TYPE-CERTIFICATE
DATA SHEET

NO. EASA.A.647

for
F2

Type Certificate Holder
Flight Design general aviation GmbH

Am Flugplatz 3
99820 Hörselberg-Hainich
Germany

For models: F2-CS23
SECTION A: MODEL F2-CS23

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**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 01010 0005_02

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 m²

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_1_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)
      VSO  43 kCAS  (40 kIAS)
      VS   55 kCAS  (53 kIAS)
      VFE  80 kCAS  (77 kIAS)
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. 40 kg

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

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<table>
<thead>
<tr>
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<tbody>
<tr>
<td>1.</td>
<td>Flight Manual AM 0430 0004 Rev. 00 or later approved revision</td>
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<td>2.</td>
<td>Maintenance Manual AM 0480 0005 Rev. 00 or later approved revision</td>
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<td>3.</td>
<td>Structural Repair Manual not available</td>
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<td>4.</td>
<td>Weight and Balance Manual see flight manual</td>
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<td>5.</td>
<td>Illustrated Parts Catalogue not available</td>
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A.V. Notes

none
SECTION ADMINISTRATIVE

I. Acronyms & Abbreviations
CRI Certification Review Item
EASA European Aviation Safety Agency
kIAS Indicated Airspeed
kCAS Knoths 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

<table>
<thead>
<tr>
<th>TC Holder</th>
<th>Period</th>
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<tr>
<td>FLIGHT DESIGN general aviation GmbH Am Flugplatz 3 99820 Hörselberg-Hainich Germany</td>
<td>08 December 2021</td>
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III. Change Record

<table>
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<th>Changes</th>
<th>TC Issue No. &amp; Date</th>
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<tr>
<td>Issue 01</td>
<td>08 Dec 2021</td>
<td>Initial Issue</td>
<td>Initial Issue, 08 Dec 2021</td>
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