Building excellence every day

At ALUMIL we are building excellence every day. Through our modern production facilities and strict quality controls along the entire production line, we ensure the creation of superior products of high added value. With more than 30 years of experience and 2,200 employees, we are one of the most advanced companies globally in the design and production of aluminium profiles and architectural aluminium systems, owning state-of-the art production plants in our 12 factories in Europe.

Our extensive network of subsidiaries across the globe, the large number of our privately owned factories and our multiple distribution centers ensure efficient service internationally.

/ Presence in over 60 countries in all continents
/ 32 Subsidiaries worldwide
/ 12 factories in 6 countries: Greece, Bulgaria, Romania, Albania, Serbia, Bosnia & Herzegovina
/ 10,000 partners worldwide
/ Strong Engineering (Greece, America, Romania, Serbia, Dubai, India)
Production Plants

We love what we do and that is why we want to be excellent in every aspect of it. As of today, ALUMIL has 12 factories in 6 countries.

Everything from one hand, in exceptional quality

To get an idea of our immense vertical integration consider that our industrial facilities include:

1. aluminium extrusion lines
2. foundry for aluminium billet production
3. manufacturing plants for production, processing and assembling of accessories
4. production site for various prefabricated interior & entrance doors, through the business unit of INTERNO Doors
5. manufacturing plant for roll-formed aluminium-foam filled profiles
6. production site for automated systems and elevators with METRON, an autonomous subsidiary specialized in automation
7. manufacturing plant for aluminium composite panels
8. manufacturing plant for polycarbonate sheets

Production capacities & capabilities

- 100,000 tons of aluminium extrusion
- 75,000 tons of powder coating
- 80,000 tons of billets
- 22,000 tons of anodized aluminium
- 30,500 tons of thermally insulated profiles
- 950,000 m² aluminium composite panels
- 2,000,000 m² polycarbonate sheets
- 10,000,000 m² polyamide profiles

Capable of everything

Last but not least, in ALUMIL’s industrial sites are operating:

- Multiple CNC lines, bending machines, cutting saws, drilling machines
- Accessories assembling lines
- Automated packaging lines
- Polyamide & PVC extrusion lines
- Solar truss assembly line
- Polishing machines & sand blast lines
- Sound wall machines
One of ALUMIL’s greatest assets is its people and the high level of service it provides at all times. With us you get cutting-edge aluminium products, as well as top-notch services.

ALUMIL offers:

- A powerful presence in the European market, with service points staffed by experienced and technically qualified consultant engineers, always at the customer’s service he or she may need.

- A back-office staffed with experienced engineers, always ready to advise at the design phase, recommend and find solutions at all stages of the process and for every product requirement.

- Multiple production points with separate departments for additional processing in the same facilities, as well as efficient call centres, thus rendering ALUMIL a one-stop-shop.

- An up-to-date quality control assurance system which guarantees the quality of our services.

- A flexible distribution network which ensures the fastest and safest dispatch of products to our customers for punctual delivery.
State-of-the-art 3D printing services

For even greater customer convenience at the new product development stage, we can offer profile sampling through the cutting-edge 3-D printing workshop on our premises through:

- Checking that the designed profile is compatible with other profiles and components
- Printing of 3-D objects up to 300 x 300 mm and with a maximum height of 450 mm
- Dimensional precision of +/- 0.3 mm
- Printing on PLA, a biodegradable, environmentally-friendly material
Quality Control

In its effort to provide well-constructed, perfectly functional products, ALUMIL makes sure that it supports each production stage with the most advanced Quality Control methods. Specifically:

- In each production section, procedures are applied based on the very latest quality certifications (ISO 9001, ISO 14001, OHSAS).
- Continuous renewing of measuring instruments and calibration of all control configurations – sensors.
- Statistical analysis and traceability of data from every quality control point.
- Quality assurance of alloy – certification of chemical composition.
- Staffed testing labs (Powder Coating), anodizing and mechanical properties).
- Our philosophy for providing our customers with optimum solutions, thanks to state-of-the art equipment and continuous staff training results in the minimization of errors and technical flaws, as well as the elimination of accidents.
Production certificates

