

型号认可证数据单

THE VALIDATION DATA SHEET

编号/No: VTC0255P

版次/Revision: 1

型号/Type: MTV-9-()

型别/Model:

MTV-9-AA

MTV-9-AB

MTV-9-B

MTV-9-D

MTV-9-E

MTV-9-K

批准人/Approved By:



职务/Title: Deputy Director General

日期/Date: 2025-05-19

本数据单是型号认可证（编号：VTC0255P）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 part of Validation of Type Certificate (No: VTC0255P), 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.

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

MT 螺旋桨公司/MT-Propeller Entwicklung GmbH

Flugplatzstraße 1

94348 Atting

Germany

第1部分概述（所有型别）
SECTION 1 General（ALL MODELS）

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

	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	VTC0255P，版次1, 2025年5月19日 VTC0255P, Revision 1, Date of Issue: 2025-05-19	EASA TCDS No. P.096, Issue 03 Jun. 17, 2024
历史/ History	VTC0255P，版次0, 2011年5月12日 VTC0255P, Revision 0, Date of Issue: 2011-05-12	LBA TCDS No. 32.130/65, Revision 10 Dec. 11, 2003

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
版次 1/Rev 1	1. 增加型别：MTV-9-AA 和 MTV-9-AB Additional propeller variant: MTV-9-AA and MTV-9-AB 2. 增加额定功率/Additional Power Rating: 634 kw / 2300 rpm / 175 - 250 cm 634 kw / 2200 rpm / 175 - 260 cm 149 kW / 1250 rpm / 175 - 270 cm 3. 批准反桨系统：-- R(DA) Approval of Reverse System: -- R(DA) 4. 增加法兰盘类型/Additional flange types: -AA =用于适配到 SAE No. 20 花键的法兰安装座 -AB = ARP-502 mod., 1/2” – 20 个 UNF 螺桩, 4.75” 螺栓孔圆周直径 -AA = flange mount for adapter to SAE No. 20 spline -AB = ARP-502 mod., 1/2” – 20 UNF studs, 4.75“ bolt circle diameter 5. 增加桨叶类型/Additional Blade Types: -63, 65, -66, -67, 87, -88, -92, -93, -94, -111, -116, -120, -133, - 134, - 135, -136, -142, -143, -144, -150, -151, -360, -361, -362, -363, -364	

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. 型号合格证持有人/Type Certificate Holder: MT 螺旋桨公司
MT-Propeller Entwicklung GmbH
Flugplatzstraße 1
94348 Atting
Germany
4. 生产制造商/Manufacturer: MT螺旋桨公司
MT-Propeller Entwicklung GmbH
5. 延程飞行/Extended diversion time operation: 不适用/N/A
6. CAAC专用要求/CAACSpecial Requirements: 无/NONE

第2部分
SECTION 2

I. 产品型别和批准日期/Model and Approval Date

产品型别 Model	申请日期 Application Data	批准日期 Approval Date	类别 category
MTV-9-AA	2017年6月1日/ 01 June 2017	2018年12月6日/ 06 December 2018	螺旋桨 Propeller
MTV-9-AB	2023年4月28日/ 28 April 2023	2024年6月17日/ 17 June 2024	螺旋桨 Propeller
MTV-9-B	1990年1月19日/ 19 January 1990	1990年3月8日/ 08 March 1990	螺旋桨 Propeller
MTV-9-D	未知/ not identified	1987年12月17日/ 17 December 1987	螺旋桨 Propeller
MTV-9-E	2001年5月17日/ 17 May 2001	2001年9月27日/ 27 September 2001	螺旋桨 Propeller
MTV-9-K	2001年5月17日/ 17 May 2001	2001年9月27日/ 27 September 2001	螺旋桨 Propeller

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

型别	审定基础和生产依据/ Certification Basis and Production Basis	
MTV-9-()	适航标准 /Airworthiness standard	14 CFR 35部35-1至35-7修正案，1995年12月28日/14 CFR Part 35, as amended by 35-1 through 35-7, effective 28 December 1995;
	专用条件/ Special Conditions	无/None
	等效安全/ ELOS	无/None
	豁免/ Exemption	无/None
	环保要求 /Environmental Standards including Noise	不适用/Not applicable
	附件技术条件 /Additional Technical Requirement	无/None

注/note:

在EASA成立之前向德国民航局LBA提出申请。适用的适航标准是根据申请时德国的法规制定的。最初的适航标准为1980年10月14日生效的联邦法规汇编14集第35部5号修正案。1999年5月19日升级为1990年8月18日生效的联邦法规汇编14集第35部6号修正案（德国民航局LBA型号合格数据单编号32.130/65，版次6）。2003年12月11日升级为1995年12月28日生效的联邦法规汇编14集第35部7号修正案（德国民航局LBA型号合格数据单编号32.130/65，版次10）。

