

**COMANDO DA AERONÁUTICA  
DEPARTAMENTO DE PESQUISAS E DESENVOLVIMENTO  
CENTRO TÉCNICO AEROESPACIAL**

**TYPE CERTIFICATE DATA SHEET Nº EH-2000T04**

Type Certificate Holder:

**MT-PROPELLER ENTWICKLUNG GmbH**  
Airport Straubing-Wallmühle  
D-94348 Atting  
**GERMANY**

EH-2000T04-01

Sheet 01

MT-PROPELLER

MTV-9-( )

September 2004

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Propellers of models described herein conforming with this data sheet, which is part of Type Certificate No. 2000T04, 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 with optional feathering and reversing feature (See Note 3 & 4)
<b>ENGINE SHAFT</b>	See Note 1
<b>HUB MATERIAL</b>	Aluminum Alloy
<b>BLADE MATERIAL</b>	Laminated wood composite structure, epoxy-fiber glass cover, with leading edge and erosion protection.
<b>NUMBER OF BLADES</b>	Three

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**HUB ELIGIBLE** MTV-9-B, -D, -E, -K

Blade Eligible (See Note 2)	Max. Continuous Power	Takeoff Power	Nominal Diameter		Approx. Max. Weight (1) kg (lb)
	hp (rpm)	hp (rpm)	Min. m (in)	Max m (in)	

Hub Model MTV-9-B, MTV-9-D, MTV-9-E, MTV-9-K

(-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, (-102, (-103, (-104, (-109, (-121	420 (2 700)	420 (2 700)	1.75 (69)	2.13 (84)	24 (52.9)
	450 (2 030)	450 (2 030)	1.75 (69)	2.50 (99)	24 (52.9)
	420 (1 975)	420 (2 700)	1.75 (69)	2.60 (103)	24 (52.9)

In the blade area of 0.20 to 1.00 blade radius the blade twist is from min. 5° to max. 10° .

(1) Propeller equipped with reverse are 3 kg heavier, propeller equipped with feathering are 5 kg heavier, and propeller equipped with feathering and reverse are 8 kg heavier.

**CERTIFICATION BASIS** Brazilian Type Certificate N° 2000T04 based on the RBHA 35 (Brazilian Requirements for Aeronautical Certification), which endorses the US FAR 35, effective 01 February 1965, Amendments 35-1 to 35-7, inclusive.

<b>TYPE CERTIFICATION</b>	<u>Model</u>	<u>Application</u>	<u>Issued TC</u>
	MTV-9-()	30 June 1999	17 April 2000

**IMPORT REQUIREMENTS** Each propeller imported separately and/or spare parts must be accompanied by an export airworthiness approval issued by the primary authority, attesting that the particular propeller and/or parts were submitted to the governmental quality control before delivery and are in conformity with the CTA approved type design.

**NOTES**

**NOTE 1** Hub model Designation - MT V - 9 ( ) - D ( ) ( ) ( ) ( ) - ( ) , where:

- MT MT- Propeller Entwicklung GmbH  
 V Variable Pitch Prop  
 9 Number of the Basic Model  
 ( ) Number of design series  
 D Flange Type :  
 B - AS - 127 - D, SAE No. 2 mod., 1/2"  
 D - ARP 502, Typ  
 E - ARP 880  
 K - 135 mm bolt circle diameter with 6 bolts, size 9/16" Applicable for M-14 engines.
- ( ) Letter designating counterweights:  
 Blank : none or small counterweights mounted for pitch change moments towards low pitch  
 C : counterweights mounted for pitch change moments towards high pitch
- ( ) Information about feathering  
 Blank: no feathering possible  
 F: feathering system (hydraulic) installed
- ( ) Information about reverse  
 Blank: no reverse possible  
 R: reverse installed
- ( ) Information about reverse system  
 M: system Mühlbauer
- ( ) **Small letter: Modifications which do not affect interchangeability.**  
**Capital letter: Modification which restrict or exclude interchangeability**

**NOTE 2** Blade Model Designation - ( ) ( ) 200 - 15 ( ) , where:

- ( ) Position of actuation pin  
 Blank: pitch change pin for pitching moments towards low pitch  
 C: pitch change pin for pitching moments towards high pitch  
 CF: pitch change pin for feathering ( pitching moments towards high pitch)  
 CR: pitch change pin for reverse ( pitching moments towards high pitch)  
 CFR: pitch change pin for feathering and reverse ( pitching moments towards high pitch)
- ( ) Sense of rotation (viewed in flight direction)  
 Blank: right hand tractor  
 RD: right hand pusher  
 L: left hand tractor  
 LD: left hand pusher
- 200 Propeller diameter in cm  
 15 Consecutive number of blade design, contains construction and aerodynamic data.
- ( ) **Small letter: Modification which do not affect interchangeability of blade sets.**  
**Capital letter: Modifications which restrict or exclude interchangeability of blade sets.**

**NOTE 3** Pitch Control

Pitch control is accomplished by a standard governor or by the MT-Propeller Hydraulic Propeller Governor Installation, P-480-( ) or P-9( )( )-( ) for the reversing option –R(M). Applicable standard governors are published MT –Propeller Service Bulletin N° 14. The P-480-( ) or P-9( )( )-( ) is a single acting pump governor, buit dual pressure system design enables the hydraulically variable pitch MT-Propeller to operate with reverse capability. P-480-( ) or P-9( )( )-( ) governors also incorporates feathering capability. Time Between Overhauls (TBO)for P-480-( ) or P-9( )( )-( ) governor is published in the MT-Propeller Service Bulletin N° 1( ).

**NOTE 4** Feathering. Model incorporates feathering features by means of counterweights and springs with governor operation.  
Reversing. Model also incorporates reversing features by P-480-( ) or P-9( )( )-( ) governors.

**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.

**NOTE 6** Interchangeability.

Not applicable

**NOTE 7** Accessories.

- (a) Prop. Spinners: according to list published in MT-Propeller Service Bulletin n. 13
- (b) Prop. Governors: according to list published in MT-Propeller Service Bulletin n. 14
- (c) Deicing Systems: according to list published in MT-Propeller Service Bulletin n. 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-9 propellers are to be operated within the limits of MT-Propeller Operation and Installation Manual N°. E-124 **for non reversible propellers** and N° E-504 **for reversible propellers**, and adhere to the TBO-limits shown in Service Bulletin n. 1 Propeller Maintenance, on overhaul and airworthiness limitations shall be accomplished in accordance with MT-Propeller Overhaul Manual N° E-220 **for non reversible propellers** and N° E-519 **For reversible propellers, latest revision.**