



**AGÊNCIA NACIONAL DE AVIAÇÃO CIVIL - BRASIL**

**TYPE CERTIFICATE DATA SHEET Nº EM-2010T01**

Type Certificate Holder:

**AUSTRO ENGINE GmbH**  
Rudolf-Diesel-Straße 11  
A-2700 Wiener Neustadt  
**AUSTRIA**

EM-2010T01 Sheet 01 AUSTRO ENGINE E4 27 January 2010
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Engines of models described herein conforming with this data sheet, which is part of Type Certificate No. 2010T01, meet the minimum standards for use in certificated aircraft in accordance with pertinent aircraft data sheets and applicable portions of the Brazilian Aeronautical Regulations provided they are installed, operated, and maintained as prescribed by the approved manufacturer's manuals and other instructions.

**I. GENERAL**

**MODEL** E4

**TYPE** The E4 engine is a 4 cylinders in line, liquid cooled, 4 stroke diesel cycle engine with double overhead camshaft. It is equipped with common rail high pressure direct injection, turbocharger, gearbox with reduction ratio of 1:1.69 and Electronic Engine Control Unit (EECU).

<b>RATINGS</b>	kW (Hp) at crankshaft rpm (Sea level pressure altitude)	E4
	Takeoff (5 min.)	123.5 (165.6) at 3 880



**II. AIRWORTHINESS LIMITATIONS**

<b>ALTITUDE</b>	m (ft)	
	Maximum Altitude	5 490 (18 000)
<b>TEMPERATURE LIMITS</b>	°C (°F)	
	Min. opening up Oil Temperature	50 (122)
	Oil Temperature (normal operation)	50 - 125 (122 - 257)
	Max. Oil Temperature	140 (284)
	Min. Ambient Temperature for Starting (normal)	-22 (-8)
	Min. Ambient Temperature for Starting (special procedure required, see Operational Manual)	-30 (-22)
	Min. Fuel Temperature during operation	-30 (-22)
	Min. opening up Cooling Fluid Temperature	60 (140)
	Max. Cooling Fluid Temperature	105 (221)
	Max. Gearbox Temperature	120 (248)
<b>SPEED LIMITS</b>	rpm (rpm propeller)	
	Max. Engine Over-speed (Crankshaft Speed)	4220 (2500)
	Take-off speed, maximum 5 minutes	3880 (2300)
	Maximum continuous speed	3550 (2100)
<b>MAXIMUM TURBOCHARGER SPEED</b>	rpm	172 000
<b>PRESSURE LIMITS</b>	kPa (psi)	
	Min. Fuel Pressure (at inlet of HP engine pump)	400 (58)
	Max. Fuel Pressure (at inlet of HP engine pump)	700 (101.5)
	Min. Oil Pressure	150 (21.8)
	Oil Pressure (normal operation)	250 - 650 (36.3 - 94.3)
	Max. Oil Pressure	650 (94.3)

**CERTIFICATION BASIS**

RBHA 21.29 and RBAC 33, which endorses the 14 CFR Part 33 effective 01 February 1965 and Amendments 33-1 through Amendment 33-20.

Model

E4

Date of Application

02 March 2009

Date Type Certificate Issued/Revised

27 January 2010

**IMPORT REQUIREMENTS**

Each engine imported separately and/or spare parts must be accompanied by an Airworthiness Certificate for Export and/or an Airworthiness Approval Tag, respectively, issued by EASA, attesting that the particular engine and/or parts were submitted to the governmental quality control before delivery and are in conformity with the ANAC approved type design.

**NOTES:**

- NOTE 1** Engine model numbers may include suffixes to define minor engine changes related to installation specific configurations. See MSB E4-002 for configuration specifications. The software of the electronic engine control for each application has specific software application data. See MSB E4-003 for the installation versions. Also refer to Installation Manual E4.02.01 for appropriate installation.
- NOTE 2** ENGINE MANUALS:  
Installation Manual: E4.02.01  
Operating Manual: E4.01.01  
Maintenance Manual: E4.08.04  
Overhaul Manual: None (See NOTE 6)
- NOTE 3** The E4 engine is approved for installation in RBAC 23 normal and utility category airplanes.
- NOTE 4** The E4 engine has been certified to use Jet A and Jet A1 fuel with cetane number 37 or above. Jet fuel with cetane number below 37 is not recommended. See Operation Manual E4.01.01.
- NOTE 5** The engine is approved for use with propellers and propeller governors as listed in IM E4.02.01. This approval does not include the approval of the propellers and their governors.
- NOTE 6** Overhaul of the engine and components is not authorized unless the appropriate overhaul manual is available.
- NOTE 7** The recommended Time Between Overhaul (TBO) is published in Maintenance Manual E4.08.04.
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- NOTE 8** The engine control system has been tested according to DO-160D for lightning protection and magnetic interference. The demonstrated levels are provided in the Installation Manual.
- NOTE 9** The Engine Electronic Control Unit (EECU) must not be installed in a dedicated fire zone. The installation conditions are defined in the Installation Manual.
- NOTE 10** The Engine Electronic Control Unit (EECU) must have a backup power source which are independent and isolated from the primary power supply when install on an aircraft.
- NOTE 11** Installation Assumptions: See Installation Manual.
- NOTE 12** Dispatch Limitations: No Time Limited Dispatch has been approved. All engine systems and equipment must be functional prior to aircraft take-off. Any detected engine system or equipment failure must be corrected before nest flight. For special instructions see OM E4.01.01.
- NOTE 13** The software of the EECU has been validated according to DO 178 B, level C.
- NOTE 14** SERVICE INFORMATION:  
Each of the documents listed below must state that it is approved by the European Aviation Safety Agency - EASA. Any such documents including those approved under a delegated authority, are accepted by the ANAC and are considered ANAC approved.
- Service bulletins;
  - Operation & Maintenance manuals;
  - Repair manuals and
  - Overhaul manuals.
- These approvals pertain to the type design only.
- NOTE 15** The following engine parameters must be monitored:
- Propeller speed;
  - Load;
  - Oil pressure;
  - Oil temperature;
  - Coolant temperature;
  - Gearbox temperature.
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**NOTE 16** Sales name of the E4 model: AE 300



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

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