

型号合格证数据单
TYPE CERTIFICATE DATA SHEET

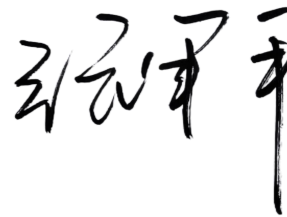
编号/No: TC0081A-XJ

版次/Revision: 0

型号/Type: ZH281A

型别/Model: ZH281A

批准人/Approved By:



批准日期/Date: 2023-12-08

本数据单是型号合格证（编号：TC0081A-XJ）的组成部分，它规定了获得该型号合格证的产品满足中国民用航空规章相关适航要求的条件和限制。

This data sheet, which is part of Type Certificate (No:TC0081A-XJ), prescribes condition and limitation under which the product for which the Type Certificate was issued meets the airworthiness requirements of the Chinese Civil Aviation Regulation.

型号合格证持有人/Type Certificate Holder :

新疆喆航航空科技有限公司

新疆铁门关市二十九团铁门关工业园中央大道1号河北创业服务大厦891号

Xinjiang Zhehang Helicopter Technology Co., Ltd.

No.891 Hebei Entrepreneurship Service Building, No.1 Central Avenue, Tiemenguan
Industrial Park, 29th Regiment, Tiemenguan City, Xinjiang, PRC

第一部分：ZH281A 型别技术数据/SECTION A: Model ZH281A TECHNICAL DATA

A I.概述/General

1. 产品型号/Model: ZH281A
2. 类别/Category: 轻型运动类航空器/Light Sport Aircraft
3. 型号合格证申请日期/Application Date: 2023 年 02 月 23 日
4. 型号合格证批准日期/Approval Date: 2023 年 12 月 08 日

A II.生产依据/Production Basis

生产许可证编号/Production Certificate No.: PC0071A-XJ

A III.审定基础/Certification Basis

《民用航空产品和零部件合格审定规定》(CCAR-21R4), 第 21.17 和 21.26 条/

Certification Procedures for Civil Aviation Products and Parts (CCAR-21R4), Section 21.17 and Section 21.26

《轻型运动直升机技术标准》(版次: 2019 年第一版) /

Light Sport Helicopter Technical Standard (initial version, 2019)

专用条件/Special Conditions: 无/None

等效安全/Equivalent Safety Findings: 无/None

环境要求/ Environmental Standards: 无/None

豁免/ Exemptions: 无/None

A IV.技术特性和使用限制/Technical Characteristics and Operational Limits

型号设计定义/Type Design Definition:

《ZH281A 型直升机整机图样目录》(ZHHK-ZH281A-ZJTYML, R0 版及后续批准的版次)

发动机/Engine:

1 台比利时 ULPower Aero Engines 公司生产的 UL520iS 活塞式发动机

Single piston engine,UL520iS,manufactured by ULPower Aero Engines,Belgium

发动机额定值/Engine Ratings:

最大起飞功率(5 分钟)/Max.Take off Power(5 min): 147.1 kW(200 hp)@3300 rpm

最大连续功率/Max. Continuous Power: 132.4 kW(180 hp)@2800 rpm

发动机限制/Engine Limitations:

温度限制/Temperature Limits:

环境温度/Ambient Temperature: -25°C(-13°F)~50°C (122°F)

滑油温度/Oil Temperature: 50°C(122°F)~120°C (248°F)

最大汽缸头温度/Max. Cylinder Head Temperature: 170°C(338°F)

排气温度/EGT: 300°C(573°F)~880°C (1616°F)

转速限制/Speed Limits:

最大起飞转速（5 分钟）/Max. Takeoff rpm(5 min): 3300 rpm

最大连续转速/Max. continuous speed: 2800 rpm

压力限制/Pressure Limits:

燃油压力/Fuel Pressure: 2.4 bar(35 psi)~3.8 bar (55 psi)

滑油压力/Oil Pressure:

最低低于 900 rpm, 热滑油/Min. Below 900 rpm, hot oil: 0.7 bar(10 psi)

高于 2000 rpm/Above 2000 rpm: 2.0 bar(27 psi)~5.0 bar(75 psi)

发动机冷起动（最大）/Engine Cold Start(Max.): 8 bar (115 psi)

主旋翼限制/Main Rotor Limits:

无动力转速/Power Off RPM: 480 rpm~600 rpm

有动力转速/Power On RPM: 460 rpm~570 rpm

燃油/Fuel:

燃油等级: 最小辛烷值 98 以上的车用汽油/Fuel Grade:MOGAS Min. 98 Octane Rating

批准的燃油见《ULPOWER 发动机技术文件》（M0510）/Refer to *ULPOWER Engine Technical Data Documents (M0510)* for approved fuel

燃油容量/Fuel Capacity:

总计/ Total : 120 L

可用燃油/ Usable: 113L

不可用燃油/Unusable: 7L

滑油/Oil:

批准的滑油见《ZH281A 轻型运动直升机飞行手册》（ZHHK-ZH281A-FXSC）/Refer to *ZH281A Light Sport Helicopter Flight Manual (ZHHK-ZH281A-FXSC)* for approved oils

滑油容量/Oil Capacity:

发动机滑油容量/Engine Oil Capacity: 4.5 L (1.19 US gal)

主减速器滑油容量/MTG Oil Capacity: 1.5 L (0.4 US gal)

尾减速器滑油容量/RTG Oil Capacity: 0.1 L (0.03 US gal)

空速限制/Airspeed Limits:

V_{NE} 不可逾越速度/Never Exceed Speed: 200km/h (指示空速/IAS)

最大使用高度 (压力高度) /Max. Operating Altitude (Pressure Altitude): 3000m

最大重量/Max. Weight: 680 kg

重心范围/Center of Gravity (C.G.) Range:

重心前限/Forward Limit: 旋翼轴后/Rear of Main Rotor Axis 80 mm

重心后限/Aft Limit: 旋翼轴后/Rear of Main Rotor Axis 230 mm

测量基准/Datum:

主旋翼轴线/Main Rotor Axis

水平测量措施/Leveling Means:

查阅《ZH281A 型轻型运动直升机维护手册》校准测量章节/Refer to the Leveling Means Section of *ZH281A Light Sport Helicopter Maintenance Manual (ZHHK-ZH281A-WHSC)*

最小飞行机组/Min. Flight Crew: 1 名驾驶员/One (1) Pilot

座位数/Number of Seats: 最大 2 个座位/Two (2) Max.

操纵面运动范围/Control Surface Movements:

主旋翼变距范围/Main Rotor Pitch Range: $-4.2^{\circ} \pm 1^{\circ} \sim 11.7^{\circ} \pm 1^{\circ}$

尾桨变距范围/Tail Rotor Pitch Range: $-10^{\circ} \pm 2^{\circ} \sim 20^{\circ} \pm 2^{\circ}$

运行限制/Operational Limits:

目视气象条件下的昼间目视飞行规则运行/Approved for VFR day flight under VMC

禁止在已知结冰条件下飞行/Flights into known icing conditions are prohibited.

其他限制/Other Limitations:

见《ZH281A 型轻型运动直升机飞行手册》(ZHHK-ZH281A-FXSC) /

Refer to *ZH281A Light Sport Helicopter Flight Manual (ZHHK-ZH281A-FXSC)*

制造序号/Manufacturing S/N: ZH281A-0006 及以后/ZH281A-0006 and subsequent

设备/Equipment:

适航法规（见审定基础）规定的基本设备必须安装在直升机上以满足型号合格审定的要求。

The basic required equipment as prescribed in the applicable airworthiness regulations (Refer to Certification Basis) must be installed in the helicopter to meet the requirements of type certification.

A V. 批准的技术资料/Approved Technical Documents

型别 已批准出版物

ZH281A (1) 《ZH281A 轻型运动直升机飞行手册》(ZHHK-ZH281A-FXSC),
R4 版及其后续批准的版本。

ZH281A Light Sport Helicopter Flight Manual (ZHHK-ZH281A-FXSC),
R4 and subsequent approved revision.

(2) 《ZH281A 轻型运动直升机维护手册》(ZHHK-ZH281A-WHSC),
R5 版及其后续批准的版本。

ZH281A Light Sport Helicopter Maintenance Manual (ZHHK-ZH281A
-WHSC), R5 and subsequent approved revision.

A VI. 注释/NOTE

注释/NOTE 1: 经 CAAC 批准的航空器飞行手册、适用的运营规章或审定基础要求的
标牌必须安装在航空器上。

All placards required by either the CAAC-Approved AFM, the applicable
operating rules, or the Certification Basis must be installed in the aircraft.

第二部分：管理信息/SECTION B: ADMINISTRATIVE INFORMATION

B I. 型号合格证持有人记录/ Type Certificate Holder Record

新疆喆航航空科技有限公司
新疆铁门关市二十九团铁门关工业园中央大道 1 号河北创业服务大厦 891 号
Xinjiang Zhehang Helicopter Technology Co., Ltd.
No.891 Hebei Entrepreneurship Service Building, No.1 Central Avenue, Tiemenguan
Industrial Park, 29th Regiment, Tiemenguan City, Xinjiang,PRC

B II. 修订记录/ Change Records

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

	数据单编号、版次和颁发日期/ Type Certificate Data Sheet Number, Revision and Issue date
当前/Current	编号 TC0081A-XJ, 版次 0, 2023 年 12 月 08 日/ No. TC0081A-XJ, Revision 0, 08 Dec.2023

数据单修订记录/Change Record of the Type Certificate Data Sheet

版次/Revision	相对上一版的修订记录/Change Record	备注/Remark
	无/None	

-结束-
-THE END-