



AGÊNCIA NACIONAL DE AVIAÇÃO CIVIL - BRASIL

TYPE CERTIFICATE DATA SHEET Nº EP-8602

Type Certificate Holder:

AEROMOT – INDÚSTRIA MECÂNICO-METALÚRGICA LTDA
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BRAZIL

EP-8602-14
Sheet 01

AEROMOT
AMT-100
AMT-200
AMT-300
AMT-200S
AMT-200SO
AMT-300O
6 May 2009

This data sheet, which is part of Type Certificate No. 8602, prescribes conditions and limitations under which the product, for which the Type Certificate was issued, meets the airworthiness requirements of the Brazilian Aeronautical Regulations.

I - Model AMT-100 Ximango (Utility Category), approved 05 June 1986 (Limbach engine) and 09 August 1988 (IMAER engine).

ENGINE

Limbach Motorenbau model L2000 E 01

Type: 4 cylinder horizontally opposed, 4 stroke, air cooled, direct propeller drive, single magneto ignition, 1 994 cm³ (121.6 in³) displacement and compression rate 8.4:1.

or

Imaer model T2000 M1

Type: 4 cylinder horizontally opposed, 4 stroke, air cooled, direct propeller drive, single magneto ignition, 2 017 cm³ (123.0 in³) displacement and compression rate 8.7:1.

FUEL

Aviation gasoline 100 LL..

ENGINE LIMITS

Engine:	Limbach	Imaer
Max. rpm:	3 400	3 400
Max. continuous rpm:	3 000	3 000
Max. takeoff power:	57 kW (76.4 hp) at 3 400 rpm	59 kW (79.1 hp) at 3 400 rpm
Max continuous power:	51 kW (68.4 hp) at 3 000 rpm	54.2 kW (72.7 hp) at 3 000 rpm

PROPELLER AND PROPELLER LIMITS

Hoffmann Propeller Rosenhein

Model: HO-V62R/L 160 BT.

Diameter: 1600 ± 50 mm (63 ± 2 in)

Type: two wood blades coated with fiber glass, three position variable pitch setting: takeoff, cruise and feather.

OIL For selection of suitable oil considers the **Aircraft Flight Manual (AFM)** or **Aircraft Maintenance Manual (AMM)**.
Quantity: 2.5 liters (0.66 U.S. gal or 2.64 qt)

MAXIMUM WEIGHT 800 kg (1764 lb)

CG RANGE From + 1 308 mm (+ 51.5 in) to +1 340 mm (+52.7 in) with 800 kg (1764 lb).
From + 1 308 mm (+ 51.5 in) to +1 372 mm (+54.0 in) with 680 kg (1499 lb) or less.
Linear variation between given points.
See Note 5 about the required ballast weight.

MANUFACTURER SERIAL NUMBER 100.001 and up. See Note 8.

II - Model AMT-200 Super Ximango (Utility Category), approved 03 February 1993.

ENGINE Bombardier–Rotax GMBH model 912 A2
Type: 4 cylinder horizontally opposed, 4 stroke, liquid cooled, dual ignition, 1 211 cm³ (73.9 in³) displacement and compression rate 9:1.

FUEL Aviation gasoline 100LL.

ENGINE LIMITS

Max. rpm (3 min.):	5 800
Max. continuous rpm:	5 500
Max. takeoff power:	59.6 kW (79.9 hp) at 5 500 rpm
Max continuous power:	58 kW (77.8 hp) at 5 500 rpm

PROPELLER AND PROPELLER LIMITS Propellerwerk Hoffmann Propeller & Co. GmbH
Model: HO-V62R/170 FA and HO-V62R-1/170 FA*.
Diameter: 1 700 mm (67 in)
Type: two wood blades coated with fiber glass, three position variable pitch setting: takeoff, cruise and feather.
* Installed in Rotax 912 A2 engines s/n 4.380.600 and up.

OIL For selection of suitable oil considers the AFM and/or ROTAX Service Instruction SI-912-016/**SI-914-019(later revision)**
Quantity: Maximum : 3 liters (0.79 U.S. gal or 3.17 qt)
Minimum: 2.5 liters (0.66 U.S. gal or 2.64 qt)
Maximum per hour: 0.06 liters (0.02 U.S.gal or 0,06 qt)

ENGINE COOLANT See recommended coolant in AFM or ROTAX Service Instruction SI-912-016/**SI-914-019** (later revision).

