



## **TYPE-CERTIFICATE**

### **DATA SHEET**

## **BALLONS CHAIZE HOT AIR BALLOONS**

*Manned Free Hot Air Balloon*

**Type Certificate Holder:**

**BALLONS CHAIZE**

CHEMIN DE MIRECOULY  
07 100 ANNONAY  
FRANCE

For models: CS-Type; JZ-Type; JZX-Type; DC-Type, SW-Type

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**SECTION 1 GENERAL, All Types and Variants**

**I. General**

- |  |  |
|--|--|
| 1. Data Sheet No: EASA.BA.015            | Issue 15 Date: 17 May 2021   |
| 2. Type / Variant or Model               |  |
| - Type:                                  | Ballons Chaize Hot Air Balloons  |
| - Model, Variant:                        | CS,<br>JZ,<br>JZX,<br>DC,<br>SW  |
| 3. Airworthiness Category:               | Normal   |
| 4. Type Certificate Holder:              | Ballons Chaize<br>Chemin de Mirecouly<br>07100 Annonay<br>FRANCE   |
| 5. Manufacturer:                         | Ballons Chaize<br>Chemin de Mirecouly<br>07100 Annonay<br>France   |
|  | Former Manufacturers :   |
|  | ALTISPH'AIR<br>14 rue des Bruyères<br>64140 MORLAAS<br>FRANCE  |
|  | ANNONAY AIR CONCEPT<br>7 rue Vidal<br>07100 ANNONAY<br>FRANCE  |
|  | BALLONS CHAIZE<br>Annonay Air Concept<br>Chemin des Falcons<br>07100 ANNONAY<br>FRANCE   |
| 6. National DGAC-FR Certification Date : | Refer to Sections 2 and 3  |
| 7. DGAC-FR Initial Application Date:     | Refer to Sections 2 and 3  |
| 8. EASA Application Date:                | Refer to Sections 2, 3 and 4   |
| 9. EASA Type Certification Date:         | Refer to Sections 2, 3 and 4   |
| 10. Certification History                | TCDS EASA.BA.015 incorporates JZ/JZX Type' TC data sheet N°. 182, édition n° 7, dated April 2001 issued by the DGAC France and replaces it. The corresponding Certificat de Navigabilité de type N°. 182 initially issued by the DGAC France 7 December 1992 and last amended 19 April 2001 is replaced by the TC EASA.BA.015. The CS-model, former DGAC France TC N°. 79 with its TCDS N°. 152, was already part of the TCDS EASA.BA.015 Iss. 0 |

## **II. Certification Basis**

- |  |  |
|--|--|
| 1. Reference Date for determining the applicable requirements: | Refer to Tables 2.1, 3.1 and 4.1 in Section 2 and 3  |
| 2. DGAC-FR Type Certificate Data Sheet No:                     | for CS Type: N°. 152, Issue 8<br>for JZ Type N°. 182, Issue 7<br>for JZX Type N°. 182, Issue 7   |
| 3. Certification Basis:  | Refer to Tables 2.1, 3.1 and 4.1 in Section 2, 3 and 4:<br>- Conditions Techniques Générales CTG 015, édition no. 1 of 27 October 1975, marked (□)<br>- Conditions Techniques Générales CTG 015, édition no. 2 of 3 March 1980, and CTG 015/A introducing the requirements of FAR 31 Amdt. 4, marked (□□)<br>- Certification Specifications and Acceptable Means of Compliance for Hot Air Balloons CS-31HB Amdt. 1 dated 5 December 2011 marked (□□□) |
| 4. Airworthiness Requirements:                                 | Refer to Tables 2.1, 3.1 and 4.1 in Section 2 and 3:<br>- FAR 31 change 2;<br>Additional Technical Conditions, CTG 015 – Section I;<br>Acceptable Means of Compliance, CTG 015 – Section II;<br>Free Manned Balloons Certification, CTG 015 – Section III;<br>Basic Technical Conditions, CTG 015 – Section IV marked (○)<br>- CS 31HB Amdt. 1 marked (○○)   |
| 5. Special Conditions:   | None   |
| 6. Reversion and Exemptions:                                   | None   |
| 7. Equivalent Safety Findings:                                 | None   |

## **III. Technical Characteristics and Operational Limitations**

- |                            |  |
|----------------------------|--|
| 1. Type Design Definition: | Refer to Tables 2.1, 3.1 and 4.1 in Section 2, 3 and 4:  |
| 2. Description:            | Manned free hot-air balloon with natural shape envelope of 1 540 – 12,000 m <sup>3</sup> volume, vertical or horizontal construction with 12-32 gores. Parachute in top for control and rapid deflation. Option: Fast deflation system, Turning vents or Double layer. Single backed up, double, triple or quadruple burner as heater system. Conventional wicker baskets suspended beneath the envelope by stainless-steel cables and karabiners with a screw gate. Stainless steel, duralumin or titanium fuel cylinders and other equipment/instruments fixed on the inner side of the basket wall.<br>Baskets can be fitted optionally with a door or harness. |
| 3. Equipment:              | - Altimeter<br>- Rate of climb/descent indicator<br>- Melting link for the envelope overheating check<br>- Fuel quantity gauge   |
| 4. Envelope:               | Refer to Section 2, 3 and 4, see Table 2.2, 3.2 or 4.2   |

