

Modern Airships

Consolidated Table of Comments

Peter Lobner, Updated 21 December 2020

“Modern Airships” is a three-part document that contains an overview of modern airship technology in Part 1 and links in Parts 1, 2 and 3 to 95 individual articles on historic and advanced airship designs. Here are the links to the three parts:

- Modern Airships – Part 1: <https://lynceans.org/all-posts/modern-airships-part-1/>
- Modern Airships – Part 2: <https://lynceans.org/all-posts/modern-airships-part-2/>
- Modern Airships – Part 3: <https://lynceans.org/all-posts/modern-airships-part-3/>

The following consolidated Table of Contents for all three parts should help you navigate this large volume of material.

Table of Contents Modern Airships – Part 1

1. Introduction

Modern Airships – Part 1 begins with an overview of modern airship technology, continues with a summary table identifying the airships addressed in this part, and concludes by providing links to 38 individual articles on these airships.

2. **Well-established benefits and opportunities, but a risk-averse market**
3. **Status of current aviation regulations for airships**
4. **Lifting gas**

5. Types of modern airships

5.1 Conventional airships

5.2 Semi-buoyant hybrid airships

5.3 Semi-buoyant aircraft

5.4 Variable buoyancy airships

- Variable buoyancy / fixed volume airships
- Variable buoyancy / variable volume airships

5.5 Variable buoyancy propulsion airships / aircraft

5.6 Helistats (airship / helicopter hybrid)

5.7 Stratospheric airships

5.8 Thermal (hot air) airships

6. How does an airship pick up and deliver a heavy load?

7. The scale of large cargo airships

8. Specific airships in Part 1

9. Links to the individual articles

Conventional airships:

- Airfloat HL
- Shell / Aerospace Developments methane gas transporter
- CargoLifter Joey, CL75 AC (AirCrane) & CL160
- Zeppelin NT
- Zeppelin ZET
- Science Applications International Corp. (SAIC) Skybus 80K
- SAIC & ArcXeon International Airstation UAS Carrier
- Airship do Brasil (ADB) ADB 3-3 & 3-15/30

Variable buoyancy, fixed volume airships:

- Walden Aerospace / LTAS lenticular, toroidal, variable buoyancy airships
- Aeros Aircraft *Dragon Dream*
- Aeros ML866 / Aeroscraft Generation 2
- Halo luxury airship

Helistats (airship / helicopter hybrid):

- Piasecki PA-97, Boeing / Skyhook International SkyHook JLH-40 and other helistats

Hybrid, semi-buoyant aircraft:

- Megalifter
- Ohio Airships Dynalifters DL-100 & Patroller, Freighter & Cruiser, Drone Runner
- Aereon Corporation Aereon III, Aereon 26 & Dynairships

Hybrid, semi-buoyant airships:

- Goodyear dynamic lift airships & Dynastats
- DARPA Project Walrus
- Navy HULA program
- ATG SkyKitten & SkyCat
- Hybrid Air Vehicles / Northrop Grumman HAV-3 & HAV-304 (LEMV)
- Hybrid Air Vehicles Airlander 10 & 50
- Lockheed Martin P-791
- Lockheed Martin SkyTug & LMH-1
- Vantage Airship Manufacturing Co., Ltd. CA-60T & CA-200T
- Voliris V900, V901, V902, V930, V932 NATAC & SeaBird

Stratospheric airships

- SwRI HiSentinel
- Lockheed Martin high-altitude airship (HAA)
- Lockheed Martin HALE-D
- Air Force Blue Devil Bock II
- DARPA / Lockheed Martin ISIS
- Japan stratospheric platform (SPF) & SkyNet
- South Korea stratospheric airship VIA-200
- Walden Aerospace / LTAS S.O.S.C.S.
- ATG StratSat
- Navy StarLight
- SAGA

Thermal (hot air) airships:

- GEFA-Flug (Impacto Aereo) AS-105GD/4 & AS-105GD/6
- Skyacht Personal Blimp
- APEX Balloons thermal airship

Record of revisions – Part 1

Revision 1, 21 December 2020: added 15 new articles, split existing Aeros article into two articles, and updated all 23 previously existing articles.

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Modern Airships – Part 2

1. Introduction

Modern Airships – Part 2 begins with a summary table identifying the airship concepts addressed in this part, and concludes by providing links to 25 individual articles on these airship concepts.

