

European Aviation Safety Agency

EASA TYPE-CERTIFICATE DATA SHEET

Number : IM.P.128
Issue: 01
Date : 21 July 2014
Type : Hartzell Propeller Inc.
HC-B4M series propellers

Model
HC-B4MP-3

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I. General

1. Type / Model:

HC-B4M / HC-B3MP-3

2. Type Certificate Holder:

Hartzell Propeller Inc.
One Propeller Place
Piqua, OH 45356
USA

3. Manufacturer:

Hartzell Propeller Inc.

4. Date of Application:

HC-B4MP-3: Before 1991*

*: The exact Date of Application was not recorded in individual EASA Member States.

5. EASA Certification Reference Date:

05 May 1978

6. EASA Certification Date:

HC-B4MP-3: 23 April 1991*

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

II. Certification Basis

1. FAA Certification Basis: Refer to FAA TCDS no. P56GL.

2. EASA Certification Basis:

2.1 Airworthiness Standards:

HC-B4MP-3:

14 CFR Part 35 with amendments 35-1 through 35-5 effective 14 October 1980.

Note 1:

Application was made to EASA Member States before EASA was established. Refer to Commission Regulation (EU) No 748/2012.

Note 2:

The above mentioned propeller models are EASA certified based on member states approvals prior to EASA existence. The original and updated FAA certification basis as indicated above had been taken over from the FAA TCDS.

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 including a parts list (or later approved revisions).

HC-B4MP-3

Drawing D-4000, rev J, dated 10 December 1983

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 model incorporate feathering and unfeathering features. The -3 model is approved for installation as reversing propellers with appropriate reversing controls.

The hub is a one piece alloy steel hub. Each blade is supported on a hub arm with a pilot tube, two-piece blade clamp, and ball thrust bearing assembly. Optional equipment includes spinner and deicing (See Note 7).

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

Blades (See Note 2)	Max. Continuous kW - rpm (min ⁻¹)	Take Off kW - rpm (min ⁻¹)	Diameter Limits (cm) (See Note 2)	Approx. Max. Wt. Complete (kg) (See Notes 3,7)	Blade Construction (See Note 10)
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HC-B4MP-3

M10476-0 to M10476-10	894,8 1700	894,8 1700	266,7 to 241,3 (-0 to -10)	87,1	Aluminum Alloy
M10877	874,7 1700	874,7 1700	278,1	77,6	Aramid Composite
M10877S	874,7 1700	874,7 1700	278,1	78,5	Aramid Composite

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.

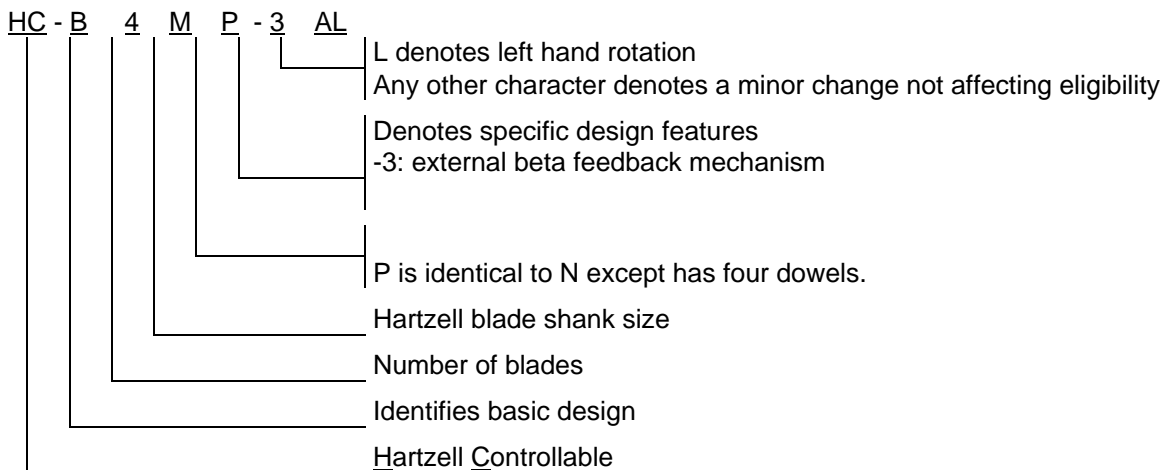
V. Operating and Service Instructions

Owner's Manual-Aluminium blades	Hartzell Manuals 139*
Owner's Manual-Composite blades	Hartzell Manual 146*
Standard Practices Manual	Hartzell Manual 202A*
Composite Blade Maintenance Manual	Hartzell Manual 135F*
Aluminum Blade Overhaul Manual	Hartzell Manual 133C*
Propeller Overhaul Manual	Hartzell Manual 118F*
Service Bulletins	