5. Burner: Refer to Section 2, 3 and 4, see Table 2.3, 3.3 or 4.3
6. Basket: Refer to Section 2, 3 and 4, see Table 2.4, 3.4 or 4.4
7. Mass: Minimum Landing Weight Refer to Section 2, 3 or 4  
& Maximum take-off see Table 2.2, 3.2 or 4.2  
mass:
8. Maximum Envelope Temperature: for CS Types (polyamide fabric): 120°C  
for JZ Types (polyamide fabric): 120°C  
for JZX Types (polyester fabric): 130°C  
for DC Types (polyamide fabric): 120°C  
for SW Types (polyamide fabric): 120°C
9. Minimum Flight Crew: 1 Pilot
10. Maximum number of persons on board: In accordance with approved Flight Manual
11. Other Limitations:
  - The balloon is approved for VFR-Day flight
  - Life limited parts – see Airworthiness Limitations Section (ALS) in the Maintenance Manual

#### **IV. Operating and Service Instructions**

Flight Manual: Manuel Utilisateur – Ballons Chaize, Réf: Manuel-1401001, Version 07\_9, or later EASA approved revision,

Supplements concerning combinations with other manufacturer's parts:

- Supplément 4 – Base Cameron, Version 02\_00, or later EASA approved revision
- Supplément 5 – Base Kubíček, Version 01\_05, or later EASA approved revision
- Supplément 6 – Base Lindstrand, Version 01\_04, or later EASA approved revision
- Supplément 7 – Base Ultramagic, Version 01\_05, or later EASA approved revision
- Supplément 8 – Base Thunder&Colt, Version 01\_03, or later EASA approved revision
- Supplément 9 – Base Raven, Version 01\_02, or later EASA approved revision
- Supplément 10 – Base Sky Balloons, Version 01\_02, or later EASA approved revision
- Supplément 11 – Base Schroeder, Version 01\_04, or later EASA approved revision
- Supplément 12 – Option Double peau, Version 01\_00, or later EASA approved revision
- Supplément 14 – Base LTL, Version 01\_03, or later EASA approved revision

Maintenance Manual: Manuel de maintenance et instructions de suivi de navigabilité série: JZ/JZX/CS/DC/SW, Réf: ManE-1307001, Version : 04\_2, or later EASA accepted revision Applicable to:

1. CS Type, JZ Type JZX Type and SW Type balloons (up to including s/n 231 and NG001 and up);
2. DC Type balloons (from s/n DC001 and up).

#### **V. Notes**

1. Manufacturing confined to approved Part 21 Subpart F or Subpart G organisation (Commission Regulation (EU) No 748/2012 of 03/08/2012)
2. Two Fuel Cells approved for use at less per model
3. Combinations with other manufacturer's parts (bottom ends).
  - See approved AFM and related supplements

**SECTION 2: CS-model definition and certification data**

**Table 2.1: Type Design**

CS model definition is defined in Type Design Document MDL-1706001 initially approved as per approval date indicated in Table below or later EASA approved revision

Model	Type design document n°	Reference date	Airworthiness Requirements (see II.4)	Certification basis (see II.3)	Approval date
CS 1600 F12	MDL-1706001	1 July 1975	○	□	7 November 1975
CS 1600 F24	MDL-1706001	1 <sup>st</sup> November, 2003	○	□	March 2006
CS 1800 F12	MDL-1706001	1 January 1979	○	□	11 May 1979
CS 1800 F24	MDL-1706001	1 <sup>st</sup> November, 2003	○	□	March 2006
CS 2000 F12	MDL-1706001	1 July 1975	○	□	7 November 1975
CS 2000 F24	MDL-1706001	1 <sup>st</sup> November, 2003	○	□	March 2006
CS 2200 F12	MDL-1706001	1 January 1979	○	□	11 May 1979
CS 2200 F16	MDL-1706001	1 <sup>st</sup> November, 2003	○	□	March 2006
CS 2200 F24	MDL-1706001	1 <sup>st</sup> November, 2003	○	□	March 2006
CS 2200 F32	MDL-1706001	1 January 1979	○	□	11 May 1979
CS2500 F24	MDL-1706001	10 December 2019			December 2019
CS 3000 F16	MDL-1706001	1 January 1979	○	□	27 August 1981
CS 3000 F24	MDL-1706001	12 May 2016			12 May 2016
CS 3000 F32	MDL-1706001	1 <sup>st</sup> November, 2003	○	□	March 2006
CS 3700 F24	MDL-1706001	11 November 2016	○○	□□□	November 2016
CS 4000 F16	MDL-1706001	1 January 1979	○	□	11 May 1979
CS 4000 F24	MDL-1706001	08 January 2019			January 2019
CS 4000 F32	MDL-1706001	1 <sup>st</sup> November, 2003	○	□	March 2006
CS 4500 F24	MDL-1706001	11 November 2016	○○	□□□	November 2016
CS 5000 F24	MDL-1706001	13 April 2015	○○	□□□	April 2015
CS5500 F24	MDL-1706001	18 March 2018	○○	□□□	April 2018

