TYPE-CERTIFICATE
DATA SHEET

No. P.038

for Propeller
FLASH H-FSH_3-D-R_I_{ }C Series

Type Certificate Holder
SOCIETE DUC
t/a DUC Hélices Propellers

Aerodrome de Villefranche-Tarare
289 Avenue Odette et Edouard Durand
69620 Frontenas
France

For Models:
H-FSH_3-D-R_I_RX_C
H-FSH_3-D-R_I_AN6_C
H-FSH_3-D-R_I_AN8_C
TABLE OF CONTENTS

I. General ............................................................................................................................... 4
  1. Type / Models ................................................................................................................... 4
  2. Type Certificate Holder ................................................................................................. 4
  3. Manufacturer .................................................................................................................. 4
  4. Date of Application ......................................................................................................... 4
  5. EASA Type Certification Date ....................................................................................... 4
II. Certification Basis ............................................................................................................. 4
  1. Reference Date for determining the applicable airworthiness requirements ................. 4
  2. EASA Certification Basis .............................................................................................. 4
  2.1. Airworthiness Standards ............................................................................................ 4
  2.2. Special Conditions (SC) ............................................................................................ 4
  2.3. Equivalent Safety Findings (ESF) ............................................................................. 4
  2.4. Deviations .................................................................................................................. 4
III. Technical Characteristics ................................................................................................ 5
  1. Type Design Definition ................................................................................................ 5
  2. Description ..................................................................................................................... 5
  3. Equipment ....................................................................................................................... 5
  4. Dimensions ..................................................................................................................... 5
  5. Weight ............................................................................................................................. 5
  6. Hub / Blade Combinations ............................................................................................ 5
  7. Control System ............................................................................................................... 5
  8. Adaptation to Engine ..................................................................................................... 5
  9. Direction of Rotation ..................................................................................................... 5
IV. Operating Limitations ...................................................................................................... 6
  1. Approved Installations .................................................................................................... 6
  2. Maximum Take Off Power and Speed .......................................................................... 6
  3. Maximum Continuous Power and Speed ..................................................................... 6
  4. Propeller Pitch Angle .................................................................................................... 6
V. Operating and Service Instructions .................................................................................. 6
VI. Notes .................................................................................................................................. 7
SECTION: ADMINISTRATIVE ............................................................................................... 8
I. Acronyms and Abbreviations ............................................................................................ 8
II. Type Certificate Holder Record ....................................................................................... 8
III. Change Record ................................................................................................................. 8
I. General

1. Type / Models
H-FSH_3-D-R_I_()_C / H-FSH_3-D-R_I_RX_C, H-FSH_3-D-R_I_AN6_C, H-FSH_3-D-R_I_AN8_C

2. Type Certificate Holder
SOCIETE DUC
t/a DUC Hélices Propellers
Aerodrome de Villefranche-Tarare
289 Avenue Odette et Edouard Durand
69620 Frontenas
France

Design Organisation Approval No.: None

3. Manufacturer
SOCIETE DUC
Same address

4. Date of Application
30 April 2014

5. EASA Type Certification Date
07 July 2016

II. Certification Basis

1. Reference Date for determining the applicable airworthiness requirements
30 April 2014

2. EASA Certification Basis

2.1. Airworthiness Standards
CS-P amendment 1, dated November 16, 2006

2.2. Special Conditions (SC)
None

2.3. Equivalent Safety Findings (ESF)
None

2.4. Deviations
None
III. Technical Characteristics

1. Type Design Definition
Part List DH_FSH_BE_04_G dated 01/07/2016
Part List DH_FSH_BE_04_H dated 02/04/2019

2. Description
Three blade, ground adjustable pitch propeller. The hub and the blades are made of carbon fibre reinforced composite. The blades are protected by a nickel sheath.

3. Equipment
The propeller is optionally equipped with a carbon and glass fibre reinforced composite cone, and/or a spacer.

4. Dimensions
Diameter: 152 to 190 cm

5. Weight
H-FSH_3-D-R_I_RX_C: 5.6 kg maximum
H-FSH_3-D-R_I_AN6_C: 5.6 kg
H-FSH_3-D-R_I_AN8_C: 6 kg

6. Hub / Blade Combinations

<table>
<thead>
<tr>
<th>Model</th>
<th>Half Hubs</th>
<th>Blade</th>
</tr>
</thead>
<tbody>
<tr>
<td>H-FSH_3-D-R_I_RX_C</td>
<td>DMFSH-3-AV_RX_C, DMFSH-3-AR_RX_C</td>
<td>FSH-D-R_I_C</td>
</tr>
<tr>
<td>H-FSH_3-D-R_I_AN6_C</td>
<td>DMFSH-3-AV_AN6_C, DMFSH-3-AR_AN6_C</td>
<td>FSH-D-R_I_C</td>
</tr>
<tr>
<td>H-FSH_3-D-R_I_AN8_C</td>
<td>DMFSH-3-AV_AN8_C, DMFSH-3-ARV_AN8_C</td>
<td>FSH-D-R_I_C</td>
</tr>
</tbody>
</table>

