

THE VALIDATION OF TYPE CERTIFICATE DATA SHEET

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Diamond Aircraft Industries GmbH
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AUSTRIA

[illegible]

第1部分 型号认可证概述

SECTION 1 GENERAL OF VTC

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 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 Type Certificate Data Sheet Number, Revision and issuance date
当前 Current	VTC0166A Revision: 3 2016-11-28	EASA.A.005 Issue 28 16-Apr-2015
	VTC0166A Revision:2 2011-06-23	EASA.A.005 Issue 16 26- Apr-2011
	VTC0166A Revision:1 2010-05-31	

2. 认可当局/Validation Authority:

中国民用航空局/CAAC

审定当局/Certifying Authority:

欧洲航空安全局/EASA

3. 型号合格证 Type Certificate Number:

EASA.A.005

型号合格证持有人/Type Certificate Holder:

钻石飞机工业有限公司

DIAMOND AIRCRAFT INDUSTRIES GMBH

N.A. OTTO-STR. 5

A-2700 WIENER NEUSTADT

AUSTRIA

4. CAAC 附加技术要求/CAAC additional technical conditions

(1)CCAR21.29, Amendment Level: R3

(2)环保标准/Environment Standards Noise: CCAR-36-R1, dated 15 April 2007

(3)用于警告乘客或地面救援人员舱门位置和打开方法的标记标牌必须满足中文要求

All literal marking and placards on an airplane used for indicating passengers or outboard rescue personnel of the location of doors and their means of opening must be at least in Chinese language.

(4)燃油符合中国航空燃油 3 号喷气燃油 (GB-6537-2006) ;

Fuel conforms to China Aviation No.3 JET FUEL (PRC National Standard GB-6537-2006)

(5)进口要求/Import Requirements

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.

(6)产品有效性/Serial Nos. Eligible

对于申请 CAAC 审定的每一架飞机,其出口适航证都必须由 EASA 按上述“进口要求”予以签注。

A EASA Certification of Airworthiness for export endorsed as noted below under “Import Requirements” must be submitted for each individual airplane for which application for the CAAC certification.

(7)资料批准/Service Information

CAAC 接受的服务通告、结构修理手册、航空器飞行手册、供应商手册和航空器维护手册等使用维护资料应经 EASA 批准,EASA 的这些批准代表了 CAAC 的批准,且仅限于本型号设计。

Service bulletins, structural repair manuals, aircraft flight manuals, vendor manuals, and aircraft maintenance manual which contain a statement that the document is EASA approved, are accepted by the CAAC and are considered CAAC-approved. These approvals pertain to the type design only.

第2部分 型号数据 SECTION 2 TYPE DATA

I.型别: DA 42

MODEL NUMBER: DA 42

一、概述//General

1. 型号合格证数据单号
Type Certificate Data Sheet No. EASA.A.005
2. 型号、衍生型或型别
Type / Variant or Model
 - (a) 型号/Type DA 42
 - (b) 型别/Model: DA 42
 - (c) 衍生型/Variant: --
3. 适航类别
Airworthiness Category JAR-23 正常类/ JAR-23 Normal Category
4. 型号合格证持有人
Type Certificate Holder: DIAMOND AIRCRAFT INDUSTRIES GMBH
N.A. OTTO-STR. 5
A-2700 WIENER NEUSTADT
AUSTRIA
5. 制造商:
Manufacturer: DIAMOND AIRCRAFT INDUSTRIES GMBH
N.A. OTTO-STR. 5
A-2700 WIENER NEUSTADT
AUSTRIA
DIAMOND AIRCRAFT INDUSTRIES INC.
1560 CRUMLIN SIDEROAD, LONDON ONTARIO,
N5V 1S2
CANADA
6. 国外适航当局申请日期
Foreign Authority Application Date: 2002-04-02
02-Apr-2002

二、合格审定基础 CERTIFICATION BASIS

1.确定适用要求的参考日期	2002-04-02
Reference Date for determining the applicable requirements:	02-Apr-2002
2.CAAC 型号认可证申请日期	2005-06-03
CAAC Validation of Type Certificate Application Date	
3.国外适航当局合格审定基础	JAR-23, 修正案 1, 2001 年 2 月 1 日发布
Foreign Authority Certification Basis:	JAR-23, Amendment 1, issued 01-Feb-2001
	JAR-1, 更改 5,1996 年 7 月 15 日发布
	JAR-1, Change 5, issued 15-Jul-1996
4.专用条件	CRI D-02 可调式升降舵止动点
Special Conditions:	Variable Elevator Stop
	CRI E-02 活塞式发动机上使用航空煤油
	Use of Jet Fuel for Reciprocating Engines
	CRI E-03 活塞式发动机上使用柴油
	Use of Diesel Fuel for Reciprocating Engines
	CRI E-06 发动机振动水平
	Engine Vibration Level
	CRI E-07 发动机扭矩
	Engine Torque
	CRI F-01 HIRF 防护
	Protection from the Effects of HIRF
	CRI F-03 闪电间接影响防护
	Protection from the Effects of Lightning Strikes, Indirect Effects
	CRI F-07 集成航电系统的人机要素
	Human Factors in Integrated Avionic System
5.追溯和豁免	N/A
Reversion and Exemptions:	
6.等效安全	CRI D-01 单杆动力控制
Equivalent Safety Findings:	Single Lever Power Control
	CRI E-04 液冷-冷却液罐
	Liquid Cooling - Coolant Tank
	CRI E-05 电子控制-活塞式柴油机
	Electronically-controlled Reciprocating Diesel Engine
	CRI E-08 燃油系统-热燃油温度
	Fuel System - Hot Fuel Temperature
	CRI F-04 动力装置仪表
	Power plant Instruments
	CRI B-03 结冰条件下的失速速度
	Stall Speed in Icing Conditions
7.环境标准	ICAO, 附件 16, 第一卷, 第 3 版, 1993
Environmental Standards :	ICAO, Annex 16, Volume 1, Third Edition, 1993
	JAR36,1997 年 5 月 23 日颁布
	JAR 36, issued 23-May-1997