**Table 2.2: Envelopes**

Model	Type design document n°	Approval date	Volume [m³]	Gores [-]	MLM [kg]	MTOM [kg]
CS 1600 F12	MDL-1706001	7 November 1975	1 540	12	N/A	500
CS 1600 F24	MDL-1706001	March 2006	1 540	24	N/A	500
CS 1800 F12	MDL-1706001	11 May 1979	1 850	12	N/A	500
CS 1800 F24	MDL-1706001	March 2006	1 850	24	N/A	500
CS 2000 F12	MDL-1706001	7 November 1975	2 150	12	N/A	500
CS 2000 F24	MDL-1706001	March 2006	2 150	24	N/A	500
CS 2200 F12	MDL-1706001	11 May 1979	2 650	12	N/A	750
CS 2200 F16	MDL-1706001	March 2006	2 650	16	N/A	750
CS 2200 F24	MDL-1706001	March 2006	2 650	24	N/A	750
CS 2200 F32	MDL-1706001	11 May 1979	2 650	32	N/A	750
CS 2500 F24	MDL-1706001	10 Decembre 2019	2500	24	N/A	815
CS 3000 F16	MDL-1706001	27 August 1981	3 350	16	N/A	1 000
CS 3000 F24	MDL-1706001	May 2016	3030	24	N/A	1000
CS 3000 F32	MDL-1706001	March 2006	3 350	32	N/A	1 000
CS 3700 F24	MDL-1706001	11 november 2016	3700m3	24	540	1260
CS 4000 F16	MDL-1706001	11 May 1979	4 250	16	N/A	1 100
CS4000 F24	MDL-1706001	08 January 2019	4000m3	24	600	1 100
CS 4000 F32	MDL-1706001	March 2006	4 250	32	N/A	1 100
CS4500 F24	MDL-1706001	11 November 2016	4550m3	24	700	1460
CS 5000 F24	MDL-1706001	12 May 2016	5 000	24	700	1 700
CS5500 F24	MDL-1706001	18 March 2018	5500m3	24	700	1850

**Table 2.3: Burners**

Model	Description	Applicable load frames (measures)	Drawing n°.	Certification basis	Approval date
Chaize 303	Double	900 x 600	303	CTG15	11 May 1979
Chaize 304	Single	640 x 615	304	CTG15	7 November 1975

**Table 2.4: Baskets**

<b>Model</b>	<b>Description [m]</b>	<b>Drawing n°.</b>	<b>Certification basis</b>	<b>Approval date</b>	<b>Option door</b>	<b>Option harness</b>
<b>A 100</b>	1.10 x 1.10	DDEF-1409007	CTG 015A	18 Nov 2014		X
<b>A 101</b>	1.10 x 1.10	DDEF-1409007	CTG 015A	18 Nov 2014		X
<b>A 200</b>	1.30 x 1.10	DDEF-1409007	CTG 015A	18 Nov 2014		X
<b>A 201</b>	1.10 x 1.30	DDEF-1409007	CTG 015A	18 Nov 2014		X
<b>405</b>	1.10 x 1.30	CHAIZE Doc. L-00-AX2093 R1	CTG 015A	14 Jan 2005		X
<b>A201 C</b>	1.20 x 1.30	DDEF-1409007	CTG 015A	18 Nov 2014		X
<b>A 300</b>	1.50 x 1.10	DDEF-1409007	CTG 015A	18 Nov 2014		X
<b>A 301</b>	1.10 x 1.50	DDEF-1409007	CTG 015A	18 Nov 2014		X
<b>A 302</b>	1.10 x 1.50	DDEF-1409007	CTG 015A	18 Nov 2014		X
<b>A 303 T</b>	1.10 x 1.50	DDEF-1409007	CTG 015A	18 Nov 2014		X
<b>A 401</b>	1.30 x 1.70	DDEF-1409007	CTG 015A	18 Nov 2014		X
<b>A 403</b>	1.30 x 1.70	DDEF-1409007	CTG 015A	18 Nov 2014		X
<b>A 403 T</b>	1.30 x 1.70	DDEF-1409007	CTG 015A	18 Nov 2014		X
<b>A501</b>	1.50 x 2.00	DDEF-1409007	CTG 015A	18 Nov 2014		X
<b>A 503</b>	1.50 x 2.00	DDEF-1409007	CTG 015A	18 Nov 2014		X
<b>A 503 T</b>	1.50 x 2.00	DDEF-1409007	CTG 015A	18 Nov 2014	X	X
<b>B240T</b>	1.50x2.40	DDEF-1409007	CS31HB	17 May 2021	X	X



