

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 6, 23 April 2013
Issue 5, 4 July 2012
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: 23 April 2013 |
| 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-35 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 to F-35 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 and February 2009) 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>Manual de Vuelo y Mantenimiento, Revision February 1991, or later approved revisions</p> <p>Ultramagic Hot Air Balloon Flight Manual FM04 Rev. 1 and applicable Supplements – or later approved revisions</p> <p>Maintenance Manual for Ultramagic Balloons and applicable Supplements – or later accepted revisions</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.</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 (24.1)*	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	F-35 R4TS
Approval date	24 Apr 2009	20 July 2009	7 Feb 2011	4 Jul 2012
Technical description				
Volume (m ³)	2 500	3 458	3 892	3 700
Number of gores	16	20	24	14
Disposition	----	---	horizontal	horizontal
Max diameter (m)	13.1	16.1	26.4	20.1
Total height (m)	37.4	31.3	19.9	39.8
MTOM (kg)	700	990	1 173	995
Drawing number	F32-figs.	F33-figs.	F34-figs.	F35-figs.
Serial numbers eligible	F32-01 & up	F33-01 & up	F34-01 & up	F35-01 & up
Fuel cylinder quantity				
Worthington 4100-U4-27	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
UM Type M-30 or M-30D	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
UM Type M-40 or M-40D	2 or more	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.

Note: (*) total height (m) without inflated appendices (hands)

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
F-35 R4TS	-	-	X	X	X	X

BASKET							
Model	CT-01	C1	C2	C3	C4	C6	C10
Size	1.0x1.0 m	1.0x1.2 m	1.0x1.0 m	1.1x1.3 m	1.6x1.2 m	1.8x1.3 m	1.15x1.45 m
Drawing	3200	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

BASKET							
Model	CT-01	C1	C2	C3	C4	C6	C10
Size	1.0x1.0 m	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	3200	3001	3002	3003	3004	3006	3010
F-33 PHAROX LAMP		990		990	990		990
F-34 METTEN		1 173		1 173	1 173		1 173
F-35 R4TS	868	995		995	995		995
** 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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