



MERCUR 28-168/32.5 (H₂)

Technical Datasheet & Strategic Applications

ETERNAUS Airship Division — Prime Aerospace Edition

The Mercur inaugurates a new category in global aviation: **the airborne aerodrome** — a large-scale atmospheric vessel capable of operating without runways, without airports, and without geographic constraints. With a length of 168 meters, a diameter of 28 meters, and intercontinental autonomy, the Mercur combines the presence of a 280-foot superyacht with the operational freedom of a long-range airship.

Engineered in **ALLOY 2090-T83**, with internal prestressing, controlled pressurization, and high-efficiency hydrogen propulsion, the Mercur delivers **silent, vibration-free, runway-independent flight** with extremely low operating cost and unmatched mission flexibility.

“The Mercur is not an aircraft — it is a **living aerodrome**, a self-sustaining airborne ecosystem.”

1. Basic Dimensions

The Mercur is a mid-heavy atmospheric platform designed for long-range transport, panoramic tourism, airborne hospitality, and multi-role operations.

- **Overall Length:** 168 m
- **Maximum Diameter:** 28 m
- **Maximum Cross-Section:** 615 m²
- **External Surface Area:** 11,940 m²
- **Displaced Volume:** 71,790 m³
- **Maximum Thrust:** 92,700 kg
- **Usable Internal Area (Two Decks):** 1,400 m²

2. Structural Information

The Mercur follows the same aerospace-grade structural philosophy applied to the Titan, Atlas, and Hércules platforms.

- **Material:** ALLOY 2090-T83 Aerospace sheet
- **Plate Thickness:** 0.6 mm
- **Specific Density:** 1.6 kg/m²
- **Tensile Strength:** 70 kg/mm²
- **Allowable Stress:** 21 kg/mm²
- **Transverse Prestressing:** 10 kg/mm²
- **Longitudinal Prestressing:** 5 kg/mm²
- **Operating Pressure:** 420 mmca
- **Maximum Allowable Pressure:** 700 mmca
- **External Compression Resistance:** 420 kg/m²



3. Operational Performance

Designed for long-duration, low-consumption flight, the Mercur achieves exceptional autonomy even at high cruise speeds.

- **Operating Speed Limit:** 280 km/h
- **Superstructure Weight:** 25,560 kg
- **Accessories Weight:** 12,500 kg
- **Gas Weight:** 7,100 kg
- **Fuel Weight:** 15,000 kg
- **Payload Capacity:** 32,500 kg
- **Total Operating Weight:** 60,200 kg
- **Displacement Factor:** $0.0204 \times \text{vel}^3$

Range by Speed

- **70 km/h — 150 HP:** 100,000 km (unlimited with solar integration)
- **100 km/h — 450 HP:** 47,000 km
- **140 km/h — 1,200 HP:** 25,000 km
- **180 km/h — 2,550 HP:** 12,000 km
- **210 km/h — 4,000 HP:** 8,100 km

MAIN USES — MERCUR (H₂)

A multi-role airborne platform for tourism, logistics, hospitality, industry, and sovereign operations.

The Mercur is one of the most versatile aircraft ever engineered in its class. It operates as a **hotel, logistics hub, cultural platform, rescue unit, industrial lifter, and panoramic tourism asset**, all within a single atmospheric system.

Below are the strategic applications, aligned with the structure used in the Titan, Atlas, Explorer, and Hércules documents.

1. Intercontinental Premium Passenger Transport

The Mercur can transport up to **280 passengers** in a full-comfort configuration, without airports, runways, or ground infrastructure.

- Total freedom of movement — **no seatbelts**
- Boarding via **modular capsules** lowered from 70 meters
- Ultra-smooth, silent, vibration-free flight
- Ideal for premium point-to-point routes and sovereign mobility

2. Seven-Star Airborne Hotel

A two-deck, 1,400 m² interior transforms the Mercur into the world's first **itinerant seven-star hotel**.

- Presidential suites, private cabins, lounges, dining rooms
- Fitness, wellness, entertainment, and panoramic observation



- Perfect for luxury brands, hotel chains, and exclusive tourism operators
- A flying superyacht with global reach

3. Panoramic Tourism — High-Impact Revenue

The Mercur is one of the most profitable tourism platforms ever conceived.

- Up to **336 passengers** per panoramic flight
- 1–2-hour operations with extremely high turnover
- *“A single day of operation can exceed US\$ 1,200,000 in revenue.”*
- Ideal for: Dubai, Las Vegas, Orlando, Rio de Janeiro, Paris, Singapore
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4. High-Efficiency Air Logistics

With 32.5 tons of payload and runway-independent operation, the Mercur is ideal for premium express logistics.

- Electronics, pharmaceuticals, high-value cargo
- Direct point-to-point delivery
- Eliminate hubs, delays, and airport congestion
- Ideal for Amazon, Shopee, Mercado Livre, Temu, FedEx, UPS, DHL

5. Cultural Air Yacht & Global Touring Platform

A complete stage can descend from the Mercur, enabling performances anywhere on Earth.

- Stadiums, deserts, forests, islands, urban parks
- Ideal for world tours, festivals, corporate events
- Creates a new airborne entertainment industry
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6. Industrial & Government Operations

The Mercur supports medium-heavy industrial missions:

- Installation of wind turbines, prefabricated structures, remote infrastructure
- Transport of components to inaccessible regions
- Support for energy, mining, and construction sectors

7. Airborne Healthcare & Humanitarian Missions

The Mercur can be configured as:

- A complete airborne hospital
- A rehabilitation clinic
- A disaster-response platform
- A mass-evacuation and supply-delivery system

8. Environmental, Forestry & Amazon Operations

A unique asset for sustainable operations:



- Reforestation with mature trees
- Transport of supplies to remote communities
- Firefighting with 30 m³ of extinguishing agent
- Selective extraction of timber without clear-cutting

9. Commercial, Tourism & Special Operations

The Mercur can operate as:

- An itinerant small shopping center
- A mobile corporate headquarters
- A scientific observation platform
- An ecotourism vessel for remote regions

Conclusion

The Mercur is simultaneously:

- an intercontinental transport system,
- a seven-star airborne hotel,
- a panoramic tourism engine,
- a logistics platform,
- a cultural air yacht,
- an industrial support aircraft,
- a humanitarian and environmental asset.

Above all, it is a **fully operational, market-ready product**, engineered for operators, sovereign clients, and visionary investors seeking to open a new era of atmospheric mobility.