



# Aluminium profiles for your future



## Aluminium – the metal of the future



No other metal offers so many opportunities like aluminium.

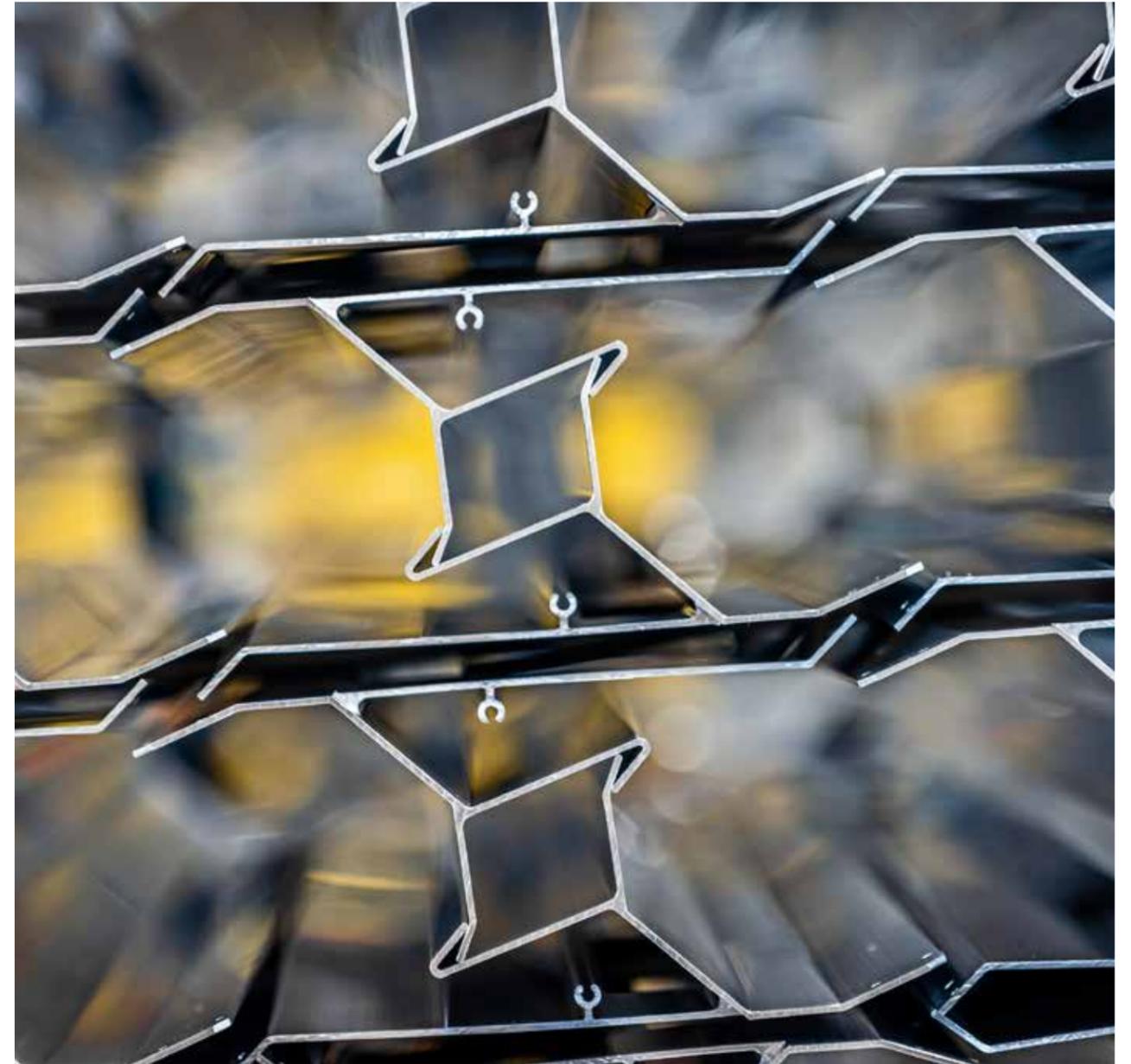
Aluminium is fascinating, flexible and highly versatile material. Aluminium's superior properties make it the perfect material for making of products changing our life.

Profiles made from this unique metal help engineers and designers make solutions satisfying almost all customers' expectations, hopes and requirements.

