



TYPE CERTIFICATE DATA SHEET Nº ER-2021T04

Type Certificate Holder:

AIRBUS HELICOPTERS
 Aéroport International Marseille-Provence
 13725 Marignane Cedex
France

ER-2021T04-00

Sheet01

AIRBUS HELICOPTERS

H160-B

14 September 2021

This data sheet, which is part of Type Certificate No. 2021T04, prescribes conditions and limitations under which the product, for which the Type Certificate was issued, meets the airworthiness requirements of the Brazilian Civil Aviation Regulations.

I - Model H160-B (Transport Category A and B Rotorcraft), approved 14 September 2021.

ENGINE 2 ARRANO 1A (SAFRAN HELICOPTER ENGINES)

FUEL JET A, JET A-1, JP-8, JP8+100, JP-5, No.3 Jet Fuel,
 TS-1 (TC-1) / RT(PT)

For specifications and more details refer to approved Brazilian RFM.

ENGINE LIMITS

	Torque limits [%] at MBG input	Gas generator rpm [%]	Temperature TOT [°C]
AEO 20s transient	108%	46550 (105.5%)	934
Take-off / 30-min AEO	100% up to Vy+10 kt 93.7% above Vy+ 30 kt	45910 (104.0%)	912
AEO-MCP	93.6%	45470 (103.0%)	886
OEI (30 sec)	145% (72,5% at output level)	47590 (107.8%)	991
OEI (2 min)	127.5% (63,8% at output level)	46620 (105.6%)	957
OEI CT	112.1% (56.0% at output level)	46130 (104.5%)	914

OIL For approved engine, MGB, TGB oils/lubricants, refer to the Brazilian RFM.

HYDRAULIC FLUIDS MIL-PRF-83282 or MIL-PRF-87257

AIRSPEED LIMITS (IAS) VNE PWR ON = 170 KIAS up to 5000 ft PA
For reduction of VNE with altitude refer to approved RFM

VNE OEI = VNE PWR OFF = VNE PWR ON - 35 KIAS
For other speed limitations refer to approved RFM

ROTOR LIMITS

Power on:

NR regulated range AEO	96 - 105.3 %	(308.7 – 338.6 rpm)
Reference	100.0 %	(321.6 rpm)
Maximum CT	107.8 %	(346.7 rpm)
Minimum CT AEO	92.0 %	(295.9 rpm)
Minimum CT OEI	95.5 %	(307.1 rpm)
Minimum transient	83.0 %	(266.9 rpm)

Power off:

Maximum transient	117.0 %	(376.3 rpm)
Maximum CT	109.8 %	(353.1 rpm)
Minimum CT	92.0 %	(295.9 rpm)
Minimum transient	83.0 %	(266.9 rpm)

C. G. RANGE

Longitudinal C.G. limits

maximum forward limit:

5092 mm aft of DP at 5300 kg

5130 mm aft of DP at 6050 kg

maximum rearward limit:

5390 mm aft of DP at 4500 kg

5287 mm aft of DP at 6050 kg

Lateral C.G Limits

maximum deviation on right / left:

65 mm at 5500 kg

20 mm at 6050 kg

For detailed data refer to approved Brazilian RFM

DATUM

Longitudinal: the datum plane (STA 0) is located at 5 217 mm forward of the main rotor head centre

Lateral: fuselage symmetry plane

LEVELLING MEANS

Levelling reference marking on upper deck on LH side near to MGB between frames 3 and 4

MAXIMUM WEIGHT

• in-flight: 6050 kg

• on-ground: 6100 kg

MAXIMUM PASSENGERS

14 (including Flight Crew)

MINIMUM CREW	VFR - one pilot (right seat) IFR - one pilot (right seat)
MAXIMUM BAGGAGE	Cargo floor Max load: 300 kg (330 kg with the optional cargo extension installed and with mandatory approved restraint nets) Cargo floor Max unit load: 300 kg/m ² For complementary limitations and specific loading conditions refer to approved RFM
FUEL CAPACITY	Max usable fuel capacity: 1440 liters Unusable fuel: 9.9 liters
OIL CAPACITY	Engine (each): 5.8 liters MGB: 24 liters TGB: 0.5 liters Hydraulic system: Left circuit: 5.1 liters Right circuit: 5.3 liters
ALTITUDE LIMITS	Flight altitude -1500 ft to 20000 ft PA Take-off and landing altitude: • Minimum: -1500 ft PA and -4600ft DA • Maximum: - Category B: 13000 ft DA - Category A clear area: 12500 ft DA
TEMPERATURE OPERATING LIMITS	From -20°C to ISA+37°C limited to OAT +50°C
ROTOR BLADE AND CONTROL MOVEMENTS	For rigging information, refer to Maintenance Manual.
SERIAL NUMBERS	A Certificate of Airworthiness for export as noted under "Import Requirements" must be submitted for each individual rotorcraft for which application for Brazilian airworthiness certification is made (See Note 5).
IMPORT REQUIREMENTS	A Brazilian Certificate of Airworthiness may be issued on the basis of a Certificate of Airworthiness for Export issued by the EASA including the following statement: "The aircraft covered by this Certificate has been inspected and found to be in conformity with the Brazilian approved type design as defined by the ANAC Type Certificate No. 2021T04 and is in condition for safe operation. Compliance with Airworthiness Directives (ADs) has been checked for ADs issued and adopted by EASA, and ADs published by ANAC."

