DEPARTMENT OF TRANSPORTATION FEDERAL AVIATION ADMINISTRATION

B1EU **Revision** 14 Cameron Balloons Types O-84, O-77 O-65, O-56 O-42, O-31 A-105, A-140 V-65, V-56 O-105, CAN N-31, N-56 N-77, N-105 V-77, V-31 N-65 N-90, N-180 0-160, V-42 A-210 A-250 A-300 A-315 January 8, 1996

TYPE CERTIFICATE DATA SHEET NO. B1EU

This data sheet which is part of Type Certificate no. B1EU prescribes conditions and limitations under which the product for which the Type Certificate was issued meets the airworthiness requirements of the Federal Aviation Regulations.

<u>Type Certificate Holder.</u>	Cameron Balloons Ltd. Johns Street Bedminster Bristol BS3 4NH England
I. Type O-84, hot air balloon, a	pproved December 12, 1973.
Air Heater.	Cameron Mk3 Burner assembly (single) Dwg. CB200; or (double) Dwg. CB205.
Fuel.	Commercial Propane.
<u>Maximum Weight.</u>	1680 pounds (this weight includes the envelope weight but excludes the weight of the lifting hot air).
Maximum Allowable Envelope Temperature.	250°F (120°C)
Serial Nos. Eligible.	See "Import Requirements".

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<u>Temperature.</u> Serial Nos. Eligible.

	inting not air).
Maximum Allowable Envelope	250°F (120°C)
Temperature.	
Serial Nos. Eligible.	See "Import Requirements"

III. <u>Type 0-65, hot air b</u>	alloon, approved December 12, 1973.
Type V-65, hot air b	alloon, similar to 0-65 except Type V has 8 gores, approved April 5, 1979.
Type CAN, hot air b	alloon, similar to 0-65 except Type CAN cylindrical 12 gore envelope, approved April 5, 1979.
Type N-65, 3 place h	ot air balloon, similar to -65 except Type N has 24 gores, approved December 15, 1982.
Air Heater.	Cameron Mk3 burner assembly (single) Dwg. CB200; or (double) Dwg. CB205.
Fuel.	Commercial propane.
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Commercial propane.
1300 pounds (this weight includes the envelope weight but excludes the weight of the
lifting hot air).
250°F (120°C)
See "Import Requirements".

IV. <u>Type 0-56, hot air balloon, app</u>	roved December 12, 1973.
Type V-56, similar to 0-56 exce	pt Type V has 8 gores and uses parachute rip panel versus Velcro rip panel, approved
<u>February 10, 1976.</u>	
Type N-56, hot air balloon simi	ilar to Type 0-56 except Type N has 24 gores, approved November 22, 1977.
Air Heater.	Cameron Mk3 burner assembly (single) Dwg. CB200; or (Double) Dwg. CB205.
Fuel.	Commercial propane.
Maximum Weight.	1120 pounds (this weight includes the envelope weight but excludes the weight of the
-	lifting hot air).
Maximum Allowable Envelope	250°F (120°C)

V. <u>Type 0-42, hot air balloon, approved December 12, 1973.</u> <u>Type V-42, hot air balloon, approved December 17, 1986.</u>

Air Heater.	Cameron Mk3 burner assembly (single) Dwg. CB200; or (double) Dwg. CB205; or
	Cameron Mk4 burner assembly (single) Dwg. CB391; or (double) Dwg. CB392.
Fuel.	Commercial propane.
Maximum Weight.	840 pounds (this weight includes the envelope weight but excludes the weight of the
	lifting hot air).
Maximum Allowable Envelope	250°F (120°C)
Temperature.	
Serial Nos. Eligible.	See "Import Requirements".

See "Import Requirements".

