U.S. DEPARTMENT OF TRANSPORTATION FEDERAL AVIATION ADMINISTRATION TYPE CERTIFICATE DATA SHEET P16BO	TCDS NUMBER: P16BO REVISION: 3 MT-PROPELLER COMPANY MODEL: MTV-21-( ) February 21, 2019

Propellers of models described herein confirming with this data sheet (which is part of this Type Certificate No. P16BO) and other approved data on file with the Federal Aviation Administration, meet the minimum standards for use in certified aircraft in accordance with pertinent aircraft data sheets and applicable portions of the Federal Aviation Regulations provided they are installed, operated and maintained as prescribed by approved manufacturer's manual and other approved instructions.

TYPE CERTIFICATE HOLDER	MT-Propeller Entwicklung GmbH Flugplatzstrasse 1 D-94348 Atting Germany
TYPE	Hydraulic constant speed with feathering and reversing feature (See Notes 3 & 4)
ENGINE SHAFT	See Note 1 of this TCDS
HUB MATERIAL	Aluminum alloy
BLADE MATERIAL	Laminated wood composite structure, epoxy-fiber glass cover, with leading edge and erosion protection
HUBS	See Note 1 of this TCDS
NUMBER OF BLADES	2 (two)
DESIGN SERIES	MTV-21-A MTV-21-D MTV-21-F

HUB TYPE MTV-21 See Note 1	BLADES See Notes 2 & 6	MAXIMUM CONTINUOUS		<TAKEOFF>		NOMINAL DIAMETER Max		NOMINAL DIAMETER Min		BLADE TWIST *)	APPROX-IMATE WEIGHT **), ***), ****)	
		HP(kW)	RPM	HP (kW)	RPM	inch	(cm)	inch	(cm)	Min Max	lbs.	(kg)
( )-03, ( )-04, ( )-05, ( )-06, ( )-07, ( )-08, ( )-09, ( )-12, ( )-16, ( )-23, ( )-28, ( )-31, ( )-49, ( )-51, ( )-64, ( )-69, ( )-80, ( )-81, ( )-90, ( )-106, ( )-112, ( )-122, ( )-123, ( )-125, ( )-129, ( )-140, ( )-312		91 (68)	3000	79 (59)	3400	63	160	57	145	5 50	22	(10)
		91 (68)	3000	86 (64)	3200	63	160	57	145	5 50	22	(10)
		99 (73.6)	2750	99 (73.6)	2750	69	175	57	145	5 50	22	(10)
		99 (73.6)	2265	114 (85)	2388	71	180	57	145	5 50	22	(10)
		139 (104)	2279	139 (104)	2279	80	203	57	145	5 50	22	(10)

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

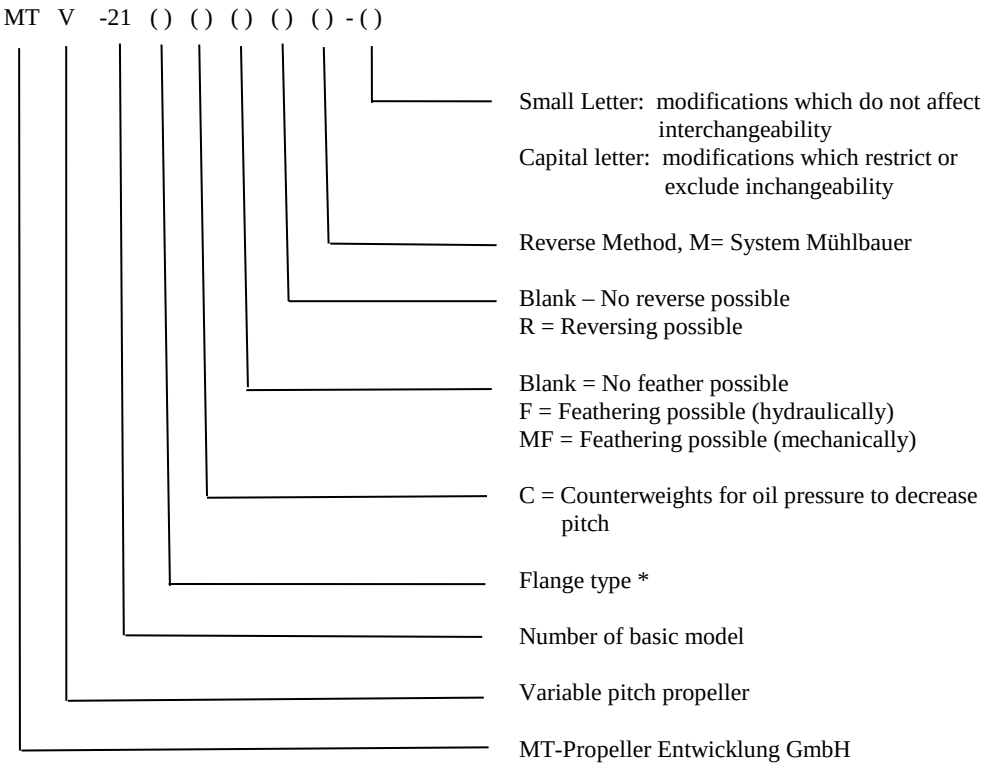
**) Propellers with the option "Feather" are approx. 4.5 lbs. 2(kg) heavier

