

United States of America
Department of Transportation
Federal Aviation Administration

AIRCRAFT

Type Certificate
Number A00018CH

This certificate issued to CIRRUS DESIGN CORPORATION

Certifies that the type design for the following product with the operating limitations and conditions therefor as specified in the Federal Aviation Regulations and the Type Certificate Data Sheet, meets the airworthiness requirements of Part 23 of the Title 14 Code of Federal Regulations.

AIRPLANE MODEL SF50

This certificate, and the Type Certificate Data Sheet which is a part hereof, shall remain in effect until surrendered, suspended, revoked, or a termination date is otherwise established by the Administrator of the Federal Aviation Administration.

Date of application: SEPTEMBER 9, 2008

Date Reissued:

Date of issuance: OCTOBER 28, 2016

Date Amended:

By direction of the Administrator.

(Signature)

Timothy P. Smyth

(Title)

Manager, Chicago Aircraft Certification Office

Any alteration of this certificate and/or the Type Certificate Data Sheet is punishable by a fine not exceeding \$1,000, or imprisonment not exceeding 3 years, or both. This certificate may be transferred or made available to third persons by licensing agreements in accordance with Title 14 of the Code of Federal Regulations, part 21, section 21.47 (14 CFR 21.47). A transfer must be endorsed as provided on the reverse hereof. A Type Certificate holder who allows a person to use the Type Certificate to manufacture a new aircraft, aircraft engine, or propeller must provide that person with a written licensing agreement acceptable to the FAA. (Ref. 14 CFR 21.55).

Number: A00018CH

Transfer Endorsement

Before transferring a certificate, the person making the transfer must notify in writing the appropriate aircraft certification office. The notification must include the type certificate number, name and address of the transferee, and anticipated date of the transfer (Ref. 14 CFR 21.47).

To (Name and address)

By:

Date:

Holder:

Signature: _____

Title:

To (Name and address)

By:

Date:

Holder:

Signature: _____

Title:

To (Name and address)

By:

Date:

Holder:

Signature: _____

Title:

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(Continuation Sheet)
Number: A00018CH

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**DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION**

A00018CH
Revision 4
Cirrus Design Corporation
SF50
February 4, 2019

TYPE CERTIFICATE DATA SHEET NO. A00018CH

This data sheet, which is part of Type Certificate No. A00018CH, prescribes conditions and limitations under which the product for the which type certificate was issued meets the airworthiness requirements of the Federal Aviation Regulations.

Type Certificate Holder: Cirrus Design Corporation
4515 Taylor Circle
Duluth, MN 55811

I - Model SF50 (7PCLM, Normal Category), Approved October 28, 2016

Engine One (1) Williams International FJ33-5A turbofan engine
Type Certificate E3GL

Fuel Jet A, Jet A-1 or JP-8

Engine Limits

Thrust Setting	Thrust (lb)	ITT °C	N1 rpm (%)	N2 rpm (%)
Takeoff	1846	877 (10 sec.)	23,566	51,703
		862 (5 min)	(104.7%)	(100.4%)
Max Continuous	1846	836	23,791 (105.7%) for 30 sec.	51,844 (100.7%) for 30 sec.

Airspeed Limits

V_{MO}	Maximum Operating Speed	250 KIAS
M_{MO}	Maximum Operating Mach Number	0.53 Mach
V_O	Operating Maneuvering Speed	150 KIAS
$V_{FE_{50\%}}$	Maximum Flap Extend Speed (50% flaps)	190 KIAS
$V_{FE_{100\%}}$	Maximum Flap Extend Speed (100% flaps)	150 KIAS
V_{LE}	Maximum Landing Gear Extended Speed	210 KIAS
$V_{LO_{Extend}}$	Maximum Landing Gear Extension Speed	210 KIAS
$V_{LO_{Retract}}$	Maximum Landing Gear Retract Speed	150 KIAS

Maximum Weight

Maximum Ramp Weight	6040 lb
Maximum Takeoff Gross Weight	6000 lb
Maximum Landing Weight	5550 lb
Maximum Zero Fuel Weight	4900 lb

