

DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION

TG00004AT
Revision 1
Aeromot
AMT-100
AMT-200
March 1, 1996

TYPE CERTIFICATE DATA SHEET NO. TG00004AT

This data sheet which is a part of type certificate No. TG00004AT prescribes conditions and limitations under which the product for which the type certificate was issued meets the airworthiness requirements of the Federal Aviation Regulations.

Type Certificate Holder: Aeromot-Industria Mecanico Metalurgica Ltda.
Av das Industrias, 1210
Bairro Anchieta
Caixa Postal 8031
90200-Porto Alegre-RS
Brazil

1. Model AMT-100 (Ximango) (Utility Category), approved December 29, 1993.

Engine. Limbach Motorenbau Model L2000 E 01

Fuel. Aviation gasoline 100/130 LL

Lubricating Oil. Automotive engine oil. Approved oil brands listed in AFM.

Engine Limits. Takeoff: 3400 rpm (76.4 hp/57kw), limited to 5 minutes.
Max. continuous power: 3000 rpm (69hp/51kw)

Propeller and Propeller Limits. Hoffmann HO-V62R/L 160 BT
Diameter 63.0 in \pm 2.0 in
(1600 \pm 50mm)
Blade angle settings -
3 positions: takeoff, cruise, and feather.

C.G. Range. +51.5 in to +52.7 in (1308 to 1340mm) at 1764 lbs (800 kg)
+51.5 in to +54.0 in (1308 to 1372 mm) at 1499 lbs (680 kg) or less
Straight line variation between points given.
See Note 5.

Empty Weight C.G. Range None.

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<u>Maximum Weight.</u>	1764 lbs (800 kg)
<u>Fuel Capacity.</u>	2 wing tanks, 11.62 U.S. gal. (45 liters) each at +48.8 in (1240mm) of the reference plane.
<u>Oil Capacity.</u>	0.66 U.S. gal (2.5 liters)
<u>Serial Nos. Eligible.</u>	100.001 and up. See Note 7.

2. Model AMT-200 (SuperXimango)(Utility Category), approved December 29, 1993.

<u>Engine.</u>	Bombardier-ROTAX GMBH Model 912 A2
<u>Fuel.</u>	Aviation gasoline 100/130/ LL
<u>Lubricating Oil.</u>	Automotive engine oil. Approved oil brands listed in AFM.
<u>Engine Limits.</u>	Takeoff: 5800 rpm (81hp/59.6kw), limited to 5 minutes. Max. continuous power: 5500 rpm(79hp/58kw)
<u>Propeller and Propeller Limits.</u>	Hoffmann HO-V62R-170 FA Hoffman HO-V62R-1/170FA (installed on Rotax 912 A2 engines s/n 4.380.600 and on) Diameter 67 in + 0, -3.94 in (1700mm + 0, -100mm) Blade angle settings-3 positions: takeoff, cruise, and feather.
<u>C.G. Range.</u>	+50.8 in to +52.2 in (1290 to 1326mm) at 1874 lbs. (850 kg) +50.8 in to +54.0 in (1290 to 1372mm) at 1499 lbs. (680 kg) or less Straight line variation between points given. See Note 5.
<u>Empty Weight C.G. Range.</u>	None.
<u>Maximum Weight.</u>	1874 lbs (850 kg)
<u>Fuel Capacity.</u>	2 wing tanks, 11.62 U.S. gal (45 liters) each at +48.8 in (1240mm) of the reference plane.
<u>Oil Capacity.</u>	0.79 U.S. gal (3 liters)
<u>Serial Nos. Eligible</u>	200.040 and up. See Note 7.

DATA PERTINENT TO ALL MODELS**Control Surface Movements.**

<u>Aileron:</u>	<u>Degrees</u>	<u>In (mm)(*)</u>
Up:	15 ± 1	2.91 ± 0.16 in (74 ± 4mm)
Down:	15 ± 1	2.91 ± 0.16 in (74 ± 4mm)
Neutral Pos.(**)	3 ± 1/3	0.59 ± 0.08 in (15 ± 2mm)

(*) Measured at 10.83 in (275mm) from the aileron hingeline to the aileron trailing edge at the first aileron rib.