**Table 2.5: Approved combinations of envelopes and baskets for CS models**

Envelope Model	Basket																
	A 100	A 101	A 200	A 201	A 201 C	405	A 300	A 301	A 302	A 303 T	A 401	A 403	A 403 T	A 501	A 503	A 503 T	B240T
CS 1600 F12	●	●	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
CS 1600 F24	●	●	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
CS 1800 F12	●	●	●	●	---	---	---	---	---	---	---	---	---	---	---	---	---
CS 1800 F24	●	●	●	●	---	---	---	---	---	---	---	---	---	---	---	---	---
CS 2000 F12	---	---	●	●	●	●	---	---	---	---	---	---	---	---	---	---	---
CS 2000 F24	---	---	●	●	●	●	---	---	---	---	---	---	---	---	---	---	---
CS 2200 F12	---	---	●	●	●	●	●	●	●	●	---	---	---	---	---	---	---
CS 2200 F16	---	---	●	●	●	●	●	●	●	●	---	---	---	---	---	---	---
CS 2200 F24	---	---	●	●	●	●	●	●	●	●	---	---	---	---	---	---	---
CS 2200 F32	---	---	●	●	●	●	●	●	●	●	---	---	---	---	---	---	---
CS2500 F24	---	---	●	●	●	●	●	●	●	●	●	●	●	---	---	---	---
CS 3000 F16	---	---	●	●	●	●	●	●	●	●	●	●	●	---	---	---	---
CS3000 F24	---	---	●	●	●	●	●	●	●	●	●	●	●	---	---	---	---
CS 3000 F32	---	---	●	●	●	●	●	●	●	●	●	●	●	---	---	---	---
CS3700 F24	---	---			●	●	●	●	●	●	●	●	●	●	---	---	---
CS 4000 F16	---	---	---	---	---	---	●	●	●	●	●	●	●	●	●	●	---
CS 4000 F24	---	---	---	---	---	---	●	●	●	●	●	●	●	●	●	●	---
CS 4000 F32	---	---	---	---	---	---	●	●	●	●	●	●	●	●	●	●	---
CS 4500 F24	---	---	---	---	---	---	●	●	●	●	●	●	●	●	●	●	●
CS 5000 F24	---	---	---	---	---	---	---	---	---	---	●	●	●	●	●	●	●
CS 5500 F24	---	---	---	---	---	---	---	---	---	---	●	●	●	●	●	●	●

Legend: ● combination approved  
 --- combination not approved

**SECTION 3: JZ/JZX-model definition and certification data**

**Table 3.1: Type Design**

JZ model definition is defined in Type Design Document MDL-1706001 initially approved as per approval date indicated in Table below or later EASA approved revision.

