



TYPE-CERTIFICATE DATA SHEET

No. P.100

for Propeller
MTV-20 series

Type Certificate Holder
MT-Propeller Entwicklung GmbH

Flugplatzstraße 1
94348 Atting
Germany

For Models:
MTV-20-AA
MTV-20-B
MTV-20-C
MTV-20-D



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I. General

1. Type / Models

MTV-20 / MTV-20-AA, MTV-20-B, MTV-20-C, MTV-20-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-20-AA: 06 November 2017
MTV-20-B: 15 August 1988
MTV-20-C: 19 April 2017
MTV-20-D: 19 April 2017

5. EASA Type Certification Date

MTV-20-AA: 05 July 2018
MTV-20-B: 01 March 1989
MTV-20-C: 04 August 2017
MTV-20-D: 04 August 2017

II. Certification Basis

1. Reference Date for determining the applicable airworthiness requirements:

15 August 1988



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.

MTV-20-B	14 CFR Part 35, as amended by 35-1 through 35-5, effective 14 October 1980
MTV-20-C, MTV-20-D	14 CFR Part 35, as amended by 35-1 through 35-6, effective 18 August 1990
MTV-20-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-20 propeller model is defined by a main assembly drawing and associated parts list:

MTV-20-(*)1 "Constant Speed":
Drawing No. P-171-I dated 28 June 2011 (*2)
Parts List No. S-018-F dated 11 April 2017 (*2)

MTV-20-AA "Constant Speed" with flange mount for adapter to SAE No. 20 spline:
Drawing No. P-1605 dated 11 October 2017 (*2)
Parts List No. S-228 dated 11 October 2017 (*2)

Note:

- (*1) Three versions of hub flanges are available (refer to drawing):
 - 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-171-I to P-171-J.



2. Description

2-blade variable pitch propeller with an electrically operated blade pitch change mechanism providing the operation mode "Constant Speed". 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

Governor: refer to MT-Propeller Service Bulletin No. 14

Ice Protection: refer to MT-Propeller Service Bulletin No. 15

All propeller equipment must be approved as part of the aircraft installation regardless of manufacturer.

4. Dimensions

Propeller diameter: Wooden blades: 175 cm to 260 cm

5. Weight

MTV-20-AA: Approx. 24.5 kg

MTV-20-B, MTV-20-C, MTV-20-D: Approx. 21 kg

6. Hub / Blade Combinations

MTV-20-AA MTV-20-B MTV-20-C MTV-20-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
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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.4.)

9. Direction of Rotation

Direction of rotation (viewed in flight direction) as identified by a letter-code in the propeller designation (see VI.4.)



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	2700	175 to 210
	224	2200	175 to 260

3. Maximum Continuous Power and Speed

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

4. Propeller Pitch Angle

From +5° up to +50° measured at 75% radius station

V. Operating and Service Instructions

Manuals	
Operation and Installation Manual for electrically controlled variable pitch propeller MTV-20-()	No. E-118 (*)
Instructions for Continued Airworthiness (ICA)	
Operation and Installation Manual for electrically controlled variable pitch propeller MTV-20-()	No. E-118 (*)
Overhaul Manual and Parts List for electrically controlled variable pitch propeller MTV-20-()	No. E-250 (*)
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 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.** The overhaul intervals recommended by the manufacturer are listed in MT-Propeller Service Bulletin No. 1.
- 3.** EASA Type Certificate and Type Certificate Data Sheet No. P.100 replace LBA-Germany Type Certificate and Type Certificate Data Sheet No. 32.130/68.



4. Propeller designation system:

Hub / Blade
MT V - 20 - () () () / () 210 - 58 ()
1 2 3 4 5 6 / 1 2 3 4

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 hub design changes:
 - small letter for changes which do not affect interchangeability
 - capital letter for changes which affect interchangeability

Blade

- 1 Letter code for direction of rotation and installation:
 - blank = right-hand tractor
 - RD = right-hand pusher
 - L = left-hand tractor
 - LD = left-hand pusher
- 2 Propeller diameter in cm
- 3 Identification of blade design
- 4 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

TCDS Issue	Date	Changes	TC Issue Date
Issue 01	04 August 2017	Initial issue. Amendment of the LBA/EASA type certificate to introduce the –C and –D models. Addition of wooden blades -02, -11, -14, -15, -18, -20, -21, -25, -26, -27, -29, -33, -35, -37, -42, -43, -45, -46, -50, -52, -55, -58, -61, -62, -63, -65, -66, -67, -102, -103, -104, -109, -121. Rating increased to 224 kW / 2700 rpm / 175 to 210 cm.	Initial Issue, 04 August 2017
Issue 02	05 July 2018	Introduction of the –AA model. Addition of the 224 kW / 2200 rpm / 175 to 260 cm ratings. Amendment of paragraph III.3. Equipment.	Amended, 05 July 2018

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