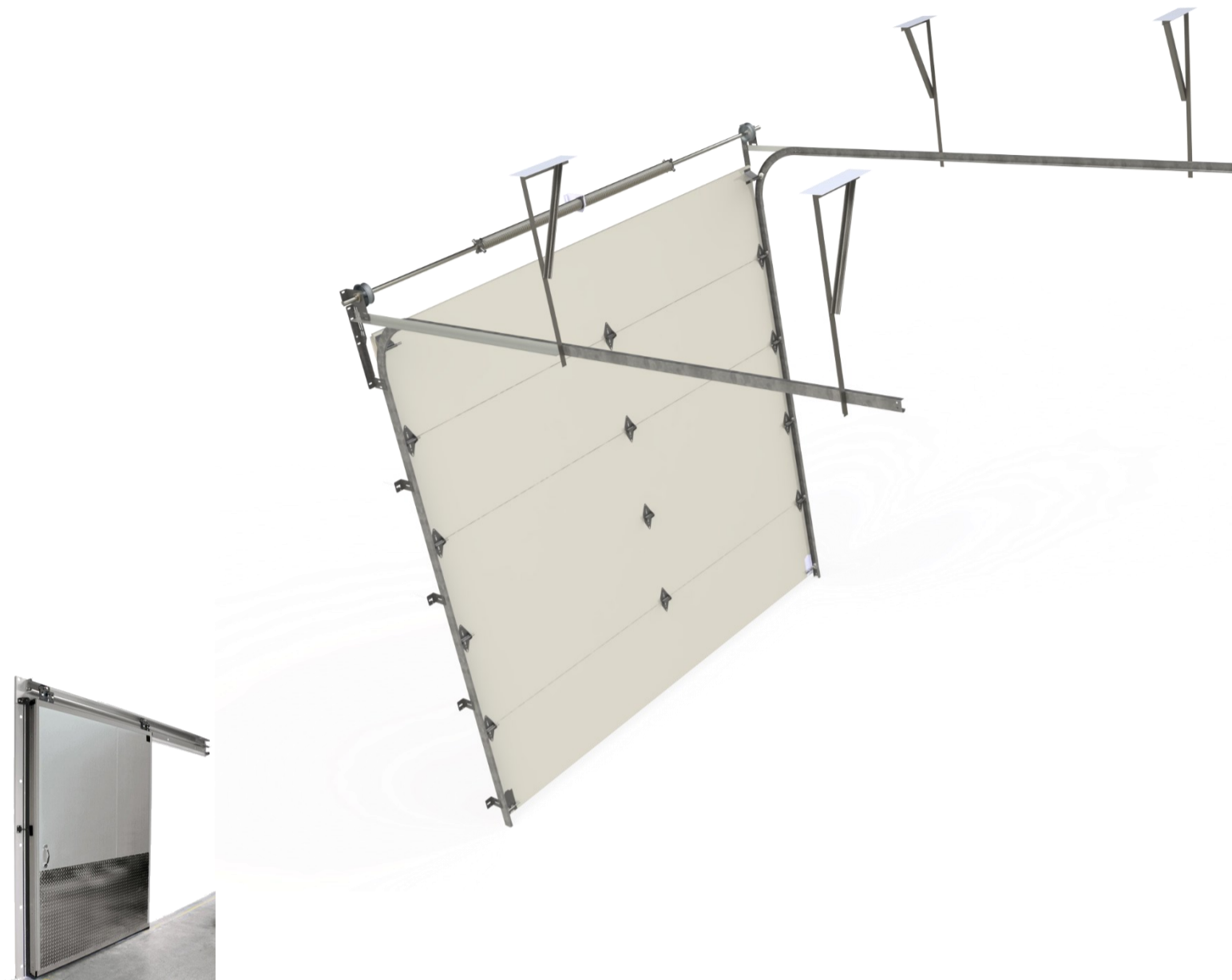
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