- QUALITY MANAGEMENT SYSTEM
  In accordance to International standard ISO 9001
- ENVIRONMENTAL MANAGEMENT SYSTEM
  In accordance to International standard EN ISO 14001
- HEALTH AND SAFETY MANAGEMENT SYSTEM
  In accordance to national standard ELOT 1801
- FPC - FACTORY PRODUCTION CONTROL
  with full traceability systems
- CE marking
  In aluminium profiles for use in load-bearing structures
- NF Certification
  from the CSTB for thermally insulated profiles
- QUALICOAT CERTIFICATE
  (Aluminium Profile Paint Quality Certificate)
- GSB – INTERNATIONAL
  (Aluminium Profile Paint Quality Certificate)
- QUALANOD
  (Anodized Aluminium Profiles Quality Certificate)

Traceability: Ensuring Quality

The main reason ALUMIL has put such an enormous effort in developing a totally autonomous production plant capable to produce almost everything regarding aluminium, is basically one: TRACEABILITY.

Thanks to our advanced material handling system and our cutting edge ERP system, we know every aspect of our production process and are able to make continuous improvements.

In addition, we can prevent on time possible problems and adopt an accurate tracking system of any item from the starting point of production or purchase, until the final delivery. In that way we can assure guaranteed quality to our customers, every day.
Advanced aluminium extrusion

Why aluminium?

Aluminium is a metal with excellent mechanical properties, and has introduced a revolution to many technological fields. Though much lighter than other metals, it possesses very high mechanical strength, which is the reason why it is so much used in the very demanding area of aeronautics. Furthermore, it is very resilient to various forms of corrosion and entails minimal maintenance costs.

Aluminium is also the 3rd most common element existing around the world’s crust. It is a ‘green’ material which can be recycled an infinite number of times while retaining its characteristics without any qualitative degrading. Indeed, the energy required in its recycling is only 5% of that consumed in its initial production. Thus, it is hardly a surprise that in Europe 85% of aluminium used in construction derives from recycling.

Aluminium has a unique and unbeatable combination of properties which means that it is an extremely versatile, highly usable and attractive construction material.

Weight
Aluminium is light with a density one third of that of steel.

Strength
Aluminium is strong with a tensile strength of 70 to 700MPa depending on the alloy and manufacturing process. Extrusions of the right alloy and design are as strong as structural steel.

Elasticity
The Young’s modulus for aluminium is a third that of steel (E=70,000 Mpa), this means that the moment of inertia has to be three times as great for an aluminium extrusion to achieve the same deflection as a steel profile.

Formability
Aluminium has a good formability, a characteristic that is fully utilized in extruding. Aluminium can also be cast, drawn and milled.

Machining
Aluminium is very easy to machine. Ordinary machining equipment can be used such as saws and drills. Aluminium is also suitable for forming in both the hot and cold condition.
Joining
Aluminium can be joined using all the normal methods available such as welding, soldering, adhesive bonding and riveting.

Corrosion resistance
A thin layer of oxide is formed in contact with air, which provides very good protection against corrosion, even in corrosive environments. This layer can be further strengthened by surface treatment such as anodising or powder coating.

Conductivity
The thermal and electrical conductivities are very good, even when compared to copper. Furthermore, an aluminium conductor weighs half that of an equivalent copper conductor.

Linear expansion
Aluminium has a relatively high coefficient of linear expansion compared to other metals. This should be taken into account at the design stage to compensate for differences in expansion.

Non-toxic
Aluminium is not poisonous and is therefore highly suitable for the preparation and storage of food.

Reflectivity
Aluminium is a good reflector of both light and heat.
Applications

Industrial aluminium profiles

ALUMIL produces industrial aluminium profiles upon request and offers advanced solutions to various industry sectors such as Construction, Transport, Engineering, Automotive Industry, Electrical Applications etc.

Our industrial profiles Business Unit guarantees high quality products with:

- Precision in size
- Smooth, polished and flat surfaces
- High quality coatings
- High quality anodization
- Precise mechanical processing of aluminium profiles and special cuttings
- Certifications according to ISO Standards
ALUMIL mainly implements aluminium of the 6000 Series which incorporates properties that are ideal for extensive processing. Our R&D department with highly specialized teams of engineers, which are responsible for the design, development and the integration of the products into the production process, will satisfy even the most demanding clients.

