TYPE CERTIFICATE DATA SHEET

No. EASA.IM.AS.513

for

A-60 Series

Type Certificate Holder

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

For Models: A-60
A-60+
A-60R

TABLE OF CONTENTS

SECTION 1: A-60

I. General

1.	Type, Model	Type: A-60 Series, Model: A-60
2.	Airworthiness Category	Normal Airship
3.	Manufacturer	See 'Section Administrative', III.
4.	Type Certification Application Date	to FAA: 11 May 1987
5.	State of Design Authority	FAA
6.	Type Certificate Date	FAA: 18 May 1990 LBA: 3 February 1999
7.	Type Certificate n° by	FAA: AS1NM LBA: 9006
8.	Type Certificate Data Sheet n°	FAA: AS1NM LBA: 9006 (see Note V.7)
9.	EASA Type Certification Date	28 September 2003, in accordance with CR (EU) 1702/2003, Article 2, 3., (a), (i), 2nd bullet, 1st indented bullet.

II. Certification Basis

1.	Reference Date for determining the applicable Requirements	11 May 1987
2.	Airworthiness Requirements	Airship Design Criteria (ADC), FAA P-8110-2, dated 2 November 1987, as amended by FAA letter dated 10 January 1989. FAR 21.17(b) effective 13 March 1987. Compliance with FAR 21.17(b) has been shown utilising the provisions of Advisory Circular 21.17-1, dated 30 September 1987, Section 5
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, Rev. Z, dated 18 May 1997
2.	Description	Airship with pressurised envelope (single ballonet) and external suspension system attachments for gondola and stabilisers; four conventional fins in king-cross configuration; welded framework gondola with two detachable pusher engines and a single wheel main landing gear; fixed propellers; single main fuel tank; conventional mechanical control links to aerodynamic

surfaces and engines, single LH door; ballonet with automatically/manually operated air valve, automatically/manually operated helium valve.

3. Equipment

3.1 Flight instruments:

- 1 airspeed indicator
- 1 precision altimeter
- 1 rate of climb/descent indicator (variometer)
- 1 magnetic compass
- 1 ambient air temperature indicator
- 1 lifting gas temperature indicator
- 1 lifting gas pressure indicator
- 1 ballonet pressure indicator
- 1 longitudinal angle indicator

3.2 Propulsion instruments:

- 1 fuel state indicator
- 2 engine rev indicators (rpm)
- 2 cylinder head temperature indicators
- 2 fuel pressure indicators
- 2 oil pressure indicators
- 2 oil temperature indicators
- 2 Volt/Ampère indicators

3.3 Cabin safety equipment:

- 1 portable fire extinguisher
- 1 first-aid kit
- 1 emergency axe

3.4 Other equipment:

- see Airship Flight Manual
- Equipment for IFR flights see LBA Equipment List Document No 304028

4. Dimensions

4.1	Envelope/Ballonet Volume	Envelope:	1 699 m³ (60 000 ft³)
		Ballonet:	340 m³ (12 000 ft³)
		For pressure limits see III.9.3.	
4.2	External (approx.)	Length:	39.0 m (128 ft)
		Diameter:	9.45 m (31 ft)
		Height:	12.8 m (42 ft)
		Max. Width:	10.7 m (35 ft)

5. Powerplant

5.1 Engine

Limbach Flugmotoren GmbH
2 x L 2000 EC 1

EASA TC/TCDS n°: EASA.E.083
(former LBA TC/TCDS n°: 4597)

Limitations:
Max. RPM (1 min): 2 900 min^{-1}
Max. RPM continuous: 2 600 min^{-1}

5.2 Auxiliary Power Unit (APU)

See Note 7., 'Section: Notes pertinent to all models'.
For details see: AFM Section 7, 7.1 Supplement 1: Generator System, and, AFM Supplement 23 (AFMS-23), approved 12 July 2013.