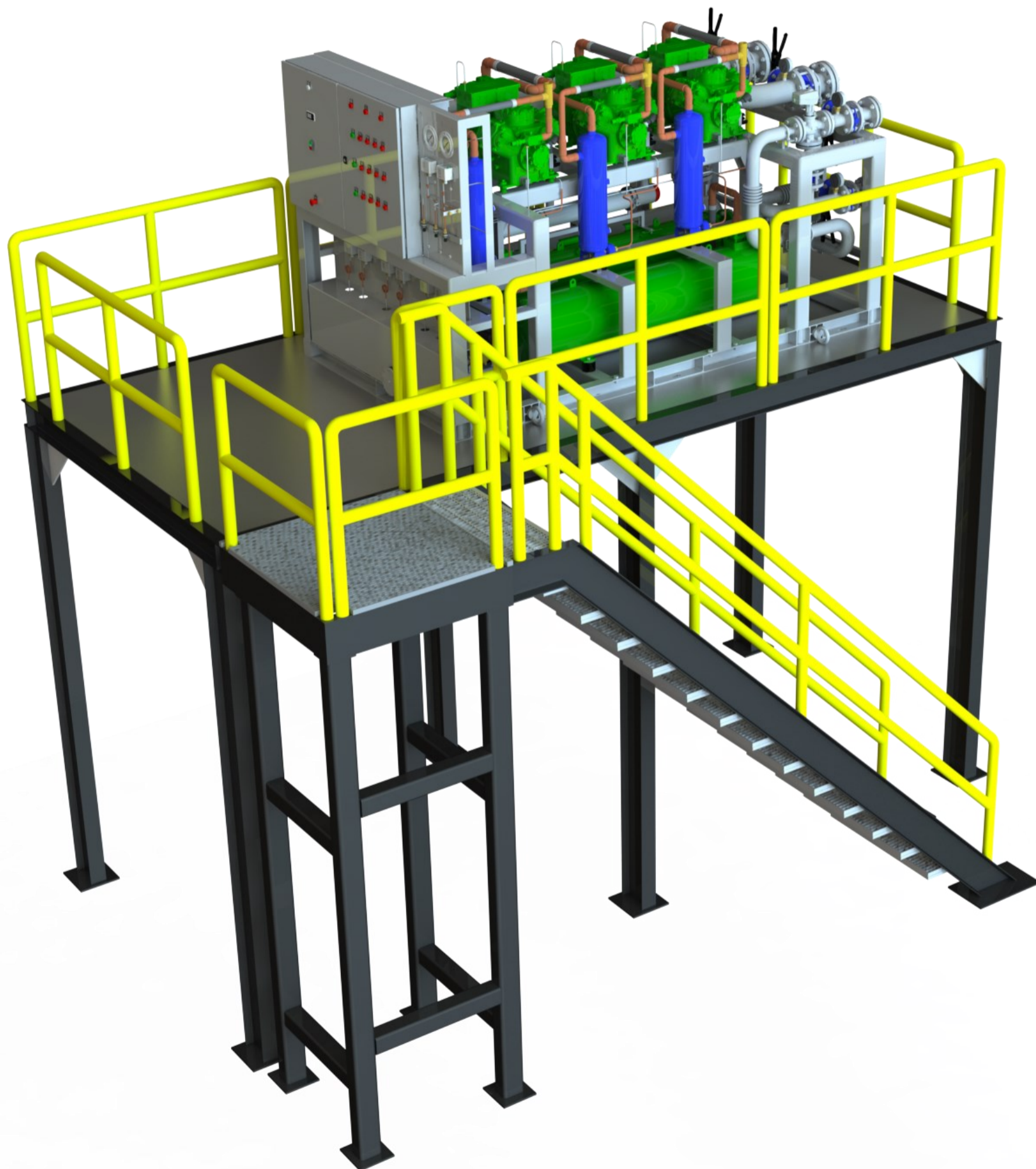
jorge_filipigh@hotmail.com



