ADB CONSULTING

Smart Design. Smarter Products.

COMPANY PRESENTATION

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Let’s build something great together.

About ADB Consulting

ADB Consulting is a product design and research & development company built on a foundation of hands-on experience in real-world manufacturing processes. With a background in machining, sheet metal fabrication, and electronics assembly, we specialize in taking ideas from concept through to production — optimizing every step along the way.

Our approach combines practical manufacturing knowledge with strong CAD and prototyping skills, enabling us to design smart, cost-effective solutions tailored for production, ensuring a cost-effective solution at every step of the process.

Whether it's reverse engineering, DFM, or full product development, ADB Consulting delivers results that work — on the shop floor and in the field.

Our Services

- 2D & 3D CAD Design
- Sheet Metal Design & Manufacturing
- 3D Printing & Prototyping
- Design for Manufacturing (DFM)
- Product Development
- Electronics Development (PCB design in Eagle, hands-on circuit assembly)
- Embedded Systems & Arduino Projects
- Software Development (C++, Node.js, React)

Project’s Showcase

Motorcycle Carrier




Client Need: Recreate a product (motorcycle carrier) made by a company that is no longer around.

Summary: Reverse-engineered the cage from a sample that he had sent to us, convert to CAD, create production drawings and send to manufacturing.

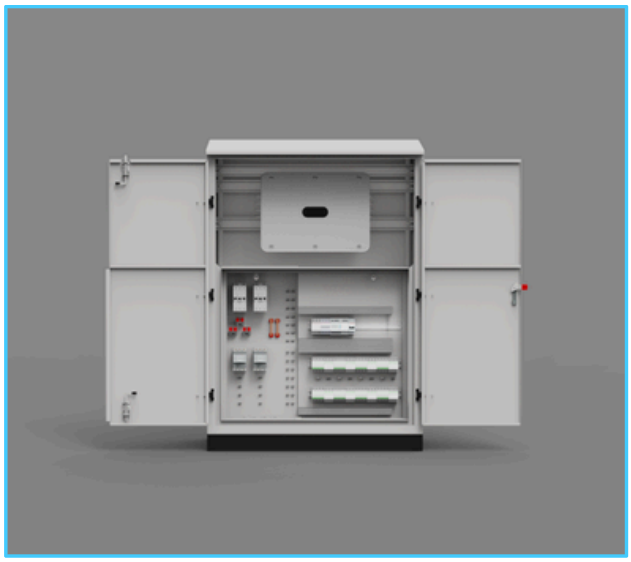
Deliverables:

- Final Manufactured Product

Techniques & Tools Used:

- Autodesk Inventor
- Square Steel Tubes
- Expanded Metal

Dual-Zone Outdoor
Grid-Tie Inverter Enclosure



Client Need: Reduce the costs and improve air flow of an existing outdoor enclosure design. The previous cabinets were designed and manufactured out of town and transport costs were stacking up.

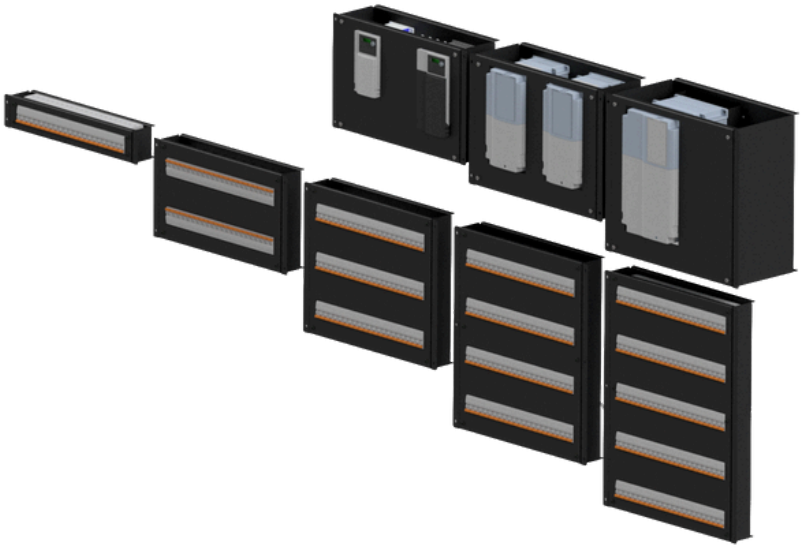
The existing cabinets also had inadequate cooling, leading to the dual zone design: The inverter section has free air flow allowing for more passive cooling, while the electronics section is IP65 and protects against water ingress.

Summary: Measuring existing cabinets to work within the existing size allowances.

Deliverables:

- Final Manufactured Product

Custom DIN Rail & VFD Mounting Brackets



Client Need: Mount DIN rail breakers and VFD drives neatly inside a server cabinet for an RO plant installation.

Summary: Designed a custom bracket system to mount electrical components securely within an existing server rack using cage nuts and rivnuts for easy assembly.

