# TYPE-CERTIFICATE

# DATA SHEET

N°EASA.A.661

**for**

INTEGRAL

**Type Certificate Holder**

AURA AERO

Aéroport Toulouse Francazal,
135 avenue du Comminges
31270 Cugnaux
France

For models: INTEGRAL R

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**SECTION A: INTEGRAL R**

**A.I. General**

| | |
|---|---|
| 1. Type/ Model/ Variant | |
| 1.1 Type | INTEGRAL |
| 1.2 Model | INTEGRAL R |
| 1.3 Variant | None |
| 2. Airworthiness Category | CS-23, Normal category |
| 3.a. Type Certificate Holder | AURA AERO<br>Aéroport Toulouse Francazal,<br>135 avenue du Comminges<br>31270 Cugnaux<br>France |
| 3.b. Manufacturer | AURA AERO<br>Aéroport Toulouse Francazal,<br>135 avenue du Comminges<br>31270 Cugnaux<br>France |
| 4. EASA Type Certification Application Date | 12 March 2019 |
| 5. State of Design Authority | EASA |
| 6. State of Design Authority Type Certificate Date | N/A |
| 7. EASA Type Certification Date | 18 December 2024 |

**A.II. EASA Certification Basis**

| | |
|---|---|
| 1. Reference Date for determining the applicable requirements: | 12 March 2019 |
| 2. Airworthiness Requirements | EASA CS-23, Certification Specifications for Normal Category Aeroplanes, Amdt. 5, dated 29 March 2017 |
| 3. Special Conditions | None |
| 4. Exemptions | None |
| 5. (Reserved) Deviations | None |
| 6. Equivalent Safety Findings | None |
| 7. Environmental Protection | see TCDSN EASA.A.661 |

## A.III. Technical Characteristics and Operational Limitations

| | | |
|---|---|---|
| 1. Type Design Definition: | I0000015.A001.00, INTEGRAL R TYPE DESIGN DEFINITION, issue F or later approved issue | |
| 2. Description: | Two seat, side by side configuration, aerobatic airplane, low wing, with fixed main gear in tail-wheel configuration, structure made of wood reinforced with carbon, single reciprocating engine and tractor propeller. | |
| 3. Equipment: | Refer to Section 03-00-04 of the Aircraft Maintenance Manual, latest approved issue | |
| 4. Dimensions: | Wing span | 8.78 m / 28.80 ft |
| | Height | 2.48 m / 8.14 ft |
| | Length | 7.26 m / 23.82 ft |
| | Wing area | 9.97 m² / 107.32 ft² |

5. Engine

| | |
|---|---|
| 5.1. Model | Lycoming AEIO-390-A3B6 |
| 5.2 Type Certificate | EASA.IM.E.097 |
| 5.3 Limitations | Refer to the latest version of TCDS EASA.IM.E.097 |

6. Load factors

| | | |
|---|---|---|
| BC Category: | +5 g / -3 g | at MTOW 1005 kg |
| A2s Category (double seat) | +6 g / -4 g | at MTOW 930 kg |
| A2 Category (double seat): | +6 g / -4 g | at MTOW 910 kg |
| A1 Category (single seat): | +6 g / -4 g | at MTOW 795 kg |

7. Propeller

| | |
|---|---|
| 7.1 Model | MT-Propeller MTV-15-B-C / C-193-25 |
| 7.2 Type Certificate | EASA.P.098 |
| 7.3 Number of blades | 2 |
| 7.4 Diameter | 1 930 mm / 76 in |
| 7.5 Sense of Rotation | clockwise, seen from pilot's point of view |

8. Fluids

| | |
|---|---|
| 8.1 Fuel | Refer to applicable AFM section. |
| 8.2 Oil | Refer to applicable AFM section. |
| 8.3 Coolant | N/A |

9. Fluid capacities

9.1 Fuel

| | |
|---|---|
| Total capacity: | 169 l / 44.6 US gal |
| Usable capacity: | 124 l / 32.7 US gal |
| Usable capacity for aerobatics: | 70 l / 18.5 US gal |

9.2 Oil

| | |
|---|---|
| Max. sump capacity: | 7.6 l / 8 US qts. |
| Min. sump capacity: | 3.5 l / 4 US qts. *) |

*) max +15°/-20° pitch, no aerobatics

| | |
|---|---|
| 9.3 Coolant system capacity | N/A |
| 9.4 Smoke Oil | N/A |

10. Air Speeds (Indicated)

| | | |
|---|---|---|
| $V_S$ – Stall Speed: | BC Category: | 112 km/h / 61 kts |
| | A2s Category: | 108.5 km/h / 58.3 kts |
| | A2 Category: | 107.5 km/h / 57.7 kts |
| | A1 Category: | 100.5 km/h / 54 kts |
| $V_A$ – Manoeuvring Speed: | BC Category: | 278 km/h / 150 kts |
| | A1/A2/A2s Category: | 294 km/h / 159 kts |
| $V_{NO}$ – Max. Structural Cruising speed: | BC Category: | 294 km/h / 159 kts |
| | A1/A2/A2s Category: | 294 km/h / 159 kts |
| $V_{NE}$ – Never Exceed Speed | | 323 km/h / 174 kts |

