

型号认可证数据单
THE VALIDATION DATA SHEET

编号/No: VTC0378A

版次/Revision: 0

型别/Type:

F2-CS23

批准人/Approved By:

徐 峰

职务/Title: Deputy Director General

日期/Date: 2024-01-16

本数据单是型号认可证（编号 VTC0378A）的组成部分，它规定了符合中国民用航空局的适航要求所颁发此型号认可证的产品状态和限制。

This data sheet, which is a part of Validation Type Certificate (No: VTC0378A), prescribes conditions and limitations under which the product for which the Type Certificate was issued meets the airworthiness requirements of the Chinese Civil Aviation Regulation.

型号认可证持有人/Validation of Type Certificate Holder: Flight Design general aviation GmbH

Am Flugplatz 3 99820 Hörselberg-Hainich Germany

第 1 部分 概述

SECTION 1 GENERAL

1. 型号认可证数据单版次信息以及修订记录/ Revision and Change Record of the Validation of Type Certificate Data Sheet

数据单版次信息/Revision of the Type Certificate Data Sheet

历史 History	VTC0378A,R0,2024-01-16	EASA.A.647,Issue 3,2021-12-08
------------	------------------------	-------------------------------

注：上表中出口国局方型号合格证数据单信息仅供参考

Note: Above TCDS information of Certification Authority is only for reference

认可数据单修订记录/ Change Record of the VTCDS

版次/ Revision	相对上一版的修订记录 Change Record	备注 Remark
N/A		

2. 认可当局/Validation Authority:

中国民用航空局/CAAC

审定当局/Certifying Authority:

欧盟航空安全局/EASA

3. 型号合格证持有人/Type Certificate Holder:

Flight Design general aviation GmbH

Am Flugplatz 3

99820 Hörselberg-Hainich

Germany

4. 生产制造商/Manufacturer

FLIGHT DESIGN general aviation CZ s.r.o.

Letiště Šumperk, 78803, Nový Malín 524

Czech Republic

5. 双发延程飞行/ETOPS:

不适用/Not Applicable

6. CAAC 专用要求/Special Requirements:

交付到中国的每一架特定的航空器必须满足下述特殊要求:

Each of specific aircraft delivered to China shall meet the following Special Requirements:

标牌要求/ Placard Requirements:

根据 CCAR 21.29(5), 机上所有对旅客进行的提示、警告和通知的文字标记和标牌; 机上所有向旅客或机外营救人员指示应急出口和门的位置以及开启方法的文字和标牌; 旅客可能使用的机上所有应急设备的操作、使用说明应当至少有中文表述;

Per CCAR 21.29(5), All on-board placard and marking for awareness, warning, and note to the passenger; all on-board placard and marking for opening method and location indication of the emergency exit and door to passenger and outside rescuer; and all operational instructions for on-board emergency equipment possible operated by passengers shall be presented in Chinese at least.

第 2 部分 数据（型别：F2-CS23）

SECTION 2 DATA (Models: F2-CS23)

1. 产品型别和批准日期/Model and Approval Date

型别 MODEL	申请日期 APPLICATION DATE	批准日期 Approval Date	类别 category
F2-CS23	2018年4月26日/ 26 April 2018	2021年12月8日/ 8 December 2021	正常类飞机/ Normal Category Aeroplanes

2. 认可审定基础和生产依据/ Certification Basis and Production Basis

CAAC的认可审定基础由适航要求，环境保护要求以及附加技术条件组成。

The CAAC validation certification basis consists of airworthiness requirements, environmental protection requirements and CAAC Additional Technical Conditions.

适航要求/Airworthiness Requirements

(1) 适航规章/Airworthiness Rules.

CCAR-23-R4

(2) 专用条件/Special Conditions

无/None

(3) 豁免/Exemptions

无/None

(4) 等效安全/Equivalent Safety Findings

无/None

环境保护要求/ Environmental Protection Requirements

CCAR-36-R2

中国民用航空局附加技术条件/CAAC Additional Technical Conditions

交付到中国的每一架 F2-CS23 飞机须满足下述附加技术条件：

Each of Model F2-CS23 aircraft delivered to China shall meet the following Additional Technical Conditions:

(1) 标牌要求/Placard Requirements:

根据 CCAR21.29(5)，有关适航规章、噪声规定所要求的手册、标牌、目录清单和仪表标记，应当用中文或英文书写；下列各项应当至少有简体中文表述

1) 机上所有对旅客进行的提示、警告和通知的文字标记和标牌；

2) 机上所有向旅客或机外营救人员指示应急出口和门的位置以及开启方法的文字标记和标牌；

3) 旅客可能使用的机上所有应急设备的操作、使用说明。

Per CCAR 21.29(5), the manuals, placards, listings and instrument markings required by the

applicable airworthiness regulations and noise requirements are presented in the Chinese or English language. The following items must be presented in Simplified Chinese at least.

