

MIFA®

PRECISION EXTRUSION PRODUCTS

Experience
Mifa



AS 9100
CERTIFIED





Experience precision Experience Mifa

Mifa is a specialist in aluminium and magnesium extrusion profiles. We produce completely finished precision products with dimensional tolerances from ± 0.02 mm. The accuracy, expertise of our engineers, and ability to manufacture complete products in house gives our clients unrivalled opportunities for further development of their products.

MIFA IS PART OF AALBERTS

Aalberts is a quoted global technology company with more than 16,000 employees in 50 countries, generating a turnover of EUR 2.6 billion.

PRECISION EXTRUSION

Dimensional tolerances from ± 0.02 mm.

FLEXIBLE QUANTITIES

From prototypes to series

VERTICAL INTEGRATION

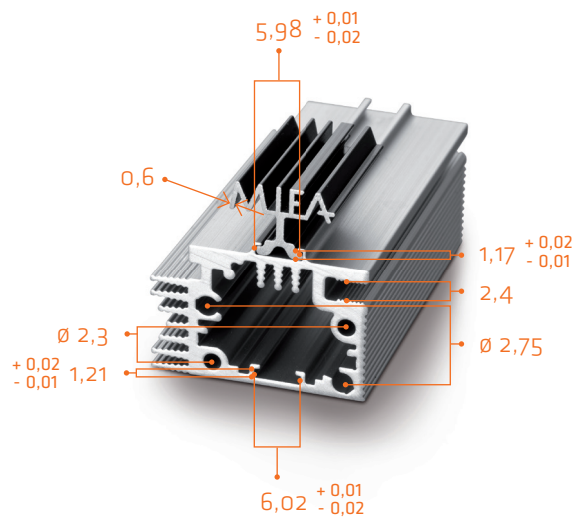
From profiles to products in house

Vertical integration

Mifa is happy to take on the responsibility for the entire process when developing and producing aluminium and magnesium components. In addition to precision extrusion, machining, surface treatment and assembly we offer in-house processes including:

- Bending
- Brushing
- Belt grinding
- Glueing
- Soldering
- Welding
- Marking

With our specialist expertise, we would be happy to offer technology-related advice and assist you in developing your product cost effectively.

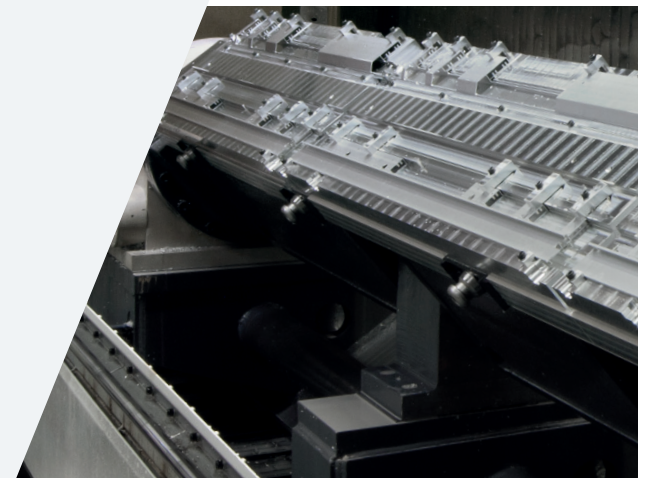


SCALE 1:1
27,3 x 23,3 mm (length x width)

Aluminium precision extrusion: the facts

Precision extrusion from Mifa is unmatched. Our exceptionally high level of specialization guarantees dimensional tolerances from ± 0.02 mm. We can work up to ten times more precise than NEN-EN 12020-2, the standard in aluminium extrusion. We can also do better than the standard when it comes to straightness, torsion, concentricity, parallelism, surface roughness, and fit.

