



**SC ALPROF SA**  
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- *Privately Owned 100% Romanian citizens*
- *Founded in 1997*
- *GM: Ismet Ibraim*
- *Total employment: 140*
- *Location: Lumina, Romania;*
- *Production capacity: 4000 to/year;*
- *Closed production halls: 5000 sqm;*
- Broad range of products in many different industries;
- We take pride in being a flexible company which can provide solutions for all types of customers;



# Aluminum sustainability

- **Initiation of Green Energy Project:**

Documentation for our green energy project began in early 2022, reflecting our proactive approach to sustainability.

- **Completion of Photovoltaic System:** In November 2023, we completed the installation of a 450kW photovoltaic system, underscoring our commitment to renewable energy.



# Commitment to Sustainable Aluminium

• **Energy Utilization:** The energy produced by our photovoltaic system powers our entire production process, including:

- **Foundry and Casting of Aluminum Billets**
- **6-Inch Press for Aluminum Extrusion**
- **Heat Treatment Oven**
- **Profile Processing Center**
- **Powder Coating Facility**
- **Additional Utilities**

• **Future Green Energy Certification:** We are planning to obtain certification as a Green Energy Producer by recognized organizations. This certification process will begin in Q4 2024, with final agreements expected in 2025.

• **Sustainability Documentation:** As part of the certification process, we will complete comprehensive documentation on our low CO<sub>2</sub> emissions and establish measurement criteria for green energy production.



The full production capabilities of ALPROF follows the following steps:

- Billet casting;
- Aluminium profile extrusion;
- Extruded profile aging by thermal treatment;
- Machining aluminium extruded profile, quality control
- Aluminium extrusion chemical surface treatment;
- Powder coating of aluminium parts;

# Billet casting process

We melt aluminium scrap and aluminium ingots to obtain melted aluminium. We make spectrochemical analysis of the melted aluminium and adjust the alloying elements according to SR EN 573.3. Our melting oven capacity is 8mto per cast. We the cast the aluminium billets in the vertical casting pit.



# Extrusion process



The aluminium billets are preheated to approximately  $480^{\circ}\text{C}$  and loaded in the 1660MT extrusion press. The machine pressed the billet in the container against the extrusion die forcing the aluminium billet to go through the die. The hot aluminium extrusion comes the out of the press exit platen.



# Heat treatment



After the extrusion the profiles are in a soft state. In order to achieve mechanical properties the extrusion profiles are heat threaded in the aging oven.

# Machining profile, quality control

**ALPROF**



In order to offer more benefit to our customer we have the following capabilities for machining aluminium profiles:

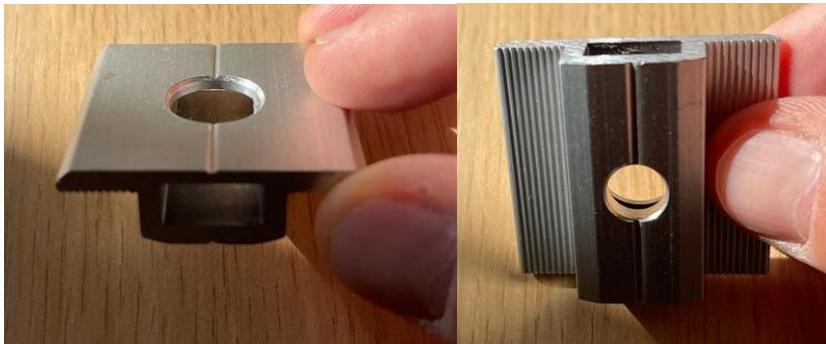
- Precision cutting;
- Drilling;
- Bending;
- Deburring;
- Quality control, control fixtures;



# CNC machining

## Tekna TKE 954

- CNC milling center 4 axes, 7.5m long profiles
- able to do CNC milling acc do customer drawing, tapping, precise drilling operations





Bendind custom extrusion parts according to customer drawing.

Special bending dies/jigs need to me manufactured for each project.