Maximum Baggage

Aft Compartment 300 lb

Refer to the Airplane Flight Manual for load distribution and moment arm

Datum

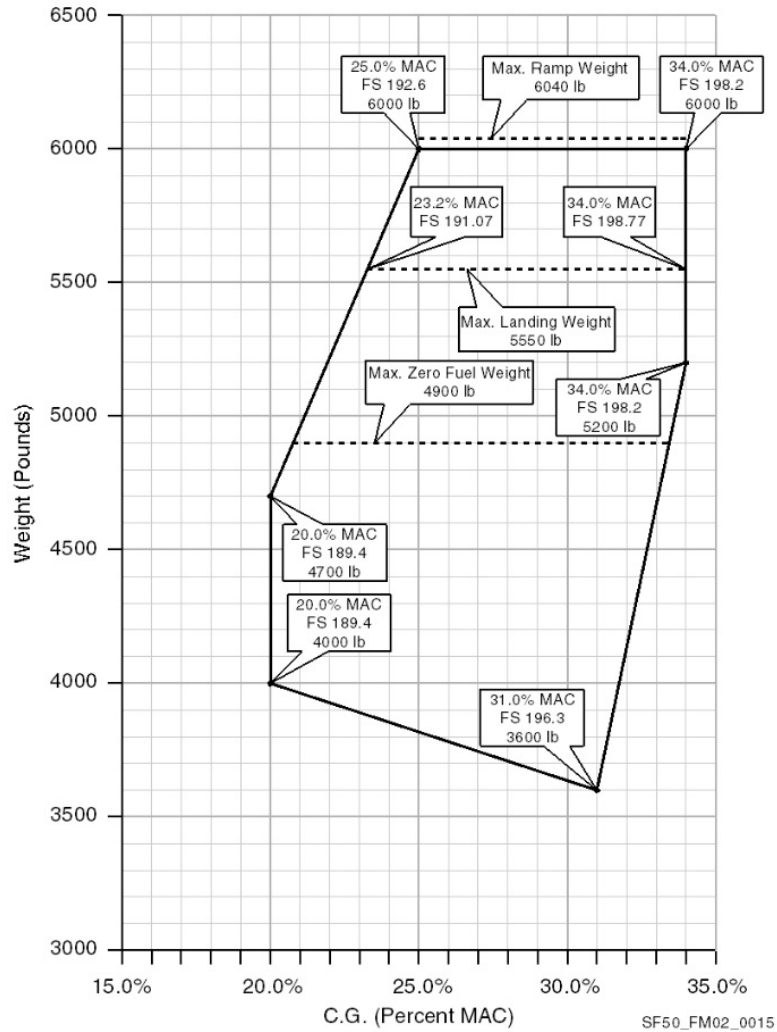
89 inches in front of the flat surface of forward cabin bulkhead

Leveling Means

Refer to the Airplane Maintenance Manual (31448-001)

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C.G. Range



Empty Weight C.G. Range None

Minimum Crew One (1) Pilot

Number of Seats 7 maximum.

Refer to the Airplane Flight Manual for seat configurations, moment arms and limitations.

Fuel Capacity Total 298.5 US gal at 203 inches
Usable 296 US gal
Unusable 2.5 US gal

Oil Capacity 2.2 quarts (full line)

Refer to the Airplane Flight Manual for approved oils

Maximum Operating Altitude S/N 0004 and subsequent for aircraft part numbers 26000-001 and 26000-003
28,000 ft MSL

S/N 0008, 0089, 0094 and subsequent except aircraft part number 26000-003
31,000 ft MSL

Control Surface Movements	Aileron	Up 15.0° ± 1.0°	Down 11.5° ± 1.0°
	LH Aileron Trim	Up 10.0° ± 1.0°	Down 10.0° ± 1.0°
	Ruddervator Pitch	Up 20.0° ± 1.0°	Down 15.0° ± 1.0°
	Ruddervator Yaw	Up 9.0° ± 0.5°	Down 9.0° ± 0.5°
	Ruddervator Trim	Up 7.0° ± 1.0°	Down 18.0° ± 1.0°
	Yaw SAS	Up 15° ± 1.5°	Down 15° ± 1.5°
	Wing Flaps	Up 0° ± 0.5°	Down 50% 15.0° ± 0.5° Down 100% 39.0° ± 0.5°

