

SUPPLEMENT 48 – CV BASKETS

Issue No.2 to AFM Supplement No.48 is approved by EASA (Project 0060085496).

48.1 General Information

This supplement details the instructions and limitations necessary to ensure the correct operation, maintenance and continued airworthiness of the Ultramagic CV Basket Series.

The section indexes on this supplement are preceded with the §48.X, and the suffix is kept in line with the Ultramagic Flight Manual. The content of this supplement replaces or appends the information contained on the Flight Manual for the balloon or parts to which this supplement is intended.

48.2 Limitations of Use

The following limitations are additional to those already contained in the Flight Manual:

48.2.2 Meteorological Limitations

The surface wind speed must not exceed 5 m/s (18 km/h or 10 kt)

48.2.4 Safety Equipment (Minimum Equipment)

- Waist restraint harness for all the occupants.
- Seat and seat harness for each passenger.

48.2.6 Loading

Applicable loading parameters are listed on section 48.5 of this supplement. Each seat has an individual load limit of 150 kg (330 lb).

48.2.7 Crew

Maximum number of occupants is described on section 48.D.

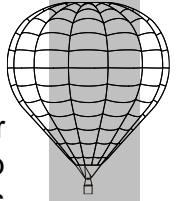
48.2.11 Baskets

Rotation vents must be fitted to envelopes using the CV Basket Series.

48.2.12 Minimum Burner Requirements

Only double burners or larger can be used with the CV Basket Series.

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48.2.13 Fuel Cylinders

A maximum of 4 cylinders can be carried on board.

Cylinders must be strapped upright in the designated positions behind or beside the seats (refer to Fig.1 and Fig.2) without protruding above the top padding of the basket. CV-06 Basket allows to strap two additional cylinders underneath the side table extending the maximum number of cylinders by two. These cylinders must also be strapped together with a fuel cylinder strap going around them.

48.3 Emergency Procedures

The following procedure replaces the equivalent already contained in the Flight Manual:

48.3.7 Emergency Landing

1. Brief everyone to tighten shoulder straps of the harness, keep the arms and legs inside the basket and watch the progress of the landing.
2. [...] (continue with the list of procedures as per the main Manual)

48.3.12 Use of waist harness

Under abnormal circumstances, pilot may consider necessary that passengers stand off from their normal seated position. In this case, proceed as follows:

- If not connected, instruct and monitor the passenger(s) to connect the waist harness delta ring to the restrain tape using the karabiner on its end.
- Instruct the passenger(s) to release the seat harness.

CAUTION: Unless instructed to do so by the pilot, the seat harness is to be worn at all times.

48.4 Standard Procedures

The following procedures are additional to those already contained in the Flight Manual:

48.4.5.1.4 Initial pre-flight checks: Basket

- Confirm that the tray tables are folded and that the side table is closed.
- Check the function of the (waist) restraint and seat harnesses.
- When necessary, assist the passengers adjusting their harnesses.

CAUTION: Waist harnesses must be adjusted and fastened to each passenger prior to sitting.

48.4.8 Preparation for Take off

- Crew to fasten their waist harnesses.
- Passengers seated with seat harnesses fastened.

48.4.8.2 Passenger Briefing

- When instructed to do so, tables must be stowed.

48.4.10.5 Deployment and stowing of the tray or side table

Tray is deployed by pivoting it 180°. Once upright, tilt it 90° to reach the final position. Stowing is the reverse procedure.

Side table is opened by pulling the safety lock and tilting 90°. Closing is the reverse procedure.

CAUTION: Tables must be stowed during takeoff and landing.

48.4.11 Landing

Before making any landing, add the following checks:

- Instruct the passengers to tighten the shoulder straps of the harness, and to keep the arms and legs inside the basket.
- All passenger's trays and accessories are stowed.

48.4.11.4 Landing Large Balloons

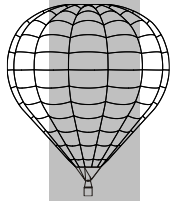
CV Basket Series must always be positioned on the approach to allow touchdown on the long side with high wall.