CRI A-03 附件的国家要求，见注释 2
CRI A-03 for additional national requirements
See Note 2

三、技术特性和使用限制/TECHNICAL CHARACTERISTICS AND OPERATIONAL LIMITATIONS

1.型号设计定义 Type Design Definition	当前有效文档,编号 7.07.00, 第七章, 包括设计更改 MÄM 42-001 至 42-012 和后续更改。 Current issue of Doc. No. 7.07.00, Chapter 7, Including Design Changes MÄM 42-001 to 42-012 and following
2.中文标牌和标识 Chinese Placards and marking	DAI 只使用象形图向乘客或者舱外救援人员指示舱门位置和打开方式, 文件编号 D60-1120-20-00_3。内容不包含英文, 所以不需要中文标牌。 DAI uses only pictogram for indicating passengers or outboard rescue personnel the location of doors and means of opening, document No. D60-1120-20-00_3 No descriptive text in English language is required, so no placard in Chinese language placards are required.
3.描述 Description	双发, 四座, 悬挂式下单翼飞机, 复合材料结构, 可收放前三点式起落架, T 型尾翼 Twin engine, four-seated cantilever low wing airplane, composite construction, retractable tricycle landing gear, T-tail.
4.设备 Equipment	设备列表, 适用 AFM, 第六章, 见注释 3 Equipment list, applicable AFM, Section 6, See Note 3
5.几何尺寸 Dimensions	翼展/ Span 13.42 m (44 ft 0 in) 长/ Length 8.56 m (28 ft 1 in) 高/ Height 2.49 m (8ft 2 in) 机翼面积/ Wing Area 16.29 m² (175.3 sqft)
6.发动机 Engine	
型别 Model	2 台 Technify Motors GmbH (Thielert 前身) TAE 125-01 或 TAE125-02-99 或 TAE125-02-114, 见注释 4 2 Technify Motors GmbH (formerly Thielert) TAE 125-01 or TAE-125-02-99 or TAE-125-02-114, see Note 4
型号合格证 Type Certificate	EASA 发动机型号合格证数据单 E.055 EASA Engine Type Certificate Data Sheet E.055
CAAC 型号认可证 CAAC Validation Type Certificate	CAAC 发动机型号认可证数据单 VTC0158E 版本 1 CAAC Validation Type Certificate Data Sheet VTC0158E Revision 1
限制 Limitation	最大起飞转速 Max take-off rotational speed 2300 r.p.m. 最大连续转速(螺旋桨轴 r.p.m) Max continuous rotational speed (Propeller shaft r.p.m) 2300 r.p.m 动力装置限制参见 AFM,第二章 For powerplant limits refer to AFM, Section 2
固件 Firmware	见 DAI MSB 42-007 见注释 4 See DAI MSB 42-007 See Note 4

参数谱	见 DAI MSB 42-007	见注 4	
Mapping	See DAI MSB 42-007	See Note 4	
7.载荷系数	在 V _A	在 V _{NE}	起飞或着陆使用襟翼时
Load factors	at V _A	at V _{NE}	With flaps in T/O or LDG position
正值: Positive	3.8	3.8	2.0
负值: Negative	-1.52	0	
8.螺旋桨			
Propeller			
型别	2 MT-Propeller MTV-6-A-C-F/CF187-129		
Model			
型号合格证	EASA 螺旋桨型号合格证数据单 P.094		
Type Certificate	EASA Propeller Type Certificate Data Sheet P.094		
CAAC 型号认可证	CAAC 螺旋桨型号认可证数据单 VTC0254P 版本 1		
CAAC Validation Type Certificate	CAAC Propeller Validation Type Certificate Data Sheet VTC0254P Revision 1		
桨叶数量	3		
Number of blades			
直径	1870 mm		
Diameter			
旋转方向	顺时针		
Sense of Rotation	CW		
设置	低桨距设置/Low pitch setting: 12°		
Setting	顺桨/ Feather position 81 °		
	启动锁定/ Start Lock 15°		
9.液体			
Fluids			
燃油	Jet A-1 (ASTM 1655) 见注释 8 see Note 8		
Fuel	Diesel (EN 590) 见注释 7 see Note 7		
滑油	发动机: Shell Helix Ultra 5W30 synthetic API SJ/CF 或参见适用的 AFM, 第二章		
Oil	Engine Shell Helix Ultra 5W30 synthetic API SJ/CF or see applicable AFM, Section 2		
	齿轮箱: 壳牌 EP 75W90 API GL-4 或参见 AFM, 第二章		
	Gearbox Shell EP 75W90 API GL-4 or see AFM, Section 2		
冷却剂	水/冷却器防护液		
Coolant	更多细节参见适用的 AFM, 第二章 Water / Cooler Protection for more details see applicable AFM, Section 2		
防冰液	AL-5 (DTD 406B) or Aeroshell Compound 07		
Ice Protection Fluids	更多细节参见适用的 AFM, AFM 增补页 S03		

for more details see applicable AFM, AFM Supplement S03

10.液体容量

Fluid Capacities

燃油	标准油箱/Standard Fuel Tank	
Fuel	总共/ Total:	196.8 升/ liters 52 US Gallons
	可用/ Usable:	189.2 升/ liters 50 US Gallons
	辅助油箱/ Auxiliary Fuel Tank	
	总共/ Total:	104 升/ liters 27,4 US Gallons
	可用/ Usable:	100 升/ liters 26,4 US Gallons
滑油	最大/Maximum:	6.0 升/liters 6.3 夸托/qts
Oil	最小/Minimum:	4.5 升/liters 4.8 夸托/qts
冷却系统容量	大约 7 升	
Coolant System Capacities	Approx. 7 Liter	