Model	Type design document n°	Reference date	Airworthiness Requirements (see II.4)	Certification basis (see II.3)	Approval date
JZ 18 F12	MDL-1706001	June 2016	○	□□	30 March 1993
JZ 18 F24	MDL-1706001	June 2016	○	□□	11 June 1999
JZ 20 F12	MDL-1706001	June 2016	○	□□	11 June 1999
JZ 20 F24	MDL-1706001	June 2016	○	□□	11 June 1999
JZ 22 F12	MDL-1706001	June 2016	○	□□	27 July 1994
JZ 22 F24	MDL-1706001	June 2016	○	□□	11 June 1999
JZ 25 F12	MDL-1706001	June 2016	○	□□	27 July 2009
JZ 25 F16	MDL-1706001	June 2016	○	□□	30 March 1993
JZ 25 F24	MDL-1706001	June 2016	○	□□	11 June 1999
JZ 25 F32	MDL-1706001	June 2016	○	□□	11 June 1999
JZ 30 F16	MDL-1706001	June 2016	○	□□	7 December 1992
JZ30 F24	MDL-1706001	January 2019	○	□□	January 2019
JZ 30 F32	MDL-1706001	June 2016	○	□□	11 June 1999
JZ34 F16	MDL-1706001	June 2016	○	□□	3 January 2017
JZ 34 F24	MDL-1706001	June 2016	○	□□	3 January 2017
JZ 35 F16	MDL-1706001	June 2016	○	□□	27 July 1994
JZ 35 F32	MDL-1706001	June 2016	○	□□	11 June 1999
JZ 40 F16	MDL-1706001	June 2016	○	□□	7 December 1992
JZ 40 F32	MDL-1706001	June 2016	○	□□	11 June 1999
JZ45 F24	MDL-1706001	December 2019	○	□□	10 December 2019
JZX 18 F12	MDL-1706001	June 2016	○	□□	30 March 1993
JZX 18 F24	MDL-1706001	June 2016	○	□□	11 June 1999
JZX 20 F12	MDL-1706001	June 2016	○	□□	11 June 1999
JZX 20 F24	MDL-1706001	June 2016	○	□□	11 June 1999
JZX 22 F12	MDL-1706001	June 2016	○	□□	27 July 1994
JZX 22 F24	MDL-1706001	June 2016	○	□□	11 June 1999
JZX 25 F12	MDL-1706001	June 2016	○	□□	27 July 2009
JZX 25 F16	MDL-1706001	June 2016	○	□□	30 March 1993
JZX 25 F24	MDL-1706001	June 2016	○	□□	11 June 1999
JZX 25 F32	MDL-1706001	June 2016	○	□□	11 June 1999
JZX 30 F16	MDL-1706001	June 2016	○	□□	7 December 1992
JZX 30 F32	MDL-1706001	June 2016	○	□□	11 June 1999
JZX 35 F16	MDL-1706001	June 2016	○	□□	27 July 1994
JZX 35 F32	MDL-1706001	June 2016	○	□□	11 June 1999
JZX 40 F16	MDL-1706001	June 2016	○	□□	7 December 1992
JZX 40 F32	MDL-1706001	June 2016	○	□□	11 June 1999

**Table 3.2: Envelopes**

Model	Type design document n°	Approval date	Volume [m³]	Gores [-]	MTOM [kg]
JZ 18 F12	MDL-1706001	4 January 2017	1 887	12	570
JZ 18 F24	MDL-1706001	4 January 2017	1 887	24	570
JZ 20 F12	MDL-1706001	4 January 2017	2 138	12	650
JZ 20 F24	MDL-1706001	4 January 2017	2 138	24	650
JZ 22 F12	MDL-1706001	4 January 2017	2 408	12	725
JZ 22 F24	MDL-1706001	4 January 2017	2 408	24	725
JZ 25 F12	MDL-1706001	4 January 2017	2 547	12	815
JZ 25 F16	MDL-1706001	4 January 2017	2 547	16	815
JZ 25 F24	MDL-1706001	4 January 2017	2 547	24	815
JZ 25 F32	MDL-1706001	4 January 2017	2 547	32	815
JZ 30 F16	MDL-1706001	4 January 2017	3 100	16	963
JZ30 F24	MDL-1706001	08 January 2019	3 100	24	963
JZ 30 F32	MDL-1706001	4 January 2017	3 100	32	963
JZ34 F16	MDL-1706001	4 January 2017	3400	16	1080
JZ 34 F24	MDL-1706001	4 January 2017	3400	24	1080
JZ 35 F16	MDL-1706001	4 January 2017	3 515	16	1 120
JZ 35 F32	MDL-1706001	4 January 2017	3 515	32	1 120
JZ 40 F16	MDL-1706001	4 January 2017	4 080	16	1 300*
JZ 40 F32	MDL-1706001	4 January 2017	4 080	32	1 300*
JZ 45 F24	MDL-1706001	December 2019	4500	24	1460
JZX 18 F12	MDL-1706001	4 January 2017	1 887	12	570
JZX 18 F24	MDL-1706001	4 January 2017	1 887	24	570
JZX 20 F12	MDL-1706001	4 January 2017	2 138	12	650
JZX 20 F24	MDL-1706001	4 January 2017	2 138	24	650
JZX 22 F12	MDL-1706001	4 January 2017	2 408	12	725
JZX 22 F24	MDL-1706001	4 January 2017	2 408	24	725
JZX 25 F12	MDL-1706001	4 January 2017	2 547	12	815
JZX 25 F16	MDL-1706001	4 January 2017	2 547	16	815
JZX 25 F24	MDL-1706001	4 January 2017	2 547	24	815
JZX 25 F32	MDL-1706001	4 January 2017	2 547	32	815
JZX 30 F16	MDL-1706001	4 January 2017	3 100	16	963
JZX 30 F32	MDL-1706001	4 January 2017	3 100	32	963
JZX 35 F16	MDL-1706001	4 January 2017	3 515	16	1 120
JZX 35 F32	MDL-1706001	4 January 2017	3 515	32	1 120
JZX 40 F16	MDL-1706001	4 January 2017	4 080	16	1 300*
JZX 40 F32	MDL-1706001	4 January 2017	4 080	32	1 300*

\* MTOM = 1 260 kg must not be exceeded with the baskets A 101, A 201, A 301, A 302 A 303 T