48.5 Loading

48.5.2 Table of Empty Weight and Maximum Lift

For the calculations in the Load Chart of chapter 5 of the Flight Manual will be used the following characteristics:

Model	V	Basket	Pv	Lmax
S-90	2550	CV-06	346	878
S-105	2950	CV-06	359	1032
S-130	3680	CV-06	385	1365
S-160	4550	CV-06	403	1479
T-150	4245	CV-06	405	1465
T-180	5100	CV-06	434	1510
V-90	2550	CV-06	349	878
V-105	2950	CV-06	373	1032
M-90	2550	CV-06	353	880
M-105	2950	CV-06	358	1032
M-120	3400	CV-06	369	1173
M-130	3680	CV-06	380	1365
M-145	4105	CV-06	395	1436
M-160	4550	CV-06	406	1482
N-180	5100	CV-06	433	1509
Z-90	2550	CV-06	346	894
G-90	2550	CV-06	340	878



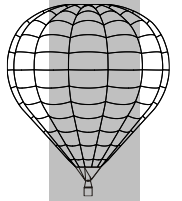
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Model	V	Basket	Pv	Lmax
F-6	2500	CV-06	398	875
F-7	2600	CV-06	388	910
F-8	4497	CV-06	453	1391
F-11	3000	CV-06	398	1035
F-12	2500	CV-06	458	670
F-13	3511	CV-06	514	1032
F-14	3000	CV-06	418	850
F-15	3000	CV-06	413	850
F-17	3000	CV-06	452	570
F-18	4450	CV-06	508	1000
F-19	2500	CV-06	443	570
F-20	3000	CV-06	448	740
F-21	2840	CV-06	403	810
F-22	2900	CV-06	443	570
F-24	3580	CV-06	443	950
F-25	3000	CV-06	398	980
F-26	2995	CV-06	413	950
F-29	3510	CV-06	513	750
F-31	4744	CV-06	483	990
F-32	2500	CV-06	423	700
F-33	3458	CV-06	426	990
F-35	3892	CV-06	426	1173
F-36	3700	CV-06	648	995
F-36	2674	CV-06	449	995
F-37	2875	CV-06	468	990
F-38	2704	CV-06	548	980
F-39	4100	CV-06	427	1400
F-40	3940	CV-06	586	1032
F-41	3500	CV-06	523	1173
F-43	3500	CV-06	538	1050
S-105	2950	CV-08	397	1032
S-130	3680	CV-08	414	1365
S-160	4550	CV-08	436	1569
T-150	4245	CV-08	449	1465
T-180	5100	CV-08	476	1676
T-210	6000	CV-08	484	1684
V-105	2950	CV-08	402	1032
M-105	2950	CV-08	404	1032
M-120	3400	CV-08	414	1173
M-130	3680	CV-08	427	1365
M-145	4105	CV-08	436	1436
M-160	4550	CV-08	449	1569
N-180	5100	CV-08	472	1672
N-210	6000	CV-08	490	1690

V = Volume [m³]

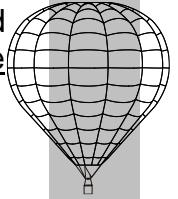
Pv = Empty weight in STD configuration (without fuel cylinders) [Kg]

Lmax = Maximum authorised Lift [Kg]



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Previous table provides **orientative figures** for the **Empty Weight** and **Maximum Lift** available per envelope/basket combination. Actual figures must be calculated with the specific mass of each balloon component (page.0.1).



48.5.4 Table of Compatibility

Envelopes listed on 48.5.2 are considered compatible with the CV-06 and CV-08. Rotation vents are mandatory on all the combinations.

48.6 Balloon and Systems Description

Add the following:

48.6.2.3 Baskets

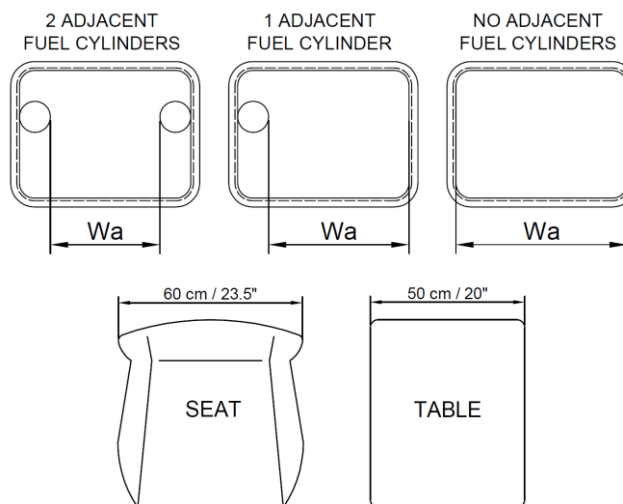
CV-08 Basket is fitted with four seats for passenger accommodation, including individual foldable trays and full seat harnesses. The wall in front has been lowered to improve the sight from the passenger position. Each seat is equipped also with a waist restraint harness to the basket structure.

CV-06 Basket is fitted with one to three seats for passenger accommodation, including individual foldable trays and full seat harnesses. In addition, a side table can be installed. Each seat is equipped also with a waist restraint harness to the seat structure.

