



MÄKELÄ ALU

SERVICES



MÄKELÄ ALU

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For us, ensuring and maintaining high quality is a given point of departure and quality forms the cornerstone of all our operations. Quality is ensured at every phase of a project. We have been awarded ISO 9001, ISO 14001, OHSAS 18001 and GSB certificates, which all independently attest to our excellent quality production capabilities. All of our products bear the CE marking.



MARKO ORPANA CEO OF MÄKELÄ ALU:

Aiming for the world's lowest emission



Responsibility for the environment and our planet concerns each of us today. Technology, new operational models, and clean energy sources enable efficient and responsible production methods on an industrial scale. We want to be pioneers in this matter.

For years, we have been measuring the energy efficiency of our operations and the emissions to air, water, and soil, and have invested in making our production increasingly responsible. We aim to improve every day and bring that progress to benefit our customers.

Our AluServices have also been developed from a sustainable perspective, with the customer's benefit in mind. Environmentally friendly basket

solution for transporting aluminium profiles and our cost-effective warehousing services provide benefits and efficiency.

The opposite of irresponsibility is not responsibility, but merely compliance with norms. We have chosen to do more. Our goal is to become the producer of the world's lowest emission aluminium profile. Welcome to join us on this journey.

"WE AIM TO IMPROVE EVERY DAY AND BRING THAT PROGRESS TO BENEFIT OUR CUSTOMERS."

Our profiles are tailored to meet our customers' need

All of our production is focused on manufacturing aluminium profiles to meet our customers' needs. We also produce standard profiles. Aluminium profiles are used in a number of different applications.

Aluminium is easily moulded into profiles through extrusion. It can be used to build light and yet extremely sturdy structures for various applications. We focus particularly on manufacturing customer-specific profiles: approximately 90% of the profiles we manufacture are custom-made to meet

our customers' needs.

Tell us what you need and we can offer you the whole package as a turnkey delivery - from idea to product. Don't forget, we make aluminium profiles for several different industries, so we can provide you with a diverse range of products for almost any application.





CUSTOMER PROFILES

Our principle is to act as a “one-stop shop” for aluminium profile manufacturing. We will help you to make your own profile to meet your needs. In practice, you only need to have an idea for a product and we’ll help you to make it a reality. Product design and manufacturing are just two parts of the process. If you wish, we can also store your profiles, or provide a range of surface treatments and coatings. Thanks to our network of partners, the sky’s the limit – with just a single purchase from us you can order ready-to-use machined pieces and have them delivered directly to the location of your choice. And combined with our storage model, we can find an extremely flexible value chain to suit precisely your needs. We call this all-inclusive partnership.

STANDARD PROFILES

Our standard profiles consists of common and well-known standard shapes in several hundred different dimensions. Our list of standard profiles is continuously updated, and the best way to receive real-time information is from our website.

The standard length of a profile is 6 metres, but you can also order profiles in special lengths. As a general rule, all alloys used by Mäkelä Alu are suitable alloy options, but please contact our sales to ensure the suitability of an alloy for a product.

Standard profiles can also be surface treated by painting or anodizing, and then processed into a ready product in our further processing network.

Our list of standard products includes all standard profiles.

ALUMINIUM ALLOYS

The selection of a suitable alloy affects many of the aluminium's properties, such as its malleability, its strength properties, its coatability, workability and conductivity. Selecting the right alloy is a crucially important phase in the manufacturing process of a profile. Our professional sales service and profile designers are skilled in helping you to find a suitable and competitive aluminium alloy.

The purity and evenness of alloys are important when manufacturing high-quality or precisely dimensioned profiles. This is the reason we only use billets

made from primary aluminium. Nordic billets are some of the purest in the world when it comes to manufacturing technology. Process scrap is recovered and recycled as a raw material for new profiles in our foundry: this means we can ensure the purity of the raw material at every phase.

Mäkelä Alu recycles its production scrap into low-emission aluminium billets that significantly reduces the carbon footprint of your products.

The mechanical and chemical properties of manufactured profiles are specified in standards EN 573-3 and EN 755-2.

