TYPE CERTIFICATE DATA SHEET

No. EASA.IM.AS.500

for

A-1 Series

Type Certificate Holder

Skyship Services Inc.
13506 Summerport Village Pkwy, Suite 1018
Windermere, Florida 34786
USA

For Models: A-1-50
A-1-70

TABLE OF CONTENTS

SECTION 1: A-1-50

I. General

1.	Type, Model	Type: A-1 Series, Model: A-1-50
2.	Airworthiness Category	Normal Airship
3.	Manufacturer	See 'Section Administrative', III.
4.	Type Certification Application Date	to FAA: 29 June 1995
5.	State of Design Authority	FAA
6.	Type Certificate Date	FAA: 3 October 1997
7.	Type Certificate n° by	FAA: S00002SE
8.	Type Certificate Data Sheet n°	FAA: S00002SE
9.	EASA Type Certification Date	22 December 2011

II. Certification Basis

1.	Reference Date for determining the applicable Requirements	29 June 1995
2.	Airworthiness Requirements	Airship Design Criteria (ADC), FAA P-8110-2, dated 2 November 1987, as amended by Change 1, dated 24 July 1992 and Change 2, dated 6 February 1995
3.	Special Conditions	none
4.	Exemptions	none
5.	Deviations	none
6.	Equivalent Safety Findings	none
7.	Operational Suitability Data (OSD)	Not required for aircraft that are no longer in production. CR (EU) 748/2012, as amended by CR (EU) 69/2014 does not require OSD elements for this model (see Article 7a, 1.). See Note 3. of 'Section: Notes pertinent to all models'.

III. Technical Characteristics and Operational Limitations

1.	Type Design Definition	American Blimp Corporation Drawing List, Document #10A150 Rev BE, dated 2 December 2011, and later approved revisions.
2.	Description	Airship with pressurised envelope; external suspension system; water ballast trim system; two engines mounted on each side of gondola with forward thrust propellers; four fins in king-cross configuration; mechanical wire control system for the aerodynamic surfaces and valves; steel tube framework gondola with one cabin door; single ballonet with manually operated air valves, two automatically and manually operated helium valves on top of the envelope.
3.	Equipment	The required basic equipment as prescribed in the applicable airworthiness regulations (see Certification Basis) must be installed in the airship. In addition to the above required basic equipment, the following equipment is required and approved for use: - A-1 EASA Equipment List #304052 Rev IR, or later EASA

		approved revision - Latest FAA-approved Airship Flight Manual, Document 301030, Rev. 14, or later approved revision
4.	Dimensions	
	4.1 Envelope/Ballonet Volume	Envelope: 4 248 m³ (150 000 ft³) Ballonet: 1 104 m³ (39 000 ft³), 26% of envelope For pressure limits see III.9.3.
	4.2 External (approx.)	Length: 50.3 m (165 ft) Diameter: 13.1 m (43 ft) Height: 16.8 m (55 ft) Max. Width: 14.0 m (46 ft)
5.	Powerplant	
5.1	Engine	Textron-Lycoming 2 x Model IO-360-B1G6 FAA TC/TCDS n°: 1E10 EASA TC/TCDS n°: EASA.IM.E.032 Limitations: Max. RPM: 2 700 min^{-1} Max. RPM continuous: 2 700 min^{-1}
	5.2 Auxiliary Power Unit (APU)	none
	5.3 Propeller	2 x MT-Propeller MTV 25-1-D-C-R (M) CR165-06 LBA TC/TCDS: 32.130/97 1.65 m five-bladed, pitched, wood composite with erosion protection
6.	Lifting Gas	Helium (He)
7.	Air Speed Limitations	V_{NE}: 89 km/h (48 kts, 55 mph) IAS V_{MO}: 89 km/h (48 kts, 55 mph) IAS V_B: 74 km/h (40 kts, 46 mph) IAS For other limitations see AFM
8.	Mass/Weight	Max. airship EQ weight 4 927 kg (10 863 lb) Max. gondola mass: 4 080 kg (8 995 lb) Max. static heaviness: 340 kg (750 lb) Max. static lightness: 204 kg (450 lb)
9.	Operating Altitude, Temperature and Envelope Pressure	
	9.1 Altitude	10 000 ft (3 048 m)
	9.2 Temperature	Min. 29 °C (-21 °F)
	9.3 Envelope Pressure Limitations	Max. pressure: 498 Pa (2 in H_2O column) Min. pressure: 324 Pa (1.3 in H_2O column)
10.	Kind of Operation Limitations	VFR day/night
11.	Centre of Buoyancy	Not recorded Note: The theoretical bow STA 0 is 66 cm (26 in) aft of the nose mooring probe
12.	Flight Crew and Occupants	
	12.1 Minimum Flight Crew	one (1) pilot
	12.2 Max. Number of Seats	ten (10)

12.3	Pilot Seat(s)	one (1), RH front seat
12.4	Passenger Seats	nine (9)

IV. Operating and Service Instructions

1. Operating Instructions

1.1	Flight Manual	American Blimp Corporation Airship Flight Manual, Document 301030, or later approved revisions.
1.2	Ground Handling Manual	American Blimp Corporation Ground Handling Manual, 301001, Revision E, dated March 24, 2005, or later approved revisions.
1.3	OSD MMEL	*reserved*
1.4	OSD FCD	*reserved*

