



Custom 6063 Aluminum Extrusion Inverter Heat Sink with CNC Machining

Basic Information

- Certification: ISO
- Minimum Order Quantity: 200
- Price: 1.98



Product Specification

- Alloy Grade: 6063
- Temper: T3-T8
- Wall Thickness: > 0.9mm
- Section Size: Square $\leq 150 \times 150\text{mm}$; Rectangle $\leq 250 \times 50\text{mm}$; Round $\leq \varnothing 170\text{mm}$
- Length Tolerance: $\pm 0.2\text{mm}$
- Hole Tolerance: $\pm 0.05\text{mm}$
- Surface Finishing: Anodic Oxidation
- Shape: Square
- Processing: Extrusion
- CNC Service: CNC Milling
- Package Size: 120.00cm $\times$ 50.00cm $\times$ 50.00cm
- Package Gross Weight: 50.000kg
- Tensile Strength: $\geq 160\text{MPa}$ (T5); $\geq 205\text{MPa}$ (T6)
- Yield Strength: $\geq 110\text{MPa}$ (T5); $\geq 180\text{MPa}$ (T6)



More Images



Product Description

MetalPlus specializes in the design and manufacture of custom aluminum industrial profiles, including CNC-machined inverter heat sinks. Our production base covers more than 100,000 square meters with an annual capacity exceeding 100,000 tons, delivering precision extrusion, machining, and surface finishing under one roof.

Product Range & Capabilities

Aluminum Profiles

Aluminum fan blade profiles, profile systems, extrusion enclosures, LED extrusion profiles, frames, custom profiles, heat sinks, electric motor housings, construction profiles, extrusion tubes.

Die Casting

Die-cast LED housings, stainless steel casting, aluminum casting.

ACP

Aluminum composite panels.

Aluminum Heat Sink Specifications

Product	Aluminum Heat Sink
Material	6063, 6061, 6005, 6082
Temper	T4 / T5 / T6 / T66
Surface Treatment	Powder coating in RAL colors, anodizing (AA10/15/20/25), sandblasting, brushing, passivation, silk screen, mechanical/chemical polishing, wood grain coating/wooden transfer, galvanizing, (nickel/tin/chrome/copper) plating, PVDF, matt finish, and more.
Shape	Flat / square / round / hollow / oval / triangle; U-type, L-type, T-type, H-type
Deep Process	Aluminum profile extrusion, precision milling, cutting, punching, bending, tapping, drilling, CNC lathe machining, etc. Tolerance: length $\pm 0.2\text{mm}$, holes $\pm 0.05\text{mm}$.
Wall Thickness	> 0.9mm
Section Size	Square: $\leq 150 \times 150\text{mm}$; Rectangle: $\leq 250 \times 50\text{mm}$; Round: $\leq \varnothing 170\text{mm}$
Packaging	Inner: plastic paper / PE paper interleaving each piece; Outer: fixed by plywood or pallets with shipping mark; or as required.
Delivery Time	15–25 days after deposit

Process: Die design → Die making → Extruding → Cutting → CNC Machining → Surface Treatment → Packing

Product Gallery



Advantages of Aluminum Heat Sink Extrusions

Superior heat dissipation: Aluminum alloy outperforms many materials in thermal conductivity. The heat sink casing keeps motor temperatures within a specific range during continuous operation, thanks to aluminum's high thermal solubility.

Lightweight construction: Extruded aluminum products are significantly lighter, making mechanical transportation and installation more convenient and greatly reducing the overall weight of the motor product.

Excellent plasticity: The physical properties of aluminum alloys provide far better ductility and formability than steel or cast iron.

Reliable performance: Light weight, low vibration, and low noise, combined with waterproof, dustproof, and corrosion-resistant characteristics.

Energy efficient & durable: High performance, high efficiency, long service life, and environmentally friendly.

Product Parameters

1) Chemical Composition

Alloy	Si	Fe	Cu	Mn	Mg	Cr	Zn	Ti	Impurity	Al
6063	0.2–0.6	0.35	0.1	0.1	0.45–0.9	0.1	0.1	0.1	0.15	Rest
6061	0.4–0.8	0.7	0.15–0.4	0.15	0.8–1.2	0.04–0.35	0.25	0.15	0.15	Rest
6060	0.3–0.6	0.1–0.3	0.1	0.1	0.35–0.6	–	0.15	0.1	0.15	Rest
6005	0.6–0.9	0.35	0.1	0.1	0.40–0.6	0.1	0.1	0.1	0.15	Rest

2) Mechanical Properties

Alloy	Temper	Tensile Strength	Yield Strength	Elongation
6063	T5	≥ 160 MPa	≥ 110 MPa	≥ 8%
6063	T6	≥ 205 MPa	≥ 180 MPa	≥ 8%
6061	T6	≥ 265 MPa	≥ 245 MPa	≥ 8%

Technical Support

Based on customer requirements, we help design the appearance of extruded profiles, provide CAD drawings and 3D models for confirmation, customize molds, and extrude aluminum profiles that meet exact specifications.