CV-06 Basket uses an anchor rail based fixing system for attaching the seats or the side table to the basket floor. As a result, the position of the seats or the side table can be easily changed allowing multiple configurations. All configurations complying with the following rule are to be considered approved:

$$(0.6 \times \text{Nr. Seats}) + (0.5 \times \text{Nr. Side Tables}) \leq \text{Width Available (Wa)}$$

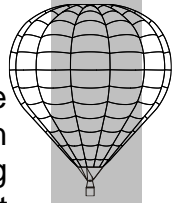
Where 0.6 and 0.5 are the widths of a seat and a side table respectively in metres and the available width is defined as follows:



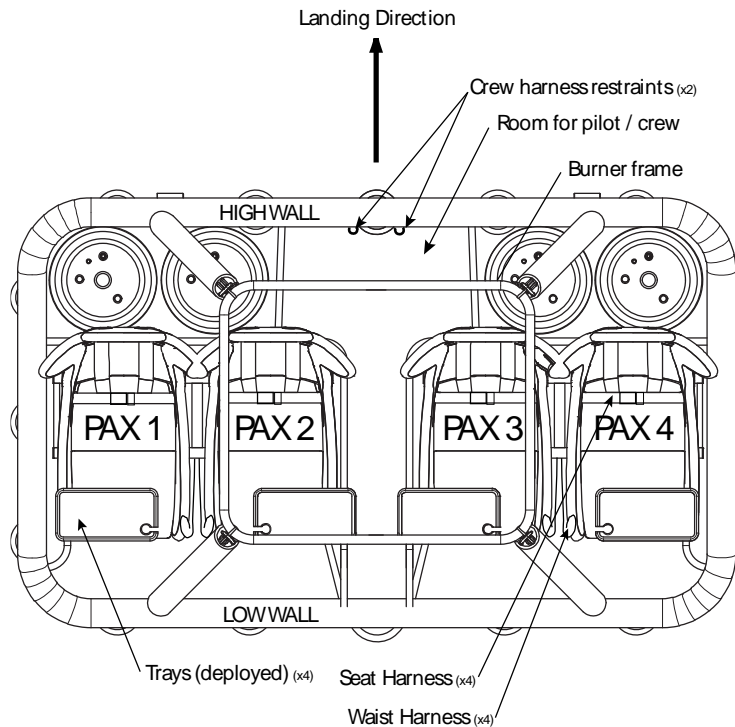
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For a valid configuration any order/distribution of the items is approved.

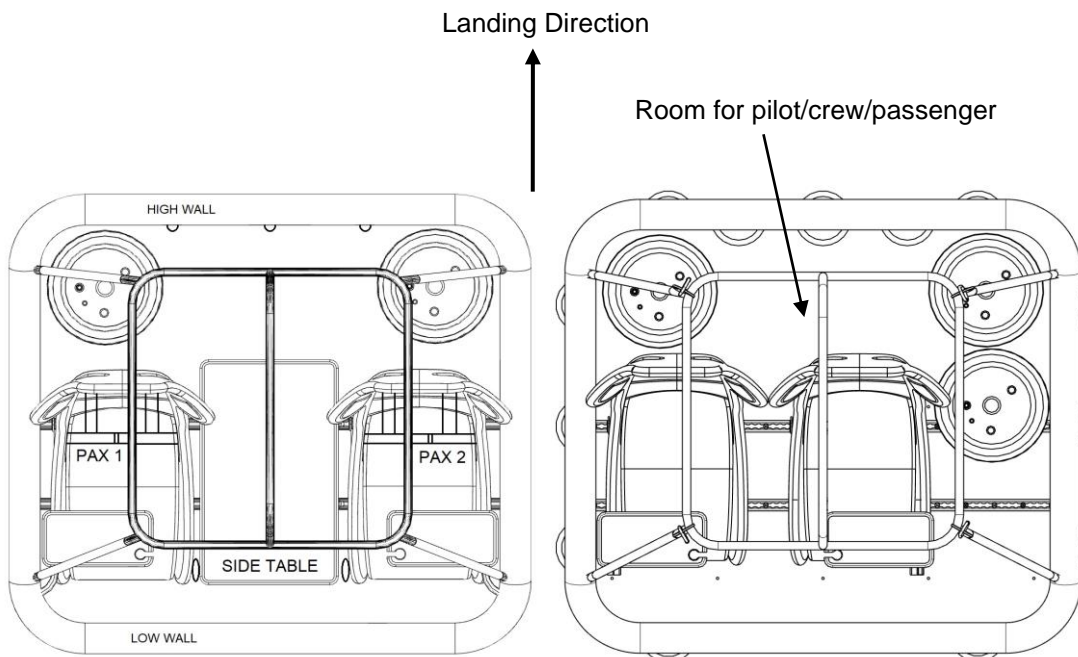
In normal conditions pilot (and crew, if present) stand up at the centre of the basket, behind the two centre seats in the CV-08 or the seat(s)/side table in the CV-06. The presence of crew or flight attendant is subject to having enough room in accordance with 48.D. Crew or flight attendant place might be used to carry an extra passenger instead.