(**) Measured down from the aligned position on the wing.

<u>Elevator:</u>	<u>Degrees</u>	<u>In (mm)</u>
Up:	21 ± 2	2.72 ± 0.24 in (69 ± 6mm)
Down:	23 ± 2	2.99 ± 0.24 in (76 ± 6mm)
Neutral Pos: Control surface aligned with the stabilizer profile.		
Measurement is made at 7.09 in (180mm) from the hinge line.		

<u>Rudder:</u>	<u>Degrees</u>	<u>In (mm)</u>
Left	28 ± 2	7.32 ± 0.47 in (186 ± 12mm)
Right	28 ± 2	7.32 ± 0.47 in (186 ± 12mm)
Neutral Position: Control surface aligned with the vertical fin profile.		
Measurement is made at 13.78 in (350mm) from the hinge line.		

<u>Elevator Trim Tab:</u>	<u>Degrees</u>	<u>In (mm)</u>
Down	43 ± 4	2.80 ± 0.20 in (71 ± 5mm)
Up	36 ± 4	2.17 ± 0.20 in (55 ± 5mm)
Neutral Position: Control surface aligned with elevator profile.		
Measurement is made at 2.99 in (76mm) from the hinge line.		

<u>Airspeed Limits (CAS).</u>	<u>kts</u>	<u>mph</u>	<u>km/h</u>
V _{NE} (Never exceed)	132	152	245
V _B (Rough air)	97	112	180
V _A (Maneuvering)	97	112	180
V _{LE} (Landing gear extended)	81	93	150
V _{LO} (Landing gear operating)	81	93	150
V _{SB} (Speed brakes extended)	132	152	245

Datum. Front surface of engine firewall.

Leveling Means. Wedge of 19.7 x 1.00 in (500 x 25.5mm) placed on canopy trail (see AFM).

Minimum Crew. One pilot.

No. of Seats. Two side-by-side at 41.3 in (1050mm) from datum for AMT-100 S/Ns 100.001 to 100.021 and all AMT-200, and 38.8 in (985mm) from datum for AMT-100 S/N 100.022 and on.

Maximum Baggage. 11.0 lbs (5kg) at +71.6 in (1.82m) for solo flight.
22.0 lbs (10kg) at 71.6 in (1.82m) for two occupants.

Certification Basis.

Code of Federal Regulations (CFR), 14 CFR 21, Effective February 1, 1965, Amendments 21-1 through 21-68, Sections 21.17, 21.29 and 21.50;

Joint Airworthiness Requirements for Sailplanes and Powered Sailplanes, JAR-22 Amendment 2, effective September 13, 1982;

plus the following paragraphs of JAR-22, Change 4:

22.1, Applicability, Amdt. 22/85/1, eff. Dec. 12, 1985,
22.175, Demo. of static long. stab. Amdt. 22/85/1, eff. Dec. 12, 1985,
22.395, Control system loads, Amdt. 22/85/1, eff. Dec. 12, 1985,
22.397, Loads-limit pilot forces, Amdt. 22/85/1, eff. Dec. 12, 1985,
22.411, Control sys. stiffness and stretch, Amdt. 22/84/1, eff. Dec. 14, 1984,
22.441, Maneuvering load, Amdt. 22/86/1, eff. Oct. 22, 1986,
22.443, Gust loads, Amdt. 22/86/1, eff. Oct. 22, 1986,
22.477, Landing gear arrangement, Amdt. 22/86/1, eff. Oct. 22, 1986,
22.483, One-wheel landing, Amdt. 22/86/1, eff. Oct. 22, 1986,
22.591, Rigging/de-rigging loads, Amdt. 22/86/1, eff. Oct. 22, 1986,
22.785, Seats and Safety harnesses, Amdt. 22/86/1, eff. Oct. 22, 1986,
22.786, Protection from injury, Amdt. 22/86/1, eff. Oct. 22, 1986
22.857, Elect. bonding, Amdt. 22/86/1, eff. Oct. 22, 1986,
22.1581, Flt. manual-general, Amdt. 22/86/1, eff. Oct. 22, 1986;

plus the following paragraphs to be incorporated in Change 5:

