



# *European Aviation Safety Agency*

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**EASA**

**TYPE-CERTIFICATE  
DATA SHEET**

**EASA.A.527**

**AQUILA AT01**

**AQUILA Aviation International GmbH**

OT Schönhagen  
Flugplatz  
14959 Trebbin  
Germany

For model: AT01  
AT01-100  
Variants: AT01-100A  
AT01-100B  
AT01-100C

Issue 05: 2 May 2016

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## **SECTION A: AT01**

### **A.I. General**

- |                                                     |                                     |
|-----------------------------------------------------|-------------------------------------|
| 1. Data Sheet No.:                                  | EASA.A.527                          |
| 2. a) Type:                                         | AQUILA AT01                         |
| b) Model:                                           | AT01                                |
| c) Variant:                                         |                                     |
| 3. Airworthiness Category:                          | Very Light Aircraft (VLA)           |
| 4. Type Certificate Holder:                         | AQUILA Aviation International GmbH  |
| 5. Manufacturer:                                    | AQUILA Aviation International GmbH  |
| 6. Certification Application Date:                  | 27-Feb-1998                         |
| 7. (LBA) National Certifying Authority, Date        | 21-Sept-2001 (LBA TCDS Number 1106) |
| 8. (EASA) National Authority Type Certificate Date: | 19-Nov-2008 (EASA.A.527)            |

### **A.II. EASA Certification Basis**

- |                                                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
|----------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1. Reference Date for determining the applicable requirements: | 27-Feb-1998                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| 2. Airworthiness Requirements:                                 | JAR-VLA, incl. Amd. VLA/92/1, dated 1-Jan-1992                                                                                                                                                                                                                                                                                                                                                                                                                        |
| 3. Special Conditions:                                         | SC235.01 "Connection Engine Mount/ Composite Airframe"<br>SC235.02 "Winglet"<br>Special Condition to CS-VLA for Night-VFR-Operation according to CRI-A01                                                                                                                                                                                                                                                                                                              |
| 4. Exemptions:                                                 | none                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| 5. Deviations:                                                 | none                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| 6. Equivalent Safety Findings:                                 | none                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| 7. Requirements elected to comply:                             | CS-23, Amdt. 2: for glass cockpit installation (Garmin G-500 / ASPEN PFD 1000) as Primary for Day- and Night VFR<br>§23.29, §23.303, §23.601, §23.603, §23.611, 23.771, §23.773, §23.777, §23.867, §23.1301, §23.1303, §23.1309, §23.1311, §23.1321, §23.1322, §23.1323, §23.1325, §23.1327, §23.1331, §23.1351, §23.1353, §23.1357, §23.1359, §23.1361, §23.1365, §23.1367, §23.1381, §23.1431, §23.1501, §23.1519, §23.1541, §23.1557, §23.1581, §23.1583, §23.1585 |

8. Environmental Standards: ICAO, Annex 16, Vol 1, Chapter X Original LBA, LSL Chapter X dated 1-Jan-1991
9. (Reserved) Additional National Requirements: none
10. (Reserved)

### **A.III. Technical Characteristics and Operational Limitations**

1. Type Design Definition: Drawing list,  
S/N AT01-100: Doc.-no LD-AT01-0030-100P  
S/N AT01-101 until 299: Doc.-no LD-AT01-0030-100
2. Description:
- Single-Engine, Low-Wing Aircraft
  - 2 Seats side-by-side
  - Dual Controls
  - Normal Tailplane Configuration
  - Composite Design
  - Fixed Tricycle Landing Gear with steerable nose wheel
3. Equipment: For Minimum Equipment List refer to AFM, Section 2 and for NVFR-operation refer to AFM-Supplement AVE 23, AVE 28 and/or AVE29, Section 2, latest approved Revision
4. Dimensions:
- |            |                    |
|------------|--------------------|
| Span:      | 10,3m              |
| Length:    | 7,35m              |
| Height:    | 2,4m               |
| Wing Area: | 10,5m <sup>2</sup> |
5. Engine:
- 5.1.1 Model: 1 Rotax 912 S3
- 5.1.2 Type Certificate: EASA TCDS E.121
- 5.1.3 Limitations: For power plant limits refer to AFM
6. Load Factors: +4; -2
7. Propeller:
- 7.1 Model: 1 MT-Propeller MTV-21-A/175-05
- 7.2 Type Certificate: LBA TCDS 32.130/86
- 7.3 Number of Blades: 2 Blades
- 7.4 Diameter: 1750 mm ± 5mm