MAXIMUM WEIGHT 850 kg. (1874 lb)

CG RANGE From +1 290 mm (50.8 in) to +1 326 mm (52.2 in) with 850 kg (1874 lb).
From +1 290 mm (50.8 in) to +1 372 mm (54.0 in) with 680 kg (1499 lb) or less.
Linear variation between given points.

MANUFACTURER SERIAL NUMBER 200.040 and up. See Note 10.

III - Model AMT-300 Turbo Ximango Shark (Utility Category), approved 31 March 1999.

ENGINE Bombardier–Rotax GMBH & Co. KG. model Rotax 914 F3
Type: 4 cylinder horizontally opposed, 4 stroke, liquid cooled, dual ignition, 1 211 cm³ (73.9 in³) displacement and compression rate 9:1.

FUEL Aviation gasoline 100LL.

ENGINE LIMITS

Max. rpm (5 min.):	5 800
Max. continuous rpm:	5 500
Max. takeoff power:	84.5 kW (113.3 hp) at 5 800 rpm
Max continuous power:	73.5 kW (98.5 hp) at 5 500 rpm

PROPELLER AND PROPELLER LIMITS MT-Propeller Entwicklung GMBH & Co. KG
Model MTV-21-A-C-F/CF 165-05.
Diameter: 1 650 mm (65 in)
Type: variable pitch, governor Woodward, McCauley or **MT-Propeller..**

OIL For selection of suitable oil considers the AFM and/or ROTAX Service Instruction SI-912-016 / SI-914-019(later revision).
Quantity: Maximum : 3 liters (0.79 U.S. gal or 3.17 qt)
Minimum: 2.5 liters (0.66 U.S. gal or 2.64 qt)
Maximum per hour: 0.06 liters (0.02 U.S.gal or 0,06 qt)

ENGINE COOLANT **For selection of suitable coolant considers the AFM and/or ROTAX Service Instruction SI-912-016/SI-914-019(later revision).**

MAXIMUM WEIGHT 850 kg. (1874 lb)

CG RANGE From +1 290 mm (50.8 in) to +1 326 mm (52.2 in) with 850 kg (1874 lb).
From +1 290 mm (50.8 in) to +1 372 mm (54.0 in) with 680 kg (1499 lb) or less.
Linear variation between given points.

MAXIMUM OPERATION ALTITUDE 7 315 m (24 000 ft). See Note 9.

MANUFACTURER SERIAL NUMBER 300.106 and up. See Note 10.

IV - Model AMT-200S Super Ximango (Utility Category), approved 11 May 2000.

ENGINE	Bombardier–Rotax GMBH & Co. KG. models Rotax 912 S4, 912 S2* and 912 S3**. *Installed on motorglider S/N 200.168 and on. **Installed on motorglider S/N 200.177 and on of same configuration (AMT-200S Optional Version). Type: 4 cylinder horizontally opposed, 4 stroke, liquid cooled, dual ignition, 1 352 cm ³ (82.49 in ³) displacement and compression rate 10:5.
FUEL	Aviation gasoline 100LL.
ENGINE LIMITS	Max. rpm (5 min.): 5 800 Max. continuous rpm: 5 500 Max. takeoff power: 73.5 kW (98.5 hp) at 5 800 rpm Max continuous power: 69.0 kW (92.5 hp) at 5 500 rpm
PROPELLER AND PROPELLER LIMITS	Propellerwerk Hoffmann & Co. GmbH Model HO-V62R-1/170 FA* *Installed on motorglider S/N 200.119 and on. Diameter: 1 700 mm (67 in) Type: two wood blades coated with fiber glass, three position variable pitch setting: takeoff, cruise and feather. MT-Propeller Entwicklung GmbH&Co.KG Model: MTV-21-A-C-F/CF 170-05** **Installed on motorglider S/N 200.177 and on of same configuration (AMT-200S Optional Version). Diameter: 1 700 mm (67 in) Type: Variable pitch, governor Woodward , McCauley or MT-Propeller
OIL	For selection of suitable oil considers the AFM and/or ROTAX Service Instruction SI-912-016/SI-914-019 (later revision). Quantity: Maximum : 3 liters (0.79 U.S. gal or 3.17 qt) Minimum: 2.5 liters (0.66 U.S. gal or 2.64 qt) Maximum per hour:0.06 liters (0.02 U.S.gal or 0,06 qt)
ENGINE COOLANT	See recommended coolant in AFM and/or ROTAX Service Instruction SI-912-016/SI-914-019 (later revision).
MAXIMUM WEIGHT	850 kg. (1874 lb)
CG RANGE	>From +1 290 mm (50.8 in) to +1 326 mm (52.2 in) with 850 kg (1874 lb). From +1 290 mm (50.8 in) to +1 372 mm (54.0 in) with 680 kg (1499 lb) or less. Linear variation between given points.
MANUFACTURER SERIAL NUMBER	200.119 and up. See Note10.

