

This data sheet which is part of **Type Certificate No. F 56-22** prescribes conditions and limitations under which the product for which the Type Certificate was issued meets the airworthiness requirements of the Federal Aviation Regulations.

Type Certificate Holder: Pilatus Aircraft Ltd.
 CH-6371 Stans
 Switzerland

1.0 Model **PC-9** (Acrobatic Category)
 Date of Type Certificate: September 19, 1985

1.1 Engine Pratt & Whitney Canada Corp. PT6A-62
 (Turboprop), Type Certificate DOT Canada No. E-12

1.2 Fuel Refer to P&WC Service Bulletin No. 13044 for approved fuels
 (ASTM D1655 Jet A, Jet A1, Jet B and other fuels conforming to
 Spec. CPW 204).

1.3 Oil (Engine and Gearbox) Refer to P&WC Service Bulletin No. 13001 for approved oils
 (synthetic turbine oil according to Spec. PWA 521 Type II).

1.4 Engine Limits

	Shaft Power	Torque	N1 Gas Generator Speed	Prop Shaft Speed	Maximum Observed Inter Turbine Temp
	shp	ft.lb. (psi)	%	RPM	°C
Maximum	950	2495 (67.4)	104	2000	800
Max. cruise	900	2363 (63.8)	104	2000	775
Idle	-	-	56 min.	-	800
Starting (5 seconds)	-	-	-	-	1000
Transient (20 seconds)	-	2750 (74.3)	104	2205	870

Note: 100% Gas Generator Speed = 37'468 RPM

Shaft power, torque and ITT is limited by an electronic limiter unit (ELU).

Oil temperature: starting -40°C minimum
 idle -40°C to +99°C
 MCL/MCR 0°C to +99°C
 T.O./max. cont. 0°C to +99°C

Inverted flight (less than zero g) is limited to 60 seconds.

1.5 Propeller and Propeller Limits

Hartzell HC-D4N-2A hub with four Hartzell D 9512A or D 9512AK (deiced version) blades, constant speed type.
 Type Certificate Number FAA P10 NE

Diameter: 96 inch (2439 mm) maximum
 95 inch (2413 mm) maximum

Pitch settings at: (measured at 30 inch station)
 Minimum pitch : 14°
 Feathered : 86°

Propeller blade life limit : 11'500 hours

Spinner: D-630

1.6 Air Speed Limits (EAS)

Max. operating speed (V_{MO}) 320 knots
 up to 17'500 ft altitude

above 17'500 ft limited to (MMO) 0.68
 max. operating Mach. No.

Max. maneuvering speed (V_A) 210 knots
 at MTOW 2250 kg

Max. speed with flaps and/or (VFE) (VLO) 150 knots
 landing gear extended

Max. airbrake operating speed 250 knots
 (not applicable if airbrake pitch trim system is installed)

Stall speed at MTOW 2250 kg Flaps up 79 knots
 Flaps down 70 knots

1.7 Maneuvering Load Factors

Max. positive up to V_{MO} +7.00g
 Max. negative up to V_{MO} -3.50g

1.8 C.G. Range (Landing gear extended and retracted)

22% to 30% M.A.C. at 2250 kg or less for A-Category
 MAC = 1650 mm
 position of MAC leading edge: 3873 mm

1.9 Maximum Weight

Ramp 2260 kg
 Take-off 2250 kg
 Landing 2250 kg
 MZWF 1900 kg
 Min. Flying Weight 1735 kg

1.10 Minimum Crew	One pilot Solo flight is limited to front cockpit For IFR operation, the minimum crew is two pilots					
1.11 Number of Seats	1 Front crew at 4061 mm 1 Rear crew at 5486 mm					
1.12 Maximum Baggage	25 kg at 6898 mm in baggage compartment					
1.13 Fuel Capacity at 0.806 kg/l specific gravity	Total	Usable	Arm			
	540 liters	535 liters	4178 mm			
1.14 Oil Capacity	Total	Arm				
	17 liters	2318 mm				
1.15 Maximum Operating Altitude	25'000 ft (according to FAR 23.141)					
1.16 Control Surface Movements	Wing flap	Take-off	23°	Landing	50°	+/- 1°
	Ailerons	Up	20°	Down	11°	+/- 0.5°
	Elevator	Up	18°30'	Down	16°	+/- 0.5°
	Elevator tab	Up	15°	Down	20°	+/- 1°
	Rudder	right	24°	left	24°	+/- 0.5°
	Rudder tab (anti-flettner)	right	5.5°	left	5.5°	+/- 0.5°
	Rudder tab (trim)	right	5°	left	10°	+/- 0.5°
	Airbrake	down	70°			
1.17 Serial Nos. Eligible	101 and up (see Note 1)					
1.18 Datum	3000 mm in front of firewall					
1.19 Leveling Means	Marks (rivet heads) on each side of fuselage					

