DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION

H6EA
Revision 17
Erickson Air-Crane
S-64E
S-64F
June 15, 2018

TYPE CERTIFICATE DATA SHEET NO H6EA

This data sheet, which is part of Type Certificate Number H6EA, prescribes conditions and limitations under which the product for which the Type Certificate was issued meets the airworthiness requirements of the Federal Aviation Regulations.

Type Certificate (TC) Holder: Erickson Incorporated, DBA Erickson Air-Crane
3100 Willow Springs Road
Central Point, Oregon 97502-0010

Type Certificate Holder Record: Erickson Air-Crane Incorporated, DBA Erickson Air-Crane transferred TC H6EA to Erickson Incoporated, DBA Erickson Air-Crane on August 13, 2014

Erickson Air-Crane Co., L.L.C. transferred TC H6EA to Erickson Air-Crane Incorporated, DBA Erickson Air-Crane on February 14, 2001

Erickson Air-Crane Co. transferred TC H6EA to Erickson Air-Crane Co., L.L.C. on August 22, 1997

Sikorsky Aircraft transferred TC H6EA to Erickson Air-Crane Co. on February 13, 1992.

I. MODEL NUMBER: S-64E (Transport Category Rotorcraft) (See ALL MODEL Section) (See NOTES Section)

Approved: 08/21/69

Engines: 2 Pratt & Whitney JFTD12A-4A (with Hamilton Standard Fuel Control JFC56-4)

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

Engine Limits: Sea Level Static, Standard Day Conditions

	SHAFT HP	POWER TURBINE RPM	GAS GEN RPM	POWER TURBINE INLET TEMP (T5)
Takeoff (5 min)	4,500	9,500(105%N_2)	16,700(104.2%N_1)	688^{o} C
One engine inoperative (30 min)	4,500	9,500(105%N_2)	16,700(104.2%N_1)	688^{o} C
Maximum continuous	4,000	9,500(105%N_2)	16,700(104.2%N_1)	655^{o} C
Allowable maximum overspeed	--	10,350(114%N_2)	16,700(104.2%N_1)	--
Acceleration limit (2 min)	--	--	--	688^{o} C

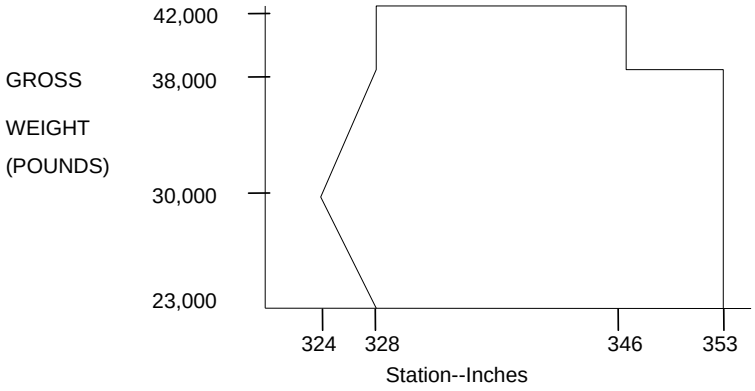
Takeoff and maximum continuous horsepower ratings are normally obtained at a power turbine speed of 9,000 rpm (100%N_2)

Total power for two-engine operation is limited to 6,600 s.hp. for takeoff, and 5,400 s.hp. maximum continuous.

	Power Off	Power On
Rotor Limits:	Max 110% N_r (204 r.p.m.) Min 89% N_r (165 r.p.m.)	Max 104% N_r (193 r.p.m.) Min 100% N_r (185 r.p.m.)

Airspeed Limits: V_{NE} (never exceed) 114 m.p.h. (99 knots) at 42,000 lb gross weight. For increased airspeed limits at lower gross weights and variation of V_{NE} with altitude refer to Rotorcraft Flight Manual.

C.G. Range: (+328.0) to (+353.0) at 23,000 lb
(+324.0) to (+353.0) at 30,000 lb
(+328.0) to (+353.0) at 38,000 lb
(+328.0) to (+346.0) at 38,000 lb



(+328.0) to (+346.0) at 42,000 lb

Empty Weight C.G. Range: None

Datum: 336 inches forward of main rotor centroid

Leveling Means: Plumb line from top level plate inside cockpit aft door

Maximum Weight: 42,000 lb

Number of Seats: 5. 2 at (+94.0), 1 at (+108.5), 1 at (+127.0), 1 at (+130.0).

Maximum Baggage: 500 lb at (+124.0) Two baggage compartments with a maximum allowable floor loading of 300 p.s.f. and a total allowable load of 250 lb each compartment. See NOTE 3 for information pertaining to the carriage of external loads.

Fuel Capacity: 1356 gal. (454 gal. at (+280.8), 454 gal. at (+397.3), 448 gal. at (+461.3)).

