

TYPE CERTIFICATE DATA SHEET № EA-2012Txx

Type Certificate Holder:

EXTRA FLUGZEUGPRODUKTIONS- UND VERTRIEBS GMBH

Schwarze Heide 21 46569, Hünxe **GERMANY** EA-2012T14-00 Sheet 01

EXTRA

300/L 300/LC 300/LT

08 October 2012

This data sheet, which is part of Type Certificate No. 2012T14, 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 300/L (Normal & Acrobatic Category), approved 8 October 2012.

ENGINE 1 Textron Lycoming AEIO-540-L1B5 (EM-8209), or

1 Textron Lycoming AEIO-580-B1A (EM-2012T12)

FUEL 100LL minimum grade aviation gasoline

ENGINE LIMITS For AEIO-540-L1B5

Take-off and continuous power 224 kW / 300 BHP

Max. engine rotational speed 2700 RPM

Manifold Pressure 100 kPa / 29.5"Hg

For AEIO-580-B1A

Take-off and continuous power 235 kW / 315 BHP

Max. engine rotational speed 2700 RPM

Manifold Pressure 100 kPa / 29.5"Hg

OIL Single or multi – viscosity aviation grade oils see latest issue of

Textron Lycoming S.I. N° 1014

PROPELLER AND PROPELLER

LIMITS

MT Propeller MTV-9-B-C/C200-15 (EH-2000T04)

Diameter = 2.00 mLow Pitch = $10.5^{\circ} \pm 0.2^{\circ}$ High Pitch = $34^{\circ} \pm 1^{\circ}$

Pitch limits measured at 0.70 m radial distance.

Sense of Rotation: Right-hand tractor (viewed in direction of flight)

or

MT Propeller MTV-14-B-C/C190-17 (EH-2012T13)

Diameter = 1.90 mLow Pitch = $12.5^{\circ} \pm .2^{\circ}$ High Pitch = $34^{\circ} - 1^{\circ}$

Pitch limits measured at 0.665 m radial distance.

Sense of Rotation: Right-hand tractor (viewed in direction of flight)

or

MT Propeller MTV-9-B-C/C198-25 (EH-2000T04)

Diameter = 1.98 mLow Pitch = $9.5^{\circ} \pm 0.2^{\circ}$ High Pitch = $34^{\circ} \pm 1^{\circ}$

Pitch limits measured at 0.74 m radial distance.

Sense of Rotation: Right-hand tractor (viewed in direction of flight)

AIRSPEED LIMITS (IAS) Maximum Never Exceed (V_{NE}): 220 kias (407 km/h)

Design Maneuvering Speed V_A:

Acrobatic category 158 kias (293 km/h) Normal category 140 kias (259 km/h)

Max. Structural Cruising Speed V_{NO}:

Acrobatic category 158 kias (293 km/h) Normal category 140 kias (259 km/h)

CG RANGE

(Straight line variation between points.)

	Acrobatic	Normal	
	1 Pax.	2 Pax.	Category
		870 kg (1 918	
	lbs.) and below	lbs.) and below	lbs.) and below
Forward C.G.	67.1 cm (26.4	67.1 cm (26.4	67.1 cm (26.4
(aft of datum)	in)	in)	in)
Rear C.G. (aft	84.1 cm (33.1	84.1 cm (33.1	84.1 cm (33.1
of datum)	in)	in)	in)

DATUM Plane of Firewall

LEVELING MEANS Upper fuselage longeron

MAXIMUM WEIGHT Takeoff: Normal Category 950 kg (2 095 lb)

Acrobatic 1 Pax. 820 kg (1 808 lb)
Acrobatic 2 pax. 870 kg (1 918 lb)
Landing: 950 kg (2 095 lb)
Type of the part of the part

Acrobatic 1 Pax. 701 kg (1 546 lb) Acrobatic 2 Pax. 655 Kg (1 466 lb)

MINIMUM CREW 1 pilot

NO. OF SEATS 2

MAXIMUM BAGGAGE None

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FUEL CAPACITY Fuel (Standard):