***) Propellers with the option "Reverse" are approx. 4.5 lbs. 2(kg) heavier

****) Propellers with the option "Feather", "Reverse" are approx. 7.8 lbs. (3.5kg) heavier

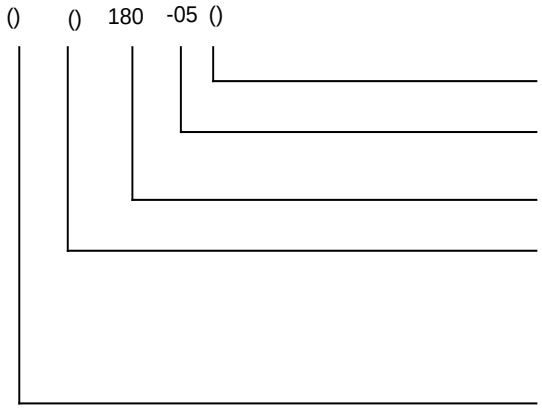
CERTIFICATION BASIS	The U.S. certification basis determined under Section 21.29 to the FAR and Bilateral Airworthiness Agreement between the United States and the Federal Republic of Germany is FAR 35, effective February 1, 1965, Amendments 35-1 to 35-7, inclusive. Luftfahrt-Bundesamt (LBA) originally type certificated this propeller under its type certificate Number 32.130/86. The FAA validated this product under U.S. Type Certificate Number P16BO. Effective September 28, 2003, the European Aviation Safety Agency (EASA) began oversight of this product on behalf of the Federal Republic of Germany.
TC (IMPORT) NO.	LBA-Data Sheet No. 32.130/86
TC APPLICATION DATE	June 3, 1995, June 28, 2004
TC ISSUED	September 9, 1998, Amended October 20, 2004
IMPORT REQUIREMENTS	To be considered eligible for installation on U.S. registered aircraft, each propeller to be exported to the United States shall be accompanied by a Certificate of Airworthiness for export endorsed by the LBA on behalf of the European Community which contains the following language: (1) This propeller conforms to its United States type design (Type Certificate Number P16BO) and is in a condition for safe operation. (2) This propeller has been subjected by the manufacturer to a final operational check and is in a proper state of airworthiness. Reference FAR Section 21.500 which provides for the airworthiness acceptance of aircraft engines or propellers manufactured outside the U.S. for which a U.S. type certificate has been issued. Additional guidance is contained in FAA Advisory Circular 21-23, Airworthiness Certification of Civil Aircraft, Engines, Propellers, and Related Products, imported into the United States.

NOTE 1: HUB MODEL DESIGNATION



*Flange
A = Motorglider engines bolt 7/16” – 20 UNF
D = ARP 502, Type 1
F = SAE No. 1, bolts 3/8”-24 UNF

NOTE 2: BLADE MODEL DESIGNATION



Small letter: modifications which do not affect interchangeability of blade sets
Capital letter: modifications which restrict or exclude interchangeability of blade sets

Number of blade design, contains construction and aerodynamics data

Propeller diameter in cm

Sense of rotation (viewed in flight direction)
Blank: right-hand tractor
RD: right-hand pusher
L: left-hand tractor
LD: left-hand pusher

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 in direction to Increase pitch)
CFR: Position for feather and reverse (pitch change forces in direction to increase pitch

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 in the FAA-approved list MT-Propeller Service Bulletin No. 14( ). The P-480-( ) or P-9( )( )-( ) is a single acting pump governor, but dual pressure system design enables the hydraulically variable pitch MT-propellers to operate with reverse capability. P-480-( ) or P-9( )( )-( ) governors also incorporate feathering capability. Time Between Overhauls (TBO) for P-480-( ) or P-9( )( )-( ) governor is published in the MT-Propeller Service Bulletin No. 1( ).
NOTE 4:	(a) Feathering	Optional with MTV-21-( )-( )-MF models (mechanically) or optional with MTV-21-( )-( )-( )-F models (hydraulically).
	(b) Reversing	Model also incorporates reversing feature 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) Propeller Spinners: According to FAA-approved list published in MT-Propeller Service Bulletin No. 13 (b) Propeller Governors: According to FAA-approved list published in MT-Propeller Service Bulletin No. 14 (c) Deicing Systems: According to FAA-approved list published 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-21 propellers are to be operated within the limits of MT-Propeller Operation and installation Manual No. E-124 for non reversible propellers and No. E-504 for reversible propellers, and adhere to the TBO-limits shown in Service Bulleting No. 1( ). (c) Propeller maintenance or overhaul, and airworthiness limitations shall be accomplished in accordance with MT-Propeller Overhaul Manual No. E-220 for non reversible propellers and No. E-519 for reversible propellers, 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 September 28, 2003 – by the LBA. Any such documents are accepted by the FAA and are considered FAA approved. • Service bulletins, • Structural repair manuals, • Vendor manuals, • Aircraft flight manuals, and • Overhaul and maintenance manuals.

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