TYPE CERTIFICATE

DATA SHEET

No. EASA.IM.R.003

for

S-64F

Type Certificate Holder

Erickson Incorporated, DBA Erickson Air-Crane

3100 Willow Springs Road

P.O. Box 3247

Central Point, Oregon, 97502-0010

U.S.A.

For Model: S-64F

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SECTION 1: S-64F

I. General

1.	Type/ Model/ Variant	
	1.1 Type	S-64
	1.2 Model	S-64F
	1.3 Variant	n/a
2.	Airworthiness Category	Large Rotorcraft
3.	Manufacturers	Erickson Incorporated, DBA Erickson Air-Crane 3100 Willow Springs Road P.O. Box 3247 Central Point, Oregon 97502-0010, U.S.A. see Note 2
4.	Type Certification Application Date	to FAA: 2 April 1969 to ENAC: 15 February 1999
5.	State of Design Authority	Federal Aviation Administration (USA)
6.	Type Certificate Date by FAA	25 November 1970
7.	Type Certificate n° by FAA	H6EA
8.	Type Certificate Data Sheet n° by FAA	H6EA
9.	EASA Type Certification Date	4 August 2004

II. Certification Basis

1.	Reference Date for determining the applicable requirements	2 April 1969
2.	Airworthiness Requirements	FAR 29, dated 1 February 1965 including Amdts. 29-1 and 29-2 except FAR 29.855(d), and Special Conditions No. 29-014-SC including Amdt. No. 1. Note: The FAA reference date of application as of 2 April 1969 was accepted and retained as reference date for EASA Certification Basis. Since the JAR Requirements were not in existence at the reference date, the FAA Certification Basis is retained as EASA Certification Basis.
3.	Special Conditions	29-014-SC
4.	Exemptions	none
5.	Deviations	none
6.	Equivalent Safety Findings	none
7.	Requirements elected to comply	none
8.	Environmental Protection Requirements	
	8.1 Noise Requirements	n/a, the S-64F is designed and intended to be operated exclusively for external load carrying purpose
	8.2 Emission Requirements	ICAO Annex 16, Volume 2, second edition

9.	Operational Suitability Data (OSD)	see SECTION 2 below

III. Technical Characteristics and Operational Limitations

1.	Type Design Definition	EAC drawing. 6401-10015 Rev. D, and subsequent EASA approved revisions. Note 1: Installation of Elastomeric Engine Mounts P/N EA643021-109 is required Note 2: Type design change 6450-10522 (Shoulder Harness on Crewman Seat), 6455-61337 (Spare AC fuses for Generator), 6430-10616 and 6430-63050 (Environmental Collection Tank) are required. Changes 6450-10522 and 6455-61337 are included in the basic type design upon EAC decision.
2.	Description	Transport Rotorcraft designed as flying crane and primarily intended to carry cargo in external load operations up to 11 340 kg by means of hydraulic hoist or cargo hook. With EAC STC SR00004SE installed also certified for firefighting. Main rotor: Six (6) blades Tail rotor: Four (4) blades Fuselage: Traditional Aluminium fuselage structure Landing gear: Fixed tricycle landing gear Powerplant: Two (2) turbine engines with APU
3.	Equipment	Basic equipment must be installed and operational prior to registration of the helicopter. Refer to Equipment list in approved RFM
4.	Dimensions	
	4.1 Fuselage	Length: 27.23 m (88ft 6in) Width: 6.71 m (21ft 10in) Height: 7.82 m (25ft 5in)
	4.2 Main Rotor	Diameter: 21.95 m (72 ft)
	4.3 Tail Rotor	Diameter: 4.88 m (16 ft)
5.	Engine	
	5.1 Model	Erickson Incorporated (former: Pratt & Whitney) 2 x Model JFTD12A-5A (with Hamilton Standard Fuel Control JFC56-6)
	5.2 Type Certificate	FAA TCDS No: E15EA EASA TCDS No: EASA.IM.E.106 ENAC TCDS No: MO-108

