



TYPE CERTIFICATE DATA SHEET

No. EASA.IM.R.003

for
S-64

Type Certificate Holder
Erickson Incorporated, DBA Erickson Air-Crane

3100 Willow Springs Road
Central Point, Oregon, 97502-0010
U.S.A.

For Models: S-64F
S-64E

|



TABLE OF CONTENTS

SECTION 1: S-64F 3
 I. General 3
 II. Certification Basis 3
 III. Technical Characteristics and Operational Limitations 3
 IV. Operating and Service Instructions 6
 V. Notes 6
SECTION 2: S-64E 7
 I. General 7
 II. Certification Basis 7
 III. Technical Characteristics and Operational Limitations 7
 IV. Operating and Service Instructions 10
 V. Notes 10
SECTION 3: OPERATIONAL SUITABILITY DATA (OSD) 11
 I. OSD Certification Basis 11
 II. OSD Elements 11
SECTION: ADMINISTRATIVE 12
 I. Acronyms and Abbreviations 12
 II. Type Certificate Holder Record 12
 III. Change Record 12



SECTION 1: S-64F

I. General

- | | |
|--|---|
| 1. Type / Model | |
| 1.1 Type | S-64 |
| 1.2 Model | S-64F |
| 2. Airworthiness Category | Large Rotorcraft |
| 3. Manufacturer | Erickson Incorporated, DBA Erickson Air-Crane
3100 Willow Springs Road,
Central Point, Oregon 97502-0010, U.S.A.;
See also 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).
<u>Note:</u> 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. Environmental Protection Requirements | |
| 7.1 Noise Requirements | n/a,
the S-64F is designed and intended to be operated exclusively for external load carrying purpose |
| 7.2 Emission Requirements | ICAO Annex 16, Volume II |
| 8. Operational Suitability Data (OSD) | See SECTION 3 below. |

III. Technical Characteristics and Operational Limitations

- | | |
|---------------------------|--|
| 1. Type Design Definition | EAC drawing. 6401-10015 Rev. D, and subsequent EASA approved revisions.
<u>Note 1:</u> Installation of Elastomeric Engine Mounts P/N EA643021-109 is required
<u>Note 2:</u> 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 'Industrial Flying Crane Helicopter' 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 (88 ft 6 in)
Width: 6.71 m (21 ft 10 in)
Height: 7.82 m (25 ft 5 in)

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 TC/TCDS n°: E15EA
ENAC TC/TCDS n°: MO-108
EASA TC/TCDS n°: EASA.IM.E.106

5.3 Limitations

5.3.1 Installed Engine Limitations

	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	---

5.3.2 Other Engine and Transmission Torque Limits

Refer to approved RFM

6. Fluids

For detailed information, see Section 1 of the Rotorcraft Flight Manual

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

Engine: 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) Usable fuel: - 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 Unusable fuel: total 26 lb - 10 lb at +290.0 - 9 lb at +370.0 - 7 lb at +461.0
7.2 Oil	Engine: 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
7.3 Coolant System Capacity	n/a
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	
10.1 Altitude	16 000 ft DA (4 877 m)
10.2 Temperature	not recorded
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 Occupant Seating Capacity	5, 2 at +94.0 in, 1 at +108.5 in, 1 at +127.0 in, 1 at +130.0 in
18. Emergency Exit	not recorded
19. Maximum Baggage/ Cargo Loads	227 kg (500 lb) Two baggage compartments with max. floor loading of 21.1 kg/cm ² (300 lb/ft ²) 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-16A1, or T-62T-16A2
22. Life-limited Parts	See Service Bulletin: S-64F General-1



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, S-64F General-2 and S-64F General-3
3. Service Letters and Service Bulletins
As published by Sikorsky Aircraft, Erickson Air-Crane Co., Erickson Air-Crane Co., L.L.C., Erickson Air-Crane Inc., DBA Erickson Air-Crane and Erickson Inc., DBA Erickson Air Crane.
4. Weight and Balance Manual
Refer to approved RFM
5. Illustrated Parts Catalogue
n/a
6. Miscellaneous Manuals
not recorded
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:
64067, 64078, 64080, 64081, 64084 until 64086, 64088 until 64091, 64093, 64095, 64097, 64098, 64F5001, and subsequent.
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.

