TYPE-CERTIFICATE DATA SHEET

No. EASA.P.502

for
Helix H50F propeller

Type Certificate Holder
Richard Krüger-Sprengel

Düserhofstraße 20
52074 Aachen
Germany

For Model:
Helix H50F

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I. General

1. Type / Model

Helix H50F

2. Type Certificate Holder

Richard Krüger-Sprengel
Düserhofstraße 20
52074 Aachen
Germany

Design Organisation Approval No.: EASA.AP461.

3. Manufacturer

Helix-Carbon GmbH
Düserhofstraße 20
52074 Aachen
Germany

4. Date of Application

Helix H50F 16 April 2008

5. EASA Type Certification Date

Helix H50F 09 March 2010

II. Certification Basis

1. Reference Date for determining the applicable airworthiness requirements

16 April 2008

2. EASA Certification Basis

2.1. Airworthiness Standards

Helix H50F:
CS-22, Subpart J, Initial issue

2.2. Special Conditions (SC)

None

2.3. Equivalent Safety Findings (ESF)

None

2.4. Deviations

None

III. Technical Characteristics

1. Type Design Definition

Type Design Definition Propeller Helix H50F, Issue 1 dated 04 June 2008 (*)
(*): or later approved revisions

2. Description

The H50F propeller is segmented in several parts, hub aluminium, 4 blade fixed pitch propeller constructed of GfK / CfK composite materials, the blade leading edge optionally equipped with an erosion protection tape.

3. Equipment

None.

4. Dimensions

Propeller diameter from 145,0 cm up to max. 192,0 cm. (See table of section III. 6.)

5. Weight

Propeller H50F weight: Approx.5.8 kg. (See table of section III. 6.)

6. Hub/ Blade Combinations

Hub	Blade Type	Maximum Continuous Power	Maximum Continuous Speed	Take Off Max. Power	Take Off Max. Speed	Torque Max.	Diameter Limit	Approx. Max. Weight
		[kW]	[RPM]	[kW]	[RPM]	[Nm]	[cm]	[kg]
H50F	CI, Cs, LS, SI	85	3400	85	3400	400	145 - 192	5,8
	C, S, N	85	2500	85	2500	400	145 - 192	5,8

7. Control System

N/A (fixed pitch propeller)

8. Adaptation to Engine

Hub drilling according to the particular data in the propeller designation (see section VI.2).

9. Direction of Rotation

Direction of rotation (viewed in flight direction) as identified by a letter code in the propeller designation (see section VI.2).

IV. Operating Limitations

1. Approved Installations

The Helix H50F fixed pitch propeller model is intended for the use on a Hot Air-Airship AS 105 GD, TC EASA.AS.002 powered by Rotax 582 UL engine.

2. Maximum Take Off Power and Speed

Details are mentioned within Table of Section III.6.

3. Maximum Continuous Power and Speed

Details are mentioned within Table of Section III.6.

4. Maximum Torque

Details are mentioned within Table of Section III.6.

5. Propeller Blade Pitch

Measured at 75% radius station:
Blade-pitch from 65,5 cm up to max. 192,0 cm.

V. Operating and Service Instructions

Instructions for Continued Airworthiness (ICA)	
Manual for propeller types series H50F	Issue 04/2008 (*)
Service Bulletins, Service Letters, Service Advisories and Service Instructions	

(*): or later approved revision

VI. Notes

1. The general suitability of a propeller for a given aircraft/engine combination must be demonstrated within the scope of the type certification of the aircraft.

2. Propeller Designation System
   Example:

	HUB					BLADE				
H	50	F	/	175	L	- CS	-	08	-	4 (…)
1	2	3		4	5	6		7		8 9

Hub:
1 Helix-Carbon GmbH
2 Strength class
3 F = fixed pitch propeller

Blade:
4 Propeller diameter in cm
5 Code letter(s) for propeller sense of rotation / functioning
R = right-hand turning
L = left-hand turning
6 Profile-perimeter
7 Fixed angle
8 Number of blades
9 Modifications

SECTION: ADMINISTRATIVE

I. Acronyms and Abbreviations

N/A

II. Type Certificate Holder Record

N/A

III. Change Record

Issue	Date	Changes	TC issue
Issue 01	09 March 2010	Initial Issue of the EASA TCDS P.502. Type Certificate Holder: GEFA-Flug GmbH	09 March 2010
Issue 02	19 August 2019	New EASA TCDS format. Type Certificate Holder change to: Richard Krüger-Sprengel.	19 August 2019

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