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# TYPE-CERTIFICATE DATA SHEET

No. P.004

**for**

AS2F1 series fixed pitch propellers

**Type Certificate Holder**

Alexander Schleicher GmbH & Co. Segelflugzeugbau  
Alexander-Schleicher Straße 1  
36163 Poppenhausen Wasserkuppe  
Germany

For Models:

AS2F1-1  
AS2F1-2  
AS2F1-3  
AS2F1-4  
AS2F1-5  
AS2F1-6



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## **I. General**

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

AS2F1-1, AS2F1-2, AS2F1-3, AS2F1-4, AS2F1-5, AS2F1-6

### **2. Manufacturer**

Alexander Schleicher GmbH & Co. Segelflugzeugbau  
Alexander-Schleicher-Straße 1  
36163 Poppenhausen Wasserkuppe  
Germany

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

AS2F1-1:	19 January 1999
AS2F1-2:	17 July 2002
AS2F1-3:	22 September 2008
AS2F1-4:	23 April 2015
AS2F1-5:	20 September 2018
AS2F1-6:	29 November 2019

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

AS2F1-1:	05 October 2000
AS2F1-2:	12 April 2005
AS2F1-3:	29 January 2009
AS2F1-4:	19 June 2017
AS2F1-5:	08 May 2019
AS2F1-6:	27 May 2021

Type certification of the AS2F1-1 series fixed pitch propeller models has been covered previously by German Type certificate No.32.110/26.

## **II. Certification Basis**

### **1. Airworthiness Standards**

JAR-22 Change 5 dated 28 October 1995, subpart J

For AS2F1-4, AS2F1-5 and AS2F1-6: CS-22 Amendment 2 dated 5 March 2009, subpart J



### **III. Technical Characteristics**

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

Type Design Definition Propeller ASF1-1, Issue 1, dated 15 September 2000 (\*)  
Type Design Definition Propeller ASF1-2, Issue 1, dated 07 January 2005 (\*)  
Type Design Definition Propeller ASF1-3, Issue 1, dated 06 October 2008 (\*)  
Type Design Definition Propeller ASF1-4, Issue 1, dated 17 July 2015 (\*)  
Type Design Definition Propeller ASF1-5, Issue 1, dated 21 September 2018 (\*)  
Type Design Definition Propeller AS2F1-6, Issue 1, dated 30 May 2019 (\*)  
(\*)= or later approved revisions

#### **2. Description**

The AS2F1 series propeller is a two blades, fixed pitch propeller constructed of composite structure with a wood hub core. Leading edges of the propeller are optionally protected against damage with erosion protection tape.

#### **3. Equipment**

None

#### **4. Dimensions**

According to the particular data in the propeller designation (see VI.3)

##### Propeller AS2F1-1

- Diameter: from 120 cm up to max. 155 cm
- Blade pitch at 0.75 R: from 60 cm up to max. 120 cm

##### Propeller AS2F1-2

- Diameter: from 100 cm up to max. 120 cm
- Blade pitch at 0.75 R: from 30 cm up to max. 60 cm

##### Propeller AS2F1-3

- Diameter: from 80 cm up to max. 100 cm
- Blade pitch at 0.75 R: from 28 cm up to max. 80 cm

##### Propeller AS2F1-4

- Diameter: from 135 cm up to max. 155 cm
- Blade pitch at 0.75 R: from 60 cm up to max. 120 cm

##### Propeller AS2F1-5

- Diameter: from 135 cm up to max. 155 cm
- Blade pitch at 0.75 R: from 60 cm up to max. 120 cm

##### Propeller AS2F1-6

- Diameter: from 110 cm up to max. 125 cm
- Blade pitch at 0.75 R: from 80 cm up to max. 120 cm



## 5. Weight

Propeller AS2F1-1:	approx. 2.1 kg
Propeller AS2F1-2:	approx. 1.0 kg
Propeller AS2F1-3:	approx. 1.0 kg
Propeller AS2F1-4:	approx. 2.0 kg
Propeller AS2F1-5:	approx. 2.2 kg
Propeller AS2F1-6:	approx. 1.8 kg

## 6. Hub/ Blade- Combinations

N/A (single piece propeller)

## 7. Control System

N/A (fixed pitch propeller)

## 8. Adaptation to Engine

Hub flanges as identified by a letter in the propeller designation (refer to note VI.3).