* * *



SECTION 2: S-64E

I. General

- | | |
|--|---|
| 1. Type / Model | |
| 1.1 Type | S-64 |
| 1.2 Model | S-64E |
| 2. Airworthiness Category | Large Rotorcraft |
| 3. Type Certificate Holder | Erickson Incorporated, DBA Erickson Air-Crane
3100 Willow Springs Road,
Central Point, Oregon 97502-0010, U.S.A.;
See also Note 2. |
| 4. Type Certification Application Date | to FAA: 27 November 1967
to EASA: 4 August 2020 |
| 5. State of Design Authority | Federal Aviation Administration (USA) |
| 6. Type Certificate Date by FAA | 21 August 1969 |
| 7. Type Certificate n° by FAA | H6EA |
| 8. Type Certificate Data Sheet n° by FAA | H6EA |
| 9. EASA Type Certification Date | 16 December 2021 |

II. Certification Basis

- | | |
|---|--|
| 1. Reference Date for determining the applicable requirements | 27 November 1967 |
| 2. Airworthiness Requirements | FAR 29, dated 1 February 1965 including Amdts. 29-1 and 29-2, except FAR 29.855 (d).

<u>Note:</u> The FAA reference date of application as of 27 November 1967 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. Environmental Protection Requirements | |
| 7.1 Noise Requirements | n/a,
the S-64F is designed and intended to be operated exclusively for external load carrying purpose |
| 7.2 Emission Requirements | ICAO Annex 16, Volume II |
| 8. Operational Suitability Data (OSD) | See SECTION 3 below. |

III. Technical Characteristics and Operational Limitations

- | | |
|---------------------------|---|
| 1. Type Design Definition | EAC drawing. 6401-10021 Rev. B, and subsequent EASA approved revisions, and FAA Supplemental Type Certificates SR00004SE, SR00026SE, SR00502SE, SR00815SE, SH606NW, SH1618NM, SH5102NM, and subsequent EASA approved revisions. |
|---------------------------|---|



Note 1: Main Rotor Inner Bracket P/N S1510-21332-043 is required.

Note 2: Main Rotor Blades P/N 6415-20201-048, -049, -050 or 051 are required.

2. Description
Transport Rotorcraft designed as 'Industrial Flying Crane Helicopter' and primarily intended to carry cargo in external load operations up to 9 072 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 (88 ft 6 in)
Width: 6.71 m (21 ft 10 in)
Height: 7.82 m (25 ft 5 in)
- 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-4A
(with Hamilton Standard Fuel Control JFC56-4)
- 5.2 Type Certificate
FAA TC/TCDS n°: E15EA
ENAC TC/TCDS n°: MO-108
EASA TC/TCDS n°: EASA.IM.E.106
- 5.3 Limitations
- 5.3.1 Installed Engine Limitations

	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)	688	4 500
AEO-MCP	9 500 (105)	16 700 (104.2)	655	4 000
OEI (30 min)	9 500 (105)	16 700 (104.2)	675	4 500
Max. allowable overspeed	10 350 (114)	16 700 (104.2)	not defined	---
Acceleration limit (2 min)	not defined	not defined	688	---

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 6 600 shp for take-off, and 5 400 shp maximum continuous.

5.3.2 Other Engine and Transmission Torque Limits

Refer to approved RFM



6.	Fluids	For detailed information, see Section 1 of the Rotorcraft Flight Manual
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	Engine: 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) Usable fuel: - 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 Unusable fuel: total 26 lb - 10 lb at +290.0 - 9 lb at +370.0 - 7 lb at +461.0
7.2	Oil	Engine: 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
7.3	Coolant System Capacity	n/a
8.	Air Speed Limitations	V _{NE} : 99 kt (114 mph) at 19 051 kg (42 000 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 89% N _R (165 rpm)
10.	Maximum Operating Altitude and Temperature	
10.1	Altitude	14 000 ft DA (4 267 m)
10.2	Temperature	not recorded
11.	Operating Limitations	- VFR day - Logging operations are not allowed
12.	Maximum Mass	TKOF: 19 051 kg (42 000 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 Occupant Seating Capacity	5, 2 at +94.0 in, 1 at +108.5 in, 1 at +127.0 in, 1 at +130.0 in
18.	Emergency Exit	not recorded
19.	Maximum Baggage/ Cargo Loads	227 kg (500 lb)



