



High-flying EXCELLENCE

2024 BROCHURE



Mecanizados & Montajes
AERONÁUTICOS

The image shows the exterior of a modern building with a large, three-dimensional sign. The sign features the letters 'M&M' in a stylized, colorful font (red, yellow, and grey) with a distressed, industrial look. Below this, the text 'Mecanizados & Montajes' is written in a smaller, grey, sans-serif font, and 'AERONÁUTICOS' is written in a larger, bold, grey, sans-serif font. A black light fixture is mounted on the building's facade above the sign. The sky is clear and blue.

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Mecanizados y Montajes Aeronáuticos S.A. (M&M Group) was founded in 2004 as an auxiliary company for the provision of services in preparation and hanging of metallic elements for surface treatments, manufacture of tools for hydro-forming and reaming parts.

M&M Group continues to evolve, entering the Industry 4.0 phase, with the implementation of a comprehensive management process, which becomes a reference among small and medium-sized companies in the sector in Spain.

Today, the group develops two business lines that make the company a reference in the sector: **Manufacturing & Processes and Technology & R&D.**

HEADQUARTERS



We have three different locations
in the province of Cadiz, Andalusia
(Spain).



LAS SALINAS

Las Salinas Center, in Puerto de Santa María (Cádiz). It has 2,700 m² and acts as headquarters. Its activity is based on the forming of sheet metal parts, shared processes, surface treatments, painting, equipment and subassemblies.



CARISSA AURELIA

Carissa Aurelia's center, in Espera (Cádiz), has 2,250 m². This center specializes in profiles and drawing parts, including their heat treatments.



TECNOBAHÍA

Tecnobahía Center, in Puerto de Santa María (Cádiz). It has 1,000 m² and its activity is focused on Numerical Control Machining (CNC). It is also the headquarters of the MRO and services business lines, as well as Technology and R&D.

BEST-IN-CLASS ON QUALITY AND ON TIME DELIVERY



In M&M Group quality as company value, is necessary to achieve our commitment with our customers.

M&M Group records continuously outstanding on-time and on-quality rates in the aeronautic industry.

**R1 - 99.3* %
In quality**

**D1 - 99* %
On-time delivery**

*Data extracted from the 2022 audit of the company.

MACHINING

M&M Group specializes in industrial processes applied to the parts in order to transform them into the final product according to the design requirements. We have 3 and 5 axis CNC machines with different kinematics capable of machining parts up to 3 meters, with which we will achieve a high quality manufacturing process.

HEAT TREATMENTS

Heat treatments are controlled processes that transform the internal microstructures of the metal, thus providing beneficial properties for the product life cycle such as increased hardness of the final products or improved formability of intermediate products. We have a wide range of certified heat treatment services, including quenching, annealing, solubilization and maturation. Given the high level of experience and expertise provided by our staff, we are able to deliver reliable results.

FORMING

Metal forming processes are used for plastic deformation and changing the geometry of the part. We have cold and hot forming technologies, press brakes, hydraulic rubber cushion presses as well as the manufacture of elementary parts by drawing technology, thus following the regulations required by the customer applicable to the processes.



STRETCHING

The objective of the straightening process is to obtain flat geometries in order to obtain the final or intermediate geometric design required by manufacturing. An excellent finish will be achieved by operations such as CNC milling or water jet cutting (AWJC).

SURFACE TREATMENTS

The surface treatments will participate in the improvement of the finish of the metal parts, thus guaranteeing optimum protection against oxidation and corrosion. We take care of coating from small parts to large series, so we have different certified technologies, such as chemical conversion procedures, stainless steel passivation, titanium anodizing, TSA anodizing, priming and painting, complying with the most demanding standards and offering reliable results with continuous quality.

