

**DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION**

A61CE Revision 0 AERO Sp. z o.o. AT-3R100 July 2, 2010
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TYPE CERTIFICATE DATA SHEET No. A61CE

This Data Sheet, which is part of Type Certificate No. A61CE, 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 AERO Sp. z o.o.
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 03-942 Warszawa
 Poland

I - Model AT-3R100 (JAR-VLA) Approved July 2, 2010

Engine Bombardier-Rotax 912S2 or S4 (TC E00051EN)
 Four cylinder, horizontally opposed.
 The cylinders are air-cooled, the cylinder heads, by liquid coolant.
 Dual ignition.
 73.5 kW / 98.5 HP take-off power, 69 kW / 92.5 HP continuous power.

Engine Limitation Max take-off rotational speed 5800 r.p.m
 Max continuous rotational speed 5500 r.p.m
 For other engine limits refer to AFM.

Propeller and
 Propeller Limitation Wooden, fixed pitch, two-blade GT ELICHE GT-2/173/VRR-FW101SRTC
 Diameter 1.73m (5' 8") and clockwise direction of rotation.
 For other propeller limits refer to AFM, Section 2
 or
 Ground adjustable, carbon epoxy composite three-blades ELPROP 3-1-1P
 Diameter 1.73m (5' 8") and clockwise direction of rotation.
 See Note 7.

Fuel Minimum 95 Grade Unleaded Automotive Gasoline or
 AVGAS 100 LL if other fuel is not available

Lubricant Oils conforming to API classification marked "SF" or "SG".
 For more details see AFM, Section 2.

Landing gear

- Wheel track 7' 5" (2.26 m)
- Main wheel tyre- Type 380 x 150 /15x6.00-5 - Pressure 36 psi (2.5 bar)
- Nose wheel tyre- Type 5.00-4 6ply Type III - Pressure 36 psi (2.5 bar)
- Disc brakes
- Type of shock absorber elastic strut

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Airspeed Limits (IAS)	V_{NE}	(Never exceed speed)	127 kts (146 mph)
	V_{NO}	(Structural cruising speed)	112 kts (129 mph)
	V_A	(Manoeuvring speed)	112 kts (129 mph)
	V_{FE}	(Flap extended speed)	85 kts (98 mph)
Maximum Weight	At take-off		1,283 lb (582 kg)
	At landing		1,283 lb (582 kg)
Center of Gravity Limits:			
Forward limit	up to 992 lb (450 kg)	9.0 in (0.229 m) behind Datum.	
	at 1,283 lb (582 kg)	12.0 in (0.305 m) behind Datum.	
	Varying linearly with mass in between.		
Rear Limit	for all masses	15.5 in (0.394m) behind Datum.	
Datum:	Wing Leading Edge.		
Levelling Means:	Spirit level on the cockpit side rail with canopy open.		
Minimum Crew	1 pilot		
Maximum Passenger Seating	1		
Maximum Baggage Weight	Maximum load in luggage compartment		66 lb (30 kg) total
	- Port luggage compartment (large)		44 lb (20 kg)
	- Starboard luggage compartment (small)		22 lb (10kg)
Control Surface Displacements:			
	- Slab tail (angles related to the fuselage base)		
	Trailing edge down		$10^{\circ} \pm 1^{\circ}$
	Trailing edge up		$12^{\circ} \pm 1^{\circ}$
	- Trim & balancing tab (angles related to the fuselage base)		
	When the slab tail trailing edge is down, the tab is displaced downward, i.e. by maximum		$26^{\circ} \pm 3^{\circ}$
	When the slab tail trailing edge is up, the tab is displaced upwards, i.e. by maximum		$44^{\circ} \pm 3^{\circ}$
	- Ailerons (angles related to the wing chord)		
	- Up		$20^{\circ} \pm 2^{\circ}$
	- Down		$15^{\circ} \pm 2^{\circ}$
	- Rudder (angles related to the chord of the fin)		
	- Each side		$25^{\circ} \pm 2^{\circ}$
	- Wing flaps (angles related to the wing chord)		
	- Retracted		$0^{\circ} \pm 2^{\circ}$
	- For takeoff		$15^{\circ} \pm 2^{\circ}$
	- For landing		$40^{\circ} +5/-2^{\circ}$
Fuel Tank Capacity	Total 19.42 US gal (73.5 litres)		
	Consumable fuel 18.5 US gal (70.0 litres)		
	Unusable fuel 0.92 US gal. (3.5 litres)		
Oil Capacity	Maximum	3.6 US quarts (3.5 litres)	
	Minimum	2.6 US quarts (2.5 litres)	