2. Specific Airships in Part 2

3. Links to the individual articles

Conventional airships:

- Flying Whales LCA60T
- Buoyant Aircraft Systems International (BASI) MB-310 & MB-560
- TP Aerospace Atlas 80
- SkyLifter Ltd. SL150, SL50, SL25 & SL20
- Augur RosAeroSystems DZ-N1 & MD-900

Variable buoyancy, fixed volume airships:

- Atlas (former Augur RosAeroSystems) ATLANT 30 & 100
- Varialift Plc. ARH 50 & 250
- Euro Airship Corsair & DGPAtt
- Skylite Aeronautics GeoShip
- AeroVehicles, Inc. Minicat & Aerocat R-12 & R-40
- Global Airships Atlas
- LTA Aerostructures 10T & 70T
- Imaginative Alert, Invitation & Kugaaruk

Variable buoyancy, variable volume airships:

- EADS Tropospheric Airship

Hybrid, semi-buoyant airships:

- Millennium Airship SkyFreighter
- Airship GP “Super Hybrid” AeroTruck, AeroBoat & AeroYacht
- Nautilus SpA Elettra Twin Flyers (ETF)
- Flying-Yacht

Hybrid, solar-powered airships:

- Project Sol’R Nephelios
- Solar Ship Caracal semi-buoyant airship
- Solar Ship Wolverine & Nanuq semi-buoyant aircraft
- Solar Flight Sunship
- Dirisolar DS-12, DS-900 & DS-1500
- SolarAirShip High-Speed Solar Airship (HSSA)
- Atlas (former Augur RosAeroSystems) HAA Berkut

Plane / blimp hybrids:

- Egan Airships PLIMP Model D drone & Model J

Solid-state propulsion airship:

- Festo b-IONIC Airfish

Variable buoyancy propulsion airships:

- Phoenix
- Advanced High-Altitude Aerobody (AHAB)
- Solomon Andrews’ Aereon I & II (1863)

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Modern Airships – Part 3

1. Introduction

Modern Airships – Part 3 begins with a summary table identifying the airship concepts addressed in this part, and concludes by providing links to 32 individual articles on these airship concepts. Many of the design concepts in Part 3 are quite exotic in comparison to the more utilitarian airships that dominate Modern Airships – Parts 1 & 2.

2. Specific Airships in Part 3

3. Links to the individual articles

Cargo & multi-purpose airships:

- KNAAR heavy-lift cargo airship for wind turbine components
- Airship One medium, hybrid airship / semi-buoyant aircraft
- Airship Archangel large, multi-purpose airship
- Cloudea large, multi-purpose airship
- Rediscovery Presidential airship

Mass transportation airships:

- KLM WB-1010 Spruce Whale large buoyant passenger aircraft
- Airbia suburban passenger ferry airship
- Flight 2.0 basic air transportation
- Imaginative Aerostratos regional passenger transportation

Flying hotel airships:

- Avalon Airships Aether luxury airship hotel
- Manned Cloud luxury airship hotel
- Airship Traveling luxury airship hotel
- Dassault Systems commercial flying cruise liner
- Aircruise luxury airship hotel with land dock
- Hydrogenase bio-hydrogen airship / building with land dock

Touring airships:

- Avalon Airships Hemera luxury tourist ferry
- Airmotion scenic touring airship
- Stalker exploration airship

Flying yacht airships:

- Strato Cruiser luxury airship yacht
- Eunoia luxury airship yacht
- LZ-73 small luxury airship
- Renault Zep'lin solar-powered racing airship
- Aeolus personal airship yacht
- Wolke7 personal airship yacht / flying home
- Aeromodeller II personal hydrogen airship yacht
- Aerolabe solar-powered airship / ornithopter hybrid

Remotely-piloted special purpose airship:

- Avalon Airships EOS autonomous police support vehicle

Personal airships:

- Sky Voyage hybrid personal airship / glider
- Escape hybrid personal airship & land vehicle

Thermal (hot air) airships:

- Sunrise solar-powered thermal airship
- Sterling solar-powered thermal airship
- Tensairity thermal airship

Other novel designs:

- Imaginative Medusa and Cubozo
- Imaginative Templar