ALLOYS THAT ARE AVAILABLE IMMEDIATELY

EN AW-1070 Delivery status: Soft	Non-alloyed aluminium. Tensile properties not very good, excellent formability.
EN AW-6060 Delivery status T6,T4 or T64	General alloy. Good tensile properties, excellent for anodizing.
EN AW-6063 Delivery status: T6, T4 or T66	General alloy. Good tensile properties, well suited for anodizing
EN AW-6005A Delivery status: T6 or T4	This alloy is stronger than 6063. Medium extrudability and suitability for anodizing.
EN AW-6082 Delivery status: T6 or T4	The strongest alloy. Not very well suited for anodizing. Challenging to extrude.
EN AW-6101A Delivery status: T6 or T4	Good electrical conductivity. Has tensile properties similar to alloys 6060/6063.
EN AW-6101B Delivery status: T6 or T4	Excellent electrical conductivity, ≥ 32 MS/m. Has tensile properties similar to alloys 6060/6063.





Increase your competitiveness with our services

Our service concept was created directly from our customers' everyday needs through years of cooperative development work. We want to be a seamless part of our customers' production processes, so that you can focus on your core operations.

Our additional logistics services developed together with our customers meet challenges relating to profile handling, transportation and storage. When you order the profiles you need from us, you can also purchase assembly, storage or surface treatment as an added service. All located on a single site, our modern manufacturing lines and effective logistics system speeds up the process and is cost saving.

The highly automated and safe production environment minimizes delays and guarantees reliable delivery times.

MORE THAN JUST A PROFILE

We don't just sell profiles. We sell service. That's why we are able to offer our

customers a superior service experience. Your company saves both time and money when everything relating to profile deliveries is outsourced. Our storage service, for example, reduces your company's need for space and properties, thereby also reducing related costs. This means that you have the opportunity to increase your own operational efficiency and improve your competitive ability. We continuously develop our services in close cooperation with our customers. Production efficiency and service agility are developed through continuous training and new investments. With our all-inclusive partnership, your company can achieve maximum benefit from a customer relationship with us.

AluDesign[®]
AluCoating[®]
AluStorage[®]

AluCallOff[®]
AluBasket[®]



AluDesign[®]

A DESIGN SERVICE FOR ALUMINIUM PROFILES

The AluDesign[®] service aims to work with the customer, to design the most cost-efficient aluminium profile or profiles as possible. The best result is achieved when we are able to participate in the early stages of product development, preferably right from the drawing board.

Design ensures the quantity of required material, product functionality, and production efficiency. We are able to produce an increasingly diverse range of aluminium profiles with our modern tool technology. The right design and innovative solutions are used to develop a cost saving end product.

Once the properties of a profile have been determined, the sketches and designs are transferred from paper to CAD. Our profile design is carried out using modern tools and the latest CAD soft-

ware, which makes it possible to transfer the results in electronic format to the customer for use. If necessary, the visual look of the product can be simulated using 3D modelling to generate the most realistic possible image of the end product.

The customer can be involved in every stage of the design if wished. That keeps us on the same page throughout the entire process and the result is a high-quality aluminium profile that meets the customer's requirements down to the last detail.



Q&A

COMMON QUESTIONS AND ANSWERS

What do I need to do before ordering design services?

Think about what type of design work you need done (even if you only have a rough idea) and contact our design service or sales. You can also send a contact request via e-mail to our sales department: sales@makelaalu.fi.

What are the benefits of the design service?

You will receive a profile designed precisely to meet your needs. Our designers can e.g. determine what alloy and surface treatment are most suitable for the application.

How do I order the manufacturing of the aluminium profiles?

By contacting our sales department or sending an e-mail to sales@makelaalu.fi.

If I buy design services from Mäkelä Alu, do I also have to order the products from you?

Not at all. After the design process, we will make an offer on the manufacturing of the profiles. The die and profiles will only be ordered after the order is accepted.

How does the pricing of the design services work?

Basic design work related to profile shape, as well as other closely related design work, is free of charge. A price for the design work will only be agreed on if and when the design work is expanded to cover assemblies, strength calculations, model pieces and so on. The price will be agreed before work is started.