Aluminium has a life cycle that few other metals can match. It is corrosion resistant, can be recycled over and over and used again without losing its quality and properties. Aluminium is sustainable material suitable for manufacturing of products lasting for generations.

It is the metal of the future.

## Your traditional partner



Hydro Extrusion Slovakia based in Žiar nad Hronom has been on the market since 1969, when the first aluminium profile was extruded in Slovakia.

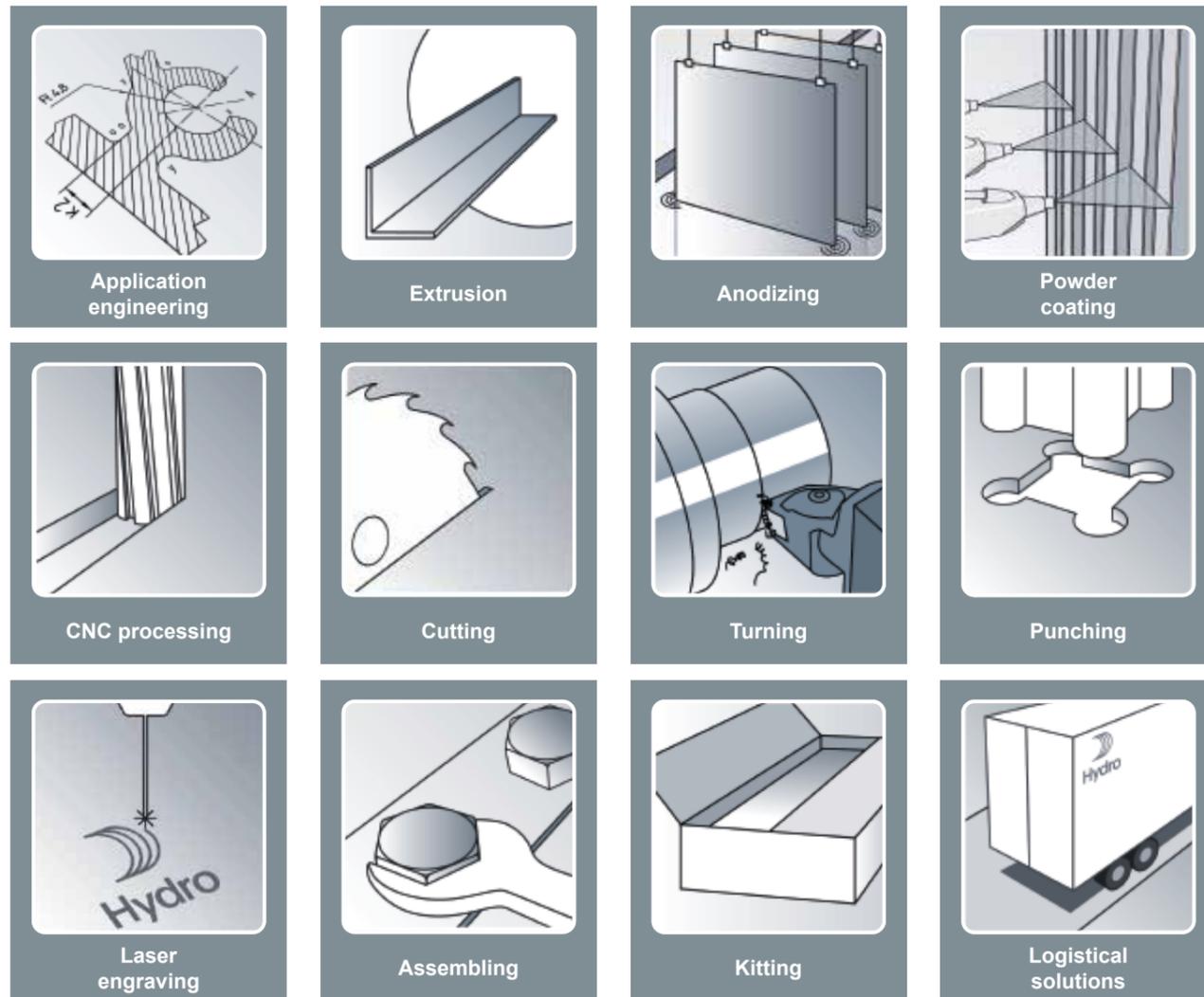
Today, we are a modern and successful company, which is a part of global and fully incorporated aluminium company Hydro based in Oslo, Norway.