2. Service Instructions

2.1	Airship Maintenance Manual	American Blimp Corporation Instructions for Continued Airworthiness, Document 301032, Revision 7, dated 14 March 2005, or later accepted revisions.
2.2	Engine Manual	Lycoming Overhaul Manual Direct Drive Models, 60294-7, Dec 1974, Revision 60294-7-13, or later accepted revisions.
2.3	Propeller Manual	- Overhaul Manual E-519, Revision 34, 7 July 2020, or later accepted revisions; - Blade Overhaul Manual E-1290, Revision 18, 25 August 2011, or later accepted revisions.
2.4	Service Letters and Service Bulletins	As published by American Blimp Corporation (ABC), Skyship Services Inc., Lycoming and MT-Propeller.

V. Notes

1. Manufacturer's eligible serial numbers: s/n 101 through s/n 106, s/n 108 and up.

* * *

SECTION 2: A-1-70

I. General

1.	Type, Model	Type: A-1 Series, Model: A-1-70
2.	Airworthiness Category	Normal Airship
3.	Manufacturer	See Section 'Administrative', III.
4.	Type Certification Application Date	to FAA: not recorded
5.	State of Design Authority	FAA
6.	Type Certificate Date	FAA: 25 March 2005
7.	Type Certificate n° by	FAA: S00002SE
8.	Type Certificate Data Sheet n°	FAA: S00002SE
9.	EASA Type Certification Date	22 December 2011

II. Certification Basis

1.	Reference Date for determining the applicable Requirements	not recorded
2.	Airworthiness Requirements	Airship Design Criteria (ADC), FAA P-8110-2, dated 2 November 1987, as amended by Change 1, dated 24 July 1992 and Change 2, dated 6 February 1995
3.	Special Conditions	none
4.	Exemptions	none
5.	Deviations	none
6.	Equivalent Safety Findings	none
7.	Environmental Protection Requirements	
	7.1 Noise Requirements	See TCDSN EASA.IM.AS.500, and Note 2. of 'Section: Notes pertinent to all models'.
	7.2 Emission Requirements	n/a
8.	Operational Suitability Data (OSD)	Not required for aircraft that are no longer in production. CR (EU) 748/2012, as amended by CR (EU) 69/2014 does not require OSD elements for this model (see Article 7a, 1.). See Note 3. of 'Section: Notes pertinent to all models'.

III. Technical Characteristics and Operational Limitations

1.	Type Design Definition	Drawing List, Document #10A150 Rev BE, dated 2 December 2011, and later approved revisions
2.	Description	Airship with pressurised envelope; external suspension system; water ballast trim system; two engines mounted on each side of gondola with forward thrust propellers; four fins in king-cross configuration; mechanical wire control system for the aerodynamic surfaces and valves; steel tube framework gondola with one cabin door; single ballonet with manually operated air valves, two automatically and manually operated helium valves on top of the envelope.
3.	Equipment	The required basic equipment as prescribed in the applicable airworthiness regulations (see Certification Basis) must be installed in the airship.

In addition to the above required basic equipment, the following equipment is required and approved for use:
- A-1 EASA Equipment List #304052 Rev IR, or later EASA approved revision
- Latest FAA-approved Airship Flight Manual, Document 301030, Rev. 14, or later approved revision

4. Dimensions

4.1 Envelope/Ballonet Volume

Envelope: 4 822 m³ (170 297 ft³)
Ballonet: 1 254 m³ (44 275 ft³), 26% of envelope
For pressure limits see III.9.3.

4.2 External

Length: 54.3 m (178 ft)
Diameter: 13.1 m (43 ft)
Height: 16.8 m (55 ft)
Max. Width: 14 m (46 ft)

5. Powerplant

5.1 Engine

Textron-Lycoming
2 x Model IO-360-B1G6

FAA TC/TCDS n°: 1E10
EASA TC/TCDS n°: EASA.IM.E.032

Limitations:
Max. RPM: 2 700 min^{-1}
Max. RPM continuous: 2 700 min^{-1}

5.2 Auxiliary Power Unit (APU)

See Note V.3.