AluCoating®

A COATING SERVICE FOR ALUMINIUM PROFILES

Our coating service provides plenty of choice

For ever-increasing surface treatment needs, we have developed a comprehensive service that we call AluCoating®. The profiles are given a surface treatment to meet application requirements using either powder-coating, anodizing or Decoral surfacing.

Customers can choose from a wide range of colours for the coating of their aluminium profile or opt to have the profile anodized in its natural colour. Profiles can also be painted in special colours or in two colours. Our GSB-certified painting line guarantees a high-quality result. We monitor the evenness of the paint and aim to continuously improve quality. Peripheral components can easily be coated at the same time as the profiles are treated.

By combining the additional AluStorage® service with the AluCoating® service, coated profiles are delivered quickly, right when you need them.

PAINTING

Currently powder coating is by far the most used painting method, since it produces a surface that can withstand

UV radiation, corrosion, friction and impact. Powder coating provides almost unlimited colour possibilities for aluminium profiles. In our two paint shops, the surface can be dyed thousands of different colours.

UNIQUE DECORAL SURFACING

Decoral is a stylish and eye-catching solution that is becoming increasingly popular. It can create all kinds of different surfaces, such as abstract patterns and stone or wood imitations on the aluminium.



LINK FOR MORE INFORMATION ON DECORAL SURFACING OPTIONS

<https://makelaalu.fi/en/surface-treatment/decoral/>



The properties of a Decoral-surfaced profile are the same as for a powder-coated profile. The decorative coating is eye-catching and durable even in harsh conditions, making it a successful solution for construction architecture and the interior design industry.

ANODIZING

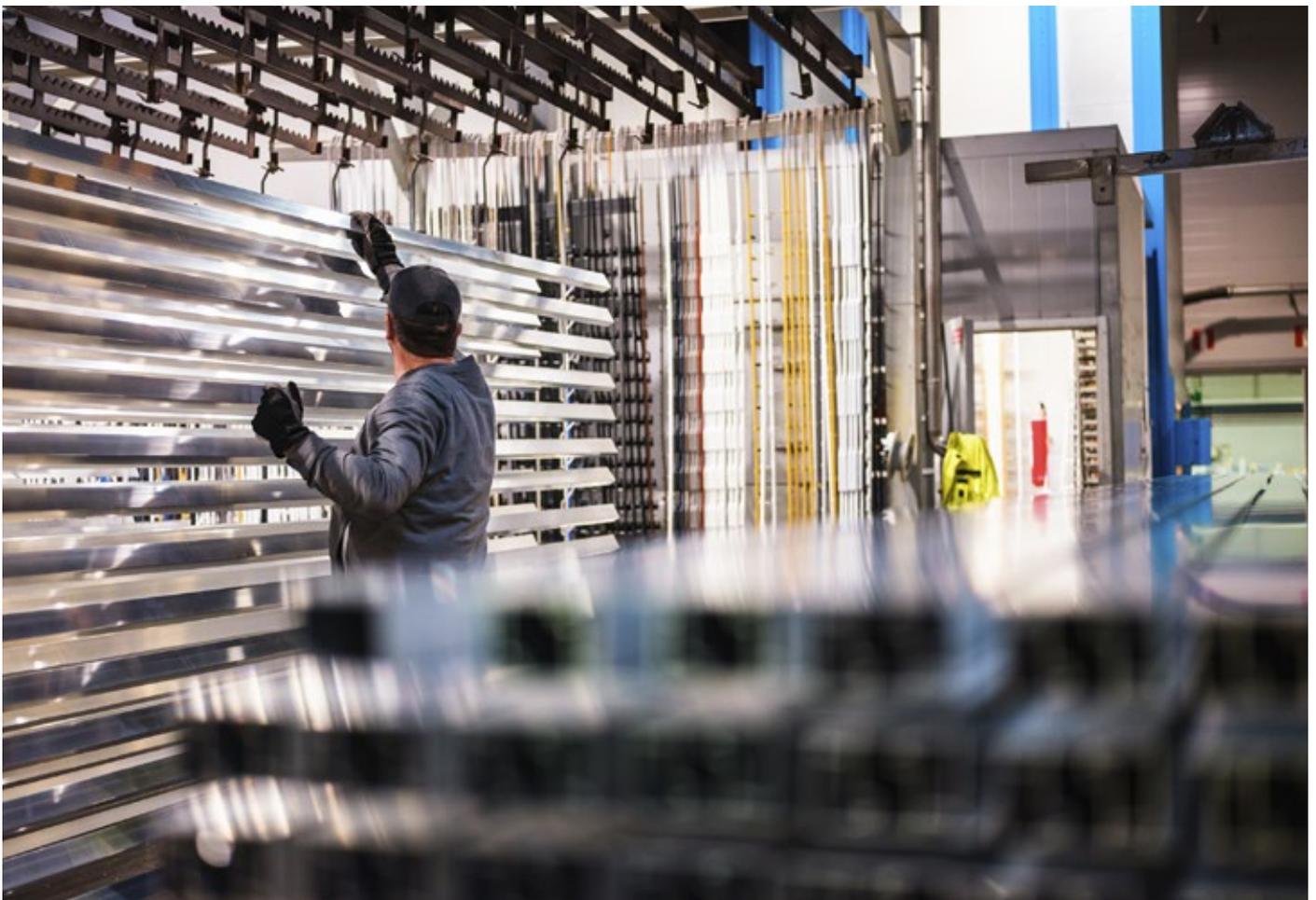
Our anodizing factory refines the natural properties of aluminium and significantly increases profiles' corrosion tolerance. It is also possible to anodize individual pieces. Anodizing is an electrochemical coating method that improves aluminium's corrosion tolerance and durability. Anodizing results in a surface with a neat finish that is also easy to clean. Our anodizing line produces

