



TYPE CERTIFICATE DATA SHEET Nº ER-2020T07

Type Certificate Holder:

KAMAN AEROSPACE CORPORATION
P.O. Box 2
Bloomfield, Connecticut 06002
USA

ER-2020T07-00
Sheet 01

KAMAN
K-1200

03 December 2020

This data sheet, which is part of Type Certificate No. 2020T07, prescribes conditions and limitations under which the product, for which the Type Certificate was issued, meets the airworthiness requirements of the Brazilian Aeronautical Regulations.

I - Model K-1200 (Normal Category Rotorcraft), approved 03 December 2020.

ENGINE 1 Honeywell (Textron Lycoming), T5317A-1 (EM-2012T11)

FUEL Jet A, Jet A-1, Jet B, JP-4, JP-5, JP-8 and PRC nº 3 Fuels. See Notes 5 and 6.

OIL Engine – Type MIL-L-7808 or MIL-L-23699 See Note 7.
Transmission – Dexron II or Dexron III

ENGINE LIMITS

SEA LEVEL STATIC / STANDARD DAY

	Engine Torque Pressure	Gas Generator Speed (25,150 r.p.m.= 100%)	Exhaust Gas Temperature (T9)
TAKEOFF	65 psi	26,400 r.p.m. (105 %)	648°C
MAXIMUM CONTINUOUS	61 psi	25,400 r.p.m. (101 %)	626°C

TRANSMISSION LIMITS

TORQUE PRESSURE

	<u>NO EXTERNAL LOAD</u>	<u>WITH EXTERNAL LOAD</u>
TAKEOFF	40 psi	58 psi (0 - 46 km/h) (0 - 25 Knots) 45 psi (> 46 km/h) (> 25 Knots)
MAXIMUM CONTINUOUS	40 psi	45 psi (0 - 148 km/h) (0 - 80 Knots)

ROTOR LIMITS**POWER OFF**Maximum 100 % N_r (260 r.p.m.)Minimum 75 % N_r (195 r.p.m.)**POWER ON**Maximum 105 % N_r (273 r.p.m.)Minimum 100 % N_r (260 r.p.m.) ≤ 3.175 kg (7,000 pounds)Minimum 104 % N_r (270 r.p.m.) > 3.175 kg (7,000 pounds)Minimum 104 % N_r (270 r.p.m.) for operations above 3.048 m (10,000 feet) density altitudeMaximum 100 % N_r (260 r.p.m.) for ground extended operations.**AIRSPEED LIMITS (CAS)**V_{NE} (never exceed) Power On**No External Load:**

100 kcas (100 KIAS), S.L. to 1.524 m (5,000 feet) density altitude. Decrease 5,5 km/h (3 knots) per 305 m (1,000 ft) above 1.524 m (5,000 ft) density altitude.

70 kcas (70 KIAS) (with HEC, See Note 10)

With External Load:

80 kcas (80 KIAS), S.L. to 1.524 m (5,000 feet) density altitude. Decrease 5,5 km/h (3 knots) per 305 m (1,000 ft) above 1.524 m (5,000 ft) density altitude.

V_{NE} Power Off

80 kcas (80 KIAS), S.L. to 1.524 m (5000 feet) density altitude. Decrease 5,5 km/h (3 knots) per 305 m (1,000 ft) above 1.524 m (5,000 ft) density altitude.

MAXIMUM GROUNDSPEED

46 km/h (25 Knots) (nose wheel locked)

18 km/h (10 Knots) (nose wheel unlocked)

CG RANGE**CG****GROSS WEIGHT****LATERAL CG LIMITS**

4,24 m (167.0 in) 2.268 to 5.443 kg (5,000 to 12,000 lb) ± 0,03 m (1.25 in)

4,30 m (169.5 in) 5.443 kg (12,000 lb) ± 0,03 m (1.25 in)

4,34 m (171.0 in) 3.175 kg (7,000 lb) ± 0,03 m (1.25 in)

4,37 m (172.0 in) 2.721 to 2.268 kg (6,000 to 5,000 lb) ± 0,03 m (1.25 in)

Straight line variation between points shown.

EMPTY WEIGHT CG RANGE

None

DATUM

0,16 m (6.265 in) forward of nose.