TOLERANCES	From ± 0.02 mm
MINIMUM ORDER	From prototypes to series
MAXIMUM ORDER	Unlimited
PROFILE DIMENSION	From $\varnothing 3$ mm to $\varnothing 180$ mm 220 x 60 mm
PROFILE WEIGHT	From 0.003 kg/m to 10 kg/m
SURFACE ROUGHNESS	From Ra 0.3 in extrusion direction



Machining

Mifa is the market leader in aluminium and magnesium profile processing. We have 25 state-of-the-art CNC-controlled machines that can carry out complex machining operations. Over the years, we have developed to become an efficient manufacturer of highly accurate and complex products. A continuous programme of investment means that we have the most up to date technology.

TOLERANCES

From ± 0.01 mm

MACHINERY

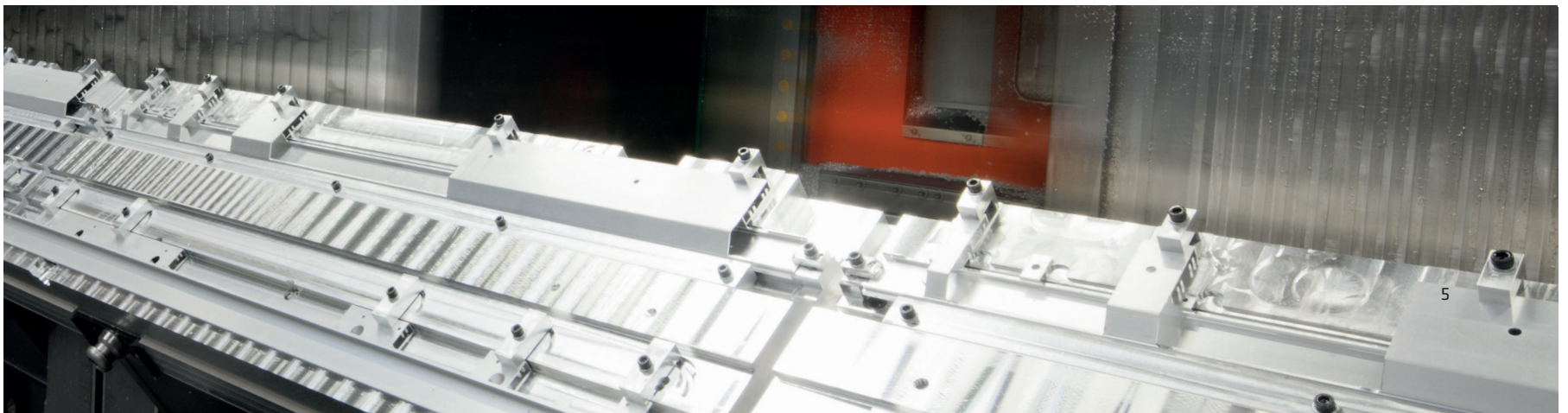
- 25 CNC machines
- 3, 4, and 5-axis processing up to 60,000 rpm
- Special profile-processing machines
- From small components to long product milling
- Fully automated production cells
- Maximum machinery dimensions:
 - X = 6500 mm, Y = 1000 mm, Z = 500 mm

CO-ENGINEERING

- Participation for optimum profile design
- Translation of functionality to productivity