- 1) All on-board placard and marking for awareness, warning, and note to the passenger;
- 2) All on-board placard and marking for opening method and location indication of the emergency exit and door to passenger and outside rescuer; and
- 3) All operational instructions for on-board emergency equipment possible operated by passengers.

生产依据/ Production Basis:

CZ.21G.0065, 见注释 1/See Note 1.

3. 技术特征和使用限制/Technical Characteristics and Operational Limitations

型号设计定义/Type Design Definition:

文件 F2-CS23 Type Design Definition, Flight Design Master Document List
AM 0100 0005_03 或后续批准版本

F2-CS23 Type Design Definition, Flight Design Master Document List AM
0100 0005_03
or later approved revision.

描述/Description:

单发, 并排双座, 采用传统尾翼和不可收放三轮起落架的上单翼复合材料飞机。

Single engine, two seats side-by-side, high wing cantilever composite construction aircraft with conventional empennage configuration and non-retractable tricycle landing gear

几何尺寸/Dimensions:

翼展/Span: 9.87 m

长/Length: 6.86 m

高/Height: 2.68 m

机翼面积/Wing Area: 11.3 m²

发动机/Engine:

一台 BRP-Rotax GmbH & Co KG 的活塞发动机

型号: Rotax 912 iSc2 Sport

EASA 型号合格证号: EASA.E.121

CAAC 型号认可证号: VTC139E, 认可数据单版本: 0

1 BRP-Rotax GmbH & Co KG piston engine

Model: Rotax 912 iSc2 Sport

EASA Type Certificate No. EASA.E.121

CAAC VTC No. VTC139E, VTCDS Revision: 0

发动机限制/Engine Limitations:

螺旋桨转速 5800 rpm, 最大起飞功率 (5 分钟)	73.5kw (100HP)
螺旋桨转速 5500 rpm, 最大连续功率	72kw (98HP)
Max. Take-Off Power (5 min) at 5800 prop rpm	73.5kw
(100HP)	
Max. Continuous Power at 5500 prop rpm	72kw (98HP)
发动机使用限制见发动机型号合格证数据单: TCDS EASA.E.121。	
For engine operating limits see the Engine Type Certificate Data Sheet: TCDS EASA.E.121.	

载荷系数/Load Factors:

	襟翼处于上偏位	襟翼处于下偏位
	flaps up	flaps down
正	+3.8	+2.0
/Positive		
负	-1.5	0
/Negative		

螺旋桨/Propeller:

一副 SOCIETE DUC t/a DUC Hélices Propellers 公司的地面可调桨距螺旋桨
型号: H-FSH_3-D-R_I_RX_C (DUC Helices FLASH-R)
EASA 型号合格证号: EASA.P.038
CAAC 型号认可证号: VTC0371P, 认可数据单版本: 0
桨叶数量: 3
直径: 173±1 厘米
旋转方向: 顺时针 (驾驶员视角)
One ground adjustable pitch propeller manufactured by SOCIETE DUC t/a
DUC Hélices Propellers
Model: H-FSH_3-D-R_I_RX_C (DUC Helices FLASH-R)
EASA Type Certificate No. EASA.P.038
CAAC VTC No. VTC0371P, VTCDS Revision: 0
Number of Blades: 3
Propeller Diameter: 173±1 cm
Sense of Rotation: Clockwise, seen from pilot's point of view

燃油/Fuel:

详见飞机飞行手册第二部分
详见 ROTAX 发动机使用说明 SI-912i-001 部分
see POH section 2
see ROTAX Service Instruction SI-912i-001

燃油容量/Fuel Capacities:

共计

机翼油箱: 2*65 升

头部油箱: 5 升

可用

机翼油箱: 2*64 升

头部油箱: 4 升

Total

Wing Tanks: 2*65 liters

Head Tanks: 5 liters

Usable

Wing Tanks: 2*64 liters

Head Tanks: 4 liters

滑油/Oil:

详见飞机飞行手册第二部分

详见 ROTAX 发动机使用说明 SI-912i-001 部分

see POH section 2

see ROTAX Service Instruction SI-912i-001

滑油容量/Oil Capacities:

3.5 升/liters

冷却剂/Coolant:

详见飞机飞行手册第二部分

详见 ROTAX 发动机使用说明 SI-912i-001 部分

see POH section 2

see ROTAX Service Instruction SI-912i-001

冷却剂容量/Coolant Capacities:

2.5 升/liters

空速限制/Airspeed Limits:

不可超越速度 V_{NE} Never exceed speed V_{NE}	141 KEAS
使用机动速度 V_O Manoeuvring speed V_O	103 KEAS
最大襟翼展开速度 V_{FE} Maximum flaps extended speed V_{FE}	80 KEAS
最大结构巡航速度 V_{NO} Maximum Structural Cruising Speed V_{NO}	112 KEAS
襟翼收起失速速度 V_S	55 KEAS

Stall speed with flaps up	
襟翼着陆构型失速速度 V_{SO}	43 KEAS
Stall speed with flaps landing	

其其它空速限制见适用的飞机飞行手册第 2 章

For other airspeed limits, see the applicable POH, Section 2.

