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## TYPE-CERTIFICATE DATA SHEET

No. IM.P.131

**For**

HC-C3Y, PHC-C3Y, EHC-C3Y series propellers

**Type Certificate Holder**  
Hartzell Propeller Inc.

One Propeller Place  
Piqua, OH 45356-2634  
USA

For Models:

- PHC-C3YD-2
- HC-C3YF-1, -2, -4, -5
- EHC-C3YF-1, -2
- PHC-C3YF-1, -2
- HC-C3YK-1, -2
- HC-C3YN-2, -4, -5
- HC-C3Y1R-1
- HC-C3YR-1, -2, -4



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## **I. General**

### **1. Type/ Model**

HC-C3Y / HC-C3YF-1, -2, -4, -5, HC-C3YK-1, -2, HC-C3YN-2, -4, -5, HC-C3Y1R-1, HC-C3YR-1, -2, -4  
EHC-C3Y / EHC-C3YF-1, -2  
PHC-C3Y / PHC-C3YD-2, PHC-C3YF-1, -2

### **2. Type Certificate Holder**

Hartzell Propeller Inc.  
One Propeller Place  
Piqua, OH 45356-2634  
USA

### **3. Manufacturer**

Hartzell Propeller Inc.

### **4. Date of Application**

PHC-C3YD-2:	12 June 2018	PHC-C3YF-1, -2:	Before 1979*
HC-C3YK-1, -2:	Before 1976*	EHC-C3YF-1, -2:	Before 1979*
HC-C3YF-1, -2:	Before 1976*	HC-C3YN-4:	03 July 2001
HC-C3YF-4, -5:	03 July 2001	HC-C3YN-5:	Before 1988*
HC-C3YR-1, -2:	Before 1976*	HC-C3Y1R-1:	12 June 2018
HC-C3YN-2:	Before 1976*	HC-C3YR-4:	Before 1996*

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

### **5. EASA Type Certification Date**

PHC-C3YD-2:	23 July 2018	PHC-C3YF-1, -2:	22 June 1979*
HC-C3YK-1, -2:	01 November 1976*	EHC-C3YF-1, -2:	22 June 1979*
HC-C3YF-1, -2:	01 November 1976*	HC-C3YN-4:	05 November 2001*
HC-C3YF-4, -5:	05 November 2001*	HC-C3YN-5:	25 November 1988*
HC-C3YR-1, -2:	01 November 1976*	HC-C3Y1R-1:	23 July 2018
HC-C3YN-2:	01 November 1976*	HC-C3YR-4:	18 June 1996*

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



## **II. Certification Basis**

### **1. State of Design Authority Certification Basis**

Refer to FAA TCDS no. P25EA.

### **2. Reference Date for determining the applicable airworthiness requirements**

22 November 1965: HC-C3Y(F,K)-2, HC-C3Y(F,N)-4, HC-C3Y(F,N)-5,(E)HC-C3YF-2, HC-C3YN -2, HC-C3YR-1, HC-C3YK-1, EHC-C3YF-1, PHC-C3YF-1, HC-C3YR-2, PHC-C3YF-2, HC-C3YR-1, PHC-C3YF-1 and HC-C3YR-4

01 August 1990: PHC-C3YD-2

19 March 2013: HC-C3Y1R-1

### **3. EASA Certification Basis**

#### **3.1. Airworthiness Standards**

HC-C3Y(F,K)-2, HC-C3Y(F,N)-4, HC-C3Y(F,N)-5,(E)HC-C3YF-2, HC-C3YN -2 and PHC-C3YD-2:  
14 CFR Part 35 with amendments 35-1 through 35-6 effective 1 August 1990.

HC-C3YR-1, HC-C3YK-1, EHC-C3YF-1, PHC-C3YF-1, HC-C3YR-2 and PHC-C3YF-2:  
14 CFR Part 35 with amendments 35-1 through 35-9 effective 19 March 2013.

HC-C3YR-1, PHC-C3YF-1 and HC-C3YR-4:  
14 CFR Part 35 with amendments 35-1 through 35-10 effective 30 August 2017.

HC-C3Y1R-1:  
CS-P Amendment 1 dated 16 November 2006 as issued by EASA Decision No 2006/09/R.

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.