VI. <u>Type 0-31, hot air balloon, approved December 12, 1973.</u> <u>Type N-31, hot air balloon, similar to 0-31 except Type N has 24 gores, approved November 22, 1977.</u> <u>Type V-31, 1 place hot air balloon, similar to 0-31 except Type V has 8 gores, approved April 5, 1978.</u>

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<u>Air Heater.</u>	Cameron MK3 burner assembly (single) Dwg. CB200, or (double) Dwg. CB205.
<u>Fuel.</u>	Commercial propane.
Maximum Weight.	630 pounds (this weight includes the envelope weight but excludes the weight of the
	lifting hot air).
Maximum Allowable Envelope	250°F (120°C)
Temperature.	
Serial Nos. Eligible.	See "Import Requirements".

VII. Type N-90, hot air balloon, approved December 17, 1986.

Air Heater.	Cameron Mk3 burner assembly (double) Dwg. CB205, or
	Cameron Mk3 burner assembly (double) Dwg. CB392.
Fuel.	Commercial propane.
Maximum Weight.	1800 pounds (This weight includes the envelope weight but excludes the weight of the
	lifting hot air).
Maximum Allowable Envelope	250°F (120°C)
Temperature.	
Serial Nos. Eligible.	See "Import Requirements".

VIII.Type A-105, hot air balloon, approved May 15, 1975.
Type N-105, hot air balloon, similar to Type A-105 except Type N has 28 gores, approved November 22, 1977.
Type 0-105, hot air balloon, similar to Type A-105 except Type 0 has 12 gores, approved May 29, 1979.

Air Heater.	Cameron Mk3 burner assembly (double) Dwg. CB205.
Fuel.	Commercial propane.
Maximum Weight.	2100 pounds (this weight includes the envelope weight but excludes the weight of the
	lifting hot air).
Maximum Allowable Envelope	250°F (120°C)
Temperature.	
Serial Nos. Eligible.	See "Import Requirements".

IX. Type A-140, hot air balloon, approved May 15, 1975.

Cameron Mk3 burner assembly (double) Dwg. CB205.
Commercial propane.
2800 pounds (this weight includes the envelope weight but excludes the weight of the
lifting hot air).
250°F (120°C)
See "Import Requirements".

X. Type 0-160, hot air balloon, approved December 17, 1986.

Air Heater.	Cameron Mk3 burner assembly (double) Dwg. CB205; or
	Cameron Mk4 burner assembly (double) Dwg. CB392; or
	Cameron Mk4 burner assembly (triple) Dwg. CB378.
Fuel.	Commercial propane.
Maximum Weight.	3200 pounds (this weight includes the envelope weight but excludes the weight of the
	lifting hot air).
Maximum Allowable Envelope	250°F (120°C)
Temperature.	

XI.	Type N-180.	hot air balloon.	approved December	17, 1986.

Air Heater.	Cameron Mk3 burner assembly (double) Dwg. CB205; or
	Cameron Mk4 burner assembly (double) Dwg. CB392; or
	Cameron Mk4 burner assembly (double) Dwg. CB378.
Fuel.	Commercial propane.
Maximum Weight.	3600 pounds (this weight includes the envelope weight but excludes the weight of the
	lifting hot air).
Maximum Allowable Envelope	250°F (120°C)
Temperature.	
Serial Nos. Eligible.	See "Import Requirements".

XII. Type A-210, hot air balloon, approved March 18, 1991.

Envelope.	Cameron envelope, Drawing CB199.
<u>Air Heaters.</u>	Cameron Mk4, super burner assembly (triple) Dwg. CB378; or Cameron Mk4, "super" burner assembly (triple) Dwg. CB663; or Cameron Mk4, "super" burner assembly (quadruple) Dwg. CB616
Baskets.	Cameron basket to any size specified in drawing CB300-2A to CB300-4A or drawing CB310-1A to CB310-4A or drawing CB303 or drawing CB308 or drawing CB302-1 or drawing CB302-2.
Fuel.	Commercial LPG. or propane.
<u>Maximum Weight.</u>	Gross weight limited to 4200 lb or the weight requiring maximum continuous envelope temperature of 250°F, whichever is less. See balloon flight manual.
<u>Allowable Envelope</u> Temperature.	1. Never exceed: 275°F.
	2. For no longer than 10 minutes continuously or 10 minutes per two hours of flight: 250°F to 275°F.
	3. Maximum continuous: 250°F.
<u>Maximum Takeoff Altitude.</u> <u>Minimum Crew.</u>	18,000 ft MSL. 1 pilot.

