

## 型号认证数据单

### THE VALIDATION DATA SHEET

编号/No: VTC0320A

版次/Revision: 0

型号/Type:

44

批准人/Approved By: Yang Zhenmei



职务/Title: Deputy Director General  
of CAAC-AAD

日期/Date: 2015-7-17

本数据单是型号认证（编号：VTC0320A）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证的产品的状态和限制。

This data sheet, which is part of Validation of Type Certificate (No:VTC0320A), 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.

型号认证持有人/Validation of Type Certificate Holder:

The King's Engineering Fellowship (TKEF)

Orange City, Iowa 51041

The United States of America

|                    |   |   |   |   |   |   |   |  |  |  |  |
|--------------------|---|---|---|---|---|---|---|--|--|--|--|
| 版次/Revision        | 0 | 0 | 0 | 0 | 0 | 0 | 0 |  |  |  |  |
| 有效页/Effective Page | 1 | 2 | 3 | 4 | 5 | 6 | 7 |  |  |  |  |
| 版次/Revision        |   |   |   |   |   |   |   |  |  |  |  |
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第一部分 概述（所有机型）

SECTION 1 GENERAL (ALL MODELS)

1. CAAC 认可数据单和型号合格证数据单

CAAC Validation Data Sheet and Type Certificate Data Sheet

|               | 中国民用航空局认可数据单号、版次和颁发日期<br>CAAC Validation Data Sheet Number, Revision and Issuance date                   | 型号合格证数据单号、版次和颁发日期<br>Type Certificate Data Sheet Number, Revision and Issuance date                    |
|---------------|----------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------|
| 当前<br>Current | 认可数据单号:VTC0320A, 版次: 0, 颁发日期: 2015 年 7 月 17 日<br>No. VTC0320A, Revision 0, Date of Issued: 17 July 2015. | 型号合格证数据单号: A2WI, 版次: 3, 颁发日期: 2015 年 4 月 10 日<br>No. A2WI, Revision 3, Date of Issued: April 10, 2015. |
| 历史<br>History | /                                                                                                        | /                                                                                                      |
|               | /                                                                                                        | /                                                                                                      |

2. 类别/Airworthiness Category

正常类飞机/ Normal Airplanes

3. 认可当局 / Validation Authority

中国民用航空局 / CAAC

审定当局 / Certifying Authority

美国联邦航空局 / FAA

4. 型号认可证持有人/Validation of Type Certificate Holder:

The King's Engineering Fellowship (TKEF)

Orange City, Iowa 51041

The United States of America

5. 双发延程飞行/ ETOPS:

不适用 / Not Applicable

6. 中国民用航空局特殊要求 / CAAC Special Requirements:

交付到中国的每一架 44 航空器须满足下述特殊要求/ Each of 44 aircraft delivered to China shall meet the following Special Requirements:

必须满足中国民用航空局的运行要求(例如标记标牌的中文要求)/ The operational requirements of CAAC must be met (e.g. Chinese language requirements for markings and placards).

7. 中文标记标牌/Chinese marking and placards

下述文件(或后续批准版本)中包含的经 FAA 批准的中文标记标牌已被中国民用航空局接受 /FAA approved Chinese marking and placards included in the following document(or later approved versions) has been accepted by CAAC: The placards in Chinese Drawings 4476-0204/14A (12/18/14) and 4476-0701/7A (12/19/14).

第二部分 合格审定基础（所有机型）

SECTION 2 CERTIFICATION BASIS (ALL MODELS)

1. 美国联邦航空局型号合格审定基础：见美国联邦航空局型号合格证数据单：No. A2WI, 第 3 版。/ Certification Basis of Federal Aviation Administration: As defined in Federal Aviation Administration Type Certificate Data Sheet No. A2WI, Revision 3.

型号44/MODEL 44:

a) 规章 /Regulations:

1965年2月1日生效的美国联邦航空规章第23部，第23-1修正案至第23-25修正案；和1969年12月1日生效的美国联邦航空规章第36部，第36-1修正案至第36-18修正案。/ Part 23 of Federal Aviation regulations dated February 1, 1965, as amended by 23-1 through 23-36 and FAR 36 dated December 1, 1969, as amended by 36-1 through 36-18.

b) 专用条件/ Special Conditions: 23-ACE-59

c) 豁免/ Exemption: Stall warning FAR 23.207(c).

2. 中国民用航空局认可美国联邦航空局确定的型号合格审定基础。

CAAC accepts the Certification Basis of FAA as the Validation Basis.

