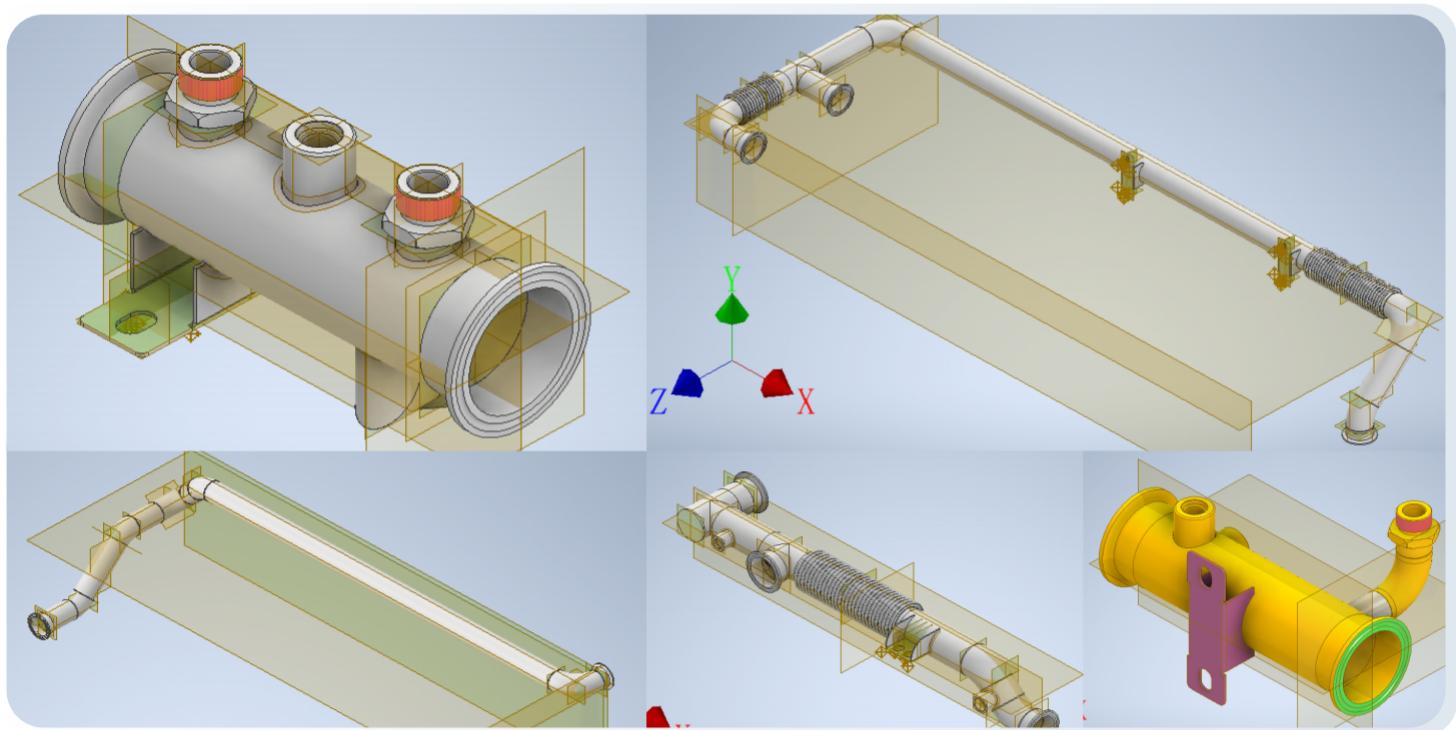




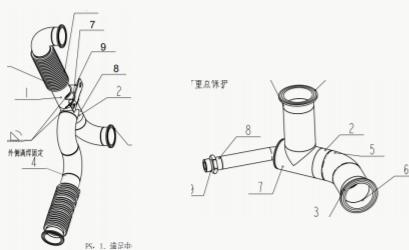
AETHER

OFFSHORE COSTS—ONSHORE SPEED

LIQUID COOLING MODULE



- Product Name: 53KW Internal Piping
- Material: Fe, 06Cr19Ni10 (Stainless Steel 304)



• Industry-Specific Inspection Standards:

- 1-Leak test performed by submerging the pipeline in a water tank, filled with 1.6 MPa gas and held under pressure for 10 minutes—no bubbles shall be generated.
- 2-Internal pipeline impurity content shall not exceed 20 mg/m².
- 3-After drying, internal moisture content shall not exceed 40 mg/m².