- 7.5 Sense of Rotation: Clockwise in flight direction
8. Fluids:
- 8.1 Fuel: Refer to AFM (FM-AT01-1010-100)
- 8.2 Oil: Refer to AFM (FM-AT01-1010-100)
- 8.3 Coolant: Refer to AFM (FM-AT01-1010-100)
9. Fluid Capacities:
- 9.1 Fuel: Total: 120 liters (2 x 60 liters)  
Useable: 109,6 liters (2 x 54,8 liters)
- 9.2 Oil: Min: 2,55 liters  
Max: 3,00 liters
- 9.3 Coolant System Capacity: Min: 2,40 liters  
Max: 2,50 liters
10. Air Speeds:  $V_A = 112$  KIAS  
 $V_{FE} = 90$  KIAS  
 $V_{NO} = 130$  KIAS  
 $V_{NE} = 165$  KIAS
11. Maximum Operating Altitude: 14500 ft
12. Kinds of Operation: Day-VFR and Night-VFR
13. Maximum Weights: MTOW=750 kg
14. Centre of Gravity Range: Forward limit: 427 mm (31% MAC)  
Rear limit: 523 mm (40% MAC)
15. Datum: At wing root leading edge vertical to fuselage centre line.
16. Control Surface Deflections: refer to Maintenance Manual
17. Levelling Means: Wedge 800:77 (5,5°) on top of rear fuselage; 800 mm forward of horizontal stabilizer
18. Minimum Flight Crew: 1 pilot

19. Maximum Passenger Seating Capacity: 2 seats (1 pilot, 1 passenger)
20. Baggage/Cargo Compartments: Aft Baggage Compartment; max. allowable load: 40kg
21. Wheels and Tyres: refer to Maintenance Manual
22. (Reserved):

#### **A.IV. Operating and Service Instructions**

1. Flight Manual: FM-AT01-1010-100
2. Technical Manual: see Repair Manual and Spare Parts Catalogue
3. Repair Manual: MM-AT01-1020-100
4. Manual for Operation: see Flight Manual
5. Spare Parts Catalogue: PC-AT01-1030-100
6. Table of Dimensions, Limits and Clearances: see Flight Manual
7. Instruments and Aggregates: MZ-AT01-0150-001

**A.V. Notes:**

1. TCDS section A is valid for S/N AT01-100 until AT01-299
2. Approved Noise Level in accordance with the EASA Data Sheet for Noise TCDSN A.527
3. Production is only permitted under Production Organisation Approval.
4. Marketing name: AQUILA A210
5. All parts which are imposed to direct vertical sunlight have to be painted in white colour except of those areas provided for registration signs and warning paint.
6. This EASA TCDS replaces the LBA TCDS No 1106, issue 3 dated June 25, 2003 according to EASA information and policy paper to EC-Reg 1702/2003 Art. 2.
7. The operation under Night-VFR-conditions is allowed after accomplishment of the Service Bulletin SB-AT01-010 "Extension of the Kind of Operation to VFR-Night-Operation" except aircrafts where the Service Bulletin SB-AT01-011 "Modifications for Measuring and Photo Flight Operations" has been accomplished or with MC approval 10039259

## **SECTION B: AT01-100**

### **B.I. General**

- |                                                     |                                     |
|-----------------------------------------------------|-------------------------------------|
| 1. Data Sheet No.:                                  | EASA.A.527                          |
| 2. a) Type:                                         | AQUILA AT01                         |
| b) Model:                                           | AT01-100                            |
| c) Variant:                                         | AT01-100A, AT01-100B, AT01-100C     |
| 3. Airworthiness Category:                          | Very Light Aircraft (VLA)           |
| 4. Type Certificate Holder:                         | AQUILA Aviation International GmbH  |
| 5. Manufacturer:                                    | AQUILA Aviation International GmbH  |
| 6. Certification Application Date:                  | 27-Feb-1998                         |
| 7. (LBA) National Certifying Authority, Date        | 21-Sept-2001 (LBA TCDS Number 1106) |
| 8. (EASA) National Authority Type Certificate Date: | 19-Nov-2008 (EASA.A.527)            |