5.3 Propeller

MT-Propeller Entwicklung GmbH
2 x MTV 25()

LBA TC/TCDS: 32.130/97

1.7 m five-bladed, pitched,
wood composite with erosion protection

6. Lifting Gas

Helium (He)

7. Air Speed Limitations

V_{NE}: 97 km/h (52 kts, 60 mph) IAS
V_{MO}: 89 km/h (48 kts, 55 mph) IAS
V_B: 74 km/h (40 kts, 46 mph) IAS

For other limitations see AFM

8. Mass/Weight

Max. airship mass TO/LDG: 4 927 kg (10 863 lb)
Max. gondola mass: 4 080 kg (8 995 lb)

Max. static heaviness: 272 kg (600 lb)
Max. static lightness: 205 kg (425 lb)

9. Operating Altitude, Temperature and Envelope Pressure

9.1 Altitude

10 000 ft (3 048 m)

9.2 Temperature

Min. 29 °C (-21 °F)

9.3 Envelope Pressure Limitations

Maximum pressure: 498 Pa (2 in H_2O)
Minimum pressure: 323 Pa (1.3 in H_2O)

10. Kind of Operation Limitations

VFR day/night

11. Centre of Buoyancy

Not recorded.
Note: The theoretical bow STA 0 is 66 cm (26 in) aft of the nose mooring probe

12. Flight Crew and Occupants

12.1 Minimum Flight Crew

one (1) pilot

12.2	Max. Number of Seats	ten (10)
12.3	Pilot Seat(s)	one (1), RH front seat
12.4	Passenger Seats	nine (9)

IV. Operating and Service Instructions

1. Operating Instructions

1.1	Flight Manual	American Blimp Corporation Airship Flight Manual, Document 301030, or later approved revisions.
1.2	Ground Handling Manual	American Blimp Corporation Ground Handling Manual, 301001, Revision E, dated 24 March 2005, or later approved revisions.
1.3	OSD MMEL	*reserved*
1.4	OSD FCD	*reserved*

2. Service Instructions

2.1	Airship Maintenance Manual	American Blimp Corporation Instructions for Continued Airworthiness, Document 301032, Revision 7, dated 14 March 2005, or later accepted revisions.
2.2	Engine Manual	Lycoming Overhaul Manual Direct Drive Models, 60294-7, Dec 1974, Revision 60294-7-13, or later accepted revisions.
2.3	Propeller Manual	- Overhaul Manual E-519, Revision 34, 7 July 2020, or later accepted revisions; - Blade Overhaul Manual E-1290, Revision 18, 25 August 2011, or later accepted revisions.
2.4	Service Letters and Service Bulletins	As published by American Blimp Corporation (ABC), Skyship Services Inc., Lycoming and MT-Propeller.

V. Notes

1. Manufacturer's eligible serial numbers: s/n 101 through s/n 106, s/n 108 and up.
2. Current Weight and Balance Report together with list of equipment included in certificated empty weight, and loading instructions when necessary, must be provided for each aircraft at the time of original certification. The certificated empty weight must include unusable fuel of 7.6 kg (16.8 lb) at gondola station STA 237.5.
3. The Auxiliary Power Unit (Generator System) is limited to non-flight safety electrical services whose failure or malfunction will pose no safety hazard (e.g. advertising lighting, etc.).
   Operation:
   - AFM Section 7, 7.1 Supplement 1: Generator System, or later approved revision, and,
4. Option: Installation of Model A-1-70 Lightsign per American Blimp Corporation (ABC) Drawing 'Lightsign Installation' Drawing Number 137000, Rev. B, dated 13 January 13 2006 or later approved revision. This modification is installed on an airship per ABC Service Bulletin 130, Rev. IR, 'Lightsign Installation', dated 1/30/7, or later approved revision.
   Operation:
   - AFM Supplement 18 (AFMS-18), approved 7 March 2006, or later approved revision.

* * *

SECTION: NOTES PERTINENT TO ALL MODELS

1. The initial EASA TCDS is based on the FAA TCDS S00002SE, Issue 9, supplemented by the EASA required equipment list (see III.3).
2. ICAO Annex 16 does not require noise data for Airships.
3. Should the holder of this aircraft type certificate intend to deliver a new aircraft to an EU operator, an approval in accordance with point 21.A.21(e) of Annex I (Part 21) shall be obtained for the MMEL and Flight Crew Data (FCD). The approval shall be obtained before the aircraft is operated by an EU operator. The operational suitability data may be limited to the model which is delivered.

SECTION: ADMINISTRATIVE

I. Acronyms and Abbreviations

AFM	Airship Flight Manual	s/n	Serial Number
ALS	Airworthiness Limitations Section	STA	Station
LH/RH	Left Hand/Right Hand (side)	V_B	Maximum Speed in Gusts
Max.	Maximum	VFR	Visual Flight Rules
Min.	Minimum	V_{MO}	Maximum Operating Speed
OSD	Operational Suitability Data	V_{NE}	Never Exceed Speed
Pax	Passenger(s)		

II. Type Certificate Holder Record

Type Certificate Holder	**Period**
Skyship Services Inc. 13506 Summerport Village Pkwy, Suite 1018 Windermere, FL 34786 U.S.A.	From 6 June 2023
American Blimp Corporation 1900 N.E. 25th Avenue, Suite 5 Hillsboro, OR 97124 U.S.A.	From 3 October 1997 until 5 June 2023

III. Production Approval Holder Record

Production Approval Holder	**Period**
FAA Production Certificate No.: not recorded	---

IV. Change Record

Issue	**Date**	**Changes**	**TC issue**
Issue 1	22 Dec 2011	Initial issue of TC and TCDS in EASA format.	22 December 2011
Issue 2	10 Sep 2024	- Change of TC holder - All pages: update to current EASA format	10 September 2024

- end of file -