**Table 3.3: Burners**

Model	Description	Applicable load frame measures [mm]	Drawing n°.	Certification basis	Approval date
T&C Mk II / Mk III	single	730 x 670	Colt 2 / Colt 3	CTG15	1991
T&C Mk II / Mk III	double	730 x 670	Colt 2 / Colt 3	CTG15	1991
T&C Mk II / Mk III	triple	1 000 x 1 000	Colt 2 / Colt 3	CTG15	1991

**Table 3.4: Baskets**

Model	Description [m]	Drawing n°.	Certification basis	Approval date.
A 100	1.10 x 1.10	DDEF-1409007	CTG 015A	18 November 2014
A 101	1.10 x 1.10	DDEF-1409007	CTG 015A	18 November 2014
A 200	1.30 x 1.10	DDEF-1409007	CTG 015A	18 November 2014
A 201	1.10 x 1.30	DDEF-1409007	CTG 015A	18 November 2014
A201 C	1.20 x 1.30	DDEF-1409007	CTG 015A	18 November 2014
405	1.10 x 1.30	CHAIZE Doc. L-00-AX2093 R1	CTG 015A	14 Jan 2005
A 300	1.50 x 1.10	DDEF-1409007	CTG 015A	18 November 2014
A 301	1.10 x 1.50	DDEF-1409007	CTG 015A	18 November 2014
A 302	1.10 x 1.50	DDEF-1409007	CTG 015A	18 November 2014
A 303 T	1.10 x 1.50	DDEF-1409007	CTG 015A	18 November 2014
A 401	1.30 x 1.70	DDEF-1409007	CTG 015A	18 November 2014
A 403	1.30 x 1.70	DDEF-1409007	CTG 015A	18 November 2014
A 403 T	1.30 x 1.70	DDEF-1409007	CTG 015A	18 November 2014
A501	1.50 x 2.00	DDEF-1409007	CTG 015A	18 November 2014
A 503	1.50 x 2.00	DDEF-1409007	CTG 015A	18 November 2014
A 503 T	1.50 x 2.00	DDEF-1409007	CTG 015A	18 November 2014
B240T	1.50x2.40	DDEF-1409007	CS31HB	01 May 2021

**Table 3.5: Approved combinations of envelopes and burners for JZ/JZX models**

Envelope Model	Burner		
	T&C Mk II / Mk III single	T&C Mk II / Mk III double	T&C Mk II / Mk III triple
JZ 18 F12	●	●	---
JZ 18 F24	●	●	---
JZ 20 F12	---	●	---
JZ 20 F24	---	●	---
JZ 22 F12	---	●	---
JZ 22 F24	---	●	---
JZ 25 F12	---	●	---
JZ 25 F16	---	●	---
JZ 25 F24	---	●	---
JZ 25 F32	---	●	---
JZ 30 F16	---	●	---
JZ30 F24	---	●	---
JZ 30 F32	---	●	---
JZ34 F16	---	●	●
JZ34 F24	---	●	●
JZ 35 F16	---	●	●
JZ 35 F32	---	●	●
JZ 40 F16	---	●	●
JZ 40 F32	---	●	●
JZ45 F24	---	●	●
JZX 18 F12	●	●	---
JZX 18 F24	●	●	---
JZX 20 F12	---	●	---
JZX 20 F24	---	●	---
JZX 22 F12	---	●	---
JZX 22 F24	---	●	---
JZX 25 F12	---	●	---
JZX 25 F16	---	●	---
JZX 25 F24	---	●	---
JZX 25 F32	---	●	---
JZX 30 F16	---	●	---
JZX 30 F32	---	●	---
JZX 35 F16	---	●	●
JZX 35 F32	---	●	●
JZX 40 F16	---	●	●
JZX 40 F32	---	●	●

