

型号合格证数据单

TYPE CERTIFICATE DATA SHEET

编号/No: TC0061A

版次/Revision: 0

型别/Model:

Cavalon

批准人/Approved By:



职务/Title: Director General of CAAC-AAD

日期/Date: 2022 年 10 月 25 日

本数据单是型号合格证（编号：TC0061A）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合格证的产品的状态和限制。

This data sheet, which is part of Type Certificate (No: TC0061A), prescribes the conditions and the limitations under which the product for which the type Certificate was issued meets the airworthiness requirements of the Chinese Civil Aviation Regulations.

型号合格证持有人 / Type Certificate Holder:

AutoGyro GmbH
Dornierstraße 14
D-31137 Hildesheim
Germany

第 1 部分 A: Cavalon

SECTION 1. A: Cavalon

A.I. 概述

1. a) 型号: Cavalon
b) 衍生型: N/A
2. 适航类别: LSA 轻型运动航空器
3. 型号合格证持有人: Auto Gyro GmbH
Dornierstraße 14
D-31137 Hildesheim
Germany
4. 制造人: Auto Gyro GmbH
Dornierstraße 14
D-31137 Hildesheim
Germany
5. 申请日期: 2019 年 9 月 9 日
6. CAAC 型号设计批准日期: 2022 年 10 月 25 日

A.I. General

1. a) Type: Cavalon912ULS/914UL/915iS
b) Variant: N/A
2. Airworthiness Category: LSA
3. Type Certificate Holder: AutoGyro GmbH
Dornierstraße 14
D-31137 Hildesheim
Germany
4. Manufacturer: AutoGyro GmbH
Dornierstraße 14
D-31137 Hildesheim
Germany
5. Application Date: 09-September-2019
6. CAAC Type Design Approval Date: 25-October-2022

A.II. 审定基础和生产依据

1) 审定基础

- | | | |
|----|------------|---|
| 1. | CAAC 规章和政策 | CCAR -21-R4, AC-21-AA-2015-25,
AP-21-AA-2015-37, 民航适发〔2019〕9 号 |
| 2. | 相关的技术标准 | CCAR-21-R4:
21.26(一).4, 21.175(二), 21.421, 21.29(五);
ASTM:
F2352-14, F2339-06, F2506-13, F2415-14,
F2483-12, F2245-20 A.2 |
| 3. | 专用条件: | 无 |
| 4. | 等效安全判定: | 无 |
| 5. | 环境要求: | 无 |
- 2) 生产依据
- | | |
|--------|-----------|
| 生产许可证: | LSA-0002A |
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A.II. Certification Basis and Production Basis

1) Basis of certification

- | | | |
|----|-----------------------------|--|
| 1. | CAAC regulation and Policy | CCAR -21-R4, AC-21-AA-2015-25,
AP-21-AA-2015-37, 民航适发〔2019〕9 号 |
| 2. | Related Technical standards | CCAR-21-R4:
21.26(一).4, 21.175(二), 21.421, 21.29(五)
ASTM:
F2352-14, F2339-06, F2506-13, F2415-14,
F2483-12, F2245-20 A.2 |
| 3. | Special Condition | None |
| 4. | Equivalent Level of Safety | None |
| 5. | Environmental Standards: | None |

2) Production Basis

Production Certificate	No. LSA-0002A
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A.III. 技术参数和使用限制

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|----|---------|--------------------------------------|
| 1. | 型号设计定义: | PRODUCT DEFINITION DOCUMENT (PDD006) |
| 2. | 描述: | 单发动机, 不锈钢管骨架, 焊接处理, 复合材料的座舱, 两个座位。 |