#### **3.2. Special Conditions**

None

#### **3.3. Equivalent Safety Findings**

None

#### **3.4. 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).

PHC-C3YD-2	Drawing E-7762 dated 24.07.2003
HC-C3YF-1	Drawing D-3250 dated 14.03.1966
HC-C3YF-2	Drawing D-3255 dated 19.01.1965
HC-C3YF-4	Drawing D-4215 dated 04.02.1976
HC-C3YF-5	Drawing D-3680 dated 30.01.1981
EHC-C3YF-1	Drawing D-3250 dated 02.04.1971
EHC-C3YF -2	Drawing D-3255 dated 14.07.1971
PHC-C3YF-1	Drawing D-3250 dated 02.04.1971
PHC-C3YF-2	Drawing D-3255 dated 08.02.1971
HC-C3YK-1	Drawing D-3250 dated 14.03.1966
HC-C3YK-2	Drawing D-3255 dated 19.01.1965
HC-C3YN-2	Drawing D-3255 dated 24.04.1969
HC-C3YN-4	Drawing D-4215 dated 04.02.1976
HC-C3YN-5	Drawing D-3690 dated 26.07.1983
HC-C3Y1R-1	Drawing 103007 dated 13.02.2009
HC-C3YR-1	Drawing D-3250 dated 12.04.1968
HC-C3YR-2	Drawing D-3255 dated 19.04.1968
HC-C3YR-4	Drawing D-4215 dated 04.02.1976

#### **2. Description**

The propeller is a 3-blade variable pitch propeller with a hydraulically operated blade pitch change mechanism providing the operation mode "Constant Speed". The -1 and -4 models do not feather, the -2 and -5 models incorporate feathering and unfeathering features, the -5 model is turbine oil compatible. (See Notes 1 and 4).

The hub is a two piece aluminium alloy. Each blade is supported in the hub with a ball thrust bearing. The blade materials are:

- Aluminium alloy and
- Composite.

Optional equipment includes spinner and ice protection (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. Operating Limitations

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)	Blade Construction (See Note 10)
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##### Non-Counterweighted Propellers HC-C3YF-1, EHC-C3YF-1, PHC-C3YF-1, HC-C3YK-1, HC-C3YR-1

6660-0 to 6660-6	289,3	2700	289,3	2700	172,7 to 157,5 (-0 to -6)	35,8	Aluminum Alloy
6890-0 to 6890-10	261,0	2850	261,0	2850	177,8 to 152,4 (-0 to -10)	34,6	Aluminum Alloy
7282-0 to 7282-6	223,7	2700	223,7	2700	188,0 to 172,7 (-0 to -6)	30,8	Aluminum Alloy
7382-0 to 7382-10	261,0	2850	261,0	2850	190,5 to 165,1 (-0 to -10)	31,3	Aluminum Alloy
7392-0 to 7392-10	261,0	2850	261,0	2850	190,5 to 165,1 (-0 to -10)	32,9	Aluminum Alloy
7451-0 to 7451-8	289,3	2700	289,3	2700	193,0 to 172,7 (-0 to -8)	36,3	Aluminum Alloy
7453-0 to 7453-8	231,2	2800	231,2	2800	193,0 to 172,7 (-0 to -8)	32,2	Aluminum Alloy
7479-2 to 7479-8	283,4	2900	283,4	2900	188,0 to 172,7 (-2 to -8)	34,6	Aluminum Alloy
7590-0 to 7590-10	261,0	2850	261,0	2850	195,6 to 170,2 (-0 to -10)	33,1	Aluminum Alloy
7663-0 to 7663-10	261,0	2800	261,0	2800	198,1 to 172,7 (-0 to -10)	31,3	Aluminum Alloy
7666-0 to 7666-10	231,2	2700	231,2	2700	198,1 to 172,7 (-0 to -10)	34,5	Aluminum Alloy
7691-0 to 7691-10	261,0	2850	261,0	2850	198,1 to 172,7 (-0 to -10)	30,4	Aluminum Alloy
7693+2 to 7693-10	289,3	2700	289,3 or 261,0	2700 2850	203,2 to 172,7 (+2 to -10)	33,1	Aluminum Alloy
7854-0 to 7854-8	289,3	2700	289,3	2700	203,2 to 182,9 (-0 to -8)	35,4	Aluminum Alloy
8068+2 to 8068-10	261,0	2700	261,0	2700	213,4 to 182,9 (+2 to -10)	34,9	Aluminum Alloy
8068-2 to 8068-10	261,0	2700	231,2	2850	203,2 to 182,9 (-2 to -10)	34,9	Aluminum Alloy
8459-0 to 8459-14	289,3	2700	289,3	2700	218,4 to 182,9 (-0 to -14)	32,7	Aluminum Alloy
8465-0 to 8465-14	289,3	2700	289,3	2700	218,4 to 182,9 (-0 to -14)	33,6	Aluminum Alloy
8467-0 to 8467-14	289,3	2575	289,3	2575	218,4 to 182,9 (-0 to -14)	35,4	Aluminum Alloy