	5.3	Propeller	MT-Propeller Entwicklung GmbH 2 x MT 150 RD 80-1A EASA TC/TCDS n°: EASA.P.006 (former LBA TC/TCDS n°: 32.110/12) 1.5 m diameter, two bladed fixed pitch, one piece wood/composite; colour scheme see Note 6., 'Section: Notes pertinent to all models'
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: 69 km/h (37 kts, 43 mph) IAS For other limitations see AFM
8.	Mass/Weight		Max. airship EQ weight 1 993 kg (4 394 lb) Max. gondola mass: 1 361 kg (3 000 lb) Max. static heaviness: 113.5 kg (250 lb) Max. static lightness: n/a
9.	Operating Altitude, Temperature and Envelope Pressure		
	9.1	Altitude	10 000 ft (3 048 m)
	9.2	Temperature	Max. temperature: 40 °C (104 °F)
	9.3	Envelope Pressure Limitations	Max. pressure: 498 Pa (2 in H_2O column) Min. pressure: 249 Pa (1 in H_2O column)
10.	Kind of Operation Limitations		VFR day/night IFR (see Note 4. of 'Section: Notes pertinent to all models')
11.	Centre of Buoyancy		STA 704 (gore station) <u>Note:</u> The theoretical bow STA 0 is 56 cm (22 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	five (5), 2 at gondola STA 49.0, 3 at gondola STA 103.0
	12.3	Pilot Seat(s)	one (1)
	12.4	Passenger Seats	four (4)
	12.5	Seat load(s)	each max. 90 kg (199 lb)

<u>IV. Operating and Service Instructions</u>

1.	Operating Instructions		
	1.1	Flight Manual	Airship Flight Manual A-60 & A-60+ Airship, Publication No. 301-006, latest approved revisions.
	1.2	Ground Handling Manual	American Blimp Corporation Ground Handling Manual 301001, FAA-approved.
	1.3	OSD MMEL	*reserved*
	1.4	OSD FCD	*reserved*

2. Service Instructions

2.1	Airship Maintenance Manual	American Blimp Corporation Maintenance Manual 301-003, Rev. 14, dated 19 October 2004, or later accepted revision.
2.2	Engine Manual	Betriebshandbuch Limbach L 2000 und weitere Baureihen (*Operating instructions for Limbach L 2000 and further variants)*, or later accepted revision.
2.3	Propeller Manual	Betriebs- und Wartungsanweisung E-112 für den Mühlbauer Holzpropeller (*Operating and service instructions E-112 for Mühlbauer wooden propellers*), or later accepted revision.
2.4	Service Letters and Service Bulletins	As published by American Blimp Corporation (ABC), Skyship Services Inc., Limbach and MT-Propeller

V. Notes

1. Manufacturer's eligible serial numbers: s/n 001 and up.

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SECTION 2: A-60+

I. General

1.	Type, Model	Type: A-60 Series, Model: A-60+
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: 29 November 1991 LBA: 3 February 1999
7.	Type Certificate n° by	FAA: AS1NM LBA: 9006
8.	Type Certificate Data Sheet n°	FAA: AS1NM LBA: 9006 (see Note V.7)
9.	EASA Type Certification Date	28 September 2003, in accordance with CR (EU) 1702/2003, Article 2, 3., (a), (i), 2nd bullet, 1st indented bullet.

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 FAA letter dated 10 January 1989.
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, Drawing 100A60 Rev. Z, dated 18 May 1997.
2.	Description	Airship with pressurised envelope (single ballonet) and external suspension system attachments for gondola and stabilisers; four conventional fins in king-cross configuration; welded framework gondola with two detachable pusher engines and a single wheel main landing gear; fixed propellers; single main fuel tank; conventional mechanical control links to aerodynamic surfaces and engines, single LH door; ballonet with automatically/manually operated air valve, automatically/manually operated helium valve.
3.	Equipment	3.1 Flight instruments:

- 1 airspeed indicator
- 1 precision altimeter
- 1 rate of climb/descent indicator (variometer)
- 1 magnetic compass
- 1 ambient air temperature indicator
- 1 lifting gas temperature indicator
- 1 lifting gas pressure indicator
- 1 ballonet pressure indicator
- 1 longitudinal angle indicator

