



TYPE-CERTIFICATE DATA SHEET

EASA.IM.A.007

for
SR20, SR22, SR22T

Type Certificate Holder
Cirrus Design Corporation

4515 Taylor Circle
Duluth, Minnesota 55811
United States of America

For models: SR20, SR22, SR22T



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SECTION A: SR20

A.I. General

- | | |
|--|---|
| 1. a) Type: | SR20 |
| b) Variant: | N/A |
| 2. Airworthiness Category: | JAR-23 Normal Category |
| 3. Type Certificate Holder: | Cirrus Design Corporation
4515 Taylor Circle
Duluth, MN 55811
U.S.A. |
| 4. Manufacturer: | Cirrus Design Corporation
4515 Taylor Circle
Duluth, MN 55811
U.S.A. |
| 5. JAA Certification Application Date: | 18-Mar-1999 |
| 6. JAA recommendation Date: | Not applicable |
| 7. EASA Type Certification Date: | 27-May-2004 |

A.II. Certification Basis

- | | |
|--|--|
| 1. Reference Date for determining the applicable requirements: | 07-Mar-1996 |
| 2. (Reserved) | |
| 3. (Reserved) | |
| 4. Certification Basis: | As defined in CRI A-1, Issue 5 |
| 5. Airworthiness Requirements: | JAR-23, Change 1, dated 11-Mar-1994 |
| 6. Requirements elected to comply: | None |
| 7. EASA Special Conditions:
System | CRI B-1, Cirrus Airframe Parachute

CRI B-2, Spins
CRI F-1, Protection from the Effects of HIRF
CRI F-2, Protection from the Effects of Lightning Strikes, Direct Effects
CRI F-3, Protection from the Effects of Lightning Strikes, Indirect Effects |
| 8. EASA Exemptions: | None |



9. EASA Equivalent Safety Findings: None
10. EASA Environmental Standards: ICAO Annex 16, Volume 1, Amdt 4, third edition, Chapter X
JAR 36, issued 23-May-1997
CRI A-3 (See Note 1)

A.III. Technical Characteristics and Operational Limitations

1. Type Design Definition: Master Drawing List, Document No. 13750, latest FAA Approved Revision.
2. Description: Single-engine, four-seat, low-wing airplane, composite construction, fixed tricycle landing gear.
3. Equipment: Equipment list, AFM, Doc. No. 11934-002E, 11934-003E, 11934-004E, 11934-005 Section 6. (See Note 2)
4. Dimensions:
- a. Serial Numbers 1005 thru 1877, and 1879 thru 1885:

Span	10.7 m	(35.3 ft)
Length	7.9 m	(25.9 ft)
Height	2.8 m	(9.2 ft)
Wing Area	12.6 m ²	(135.2 ft ²)
 - b. Serial Numbers 1878, 1886 and subsequent:

Span	11.67 m	(38.3 ft)
Length	7.92 m	(26.0 ft)
Height	2.71 m	(8.9 ft)
Wing Area	13.46 m ²	(144.90 ft ²)
5. Engines:
- 1. One (1) Teledyne Continental IO-360-ES
EASA TC IM.E.005
 - 2. One (1) Lycoming IO-390-C3B6
EASA TC IM.E.097
- 5.1 Firmware: Not Applicable
- 5.2 Mapping: Not Applicable
- 5.3 Engine Limits:
- Continental Motors, Inc IO-360-ES
Maximum Take-off 2700 RPM (200 hp)
Maximum Continuous Power 2700 RPM (200 hp)
 - Lycoming Engines IO-390-C3B6
Maximum Take-off 2700 RPM (215 hp)
Maximum Continuous Power 2700 RPM (215 hp)

For power-plants limits refer to AFM, Doc. No. 11934-002E, 11934-003E, 11934-004E or 11934-005 Section 2



7. Propellers:

- a. Hartzell Propeller Inc. P/N PHC-J3YF-1MF/F7392-1 (See note 6)
EASA TC IM.P.132
Maximum Diameter: 74 inches
Minimum Diameter: 72 inches
Number of Blades: 3
Low Pitch: $14.1^{\circ} \pm 0.5^{\circ}$
High Pitch: $35.0^{\circ} \pm 1.0^{\circ}$
No operating limitations to 2800 RPM
- b. Hartzell Propeller Inc. P/N PHC-J3YF-1RF/F7392-1 (See note 6)
EASA TC IM.P.187
Maximum Diameter: 74 inches
Minimum Diameter: 72 inches
Number of Blades: 3
Low Pitch: $13.9^{\circ} \pm 0.5^{\circ}$
High Pitch: $35.0^{\circ} \pm 1.0^{\circ}$
No operating limitations to 2800 RPM
- c. Hartzell Propeller Inc. P/N HC-E3YR-1RF/F7392S-1 (See note 7)
EASA TC IM.P.132
Maximum Diameter: 74 inches
Minimum Diameter: 73 inches
Number of Blades: 3
Low Pitch: $13.4^{\circ} \pm 0.5^{\circ}$
High Pitch: $30.0^{\circ} \pm 1.0^{\circ}$
No operating limitations to 2850 RPM
- d. Hartzell Propeller Inc. P/N 3C1-R919A1/76C03-2 (See note 7)
EASA TC IM.P.137
Maximum Diameter: 74 inches
Minimum Diameter: 74 inches
Number of Blades: 3
Low Pitch: $11.9^{\circ} \pm 0.5^{\circ}$
High Pitch: $30.0^{\circ} \pm 1.0^{\circ}$
No operating limitations to 2700 RPM