8468-0 to 8468-14	289,3	2700	289,3	2700	218,4 to 182,9 (-0 to -14)	34,6	Aluminum Alloy
8468-6 to 8468-14	231,2	2850	231,2	2850	203,2 to 182,9 (-6 to -14)	34,6	Aluminum Alloy
8470-0 to 8470-14	289,3	2700	289,3	2700	218,4 to 182,9 (-0 to -14)	33,6	Aluminum Alloy
8475-0 to 8475-14	289,3	2650	289,3	2650	218,4 to 182,9 (-0 to -14)	35,4	Aluminum Alloy
8477-0 to 8477-14	289,3	2575	289,3	2575	218,4 to 182,9 (-0 to -14)	36,7	Aluminum Alloy
8483-0 to 8483-14	289,3	2650	289,3	2650	218,4 to 182,9 (-0 to -14)	36,7	Aluminum Alloy
9587-0 to 9587-22	296,8	1810	311,7	1810	246,4 to 190,5 (-0 to -22)	35,4	Aluminum Alloy
9587-2 to 9587-22	238,6	2200	238,6	2200	241,3 to 190,5 (-2 to -22)	35,4	Aluminum Alloy
9587-15 to 9587-25	212,5	2700	212,5	2700	208,3 to 182,9 (-15 to -25)	35,4	Aluminum Alloy
9684-0 to 9684-16	212,5	2000	212,5	2000	243,8 to 203,2 (-0 to -16)	38,6	Aluminum Alloy

Non-Counterweighted Propellers HC-C3YF-1, EHC-C3YF-1, PHC-C3YF-1, HC-C3YK-1, HC-C3YR-1, HC-C3Y1R-1

N7605-0 to N7605-10	261,0	2700	261,0	2700	198,1 to 172,7 (-0 to -10)	30,6	Composite
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Non-Counterweighted Propellers HC-C3YR-1

7468-0 to 7468-10	261,0	2700	261,0	2700	193,0 to 167,6 (-0 to -10)	32,9	Aluminum Alloy
7690	261,0	2850	261,0	2850	198,1	27,2	Aramid Composite

Non-Counterweighted Propellers HC-C3YR-1, HC-C3Y1R-1

NG8301-0 to NG8301-7	261,0	2700	261,0	2700	215,9 to 198,1 (-0 to -7)	30,8	Composite
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Non-Counterweighted Propellers HC-C3YF-1, PHC-C3YF-1

NG8301-0 to NG8301-7	261,0	2850	261,0	2850	215,9 to 198,1 (-0 to -7)	30,8	Composite
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Counterweighted Propellers HC-C3YR-4

C7690	261,0	2850	261,0	2850	198,1	31,8	Aramid Composite
C7693+2-0 to C7693-10	261,0	2700	261,0	2700	203,2 to 172,7 (-0 to -10)	34,7	Aluminum Alloy
NC8302-0 to NC8302-7	261,0	2700	261,0	2700	215,9 to 198,1 (-0 to -7)	29,9	Composite

Counterweighted Propellers PHC-C3YD-2

C9587-4 to C9587-10	279,6	2275	279,6	2275	236,2 to 221,0 (-4 to -10)	39,5	Aluminum Alloy
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Counterweighted Propellers HC-C3YF-2, EHC-C3YF-2, PHC-C3YF-2, HC-C3YK-2, HC-C3YN-2, HC-C3YR-2, HC-C3YF-4, HC-C3YN-4, HC-C3YR-4, HC-C3YF-5, HC-C3YN-5