V - Model AMT-200SO Super Ximango (Restrict Category), approved 15 May 2007.

ENGINE	Bombardier–Rotax GMBH & Co. KG models 912 S3 Type: 4 cylinder horizontally opposed, 4 stroke, liquid cooled, dual ignition, 1 352 cm ³ (82.49 in ³) displacement and compression rate 10:5.
FUEL	Aviation gasoline 100LL.
ENGINE LIMITS	Max. rpm (5 min.): 5 800 Max. continuous rpm: 5 500 Max. takeoff power: 73.5 kW (98.5 hp) at 5 800 rpm Max continuous power: 69.0 kW (92.5 hp) at 5 500 rpm
PROPELLER AND PROPELLER LIMITS	MT - Propeller Entwicklung GMBH & Co.KG Models: MTV21-A-C-F/CF 170-05 Diameter: 1 700 mm (67 in) Type: Variable pitch, governor Woodward, McCauley or MT-Propeller.
OIL	For selection of suitable oil considers the AFM and/or ROTAX Service Instruction SI-912-016/SI-914-019 (later revision). Quantity:Maximum : 3 liters (0.79 U.S. gal or 3.17 qt) Minimum: 2.5 liters (0.66 U.S. gal or 2.64 qt) Maximum per hour:0.06 liters (0.02 U.S.gal or 0,06 qt)
ENGINE COOLANT	For selection of suitable coolant considers the AFM and/or ROTAX Service Instruction SI-912-016/SI-914-019(later revision).
MAXIMUM WEIGHT	1050 kg (2315 lb).
CG RANGE	From +1 280 mm (50.4 in) to +1 312 mm (51.7 in) with 1050 kg (2315 lb). From +1 280 mm (50.4 in) to +1 357 mm (53.4 in) with 765 kg (1686 lb) or less. Linear variation between given points.
MANUFACTURER SERIAL NUMBER	200.169 and up. See Note 10 .

VII - Model AMT-300O Turbo Ximango (Restricted Category), approved 27 december 2007.

ENGINE	Bombardier–Rotax GMBH & Co. KG models 914 F3 Type: 4 cylinder horizontally opposed, 4 stroke, liquid cooled, dual ignition, 1 211 cm ³ (73.9 in ³) displacement and compression rate 9.0:1.
FUEL	Aviation gasoline 100LL.