3.2 Propulsion instruments:

- 1 fuel state indicator
- 2 engine rev indicators (rpm)
- 2 cylinder head temperature indicators
- 2 fuel pressure indicators
- 2 oil pressure indicators
- 2 oil temperature indicators
- 2 Volt/Ampère indicators

3.3 Cabin safety equipment:

- 1 portable fire extinguisher
- 1 first-aid kit
- 1 emergency axe

3.4 Other equipment:

- see Airship Flight Manual
- Equipment for IFR flights see LBA Equipment List Document No 304028

4. Dimensions

4.1	Envelope/Ballonet Volume	Envelope: 1 926 m³ (68 000 ft³) Ballonet: 385 m³ (13 600 ft³) For pressure limits see III.9.3.
4.2	External	Length: 39.0 m (128 ft) Diameter: 10.0 m (33 ft) Height: 13.4 m (44 ft) Max. Width: 11.0 m (36 ft)

5. Powerplant

5.1	Engine	Limbach Flugmotoren GmbH 2 x L 2000 EC 1 EASA TC/TCDS n°: EASA.E.083 (former LBA TC/TCDS n°: 4597 Limitations: Max. RPM (1 min): 2 900 min^{-1} Max. RPM continuous: 2 600 min^{-1}
5.2	Auxiliary Power Unit (APU)	See Note 7., 'Section: Notes pertinent to all models'. For details see: AFM Section 7, /7.1 Supplement 1: Generator System, and, AFM Supplement 23 (AFMS-23), approved 12 July 2013.
5.3	Propeller	MT-Propeller Entwicklung GmbH 2 x MT 150 RD 80-1A EASA TC/TCDS n°: EASA.P.006 (former LBA TC/TCDS n°: 32.110/12) 1.5 m diameter, two bladed fixed pitch, one piece wood/composite; colour scheme see Note V.4.

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: 69 km/h (37 kts, 43 mph) IAS For other limitations see AFM
8.	Mass/Weight		Max. airship EQ weight 1 993 kg (4 394 lb) Max. gondola mass: 1 361 kg (3 000 lb) Max. static heaviness: 113.5 kg (250 lb) Max. static lightness: n/a
9.	Operating Altitude, Temperature and Envelope Pressure		
	9.1	Altitude	10 000 ft (3 048 m)
	9.2	Temperature	Max. temperature: 40 °C (104 °F)
	9.3	Envelope Pressure Limitations	Maximum pressure: 498 Pa (2 in H_2O) Minimum pressure: 249 Pa (1 in H_2O)
10.	Kind of Operation Limitations		VFR day/night IFR (see Note 4. of 'Section: Notes pertinent to all models')
11.	Centre of Buoyancy		STA 704 (gore station) Note: The theoretical bow STA 0 is 56 cm (22 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	five (5), 2 at gondola STA 49.0, 3 at gondola STA 103.0
	12.3	Pilot Seat(s)	one (1)
	12.4	Passenger Seats	four (4)
	12.5	Seat load(s)	each max. 90 kg (199 lb)

IV. Operating and Service Instructions

1. Operating Instructions

1.1	Flight Manual	Airship Flight Manual A-60 & A-60+ Airship, Publication No. 301-006, latest approved revisions.
1.2	Ground Handling Manual	American Blimp Corporation Ground Handling Manual 301001, FAA-approved.
1.3	OSD MMEL	*reserved*
1.4	OSD FCD	*reserved*

2. Service Instructions

2.1	Airship Maintenance Manual	American Blimp Corporation Maintenance Manual 301-003, Rev. 14, dated 19 October 2004, or later accepted revision.
2.2	Engine Manual	Betriebshandbuch Limbach L 2000 und weitere Baureihen (*Operating instructions for Limbach L 2000 and further variants)*, or later accepted revision.

2.3	Propeller Manual	Betriebs- und Wartungsanweisung E-112 für den Mühlbauer Holzpropeller (*Operating and service instructions E-112 for Mühlbauer wooden propellers*), or later accepted revision.
2.4	Service Letters and Service Bulletins	As published by American Blimp Corporation (ABC), Skyship Services Inc., Limbach and MT-Propeller

V. Notes

1. Manufacturer's eligible serial numbers: s/n 005 and up.
   Serial numbers s/n 001 through s/n 004 are eligible if Service Bulletin 21 has been incorporated.

