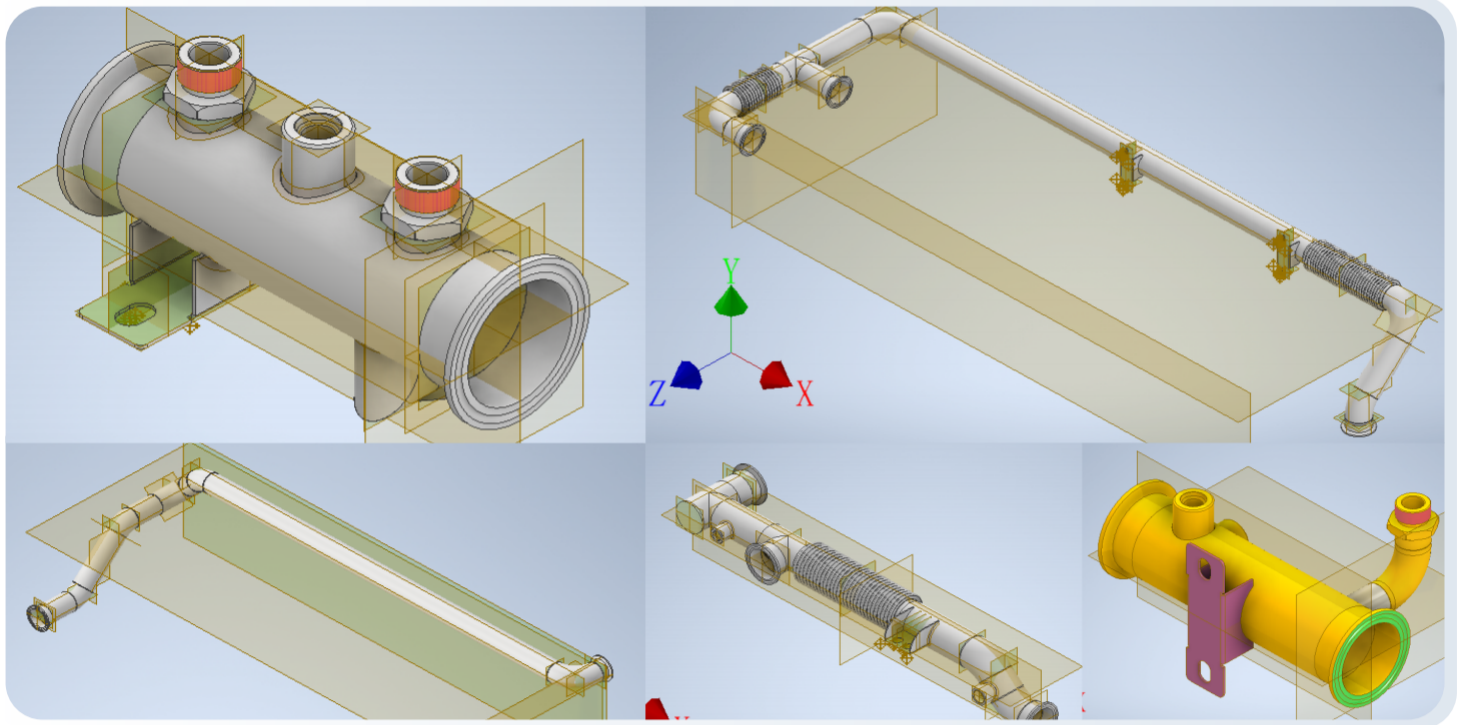




AETHER

OFFSHORE COSTS—ONSHORE SPEED

LIQUID COOLING MODULE



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

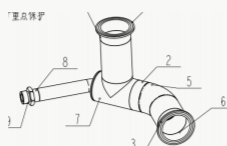
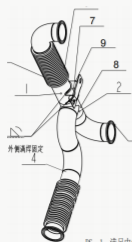


图 1. 设计中

• 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:

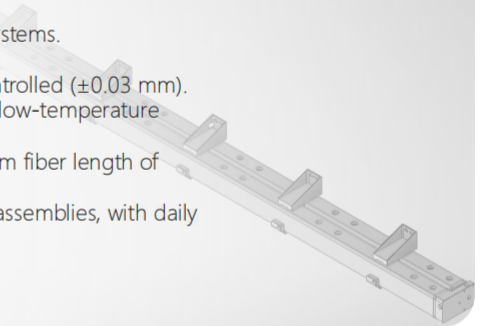
- 1-All internal welds of square pipes must be single-side welded with double-side forming, without weld beads or root gaps.
- 2-Completed pipelines must undergo hydrostatic pressure tests—no leakage under 1 MPa air pressure.

• 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/sm³/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).