11.空速

Air speeds

设计机动速度 V_A	
Design Manoeuvring Speed V_A :	
小于 1542kg/ up to 1542 kg	119 KEAS
1542kg 以上/above 1542kg	125 KEAS
襟翼放下速度 V_{FE}	
Flap Extended Speed V_{FE}	
进场/ Approach	135 KEAS
着陆/ Landing	110 KEAS
最大起落架使用速度 V_{LO}	
Maximum Landing Gear	
Operation Speed V_{LO} :	155 KEAS
最大起落架放下速度 V_{LE}	
Maximum Landing Gear	
Extended Speed V_{LE} :	192 KEAS
最小操纵速度 V_{MC}	
Minimum Control Speed V_{MC} :	68 KEAS
选装 OÄM 42-252	
With OÄM 42-252 installed	72 KEAS
最大结构巡航速度 V_{NO}	
(=最大结构设计速度 V_C)/	
Maximum structural cruising	
speed V_{NO} :	155 KEAS
(= Maximum structural design	
speed V_C):	
极限速度 V_{NE}	
Never exceed speed V_{NE} :	192 KEAS

12.最大操作高度

Maximum Operating Altitude

13.全天候能力

All-weather

Operation

Capability

昼/夜-VFR, IFR Day/Night-VFR, IFR
在已知或预计结冰条件下飞行, 参见注释 5
Flights into known or forecast icing conditions
See Note 5

14.最大重量

Maximum Weights	起飞/ Take-off	1700 kg (3748 lb)	
		1785 kg (3935 lb)	MÄM 42-088 installed
	零燃油/ Zero Fuel	1650 kg (3638 lb)	
		1674 kg (3690 lb)	OÄM 42-188 installed
		1730 kg (3814 lb)	OÄM 42-188 & -195 installed
	着陆/ Landing	1700 kg (3748 lb)	
		1785 kg (3935 lb)	OÄM 42-195 installed
		批准的重量构型见注释 6	
For approved Weight Configurations see Note 6			

15.重心范围

Center of Gravity Range	前部重心/Forward limit:	
	小于 1468kg	基准后 2.35m
	up to 1468kg	2.35 m behind Datum
	在 1785kg	基准后 2.40m
	At 1785 kg	2.40 m behind Datum
	中间质量线性变化	
	varying linearly with mass in between	
	后部限制/Rear limit:	
	在 1250 kg	基准后 2.42m
	At 1250 kg	2.42m behind Datum
	在 1600kg 及以上	基准后 2.49m
	At 1600 kg and above	2.49 m behind Datum
	中间质量线性变化	
varying linearly with mass in between		

16.基准

Datum	机翼对接前缘处 2.196m
	2.196m in front of leading edge of stub-wing at the wing joint

17.控制面偏转

Control surface deflections			
副翼	后缘向上 trailing edge up	25° ± 2°	
		15° + 2/-0°	
升降舵	后缘向上 trailing edge up	15.5° ± 0.5°	
		13° ± 1°	
升降舵配平片	升降舵向上 10° 机头抬起	17°, ± 5°	
		nose up at elevator 10° up	
		升降舵向上 10° 机头向下	
方向舵	左 left	27° ± 1°	
		29° ± 1°	
		方向舵在左侧 20° 右侧配平	
方向舵配平片	trim RH at rudder 20° LH	+ 34° ± 5°	

	方向舵在左侧 20° 左侧配平	
	trim LH at rudder 20° LH	+ 18° ± 5°
	选装 OÄM 42-252	
	With OÄM 42-252 installed:	
	方向舵在左侧 20° 右侧配平	
	trim RH at rudder 20° LH	+ 54° ± 5°
	方向舵在左侧 20° 左侧配平	
	trim LH at rudder 20° LH	+ 22° ± 5°
襟翼	巡航襟翼设定	
Flaps	Cruise flap setting	0° + 2° -0°
	进场襟翼设定	
	Approach flap setting	20° + 4° -2°
	着陆襟翼设定	
	Landing flap setting	42° + 3° -1°
18.测平方式	前行李舱地板为水平基准	
Levelling Means	floor of front baggage compartment levelled	
19.最小飞行机组	1 (飞行员/Pilot)	
Minimum Flight Crew		
20.最大乘员座位数	3	
Maximum Passenger		
Seating Capacity		
21.行李舱/货物舱	位置/Location	最大许用负载/max. allowable load
Baggage/Cargo	前行李舱	
Compartments	Front Baggage Compartment	30kg (66 lb)
	后排座位后	
	Behind Rear Seats	45kg (100 lb)
	尾部扩展行李舱	
	Aft part of Baggage Extension	18 kg (40 lb)
	整个尾部行李舱	
	Whole aft Baggage Compartment together	45kg(100 lbs)
22.机轮与轮胎	前起轮胎尺寸	
Wheels and Tyre	Nose Wheel Tyre Size	5.00 - 5
	主起轮胎尺寸	
	Main Wheel Tyre Size	15×6.0-6
四、操作及维护说明/Operating and Service Instructions		
1.飞行手册		
Flight Manual	文件 No.7.01.05 或 7.01.06 (安装 OÄM 42-102, GFC 700 自动驾驶仪)。	
	对于配置 TAE125-02-114 的 DA 42 (OÄM 42-252), AFM 增补页 S07 适用	
	Document No. 7.01.05 or 7.01.06(with OÄM 42-102, GFC 700 Autopilot)	
	For TAE 125-02-114 equipped DA 42 (OÄM 42-252) AFM Supplement S07 applies	
2.技术手册		
Technical Manual:	飞行维修手册(AMM)文件 No. 7.02.01	
	(包括适航限制)、服务信息和服务通告	
	Airplane Maintenance Manual (AMM) Document No.7.02.01 (incl. Airworthiness	

Limitations) Service Information and Service Bulletins

3. 零配件目录

文件 No. 7.03.01/Document No. 7.03.01

Spare Parts Catalogue:

4. 设备及数量

参考 AMM Doc. No. 7.02.01 第一章

Instruments and aggregates:

refer to AMM Doc. No. 7.02.01 Chapter 1

五、注释/Notes

1. 本合格证用于系列号 42.004 和在奥地利钻石飞机公司生产的后继系列, 系列号 42.AC001 和在加拿大钻石飞机公司生产的后继系列, 不包括系列号 42L.001 和 42L.002。

This certification applies to serial numbers 42.004 and subsequent for production at Diamond-Austria, serial numbers 42.AC001 and subsequent for production at Diamond-Canada, excluding serial numbers 42L.001 AND 42L.002.