C6660-0 to C6660-6	289,3	2700	289,3	2700	172,7 to 157,5 (-0 to -6)	39,5	Aluminum Alloy
C6890-0 to C6890-10	261,0	2850	261,0	2850	177,8 to 152,4 (-0 to -10)	37,6	Aluminum Alloy
C7282-0 to C7282-6	223,7	2700	223,7	2700	188,0 to 172,7 (-0 to -6)	34,9	Aluminum Alloy
C7382-0 to C7382-10	261,0	2850	261,0	2850	190,5 to 165,1 (-0 to -10)	35,4	Aluminum Alloy
C7391-0 to C7391-10	261,0	2700	261,0	2700	190,5 to 165,1 (-0 to -10)	36,6	Aluminum Alloy
C7451-0 to C7451-8	289,3	2700	289,3	2700	193,0 to 172,7 (-0 to -8)	40,4	Aluminum Alloy
C7453-0 to C7453-8	231,2	2800	231,2	2800	193,0 to 172,7 (-0 to -8)	36,3	Aluminum Alloy
C7479-2 to C7479-8	283,4	2900	283,4	2900	188,0 to 172,7 (-2 to -8)	38,1	Aluminum Alloy
C7590-0 to C7590-10	261,0	2850	261,0	2850	195,6 to 170,2 (-0 to -10)	37,2	Aluminum Alloy
C7663-0 to C7663-10	261,0	2800	261,0	2800	198,1 to 172,7 (-0 to -10)	35,4	Aluminum Alloy
C7666-0 to C7666-10	231,2	2700	231,2	2700	198,1 to 172,7 (-0 to -10)	38,6	Aluminum Alloy
C7691-0 to C7691-10	261,0	2850	261,0	2850	198,1 to 172,7 (-0 to -10)	34,5.	Aluminum Alloy
C7854-0 to C7854-8	289,3	2650	289,3	2650	203,2 to 182,9 (-0 to -8)	39,5	Aluminum Alloy
C8459-0 to C8459-14	289,3	2700	289,3	2700	218,4 to 182,9 (-0 to -14)	36,7	Aluminum Alloy
C8465-0 to C8465-14	289,3	2700	289,3	2700	218,4 to 182,9 (-0 to -14)	39,5	Aluminum Alloy
C8467-0 to C8467-14	289,3	2575	289,3	2575	218,4 to 182,9 (-0 to -14)	39,5	Aluminum Alloy
C8468-0 to C8468-14	289,3	2700	289,3	2700	218,4 to 182,9 (-0 to -14)	38,1	Aluminum Alloy
C8468-6 to C8468-14	231,2	2850	231,2	2850	203,2 to 182,9 (-6 to -14)	38,1	Aluminum Alloy
C8470-0 to C8470-14	289,3	2700	289,3	2700	218,4 to 182,9 (-0 to -14)	39,5	Aluminum Alloy
C8475-0 to C8475-14	289,3	2650	289,3	2650	218,4 to 182,9 (-0 to -14)	39,5	Aluminum Alloy



C8475F-0 to C8475F-14	289,3	2650	289	2650	218,4 to 182,9 (-0 to -14)	39,5	Aluminum Alloy
C8477-0 to C8477-14	289	2575	289	2575	218,4 to 182,9 (-0 to -14)	40,8	Aluminum Alloy
C8483-0 to C8483-14	289	2650	289	2650	218,4 <sup>182,9</sup> to 182,9 (-0 to -14)	40,8	Aluminum Alloy
C9587-0 to C9587-22	296,8	1810	311,7	1810	246,4 to 190,5 (-0 to -22)	39,5	Aluminum Alloy
C9587-2 to C9587-22	238,6	2200	238,6	2200	241,3 to 190,5 (-2 to -22)	39,5	Aluminum Alloy
C9587-15 to C9587-25	212,5	2700	212,5	2700	208,3 to 182,9 (-15 to -25)	39,5	Aluminum Alloy
C9684-0 to C9684-16	212,5	2000	212,5	2000	243,8 to 203,2 (-0 to -16)	42,6	Aluminum Alloy
C9684-3 to C9684-16	335,6	2133	335,6	2133	236,2 to 203,2 (-3 to -16)	42,6	Aluminum Alloy

Counterweighted Propellers HC-C3YF-2, HC-C3YF-4, HC-C3YF-5,  
HC-C3YK-2, HC-C3YN-2, HC-C3YN-4, HC-C3YN-5, HC-C3YR-2, HC-C3YR-4

C7818-0 to C7818-10	341,5	2133	341,5	2133	203,2 to 177,8 (-0 to -10)	41,3	Aluminum Alloy
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Counterweighted Propellers HC-C3YR-2 and PHC-C3YF-2

C7693+2 to C7693-10	289	2700	289	2700	203,2 to 172,7 (+2 to -10)	36,8	Aluminum Alloy
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Counterweighted Propellers HC-C3YF-2 and HC-C3YN-2

C9587-4 to C9587-10	279,6	2275	279,6	2275	236,2 to 221,0 (-4 to -10)	39,5	Aluminum Alloy
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Counterweighted Propellers HC-C3YR-2

C7690	261,0	2850	261,0	2850	198,1	34,6	Aramid Composite
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### 1. Approved Installations

See Hartzell Manual 159 for approved installations.

### 2. Maximum Take Off Power and Speed

See Table of Section IV.

### 3. Maximum Continuous Power and Speed

See Table of Section IV.

### 4. Propeller Pitch Angle

See Note 3.