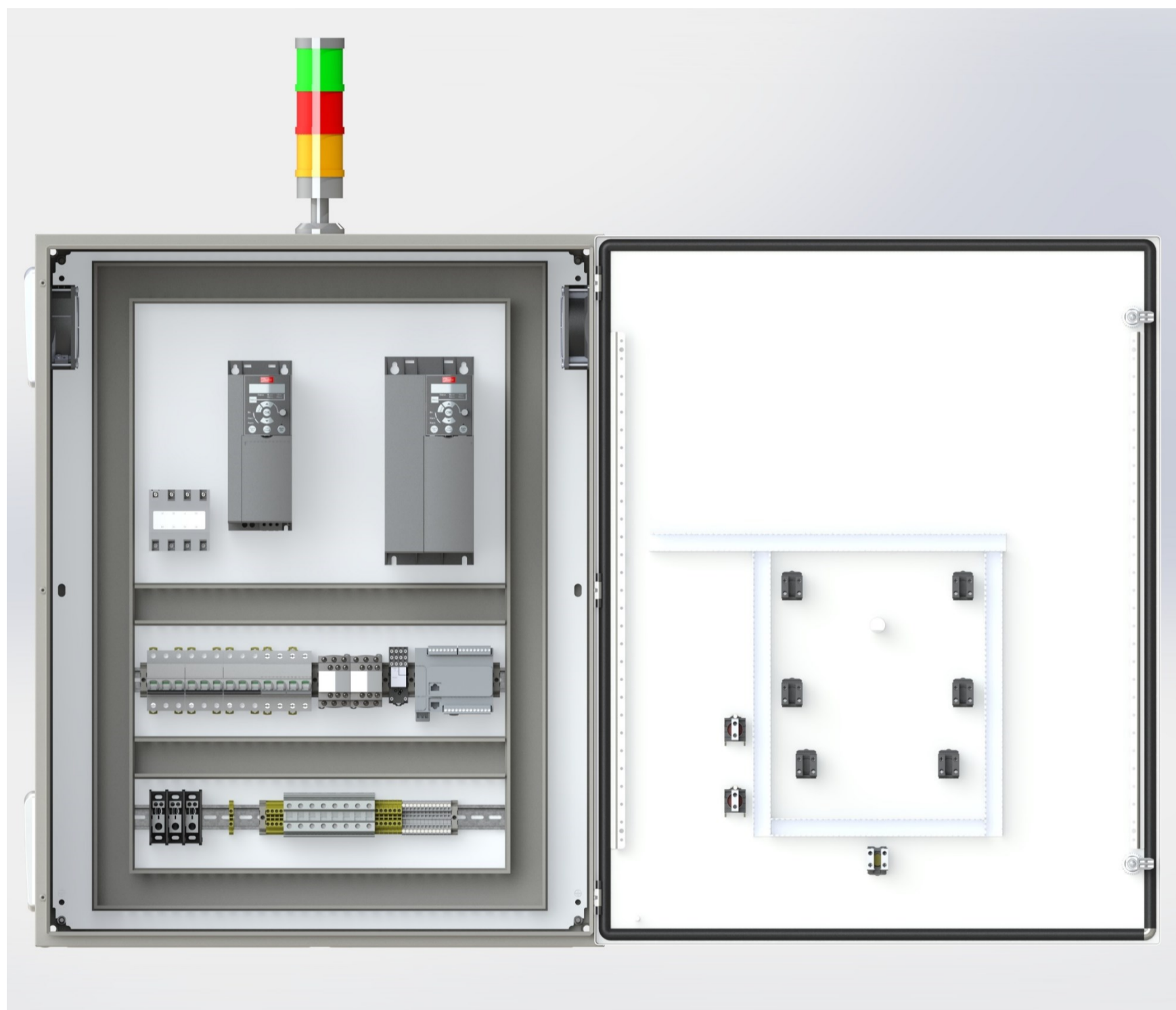
With FEA, we take our mechanical designs beyond the realm of theory and into the world of virtual experimentation. It's where mathematical algorithms and computational power combine to simulate how our creations will behave under the most demanding conditions. FEA is the bridge that connects imagination to reality, providing insights that guide us towards optimal solutions.



