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# TYPE-CERTIFICATE DATA SHEET

No. P.094

**for Propeller**  
MTV-6 Series

**Type Certificate Holder**  
MT-Propeller Entwicklung GmbH

Flugplatzstraße 1  
94348 Atting  
Germany

For Models:

MTV-6-A  
MTV-6-C  
MTV-6-D  
MTV-6-F  
MTV-6-P  
MTV-6-R



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## TABLE OF CONTENTS

<b>I. General</b> .....	<b>4</b>
<b>1. Type / Models</b> .....	<b>4</b>
<b>2. Type Certificate Holder</b> .....	<b>4</b>
<b>3. Manufacturer</b> .....	<b>4</b>
<b>4. Date of Application</b> .....	<b>4</b>
<b>5. EASA Type Certification Date</b> .....	<b>4</b>
<b>II. Certification Basis</b> .....	<b>5</b>
<b>1. Reference Date for determining the applicable airworthiness requirements:</b> .....	<b>5</b>
<b>2. EASA Certification Basis</b> .....	<b>5</b>
<b>2.1. Airworthiness Standards</b> .....	<b>5</b>
<b>2.2. Special Conditions (SC):</b> .....	<b>5</b>
<b>2.3. Equivalent Safety Findings (ESF):</b> .....	<b>5</b>
<b>2.4. Deviations</b> .....	<b>5</b>
<b>III. Technical Characteristics</b> .....	<b>6</b>
<b>1. Type Design Definition</b> .....	<b>6</b>
<b>2. Description</b> .....	<b>6</b>
<b>3. Equipment</b> .....	<b>7</b>
<b>4. Dimensions</b> .....	<b>7</b>
<b>5. Weight</b> .....	<b>7</b>
<b>6. Hub / Blade Combinations</b> .....	<b>7</b>
<b>7. Control System</b> .....	<b>7</b>
<b>8. Adaptation to Engine</b> .....	<b>7</b>
<b>9. Direction of Rotation</b> .....	<b>7</b>
<b>IV. Operating Limitations</b> .....	<b>8</b>
<b>1. Approved Installations</b> .....	<b>8</b>
<b>2. Maximum Take Off Power and Speed</b> .....	<b>8</b>
<b>3. Maximum Continuous Power and Speed</b> .....	<b>8</b>
<b>4. Propeller Pitch Angle</b> .....	<b>8</b>
<b>V. Operating and Service Instructions</b> .....	<b>9</b>
<b>VI. Notes</b> .....	<b>10</b>
<b>SECTION: ADMINISTRATIVE</b> .....	<b>13</b>
<b>I. Acronyms and Abbreviations</b> .....	<b>13</b>
<b>II. Type Certificate Holder Record</b> .....	<b>13</b>
<b>III. Change Record</b> .....	<b>13</b>



## **I. General**

### **1. Type / Models**

MTV-6 / MTV-6-A, MTV-6-C, MTV-6-D, MTV-6-F, MTV-6-P, MTV-6-R

### **2. Type Certificate Holder**

MT-Propeller Entwicklung GmbH  
Flugplatzstraße 1  
94348 Atting  
Germany

Design Organisation Approval No.: EASA.21J.020

### **3. Manufacturer**

MT-Propeller Entwicklung GmbH

### **4. Date of Application**

MTV-6-C:	18 December 1984
MTV-6-A:	31 January 1992
MTV-6-D:	31 January 1992
MTV-6-F:	31 January 1992
MTV-6-P:	06 February 2008
MTV-6-R:	06 February 2008

### **5. EASA Type Certification Date**

MTV-6-C:	20 December 1985
MTV-6-A:	22 May 1992
MTV-6-D:	22 May 1992
MTV-6-F:	22 May 1992
MTV-6-P:	29 August 2008
MTV-6-R:	29 August 2008



## **II. Certification Basis**

### **1. Reference Date for determining the applicable airworthiness requirements:**

18 December 1984

### **2. EASA Certification Basis**

#### **2.1. Airworthiness Standards**

CFR Title 14 Part 35, as amended by 35-1 through 35-6, effective 18 August 1990

CFR Title 14 Part 35.38 "Lightning strike", amendment 35-8, effective 23 December 2008, approved 17 March 2015

Note:

First 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 CFR Title 14 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 24 July 2002 (LBA-Germany Type Certificate Data Sheet No. 32.130/57 issue 4).

