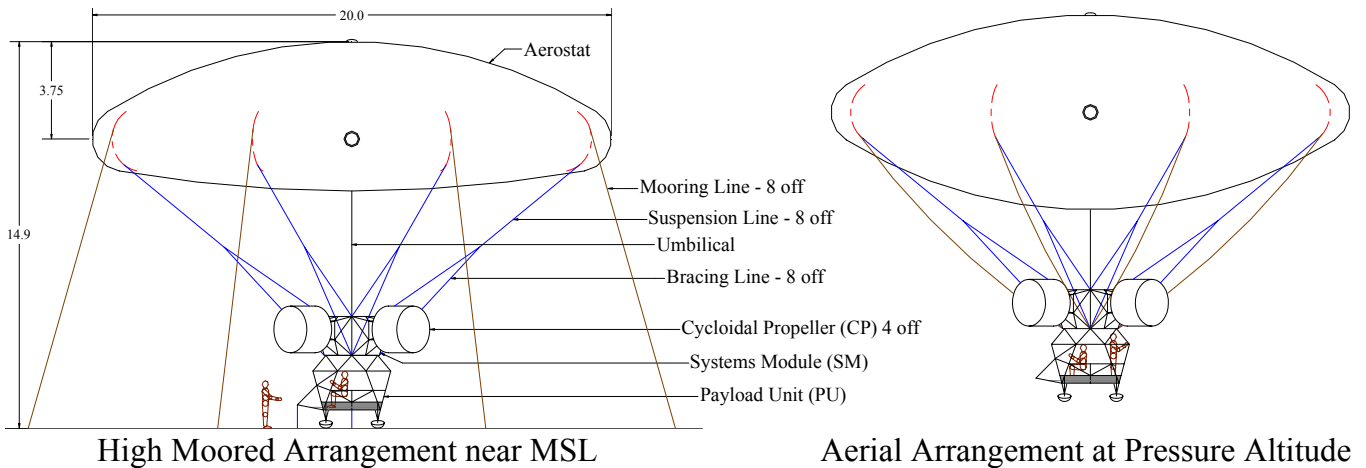


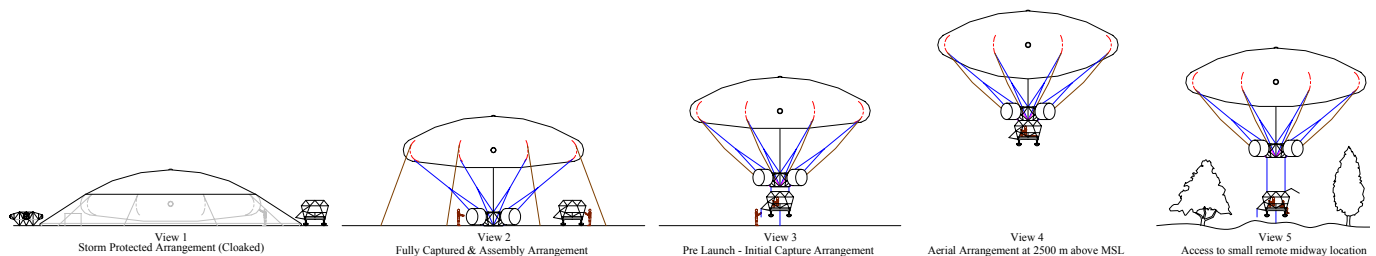
LS-L20

A Small Omni-directional Airship



Key Aspects:

- An omni-directional motorised gas balloon for simple operation like helicopters (always upright)
- Low drag variable geometry lenticular (discus form) aerostat enabling aero-static/dynamic lift
- Quiet operation, also able to fly routinely as a silent steady un-powered free balloon
- Stable day long endurance that is environmentally friendly (low emissions)
- 6 degree of freedom control with quad cycloidal propellers
- Pseudo VTOL manned or UAV and autonomous programmed or R/C piloted operation
- Doesn't need aerodynamic stabilisers, elevators or rudders – controlled with thrust
- Fixed when moored and able to be cloaked at low level for storm protection
- Compact (smaller than unidirectional airships), able to access small sites practically anywhere
- A resilient airship, able to settle onto soft land or water as well as hard surfaces
- Assembled and maintained outdoors – doesn't need a mast or runways
- Designed for setup and operation by 2 people at small cleared level sites wherever



