



TYPE-CERTIFICATE DATA SHEET

No. P.098

for Propeller
MTV-15 series

Type Certificate Holder
MT-Propeller Entwicklung GmbH

Flugplatzstraße 1
94348 Atting
Germany

For Models:
MTV-15-AA
MTV-15-B
MTV-15-C
MTV-15-D



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I. General

1. Type / Models

MTV-15 / MTV-15-AA, MTV-15-B, MTV-15-C, MTV-15-D

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-15-AA: 08 June 2015
MTV-15-B: 19 May 1989
MTV-15-C: 19 May 1989
MTV-15-D: 23 April 2001

5. EASA Type Certification Date

MTV-15-AA: 17 February 2017
MTV-15-B: 31 July 1989
MTV-15-C: 31 July 1989
MTV-15-D: 13 June 2002

II. Certification Basis

1. Reference Date for determining the applicable airworthiness requirements: 19 May 1989



2. EASA Certification Basis

2.1. Airworthiness Standards

Note:

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 13 June 2002 (LBA-Germany Type Certificate Data Sheet No. 32.130/70 issue 2).

MTV-15-B, MTV-15-C, MTV-15-D	14 CFR Part 35, as amended by 35-1 through 35-6, effective 18 August 1990
MTV-15-AA	14 CFR Part 35, as amended by 35-1 through 35-6, effective 18 August 1990, except 14 CFR 35.39 amendment 6 CS-P 390 amendment 1, dated 16 November 2006

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-15 propeller model is defined by a main assembly drawing and associated parts list:

MTV-15-(*) "Constant Speed":
Drawing No. P-202-() dated 16 December 1987 (*2)
Parts List No. S-025-() dated 23 June 1988 (*2)
and
Drawing No. P-719-A dated 05 April 2001 (*2)
Parts List No. S-130-A dated 06 April 2001 (*2)
and
Drawing No. P-1391-B dated 25 February 2016 (*2)
Parts List No. S-206-B dated 25 February 2016 (*2)

MTV-15-(*)-C-F "Constant Speed, Feather":
Drawing No. P-725-A dated 05 April 2001 (*2)
Parts List No. S-127-A dated 06 April 2001 (*2)
and
Drawing No. P-1558-() dated 11 October 2016 (*2)
Parts List No. S-216-() dated 11 October 2016 (*2)



MTV-15-(*1)-C-R(M) "Constant Speed, Reverse (System Mühlbauer)", or
MTV-15-(*1)-C-F-R(M) "Constant Speed, Feather, Reverse (System Mühlbauer)":
Drawing No. P-1003-() dated 13 March 2006 (*2)
Parts List No. S-167-A dated 22 February 2007 (*2)

Note:

- (*1) Four versions of hub flanges are available (refer to drawing):
 - AA = Flange mount for adapter to SAE No. 20 spline
 - B = AS-127-D, SAE No. 2 mod., 1/2 inch bolts
 - C = AS-127-D, SAE No. 2 mod., 7/16 inch bolts
 - D = ARP-502, Type 1

- (*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-719 to P-719-A.

2. Description

2-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 blade materials are:

- Wooden blades: Laminated wood structure with a composite fibre cover. The leading edge of the blades is protected by a stainless steel erosion protection sheath;
- Aluminium blades.

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: Wooden blades: 175 cm to 260 cm
Aluminium blades: 175 cm to 204 cm

5. Weight

Depending on Propeller-Design Configuration

Wooden blades:

"Constant Speed":	approx. 21 kg
"Constant Speed, Feather":	approx. 25 kg
"Constant Speed, Reverse":	approx. 25 kg
"Constant Speed, Feather, Reverse":	approx. 27 kg

Aluminium blades:

"Constant Speed":	approx. 26 kg
"Constant Speed, Feather":	approx. 30 kg
"Constant Speed, Reverse":	approx. 30 kg
"Constant Speed, Feather, Reverse":	approx. 32 kg



6. Hub / Blade Combinations

MTV-15-AA	Wooden Blades	-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, -102, -103, -104, -109, -121
MTV-15-B MTV-15-C MTV-15-D	Wooden Blades	-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, -102, -103, -104, -109, -121
	Aluminium Blades	-402

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.5.)

9. Direction of Rotation

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

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

	Max. Take Off Power (kW)	Max. Take Off Speed (rpm)	Diameter (cm)
Wooden Blades	224 kW	2200 rpm	175 to 260 cm
	224 kW	2700 rpm	175 to 210 cm
Aluminium Blades	224 kW	2700 rpm	175 to 204 cm

3. Maximum Continuous Power and Speed

	Max. Cont. Power (kW)	Max. Cont. Speed (rpm)	Diameter (cm)
Wooden Blades	224 kW	2200 rpm	175 to 260 cm
	224 kW	2700 rpm	175 to 210 cm
Aluminium Blades	224 kW	2700 rpm	175 to 204 cm



4. Propeller Pitch Angle

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

V. Operating and Service Instructions

Manuals	
Operation and Installation Manual for hydraulically controlled variable pitch propeller MTV-15-(), MTV-15-()-C-F	No. E-124 (*)
Operation and Installation Manual for reversible hydraulically controlled variable pitch propeller; Reverse-Systems (M) MTV-15-()-C-R(M)	No. E-504 (*)

Instructions for Continued Airworthiness (ICA)	
Operation and Installation Manual for hydraulically controlled variable pitch propeller MTV-15-(), MTV-15-()-C-F	No. E-124 (*)
Operation and Installation Manual for reversible hydraulically controlled variable pitch propeller; Reverse-Systems (M) MTV-15-()-C-R(M)	No. E-504 (*)
Overhaul Manual and Parts List for hydraulically controlled variable pitch propeller MTV-15-(), MTV-15-()-C-F	No. E-220 (*)
Overhaul Manual and Parts List for reversible hydraulically controlled variable pitch propeller; Reverse-Systems (M) MTV-15-()-C-R(M)	No. E-519 (*)
Overhaul Manual for Composite Blades (also applicable to wooden blades)	No. E-1290 (*)
Overhaul Manual for Metal Blades	No. E-809 (*)
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 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. EASA Type Certificate and Type Certificate Data Sheet No. P.098 replace LBA-Germany Type Certificate and Type Certificate Data Sheet No. 32.130/70.

5. Propeller designation system:

		Hub								/	Blade					
MT	V	-	15	-	()	()	()	()	()	/	()	()	210	-	58	()
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:
 - AA = Flange mount for adapter to SAE No. 20 spline
 - B = AS-127-D, SAE No. 2 mod., 1/2 inch bolts
 - C = AS-127-D, SAE No. 2 mod., 7/16 inch bolts
 - D = ARP-502, Type 1
- 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



SECTION: ADMINISTRATIVE

I. Acronyms and Abbreviations

[insert list or table]

II. Type Certificate Holder Record

[insert list or table]

III. Change Record

TCDS Issue	Date	Changes	TC Issue Date
Issue 01	03 May 2007	Initial issue following approval P.EASA.P.C.01000 (Introduction Reverse System Mühlbauer “-R(M)” – Introduction of additional wooden blades -25, -27, -29, -52, -61, -62, -63, -65, -66, -67).	Initial Issue, 03 May 2007
Issue 02	17 February 2017	Introduction of MTV-15-AA model and of 224 kW / 2200 rpm ratings. Previous note VI.1 on approved installation moved to § IV.1. Addition of SPM manual in § V. New note VI.1.	Amended, 17 February 2017

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