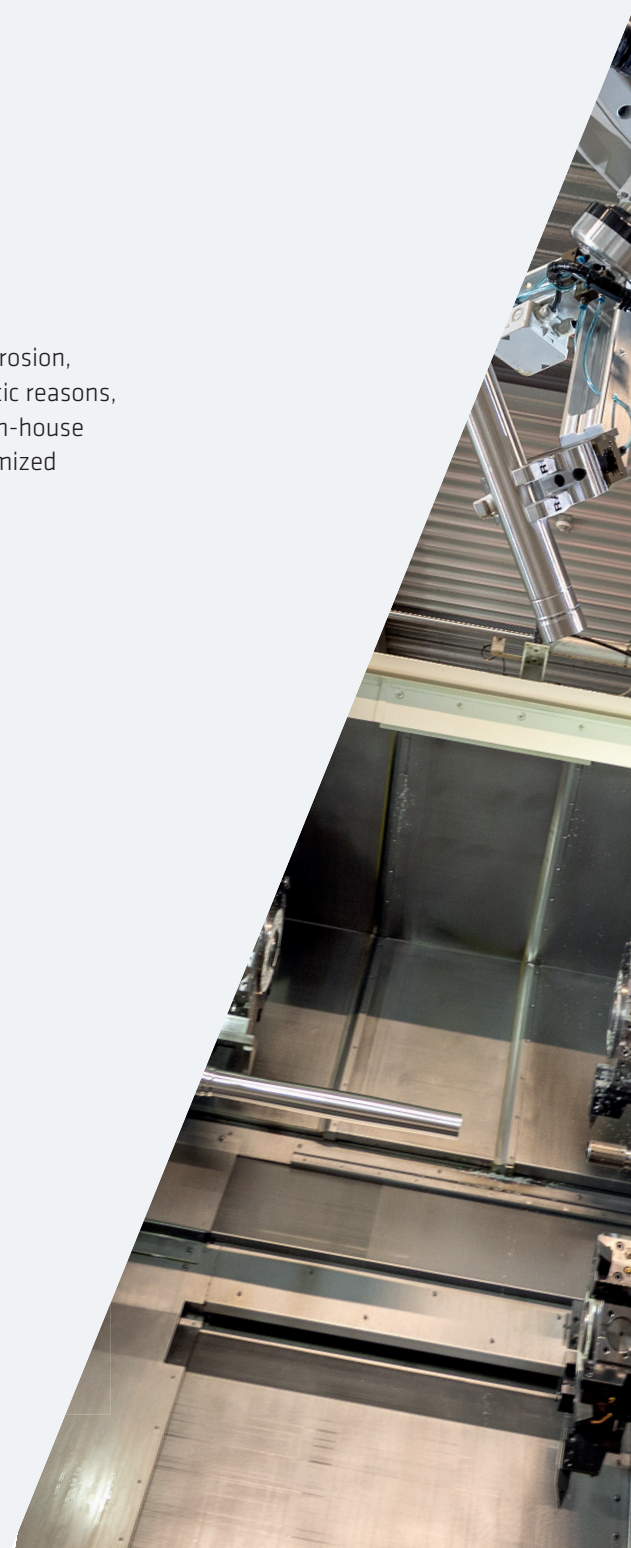
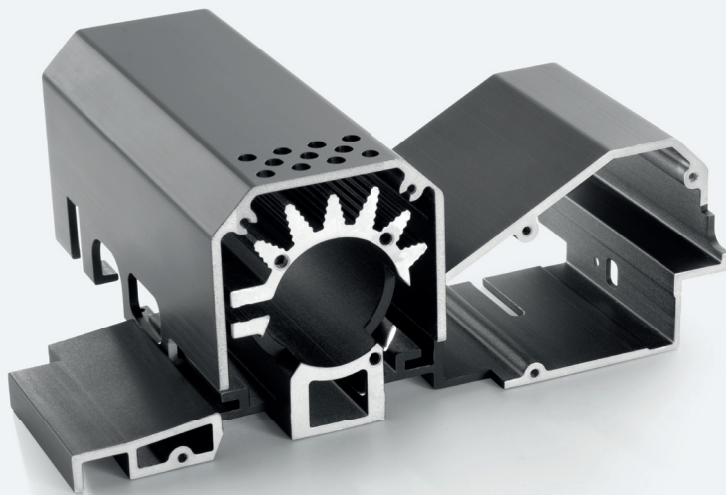
CAD/CAM

Solid Works, Solid Edge, Unigraphics, Catia, Top Solid, Step, IGES



Surface treatment

Surface treatment helps to improve components. It increases protection against corrosion, improves wear resistance and reduces friction. Coatings can also be used for aesthetic reasons, and an attractive surface finish when essential on visible components. Mifa has an in-house surface treatment for every goal and every requirement. We can also develop customized coatings on request.