Total capacity 171 Liter (45.1 US.gal)
Usable capacity 165.5 Liter (43.7 US.gal)
Usable capacity 45.5 Liter (12.0 US.gal)

Fuel (Long Range):

Total capacity 205 Liter (54.1 US.gal)
Usable capacity 199.5 Liter(52.7 US.gal)
Usable capacity 45.5 Liter (12.0 US.gal)

Fuel (Raised Standard): See Note 9

Total capacity
Usable capacity
Usable capacity 189 Liter (49.9 US.gal)
187 Liter (49.4 US.gal)
Usable capacity 67 Liter (17.7 US.gal)

OIL CAPACITY Oil (Engine AEIO-540-L1B5):

Max. sump capacity

Min. sump capacity aerobatic

Min. sump capacity normal

15.1 Liter (16 qts)

11.3 Liter (12 qts)

8.5 Liter (9 qts)

Oil (Engine AEIO-580-B1A):

Max. sump capacity 15.1 Liter (16 qts)
Min. sump capacity normal 8.5 Liter (9 qts)

SMOKE OIL: Straight paraffin oil, kin. viscosity 30-50 cSt at 20°C (68°F), initial

boiling point >330°C (626°F);

For example: Fauth FC05, Texaco Canopus 13 or equivalent.

Down $25^{\circ} \pm 2^{\circ}$

SMOKE OIL CAPACITY: 31 Liters (8.2 US.gal)

CONTROL SURFACE Elevator: Up $25^{\circ} \pm 2^{\circ}$

MOVEMENTSElevator trim tab:Up $40^{\circ} \pm 2^{\circ}$ Down $50^{\circ} \pm 2^{\circ}$ Rudder:Right $30^{\circ} \pm 2^{\circ}$ Left $30^{\circ} \pm 2^{\circ}$

Rudder: Right $30^{\circ} \pm 2^{\circ}$ Left $30^{\circ} \pm 2^{\circ}$ Aileron: Up $30^{\circ} \pm 2^{\circ}$ Down $30^{\circ} \pm 2^{\circ}$

SERIAL NUMBER ELIGIBLE 01 and on

IMPORT ELIGIBILITY

A Brazilian Certificate of Airworthiness may be issued on the basis
of an EASA Export Certificate of Airworthiness (or a third country)

of an EASA Export Certificate of Airworthiness (or a third country Export Certificate of Airworthiness, in case of used aircraft imported from such country), including the following statement:

"The aircraft covered by this certificate has been inspected, tested, and found to be in conformity with the Brazilian approved type design as defined by the Brazilian Type Certificate no.

2012T14 and in condition of safe operation".

CERTIFICATION BASIS Brazilian Type Certificate No. 2012T14 issued on 08 October 2012

based on the RBAC 21.29 and RBHA 23, which endorses the 14

CFR Part 23 amendment 23-1 through 23-34.

Special Conditions:

- C-1, (Fatigue / Damage Tolerance Substantiation of Composite

Structure)

- C-4, Structural Design and Loads Criteria (LBA I 311-1086/93, dated 12-March-1993 & FAA Issue Paper C-1 and C-4, Project N°

CA581EU)

- Smoke System (optional equipment) (LBA I 311-1086/96, dated 07-February-1996) Lufttüchtigkeitsforderungen für den Schleppflug

- (Airworthiness Requirement for Glider Towing) (LBA I 23-60/100,

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dated February-1971)

Noise requirements:

FAR 36 as amended through 36-28. Effective February 03, 2006.

REQUIRED EQUIPMENT

The basic required equipment, as prescribed in the applicable airworthiness regulations (see Certification Basis) must be installed in the airplane.

DATA PERTINENT TO ALL MODELS:

NOTES:

NOTE 1 Weight and balance.

A current weight and balance report with a list of equipment included in the certificated empty weight must be provided for each aircraft at the time of original airworthiness certification.

NOTE 2 Markings and placards.