## **V. Operating and Service Instructions**

Instructions for propeller installation and operation	Hartzell Manuals 115N*, 191*
Instruction for continued airworthiness	Hartzell Manuals 113B*, 115N*, 127*, 133C*, 202A*
Propeller Owner's Manual and log book	Hartzell Manual 115N (*) for propellers with aluminium blades
Propeller Integration Manual	Hartzell Manual 191*
Blade Overhaul procedure and dimensional limits	Hartzell Manual 133C*, 135F*
Overhaul instructions for non-feathering propellers	Hartzell Manual 113B*
Spinner maintenance	Hartzell Manual 127*
Standard practices	Hartzell Manual 202*
Service Bulletins	

\*: or later approved revision



**VI. Notes**

1. **Hub Model Designation:**

P HC -C 3 Y 1 R -1 RF

F when used denotes modified pitch change system (integral on HC-C3YN-5A)  
K when used with -2 models indicates specific flange mounting studs  
L denotes left hand rotation  
M when used denotes 139,35 cm<sup>2</sup> piston area and large return spring  
N indicates compatibility with N shank blades (See Note 2)  
R when used denotes 139,35 cm<sup>2</sup> piston area  
U denotes added feather assist spring (integral on HC-C3Y( )-5 model)  
Any other character denotes a minor change not affecting eligibility

Denotes specific design features (See Note 4)  
-1: non-feathering, no counterweights, governor oil pressure increases pitch  
-2: feathering with counterweights, governor oil pressure decreases pitch  
-4: non-feathering, counterweights, governor oil pressure decreases pitch  
-5: similar to -2, but compatible with turbine engine oil

F denotes flange with six 1/2" bolts and two 1/2" dowels on a 4" bolt circle  
D similar to F except uses eight 1/2" bolts and no dowels  
K or R denotes SAE # 2 flange with six 1/2" bolts on a 4-3/4" bolt circle  
K has four 3/4" drive bushings, R has five (See Note 6)  
N denotes flange with eight 9/16" bolts and two 1/2" dowels on a 4.25" bolt circle

1 when used denotes hub design modification compatible only with certain blade models listed in the front of this Data Sheet

Hartzell blade shank size

Number of blades

Identifies basic design. "C" denotes no integral shaft extension

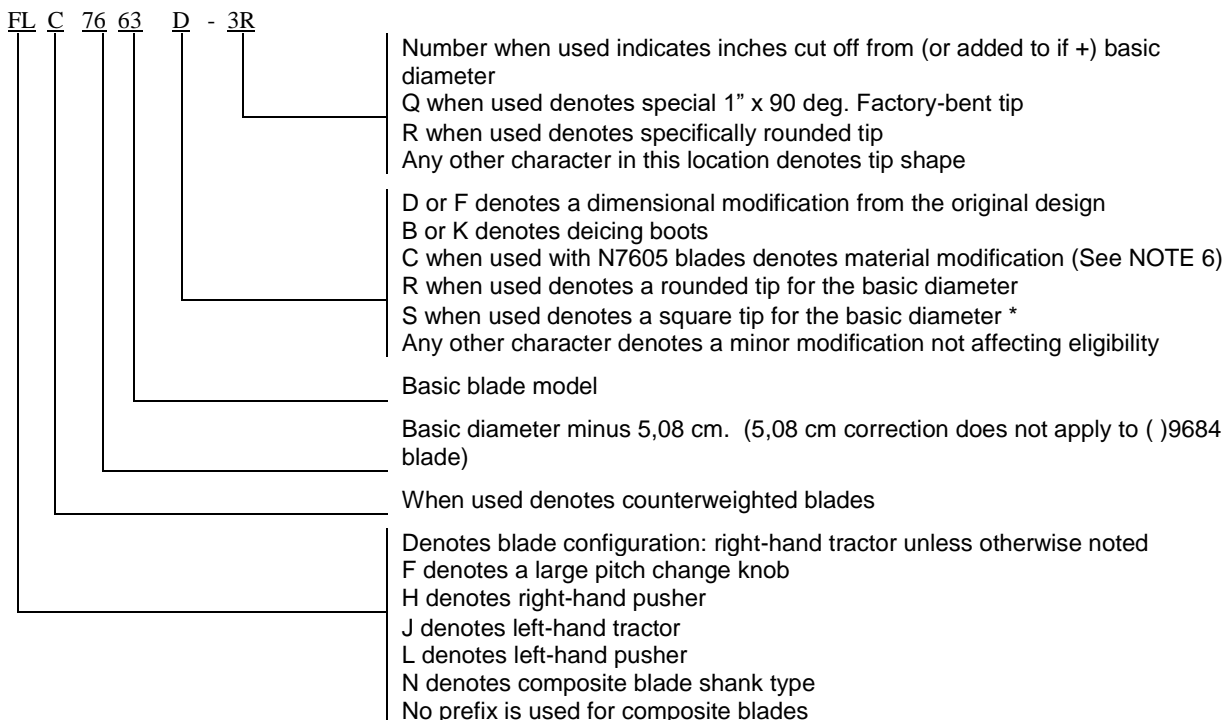
Hartzell Controllable

When used indicates Flange Angular Index with respect to #1 blade, viewed clockwise facing propeller flange

