

**DEPARTMENT OF TRANSPORTATION  
FEDERAL AVIATION ADMINISTRATION**

A50EU  
Revision 2  
PILATUS  
PC-7  
  
July 1, 1996

**TYPE CERTIFICATE DATA SHEET No. A50EU**

This data sheet, which is a part of Type Certificate No. A50EU, prescribes conditions and limitations under which the products for which the type certificate was issued meets the airworthiness requirements of the Federal Aviation Administration.

Type Certificate Holder.                      PILATUS Aircraft Ltd.  
CH-6370 STANS (Switzerland)

**Model PC-7 (Acrobatic Category) Approved August 12, 1983.**

Engine.    Pratt & Whitney Aircraft of Canada Ltd. PT6A-25 or PT6A-25A Turboprop.

Fuel.    See Airplane Flight Manual for approved fuels and additives.

Oil.    See Airplane Flight Manual for approved oils.  
(Engine & Gearbox)

Engine Limits.

	Shaft Power <u>SHP</u>	Torque Pressure <u>Psi</u>	N <sub>1</sub> Gas Generator Speed <u>%</u>	Prop. Shaft Speed <u>RPM</u>	Maximum Permissible Turbine Interstage Temperature <u>°C</u>
Takeoff and Max. Continuous	550	42.5	101.5	2200	695
Starting Transient			101.5	2200	1090*
Max. Acceleration		48.5	102.6	2420	825

\* These values are time limited to two seconds

NOTE: 100% Gas Generator Speed = 37,468 rpm  
Engine torque is limited by a torque controller to 1315 lb-ft (42,5 psi) at sea level.

Oil temperatures: Starting                      - 40° minimum  
idle    - 40° to +99°C  
max. continuous                                  + 10° to +99°C

Inverted flight (less than zero g) is limited to 30 seconds.

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Propeller and Propeller Limits. Hartzell HC-B3TN-2 hubs with Hartzell T 10173C-8 or 10173CH-8 blades, three blade constant speed type.

Diameter: 92 3/8 to 93 3/8 inches (cropping of blade tip not permitted)

Pitch settings at: (measure at 30 inch station)

Minimum pitch +14°

Feathered +83.5° ± 1.5°

Propeller blade life limit: 9700 hours

Spinner: Hartzell C 3065 P

Airspeed Limits (CAS). Max. operating speed ( $V_{MO}$ ) 270 knots  
up to 15,000 ft altitude

above 15,000 ft limited to ( $V_{MO}$ ) 0.55  
max. operating Mach. No.

Maneuvering speed ( $V_A$ ) 175 knots  
at MTOW = 4189 lbs.

Max. speed with flaps ( $V_{FE}$ ) 135 knots

Max. speed with landing gear extended ( $V_{LO}$ ) 135 knots

Maneuvering Load Factors. Acrobatic  
Max. positive up to  $V_{MO}$  + 6.00

Max. negative up to  $V_{MO}$  - 3.00

C.G. Range. (Landing Gear Extended). 13.707 ft to 14.232 at 4189 lbs or less (18% - 28% MGC)

Maximum Weight.

Ramp	4213	lbs
Takeoff	4189	lbs
Landing	4189	lbs
Zero fuel	3668.5	lbs

Number of Seats. Two, front seat at 13.494 ft.  
rear seat at 17.611 ft.

For solo flight the pilot must occupy the front seat.

Maximum Baggage. 55 lb at 21.981 ft in baggage compartment.

Fuel Capacity.

<u>Total</u>	<u>Usable</u>	<u>Arm</u>
129.4 gals	125.2 gals	13.83 ft.

Oil Capacity.

<u>Total</u>	<u>Arm</u>
4.22 gals	7.66 ft

<u>Control Surface Movements.</u>	Wing flap	Takeoff	23° ± 2°	Landing	50° ± 2°
	Ailerons	Up	20° ± 1°	Down	11° ± 1°
	Aileron tab	Up	12.5° ± 1.5°	Down	18° ± 1.5°
	Elevator	Up	18.5° ± 1°	Down	16° ± 1°
	Elevator tab	Up	15° ± 2°	Down	20° ± 2°
	Rudder	Right	24° ± 1°	Left	24° ± 1°
	Rudder tab	Right	11° ± 1.5°	Left	17.75° ± 1.5°

Rudder tab

At 24° rudder deflection to the right, Anti-Flettner deflection: Right 7±1°

At 24° rudder deflection to the left, Anti-Flettner deflection: Left 7±1°

Maximum Operating Altitude. 25,000 ft

Datum. 9.84 ft. in front of firewall.