3. 设备: 有关下列性能的仪表:飞行速度, 高度, 旋翼转速, 发动机转速, 油压, 油温, 气缸头温度, 飞行小时数, 其他设备见《AutoGyro GmbH Cavalon 装机仪表设备报告》
4. 尺寸: 长度: 4.73 m
宽度: 1.77 m
高度: 2.77 m
5. 操纵面偏度 :
方向舵: 右偏: 530mm
左偏: 630mm
参考平面: 纵轴
6. 发动机 满足 ASTM F2339-06
Rotax 912 ULS
或 Rotax 914 UL
或 Rotax915 iS
- 6.1 发动机限制: 最大转速 5800 rpm (最多 5 分钟).
最大连续转速 5500 rpm
发动机其他使用限制参见 OM-912, OM-914, OM-915
7. 螺旋桨: 三叶式地面可调定距螺旋桨
(匹配 Rotax912ULS/914UL 发动机)
或四叶式地面可调定距螺旋桨
(匹配 Rotax915iS 发动机)
详情参见飞行操作手册
8. 液体:
- 8.1 燃油: Rotax 发动机 912 ULS/914UL/915iS 的操作手册 (Operator's Manual) 及后续的升级, 包括 Rotax 服务通告和服务信息对批准的燃油规格予以持续更新。同时参见飞行手册中对于燃油的限制。
- 8.2 滑油: Rotax 发动机 912 ULS/914UL/915iS 的操作手册 (Operator's Manual) 及后续的升级, 包括 Rotax 服务通告和服务信息对批准的滑油规格予以持续更新。同时参见飞行手册中对于滑油的限制。
- 8.3 冷却液: Rotax 发动机 912 ULS/914UL/915iS 的操作手册 (Operator's Manual) 及后续的升级, 包括 Rotax 服务通告和服务信息对批准的冷却液规格予以持续更新。参见飞行手册中对于冷却液的限制。
9. 液体容量:
- 9.1 燃油: 总量: 100 升

	可用: 97 升	
9.2 滑油:	最大: 3.4 升	
	最小: 3.0 升	
9.3 冷却液:	最大: 3.5 升	
	最小: 3.3 升	
10. 空速限制 (IAS):	不可超越速度 V_{NE}	160 km/h 或 *195km/h
	设计机动速度 V_A	80 km/h
	最大湍流速度 V_B	130 km/h
11. 旋翼系统:	两片桨叶旋翼和桨毂组件	
	见飞行操作手册	
12. 运行条件:	- 日间目视飞行及	
	- 进行夜间目视飞行需安装 CN night VFR 夜间目视飞行基础套件	
	- 禁止特技或在机动中超过 60 度坡度	
	- 禁止在已知结冰条件下飞行	
	- 禁止在强阵风条件下或超过 40 节风速的条件下飞行	
13. 最大质量:		
起飞	500 kg 或 *560kg	
着陆	500 kg 或 *560kg	
滑行	500 kg 或 *560kg	
14. 重心范围 (基准点之前):	前限: 540 mm	
	后限: 325 mm	
15. 基准点:	主轮轴	
16. (保留)		
17. 水平测量方法:	旋翼桅杆铅垂方向	
18. 最小飞行机组:	1 人	
19. 最大乘客座椅容量:	1 人	
20. (保留)		
21. 行李舱最大允许载荷 :	10 kg	

A.III. Technical Characteristics and Operational Limitations

1. Type Design Definition:	PRODUCT DEFINITION DOCUMENT (PDD006)
2. Description:	Single engine powered, Tubular steel frame, welded, composite cockpit, and two seats.
3. Equipment:	instruments for: speed, rotor speed, engine speed, Oil

- pressure, oil temperature, cylinder head temperature, height, operation hours, other instruments see
《AutoGyro GmbH Cavalon 装机仪表设备报告》
4. Dimensions: Length: 4.73 m
Width: 1.77 m
Height: 2.77 m
5. Control surface deflections:
Rudder: Right: 530mm
Left: 630mm
Reference level: longitudinal axis
6. Engines: compliant to ASTM F2339-06
ROTAX 912 ULS
Or Rotax 914 UL
Or Rotax 915 iS
6.1 Engine Limits: Max rotational speed 5800 rpm (5 minutes, max.).
Max continuous rotational speed 5500 rpm
For power-plants limits refer to OM-912, OM-914, OM-915
7. Propellers: 3 Blade ground adjustable fixed pitch propeller
(Rotax 912ULS/914UL) or 4 Blade ground adjustable fixed pitch propeller (Rotax 915iS)
see Pilot and Operation Handbook
8. Fluids:
8.1 Fuel: Rotax Operator's Manual for engine 912 ULS/914UL /915iS and subsequent updates, including Rotax SB's and SI's providing continuous update to approved fuel specifications. Also refer to the Pilot Operation Handbook for fuel limitations.
8.2 Oil: Rotax Operator's Manual for engine 912 ULS/914UL /915iS and subsequent updates, including Rotax SB's and SI's providing continuous update to approved oil specifications. Also refer to the Pilot Operation Handbook for oil limitations.
8.3 Coolant: Rotax Operator's Manual for engine 912 ULS /914UL /915iS and subsequent updates, including Rotax SB's and SI's providing continuous update to approved coolant specifications. Refer to the Pilot Operation Handbook for coolant limitations.