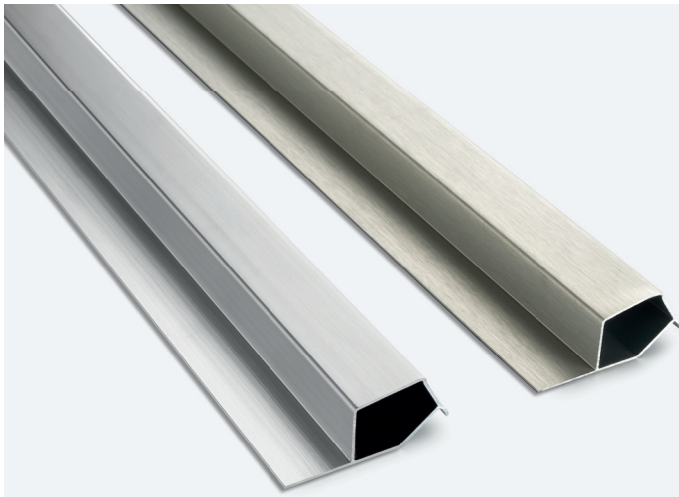


Other processes

Mifa is happy to take on the responsibility for the entire process when developing and producing aluminium and magnesium profiles. We have developed a number of processes in house, including assembly, bending, glueing, soldering, welding, and marking. Our knowledge and experience enable us to use the right technologies for each product. We combine machining and surface treatment with other processes to ensure that we deliver the best product possible. This also means fewer logistic operations increasing both the quality of the end product while decreasing costs.

ASSEMBLY

We can help design your profile so it has minimum secondary operations, giving a more cost effective product. We have all mechanical assembly capabilities in house, allowing us to fit the necessary components, such as rivets and screws, to the product. Assembly is an important service for our clients, and since we take care of everything, our clients don't have to.



BELT GRINDING

The visual requirements of profiles are an absolute priority, especially to clients in the aerospace and automotive industries. Belt grinding gives a consist surface finish after surface treatments.

GLUEING

Choosing the right adhesive is a task in itself. The range of adhesives is comprehensive, and not all will be suited to your specific application. The extent to which each adhesive adheres depends on a number of factors, including the material, required strength, temperature at which the product is used, electrical conductivity required. With our expertise, we can help you choose the best adhesive.

WELDING

Welding is a specialist area, and the quality of a weld is affected by a number of variables. There are numerous welding techniques, including MIG/MAG welding, TIG welding, electric arc welding, and electron-beam welding. Each technique has benefits and downsides. Our specialists can help you choose the technique that's most appropriate.

MARKING, ENGRAVING, AND LASERING

We mark, engrave or laser onto the component the type numbers, serial numbers, and other information that is needed to be able to trace the origin of products. We can also apply more commercial information including names, logos, and QR codes following consultation.

BENDING

Proper bending of aluminium and magnesium requires specific knowledge of the materials. The phase in the process in which the material is bent is also crucial to the final result – right after pressing or only after hardening, for example. There are many techniques for bending, such as roll forming, press brake bending, swivel bending, deep drawing, stretch forming, and 3D bending.

PRETREATMENT

Aluminium and magnesium may need to be pretreated to guarantee the right result on a product after surface treatment. Or just for an extra attractive or noticeable appearance. At Mifa, we are masters of processes such as deburring, grinding, and brushing, and by harmonizing pretreatment and aftertreatment, we can ensure that we achieve the best result.



Quality

Mifa produces high-quality extrusion profiles. We do this not only through process control, but also strict product control. We carry out the following inspections on our products:

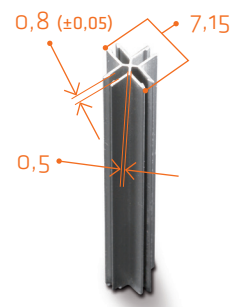
- Dimensional inspection
- Chemical analysis of materials and coatings
- Mechanical tests, including of hardness and yield strength
- CMM measurements
- Fluorescent penetrant inspection
- X-ray
- Salt spray tests
- AS 9100 certification

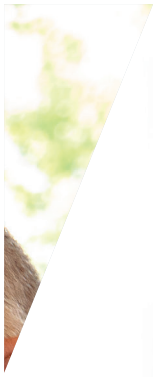
Mifa supplies constructors and suppliers in the aviation and aerospace industry worldwide. This market sets stringent requirements on the quality of the surface, the strength of the material, and the weight of the precision profiles. With our AS 9100 certification, Mifa confirms that its production and business systems meet the stringent quality standards of the aerospace industry.