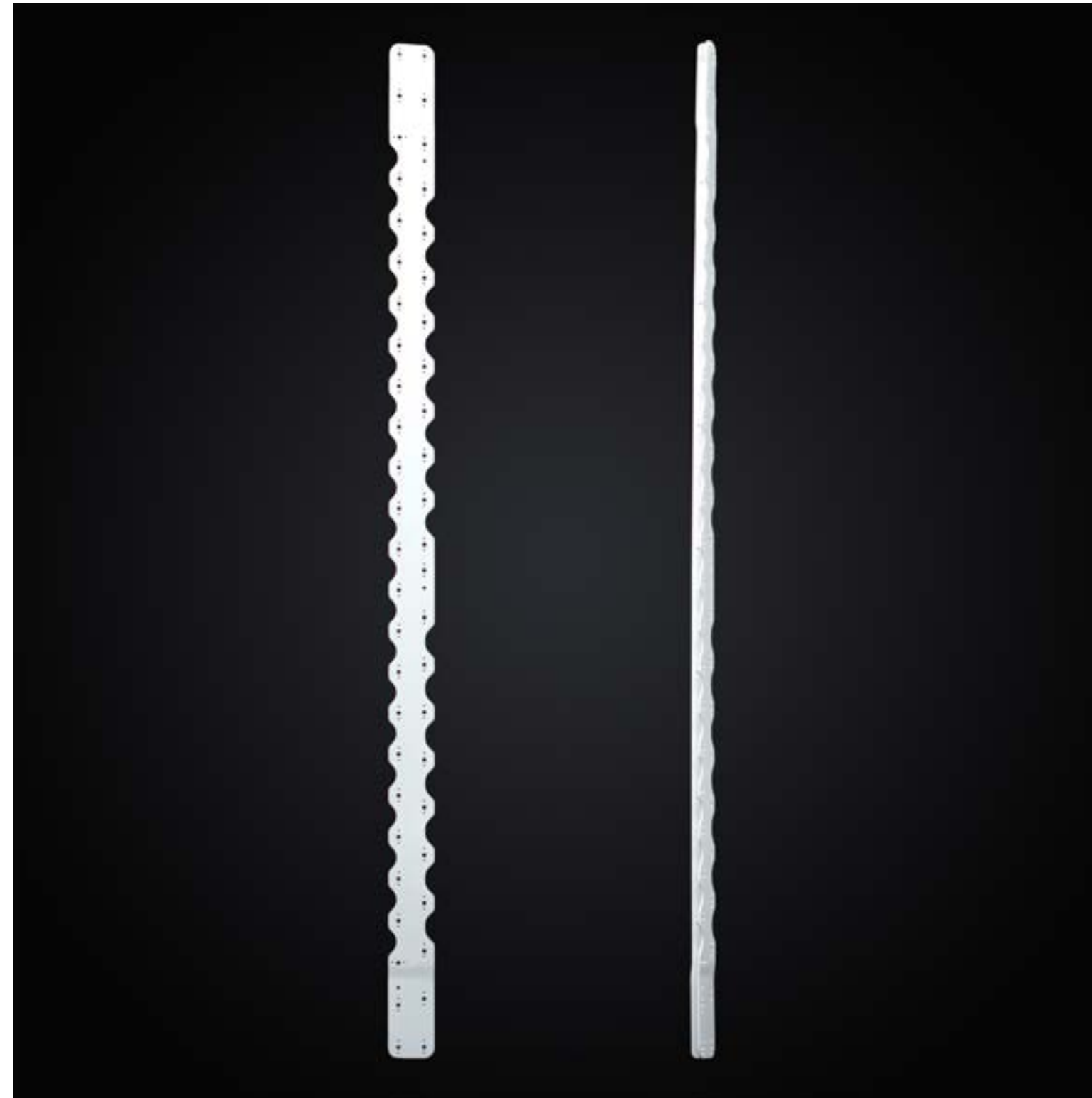
SUBASSEMBLING

We have the most modern means to carry out assembly processes of aeronautical subassemblies. The company has an air-conditioned room for the assembly and application of sealants, a mixing room and equipment for riveting and drilling.

MANUFACTURING & PROCESSES



Some examples of the metal parts for aerospace use that we manufacture:



MANUFACTURING & PROCESSES



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MANUFACTURING & PROCESSES



Some examples of the metal parts for aerospace use that we manufacture:



QUALITY

M&M Group, aware of the importance of Quality and product safety, establishes, implements and maintains in the company a Quality Management System in accordance with the requirements of the EN 9100:2018 standard, and is committed to comply with the applicable requirements in order to achieve continuous improvement of the quality management system.



BOEING

- Standard Test Methods for Rockwell Hardness of Metallic Materials.
- Heat Treat of Aluminum Alloys.
- Hardness Testing.
- Temper Inspection of Non-ferrous Alloys (Conductivity Method including BAC 5651).
- Mechanical Testing – Metallic.
- Boeing approved QMS as defined in D1-4426.
- Processor Requirements Sec 6.16.3.

EMBRAER

- Quality Management System.
- Non destructive Testing by penetrant liquid.
- Hot Forming process.
- Tartaric Sulphuric Anodizing of aluminium alloys TSA.

LEONARDO

- ASA – Metallic Structures.
- ASA – Metallic Sub-assemblies.

CERTIFICATES

AIRBUS

- Certification of personnel and facilities for inspection of ferrous alloys heat treatment by means of Rockwell hardness.
- Cleaning and passivation of stainless steels and refractory nickel and cobalt alloys.
- Paint (General specification). Paint system for metallic details parts and assemblies.
- Application of sealants.
- Chemical conversion films on aluminium and its alloys.
- Aluminium and aluminium alloy tartaric-sulphuric anodising.
- Preparation of holes in metallic materials for fastening.
- Application of structural paints.
- Electrical Bonding.
- Penetrant testing.
- Processes Determination of electrical conductivity of aluminium alloys by Eddy current method.
- Solid aluminum alloy and titanium-niobium alloy rivets.
- Paint general specification.
- Paint systems for metallic detail parts and assemblies.