5.3 Limitations

5.3.1 Installed Engine Limitations and Transmission Torque Limits

	PWR turbine [rpm (%N2)]	Gas generator [rpm (%N1)]	PWR turbine inlet temperature T5 [°C]	PWR [shp]
AEO-TOP (5 min)	9 500 (105)	16 700 (104.2)	720	4 800
AEO-MCP	9 500 (105)	16 700 (104.2)	720	4 430
OEI (30 min)	9 500 (105)	16 700 (104.2)	675	4 800
Max. allowable overspeed	10 350 (114)	16 700 (104.2)	not defined	- - -
Acceleration limit (2 min)	not defined	not defined	720	- - -
Starting limit (2 sec)	not defined	not defined	525	- - -

Notes:

- Sea level static, standard day conditions
- Take-off and maximum continuous horsepower ratings are normally obtained at a power turbine speed of 9 000 rpm (100%N2).
- Total power for two-engine operation is limited to 7 900 shp for take-off, and 6 600 shp maximum continuous.

5.3.2 Other Engine and Transmission Torque Limits

Refer to approved RFM

6. Fluids (Fuel/ Oil/ Additives)

6.1 Fuel — Jet A or Jet A-1 or Jet B or JP-4 or JP-5 or JP-8+100 (conforming to Pratt &Whitney Aircraft SB 2016)

6.2 Oil — Engines: as per P&W S.B. 238

APU: Refer to approved RFM

6.3 Additives — n/a

7. Fluid capacities

7.1 Fuel — Fuel tank capacity: total 5 133 litres (1 356 US gal)

- 1 719 litres (454 US gal) at +280.8
- 1 719 litres (454 US gal) at +397.3
- 1 696 litres (448 US gal) at +461.3

Usable fuel: total 20 lb
- 10 lb at +290.0
- 9 lb at +370.0
- 7 lb at +461.0

7.2 Oil — Engines:
total 9.84 litres (2.6 US gal)
- 2 x 4.92 litres (1.3 US gal) at +234.0

Undrainable oil: 5 lb at +234.0
APU: not recorded

8. Air Speed Limitations — V_{NE}: 104 kt (120 mph) at 21 319 kg (47 000 lb)
Refer to approved RFM for other limitations.

9.	Rotor Speed Limitations	Power-on: Maximum 104% N_R (193 rpm) Minimum 100% N_R (185 rpm) Power-off: Maximum 110% N_R (204 rpm) Minimum 95% N_R (176 rpm)
10.	Maximum Operating Altitude and Temperature	16 000 ft DA (4 877 m)
11.	Operating Limitations	VFR Day Logging operations are not allowed
12.	Maximum Mass	TKOF: 21 319 kg (47 000 lb) Refer to approved RFM for variations of maximum allowable weight with temperature and altitude.
13.	Centre of Gravity Range	Refer to approved RFM
14.	Datum	Longitudinal: the datum plane (STA 0) is located 8 534 mm (336 in) forward of main rotor centroid.
15.	Levelling Means	Plumb line from top level plate inside cockpit aft door.
16.	Minimum Flight Crew	two (2), pilot and co-pilot
17.	Maximum Seating Capacity	5, 1 at +94.0 in, 1 at +108.5 in, 1 at +127.0 in, 1 at +130.0 in
18.	Passenger Emergency Exit	not recorded
19.	Maximum Baggage/ Cargo Loads	227 kg (500 lb) Two baggage compartments with max. floor loading of 21.1 kg/cm² (300 lb/ft²) and a total allowable load of 113.5 kg (250 lb) in each compartment.
20.	Rotor Blade Control Movement	For rigging information refer to Maintenance Manual
21.	Auxiliary Power Unit (APU)	SOLAR T-62T-16A2
22.	Life-limited Parts	not recorded
23.	Wheels and Tyres	Tyres: not recorded Wheels: not recorded

IV. Operating and Service Instructions

1.	Flight Manual	S-64F Rotorcraft Flight Manual Publication SA4047-5 (re-issued 15 January 2003) Rev.1, dated 25 July 2003.
2.	Maintenance Manual	Publication No. EAC006 The Airworthiness Limitations are listed in the S-64F Service Bulletins: S-64F General-1 and S-64F General-3

