



AGÊNCIA NACIONAL DE AVIAÇÃO CIVIL - BRASIL

**TYPE CERTIFICATE DATA SHEET N° EA-2011T09**

Type Certificate Holder:

**HAWKER BEECHCRAFT CORPORATION**

9709 East Central  
Wichita, KA, 67201  
USA

EA-2011T15-00  
Sheet 01

Hawker Beechcraft Co.  
4000

30 September 2011

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This data sheet, which is part of Type Certificate No. 2011T-09, 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 4000 (Transport Category), approved 30 September 2011.**

**ENGINE**

Two Pratt & Whitney Corporation PW308A Turbofans  
Engine Type Certificate N° 2003T04

**FUEL**

Commercial Kerosene JET A, JET A-1, JP-5, JP-8, RT, TS-1, and Chinese Jet Fuel No. 3  
(See ANAC Approved Airplane Flight Manual for limitations on use of TS-1 fuel)  
For unmodified aircraft:  
Fuel not containing icing inhibitors must have MIL-DTL-85470 fuel system icing inhibitor added in amounts of not less than 0.10% nor more than 0.15% by volume. Minimum fuel icing inhibitor content during refueling is 0.10 % by volume.  
  
For modified aircraft using Service Bulletin 73-3903. Kit 401-9000 or RC-23 and after: It is permissible to use fuels that do not contain MIL-DTL-85470 fuel system icing inhibitor (Prist).  
See ANAC Approved Airplane Flight Manual for approved fuel additives.

**ENGINE LIMITS**

Take Off Static Thrust	
Sea Level standard day	3132 kgf (6.904 lbs)
Maximum Continuous static thrust	
Sea level standard day	3132 kgf (6.904 lbs)
Maximum Permissible Engine Rotor Operating Speed:	
Low Pressure Rotor, N1 (20 Seconds)	103.5%
Low Pressure Rotor, N1 (100% N1 = 10400 Rpm)	102.5%
High Pressure Rotor, N2 (20 Seconds)	103.0%
High Pressure Rotor, N2 (100% N2 = 26780 Rpm)	102.0%

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<b>ENGINE LIMITS (Cont.)</b>	Maximum permissible Interstage Turbine Temperature	
	Take-off (20 seconds)	890° C
	Take-off (5 minutes)	875° C
	Maximum Continuous	860° C
	Engine Starting	950° C
<b>APU</b>	Honeywell International Inc. Model 36-150 [HH] APU P/N 3800760-1	
<b>APU LIMITS</b>	Maximum Pressure Altitude for In-Flight Starting or Operating	34 000 FT
	Minimum OAT for APU Starting on the ground	-40° C (-40° F)
<b>OIL</b>	See ANAC approved Airplane Flight Manual for Approved Oil	
<b>AIRSPEED LIMITS (IAS)</b>	Maximum operating ( $V_{MO}$ ):	
	-1000 to < 8 000 ft.	519 km/h (280 kias)
	≥ 8 000 to 20 000 ft	648 km/h (350 kias)
	32 000 ft.	568 km/h (307 kias)
	(Linear variation, 20 000 ft to 32 000 ft)	
	Maximum operating ( $M_{MO}$ ):	
	(Above 32 000 ft.)	0.84 Mach
	Maneuvering ( $V_A$ ):	
	-1 000 to 45 000 ft.	389 km/h (210 kias)
	Rough Air Speed ( $V_{RA}/M_{RA}$ )	
	-1 000 to 38 100 ft	435 km/h (235 kias)
	38 100 to 45 000 ft	0.75 Mach
	Speed for Max. Gust Intensity ( $V_B/M_B$ )	
	-1 000 ft. to 38 100 ft.	435 km/h (235 kias)
	38 100 ft. to 45 000 ft.	0.75 Mach
	Flaps extended ( $V_{FE}$ )	
	- 35° (landing):	333 km/h (180 kias)
	- 20° (takeoff and approach):	426 km/h (230 kias)
	- 12° (takeoff):	426 km/h (230 kias)
	Speed for Max. Gust Intensity (VB/MB)	
	-1 000 ft. to 38 100 ft.	435 km/h (235 kias)
	38 100 ft. to 45 000 ft.	0.75 Mach
	Speed for Speedbrake ( $V_{SB}/M_{SB}$ )	
		No Limit
	Minimum control speed - Air ( $V_{MCA}$ ):	
	Flap 0°	183 km/h (99 kias)
	Flap 12°	Below stick pusher at all weights
	Flap 20°	Below stick pusher at all weights
	Minimum control speed - Ground ( $V_{MCG}$ ):	
		157 km/h (85 kias)
	L. G. operation - extend ( $V_{LOEXT}$ ):	
		426 km/h (230 kias)
	L. G. operation - retract ( $V_{LORET}$ ):	
		389 km/h (210 kias)
	L. G. extended ( $V_{LE}$ ):	
		426 km/h (230 kias)
	L. G. emergency extend ( $V_{LOEMEREXT}$ ):	
		370 km/h (200 kias)
	$V_{TIRE}$ (maximum tire ground speed)	
		337 km/h (182 knots)

