



TYPE-CERTIFICATE DATA SHEET

NO. EASA.A.647

for
F2

Type Certificate Holder
Flight Design general aviation GmbH

Am Flugplatz 3
99820 Hørselberg-Hainich
Germany

For models: F2-CS23



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SECTION A: MODEL F2-CS23	4
A.I. General	4
A.II. EASA Certification Basis	4
A.III. Technical Characteristics and Operational Limitations	5
A.V. Notes	8
SECTION ADMINISTRATIVE	9
I. Acronyms & Abbreviations	9
II. Type Certificate Holder Record	9
III. Change Record	9



SECTION A: MODEL F2-CS23

A.I. General

1. Type/ Model/ Variant	
1.1 Type	F2
1.2 Model	F2-CS23
1.3 Variant	n/a
2. Airworthiness Category	CS23, Normal Category
3. Manufacturer	FLIGHT DESIGN general aviation CZ s.r.o. Letiště Šumperk, 78803, Nový Malín 524 Czech Republic
4. EASA Type Certification Application Date	26 April 2018
5. State of Design Authority	n/a
6. State of Design Authority Type Certificate Date	n/a
7. EASA Type Certification Date	08 December 2021

A.II. EASA Certification Basis

1. Reference Date for determining the applicable requirements	26 April 2018
2. Airworthiness Requirements	CS-23 [Certification Specifications for Normal Category Aeroplanes] Amdt. 5, dated 29 March 2017 CS-ACNS, Issue 2, dated 26 April 2019
3. Special Conditions	SC-F23-1353-02-i01 Lithium Battery Installation
4. Exemptions	none
5. (Reserved) Deviations	none
6. Equivalent Safety Findings	ELOS-VLA.0991-01 Electrical Fuel Pumps
7. Environmental Protection	see TCDSN EASA.A.647



A.III. Technical Characteristics and Operational Limitations

1. Type Design Definition	Flight Design Master Document List AM 0100 0005_03 or later approved revision
2. Description	Single engine, two-seated cantilever high wing airplane, composite construction, fixed tricycle landing gear, cruciform tail
3. Equipment	See Kinds of Operation Minimum Equipment in POH Approved Equipment Variants see POH
4. Dimensions	Span 9.87 m Length 6.86 m Height 2.68 m Wing Area 11.3 m ²
5. Engine	
5.1. Model	Rotax 912 iSc2 Sport
5.2 Type Certificate	EASA.E.121
5.3 Limitations	Refer to TCDS EASA.E.121
6. Load factors	flaps up: n = +3.8 n = -1.5 flaps down: n = +2.0 n = 0.0
7. Propeller	
7.1 Model	H-FSH_3-D-R_I_RX_C (DUC Helices FLASH-R)
7.2 Type Certificate	EASA.P.038
7.3 Number of blades	3
7.4 Diameter	173 +/- 1 cm
7.5 Sense of Rotation	clockwise, seen from pilot's point of view
8. Fluids	
8.1 Fuel	see POH section 2 see ROTAX Service Instruction SI-912i-001
8.2 Oil	see POH section 2 see ROTAX Service Instruction SI-912i-001
8.3 Coolant	see POH section 2 see ROTAX Service Instruction SI-912i-001
9. Fluid capacities	
9.1 Fuel	total capacity: 2x 65 ltr in wing tanks 1x 5 ltr in header tank usable capacity: 2x 64 ltr in wing tanks 1x 4 ltr in header tank
9.2 Oil	max. capacity: ca. 3.5 ltr
9.3 Coolant system capacity	max. capacity: ca. 2.5 ltr
10. Air Speeds	kEAS = kCAS (kIAS) VS0 43 kCAS (40 kIAS) VS 55 kCAS (53 kIAS)



	VFE	80 kCAS	(77 kIAS)
	VO	103 kCAS	(101 kIAS)
	VNO	112 kCAS	(109 kIAS)
	VNE	141 kCAS	(137 kIAS)
		141 kTAS	
11. Flight Envelope		service ceiling 12 500 ft	
12. Approved Operations Capability		Day - VFR	
13. Maximum Masses		max. take-off mass 650 kg	
14. Centre of Gravity Range	front limit	210 mm	(18% MAC)
	aft limit	280 mm	(24% MAC)
15. Datum		wing leading edge at fuselage with aeroplane leveled as per section 14	
16. Control surface deflections			
16.1 Elevator	up	21	+/- 1°
	down	18	+/- 1°
16.2 Aileron	up	20	+/- 1°
	down	12	+/- 1°
16.3 Rudder	left	17	+/- 1°
	right	17	+/- 1°
16.4 Flaps	take-off	15	+/- 1°
	landing	35	+/- 1°
17. Levelling Means			
17.1 Center of Gravity		center fuselage tunnel in level position	
17.2 Control surface deflections		airfoil shape	
18. Minimum Flight Crew		one pilot	
19. Maximum Passenger Seating Capacity		one passenger	
20. Baggage/ Cargo Compartments		one compartment behind the seats, max. 40kg	
21. Wheels and Tyres			
21.1 Nose wheel		5.00-5, type III, min 6PR, ETSO approved, see AMM	
21.2 Main wheels		5.00-5, type III, min 6PR, ETSO approved, see AMM	
22. (Reserved)			



A.IV. Operating and Service Instructions

- | | |
|--------------------------------|---|
| 1. Flight Manual | AM 0430 0004 Rev. 00 or later approved revision |
| 2. Maintenance Manual | AM 0480 0005 Rev. 00 or later approved revision |
| 3. Structural Repair Manual | not available |
| 4. Weight and Balance Manual | see flight manual |
| 5. Illustrated Parts Catalogue | not available |



A.V. Notes

none



SECTION ADMINISTRATIVE

I. Acronyms & Abbreviations

CRI	Certification Review Item
EASA	European Aviation Safety Agency
kIAS	Indicated Airspeed
kCAS	Knots Calibrated Indicated Airspeed
MAC	Mean Aerodynamic Chord
POH	Pilot's Operating Handbook
RPM	Rotations per Minute
TCDS	Type Certificate Data Sheet
VFR	Visual Flight RulesType Certificate Data Sheet

II. Type Certificate Holder Record

TC Holder	Period
FLIGHT DESIGN general aviation GmbH Am Flugplatz 3 99820 Hörsselberg-Hainich Germany	08 December 2021

III. Change Record

Issue	Date	Changes	TC Issue No. & Date
Issue 01	08 Dec 2021	Initial Issue	Initial Issue, 08 Dec 2021
Issue 02	15 Mar 2022	Correction of typo in MDL reference	Initial Issue, 08 Dec 2021

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