natural-coloured aluminium profiles with different layer thickness.

The layer thickness is selected according to application, and if necessary it is possible to carry out protective anodizing alone to protect the surface during machining, for example. The anodizing line can coat profiles up to 7.8 m in length, and it is also possible to anodize individual pieces.

Hanging the profile may cause marks or deformities on the ends, and sometimes the middle, of the profile. Special requirements to be set for the surface treatment are therefore agreed together with the customer.

We can also produce a coloured profile through our network of partners in cooperation.



Save time and money with our storage services

Our storage services were developed together with our customers to free up your company's resources so that you can focus on your core operations.

AluStorage®

A STORAGE AND RESTOCKING SERVICE FOR ALUMINIUM PROFILES

THE ALUSTORAGE® SERVICE IN OUR WAREHOUSE

With the AluStorage® service, we store your profiles at our warehouse in Luoma-aho. Warehouse maintenance and restocking take place automatically using a system in accordance with a

pre-agreed service level. We make sure that there is always the right number of goods to meet your company's needs in the warehouse. Through automation, the warehouse balances constantly remain at the agreed level, so all you have to do is place an order and wait for delivery.

AluCallOff®

AN ALUMINIUM PROFILE DELIVERY SERVICE

HASSLE-FREE STORAGE WITH ALUCALLOFF®

AluCallOff® is a warehouse service maintained by us on the customer's premises. The service significantly reduces the customer's labour and capital that are bound to warehousing. AluCallOff® guarantees the continuous

availability of profiles without any separate ordering or delivery periods. Our **AluVendor®** system takes care of stock levels and restocking to make the management of warehouse capital and turnover easy. You can monitor warehouse and delivery status in real-time through the system.



AluBasket®

A SOLUTION FOR TRANSPORTING AND HANDLING ALUMINIUM PROFILES

Our service solution for transportation and handling

We have developed solutions for transporting and handling aluminium profiles based on the varying needs of our customers.

AluBasket® is a weatherproof and environmentally friendly aluminium basket solution for transporting, handling and storing long profiles. You will receive baskets for handling and storing aluminium profiles against a deposit. The baskets are stackable and easy to handle using a forklift truck. The basket makes it faster to handle the profiles and it also

protects them against knocks. Since the basket is reusable, the amount of packing waste remains at a minimum.

The AluBasket® service works as follows. First agree with us on the use of baskets when you place an order. We will charge you a delivery fee. We will deliver your profiles in baskets. You handle and store the profiles as you need.



