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# TYPE-CERTIFICATE DATA SHEET

No. P.038

**for Propeller**  
FLASH H-FSH\_3-D-R\_I\_(\*)\_C Series

**Type Certificate Holder**  
SOCIETE DUC

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



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

Design Organisation Approval No.: None

### **3. Manufacturer**

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

### **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

#### **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**

Model	Half Hubs	Blade
H-FSH_3-D-R_I_RX_C	DMFSH-3-AV_RX_C DMFSH-3-AR_RX_C	FSH-D-R_I_C
H-FSH_3-D-R_I_AN6_C	DMFSH-3-AV_AN6_C DMFSH-3-AR_AN6_C	FSH-D-R_I_C
H-FSH_3-D-R_I_AN8_C	DMFSH-3-AV_AN8_C DMFSH-3-ARV_AN8_C	FSH-D-R_I_C

#### **7. Control System**

N/A

#### **8. Adaptation to Engine**

H-FSH\_3-D-R\_I\_RX\_C for Rotax (Bombardier) 912S 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**

	Max. Take Off Power (kW)	Max. Take Off Speed (propeller rpm)	Diameter (cm)
H-FSH_3-D-R_I_RX_C H-FSH_3-D-R_I_AN6_C H-FSH_3-D-R_I_AN8_C	120 (160 hp)	2700	152 to 190

##### **3. Maximum Continuous Power and Speed**

	Max. Continuous Power (kW)	Max. Continuous Speed (propeller rpm)	Diameter (cm)
H-FSH_3-D-R_I_RX_C H-FSH_3-D-R_I_AN6_C H-FSH_3-D-R_I_AN8_C	120 (160 hp)	2700	152 to 190

##### **4. Propeller Pitch Angle**

Pitch is measured at 25 cm from the blade tip.

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

Manuals	
Manuel d'instruction Hélice Tripale FLASH-R Certifiée	DH_FSH-R_BE_03_A 27/06/2016
Instructions for Continued Airworthiness (ICA)	
Manuel d'instruction Hélice Tripale FLASH-R Certifiée chapter 7. "Maintien de Navigabilité"	DH_FSH-R_BE_03_A 27/06/2016
Manuel d'instruction TBO	DH_TBO_BE_01_A (to be published)
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".



**SECTION: ADMINISTRATIVE**

**I. Acronyms and Abbreviations**

N/A

**II. Type Certificate Holder Record**

N/A

**III. Change Record**

<b>TCDS Issue</b>	<b>Date</b>	<b>Changes</b>	<b>TC Issue Date</b>
Issue 01	07 July 2016	Initial Issue	Initial Issue, 07 July 2016
Issue 02	01 June 2018	Change of Type Certificate Holder's address	01 June 2018

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