European Aviation Safety Agency

EASA

TYPE-CERTIFICATE DATA SHEET

Number : P.007
Issue : 1
Date : 19 July 2005
Type : MT-Propeller Entwicklung GmbH
MTV-11 series propellers

Variants
MTV-11-C
MTV-11-D
MTV-11-F

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I. General

1. Type/Variants

MTV-11 / MTV-11-C, MTV-11-D, MTV-11-F

2. Type Certificate Holder

MT-Propeller Entwicklung GmbH
Flugplatzstraße 1
94348 Atting
Germany

3. Manufacturer

MT-Propeller Entwicklung GmbH

4. Date of Application

MTV-11-C	MTV-11-F	MTV-11-D		
09 February 1990	09 February 1990	04 July 2003		

5. Reference Date for determination of the applicable requirements

09 February 1990

6. Certification Date

MTV-11-C	MTV-11-F	MTV-11-D		
30 March 1990	30 March 1990	19 July 2005		

II. Certification Basis

1. Airworthiness Standards

FAR 35 Amdt. 35-7 effectiv December 28, 1995

Note: Initial certification was based on airworthiness standard FAR 35 Amdt 35-5 effective September 11, 1980.
Update of certification to airworthiness standard FAR 35 Amdt. 35-7 was made based on application of MT-Propelller, dated July 4, 2003.

III. Technical Characteristics

1. Type Design Definition

The MTV-11 propeller model is defined by a main assembly drawing and an appropriate Parts list. The propeller variant is defined by the hub version installed, and which fits on a certain engine propeller flange.

Drawing No. P-184-( ) dated January 12, 1987 **(*1)**
Parts List No. S-020-( ) dated January 12, 1987 **(*1)**

Note: **(*1)**: or a later approved revision
At a revision, the Drawing No. or the Parts List No. will be completed with the current revision letter, e.g. from P-184 in P-184-A

2. Description

2-blade variable pitch propeller with a hydraulically operated blade pitch change mechanism providing the operation mode “Constant Speed”.
The hub is milled out of aluminum alloy, and the blade material is a laminated wood composite structure coated in fiberglas reinforced epoxy. The leading edge of the blades are equipped with an erosion protection device.
Optionally the propeller may have installed a spinner and ice protection equipment.

3. Equipment

Spinner: according to MT-Propeller Service Bulletin No. 13

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

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

4. Dimensions

Propeller-Diameter: 152 cm to 190 cm

Note: The propeller type certification is valid for any MTV-11 propeller model with a Diameter covered by the declared diameter range. Individual propeller Diameter is determined particularly by the demands of the aircraft on which the propeller will be installed.

5. Weights

approx. 16 kg

6. Hub/Blade-Combinations

Hub	Blade-Type
MTV-11-( )	-17, -24, -30, -32, -36, -39, -40, -53, -56, -57, -59, -100, -101, -105, -113, -114, -115, -117, -118, -119, -301

7. Control System

Hyraulically operating governors corresponding to the data of MT-Propeller Service Bulletin No. 14.

8. Adaptation to Engine

Hub flanges corresponding to the particular letter in the propeller designation (see chapter VI. 3.)

9. Sense of Rotation

Sense of rotation (viewed in flight direction) correponding to the particular letter in the propeller designation (see chapter VI. 3.)

IV. Operational Limits

1. Propeller Speed

max. 2700 min^{-1}

2. Driving Power

max. 120 kW for a propeller-diameter/-speed of max.190 cm / 2700 min^{-1}

3. Propeller Pitch Angle

from +5° up to +50°

V. Operating and Service Instructions

Operation and Installation Manual for hydraulically controlled variable pitch propeller	No. E-124, Issue July 1, 1987 **(*)**
Overhaul Manual and Parts List for hydraulically controlled variable pitch propeller since June 1, 1998 replaced by Overhaul Manual and Parts List for hydraulically controlled variable pitch propeller	No. E-128, Issue July 22, 1987 No. E-220, Issue June 1, 1989 **(*)**
Service Bulletins	as noted in the current List of Service Bulletins

(*) effective is the declared issue or a later approved revision

VI. Notes

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

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

3. Propeller designation system

	Hub							Blade					
MT	V	-	11	-	( )	( )	( )	/	( )	( )	190	-	32	( )
1	2		3		4	5	6		1	2	3		4	5

Hub

1 MT: MT-Propeller Entwicklung GmbH

2 V: Variable Pitch Propeller

3 No. of propeller model

4 code letter for flange type
- C: AS-127-D, SAE No. 2., 7/16” inch bolts
- D: ARP-502, Type 1
- F: AS-127-D, SAE No. 1, 3/8” inch bolts

5 code letter for counterweights
- blank: no or small counterweights for pitch change moments toward low pitch
- C: counterweights for pitch change moments toward high pitch

6 code letter for design changes
- small letter for changes which do not affect interchangeability
- capital letter for changes which restrict or exclude interchangeability

Blade

1 code letter for position of pitch change pin
- blank: pitch change pin position for pitch change moments toward low pitch
- C: pitch change pin position for pitch change moments toward high pitch

2 code letter for blade design and installation
- blank: right-hand tractor
- RD: right-hand pusher
- L: left-hand tractor
- LD: left-hand pusher

3 propeller diameter in cm

4 No. of blade type (contains design configuration and aerodynamic data) according to the certified hub/blade-combinations

5 code letter for design changes
- small letter for changes which do not affect interchangebility of blade set
- capital letter for changes which restrict or exclude interchangeability of blade set

4. Before issue of EASA-TC/TCDS the Type Certification of MTV-11 propeller series was covered by German Type Certificate No. 32.130/73