ENGINE LIMITS	Max. rpm (5 min.): 5 800 Max. continuous rpm: 5 500 Max. takeoff power: 84.5 kW (113.3 hp) at 5 800 rpm Max continuous power: 73.5 kW (98.5 hp) at 5 500 rpm
PROPELLER AND PROPELLER LIMITS	MT - Propeller Entwicklung GMBH Co.KG Models: MTV21-A-C-F/CF 170-05 Diameter: 1 700 mm (67 in) Type: Variable pitch, governor Woodward, McCauley or MT-Propeller..
OIL	For selection of suitable oil considers the AFM and/or Service Instruction SI-912-016/SI-914-019. Quantity: Maximum : 3 liters (0.79 U.S. gal or 3.17 qt) Minimum: 2.5 liters (0.66 U.S. gal or 2.64 qt) Maximum per hour: 0.06 liters (0.02 U.S.gal or 0,06 qt)
ENGINE COOLANT	For selection of suitable coolant considers the AFM and/or ROTAX Service Instruction SI-912-016/SI-914-019 (later revision).
MAXIMUM WEIGHT	1 000 kg (2 204.5 lb).
CG RANGE	From +1 280 mm (50.4 in) to +1 320 mm (51.96 in) with 1000 kg (2204.5 lb). From +1 280 mm (50.4 in) to +1 357 mm (53.4 in) with 765 kg (1686 lb) or less. Linear variation between given points.
MANUFACTURER SERIAL NUMBER	300.171 and up. See Note 10.
<u>DATA PERTINENT TO ALL MODELS</u>	
AIRSPEED LIMITS (IAS)	Never exceed speed (V_{NE}): 245 km/h (132 kt) Only AMT-200SO and AMT-300O: 238 km/h (128 kt) Design speed for max. gust (V_B): 180 km/h (97 kt) Only AMT-200SO and AMT-300O: 170 km/h (92 kt) Maneuvering speed (V_A): 180 km/h (97 kt) Only AMT-200SO and AMT-300O: 170 km/h (92 kt) Landing gear extended (V_{LE}): 150 km/h (81 kt) Landing gear operating (V_{LO}): 150 km/h (81 kt) Speed brakes extended: 245 km/h (132 kt) Only AMT-200SO and AMT-300O: 176 km/h (95 kt)
DATUM	Front surface of engine firewall.
MEAN AERODYNAMIC CHORD	1 070 mm (42.1 in). Distance from wing leading edge to datum: +955 mm (37.6 in).
LEVELING MEANS	Wedge of 500 x 24.5 mm (19.7 x 0.96 in) placed on canopy trail (see AFM).
NUMBER OF SEATS	Two side by side at +1 050 mm (41.3 in) from datum for AMT-100

s/n 100.001 to 100.021, AMT-200, AMT-200S and AMT-300.

Two side by side at +985 mm (38.8 in) from datum for AMT-100 s/n 100.022 and on.

Two side by side at +1 000 mm (39.4 in) from datum for AMT-200SO and AMT-300O.

Note: Model AMT-300O can be operated with only one seat and the Imaging Camera installed on the seat RH.

MAXIMUM BAGGAGE

5 kg (11.0 lb) (solo flight) or 10 kg (22.0 lb) (two occupants) at +1 820 mm (71.7 in) of datum.

10 kg (22.0 lb) at +1 820 mm (71.7 in) of datum when not installed the FLIR camera on AMT-200SO **and AMT-300O**.

FUEL CAPACITY

2 tanks of 45 liters (11.9 gal) located at +1 240mm (48.8 in) of the reference plane.

CONTROL SURFACE MOVEMENTS

Elevator:

- Max. up $21 \pm 2^\circ$ 69 \pm 6 mm (2.7 \pm .0,2) in

- Max. down $23 \pm 2^\circ$ 76 \pm 6 mm (3.0 \pm .0,2) in

Neutral position: control surface aligned with the stabilizer profile.

Deflection measurement in mm at 180mm from elevator hinge line.

Aileron:

- Max. up $15 \pm 1^\circ$ 74 \pm 4 mm (2.9 \pm .0,15) in

- Max. down $15 \pm 1^\circ$ 74 \pm 4 mm (2.9 \pm .0,15) in

- Neutral position $3 \pm (1/3)^\circ$ 15 \pm 2 mm (0.6 \pm .0,08) in (AMT-100/200)

$0 \pm (1/3)^\circ$ 00 \pm 2 mm (0 \pm .0,08) in (AMT-300/200S/200SO,300O)

Deflection measurement in mm at 275mm from the aileron hinge line to the wing trailing edge at the first aileron rib.

The measurement of the neutral position is made downwards from the aligned position aileron-wing.

Rudder:

- Max. right $28 \pm 2^\circ$ 186 \pm 12 mm (7.3 \pm .0,5) in

- Max. left $28 \pm 2^\circ$ 186 \pm 12 mm (7.3 \pm .0,5) in

Neutral position: control surface aligned with the vertical stabilizer.

Deflection measurement in mm at 350mm (13.8 in) from rudder hinge line.