22.221, Spinning-general, Amdt. 22/90/1, eff. June 30, 1990,
22.779, Motion and effect of cockpit controls, Amdt. 22/90/1, eff. June 30, 1990;

plus the following requirements from FAA Advisory Circular 21.17-2, dated July 13, 1989:

22.177(b) including AC 21.17-2 par. 6.c.(6)(i)(A), (B),(C), and (D),
22.777 including AC 21.17-2 par. 6.c.(7)(i)(A),(B), (C), and (D),
22.903(b) including AC 21.17-2 par. 6.c.(7)(iii),
22.1093 including AC 21.17-2 par. 6.c.(7)(iv),
FAR 23.1153 including AC 21-17-2 par. 6.c.(7)(vi),
22.1555 including AC 21.17-2 par. 6.c.(7)(vii);

plus the special condition established in letter No. 54085 SFAT/TC, dated October 15, 1984 (established by the DGAC, airworthiness authority in France, to provide additional requirements for composites - high temperatures and an increased safety margin to account for aging of the structure).

Exemption from FAR 45.11(a) and (d) as specified in Exemption No. 4988 (external marking of gliders).

Date of Application for Type Certificate September 4, 1990. Type Certificate No. TG00004AT issued December 29, 1993.

Import Requirements.

A U.S. Standard Airworthiness Certificate may be issued on the basis of a Certificate of Airworthiness for Export signed by a representative of the Centro Tecnico Aeroespacial (CTA), containing the following statement: "The powered glider covered by this certificate has been examined, tested and found to conform to the type design approved under FAA Type Certificate No. TG00004AT and is in condition for safe operation."

Modifications pre-dating the issuance of this type certificate and not included in paragraph 1 of this note and modifications dated after the issuance of this type certificate not covered by note contained in the Service Information paragraph of this type certificate must be assumed not to be approved under this type certificate.

The following AEROMOT Service Bulletins must be incorporated in Models AMT-100 or AMT-200 prior to issuance of a U.S. Airworthiness Certificate:

<u>Service Bulletin</u>	<u>Date</u>	<u>Subject</u>	<u>S/N's Affected</u>
100-11-001 Rev.2	Sep 10,'93	Placards	100.001-100.007
100-24-003 Rev.1	Sep 10,'93	Landing Gear Warning	100.001-100.009
100-24-005 Rev.1	Sep 10,'93	Alternator Control	100.001-100.013
100-24-011 Rev.2	Oct 8, '93	Fusebox Cover	100.001-100.012
100-24-012 Rev.2	Sep 10, '93	Starter Button	100.001-100.015
100-25-025 Rev.1	Sep 10,'93	Baggage Retaining Net	100.001-100.039, 100.041-100.044, 100.046, 200.040
100-27-024 Rev.1	Sep 10,'93	Elev Trim Tab Cable Connection	100.001-100.039, 100.041-100.044, 100.046, 200.040
100-28-002 Rev.1	Sep 10,'93	Fuel Filter	100.001-100.008
100-28-027 No Rev.	Dec 17, '93	Placard-Fuel Gage	100.001-100.039, 100.041-100.044, 100.046, 200.040
100-32-004 Rev.3	Sep 10,'93	Landing Gear Bolts	100.003, 100.006
100-32-015 Rev.1	Sep 10,'93	Landing Gear Locking Pin	100.001-100.029
100-32-016 Rev.2	Sep 10,'93	Landing Gear Strut Spring	100.001-100.032
100-32-017 Rev.3	Oct 8,'93	Landing Gear Additional Locking Device	100.001-100.034