3. 中国民用航空局确认下述附加技术条件（ATC）/CAAC identifies the following Additional Technical Conditions(ATC):

(1) 应符合美国联邦航空局颁发的所有适用的适航指令 /All applicable Airworthiness Directives(ADs)issued by FAA shall be complied with;

(2) 标牌要求/Placard Requirement:

(a) 依据中国民用航空规章 CCAR 21.29(5)的要求, 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；机上所有向旅客或者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；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), each on-board placard and marking for awareness, warning, and note to the passenger, each on-board placard and marking for opening method and location indication of the emergency exit and each door to passenger and to outside rescuer, and each operational instruction for on board emergency equipment possible operated by passenger shall be presented in Chinese at least.

(b) 中文字符的尺寸应符合 CCAR23.811 中的适用要求。/The Dimension of the Chinese characters shall comply with the provision of CCAR 23.811 as applicable.

(c) 如有其他中文标牌和标记，在飞机交付前必须经由中国民用航空局接受或批准。/Other placards and markings in Chinese, if any, shall be accepted or approved by the CAAC before or at the moment of the delivery.

第三部分 技术特性和使用限制

SECTION 3 TECHNICAL CHARACTERISTICS AND OPERATIONAL LIMITATIONS

型号 44 / Model 44:

发动机/Engines

两台莱康明公司的发动机，型号为：IO-540-M1C5 (见注释 5)。型号

合格证: No. IE4。 / Two Lycoming IO-540-M1C5 (See Note 5). Type Certificate No. IE4。 (VTC0025E)

