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Pilatus PC-6 Turbo Porter

Outlook

- PC-6 production has ended
- The PC-6 had been in production for some 60 years

Orientation

Description. Single-turboprop-powered STOL utility transport aircraft.

Sponsor. The PC-6 was sponsored by Pilatus.

Status. Production of the PC-6 ended in early 2019.

Total Produced. Through 2019, approximately 599 PC-6s were produced, including about 92 aircraft built under license by Fairchild.

Application. Nonscheduled and charter passenger service, small freight and express package service, supply dropping, search-and-rescue, aerial ambulance, aerial survey, fire protection, agricultural services, parachute dropping, and glider towing.

Price Range. Estimated at \$2.1 million in 2019 U.S. dollars.

Pilatus PC-6 Turbo Porter



PC-6

Source: J. Drewes

Contractors

Prime

| | |
|-----------------------------|---|
| Pilatus Aircraft Ltd | http://www.pilatus-aircraft.com , PO Box 992, Stans, Switzerland, Tel: + 41 41 619 61 11, Fax: + 41 41 610 92 30, Prime |
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Subcontractor

| | |
|---|--|
| Collins Aerospace Systems, Wheels & Brakes | http://www.collinsaerospace.com , 101 Waco St, PO Box 340, Troy, OH 45373-3872 United States, Tel: + 1 (937) 339-3811, Fax: + 1 (937) 440-3286 (Hydraulic Disc Brakes) |
| Hartzell Propeller Inc | http://hartzellprop.com , One Propeller Pl, Piqua, OH 45356-2656 United States, Tel: + 1 (937) 778-4200, Fax: + 1 (937) 778-4321 (Three-Blade Propeller) |
| Pratt & Whitney Canada | http://www.pwc.ca , 1000 Marie-Victorin Blvd, Longueuil, Quebec, Canada, Tel: + 1 (450) 677-9411, Fax: + 1 (450) 647-3620 (PT6A-27 Turboprop) |

Contractors are invited to submit updated information to Editor, International Contractors, Forecast International, 22 Commerce Road, Newtown, CT 06470, USA; rich.pettibone@forecast1.com

Pilatus PC-6 Turbo Porter**Technical Data****(PC-6/B2-H4)**

Design Features. Braced, cantilever, high-wing monoplane. The fuselage was a semi-monocoque structure with a cantilever tail section. The aircraft structure was all-metal. The landing gear were fixed and employed twin forward-braced units with a single tail wheel. Wheel/ski gear or floats could be fitted instead.

The PC-6 could be converted from one application to another with minimal effort. Passenger seats could be quickly removed and stowed in a seat stowage area behind the cabin. A large sliding door was located on each side of the fuselage, allowing easy cabin access for cargo loading and unloading.

| | <u>Metric</u> | <u>U.S.</u> |
|-------------------------------|---------------|---|
| Dimensions | | |
| Length overall | 10.90 m | 35.75 ft |
| Height overall | 3.20 m | 10.50 ft |
| Wingspan | 15.87 m | 52.08 ft |
| Cabin width, max | 1.16 m | 3.81 ft |
| Cabin height, max(a) | 1.28 m | 4.20 ft |
| Cabin length | 2.30 m | 7.55 ft |
| Wing area, gross | 30.15 sq m | 324.54 sq ft |
| Weight | | |
| Basic empty weight | 1,395 kg | 3,075 lb |
| Max takeoff weight | 2,800 kg | 6,173 lb |
| Max payload | 1,200 kg | 2,646 lb |
| Capacities | | |
| Usable fuel (internal) | 644 liters | 170 U.S. gal |
| Performance | | |
| Max cruise speed | 232 km/h | 125 kt |
| Takeoff distance over 50 feet | 440 m | 1,444 ft |
| Landing distance over 50 feet | 315 m | 1,033 ft |
| Range at 10,000 feet | | |
| with internal fuel only | 926 km | 500 nm |
| with underwing tanks | 1,611 km | 870 nm |
| Propulsion | | |
| PC-6/B2-H4 | (1) | Pratt & Whitney Canada PT6A-27 turboprop engine flat-rated to 410 kW (550 shp), driving a Hartzell three-blade, constant-speed, fully feathering, reversible-pitch propeller with Beta control. |

Seating

Seven passengers plus pilot is standard; high-density seating for up to 11 is available in a 2-3-3-3 (including pilot) configuration.

(a) At front.

Variants/Upgrades

Q-STOL Variant. Pilatus once marketed a Quiet STOL conversion kit for PT6A-20/27 powered B1 and B2 Turbo Porters, consisting of a reversal system to alter propeller speed independently of the engine power setting. Pilatus claimed that this reduced the noise level by more than 10 dB on takeoff and 20 dB on landing.

PC-6/B2-H4. The most recent production version in the Turbo Porter series was the PC-6/B2-H4. It possessed a maximum takeoff weight of 2,800 kilograms (6,173 lb), and an increase in payload of 570 kilograms (1,257 lb) over earlier variants.

Pilatus PC-6 Turbo Porter

The PC-6/B2-H4 was powered by the PT6A-27 engine, and was equipped with a Hartzell three-blade propeller. A four-blade propeller from Hartzell was available as an option.

Beginning in 2010, new PC-6/B2-H4s were equipped with a glass cockpit featuring Garmin G950 avionics.

Program Review

Background. The Turbo Porter was a single-engine, high-wing STOL aircraft possessing excellent slow flight characteristics and the ability to operate into just about any type of terrain in any weather. The PC-6 was optimized for high-altitude operation.

Piston First, Then Turboprop

The initial version first flew in 1959 with a piston engine, but a turboprop-powered model flew for the first time just two years later. Early-series Turbo Porters used various engines, including Turbomeca Astazou IIE, IIG, XII, and XIVE engines; AiResearch TPE331 engines; and Pratt & Whitney Canada PT6A-6A and PT6A-20 powerplants. The most recent production version of the PC-6 was the PC-6/B2-H4 model, which entered production in 1985. It was powered by the PT6A-27.

Until the mid-1970s, Fairchild Industries, Hagerstown, Maryland, built the PC-6 under license.

In August 2013, Pilatus opened a facility in Chongqing Liangjiang New Area in China. The facility was operated by a joint venture company called Pilatus Aircraft Industry (China) Company Ltd. The plant manufactured fuselages for PC-6s assembled in Switzerland.

The joint venture was a partnership between Pilatus and the Chinese firm Beijing Tian Xing Jian Yu Science Company Ltd. Pilatus had a majority stake in the joint venture.

In August 2017, Pilatus announced plans to terminate PC-6 production in 2019.

Timetable

| <u>Month</u> | <u>Year</u> | <u>Major Development</u> |
|--------------|-------------|--|
| | 1957 | Original piston-powered design initiated |
| May | 1959 | First flight of piston-powered prototype |
| Dec | 1959 | Swiss certification granted |
| May | 1961 | First flight of turboprop-powered PC-6 |
| | 1985 | PC-6/B2-H4 production begun |
| Aug | 2013 | Fuselage assembly facility opened in China |
| Early | 2019 | PC-6 production ends |

Forecast Rationale

Pilatus delivered the final PC-6s in 2018, and subsequently terminated production of the venerable turboprop aircraft. According to Pilatus, the PC-6 had come to the end of its product life-cycle, demand for it had been dwindling, and the company's production capacity needed to be reallocated to other uses.

Nearly 600 PC-6s were built over the life of the program, including 92 that were built under license by Fairchild in the U.S. Pilatus intends to continue providing support to existing PC-6 operators for at least 20 years.

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