## 9. Direction of Rotation

Direction of rotation (viewed in flight direction) as identified by a letter-code in the propeller designation (refer to note VI.3)

## IV. Operating Limitations

### 1. Propeller Speed

Propeller AS2F1-1:	max. 3000 min <sup>-1</sup>
Propeller AS2F1-2:	max. 4500 min <sup>-1</sup>
Propeller AS2F1-3:	max. 5400 min <sup>-1</sup>
Propeller AS2F1-4:	max. 3000 min <sup>-1</sup>
Propeller AS2F1-5:	max. 3000 min <sup>-1</sup>
Propeller AS2F1-6:	max. 3750 min <sup>-1</sup>

### 2. Driving Power:

Propeller AS2F1-1:	max. 70 kW
Propeller AS2F1-2:	max. 20 kW
Propeller AS2F1-3:	max. 20 kW
Propeller AS2F1-4:	max. 30 kW
Propeller AS2F1-5:	max. 70 kW
Propeller AS2F1-6:	max. 60 kW



### 3. Driving Torque

Propeller AS2F1-1:	max. 355 Nm
Propeller AS2F1-2:	max. 152 Nm
Propeller AS2F1-3:	max. 48 Nm
Propeller AS2F1-4:	max. 150 Nm
Propeller AS2F1-5:	max. 355 Nm
Propeller AS2F1-6:	max. 200 Nm

### V. Operating and Service Instructions

Operating- and Service Instructions for propeller AS2F1-1, Issue February 2000(\*)  
Operating- and Service Instructions for propeller AS2F1-2, Issue February 2004(\*)  
Operating- and Service Instructions for propeller AS2F1-3, Issue February 2008(\*)  
Operating- and Service Instructions for propeller AS2F1-4, Issue August 2015(\*)  
Operating- and Service Instructions for propeller AS2F1-5, Issue September 2018(\*)  
Operating- and Service Instructions for propeller AS2F1-6, Issue January 2020(\*)  
[\*] or 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 overhaul intervals recommended by the manufacturer are listed in A. Schleicher Service Bulletin No. 2.
3. Propeller designation system:

AS	2	F	1	-	1 / L	120	- 65	-	N2
1	2	3	4		5 6	7	8		9

- 1 AS = Alexander Schleicher GmbH & Co.
- 2 Number of blades
- 3 F = fixed pitch propeller
- 4 No. of propeller model
- 5 No. of variant of the propeller model
- 6 Code letter(s) for propeller sense of rotation / functioning  
R = right-hand turning / tractor  
L = left-hand turning / tractor  
RD = right-hand turning / pusher  
LD = Left-hand turning / pusher
- 7 Propeller diameter in "cm"
- 8 Blade pitch in "cm" measured at 0.75 blade radius
- 9 Code for particular propeller characteristics  
N1 = Hub drilling type N1: six 8 mm holes on a 100 mm bolt circle  
N2 = Hub drilling type N2: six 8 mm holes on a 57 mm bolt circle  
N3 = Hub drilling type N3: six 8 mm holes on a 75 mm bolt circle

4. The propeller models are only certified for use in powered sailplanes and Very Light Aeroplanes.

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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 | 12 April 2005    | Initial Issue, AS2F1-1 and AS2F1-2 included replacing LBA TCDS 32.110/26 | Initial Issue   |
| Issue 02 | 29 January 2009  | Derivative AS2F1-3 included                                              | 29 January 2009 |
| Issue 03 | 17 February 2009 | update to new format, VI.4 included                                      |                 |
| Issue 04 | 31 May 2017      | Derivative AS2F1-4 included, update to new format                        | 31 May 2017     |
| Issue 05 | 08 May 2019      | Derivative AS2F1-5 included                                              | 10 May 2019     |
| Issue 06 | 27 May 2021      | Derivative AS2F1-6 included                                              | 07 June 2021    |
| Issue 07 | 16 June 2021     | Typos corrected                                                          |                 |

-END-