2. 批准的噪声水平符合 EASA 的噪声数据单 TCDSN A.005

Approved Noise Levels in accordance to the EASA data sheet for noise TCDSN A.005

3. 批准的 Garmin G1000 集成航电系统的软件版本参见最新版 DAI MSB 42-008。

如果安装了 TAE 125-02-99 发动机 (设计更改 MÄM 42-198), 则需要安装 Garmin PNo 010-00370-15 或之后批准的版本的软件。

如果安装了 TAE 125-02-114 发动机 (设计更改 OÄM 42-252), 则需要安装 Garmin PNo. 010-00370-22 包括二级配置卡或之后批准的版本的软件。

For approved software versions of Gamin G1000 Integrated Avionic System see DAI MSB 42-008, at latest issue.

If engine TAE 125-02-99 is installed (Design Change MÄM 42-198), then Garmin Software PNo. 010-00370-15 or later approved version is required.

If engine TAE 125-02-114 is installed (Design Change OÄM 42-252), then Garmin Software PNo. 010-00370-22 including secondary configuration card or later approved version is required.

4. 批准安装在 DA 42 上的发动机型号:

TAE 125-01 (安装衍生型 125-01-(017)-(), 服务公告 TAE 000-0007)

TAE125-02-99 (安装衍生型 125-02-99-(0003)-(), 服务公告 TAE000-0007)

TAE125-02-114 (安装衍生型 125-02-114-(0006)-(), 服务公告 TAE000-0007)

批准的固件和参数谱, 依据 DAI MSB 42-007 最新版。

发动机型号只能成对安装。

发动机 TAE 125-02 是 TAE 125-02-99 的原先批准型号

发动机从 TAE 125-01 改装到 TAE125-02-99, 是由设计变更 MÄM 42-198 和 OSB 42-046 批准的。

发动机从 TAE 125-02-99 改装到 TAE 125-02-114, 是由设计变更 OÄM 42-252 和 OSB 42-117.批准的。

Approved engine model for installation in the DA 42:

TAE 125-01 (Installation Variant 125-01-(017)-(), SB TAE 000-0007)

TAE 125-02-99 (Installation Variant 125-02-99-(0003)-(), SB TAE 000-0007)

TAE 125-02-114 (Installation Variant 125-02-114-(0006)-(), SB TAE 000-0007)

Approved firmware and mapping in accordance with DAI MSB 42-007 at latest issue.

Installation of engine types in pairs only.

The TAE 125-02-99 engine was previously approved as TAE 125-02.

Engine retrofit installation from engine TAE 125-01 to TAE125-02-99 is approved by Design Change MÄM 42-198 with OSB 42-046.

Engine retrofit installation from engine TAE 125-02-99 to TAE 125-02-114 is approved by Design Change OÄM 42-252 with OSB 42-117.

5. 如果按照 OÄM 42-054 安装了设计大改液体防冰系统时, 可以在已知或预报结冰条件下飞行。

Flights into known or forecast icing conditions is approved if the liquid fluid ice protection system in accordance to Major Design Change OÄM 42-054 is installed.

6.以下设计重量构型是经批准的/

The following Design Mass Configurations are approved.

Design Changes installed 安装的设计更改	Standard 标准型	MÄM 42-088	MÄM 42-088 and OÄM 42-188	MÄM 42-088 and OÄM 42-188 and OÄM 42-195
MTOM	1700 kg (3748 lb)	1785 kg (3935 lb)	1785 kg (3935 lb)	1785 kg (3935 lb)
MZFM	1650 kg (3638 lb)	1650 kg (3638 lb)	1674 kg (3690 lb)	1730 kg (3814 lb)
MLM	1700 kg (3748 lb)	1700 kg (3748 lb)	1700 kg (3748 lb)	1785 kg (3935 lb)

MTOM – 最大起飞重量/ maximum take-off mass; MZFM – 最大零燃油重量/ maximum zero fuel mass; MLM – 最大着陆重量/ maximum landing mass
只有按 TC 持有人服务通告进行的设计更改改装是获批准的。

The retrofit installation of the design changes is only approved per TC Holder Service Bulletins.

7.如果安装了设计大改 MÄM 42-037，则使用柴油（EN590）是获得批准的

The use of Diesel fuel (EN 590) is approved if Major Design Change MÄM 42-037 is installed.

8.批准的其他航空燃油牌号见适用的 AFM 第二章。

JET A, JET A-1 (ASTM D 1655), TS-1 (Russia, GOST 10227-86), (Ukraine, GSTU 320.00149943.011-99), RT (Russia, GOST 10227-86), RT (Ukraine GSTU 320.00149943.007-97), No. 3 Jet Fuel (China, GB 6537-2006), JP-8 (F34) (USA, MIL-DTL-83133G-2010) 和以上列出燃油等级的混合物。.

For additional approved Jet Fuel specification see applicable AFM, Section 2.

