

# *European Aviation Safety Agency*

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## **EASA TYPE-CERTIFICATE DATA SHEET**

Number : IM.P.127  
Issue : 01  
Date : 26 April 2010  
Type : Hartzell Propeller Inc.  
HC-B4T series propellers

Models  
HC-B4TN-3  
HC-B4TN-5

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## **I. General**

**1. Type / Models:**

HC-B4T / HC-B4TN-3, HC-B4TN-5

**2. Type Certificate Holder:**

Hartzell Propeller Inc.  
Piqua, OH 45356  
USA

**3. Manufacturer:**

Hartzell Propeller Inc.

**4. Date of Application:**

HC-B4TN-3:	Before 1979
HC-B4TN-5:	Before 1979

The exact Date of Application was not recorded in individual EU Member States.

**5. EASA Certification Reference Date:**

06 April 1971

**6. EASA Certification Date:**

HC-B4TN-3:	16 February 1979
HC-B4TN-5:	16 February 1979

The EASA Certification Date has been taken over from individual EU Member States.

## **II. Certification Basis**

1. **FAA Certification Basis:** Refer to FAA TCDS no. P40EA

2. **EASA Certification Basis:**

2.1 **Airworthiness Standards:**

14 CFR Part 35 with amendments 35-1 through 35-6 effective 18 August 1990.

Note:

Application was made to EU Member States before EASA was established. Refer to Commission Regulation (EC) No 375/2007 of 30 March 2007 amending Regulation (EC) No 1702/2003.

2.2 **Special Condition:** None

2.3 **Equivalent Safety Findings:** None

2.4 **Deviations:** None

## **III. Technical Characteristics**

1. **Type Design Definition:**

The propeller type is defined by a propeller assembly drawing that includes a parts list. The earliest applicable drawing revision is shown below:

HC-B4TN-3 Drawing D-3400 dated 16 September 1964

HC-B4TN-5 Drawing D-3420 dated 22 July 1964

2. **Description:**

The propeller is a 4-blade variable pitch propeller with a hydraulically operated blade pitch change mechanism providing the operation mode "Constant Speed". The -3 and -5 models incorporate feathering and reversing features. (See Notes 1 and 4).

The hub is machined of steel alloy. The blade material is aluminum alloy. Optional equipment includes spinner and ice protection.

3. **Equipment:**

Spinner: See Note 7

Governor: See Note 3

Ice Protection: See Note 7

4. **Dimensions:**

See Table of Section IV.

**5. Weight:**

Depending on Propeller-Design Configuration:  
See Table of Section IV.

**6. Hub/Blade-Combinations:**

See Table of Section IV.

**7. Control System:**

Propeller governors: See Note 3

**8. Adaptation to Engine:**

Special flange: See Note 1

**9. Direction of Rotation:**

Direction of rotation (viewed in flight direction) as identified by a letter-code in the propeller designation. (See Note 5)

**IV. Operational Limits**

Blade material: Aluminum Alloy

Blades (See Note 2)	Max. Continuous kW - rpm (min <sup>-1</sup> )	Take Off kW - rpm (min <sup>-1</sup> )	Diameter Limits (cm) (See Note 2)	Approx. Max. Wt. Complete (kg) (See Notes 3,7)
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Propeller Models HC-B4TN-3, HC-B4TN-5

T9212-0 to T9212-10	634	2000	634	2000	236,2 to 210,8 (-0 to -10)*	71,6
T9216-0 to T9216-10	634	2000	634	2000	236,2 to 210,8 (-0 to -10)*	71,6
T10574-0 to T10574-16	708,4	1620	708,4	1620	269,2 to 228,6 (-0 to -16)*	74,8
T10574A-0 to T10574A-16	708,4	1620	708,4	1620	269,2 to 228,6 (-0 to -16)*	76,2
T10576-0 to T10576-16	708,4	1591	708,4	1591	269,2 to 228,6 (-0 to -16)*	77,1
T10173+1 to T10173-21	671,1	2200	671,1	2200	262,9 to 207,0 (+1 to -21)**	70,3
T10173AN-12,5 to T10173AN-21	559,3	2200	671,1	2200	228,6 to 207,0 (-12,5 to -21)**	71,2
T10173F-12,5 to T10173F-21	559,3	2200	708,4	2200	228,6 to 207,0 (-12,5 to -21)**	69,4
T10176+1 to T10176-21	671,1	2200	671,1	2200	262,9 to 207,0 (+1 to -21)**	70,3

