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# TYPE-CERTIFICATE DATA SHEET

NO. EASA.A.348

for  
**Fournier-Pützer Powered Sailplanes**

Type Certificate Holder  
**Sportavia-Pützer TC-Services GmbH**

Am Wichelshof 44  
53129 Bonn  
Germany

For models:

Fournier RF 3  
Fournier RF 4 D  
Fournier RF 5  
Sportavia-Pützer RF 5 B "Sperber"  
SFS 31 "Milan"



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**Section A: Fournier RF 3**

**A.I General**

- |  |   |
|--|---|
| 1. Type/ Model/ Variant  |   |
| 1.1 Type:  | <b>Fournier-Pützer Powered Sailplanes</b> |
| 1.2 Model:   | Fournier RF 3                             |
| 2. Airworthiness Category                                      | utility                                   |
| 3. Manufacturer  | Société Alpvavia, Gap-Tallard, France     |
| 4. State of Design Authority                                   | Germany                                   |
| 5. State of Design Auth. Type Certificate Date                 | 24 May 1965                               |
| 6. This EASA TCDS cancels and replaces the German TCDS No 666. |   |

**A.II EASA Certification Basis**

- |   |   |
|---|---|
| 1. Reference Date for determining the applicable requirements | -   |
| 2. Airworthiness Requirements                                 | :<br>Reglement AIR 2052 Ch. 9<br>BVS Beanspruchungsgruppe 2<br>Preliminary directive for the certification of<br>powered sailplanes (LBA-Information No<br>10.05, dated 8 January 1959).<br>Vorläufige Richtlinien für die Prüfung und<br>Zulassung von Motorseglern (LBA-Mitteilung Nr.<br>10.05 vom 8.1.1959) |
| 3. Special Conditions   | n/a   |
| 4. Exemptions   | n/a   |
| 5. (Reserved) Deviations                                      | n/a   |
| 6. Equivalent Safety Findings                                 | n/a   |
| 7. Environmental Protection                                   | :<br>Noise requirements for aircraft, Germany,<br>(Lärmschutzanforderungen für Luft-<br>fahrzeuge (LSL), Kap. VI, dated 1 August 1985   |



### **A.III Technical Characteristics and Operational Limitations**

1. Type Design Definition -
2. Description :  
Powered sailplane self-launching  
Single engine, wooden cantilever low-wing aircraft, retractable and suspended mono wheel landing gear, outriggers below wing, steerable tail wheel.  
Eigenstartfähiger Motorsegler.  
Einmotoriger, freitragender Tiefdecker in Holzbauweise, einziehbares, gefedertes Einradfahrwerk und Stützbügel am Flügel, lenkbarer Sporn.
3. Equipment  
1 airspeed indicator (range up to 250 km/h)  
1 altimeter  
1 RPM indicator  
1 oil pressure indicator  
1 oil temperature indicator  
1 fuel quantity indicator  
1 4-piece harness (symmetrical)  
1 stall warning indicator  
1 gear warning indicator  
1 running time indicator  
1 magnetic compass with deviation table
4. Dimensions
5. Engine
  - 5.1 Model Rectimo 4 AR 1200
  - 5.2 Type Certificate Included in aircraft type certificate
  - 5.3 Take-off power 28,7 kW (39 HP) at 3600 r.p.m.
  - 5.4 Recommended Continuous Power 20,2 kW (27,5 HP) at 3200 r.p.m.
  - 5.5 Limitations Max. revolutions 3600 r.p.m.
6. Propeller
  - 6.1 Model EVRA D9/27  
EVRA D9/28  
HOCO F-H2/S1\*-133 70 6,8 L  
HO 11\*-133 S 70 L
  - 6.2 Type Certificate HOCO, HO: DE 32.110/1/PR
  - 6.3 Number of blades 2
  - 6.4 Diameter 133 cm