**AIRSPPEED LIMITS (Cont.)**

Minimum Control Speed Approach/Landing ( $V_{MCL}$ )  
 Approach Flaps 12° Below Stick Pusher At All Weights  
 Landing Flaps 35° Below Stick Pusher At All Weights

**CG RANGE**

(Gear and Flaps Extended)

Allowable Fwd CG at 9,979 kg (22,000 lb) F.S. 412.60  
 Allowable Fwd CG at 11,340 kg (25,000 lb) F.S. 406.52  
 Allowable Fwd CG at 17,917 kg to 18,008 kg  
 (39,500 lb to 39,700 lb) F.S. 401.93  
 Allowable Fwd CG at 15,195 kg (33,500 lb) F.S. 401.93  
 Allowable Fwd CG at 15,286 kg (33,700 lb)  
 (Without Passenger Interior) F.S. 402.04  
 Allowable Fwd CG at 15,195 kg (37,500 lb) F.S. 403.65  
 Allowable Fwd CG at 17,917 kg to 18,008 kg  
 (39,500 lb to 39,700 lb) F.S. 404.80  
 Aft CG between 9,979 kg and 10,433 kg (22,000  
 and 23,000 lb) F.S. 423.74  
 Aft CG at 13,608 kg (30,000 lb) F.S. 413.40  
 Aft CG Up to 15,286 kg (33,700 lb) (Without  
 Passenger Interior) F.S. 413.40  
 Aft CG at 17,010 kg (37,500 lb) (With Passenger  
 Interior) F.S. 413.40  
 Aft CG between 17,917 kg to 18,008 kg (39,500 and  
 39,700 lb) (With Passenger Interior) F.S. 412.26  
 Straight line variation between given points.

Landing Gear Retracting Moment -4494.4 kg-cm (-3900 lb.-in.)

**DATUM**

F.S. 0.00 is located 96.52 cm (38.00 in) forward of the nose of the aircraft.

**LEVELING MEANS**

Level is determined with a level gauge placed on the leveling pads in the aft maintenance bay.

**MEAN AERODYNAMIC CHORD**

291.57 cm (114.79 in). The leading edge of the mean aerodynamic chord is 959.67 cm (377.82 in) aft of the datum.

**MAXIMUM WEIGHT**

(With Passenger Interior)

Takeoff: 17,917 kg (39,500 lb)  
 Landing: 15,195 kg (33,500 lb)  
 Zero Fuel: 11,793 kg (26,000 lb)  
 Ramp: 18,008 kg (39,700 lb)

**MAXIMUM WEIGHT**

(Without Passenger Interior)

Takeoff: 15,195 kg (33,500 lb)  
 Landing: 15,195 kg (33,500 lb)  
 Zero Fuel: 11,793 kg (26,000 lb)  
 Ramp: 15,286 kg (33,700 lb)

**MINIMUM CREW**

Two (2) Pilots

**MAXIMUM PASSENGERS**

Up To Ten (10) If Interior Is Installed.

**MAXIMUM BAGGAGE**

Aft Fuselage Baggage Compartment 409 kg (900 lb) at F.S. 484.00  
 Aft Fuselage Compartment 409 kg (900 lb) at F.S. 484.00

Aft Fuselage Baggage Compartment or Aft Fuselage Compartment  
 Maximum floor loading density 88.24 kgf/m<sup>2</sup> (100 lb per square ft)

**ENGINE LIMITS (Cont.)**

Maximum cabin floor loading density 390.6 kgf/m<sup>2</sup> (80 lb per square ft)

Note: The “without passenger interior” configuration prohibits carriage of baggage and refers to the aft fuselage baggage compartment as “Aft Fuselage Compartment”. The structural loading capabilities are valid for both “with passenger interior” and “without passenger interior” configurations.

**FUEL CAPACITY**

Tank	Cap. Liters (Gal.)	Usable Liters (Gal.)	Arm
LH	4,143.9 (1,094.7)	4,126.5 (1,090.1) Single Point	See Note 7
RH	4,143.9 (1,094.7)	4,126.5 (1,090.1) Single Point 4,107.5 (1,085.1) Gravity Fill	See Note 7

See Note 1 For Data On Usable And Undrainable Fuel.

Note: The “without passenger interior” configuration limits operational fuel load to 5,307 kg (11,700 lb) for an increased gross weight aircraft.