JET A, JET A-1 (ASTM D 1655), TS-1 (Russia, GOST 10227-86), (Ukraine, GSTU 320.00149943.011-99), RT (Russia, GOST 10227-86), RT (Ukraine GSTU 320.00149943.007-97), No. 3 Jet Fuel (China, GB 6537-2006), JP-8 (F34) (USA, MIL-DTL-83133G-2010) and blends of the above listed fuel grades.

II. 型别: DA 42 NG

MODEL NUMBER: DA 42 NG

一、产品型别和批准日期/THE PRODUCT MODEL AND APPROVAL DATE

1. 型号合格证数据单号 EASA.A.005
Type Certificate Data Sheet No.

2. 型号、衍生型或型别
Type / Variant or Model DA 42
(a) 型号/Type DA42 NG
(b) 型别/ Model: --
(c) 衍生/Variant:
3. 适航类别 JAR 23 正常类飞机/ Normal Category
Airworthiness Category
4. 型号合格证持有人 DIAMOND AIRCRAFT INDUSTRIES GMBH
Type Certificate Holder: N.A. OTTO-STR. 5
A-2700 WIENER NEUSTADT
AUSTRIA
5. 制造商: DIAMOND AIRCRAFT INDUSTRIES GMBH
Manufacturer: N.A. OTTO-STR. 5
A-2700 WIENER NEUSTADT
AUSTRIA

DIAMOND AIRCRAFT INDUSTRIES INC.
1560 CRUMLIN SIDEROAD, LONDON ONTARIO
N5V 1S2
CANADA
6. 国外适航当局申请日期 2008-01-17
Foreign Authority Application Date: 17-Jan-2008
7. 保留/ (Reserved) N/A
8. 保留/ (Reserved) N/A

二、合格审定基础 CERTIFICATION BASIS

1. 确定适用要求的参考日期 2002-04-02
Reference Date for determining the applicable requirements 02-Apr-2002
2. CAAC 型号认可证申请日期 2015-06-16
CAAC Validation of Type Certificate Application Date
3. 国外适航当局合格审定基础 JAR-23, 修正案 1, 2001 年 2 月 1 日发布
Foreign Authority Certification Basis: JAR-23, Amendment 1, issued 01-Feb-2001
JAR-1, 更改 5, 1996 年 7 月 15 日发布
JAR-1, Change 5, issued 15-Jul-1996
4. 专用条件 CRI D-02 可调式升降舵止动点
Special Conditions: Variable Elevator Stop

	CRI E-02 活塞式发动机上使用航空煤油 Use of Jet Fuel for Reciprocating Engines
	CRI E-03 活塞式发动机上使用柴油 Use of Diesel Fuel for Reciprocating Engines
	CRI E-04 液冷-冷却剂罐 Liquid Cooling - Coolant Tank
	CRI E-05 电子控制活塞式柴油发动机 Electronically-controlled Reciprocating Diesel Engine
	CRI E-06 发动机振动水平 Engine Vibration Level
	CRI E-07 发动机扭矩 Engine Torque
	CRI F-01 HIRF 防护 Protection from the Effects of HIRF
	CRI F-03 闪电间接影响防护 Protection from the Effects of Lightning Strikes, Indirect Effects
	CRI F-04 动力装置仪表 Power plant Instruments
	CRI F-07 集成航电系统的人机要素 Human Factors in Integrated Avionic System
5.豁免 Exemptions:	N/A
6.偏离 Deviations	N/A
7.等效安全 Equivalent Safety Findings:	CRI E-10 电动燃油泵 Electrical Fuel Pump
8.选择的符合性要求 Requirements elected to comply	CS 23.1507 (CS23/0) 机动速度 Manoeuvring Speed CS 23.49 (CS23/1) 失速速度 Stalling Speed CS 23.562 (CS23/1) 应急着陆动态情况 Emergency Landing Dynamic Conditions
9.环境标准 Environmental Standards :	ICAO, 附件 16, 第一卷, 第 2 部分及 2007 年 4 月 2 日民航局局长令 2007/007/R, 即民航局局长令 No.2003/04RM——《关于航空器噪声合格审定规范提供可接受的符合性方法》的修订稿的要求 CS-36, 修正案 1 见注释 2 ICAO, Annex 16, Volume 1, Part II and as implemented in Decision No. 2003/4/RM amended by Decision 2007/007/R of The Executive Director of the Agency dated 2 April 2007, on certification specifications providing for acceptable means of compliance for aircraft noise CS-36, Amendment 1 see Note 2