|                                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                                             |     |            |                                                              |     |            |                                         |     |            |                                              |     |            |                                                |    |           |                                                            |  |  |              |     |            |               |     |            |
|--------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------|-----|------------|--------------------------------------------------------------|-----|------------|-----------------------------------------|-----|------------|----------------------------------------------|-----|------------|------------------------------------------------|----|-----------|------------------------------------------------------------|--|--|--------------|-----|------------|---------------|-----|------------|
| 发动机限制/ Engine Limits                                         | 所有使用状态: / For all operations:<br>- 2700转/分 (300 马力)。 / 2700 rpm (300 hp).                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                             |     |            |                                                              |     |            |                                         |     |            |                                              |     |            |                                                |    |           |                                                            |  |  |              |     |            |               |     |            |
| 燃油/ Fuel                                                     | 100/100LL最低等级航空汽油。 / 100/100LL minimum grade aviation gasoline.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                                             |     |            |                                                              |     |            |                                         |     |            |                                              |     |            |                                                |    |           |                                                            |  |  |              |     |            |               |     |            |
| 螺旋桨和螺旋桨限制/ Propeller and Propeller Limits                    | a) 哈兹热尔恒速可顺螺旋桨, 型号合格证编号: P33EA。 /Hartzell constant speed, full feathering propeller, TC No. P33EA。 (VTC0285P)<br>桨毂/Hub: HC-E3YR-2ALTF/FLC7468 (2发/ both engines)<br>桨叶/Blade : 3叶铝合金/ 3 blades aluminum alloy<br>直径/Diameter: 76 (英寸/in). (名义/nominal)<br>最小允许维修直径75英寸, 不允许进一步的减小。 /Minimum allowed for repair 75 in., no further reduction permitted.<br>30英寸处桨叶角 /Pitch setting at 30 in. station: 最小/low 13.2° ±0.2°, 顺桨/feather 84.5° ±1°<br>(b) 哈兹热尔液压调速器/Hartzell hydraulic governor: V-1-3 for narrow deck engine,V-1-4 for wide deck engine<br>(c) 桨帽/TKEF spinner assembly: 4459-3000                                                                                                                               |                                             |     |            |                                                              |     |            |                                         |     |            |                                              |     |            |                                                |    |           |                                                            |  |  |              |     |            |               |     |            |
| 空速限制 (指示空速. 节)/ Airspeed Limits (IAS)                        | <table><tr><td>V<sub>NE</sub> (不许超越速度/Never exceed speed)</td><td>209</td><td>(210 KCAS)</td></tr><tr><td>V<sub>NO</sub> (最大结构巡航速度/Maximum structural cruising speed)</td><td>174</td><td>(174 KCAS)</td></tr><tr><td>V<sub>A</sub> (机动速度/Maneuvering speed)</td><td>139</td><td>(138 KCAS)</td></tr><tr><td>V<sub>FE</sub> (襟翼放下速度/Flap extended speed)</td><td>104</td><td>(106 KCAS)</td></tr><tr><td>V<sub>MC</sub> (最小操纵速度/Minimum control speed)</td><td>65</td><td>(65 KCAS)</td></tr><tr><td>V<sub>LO</sub> (最大起落架工作速度/Maximum Landing Gear Operation)</td><td></td><td></td></tr><tr><td>放下/Extension</td><td>130</td><td>(130 KCAS)</td></tr><tr><td>收起/Retraction</td><td>104</td><td>(104 KCAS)</td></tr></table> | V <sub>NE</sub> (不许超越速度/Never exceed speed) | 209 | (210 KCAS) | V <sub>NO</sub> (最大结构巡航速度/Maximum structural cruising speed) | 174 | (174 KCAS) | V <sub>A</sub> (机动速度/Maneuvering speed) | 139 | (138 KCAS) | V <sub>FE</sub> (襟翼放下速度/Flap extended speed) | 104 | (106 KCAS) | V <sub>MC</sub> (最小操纵速度/Minimum control speed) | 65 | (65 KCAS) | V <sub>LO</sub> (最大起落架工作速度/Maximum Landing Gear Operation) |  |  | 放下/Extension | 130 | (130 KCAS) | 收起/Retraction | 104 | (104 KCAS) |
| V <sub>NE</sub> (不许超越速度/Never exceed speed)                  | 209                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | (210 KCAS)                                  |     |            |                                                              |     |            |                                         |     |            |                                              |     |            |                                                |    |           |                                                            |  |  |              |     |            |               |     |            |
| V <sub>NO</sub> (最大结构巡航速度/Maximum structural cruising speed) | 174                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | (174 KCAS)                                  |     |            |                                                              |     |            |                                         |     |            |                                              |     |            |                                                |    |           |                                                            |  |  |              |     |            |               |     |            |
| V <sub>A</sub> (机动速度/Maneuvering speed)                      | 139                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | (138 KCAS)                                  |     |            |                                                              |     |            |                                         |     |            |                                              |     |            |                                                |    |           |                                                            |  |  |              |     |            |               |     |            |
| V <sub>FE</sub> (襟翼放下速度/Flap extended speed)                 | 104                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | (106 KCAS)                                  |     |            |                                                              |     |            |                                         |     |            |                                              |     |            |                                                |    |           |                                                            |  |  |              |     |            |               |     |            |
| V <sub>MC</sub> (最小操纵速度/Minimum control speed)               | 65                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | (65 KCAS)                                   |     |            |                                                              |     |            |                                         |     |            |                                              |     |            |                                                |    |           |                                                            |  |  |              |     |            |               |     |            |
| V <sub>LO</sub> (最大起落架工作速度/Maximum Landing Gear Operation)   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                                             |     |            |                                                              |     |            |                                         |     |            |                                              |     |            |                                                |    |           |                                                            |  |  |              |     |            |               |     |            |
| 放下/Extension                                                 | 130                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | (130 KCAS)                                  |     |            |                                                              |     |            |                                         |     |            |                                              |     |            |                                                |    |           |                                                            |  |  |              |     |            |               |     |            |
| 收起/Retraction                                                | 104                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | (104 KCAS)                                  |     |            |                                                              |     |            |                                         |     |            |                                              |     |            |                                                |    |           |                                                            |  |  |              |     |            |               |     |            |
| 重心范围/C.G. Range (英寸/in)                                      | (起落架放下/Landing Gear Extended)<br>(+176.0) to (+186.0) 所有使用重量/for all operating weights<br>(5800 lbs 最大/maximum)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                                             |     |            |                                                              |     |            |                                         |     |            |                                              |     |            |                                                |    |           |                                                            |  |  |              |     |            |               |     |            |
| 空机重量重心范围/ Empty Weight C.G. Range                            | 无/None                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                                             |     |            |                                                              |     |            |                                         |     |            |                                              |     |            |                                                |    |           |                                                            |  |  |              |     |            |               |     |            |
| 基准点/ Datum                                                   | 前起落架中心点前 3.0 英寸/ 3.0 in. forward of nose gear pivot point.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                                             |     |            |                                                              |     |            |                                         |     |            |                                              |     |            |                                                |    |           |                                                            |  |  |              |     |            |               |     |            |
| 水平措施/Levelling Means                                         | 座椅轨道。 / Seat tracks.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                                             |     |            |                                                              |     |            |                                         |     |            |                                              |     |            |                                                |    |           |                                                            |  |  |              |     |            |               |     |            |



制造交付序号/ Manufacturer's Serial Numbers 从 001 架起。/ 001 and up.