LEVELING MEANS

No leveling plate; level at cockpit door sill per instructions in Section 08-00-00 of Kaman Model K-1200 K-MAX Maintenance and Servicing Instructions, Manual KMM.

MAXIMUM WEIGHT	No External Load:	3.175 kg (7,000 lb) (see notes 8, 9 and 11)
	With External Load:	5.443 kg (12,000 lb)
MINIMUM CREW	1 at 2,74 m (108.0 in)	
NO. OF SEATS	1 at 2,74 m (108.0 in)	
MAXIMUM BAGGAGE	226,8 kg (500 lb); 488 kg/m ² (100 lbs/ft ²)	
FUEL CAPACITY	865 l (228.5 US gals) total. 831 l (219.5 US gals) useable at 4,11 m (161.83 in) (See Note 1).	
OIL CAPACITY	12,15 l (3.21 US gals)	
MAXIMUM OPERATING (DENSITY) ALTITUDE	4.572 m (15,000 ft) (day/night VFR)	
AMBIENT TEMPERATURE LIMITS	-32° C (-25.6° F) to +49° C (+120° F)	
ROTOR BLADE CONTROL MOVEMENTS	For rigging information, refer to Section 67-00-00 of Kaman Model K-1200 K-MAX Maintenance and Servicing Instructions, Manual KMM.	
SERIAL NUMBER ELIGIBLE	A94-0004 and up are eligible.	
IMPORT ELIGIBILITY	A Brazilian Certificate of Airworthiness may be issued on the basis of an FAA Export Certificate of Airworthiness (or a third country Export Certificate of Airworthiness, in case of used aircraft imported from such country), including the following statement: "The aircraft covered by this certificate has been inspected, tested, and found to be in conformity with the Brazilian approved type design as defined by the Brazilian Type Certificate no. 2020T07 and in condition of safe operation".	
CERTIFICATION BASIS	Brazilian Type Certificate No. 2020T07 issued on 03 December 2020 based on the RBAC 21.29 and RBAC 27, which endorses the 14 CFR Part 27 effective 01 February 1965, and amendments 27-1 through 27-28. Equivalent Safety Finding for RBAC 27 / 14 CFR Part 27.173(b) Static Longitudinal Stability. RBAC 36 corresponding to 14 CFR part 36, effective December 1, 1969, and amendments 36-1 through 36-20.	

Production rotorcraft modification additional requirements as follows:

Induction System Icing Protection: Compliance has been established with the falling and blowing snow requirements of RBAC 27 / 14 CFR 27.1093(b)(1)(ii).

Restricted Category RBAC 21 / 14 CFR 21.25(a)(1). See Note 8.

Maximum weight of 2,948kg (6,500 pounds): Grant of Exemption from RBAC 27 / 14 CFR 27.1(a), Exemption No. 6433 (Regulatory Docket No. 009SW), dated April 25, 1996. See Note 9.

External Loads: Compliance has been established with the personnel carrying device system (PCDS) applicable portions of RBAC 27 / 14 CFR part 27.865, Amendment 27-36 for human external cargo (HEC). See Note 10.

Maximum weight of 3.175 kg (7,000 pounds) without external load, approved June 23, 2005: RBAC 27 / 14 CFR part 27, effective February 1, 1965, and Amendments 27-1 through 27-37 except RBAC 27 / 14 CFR part 27.561(c), 27.865 (b)(3)(ii) and 27.1365(c). See Note 11.

Avionics, Loud Hailer, Anti-collision Lights, and Lateral and Longitudinal Trim Actuators Replacement: Approved June 30, 2017. Compliance has been established with RBAC 27 / 14 CFR part 27.1309(a)(b)(c) and RBAC 27 / 14 CFR part 27.1316(a)(1)(2)(b) as amended by Amendment 27-46, RBAC 27 / 14 CFR part 27.1317(a)(1)(2)(3)(4)(b)(c)(d)(1)(2)(3) as amended by Amendment 27-42, and RBAC 27 / 14 CFR part A27.4 as amended by Amendment 27-47. Effective at Serial Number A94-0039 and subsequent.

Parking Brake Replacement: Approved June 30, 2017. Compliance has been established with RBAC 27 / 14 CFR part 27.1309(a)(c) as amended by Amendment 27-46. Effective at Serial Number A94-0039 and subsequent.

