

European Aviation Safety Agency

EASA

TYPE-CERTIFICATE DATA SHEET

ULTRAMAGIC SPECIAL SHAPE HOT AIR BALLOONS

Manned Free Hot Air Balloons

Type Certificate Holder: **ULTRAMAGIC, S.A.**
Aerodrom Igualada-Odena s/n
08711 ODENA
Spain

Manufacturer: **ULTRAMAGIC, S.A.**
Aerodrom Igualada-Odena s/n
08711 ODENA
Spain

For Variants: Ultramagic Special Shape Type

Issue 4, 7 February 2011

Issue 3, 20 July 2009

Issue 2, 24 April 2009

Issue 1, 18 July 2008

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SECTION 1: GENERAL (applicable to all models)

I. GENERAL

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|---------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1. Data Sheet No: EASA.BA.517 | Issue Date: 7 February 2011 |
| 2. Type / Variant or Model | |
| (a) Type: | Ultramagic Special Shape Types (F Models) |
| (b) Variant or Model | Refer to Section 2 |
| 3. Category: | Free manned Hot Air Balloon |
| 4. Type Certificate Holder: | |
| | ULTRAMAGIC, S.A.
Aerodrom Igualada-Odena s/n
08711 ODENA
Spain |
| 5. Manufacturer: | |
| | ULTRAMAGIC, S.A.
Aerodrom Igualada-Odena s/n
08711 ODENA
Spain |
| 6. National certification date: | Various, refer to Section 2 |
| 7. DGAC-ES application date: | Various, refer to Section 2 |
| 8. EASA certification date: | 19 January 2006 |
| 9. TCDS History: | This EASA TCDS replaces the Spanish TCDS Nr. 54,
Rev. 20 issued by the DGAC-ES.
Between 19 January 2006 and 17 July 2008 special shape
balloons were embraced by EASA.BA.014. |

II. CERTIFICATION BASIS

This Type Certificate has initially been issued according to the requirements of la Dirección General de Aviación Civil (DGAC) following 14 CFR Part 31 corresponding to Manned Hot Air Balloons Part 31, Amdt. 4, 14 October 1980. The models F-4 and F-5 to F13 correspond to this Amdt. 4.

For models F-14 to F-24 the applied rule corresponds to 14 CFR Part 31, Amdt. 5, 18 August 1990.

For models F-25, F-26 and F-29 to F-34 the applied rule corresponds to 14 CFR Part 31, Amdt. 7, 24 May 1996.

Alternative means of compliance concerning 14 CFR Part 31 paragraph 31.47(d) (Amdt. 7, 24 May 1996) were applied to the burner models MK-2, MK-2 Super and MK-10. A special test programme was established to ensure the equivalent level of safety.

For models F-26 and F-29 to F-32 the applied rule corresponds to CS-31HB draft (see EASA NPA 07/2006)

For models F-33 and F-34 the applied rule corresponds to CS 31HB (February 2009)

III. COMMON DATA TO ALL MODELS

Equipment:	<p>for FAR Part 31:</p> <ul style="list-style-type: none">- 1 Altimeter- 1 Rate of climb/descent indicator (variometer)- 1 Remaining fuel quantity gauge for each fuel cell- 1 Envelope limit temperature indicator <p>for CS 31HB (draft February 2007) in addition:</p> <ul style="list-style-type: none">- 1 Fuel pressure gauge for each burner <p>for all balloons:</p> <ul style="list-style-type: none">- Alternative means for burner ignition (lighter or similar)- Fire extinguisher- Flight Manual, EASA approved <p>Additional operational equipment may be required by national legislation</p>
Fuel:	<p>Commercial LPG, usually propane, except if burner is configured for butane</p>
Minimum crew:	<p>1 pilot</p>
Compatibility with approved parts of other manufacturers:	<p>See approved Chapter 8 of Ultramagic Flight Manual and Supplements. Only listed approved configurations shall be used. The latest Service Instructions of the other manufacturer's parts shall be used for maintenance</p>
Maintenance schedule:	<p>Annual or 100 hours inspections, whichever applies earlier one and following the Flight Manual and Maintenance Manual corresponding to the specific balloon configuration</p>
Operation and Service Instructions:	<p>Flight Manual for Ultramagic Balloons and applicable Supplements - in their latest EASA-approved revision</p> <p>Maintenance Manual for Ultramagic Balloons and applicable Supplements - in their latest EASA accepted revision</p> <p>Operation and Service Instructions specific to aircraft registration or constructors number with an issue date prior to 28 September 2003 may continue to be used. Inspection shall be in accordance with the latest issue of the inspection schedule - Maintenance Manual for Ultramagic Balloons and applicable Supplements or later EASA accepted revision refers</p>

Model	F-24 FLYING-MAN	F-25 FUTBOL	F-26 HEART	F-29 MOVISTAR	F-30 EGG	F-31 MAZORKA DEKALB
Approval date	5 Mar 2003	23 Feb 2004	3 Mar 2008	23 Oct 2008	22 Jan 2009	12 Mar 2009
Technical description						
Volume (m ³)	3 580	3 000	2 995	3 510	2 200	4 744
Number of gores	20	24	24	24	24	24
Disposition	14.4	----	----	----	----	----
Max diameter (m)	----	18.1	----	19.5	14.6	24.62
Total height (m)	32.4	21.0	30.8	20.7	23.8	24.3
MTOM (kg)	950	980	950	750	700	990
Drawing number	F24-figs.	F25-figs.	F26-figs.	F29-figs.	F30-figs.	F31-figs.
Serial numbers eligible	F24-01 & up	F25-01 & up	F26-01 & up	F29-01 & up	F30-01 & up	F31-01 & up
Fuel cylinder quantity						
Worthington 4100-U4-27	2 or more	2 or more	2 or more	2 or more	2 or more	2 or more
UM Type M-20 or M-20D	2 or more	2 or more	2 or more	2 or more	2 or more	2 or more
UM Type M-30 or M-30D	2 or more	2 or more	2 or more	2 or more	2 or more	2 or more
UM Type T-25	2 or more	2 or more	2 or more	2 or more	2 or more	2 or more
UM Type M-40 or M-40D	2 or more	2 or more	2 or more	2 or more	2 or more	2 or more