For the approved markings and placards translations contact the TC holder and/or ANAC at the following address: ggcp-gr@anac.gov.br

- NOTE 3 <u>Continuing Airworthiness</u>. The airplane must be maintained in accordance with the instructions for continued airworthiness contained in the latest EASA approved revision of "Airplane Maintenance Manual" No. EA-06702.
- NOTE 4 The differences of the Brazilian airplanes in relation to the basic EASA type design are summarized below:
 - 1. The Brazilian Airplane Flight Manual Supplement
 - 2. Markings and placards
- The use of an exhaust silencer system type Gomolzig EA300-606500 is certified. The installation of the exhaust silencer system has to be in accordance with the Retrofit-Instruction UA-300-1-92. For service of the optional system the instructions of the appendix to the Service Manual EA 300 are obligatory.
- NOTE 6 A standard Certificate of Airworthiness can only be issued for an aircraft which is equipped with
 - a) the 4-blade propeller MTV-14-B-C/C190-17 in combination with the exhaust silencer system type Gomolzig EA300-606500 or EA300-606000 or
 - b) the 3-blade propeller MTV-9-B-C/C198-25 in combination with the exhaust silencer system type Gomolzig EA300-606000 and a reduced max. take-off engine rotational speed of 2600RPM.

Otherwise a Certificate of Airworthiness can only be issued for aerial work.

- NOTE 7 Structure is qualified up to 72°C (161.6°F). Structure temperatures (composite) above 72°C (161.6°F) are not permitted. Not to exceed this temperature limit, color specification for composite structure of the manufacturer (document EA-03205.19) has to be complied with.
- NOTE 8 The 3-blade propeller MTV-9-B-C/C198-25 is only approved in combination with the Lycoming engine AEIO-580-B1A
- NOTE 9 The raised-standard fuel system provides an increased fuel capacity of the center fuel tank approved for operation in the normal and aerobatic category delivered ex factory. It cannot be combined with the increased fuel capacity of the wing fuel tank of the long

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range tank option.

NOTE 10

Major structural repairs must be accomplished at ANAC certified repair stations rated for composite aircraft structure work, in accordance with Extra repair methods approved by LBA or EASA and accepted by the ANAC.

II- Model 300/LC (Normal & Acrobatic Category), approved 8 October 2012.

ENGINE 1 Textron Lycoming AEIO-580-B1A (EM-2012T12)

FUEL 100LL minimum grade aviation gasoline

ENGINE LIMITS For Normal Category

> Take-off and continuous power 226 kW / 303 BHP

Max. engine rotational speed 2600 RPM

Manifold Pressure 100 kPa / 29.5"Hg

For Acrobatic Category

Take-off and continuous power 235 kW / 315 BHP

Max. engine rotational speed 2700 RPM

Manifold Pressure 100 kPa / 29.5"Hg

OIL Single or multi - viscosity aviation grade oils see latest issue of

Textron Lycoming S.I. N° 1014

PROPELLER AND PROPELLER

LIMITS

MT Propeller MTV-9-B-C/C198-25 (EH-2000T04)

Diameter = 1.98 mLow Pitch = $9.5^{\circ} \pm 0.2^{\circ}$ High Pitch = $34^{\circ} \pm 1^{\circ}$

Pitch limits measured at 0.74 m radial distance.

Sense of Rotation: Right-hand tractor (viewed in direction of flight)

AIRSPEED LIMITS (CAS) Maximum Never Exceed (V_{NE}) : 220 kcas (219 kias)

Design Maneuvering Speed V_A:

Acrobatic category 158 kcas (154 kias) Normal category 140 kcas (138 kias)

Max. Structural Cruising Speed V_{NO}:

Acrobatic category 158 kcas (154 kias) Normal category 140 kcas (138 kias)

CG RANGE

(Straight line variation between

points.)