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SECTION 3: A-60R

I. General

1.	Type, Model	Type: A-60 Series, Model: A-60R
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: 22 December 2004
7.	Type Certificate n° by	FAA: AS1NM
8.	Type Certificate Data Sheet n°	FAA: AS1NM
9.	EASA Type Certification Date	3 December 2025

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 FAA letter dated 10 January 1989.
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, Drawing 100A60 Rev. Z, dated 18 May 1997.
2.	Description	Airship with pressurised envelope (single ballonet) and external suspension system attachments for gondola and stabilisers; four conventional fins in king-cross configuration; welded framework gondola with two detachable pusher engines and a single wheel main landing gear; fixed propellers; single main fuel tank; conventional mechanical control links to aerodynamic surfaces and engines, single LH door; ballonet with automatically/manually operated air valve, automatically/manually operated helium valve.
3.	Equipment	3.1 Flight instruments: - 1 airspeed indicator - 1 precision altimeter - 1 rate of climb/descent indicator (variometer) - 1 magnetic compass - 1 ambient air temperature indicator

- 1 lifting gas temperature indicator
- 1 lifting gas pressure indicator
- 1 ballonet pressure indicator
- 1 longitudinal angle indicator

3.2 Propulsion instruments:

- 1 fuel state indicator
- 2 engine rev indicators (rpm)
- 2 cylinder head temperature indicators
- 2 fuel pressure indicators
- 2 oil pressure indicators
- 2 oil temperature indicators
- 2 Volt/Ampère indicators

3.3 Cabin safety equipment:

- 1 portable fire extinguisher
- 1 first-aid kit
- 1 emergency axe

3.4 Other equipment:

- see Airship Flight Manual
- Equipment for IFR flights see LBA Equipment List Document No 304028

4. Dimensions

4.1	Envelope/Ballonet Volume	Envelope: 1 926 m³ (68 000 ft³) Ballonet: 385 m³ (13 600 ft³) For pressure limits see III.9.3.
4.2	External	Length: 39.0 m (128 ft) Diameter: 10.0 m (33 ft) Height: 13.4 m (44 ft) Max. Width: 11.0 m (36 ft)

5. Powerplant

5.1	Engine	BRP-Rotax GmbH & Co KG 2 x 912 F3 EASA TC/TCDS n°: EASA.E.121 (former BAZ/ACG TC/TCDS n°: TW9-ACG Limitations: Max. RPM (1 min): 5 800 min^{-1} Max. RPM continuous: 5 500 min^{-1}
5.2	Auxiliary Power Unit (APU)	See Note 7., 'Section: Notes pertinent to all models'. For details see: AFM Section 7, /7.1 Supplement 1: Generator System, and, AFM Supplement 23 (AFMS-23), approved 12 July 2013.
5.3	Propeller	MT-Propeller Entwicklung GmbH 2 x MTV-21-A-C-R(M)CRLD175-05 EASA TC/TCDS n°: EASA.P.101 (former LBA TC/TCDS n°: 32.130/86) 1.75 m diameter, two bladed, wood/composite, constant speed reversing propeller.

6. Lifting Gas — Helium (He)

7. Air Speed Limitations — V_{NE}, V_{MO}: 97 km/h (52 kts, 60 mph) IAS
V_B: 69 km/h (37 kts, 43 mph) IAS
For other limitations see AFM

8.	Mass/Weight		Max. airship EQ weight 1 993 kg (4 394 lb) Max. gondola mass: 1 361 kg (3 000 lb) Max. static heaviness: 159 kg (350 lb) Max. static lightness: n/a
9.	Operating Altitude, Temperature and Envelope Pressure		
	9.1	Altitude	6 000 ft (1 829 m)
	9.2	Temperature	Max. temperature: 40 °C (104 °F)
	9.3	Envelope Pressure Limitations	Maximum pressure: 498 Pa (2 in H_2O) Minimum pressure: 249 Pa (1 in H_2O)
10.	Kind of Operation Limitations		VFR day/night IFR (see Note 4. of 'Section: Notes pertinent to all models')
11.	Centre of Buoyancy		STA 704 (gore station) Note: The theoretical bow STA 0 is 56 cm (22 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	five (5), 2 at gondola STA 49.0, 3 at gondola STA 103.0
	12.3	Pilot Seat(s)	one (1)
	12.4	Passenger Seats	four (4)
	12.5	Seat load(s)	each max. 90 kg (199 lb)