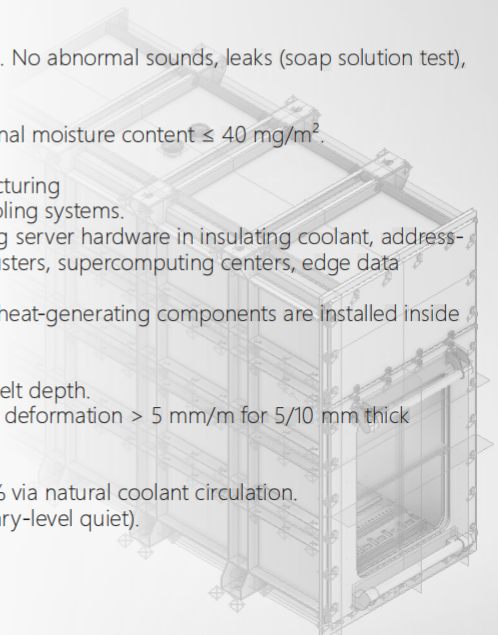
Primary cooling method: Server motherboards, CPUs, GPUs, and other heat-generating components are installed inside the chamber filled with special coolant, transferring heat to the liquid.

• 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:

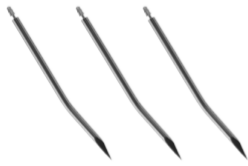
- 1-Eliminates server fans, reducing device power consumption by 10–20% via natural coolant circulation.
- 2-Fully sealed against dust, moisture, and corrosion; noise < 45 dB (library-level quiet).
- 3-PUE value of immersion chamber ≤ 1.06 .



MORE PRODUCTS



QMS : ISO9001 ISO13485, AS9100D, IATF16949, ISO14001



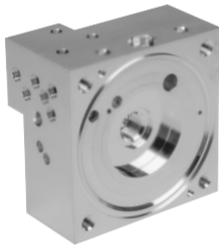
TOLERANCES: $\pm 0.05\text{mm}$
DIMENSION: $\Phi 1.7 \times 300\text{mm}$



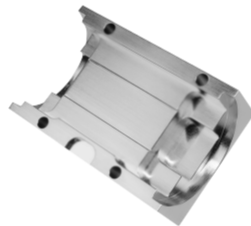
TOLERANCES: $\pm 0.1\text{mm}$
DIMENSION: $68.6 \times 28.2 \times 9.5\text{mm}$



TOLERANCES: $\pm 0.05\text{mm}$
DIMENSION: $154 \times 20 \times 30\text{mm}$



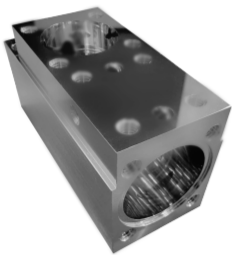
TOLERANCES: $\pm 0.04\text{mm}$
DIMENSION: $49.8 \times 49.8 \times 30\text{mm}$



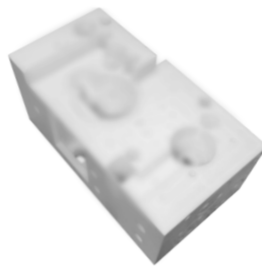
TOLERANCES: $\pm 0.03\text{mm}$
DIMENSION: $\Phi 71.7 \times 465 \times 21\text{mm}$



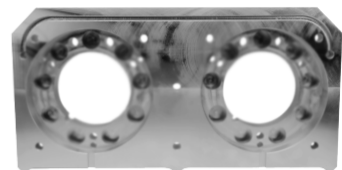
TOLERANCES: $\pm 0.02\text{mm}$
DIMENSION: $\Phi 12 \times 14.75\text{mm}$



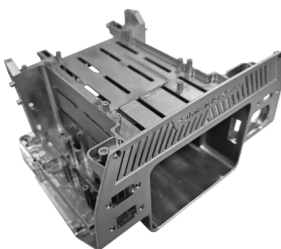
TOLERANCES: $\pm 0.005\text{mm}$
DIMENSION: $70 \times 40 \times 30\text{mm}$



TOLERANCES: $\pm 0.015\text{mm}$
DIMENSION: $123 \times 55 \times 60\text{mm}$



TOLERANCES: $\pm 0.02\text{mm}$
DIMENSION: $280 \times 144 \times 26\text{mm}$



TOLERANCES: $\pm 0.02\text{mm}$
DIMENSION: $255 \times 210 \times 130\text{mm}$



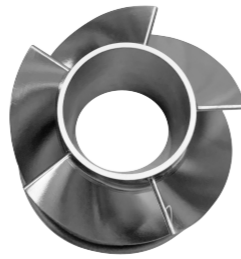
TOLERANCES: $\pm 0.015\text{mm}$
DIMENSION: $\Phi 84 \times 60\text{mm}$



TOLERANCES: $\pm 0.025\text{mm}$
DIMENSION: $371 \times 110 \times 27.5\text{mm}$



TOLERANCES: $\pm 0.05\text{mm}$
DIMENSION: $\Phi 120 \times 122\text{mm}$



TOLERANCES: $\pm 0.01\text{mm}$
DIMENSION: $\Phi 101 \times 67\text{mm}$



TOLERANCES: $\pm 0.01\text{mm}$
DIMENSION: $\Phi 139 \times 196\text{mm}$



TOLERANCES: $\pm 0.025\text{mm}$
DIMENSION: $\Phi 108 \times 235\text{mm}$



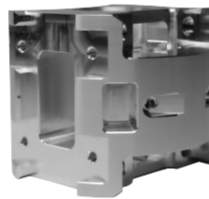
TOLERANCES: $\pm 0.021\text{mm}$
DIMENSION: $\Phi 88.82 \times 246.38\text{mm}$