HVAC Condenser structural mezzanine with maintenance access.



Electrical control box.



ELECTRICAL

Electrical box control for a pre cooling process in the food industry.
Two inverters control fans and a PLC controls the condenser unit and the evaporator.

Tube amplifier



This tube amplifier is engineered with meticulous attention to technical detail and performance. It features a quartet of EL84 tubes, renowned for their exceptional audio characteristics, providing a warm and vintage sound signature.

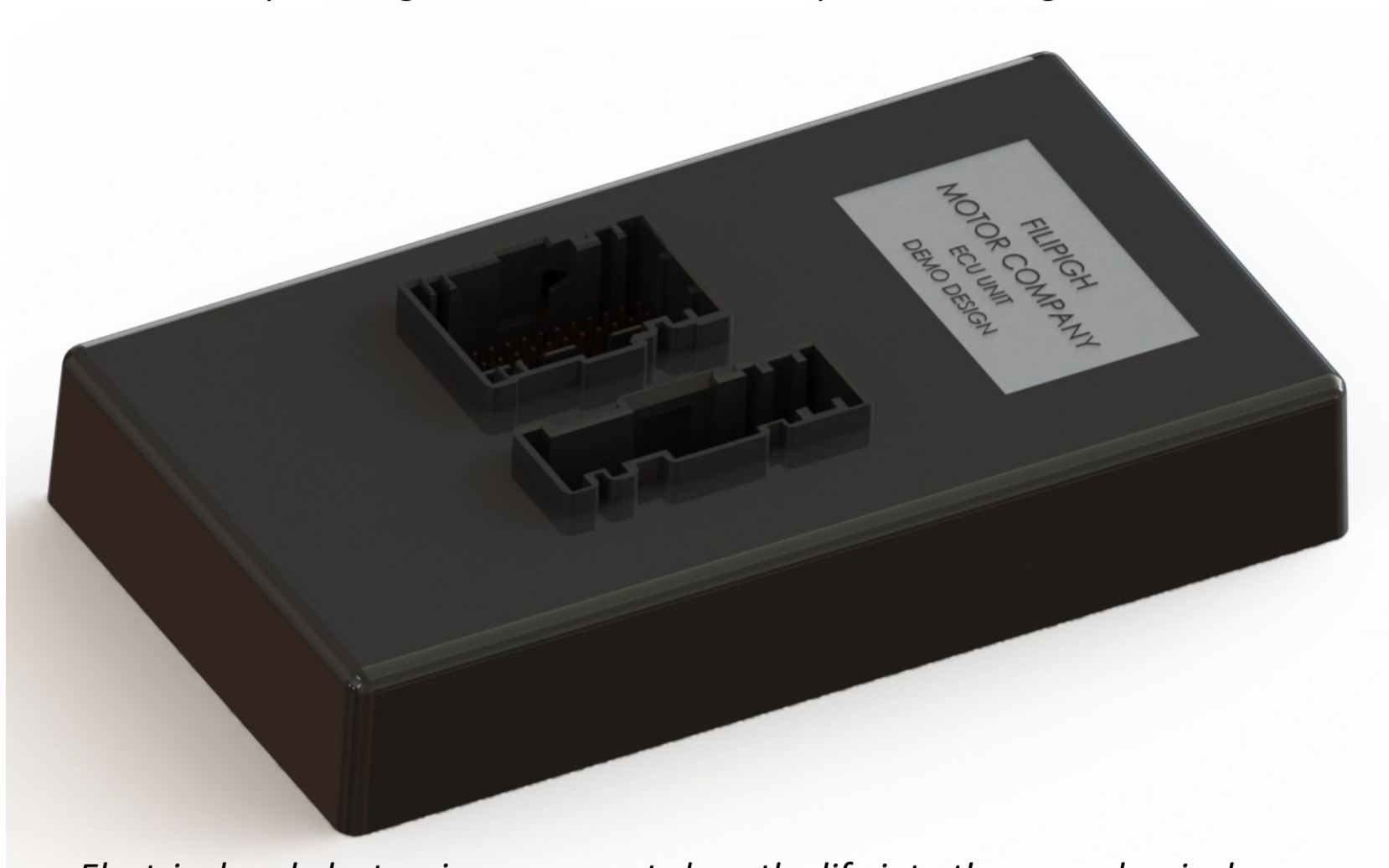
The amplifier's output is supported by a dual-sided toroidal transformer configuration, delivering efficient power while minimizing electromagnetic interference, thereby ensuring optimal signal integrity.