Application was made to LBA-Germany before EASA was established. The applicable airworthiness standards were established in accordance with the rule in Germany at the time of application. Initial

airworthiness standard was 14 CFR Part 35 Amendment 35-5, effective 14 October 1980. Update to 14 CFR Part 35 Amendment 35-6, effective 18 August 1990, was made on 19 May 1999 (LBA-Germany Type Certificate Data Sheet No. 32.130/65 issue 6). Update to 14 CFR Part 35 Amendment 35-7, effective 28 December 1995, was made on 11 December 2003 (LBA-Germany Type Certificate Data Sheet No. 32.130/65 issue 10).

III. 技术特性/ Technical Characteristics

1. 型号设计定义/ Type Design Definition

MTV-9螺旋桨型号包含多种设计构型，每种构型可能配备不同版本的桨毂法兰盘。每个设计构型均由一份主装配图和相应的零件清单定义，详见下表：

The MTV-9 propeller model consists of different design configurations, each one of the design configurations may have different versions of the hub flange. Each design configuration is by a main assembly drawing and associated parts list as per the following table:

设计构型 Design Configuration	装配图 Assembly Drawing	零件清单 Parts List
MTV-9-(*)-(C) 恒速 MTV-9-(*)-(C) Constant Speed	P-154-(x) P-1392-(x)**	S-013-(x) S-205-(x)**
MTV-9-(*)-C-F 恒速+顺桨 MTV-9-(*)-C-F Constant Speed + Feather	P-540-(x) P-1576-(x)**	S-065-2-(x) S-220-(x)**
MTV-9-(*)-C-R(M) 恒速+反桨 (Mühlbauer系统) MTV-9-(*)-C-R(M) Constant Speed + Reverse (System Mühlbauer)	P-529-(x)	S-072-1-(x)
MTV-9-(*)-C-F-R(M) 恒速+顺桨+反桨 (Mühlbauer系统) MTV-9-(*)-C-F-R(M) Constant Speed + Feather +Reverse (System Mühlbauer)	P-525-(x)	S-072-(x)
MTV-9-(*)-C-F-R(A) 恒速+顺桨+反桨 (Allison系统) MTV-9-(*)-C-F-R(A) Constant Speed + Feather +Reverse (System Allison)	P-1573-(x)	S-219-(x)
MTV-9-(*)-C-F-R(P) 恒速+顺桨+反桨 (Pratt&Whitney系统) MTV-9-(*)-C-F-R(P) Constant Speed + Feather +Reverse (System Pratt&Whitney)	P-424-(x)	S-055-(x)
MTV-9-(*)-C-F-R(W) 恒速+顺桨+反桨 (Walter系统) MTV-9-(*)-C-F-R(W) Constant Speed + Feather +Reverse (System Walter)	P-786-(x)	S-136-(x)
MTV-9-(*,***)-R(DA) 变距+反桨 (双作动系统) MTV-9-(*,***)-R(DA) Variable Pitch + Reverse (Dual Acting System)	P-1795-(x)	S-245-(x)
注/Note: 1. 六类桨毂法兰盘可供选择 *: -B = SAE No. 2 mod., 1/2" – 20个UNF螺栓 -D = ARP-502, 1/2" –20个UNF螺栓 -E = ARP-880, 9/16" –18个UNF螺栓 -K = 135mm螺栓孔圆周直径, 共6个螺栓, 每个9/16" (对于M-14发动机) **: -AA =用于适配到 SAE No. 20 花键的法兰安装座		

***:

-AB = ARP-502 mod., 1/2" – 20个UNF螺栓, 4.75" 螺栓孔圆周直径

1. Six versions of hub flanges are available:

*:

-B = SAE No. 2 mod., 1/2" – 20 UNF bolts

-D = ARP-502, 1/2" – 20 UNF studs

-E = ARP-880, 9/16" – 18 UNF studs

-K = 135 mm stud circle diameter with 6 studs, 9/16" each (for M-14 engines)

**:

-AA = flange mount for adapter to SAE No. 20 spline

***:

-AB = ARP-502 mod., 1/2" – 20 UNF studs, 4.75" bolt circle diameter

2. 在装配图纸编号和零件清单编号中, 后缀 (x) 表示修订状态。

2. In the assembly drawing number and the part list number, the suffix (x) indicates the revision status.

2. 描述/ Description

具有液压控制桨叶变距机构的3叶可变距螺旋桨, 具有“恒速”、“顺桨”、“反桨”运行模式。桨毂为铝合金整体铣制。叶片是分层木质结构表面覆有复合材料纤维。桨叶前缘装有防冲蚀装置。可选设备包括桨帽和防冰。

3-blade variable pitch propeller with a hydraulically operated blade pitch change mechanism providing the operation mode “Constant Speed”, “Feather” and “Reverse”. The hub is milled out of aluminium alloy. The blades have a laminated wood structure with a composite fibre cover. The leading edge of the blade is equipped with an erosion protection device. Optional equipment includes spinner and ice protection.