XIII. Type A-250, hot air balloon, approved January 24, 1992.

Envelope.	Volume 250,000 cm	u. ft. (7080 Cu. m).	
	Drawing CB463.		
Air Heaters.	Cameron Mk3 burner assembly (double) Dwg. CB205		
	Cameron Mk4 burn	ner assembly (double) Dwg. CB371	
Baskets.	CB300	Standard Basket	
	CB300/A	Aristocrat Basket	
	CB302	Partitioned Basket	
Fuel.	Commercial propane.		
Maximum Weight.	Gross weight limit	ed to 5000 lb. (this weight includes the envelope weight but excludes	
	the weight of the li	fting hot air).	
Maximum Allowable Envelope	250°F (120°C)		
Temperature.			
Empty Weight.	930 lb. (Empty wei	ght consists of basket plus burner, envelope and auxiliaries). Fuel	
	cylinders and fuel	weight must be added.	
	NOTE: Empty w	eight configuration assumed is with triple burner and large	
	partitione	ed basket. If double burner is used, subtract 35 lbs.	
Maximum Occupants.	15 (Including Pilot).	
Serial Nos. Eligible.	See "Import Requir	rement".	

XIII. Type A-250 (cont'd) Fuel Capacity.	Two Cameron Master tanks and one standard or master tank must be present except if the liquid propane pilot light is used three tanks must be present, master or standard. Additional Cameron master or standard tanks must be carried as desired by the pilot. Cameron master tanks are P/N CB250 master (10 gallon or 8 gallon capacity, each at 80 percent fill), P/N CB497 when fitted with vapor outlet and regular (10 gallon capacity at 80 percent fill), P/N CB599 when fitted with vapor outlet and regulator (11 gallon capacity at 80 percent fill), and P/N CB426 (15 gallon capacity, at 85 percent fill) when fitted with vapor outlet and regulator. Cameron standard tanks are P/N CB250 standard (10 gallon or 8 gallon capacity, each at 80 percent fill), P/N CB497 when not fitted with vapor outlet (11 gallon capacity at 80 percent fill), P/N CB599 when not fitted with vapor outlet (11 gallon capacity at 80 percent fill), P/N CB497 when not fitted with vapor outlet (11 gallon capacity at 80 percent fill), P/N CB599 when not fitted with vapor outlet (11 gallon capacity at 80 percent fill), P/N CB497 when not fitted with vapor outlet (11 gallon capacity at 80 percent fill), P/N CB497 when not fitted with vapor outlet (11 gallon capacity at 80 percent fill), P/N CB496 when not fitted with vapor outlet (11 gallon capacity at 80 percent fill), and P/N CB426 when not fitted with vapor outlet (15 gallon capacity, at 85 percent fill).	
Serial Nos. Eligible.	See "Import Requirements".	
XIV. Type "A-300" hot air balloon	, approved December 22, 1995.	
Envelope.	Cameron envelope, Drawing CB603. Volume: 300,000 cu.ft. (8500 m ³)	
Air Heaters.	Any approved triple burner or quadruple burner. (See NOTE 9).	
Baskets.	Any basket approved for 6000 pounds or less capacity. (See NOTE 10).	
Maximum Weight.	Gross weight limited to 6000 lb (2722 kg). (this weight includes the envelope weight but excludes the weight of the lifting hot air).	
Fuel.	Commerical propane.	
<u>Fuel Capacity.</u>	When triple burner with liquid pilot lights is used, three Cameron Master or Standard tanks must be present. When quadruple burner with vapor pilot lights is used, four Cameron Master tanks must be present. When quadruple burner with liquid pilot lights is used, four Cameron Master or Standard tanks must be present. Additional Cameron Master or Standard tanks may be carried as desired by pilot (See NOTE 8).	
Maximum Allowable Envelope		
<u>Temperature.</u>	 Never exceed: 275°F For no longer than 10 minutes continuously or 10 minutes per two hours of flight: 250°F to 275°F Maximum continuous 250°F 	
Maximum Takeoff Altitude.	18,000 ft MSL.	
Minimum Crew.	One (1) pilot.	
Serial Numbers Eligible.	See "Import Requirements".	
XV. Type "A-315" hot air balloon	, approved December 22, 1995.	
Envelope:	Cameron envelope, Drawing CB1028. Volume: 315,000 cu.ft. (8920 m ³).	
Air Heaters.	Any approved triple burner or quadruple burner. (See Note 9).	
Baskets.	Any basket approved for 6000 pounds or greater capacity. (See Note 10).	
Maximum Weight.	Gross weight limited to 6300 lb. (this weight includes the envelope weight but excludes the weight of the lifting hot air).	