Oil Capacity: 2.6 gal. (+234.0) (2 tanks 1.3 gal. each). See NOTE 1 for data on system fuel and oil.

Rotor Blade & Control Movements: For rigging information, refer to Maintenance Manual.

Serial Numbers Eligible: 64002, 64003, 64015, 64016, 64017, 64018, 64019, 64022, 64025, 64027, 64028, 64033, 64034D, 64037, 64038, 64042, 64043, 64050, 64052, 64058, 64061, 64064, 64065, 64066, 64079, 64099, 64101, 641001, 64E3001, and subsequent.

Certification Basis: FAR 29, 1 February 1965, including Amendments 29-1 and 29-2 except FAR 29.855(d), and Special Conditions No. 29-014-SC

Type Certificate Application Date: 11/27/67.

Type Certificate Issued: 08/21/69

The S-64E is designed and intended to be operated as an industrial flying crane. It is primarily intended to carry cargo in external load operations and the certification basis has been developed for that purpose. Special Conditions No. 29-014-SC include modifications to sections of FAR 29 considered appropriate for industrial flying crane operation without external loads under FAR 91 and for rotorcraft-load combinations meeting the requirements of Subpart D of FAR 133.

II. MODEL NUMBER: S-64F (Transport Category Rotorcraft) (See ALL MODEL Section) (See NOTES Section)

Approved: 11/25/70

Engines: 2 Pratt & Whitney JFTD12A-5A (with Hamilton Standard Fuel Control JFC56-6)

Fuel: Aviation Kerosene Jet A or Jet A-1 or Jet B or JP-4 or JP-5 or JP-8 or JP-8+100 (conforming to Pratt & Whitney Aircraft SB 2016).

Engine Limits: Sea level static, standard day conditions

	SHAFT HP	POWER TURBINE RPM	GAS GEN RPM	POWER TURBINE INLET TEMP (T5)
Takeoff (5 min)	4,800	9,500(105%N_2)	16,700(104.2%N_1)	720° C
One engine imperative (30 min)	4,800	9,500(105%N_2)	16,700(104.2%N_1)	720° C
Maximum continuous	4,430	9,500(105%N_2)	16,700(104.2%N_1)	675° C
Allowable maximum overspeed	--	10,350(114%N_2)	16,700(104.2%N_1)	--
Acceleration limit (2 min)	--	--	--	720° C
Starting limit (2 sec)	--	--	--	525° C

Takeoff and maximum continuous horsepower ratings are normally obtained at a power turbine speed of 9,000 rpm (100%N_2)

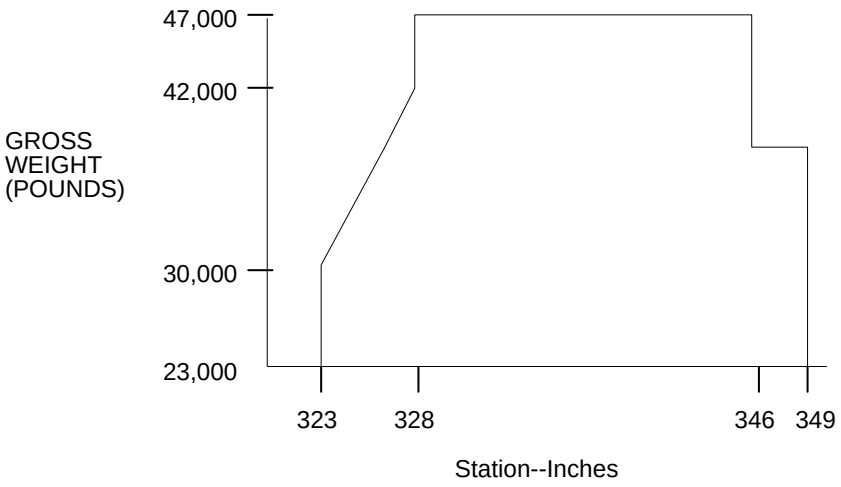
Total power for two-engine operation is limited to 7,900 s.hp. for takeoff, and 6,600 s.hp. maximum continuous.

	Power Off	Power On
Rotor Limits:	Max 110% N_r (204 r.p.m.)	Max 104% N_r (193 r.p.m.)
	Min 95% N_r (176 r.p.m.)	Min 100% N_r (185 r.p.m.)

Airspeed Limits: V_{NE} (never exceed) 120 m.p.h. (104 knots) at 47,000 lb gross weight. For airspeed limits at lower gross weights and variation of V_{NE} with altitude refer to Rotorcraft Flight Manual.