TOLERANCES: $\pm 0.006\text{mm}$
DIMENSION: $355.3 \times 110.8 \times 64.6\text{mm}$



TOLERANCES: $\pm 0.004\text{mm}$
DIMENSION: $214 \times 88 \times 21.5\text{mm}$

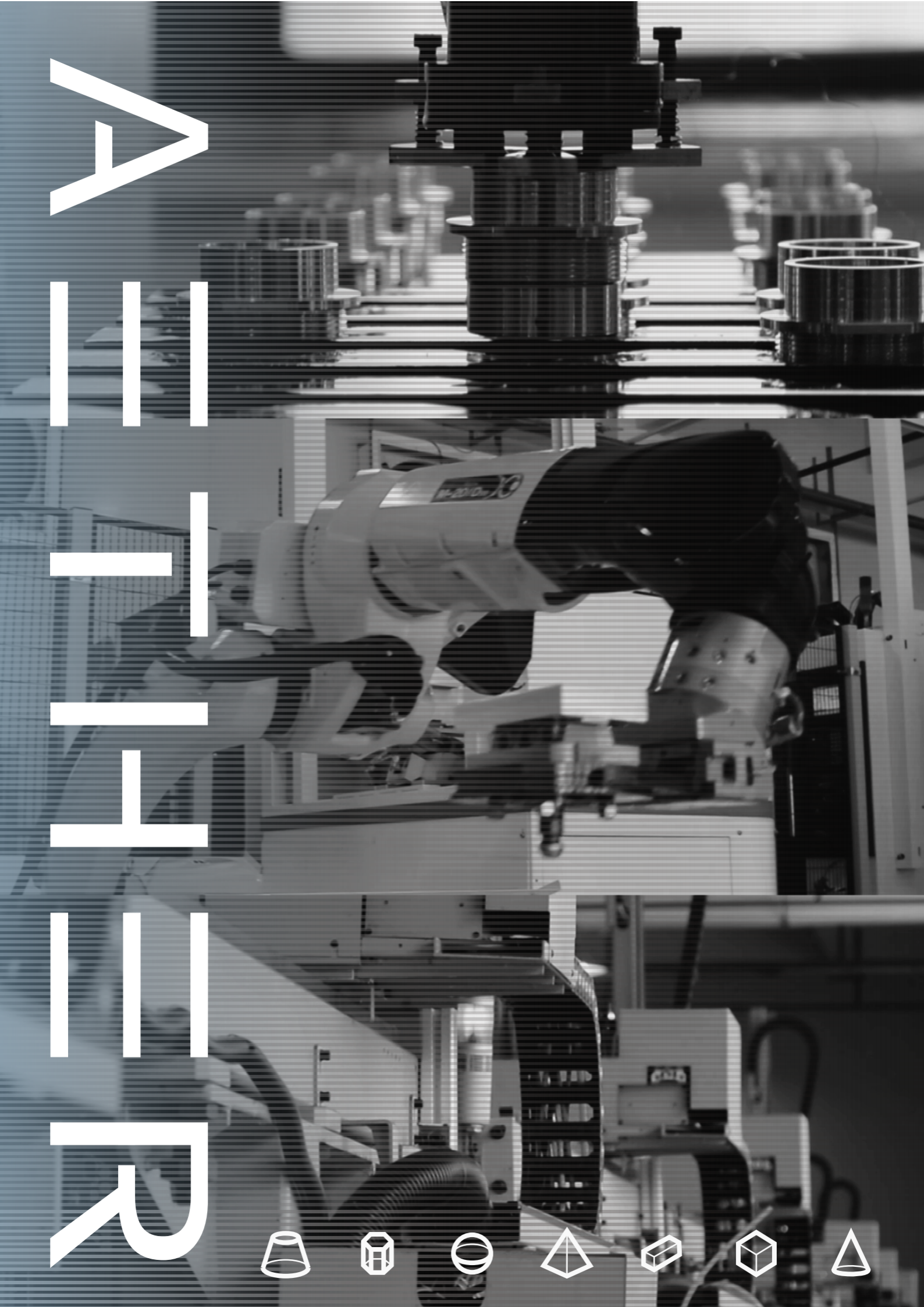


TOLERANCES: $\pm 0.025\text{mm}$
DIMENSION: $\Phi 88.39 \times 69.85\text{mm}$



TOLERANCES: $\pm 0.1\text{mm}$
DIMENSION: $336 \times 100 \times 85\text{mm}$





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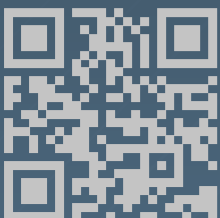
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