Our vision is to offer solutions of aluminium profiles in innovative way and all our activities are conformed to that.

We own two hydraulic extrusion presses with annual production capacity of 20,000 tons, modern anodizing line and modern CNC machines and automatic saws satisfy customers' requirements for fabrication of aluminium profiles.

We regularly share our knowledge on aluminium profile properties with our customers at Hydro Profile Academy.

# More than just a profile



Hydro Extrusion Slovakia offers aluminium solutions for your business.

With a comprehensive offering that includes extrusion, fabrication, surface treatment, assembly and logistics services, all in one place, we help customers reduce production time and save costs.

High product quality and on-time delivery are taken care of during whole production process.

Aluminium is universal, highly shapeable material suitable for many applications. Therefore still more engineers and industrial designers focus on the fascinating metal.

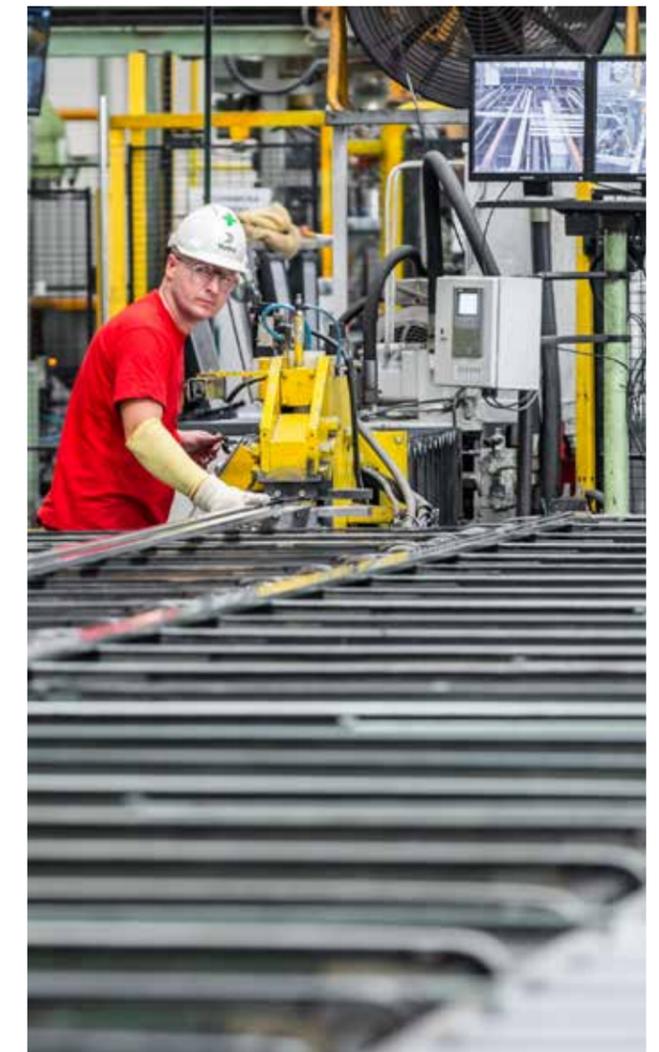
Usage range is unlimited – only imagination is limited. Our long-time experience in aluminium and profile production capacity, in surface treatment and fabrication enable our customers to create innovative and sophisticated products.

## Certification

ISO 9001 Quality Management System  
 ISO 45001 Health and Safety Management System  
 ISO 14001 Environmental Management System

ISO 50001 Energy Management System  
 Qualanod Quality label for anodizing of aluminium  
 Certifikát CE Conformity of the factory production control

# We transform aluminium into unique shapes



One of the most common methods of aluminium forming is hot extrusion. Its advantage lies in small number of operations enabling production of various profile types with easier or more difficult cross sections with high dimension accuracy and surface quality.

Aluminium profiles are produced based on individual customers' requirements and technical specifications are talked over in advance with our team of professionals.

## Aluminium alloys

The most widely used group of aluminium alloys for extrusion are hardenable 6xxx alloys with alloying elements such as silicon and magnesium.