CERTIFICATION BASISModel H160-B:

RBAC 21, amendment 8 effective 1 July 2021, Section 21.29, Brazilian Aeronautical Certification Regulations, including:

Airworthiness requirements:

RBAC 29, including amendments 29-1 through 29-53.

Emissions requirements:

RBAC 34, Subpart B, including amendments 34-1 through 34-4, covered by CS 34 Amendment 2 (implementing Emission Requirements Chapter 2 of Part II of Volume II, Third Edition (Amendment 8) of ICAO Annex 16 to the Chicago Convention).

Noise requirements:

RBAC 36, including amendments 36-1 through 36-28, covered by CS 36 Amendment 4 (implementing the Noise Requirements Chapter 8 of Part II of Volume I, Seventh Edition (Amendment 11-B) of ICAO Annex 16 to the Chicago Convention).

The compliance was verified through equivalency finding to EASA Certification Specification 29 (CS-29 Amendment 3 except for CS 29.917, CS 29.927, and CS 29.1585 of CS-29 Amendment 5), including EASA issued Special Conditions, Equivalent Safety Findings, Deviations accepted by ANAC and additional ANAC issued Equivalent Level of Safety as noted:

EASA Special Conditions adopted by ANAC:

- SC E-01 - Extended Take-Off Power Duration
- SC E-32 - Continued Flight with Cargo/Baggage Compartment Fire Detected
- SC F-01 - Protection from the effects of High Intensity Radiated Fields (HIRF)
- SC F-13 - Non-rechargeable Lithium Battery Installations
- SC F-35 - Equipment, Systems and Network Information Security

EASA Equivalent Safety Findings adopted by ANAC:

- ESF D-15 - CS 29.807(c) - Passenger emergency exits / other than side-of-fuselage
- ESF D-16 - CS 29.807 (d)(2) and (d)(3) - Ditching emergency exit for passengers
- ESF D-17 - CS 29.855 - Fires in cargo and baggage compartments
- ESF D-19 - CS 29.807 (a) (4) - Passenger emergency exits
- ESF E-07 - CS 29.1203(d) - Fire detection electrical circuit testability
- ESF E-28 - CS 29.1145 - Ignition Switches

CERTIFICATION BASIS**(CONT.)**

- ESF E-29 - CS 29.1195 - Multipurpose Fire Extinguishing System
- ESF E-35 - CS 29.1191 - Backside Fire Ignition
- ESF F-03 - CS 29.1305, CS 29.1351, CS 29.1435 - Part time display of vehicle parameters
- ESF F-04 - CS 29.1303(g)(2), CS 29 App B VIII(a)(2) - Independent Power Source for Standby Attitude Instrument
- ESF F-05 - CS-29, Appendix B VIII c – Thunderstorm Lights
- ESF G-03 - CS 29.1305, CS 29.1309, CS 29.1525, CS 29.1549 - Engine Training Mode
- ESF G-05 - CS 29.1545, CS 29.1549 - Airspeed and Powerplant indicators green arcs
- ESF G-06 - CS 29.1555(c)(1) - Usable fuel capacity marking

EASA deviations adopted by ANAC:

- DEV D-21 - CS 29.735 (c) (2) - Electric Brake Slope Landing

ANAC Equivalent Level of Safety:

- ELOS FCAR EI-01 - RBAC 21.29(a)(3) and RBAC 21.41-I – Translation of the "EXIT" illuminated equipment. Ordinance No. 5.480 dated 14 July 2021.

REQUIRED EQUIPMENT

The basic equipment required as prescribed by the applicable airworthiness regulations (see Certification Basis) must be installed in the rotorcraft for certification.

A Brazilian RFM approved by the EASA on behalf of the ANAC shall be carried on the rotorcraft.

DATA PERTINENT TO ALL MODELS:**NOTES:****NOTE 1** Weight and balance:

A current weight and balance report, including a list of required equipment and list of equipment included in certificated empty weight, and loading instructions, when necessary, must be provided for each rotorcraft at the time of original certification.

NOTE 2 Markings and placards:

Rotorcraft operation must be in accordance with the Brazilian Approved Rotorcraft Flight Manual. All placards required by the Brazilian Approved Rotorcraft Flight Manual, the applicable operating rules, and the Certification Basis must be installed in the aircraft.

The following placard must be displayed in front of and in clear view of the pilot:

"THIS HELICOPTER IS APPROVED FOR DAY-TIME AND NIGHT-TIME VFR AND IFR OPERATIONS.

THIS HELICOPTER MUST BE OPERATED IN COMPLIANCE WITH THE OPERATING LIMITATIONS SPECIFIED IN APPROVED ROTORCRAFT FLIGHT MANUAL. THE AIRWORTHINESS LIMITATIONS SECTION OF THE ROTORCRAFT MAINTENANCE MANUAL MUST BE COMPLIED WITH"

- NOTE 3** Continuing airworthiness: See approved ALS of the Maintenance Manual.
- NOTE 4** Operating Limitations:
VFR day and night and IFR in non-icing conditions
Flight in falling and blowing snow without inlet barrier filter installed is prohibited
- NOTE 5** Manufacturer's eligible serial numbers: s/n 1002 and subsequent.
- NOTE 6** The certified optional installations are each approved independently of the basic helicopter and are part of the relevant approved Flight Manual.
- NOTE 7** The H160-B is certified for ditching with the optional installations and operating procedures as defined in approved RFM.

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This TCDS is available at ANAC website:

<https://sistemas.anac.gov.br/certificacao/Produtos/EspecificacaoOrgE.asp>

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