|                        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
|------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 生产基础/ Production Basis | <p>001架机 / S/N 001</p> <p>由The King's Engineering Fellowship (TKEF)公司仅依据型号合格证生产。/Manufactured under Type Certificate only by TKEF.</p> <p>002架机 / S/N 002</p> <p>按照TKEF与Angel Aircraft Corporation公司(AAC)在1986年10月4日签署的权益转让协议, 由爱荷华州桔城的AAC仅依据型号合格证生产。/Manufactured under Type Certificate only by Angel Aircraft Corporation (AAC), of Orange City, Iowa, under Licensing Agreement between TKEF and AAC, dated October 4, 1986.</p> <p>003架机起 / S/N 003 and up</p> <p>生产许可证: 342CE。依据美国联邦航空规章第 21 部第 183.(a)条的规定, AAC 被授权可颁发适航证。注释: 该型飞机列入 AAC 公司的生产许可项目单中, 并按 TKEF 与 AAC 间 1986 年 10 月 4 日签署的权益转让协议进行生产。/Production Certificate 342CE. The manufacturer (AAC) is authorized to issue airworthiness certificates under 14 CFR 21.183(a). NOTE: This model is listed on the AAC Production Limitation Record and is being produced under Licensing Agreement between TKEF and AAC, dated October 4, 1986.</p> |
| 设备/Equipment           | <p>为了合格审定, 适用适航规章(见合格审定基础)规定基本所需设备必须安装在飞机上, 及必须包含在最新的飞行手册中。/The basic required equipment as prescribed in the applicable airworthiness regulations (see Certification Basis) must be installed in the aircraft for certification. This equipment must include a current Airplane Flight Manual.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| 注释 1/NOTE 1            | <p>必须为每架飞机提供包含在合格审定空机重量中所列设备清单的最新重量和平衡报告和装载说明书(必要时)。/Current weight and balance report including list of equipment included in certificated empty weight, and loading instructions when necessary must be provided for each aircraft at the time of original certification.</p> <p>(a) 基本空机包含位于+165.5处的12磅不可用燃油。/Basic empty weight includes unusable fuel of 12 lbs at +165.5.</p> <p>(b) 基本空机包含位于+216.5处的45磅发动机滑油。/Basic empty weight includes engine oil of 45 lbs at +216.5.</p>                                                                                                                                                                                                                                                                                                                                                                                                                          |
| 注释 2/NOTE 2            | <p>美国联邦航空局批准的《飞机飞行手册》中所需的全部标牌必须安装在适当的位置。/All required placards in the FAA Approved Airplane Flight Manual must be installed in the appropriate locations.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |

- 注释 3/NOTE 3     关于结构件的强制更换时限包含在《维修手册》的限制章节中。  
/Mandatory replacement times for structural components are contained in the Limitations Section of the Maintenance Manual.
- 注释 4/NOTE 4     更换所有座椅（机组和乘客），除了需符合 TSO C39 之外，必须演示符合美国联邦航空规章第 23 部的第 23.321, 23.395, 23.561, 23.562,和 23.785 条款。/ All replacement seats (crew and passenger), although they may comply with TSO C39, must also be demonstrated to comply with FAR 23.321, 23.395, 23.561, 23.562, and 23.785.  
所有座椅（机组和乘客）的泡沫垫是不可改变的。泡沫结构或刚度的任何偏离必须经试验演示所列美国联邦航空规章第 23 部条款的符合性。/ The foam cushion buildup of all seats (crew and passenger) may not be altered. Any deviations in the foam construction or stiffness must be demonstrated by test to comply with the listed FAR 23 paragraphs.
- 注释 5/NOTE 5     按照 TKEF 公司的《发动机规范(4450-0001)》，莱康明公司的 IO-540- M1A5 型发动机，具有两台脉冲磁电机。/Lycoming IO-540-M1A5 configured with two impulse magnetos per TKEF Engine Specification 4450-0001.

#### 四. 进口要求/ IMPORT REQUIREMENTS

1. 使用要求 / Operational Requirements  
交付中国的每架飞机，必须满足中国民用航空总局的使用要求( 例如，标记和标牌的中文标识要求)。/ For each aircraft to be delivered in China, the operational requirements of CAAC must be met( e.g Chinese language requirements for markings and placards).
2. 出口适航证 / Export Certificate  
美国联邦航空局将颁发声明飞机符合中国民用航空局批准的型号设计的单独出口适航证，并处于安全使用状态。/ FAA will issue an individual Export Certificate of Airworthiness stating that the aircraft complies with CAAC approved type design and is in condition for safe operation.
3. 《飞行手册》/ Flight Manual  
每架飞机配有美国联邦航空局以中国民用航空局批准的《飞行手册》。/ The Flight Manual for each aircraft will be approved by FAA on behalf of CAAC.

-END-