Elevator Trim Tab (AMT 100 and AMT 200 only):

- Max. up $43 \pm 4^\circ$ 71 \pm 5 mm (2.8 \pm .0,2) in

- Max. down $36 \pm 4^\circ$ 55 \pm 5 mm (2.2 \pm .0,2) in

Neutral position: control surface aligned with elevator profile.

Deflection measurement in mm at 76mm (3.0 in) from trim tab hinge line.

CERTIFICATION BASIS

AMT 100 and AMT 200: RBHA 1330, corresponding to JAR 22 (utility category, VFR) Amdt. 2, effective 13 September 1982, plus special condition established in letter DGAC n° 54085 SFACT/TC, dated 15 October 1984, plus compliance with NPA 22C7.

AMT 300: RBHA 22, corresponding to JAR 22 (utility category, VFR) Change 5 effective 28 October 1995. Plus special condition established in letter DGAC no 54085 SFACT/TC, dated 15 October 1984.

AMT-200S: RBHA 1330, corresponding to JAR 22 (utility category, VFR) Amdt. 2, effective 13 September 1982; except the following: paragraphs 22.1, 22.175, 22.395, 22.397, 22.411, 22.441, 22.443, 22.477, 22.483, 22.591, 22.785, 22.786, 22.857, 22.925, 22.1529 and 22.1581, as amended by RBHA 22, corresponding to JAR 22 Change 4 effective on 07 May 87; paragraphs 22.221 and 22.779, as amended by RBHA 22, corresponding to JAR 22 Change 5 effective on 28 Oct. 95; **RBHA 91, Amdt. 91-05, paragraph 91.205, effective 01 March 1999, applicable to AMT-200S Optional Version**; plus special condition established in letter DGAC n° 54085 SFACT/TC, dated 15 October 1984.

AMT-200SO: RBHA 21, Amdt. 4, paragraph 21.25, effective 18 Feb. 2005. RBHA 22 corresponding to JAR 22 Amdt. 8, effective 01 Nov. 2004, except the following: paragraphs 22.1, 22.3, 22.49 and 22.71 substantiated by Special Conditions established in letter Aeromot EPR062/07, dated 26 Mar. 2007 and accepted by ANAC. RBHA 91, Amdt. 91-05, paragraph 91.205, effective 01 Mar. 1999. Special Condition established in letter DGAC n° 54085 SFACT/TC, dated 15 Oct. 1984.

AMT-3000: RBHA 21, Amdt. 4, paragraph 21.25, effective 18 Feb. 2005. RBHA 22 corresponding to JAR 22 Amdt. 8, effective 01 Nov. 2004, except the following: paragraphs 22.1, 22.3, 22.49 and 22.71 substantiated by Special Conditions established in letter Aeromot EPR264/07, dated 26 Dec. 2007 and accepted by ANAC. RBHA 91, Amdt. 91-05, paragraph 91.205, effective 01 Mar. 1999. Special Condition established in letter DGAC n° 54085 SFACT/TC, dated 15 Oct. 1984.

PRODUCTION BASIS

CHE N°. E-7411-01 (AMT-100, AMT-200, AMT-200S, AMT-300, AMT-200SO, AMT-3000).

REQUIRED EQUIPMENT

The following equipment shall be installed:

1. Basic equipment and instruments:
 - Airspeed indicator (illuminated on AMT-200SO, AMT-3000 **and AMT-200S Optional Version**).
 - Altimeter (illuminated on AMT-200SO, AMT-3000 **and AMT-200S Optional Version**).
 - Magnetic compass (illuminated on AMT-200SO, AMT-3000 **and AMT-200S Optional Version**).
 - Variometer (illuminated on AMT-200SO, AMT-3000 **and AMT-200S Optional Version**).
 - Slip-skid indicator (illuminated on AMT-200SO, AMT-3000 **and AMT-200S Optional Version**).