	Acrobatic Category	Normal Category	
	950 kg (2 095 lbs.) and below	950 kg (2 095 lbs.) and below	
Forward C.G. (aft of datum)	67.1 cm (26.4 in)	67.1 cm (26.4 in)	
Rear C.G. (aft of datum)	84.1 cm (33.1 in)	84.1 cm (33.1 in)	

DATUM Plane of Firewall

LEVELING MEANS Upper fuselage longeron

MAXIMUM WEIGHT Takeoff: Normal and Acrobatic 950 kg (2 095 lb)

Category III

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Acrobatic category I 820 kg (1 808 lb)
Acrobatic category II 870 kg (1 918 lb)
Landing: 950 kg (2 095 lb)

Empty Weight: Normal Category 738 kg (1 627 lb)

Acrobatic Category III 742 kg (1 636 lb) Acrobatic category I 686 kg (1 513 lb) Acrobatic category II 662 Kg (1 460 lb)

MINIMUM CREW 1 pilot

NO. OF SEATS 2

MAXIMUM BAGGAGE None

FUEL CAPACITY Total capacity 189 Liter (49.9 US.gal)

Usable capacity 187 Liter (49.4 US.gal)

Usable capacity for aerobatics 67 Liter (17.7 US.gal)

OIL CAPACITY Max. sump capacity 15.1 Liter (16 qts)

Min. sump capacity normal 8.5 Liter (9 qts)

SMOKE OIL: Straight paraffin oil, kin. viscosity 30-50 cSt at 20°C (68°F), initial

boiling point >330°C (626°F);

For example: Fauth FC05, Texaco Canopus 13 or equivalent.

SMOKE OIL CAPACITY: 31 Liters (8.2 US.gal)

CONTROL SURFACE Elevator: Un

CONTROL SURFACEElevator:Up $25^{\circ} \pm 2^{\circ}$ Down $25^{\circ} \pm 2^{\circ}$ MOVEMENTSElevator trim tab:Up $35^{\circ} \pm 2^{\circ}$ Down $27^{\circ} \pm 2^{\circ}$ Rudder:Right $30^{\circ} \pm 2^{\circ}$ Left $30^{\circ} \pm 2^{\circ}$

Rudder: Right $30^{\circ} \pm 2^{\circ}$ Left $30^{\circ} \pm 2^{\circ}$ Aileron: Up $30^{\circ} \pm 2^{\circ}$ Down $30^{\circ} \pm 2^{\circ}$

SERIAL NUMBER ELIGIBLE LC001 and on

IMPORT ELIGIBILITY

A Brazilian Certificate of Airworthiness may be issued on the basis

of an EASA Export Certificate of Airworthiness (or a third country Export Certificate of Airworthiness, in case of used aircraft imported from such country), including the following statement:

"The aircraft covered by this certificate has been inspected, tested, and found to be in conformity with the Brazilian approved type design as defined by the Brazilian Type Certificate no.

2012T14 and in condition of safe operation".

CERTIFICATION BASIS Brazilian Type Certificate No. 2012T14 issued on 08 October 2012

based on the RBAC 21.29 and RBHA 23, which endorses the 14

CFR Part 23 amendment 23-1 through 23-34.

Special Conditions:

- C-1, (Fatique/Damage Tolerance Substantiation of Composite

Structure)

- C-4, Structural Design and Loads Criteria (LBA I 311-1086/93, dated 12-March-1993 & FAA Issue Paper C-1 and C-4, Project

N°CA581EU)

- Smoke System (optional equipment) (LBA I 311-1086/96, dated

07-February-1996)

- (Airworthiness Requirement for Glider Towing) (LBA I 23-60/100,

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dated February-1971)

Equivalent Safety Findings:

a) Static longitudinal stability §§23.171; 23.173, 23.175

b) Stall warning §23.207

Noise requirements:

ICAO, Annex 16, Volume 1Fourth Edition, Amdt. 8

REQUIRED EQUIPMENT

The basic required equipment, as prescribed in the applicable airworthiness regulations (see Certification Basis) must be installed in the airplane.

DATA PERTINENT TO ALL MODELS:

NOTES:

NOTE 1 Weight and balance.

A current weight and balance report with a list of equipment included in the certificated empty weight must be provided for each aircraft at the time of original airworthiness certification.

NOTE 2 Markings and placards.