Duties: sport, pleasure, search and rescue, reconnaissance and as a platform for electronic/optical systems with 300 kg disposable load in private, business and public service operations, including:

- Rescue aid vehicle – able to hold station over a ground position with little downdraft
- Roving watch tower for aerial surveillance – persistent presence over a wide area
- Border, coast or regional patroller – facilitates policing and customs activities
- Disaster relief – humanitarian (search, assist and medical aid)
- Geostationary aerial platform as a relay station and sky beacon
- Forest fire watch, traffic monitoring and general survey
- Mineral detection, crops analysis, pipe-line monitoring, mapping and so forth
- Film, camera and broadcast activities
- Scientific and archaeological studies
- Training, leisure and sight-seeing tours
- Traditional advertising and events attraction with guard duties

Supplied with everything needed (except disposables) in a small standard ISO container.



LS-L20 Visualisation

LS-L20

A Small Omni-directional Airship

General specification:

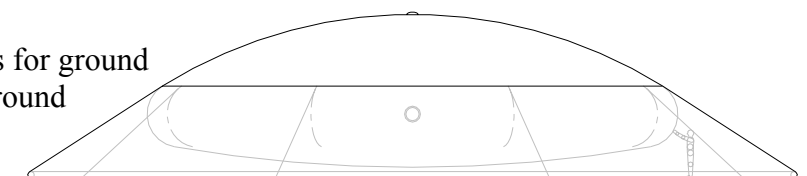
Gas fill / Overall aerostat volume	900 to 1200 m ³ (31,783 ft ³) / 1400 m ³ (49,440 ft ³)
Aerostat maximum diameter	20 m (65.62 ft)
Aerostat height at pressure altitude / sea level	7.5 m (24.61 ft) / about 5.75 m (18.86 ft)
Overall airship height	14.5 m (47.57 ft)
Disposable load / Payload (pilot + pax + bags)	Fuel + Payload 300 kg (660 lb) / 200 kg (449 lb)
Payload unit block space	2.2 m long 1.5 m wide 1.9 m tall
Max and cruise airspeeds	40 Kn (74.1 km/h) and 35 Kn (64.8 km/h)
Wind speed – launch & capture open / restricted	20 Kn (37 km/h) / 15 Kn (27.8 km/h)
Max wind speed - low moored	50 Kn (92.6 km/h)
Max wind speed - low moored & cloaked	80 Kn (148.2 km/h)
Cruise altitude	300 m (984 ft) AMSL
Pressure altitude (ceiling)	1500 to 3000 m (4921 to 9842 ft) AMSL
Endurance - continuous cruise power	8 h at cruise airspeed
Endurance - un-powered (as a gas balloon)	Unlimited
Range - continuous cruise power	300 km (186 miles)
Range - floating with wind	Unlimited
Power - max	90 kW (120 hp) Diesel producing electricity
Power – cruise	50 kW (65 hp)
Propulsion	Electrically driven cycloidal propellers
Certification	All primary jurisdictions sought

Note: Following prototype production, shake down and flight test assessment, confirmation of these estimates will be possible; where improvements are likely.

The LS-L20 is being developed for private, commercial and public service duties. It's a new lighter-than-air (LTA) way for an airship with a lenticular aerostat to pursue aerial tasks operating like a helicopter, but with quiet long endurance, able to serve coastal environments or remote regions with little infrastructure. It provides a stable platform for sensitive payloads (people and or systems). Operators may expect a practical, easily-maintained aircraft with relatively low costs. It should allow them to expand their services and create new markets. Payload units are swappable, enabling quick configuration changes; for example, from a roving search airship to an autonomous geostationary systems platform. It will be quick to set up and deploy (less than 4 hours out of the box), easy to manage on the ground (2 person setup, launch and moor) and be operated by a single (ground or onboard) pilot with low workload.

Ground Infrastructure

The LS-L20 comes with a range of options for ground protection and maintenance, including a ground skirt (see right), handling systems and a relocatable domed hangar.



Current status

The design has reached a mature stage, where assembly drawings and system specifications are available. The next stage is to produce prototypes for test and to pursue the certification programme. An 18 m diameter tethered version (pictured right) already confirms good function and practicability of the ground arrangements. Project costs, timeline schedule and business plans plus brochures are all available. Finance is needed to continue through the next stage and for marketing/demonstration purposes.

Contact as below.



LS-LT18-1