3. 设备/ Equipment

桨帽/Spinner: 参照MT-Propeller服务通告No. 13 (并参见VI.6) /refer to MT-Propeller Service Bulletin No. 13 (see also VI.6)

调速器/Governor: 参照MT-Propeller服务通告No. 14 (并参见VI.6) /refer to MT-Propeller Service Bulletin No. 14 (see also VI.6)

防冰/Ice Protection: 参照MT-Propeller服务通告No. 15 (并参见VI.6) /refer to MT-Propeller Service Bulletin No. 15 (see also VI.6)

4. 尺寸/ Dimensions

螺旋桨直径: 175 cm至270 cm

Propeller diameter: 175 cm to 270 cm

5. 重量/ Weight

根据螺旋桨设计构型/ Depending on Propeller-Design Configuration

“恒速/Constant Speed”: 约/approx.: 24 kg

“恒速/Constant Speed, 顺桨/Feather”: 约/approx.: 29 kg

“恒速/Constant Speed, 反桨/Reverse”: 约/approx.: 27 kg

“恒速/Constant Speed, 顺桨/Feather, 反桨/Reverse”: 约/approx.: 32 kg

6. 桨毂/桨叶组合/Hub/ Blade Combinations

以下木制叶片适用于III.1列出的所有型号设计定义/For all design configurations listed under III.1 the

following wooden blades are applicable:

-02, -11, -14, -15, -18, -20, -21, -22, -25, -26, -27, -29, -33, -34, -35, -37, -42, -43, -45, -46, -50, -52, -55, -58, -61, -62, -63, -65, -66, -67, -87, -88, -92, -93, -94, -102, -103, -104, -109, -111, -116, -120, -121, -133, -134, -135, -136, -142, -143, -144, -150, -151, -360, -361, -362, -363, -364

7. 控制系统/ Control System

在MT-Propeller服务通告No. 14中列出的螺旋桨调速器

Propeller governors as listed in MT-Propeller Service Bulletin No. 14.

8. 与发动机的匹配/ Adaptation to Engine

桨毂法兰盘对应螺旋桨牌号中特定的字母代码（见VI.5）

Hub flanges as identified by a letter-code in the propeller designation (see VI.5.)

9. 旋转方向/Direction of Rotation

旋转方向（顺着飞行方向看）对应螺旋桨牌号中特定的字母代码（见VI.5）

Direction of rotation (viewed in flight direction) as identified by a letter-code in the propeller designation (see VI.5.)

IV. 使用限制/Operating Limitations

1. 批准的安装/Approved Installations

螺旋桨对于给定飞机/发动机组合的适用性必须在飞机的型号合格审定中予以证明。

The suitability of a propeller for a given aircraft/engine combination must be demonstrated within the scope of the type certification of the aircraft.

2. 最大起飞功率和转速/ Maximum Take Off Power and Speed

直径(cm) Diameter (cm)	最大起飞功率(kW) Maximum Take Off Power (kW)	最大起飞转速 (rpm) Maximum Take Off Speed (rpm)
175至213 cm 175 to 213 cm	314	2700
175至250 cm 175 to 250 cm	634	2300
175至260 cm 175 to 260 cm	314	1975
175至260 cm 175 to 260 cm	634	2200
175至270 cm 175 to 270 cm	149	1250

3. 最大连续功率和转速/ Maximum Continuous Power and Speed

直径(cm) Diameter (cm)	最大连续功率(kW) Maximum Continuous Power (kW)	最大连续转速 (rpm) Maximum Continuous Speed (rpm)
175至213 cm 175 to 213 cm	314	2700
175至250 cm 175 to 250 cm	634	2300
175至260 cm 175 to 260 cm	314	1975