<u>Prefix</u>	<u>Angular Index</u>	<u>Clocking Feature</u>	<u>Flange</u>
Blank	90 and 270 degrees	Dowel Pin	F,N
Blank	0 and 180 degrees	Non Counter bored holes	K,R
E.P:	0 and 180 degrees	Dowel Pin	D,F



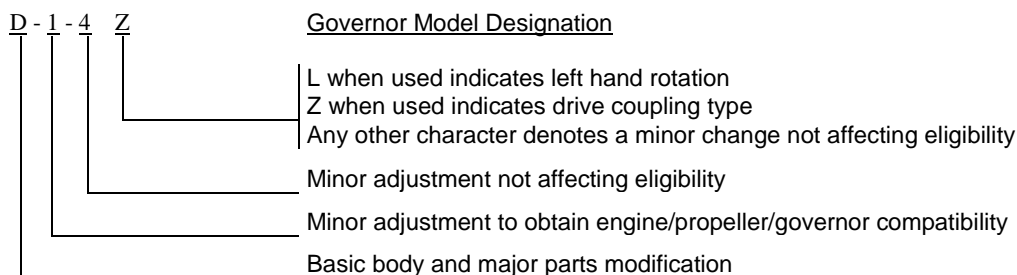
2. Blade Model Designation:



\* Blades may incorporate either round or square tips, yet may not be marked with an "R" or "S" in their model designation. This character is used to distinguish between two or more tip shapes available at the same diameter. Certain blades use "S" to denote shot peening of the exterior surface. (See Note 6)

3. Pitch Control:

(a) Approved with Hartzell governors per drawings C-4770, C-4771 and C-4772. Wt.: 2,0 kg (See Note 10)



- (b) The -2, -4 and -5 models have counterweighted blades and use oil to decrease pitch. The -1 models do not have counterweighted blades and use oil to increase pitch. (See Note 4)
- (c) Maximum governor output pressure: 2413,16 kPa for all propeller models.
- (d) All governors must be approved as part of the aircraft installation regardless of manufacturer. (See Note 10)

4. Feathering            The -1 and -4 models do not feather.  
                                      The -2 and -5 models incorporate feathering and unfeathering features.  
                                      The -5 model is turbine oil compatible.

Reversing                Not applicable

Piston size                Piston area is 114,19 cm<sup>2</sup> except as noted in Note 1.



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)

6. Interchangeability:

(a) Propellers

- (1) "F" type propellers with large pitch change knobs are interchangeable with corresponding propellers with the standard pitch change system. ( See Notes 1 and 2)
- (2) HC-C3YR models may replace corresponding HC-C3YK models. (See Note 1)

(b) Governors

Hartzell governors with a "Z" suffix in their model designation may be used interchangeably with corresponding governors without the "Z". For example, the F-6-24Z is a replacement for the F-6-24 and the F-6-24 is a replacement for the F-6-24Z.

(c) Blades

- (1) Shot-peened blades may replace non shot-peened blades either individually or as a set (See Note 2)
- (2) N7605C( ) blades may replace N7605( ) blades either individually or as a set. N7605( ) blades may not replace N7605C( ) blades.

(d) Ice Protection Systems

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

7. Accessories: (See Note 10)

(a) Propeller ice protection system (weight of ice protection equipment extra)

- (1) Propeller models listed in this data sheet are approved for use with propeller ice protection equipment listed in Hartzell Manual 159( ) or in other Hartzell type design data.
- (2) All propeller ice protection equipment must be approved as part of the aircraft installation regardless of manufacturer. (See Note 10)

(b) Propeller spinner (weight of spinner extra)

- (1) Approved with Hartzell and other manufacturers' spinners when listed on Hartzell type design data.
- (2) All propeller spinners must be approved as part of the aircraft installation regardless of manufacturer. (See Note 10)

8. Shank Fairings : Not applicable.

9. Special Limits:

**Table of Propeller - Engine Combinations**  
**Approved Vibrationwise for Use on Normal Category Single Engine Tractor Aircraft**

The maximum and minimum propeller diameters that can be used from a vibration standpoint are shown below. No reduction below the minimum diameter listed is permissible, since this figure includes the diameter reduction allowable for repair purposes.

