
European Aviation Safety Agency

EASA

**SPECIFIC AIRWORTHINESS
SPECIFICATION**

for

Hot Air Balloon

Viking Series

56 A 120 A
69 A 160 A
77 A 180 A
90 A 210 A
105 A 240 A

as specified in Section I

This Specific Airworthiness Specification is issued in accordance with Regulation (EC) 1592/2002 Article 15(1)(b). There is no valid Type Certificate for this aircraft type. The former Type Certificate holder was:

Viking Balloons AB
PL 132 B
260 83 Vejbystrand
Sweden

List of effective Pages:

Page	all
Issue	1

CONTENTS

SECTION 1:	Aircraft Design Definition	3
I.	Former TCDS:	
	Specifikation till Typcertifikat A 1/88, rev. A, revision nr. 2	3
	EASA courtesy translation of TCDS	4
II.	Design Changes (see TCDS, Notes 1. – 6.)	4
SECTION 2:	Airworthiness Directives	5
SECTION 3:	Occurrence Reporting	5
SECTION 4:	Other Limitations	5
SECTION 5:	Notes	5

VIKING	56 A
	69 A
	77 A
	90 A
	105 A
	120 A
	160 A
	180 A
	210 A
	240 A

Revision nr 2
6 juni 1991

SPECIFIKATION TILL TYPCERTIFIKAT A 1/88, rev. A.

Innehavare: VIKING BALLOONS AB
PL 132 B
260 83 VEJBYSTRAND

(Former SL BALLOON)
(Tidigare SL BALLOON)



Hot Air Balloon approved
Varmluftballong VIKING godkänd 7 mars 1988 (mod. 56 A - 105 A)
samt 18 november 1988 (mod. 120 A - 240 A).

Designation Modellbeteckning (Not 1)	56 A	69 A	77 A	90 A	105 A	120 A	160 A	180 A	210 A	240 A
Volym cu ft (c:a)	56.000	69.000	77.000	90.000	105.000	120.000	160.000	180.000	210.000	240.000
Brännare typ: Burner type:	← SLB-001 dubbelbrännare double				← SLB-001 kombination tre brännare three burners ← två SLB-001 dubbelbrännare two double →					
Bränsle: Fuel:	← Propan →									
Max temp. i hölje mom:	← 110°C				← 100°C					
Basket model: kont:	← 100°C									
Ballongkorg VIKING mod: (Not 2) Number occupants	105	105	125	145	175	175	200	200	220	240
Personer inkl. förare: (Not 3) (incl. pilot)	3	3	4	5	6	7	8	9	10	12
Antal bärband: Number of loadtapes	24-28	24-28	20-28	20-28	20-28	24-28	28-32	28-32	28-32	32
Max flygvikt kg: (Not 4)	510	625	700	820	955	1080	1250	1355	1505	1720
Max gross weight										

För ovanstående modeller gäller dessutom:

Base for certification
Certifieringsunderlag: UK CAA BCAR 494 Part 31, 31 Aug 1984.

Applicable serial numbers (construction numbers)
Aktuella tillverkningsnummer: SL BALLOON s/n 002 och högre.

Flight Manual:
Flyghandbok: Flyghandbok med begränsningar samt anvisningar för tillsyn och underhåll utgiven av SL BALLOON och godkänd av Luftfartsinspektionen skall finnas för varje individ.

Placards/
Skyltar: Tillverkningsskylt enligt BCL-M 3.1 skall finnas för ballonghölje (kronring), ballongkorg och brännare.

Equipment:
Utrustning: For min required equipment refer to BCL-M 5.1. For special operation minimiutrustning för all flygning framgår av BCL-M 5.1. För speciella driftförhållanden kan krav ställas på tillägsutrustning enligt BCL-D 4.2.

Fuel tanks must be of approved type and fixed to the basket structure by proper straps or other means. Lines hoses and connections must be of type delivered with the balloon or otherwise approved for this application.

The Type Certificate includes intermediate sizes between those shown above.

Not 1. Typecertifikatet innefattar även eventuella mellanliggande specialstorlekar.

Not 2. Basket model may be altered in combination with balloon model. Korgmodell kan varieras i kombination med ballongmodell. Som regel är totala tillsatsvikten och antalet passagerare avgörande för val av korg - se flyghandbok.

Standardmodeller av korgar typ VIKING.

Modell	105	125	145	175	200	220	240
Längd/bredd cm length/width	105x105	125x105	145x105	175x120	200x150	220x150	240x150
Inre höjd till bärsg om inside height to rail	115	115	115	115	115	115	115
Vikt kg c:a weight (approx)	55	60	70	100-120	180	200	220
Antal personer Number of occupants	3	4	5	6 - 7	8 - 9	10	12
Mellanväggar dividers	-	-	-	(1)	2	2	2

Minor variations are allowed under this type certificate. Smärre variationer medges inom ramen för typcertifikatet. There must be two handholds provided for each occupant. Varje ombordvarande skall ha tillgång till två fasta handtag.

Not 3. The number of occupants carried must not exceed the number approved for each basket model. Antalet ombordvarande får ej överstiga det för aktuell korg godkända.

Not 4. This gross wt is the sum of envelope, basket, and equipment and payload under ideal conditions and thereby forms the base. Denna flygvikt utgör summan av ballonghölje, korg och utrustning samt last under idealliska förhållanden och ligger till grund för beräkning av hållfastheten. Praktisk flygvikt med hänsyn till yttre förhållanden är som regel lägre och beräknas för varje flygning enligt flyghandbok. This gross weight is usually lower and is calculated from the Flight Manual for each flight.