最大使用升限/Maximum Operating Altitude:

3810 m (12500 ft)

重心范围/ Centre of Gravity Range:

前限: 210 mm (18%平均气动弦长)

后限: 280 mm (24%平均气动弦长)

front limit: 210 mm (18% MAC)

aft limit: 280 mm (24% MAC)

运行能力/Operations Capability:

昼间-目视飞行规则

禁止在结冰条件下或靠近/进入雷暴中飞行

Day-VFR

Flight into icing conditions and close to or in thunderstorms are not approved

最大重量/Maximum Weights:

最大起飞重量/Max. Take-Off weight

650 kg (1430 lb)

测量基准/Datum:

在机身的机翼前缘位置 (飞机机体调平时)。

Wing leading edge at fuselage with aeroplane is leveled.

水平测量措施/Leveling Means:

重心 中机身位置处于水平位置

操纵面偏转 翼型形状

Center of Gravity center fuselage tunnel in level position

Control surface deflections airfoil shape

最小飞行机组/Minimum Flight Crew:

1 名驾驶员/1 pilot

最大客座数/Maximum Passenger Seating Capacity:

1 名乘客/1 passenger

最大行李/货物/ Max. Baggage/Cargo:

座椅后部货舱 最大重量 40 公斤

one compartment behind the seats, max. 40kg

操纵面运动/ Control Surface Deflections:

升降舵:	21±1° (上) 18±1° (下)
副翼:	20±1° (上) 12±1° (下)
方向舵:	17±1° (左) 17±1° (右)
襟翼:	15±1° (起飞) 35±1° (着陆)
Elevator	up 21+/-1° down 18+/-1°
Aileron	up 20+/-1° down 12+/-1°
Rudder	left 17+/-1° right 17+/-1°
Flaps	take-off 15+/-1° landing 35+/-1°

机轮和轮胎/Wheels and Tyres:

前机轮: 5.00-5, III 型, 最小 6PR, ETSO 件
Nose Wheel: 5.00-5, type III, min 6PR, ETSO approved
主机轮轮胎: 5.00-5, III 型, 最小 6PR, ETSO 件
Main Wheel: 5.00-5, type III, min 6PR, ETSO approved
详细信息见适用的飞机维护手册
For more details see applicable AMM.

必要设备/Required Equipment:

设备清单, 见飞机飞行手册第 6.10 部分/List of Approved Equipment, see POH Section 6.10 .

在适用的适航规章(见审定基础)中规定的基本必备设备, 必须安装在审定的飞机上。

The basic required equipment as prescribed in the applicable airworthiness regulations (see Certification Basis) must be installed in the aircraft for certification.

适用的序号/Eligible Serial Numbers:

序号: M-23-06-03 及以后。
SN: M-23-06-03 and on.

经批准的中文标记标牌/ The Approved Chinese Placards

以下资料中所包含的中文标记标牌的中文表述已由 CAAC 接受:

The Chinese Placards involved in the following data have been accepted by CAAC:

序号 Code	标题 Title	编号 Number	版本（见注释 2） Version（See Note 2）
1	Pilot's Operating Handbook (POH) Supplement S1 for CAAC validated version of F2-CS23	AM 0430 0005_00	00

4. 批准的技术资料/Approved Technical Documents

a) F2-CS23 飞机飞行手册，文件编号：AM 0430 0004.Rev. 00 及后续经批准版本 /F2-CS23 Pilot's Operation Handbook, Doc. No. AM 0430 0004 Rev. 00 or later approved revision.

b) F2-CS23 飞机飞行手册增补章节 S1 (CAAC 认可型号版本)，文件编号：AM 0430 0005.Rev. 00 及后续经批准版本 /F2-CS23 Pilot's Operation Handbook Supplement S1 for CAAC validated version of F2-CS23, Doc. No. AM 0430 0005 Rev. 00 or later approved revision.

c) F2-CS23 飞机维护手册,文件编号：AM 0430 0005 Rev. 00 及后续经批准版本 / F2-CS23 Airplane Maintenance Manual, Doc. No. AM 0480 0005 Rev. 00 or later approved revision.

5. 注释/Notes

注释/NOTE 1: 进口要求/Import Requirement

为具备在中国运行的资格，按本型号认可证制造的每架航空器必须具有一份出口适航证，其上签注有出口国适航当局的审定声明，即：本架航空器符合 CAAC 所批准的型号设计，并处于可安全运行的状态。

To be considered eligible for operation in China, each aircraft manufactured under this Validation of Type Certificate must be accompanied by a certificate of airworthiness for export endorsed by Export Authority which states (in English language): This aircraft conforms to its CAAC type design and is in a condition for safe operation.

注释/NOTE 2: 包含后续经批准的版本。

Including the subsequent approved version(s).

---完---

---END---