For the approved markings and placards translations contact the TC holder and/or ANAC at the following address: ggcp-gr@anac.gov.br

- NOTE 3 Continuing Airworthiness. The airplane must be maintained in accordance with the instructions for continued airworthiness contained in the latest EASA approved revision of "Airplane Maintenance Manual" No. EA-0E702.
- NOTE 4 The differences of the Brazilian airplanes in relation to the basic EASA type design are summarized below:
 - 3. The Brazilian Airplane Flight Manual Supplement
 - 4. Markings and placards
- NOTE 5 A standard Certificate of Airworthiness can only be issued for an aircraft which is equipped with:
 - the 3-blade propeller MTV-9-B-C/C198-25 in combination with the exhaust silencer system type Gomolzig EA300-606000 and a reduced max. takeoff engine rotational speed of 2600RPM.

Otherwise a Certificate of Airworthiness can only be issued for aerial work.

- NOTE 6 Structure is qualified up to 72°C (161.6°F). Structure temperatures (composite) above 72°C (161.6°F) are not permitted. Not to exceed this temperature limit, color specification for composite structure of the manufacturer (document EA-03205.19) has to be complied with.
- NOTE 7 Major structural repairs must be accomplished at ANAC certified repair stations rated for composite aircraft structure work, in accordance with Extra repair methods approved by LBA or EASA and accepted by the ANAC.

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III- Model 300/LT (Normal & Acrobatic Category), approved 8 October 2012.

ENGINE 1 Textron Lycoming AEIO-580-B1A (EM-2012T12)

FUEL 100LL minimum grade aviation gasoline

ENGINE LIMITS Take-off and continuous power 235 kW / 315 BHP

Max. engine rotational speed 2700 RPM

Manifold Pressure 100 kPa / 29.5"Hg

OIL Single or multi – viscosity aviation grade oils see latest issue of

Textron Lycoming S.I. N° 1014

PROPELLER AND PROPELLER

LIMITS

MT Propeller MTV-9-B-C/C198-25 (EH-2000T04)

Diameter = 1.98 mLow Pitch = $9.5^{\circ} \pm 0.2^{\circ}$ High Pitch = $34^{\circ} \pm 1^{\circ}$

Pitch limits measured at 0.74 m radial distance.

Sense of Rotation: Right-hand tractor (viewed in direction of flight)

AIRSPEED LIMITS (CAS) Maximum Never Exceed (V_{NE}) : 220 kcas (221 kias)

Design Maneuvering Speed V_A:

Acrobatic category 158 kcas (160 kias) Normal category 140 kcas (143 kias)

Max. Structural Cruising Speed V_{NO}:

Acrobatic category 158 kcas (160 kias) Normal category 140 kcas (143 kias)

CG RANGE

(Straight line variation between

points.)

Forward C.G.	820 kg (1 808	870 kg	(1 918	950 kg (2 095
(aft of datum)	lbs.) and below	lbs.) and	d below	lbs.) and below
	70.7 am (07.0	74.0 0	~ (20.2	72 am (20 7 in)
	70.7 cm (27.8		11 (28.2	73 Cm (28.7 m)
	in)	in)		
Rear C.G. (aft	915 kg (2 018 lbs.) and		950 kg (2 095 lbs.) and	
of datum)	below		below	
	88 cm (34.6 in)		84.1 cm (33.1 in)	
	,			

DATUM Plane of Firewall

LEVELING MEANS Upper fuselage longeron

MAXIMUM WEIGHT Takeoff: Normal and Acrobatic 950 kg (2 095 lb)

Category III

Acrobatic category I 820 kg (1 808 lb)
Acrobatic category II 870 kg (1 918 lb)
Landing: 950 kg (2 095 lb)
Empty Weight: Normal Category 723 kg (1 504 lb)

Empty Weight: Normal Category 723 kg (1 594 lb)

Acrobatic Category III 742 kg (1 636 lb)
Acrobatic category II 686 kg (1 513 lb)
Acrobatic category II 662 Kg (1 460 lb)

MINIMUM CREW 1 pilot

NO. OF SEATS 2

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MAXIMUM BAGGAGE 1 baggage compartment within the upper aft fuselage section

behind the rear seat. The baggage compartment must be empty

for aerobatics.