Bundesamt für Zivilluftfahrt (BAZL) Office fédéral de l'aviation civile (OFAC) Federal Office of Civil Aviation (FOCA) CH-3003 Berne, Switzerland	Geräte Kennblatt – Fiche de navigabilité – Data Sheet F 56-22	Page 4 of 8
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1.20 Certification Basis

- US Federal Aviation Regulation Part 23 Acrobatic Category including Amendments 23-1 through 23-28 effective April 28, 1982.
- Swiss Federal Office of Civil Aviation (FOCA) Special Requirements dated July 19, 1982, rev. A
- FOCA Special Requirements for Ejection Seats dated Dec. 15, 1983
- ICAO Annex 16, Chapter 6
- SFAR 27
- Equivalent safety findings for:
 - FAR 23.49(b)(1) Issue Paper (CRI) B-2
 - 23.201 Issue Paper (CRI) B-3
 - 23.1555(e) 2) Issue Paper (CRI) G-1
- Application for type certification dated April 15, 1982.

Avionics Upgrade Major Change:

As per above, except for the following requirements applicable to the areas affected by the major change (as defined in Issue Paper (CRI) A-1, latest stage):

FOCA special conditions:

- Issue paper (CRI) F-8 for the Protection from the Effects of High Intensity Radiated Fields (HIRF)
- Issue paper (CRI) F-9 for the Protection from the Indirect Effects of Lightning Strike (IEL)
- Any existing PC-9 Issue Paper (CRI) remains valid unless superseded by a new Issue Paper (CRI).

1.21 Kinds of Operation

Eligible for the following kinds of operations when the appropriate equipment and instruments required by the operating requirements are installed, approved and in operable condition:

- VFR Day
- VFR Night
- IFR

Flight into known icing conditions is not approved.

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- 1.22 Material** Primary Structure: 2024 Clad & unclad
Aluminium Castings
Magnesium Castings
- 1.23 Hydraulic System** Actuation of landing gear and doors, air brake, flaps and
nosewheel steering
- 1.24 Ejection Seat** Operating range 60 to 400 knots EAS, 0 to 40'000 ft.
Command ejection from rear seat, or individually.
Ejection through canopy.

9 liters survival pack
- 1.25 Environmental Control System (ECS)** Bootstrap air cycle system for cockpit cooling, heating and
windshield defogging
- 1.26 Equipment** For the list of standard and optional equipment, refer to the AFM
and AFM-Supplement as listed in Section 5.0
- 1.27 Documents**
 - Airplane Flight Manual: For FOCA approved AFM and AFM-Supplements see Section 5.0.
 - Maintenance Manual: Doc. No. 01834
- 1.28 Placards** All placards required in the Approved Airplane Flight Manual
and/or applicable AFM Supplements must be installed at the
respective locations.
- 1.29 Service Life Limits** Life limited airplane components are listed in Chapter 5
of the PC-9 Aircraft Maintenance Manual, Document No. 01834,
and must be replaced as indicated therein (see note 3).
- 1.30 Notes**
1. Serial No. 001 and 002 fulfill the requirements listed under Certification Basis, but do not fully comply with the approved serial version.
 2. The certification noise level for max. take-off weight of 2250 kg is 72,8 dB(A).
 3. Airworthiness Limitations are contained in the FOCA approved Airworthiness Limitations Section in the Chapter 5 of the applicable PC-9 Aircraft Maintenance Manual (AMM). These limitations may not be changed without FOCA approval.

2.0 Model: PC-9/A Approved June 1, 1987

Information given in this section is to be understood as supplemental to or superseding those shown in section 1.0.

2.17 Serial Nos. Eligible 501 and up

2.20 Certification Basis Application for type certification dated August 18, 1986

3.0 Model: PC-9/F Approved August 29, 1989

Information given in this section is to be understood as supplemental to or superseding those shown in section 1.0.

