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# TYPE-CERTIFICATE DATA SHEET

No. P.177

**For Propeller**  
KW-3(x) series propellers

**Type Certificate Holder**  
Aleš KŘEMEN  
Vodolská 4, Dolínek  
250 70 Odolena Voda  
Czech Republic

For Models:  
KW-30  
KW-31



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## **I. General**

### **1. Type/ Models**

KW-3(x) / KW-30, KW-31

### **2. Manufacturer**

Aleš KŘEMEN  
Vodolská 4, Dolínek  
250 70 Odolena Voda  
Czech Republic

### **3. Date of Application**

KW-30	KW-31
01 March 2013	01 March 2013

### **4. EASA Type Certification Date**

KW-30	KW-31
18 February 2014	18 February 2014

## **II. Certification Basis**

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

Czech Republic

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

01 March 2013

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

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

CS-P Amendment 1 as published with ED Decision 2006/09/R dated November 2006

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

None

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

None

#### **3.4. Deviations**

None



### **III. Technical Characteristics**

#### **1. Type Design Definition**

Each design configuration is defined by a main assembly drawing and an appropriate parts list.

The KW-30 propeller model covers the following design configurations.

Design Configuration "Constant Speed"

Drawing No. 30-000-000 dated 21 January 2014 (\*1)

Above mentioned drawing contains Parts List

The KW-31 propeller model covers the following design configurations.

Design Configuration "Constant Speed"

Drawing No. 31-000-000 dated 21 January 2014 (\*1)

Above mentioned drawing contains Parts List

(\*1) effective is the declared issue or a later approved revision.

#### **2. Description**

The KW-30, resp. KW-31, propeller models are a 3-blade hydraulically, resp. electrically controlled variable pitch propellers. Provided that the power unit is equipped by hydraulic, resp. electric governor the propellers could work as a constant speed propeller.

The hub is milled out of aluminium alloy and the blades are made of wood with glass or carbon composite covering layer. The leading edge of the blade is protected by the metal stamping.

#### **3. Equipment**

Spinner: according to Aleš KŘEMEN Service Bulletin No. 2

Governor: according to Aleš KŘEMEN Service Bulletin No. 3

#### **4. Dimensions**

Propeller diameter: max. 195 cm ( 77"

#### **5. Weight**

KW-30: approx. 12,5 kg (27,6 lb)

KW-31: approx. 14,0 kg (30,9 lb)

#### **6. Hub/ Blade- Combinations**

Hub	Blade -- Type
KW-30	-031, -033, -034, -037, -038
KW-31	-031, -033, -034, -037, -038

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

Propeller governors as listed in Aleš KŘEMEN Service Bulletin No. 3.

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

Adaptation to engine as listed in Aleš KŘEMEN Service Bulletin No. 4.



### 9. Direction of Rotation

Direction of rotation (viewed in flight direction) as identified by a letter-code in the propeller designation. (see chapter VI.3.). The left-hand version of an approved propeller model is approved at the same rating and diameter as listed for the right-hand model.

## IV. Operating Limitations

### 1. Maximum Take Off Power and Speed

104 kW

max. 2550 min<sup>-1</sup> (all blades except Type -037, -038)

max. 2300 min<sup>-1</sup> (blades Type -037, -038)

### 2. Maximum Continuous Power and Speed

104 kW

max. 2550 min<sup>-1</sup> (all blades except Type -037, -038)

max. 2300 min<sup>-1</sup> (blades Type -037, -038)

### 3. Propeller Pitch Angle

Maximum pitch change range +8° to +40° - measured at 75% radius station

## V. Operating and Service Instructions

User's Manual	KW-30	UM-06, Rev.0, dated 21 January 2014 [*]
	KW-31	UM-05, Rev.0, dated 21 January 2014 [*]
Overhaul Manual	KW-30	TN-21, Rev. 0, dated 21 January 2014 [*]
	KW-31	TN-22, Rev. 0, dated 21 January 2014 [*]
Service Bulletins	KW-3(x)	as noted in the current List of Service Bulletins

[\*] or later approved revision



## **VI. Notes**

1. The EASA approved Airworthiness Limitations Section (ALS) of the Instructions for Continued Airworthiness is published in the applicable "User Manual" document, chapter 17 "Airworthiness Limitations Section". This ALS section is empty because no life limit is necessary for these models.
2. The overhaul intervals recommended by the manufacturer are listed in Aleš KŘEMEN Service Bulletin No. 1.
3. **Propeller designation system:**

### ***HUB:***

- 1 KW Aleš KŘEMEN, Vodolská 4, Dolínek, 250 70 Odolena Voda, Czech Republic
- 2 No. of propeller model
- 3 Code letter for propeller category:  
A - Automatic Propeller  
F - Fixed Pitch Propeller  
G - Ground Adjustable Propeller  
V - Variable Pitch Propeller
- 4 Code letter for blade pitch change system:  
H – Hydraulic  
E – Electric  
M – Mechanical
- 5 Number of blades installed
- 6 Code letter for feathering system: F – Feather position installed  
0 – No feather position possible
- 7 Code letter for reverse provision: R – Reverse position installed  
0 – No reverse position possible
- 8 Code letter for flange type listed in Aleš KŘEMEN Service Bulletin No. 4

### ***BLADE :***

- 9 Code letter for blade design and installation:  
R: - Right-hand tractor  
RP: - Right-hand pusher  
L: - Left-hand tractor  
LP: - Left-hand pusher
- 10 Propeller diameter in cm
- 11 No. of blade type (contains design configuration and aerodynamic data) according to the certified hub/blade-combinations.



**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	18 February 2014	Initial Issue	Initial Issue, 18 February 2014
Issue 02	26 June 2018	Increase of maximum take-off power and max. continuous power (Major Change Approval 10065886)	

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