The engine models listed below are the configurations on the engine type certificate unless specifically stated otherwise. Modifications to the engine or airframe that alter the power of the engine models listed below during any



phase of operation have the potential to increase propeller stresses and are not approved by this list. Such modifications include, but are not limited to, the addition of a turbocharger or turbonormalizer, increased boost pressure, increased compression ratio, increased RPM, altered ignition timing, electronic ignition, full authority digital engine controls (FADEC), or tuned induction or exhaust. Also, any change to the mass or stiffness of the crankshaft/counterweight assembly is not approved by this list.

<u>Hub Model</u>	<u>Blade Model</u>	<u>Engine Model</u>	<u>Max. Dia. (cm)</u>	<u>Min. Dia. (cm)</u>	<u>Placards</u>
HC-C3YR	F7282	LYC O-360-A1F6, A1F6D, A1G6, A1G6D, A1H6, F1A6, G1A6	188,0	185,4	Avoid continuous operation below 103,4 kPa manifold pressure between 1950 and 2350 RPM
HC-C3YR	F7282	LYC O-360-A1A, A1AD, A1C, A1D, A1F, A1G, A1H, C1A, C1C, C1E, C1F	188,0	185,4	Avoid continuous operation below 103,4 kPa manifold pressure between 1950 and 2350 RPM
HC-C3YR	F7282	LYC IO-360-A1A, A1B, A1C, A1D, C1A, C1B, C1C, B1A, B1B, B1D, B1E, B1F, E1A, A1B6, A1B6D, A1D6, A1D6D, C1C6, C1D6, C1E6, C1E6D	188,0	185,4	Avoid continuous operation below 103,4 kPa manifold pressure between 1950 and 2350 RPM
HC-C3YR	F7282	LYC O-360-C1G	188,0	182,9	Avoid continuous operation below 103,4 kPa manifold pressure between 1950 and 2350 RPM
PHC-C3YF	F7663 F7663-( )R F7663-( )T	TCM TSIO-360-E, EB, F, FB	193,0	182,9	none
PHC-C3YF	7663	TCM IO-470-L	193,0	188,0	none
PHC-C3YF	F7663	TCM O-470-U	198,1	193,0	none
HC-C3YF EHC-C3YF	7663	TCM IO-520-A, J	193,0	188,0	none
HC-C3YF EHC-C3YF	7663	TCM TSIO-520-A, C, H	193,0	188,0	none
PHC-C3YF	7663	TCM IO-520-B, C	193,0	188,0	none
PHC-C3YF	7663	TCM TSIO-520-B, D, E	193,0	188,0	none
PHC-C3YF	F7663D-2Q	TCM IO-520-B, BA, BB	193,0	193,0	none
PHC-C3YF	F7663	TCM IO-550-B	193,0	188,0	none
HC-C3YR	F7663R	LYC IO-540-K1A5, K1B5, K1H5	198,1	193,0	none





<u>Hub Model</u>	<u>Blade Model</u>	<u>Engine Model</u>	<u>Max. Dia. (cm)</u>	<u>Min. Dia. (cm)</u>	<u>Placards</u>
HC-C3YR	F7663R	LYC IO-540-K1A5, K1B5, K1H5	198,1	193,0	none
PHC-C3YF	F7691()	TCM O-470-A, J, K, L, R, S, U	198,1	195,6	none
PHC-C3YF	F7691()	TCM IO-520-A, B, BA, BB, D, F, J, L	198,1	195,6	Do not exceed 137,9 kPa manifold pressure below 2200 RPM
PHC-C3YF	F7691()	TCM IO-550-B, D, F	198,1	195,6	Do not exceed 137,9 kPa manifold pressure below 2200 RPM
HC-C3YF PHC-C3YF	F7693(D)F()	TCM TSIO-520-C, G, M, P, R, AF	203,2	193,0	none
HC-C3YR	F8068	LYC IO-540-K1A5(D), K1B5(D), K1C5, K1D5, K1E5(D), K1F5(D), K1G5(D), K1H5, K1J5(D), K1K5, L1A5(D), L1B5D, L1C5, M1A5(D), M1B5D, M1C5, S1A5, U1A5D, U1B5D	208,3	198,1	none
PHC-C3YF	F8068	TCM IO-470-D, E, F, M, S IO-520-A, J IO-550-D, E, F, L TSIO-520-C, H	208,3	198,1	none
PHC-C3YF	F8068-2	TCM IO-520-D, E, F, L	203,2	198,1	none
HC-C3YF	8468-( )R	TCM IO-520 series with one 4 <sup>th</sup> , one 5 <sup>th</sup> and two 6 <sup>th</sup> order dampers, 8.5 to 1 compression ratio or less, 300 HP at 2850 RPM or less	198,1	195,6	none
HC-C3YF EHC-C3YF	8468	TCM IO-520-A, J	203,2	195,6	none
HC-C3YF EHC-C3YF	8468	TCM TSIO-520-A, C, H	203,2	195,6	none
HC-C3YF PHC-C3YF	8468	TCM IO-520-B, BA, BB, C, CB	203,2	195,6	none
HC-C3YF PHC-C3YF	8468	TCM TSIO-520-B, BB, D, DB, E, EB	203,2	195,6	none
PHC-C3YF	F8468A()	TCM O-470-K, L	203,2	195,6	none
PHC-C3YF	F8468A()	TCM IO-470-F	203,2	195,6	none
PHC-C3YF	F8468A()	TCM IO-520-D	203,2	195,6	none
PHC-C3YF	F8468A()	TCM IO-550-D	203,2	195,6	none
PHC-C3YF	F8468A()	TCM TSIO-520-C, G, H, M, N, P, R, T, AF	203,2	195,6	none
PHC-C3YF	F8468A-( )R	TCM O-470-A s/n 41000 & up, J, K, L, R, S, U	203,2	195,6	none
PHC-C3YF	F8468A-( )R	TCM TSIO-520-U, UB	203,2	198,1	none
HC-C3YR	F8468A	LYC O-540-B4B5	198,1	193,0	none