- Wet installation of fasteners.
- Chemical conversion coating.
- Riveting of carbon fiber composite structures.
- Application of external paint systems.
- Dry Blasting.
- Cleaning and pickling of Ti and its alloys.





BUILD-TO-PRINT

Along 15+ years, M&M Group has supported and collaborated with all its customers in order to strength relations and create solid alliances through different programs and work packages, under build to print basis. A full team of engineers with great expertise and know how, working towards continues improvement, are our best warranty as supplier.

BUILD-TO-SPEC

M&M Group has capacity for the build to specification manufacturing for customers. With long experience in manufacturing of Jigs and tooling, with capacity over 30 tool and jigs per month, design and manufacturing under compliance to Airbus and Boeing specifications, among others, more than 900 works a year, and more than 5.000 tooling manufactured since our creation. In our dedicated site in Tecnobahia, we have more than 30.000 hours a year in machining to support this build to print and build to spec.

REVERSE ENGINEERING

Our manufacturing engineers, full specialist in reverse engineering, drawings and documentation elaboration, and all the process to manufacture aerospace components.

A full team of engineers with great expertise and know how in industrialization of build-to-print packages.

Starting from the parts our design engineers produce the drawings and the technical documentation to set all the process to manufacture aerospace components in reverse engineering.



WE INNOVATE



INNOVATIVE SME



Valid until Aug 22nd 2025



Junta de Andalucía

M&M Group has received the Innovative SME seal issued by the Spanish Ministry of Science and Innovation. This seal and entry in public registry, with a duration of 3 years renewable with the maintenance of requirements, is granted to small and medium companies that have a great innovative character.

In addition, the Department of University, Research and Innovation of the Regional Government of Andalusia, through the Directorate General of Research Planning, has decided to accredit and register M&M Group as Accredited Technological Knowledge Agent (ACTA) in the electronic register of Agents of the Andalusian Knowledge System (SAC) with the registration number AC0284ACTA.

These recognitions are a new sign of M&M's firm commitment to research and innovation in the aerospace and industrial sector.



Industrial innovation and technological progress are one of the fundamental pillars on which M&M's business strategy is based. Our company collaborates with universities and technological centers of reference with the aim of researching and implementing new processes and management systems within Industry 4.0 (PLM).

Our research fields focus on technologies applied to the field of modeling and simulation, as well as surface engineering and forming technology.

We also work in the development of scientific and industrial software; augmented reality and video processing, or software engineering for Industry 4.0 (IoT, Digital Twin, Cloud Computing...).

In addition, we have several continuing education programs, including our Internship Talent Program, development of Master's Thesis or development of doctoral theses applied to industry.

TECHNOLOGY & R&D

METAL FORMING

In the R&D line of M&M Group we study and develop knowledge around our main manufacturing processes, generate innovative ways of manufacturing and develop cutting-edge industrial technologies and propose improvements based on scientific results.

SURFACE ENGINEERING

M&M Group focuses on corrosion protection and has a strong R&D activity in the development of innovative corrosion protection systems and the optimization of existing processes.

M&M Group's lines of research are Cr(VI)-free protection systems, field-assisted coating deposition, frictionless and anti-wear coatings, corrosion inhibitors for active protection and the development of electrochemical process models.



PLM & INDUSTRY 4.0

In M&M Group we work in projects of definition and development of a PLM based on FOSS for SMEs and we also offer consulting and advisory services to companies in the aerospace and naval industry in their digital transformation.

MODELING AND SIMULATION

The objective of our work is to generate possible scenarios in the digital world to optimize processes and resources before testing them in the real plant.



M&M, YOUR BEST PARTNER

PARTNERSHIP STRATEGY

The growth of M&M Group over the years, has been based in setting strong partnerships with customers and suppliers. Today M&M has commercial and strategic partnerships with main key players in the aerospace industry. M&M Group works also along a Supply Chain.

M&M Group is open to participate and build new profitable partnerships for the industry.

CUSTOMER SUPPORT

- M&M offers to its customers a dedicated team to help them in solving their industrial challenges.
- M&M works with our customers in their facilities with in-plant teams when requested.
- M&M Offers a great human team available at your site.

M&M, YOUR BEST PARTNER

M&M Group works with the most important Tier I and Tier II on the market, as well as with OEMs. Our customer base continues to expand around the world...



We work with:





Mecanizados & Montajes AERONÁUTICOS

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#WeAreMyM

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