8. Fluids:

- 8.1 Fuel: Aviation Grade 100LL or 100
- 8.2 Oil: Engine AFM, Doc. No.11934-002E, 11934-003E, 11934-004E, 11934-005 Section 2
- 8.3 Coolant: Not Applicable



9. Fluid capacities:

9.1 Fuel:	Standard Fuel Tank	S/N 1005 thru 1877, 1879 thru 1885
		Total: 229.0 liters 60.5 US Gallons
		Usable: 212.0 liters 56.0 US Gallons
		S/N 1878, 1886 and subsequent:
		Total: 221.4 liters 58.5 US Gallons
		Usable: 212.0 liters 56.0 US Gallons
9.2 Oil:		Maximum: 7.6 liters 8.0 US qts
		Minimum: 5.7 liters 6.0 US qts

10. Air Speeds:

a.	<u>Serial Numbers 1005 through 1147 without Service Bulletin SB 20-01-00:</u>	
	Never Exceed Speed V_{NE}	200 KIAS
	Maximum Structural Cruising Speed V_{NO}	165 KIAS
	1315 kg (2900 lb) Operating Maneuvering Speed V_O	135 KIAS
	1179 kg (2600 lb) Operating Maneuvering Speed V_O	126 KIAS
	998 kg (2200 lb) Operating Maneuvering Speed V_O	116 KIAS
	Maximum Flap Extension Speed V_{FE}	100 KIAS
	Maximum Parachute Deployment Speed V_{PD}	135 KIAS
b.	<u>Serial Numbers 1148 through 1877, 1879 through 1885, and serials 1005 through 1147 with SB 20-01-00:</u>	
	Never Exceed Speed V_{NE}	200 KIAS
	Maximum Structural Cruising Speed V_{NO}	165 KIAS
	1361 kg (3000 lb) Operating Maneuvering Speed V_O	131 KIAS
	1179 kg (2600 lb) Operating Maneuvering Speed V_O	122 KIAS
	1043 kg (2300 lb) Operating Maneuvering Speed V_O	114 KIAS
	Maximum Flap Extension Speed V_{FE}	100 KIAS
	Maximum Parachute Deployment Speed V_{PD}	135 KIAS
c.	<u>Serial Numbers 1878, 1886 and subsequent (see note 6):</u>	
	Never Exceed Speed V_{NE}	200 KIAS
	Maximum Structural Cruising Speed V_{NO}	163 KIAS
	1383 kg (3050 lb) Operating Maneuvering Speed V_O	130 KIAS
	Maximum Flap Extension Speed V_{FE}	104 KIAS
	Maximum Parachute Deployment Speed V_{PD}	133 KIAS
d.	<u>Serial Numbers 2339 and subsequent (see note 7):</u>	
	Never Exceed Speed V_{NE}	201 KIAS
	Maximum Structural Cruising Speed V_{NO}	164 KIAS
	1429 kg (3150 lb) Operating Maneuvering Speed V_O	133 KIAS
	Maximum Flap Extension Speed V_{FE}	110 KIAS
	Maximum Parachute Deployment Speed V_{PD}	133 KIAS



11. Maximum Operating Altitude: The aircraft is limited to 5334 m (17500 ft MSL).
12. Operational Capability: VFR Day and Night (see Note 2)
IFR Day and Night
13. Maximum Masses:
- a. Serial Numbers 1005 through 1147 without Service Bulletin SB 20-01-00:
- | | |
|----------|-------------------|
| Take-Off | 1315 kg (2900 lb) |
| Landing | 1315 kg (2900 lb) |
- b. Serial Numbers 1148 through 1877, 1879 through 1885, and serials 1005 through 1147 with SB 20-01-00:
- | | |
|----------|--|
| Take-Off | 1361 kg (3000 lb) All weights in excess of
1315 kg (2900 lb) must consist of wing fuel. |
| Landing | 1315 kg (2900 lb) |
- c. Serial Numbers 1878, 1886 and subsequent (See note 6):
- | | |
|----------|------------------|
| Take-Off | 1383 kg (3050lb) |
| Landing | 1383 kg (3050lb) |
- d. Serial Numbers 2339 and subsequent (See note 7):
- | | |
|----------|------------------|
| Take-Off | 1429 kg (3150lb) |
| Landing | 1429 kg (3150lb) |
14. Centre of Gravity Range:
- a. Serial Numbers 1005 through 1147 without Service Bulletin SB 20-01-00:
- Forward Limits:** 3.523 m at 952 kg with a straight line taper to 3.581 m at 1222 kg, and 3.632 m at 1315 kg.
- Aft Limits:** 3.673 m at 952 kg, with straight line taper to 3.744 m at 1166 kg, and to 3.757 m at 1245 kg, and 3.764 m at 1315 kg.
- b. Serial Numbers 1148 through 1877, 1879 through 1885, and serials 1005 thru 1147 with SB 20-01-00:
- Forward Limits:** 3.523 m at 952 kg with a straight line taper to 3.581m at 1222 kg, and 3.660 m at 1361 kg.
- Aft Limits:** 3.673 m at 952 kg, with straight line taper to 3.744 m at 1166 kg, and to 3.762 m at 1315 kg, and 3.759 m at 1361 kg.
- c. Serial Numbers 1878, 1886 and subsequent (See note 6):
- Forward Limits:** 3.500 m at 953 kg with a straight line taper to 3.533m at 1225 kg, and 3.574 m at 1383 kg.
- Aft Limits:** 3.762 m at 953 kg, with straight line to 3.762 m at 1383kg.



