



TYPE-CERTIFICATE DATA SHEET

EASA.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 |







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SECTION 1: GENERAL (ALL TYPES AND VARIANTS)

I. General

1. Data Sheet No: EASA.BA.26 Issue 10, Date: 9 July 2018
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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