For operational convenience, the amplifier incorporates a side-mounted volume control, allowing for precise adjustments at your fingertips.

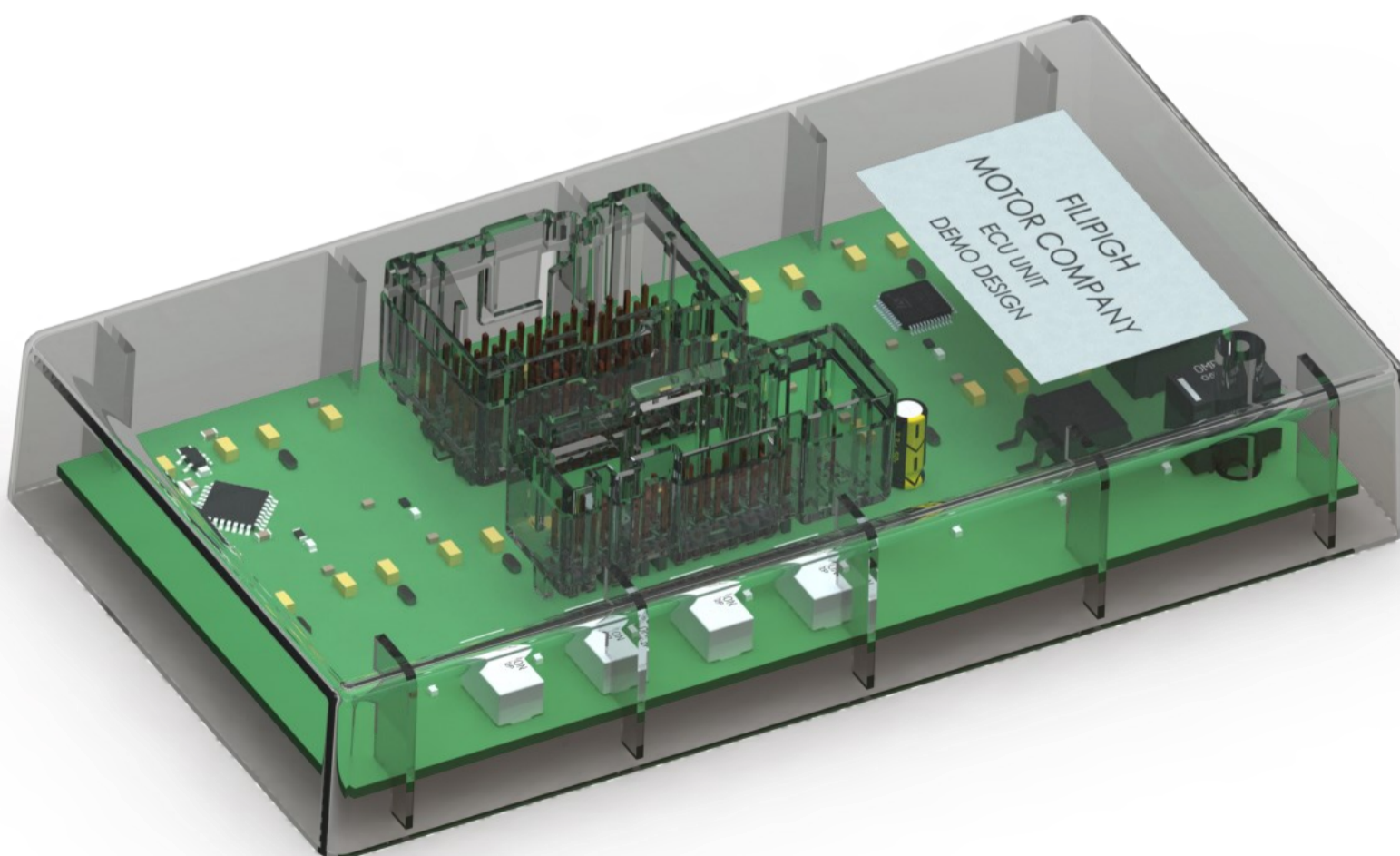
In terms of construction, advanced plastic injection molding techniques have been employed to achieve structural durability, while a carefully applied coat finishing not only enhances the amplifier's visual aesthetics but also serves as a protective shield for its internal components.

