GALAXIIUM
TRAVELS

# Galaxium Voyager - Technical Specifications

Galaxium Travels

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## Overview

The Galaxium Voyager is our flagship luxury spacecraft, designed to provide the ultimate space travel experience while maintaining the highest standards of safety and comfort.

## General Specifications

- **Manufacturer**: Galaxium Aerospace
- **Model**: GV-1
- **First Flight**: 2025
- **Status**: Active Service
- **Fleet Size**: 3 vessels

## Dimensions and Capacity

- **Length**: 45 meters
- **Width**: 12 meters
- **Height**: 8 meters
- **Passenger Capacity**: 12
- **Crew Capacity**: 4
- **Cargo Capacity**: 2,000 kg

## Propulsion System

### Primary Engines

- **Type**: Hybrid Ion-Plasma Drive
- **Thrust**: 500 kN
- **Specific Impulse**: 4,500 seconds
- **Fuel**: Xenon/Argon mixture

- **Efficiency**: 98%

### Secondary Engines

- **Type**: Chemical Rocket
- **Thrust**: 1,200 kN
- **Fuel**: LOX/LH2
- **Purpose**: Launch and emergency backup

## Power Systems

### Primary Power

- **Type**: Advanced Nuclear Reactor
- **Output**: 50 MW
- **Efficiency**: 95%
- **Lifespan**: 10 years

### Backup Power

- **Type**: Solar Arrays
- **Surface Area**: 200 m²
- **Output**: 100 kW
- **Battery Capacity**: 1 MWh

## Life Support Systems

### Air Management

- **Oxygen Generation**: Electrolysis
- **CO2 Removal**: Molecular Sieve
- **Air Filtration**: HEPA + UV
- **Air Exchange Rate**: Every 2 minutes

### Water Management

- **Water Recovery**: 98%
- **Storage Capacity**: 5,000 liters
- **Purification**: Multi-stage filtration
- **Recycling System**: Closed-loop

### Temperature Control

- **Range**: 18-24°C
- **Humidity Control**: 40-60%
- **Thermal Protection**: Multi-layer insulation

## Safety Features

### Emergency Systems

- **Escape Pods**: 4 (3 passengers each)
- **Life Support Duration**: 72 hours
- **Emergency Power**: 48 hours
- **Radiation Shielding**: 5 cm lead equivalent

### Navigation

- **Primary**: Quantum Navigation
- **Backup**: GPS + Stellar Navigation
- **Autonomous Capability**: Level 4
- **Collision Avoidance**: AI-powered

## Luxury Amenities

### Accommodations

- **Suite Types**: 6 (2 passengers each)
- **Bed Size**: Queen
- **Window Size**: 2m x 1.5m
- **Privacy Features**: Smart glass

### Common Areas

- **Observation Deck**: 100 m²
- **Dining Area**: 50 m²
- **Recreation Room**: 75 m²
- **Exercise Facility**: 40 m²

### Entertainment

- **Virtual Reality Suite**: Yes
- **Zero-G Pool**: 3m x 2m

- **Holographic Theater**: Yes
- **High-Speed Internet**: 1 Gbps

# Performance Metrics

## Flight Characteristics

- **Maximum Speed**: 28,000 km/h
- **Orbital Capability**: LEO to Lunar
- **Maximum G-Force**: 3G
- **Maneuverability**: 6 degrees of freedom

## Mission Capabilities

- **Maximum Duration**: 14 days
- **Range**: Earth to Moon
- **Payload Capacity**: 2,000 kg
- **Docking Capability**: ISS compatible

# Maintenance

## Inspection Intervals

- **Daily**: Visual inspection
- **Weekly**: System diagnostics
- **Monthly**: Deep maintenance
- **Annual**: Complete overhaul

## Service Life

- **Design Life**: 20 years
- **Major Refit**: Every 5 years
- **Component Replacement**: As needed
- **Software Updates**: OTA

# Environmental Impact

## Emissions

- **CO2 Equivalent**: 0.5 tons per flight

- **Particulate Matter**: Negligible
- **Noise Pollution**: Below regulatory limits
- **Space Debris**: Zero

### Sustainability Features

- **Recycled Materials**: 85%
- **Energy Efficiency**: 95%
- **Waste Management**: Zero waste
- **Carbon Offset**: 200%

## Certification

- **Space Safety**: ISO 14620
- **Environmental**: ISO 14001
- **Quality Management**: ISO 9001
- **Occupational Health**: OHSAS 18001