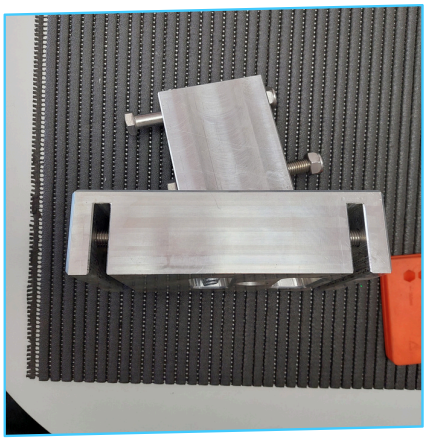
Deliverables:

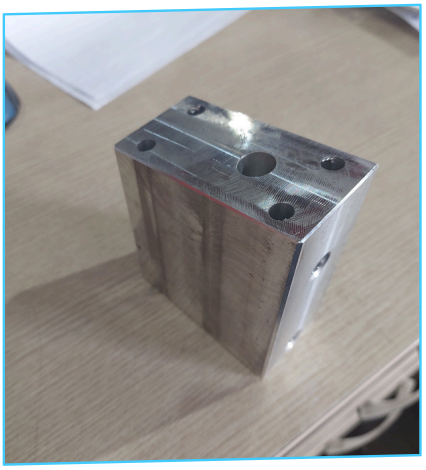
- Parametric bracket designs
- DXF flat patterns
- Bend drawings
- Rendered images for client confirmation

Techniques & Tools Used:

- Parametric design with Autodesk Inventor
- Sheet metal module for accurate bends
- Design for laser cutting and powder coating
- Integrated cable gland and access holes

Aluminium Trailer Coupler



Client Need: Client required a coupler for assembly of a weld-less aluminium boat trailer. I assisted in designing and milling the part

Summary: The coupler connected the I beam main frame, to the channel connecting ribs. This coupler connected the two without needing to weld any parts. I assisted with designing and milling the part.

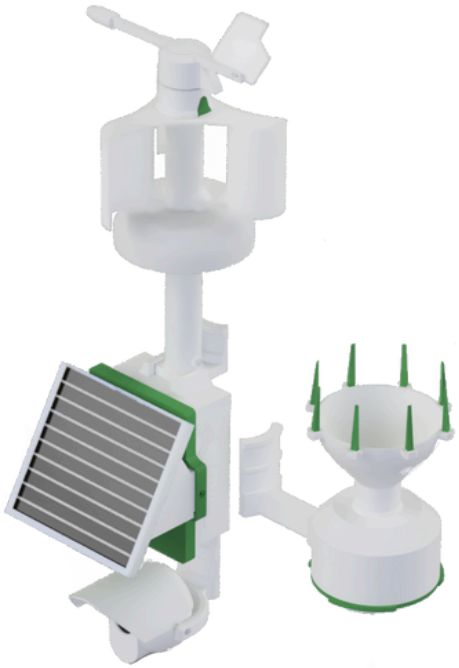
Deliverables:

- Final Manufactured Product

Techniques & Tools Used:

- Autodesk Inventor (CAM Environment)
- Milling Machine (HAAS)

iWeathar Weather Station



Client Need: Upgrade an existing weather station design from SketchUp into a refined, production-ready format for 3D printing.

Summary: Took over an existing product concept and rebuilt it in Fusion 360. Redesigned parts for better usability, modularity, and support-free 3D printing.

Deliverables:

- Full Fusion 360 CAD assembly
- 3D-print-ready STL files
- Ongoing design iterations over multiple years
- Consulting on design-for-print

Techniques & Tools Used:

- Fusion 360 for modeling
- Cura for slicing profiles
- Optimized for FDM printing with no support material
- Part consolidation and design iteration
- Practical electronics integration

Sheet Metal Extension Reel

Client Need: An easy to manufacture yet durable extension reel

Summary: We ended up designing a product that used mostly sheet steel as well as some Steel Tube parts for easy manufacturing

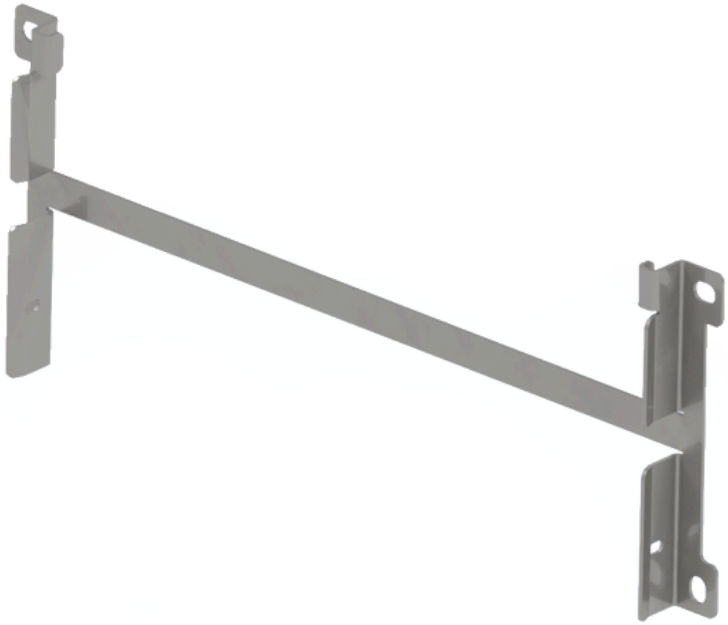
Deliverables:

- Final Manufactured Product

Techniques & Tools Used:

- Autodesk Inventor
- Sheet Metal (Flat Pattern and Bend Drawings)
- Cut list for Tube Parts
- Assembly and Welding Instructions

Huawei 30KTL Inverter Mounting Bracket (Reverse Engineering)



Client Need: Replace a lost mounting bracket for a Huawei 30KTL inverter without waiting months for a replacement from overseas.

Summary: Reverse-engineered the bracket from an identical Bracket on-site, adjusted the design for sheet metal (instead of casting), and produced a cost-effective replacement.

Deliverables:

- DXF cut files for laser cutting
- Bend Drawings
- Custom Integrated Branding

Techniques & Tools Used:

- Autodesk Inventor
- 316 Stainless steel selection for corrosion resistance
- First-time fit confirmation — no iteration needed