Leveling Means. Marks (rivet heads) on each side of fuselage. Canopy rails horizontal.  
See Section 8 of Airplane Maintenance Manual.

Certification Basis. Type certification under 14 CFR Section 21-29 including the following requirements:

- 14 CFR Part 23 effective February 1, 1965, including amendments 23-1 through 23-16 plus FAR 23.977 Amendment 23-17, FAR 25.393 Amendment 25-37 and
- 14 CFR Part 36 effective December 1, 1969, including Amendments 36-1 through 36-12 and
- SFAR 27 effective December 12, 1973, including Amendments SFAR 27-1 through SFAR 27-4 (see Note 5) and
- Exemption No. 3748 from Section 23.49(b)(1).

Date of application: December 21, 1981.

Type Certificate issued on August 12, 1983.

Import Requirements. An FAA Standard Airworthiness Certificate may be issued on the basis of a Certificate of Airworthiness for Export signed by a representative of the Swiss Federal Air Office, containing the following statement:

"The airplane covered by this certificate has been examined, tested and found to conform to the type design approved under Type Certificate No. A50EU, and to be in condition for safe operation."

Airplane S/N 395 is eligible for a U.S. standard Airworthiness Certificate when the requirements of 14 CFR Sections 45.11 and 45.13, and all other import requirements of this type certificate data sheet are satisfied.

Serial Nos. Eligible. A Certificate of Airworthiness for Export endorsed as noted under "Import Requirements" must be submitted for each individual aircraft for which application for U.S. Certification is made.

Service Information.

“Service bulletins, structural repair manuals, vendor manuals, aircraft flight manuals, and overhaul and maintenance manuals, which contain a statement that the document is approved by the Federal Office for Civil Aviation (FOCA) of Switzerland, are accepted by the FAA and are considered FAA approved. These approvals pertain to the type design only.”

NOTES.

- NOTE 1. Current weight and balance report including list of equipment in certificated empty weight, and loading instructions, must be provided for each aircraft at the time of original certification.  
The certificated empty weight and corresponding center of gravity location must include full oil (31.65 lbs at + 7.66 ft), and unusable fuel (28.66 lbs. at + 15.39 ft).
- NOTE 2. All placards required in the approved Airplane Flight Manual must be installed on the airplane in the appropriate location.
- NOTE 3. Service Life Limits.  
Airplane components which are life limited are listed in paragraph 3 of Chapter 5 of the Swiss FAO-approved PC-7 Maintenance Manual, Document No. 01715, and must be replaced as indicated therein.
- NOTE 4. Information essential for the proper operation and maintenance of the airplane are contained in the following Pilatus Aircraft Ltd. documents:
- (a) Airplane Flight Manual: Swiss Federal Air Office approved Document No. 01678 (for instrumentation in British/American units), or 01678M (for instrumentation in metric units), including actual weight and balance data and equipment list for the individual airplane (Report No. 01603-A).
  - (b) Maintenance Manual: PC-7 Maintenance Manual Document No. 01715
  - (c) PC-7 Structural Repair Manual: Document No. 01720
  - (d) PC-7 Wiring Manual: Document No. 01718
  - (e) PC-7 Illustrated Parts Catalog: Document No. 01719
  - (f) PC-7 Tool and Equipment Manual: Document No. 01724
- NOTE 5. Compliance with the fuel venting provisioned of SFAR-27 is achieved by incorporation of the components listed on Pilatus Drawing No. 119.35.07.008.
- NOTE 6. Each seat is to be equipped with Pilatus PC-7 Harness Assembly, Part No. G.Q.D. 14081, manufactured by G.Q. Defence Equipment, Ltd., Woking, England. (Ref. Exemption No. 3748)
- NOTE 7. This airplane is not FAA approved for use with underwing stores or underwing fuel tanks.

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