IV. Operating and Service Instructions

1.	Operating Instructions		
	1.1	Flight Manual	Airship Flight Manual A-60R, Publication No. 301-047, latest approved revision.
	1.2	Ground Handling Manual	American Blimp Corporation Ground Handling Manual 301-001, Rev. E, dated 23 November 2004, or later approved revision.
	1.3	OSD MMEL	*reserved*
	1.4	OSD FCD	*reserved*
2.	Service Instructions		
	2.1	Airship Maintenance Manual	American Blimp Corporation Maintenance Manual 301-003, Rev. 14, dated 19 October 2004, or later accepted revision.
	2.2	Engine Manual	- Maintenance Manual (Line) 912 Series, MML-912, Issue 4, Rev. 2, or later accepted revision. - Maintenance Manual (Heavy) 912 and 914 Series,

		MMH-912, Issue 4, Rev. 0 or later accepted revision.
2.3	Propeller Manual	No. E-519; Overhaul Manual and Parts List for reversible hydraulically controlled variable pitch propeller; Reverse-Systems (M), MTV-21-A-C-R(M), latest accepted revision.
2.4	Service Letters and Service Bulletins	As published by American Blimp Corporation (ABC), Skyship Services Inc., Rotax and MT-Propeller

V. Notes

1. Manufacturer's eligible serial numbers: s/n 019, s/n 021 and up.
   Serial numbers s/n 001 through s/n 018 and s/n 20 are eligible if Service Bulletin 127 has been incorporated.

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SECTION: NOTES PERTINENT TO ALL MODELS

1. The initial EASA TCDS is based on the FAA TCDS AS1NM, Issue 6, and LBA Gerätekennblatt 9006 Ausgabe Nr. 1, dated 3 February 1999. The LBA TCDS 9006 was the first validation of the A-60 by an EASA Member State and imposed additional requirements not raised by FAA (see Section 1 and 2, 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.
4. Flights under IFR are limited to non-commercial passenger transport in accordance with the Airship Flight Manual.
   Equipment according to LBA Equipment List, Document No 304028, dated 18 January 1999.
5. Permitted 'Minimum Ballast' material:
   - water or dry sand (both disposable)
   - fine lead shot (undisposable only).
6. Propeller must be painted in accordance with CAA AIC 62/1992 in a gloss white and gloss black pattern.
7. The Auxiliary Power Unit (Generator System) is limited to non-flight safety electrical services, the failure or malfunction of which (e.g. advertising lighting) will pose no safety hazard.

SECTION: ADMINISTRATIVE

I. Acronyms and Abbreviations

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

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 18 May 1999 until 5 June 2023

III. Production Approval Holder Record

Production Approval Holder	**Period**
FAA Production Certificate No.: none Before original airworthiness certification of each aircraft manufactured subsequent to 2 August 2017, an FAA representative must perform a detailed inspection for	From 2 August 2017

Production Approval Holder	Period
workmanship, materials, conformity with the approved technical data, and a check of the flight characteristics. In the event of an application for a standard airworthiness certificate or if an applicant intends to produce a new aircraft under 14 CFR 21.183(d), and the applicant is manufacturing, building, or assembling to another person's type certificate, the applicant also must provide written evidence of permission from the type certificate holder. Conduct of such activity without written evidence of permission may be a violation of 49 U.S.C. § 44704(a)(3).	
FAA Production Certificate No.: PC-701NM	From 18 May 1999 until 1 August 2017

IV. Change Record

Issue	Date	Changes	TC issue
Issue 1	10 Sep 2024	Initial issue of TC and TCDS in EASA format.	10 September 2024
Issue 2	3 Dec 2025	Model A-60R added.	3 December 2025

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