- REQUIRED EQUIPMENT (Cont.)**
- Tachometer (illuminated on AMT-200SO, AMT-3000 and AMT-200S Optional Version).
 - Fuel quantity indicator (illuminated on AMT-200SO, AMT-3000 and AMT-22S Optional Version).
 - Oil temperature indicator (illuminated on AMT-200SO, AMT-3000 and AMT-200S Optional Version).
 - Oil pressure indicator (illuminated on AMT-200SO, AMT-3000 and AMT-200S Optional Version).
 - Hourmeter
 - Cylinder head temperature. (AMT 200, AMT-200S, AMT-300, (illuminated on AMT-200SO, AMT-3000 and AMT-200S Optional Version).
 - Manifold pressure manometer (AMT 300, illuminated on AMT-200SO, AMT-3000 and AMT-200S Optional Version).
 - Attitude Gyro indicator(AMT-200SO, AMT-3000 and AMT-200S Optional Version).
 - Navigation/Communication equipment (AMT-200SO, AMT-3000 and AMT-200S Optional Version).
 - Emergency locator transmitter - ELT (AMT-200SO, AMT-3000 and AMT-200S Optional Version)
 - Landing Gear position indicator
 - Shoulder harness
 - Fire extinguisher (AMT-200SO, AMT-3000 and AMT-200S Optional Version)
 - Navigation lights (AMT-200SO, AMT-3000 and AMT-200S Optional Version)
 - Anti-collision light (AMT-200SO, AMT-3000 and AMT-200S Optional Version).
 - Landing light (AMT-200SO, AMT-3000 and AMT-200S Optional Version).
 - Set of spare fuses
 - Portable spot light (AMT-200SO, AMT-3000 and AMT-200S Optional Version).

2. Airplane Flight Manual approved by ANAC.

NOTES:

- NOTE 1** Weight and Balance. For each aircraft prior to delivery, an updated weight and balance report shall be prepared, which shall include the equipment list which is part of the certified empty weight, including also the necessary instructions for load.
- NOTE 2** Markings and placards. The placards listed in AFM section 2, paragraph 2.14 – Placards, must be displayed in appropriate places of the aircraft.
- NOTE 3** Continued Airworthiness. The inspections, maintenance, repair and painting shall be made according to the Maintenance Manual instructions. Any large repair can only be performed by the manufacturer.
- NOTE 4** All external surfaces of the motorglider exposed to the sunlight shall be painted white with exception of the surfaces of the registration marks and anti-collision paint.
- NOTE 5** Night condition VFR operation is allowable to the AMT-200SO, AMT-3000 and AMT-200S Optional Version.

- NOTE 6** Specific limitations to the AMT-200SO model:
- Up-side-down and acrobatic maneuvers (including spin) is forbidden;
 - Intentional engine in-flight shut-down is forbidden;
 - The GPS equipment is limited to day light and night condition VFR operation only; and,
 - It is forbidden using the Moving Map System (BRAVIO) and/or FLIR images as means of compliance for day light and night condition VFR operation rules.
- Specific limitations to the AMT-3000 Model:
- Up-side down and acrobatic maneuvers(including spin) is forbidden;
 - Intentional engine in flight shut-down is forbidden;
 - The GPS equipment is limited to day and night condition VFR operation only;
- NOTE 7** 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 100)
- NOTE 8** The original Type Certificate was issued for AEROMOT – AERONAVES E MOTORES S.A., on 5 June 1986, and reissued for AEROMOT – INDÚSTRIA MECÂNICO-METALÚRGICA LTDA., on 17 September 1987 as requested by the TC holder.
- NOTE 9** Oxygen equipment not installed.
- NOTE 10** The last three digits of the serial number refer to the production sequence. The first three digits mean: 100, model AMT-100; 200, models AMT-200, AMT-200S and AMT-200SO; 300, models AMT-300 and AMT-3000.
- NOTE 11** AMT-100 Master Drawing List No. LP-10.000 (later revision).
AMT-200 Master Drawing List No. LP-20.000 (later revision).
AMT-200S Master Drawing List No. 96000-20809 (later revision).
AMT-300 Master Drawing List No. 96000-20808 (later revision).
AMT-200SO Master Drawing List No. 96000-20816 (later revision).
AMT-3000 Master Drawing List No. 96000-20817 (later revision).

Original in the Portuguese language signed by:

ADEMIR ANTÔNIO DA SILVA
Gerente-Geral, Certificação de Produto Aeronáutico
(Manager, Aeronautical Product Certification)