### **B.II. EASA Certification Basis**

- |                                                                |                                                                                                                                                                                                                                                                                                                                                                                                           |
|----------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1. Reference Date for determining the applicable requirements: | 27-Feb-1998                                                                                                                                                                                                                                                                                                                                                                                               |
| 2. Airworthiness Requirements:                                 | JAR-VLA, incl. Amd. VLA/92/1, dated 1-Jan-1992                                                                                                                                                                                                                                                                                                                                                            |
| 3. Special Conditions:                                         | SC235.01 "Connection Engine Mount/ Composite Airframe"<br>SC235.02 "Winglet"<br>Special Condition to CS-VLA for Night-VFR-Operation according to CRI-A01                                                                                                                                                                                                                                                  |
| 4. Exemptions:                                                 | none                                                                                                                                                                                                                                                                                                                                                                                                      |
| 5. Deviations:                                                 | none                                                                                                                                                                                                                                                                                                                                                                                                      |
| 6. Equivalent Safety Findings:                                 | none                                                                                                                                                                                                                                                                                                                                                                                                      |
| 7. Requirements elected to comply:                             | <u>Variant AT01-100A, AT01-100B</u><br>CS-VLA acc. MoC: MC-AT01-00600-100<br>CS-23, Amdt. 2: for glass cockpit installation (ASPEN PFD 1000 and Garmin G-500) as Primary for Day- and Night VFR<br>§23.29, §23.303, §23.601, §23.603, §23.611, 23.771, §23.773, §23.777, §23.867, §23.1301, §23.1303, §23.1309, §23.1311, §23.1321, §23.1322, §23.1323, §23.1325, §23.1327, §23.1331, §23.1351, §23.1353, |



§23.1357, §23.1359, §23.1361, §23.1365, §23.1367,  
§23.1381, §23.1431, §23.1501, §23.1519, §23.1541,  
§23.1557, §23.1581, §23.1583, §23.1585

Variant AT01-100C

CS-VLA acc. MoC: MC-AT01-00635-100  
CS-23, Amdt. 2: for glass cockpit installation  
(Garmin G-500 plus MVP-50P) as Primary for Day-  
and Night VFR

§23.29, §23.303, §23.561, §23.601, §23.603, 23.611,  
§23.771, §23.773, §23.777, §23.867, §23.1301,  
§23.1303, §23.1309, §23.1311, §23.1321, §23.1322,  
§23.1323, §23.1325, §23.1327, §23.1331, §23.1337,  
§23.1351, §23.1353, §23.1357, §23.1359, §23.1361,  
§23.1365, §23.1367, §23.1381, §23.1431, §23.1501,  
§23.1519, §23.1525, §23.1541, §23.1543, §23.1549,  
§23.1553, §23.1557, §23.1581, §23.1583, §23.1585

8. Environmental Standards: ICAO, Annex 16, Vol 1, Chapter X Original LBA, LSL  
Chapter X dated 1-Jan-1991
9. (Reserved) Additional National Requirements: none
10. (Reserved)

**B.III. Technical Characteristics and Operational Limitations**

1. Type Design Definition: Drawing list,  
S/N AT01-100A (B, C)-300 and ff:  
Doc.-no LD-AT01-0030-100
2. Description:
  - Single-Engine, Low-Wing Aircraft
  - 2 Seats side-by-side
  - Dual Controls
  - Normal Tailplane Configuration
  - Composite Design
  - Fixed Tricycle Landing Gear with steerable nose wheel
3. Equipment: For Minimum Equipment List refer to AFM, Section 2  
and for  
NVFR-operation refer to AFM-Supplement AS-01  
(variant AT01-100A), AS-05 (variant AT01-100B) and  
AS-06 (variant AT01-100C), Section 2, latest approved  
Revision

4. Dimensions: Span: 10,3m  
Length: 7,40m  
Height: 2,4m  
Wing Area: 10,5m<sup>2</sup>
5. Engine:
- 5.1.1 Model: 1 Rotax 912 S3
- 5.1.2 Type Certificate: EASA TCDS E.121
- 5.1.3 Limitations: For power plant limits refer to AFM
6. Load factors: +4; -2
7. Propeller:
- 7.1 Model: 1 MT-Propeller MTV-21-A/170-05
- 7.2 Type Certificate: LBA TCDS 32.130/86
- 7.3 Number of Blades: 2 Blades
- 7.4 Diameter: 1700 mm ± 5mm
- 7.5 Sense of Rotation: Clockwise in flight direction
8. Fluids:
- 8.1 Fuel: Refer to AFM (FM-AT01-1010-101 / -102 / -103)
- 8.2 Oil: Refer to AFM (FM-AT01-1010-101 / -102 / -103)
- 8.3 Coolant: Refer to AFM (FM-AT01-1010-101 / -102 / -103)
9. Fluid Capacities:
- 9.1 Fuel: Total: 120 liters (2 x 60 liters)  
Useable: 109,6 liters (2 x 54,8 liters)
- 9.2 Oil: Min: 2,55 liters  
Max: 3,00 liters
- 9.3 Coolant System Capacity: Min: 2,40 liters  
Max: 2,50 liters
10. Air Speeds: V<sub>A</sub> = 112 KIAS  
V<sub>FE</sub> = 90 KIAS  
V<sub>NO</sub> = 130 KIAS  
V<sub>NE</sub> = 165 KIAS