• Application:

AETHER | Expert in High-Precision Liquid Cooling Module Core Manufacturing
Specializes in key assemblies/components of data center-level liquid cooling systems.

• Core Process:

Welding must be fully penetrated with single-side welding achieving double-side forming. The product is used inside server cabinets as secondary piping and undergoes 10,000+ thermal cycling tests.



■ Product Name: Liquid Cooling Double-Row Pipe
Material: Fe, 06Cr19Ni10 (Stainless Steel 304)
Minimum Precision: Overall flatness < 0.5 mm
Dimensions: 1785 mm × 91.3 mm × 106.3 mm

SAMPLE PARTS

- **Industry-Specific Inspection Standards:**

1-All internal welds of square pipes must be single-side welded with double-side forming, without weld beads or root gaps.

2-Completed pipelines must undergo hydrostatic pressure tests—no leakage under 1 MPa air pressure.

- **Application:**

AETHER | Expert in High-Precision Liquid Cooling Module Core Manufacturing
Specializes in key assemblies/components of data center-level liquid cooling systems.

- **Core Process:**

1-Ultra-long precision machining: Meter-scale large components fully CNC-controlled (± 0.03 mm).

2-Aerospace-grade precision welding: Full-environment airtightness and high/low-temperature testing, millions of cycling tests.

3-Ultra-high cleanliness requirements: Strict control of total impurities; maximum fiber length of specific flow ≤ 1000 μ m.

4-Mass production supply for top-tier data center core liquid cooling module assemblies, with daily delivery and validation capacity of hundreds of units.



■ Product Name: Immersion Chamber
Material: Fe, 06Cr19Ni10 (Stainless Steel 304)
Dimensions: 530 mm × 535 mm × 382 mm
1120 mm × 940 mm × 534 mm

SAMPLE PARTS

- **Industry-Specific Inspection Standards:**

1-Stepwise pressure increase from ± 5 kPa to 30 kPa, held for 30 minutes. No abnormal sounds, leaks (soap solution test), or visible deformation.

2-Leak rate $\leq 1.0E-5$ mbar·L/s 或 $1.0E-6$ pa·m³/s.

3-Post-cleaning internal impurity content ≤ 20 mg/m²; post-drying internal moisture content ≤ 40 mg/m².

- **Application:**

AETHER | Expert in High-Precision Liquid Cooling Module Core Manufacturing
Specializes in key assemblies/components of data center-level liquid cooling systems.

Immersion cooling achieves efficient heat dissipation by fully submerging server hardware in insulating coolant, addressing thermal bottlenecks in high-density computing scenarios (e.g., AI clusters, supercomputing centers, edge data centers).

Primary cooling method: Server motherboards, CPUs, GPUs, and other heat-generating components are installed inside the chamber filled with special coolant, transferring heat to the liquid.

- **Processing Challenges:**

1-Deep penetration welding on thick plates (5/10 mm) with consistent melt depth.

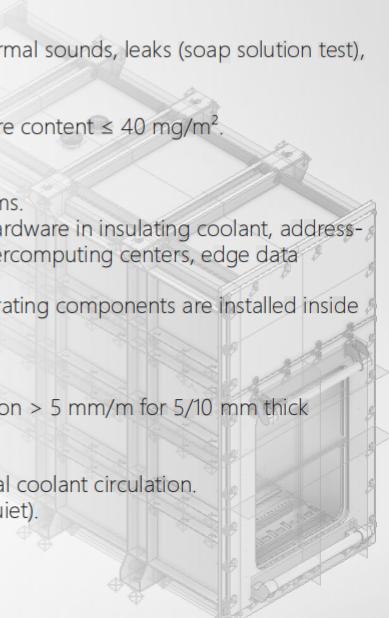
2-Welding deformation: Transverse shrinkage stress > 500 MPa, angular deformation > 5 mm/m for 5/10 mm thick plates.