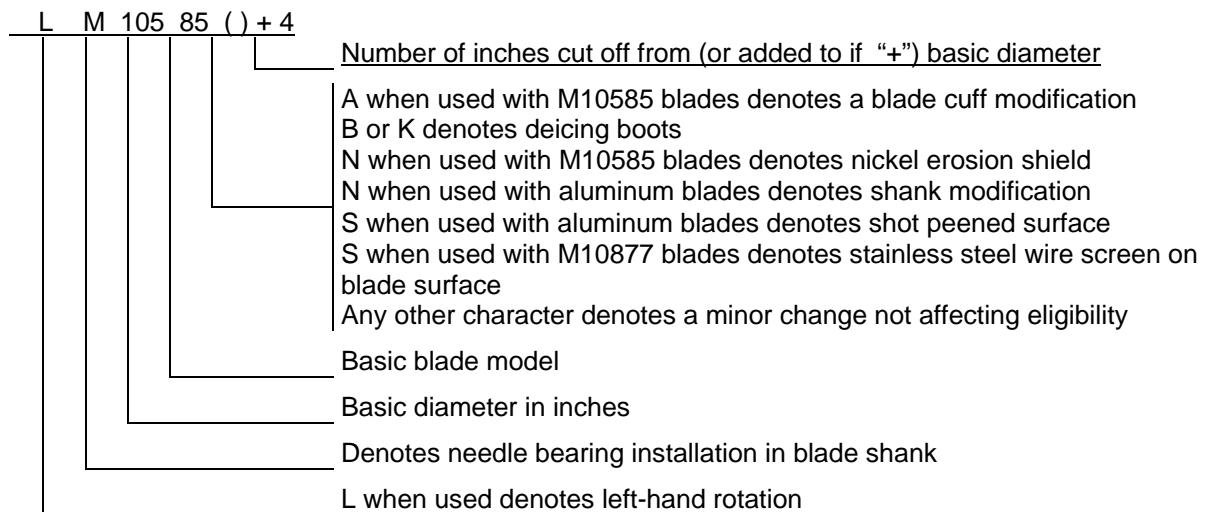
*: or later approved revision

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 propeller 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: 3447,38 kPa.

4. Feathering:

- (a) The -3 model incorporates feathering and unfeathering features.

Reversing:

- (a) The -3 model is approved for installation as reversing propeller 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) 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.

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

7. Accessories:
- (a) Propeller spinner. (weight of spinner extra)
 - (1) Approved with Hartzell and other manufacturers' spinners when listed on Hartzell type design data.
 - (b) Propeller deicing (weight of deice system extra)
 - (1) Approved with Goodrich electrical deicing kit 77-XXX, 67-XXX, 65-XXX, 5EXXXX-XX, or 7EXXXX-XX when the specific kit number is listed on Hartzell type design data and installed in accordance with Goodrich Report no. ATA 30-60-07.
 - (2) Approved with ice protection equipment when listed on Hartzell type design data.
8. Shank Fairings : Not applicable.
9. Special Limits: Not applicable.
10. The propeller installation must be approved as part of the aircraft Type Certificate to 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. Refer to the aircraft Type Certificate Data Sheet for the specific propeller model applicable to the installation.
- Propellers with composite blades must be evaluated for bird impact resistance prior to approval on any type aircraft. Hartzell Propeller must perform tests and/or analyses based on aircraft configuration and operating conditions to determine the potential hazard as a result of a bird impact.
11. Retirement Time:
- (a) Life Limits and mandatory inspections
 - (1) Airworthiness limitations, if any, are specified in Hartzell Manuals 139 or 146 or Service Letter 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 recommended overhaul periods.
13. EASA Type Certificate and Type Certificate Data Sheet No. IM.P.128 replace the associated Type Certificates and Type Certificate Data Sheets of the EASA Member States.
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