TYPE-CERTIFICATE
DATA SHEET

No. P.028

for
V 508 series propellers

Type Certificate Holder
Avia Propeller Ltd.
Beranových 65/666
199 00 Praha 9 - Letňany
Czech Republic

For Models:
V 508
V 508B
V 508D
V 508D-2
V 508D-AG
V 508E
V 508E-AG
V 508Z
V 508H
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I. General

1. Type / Model
   V 508 / V 508B / V 508D / V-508D-2 / V 508D-AG / V 508E / V 508E-AG / V 508Z / V 508H

2. Manufacturer
   Avia Propeller Ltd.
   Beranových 65/666
   199 00 Praha 9 - Letňany
   Czech Republic

3. Date of Application

<table>
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<tr>
<th></th>
<th>V 508</th>
<th>V 508B</th>
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<tr>
<td>Date</td>
<td>06 April 2000</td>
<td>06 April 2000</td>
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4. EASA Type Certification Date

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<tr>
<td>Date</td>
<td>17 April 1975</td>
<td>30 August 1977</td>
<td>13 September 1982</td>
<td>20 November 1984</td>
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<td>29 June 2011</td>
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Type certification of the V 508 series propeller models has been covered previously by Czech Republic Type certificate No.91-01, Rev.No.4. and partly by No. 75-02, Amendment 5. Type certification of the V 508H propeller model has been covered by EASA.

II. Certification Basis

1. State of Design Authority Certification Basis
   Czech Republic

2. Reference Date for determining the applicable airworthiness requirements
   25 March 1975 (for later updated amendments 09 February 1990 was used)

3. EASA Certification Basis

3.1. Airworthiness Standards
   Initially BCAR, 7th edition of 15 May 1971 Section C, Sub-section C5

   Later compliance with FAR Part 35-6 dated August 18, 1989 had been shown.
Note:
Application was made to CAA - Czech Republic (former Czechoslovakia) before EASA was established. The applicable airworthiness standards were established in accordance with the rule in Czech Republic (former Czechoslovakia) at the time of application.

3.2. Special Conditions
None

3.3. Equivalent Safety Findings
None

3.4. Deviations
None

III. Technical Characteristics

1. Type Design Definition
The V 508 propeller model covers the following design configurations. Each design configuration is defined by a main assembly drawing and an appropriate parts list.

V 508, V 508B, V 508D, V 508D-2, V 508D-AG, V 508Z
Design Configuration “Constant Speed, Feather, Reverse (System Walter)”
Drawing No. 066-0000 dated March 16, 2009 (*)
Parts List No. R-066-0000 dated March 16, 2009 (*)

V 508E, V 508E-AG
Design Configuration “Constant Speed, Feather, Reverse (System Walter, secondary pitch stop)”
Drawing No. 076-0000 dated March 16, 2009 (*)
Parts List No. R-076-0000 dated March 16, 2009 (*)

V 508H
Design Configuration “Constant Speed, Feather, Reverse (single acting, system Pratt&Whitney)”
Drawing No. 100-0000 dated September 10, 2009 (*)
Parts List No. R-100-0000 dated March 21, 2006 (*)

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

2. Description
3-blade variable pitch propeller with a hydraulically operated blade pitch change mechanism providing the operation modes “Constant Speed”, “Feather”; and “Reverse”. The hub is milled out of steel and blades are 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. 2
Governor: according to Avia Propeller Service Bulletin No. 3
Ice Protection: according to Avia Propeller Service Bulletin No. 4

4. Dimensions

Propeller diameter: max. 275 cm

5. Weight

Propeller-Design Configuration
“Constant Speed, Feather, Reverse”: approx. 69 kg

6. Hub / Blade-Combinations

<table>
<thead>
<tr>
<th>Hub</th>
<th>Blade-Type</th>
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<tr>
<td>V 508(H)</td>
<td>-84B, -99C, -99D, -106B, 91B, 93B, -108</td>
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7. Control System

Propeller governors as listed in Avia Propeller Service Bulletin No. 3.