Commercial propane.

<u>Fuel Capacity.</u>	Wher tanks Came is use Maste	When triple burner with liquid pilot lights is used, three Cameron Master or Standard tanks must be present. When quadruple burner with vapor pilot lights is used, four Cameron Master tanks must be present. When quadruple burner with liquid pilot lights is used, four Cameron Master or Standard tanks must be present. Additional Cameron Master or Standard tanks may be carried as desired by pilot (see NOTE 8).	
Allowable Envelope Temperature.	1. 2. 3.	Never exceed: For no longer than 10 min of flight: Maximum continuous:	275°F utes continuously or 10 minutes per two hours 250°F-275°F 250°F
Maximum Takeoff Altitude.	18,000 ft. MSL		
Minimum Crew.	One ((1) pilot	
Serial Numbers Eligible.	See "	Import Requirements".	

DATA PERTINENT TO ALL MODELS.

Import Requirements.	A U.S. Standard Airworthiness Certificate may be issued on the basis of a Certificate of Airworthiness for Export, signed by a representative of the U.K. Civil Aviation Authority, Airworthiness Division, containing the following statement: "The balloon covered by this certificate has been examined, tested and found to conform to the type design approved under FAA Type Certificate B1EU and is in a condition for safe operation."	
Certification Basis.	 FAR 21.29 and FAR 31 effective July 1, 1964 as amended by amendments 31-1 and 31-2. For Models A-210, A-250, A-300 and A-315, FAR 31 effective July 1, 1964 as amended by amendments 31-1 through 31-4. Type Certificate No. B1EU, issued December 12, 1973. Date of Application for Type Certificate: May 26, 1972. 	
Validation Basis.	Type Certificate No. B1EU was issued pursuant to FAR 21.29 in validation of the U.K. Civil Aviation Authority's certification of compliance with the aforementioned FAA certification basis.	
Equipment.	The basic required equipment as prescribed in the applicable airworthiness regulation (see Certification Basis) must be installed in the balloon for standard airworthiness certification. In addition the following equipment must be installed.	
	1. Two sources of ignition (striker, matches or equal) in addition to ignition sources in the burner units	
	 Cameron Balloons Ltd. Flight Manual issue 4, or subsequent issue, or Cameron Balloons US Flight Manual, dated July 27, 1983 or later FAA-approved revision. 	
Service Information.	Cameron Balloons Ltd. technical information (Service Bulletins) published in the English language for the U.S. Type Designs that carry a statement "Approved by the U.K. Civil Airworthiness Authority (UK-CAA) may be interpreted as FAA approved.	

NOTES.

NOTE 1.	Annual maintenance checks should be carried out in accordance with the inspection schedule included in
	Section 4 of Cameron Balloons Pilot's Notes and Operating Handbook or in Section 7 of Cameron Balloons
	Flight and Maintenance Manual. Model A300 annual maintenance checks should be carried out in
	accordance with the inspection schedule included in Section 2.2 of Cameron Balloons Maintenance Manual.