**OIL CAPACITY**

18.0 Liters (4.76 Gallons) total  
See Note 1 for included oil in basic empty weight.

**MAXIMUM OPERATING ALTITUDE**

45,000 ft

**TEMPERATURE OPERATING LIMITS (T.O. & L.)**

Maximum: 50 °C (ISA +35 °C ASL)  
Minimum: -40 °C

**CONTROL SURFACE MOVEMENTS**

Elevator:	Up 20° ±0,5°	Down 12,5° ±0,5°
Elevator tab:	Up 11,25° ±0,5°	Down 18° ±0,5°
Rudder (0 kias):	Right 32° +1°	Left 32° +1°
Rudder trim (0 kias):	Right 18,25° ±1,25°	Left 18,25° ±1,25°
Aileron:	Up 15° ± 0,5°	Down 15° ± 0,5°
Aileron trim tab:	Up 12,3° ± 0,5°	Down 11,6° ± 0,5°
Wing flaps:	Inboard	Outboard
Up/Takeoff	0° ± 0,25°	0° ± 0,25°
Takeoff	13,1° ± 1°	12° ± 1°
Takeoff	21,1° ± 1°	20° ± 1°
Landing	36,4° ± 1°	35° ± 1°
Speed break:		
Flaps 0, 12, 20	0 to 35° +1°, -1°	
Flaps 35	0 to 17,5° +1°, -1°	
Roll Spoiler		
Flaps 0, 12, 20	0 to 35° +1°, -1°	
Flaps 35	0 to 17,5° +1°, -1°	
Ground Spoilers	60° (All six spoiler panels (+1°, -2°))	

**SERIAL NUMBER ELIGIBLE**

RC-7 and after. A Certificate of Airworthiness for Export endorsed as noted under "Import Requirements" must be submitted for each individual aircraft for which application for a Brazilian Certificate of Airworthiness is made.

**IMPORT ELIGIBILITY**

A Brazilian Airworthiness Certificate may be issued on the basis of a Export Certificate of Airworthiness signed by a representative of a local export Civil Aviation Authority containing the following statement: "The airplane covered by this certificate has been examined, tested and found to conform to the type design approved under ANAC Type Certificate No. 2011T-09, and to be in condition for safe operation".

**CERTIFICATION BASIS**

Brazilian Type Certificate No. 2011T-09 issued on 30 September 2011 based on the RBHA 25, corresponding to 14 CFR Part 25, effective on February 1, 1965 including Amendments 25-1 through 25-105 and RBHA 25.856 as amended by 25-111, 25.1457(a)(1)(2)(3)(4) (b) (c) (d) (e) (f) and 25.1459 as amended by 25-124 with the exceptions below:

## Special Conditions:

- No. 25-162-SC, High Intensity Radiated Fields.
- No. 25-279- SC, Side-Facing Single-Occupant Seats.

## Equivalent levels of safety findings:

- RBHA/14 CFR Part 25.103 and related paragraphs, Use of 1G Stall Speed No. TC1258WI-T-F-1.
- RBHA/14 CFR Part 25.679(a)(2) Gust Lock, No. TC1258WI-T-SE-21.
- RBHA/14 CFR Part 25.807(i), Water Dam, No. TC1258WI-T-A-6
- RBHA/14 CFR Part 25.811(d)(1) and 25.812(b)(1)(d), Emergency Exit Marker and Locator Signs, No. TC1258WI-T-A-5.
- RBHA/14 CFR Part 25.811(e)(4) Door Handle Markings, No. TC1258WI-T-A-9.
- RBHA/14 CFR Part 25.813(e) Frangible Door for Lavatory, No. TC1258WI-T-A-8.
- RBHA/14 CFR Part 25.831(g) Temperature and Humidity TD4618WI-T-SE-1
- RBHA/14 CFR Part 25.841(b)(c), Cabin Pressurization – High Altitude Airport Operation, No. TC1258WI-T-SE-8.
- RBHA/14 CFR Part 25.933(a)(1)(i)&(ii), Thrust Reverser, No. TC1258WI-T-P-1.
- RBHA/14 CFR Part 25.1303(a)(3), Magnetic Compass, No. TC1258WI-T-SE-23.
- RBHA/14 CFR Part 25.1305, 25.1501(b) & 25.1549, APU Displays, No. TC1258WI-T-P-8.
- RBHA/14 CFR Part 25.1435, Hydraulic System Function Test, No. TC1258WI-T-SE-24.
- RBHA/14 CFR Part 25.1549(a), (b), & (c), Digital Engine

**CERTIFICATION BASIS  
(Cont.)**

Displays, No. TC1258WI-T-P-7.  
Exemptions:

- No. 7512B Partial exemption from requirements of 14 RBHA/CFR Part 25.785(b) for the general occupant protection requirements for occupants of multiple place side facing seats.
- No. 8761C Partial exemption until March 24, 2014 for airplanes granted a Certificate of Airworthiness on or before May 25, 2011, from the requirements of RBHA/14 CFR 25.981, Fuel System Safety Analysis and Documentation.
- No. 8760A, exemption until December 21, 2007, from the requirements of RBHA/14 CFR 25.1435(a)(1), Hydraulic System Proof Pressure Testing.

