



TYPE-CERTIFICATE DATA SHEET

N°EASA.A.661

for
INTEGRAL

Type Certificate Holder
AURA AERO

Aéroport Toulouse Franczal,
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 Aéroport Toulouse Francatzal, 135 avenue du Comminges 31270 Cugnaux France
3.b. Manufacturer	AURA AERO Aéroport Toulouse Francatzal, 135 avenue du Comminges 31270 Cugnaux 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 E 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 m ² / 107.32 ft ² | |
| 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 | |
| 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
	A1/A2 Category:	112 km/h / 61 kts
V _A – Manoeuvring Speed:	BC Category:	278 km/h / 150 kts
	A1/A2 Category:	294 km/h / 159 kts
V _{NO} – Max. Structural Cruising speed:	BC Category:	294 km/h / 159 kts
	A1/A2 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
	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 Category:	24% WRC - 798 mm
Maximum Rearward CG:	BC Category:	32% WRC - 896 mm
	A1 Category:	29% WRC – 854 mm
	A2 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.
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
ft ²	Square feet; 1 ft ² = 0.093 m ²
g	Acceleration (9.81 m/s ²)
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
m ²	Square meter; 1 m ² = 10.764 ft ²
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	Section 9, 10, 14 & 16 updated (typo error)	Initial Issue, 18-DEC-2024

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