

I. General

1. Type / Variants

MTV-15 / 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-B: 19 May 1989
MTV-15-C: 19 May 1989
MTV-15-D: 23 April 2001

5. Reference Date for Determination of the Applicable Requirements

19 May 1989

6. Certification Date

MTV-15-B: 31 July 1989
MTV-15-C: 31 July 1989
MTV-15-D: 13 June 2002

II. Certification Basis

1. Airworthiness Standards

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

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)

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-(*1) "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)

MTV-15-(*1)-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)

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) Three versions of hub flanges are available:
- 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 aluminum alloy. The blade materials are:

- Wooden blades: Laminated wood structure with a composite fiber 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 210 cm
Aluminum 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-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 ServiceBulletin 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. Operational Limits

1. Maximum Take Off Power and Speed

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

2. Maximum Continuous Power and Speed

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

3. 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 April 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 reversible hydraulically controlled variable pitch propeller; Reverse-Systems (M)	No. E-519 Issue 10 Oct. 2000 (*)
Overhaul Manual for Metal Blades	No. E-809 Issue Nov. 29, 2001 (*)
Service Bulletins	as noted in the current List of Service Bulletins

(*) or later approved revision

VI. Notes

1. 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. 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:
 - 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 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 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