<u>Hub Model</u>	<u>Blade Model</u>	<u>Engine Model</u>	<u>Max. Dia. (cm)</u>	<u>Min. Dia. (cm)</u>	<u>Placards</u>
HC-C3YR	F8468R	LYC IO-540-K1J5D	213,4	193,0	none
HC-C3YR	8468	LYC IO-540-K1G5	203,2	193,0	none
HC-C3YR	8468	LYC IO-540-A1( )5, B1( )5, E1( )5, G1( )5, P1( )5	203,2	198,1	none
HC-C3YR	8468-( )R F8468-( )R	LYC IO-540-K1A5, K1B5, K1C5, K1D5, K1G5, L1A5, M1A5, M1A5D, M1B5D	213,4	193,0	none
HC-C3YR	F8468-( )R	LYC IO-540-AA1A5	198,1	195,6	none
HC-C3YR	F8475R	LYC IO-720-D1B, D1BD	218,4	203,2	none
HC-C3YR	8475R	LYC IO-720-A1A, A1B, B1A, D1CD	218,4	203,2	none
HC-C3YR	F8483	LYC IO-720-A1A, A1B, B1A, D1CD	218,4	203,2	none
HC-C3YF	9587D	TCM 6-320-B	241,3	241,3	Avoid continuous operation on the ground between 1900 and 2300 engine RPM in winds above 24,1 km/h.
HC-C3YF	F9587C	TCM IO-520-D (Note: installation must be derated to 2700 RPM max)	208,3	203,2	No continuous operation below 2300 RPM.
HC-C3YF	F9684	TCM 6-285-B, C	241,3	236,2	none

10. The propeller installation must be approved as part of the aircraft Type Certificate to demonstrate compliance with the applicable aircraft airworthiness standards.

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.

10a. This propeller has been certificated in accordance with CS-P subparts A, B and C. Compliance with the requirements of Subpart D, which is specific to each aircraft installation, has not yet been demonstrated.

11. Retirement Time:

(a) Life Limits and Mandatory Inspections

(1) Airworthiness limitations, if any, are specified in Hartzell Manuals 113( ), 115N, 117( ) or 145( ).

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. The EASA approved Airworthiness Limitations Section of the Instructions for Continued Airworthiness is published in the applicable Propeller Owner's Manual, chapter 5 "Airworthiness Limitations".



14. EASA Type Certificate and Type Certificate Data Sheet No. IM.P.131 replace the associated Type Certificates and Type Certificate Data Sheets of the EASA Member States.  
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## **SECTION: ADMINISTRATIVE**

### **I. Acronyms and Abbreviations**

N/A

### **II. Type Certificate Holder Record**

N/A

### **III. Change Record**

<b>Issue</b>	<b>Date</b>	<b>Changes</b>	<b>TC issue</b>
Issue 01	02 August 2013	Initial Issue.	02 August 2013
Issue 02	23 July 2018	Adding PHC-C3YD-2 and HC-C3Y1R-1 hub models and NG8301, C7693, NC8302, C9587 and C8475F blade models as listed on the FAA TCDS P25EA Revision 28 plus editorial changes.	23 July 2018

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