Serial Nos. Eligible 0004 and on

Type Certificate Application September 9, 2008

Type Certificate Issuance Type Certificate A00018CH Issued October 28, 2016

Certification Basis 14 CFR Part 23 effective February 1, 1965, as amended by Amendments 23-1 through 23-62

14CFR Part 34 effective September 10, 1990, as amended by Amendments 34-1 through 34-5A

14 CFR Part 36 effective December 1, 1969 as amended by Amendments 36-1 through 36-28

Special Conditions in accordance with 14 CFR Part 11:

23-261-SC, issued September 4, 2013, Inflatable Three-Point Restraint Safety Belt with an Integrated Airbag Device

23-267-SC, issued September 14, 2015, Full Authority Digital Engine Control System

23-272-SC, issued December 2, 2015, Auto Throttle

23-275-SC, issued July 6, 2016, Whole Airplane Parachute Recovery System

23-289-SC, issued August 3, 2018, Installation of Rechargeable Lithium Batteries

Equivalent Level of Safety Findings in accordance with 14 CFR Part 21:

ELOS number, date and subject	Regulation modified by ELOS
ACE-14-06, dated April 10, 2014: Electronic Placards	§23.1559, §23.1567
ACE-15-04, dated October 17, 2016: Landing Gear Warning Horn	§23.729(f)
ACE-15-14, dated June 25, 2015: Cockpit Control Knob Shape	§23.781(b)
TC6444CH-A-F-2, dated July 12, 2016: Spin Requirements	§23.221
TC06444CH-A-F-5, dated July 15, 2016: Amendment 62 Corrections	§23.45, §23.51, §23.63, §23.67, §23.73, §23.77, §23.161, §23.181, §23.221, §23.251, §23.253, §23.571, §23.785, §23.831, §23.1195, §23.1197, §23.1199, §23.1201, §23.1527, §23.1545, §23.1583
TC6444CH-A-S-11, dated June 23, 2016: Storage Battery Design and Installation	§23.1353(h)

Exemptions from 14 CFR Part 23 in accordance with 14 CFR Part 11:

Exemption No. 9948 dated October 23, 2009, §23.562(b) and §23.785(a), installation of seats limited to occupants weighing 90 pounds or less.

Exemption No. 11092 dated October 23, 2014, §23.177(b), use of electric roll trim for static lateral stability

Exemption No. 16970 dated June 23, 2016, §23.1419(a), 61-knot stall speed with critical ice accretions

Other Certification Basis:

Compliance has been shown for flight into known and forecast icing conditions

Per the type design, S/N 0008, 0089, 0094 and subsequent meet the Reduced Vertical Separation Minima (RVSM) technical requirements except when configured as aircraft part number 26000-003.

The SF50 is defined by Cirrus document E00000474, SF50 Master Drawing List

Production Basis

Production Certificate 338CE issued June 12, 2000. Amended January 03, 2017
Production Limitation Record Issued June 12, 2000. Amended May 01, 2017

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 to the above required equipment, the following equipment are also required:

1. The latest revision of the "FAA APPROVED AIRPLANE FLIGHT MANUAL", Document No. 31452-001 for aircraft serials 0004 and subsequent with aircraft part numbers 26000-001 and 26000-003, or Document No. 31452-002 for all other aircraft part numbers.

Note 1. A current weight and balance report, including list of equipment included in the certificated empty weight and loading instructions when necessary, must be provided for each aircraft at the time of original certification.

Note 2. All placards required by either the FAA-approved Airplane Flight Manual, the applicable operating rules, or the certification basis must be installed as specified.

Note 3. The Instructions for Continued Airworthiness are contained in the documents shown in the following table. These documents together meet the requirements of 14 CFR §23.1529. The Airworthiness Limitations are included in Section 4 of the Airplane Maintenance Manual.

Effectivity	Airplane Maintenance Manual	Illustrated Parts Catalog	Wiring Manual	Component Maintenance Manuals
S/N 0004 and subsequent	31448-001	31449-001	31450-001	31451-001