

DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION

AS2NM
Revision 4
Airship do Brasil Industria e Services
Aeros Especializados S/A
138S
June 12, 2018

FAA TYPE CERTIFICATE DATA SHEET NO. AS2NM

This data sheet is part of Type Certificate No. AS2NM and prescribes conditions and limitations under which the product for which the Type Certificate was issued meets the airworthiness requirements of the US Federal Aviation Regulations.

Type Certificate Holder: Airship do Brasil Industria e Servicos Aereos Especializados S/A
Christiano Rodrigues Machado, No. 10, Jardim Real
CEP 13.567-350, Sao Paulo, Brazil

Previous Type Certificate Holder: Fliegen Works Inc.
921 SE 47th Avenue
Portland, OR 97215

Leidos Inc.
11951 Freedom Drive
Reston, VA 20190

Science Application International Corporation (SAIC)
1710 SAIC Drive
McLean, VA 22102

US/LTA Corporation
750 Commercial Street
Eugene, OR 97402

I. Model 138S Airship (Approved July 24, 1990)

Envelope	Volume	138,000 cu. Ft.
	Maximum Pressure	2.8 in. H2O
	Minimum Pressure	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 AVCO Lycoming 10-540-K2A5 engine.	
Fuel	101LL minimum grade aviation gasoline.	
Oil	MIL-L-22851 grade SAE 40 or better @ operation at 30°-90°F. MIL-L-22851 grade SAE 40 or better @ operation at 0°-70°F.	
Engine Limits*	Maximum continuous, 2700 r.p.m. Takeoff, 2700 r.p.m. Maximum cylinder heat temperature, 475°F Maximum inlet oil temperature, 245°F *see note 4.	

Page No.	1	2	3	4
Rev. No.	4	1	1	1

Propeller and Propeller Limits	Hartzell HC-E3YR-7LF/FLC-8468G-8Q 300 HP @2700 r.p.m. Diameter limited at 78 inches.
Airspeed 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 FM approved Flight Manual
Datum	Theoretical bow of the envelope. The theoretical bow is 20 in. aft of the nose mooring probe. All station measurements are shown in inches. Car datum is airship station 659.0.
Maximum Weights	Maximum airship takeoff and landing weight 8,900 lbs. Maximum car weight 5,356 lbs. Maximum static heaviness 400 lbs. Maximum static lightness 200 lbs
Maximum Crew	1 Pilot.
No. of Seats	6 (2 @ car stat. 40.0, 2 @ car stat. 95.0, 2 @ car stat. 124.0)
Fuel Capacity	106.0 gal. (100.0 gal. usable)
Oil Capacity	12 qts. Maximum, 9 qts. Minimum
Maximum Operating Altitude	9000 ft.
Serial Numbers Eligible	001 and on.
Certification Basis	FAR 21.17(b) effective March 13, 1987 Compliance with FAR 21.17(b) 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), FM P-8110-2, dated November 2, 1987, as amended by FM letter dated January 10, 1989. Application for type certificate dated February 10, 1989. Type Certificate No. AS2NM issued July 24, 1990.
Production Basis	None. Prior to original certification of each aircraft, an FM representative must perform a detailed inspection for workmanship, materials, and conformity with the approved technical data, and a check of the flight characteristics.
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: FM approved Airship Flight Manual, 1070003, original issue, dated July 20, 1990, or later FM approved revision. SAIC Ground Handling Manual, 1070002, original issue, dated July 20, 1990 is to be made available to the operator's flight and ground crews.
Maintenance and Inspection	Maintenance and Inspection of this airship must be carried out according to SAIC Maintenance Manual 1070004, original issue, or later FM approved revision.

NOTE 1. 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 36.0 lbs. at car stat. 170.0.

NOTE 2. All placards required in the approved flight manual must be installed in the appropriate locations.

NOTE 3. Reserved