



**TYPE CERTIFICATE DATA SHEET Nº EH-2011T01**

Type Certificate Holder:

**MT-Propeller Entwicklung GmbH**  
 Airport Straubing-Wallmühle  
 D-94348 Atting  
**GERMANY**

EH-2011T01-01  
 Sheet 01  
 MT-PROPELLER  
 MTV-16-1  
 May 2011

Propellers of models described herein conforming with this data sheet, which is part of Type Certificate No. 2011T01, meet the minimum standards for use in certificated aircraft in accordance with pertinent aircraft data sheets and applicable portions of the Brazilian Aeronautical Regulations provided they are installed, operated, and maintained as prescribed by the approved manufacturer's manuals and other instructions.

<b>TYPE</b>	Hydraulic Constant speed propeller with feathering and reversing feature(see Notes 2 and 3)
<b>ENGINE SHAFT</b>	See Note 1
<b>HUB MATERIAL</b>	Aluminum Alloy
<b>BLADE MATERIAL</b>	Wood Blade: Laminated wood composite structure, epoxy-fiber glass cover, with leading edge and erosion protection. Metal Blade: Aluminium alloy.
<b>NUMBER OF BLADES</b>	4 (four).
<b>HUBS</b>	See Note 1.

Hub Eligible (See Note 1)	Blades (Aluminium) See Notes 2 & 6	Max. Continuous Power hp (rpm)	Takeoff power hp (rpm)	Diameter Limits m (in)	Blade Twist*		Approx. Max. Weight **, ***. kg (lb)
					Min.	Max.	
MTV-16-1	-402, -406, -407,	724 (2 080)	724 (2 080)	2.45 to 1.90 (96.5 to 74.8)	5	50	52 (115)
	-408, -409, -410, -411, -413	850 (2 200)	850 (2 200)	2.35 to 1.90 (92.5 to 74.8)	5	50	52 (115)

\* - The limits of the blade twist are defined between .20 and 1.00 blade radius.  
 \*\* - Propellers with the option "Feather" are 2 kg (4.4 lb) heavier.  
 \*\*\* - Propellers with the option "Feather and Reverse" are 3 kg (6.6 lb) heavier.

Hub Eligible (See Note 1)	Blades (Wood) See Notes 2 & 6	Max. Continuous Power hp (rpm)	Takeoff power hp (rpm)	Diameter Limits m (in)	Blade Twist*		Approx. Max. Weight **, ***. kg (lb)
					Min.	Max.	
MTV-16-1	-02, -11, -14, -15, -18, -20, -21, -22, -25, -26, -27, -29, -33, -34, -35, -37, -42, -43, -45, -46, -50, -55, -58, -61, -62, -63, -65, -66, -67, -102, -103, -104, -109, -121	600 (2 700)	600 (2 700)	2.25 to 1.90 (88.6 to 74.8)	5	50	32 (71)
	724 (2 080)	724 (2 080)	2.60 to 1.90 (102.4 to 74.8)	5	50	32 (71)	
	850 (2 200)	850 (2 200)	2.50 to 1.90 (98.5 to 74.8)	5	50	32 (71)	
	1200 (1 700)	1200 (1 700)	2.80 to 1.90 (110.2 to 74.8)	5	50	32 (71)	
	1279 (1 700)	1279 (1 700)	2.70 to 1.90 (106.3 to 74.8)	5	50	32 (71)	

\* - The limits of the blade twist are defined between .20 and 1.00 blade radius.

\*\* - Propellers with the option "Feather" are 13 kg (28.7 lb) heavier.

\*\*\* - Propellers with the option "Feather and Reverse" are 17 kg (37.5 lb) heavier.

**CERTIFICATION BASIS** Brazilian Type Certificate No. 2011T00 based on the RBHA 35 (Brazilian Requirements for Aeronautical Certification), which endorses the FAR 35 effective 01 February 1965, Amendments 35-1 to 35-7, inclusive.

**TYPE CERTIFICATION**

<u>Model</u>	<u>Application</u>	<u>Issued TC</u>
MTV-16-1	15 November 2010	11 January 2011

**PRODUCTION BASIS** Not Applicable

**IMPORT REQUIREMENTS** Each propeller imported separately and/or spare parts must be accompanied by an Airworthiness Certificate for Export and/or an Airworthiness Approval Tag, respectively, issued by EASA, attesting that the particular propeller and/or parts were submitted to the governmental quality control before delivery and are in conformity with the ANAC approved type design.