Helicopter fuel system safety per FAA Reauthorization Act of 2018 Section 317, enacted October 05, 2018: Approved March 23, 2020. Compliance has been established with 49 U.S.C. §44737 (2018) [27.952(a)(1)(2)(3)(5)(6)(c)(f)(g), 27.963(g) and 27.975(b) as amended by Amendment 27-30]. Effective at Serial Number A94-0053 and subsequent.

In-Service rotorcraft modification additional requirements as follows:

Service Bulletins and other service information, when FAA approved, will carry a statement to that effect.

REQUIRED EQUIPMENT

The basic required equipment, as prescribed in the applicable airworthiness regulations (see Certification Basis) must be installed in the helicopter. In addition, the following ANAC approved flight manual and ANAC approved rotorcraft flight manual supplement is required: “Kaman K-1200 ANAC Approved Rotorcraft Flight Manual” and “Kaman K-1200 ANAC Approved Supplement”.

NOTES:**NOTE 1****Weight and balance.**

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

See ANAC approved “Kaman K-1200 Rotorcraft Flight Manual” and ANAC approved “Kaman K-1200 Rotorcraft Flight Manual Supplement n° 3” loading section for fuel weight and moment-arm variations with fuel type and fuel quantity.

NOTE 2

All placards required in the ANAC approved “Kaman K-1200 Rotorcraft Flight Manual Supplement n° 3” and in the “Illustrated Parts Catalog Supplement No. 1 Placards for Brazil K-Max Helicopters” must be installed in the appropriate locations. The following placard must be displayed in front of and in view of the pilot:

“THIS AIRCRAFT MUST BE OPERATED IN COMPLIANCE WITH THE OPERATING LIMITATIONS SPECIFIED IN THE FAA APPROVED FLIGHT MANUAL AND IN THE ANAC APPROVED FLIGHT MANUAL SUPPLEMENT”

In addition, all markings and placards for passenger information under normal or emergency conditions must be in Portuguese (or English and Portuguese). External markings for emergency operation of doors, normal ground operation of cargo doors and servicing operations must be in Portuguese (or English and Portuguese). Marking and placards indicating maximum loads in cargo and baggage compartments must be also presented in Portuguese (or English and Portuguese).

NOTE 3

Continuing Airworthiness. The Helicopter must be maintained in accordance with the instructions for continued airworthiness contained in the latest FAA approved revision of the Rotorcraft Maintenance Manual.

Service Information, service bulletins, repair manuals, vendor manuals, Rotorcraft Flight Manuals and maintenance manuals, which contain a statement that the document is FAA approved, are accepted by the ANAC and are considered ANAC approved. These approvals pertain to the type design only.

Any alteration to the type design of this rotorcraft may require instructions for Continued Airworthiness. These instructions must be submitted and accepted by the ANAC prior to approval for return to service.

Information essential to the proper maintenance of the helicopter is contained in the Kaman Model K-1200 K-Max Maintenance and Service Instructions, Manual KMM provided with each helicopter. The values of retirement (service) life contained in Chapter 4 of the Airworthiness Limitations or inspection intervals cannot be increased without ANAC engineering approval.

NOTE 4

The differences of the Brazilian helicopters in relation to the basic FAA type design are summarized below:

1. The Brazilian Rotorcraft Flight Manual Supplement
2. Markings and placards in Portuguese language or (bilingual). See Note 2.