8. Adaptation to Engine

Flange, bolt spacing diameter 107,95 mm.

9. Direction of Rotation

Right-hand tractor (viewed in flight direction).

IV. Operating Limitations

1. Maximum Take Off Power and Speed

635 kW at 2080 min⁻¹ - All Hub Models, All Blade Types except Type -108/108B
635 kW at 2000 min⁻¹ - All Hub Models, All Blade Types
647 kW at 1900 min⁻¹ - All Hub Models, only Blade Types -106/106B, -108/108B

2. Maximum Continuous Power and Speed

635 kW at 2080 min⁻¹ - All Hub Models, All Blade Types except Type -108/108B
635 kW at 2000 min⁻¹ - All Hub Models, All Blade Types
647 kW at 1900 min⁻¹ - All Hub Models, only Blade Types -106/106B, -108/108B

3. Propeller Pitch Angle

From -21,5° to +82° measured at 75% radius station
V. Operating and Service Instructions

<table>
<thead>
<tr>
<th>Operation and Installation Manual</th>
<th>P/N E-1500</th>
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<tbody>
<tr>
<td>Date of Latest Issue/Revision</td>
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<td>Issue 2, May 10, 2011 (*)</td>
<td>Issue 1, March 17, 2009 (*)</td>
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<th>Overhaul Manual</th>
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<th>Overhaul Manual for Metal Blades</th>
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<td>Issue 2, March 17, 2009 (*)</td>
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| Service Bulletins                | as noted in the current List of Service Bulletins |

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

VI. Notes

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

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

3. EASA Type Certificate and Type Certificate Data Sheet No. P.028 replace CAA - Czech Republic Type Certificate and Type Certificate Data Sheet No. 91-04, Rev.No.4.
4. Propeller designation system

Hub / Blade
V508 ( ) / 99 A / A
 1 2 1 2 3

Hub
1 - propeller model V508
2 - code letter for hub model
   blank = basic model without overspeed governor
   B = without overspeed governor
   D = with overspeed governor
   D-2 = with overspeed governor, basic setting of reverse angle -8 deg
   D-AG = with overspeed governor, basic setting of minimum flight angle 10 deg,
         used at agricultural aircraft
   E = with overspeed governor, with secondary pitch lock
   E-AG = with overspeed governor, with secondary pitch lock, used at agricultural aircraft
   Z = with overspeed governor, basic setting of reverse angle -3 deg,
      used at agricultural aircraft
   H = single acting

Blade
1 - propeller diameter in inches
2 - code letter for blade type (contains design configuration and aerodynamic data)
   according to the certified hub/blade – combinations
3 - code letter for de-icing
   A = without de-icing
   B1 = 28 VDC, single element
   B2 = 28 VDC, dual element
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>
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<th>Changes</th>
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<tr>
<td>Issue 01</td>
<td>07 April 2009</td>
<td>Initial Issue</td>
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<tr>
<td>Issue 02</td>
<td>29 June 2011</td>
<td>Addition of model V 508H</td>
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<td>Issue 03</td>
<td>12 September 2011</td>
<td>Power increase of V 508H model</td>
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<tr>
<td>Issue 04</td>
<td>22 August 2012</td>
<td>Addition of new blade models</td>
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<tr>
<td>Issue 05</td>
<td>11 March 2013</td>
<td>Increase of maximum take-off power and max continuous power</td>
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<tr>
<td>Issue 06</td>
<td>07 December 2017</td>
<td>Ref. EASA Major Change Approval 10063968 Addition of new blade models Modification of propeller diameter and speed</td>
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<tr>
<td>Issue 07</td>
<td>15 December 2022</td>
<td>Increase of maximum take-off power and maximum continuous power (Major Change approval 10080710)</td>
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