d. Serial Numbers 2339 and subsequent (See note 7):

Forward Limits: 3.500 m at 953 kg with a straight line taper to 3.533m at 1225 kg, and 3.584 m at 1429 kg.

Aft Limits: 3.762 m at 953 kg, with straight line to 3.762 m at 1429kg.

15. Datum: 2.54 m (100 inches) in front of leading firewall
16. (Reserved)
17. Levelling Means: Spirit Level: Cabin door sill
Optical Level: Fuselage leveling points
18. Minimum Flight Crew: 1 (Pilot)
19. Maximum Passenger Seating Capacity:
3 (S/N 1005 thru 2126)
3+1 (S/N 2127 and subsequent) (see Note 5)
20. (Reserved)
21. Baggage / Cargo Compartment 59 kg (130 lb) at 5.283 m (208 in)
22. Wheels and Tires
Nose Wheel Tire Size 5.00 x 5
Main Wheel Tire Size 15 x 6.00 x 6

A.IV. Operating and Service Instructions

Airplane Flight Manual (AFM): Document No.11934-002E, 11934-003E, 11934-004E or 11934-005 Approved by the FAA and, Supplement for aeroplanes registered in Europe No 11934-S29 or later approved revision. (See note 8)

Airplane Maintenance Manual (AMM)
(Including Airworthiness Limitations) Document No. 12137-001, 12137-002 or later EASA approved Revisions.

A.V. Notes

1. Deleted, please refer to TCDS-N IM.A.007
2. Serial Numbers 1337 and subsequent with SRV (VFR Only) Option are eligible for VFR Day and Night only.
3. Cirrus Design Service Advisories and Service Bulletins are listed on the internet at <http://www.cirrusaircraft.com/support/>
4. For Optional Equipment Garmin G1000/G1000NXi:
CS23, Original issue plus
Special Conditions:



CRI B-52:	Human Factors
CRI F-51:	Equipment Systems and Installations
CRI F-52:	Protections from the Effects of HIRF
CRI F-53:	Protection from the effects of Lightning Strike; Direct Effects
CRI F-54:	Protection from the Effects of Lightning Strike; Indirect Effects
CRI F-5:	Databases and Configuration Files
CRI F-6:	Digital Devices Design Assurance
CRI F-7:	Software Aspects of Certification, Application of DO-178B Field Loadable Software and User Modifiable Software

5. For Maximum Passenger Seating Capacity 4 + 1 maximum occupancy limit according to 11934-004E, Reissue A, or later approved revision.
6. For aircraft equipped with Teledyne Continental IO-360-ES and Garmin G1000 avionics or Garmin G1000 avionics with Garmin GFC-700 autopilot system.
7. For aircraft equipped with Lycoming Engines, IO-390-C3B6 and Garmin G1000 NXi avionics or Garmin G1000 NXi avionics with Garmin GFC-700 autopilot system.
8. For aircraft equipped with Garmin G2000 suite of avionics with SW part number 006-B3956-Q4 or later approved revisions and related upgrades: Airplane Flight Manual (AFM) Document No. 44763-001 Approved by FAA and Supplement 60846-001, or later approved revisions.



SECTION B: SR 22

B.I. General

- | | |
|--|---|
| 1. a) Type: | SR22 |
| b) Variant: | N/A |
| 2. Airworthiness Category: | JAR-23 Normal Category |
| 3. Type Certificate Holder: | Cirrus Design Corporation
4515 Taylor Circle
Duluth, MN 55811
U.S.A. |
| 4. Manufacturer: | Cirrus Design Corporation
4515 Taylor Circle
Duluth, MN 55811
U.S.A. |
| 5. JAA Certification Application Date: | 10-June-2004 |
| 6. JAA recommendation Date: | TBD |
| 7. EASA Type Certification Date: | 27 January 2006 |