- NOTE 5** See Section 10 of the ANAC-approved Rotorcraft Flight Manual for the complete listing of approved Jet A, Jet A-1, Jet B, Mil-T-5624 and all equivalent fuels. Equivalent fuel: MIL-T-83133, Grade JP-8, may also be used. Use of kerosene fuels (JP-4 or JP-5) should be avoided when starting at ambient temperatures below -12°C (10°F). Commercial fuels made to conform to ASTM Specification D 1655 do not contain anti-icing additives unless specified by bulk purchaser. Care must be taken with these fuels with respect to water contamination and flight conditions.
- NOTE 6** Anti-icing, anti-corrosion and biocidal additives specified in Section 10 of the ANAC-approved Rotorcraft Flight Manual may be used singly or in any combination. The specified additives should not be added to fuel MIL-T-5624, Grades JP-4 and JP-5, or to fuel MIL-T-83133, Grade JP-8, since they are already present in these fuels.
- NOTE 7** Approved engine oil brands are listed in Section 10 of the ANAC-approved Rotorcraft Flight Manual.
- NOTE 8** The helicopter is certificated in the Restricted Category (Approved June 9, 1995), under RBAC 21 / 14 CFR Part 21.25, for the special operations of:
- Agriculture as defined in RBAC 137 / 14 CFR Part 137.3;
 - Dispensing of fire fighting materials; and
 - Carrying external loads as defined in RBAC 133 / 14 CFR Part 133.1(b).
- The special purpose operations may be conducted in the Restricted Category at maximum weights above 2.721 kg (6,000 pounds) up to and including 2.948 kg (6,500 pounds). The aircraft marking requirements of RBAC 45 / 14CFR Part 45.21 and 45.23 applicable to the Restricted Category must be met.
- NOTE 9** Grant of exemption from RBAC 27 / 14 CFR Part 27.1(a). Exemption No. 6433 (Regulatory Docket No. 009SW, dated April 25, 1996, allows increase in maximum gross weight from 2.721 kg (6,000 pounds) to 2.948 kg (6,500 pounds) while maintaining the original Normal Category Rotorcraft certification. The exemption is subject to the following conditions and limitations:
- The design of the helicopter cannot be changed to add passengers as part of the gross weight increase.
 - Prior to exercising the privileges of this exemption, each K-1200 helicopter (for which exemption is sought) and all modifications made to it, must meet the requirements established in the current certification basis, at the increased gross weight. This includes any special requirements for certification; i.e., equivalent levels of safety and the special conditions that may have been issued to complete certification.
 - All operations above 2.721 kg (6,000 pounds) must be limited to agricultural operations as defined in RBAC 137 / 14 CFR Part 137.3 dispensing fire fighting materials; or carrying external loads as defined in RBAC 133 / 14 CFR Part 133.1(b); unless a part RBAC 36 / 14 CFR Part 36 noise test is conducted prior to increasing the gross weight above 2.721 kg (6,000 pounds).
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NOTE 10 A personnel carrying device system (PCDS) for carrying human external cargo (HEC) was approved February 13, 1998. The PCDS is limited to carriage of personnel defined in RBAC 133 / 14 CFR Part 133.35(a). See “Kaman K-1200 ANAC Approved Rotorcraft Flight Manual” and “Kaman K-1200 ANAC Approved Supplement n° 3” for limitations, operational requirements, and weight-and-balance considerations.

NOTE 11 Original certification basis limited maximum weight to 2.721 kg (6,000 pounds) or less. Restricted Category (see Note 8) permitted operation to 2.948 kg (6,500 pounds) pending Grant of Exemption No. 6433 (see Note 9). RBAC 27 / 14 CFR Part 27, amendment 37, changed the maximum weight to 3.175 kg (7,000 pounds) or less. Maximum weight of 3.175 kg (7,000 pounds) without external load approved June 23, 2005.

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MARIO IGAWA

**GERENTE DE CERTIFICAÇÃO DE PROJETO DE PRODUTO AERONÁUTICO
(AERONAUTICAL PRODUCT DESIGN CERTIFICATION BRANCH, MANAGER)**



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Ofício nº 1079/2020/GTPR/GCPP/SAR-ANAC

São José dos Campos, 03 December 2020.

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Subject: K-1200 – TCDS Issuance.

Ref.: ER-2020T07-00 - SEI nº 5089262

1. In attention to the document referred above, ANAC hereby issues the Initial Revision of TCDS nº ER-2020T07-00.
2. This TCDS revision is available at ANAC website: <https://sistemas.anac.gov.br/certificacao/Produtos/EspecificacaoListE.asp?OrgCodi=001036>

Mario Igawa

Aeronautical Product Design Certification Branch, Manager

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Documento assinado eletronicamente por **Mário Igawa, Gerente de Certificação de Projeto de Produto Aeronáutico**, em 07/12/2020, às 09:40, conforme horário oficial de Brasília, com fundamento no art. 6º, § 1º, do [Decreto nº 8.539, de 8 de outubro de 2015](#).



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