



AGÊNCIA NACIONAL DE AVIAÇÃO CIVIL - BRASIL

TYPE CERTIFICATE DATA SHEET Nº EH-2000T03

Type Certificate Holder:

HARTZELL PROPELLER INC.
One Propeller Place
Piqua, Ohio - OH 45356 -
USA

EH-2000T03-02

Sheet 01

HARTZELL

HC-B5M

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Propellers of models described herein conforming with this data sheet, which is part of Type Certificate No. 2000T03, meet the minimum standards for use in certificated aircraft in accordance with pertinent aircraft data sheets and applicable portions of the Brazilian Aeronautical Regulations provided they are installed, operated, and maintained as prescribed by the approved manufacturer's manuals and other instructions.

TYPE	Constant speed, hydraulic (See Notes 3 and 4)
ENGINE SHAFT	Special flange (See Note 1)
HUB MATERIAL	Alloy steel
BLADE MATERIAL	Aluminum alloy
NUMBER OF BLADES	Five

Pavor

HUB ELIGIBLE

HC-B5MP-3, HC-B5MA-3 and HCB5MA-2 (See Notes 1 & 4)

Blade Eligible (See Notes 2 & 6)	Max. Continuous Power	Takeoff power	Diameter Limits (See Notes 2)	Approx. Max. Weight Compl. (See Notes 3 & 7)
	rpm (hp)	rpm (hp)	m (in)	kg (lb)
<u>Hub Model HC-B5MP-3</u>				
M10876-0 to M10876-6	1 700 (1 327)	1 700 (1 500)	2.82 (111.2) to 2.67 (105.2) (-0 to -6)	104.33 (230.0)
M11276-0 to M11276-10	1 700 (1 327)	1 700 (1 500)	2.93 (115.2) to 2.67 (105.2) (-0 to -10)	115.21 (254.0)
<u>Hub Model HC-B5MA-3</u>				
M11276-0 to M11276-10	1 700 (1 650)	1 700 (1 650)	2.93 (115.2) to 2.67 (105.2) (-0 to -10)	115.66 (255.0)
M11691-0 To M11691-10	1 700 (1 650)	1 700 (1 650)	3.02 (118.7) to 2.76 (108.7) (-0 to -10)	118.39 (261.0)
<u>Hub Model HC-B5MA-2</u>				
M9128-0 to M9128-6	2 000 (1 600)	2 000 (1 600)	2.39 (94) to 2.24 (88) (-0 to -6)	100.24 (221.0)

CERTIFICATION BASIS

Brazilian Type Certificate Nr.2000T03 based on the RBHA (Brazilian Requirements for Aeronautical Certification), which endorses the FAR Part 35 effective 01 February 1977, with amendments 35-1 and 35-2.

The following models were added, updated or revised in accordance with RBHA (Brazilian Requirements for Aeronautical Certification), which endorses the FAR 35 through 35-6 effective 18 August 1990: HC-B5MP-3, HC-B5MA-3 and HCB5MA-2

TYPE CERTIFICATION

<u>Model</u>	<u>Application</u>	<u>Issued TC</u>
HC-B5MP-3	22 November 1999	01 March 2000
HC-B5MA-3	22 November 1999	01 March 2000
HC-B5MA-2	20 October 2003	13 February 2004

PRODUCTION BASIS

Production Certificate No. 10

IMPORT REQUIREMENTS Each propeller imported separately and/or spare parts must be accompanied by an export airworthiness approval issued by the primary authority, attesting that the particular propeller and/or parts were submitted to the governmental quality control before delivery and are in conformity with the ANAC approved type design.

NOTES:

NOTE 1 Hub model Designation - HC -B 5 M P -3 AL , where:

HC Hartzell Controllable.

-B Identifies basic design.

5 Number of blades

M Hartzell blade shank size

P P denotes special flange with eight 9/16" bolts and four dowels on a 4-1/4" B.C.
A denotes special flange with twelve 9/16" bolts and two dowels on a 5-1/8" B.C.

-3 Denotes specific design features (See Note 4)

AL L when used denotes left hand rotation
T when used indicates a titanium piston. Add 1.68 kg (3.7 lb)
Any other character denotes a minor change not affecting eligibility

NOTE 2 Blade Model Designation - L M 102 82 AB -2Q , where:

L L when used denotes left-hand pusher.

M Denotes needle bearing installation in blade shank.

102 Basic diameter in inches for a 3 blade propeller. Add 3.2" for 5 blade propeller.

82 Basic blade model

AB B, E or K denotes deicing boots
N denotes shank modification (See Note 6)
S denotes shot peened blade surface (See Note 6)
Any other character denotes minor change not affecting eligibility

-2Q Number of inches cut off from basic diameter (or added to if preceded by "+")
Q when used denotes special 1" x 90 deg. factory-bent tip for cutoff diameter

NOTE 3 Pitch Control:

- (a) All propeller models have counterweighted blades and use oil to decrease pitch. (See Note 4)
- (b) All governors and propeller control system must be approved as part of aircraft installation regardless of manufacturer.
- (c) Maximum control pressure: 500psig.
- (d) The Hartzell propeller model HC-B5M-2() with M9128() blades is controlled by an integrated control system which is part of engine type design. The propeller model HC-B5M-2() with M9128() blades complies with the propeller airworthiness requirements when used with the Pratt & Whitney PT6A-68/3 engine only. Any change to the engine, including its control system, which affects or may affect the propeller approval must be substantiated to demonstrate that the propeller as integrated with the changed to the engine resulting from a change to propeller must be substantiated to demonstrated that the changed engine still complies with the engine certification basis.

NOTE 4 (a) Feathering:

The -3 , -5 and -2 models incorporate feathering and unfeathering features.

(b) Reversing :

The -3 and -5 models are approved for installation as reversing propellers with appropriate reversing controls.

NOTE 5 Left-Hand Models

The left-hand version of an approved propeller model is approved at the same rating and diameter as listed for the right-hand model. See Notes 1 and 2.

NOTE 6 Interchangeability

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 only be replaced by "N" or "NS" blades,

"S" blades may only be replaced by "S" or "NS" blades.

NOTE 7 Accessories

(a) Propeller spinner

- (1) Approved with spinners when listed on Hartzell type design data.

(b) Propeller deice

- (1) Approved with Goodrich electrical deicing kit 77-XXX, 67-XXX, 65-XXX, 5EXXXX-X, or 7EXXXX-X when installed in accordance with Goodrich report no. ATA 30-60-07
- (2) Approved with Safeway 6870, 6880 deice boots when installed in accordance with manufacturer's instructions.
- (3) Approved with ice protection equipment when listed on Hartzell type design data.

NOTE 8 Shank Fairings
Not applicable

NOTE 9 Special Limits
Not applicable

NOTE 10 Special Notes
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. Refer to aircraft Type Certificate Data Sheet or STC for the specific propeller model applicable to the installation.

NOTE 11 Retirement Time
(a) Life Limits and Mandatory Inspections
 (1) Airworthiness limitations, if any, are specified in Hartzell Manual 132().

NOTE 12 (a) Refer to Hartzell Manual n° 202 () for overspeed and overtorque limits.


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