B.II. Certification Basis

- | | |
|--|--|
| 1. Reference Date for determining the applicable requirements: | 06-Jan-2000 |
| 2. (Reserved) | |
| 3. (Reserved) | |
| 4. Certification Basis: | As defined in CRI A-1 |
| 5. Airworthiness Requirements: | JAR-23, Change 1, dated 11-Mar-1994 |
| 6. Requirements elected to comply: | None |
| 7. EASA Special Conditions: | CRI B-1: Cirrus Airframe Parachute System
CRI B-2, Spins
CRI F-1: Protection from the Effects of HIRF
CRI F-2: Protection from the Effects of Lightning Strike; Direct Effects
CRI F-3: Protection from the Effects of Lightning Strike; Indirect Effects
CRI F-4: Human factors in integrated avionics
CRI F-5: Equipment Systems and Installations |



CRI F-6: Software
CRI F-7: BRNAV
CRI F-8: Use of Sandel HSI SN3308

8. EASA Exemptions: None
9. EASA Equivalent Safety Findings: None
10. EASA Environmental Standards: ICAO Annex 16, Volume 1, Amdt 4, third edition, Chapter X
JAR 36, issued 23-May-1997
CRI A-3 (See Note 1)

B.III. Technical Characteristics and Operational Limitations

1. Type Design Definition: Master Drawing List, Document No. 13750, latest FAA Approved Revision.
2. Description: Single-engine, four-seat, low-wing airplane, composite construction, fixed tricycle landing gear.
3. Equipment: Equipment list, AFM, Doc. No. 13772-001E or
Equipment list, AFM, Doc. No. 13772-002E (for aircraft equipped with optional G1000 avionics) or
Equipment list, AFM, Doc. No. 13772-004E (for aircraft equipped with 1633kg MTOW) or
Equipment list, AFM, Doc. No. 13772-006 (for aircraft equipped with optional Garmin G1000 NXi avionics)
4. Dimensions:
- | | | |
|-----------|----------------------|---------------------------|
| Span | 11.67 m | (38.3 ft) |
| Length | 7.92 m | (26.0 ft) |
| Height | 2.71 m | (8.90 ft) |
| Wing Area | 13.46 m ² | (144.90 ft ²) |
5. Engines: Teledyne Continental IO-550-N
EASA TC IM.E.100
- 5.1 Firmware: Not Applicable
- 5.2 Mapping: Not Applicable
- 5.3 Engine Limits: Maximum Take-off 2700 RPM (310 hp)
Maximum Continuous Power 2700 RPM (310 hp)



For power-plants limits refer to AFM, Doc. No. 13772-001E, 13772-002E, 13772-004E or 13772-006 Section 2

7. Propellers:
- a. Hartzell Propeller Inc. P/N PHC-J3YF-1RF/F7694 or F7694B
EASA TC IM.P.187
Maximum Diameter: 78 inches
Minimum Diameter: 76 inches
Number of Blades: 3
Low Pitch: 14.1°+/-0.5°
High Pitch: 35.0°+/-1.0°
No operating limitations to 2700 RPM
 - b. Hartzell Propeller Inc. P/N PHC-J3YF-1RF/F7393DF or F7693DFB
EASA TC IM.P.187
Maximum Diameter: 78 inches
Minimum Diameter: 76 inches
Number of Blades: 3
Low Pitch: 13.9°+/-0.5°
High Pitch: 40.0°+/-1.0°
No operating limitations to 2700 RPM
 - c. Hartzell Propeller Inc. P/N PHC-J3YF-1N/N7605 or N7605B
EASA TC IM.P.187
Maximum Diameter: 78 inches
Minimum Diameter: 78 inches
Number of Blades: 3
Low Pitch: 12.2°+/-0.5°
High Pitch: 35.0°+/-1.0°
No operating limitations to 2700 RPM
 - d. Hartzell Propeller Inc. P/N PHC-J3Y1F-1N/N7605, N7605B, N7605C or N7605CB
TCDS P36EA Hartzell
Maximum Diameter: 78 inches
Minimum Diameter: 78 inches
Number of Blades: 3
Low Pitch: 12.2°+/-0.5°
High Pitch: 35.0°+/-1.0°
No operating limitations to 2700 RPM when using type design throttle-propeller controls
Spinner: Hartzell P/N 102870() or A-2295-11()
NOTE: () indicates various finish options.

8. Fluids:

- 8.1 Fuel: Aviation Grade 100LL or 100
- 8.2 Oil: Engine AFM, Doc. No. 13772-001E, 13772-002E, 13772-004E or 13772-006 Section 2
- 8.3 Coolant: Not Applicable



9. Fluid capacities:

9.1 Fuel:

9.1.1 Aircraft serials 0002 thru 2333, 2335 thru 2419, and 2421 thru 2437

Standard Fuel Tank	Total:	318.0 liters 84 US Gallons
	Usable:	306.6 liters 81 US Gallons

9.1.2 Aircraft serials 2334, 2420, 2438 and subsequent

Standard Fuel Tank	Total:	357.7 liters 94.5 US Gallons
	Usable:	348.3 liters 92 US Gallons

Or

	Total:	221.4 liters 58.5 US Gallons
	Usable:	212.0 liters 56.0 US Gallons

9.2 Oil: Maximum: 7.6 liters 8.0 qts

10. Air Speeds:

a. Aircraft serials 0002 thru 3914:

Never Exceed Speed V_{NE}	204 KCAS
Maximum Structural Cruising Speed V_{NO}	180 KCAS
(3400 lb) Operating Maneuvering Speed V_O	133 KIAS
(2900 lb) Operating Maneuvering Speed V_O	124 KIAS
(2400 lb) Operating Maneuvering Speed V_O	112 KIAS
Maximum Flap Extension Speed V_{FE} (50%)	119 KIAS
Maximum Flap Extension Speed V_{FE} (100%)	104 KIAS
Maximum Parachute Deployment Speed V_{PD}	133 KIAS

b. Aircraft serials 3915 and subsequent:

Never Exceed Speed V_{NE}	208 KCAS
Maximum Structural Cruising Speed V_{NO}	179 KCAS
1633 kg (3600 lb) Operating Maneuvering Speed V_O	140 KIAS
1542 kg (3400 lb) Operating Maneuvering Speed V_O	133 KIAS
1315 kg (2900 lb) Operating Maneuvering Speed V_O	124 KIAS
1089 kg (2400 lb) Operating Maneuvering Speed V_O	112 KIAS
Maximum Flap Extension Speed V_{FE} (50%)	150 KIAS
Maximum Flap Extension Speed V_{FE} (100%)	110 KIAS
Maximum Parachute Deployment Speed V_{PD}	140 KIAS

11. Maximum Operating Altitude: The aircraft is limited to 5334 m (17500 ft MSL).

12. Operational Capability: VFR Day and Night (see Note 2)
IFR Day and Night
Flight into known icing (see Note 3)



13. Maximum Masses:

a. Aircraft serials 0002 thru 3914:

Take-Off and Landing 1542 kg (3400 lb)

b. Aircraft serials 3915 and subsequent:

Take-Off and Landing 1633 kg (3600 lb)

Zero fuel 1542 kg (3400 lb)

14. Centre of Gravity Range:

a. Aircraft serials 0002 thru 3914:

Forward Limits: 3.500 m at 952 kg with a straight line taper to 3.533 m at 1225 kg, and to 3.614 m at 1542 kg.

NOTE: For aircraft serial numbers 0002 thru 2333, 2335 thru 2419, and 2421 thru 2437, a no-landing zone applies forward of the line between 3.592 m at 1456 kg and 3.625 m at 1542 kg.

Aft Limits: 3.762 m at 952 kg, with straight line to 3.762 m at 1542 kg.

b. Aircraft serials 3915 and subsequent:

Forward Limits: 3.500 m at 952 kg with a straight line taper to 3.533 m at 1225 kg, and to 3.637 m at 1633 kg.

Aft Limits: 3.762 m at 952 kg, with straight line to 3.762 m at 1633 kg.

15. Datum: 2.54 m (100 inches) in front of leading firewall

16. (Reserved)

18. Levelling Means: Spirit Level: Cabin door sill
Optical Level: Fuselage leveling points

18. Minimum Flight Crew: 1 (Pilot)

19. Maximum Passenger Seating Capacity:

3 (S/N 0002 thru 3827)

3+1 (S/N 3828 and subsequent) (see Note 4)

20. (Reserved)

21. Baggage / Cargo Compartment 59 kg (130 lb) at 5.283 m (208 in)

22. Wheels and Tires

Nose Wheel Tire Size 5.00 x 5

Main Wheel Tire Size 15 x 6.00 x 6

B.IV. Operating and Service Instructions

Airplane Flight Manual (AFM): Document No. 13772-001E, 13772-002E Approved by EASA or later approved revisions for aircraft serials 0002 and subsequent, or Document No. 13772-002E Approved by EASA or later Approved revisions for aircraft serials 2979, 2992, 3002 thru 3914. Or



Document No. 13772-004E Approved by EASA or later approved revisions for aircraft serials 3915 thru 4434. Or Document No. 13772-006 Approved by the FAA or later approved revisions for aircraft serials 4435 and subsequent. And Supplement No 13772-122 for aeroplanes registered in Europe or later approved revision. (See note 5)

Airplane Maintenance Manual (AMM)
(Including Airworthiness Limitations)

Document No. 13773-001 or later EASA approved revisions

B.V. Notes

1. Deleted, please refer to TCDS-N IM.A.007
2. See AFM for specific operational capabilities
3. EASA Certification Basis as following: As defined in CRI A-1:

JAR 23, Change 1, dated 11 March 1994 plus

Special Conditions:

CRI B-1:	Cirrus Airframe Parachute System
CRI B-2:	Spins
CRI F-1:	Protection from the Effects of HIRF
CRI F-2:	Protection from the effects of Lightning Strike; Direct Effects
CRI F-3:	Protection from the Effects of Lightning Strike; Indirect Effects
CRI F-4	Human Factors in integrated avionics
CRI F-5	Equipment Systems and Installations
CRI F-6:	Software
CRI F-7:	BRNAV
CRI F-8:	Use of Sandel HSI SN3308

For Optional Equipment Garmin G1000: CS23, Original issue plus

Special Conditions:

CRI B-52:	Human Factors
CRI F-51:	Equipment Systems and Installations
CRI F-52:	Protections from the Effects of HIRF
CRI F-53:	Protection from the effects of Lightning Strike; Direct Effects
CRI F-54:	Protection from the Effects of Lightning Strike; Indirect Effects
CRI F-5:	Databases and Configuration Files
CRI F-6:	Digital Devices Design Assurance
CRI F-7:	Software Aspects of Certification, Application of DO-178B Field Loadable Software and User Modifiable Software



3. Flight into known icing only allowed for SR22 serial numbers 3003, 3310, 3326, 3403 and subsequent, if equipped according to AFM 13772-002E, 13772-004E or 13772-006 and AFM-S:

No 13772-134* for aircraft serial numbers 0001 and subsequent, or

No 13772-150* for aircraft serial numbers 3915 and subsequent, or

No 13772-163* for aircraft serial numbers 4433 and subsequent

* or later EASA Approved revisions

4. For Maximum Passenger Seating Capacity 4 +1 maximum occupancy limit according to 13772-002E, 13772-004E or 13772-006
5. For aircraft equipped with Garmin G2000 suite of avionics with SW part number 006-B3956-Q4 or later approved revisions and related upgrades: Airplane Flight Manual (AFM) Document No. 44765-001 Approved by FAA and Supplement 60846-001, or later approved revisions.



SECTION C: SR 22T

C.I. General

- | | |
|--|---|
| 1. a) Type: | SR22T |
| b) Variant: | N/A |
| 2. Airworthiness Category: | CS-23 Normal Category |
| 3. Type Certificate Holder: | Cirrus Design Corporation
4515 Taylor Circle
Duluth, MN 55811
U.S.A. |
| 4. Manufacturer: | Cirrus Design Corporation
4515 Taylor Circle
Duluth, MN 55811
U.S.A. |
| 5. JAA Certification Application Date: | n/a |
| 6. JAA recommendation Date: | n/a |
| 7. EASA Type Certification Date: | 09 Jul 2010 |

C.II. Certification Basis

- | | |
|--|--|
| 1. Reference Date for determining the applicable requirements: | 06-Jan-2000 |
| 2. (Reserved) | |
| 3. (Reserved) | |
| 4. Certification Basis: | As defined in CRI A-01 |
| 5. Airworthiness Requirements: | CS 23, Original Issue |
| 6. Requirements elected to comply: | CS 23, except 23.301 |
| 7. EASA Special Conditions: | |
| CRI B-1: | Cirrus Airframe Parachute System |
| CRI B-2, | Spins |
| CRI B-52: | Human Factors |
| CRI F-51: | Equipment, Systems and Installations |
| CRI F-52: | Protection from the Effects of HIRF |
| CRI F-53: | Protection from the Effects of Lightning Strike;
Direct Effects |
| CRI F-54: | Protection from the Effects of Lightning Strike;
Indirect Effects |



CRI F-5: Databases and Configuration Files
CRI F-6: Digital Devices Design Assurance
CRI F-7: Software Aspects of Certification 23-163-SC for inflatable restraint system (adopted)

8. EASA Exemptions: None
9. EASA Equivalent Safety Findings: ACE-00-09-A for Engine and Mixture Controls
ACE-08-05A for Cockpit control knob shape
ACE-09-06A for Pitot heat indication system
ACE-10-08 for alternate air door override means
10. EASA Environmental Standards: ICAO Annex 16, Volume I, Chapter X
CS 36, Amdt 2
(See Note 1)

C.III. Technical Characteristics and Operational Limitations

1. Type Design Definition: Master Drawing List, Document No. 13750, latest FAA Approved Revision.
2. Description: Single-engine, four-seat, low-wing airplane, composite construction, fixed tricycle landing gear.
3. Equipment: Equipment list, AFM, Doc. No. 13772-003E, 13772-005E or 13772-007
4. Dimensions:
- | | | |
|-----------|----------------------|---------------------------|
| Span | 11.67 m | (38.3 ft) |
| Length | 7.92 m | (26.0 ft) |
| Height | 2.71 m | (8.90 ft) |
| Wing Area | 13.46 m ² | (144.90 ft ²) |
5. Engines: Teledyne Continental TSIO-550-K
EASA TC IM.E.105
- 5.1 Firmware: Not Applicable
- 5.2 Mapping: Not Applicable
- 5.3 Engine Limits: Maximum Take-off 2500 RPM (315 hp)
Maximum Continuous Power 2500 RPM (315 hp)
- For power-plants limits refer to AFM, Doc. No. 13772-003E, 13772-005E or 13772-007 Section 2
7. Propellers: a. Hartzell Propeller Inc. P/N PHC-J3Y1F-1N/N7605, N7605B, N7605C or N7605CB



EASA TC IM.P.187
Maximum Diameter: 78 inches
Minimum Diameter: 78 inches
Number of Blades: 3
Low Pitch: 12.2°+/-0.5°
High Pitch: 35.0°+/-1.0°
No operating limitations to 2700 RPM when using type design throttle-propeller controls
Spinner: Hartzell P/N 102870() or A-2295-11() NOTE: () indicates various finish options.