Network of subcontractors completes our own further processing

If you want to further process aluminium profiles, the specialist expertise of our network is available to help. Thanks to the network we are able to deliver ready pieces for your company's needs.

The LA Alucenter aluminium cluster in Alajärvi is Finland's leading full-service aluminium network, in which each actor focuses on its own area of expertise. Companies in the aluminium network are located in Luoma-aho, very close to our own factory area.

As our customer, you can also obtain ready pieces through us. We are able to utilize the LA Alucenter network, whose member companies are geographically very close to our own factory area. This

makes the working of ready pieces from order to delivery very cost-efficient and sustainable. Thanks to the cooperation with LA Alucenter, we're able to deliver extremely highly processed and individual products – from single pieces to large, assembled entities on a turnkey delivery principle. And if you combine this with our storage services, your company will benefit from a highly cost-efficient and flexible operating model.

EXAMPLES OF OUR NETWORK'S EXPERTISE

CNC-MACHINING,
BENDING, WELDING, SAWING OF
ALUMINIUM PROFILES

CHIPPING MACHINING, TURNING,
INSULATION ROLLING, THREADING,
ABRASIVE BLASTING,
ECCENTRIC PUNCHING



MECHANICAL GRINDING,
POLISHING AND BRUSHING
OF METAL

ROBOTIC WELDING,
POWDER-COATING

You can find the LA Alucenter network companies at www.laalucenter.fi

AluServices

A SUPERIOR SERVICE EXPERIENCE

Success comes from partnership. With all-inclusive partnership, you will achieve significant cost savings. You can choose a suitable individual solution from our range of services, or combine them into a service package. Here's how everything works.

Customer benefits:



COST-EFFICIENCY. You save money when the profile production and storage is as efficient as possible and scaled to your needs!

+



JUST WHAT YOU NEED. Flexible services and automation make sure that you receive just the right amount and right kind of profiles, exactly when you need them.

+



EFFICIENCY. No weak links. By using our services you'll reduce unnecessary and unprofitable work in your own production and processes.

ARE YOU INTERESTED?

Contact our sales personnel, who will be happy to provide you with more information!



SOLUTION



AluDesign[®]

WE DESIGN AN ALUMINIUM PROFILE WITH YOU TO MEET YOUR NEEDS.



AluCoating[®]

DO YOUR PROFILES NEED SURFACE TREATMENT? WE PROVIDE ANODIZING, POWDER-COATING WAND DECORAL SURFACING.

CUSTOMER

THE CUSTOMER HAS A SITE THAT REQUIRES ALUMINIUM PROFILES.

FURTHER PROCESSING

THE LA ALUCENTER NETWORK SUPPLEMENTS OUR OWN FURTHER PROCESSING.

AS OUR CUSTOMER, YOU CAN ORDER READY-TO-USE, MACHINED PIECES AS A TURNKEY DELIVERY.

PRODUCTION

THE ORDERED ALUMINIUM PROFILES ARE EXTRUDED AT THE MÄKELÄ ALU FACTORY.



AluBasket®

A SOLUTION FOR TRANSPORTING AND HANDLING ALUMINIUM PROFILES

YOU WILL RECEIVE STURDY, WEATHERPROOF ALUMINIUM BASKETS TO TRANSPORT AND STORE YOUR PROFILES. WE CAN ALL BENEFIT FROM OUR SERVICES TOGETHER.



AluStorage®

IN THIS STORAGE AND RESTOCKING SERVICE, YOUR ALUMINIUM PROFILES ARE STORED AT MÄKELÄ ALU'S WAREHOUSE. MAINTENANCE AND RESTOCKING TAKE PLACE AUTOMATICALLY. CAN BE COMBINED WITH THE ALUCOATING® SERVICE, WHICH MEANS YOUR STORED PROFILES WILL ALSO BE COATED IF NEEDED.



AluCallOff®

IN THIS ALUMINIUM PROFILE DELIVERY SERVICE, MÄKELÄ ALU MAINTAINS YOUR WAREHOUSE WHILE AUTOMATION HANDLES BALANCE MONITORING AND RESTOCKING.



MÄKELÄ ALU

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