三、技术特性和使用限制/TECHNICAL CHARACTERISTICS AND OPERATIONAL LIMITATIONS

1.型号设计定义 Type Design Definition	当前有效文档, 编号 7.07.00, V004/7 章, 包括设计更改 VÄM 42-004, MÄM 42-313, MÄM 42-316 至 MÄM 318, MÄM 42-322, MÄM 42-325 及后续内容 Current issue of Doc. No. 7.07.00, Chapter V004/7 including Design Changes VÄM 42-004, MÄM 42-313, MÄM 42-316 to MÄM 318, MÄM 42-322, MÄM 42-325 and following		
2.中文标牌和标识 Chinese Placards and marking	DAI 只使用象形图向乘客或者舱外救援人员指示舱门位置和打开方式, 文件编号 D64-11-30-20-00_2。内容不包含英文, 所以不需要中文标牌。 DAI uses only pictogram for indicating passengers or outboard rescue personnel the location of doors and means of opening, document No. D64-11-30-20-00_2. No descriptive text in English language is required, so no placard in Chinese language placards are required.		
3.描述 Description	双发, 四座, 悬挂式下单翼飞机, 复合材料结构, 可收放前三点式起落架, T 型尾翼 Twin engine, four-seated cantilever low wing airplane, composite construction, retractable tricycle landing gear, T-tail.		
4.设备 Equipment	3.设备列表, AFM 第六章, 见注释 3 Equipment list, AFM, Section 6		
5.几何尺寸 Dimensions	翼展/ Span	13.42 m (44 ft 0 in)	
	长/ Length	8.56 m (28 ft 1 in)	
	高/ Height	2.49 m (8ft 2 in)	
	机翼面积/ Wing Area	16.29 m ² (175.3 sqft)	
6.发动机 Engine	型别 Model	2 台 Austro 的 E4 发动机, 见注释 4 2 Austro Engine E4 see Note 4	
	型号合格证 Type Certificate	EASA 发动机型号合格证数据单 E.200 EASA Engine Type Certificate Data Sheet E.200	
	CAAC 型号认可证 CAAC Validation Type Certificate	CAAC 发动机型号认可证数据单 VTC0252E 版本 0 CAAC Validation Type Certificate Data Sheet VTC0252E Revision 0	
	限制 Limitations	最大起飞转速/Max take-off rotational speed	2300 r.p.m
		最大连续转速/Max continuous rotational speed (桨轴转速/Propeller shaft r.p.m)	2100 r.p.m
		安装 MÄM 42-600/With MÄM 42-600 installed	2300 r.p.m
		最大起飞功率/Max take-off Power (5min)	100% (123.5kW)
		最大连续功率/Max continuous Power	92% (114kW)
	固件 Firmware	见 DAI MSB 42NG-002 see DAI MSB 42NG-002	见注释 4 See Note 4
	参数谱 mapping	见 DAI MSB 42NG-002 see DAI MSB 42NG-002	见注释 4 See Note 4
7.载荷系数 Load factors	在 V _A at V _A	在 V _{NE} at V _{NE}	起飞或着陆使用襟翼时 With flaps in T/O or LDG position
	正 Positive	3.8	3.8
	负 Negative	-1.52	0
8.螺旋桨			

Propeller

型别	2 MT-Propeller MTV-6-R-C-F/CF187-129 或
Model	2 MT-Propeller MTV-6-R-C-F/CF190-69 见注释 8 see Note 8
型号合格证	EASA 螺旋桨型号合格证数据单 P.094 见注释 5
Type Certificate	EASA Prop. Type Certificate Data Sheet P.094 See Note 5
CAAC 型号认可证	CAAC 螺旋桨型号认可证数据单 VTC0254P 版本 1
CAAC Validation Type Certificate	CAAC Propeller Validation Type Certificate Data Sheet VTC0254P Revision 1
桨叶数量	3
Number of blades	
直径	1870 mm or 1900 mm (MÄM 42-600)
Diameter	
旋转方向	顺时针
Sense of Rotation	CW
设置	低桨距设置
Setting	Low Pitch setting 12° 13° (MÄM 42-600)
	顺桨
	Feather position 81° 80° (MÄM 42-600)
	启动锁定
	Start Lock 15°

9.液体

Fluids

燃油	Jet A-1 (ASTM 1655) 见注释 7/see Note 7
Fuel	Diesel (EN590) 见注释 11/ see Note11
滑油	发动机/ Engine: 壳牌 Helix Ultra 5W30 或 5W40
Oil	Shell Helix Ultra 5W30 or 5W40 或参见 AFM 第二章 or see AFM, Section 2
	齿轮箱/Gearbox
	壳牌 SPIRAX GSX 75W-80, 或
	Shell SPIRAX GSX 75W-80, or
	壳牌 SPIRAX S6 GXME 75W-80
	Shell SPIRAX S6 GXME 75W-80
	或参见 AFM 第二章
	or see AFM, Section 2

冷却剂/ Coolant:	水/冷却器防护液
	Water / Cooler Protection
	更多细节参见 AFM, 第二章
	for more details see AFM, Section 2

防冰液	AL-5 (DTD 406B) 或 Aeroshell Compound 07
Ice Protection Fluid	AL-5 (DTD 406B) or Aeroshell Compound 07
	更多细节参见 AFM, 增补页 S03
	for more details see AFM, Suppl. S03

10.液体容量

Fluid Capacities

燃油	标准油箱/Standard Fuel Tank	
Fuel	总共/ Total:	196.8 升/liters 52 US Gallons
	可用/ Usable	189.2 升/liters 50 US Gallons
	辅助油箱/ Auxiliary Fuel Tank	
	总共/ Total:	104 升/ liters 27,4 US Gallons
	可用/ Usable	100 升/liters 26.4 US Gallons
滑油	每台发动机/ each engine	
Oil	最大/ Maximum:	7 升/ liters
	最小/ Minimum:	5 升/ liters
冷却系统容量	大约 7 升	
Coolant System Capacities	Approx. 7 Liter	

11.空速

Air speeds

设计机动速度	
Design Manoeuvring Speed V_A	
小于 1700kg/ up to 1700 kg	114 KEAS
1701 至 1800 kg/1701 to 1800 kg	121 KEAS
1800 kg 以上/ above 1800 kg	125 KEAS
襟翼放下速度 V_{FE} /	
Flap Extended Speed V_{FE}	
进场/ Approach	135 KEAS
着陆/ Landing	110 KEAS
最大起落架使用速度 V_{LO} /	
Maximum Landing Gear Operation Speed V_{LO}	155 KEAS
最大起落架放下速度 V_{LE} /	
Maximum Landing Gear Extended Speed V_{LE}	192 KEAS
空中最小操纵速度 V_{MCA}	
Minimum Control Speed Airborne V_{MCA}	75 KEAS
MÄM 42-600	70 KEAS
最大结构巡航速度 V_{NO} (=最大结构设计速度 V_C)	
Maximum structural cruising speed V_{NO}	
(= Maximum structural design speed V_C)	155 KEAS
极限速度 V_{NE}	
Never exceed speed V_{NE}	192 KEAS
12.最大操作高度	5486 m (18 000 ft)
Maximum Operating Altitude	
13.全天候气象能力	日/夜-VFR, IFR Day/Night-VFR, IFR
All-weather Operation Capability	在已知或预计结冰条件下飞行, 参见注释 6
	Flights into known or forecast icing conditions
	See Note 6