- **Advantages:**

1-Eliminates server fans, reducing device power consumption by 10–20% via natural coolant circulation.

2-Fully sealed against dust, moisture, and corrosion; noise < 45 dB (library-level quiet).

3-PUE value of immersion chamber ≤ 1.06 .



MORE PRODUCTS



QMS : ISO9001 ISO13485, AS9100D, IATF16949, ISO14001



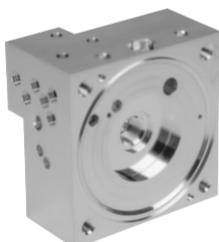
TOLERANCES: ± 0.05 mm
DIMENSION: $\Phi 1.7 \times 300$ mm



TOLERANCES: ± 0.1 mm
DIMENSION: 68.6X28.2X9.5mm



TOLERANCES: ± 0.05 mm
DIMENSION: 154X20X30mm



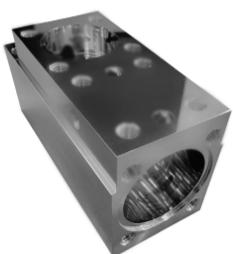
TOLERANCES: ± 0.04 mm
DIMENSION: 49.8X49.8X30m



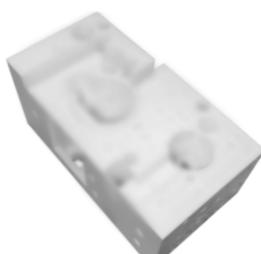
TOLERANCES: ± 0.03 mm
DIMENSION: $\Phi 71.7 \times 465 \times 21$ mm



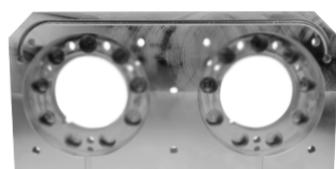
TOLERANCES: ± 0.02 mm
DIMENSION: $\Phi 12 \times 14.75$ mm



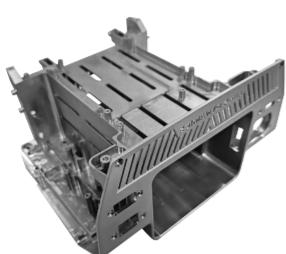
TOLERANCES: ± 0.005 mm
DIMENSION: 70X40X30mm



TOLERANCES: ± 0.015 mm
DIMENSION: 123X55X60mm



TOLERANCES: ± 0.02 mm
DIMENSION: 280X144X26mm



TOLERANCES: ± 0.02 mm
DIMENSION: 255X210X130mm



TOLERANCES: ± 0.015 mm
DIMENSION: $\Phi 84 \times 60$ mm



TOLERANCES: ± 0.025 mm
DIMENSION: 371X110X27.5mm



TOLERANCES: ± 0.05 mm
DIMENSION: $\Phi 120 \times 122$ mm

TOLERANCES: ± 0.01 mm
DIMENSION: $\Phi 101 \times 67$ mm

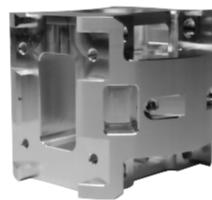
TOLERANCES: ± 0.01 mm
DIMENSION: $\Phi 139 \times 196$ mm