Legend: ● combination approved  
 --- combination not approved

**Table 3.6: Approved combinations of envelopes and baskets for JZ/JZX models**

Envelope Model	Basket															
	A 100	A 101	A 200	405	A 201	A 300	A 301	A 302	A 303 T	A 401	A 403	A 403 T	A 501	A 503	A 503 T	B240T
JZ 18 F12	●	●	---	---	---	---	---	---	---	---	---	---	---	---	---	---
JZ 18 F24	●	●	---	---	---	---	---	---	---	---	---	---	---	---	---	---
JZ 20 F12	---	---	●	●	●	---	---	---	---	---	---	---	---	---	---	---
JZ 20 F24	---	---	●	●	●	---	---	---	---	---	---	---	---	---	---	---
JZ 22 F12	---	---	●	●	●	---	---	---	---	---	---	---	---	---	---	---
JZ 22 F24	---	---	●	●	●	---	---	---	---	---	---	---	---	---	---	---
JZ 25 F12	---	---	●	●	●	●	●	●	●	---	---	---	---	---	---	---
JZ 25 F16	---	---	●	●	●	●	●	●	●	---	---	---	---	---	---	---
JZ 25 F24	---	---	●	●	●	●	●	●	●	---	---	---	---	---	---	---
JZ 25 F32	---	---	●	●	●	●	●	●	●	---	---	---	---	---	---	---
JZ 30 F16	---	---	●	●	●	●	●	●	●	●	●	●	---	---	---	---
JZ30 F24	---	---	●	●	●	●	●	●	●	●	●	●	---	---	---	---
JZ 30 F32	---	---	●	●	●	●	●	●	●	●	●	●	---	---	---	---
JZ34F16	---	---	●	●	●	●	●	●	●	●	●	●	---	---	---	---
JZ34F24	---	---	●	●	●	●	●	●	●	●	●	●	---	---	---	---
JZ 35 F16	---	---	---	---	---	●	●	●	●	●	●	●	---	---	---	---
JZ 35 F32	---	---	---	---	---	●	●	●	●	●	●	●	---	---	---	---
JZ 40 F16	---	---	---	---	---	●	●	●	●	●	●	●	●	●	●	---
JZ 40 F32	---	---	---	---	---	●	●	●	●	●	●	●	●	●	●	---
JZ45F24	---	---	---	---	---	●	●	●	●	●	●	●	●	●	●	●
JZX 18 F12	●	●	---	---	---	---	---	---	---	---	---	---	---	---	---	---
JZX 18 F24	●	●	---	---	---	---	---	---	---	---	---	---	---	---	---	---
JZX 20 F12	---	---	●	●	●	---	---	---	---	---	---	---	---	---	---	---
JZX 20 F24	---	---	●	●	●	---	---	---	---	---	---	---	---	---	---	---
JZX 22 F12	---	---	●	●	●	---	---	---	---	---	---	---	---	---	---	---
JZX 22 F24	---	---	●	●	●	---	---	---	---	---	---	---	---	---	---	---
JZX 25 F12	---	---	●	●	●	●	●	●	●	---	---	---	---	---	---	---
JZX 25 F16	---	---	●	●	●	●	●	●	●	---	---	---	---	---	---	---
JZX 25 F24	---	---	●	●	●	●	●	●	●	---	---	---	---	---	---	---
JZX 25 F32	---	---	●	●	●	●	●	●	●	---	---	---	---	---	---	---
JZX 30 F16	---	---	●	●	●	●	●	●	●	●	●	●	---	---	---	---
JZX 30 F32	---	---	●	●	●	●	●	●	●	●	●	●	---	---	---	---
JZX 35 F16	---	---	●	●	●	●	●	●	●	●	●	●	---	---	---	---
JZX 35 F32	---	---	---	---	---	●	●	●	●	●	●	●	---	---	---	---
JZX 40 F16	---	---	---	---	---	●	●	●	●	●	●	●	●	●	●	---
JZX 40 F32	---	---	---	---	---	●	●	●	●	●	●	●	●	●	●	---

Legend: ● combination approved  
 --- combination not approved

## SECTION 4: DC-model definition and certification data

**Table 4.1: Type Design**

DC model definition is defined in Type Design Document MDL-1706001 initially approved as per approval date indicated in Table below or later EASA approved revision

Model	Type design document n°	Reference date	Airworthiness Requirements (see II.4)	Certification basis (see II.3)	Approval date
DC 1800 F16	MDL-1706001	June 2016	oo	□□□	4 July 2014
DC 2000 F16	MDL-1706001	June 2016	oo	□□□	4 July 2014
DC 2200 F16	MDL-1706001	June 2016	oo	□□□	4 July 2014

**Table 4.2: Envelopes**

Model	Type design document n°	Approval date	Volume [m³]	Gores [-]	MTOM [kg]	Min. Landing Mass [kg]
DC 1800	MDL-1706001	4 January 2016	1 800	16	600	260
DC 2000	MDL-1706001	4 January 2016	2 000	16	630	290
DC 2200	MDL-1706001	4 January 2016	2 200	16	680	340

**Table 4.3: Burners**

Model	Description	Applicable load frame measures [mm]	Drawing n°.	Certification basis	Approval date
Chaize 303	Double	900 x 600	303	CTG15	11 May 1979

**Table 4.4: Baskets**

Model	Description [m]	Drawing n°.	Certification basis	Approval date.
A 100	1.10 x 1.10	DDEF-1409007	CTG 015A	18 November 2014
A 101	1.10 x 1.10	DDEF-1409007	CTG 015A	18 November 2014
A 200	1.30 x 1.10	DDEF-1409007	CTG 015A	18 November 2014
A 201	1.10 x 1.30	DDEF-1409007	CTG 015A	18 November 2014
A201 C	1.20 x 1.30	DDEF-1409007	CTG 015A	18 November 2014
405	1.10 x 1.30	CHAIZE Doc. L-00-AX2093 R1	CTG 015A	14 Jan 2005
A 300	1.50 x 1.10	DDEF-1409007	CTG 015A	18 November 2014
A 301	1.50 x 1.10	DDEF-1409007	CTG 015A	18 November 2014
A 302	1.50 x 1.10	DDEF-1409007	CTG 015A	18 November 2014

