



TYPE-CERTIFICATE DATA SHEET

EASA.IM.BA.26

LINDSTRAND TECHNOLOGIES HOT AIR BALLOONS

Type Certificate Holder:

LINDSTRAND TECHNOLOGIES Ltd.
Unit 11
Maesbury Road
Oswestry SY10 8HA
UNITED KINGDOM

For models: Lindstrand Series 1
 Lindstrand Racer Series
 Lindstrand Series 2

Issue 1	20 April 2016 Lindstrand Series 1.
Issue 2	14 July 2016 Lindstrand Racer Series Added.
Issue 3	17 May 2017 Lindstrand Series 1 210-310 models Added.
Issue 4	30 May 2017 Lindstrand Series 2 Added.
Issue 5	10 July 2017 Lindstrand Series 1 17-160 & Series 2 70-80 models Added.
Issue 6	20 October 2017 Lindstrand Series Racer 70 model Added.
Issue 7	23 October 2017 Lindstrand Series 1 400-425 models Added.
Issue 8	14 November 2017 landing masses of 400 and 425 models corrected
Issue 9	27 February 2018 Lindstrand Series Racer 75 model added
Issue 10	9 July 2018 Lindstrand Series Racer 60 model added
Issue 11	4 October 2021 TCDS number updated







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SECTION 1: GENERAL (ALL TYPES AND VARIANTS)

I. General

1. Data Sheet No: EASA.IM.BA.26 Issue 11, Date: 4 October 2021
2. Type / Variant or Model
 - (a) Type: Lindstrand Technologies 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: 20/04/2016

II. Certification Basis

1. Reference Date for determining the applicable requirements: 20/07/2015
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, Tables 1, 2 and 3 column headed "Dwg"
2. Description:

Manned Free Hot Air Balloons of conventional shape (i.e. natural). Volumes range from 17 000 to 425 000 ft³ (481 to 12 030 m³). Envelopes are fitted with parachute or rapid deflation systems. Envelope options include rotation vents (turning vents), pressure scoop, and limited inflated artwork as required.

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 1 17,000 cu. ft. - 425,000 cu.ft. balloon, Series Racer 56,000 cu. ft - 75,000 cu. ft, and Series 2 50,000 cu. ft. – 80,000 cu. ft.

Manned free hot air balloon with sixteen, twenty four, twenty eight or thirty two horizontally cut gores and sixteen, twenty four, twenty eight or thirty two flying cables. The definition of all variants (models) is listed in Tables 1, 2 and 3.

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

LTL Series 1	Dwg	Volume		FAI Class	Max Landing Mass Kg	Min Landing Mass Kg	LTL Burner	LTL Basket
		cu.m	cu.ft				Type	No.
17	EA-017-A-001	481	17,000	AX3	170	73	N/A	N/A
21	EA-021-A-001	595	21,000	AX3	210	90	N/A	N/A
31	EA-031-A-001	878	31,000	AX4	310	133	N/A	11, 12
42	EA-042-A-001	1189	42,000	AX5	420	180	N/A	1, 11, 12
56	EA-056-A-001	1586	56,000	AX6	560	240	1	1, 11, 12
65	EA-065-A-001	1841	65,000	AX7	650	279	1	1, 2, 11, 12
70	EA-070-A-001	1982	70,000	AX7	700	301	1	1, 2, 3, 11, 12
80	EA-080-A-001	2266	80,000	AX8	800	344	1	1, 2, 3, 4, 12
90	EA-090-A-001	2550	90,000	AX8	900	387	1	1, 2, 3, 4, 5, 12
105	EA-105-A-001	2970	105,000	AX8	1050	451	1	2, 3, 4, 5, 6
120	EA-120-A-001	3400	120,000	AX9	1200	516	1	3, 4, 5, 6, 7
150	EA-150-A-001	4250	150,000	AX10	1450	623	1	5, 6, 7, 8
160	EA-160-A-001	4530	160,000	AX10	1540	653	1	5, 6, 7, 8
180	EA-180-A-001	5100	180,000	AX10	1630	700	1, 2, 3	7, 8, 9, 10, 13, 14, 17
210	EA-210-A-001	5950	210,000	AX10	1890	945	1, 2, 3	8, 9, 10, 13, 14, 17
240	EA-240-A-001	6800	240,000	AX11	1940	970	2, 3	8, 9, 10, 13, 14, 17
260	EA-260-A-001	7360	260,000	AX11	2270	1135	2, 3	8, 10, 14, 15, 17
300	EA-300-A-001	8500	300,000	AX11	2650	1310	2, 3	8, 10, 14, 15, 17
310	EA-310-A-001	8780	310,000	AX11	2700	1350	2, 3	8, 10, 14, 15, 17





400	EA-400-A-001	11330	400,000	AX12	3500	1750	2, 3	8, 14, 15, 16, 17
425	EA-425-A-001	12030	425,000	AX13	3610	1825	2, 3	8, 14, 15, 16, 17

Table 2 Lindstrand Technologies Series Racer, Definitions, Limitations and Eligible Equipment

LTL Series R	Dwg	Volume		FAI Class	Max Landing Mass Kg	Min Landing Mass Kg	LTL Burner	LTL Basket
		cu.m	cu.ft				Type	No.
56	ER-056-A-001	1590	56,000	AX6	560	240	1	1, 11, 12
60	ER-060-A-001	1700	60,000	AX7	600	261	1	1,2,11,12
65	ER-065-A-001	1840	65,000	AX7	650	279	1	1, 2, 11, 12
70	ER-070-A-001	1982	70,000	AX7	700	301	1	1, 2, 3, 11, 12
75	ER-075-A-001	2120	75,000	AX7	750	322	1	1, 2, 3, 4, 12

Table 3 Lindstrand Technologies Series 2, Definitions, Limitations and Eligible Equipment

LTL Series 2	Dwg	Volume		FAI Class	Max Landing Mass Kg	Min Landing Mass Kg	LTL Burner	LTL Basket
		cu.m	cu.ft				Type	No.
50	EB-050-A-001	1420	50,000	AX6	500	217	1	1, 11, 12
60	EB-060-A-001	1700	60,000	AX7	600	261	1	1, 2, 11, 12
70	EB-070-A-001	1982	70,000	AX7	700	301	1	1, 2, 3, 11, 12
80	EB-080-A-001	2266	80,000	AX8	800	344	1	1, 2, 3, 4, 12

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