TOLERANCES: ± 0.025 mm
DIMENSION: $\Phi 108 \times 235$ mm

TOLERANCES: ± 0.021 mm
DIMENSION: $\Phi 88.82 \times 246.38$ mm

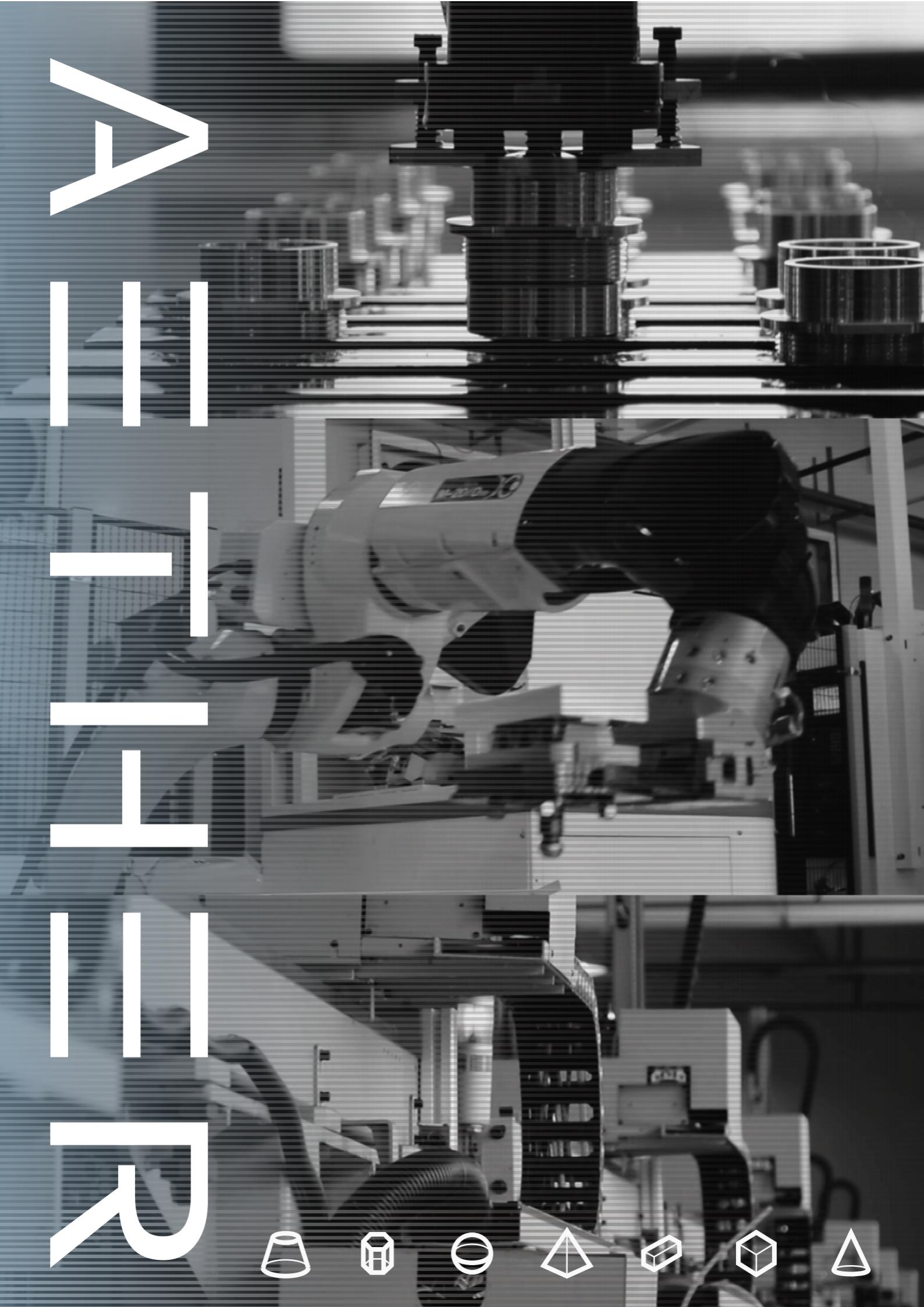
TOLERANCES: ± 0.006 mm
DIMENSION: $355.3 \times 110.8 \times 64.6$ mm

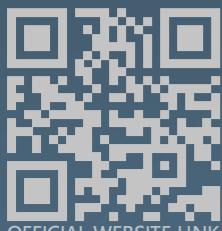


TOLERANCES: ± 0.004 mm
DIMENSION: $214 \times 88 \times 21.5$ mm

TOLERANCES: ± 0.025 mm
DIMENSION: $\Phi 88.39 \times 69.85$ mm

TOLERANCES: ± 0.1 mm
DIMENSION: $336 \times 100 \times 85$ mm





OFFICIAL WEBSITE LINK



LINK TO LINKEDIN

info@aethermfg.com

HQ: 19 Morris Ave, Brooklyn, NY USA 11205
MEXICO FACTORY: Titanio Lote 1 M26, Santa Catarina, Nuevo Mexico 66367