Max. baggage mass: 10 kg (22 lbs) C.G. (aft of datum): 331 cm (130.3 in)

FUEL CAPACITY Total capacity 221 Liter (58.4 US.gal)

Usable capacity 209 Liter (55.2 US.gal)

Usable capacity for aerobatics 67 Liter (17.7 US.gal)

OIL CAPACITY Max. sump capacity 15.1 Liter (16 qts)

Min. sump capacity normal 8.5 Liter (9 gts)

SMOKE OIL: Straight paraffin oil, kin. viscosity 30-50 cSt at 20°C (68°F), initial

boiling point >330°C (626°F);

For example: Fauth FC05, Texaco Canopus 13 or equivalent.

SMOKE OIL CAPACITY: 31 Liters (8.2 US.gal)

CONTROL SURFACE Elevator:

Up $25^{\circ} \pm 2^{\circ}$ Down $25^{\circ} \pm 2^{\circ}$ **MOVEMENTS** Up 35° ± 2° Elevator trim tab: Down $27^{\circ} \pm 2^{\circ}$

Rudder: Right 30° ± 2° Left 30° ± 2° Aileron: Up $30^{\circ} \pm 2^{\circ}$ Down $30^{\circ} \pm 2^{\circ}$

SERIAL NUMBER ELIGIBLE LT001 and on

IMPORT ELIGIBILITY A Brazilian Certificate of Airworthiness may be issued on the basis

of an EASA Export Certificate of Airworthiness (or a third country Export Certificate of Airworthiness, in case of used aircraft imported from such country), including the following statement:

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2012T14 and in condition of safe operation".

Brazilian Type Certificate No. 2012T14 issued on 08 October 2012 **CERTIFICATION BASIS** based on the RBAC 21.29 and RBHA 23, which endorses the 14

CFR Part 23 amendment 23-1 through 23-34.

Special Conditions:

- C-1 (Fatique/Damage Tolerance Substantiation of Composite Structure)

- C-4, Structural Design and Loads Criteria (LBA I 311-1086/93, dated 12-March-1993 & FAA Issue Paper C-1 and C-4, Project N° CA581EU)

- Smoke System (optional equipment) (LBA I 311-1086/96, dated 07-February-1996)

- (Airworthiness Requirement for Glider Towing) (LBA I 23-60/100, dated February-1971)

Equivalent Safety Findings:

Static longitudinal stability §§23.171; 23.173,23.175 & 23.177

Noise requirements:

ICAO, Annex 16, Volume 1Fourth Edition, Amdt. 8

REQUIRED EQUIPMENT

The basic required equipment, as prescribed in the applicable airworthiness regulations (see Certification Basis) must be installed in the airplane.

DATA PERTINENT TO ALL MODELS:

NOTES:

NOTE 1 Weight and balance.

A current weight and balance report with a list of equipment included in the certificated empty weight must be provided for each aircraft at the time of original airworthiness certification.

NOTE 2 Markings and placards.

For the approved markings and placards translations contact the TC holder and/or ANAC at the following address: ggcp-gr@anac.gov.br

- NOTE 3 Continuing Airworthiness. The airplane must be maintained in accordance with the instructions for continued airworthiness contained in the latest EASA approved revision of "Airplane Maintenance Manual" No. EA-0D702.
- NOTE 4 The differences of the Brazilian airplanes in relation to the basic EASA type design are summarized below:
 - 5. The Brazilian Airplane Flight Manual Supplement
 - 6. Markings and placards
- NOTE 5 Structure is qualified up to 72°C (161.6°F). Structure temperatures (composite) above 72°C (161.6°F) are not permitted. Not to exceed this temperature limit, color specification for composite structure of the manufacturer (document EA-03205.19) has to be complied with.
- Major structural repairs must be accomplished at ANAC certified repair stations rated for composite aircraft structure work, in accordance with Extra repair methods approved by LBA or EASA and accepted by the ANAC.

Meulio Tomymus V HÉLIO TARQUINIO JUNIOR

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