



TYPE-CERTIFICATE DATA SHEET

No. P.018

for

WD4-51 series propellers

Type Certificate Holder

Aircraft Design Certification GmbH
Reichensteinstrasse 48
69151 Neckargemünd
Germany

For Model: WD4-51-051



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I. General

1. Type / Model

WD4-51 / WD4-51-051

2. Type Certificate Holder

Aircraft Design Certification GmbH
Reichensteinstrasse 48
69151 Neckargemünd
Germany

Design Organisation Approval No.: DOA 21J.411

Formerly:
Aircraft Design & Certification Ltd.
Reichensteinstrasse 48
69151 Neckargemünd

3. Manufacturer

Aircraft Design Certification GmbH

Formerly:
Aircraft Design & Certification Ltd

4. Date of Application

28 August 2006

5. EASA Type Certification Date

12 December 2008

II. Certification Basis

1. Reference Date for determining the applicable airworthiness requirements

28 August 2006



2. EASA Certification Basis

2.1. Airworthiness Standards

CS-22 dated 14 November 2003, Subpart J

2.2. Special Conditions (SC)

None

2.3. Equivalent Safety Findings (ESF)

None

2.4. Deviations

None

III. Technical Characteristics

1. Type Design Definition

The WD4-51-051 propeller model will be manufactured in according to the Type Design Definition documents WD4-51-051 Issue A dated 24 September 2004 and WD4-C1-003 Issue C dated 19 January 2009 or later approved revisions.

2. Description

The WD4-51-051 propeller is a mechanical actuated 3-blade variable pitch propeller with propeller blades constructed of composite materials and aluminium hub.

The blade core is made of foam surrounded by of glass fibre enforced epoxy covered with polyester based gel-coat and a special paint for improved UV-resistance. In the foam core there is an aluminium tube that can be filled with glue lead balls to accurately balance the three blades.

The propeller hub consist of an aluminium fork containing all the other parts so as bearings and the push rod, which is the connection part to the propeller control.

3. Equipment

Spinner: Manufactured of glass fibre.

Governor: Filser-Propcon 1

4. Dimensions

Propeller diameter (overall): 172.0 cm. Adjustable range: 65°.



5. Weight

Propeller: 1,4 kg, Hub: 4,8 kg, Max total: 10,5 kg.

6. Hub/ Blade Combinations

Hub (aluminium) WD4-51-501 / Blade (composite) WD4-51-053.

7. Control System

Mechanical pushrod system.

8. Adaptation to Engine

Hub drilling, see drawing WD4-51-051.

9. Direction of Rotation

Direction of rotation (viewed in flight direction) clockwise.

IV. Operating Limitations

1. Approved Installations

Propeller WD4-51-051 is approved for installation on powered sailplane and VLA aircraft only.

2. Maximum Take Off Power and Speed

Maximum Take-off power: 96,0 kW / 2500 propeller rpm.

3. Maximum Continuous Power and Speed

Maximum Continuous power: 96,0 kW / 2500 propeller rpm

4. Propeller Pitch Angle

The WD4-51-051 propeller model has a variable pitch capability. Pitch control is provided by a governor.



V. Operating and Service Instructions

Service Instructions and Maintenance Checks according Airplane Maintenance Manual WD4-MM-E Chapter 61, February 2007 or later approved revision.

VI. Notes

1. Driving Torque: Max. 350 Nm.
 2. Propeller Life: Propeller life is limited to 6.000 flight hours.
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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	30 January 2009	Initial Issue.	30 January 2009
Issue 02	16 July 2018	Transfer of TC/TCDS due to change of business registration of the TC-holder Aircraft Design Certification GmbH.	16 July 2018

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