#### **2.2. Special Conditions (SC):**

None

#### **2.3. Equivalent Safety Findings (ESF):**

None

#### **2.4. Deviations**

None



### III. Technical Characteristics

#### 1. Type Design Definition

The MTV-6 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:

Design Configuration	Assembly Drawing	Parts List
MTV-6-(*) Constant Speed	P-085-(x)	S-009-(x)
MTV-6-(*)-C-F Constant Speed + Feather	P-430-(x)	S-071-(x)
MTV-6-(*)-C-F-R(M) Constant Speed + Feather + Reverse (System Mühlbauer)	P-715-(x)	S-125-(x)

**Notes:**

1. Six versions of hub flanges are available:

\*:

-A = 6 x 7/16" - 20 UNF studs on a 80 mm circle diameter

-C = AS-127-D, SAE No. 2 mod., 7/16" - 20 UNF bolts

-D = ARP-502, 1/2" - 20 UNF studs

-F = AS-127-D, SAE No. 1 mod., 3/8" - 24 UNF bolts

-P = Identical to D-flange except without dowels and uses pilot bore of A-flange for centering

-R = Identical to A-flange except uses 1/2 inch studs

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

#### 2. Description

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. Equipment

Spinner: refer to MT-Propeller Service Bulletin No. 13 (see also VI.7.)  
Governor: refer to MT-Propeller Service Bulletin No. 14 (see also VI.7.)  
Ice Protection: refer to MT-Propeller Service Bulletin No. 15 (see also VI.7.)

### 4. Dimensions

Blade diameter: 140 cm to 203 cm

### 5. Weight

Depending on Propeller-Design Configuration

“Constant Speed”: approx. 14 kg  
“Constant Speed, Feather”: approx. 17.5 kg  
“Constant Speed, Feather, Reverse”: approx. 18.5 kg

### 6. Hub / Blade Combinations

For all design configurations listed under III.1 the following wooden blades are applicable:

-03, -04, -05, -06, -07, -08, -09, -12, -16, -23, -28, -31, -49, -51, -64, -69, -80, -81, -106, -112, -122,  
-123, -125, -129, -147, -148, -149, -312

### 7. Control System

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

### 8. Adaptation to Engine

Hub flanges as identified by a letter-code in the propeller designation (see VI.6.)

### 9. Direction of Rotation

Direction of rotation (viewed in flight direction) as identified by a letter-code in the propeller designation (see VI.6.)



## **IV. Operating Limitations**

### **1. Approved Installations**

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. Maximum Take Off Power and Speed**

Diameter (cm)	Maximum Take Off Power (kW)	Maximum Take Off Speed (rpm)
140 to 160 cm	134	2700
140 to 175 cm	120	2800
140 to 190 cm	125	2500
140 to 203 cm	149	2300

### **3. Maximum Continuous Power and Speed**

Diameter (cm)	Maximum Continuous Power (kW)	Maximum Continuous Speed (rpm)
140 to 160 cm	134	2700
140 to 175 cm	120	2800
140 to 190 cm	125	2500
140 to 203 cm	149	2300

### **4. Propeller Pitch Angle**

From -20° up to +86° measured at 75% radius station





**V. Operating and Service Instructions**

<b>Manuals</b>	
Operation and Installation Manual for hydraulically controlled variable pitch propeller MTV-6-( ), MTV-6-( )-C-F	No. E-124 (*)
Operation and Installation Manual for reversible hydraulically controlled variable pitch propeller; Reverse-System (M) MTV-6-( )-C-F-R(M)	No. E-504 (*)

<b>Instructions for Continued Airworthiness (ICA)</b>	
Operation and Installation Manual for hydraulically controlled variable pitch propeller MTV-6-( ), MTV-6-( )-C-F	No. E-124 (*)
Operation and Installation Manual for reversible hydraulically controlled variable pitch propeller; Reverse-System (M) MTV-6-( )-C-F-R(M)	No. E-504 (*)
Overhaul Manual and Parts List for hydraulically controlled variable pitch propeller MTV-6-( ), MTV-6-( )-C-F	No. E-220 (*)
Overhaul Manual and Parts List for reversible hydraulically controlled variable pitch propeller; Reverse-System (M) MTV-6-( )-C-F-R(M)	No. E-519 (*)
Overhaul Manual for Composite Blades (also applicable to wooden blades)	No. E-1290 (*)
Standard Practice Manual	No. E-808 (*)
Service Bulletins, Service Letters, Service Instructions	As published by MT-Propeller