14.最大重量	见注释 12 see note 12	
Maximum Weights	起飞/ Take-off	1900 kg (4189 lb)
	如果安装 MÄM 42-678	
	If MÄM 42-678 is installed	1999 kg (4407 lb)
	零燃油/ Zero Fuel	1765 kg (3891 lb)
	如果安装 MÄM 42-659	
	If MÄM 42-659 is installed	1835 kg (4045 lb)
	着陆/ Landing	1805 kg (3979 lb)
	如果安装 MÄM 42-659	
	If MÄM 42-659 is installed	1999 kg (4407 lb)

15.重心范围

Center of Gravity Range

前部限制/ Forward limit:

当 1450 kg 时	基准后 2.350m
At 1450 kg	2.350 m behind Datum
当 1468 kg 时	基准后 2.350m
At 1468 kg	2.350 m behind Datum
当 1900 kg 时	基准后 2.418m
At 1900 kg	2.418 m behind Datum
如果安装 MÄM 42-678	
If MÄM 42-678 is installed	
当 1999 kg 时	基准后 2.434m
At 1999 kg	2.434 m behind Datum

重量间线性变化

Varying linearly with mass in between

后部限制/ Rear limit:

当 1450 kg 时	基准后 2.454m
At 1450 kg	2.454 m behind Datum
当 1700 kg 及以上时	基准后 2.480m
At 1700 kg and above	2.480 m behind Datum

重量间线性变化

Varying linearly with mass in between

如果安装 OÄM 42-199 (见注释 10)

If OÄM 42-199 is installed (see note 10)

对于所有重量	基准后 2.450m
For all weights	2.450 m behind Datum

如果安装 OÄM 42-199 和 MÄM 42-600 (见注释 10)

If OÄM 42-199 and MÄM 42-600 are installed (see note 10)

当 1450 kg 时	基准后 2.454m
At 1450 kg	2.454 m behind Datum
当 1510 kg 及以上时	基准后 2.460m
At 1510 kg and above	2.460 m behind Datum

16.基准

Datum

机翼连接翼根前缘 2.196m

2.196m in front of leading edge of stub-wing at the wing joint

17.控制面偏转

Control surface deflections

副翼	后缘向上 trailing edge up	25° ± 2°
Aileron	后缘向下 trailing edge down	15° + 2/-0°
升降舵	后缘向上 trailing edge up	15.5° ± 0.5°
Elevator	后缘向下 trailing edge down	13° ± 1°
升降舵配平片	升降舵向上 10° , 机头抬起	+ 17° ± 5°
Elevator Trim Tab	nose up at elevator 10° up	
	升降舵向上 10° , 机头向下	-35° ± 5°
	nose down at elevator 10° up	27° ± 1°
方向舵	左/ Left	29° ± 1°
Rudder	右/ Right	
方向舵配平片	方向舵在左侧 20° 右侧配平	+ 54° ± 5°
Rudder Trim Tab	trim RH at rudder 20° LH	
	方向舵在左侧 20° 左侧配平	+ 22° ± 5°
	trim LH at rudder 20° LH	
	方向舵在左侧 20° 右侧配平 (MÄM 42-600)	+ 35° ± 5°
	trim RH at rudder 20° LH (MÄM 42-600)	
	方向舵在左侧 20° 左侧配平 (MÄM 42-600)	+36° ± 5°
	trim LH at rudder 20° LH(MÄM 42-600)	
	安装了 MÄM 42-600 和 MÄM 42-885:	
	with MÄM 42-600 and MÄM 42-885	
	方向舵在左侧 20° 右侧配平	+ 56° ± 5°
	trim RH at rudder 20° LH	
	方向舵在左侧 20° 左侧配平	+ 34° ± 5°
	trim LH at rudder 20° LH	
襟翼	巡航襟翼设定	0° + 2° -0°
Flaps	Cruise flap setting	
	进场襟翼设定	20° + 4° -2°
	Approach flap setting	
	着陆襟翼设定	42° + 3° -1°
	Landing flap setting	
18.测平方式	前行李舱地板为水平基准	
Leveling Means	floor of front baggage compartment levelled	
19.最小飞行机组	1 (飞行员/Pilot)	
Minimum Flight Crew		
20.最大乘员座位数	3	
Maximum Passenger		
Seating Capacity		
21.行李舱/货物舱	位置/Location	最大许用负载/Max. allowable Load
Baggage/Cargo	前行李舱/Front Baggage Compartment	30 kg (66 lbs)
Compartments	后排座位后/ Behind Rear Seats	45kg(100 lb)
	尾部扩展行李舱 /Aft part of Baggage Extension	18 kg (40 lb)
	整个尾部行李舱 /Whole aft Baggage Compartment together	45kg(100 lbs)
22.机轮与轮胎	前轮轮胎尺寸	5.00 - 5
Wheels and Tyre	Nose Wheel Tyre Size	

主轮轮胎尺寸	15×6.0-6 （见注释 9）
Main Wheel Tyre Size	See Note 9

四、操作及维护说明/Operating and Service Instructions

1.飞行手册 Flight Manual	文件 No. 7.01.15 或 7.01.16(安装了 MÄM 42-600) Document No. 7.01.15 or 7.01.16 (MÄM 42-600 installed)
2.技术手册 Technical Manual:	飞机维修手册（AMM）文件 No. 7.02.15（包括适航限制）、服务信息和服务通告 Airplane Maintenance Manual (AMM) Document No. 7.02.15 (incl. Airworthiness Limitations) Service Information and Service Bulletins
3.零配件目录 Spare Parts Catalogue(IPC):	图解零件目录文件 No.7.03.15 Illustrated Parts Catalogue Doc. No.7.03.15
4.设备及数量 Instruments and aggregates:	参考 AMM 文件 No.7.02.15 第 1 章 refer to AMM Doc. No.7.02.15 Chapter 1

