



TYPE CERTIFICATE DATA SHEET Nº EB-2018T01

Type Certificate Holder:

FLIEGEN WORKS INC.
921 SE 47th
Portland, OR 97215
USA

EB-2018T01-00
Sheet 01

FLIEGEN WORKS

138S

13 March 2018

This data sheet, which is part of Type Certificate No. 2008T01, prescribes conditions and limitations under which the product, for which the Type Certificate was issued, meets the airworthiness requirements of the Brazilian Aeronautical Regulations.

I – Model 138S (Normal Category), approved 13 March 2018.

ENVELOPE

Volume: 3 908 m³ (138,000 cu.ft).
Maximum Pressure: 71,03 mm.H₂O (2.8 in.H₂O).
Minimum Pressure: 27,90 mm.H₂O (1.1 in.H₂O).

LIFTING GAS

Helium gas. The airship is to be inflated with laboratory grade (99.9% purity) Helium gas only.

ENGINE

One Textron Lycoming – AVCO Corporation IO-540-K2A5.
(ANAC TC 8209)

FUEL

100 LL minimum grade Aviation Gasoline.

ENGINE LIMITS*

Maximum continuous: 2 700 r.p.m.
Takeoff: 2 700 r.p.m.
Maximum cylinder heat temperature: 246°C (475°F).
Maximum inlet oil temperature: 118°C (245°F)
*See NOTE x.

OIL

MIL-L-22851 grade SAE 40 or better @ operation
at -1 to 32°C (30°-90°F).
MIL-L-22851 grade SAE 40 or better @ operation
at -1 to 21°C (0°-70°F).

PROPELLER

Hartzell HC-E3YR-7LF/FLC-8468G-8Q.
(ANAC TC 8712).

PROPELLER LIMITS

300 HP @ 2 700 r.p.m.
Diameter limited at 1,98m (78 in).

AIRSPPEED LIMITS	Maximum Operating Limit Speed: 54 m.p.h IAS. Design Speed for Max. Gust Intensity: 40 m.p.h EAS.
C.G. RANGE	See approved Flight Manual
DATUM	Theoretical bow of the envelope. The theoretical bow is 0,508 m (20 in.) aft of the nose mooring probe. All station measurements are shown in inches. Car datum is airship station 16,74 m (659.0 in).
MAXIMUM WEIGHT	Maximum airship takeoff and landing weight: 4 034 kgf (8 900 lbs). Maximum car weight: 2 429 kgf (5 356 lbs). Maximum static heaviness: 181,4 kgf (400 lbs). Maximum static lightness: 90,7 kgf (200 lbs).
MINIMUM CREW	One copilot
MAXIMUM OCCUPANTS	Six 2 @ car station 1,02 m (40.0 in). 2 @ car station 2,43 m (95.0 in). 2 @ car station 3,15 m (124.0 in).
FUEL CAPACITY	401 l (106 gal) (usable fuel: 378,5 l (100.0 gal))
OIL CAPACITY	Maximum: 11,36 l (12 qts). Minimum: 8,5 l (9 qts).
MAXIMUM OPERATING ALTITUDE	2 743 m (9 000 ft).
SERIAL NUMBER ELIGIBLE	001 and 002
IMPORT ELIGIBILITY	A Brazilian Certificate of Airworthiness may be issued on the basis of on an FAA Export Certificate on Airworthiness (or a third country Export Certificate on Airworthiness, in case of used aircraft imported from such country), including the following statement: "The aircraft covered by this certificate has been inspected, tested and found to be in conformity with the Brazilian approved type design as defined by the Brazilian Type Certificate no. 2018T01 and in condition of safe operation". (See note 4)
CERTIFICATION BASIS	Brazilian Certificate 2018T01 based on: Section 21.29 and Section 21.17(b) of RBAC 21 amendment 02. Compliance has been shown utilizing the provisions of Advisory Circular 21.17-1 dated September 30, 1987, section 5. The Airworthiness requirements met under this provision are the Airship Design Criteria (ADC), FAA P-8110-2, dated November 2, 1987, as amended by FAA letter dated January 10, 1989. Application for original type certificate dated February 10, 1989.

EQUIPMENT

The basic required equipment as prescribed in the applicable airworthiness regulation (see Certification Basis) must be installed in the aircraft for certification.

In addition to the above required equipment, the following equipment is also required:

ANAC approved Airship Flight Manual, P/N 1070003, original issue, dated July 20, 1990.

SAIC Ground Handling Manual, P/N 1070002, original issue, dated July 20, 1990 is to be made available to the operator's flight and ground crews.

NOTES:**NOTE 1** Weight and balance.

Current weight and balance report together with list of equipment included in certificated empty weight, and loading instructions when necessary, must be provided for each aircraft at the time of original certification. The certification empty weight must include unusable fuel of 16,3 kgf (36.0 lbs) at car station 170.0.

NOTE 2 Markings and placards.

The placards specified in the ANAC approved Airship Flight Manual, P/N 1070003, original issue, dated July 20, 1990. (or later revision) must be displayed:

NOTE 3 Continued Airworthiness

Maintenance and Inspection of this Airship must be carried out according to SAIC Maintenance Manual P/N 1070004, original issue.

NOTE 4 The differences of the Brazilian airplanes in relation to the basic FAA type design are summarized below:

1 – The Brazilian Airplane Flight Manual listed in Note 2.

2 – Markings and placards: For the approved markings and placards translations contact the TC holder and/or ANAC at the following address: ggcpgr@anac.gov.br

NOTE 5 AVCO LYCOMING Engine Data Sheet EM-8209, provides information on the fuel pressure limitations.
MÁRIO IGAWA

Gerente Geral - Certificação de Produto Aeronáutico
(Acting Manager, Aeronautical Product Certification)