For customers with design capabilities, our professional R&D team analyzes and optimizes designs using extrusion processing experience, applying the most reasonable design to reduce production costs and improve product performance.

Our "one-stop" service and production model covers product design, customized molds, aluminum bar melting and casting, extrusion profiling, precision machining, and surface treatment. We effectively control alloy composition and maintain product accuracy throughout production.

Factory Equipment

Extrusion

Equipped with 44 aluminum extrusion lines, MetalPlus produces commercial and industrial aluminum profiles with a maximum outer diameter of 350mm. Each line features PLC control systems and precision molds. The largest extruder is a 6800-ton unit, used for industrial profiles in various shapes with a maximum diameter of 600mm. Products include radiators, industrial fan blades, motor enclosures, solar cell frames, doors, and windows. Custom molds are produced to customer requirements, and our in-house R&D team provides reasonable suggestions to create superior products at affordable prices.

Anodizing

Anodizing forms a layer of aluminum oxide on the surface of aluminum alloy products in an electrolyte solution under electrical current. Oxidized aluminum profiles feature improved corrosion resistance to withstand various weather conditions, while the aluminum oxide increases hardness and wear resistance. MetalPlus operates 6 anodizing production lines producing uniform oxidation film thickness and color for a beautiful appearance. Color options include silver, black, gold, champagne, and imitation steel, with custom colors available on request. All anodized products are inspected by highly trained professional inspectors; defective products that cannot be re-processed are scrapped, and uneven-color

products are de-coated and re-anodized until they meet requirements, ensuring no color difference between batches.

Painting

Our factory is equipped with 4 powder spraying lines using high-quality Gema Switzerland spray nozzles. MetalPlus uses only safe, environmentally friendly paint with strong adhesive force and durable color retention.

CNC Machining

MetalPlus is equipped with highly advanced machining equipment, and all fine machining processes are accomplished by technicians with rich industry experience. Strict industrial standards ensure fine machining precision and product quality.

12 PRATIC machining centers for milling, drilling, or tapping profiles from different angles, especially suitable for long profiles up to 6 meters and complex profile machining.

Fully automatic cutting machines from Wegoma for precise cutting with automatic and continuous material feeding — low labor cost and high production efficiency, with cutting prices significantly lower than industry peers.

30 punching machines with punching pressure from 50 to 100 tons, suitable for thick profiles over 5mm; 10 stretch bending/bending machines for bending profiles to arcs or different angles with high precision; 10 milling machines for machining different planes, bevels, or grooves.

Packing & Shipping

Finished products are packaged manually and ready for delivery. MetalPlus adopts strict warehouse management procedures: the finished product warehouse is divided into sections to store specific products, all in-and-out transactions are recorded, and each product is examined before delivery.

Certifications

Company History

2004	— Recognized Brand of the Building Industry Material Market
2006	— Certificate for Product Exemption from Quality Surveillance Inspection; ISO9001
2009	— Advanced Company; Jiangsu Famous Brand Certificate; Certificate for Credible Product of Quality in Jiangsu Province
2012	— Established business relationships with Panasonic and LG
2015	— Became an innovative producer and supplying partner for European clients
2017	— Developed new baseboard heater products
2019	— Cooperated with the world's largest heater manufacturers, supplying aluminum shells and earning a strong reputation
2023	— Expanding overseas distributors to grow the market for win-win benefits

Project References

Soccer City Stadium, Johannesburg

Soccer City Stadium in Johannesburg is one of South Africa's major projects — a 94,000-seat stadium and the largest-capacity stadium in Africa. We are honored to have participated in its construction as the main aluminum supplier. The stadium won unanimous praise after completion.

Lobster Trailers

Lobster Trailers is a Nordic trailer giant, and we are proud to cooperate with them. Our professional R&D team analyzes and improves upon Lobster's designs, then processes them with our excellent equipment and exquisite technology. Our optimization expertise minimizes production costs and improves product performance.

School Desk Project

Our local customer Dadn won the bid for a school project, and we supplied the aluminum legs for the school desks. With strong design capabilities and mature techniques, we help more customers win tenders.



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