## Aluminium alloys used in Hydro Extrusion Slovakia

1050A, 6101B, 6060, 6063, 6005A, 6061, 6082

## Press P15 / 07"

Press force: 1,500 tons  
 Maximum billet diameter: 178 mm  
 Profile weight: from 0.2 to 2.0 kg/m  
 Standard sawing length: 3,000 – 6,500 mm  
 Special length: to 7,800 mm

## Press P30 / 10"

Press force: 3,000 tons  
 Maximum billet diameter: 254 mm  
 Profile weight: from 1.8 to 13.0 kg/m  
 Standard sawing length: 3,000 – 6,500 mm  
 Special length: to 10,200 mm

# Protection and aesthetics



Design and surface quality of aluminium extruded profiles is highly satisfying for wide usage already before surface treatment. However, there are industries requiring

higher surface quality and colourfulness. To meet these requirements aluminium profiles are surface-treated by anodizing technology.

### Reasons for anodizing

- Creates new, aesthetical appearance
- Increases corrosion resistance
- Provides dirt repellent and a touch-friendly surface
- Provides abrasion-resistant surface with electric isolation coating
- Creates decorative surface with permanent colour and shine

### Colours

- Natural anodizing (Co)
- Bronze shades (C31 to C35)

### Maximum dimensions

- 7,500 x 2,000 x 450 mm

### Qualanod certification

- Industrial anodizing
- Architectural anodizing

# Component from aluminium profile



During designing it is possible to create a profile requiring minimum fabrication after extrusion. Despite that, specific fabrication operations are often needed, which make the

aluminium profile into component suitable for usage in further semi-finished products or in direct finished products.

### Customer's benefits

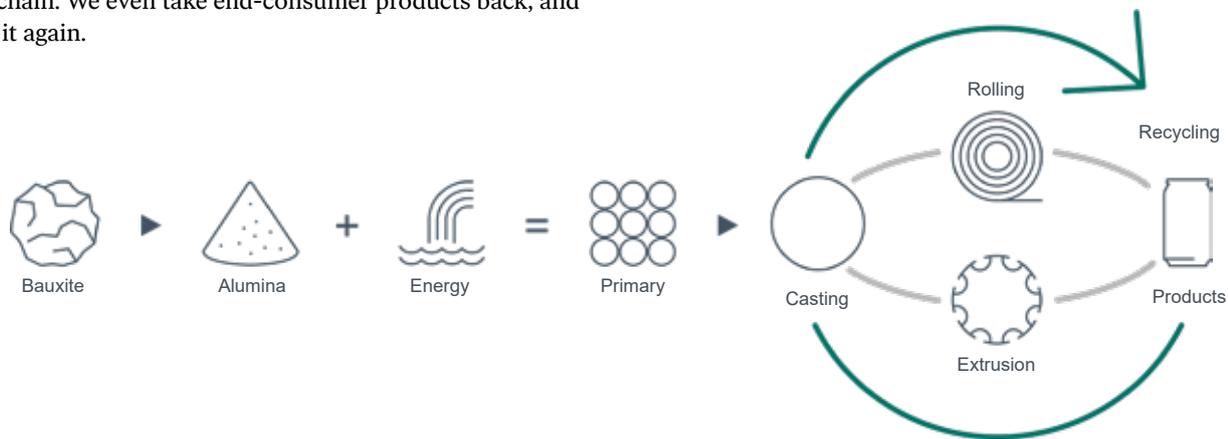
- No machine costs
- No professionals or software necessary to provide technical preparation
- No defectives and production waste
- Production cycle shortening
- Not so much fixed capital
- Less paperwork
- Finished component ready for assembly

### Technical capabilities for fabrication

- CNC machining (3- and 5- axes CNC machines)
- Sawing and deburring (single and double head saw machines and automats)
- Drilling and tapping
- Milling
- Punching (presses 25, 40, 63 tonnes)
- Tumbling
- Degreasing / washing
- Foiling, stretch foiling
- Assembling, 3D measuring

# We are aluminium

To us aluminium is a world of opportunities: we are experts of aluminium and we operate across the entire aluminium value chain. We even take end-consumer products back, and shape it again.



*We are aluminium*

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Hydro is a fully integrated aluminium company with 35,000 employees in 40 countries. Rooted in more than a century of experience in renewable energy, technology and innovation, Hydro is engaged in the entire aluminium value chain, from bauxite, alumina and energy to primary aluminium, rolled and extruded products and recycling.