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# TYPE-CERTIFICATE DATA SHEET

No. P.020

**for**

AV-804 series propellers

**Type Certificate Holder**

Avia Propeller Ltd.

Beranových 65/666

199 00 Praha 9

Czech Republic

For Models:

AV-804-1



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## **I. General**

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

AV-804 / AV-804-1

### **2. Manufacturer**

Avia Propeller Ltd.  
Beranových 65/666  
199 00 Praha 9  
Czech Republic

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

AV-804-1
20 May 2015

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

AV-804-1
08 February 2018

## **II. Certification Basis**

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

Czech Republic

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

20 May 2015

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

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

CS-P Amendment 1 as published with ED Decision 2006/09/R dated 16 November 2006 except the CS-P 550 and CS-P 560 as allowed by CS-P 10(b), see note 1.

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

None

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

None

#### **3.4. Deviations**

None



### **III. Technical Characteristics**

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

The AV-804-1 propeller model covers the following design configurations. Each design configuration is defined by a main assembly drawing and an appropriate parts list.

AV-804-1-E-C-F-R(W)

Design Configuration "Constant Speed, Feather, Reverse (System Walter)"

Drawing No. 117-0000 dated May 5, 2015 (\*1)

Parts List No. R-117-0000 dated May 5, 2015 (\*1)

AV-804-1-E-C-F-R(P)

Design Configuration "Constant Speed, Feather, Reverse (System Pratt&Whitney)"

Drawing No. 117-0001 dated August 7, 2023 (\*1)

Parts List No. R-117-0001 dated December 9, 2024 (\*1)

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

#### **2. Description**

The AV-804-1 propeller model is 4-blade variable pitch propeller with a hydraulically operated blade pitch change mechanism providing the operation "Constant speed", "Feather", and "Reverse".

The hub is milled out of aluminium alloy.

The blades are forged and milled out of aluminium alloy.

Optionally the propeller may have installed a spinner and ice protection equipment.

#### **3. Equipment**

Spinner: according to Avia Propeller Service Bulletin No. 2M and all later approved versions.

Governor: according to Avia Propeller Service Bulletin No. 3N and all later approved versions.

Ice Protection: according to Avia Propeller Service Bulletin No. 4J and all later approved versions.

#### **4. Dimensions**

Propeller diameter: max. 2750 mm

#### **5. Weight**

Propeller-Design Configuration

"Constant Speed, Feather, Reverse": approx. 90 kg

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

Hub	Blade-Type
AV-804-1	-441, -446

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

Propeller governors as listed in Avia Propeller Service Bulletin No. 3N and all later approved versions.

All governors and propeller control systems must be approved as part of the aircraft installation regardless of manufacturer.



## 8. Adaptation to Engine

ARP 880 Flange.

## 9. Direction of Rotation

Right-hand tractor (viewed in flight direction).

## IV. Operating Limitations

### 1. Maximum Take Off Power and Speed

635 kW (850 HP) at 1950 min<sup>-1</sup> - Blade Type -441

647 kW (867 HP) at 1900 min<sup>-1</sup> - All Blade Types

### 2. Maximum Continuous Power and Speed

635 kW (850 HP) at 1950 min<sup>-1</sup> - Blade Type -441

647 kW (867 HP) at 1900 min<sup>-1</sup> - All Blade Types

### 3. Propeller Pitch Angle

Maximum pitch change range 105° - measured at 75% radius station.

## V. Operating and Service Instructions

Operation and Installation Manual	P/N EN-1320 Date of Latest Issue/Revision Issue 6, December 12, 2024 (*)
Overhaul Manual	P/N EN-1291 Date of Latest Issue/Revision Issue 4, Rev. June 25, 2018 (*)
Overhaul Manual for Metal Blades	P/N EN-1370 Date of Latest Issue/Revision Issue 5, March 12, 2018 (*)
Service Bulletins	as noted in the current List of Service Bulletins

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

## VI. Notes

1. 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.
2. The EASA approved Airworthiness Limitations Section (ALS) of the Instructions for Continued Airworthiness is published in the applicable „Propeller Operation and Installation Manual“ document, chapter 1. Airworthiness Limitations.



3. The suitability of a propeller for certain aircraft/engine combination must be demonstrated within the scope of the type certification of the aircraft.

4. Propeller designation system:

Hub											/ Blade													
A	V	-	8	0	4	-	1	-	E	-	( )	-	( )	-	( )	-	( )	/	( )	( )	( )	-	( )	( )
1	2	3	4	5	6	7	8	9	10	11	1	2	3	4	5									

Hub

1 Avia Propeller (manufacturer)

2 V - Variable Pitch Propeller

3 Blade Root Type

4 Number of Blade

5 No. of variant of the propeller model

6 code letter for flange type

B = AS-127-D, SAE No.2 mod., ½ inch - 20 UNF bolts

D = ARP 502

E = ARP 880

K = M14 Flange

7 code letter for counterweights

blank = no or small counterweights for pitch change forces to decrease pitch

C = counterweights for pitch change forces to increase pitch

8 code letter for feather provision

blank = no feather position possible

F = feather position installed

9 code letter for reverse provision

blank = no reverse position possible

R = reverse position installed

10 code letter for reverse system

(W) = System Walter

(P) = System Pratt&Whitney

11 code letter for design changes

small letter for changes which do not affect interchangeability

capital letter for changes which restrict or exclude interchangeability



## Blade

- 1 code letter for position of pitch change pin
  - blank = pitch change pin position for pitch change forces to decrease pitch
  - C = pitch change pin position for pitch change forces to increase pitch
  - CF = pitch change pin position for feather provision; pitch change forces to increase pitch
  - CR = pitch change pin position for reverse provision; pitch change forces to increase pitch
  - CFR = pitch change pin position for feather and reverse provision; pitch change forces to increase pitch
  
- 2 code letter for blade design and installation
  - blank = right-hand tractor
  - RD = right-hand pusher
  - L = left-hand tractor
  - LD = left-hand pusher
  
- 3 propeller diameter in cm
  
- 4 No. of blade type (contains design configuration and aerodynamic data) according to the certified hub/blade - combinations
  
- 5 code letter for design changes
  - small letter for changes which do not affect interchangeability of blade set
  - capital letter for changes which restrict or exclude interchangeability of blade set





**SECTION: ADMINISTRATIVE**

**I. Acronyms and Abbreviations**

n/a

**II. Type Certificate Holder Record**

Avia Propeller Ltd.

**III. Change Record**

<b>TCDS Issue</b>	<b>Date</b>	<b>Changes</b>	<b>TC issue</b>
Issue 01	08 February 2018	Initial Issue	Initial Issue, 08 February 2018
Issue 02	08 January 2025	Addition of design configuration AV-804-1-E-( )-( )-R(P), blade-type -446 and new operating limitation. Propeller diameter increase. The sections updated as applicable. EASA Major Change Approval 10086129	

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