(cont'd) <u>Service Bulletin</u>	<u>Date</u>	<u>Subject</u>	<u>S/N's Affected</u>
100-52-006 Rev.1.	Sep 10,'93	Placard-Canopy Locking Canopy Locking	100.001-100.013
100-52-018 Rev.3	Sep 10,'93	Canopy Latches	100.001-100.034
100-52-026 Rev.1	Oct 8, '93	Canopy Latches	100.035-100.039, 100.041-100.044, 100.046, 200.040, 200.045
100-55-001 Rev.2	Sep 10,'93	Elevator Interference	100.002, 100.005-100.007
100-57-23 Rev.2	Sep 10,'93	Wing Drain Holes	100.001-100.039, 100.041-100.044, 100.046, 200.040, 200.045
100-57-028 No Rev.	Dec 17,'93	Wing Red Mark and Guide Trim	100.001-100.039, 100.041-100.044, 100.046, 200.040
100-76-001 Rev.1	Sep 10,'93	Throttle Jam	100.001-100.015

Equipment.

The basic required equipment as prescribed in the applicable airworthiness regulations (see Certification Basis) must be installed in the powered glider for certification. In addition, the following items of equipment are required:

1. Basic equipment and instruments
 - a) airspeed indicator
 - b) altimeter
 - c) magnetic compass
 - d) variometer
 - e) slip-skid indicator
 - f) tachometer
 - g) fuel quantity indicator
 - h) oil temperature indicator
 - I) oil pressure indicator
 - j) hourmeter
 - k) cyl. head temp. (AMT 200)
2. Operations Manual (containing Flight Manual, Repair and Maintenance Manual) approved by CTA.

Service Information.

Service bulletins, structural repair manuals, vendor manuals, aircraft flight manuals, and overhaul and maintenance manuals, which contain a statement that the document is CTA approved are accepted by the FAA and are considered FAA approved. These approvals pertain to the type design only.

Available documents for AMT-100:

Flight Manual No. 100-04, Issued December 29, 1993, and subsequent revisions, CTA approved.

Maintenance Manual 100-10, Sept. 1993.

Parts Catalog 100-02, Sept. 1993.

Engine Manual Limbach L2000 and Series

Hoffmann Owner's Manual No. E0107.72

Available documents for AMT-200:

Flight Manual No. 200-07, Issued December 29, 1993, and subsequent revisions, CTA approved.

Maintenance Manual 200-13, Sept. 93.

Parts Catalog 100-02, Sept. 93

ROTAX Operator's Manual, approved by Austria Federal Office of Civil Aviation.

Hoffmann Owner's Manual No. E0107.72

NOTES:

- Note 1. Current weight and balance report including the list of equipment included in the certified empty weight, and loading instructions, when necessary, must be provided for each motorglider at the time of original certification. The certificated empty weight and corresponding center of gravity locations must include the following: total motorglider unusable fuel of 0.52 U.S.gal at +48.8 in.
- Note 2. The placards listed in the Flight Manual must be displayed. A complete listing of all placards is shown the applicable Maintenance Manuals.
- Note 3. The inspections, maintenance, repair and painting must be accomplished according to the Maintenance Manual. Major structural repairs can only be accomplished by the manufacturer.
- Note 4. All external surfaces of the motorglider exposed to the sunlight must be painted white, except for areas provided for registration marking and anticollision paint.
- Note 5. A variable ballast weight attached to the engine firewall of each aircraft is required to keep the cg range of the loaded aircraft within limits. (AMT only)
- Note 6. The motorglider life limit may be extended from 3000 to 6000 hours, in steps of 1000 hours, if the Extension Life Limit Program specified in the Service Bulletin No. 100-10-021, Rev. 1, Sep. 10, 1993, or later CTA approved revision, has been complied with. A copy of the inspection results must be sent to the FAA, Atlanta Aircraft Certification Office.
- Note 7. The Model AMT-200 serial numbers will follow the sequence of the Model AMT-100, changing only the prefix.

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