- NOTE 2. Each hot air ballon envelope must have an individual registration number. An individual envelope is eligible for a Standard Airworthiness Certificate when mated with an approved Cameron basket. Change to an eligible combination of envelope and basket must be documented by making a log book entry by the Pilot-in-Command or certified mechanic.
- NOTE 3. Reserved
- NOTE 4. Reserved
- NOTE 5. For the purpose of maintenance and inspection, operation records (logbooks) must be maintained with each hot air ballon envelope. If burner, basket, instruments, and/or tanks are interchanged, separate logbooks must be maintained for each component or group of components which are always used together. Fuel tanks must be inspected at least annually, and if tanks other than the serial numbers specified in the Flight Manual are to be used with the aircraft, the additional tanks must be inspected and noted in the Flight Manual by an FAA Certificated Repair-man. The Flight Manual must be presented to an FAA Certificated Repair Station during annual inspections for verification of components being inspected.
- NOTE 6. Reserved
- NOTE 7. Reserved
- Eligible Cameron Master tanks are P/N CB250 Master (10 gallon or 8 gallon capacity, each at 80 percent NOTE 8. fill), P/N CB497 when fitted when vapor outlet and regulator (10 gallon capacity, at 80 percent fill), P/N CB599 when fitted with vapor outlet and regulator (11 gallon capacity, at 80 percent fill), P/N CB426 when fitted with vapor outlet and regulator (15 gallon capacity, at 85 percent fill), P/N CBUS1050 when fitted with vapor outlet and regulator (15 gallon capacity, at 83 percent fill), P/N CB959 when fitted with vapor outlet and regulator (20 gallon capacity, at 81.8 percent fill). Eligible Cameron Standard tanks are P/N CB250 Standard (10 gallon or 8 gallon capacity, each at 80 percent fill), P/N CB426 when not fitted with vapor outlet and regulator (15 gallon capacity, at 85 percent fill), P/N CB497 when not fitted with vapor outlet and regulator (10 gallon capacity, at 80 percent fill), P/N CB599 when not fitted with vapor outlet and regulator (11 gallon capacity, at 80 percent fill), P/N CBUS1050 when not fitted with vapor outlet and regulator (15 gallon capacity, at 83 percent fill), P/N CB959 when not fitted with vapor outlet and regulator (20 gallon capacity, at 81.8 percent fill). P/N CB426, CB497, CB599, and CBUS1050 tanks may be used only with baskets with Serial No. 8800 and up. P/N CB959 tanks may be used only with basket part numbers CBUS301-5, CB302, CB302-1, CBUS302-1, CB302-2, CBUS302-2, CB302-3, CBUS302-3, CB302-4, CBUS302-4, CB754, CB755, CB860, CB862, and having Serial No. 9300 and up.
- NOTE 9.Cameron single burners:
Cameron double burners:Part No. CB391, CBUS391, CB2130-1, CB2130-2
Part No. CB205, CB392, CBUS392, CB579, CBUS579, CB579-1, CB579-2,
CB2075-1, CB2075-2, or Part No. CB2059;
Part No. CB378, CB663-1, CB663-2, CB2081-1 or Part No. CB2081-2;
Part No. CB616, CB2083-1 or Part No. CB2083-2.
- NOTE 10. The following baskets are certified for gross weight of 6,000 or less: Cameron basket to any size specified in Drawing or Part No. CB300, CBUS300, CB301, CBUS301, CBUS301-5, CB301-7, CB301-8. CB302, CBUS302, CB302-1, CBUS302-1, CB302-2, CBUS302-2, CB302-3, CBUS302-3, CB302-4, CBUS302-4, CB310-1A, CB310-2A, CB310-3A, CB310-4A, CB310-5A, CB754, CB755, CB860, CB862, CBUS1056, CB3004, CB3022, CB3042, CB3084.
 The following baskets are certified for gross weight of 5,000 lbs or less: CB301-9.

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