



OPERATIONAL EVALUATION ABSTRACT REPORT

**AIRCRAFT PILATUS PC-6/B2-H4
(PILATUS, ICAO PC6T)**

ORIGINAL – OCTOBER 20TH, 2011



1. SUMMARY DESCRIPTION OF THE AIRCRAFT

1.1. General Information

The aircraft Pilatus PC6/B2-H4 is a single engine turboprop airplane, high wing and conventional fixed landing gear.

The airplane is certified to be operated by one pilot and it is equipped with the avionic Garmin G950.

A summary of the airplane specification is presented in table 1 below. For more information, the *Type Certificate Data Sheet – TCDS*, issued by ANAC Product Certification Management (Gerência Geral de Certificação de Produto - GGCP), may be consulted. In case of information disagreement between table 1 and the TCDS, this last source shall prevail.

Table 1 – Pilatus PC-6/B2-H4 Specification

Certification Basis	RBAC 21.29 e CAR 3 dated 15 May 1956 including amendments 3-1 through 3-5.
Minimum Crew	01 (one) pilot.
Number of Seats	Max configuration for 8 occupants: 01 seat for the pilot in command, 01 seat for the second in command* and 06 passenger seats. *Second in command seat may be occupied by a passenger, provided there are no primary controls of the aircraft installed in this position.
Weights	Ramp Weight – 2810 kg
	Take-off Weight – 2800 kg
	Landing Weight – 2660 kg
	Zero Fuel Weight – 2400 kg
	Payload in Cabin – 1000 kg* * Max. permissible floor load is 488 kg / m ²
Altitude Limit	Service Ceiling (AEO) – 25.000 ft
Speed Limits	Never Exceed (V _{NE}): 151 KIAS
	Maximal Structural Cruising (V _{NO}): 119 KIAS
	Maneuvering (V _P): 119 KIAS
	Flaps extended (V _{fe}): 95 KIAS
Fuel	Usable – 520 kg (644 L)

1.2. Three view drawing

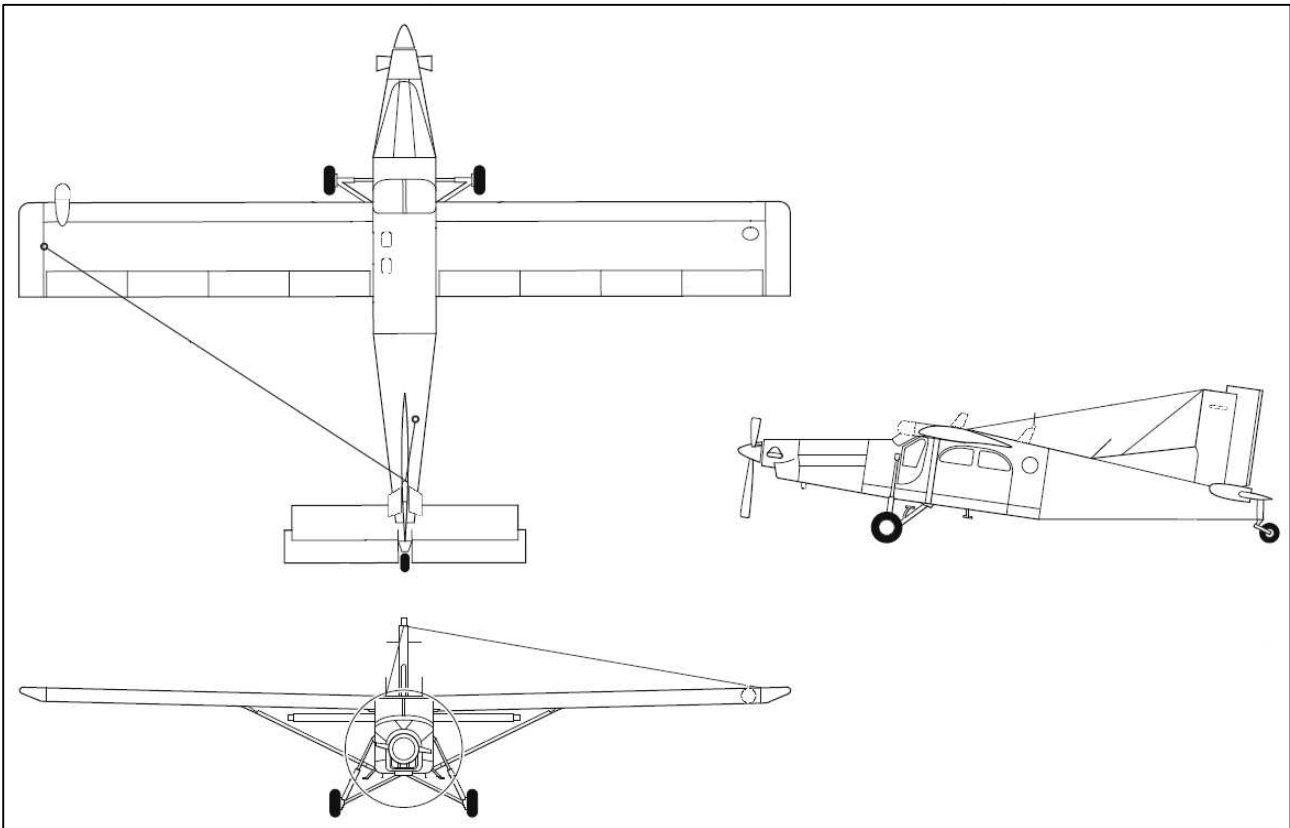


Figure 1: Aircraft three view drawing

2. PILOT LICENSE AND RATING

The required rating for pilots to operate the PC-6 is the aircraft single engine class rating - land (MNTE – *aviões monomotores terrestres*).