The highly specialized know-how and the unparalleled production potential of ALUMIL’s Industrial Profile Business Unit, lead to an enormous product range of various applications:

- Automotive industry applications
- Ascending & Scaffold System
- Marine aluminium applications
- Heating, air-conditioning and ventilation applications
- Measurement equipment
- Curtain rails
- Engineering equipment
- Lightings
- Garden gate systems
- Greenhouses
- Solar panels
- Cabin shower
- Garage doors
- Insect screen
- Locking systems
- Rail systems
- Refrigerator doors
- Floor covering
- Furniture
- Sunshades
- Advertising signs
- Sound barriers
and much more...

**Architectural aluminium systems**

ALUMIL offers a wide range of conventional and thermally insulated architectural aluminium systems suitable for an impressively wide range of various applications, which stand out for their high quality level, their excellent design and their multiple certificates from international accredited institutes.

**A/T Standard profiles**

ALUMIL has a large range of aluminium profiles for general use, including the most standardized shapes of the market.
Properties of extruded tempers and alloys

**EN-AW Chemical composition**

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**Temper**

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<th>Symbol</th>
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<td>T4</td>
<td>Solution heat - treated and then naturally aged</td>
</tr>
<tr>
<td>T5</td>
<td>Cooled from an elevated temperature shapin process and then artificially aged</td>
</tr>
<tr>
<td>T6</td>
<td>Solution heat - treated and then artificially aged</td>
</tr>
<tr>
<td>T61</td>
<td>Solution heat - treated and then artificially aged in underaging conditions in order to improve formability (T64 between T61 and T6)</td>
</tr>
<tr>
<td>T64</td>
<td>Solution heat - treated and then artificially aged - mechanical property level higher than T6 achieved through special control of the process 6000 series alloys</td>
</tr>
<tr>
<td>T66</td>
<td>Solution heat - treated and then artificially over-aged</td>
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</table>

The main tempers in use for structural application of precipitation hardened semi products (T7 only listed to explain the system).

Aluminium in collaboration with the client, has the expertise to manage the process between T4 and T7 in order to meet and serve specific requirements with respect to all customer requirements - technical specifications of the final construction (bending facilitation, corrosion resistance and electrical conductivity improvement).

If a profile cross section is comprised of different thickness which fall in more than one set of specified mechanical property values, the lowest specified value shall be considered as valid for the whole profile cross section.

The hardness values are only typical and shall not be considered as minimum.

**Tolerances on dimensions and form**

<table>
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<tr>
<th>Alloy</th>
<th>Specifications</th>
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## Mechanical Properties

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<th>Diameter (D)</th>
<th>Square Rectangular Width (S)</th>
<th>R$_s$ min (Mpa)</th>
<th>R$_m$ min (Mpa)</th>
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General alloy natural properties

The 6000 series has good extrudability and can be solution heat treated at the extrusion temperature. Furthermore, these alloys have medium to high strength, are easy to weld and offer good resistance to corrosion, even in marine environments. The bulk of the extruded material for load bearing constructions is made from these qualities. They are used for load bearing constructions both on land and at sea.

**EN AW-6060**
ISO: AlMgSi Composition: Al 0.5Mg 0.5Si Re

**Applications:**

**Characteristic properties:**

**Product Forms:**
Bar, Profile section shape, Rod, Slugs Impacts, Tube, Wire.

**EN AW-6063**
ISO: AlMg0.7Si Composition: Al 0.7Mg 0.4Si

**Applications:**

**Characteristic properties:**

**Product Forms:**
Bar, Profile section shape, Rod, Slugs Impacts, Sheet, Tube, Wire.

**EN AW-6005A**
ISO: AlSiMg(A) Composition: Al 0.6Mg 0.7Si Mn Cr

**Applications:**
Railway and bus profile structures with complex sections (integral structures). Structural engineering, pylons, platforms, pipeline. Applications in the electrical and mechanical precision industries. Extruded sections for various purposes requiring strength greater than 6060 and 6063. Masts for sailing boats. Furniture.

**Characteristic properties:**

**Product Forms:**
Bar, Profile section shape, Tube.

**EN AW-6082**
ISO: AlSi1MgMn Composition: Al 0.9Mg 1.0Si 0.7Mn

**Applications:**

**Characteristic properties:**

**Product Forms:**
Bar, Forging, Profile section shape, Plate, Slugs impacts, Sheet, Tube, Wire.
### Special alloy natural properties

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### Profile size production capacity

**Open profiles dimensions:** min 8mm, max 340mm  
**Closed profiles dimensions:** min 10mm, max 330mm  
**Weight per meter:** min 0.05 kg/m, max 20 kg/m  
**Profiles Length:** 10mm - 13500mm (Standard 6000mm)  
**Material hardening:** Euronorm DIN, FT3 - FT5

For areas of min and max limit values, a previous agreement is required between Alumil and the client regarding the production feasibility.
ALUMIL offers advanced surface treatment solutions thanks to its state-of-the-art anodizing and powder coating facilities, with multiple powder coating and anodizing lines.