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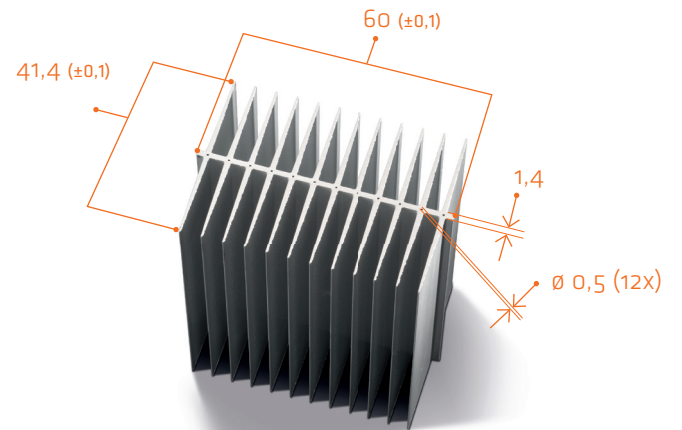
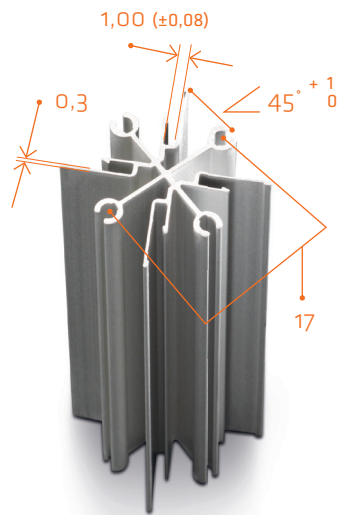
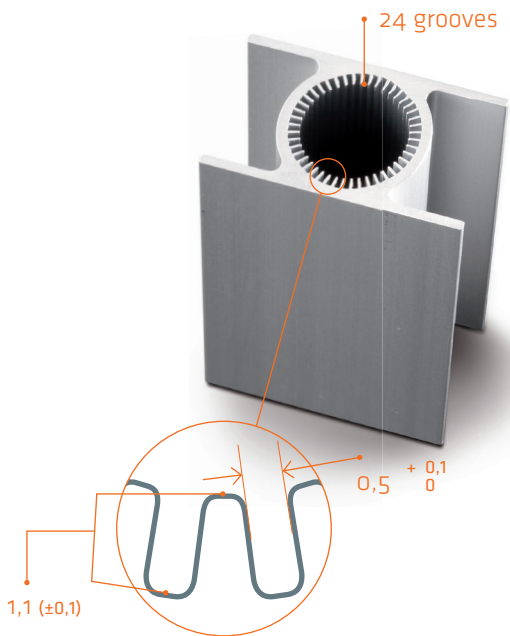
Designing without concessions





The precision offered by Mifa means that designers can pursue their ideas without limitations. On the drawing table you have no need to worry about restrictions or standards giving you ample freedom to think and deliver the very best end results.

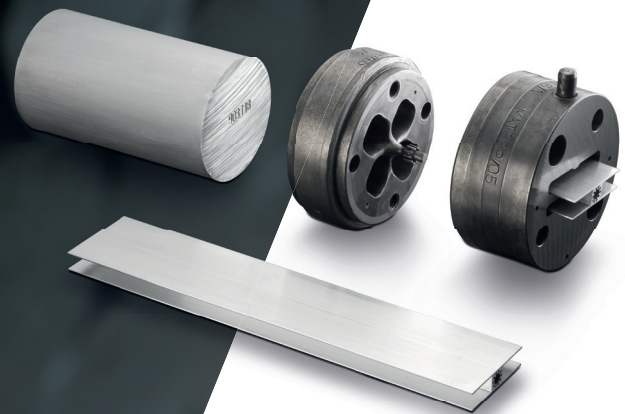
Plus, our experienced sales engineers are always there to support you.