7. Control System
N/A

8. Adaptation to Engine
H-FSH_3-D-R_I_RX_C for BRP-Rotax 912 and 914 engine flange
H-FSH_3-D-R_I_AN6_C engine SAE flange with AN6 bolts
H-FSH_3-D-R_I_AN8_C engine SAE flange with AN8 bolts

9. Direction of Rotation
Right, viewed in flight direction
IV. Operating Limitations

1. Approved Installations
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. In accordance with paragraph 21.A.14(c), SOCIETE DUC have chosen for demonstration of capability to provide the Agency with the certification programme required by point 21.A.20(b). As a consequence, the propeller is restricted for installation on ELA1 aircraft.
This propeller has been tested for endurance on a piston engine.

2. Maximum Take Off Power and Speed

<table>
<thead>
<tr>
<th>H-FSH_3-D-R_I_RX_C</th>
<th>Max. Take Off Power (kW)</th>
<th>Max. Take Off Speed (propeller rpm)</th>
<th>Diameter (cm)</th>
</tr>
</thead>
<tbody>
<tr>
<td>120 (160 hp)</td>
<td>2700</td>
<td>152 to 190</td>
<td></td>
</tr>
</tbody>
</table>

3. Maximum Continuous Power and Speed

<table>
<thead>
<tr>
<th>H-FSH_3-D-R_I_RX_C</th>
<th>Max. Continuous Power (kW)</th>
<th>Max. Continuous Speed (propeller rpm)</th>
<th>Diameter (cm)</th>
</tr>
</thead>
<tbody>
<tr>
<td>120 (160 hp)</td>
<td>2700</td>
<td>152 to 190</td>
<td></td>
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</tbody>
</table>

4. Propeller Pitch Angle
Pitch is measured at 25 cm from the blade tip.

V. Operating and Service Instructions

<table>
<thead>
<tr>
<th>Manuals</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Manuel d’instruction Hélice Tripale FLASH-R Certifiée</td>
<td>DH_FSH-R_Be_03_B</td>
</tr>
<tr>
<td>Instruction manual 3-blade propeller Certified FLASH-R</td>
<td>DH_FSH-R_Be_04_A</td>
</tr>
</tbody>
</table>

Instructions for Continued Airworthiness (ICA)

<table>
<thead>
<tr>
<th>Manuals</th>
<th></th>
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<tbody>
<tr>
<td>Manuel d’instruction Hélice Tripale FLASH-R Certifiée chapter 7. &quot;Maintien de Navigabilité&quot;</td>
<td>DH_FSH-R_Be_03_B</td>
</tr>
<tr>
<td>Instruction manual 3-blade propeller Certified FLASH-R chapter 7. &quot;Continuing airworthiness&quot;</td>
<td>DH_FSH-R_Be_04_A</td>
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<tr>
<td>Manuel d’instruction TBO</td>
<td>DH_TBO_Be_01_A (to be published)</td>
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Service Bulletins
as published by SOCIETE DUC
VI. Notes

1. The EASA approved Airworthiness Limitations Section of the Instructions for Continued Airworthiness is published in the applicable "Manuel d’instruction Hélice Tripale FLASH-R Certifiée" document, chapter 7.1 "Limites de Navigabilité", and in the applicable “Instruction manual 3-blade propeller Certified FLASH-R”, chapter 7.1 "Airworthiness limitations".
SECTION: ADMINISTRATIVE

I. Acronyms and Abbreviations
N/A

II. Type Certificate Holder Record
N/A

III. Change Record

<table>
<thead>
<tr>
<th>TCDS Issue</th>
<th>Date</th>
<th>Changes</th>
<th>TC Issue Date</th>
</tr>
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<tbody>
<tr>
<td>Issue 01</td>
<td>07 July 2016</td>
<td>Initial Issue</td>
<td>Initial Issue, 07 July 2016</td>
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<tr>
<td>Issue 02</td>
<td>01 June 2018</td>
<td>Change of Type Certificate Holder’s address</td>
<td>Amended, 01 June 2018</td>
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<tr>
<td>Issue 03</td>
<td>08 July 2019</td>
<td>Certification of Part List DH_FSH_BE_04_H. Clarification of installation on Rotax engines. Update of “Manuel d’instruction” and publication of “Instruction Manual” (Minor Change Approval 10070372)</td>
<td>01 June 2018</td>
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