C.G. Range:

(+323.0) to (+349.0) at 23,000 lb
(+323.0) to (+349.0) at 30,000 lb
(+326.4) to (+349.0) at 38,000 lb
(+326.4) to (+346.0) at 38,000 lb
(+328.0) to (+346.0) at 42,000 lb
(+328.0) to (+346.0) at 47,000 lb



Empty Weight C.G. Range: None

Datum: 336 inches forward of main rotor centroid

Leveling Means: Plumb line from top level plate inside cockpit aft door

Maximum Weight: 47,000 lb

Number of Seats: 5. 2 at (+94.0). 1 at (+108.5), 1 at (+127.0), 1 at (+130.0).

Maximum Baggage: 500 lb at (+124.0). Two baggage compartments with a maximum allowable floor loading of 300 p.s.f. and a total allowable load of 250 lb each compartment. See NOTE 3 for information pertaining to the carriage of external loads.

Fuel Capacity: 1,356 gal. (454 gal. at (+280.8), 454 gal. at (+397.3), 448 gal. at (461.3)).

Oil Capacity: 2.6 gal. (+234.0) (2 tanks 1.3 gal. each). See NOTE 1 for data on system fuel and oil.

Rotor Blade & Control Movements: For rigging information, refer to Maintenance Manual.

Serial Numbers Eligible: 64081, 64084, 64085, 64086, 64091, 64093, 64097, 64067, 64078, 64080, 64088, 64089, 64090, 64095, 64098, 64F5001, and subsequent.

Certification Basis: FAR 29 dated 1 February 1965 including Amendments 29-1 and 29-2 except FAR 29.855(d), and Special Conditions No. 29-014-SC.

Type Certificate Application Date: 04/02/69

Type Certificate Amended: 11/25/70

The S-64F is designed and intended to be operated as an industrial flying crane. It is primarily intended to carry cargo in external load operations and the certification basis has been developed for that purpose. Special Conditions No. 29-014-SC include modifications to sections of FAR 29 considered appropriate for industrial flying crane operation without external loads under FAR 91 and for rotorcraft-load combinations meeting the requirements of Subpart D of FAR 133.

THE FOLLOWING DATA IS PERTINENT TO ALL MODELS OF THIS SERIES:

Production Basis: Production Certificate 716NM

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 items of equipment are required: (a) FAA Approved Rotorcraft Flight Manual.

NOTE 1: Current weight and balance report including list of required equipment and equipment included in certificated empty weight, and loading instructions when necessary, must be provided for each helicopter at the time of original certification. The certificated empty weight and corresponding C.G. locations must include undrainable oil of 5 lb (+234.0) and unusable fuel of 26 lb (10 lb at (+290.0), 9 lb at (+370.0), 7 lb at (+461.0)).

NOTE 2: The following placard must be displayed in front of and in clear view of the pilot:

"THIS HELICOPTER MUST BE OPERATED IN COMPLIANCE WITH THE OPERATING LIMITATIONS SPECIFIED IN THE FAA APPROVED ROTORCRAFT FLIGHT MANUAL."

NOTE 3: Provisions for the carriage of external loads are available in the form of structural hard points on the fuselage and main landing gear; single point hoist; and a four point load leveler suspension system. Information concerning the operating limitations with this equipment is contained in the Rotorcraft Flight Manual.

NOTE 4: Information essential to the proper maintenance of the helicopter is contained in the manufacturer's Maintenance Manual provided with each helicopter. In addition to the maintenance manuals, the helicopters are to be serviced and maintained according to the following Service Bulletins:

Model S-64E
1. Service Bulletin 64B General-2 for component maximum recommended time between overhaul.

Model S-64F
1. Service Bulletin 64F General-2 for component maximum recommended time between overhaul.

In addition, the following Airworthiness Limitations have been established for this Rotorcraft:

Model S-64E
1. Service Bulletin 64B General-1 for component retirement times. FAA approved by the Rotorcraft Certification Office (RCO).

Model S-64F
1. Service Bulletin 64F General-1 Time Limits-Retirement Schedule. FAA approved.
2. Service Bulletin 64F General-3 Mandatory Structural Inspections. FAA approved.

NOTE 5: Prior to Airworthiness certification as a Model S-64F helicopter, either a military Model CH-54B helicopter must be inspected and modified according to Erickson Air-Crane Document No. 1097 "Master Conversion Drawing List, CH-54B to S-64F", or conforms to Erickson Air-Crane General Arrangement Drawing 6401-10015, Rev. D, or later FAA approved revision level.

NOTE 6. Prior to Airworthiness certification as Model S-64E helicopter, military Model CH-54A helicopters must be inspected and modified according to Erickson Air-Crane Document No. 1077, "Modification of CH-54A to S-64E Helicopter", or confoms to Erickson Air-Crane General Arrangement Drawing 6401-10021, Rev. IR, or later FAA approved revision level.

NOTE 7. Revision No. 5 to this TCDS was not published by the FAA.

NOTE 8. Both S-64E and S-64F models are also known as "Industrial Flying Crane Helicopters."

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