五、注释

- Notes**
- 1.本合格证适用于系列号 42.339, 42.379, 42.N001 及在奥地利钻石飞机公司生产的后继飞机。DA42.NC001 和在加拿大钻石飞机公司制造的后继飞机。DA42 可以通过奥地利钻石飞机公司批准的服务通告 OSB 42-068 改装成 DA42NG。This certification applies to serial numbers 42.339, 42.379, 42.N001 and subsequent for production at Diamond-Austria. 42.NC001 and subsequent for production at Diamond-Canada. DA 42 may be converted to Model DA 42 NG by DAI approved SB OSB 42-068
2. 批准的噪声水平符合 EASA 噪声数据单 TCDSN A.005。
Approved Noise Levels in accordance to the EASA data sheet for noise TCDSN A.005
- 3.批准的 Garmin G1000 集成航电系统软件版本见最新版次的 DAI MSB 42NG-003。要求安装 Garmin PNo.010-00670-01 或之后批准版本的软件。
For approved software versions of Gamin G1000 Integrated Avionic System see DAI MSB 42NG-003, at latest issue. Garmin Software PNo.010-00670-01 or later approved version is required.
- 4.批准安装在 DA 42NG 上的发动机型号：E4-B；
安装 MÄM 42-600 后：E4-C。
批准的固件及参数谱依据最新版 DAI MSB 42NG-002。
Approved engine model for installation in the DA 42 NG: E4-B
with MÄM 42-600 installed : E4-C
The approved firmware and mapping is according to DAI MSB 42NG-002 at latest issue.
- 5.螺旋桨设备：控制器：P-877-16
Propeller Equipment: Governor: P-877-16
- 6.如按照设计大改 OÄM 42-160 安装了液体防冰系统，在已知或预计结冰条件下飞行是获批准的。
Fights into known or forecast icing conditions is approved if the liquid fluid ice protection system in accordance to Major Design Change OÄM 42-160 is installed.
- 7.批准的其他航空燃油牌号见 AFM 第二章。
For additional approved Jet Fuel specification see AFM Section 2.
JET A, JET A-1 (ASTM D 1655), TS-1 (Russia, GOST 10227-86), (Ukraine, GSTU 320.00149943.011-99), RT (Russia, GOST 10227-86), RT (Ukraine GSTU 320.00149943.007-97), No. 3 Jet Fuel (China, GB 6537-2006), JP-8 (F34) (USA, MIL-DTL-83133G-2010) 和以上列出燃油等级的混合物。.

- For additional approved Jet Fuel specification see applicable AFM, Section 2.
- JET A, JET A-1 (ASTM D 1655), TS-1 (Russia, GOST 10227-86), (Ukraine, GSTU 320.00149943.011-99), RT (Russia, GOST 10227-86), RT (Ukraine GSTU 320.00149943.007-97), No. 3 Jet Fuel (China, GB 6537-2006), JP-8 (F34) (USA, MIL-DTL-83133G-2010) and blends of the above listed fuel grades.
- 8.螺旋桨 MTV-6-R-C-F/CF190-69 的安装，只有在安装了包括一系列更改的设计更改 MÄM 42-600 后才是获批准的。
The installation of Propeller MTV-6-R-C-F/CF190-69 is only approved by complete installation of design change MÄM 42-600 which includes a number of different modifications.
- 9.只可以安装特定品牌和型号的轮胎，参见 AMM 和 IPC。
Only specific brand names and types of tires are allowed for installation, see AMM and IPC
- 10.当安装 OÄM 42-199，需要撤去可调式升降舵止动点
The Variable Elevator Stop is removed with OÄM 42-199 installed.
- 11.使用柴油燃料运行，只有在 OÄM 42-251 安装后才是获批准的
Operation with Diesel fuel is only approved if OÄM 42-251 is installed.
- 12.以下设计重量构型是经批准的
The following Design Mass Configurations are approved:

Design Changes installed 安装的设计更改	Standard 标准型	MÄM 42-659	MÄM 42-659 and MÄM 42-678	MÄM 42-659 and MÄM 42-678 and OÄM 42-260
MTOM	1900 kg (4189 lb)	1900 kg (4189 lb)	1999 kg (4407 lb)	2001 kg (4411 lb)
MZFM	1765 kg (3891 lb)	1835 kg (4045 lb)	1835 kg (4045 lb)	1835 kg (4045 lb)
MLM	1805 kg (3979 lb)	1900 kg (4189 lb)	1999 kg (4407 lb)	1999 kg (4407 lb)

- MTOM – 最大起飞重量/ maximum take-off mass; MZFM – 最大零燃油重量/ maximum zero fuel mass; MLM – 最大着陆重量/ maximum landing mass
- 只有按 TC 持有人服务通告进行的设计更改改装是获批准的。
The retrofit installation of the design changes is only approved per TC Holder Service Bulletins.
- 执行 OÄM 42-260 而获得最大起飞重量为 2001 kg (4411 lb)，仅是为了更适合于在最大起飞重量超过 2000kg 时进行操作的情况。在最大起飞重量 2001 kg (4407 lb)时，前重心限制在飞机基准面后的 2.434m (95.83 in)处。
The Maximum Take Off Mass of 2001 kg (4411 lb) per OÄM 42-260 is intended only for cases where it is operationally more suitable to have a MTOM above 2000 kg. The forward Center of Gravity Limit at MTOM 2001 kg (4407 lb) is 2.434 m (95.83 in) aft of datum plane.
- 13.安装了 MÄM 42-600 的 DA42NG 商用名称是 DA 42-VI。
The commercial designation of the DA 42 NG with MÄM 42-600 installed is DA 42-VI

- THE END -