**Table 4.5: Approved combinations of envelopes and baskets for DC models**

Envelope Model	Basket							
	A 100	A 101	A 200	A 201	405	A 300	A 301	A 302
DC 1800	●	●	●	●	●	●	●	●
DC 2000	●	●	●	●	●	●	●	●
DC 2200	●	●	●	●	●	●	●	●

Legend: ● combination approved  
--- combination not approved

**SECTION 5: SW-model definition and certification data**

**Table 5.1: Type Design**

SW model definition is defined in Type Design Document MDL-1706001 initially approved as per approval date indicated in Table below or later EASA approved revision

Model	Type design document n°	Reference date	Airworthiness Requirements (see II.4)	Certification basis (see II.3)	Approval date
SW5500F24	MDL-1706001	18/09/2020	oo	□□□	Sept 2020
SW6000F24	MDL-1706001	18/09/2020	oo	□□□	Sept 2020
SW6000F28	MDL-1706001	18/09/2020	oo	□□□	Sept 2020
SW7000F24	MDL-1706001	18/09/2020	oo	□□□	Sept 2020
SW7000F28	MDL-1706001	18/09/2020	oo	□□□	Sept 2020
SW8000F28	MDL-1706001	18/09/2020	oo	□□□	Sept 2020
SW9000F28	MDL-1706001	18/09/2020	oo	□□□	Sept 2020
SW10000F28	MDL-1706001	18/09/2020	oo	□□□	Sept 2020
SW11000F28	MDL-1706001	18/09/2020	oo	□□□	Sept 2020
SW12000F28	MDL-1706001	18/09/2020	oo	□□□	Sept 2020

**Table 5.2: Envelopes**

Model	Type design document n°	Approval date	Volume [m³]	Gores [-]	MTOM [kg]	Min. Landing Mass [kg]
SW5500F24	MDL-1706001	Sept 2020	5500m3	24	1850	880
SW6000F24	MDL-1706001	Sept 2020	6000m3	24	2100	960
SW6000F28	MDL-1706001	Sept 2020	6000m3	28	2100	960
SW7000F24	MDL-1706001	Sept 2020	7000m3	24	2500	1120
SW7000F28	MDL-1706001	Sept 2020	7000m3	28	2500	1120
SW8000F28	MDL-1706001	Sept 2020	8000m3	28	2800	1280
SW9000F28	MDL-1706001	Sept 2020	9000m3	28	3000	1440
SW10000F28	MDL-1706001	Sept 2020	10000m3	28	3200	1650
SW11000F28	MDL-1706001	Sept 2020	11000m3	28	3600	1760
SW12000F28	MDL-1706001	Sept 2020	12000m3	28	4000	1920



**Table 5.3: Approved combination of Burner with SW series**

The burners compatibility is described in supplement to the HABFM manual in its latest revision

Manufacturer	Model or category	SW5500	SW6000 F24/F28	SW7000 F24/F28	SW8000 F28	SW9000 F28	SW10000 F28	SW11000 F28	SW12000 F28
Cameron	Double Stratus	X							
Cameron	Double Stratus	X							
Kubicek	Ingis Double		X						
Kubicek	Ingis Triple		X	X	X				
Kubicek	Ingis Quad		X	X	X	X	X	X	X
Ultramagic	MK32 triple		X						
Ultramagic	MK21 quadruple						X	X	X

Legend: X combination approved

**Table 5.4: Approved combination of Baskets with SW series**

The Basket compatibility is described in supplement to the HABFM manual in its latest revision

Manufacturer	Model or category	SW5500	SW6000 F24/F28	SW7000 F24/F28	SW8000 F28	SW9000 F28	SW10000 F28	SW11000 F28	SW12000 F28
Chaize	B240T	X	X						
Cameron	G	X							
Cameron	H	X							
Kubicek	K50TT8, K55X, K55TTA, K58HH, K60 (sn400 and up)				X	X	X	X	X
Kubicek	K60 (up to sn399)						X	X	X
Kubicek	K60X K55X						X	X	X
Kubicek	K65TTA, K70, K70TTA				X	X	X	X	X
Kubicek	K80				X	X	X	X	X
Kubicek	K85, K90, K100, K110						X	X	X
Ultramagic	C-5								
Ultramagic	C-7								
Ultramagic	C-8		X						
Ultramagic	C-9								
Ultramagic	C-11								
Ultramagic	C-12						X	X	X

Legend: X combination approved