



Advanced Aluminium Solutions

RAPS®

Rapid Aluminium Prototypes

**Aluminium
Manufacturing
Components**

www.amctechnik.com

Much more than extruded aluminium

From design to aluminium parts

Company

AMC offers a wide range of solutions in aluminum, from the manufacture of prototypes and short series to the manufacture and adjustment of tools for the correct manufacture of each piece. We are specialists in manufacture of rapid prototypes made of aluminum extrusions , in special machining of aluminum extrusion parts and in additive manufacturing.

We supply engineering and other specialized services to create the ideal product your business needs. From the design to the manufacture of the pieces, doing the assembly of assemblies, ensuring the perfect adjustment and operation of the final assembly.

We manage the whole process, from the purchase of the primary material and its mechanization, to the finishes, treatments and coatings that make it necessary.

We fulfill the projects in time with competitive prices applying in each case the most advanced technologies suitable for the mass production of each piece and always with the highest quality standards.

“Each component is unique for us”.

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RAPS

RAPS Rapid Aluminium Prototypes “prototyping of extruded products”. The unique combination of AMC's expert design guidance and prototyping capabilities can shorten your development cycle and greatly improve your product design process.

Key Benefits

- Prototypes are cut from solid aluminum and perform like a production extrusion.*. This allows for the precise validation of fit, form and function i.e. snap-fits, thermal performance, assembly details, etc.*
- Very tight tolerance control, general +/- 0.05 mm on most features. This enables the evaluation of production tolerances by cutting samples at min/max conditions.
- Reduced cost no need to purchase a die or minimum material order to validate a shape.
- Quick turnaround, average two weeks lead time.
- Work area: 45 cm x 25 cm x 20 cm. Maximum width : 470 mm

**Prototypes are cut from solid aluminum and perform like actual extrusions in nearly all instances. Due to the differences between the RAP process and the extrusion process, however, grain structure, weld seam location, surface conditions, etc. can have an impact on strength and failure characteristics. Only production extrusion material should be used for PPAP, safety testing, durability analysis or any other critical design validation.*



RAPS[®] CNC

Rapid Aluminium Prototypes

RAPS[®]
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RAPS CNC

A machines tools that utilizes computer Numerical Control (CNC) to precisely perform various fabrication operations. We use 3 and 5 axis CNC centers for machining operations.

Key Benefits


- Add features such as contour milling, holes, threading, etc. to your RAP prototype or extruded
- Allows for accurate representation of finished parts and fabrication processes.

3D Printing Prototypes. Additive Manufacturing

3D printing is an additive process that builds objects one layer at a time from the bottom up. The right technology depends on the materials, aesthetics, mechanical properties and performance you require.

Key Benefits

- Allows for validation of fit, form and function of components with complex features such as plastic molded parts, die cast components, heavily fabricated parts, etc.
- Can easily generate complex geometry with a very fast turnaround time.
- Suitable for visual representation and component fit up only. The material properties are not representative of aluminum.

The background of the slide is a collection of various aluminum extrusion components. In the top left, there are two L-shaped extrusions. In the top center, there is a T-shaped extrusion with a circular hole. In the top right, there is a more complex extrusion with a circular hole and a cylindrical protrusion. In the middle left, there is a dark-colored extrusion with a textured surface. In the bottom right, there is a long, thin extrusion with a circular hole and a small rectangular feature. The components are arranged in a way that they appear to be part of a larger assembly or a variety of parts.

Through the use of RAP process, CNC machining, and additive manufacturing techniques how 3D printing and laser sintering, we can quickly turn your extrusion design concept into reality. Prototypes are created ensuring your intellectual property remains secure - NDA -

Whether you are simply evaluating a concept, testing an assembly, or presenting a visual mock-up to a customer, AMC will be able to help.

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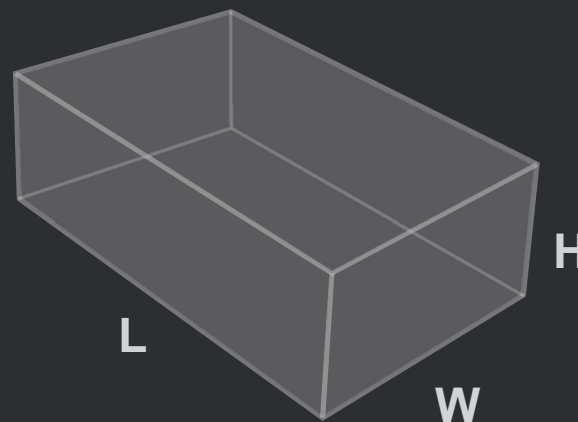
Project Envelope

Will it fit??

If your project fits within these work envelopes, then AMC can make it.

Please note, that for RAPS cutting time increases exponentially with part length. The shorter the "extruded" length, the shorter the lead time.

Work area: L x W x H (45 cm x 25 cm x 20 cm)



How to get started

RAPS

- A digital drawing file i.e. DWG, DXF or solid model file i.e. STEP, IGES, CAT PART, etc.
- Desired part length, alloy, temper and quantity.
- Intended prototype use.

RAPS CNC

- A solid model file i.e. STEP, IGES, CAT PART, etc.
- Alloy, temper & quantity.
- Intended prototype use.

3D PRINTED

- A solid model file i.e. STEP, IGES, CAT PART, etc.
- Component scale, filament color and quantity.
- Intended prototype use.

Turnaround

With AMC's new in-house capabilities, you can receive fully functional aluminum prototypes in as little as two weeks.

Order

Contact to AMC sales representative:
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