(\*) latest revision of



## **VI. Notes**

1. 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. Some models of this propeller can incorporate a start pitch lock which may prevent propeller feathering below a given propeller speed.
3. The overhaul intervals recommended by the manufacturer are listed in MT-Propeller Service Bulletin No. 1.
4. Propeller constant speed control unit TAE-ECU P/N 02-4610-55001 R1, or later approved part numbers, complies with the requirement of DO 160D and the additional requirements of the airframe. The demonstrated levels are listed in the Operation and Installation Manual E-124. The software is designed and approved according to DO 178B Level C.
5. EASA Type Certificate and Type Certificate Data Sheet No. P.094 replace LBA-Germany Type Certificate and Type Certificate Data Sheet No. 32.130/57.



6. Propeller designation system:

		Hub							/	Blade							
MT	V	-	6	-	( )	( )	( )	( )	( )	-	( )	( )	187	-	129	( )	
1	2		3		4	5	6	7	8	9	/	1	2	3		4	5

Hub

- 1 MT-Propeller Entwicklung GmbH
- 2 Variable pitch propeller
- 3 Identification of propeller type
- 4 Letter code for flange type:
  - A = 6 x 7/16" - 20 UNF studs on a 80 mm circle diameter
  - C = AS-127-D, SAE No. 2 mod., 7/16" - 20 UNF bolts
  - D = ARP-502, 1/2" - 20 UNF studs
  - F = AS-127-D, SAE No. 1 mod., 3/8" bolts
  - P = Identical to D-flange except without dowels and uses pilot bore of A-flange for centering
  - R = Identical to A-flange except uses 1/2 inch studs
- 5 Letter code for counterweights:
  - blank = no or small counterweights for pitch change forces to decrease pitch
  - C = counterweights for pitch change forces to increase pitch
- 6 Letter code for feather provision:
  - blank = no feather position possible
  - F = feather position allowed
- 7 Letter code for reverse provision:
  - blank = no reverse position possible
  - R = reverse position allowed
- 8 Letter code for reversing system:
  - M = System Mühlbauer
- 9 Letter code for hub design changes:
  - small letter for changes which do not affect interchangeability
  - capital letter for changes which affect interchangeability



## Blade

- 1 Letter code for position of pitch change pin:
  - blank = pin position for pitch change forces to decrease pitch
  - C = pin position for pitch change forces to increase pitch
  - CF = pin position to allow feather; pitch change forces to increase pitch
  - CR = pin position to allow reverse; pitch change forces to increase pitch
  - CFR = pin position to feather and reverse; pitch change forces to increase pitch
  
- 2 Letter code for direction of rotation and installation:
  - blank = right-hand tractor
  - RD = right-hand pusher
  - L = left-hand tractor
  - LD = left-hand pusher
  
- 3 Propeller diameter in cm
  
- 4 Identification of blade design
  
- 5 Letter code for blade design changes:
  - small letter for changes which do not affect interchangeability of blade set
  - capital letter for changes which affect interchangeability of blade set

7. 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.



## **SECTION: ADMINISTRATIVE**

### **I. Acronyms and Abbreviations**

CFR Code of Federal Regulations  
LBA Luftfahrt Bundesamt

### **II. Type Certificate Holder Record**

As per I.2

### **III. Change Record**

<b>TCDS Issue</b>	<b>Date</b>	<b>Changes</b>	<b>TC Issue Date</b>
Issue 01	14 March 2007	Initial issue. The type was previously covered by LBA TCDS No. 32.130/57.	Initial Issue, 14 March 2007
Issue 02	29 August 2008	Revised.	
Issue 03	19 March 2015	Increase of Take-Off and Maximum Continuous Power Rating	
Issue 04	08 October 2024	a) Amendment of power ratings 125 kW / 2500 RPM / 140 to 190 cm and 149 kW / 2300 RPM / 140 to 203 cm b) Addition of blade types -147, -148, -149 c) Editorial changes	

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