8. Fluids:

8.1 Fuel: Aviation Grade 100LL or 100
8.2 Oil: Engine AFM, Doc. No. 13772-003E, 13772-005E or 13772-007 Section 2
8.3 Coolant: Not Applicable

9. Fluid capacities:

9.1 Fuel:

9.1.1 Aircraft serials 0001, and subsequent

Standard Fuel Tank	Total:	357.7 liters 94.5 US Gallons
	Usable:	348.3 liters 92 US Gallons

9.2 Oil: Maximum: 7.6 liters 8.0 qts

10. Air Speeds:

a. Aircraft serials 0001 thru 0441:

Never Exceed Speed V_{NE} 204 KCAS from S/L to 5334 m (17,500 ft MLS)
Linearly reducing from 204 KCAS @ 5334 m (17,500 ft) to 173 KCAS @ 7620 m (25,000 ft)

Maximum Structural Cruising Speed V_{NO} 180 KCAS from S/L to 5334 m (17,500 ft MLS)
Linearly reducing from 180 KCAS @ 5334 m (17,500 ft) to 153 KCAS @ 7620 m (25,000 ft)

1542 kg (3400 lb) Operating Maneuvering Speed V_O	133 KIAS
1315 kg (2900 lb) Operating Maneuvering Speed V_O	124 KIAS
1089 kg (2400 lb) Operating Maneuvering Speed V_O	112 KIAS
Maximum Flap Extension Speed V_{FE} (50%)	119 KIAS
Maximum Flap Extension Speed V_{FE} (100%)	104 KIAS
Maximum Parachute Deployment Speed V_{PD}	133 KIAS

b. Aircraft serials 0442 and subsequent:



Never Exceed Speed V_{NE} 208 KCAS from S/L to 5334 m (17,500 ft MLS)
Linearly reducing from 208 KCAS @ 5334 m (17,500 ft) to 178 KCAS @ 7620 m (25,000 ft)

Maximum Structural Cruising Speed V_{NO} 179 KCAS from S/L to 5334 m (17,500 ft MLS)
Linearly reducing from 179 KCAS @ 5334 m (17,500 ft) to 152 KCAS @ 7620 m (25,000 ft)

1633 kg (3600 lb) Operating Maneuvering Speed V_O	140 KIAS
1542 kg (3400 lb) Operating Maneuvering Speed V_O	133 KIAS
1315 kg (2900 lb) Operating Maneuvering Speed V_O	124 KIAS
1089 kg (2400 lb) Operating Maneuvering Speed V_O	112 KIAS
Maximum Flap Extension Speed V_{FE} (50%)	150 KIAS
Maximum Flap Extension Speed V_{FE} (100%)	110 KIAS
Maximum Parachute Deployment Speed V_{PD}	140 KIAS

11. Maximum Operating Altitude: The aircraft is limited to 7620 m (25,000 ft MSL).

12. Operational Capability: VFR Day and Night (see Note 4)
IFR Day and Night
Flight into known icing (see Note 2)

13. Maximum Masses:

a. Aircraft serials 0001 thru 0441:

Take-Off and Landing 1542 kg (3400 lb)

b. Aircraft serials 0442 and subsequent:

Take-Off and Landing 1633 kg (3600 lb)
Zero fuel 1542 kg (3400 lb)

15. Centre of Gravity Range:

a. Aircraft serials 0001 thru 0441:

Forward Limits: 3.500 m at 952 kg with a straight line taper to 3.533 m at 1225 kg, and 3.614 m at 1542 kg.

NOTE: For aircraft serial numbers 0002 thru 2333, 2335 thru 2419, and 2421 thru 2437, a no-landing zone applies forward of the line between 3.592 m at 1456 kg and 3.625 m at 1542 kg.

Aft Limits: 3.762 m at 952 kg, with straight line to 3.762 m at 1542 kg.

b. Aircraft serials 0442 and subsequent:

Forward Limits: 3.500 m at 952 kg with a straight line taper to 3.533 m at 1225 kg, and to 3.637 m at 1633 kg.

Aft Limits: 3.762 m at 952 kg, with straight line to 3.762 m at 1633 kg.

15. Datum: 2.54 m (100 inches) in front of leading firewall



16. (Reserved)
19. Levelling Means: Spirit Level: Cabin door sill
Optical Level: Fuselage leveling points
18. Minimum Flight Crew: 1 (Pilot)
19. Maximum Passenger Seating Capacity:
3 (S/N 0001 thru 0250, and 0252 thru 0267)
3+1 (S/N 0251, 0268 and subsequent) (see Note 3)
20. (Reserved)
21. Baggage / Cargo Compartment 59 kg (130 lb) at 5.283 m (208 in)
22. Wheels and Tires
Nose Wheel Tire Size 5.00 x 5
Main Wheel Tire Size 15 x 6.00 x 6

C.IV. Operating and Service Instructions

Airplane Flight Manual (AFM): Document No. 13772-003E Approved by EASA or later approved revisions for aircraft serials 0001 thru 0441, or Document No. 13772-005E Approved by EASA or later Approved revisions for aircraft serials 0442 thru 1459, 1461 thru 1470 and 1472. Or 13772-007 Approved by the FAA or later Approved revisions for aircraft serials 1460, 1471, 1473 and subsequent. And Supplement No 13772-122 for aeroplanes registered in Europe or later approved revision. (see Note 5)

Airplane Maintenance Manual (AMM)
(Including Airworthiness Limitations): Document No. 13773-001 or later EASA Approved revisions for aircraft serials 0001 thru 1472 excluding serial numbers 1460 and 1471 or Document No. 13773-002 or later EASA Approved revisions for aircraft serial numbers 1460 and subsequent excluding serial numbers 1461, 1462, 1463, 1465, 1466, 1467, 1468, 1469, 1470, and 1472.