Always in accordance to QUALANOD and QUALICOAT specifications, we assure top quality, fast responsiveness and the overall satisfaction of our partners and customers.

**Anodizing**

Anodizing is an electrolytic passivation process. During this process a thin layer of *aluminium oxide* is created on the outer surface of the profiles, which improves durability and appearance. This aluminium oxide is not applied to the surface like paint or plating, but is fully integrated into the aluminium metal structure, thus it cannot chip or peel.

**Anodizing Benefits:**
- Durability
- Color Stability
- Ease of Maintenance
- Health and Safety

**ALUMIL’s Anodizing facilities**

ALUMIL has one of Europe’s largest and most advanced anodizing lines. Its facilities operate in automatic mode with the highest technical standards and are certified with QUALANOD by the European Aluminium Association (EAA). These specifications define the requirements for Sulfuric Acid Anodizing and their products.
In our state-of-the-art facilities, we have 24 hours online recording, monitoring and archiving of all critical production data, in order to achieve standard working parameters and a fully equipped laboratory for daily measurements and quality controls, to assure a perfect result.

Our ultramodern anodizing unit has 60 baths with a production potential of up to 500 m²/h of clear anodized surface at 20μm.

Some additional features and advantages of ALUMIL’s anodizing plant are:

- Wide variety of mechanical pre-treatments for different metallic finishes: blasted, polished and 3 types of brushing patterns
- Full range of standard electrocolors
- Inox look finishes
- Gold coloring
- Development of new custom made colors through various combinations of the finishing options mentioned above

Finally, due to ALUMIL’s concern to operate industrial units that respect the environment and are eco-friendly, we invested from the beginning on a modern waste-water treatment plant, which recycles 80% of the used water. The remaining water quantities are treated and disposed according to the European legislation.
Surface treatment

Powder coating

When it comes to powder coating, ALUMIL Group has the largest facilities in Greece and one of the five largest facilities in Europe, regarding surface treatment of architectural and industrial aluminium profiles with an annual production of ca. 10,000 tons of painted profiles.

The certifications of QUALICOAT, GSB, Quality Management ISO 9001 and Environmental Management ISO 14001, provide complete quality assurance. Thanks to our strict quality controls, we can guarantee complete customer satisfaction.

Every production line has a completely equipped laboratory in order to meet all international quality specifications as set by QUALICOAT and GSB standards. The quality control process starts with evaluation of the raw materials (powder and chemicals) and continues at production level, with sample evaluation every 20 minutes.
Furthermore, ALUMIL assures for its finished products the highest possible protection against corrosion, with:

/ Enhanced chemical pretreatment process, with an high etching degree equal or higher to 2.0 g/m², in accordance to QUALICOAT and GSB specifications and as required for sea side class aluminium profiles.

/ Optional Anodic Pretreatment (pre-anodizing) that provides to the painted aluminium profiles complete protection against filiform corrosion, for projects near coastal areas or swimming pools.

/ Automated processing is used with constant online controlling of all the critical parameters concerning chemical pretreatment, painting processes and polymerization, during the whole surface treatment procedure. In that way, consistent quality during the production process is guaranteed.

Moreover, ALUMIL was one of the first industries in Greece which used ecological powder coating products without toxic TGIC. This demonstrates the perpetual effort to provide a safe working environment to our employees and have environmentally friendly production processes.

Last but not least, the experienced personnel of ALUMIL’s Powder Coating Department, with an experience of 20 years on painting processes and continuous training on all new technologies and methods regarding powder coating, ensures the best handling of each order, top quality and, of course, the satisfaction of our customers.
Accessories & Special processing through CNC machines

Accessories manufacturing unit

To support its product requirements, ALUMIL has an advanced accessories manufacturing unit for the processing and production of aluminium components capable of turning out 30,000 parts per day. The cutting, drilling, milling and assembling of complex accessories are tasks which are performed at speed and with dimensional precision by specialized personnel and the latest equipment.

Together with all the above, mention should also be made of the continuous collaboration with mechanical engineering centers – machine shops, which can provide solutions for constructions with special cross-sections for each profile type.