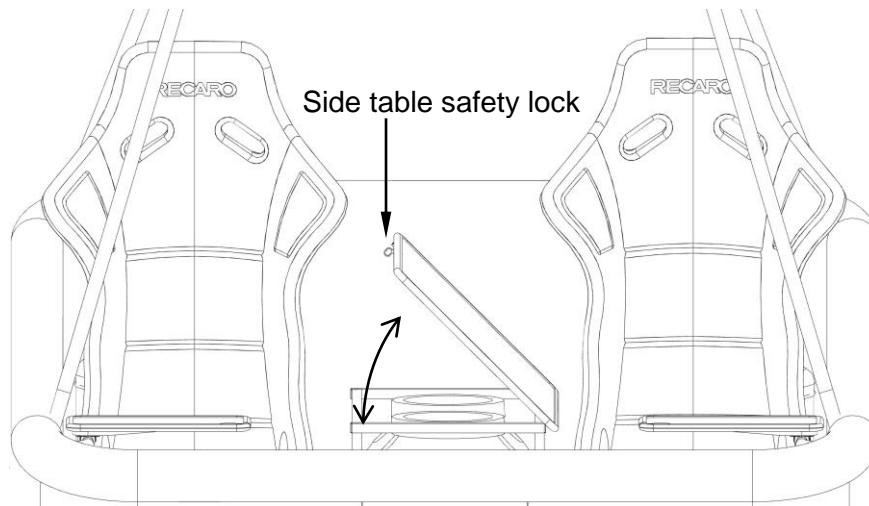
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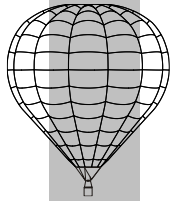
Top view of the CV-08 Basket (Burner not displayed)
Figure 1



Top view of the CV-06 Basket showing two possible configurations
(Burner not displayed)
Figure 2



Front view of the CV-06 Basket
Figure 3



48.6.3 Dimensions and Weights

See following table corresponding to mass and dimensions:

BASKET	CV-06	CV-08
Length (m)	1,5 – 2,0	2,6
Width (m)	1,4 – 1,6	1,5
Wall height (m)	0.70 to 1.15	0.70 to 1.15
Empty Mass* (kg)	195	270
Min Karabiner Strength (kN)	3000	3000
Max. Load (kg)	1076	1200

* Fuel cylinders, burner and burner frame not included

48.7 Balloon Handling, Maintenance and Care

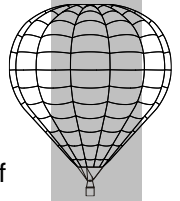
Add the following:

48.7.4 Ground handling and transportation

It is recommended to cover the seats and stow the tables during transport. The special length of the nylon rods shifts the importance of a complete de-rigging of the burner frame from the basket prior to the ground transportation.

48.8 Other Manufacturer's Equipment

No change.



48.C QUICK REFERENCE PRE-FLIGHT CHECKLIST

Add the following to the Basket pre-flight checklist:

Basket

- Check the seat harnesses and their attachments for entanglements, or signs of excessive wear or damage. Check that the buckles remain operative.
- Check the waist restraint harnesses and their attachments for entanglements, or signs of excessive wear or damage. Check that the buckles and karabiners remain operative.
- Check that trays, side table and accessories are stowed.
- Check that the seat structures are firmly secured to the floor and do not present free movement or distortion.

48.D MINIMUM BASKET SPACE REQUIREMENTS

Consider the following table:

Basket Specs.				Capacity		
Model	Width	Length	Max Load	Cylinders	Pilot / Crew	Passengers
CV-08	1.5 m	2.6 m	1200 kg	4	1	Max. 4
				Up to 3	1 or 2	Max. 4

Only an individual use of each seat is allowed.

Given the modularity of the CV-06 basket design, minimum space requirements for this basket shall be established according to the next:

- A minimum 0,25 m² floor area shall be allowed for each occupant with no assigned seat flying within the pilot designated space. This allows to fly with up to one crew/flight attendant/passenger next to the pilot in some of the approved basket configurations/sizes.
- No occupant must fly next to the lower wall side of the basket without having an assigned seat.

Hence, total number of occupants equals to the number of available seats plus the pilot, plus the extra crew/flight attendant/passenger if applicable.