T10178-0 to T10178-21	708,4	2200	708,4	2200	260,4 to 207,0 (-0 to -21)**	74,8
T10282-0 to T10282-22	708,4	2200	708,4	2200	261,6 to 205,7 (-0 to -22)*	74,8
T10282+6 to T10282-0	708,4	1591	708,4	1591	277,5 to 261,6 (+6 to -0)***	75,3
	596,6	or 2000	596,6	or 2000		
T10890N-0 to T10890N-6	708,4	1591	708,4	1591	277,5 to 262,9 (-0 to -6)**	84,4

Note: \*, \*\*, \*\*\* see Note 2

**1. Maximum Take Off Power and Speed:**

See Table of Section IV.

**2. Maximum Continuous Power and Speed:**

See Table of Section IV.

**3. Propeller Pitch Angle:**

See Note 3.

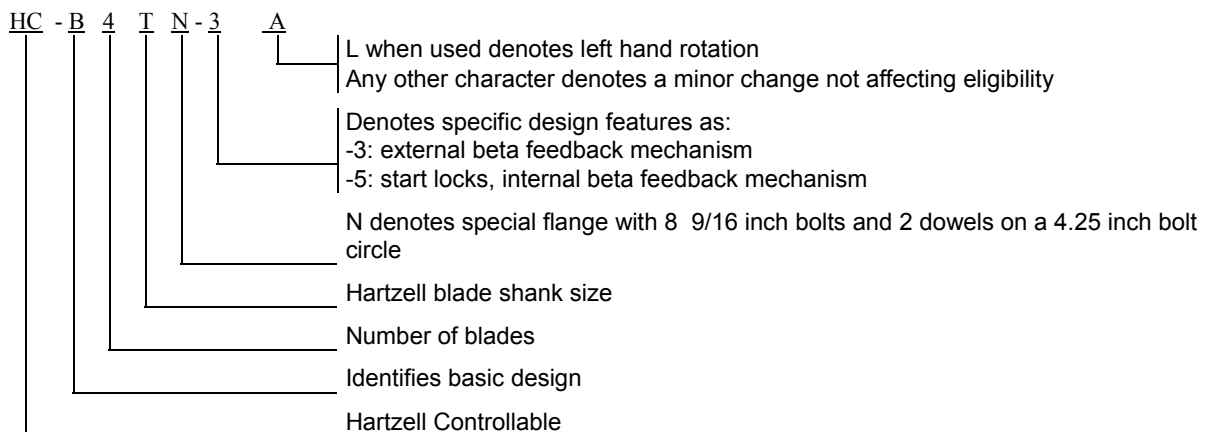
**V. Operating and Service Instructions**

Airworthiness Limitations	Hartzell Manuals 118F (*)
Overspeed and Overtorque Limits	Hartzell Manual 202A (*)
Propeller Owner's Manual	Hartzell Manual 139 (*)
Service Bulletins	