Noise requirements:

RBHA 36, corresponding to 14 CFR Part 36, effective 01 December 1969, Noise Standards including Amendments 36- 1 through 36- 24 (Standard Aircraft) and as amended by Amendment 36-1 through 36-28 (Increased Gross Weight Aircraft).

Emission requirements:

RBHA 34, corresponding to 14 CFR Part 34, effective 10 September 1990, Fuel Venting and Exhaust Emission Requirements for Turbine Engine Powered Airplanes, including Amendments 34-1 through 34-3.  
Do not comply with Ditching requirement RBHA 25.801

**REQUIRED EQUIPMENT**

The basic required equipment as prescribed in the applicable airworthiness regulations (see Certification Basis) must be installed in the airplanes.  
A Brazilian Aircraft Flight Manual, document No.4001-590001-0035, approved by the FAA on behalf of the ANAC should be carried on each aircraft.

**DATA PERTINENT TO ALL MODELS:**

Reduced Vertical Separation Minimum (RVSM) group airworthiness has been approved.

**NOTES:**

- NOTE 1** Weight and balance. Current weight and balance data, loading information and a list of equipment included in empty weight must be provided for each airplane at the time of original certification.  
(a) Basic empty weight includes unusable fuel of 33.15 kg (77.5 lb), 27.94 kg (61.6 lb) being drainable, 7.21 kg (15.9 lb) being undrainable.  
(b) Basic empty weight includes engine oil of 17.33 kg (38.2 lb)
- NOTE 2** Markings and placards. All required placards listed in the limitations Section of the Aircraft Flight Manual must be installed in the appropriate locations.  
  
All markings and placards for passenger information, external markings for emergency, and load limits in cargo/baggage compartments must be presented in Portuguese or bilingual.  
For the approved markings and placards translations contact the TC holder and/or ANAC at the following address: [ggcp-gr@anac.gov.br](mailto:ggcp-gr@anac.gov.br).
- NOTE 3** Continuing Airworthiness. See Airworthiness Limitations Manual, Part Number 401-590001-0027B, Original Issue (or later FAA approved revision), for inspections, mandatory retirement life information, and other requirements for continued airworthiness. Aircraft without a passenger interior are limited to 100 flight hours.
- NOTE 4** The differences of the Brazilian airplanes in relation to the basic FAA type design are summarized below:

1. The Brazilian Airplane Flight Manual is identified as P/N 401-590001-0095.
2. Markings and placards.  
External Placard – Dual Language (Portuguese/English) Placard is defined Drawing 401-5012 original issue or later approved revision.  
See additional marking and placards approved in Interior CST (ANAC Supplemental Type Certificate).
3. Airplanes RC-28 or before has to be modified by Kit 401-4000.

- NOTE 5** Certification Maintenance Requirements (CMR) are found in the Airworthiness Limitations Manual, Chapter Four (4). Engineering approval of the CMR's is documented in report 4000E285673, Certification Maintenance Requirements.
- NOTE 6** Refer to the FAA Approved Airplane Flight Manual, Weight and Balance Section, or the FAA approved dedicated Weight and Balance Manual, for fuel moment arm variation with fuel quantity.
- NOTE 7** The Model 4000 has been approved for high altitude operations. Any modifications to the pressure vessel must be approved in accordance with the requirements as shown in the certification basis. This includes modifications which could result in a pressure vessel opening, such as the loss of an antenna, greater than 4.35 square inches.
- NOTE 8** The following FAA Supplemental Type Certificate (STC) owned by Hawker Beechcraft Co., applicable to the HAWKER 4000 model was validated by ANAC without corresponding Brazilian CST document issuance and may be incorporated on Brazilian registered aircraft, provided the modification does not affect compliance with the Brazilian acceptance requirements (see paragraph import eligibility)":

STC NUMBER	DESCRIPTION OF TYPE DESIGN CHANGE	AFMS (*)
ST10922SC-D * (Limited to the S/N RC-65)	Installation of Cabin Interior Furnishings and Systems in accordance with Master Documents List (MDL) No. 240-2001, Rev. 37, dated 3 Sep. 2010 or later approved revision.	As listed in the table included in the limitations and conditions section of the STC # ST10922SC-D

(\*) or later approved revisions.

  
HÉLIO TARQUÍNIO JÚNIOR

(General Manager, Aeronautical Product Certification)