3.	Structural Repair Manual	n/a
4.	Weight and Balance Manual	Refer to approved RFM
5.	Illustrated Parts Catalogue	n/a
6.	Service Letters and Service Bulletins	As published by Erickson Air-Crane

7. Required Equipment

The basic required equipment as prescribed in the applicable airworthiness regulations (see certification basis) must be installed in the aircraft for certification.
In addition the following item of equipment is required:

- Rotorcraft Flight Manual Publication SA4047-5 (Re-issued on 15 January 2003) Rev.1, dated 25 July 2003, and subsequent approved revisions.

V. Notes

1. Manufacturer's eligible serial numbers:
not recorded

2. Type Certificate holder record note as per FAA TCDS H6EA, Revision 15, dated 17 March 2015:
   - 'Erickson Air-Crane Incorporated, DBA Erickson Air-Crane' transferred TC H6EA to 'Erickson Incorporated, DBA Erickson Air-Crane' on 13 August 2014;
   - 'Erickson Air-Crane Co., L.L.C.' transferred TC H6EA to 'Erickson Air-Crane Incorporated, DBA Erickson Air-Crane' on 14 February 2001;
   - 'Erickson Air-Crane Co.' transferred TC H6EA to 'Erickson Air-Crane Co., L.L.C.' on 22 August 1997;
   - 'Sikorsky Aircraft' transferred TC H6EA to 'Erickson Air-Crane Co.' on 13 February 1992.

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SECTION 2: OPERATIONAL SUITABILITY DATA (OSD)

The OSD elements listed below are approved by the European Aviation Safety Agency as per Commission Regulation (EU) 748/2012, as amended by Commission Regulation (EU) No 69/2014.

I. OSD Certification Basis

I.1 Reference Date for determining the applicable OSD requirements

reserved

I.2 MMEL - Certification Basis

reserved

I.3 Flight Crew Data - Certification Basis

reserved

I.4 SIM Data - Certification Basis

reserved

I.5 Maintenance Certifying Staff Data - Certification Basis

reserved

II. OSD Elements

II.1 MMEL

reserved

II.2 Flight Crew Data

reserved

II.3 SIM Data

reserved

II.4 Maintenance Certifying Staff Data

reserved

SECTION: ADMINISTRATIVE

I. Acronyms and Abbreviations

AEO	All Engines Operative	OEI	One Engine Inoperative
Amdt.	Amendment	OSD	Operational Suitability Data
APU	Auxiliary Power Unit	PWR	Power
C.G.	Centre of Gravity	RFM	Rotorcraft Flight Manual
DA	Density Altitude	rpm	Rounds Per Minute
EAC	Erickson Air-Crane	SC	Special Condition
ENAC	Ente Nazionale per l'Aviazione Civile	shp	Shaft Horse Power
EU	European Union	STA	Station
FAA	Federal Aviation Administration	VFR	Visual Flight Rules
JAR	Joint Aviation Requirements	V_{NE}	Never Exceed Speed
KIAS	Knots Indicated Air Speed		

II. Type Certificate Holder Record

Type Certificate Holder	**Period**
Erickson Air-Crane Incorporated 3100 Willow Springs Road, P.O. Box 3247 Central Point, Oregon 97502-0010, U.S.A.	Since initial EASA TC until 12 August 2014
Erickson Incorporated, DBA Erickson Air-Crane 3100 Willow Springs Road, P.O. Box 3247 Central Point, Oregon 97502-0010, USA	Since 13 August 2014

III. Change Record

Issue	**Date**	**Changes**	**TC issue**
Issue 01		Initial Issue	Initial Issue, 4 August 2004
Issue 02		- - -	- - -
Issue 03	27 Sep 2007	- - -	Reissued, 27 September 2007
Issue 04	5 Feb 2013	- - -	- - -
Issue 05	23 Mar 2016	TC holder name updated; OSD data added; EASA TCDS format updated	Reissued, 23 March 2016

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