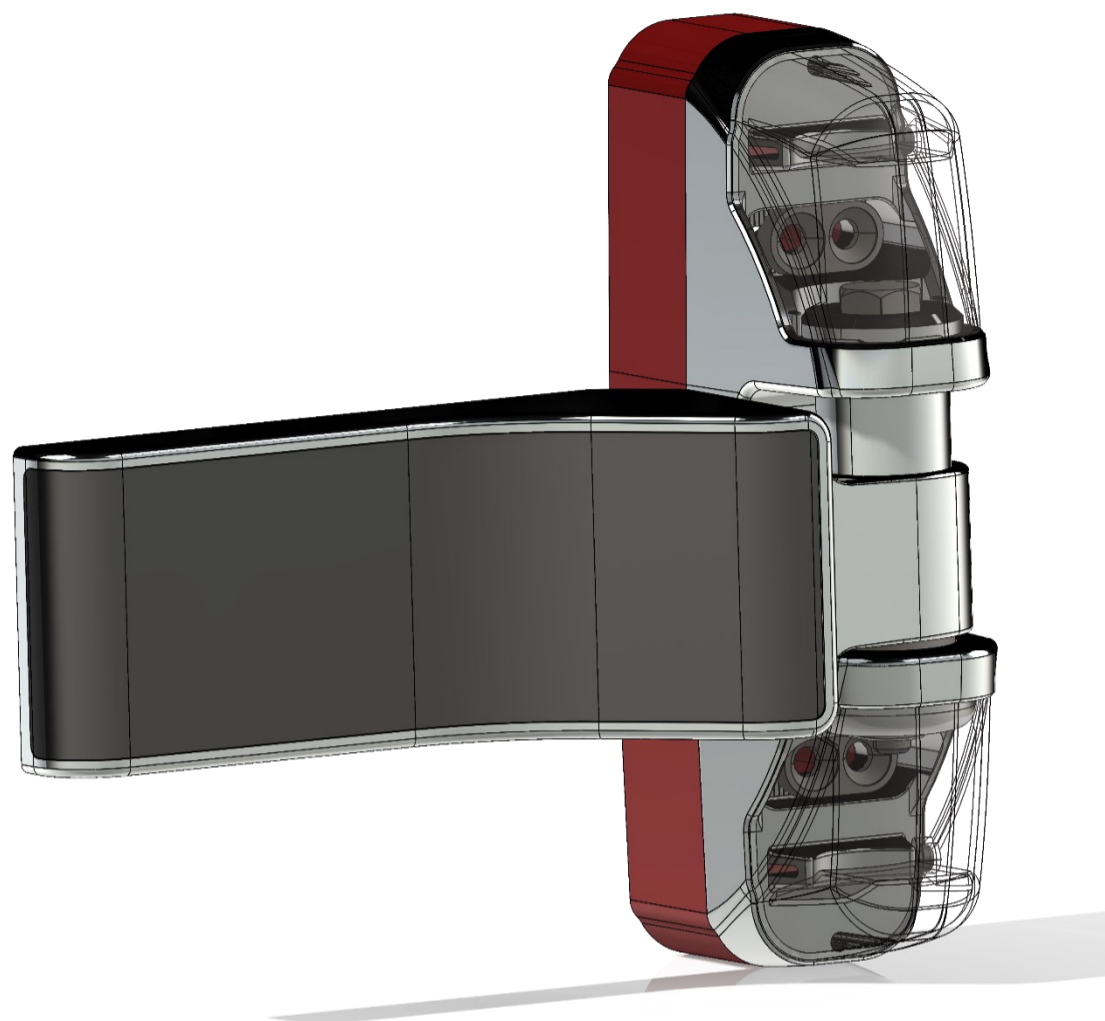
This amplifier is a testament to the fusion of classic tube technology with modern engineering expertise, resulting in a formidable audio component that meets the most exacting technical standards.

