TYPE-CERTIFICATE DATA SHEET

No. P.094

for Propeller
MTV-6

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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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 CFR Title 14 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 is defined by a main assembly drawing and associated parts list:

MTV-6-(*1) "Constant Speed":
Drawing No. P-085-( ) dated 17 September 1985 (*2)
Parts List No. S-009-( ) dated 20 September 1985 (*2)

MTV-6-(*1)-C-F "Constant Speed and Feather":
Drawing No. P-430-( ) dated 06 November 1996 (*2)
Parts List No. S-071-( ) dated 08 November 1996 (*2)

MTV-6-(*1)-C-F -R(M) "Constant Speed, Feather, and Reverse (System Mühlbauer)":
Drawing No. P-715-( ) dated 09 October 2000 (*2)
Parts List No. S-125-( ) dated 09 October 2000 (*2)

Note:

(*1) Four versions of hub flange are available:
- A = Bolt circle diameter 80 mm, 7/16 inch bolts
- C = AS-127-D, SAE No. 2 mod., 7/16 inch bolts
- D = ARP-502, Type 1
- F = AS-127-D, SAE No. 1 mod., 3/8 inch 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 bolts

(*2) Or later approved revision. Following a revision, the Drawing No. or the Parts List No. includes the corresponding revision letter, e.g. from P-085 to P-085-A.

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 blades is protected by a stainless steel erosion protection sheath.
Optional equipment includes spinner and ice protection.

3. Equipment

Spinner: refer to MT-Propeller Service Bulletin No. 13
Governor: refer to MT-Propeller Service Bulletin No. 14
Ice Protection: refer to MT-Propeller Service Bulletin No. 15

4. Dimensions

Propeller diameter: 140 cm to 203 cm

5. Weight

Approximate, depending on propeller-Design Configuration
"Constant Speed": 14 kg
"Constant Speed, Feather": 17.5 kg
"Constant Speed, Feather, Reverse": 18.5 kg

6. Hub / Blade Combinations

Hub	Blades
MTV-6-( )	-03, -04, -05, -06, -07, -08, -09, -12, -16, -23, -28, -31, -49, -51, -64, -69, -80, -81, -106, -112, -122, -123, -125, -129, -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 in the propeller designation (refer to note VI.6)

9. Direction of Rotation

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

IV. Operating Limitations

1. Approved Installations

This propeller has been tested for endurance on piston engines (refer to note VI.2)

2. Maximum Take Off Power and Speed

	Diameter			
	140 to 160 cm	140 to 175 cm	140 to 190 cm	140 to 203 cm
Max. Take Off Power	134 kW	120 kW	101 kW	132 Kw
Max. Take Off Speed	2700 rpm	2800 rpm	2500 rpm	2300 rpm

3. Maximum Continuous Power and Speed

	Diameter			
	140 to 160 cm	140 to 175 cm	140 to 190 cm	140 to 203 cm
Max. Continuous Power	134 kW	120 kW	101 kW	132 kW
Max. Continuous Speed	2700 rpm	2800 rpm	2500 rpm	2300 rpm

4. Propeller Pitch Angle
From -20° up to +86° measured at 75% radius station

V. Operating and Service Instructions

Operation and Installation Manual for hydraulically controlled variable pitch propeller	No. E-124 Issue 29 Nov. 2001 (*)
Operation and Installation Manual for reversible hydraulically controlled variable pitch propeller - reverse-Systems (M)	No. E-504, Issue 12 Apr 2000 (*)
Overhaul Manual and Parts List for hydraulically controlled variable pitch propeller	No. E-220 Issue 29 Nov. 2001 (*)
Overhaul Manual and Parts List for hydraulically controlled variable pitch propeller	No. E-519 Issue 10 Oct. 2000 (*)
Service Bulletins	as noted in the current List of Service Bulletins

(*) or later approved revision

VI. Notes

1. The EASA approved Airworthiness Limitations Section of the Instructions for Continued Airworthiness is published in the applicable "Operation and Installation Manual " document, chapter 10.0 "Airworthiness Limitations". This ALS section is empty because no life limit is necessary for these models.

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

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

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

5. Propeller constant speed control unit TAE-ECU P/N 02-4610-55001 R1, or later approved part number, 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 No. E-124. The software is designed and approved according to DO 178B Level C.

6. 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

7. 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 = Bolt circle diameter 80 mm, 7/16 inch bolts
- C = AS-127-D, SAE No. 2 mod., 7/16 inch bolts
- D = ARP-502, Type 1
- F = AS-127-D, SAE No. 1 mod., 3/8 inch 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 bolts

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 feather 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 Direction of rotation:
- 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

SECTION: ADMINISTRATIVE

I. Acronyms and Abbreviations

n/a

II. Type Certificate Holder Record

n/a

III. Change Record

Issue	Date	Changes	TC issue
Issue 01	14 March 2007	Initial Issue	Initial Issue, 14 March 2007
Issue 02	29 August 2008		
Issue 03	19 March 2015	Increase of Take-Off and Maximum Continuous Power Rating	

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