11. Maximum Operating Altitude: 14500 ft
12. Kinds of Operation: Day-VFR and Night-VFR
13. Maximum Weights: MTOW=750 kg
14. Centre of Gravity Range:  
Forward limit: 427 mm (31% MAC)  
Rear limit: 523 mm (40% MAC)
15. Datum: At wing root leading edge vertical to fuselage centre line.
16. Control Surface Deflections: refer to Maintenance Manual MM-AT01-1020-110
17. Levelling Means: Wedge 800:77 (5,5°) on top of rear fuselage; 800 mm forward of horizontal stabilizer
18. Minimum Flight Crew: 1 pilot
19. Maximum Passenger Seating Capacity: 2 seats (1 pilot, 1 passenger)
20. Baggage/Cargo Compartments: Aft Baggage Compartment; max. allowable load: 40kg
21. Wheels and Tyres: refer to Maintenance Manual MM-AT01-1020-110
22. (Reserved):

#### **B.IV. Operating and Service Instructions**

1. Flight Manual: Aircraft Flight Manual:  
FM-AT01-1010-101 (variant AT01-100A)  
FM-AT01-1010-102 (variant AT01-100B)  
FM-AT01-1010-103 (variant AT01-100C)
2. Technical Manual: Aircraft Maintenance Manual  
MM-AT01-1020-110
3. Service Bulletins: LSB-AT01-001
4. Service Information: LSI-AT01-001

**B.V. Notes:**

1. TCDS section B is valid for S/N AT01-100A (B, -C)-300 and ff.
2. Approved Noise Level in accordance with the EASA Data Sheet for Noise TCDSN A.527
3. Production is only permitted under Production Organisation Approval.
4. All parts which are imposed to direct vertical sunlight have to be painted in white colour except of those areas provided for registration signs and warning paint.

## **ADMINISTRATIVE SECTION**

### I. Acronyms

A.C. – Advisory Circular  
A.D. – Airworthiness Directives  
AFM – Airplane Flight Manual  
C.G. – Centre of Gravity  
CRI – Certification Review Items  
CS – Certification Specifications  
EASA – European Aviation Safety Agency  
EFIS – Electronic Flight Information System  
EU – European Union  
FC – Flight Crew  
FT – Feet  
GAL - Gallons  
ICAO – International Civil Aviation Organization  
IFR – Instrument Flight Rules  
KCAS – Knots Calibrated Air Speed  
KG – Kilo Grams  
KIAS – Knots Indicated Air Speed  
LBS – Pounds  
MAC – Mean Aerodynamic Chord  
MIL – Military Standard  
N.A.A. – National Aviation Authority  
OSD – Operational Suitability Data  
S.B. – Service Bulletin  
T.O. – Take Off  
TC – Type Certificate  
TCDS – Type Certificate Data Sheet  
TCDSN – Type Certificate Data Sheet - Noise.  
TSO – Technical Standards Order  
VFR – Visual Flight Rules

## II. Type Certificate Holder Record

<b>Date</b>	<b>Type Certificate Holder</b>
21 Sep 2001	AQUILA Aviation Technische Entwicklungen GmbH Flugplatz Schönhagen 14959 Schönhagen Germany
19 Nov 2008	AQUILA Aviation by Excellence AG Flugplatz Schönhagen 14959 Schönhagen Germany
23 Dec 2011	Aquila Aviation by Excellence GmbH Flugplatz 14959 Trebbin OT Schönhagen Germany
29 May 2013	AQUILA Aviation GmbH OT Schönhagen Flugplatz 14959 Trebbin Germany
2 May 2016	AQUILA Aviation International GmbH OT Schönhagen Flugplatz 14959 Trebbin Germany

## III. Change Record

<b>Issue</b>	<b>Date</b>	<b>Changes</b>
Issue 01	19 Nov 2008	Initial Issue, Transfer of LBA TC 1106 from AQUILA Technische Entwicklungen GmbH to AQUILA Aviation by Excellence AG
Issue 02	25 Mar 2010	Revision of the TCDS after approval of Major Change AT01-00219 "DayVFR/Night-VFR operation"
Issue 03	20 April 2012	Change of corporate from "AQUILA Aviation by Excellence AG" to "Aquila Aviation by Excellence GmbH" and MC approval 10039259
Issue 04	29 May 2013	Implementation of section B: model AT01-100 and variants AT01-100A, AT01-100B and AT01-100C, editorial corrections of section A (model AT01), Change of corporate from "Aquila Aviation by Excellence GmbH" to "AQUILA Aviation GmbH"
Issue 05	2 May 2016	Transfer of EASA TC A.527 from AQUILA Aviation GmbH to AQUILA Aviation International GmbH