Not 5. Brännare av typ SLB får efter godkännande av Viking Balloons inom ramen för denna specifikation ersättas med brännare av motsvarande kapacitet tillverkad av Thunder & Colt och godkänd i UK. Burner SLB may upon approval from Viking Balloons be replaced by an equivalent burner manufactured by T & C.

Not 6. Ballongkorg typ Viking enligt ovan får inom ramen för denna specifikation ersättas med certifierad ballongkorg av annat fabrikat efter godkännande av Viking Balloons. Viking basket above may upon approval by Viking Balloons be replaced by approved basket of similar type produced by other manufacturer.

(EASA courtesy translation)

SWEDISH CIVIL AVIATION ADMINISTRATION

Data Sheet to Type Certificate A 1/88, rev. A

Holder: VIKING BALLOONS AB (former: SL BALLOONS)
PL 132 B
260 83 VEJBYSTRAND

A 1/88	
VIKING	56 A
	69 A
	77 A
	90 A
	105 A
	120 A
	160 A
	180 A
	210 A
	240 A
Revision nr. 2 6 June 1991	

Hot Air Balloon VIKING approved 7 March 1988 (variants 56 A – 105 A)
and 18 November 1988 (variants 120 A – 240 A)

Designation (Note 1.)	56 A	69 A	77 A	90 A	105 A	120 A	160 A	180 A	210 A	240 A	
Volume [cu ft] approx.	56,000	69,000	77,000	90,000	105,000	120,000	160,000	180,000	210,000	240,000	
Burner type	SLB-001 double burner										
						SLB-001 combination triple burner					
							two SLB-001 double burners				
Fuel	Propane										
Max. short time envelope temperature	110°C										
Max. continuous envelope temperature	100°C										
VIKING basket model (Note 2.)	105	105	125	145	175	175	200	200	220	240	
Occupants incl. pilot (Note 3.)	3	3	4	5	6	7	8	9	10	12	
Number of load tapes	24-28	24-28	24-28	24-28	24-28	24-28	28-32	28-32	28-32	32	
Max. take-off mass [kg] (Note 4.)	510	625	700	820	955	1080	1250	1355	1502	1720	

For the variants above it applies in addition

Certification basis:	UK CAA BCAR 494 Part 31, 31 August 1984.
Eligible serial numbers:	SL BALLOON s/n 002 and higher.
Flight Manual:	Flight Manual with limitations and instructions for inspections and maintenance issued by SL BALLOON and approved by Luftfartsinspektionen shall be present for each balloon.
Placards:	A manufacturing placard according to BCL-M 3.1 must be installed for the envelope (crown ring), basket and burner.
Equipment:	Minimum equipment for all flights is described in BCL-M 5.1. For special operating conditions additional equipment may be required according to BCL-D 4.2. Fuel cylinders must be of an approved type and mounted in the basket structure with proper straps. Lines, hoses and couplings must be of the type delivered with the balloon or as otherwise approved for this application.

Note 1. The Type Certificate includes intermediate sizes between those shown above.

Note 2. Different model of baskets can be combined with different models of balloons. As a rule the total added weight and the number of passengers decides the choice of basket – see Flight Manual.

Standard models of VIKING baskets

Model	105	125	145	175	200	220	240
Length/width [cm]	105x105	125x105	145x105	175x120	200x150	220x150	240x150
Inner wall height till rim [cm]	115	115	115	115	115	115	115
Mass [kg] approx.	55	60	70	100-120	180	200	220
Max. number of occupants	3	4	5	6-7	8-9	10	12
Basket partitions	-	-	-	(1)	2	2	2

Minor variations are allowed within the type certificate.

There must be two handholds provided for each occupant.

Note 3. The number of occupants carried must not exceed the number approved for each basket model.

Note 4. This gross weight is the sum of envelope, basket and equipment and payload under ideal conditions and thereby forms the base for stress calculation. Practical lift off weight considering actual conditions is usually lower and is calculated from the Flight Manual for each flight.

Note 5. The burner SLB may upon approval from Viking Balloons be replaced by an equivalent burner manufactured by Thunder&Colt and approved in United Kingdom.

Note 6. The VIKING baskets above may upon approval by VIKING Balloons be replaced by approved baskets of similar type produced by other manufacturers.

- End -

SECTION 2: Airworthiness Directives

None

SECTION 3: Occurrence Reporting

The Specific Airworthiness Specification may be used as a basis for the issue of a Restricted Certificate of Airworthiness in accordance with 21A.173(b)(2) under the following conditions:

- a) The holder of a Restricted Certificate of Airworthiness based on this Specific Airworthiness Specification shall report to the State of Registry all information related to occurrences associated with the operation of the aircraft which affects or could affect the safety of operation¹.
- b) Such reports shall be despatched within 72 hours of the time when the occurrence was identified unless exceptional circumstances prevent this.
- c) The State of Registry shall forward the information received under (a) to the Agency when it relates to failures, malfunctions, defects or other occurrences which cause or might cause adverse effects on the continuing airworthiness of the aircraft.

SECTION 4: Other Limitations

None

SECTION 5: Notes

- I. In case that specific design data and documentation of the Viking Series are needed by approved organisations for repairs beyond the scope of the Maintenance Manual or for changes please contact:

Luftfartsstyrelsen / Swedish CAA
SE-601 73 Norrköping
Sverige
- II. Some balloon parts of the Viking Series are similar in design and construction to parts of balloons under EASA Type Certificates. However, if these parts are not covered by the document on page 3 of this EASA.SAS.BA.012 they must not be interchanged unless they are specifically approved for installation by the Agency in conformity with Part 21.

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¹ AMC 20-8 contains guidance describing the occurrences which are to be reported