175至260 cm 175 to 260 cm	634	2200
175至270 cm 175 to 270 cm	149	1250

4. 螺旋桨桨距角/Propeller Pitch Angle

从-34 °到+86 °，在75%半径位置测量

From -34 °up to +86 °measured at 75% radius station

V. 使用和维护说明/Operating and Service Instructions

手册/Manuals	
液压控制可变距螺旋桨使用和安装手册 Operation and Installation Manual for hydraulically controlled variable pitch propeller MTV-9-()-(C), MTV-9-()-C-F	No. E-124 (*)
可逆液压控制可变距螺旋桨使用和安装手册；反桨系统 (M) Operation and Installation Manual for reversible hydraulically controlled variable pitch propeller ; Reverse-Systems (M) MTV-9-()-C-(F)-R(M)	No. E-504 (*)
可逆液压控制可变距螺旋桨使用和安装手册；反桨系统 (A), (P), (W) Operation and Installation Manual for reversible hydraulically controlled variable pitch propeller ; Reverse-Systems (A), (P), (W) MTV-9-()-C-F-R(A/P/W)	No. E-610 (*)
双液压作动控制可变距螺旋桨使用和安装手册；反桨系统 (DA) Operation and Installation Manual for dual acting hydraulically controlled variable pitch propeller; Reverse-System (DA) MTV-9-()-R(DA)	No. E-4230 (*)

持续适航文件 (ICA) Instructions for Continued Airworthiness (ICA)	
液压控制可变距螺旋桨使用和安装手册 Operation and Installation Manual for hydraulically controlled variable pitch propeller MTV-9-(), MTV-9-()-C-F	No. E-124 (*)
可逆液压控制可变距螺旋桨使用和安装手册；反桨系统 (M) Operation and Installation Manual for reversible hydraulically controlled variable pitch propeller ; Reverse-Systems (M)	No. E-504 (*)

MTV-9-()-C-(F)-R(M)	
可逆液压控制可变距螺旋桨使用和安装手册；反桨系统 (A), (P), (W) Operation and Installation Manual for reversible hydraulically controlled variable pitch propeller ; Reverse-Systems (A), (P), (W) MTV-9-()-C-F-R(A/P/W)	No. E-610 (*)
双作动液压控制可变距螺旋桨使用和安装手册；反桨系统 (DA) Operation and Installation Manual for dual acting hydraulically controlled variable pitch propeller; Reverse-System (DA) MTV-9-()-R(DA)	No. E-4230 (*)
液压控制可变距螺旋桨大修手册和零部件清单Overhaul Manual and Parts List for hydraulically controlled variable pitch propeller MTV-9-()-(C), MTV-9-()-C-F	No. E-220 (*)
可逆液压控制可变距螺旋桨大修手册和零部件清单；反桨系统 (M) Overhaul Manual and Parts List for reversible hydraulically controlled variable pitch propeller; Reverse-Systems (M) MTV-9-()-C-(F)-R(M)	No. E-519 (*)
可逆液压控制可变距螺旋桨大修手册和零部件清单；反桨系统 (A), (P), (W),(DA) Overhaul Manual and Parts List for reversible hydraulically controlled variable pitch propeller; Reverse-Systems (A), (P), (W), (DA) MTV-9-()-C-F-R(A/P/W), MTV-9-()-R(DA)	No. E-680 (*)
复合材料桨叶大修手册（同时适用于木质桨叶） Overhaul Manual for Composite Blades (also applicable to wooden blades)	No. E-1290 (*)
标准施工手册 Standard Practice Manual	No. E-808 (*)
服务通告，服务信函，服务说明 Service Bulletins, Service Letters, Service Instructions	MT-Propeller发布的 As published by MT-Propeller

(*)最新修订版

(*) latest revision of

VI. 注释/ Notes

1. EASA批准的持续适航文件中的适航限制章节在“使用、安装和维护手册”第10.0章“适航限制章节”发布。由于该型号无寿命限制，因此适航限制章节中无内容。

The EASA approved Airworthiness Limitations Section (ALS) of the Instructions for Continued Airworthiness is published in the applicable "Operation, Installation and Maintenance Manual" document,

chapter 10.0 "Airworthiness Limitations Section". This ALS section is empty because no life limit is necessary for these models.

2. 该螺旋桨的一些型别可以采用一个启动螺距锁，可用来防止螺旋桨在低于给定的螺旋桨速度下顺桨。

Some models of this propeller can incorporate a start pitch lock which may prevent propeller feathering below a given propeller speed.

3. 制造商推荐的大修间隔列在MT-Propeller服务通告No.1中。

The overhaul intervals recommended by the manufacturer are listed in MT-Propeller Service Bulletin No. 1.