|      |                                |  |
|------|--------------------------------|--|
| 6.5  | Sense of Rotation              | L  |
| 7.   | Fluids:                        |  |
| 7.1  | Fuel:                          | refer to manual  |
| 8.   | Fluid capacities:              |  |
| 8.1  | Fuel:                          |  |
|      | Max. usable                    | 30 l   |
| 8.2  | Oil                            |  |
|      | Min                            | 1,25 l   |
|      | Max                            | 2,5 l  |
| 9.   | Load Factors                   |  |
| 10.  | Air Speeds                     |  |
| 10.1 | Manoeuvring speed              | 150 km/h   |
| 10.2 | Never exceed speed             | 180 km/h   |
| 10.3 | Maximum permitted speeds       |  |
|      | - in rough air                 | 150 km/h   |
|      | - for gear operation           | 110 km/h   |
|      | - with extracted air brakes    | 150 km/h   |
| 11.  | Approved Operations Capability | VFR Day only<br>Cloud flying not permitted<br>Aerobatic manoeuvres not permitted                               |
| 12.  | Maximum Masses                 |  |
| 12.1 | Maximum Take-off Mass          | 350 kg   |
| 13.  | Centre of Gravity Range        | :  |
|      | Forward limit:                 | 300 mm behind datum  |
|      | Rear limit:                    | 490 mm behind datum  |
| 14.  | Datum                          | wing leading edge at root  |
| 15.  | Levelling Means                | Fuselage upper chord level<br>Rumpobergurt waagrecht   |
| 16.  | Control Surface Deflections    |  |
|      | Aileron                        | 85 ± 8 mm upwards<br>54 ± 8 mm downwards<br>Measure at 234 mm from axle<br>Messpunkt 234 mm von Ruderachse     |
|      | Rudder                         | 230 ± 15 mm left and right<br>Measure at 490 mm from axle<br>Messpunkt 490 mm von Ruderachse                   |
|      | Elevator                       | 118 ± 10 mm upwards<br>118 ± 10 mm downwards<br>Measure at 320 mm from axle<br>Messpunkt 320 mm von Ruderachse |
|      | Trimming tab                   | 50 ± 2 mm upwards  |



|                     |   |
|---------------------|---|
|                     | 72 ± 2 mm downwards<br>Measure at 60 mm from axle<br>Messpunkt 60 mm von Ruderachse |
| 17. Number of seats | 1   |



#### **A.IV Operating and Service Instructions**

1. Flight and Maintenance Manual :  
Flughandbuch Fournier RF 3, Ausgabe April  
1965, DVL/PfL-geprüft
2. Operating Manual and Maintenance Manual for Engine  
Handbuch für den Motor Rectimo 4 AR 1200,  
Ausgabe Oktober 1967
3. Operating Manual and Maintenance Manual for Propeller
  - a) refer to: Hoffmann-prop.com
  - b) refer to: helices-evra.com





**A.V Notes**

1. Only industrial manufacturing is permitted.



**Section B:** **Fournier RF 4 D**

**B.I General**

- |  |   |
|--|---|
| 1. Type/ Model/ Variant  |   |
| 1.1 Type:  | <b>Fournier-Pützer Powered Sailplanes</b>   |
| 1.2 Model:   | Fournier RF 4D  |
| 2. Airworthiness Category                                      | utility   |
| 3. Manufacturer  | Sportavia Pützer GmbH & Co KG<br>Flugplatz Dahlemer Binz<br>5377 Post Schmidtheim |
| 4. State of Design Authority                                   | Germany   |
| 5. State of Design Auth. Type Certificate Date                 | 6 February 1968   |
| 6. This EASA TCDS cancels and replaces the German TCDS No 666. |   |

**B.II EASA Certification Basis**

- |   |   |
|---|---|
| 1. Reference Date for determining the applicable requirements | -   |
| 2. Airworthiness Requirements                                 | French Airworth. Requirements AIR 2052<br>Ch. 9<br>LFS Ausgabe Februar 1966<br>Preliminary directive for the certification of<br>powered sailplanes (LBA-Information No<br>10.05, dated 8 January 1959, amendment of<br>14 April 1967).<br>Französische Bauvorschrift AIR 2052 Ch. 9<br>Vorläufige Richtlinien für die Prüfung und<br>Zulassung von Motorseglern (LBA-Mitteilung Nr.<br>10.05 vom 8.1.1959, sowie Änderung zu dieser<br>Mitteilung vom 14.4.1967) |
| 3. Special Conditions   | n/a   |
| 4. Exemptions   | n/a   |
| 5. (Reserved) Deviations                                      | n/a   |
| 6. Equivalent Safety Findings                                 | n/a   |
| 7. Environmental Protection                                   | :<br>Noise requirements for aircraft, Germany,<br>(Lärmschutzanforderungen für Luft-<br>fahrzeuge (LSL), Kap. VI, dated 1 August 1985   |