**NOTES:**

**NOTE 1** Hub model Designation MT V - 16 - 1 -(i) -(ii) -(iii) -(iv) -(v) -(vi), where:

MT MT-Propeller Entwicklung GmbH  
V Variable pitch propeller.  
-16 Number of basic model.  
-1 Variant of the propeller type.  
-(i) Engine shaft (flange Type)\*.  
-(ii) Letter designating counterweights:  
Blank: None or small counterweights for pitch change forces to decrease pitch.  
C: Counterweights for pitch change forces to increase pitch.  
-(iii) Information about feathering.  
Blank: no feathering possible.  
F: Feathering position allowed.

- (iv) Information about reverse.  
Blank: no reverse possible.  
R: reverse position allowed.
- (v) Information about reverse.  
A = System Allison  
G = System Garrett  
M = System Mühlbauer  
P = System P&W Canada  
W = System Walter
- (vi) Small letter: modifications which do not affecting interchangeability.  
Capital letter: modifications which affect interchangeability.

\* Engine shaft (Flange type)

B = AS-127-D, SAE No. 2 mod., 1/2 inch – 20 UNF bolts.

D = ARP 502, Type 1.

E = ARP 880.

N = BCD 5.125 inches, twelve 9/16 inch – 18 UNF bolts, 2 index pins.

H = BCD 5.125 inches, twelve 9/16 inch – 18 UNF bolts, 2 index pins.

- NOTE 2** Blade Model Designation (i) (ii) 280 -65 (iii), where:
- (i) Position of pitch change pin.  
Blank: Position for pitch change forces to decrease pitch.  
C: Position for pitch change forces to increase pitch.  
CR: Position for reverse (pitch change forces to increase pitch)  
CF: Position for feather (pitch change forces to increase pitch)  
CFR: Position for feather and reverse (pitch change forces to increase pitch)
  - (ii) Sense of rotation (viewed in flight direction)  
Blank: Right hand tractor  
RD: Right hand pusher  
L: Left hand tractor  
LD: Left hand pusher
  - 280 Propeller diameter in cm
  - 65 Number of blade design, contains construction and aerodynamic data.
  - (iii) Small letter: modifications which do not affect interchangeability of blade sets.  
Capital letter: modifications which affect interchangeability of blade sets.
- NOTE 3** Pitch control: Pitch control is accomplished by MT-Propeller Hydraulic Propeller Governor Installations described on MT Service Boletim No. 14 ( ). Time Between Overhauls (TBO) for governor is published in MT-Propeller Service Bulletin No. 1 ( ).
- NOTE 4** a) Feathering: Propeller Model incorporates feathering and unfeathering features by means of counterweights and springs with governor operation.  
b) Reversing: Propeller Model incorporate reversing feature with additional functions.
- NOTE 5** Right & Left Hand Models: A version of the approved model with opposite hand rotation is approved at the same rating and diameter limitations. See Note 2.
- NOTE 6** Interchangeability: See NOTE 1 and NOTE 2.
- NOTE 7** Accessories:  
a) Propeller Spinners: Refer to published list in MT-Propeller Service Bulletin No. 13.  
b) Propeller Governors: Refer to published list in MT-Propeller Service Bulletin No. 14.  
c) Deicing Systems: Refer to published list in MT-Propeller Service Bulletin No. 15.
- NOTE 8** Shank Fairings: Not applicable.

**NOTE 9**      Special Limits: Not applicable

**NOTE 10**     Special Notes:

- a) Aircraft installations must be approved as part of the aircraft type certificate and demonstrate compliance with the applicable aircraft airworthiness requirements.
- b) All MTV-16-1 propellers are to be operated within the limits of MT-Propeller Operation and Installation Manual No. E-124 for non reversible propeller and, E-504 for reversible propeller -R(M) and No. E-610 for reversible propeller -R(P), -R(G), -R(W), and No. E-1083 for reversible propeller on P&WC PT16A-67A, and adhere to the TBO-limits shown in the MT-Propeller Service Bulletin No.1( ).
- c) Propeller Maintenance, on overhaul, and airworthiness limitations shall be accomplished in accordance with MT-Propeller Overhaul Manual E-220 for non-reversible propeller and E-519 for reversible propeller -R(M), and No. E-680 for reversible propeller -R(P), -R(G), -R(W), latest revision.

**NOTE 11**     Service Information:

Each of the documents listed below must state that it is approved by the European Aviation Safety Agency (EASA) or - for approvals made before 28 September 2003 - by LBA. Any such documents are accepted by the ANAC and are considered ANAC approved.

- Service bulletins,
- Structural repair manuals,
- Vendor manuals,
- Aircraft flight manuals, and
- Overhaul and maintenance manuals.



HÉLIO TARQUINIO JÚNIOR

**Gerente-Geral de Certificação de Produto  
Aeronáutico  
(General Manager, Aeronautical Product  
Certification)**

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