ECU Unit example. Integration of PCB board and plastic housing.



Electrical and electronic components breathe life into these mechanical marvels, infusing them with intelligence and vitality. It's the fusion of form and function, where wires and circuits gracefully converge with pistons and cogs. The union of these disciplines creates a harmonious ballet, where every movement, every interaction, is meticulously orchestrated.

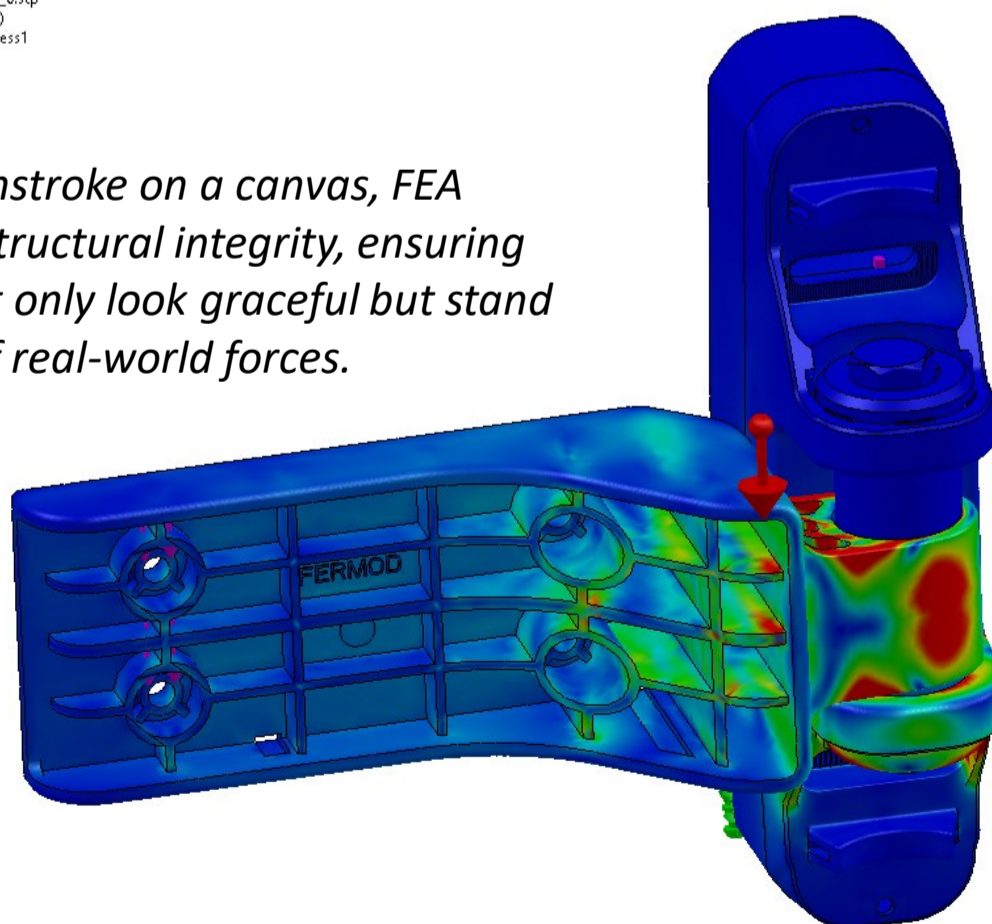




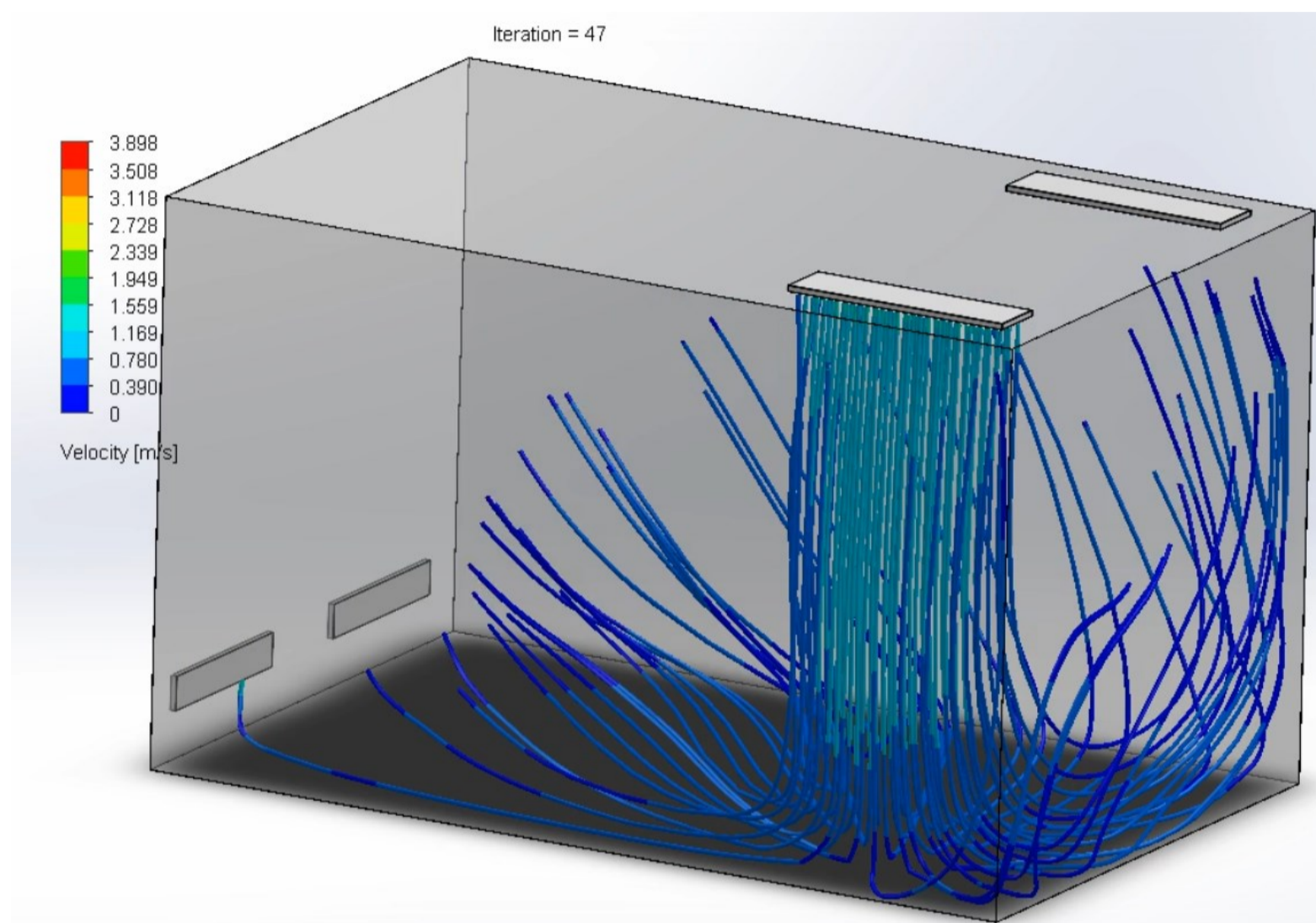
FEA (Finite Element Analysis) is the virtuoso within the mechanical design orchestra. It breathes life into our creations by revealing the hidden secrets of stress, strain, and performance.

Model name: bisagra_1473_dec_0.stp
 Study name: Static 1(-Derecha-)
 Plot type: Static nodal stress Stress1
 Deformation scale: 1

Like an artist's brushstroke on a canvas, FEA paints a picture of structural integrity, ensuring that our designs not only look graceful but stand strong in the face of real-world forces.



Airflow distribution inside an stability chamber.



Limited simulation capabilities due to a demo license availability. However, the real distribution in the chamber, measured with anemometer point to point manually, did match pretty close in average, with this simulation

PORTFOLIO

DESIGN ENGINEERING

- This portfolio contains my work and all these pictures and designs belong to me.
- Modelling, render and simulations were performed with my Fury G17 and my Solidworks License.

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