Alloys

For the best end result, the selection of good aluminium or magnesium alloys is of great importance. Mifa extrudes the following aluminium and magnesium alloys. Other alloys are available on request.

ALUMINIUM	MAGNESIUM	SPECIALS
EN AW 2024	AZ 31	6066
EN AW 3003	AZ 61	6463
EN AW 6005A	Electron 43	6061 20%SiC
EN AW 6060		Metal matrix composite
EN AW 6061		Aluminium scandium alloys
EN AW 6063		
EN AW 6082		
EN AW 7020		
EN AW 7075		



Magnesium Technology

Looking for a material that's even lighter than aluminium?
At Mifa we have both the expertise and technology to produce your product from magnesium.

- Precision extrusion
- Machining
- Surface treatment
- Assembly
- Bending
- Welding

THE FUTURE IS MAGNESIUM!

Magnesium Technology has the capability in house to produce a broad range of magnesium components that are resistant to corrosion.

Advantages

- Lighter
- Stronger
- Stiffer
- Shock-absorbent



Markets

AEROSPACE

MACHINERY AND EQUIPMENT

MEDICAL EQUIPMENT

AUTOMOTIVE

ELECTRONICS

MICROWAVE AND RADAR COMPONENTS

MEASUREMENT AND CONTROL INSTRUMENTS

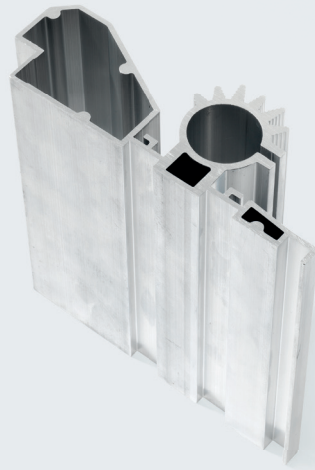
SPORTS AND RECREATION

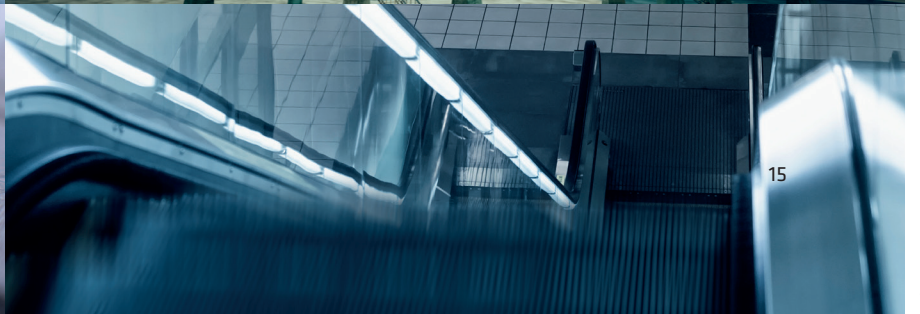
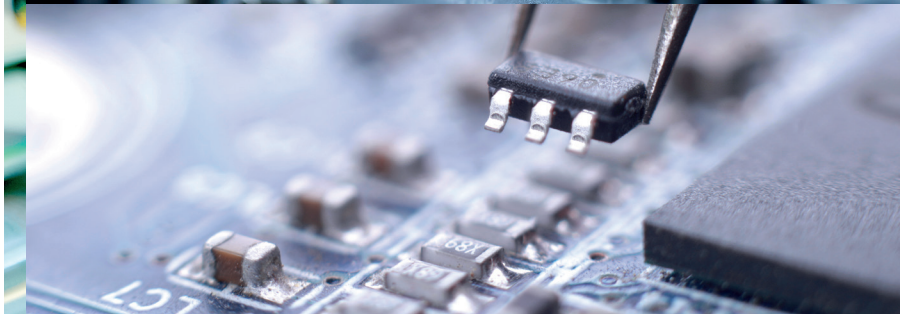
INTERIORS AND LIGHTING

OPTICS AND AUDIO

DEFENCE

RESEARCH AND DEVELOPMENT







MIFA®

PRECISION EXTRUSION PRODUCTS

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