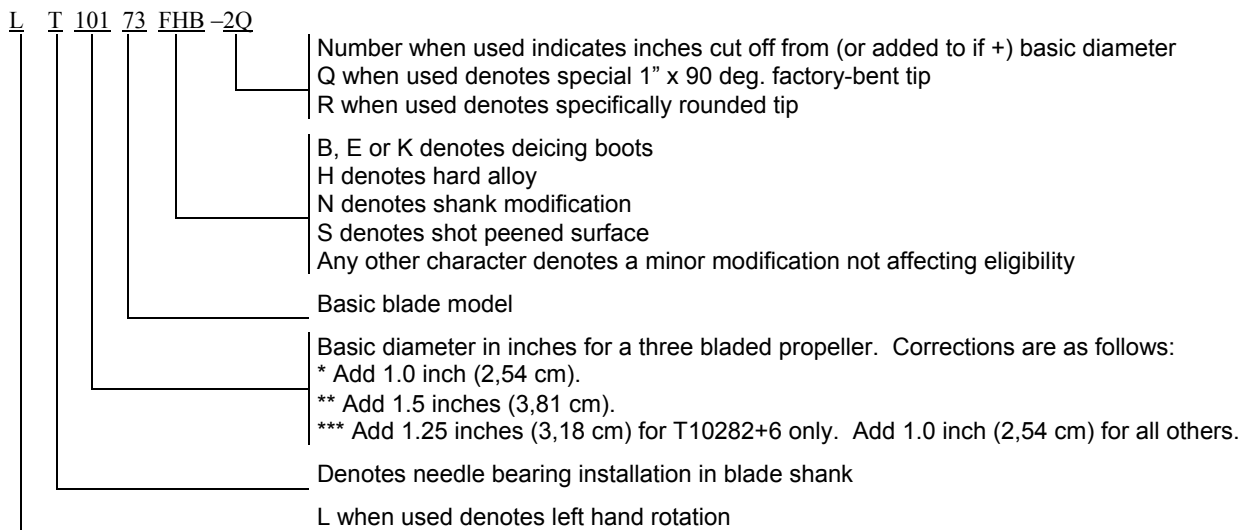
(\*) or later approved revision

**VI. Notes**

1. Hub Model Designation (See Notes 4 and 5)



2. Blade Model Designation (See Notes 5 and 6)



3. Pitch Control (Weight of pitch control extra) (See Notes 4 and 10)

- (a) All models have counterweighted blades and use governor oil to decrease pitch.
- (b) All governors and propeller control systems must be approved as part of the aircraft installation regardless of manufacturer.
- (c) Maximum control pressure for all models: 3447,38 kPa

4. (a) Feathering The -3 and -5 models incorporate feathering and unfeathering features.

- (b) Reversing The -3 and -5 models are approved for installation as reversing propellers with reversing controls.

5. Left-Hand Models (see Notes 1 and 2)

The left-hand version of an approved propeller model is approved at the same rating and diameter as listed for the right-hand model.

6. Interchangeability (See Note 2)

- (a) Hard and soft alloy blades of the same model designation are interchangeable.
- (b) Blades with the suffix "N" in the basic model number may replace those without an "N" either individually or as a set. Likewise, blades with the suffix "S" in the basic model number may replace those without an "S" either individually or as a set. When the aircraft Type Certificate or Supplemental Type Certificate specifies blades with the letters "N" or "S" in the basic model number, those characters must be retained in all replacement blade models.

For example: Blades with neither "N" nor "S" may be replaced by "N", "S" or "NS" blades,  
 "N" blades may be replaced by "NS" blades,  
 "S" blades may be replaced by "NS" blades.

- (c) Refer to Hartzell Service Letter HC-SL-30-260 for ice protection system component interchangeability.

7. Accessories
  - (a) Propeller deice (weight of deice system extra)
    - (1) Approved with Goodrich electrical deicing kit 5EXXXX-X, 7EXXXX-X, 77-XXX, 67-XXX, or 65-XXX when the specific kit number is listed on Hartzell type design data and installed in accordance with Goodrich report no. ATA 30-60-07, Goodrich drawing no. 7<sup>E</sup>-1284 or Beech installation drawing no. 50T-389045.
    - (2) Approved with ice protection equipment when listed on Hartzell type design data.
  - (b) Propeller spinner (weight of spinner extra)
    - (1) Approved with Hartzell and other manufacturers' spinners when listed on Hartzell type design data.
  
8. Shank Fairings: Not applicable.
  
9. Special Limits: Not applicable.
  
10. Propeller installation must be approved as part of the aircraft Type Certificate and demonstrate compliance with the applicable aircraft airworthiness requirements.  
  
Propeller models listed herein consist of basic hub and blade models. Most propeller models include additional characters to denote minor changes and specific features as explained in Notes 1 and 2.
  
11. Retirement Time:
  - (a) Life Limits and Mandatory Inspections. Airworthiness limitations, if any, are specified in Hartzell Maintenance Manuals 118( ) or Service Letter HC-SL-61-61( ).
  
12. Special Notes:
  - (a) Refer to Hartzell Manual no. 202( ) for overspeed and overtorque limits.
  - (b) Refer to Hartzell Service Letter HC-SL-61-61( ) for overhaul periods.
  
13. EASA Type Certificate and Type Certificate Data Sheet No. IM.P.127 replace the associated Type Certificates and Type Certificate Data Sheets of the EU Member States.  
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