3.20 Certification Basis Application for type certification dated April 27, 1988

3.26 Equipment

- Approved Conditioning System

Nomenclature	Part Number
- Control Panel fwd	959.90.01.602
- Control Panel aft	959.90.01.601
- Compressor Assembly	959.90.01.301
- Evaporator Assembly fwd	959.90.01.101
- Evaporator Assembly aft	959.90.01.102
- Condenser Coil Assembly	959.90.01.201
- Condenser Blower	959.90.01.204
- Heater Assembly	959.90.01.401

4.0 Model: PC-9/B Approved August 20, 1990

Information given in this section is to be understood as supplemental to or superseding those shown in section 1.0.

4.6 Air Speed Limits (EAS) Max. maneuvering speed (V_A) 200 knots at MTOW 2500kg

Stall speed at MTOW 2500 kg	Flaps up Flaps down	83 knots 74 knots
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4.7 Maneuvering load factors Max. positive up to V_{MO}: +6g
Max. negative up to V_{MO}: -3g

4.8 C.G. Range (Landing gear extended and retracted) up to 2200 kg 22% : 30% MAC
at 2500 kg 22.9% : 29.4% MAC

straight line variation between 2200 kg and 2500 kg

4.9 Maximum Weight

Ramp	:	2510 kg
Take-off	:	2500 kg
Landing	:	2500 kg
MZWF	:	2000 kg

4.13 Fuel capacity at 0.806 kg/l specific gravity

Total	Usable	Arm
701 liters	686 liters	4282 mm

- 4.20 Certification Basis**
- US Federal Aviation Regulation Part 23 Acrobatic Category including Amendments 23-1 through 23-28 effective April 28, 1982.
 - Swiss Federal Office of Civil Aviation (FOCA) Special Requirements dated July 19, 1982, rev. A
 - FOCA Special Requirements for Ejection Seats dated Dec. 15, 1983
 - ICAO Annex 16, Chapter 6
 - SFAR 27
 - Equivalent safety findings for FAR 23.201 (Issue Paper B-3)
 - US FAR 21.25 Restricted Category Aircraft due to non-compliance with FAR 23.49 (b)(1) Issue Paper (CRI) H-3
 - Application for type certification dated February 27, 1990.

4.30 Note:

- The certification noise level for max. take-off weight of 2500 kg is 72,8 dB(A).

5.0 Airplane Flight Manuals (AFM) and Airplane Flight Manual Supplements

In the following table, the FOCA approved AFM and AFM-Supplements are listed in relation to the aircraft model:

AFM Suppl. Doc. No.	Subject Note Approved AFM Doc. No.	A/C Model						Operating Category
		PC-9			PC-9/A	PC-9/F	PC-9/B	
		01795			01795/A	01944	01962	
		-	/M	GAMA				
01868	Bendix EFS-10, EADI and EHSI	X	X		X			Acrobatic
01869	Tracor TA 7880 Omega/VLF	X	X					Acrobatic
01875	IFR Operation	X	X					Acrobatic
01878	Underwing Stores Operation	X						Restricted
01878/ M	Underwing Stores Operation (metric units)		X					Acrobatic
01879	Bendix EFS-10, EADI and EHSI	X	X					Acrobatic
01893/ A	Operation at weight in excess of 2250 kg				X			Restricted
01894/ A	Underwing Stores Operation				X			Restricted
01926	Target Towing System RM-12-CH	X						Restricted
01945	Underwing Stores Operation					X		Restricted
01946	Target Towing System RM-12-CH					X		Restricted
01958	Target Towing System RM-24 (GAMA Layout Customized)			X				Restricted
01963	Target Towing System RM-24 (GAMA Layout Customized)						X	Restricted
01966	Enlarged Wing fuel tank	X						Acrobatic/ Restricted
01967*	Target Towing System RM-24	X						Restricted
01968	Bendix/King KLN88 Loran-C	X	X					Acrobatic
01969	Systron Donner 801 Fire Detection	X	X					Acrobatic
01970	Automatic Engine Starting System	X	X					Acrobatic
01971	Bendix/King EFS 40/50	X	X			X		Acrobatic
02067	Expanded Maneuver Envelope ¹⁾	X						
02084	Bendix/King KLN 90 A GPS	X	X			X		
02085	Bendix/King KLN 90 GPS	X	X			X		

X where applicable

* SB No. PC-9 25-003 must be accomplished prior to installation of the RM-24 System

¹⁾ valid only for aircraft MSN 108-114 and 121-143

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