To act as pilot in command of the PC-6 the pilot must have successfully completed the initial training program of the PC-6, as detailed in section 3.2 of this report. This training is essential, because despite the MNTE rating had been established for the PC-6, this airplane has some unique characteristic in terms of handling and procedures, which distinguish it from other single engine class rating airplanes.

3. SPECIFICATION FOR TRAINING

3.1. Areas of Special Emphasis in Training

The following areas shall be emphasized in training:

- Powerplant: turboprop starting and shut down procedures, monitoring of parameters.
- Yaw Trim characteristic: torque compensation, especially in take off.
- Crosswind characteristic.
- Weight & Balance: effects in performance and handling with different aircraft loadings.
- Avionics: Garmin G950 operation.
- Taxi: airplane inertia.

3.2. Initial Training

The PC-6 initial training program was developed by the manufacturer Pilatus. It is recommended that pilots complete this training, following the prerequisites described in section 3.2.1 and the syllabus described in 3.2.2.

The training may be provided by the manufacturer in Switzerland, or it can be accomplished in Brazil, ministered by a rated instructor INVA or a rated airline transport pilot PLA (*Piloto de Linha Aérea*), provided they are also qualified on the PC-6 and the provisions of sections 3.2.1 and 3.2.2 are followed.

3.2.1. Prerequisites

To enroll the training, the pilot must hold:

- Private Pilot License;
- Valid IFR rating.

3.2.2. Minimum Curriculum

The minimum curriculum is comprised of the ground segment and the flight segment. The ground segment must be completed prior to the flight segment. The flight segment is all accomplished in aircraft. Table 2 presents the course structure recommended by the manufacturer.

Table 2: Manufacturer Training Program

Ground Segment		
Contents		Time
Classroom: Aircraft and Systems Description; Normal/Abnormal and Emergency Procedures; Performance; Weight & Balance.		42:00h (5 days)
Flight Segment		
Flight	Maneuvers and Procedures Description	Time
1	i) External and internal checks, Familiarization; ii) Observation in Trim changes (pitch and yaw) in level flight and different speeds; iii) Turns of 45° and 60°, Stalls demonstration w/ clean and full flap, Circuits.	-
2	i) Stall exercises: Clean, TO flap, full flap – with idle power; straight and in turn. ii) Observation of Vmo: 151KIAS. iii) Circuits.	-
3	i) Gliding: at 70KIAS, notice of rate of descent w/ different configurations (clean, TO flap, land flap). ii) Engine Relight procedure: Only simulated; iii) Emergency: FCU failure – use of manual fuel control. iv) Simulated missed approach v) Landings: powered with use of max reverse; with zero thrust.	-
4	i) Beta Approach. ii) Trim Runaway Procedure. iii) Avionics – use of Garmin G950 in IFR operation.	-
5	i) Emergency Landing Patterns: High key to low key and land w/ zero thrust. ii) Circuits: Powered approach, Beta approach, No flap app, Precision touch down. iii) Take offs: 3 point, misstrimmed, raising tail wheel.	-

6	i) Operation with MTOW: Take off and landing performance. ii) Observation on handling with MTOW, including in misstrimmed take-off. iii) Stall with MTOW: Clean and full flaps.	-
7	Consolidation or check flight	-
TOTAL		(1) (2)
(1) Min 10:00h Block time (2) Min 5 days		

4. SPECIFICATION FOR CHECKING

After the completion of the initial training specified in section 2, a proficiency check is not required.

5. SPECIFICATION FOR FLIGHT SIMULATION TRAINING DEVICES (FSTD)

There are no FSTD available for this aircraft.

6. TRAINING CENTER

Pilatus Aircraft Ltd, based in Switzerland, offers the training for PC-6 pilots and mechanics in its facilities.

7. COMPLIANCE TO RBHA 91 AND RBAC 135

The PC-6 is compliant with RBHA 91 with no remarks.

The PC-6 is compliant with RBAC 135, with exception to item 135.163 *Required Equipments: IFR rule flights carrying passengers.*

The airplane is not compliant with item 135.163(e), therefore the PC-6 **shall not be authorized** to perform IFR flights carrying passengers, under RBAC 135 operational rules.

8. SPECIAL OPERATIONS

No documentation referring to PC-6 special operations certification was provided.

9. OPERATIONAL DOCUMENTATION

9.1. Master Minimum Equipment List – MMEL.

There is not an approved MMEL for the PC-6/B2-H4.

9.2. Airplane Flight Manual – AFM.

The Brazilian Airplane Flight Manual (AFM) of the PC-6, approved by ANAC Product Certification Management (GGCP), shall be used by Brazilian operators.

10. OPERATIONAL ISSUES (*Forward Jump Seat*)

Due to PC-6/B2H4 single pilot certification, the right forward seat is considered as a jump seat for monitoring and proficiency check flights, including flight training.

11. CONCLUSIONS

The Operational Evaluation of the PC-6 is concluded. The main findings are:

- The airplane single engine class rating - land (MNTE - Aviões monomotores terrestres) is required for pilots to operate the aircraft;
- An initial training program shall be successfully completed by the candidate pilots;
- IFR flights carrying passengers, under RBAC 135 operational rule shall not be authorized.

ANAC, Rio de Janeiro, Brazil – October 20th, 2011.

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