- | | |
|----------------------------------|--|
| | Two baggage compartments with max. floor loading of 21.1 kg/cm ² (300 lb/ft ²) 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-16A1 or T-62T-16A2 |
| 22. Life-limited Parts | refer to ALS |
| 23. Wheels and Tyres | Tyres: not recorded
Wheels: not recorded |

IV. Operating and Service Instructions

- | | |
|--|--|
| 1. Flight Manual | S-64E Helicopter Rotorcraft Flight Manual SA4045-104 (re-issued 18 February 2005) Rev.18, dated 22 September 2020, and subsequent approved revisions. |
| 2. Maintenance Manual | Publication No. EAC007
The Airworthiness Limitations are listed in the S-64E Service Bulletins:
64B GENERAL-1 and 64B GENERAL-1 EASA Addendum, and 64B GENERAL-2 |
| 3. Service Letters and Service Bulletins | As published by Sikorsky Aircraft, Erickson Air-Crane Co., Erickson Air-Crane Co., L.L.C., Erickson Air-Crane Inc., DBA Erickson Air-Crane and Erickson Inc., DBA Erickson Air Crane. |
| 4. Weight and Balance Manual | Refer to approved RFM |
| 5. Illustrated Parts Catalogue | n/a |
| 6. Miscellaneous Manuals | not recorded |
| 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:
S-64E Helicopter Rotorcraft Flight Manual SA4045-104 (re-issued 18 February 2005) Rev. 18, dated 22 September 2020, and subsequent approved revisions. |

V. Notes

1. Manufacturer's eligible serial numbers:
64002, 64003, 64015 until 64019, 64022, 64025, 64027, 64028, 64033, 64034D, 64037, 64038, 64042, 64043, 64050, 64052, 64058, 64061, 64064 until 64066, 64079, 64099, 64101, 641001, 64E3001, and subsequent.
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.

* * *



SECTION 3: 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
ALS	Airworthiness Limitations Section	OSD	Operational Suitability Data
Amdt.	Amendment	P/N	Part Number
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	s/n	Serial Number
FAA	Federal Aviation Administration	STA	Station
JAR	Joint Aviation Requirements	VFR	Visual Flight Rules
KIAS	Knots Indicated Air Speed	V _{NE}	Never Exceed Speed

II. Type Certificate Holder Record

II.1 Type Certificate Holder	Period
Sikorsky Aircraft Corporation 6900 Main Street Stratford, Connecticut 06497, U.S.A.	21 August 1969 until 13 February 1992
Erickson Air-Crane Company 3100 Willow Springs Road, Central Point, Oregon 97502, U.S.A.	14 February 1992 until 22 August 1997
Erickson Air-Crane Co., L.L.C. 3100 Willow Springs Road, Central Point, Oregon 97502-0010, U.S.A.	23 August 1997 until 14 February 2001
Erickson Air-Crane Incorporated, DBA Erickson Air-Crane 3100 Willow Springs Road, Central Point, Oregon 97502-0010, U.S.A.	15 February 2001 until 12 August 2014
Erickson Incorporated, DBA Erickson Air-Crane 3100 Willow Springs Road, Central Point, Oregon 97502-0010, USA	Since 13 August 2014

III. Change Record

Issue	Date	Changes	TC issue
Issue 1		EASA Initial Issue	Initial Issue, 4 August 2004
Issue 2	11 Nov 2005	---	---
Issue 3	27 Sep 2007	---	Reissued, 27 September 2007
Issue 4	5 Feb 2013	---	---
Issue 5	23 Mar 2016	TC holder name updated; OSD data added; EASA TCDS format updated	Reissued, 23 March 2016
Issue 6	16 Dec 2021	SECTION 1: Emission reference, APU data, SBs and eligible s/n clarified SECTION 2: S-64E model added; EASA TCDS format updated	Reissued, 16 December 2021

- end of file -