Our production plant contains:

- 15 cutting production lines, 5 of which can achieve angular cutting
- 22 punching presses with a strength of 30-80 tn
- Drills, milling machines, threading machines
- Sandblasting machine for components and stonewashing machine for components
- 2 full lines for plastic wrapping the products
Advanced CNC machines

Apart from the accessories manufacturing unit, there is also a fully equipped department for mechanical metal processing (cutting, drilling, planning, bending) with state-of-the-art CNC machinery as well as a profile bender. This department also allows for the performance of complex machine processing with exceptional precision and high productivity.

All the above operate under the ongoing supervision and guidance of the Quality Control Department, guaranteeing that we provide first quality results.
International Logistics Center

Our advanced International Logistics Center and our various warehouses across the globe, are able to serve the global markets effectively, wherever and whenever. The strategic geographical position of our plants, in the heart of the Mediterranean basin and at the crossroads of western and eastern countries, is an important competitive advantage, enhancing the effectiveness of our distribution processes. Our fast access to international ports, ensures fast shipments and flawless transportations overseas.

Moreover, we choose carefully our transportation partners and search for our customers the best possible logistics solutions, so as to ensure just in time deliveries. Our advanced information system manages the systematic monitoring of all processes - from the import of raw materials to the final pricing of the end product. So, with us, nothing gets lost.
Packaging options
Deliveries without appropriate packaging materials are bad deliveries. Thus, we offer tailor made packaging solutions in accordance with our customer’s requirements.

Our advanced automated packaging unit offers the possibility to choose among a wide range of packaging solutions, fully adapted to every need. In that way we can guarantee the protection of your orders throughout the whole transportation and storage processes.

Materials for External Packaging
- Wooden block 7.5x5 cm
- Wooden block 8x10 cm
- Wooden lumber 2x9
- Wooden lumber 2x18
- MDF 8x1 cm
- Steel strap
- Plastic strap
- Plastic wrap
- Stretch film

Materials for Internal Packaging
- Thin paper
- Crepe paper & nylon for wrapping
- Cardboard strips
International Logistics Center & Packaging options

External Packaging

Wooden belts
Made from 8X10cm wooden blocks on the base of the package, 2X9cm wooden lumbers on the sides and 2X1.8 wooden lumbers on the upper side of each package secured with a steel strap. In this way we achieve stability of the package and its protection during transportation from contact with other packages.

Cardboard box
Cardboard is wrapped around the package for protection during transport and protection from the dust during storage. The cardboard dimensions are 107X340cm. The open ends of the package are standard on unpainted profile since they protect against moisture concentration on the profiles.

Plastic wrap
The package is wrapped around with nylon (4 sides and edges) for protection from moisture and dust. Recommended for overseas shipments.

Wooden pallet in the middle of the package (Wooden pallet under the package-centered)
Consists of 2X9X300cm boards placed over the blocks at the base of the package. Provide stability and protection of the package during transport with forklifts.

Stretcher film wrap
The package is wrapped around with stretch film (4 sides) for protection from moisture, dust and to provide better stability. In this way we avoid the friction between aluminum bars during transportation.

Special methods

Wooden boxes
We place the package into wooden boxes to achieve the maximum protection during transportation.

Special external packaging
We offer various ways of packaging so as to meet the customer’s demands.
Internal Packaging

**Bare profiles**
Profiles are stacked together with no internal separation between them. We recommend this type of packaging only for mill finish profiles.

**Paper layer separation**
Thin paper between the rows is used to avoid friction between aluminium bars during transportation.

**Paper interleave**
Thin paper interleave the aluminium bars to provide additional protection of critical surface of the aluminium bars.

**Wrapped profiles**
One or more bars are wrapped with crepe paper (or nylon). We place thin paper interleave between the bars to provide additional protection from friction.

**Cardboard strip layer**
Offers horizontal protection between the layers of a package. (The distance between cardboard strips is at the discretion of the packers)

**Additional information**

**Storing**
Aluminium profiles with no surface treatment must be stored in a dry place where the temperature is warm enough to avoid condensation that can lead to corrosion of the profiles.

**Transport damage**
The client must report immediately any visible damage that can be seen as having occurred during transportation. This notification should be marked on the delivery paperwork accordingly.
International Logistics Center & Packaging options
Tailor made packaging solutions to meet every need