Cooling Liquid Capacity	2.1 US quarts (2 litres)
<u>Approved Kinds of Operation</u>	Day-VFR only
<u>Prohibited Kinds of Operation</u>	Flight into known icing conditions
<u>Service Life Limits</u>	Airframe Service Life: On technical condition Components: as listed in Chapter 4 of Maintenance Manual, Doc. No ATT3.05A Rev 1 issued June, 2010 or later FAA approved revision.
<u>Applicable Serial Numbers</u>	AT3-001 and up See Note 8, Note 9 and Note 10
<u>Import Requirements</u>	<p>a) A United States airworthiness certificate (JAR-VLA Special Class) may be issued on the basis of a Polish Certificate of Airworthiness for Export signed by a representative of the Civil Aviation Office (CAO) on behalf of the European Community, containing the following statement (in the English language): ‘The aircraft covered by this certificate has been examined, tested, and found to comply with U.S. airworthiness regulations 14 CFR Federal Aviation Regulations Part 21.17(b), type certificate No. A61CE, and to be in a condition for safe operation.’</p> <p>b) The U.S. airworthiness certification basis for aircraft type certificated under FAR Section 21.29 and exported by the country of manufacture is FAR Sections 21.183(c) or 21.185(c).</p> <p>c) Serial numbers AT3-026 through AT3-055 must have the rudder flight control system modified per paragraph 3.2 of Mandatory Service Bulletin (MSB) ATB3.03.B, Issue 1, dated February 5, 2010 (EASA AD 2010-0025-E) before U.S. standard airworthiness can be issued. (See Note 9)</p> <p>d) For all serial numbers airplanes, inspect to determine if the airplane is equipped with ELPROP 3-1-1P propellers with propeller serial numbers 3E.001 to 3E.088, inclusively. If one these propellers are installed, accomplish the initial inspection and modification, if uncracked, and replacement of the propeller, if found cracked, per AERO Mandatory Service Bulletin (MSB) No. EPB.01.B Issue 1 dated May 14 2009 (EASA AD 2009-0134-E). This must be accomplished before the U.S. standard airworthiness can be issued. (See Note 10)</p>
Certification Basis	<p><u>Airframe Certification</u> The certification basis for the airplane will be 14 CFR part 21, § 21.17(b) using Joint Aviation Requirements - Very Light Aeroplanes (JAR-VLA) at Amendment 0 dated 26 April 1990, through Amendment VLA/92/1 as identified in FAA Advisory Circular (AC) 21.17-3.</p> <p><u>Engine Certification</u> - 14 CFR Part 33 (US TC E00051EN)</p> <p><u>Propeller Certification</u> JAR 22 Subpart and is certified with the airframe per JAR-VLA. For the ELPROP 3-1-1P propeller, the CAO’s certificate of approval is Z-DB-05/05 dated July 12, 2005 and EASA TC No. EASA.P.009. For the GT ELICHE propeller</p>

the CAO certificate of approval no. Z-DB-03/03 dated February 12, 2003 (EASA approved CAO's certificate of approval and no EASA TC was issued.)

The certification basis is JAR-22 Subpart J- Propellers, amendment 6, effective as of August 1, 2001 and JAR-VLA issue April 26, 1990 inclusive of amendment VLA/92/1.

Noise Certification

- 14 CFR Part 36, Appendix G, effective December 1, 1969, as amended through 36- effective August 7, 2002.

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Type Certificate No. A61CE was issued July 2, 2010.
Date of Application for Type Certificate was December 2003.

The Civil Aviation Office (CAO) of Poland originally type certificated this aircraft under its type certificate Number BB-210. Effective **October 24, 2005**, the European Aviation Safety Agency (EASA) began oversight of this product on behalf of Poland. The EASA TCDS number is EASA.A.021 and was issued January 21, 2005.

Equipment

The basic required equipment as prescribed in the applicable airworthiness regulations (see Certification Basis) must be installed in the airplane for certification. Such equipment is listed in the current FAA approved Airplane Flight Manual: AT-3R100 Flight Manual Doc. No. ATL3.05A Rev 1 issued June 2010 or later approved revisions.

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 October 24, 2005 – by the Civil Aviation Office (CAO) of Poland.

- Service bulletins,
- Structural repair manuals,
- Vendor manuals,
- Aircraft flight manuals, and
- Overhaul and maintenance manuals.

The FAA accepts such documents and considers them FAA-approved for type design data only unless one of the following conditions exists:

- The documents change the limitations, performance, or procedures of the FAA approved manuals; or
- The documents make an acoustical or emissions changes to this product's U.S. type certificate as defined in 14 CFR § 21.93.

The FAA uses the post type validation procedures to approve these documents. The FAA may delegate on case-by-case to EASA to approve on behalf of the FAA for the U.S. type certificate. If this is the case it will be noted on the document.

Each airplane is provided with the following approved documents:

- a) AT-3R100 Flight Manual, Doc. No. ATL3.05A Rev 1 issued June 2010 with Supplements up to Supplement No 21, or later FAA approved revision.