11. Flight Envelope

| | |
|---|---|
| Max. operating altitude above MSL: | 3 810 m / 12 500 ft |

12. Approved Operations Capability

VFR-Day

13. Maximum Masses

| | | |
|---|---|---|
| Maximum take-off & landing: | BC Category: | 1005 kg / 2215 lbs |
| | A2s Category: | 930 kg / 2050 lbs |
| | A2 Category: | 910 kg / 2006 lbs |
| | A1 Category: | 795 kg / 1753 lbs |

14. Centre of Gravity Range

| | | |
|---|---|---|
| Maximum Forward CG: | BC Category: | 24% WRC - 798 mm |
| | A1/A2/A2s Category: | 24% WRC - 798 mm |
| Maximum Rearward CG: | BC Category: | 32% WRC - 896 mm |
| | A1 Category: | 29% WRC – 854 mm |
| | A2/A2s Category: | 30.5% WRC - 875 mm |

15. Datum

Firewall

16. Control surface deflections

| | |
|---|---|
| Aileron: | +20° (down) / -24° (up) |
| Elevator: | +23° (down) / -20° (up) |
| Rudder: | ± 20° |
| Elevator trim tab: | +8.6° (down)/- 18° (up) |

17. Levelling Means

Fuselage Upper Flange

18. Minimum Flight Crew

1 pilot

19. Maximum Passenger Seating Capacity

1 Passenger

20. Baggage/ Cargo Compartments

| | |
|---|---|
| Max. mass in baggage compartment: | 30 kg / 66 lbs |
| The baggage compartment must be empty for aerobatics. | See AFM for further information. |

21. Wheels and Tyres

| | |
|---|---|
| Main Wheel Tyre Size: | 5.00-5”, 8-ply |
| Tail Wheel Tyre Size: | 6” |

22. (Reserved)

## A.IV. Operating and Service Instructions

1. Flight Manual

| | | |
|---|---|---|
| I0100018.A001.01 | Aircraft Flight Manual (AFM) | issue A or later EASA approved issue |

2. Maintenance Manual

| | | |
|---|---|---|
| I0100019.A001.01 | Aircraft Maintenance Manual (AMM) | issue A or later approved issue |

3. Instructions for Continued Airworthiness

| | | |
|---|---|---|
| I0100025.A001.01 | Instructions for Continued Airworthiness (ICA) | issue A, or later approved issue |

4. Structural Repair Manual

N/A

5. Weight and Balance Manual

Section VI of AFM

6. Illustrated Parts Catalogue

N/A

**A.V. Notes**

1. Lifetime limited to 5 000 hours until the completion of the Fatigue testing.

2. Black or dark blue paints are prohibited on control surfaces except when individually approved under EASA system.

3. For AMC used to comply with CS-23 amendment 5 see the “Explanatory Note No.: TCDS EASA.A.661” document published along with this TCDS on EASA website.

**SECTION ADMINISTRATIVE**

## I. Acronyms & Abbreviations

| | |
|---|---|
| ° | Degree plane angle |
| °C | Degrees Celsius / Centigrade |
| °F | Degrees Fahrenheit |
| AEPS | Aircraft Emergency Parachute System |
| AFM | Airplane Flight Manual |
| Amdt. | Amendment |
| AMM | Airplane Maintenance Manual |
| CHT | Cylinder Head Temperature |
| CRI | Certification Review Item |
| CS | Certification Specifications |
| CG | Center of Gravity |
| EASA | European Union Aviation Safety Agency |
| ft | Feet; 1 foot = 0.3048 m |
| ft² | Square feet; 1 ft² = 0.093 m² |
| g | Acceleration (9.81 m/s2)) |
| IAS | Knots Indicated Airspeed |
| in. or ‘’ | Inch; 1’’ = 25.4 mm |
| kts | Knots |
| kg | Kilogrammes |
| kIAS | Knots Indicated Airspeed |
| km/h | Kilometre per hour; 1 km/h = 0,54 knots |
| l | Liter |
| lb | Pound; 1 Pound = 0.4536 kg |
| lbs | Pounds |
| m | Meter; 1 m = 3.2808 ft |
| m² | Square meter; 1 m² = 10.764 ft² |
| max. | Maximum |
| min. | Minimum |
| mm | Millimeters |
| MSL | Mean Sea Level |
| MTOW | Maximum Take-Off Weight |
| N/A | Not Applicable |
| POH | Pilot's Operating Handbook |
| RPM | Revolutions per minute |
| TCDNS | Type Certificate Data Sheet Noise |
| US gal. | US Gallon (3.785 liters) |
| US qts | quarts = ¼ gallon = 0.95 litre |
| VFR | Visual Flight Rules |
| $V_{NE}$ | Never Exceed Speed |
| $V_{NO}$ | Maximum structural cruising speed |
| $V_A$ | Maximum manoeuvring speed |
| WRC | Wing Root Chord |

## II. Type Certificate Holder Record

AURA AERO
Aéroport Toulouse Francazal,
135 avenue du Comminges
31270 Cugnaux
France

## III. Change Record

| Issue | Date | Changes | TC Issue No. & Date |
|---|---|---|---|
| Issue 01 | 18-DEC-2024 | Initial Issue | Initial Issue, 18-DEC-2024 |
| Issue 02 | 31-JUL-2026 | A.III.9; 10; 14 & 16 updated (typo error) | Initial Issue, 18-DEC-2024 |
| Issue 03 | 21-SEP-2026 | A.III.1; 6; 10; 13 & 14 updated (typos and MOD I-B005) | Initial Issue, 18-DEC-2024 |
| | | | |

-END-