# Punching



4 punching presses available 10to – 100to punching force



# Chemical surface treatment

In order to prepare the aluminium parts for powder coating we used the Henkel patented chemical treatment procedures procuring all the necessary solutions from Henkel Company. Below you can see a description of the solutions used.



Chemical Treatment Phase		Product Name	Conc. [%]	Temp. [°C]	Duration (min)
1	degreasing / decapare	ridoline G34 A	2 - 6	45 - 60	5 - 10
		ridosol 27 B	0.1 - 0.3		
2	washing	mains water	-	room	10
3	washing	mains water	-	room	5
4	deoxidation	kleen etch ST	4 - 5	25 - 40	5 - 10
5	washing	mains water+demineralized water	-	room	5
6	washing	demineralized water	-	room	2 - 3
7	chromalizing	alodine 400	0.5 - 2	20 - 40	1 - 2
8	washing	demineralized water	-	room	0.5 - 1
9	drying	hot air	-	max. 120	15 - 30

# Powder coating



The powder coating of the profiles are done in the powder coating booth produced by Nordson by the automatic powder guns.

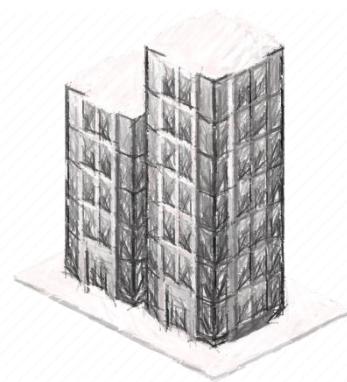
# Examples of delivered parts



## Automotive



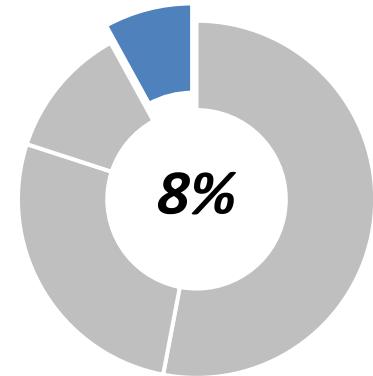
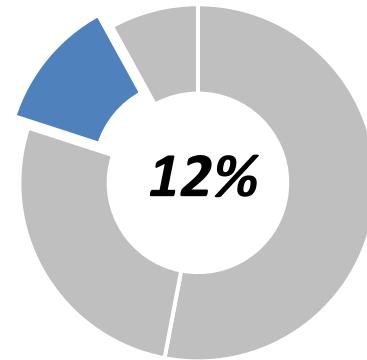
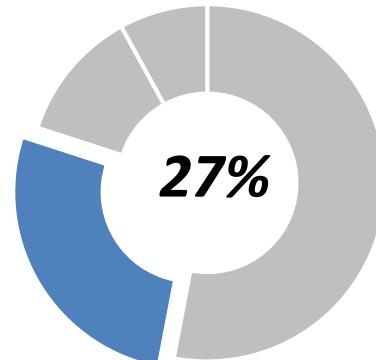
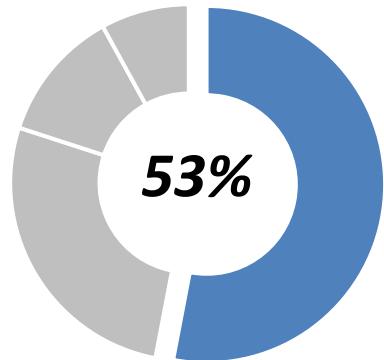
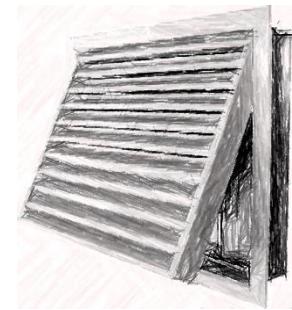
## Building & Construction



## Industry



## HVAC ventilation



# TURNOVER mil € 2017-2023

