



TYPE-CERTIFICATE DATA SHEET

EASA.BA.030

LINDSTRAND TECHNOLOGIES HOT AIR BALLOONS

Type Certificate Holder:
LINDSTRAND TECHNOLOGIES Ltd.
Unit 11
Maesbury Road
Oswestry SY10 8HA
UNITED KINGDOM

For models: LTL Series Special

Issue 1	21 November 2017	LTL Series Special – Penguin
Issue 2	03 July 2018	LTL Series Special – Boot
Issue 3	01 September 2018	LTL Series Special – Sphere
Issue 4	19 October 2018	LTL Series Special - Cylinder
Issue 5	16 May 2019	LTL Series Special - Cube





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SECTION 1: GENERAL (ALL TYPES AND VARIANTS)

I. General

1. Data Sheet No: EASA.BA.030 Issue 5, Date: 16 May 2019
2. Type / Variant or Model
 - (a) Type: Lindstrand Technologies, LTL Series Special Hot Air Balloon
 - (b) Variant or Model: Refer to Section 2
3. Airworthiness Category: Normal
4. Type Certificate Holder: **LINDSTRAND TECHNOLOGIES LTD.**
Unit 11
Maesbury Road
Oswestry SY10 8HA
UNITED KINGDOM
5. Manufacturer: **LINDSTRAND TECHNOLOGIES LTD.**
Unit 11
Maesbury Road
Oswestry SY10 8HA
UNITED KINGDOM
6. National certification date: N/A
7. CAA Application date: N/A
8. CAA Recommendation date: N/A
9. EASA Certification date: 21/11/2017

II. Certification Basis

1. Reference Date for determining the applicable requirements: 16/10/2017
2. UKCAA Type Certificate Data Sheet No.:
3. UKCAA Type Certification Basis:
4. Airworthiness Requirements: EASA CS-31HB Amendment 1 (5 December 2011)
5. Special Conditions: None
6. Reversion and Exemptions: None
7. Equivalent Safety Findings: None





Technical Characteristics and Operational Limitations

1. Type Design Drawing: Refer to Section 2, Table 1 column headed "Dwg"
2. Description:

Manned Free Hot Air Balloons of special shape (i.e. unnatural). Shapes can vary from standard shapes with additional inflatable appendages to completely unnatural shapes. Volumes contained are 70 000 ft³ (1982 m³), 105,000ft³ (2970m³) or 130,000ft³ (3681m³) Envelopes are fitted with parachute or rapid deflation systems. Envelope options include rotation vents (turning vents), pressure scoop.

The envelope is attached to the burner load frame/basket using stainless steel flying wires.

Burners (heaters) are specified in double, triple and quad configurations. Each unit incorporates a main burner, quiet burner and pilot light as a minimum.

Baskets are generally of traditional woven cane construction in Open, Single T and Double T Partitions configurations. Baskets also available in composite construction in Foldable configurations. The stainless steel suspension cables of the basket attach to the burner load frame and envelope using carabiners.

Pressurised fuel cylinders, manufactured from Titanium, Stainless Steel or Aluminium, are available in volumes of 47 to 90 litres. The cylinders have the facility to withdraw the fuel as liquid.

Additional equipment is mounted in the basket as required.
3. Equipment: Equipment is listed in the Approved Lindstrand Technologies Flight Manual - Issue 1 or later approved EASA revision.
4. Envelope: Refer to Section 2 and Lindstrand Technologies Flight Manual Appendices - Issue 1 or later approved EASA revision.
5. Burner: Refer to Section 2 and Lindstrand Technologies Flight Manual Appendices - Issue 1 or later approved EASA revision.
6. Basket: Refer to Section 2 and Lindstrand Technologies Flight Manual Appendices - Issue 1 or later approved EASA revision.
7. Mass: Refer to Section 2. Note: MTOM = Maximum Take-Off Mass, MLM = Minimum Landing Mass.
8. Envelope Temperature: The maximum continuous envelope temperature that is permitted is 125 °C. The never exceed temperature for the envelope is 130 °C.
9. Minimum Crew: One (Pilot).
10. Maximum Occupants: Not to exceed maximum take off mass and limitations. Refer to Approved Aircraft Flight Manual, Issue 1 or later EASA approved revision.





11. Fuel: Water-free LPG. Propane is the preferred fuel but some content of other hydrocarbons is permissible provided that minimum recommended fuel pressures are maintained throughout the flight.
12. Other Limitations: With the exception of single occupancy balloons, a minimum of two independent cylinders are required for flight. Extra cylinders may be used.

Operation and Service Instructions

1. Lindstrand Technologies Flight Manual and Supplements - Issue 1. or later approved EASA revision.
2. Lindstrand Technologies Maintenance Manual and Supplements - Issue 1. or later approved EASA revision.

Notes

- Note 1: For the purpose of maintenance and inspection a log book must be maintained with each hot air balloon envelope. If the burner, basket, instruments and/or cylinders are interchanged, they must be listed in the log book of each envelope with which they are used.
- Note 2: The combination of a Lindstrand Technologies envelope with approved parts or bottom ends from other manufacturers is described in the Flight Manual, Appendix 1.





Series Special 70,000,105,000 and 130,000 cu.ft. balloons.

Manned free hot air balloon with twenty four horizontally cut gores and twenty four flying cables. The definition of all variants (models) is listed in Table 1.

Table 1 Lindstrand Technologies Series Special, Definitions, Limitations and Eligible Equipment

LTL Series Special	Dwg	Volume		FAI Class	Max Landing Mass Kg	Min Landing Mass Kg	LTL Burner	LTL Basket
		cu.m	cu.ft				Type	No.
Penguin	SS-001-A-001	1982	70,000	AX7	700	301	1	1, 2, 3, 11, 12
Boot	SS-003-A-001	2970	105,000	AX8	1050	476	1	2, 3, 4, 5, 6
Sphere	SS-002-A-001	1982	70,000	AX7	700	301	1	1, 2, 3, 11, 12
Cylinder	SS-005-A-001	3681	130,000	AX9	1300	640	1	3,4,5,6,7
Cube	SS-004-A-001	2970	105,000	AX8	1050	476	1	2,3,4,5,6

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