- b) AT-3R100 Airplane Maintenance Manual, Doc. No. ATT3.05A Rev 1 issued June 2010 with Supplements up to Supplement No 21. or later FAA approved revision, including Chap. 4: "Airworthiness Limitations" and Chap. 5: "Time Limits/ Maintenance Check".
- c) The appropriate Rotax 912 series engine maintenance manuals.
- d) Either the Instruction Manual GT Propellers Doc No. GPI.02 issued February 2003 or later approved revision for the GT ELICHE propeller configuration or ELPROP Propeller Maintenance manual Doc No. EP1.02 issued June 2005 or later approved revision for the ELPROP configuration.

NOTES:

- NOTE 1. Current weight and balance data including list of equipment included in the certificated empty weight and loading instructions, when necessary, must be provided for each airplane at the time of original certification, and remain with the airplane at all times thereafter. The certificated empty weight and corresponding center of gravity locations must include the following:
- Unusable fuel 0.92 US gal. (3.5 litres)
 - Maximum Oil Capacity - 3.6 US quarts (3.5 litres)
 - Maximum Cooling Liquid Capacity - 2.1 US quarts (2 litres)
 - Maximum Brake Fluid
- NOTE 2. Airplane operation must be in accordance with the CAO/EASA approved Airplane Flight Manual listed above. All placards listed in Section 2 must be displayed in clear view of the pilot.
- NOTE 3. Per 14 CFR Part 21.17(b), special class, JAR-VLA, the aircraft may receive a Standard Certificate of Airworthiness per 14 CFR Part 21, § 21.183. Part 14 CFR Part 91, § 91.205 (b) of the regulations applies to this airplane. (DAY/VFR Only).
- NOTE 4. Airworthiness Limitations are specified in the Section 2 LIMITATIONS chapter of the Flight Manual and Chapter 4 of the Instructions for Continued Airworthiness (Maintenance Manual) and are approved by the CAO/EASA and the FAA. These LIMITATIONS specify mandatory replacement times, and operating limitations, and may not be changed without FAA approval.
- Revisions to the Airworthiness Limitations must be approved by the FAA. The inspections, maintenance, repair and painting must be accomplished according to the Maintenance Manual or other procedures acceptable to the FAA.
- The instructions for continued airworthiness and life limits are described as follows:
- Airframe : Airplane Maintenance Manual (AMM) Doc. No. ATT3.05A rev 1, dated June 2010 or later approved revisions.
- Engine: Maintenance Manual (Line Maintenance) for Rotax Engine Type 912 Series Doc.No.899372, Edition 0 dated 01September,1998 or later approved revisions.
- Propeller: Instruction Manual GT Propeller Doc.No.GPI.02 dated February, 2003
or
later approved revisions
or
ELPROP Propeller Maintenance Manual Doc.No.EPI.02 dated Jun, 2005
or later approved revisions – see Note 7.

- NOTE 5. Information essential for the proper operation, maintenance and inspection of the airplane is contained in the AT-3R100 Flight Manual and Maintenance Manual.
- NOTE 6. All avionics installed in this aircraft must meet the applicable FAA Technical Standard Order (TSO) and/or equivalent FAA approved safety requirements
- NOTE 7. The plane operator is allowed to exchange propeller GT to propeller ELPROP. With the propeller ELPROP following documents are supplied:
- Authorized Release Certificate JAA/EASA FORM ONE,
 - ELPROP Propeller Maintenance Manual Doc. No. EPI.02,
 - Supplement No.21 to AT-3R100 Airplane Flight Manual, Doc. No. ATL3.05A,
 - Supplement No.21 to AT-3R100 Airplane Maintenance Manual, Doc. No. ATT3.05A.
- NOTE 8. In the case of imports the airplane it is required;
- Airplane Flight Manual Doc. No. ATL3.05A issued June 2010 or later approved revisions.
 - Airplane Maintenance Manual Doc .No. ATT3.05A Rev 1 dated June 2010 or later approved revisions
 - all internal and external placards to confirm to Chapter 8 of the Maintenance Manual Doc. No. ATT3.05A
- NOTE 9 AT-3R100 with serial numbers AT3-026 through AT3-055 must have the rudder flight control system modified per paragraph 3.2 of Mandatory Service Bulletin (MSB) ATB3.03.B, Issue 1, dated February 5, 2010 (EASA AD 2010-0025-E issued February 12, 2010). This modification replaces the cable guide pulleys with metallic ones, Part Number AT3.27.395.0. Daily inspections on the non-metallic ones are not allowed as an option.
- NOTE 10 All AT-3R100 airplanes with ELPROP 3-1-1P propeller must accomplish the initial inspection to determine if ELPROP 3-1-1P propeller has propeller serial number 3E.001 to 3E.088 inclusively installed. If so, initial inspection of the propeller hub must be accomplished per AERO MSB EPB.01.B and if no cracks the corresponding modification per this same MSB must be accomplished. If cracked, replace with a serviceable propeller. The required 50 flight hour repetitive inspections per this same AERO MSB EPB.01.B will be introduced and required in the AT-3R100 AMM ATT3.05A in chapter 4 airworthiness limitation section.

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