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|--------------|---|--|
| 9. | Fluid capacities: | |
| 9.1 Fuel: | Total: | 100 litres |
| | Usable: | 3 litres |
| 9.2 Oil: | Max: | 3.4 litres |
| | Min: | 3.0 litres |
| 9.3 Coolant: | Max: | 3.5 litres |
| | Min : | 3.3 litres |
| 10. | Airspeed Limits (IAS): | Never exceed speed V_{NE} 160 km/h or
*195km/h |
| | | Design Manoeuvring Speed V_A 80 km/h |
| | | Maximum rough-air speed V_B 130 km/h |
| 11. | ROTOR SYSTEM: | AutoGyro rotor blade and hub assembly
see Pilot and Operation Handbook |
| 12. | Operation Conditions | - Day VFR, and
- The CN Night VFR kit is required for night VFR
- Aerobatics and manoeuvres with more than 60° bank
are prohibited
- No flight in known icing conditions,
- Do not attempt flight in strong gusty winds
conditions or in winds exceeding 40 kts (74.1 km/h). |
| 13. | Maximum Masses: | Take-off 500 kg or *560kg
Landing 500 kg or *560kg
Taxi 500 kg or*560kg |
| 14. | Centre of Gravity Range
(in front of Datum): | Forward limit : 540 mm
Afterward limit: 325 mm |
| 15. | Datum: | Main wheel axis |
| 16. | (Reserved) | |
| 17. | Levelling Means: | Rotor Mast, 90° to ground |
| 18. | Minimum Flight Crew: | 1 (Pilot) |
| 19. | Maximum Passenger Seating Capacity: | 1 |
| 20. | (Reserved) | |
| 21. | Baggage / Cargo Compartments: | 10 kg |

A.IV. 批准的技术资料

飞行操作手册: Pilot and Operation Handbook for Gyroplane Cavalon

(POH_CV)

维护和检查程序手册: Aircraft Maintenance Manual for Gyroplane Cavalon (MMM_CV)

A.IV. Approved technical Document

Flight And Operation Manual: Pilot and Operation Handbook for Gyroplane Cavalon (POH_CV)

Maintenance and Inspection Procedures Manual: Aircraft Maintenance Manual for Gyroplane Cavalon (POH_CV)

A.V. 注

1. 打“*”部分为装配 915iS 发动机后与装配 912ULS/914UL 发动机时有区别的参数。
2. 用于夜间目视飞行的 Cavalon 旋翼机必须装配 CN night VFR 夜间目视飞行基础套件。
以下表格列出 CN night VFR 夜间目视飞行基础套件所包含的设备, 及可选装的其他用于夜间目视飞行的设备。

CN night VFR 夜间目视飞行基础套件	
1	仪表和面板灯
2	驾驶舱照明
3	航行灯/导航灯/白色频闪灯
4	机鼻滑行灯
5	机腹着陆灯
6	陀螺仪和俯仰指示器
7	航向指示器
8	升降速度表
9	第二气压高度表
10	第二空速表
11	仅为 Rotax 912ULS/914UL 发动机配置的第二交流发电机
可选装的其他夜间目视飞行设备	
1	皮托管加热系统
2	交替静压系统
3	时钟
4	红色频闪灯
5	随身急救包
6	手电筒
7	Rotax 915iS 发动机可选装的第二交流发电机

A.V. Notes

1. The TCDS data specific to the 915iS engine is identified with an *.
2. A Cavalon for night flight must be fitted with a CN night VFR basic kit. The following table lists the equipment included in the CN night VFR basic kit and the optional equipment can be chosen for night flight.

CN night VFR Basic kit	
1	Instrument and panel light
2	Cockpit lighting
3	Position/navigation/white strobe lights
4	Nose-mounted taxi lights
5	Underbody-mounted landing light
6	Gyroscopic bank and pitch indicator
7	Gyroscopic direction indicator
8	Vertical speed indicator
9	Secondary pressure altitude indicator
10	Secondary airspeed indicator
11	Additional auxiliary alternator (Standard for Rotax 912ULS/914UL engine)
Optional equipment	
1	Heated pitot-tube and associated LED indicator
2	Alternate static pressure system
3	Clock
4	Anti-collision light red
5	First-aid kit (pilot carry-on)
6	Electric torch for each crew member
7	Additional auxiliary alternator (Optional for Rotax 915iS engine)

第 2 部分：修订记录

发布	日期	修订
1	2022 年 10 月 25 日	首次发布
2		

SECTION 2: Revision Record

Issue	Date	Change
1	25-October-2022	Initial issue
2		

---结束---

---End---