4. EASA型号合格证和合格证数据单No. P.096代替德国LBA型号合格证和型号合格数据单No. 32.130/65。

EASA Type Certificate and Type Certificate Data Sheet No. P.096 replace LBA-Germany Type Certificate and Type Certificate Data Sheet No. 32.130/65.

5. 螺旋桨命名系统/ Propeller designation system:

桨毂/Hub										/	桨叶/Blade							
MT	V	-	9	-	()	()	()	()	()	-	()	/	()	()	200	-	15	()
1	2		3		4	5	6	7	8		9	/	1	2	3		4	5

桨毂/Hub

1 MT-Propeller Entwicklung Gmb公司/MT-Propeller Entwicklung GmbH

2 可变距螺旋桨/Variable pitch propeller

3 螺旋桨型别编号/Identification of propeller type

4 法兰盘类型字母代码:

-B = SAE No. 2 mod., 1/2" – 20个UNF螺栓

-D = ARP-502, 1/2" – 20个UNF螺栓

-E = ARP-880, 9/16" – 18个UNF螺栓

-K = 135mm螺栓孔圆周直径，共6个螺栓，每个9/16" (对于M-14发动机)

-AA = 用于适配到 SAE No. 20 花键的法兰安装座

-AB = ARP-502 mod., 1/2" – 20个UNF螺栓, 4.75"螺栓孔圆周直径

Letter code for flange type:

- B = SAE No. 2 mod., 1/2" – 20 UNF bolts

- D = ARP-502, 1/2" – 20 UNF studs

- E = ARP-880, 9/16" – 18 UNF studs

-
- K = 135 mm bolt circle diameter with 6 studs, 9/16" each (for M-14 engines)
 - AA = flange mount for adapter to SAE No. 20 spline
 - AB = ARP-502 mod., 1/2" – 20 UNF studs, 4.75" bolt circle diameter
- 5 配重字母代码/Letter code for counterweights:
- 空白/blank=无配重或配重很小以减小桨距位置/no or small counterweights for pitch change forces to decrease pitch
 - C=配重以增大桨距位置/counterweights for pitch change forces to increase pitch
- 6 顺桨字母代码/Letter code for feather provision:
- 空白/blank=无顺桨位置/no feather position possible
 - F=有顺桨位置/feather position allowed
- 7 反桨字母代码/Letter code for reverse provision:
- 空白/blank=无反桨位置/no reverse position possible
 - R=有反桨位置/reverse position allowed
- 8 反桨系统字母代码/Letter code for reversing system:
- M= Mühlbauer系统/System Mühlbauer
 - A= Allison系统/System Allison
 - P= Pratt & Whitney系统/System Pratt & Whitney
 - W= Walter系统/System Walter
 - DA =双作动系统/System Dual Acting
- 9 桨毂设计更改字母代码/ Letter code for hub design changes:
- 小写字母表示不影响互换性的更改/ small letter for changes which do not affect interchangeability
 - 大写字母表示影响互换性的更改/ capital letter for changes which affect interchangeability

桨叶/Blade

- 1 桨距变化位置字母代码/ Letter code for position of pitch change pin:
- 空白/blank=减小桨距位置/pin position for pitch change forces to decrease pitch
 - C = 增大桨距位置/pin position for pitch change forces to increase pitch
 - CF = 顺桨位置/pin position to allow feather; 增加桨距/pitch change forces to increase pitch
 - CR = 反桨位置/pin position to allow reverse; 增大桨距/pitch change forces to increase pitch
 - CFR = 顺桨和反桨位置/pin position to feather and reverse; 增大桨距pitch change forces to increase pitch
- 2 旋转方向和安装字母代码/ Letter code for direction of rotation and installation:
- 空白/blank = 右旋, 牵引/right-hand tractor

-
- RD = 右旋, 推进/right-hand pusher
 - L = 左旋, 牵引/left-hand tractor
 - LD = 左旋, 推进/left-hand pusher

3 螺旋桨直径 (厘米) / Propeller diameter in cm

4 桨叶设计识别号/ Identification of blade design

5 桨叶设计更改字母代码/Letter code for blade design changes:

- 小写字母表示不影响桨叶互换性的更改/ small letter for changes which do not affect interchangeability of blade set
- 大写字母表示影响桨叶互换性的更改/ capital letter for changes which affect interchangeability of blade set

6 服务通告第13、14和15号中列出的设备不包含在经认证的型号设计中。对于任何制造商, 相关的螺旋桨设备都必须作为飞机安装的一部分获得批准。/The equipment listed in SBs No.13, 14 and 15 is not included in the certified Type Design. Related propeller equipment must be approved as part of the aircraft installation regardless of manufacture.

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