C.V. Notes

1. For further details to noise please refer to TCDS-N IM.A.007
2. Flight into known icing only allowed if equipped according to applicable AFM and AFM-S:
No 13772-134* for aircraft serial numbers 0001 and subsequent, or
No 13772-151* for aircraft serial numbers 0422 and subsequent, or
No 13772-161* for aircraft serial numbers 1460 and subsequent excluding serial numbers 1461, 1462, 1463, 1465, 1466, 1467, 1468, 1469, 1470, and 1472.
* or later EASA Approved revisions



3. For Maximum Passenger Seating Capacity 4 +1 maximum occupancy limit according to 13772-003E, 13772-005E or 13772-007
4. See AFM for specific operational capabilities
5. For aircraft equipped with Garmin G2000 suite of avionics with SW part number 006-B3956-Q4 or later approved revisions and related upgrades: Airplane Flight Manual (AFM) Document No. 44767-001 Approved by FAA and Supplement 60846-001, or later approved revisions.



SECTION ADMINISTRATIVE

I. Acronyms & Abbreviations

AFM	Aircraft flight manual
AMM	Aircraft maintenance manual
CRI	Certification review item
EASA	European aviation safety agency
F.S.	Fuselage Station
IPC	Illustrated parts catalogue
IFR	Instrumental flight rules
KIAS	Indicated airspeed in knots
KTAS	True airspeed in knots
MAC	Mean aerodynamic chord
MSL	Mean sea level
MDL	Master document list
POH	Pilot's operating handbook
RPM	Revolutions per minute
VFR	Visual flight rules

II. Type Certificate Holder Record

Cirrus Design Corporation
4515 Taylor Circle
Duluth, Minnesota 55811
United States of America

III. Change Record

Issue	Date	Changes
Issue 1	27 May 2004	Initial issue SR20
Issue 2	23 August 2004	SR20 Correction of noise levels
Issue 3	26 November 2004	SR20, Increased gross weight
Issue 4	27 January 2006	Introduction of model SR22
Issue 5	25 May 2007	General update and corrections throughout TCDS. Add composite propeller, add updated fuel quantities for serialized SR22 aircraft. Update C.G. envelope for SR22 aircraft, deletion of noise levels.
Issue 6	11 December 2007	Updates regarding SR20 serial numbers 1878, 1886 and subsequent. Updates to Airspeed limits, C.G. range, Maximum Weight for takeoff and Landing, and Fuel Capacity.
Issue 7	23 June 2008	Updates regarding SR22 serial numbers 2979, 2992, 3002 and subsequent. Updates are for aircraft equipped with optional G1000 avionics or Garmin avionics with GFC



Issue 8	05 March 2009	Updates regarding SR20 serial numbers 2016 and subsequent. Updates are for aircraft equipped with Optional G1000 avionics or Garmin G1000 avionics with GFC-700 autopilot system.
Issue 9	28 Sep 2009	General update and corrections throughout TCDS. Add composite propeller for SR22 aircraft.
Issue 10	12 Nov 2009	Updates regarding SR22 serial numbers 3003, 3310, 3326,3403 and subsequent. Updates are for aircraft equipped for Flight Into Known Icing.
Issue 11	09 Jul 2010	Update to add Model SR22T serial numbers 0001 and subsequent.
Issue 12	16 August 2011	General update and corrections throughout TCDS.
Issue 13	30 January 2012	Update regarding SR20 (S/N 2127 and subsequent), SR22 (S/N 3828 and subsequent) and SR22T (S/N 0251, 0268 and subsequent) of maximum Passenger Seating Capacity to 3+1. General update and corrections throughout TCDS.
Issue 14	17 May 2013	Update regarding SR22 (3915 and subsequent) and SR22T (0442 and subsequent) for increase gross weight to 1633 kg (3600 lb). General update and corrections throughout TCDS.
Issue 15	23 July 2014	Update regarding SR22 and SR22T adding Hartzell propellers PHC-J3Y1F-1N/7605C and PHC-J3Y1F-N/N7605CB.
Issue 16	06 November 2017	Updated regarding addition of Lycoming IO-390-C3B6 engine installation and gross weight increase for SR20 and Garmin G1000 NXi avionics for SR20, SR22 and SR22T.
Issue 17	11 January 2023	General update and corrections SR20 AMM; SR22T S/N eligibilities for AMM and FIKI supplements.
Issue 18	20 September 2024	Addition of approved Garmin G2000 suite of avionics with aircraft upgrade. Update and correction of SR20, SR22 and SR22T specific Notes.

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