Model	F-32 BEIRAO BOTTLE	F-33 PHAROX LAMP	F-34 METTEN
Approval date	24 Apr 2009	20 July 2009	7 Feb 2011
Technical description			
Volume (m ³)	2 500	3 458	3 892
Number of gores	16	20	24
Disposition	----	---	horizontal
Max diameter (m)	13.1	16.1	26.4
Total height (m)	37.4	31.3	19.9
MTOM (kg)	700	990	1 173
Drawing number	F32-figs.	F33-figs.	1 134
Serial numbers eligible	F32-01 & up	F33-01 & up	F34-01 & up
Fuel cylinder quantity			
Worthington 4100-U4-27	2 or more	2 or more	2 or more
UM Type M-20 or M-20D	2 or more	2 or more	2 or more
UM Type M-30 or M-30D	2 or more	2 or more	2 or more
UM Type T-25	2 or more	2 or more	2 or more
UM Type M-40 or M-40D	2 or more	2 or more	2 or more

Envelope Options: To include rotation vents (turning vents), pressure scoop or skirt.

Envelope Temperature: 1) Not exceed by any concept 130°C
2) Max. continuous temperature 120°C

Burner: See § 2.2 : Burners and Baskets for F models

Basket: See § 2.2 : Burners and Baskets for F models

Maximum Weight: That one permitting the flight with the continuous temperature lower than 120°C, or according to the basket/equipment used based on § 2.2, whatever is less.
See Load Chart in Flight Manual Chap. 5.

2.2. Burners and Baskets for F models

BURNER						
Model	MK-2/SUP	MK-10	MK-21		BMK-008	
Units	double	double	single	double	single	double
Drawing	2002/2006	2012	2021	2022	2031	2032
F-4 TXORI	X	X		X	X	X
F-6 JAMBON	X	X		X	X	X
F-7 BOTE	X	X		X	X	X
F-8 LA CARTUJA	X	X		X		X
F-9 BOTELLA DE AGUA	X	X		X	X	X
F-11 MONTGOLFIERE	X	X		X	X	X
F-10 TXORI	X	X		X	X	X
F-12 PAQUETE	X	X		X	X	X
F-13 FAIRY	X	X		X	X	X
F-14 JARRA DE CERVEZA		X		X	X	X
F-15 BOTE-HUCHA		X		X	X	X
F-16 CAJA 2		X		X	X	X
F-17 OVNI		X		X	X	X
F-18 PIZZA		X		X		X
F-19 CAVA		X		X	X	X
F-20 BEETLE		X		X	X	X
F-21 CEPESA		X		X	X	X
F-22 TORRE		X		X	X	X
F-24 FLYINGMAN		X		X	X	X
F-25 FUTBOL		X		X	X	X
F-26 HEART				X	X	X
F-29 MOVISTAR		X		X	X	X
F-30 EGG		X	X	X	X	X
F-31 MAZORCA DEKALB		X		X		X
F-32 BEIRAO BOTTLE		X		X	X	X
F-33 PHAROX LAMP		X		X		X
F-34 METTEN				X		X

BASKET						
Model	C1	C2	C3	C4	C6	C10
Size	1.0x1.2 m	1.0 x1.0 m	1.1x1.3 m	1.6x1.2 m	1.8x1.3 m	1.15x1.45 m
Drawing	3001	3002	3003	3004	3006	3010
F-4 TXORI	770					
F-6 JAMBON	875					
F-7 BOTE	910					
F-8 LA CARTUJA	1 032		1 050	1 050		
F-9 BOTELLA DE AGUA	770					
F-11 MONTGOLFIERE	1 035					
F-10 TXORI	645					
F-12 PAQUETE	670		670			
F-13 FAIRY	1 032		1 032			
F-14 JARRA DE CERVEZA	850	850	850	850		850
F-15 BOTE-HUCHA	850	850	850	850		850
F-16 CAJA 2	630					
F-17 OVNI	570					
F-18 PIZZA					1 000	
F-19 CAVA	570					
F-20 BEETLE	740					
F-21 CEPESA			810			
F-22 TORRE	570					
F-24 FLYINGMAN	950					
F-25 FUTBOL	980		980			980
F-26 HEART			950			
F-29 MOVISTAR	750	750	750			750
F-30 EGG	700	700	700			700
F-31 MAZORCA DEKALB	990		990			990
F-32 BEIRAO BOTTLE	700	700	700			700
F-33 PHAROX LAMP	990		990	990		990
F-34 METTEN	1 173		1 173	1 173		1 173

* Compatibility and maximum mass in kg

SECTION 3 : NOTES

Note 1	The system FDS of deflation can be installed optionally according to drawings 1031/72, 1031/75 and 1031/76 in all models.
Note 2	The new format of the data sheet was introduced for improved visibility. The Special Shape Type data was transferred from EASA.BA.014, Issue 5 to this TCDS. The date in Section 1 I.8. represents the initial date of publication of the TC EASA.BA.014 and remains valid.

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