### **B.III Technical Characteristics and Operational Limitations**

1. Type Design Definition -
2. Description :  
Powered sailplane self-launchable  
Single engine, wooden cantilever low-wing aircraft, retractable and suspended mono wheel landing gear, outriggers below wing, steerable tail wheel.  
Eigenstartfähiger Motorsegler.  
Einmotoriger, freitragender Tiefdecker in Holzbauweise, einziehbares, gefedertes Einradfahrwerk und Stützbügel am Flügel, lenkbarer Sporn.
3. Equipment  
1 airspeed indicator (range up to 250 km/h)  
1 altimeter  
1 RPM indicator  
1 oil pressure indicator  
1 oil temperature indicator  
1 fuel quantity indicator  
1 4-piece harness (symmetrical)  
1 stall warning indicator  
1 gear warning indicator  
1 running time indicator  
1 magnetic compass with deviation table
4. Dimensions
5. Engine
  - 5.1 Model Rectimo 4 AR 1200
  - 5.2 Type Certificate Included in aircraft type certificate
  - 5.3 Take-off power 28,7 kW (39 HP) at 3600 r.p.m.
  - 5.4 Recommended Continuous Power 20,2 kW (27,5 HP) at 3200 r.p.m.
  - 5.5 Limitations Max. revolutions 3600 r.p.m.
6. Propeller
  - 6.1 Model HOCO F-H2/S1\*-133 70 6,8 L  
HO 11\*-133 S 70 L
  - 6.2 Type Certificate HOCO, HO: DE 32.110/1/PR
  - 6.3 Number of blades 2
  - 6.4 Diameter 133 cm
  - 6.5 Sense of Rotation L
7. Fluids:



|      |                                |   |
|------|--------------------------------|---|
| 7.1  | Fuel:                          | refer to manual   |
| 8.   | Fluid capacities:              |   |
| 8.1  | Fuel:                          |   |
|      | Max. usable                    | 38 l  |
| 8.2  | Oil                            |   |
|      | Min                            | 1,25 l  |
|      | Max                            | 2,5 l   |
| 9.   | Load Factors                   |   |
| 10.  | Air Speeds                     |   |
| 10.1 | Manoeuvring speed              | 200 km/h  |
| 10.2 | Never exceed speed             | 250 km/h  |
| 10.3 | Maximum permitted speeds       |   |
|      | - in rough air                 | 150 km/h  |
|      | - for gear operation           | 110 km/h  |
|      | - for extended gear            | 250 km/h  |
|      | - with extracted airbrakes     | 180 km/h  |
| 11.  | Approved Operations Capability | VFR Day only<br>Cloud flying not permitted<br>Basic Aerobatic manoeuvres as permitted by the Flight Manual  |
| 12.  | Maximum Masses                 |   |
| 12.1 | Maximum Take-off Mass          | 390 kg  |
| 13.  | Centre of Gravity Range        | :<br>Forward limit: 300 mm behind datum<br>Rear limit: 490 mm behind datum                                  |
| 14.  | Datum                          | wing leading edge at root   |
| 15.  | Levelling Means                | Fuselage upper chord level<br>Rumpfobergurt waagrecht   |
| 16.  | Control Surface Deflections    |   |
|      | Aileron                        | 80 ± 5 mm upwards<br>50 ± 5 mm downwards<br>Measure at 230 mm from axle<br>Messpunkt 230 mm von Ruderachse  |
|      | Rudder                         | 250 ± 15 mm left and right<br>Measure at 530 mm from axle<br>Messpunkt 530 mm von Ruderachse                |
|      | Elevator                       | 125 ± 5 mm upwards<br>83 ± 5 mm downwards<br>Measure at 300 mm from axle<br>Messpunkt 300 mm von Ruderachse |
|      | Trimming tab                   | 50 ± 2 mm upwards   |



17. Number of seats

50 ± 2 mm downwards  
Measure at 60 mm from axle  
Messpunkt 60 mm von Ruderachse  
1



#### **B.IV Operating and Service Instructions**

1. Flight and Maintenance Manual :  
Flughandbuch Fournier RF 4 D, Ausgabe  
Oktober 1967, Pfl-geprüft
2. Operating Manual and Maintenance Manual for Engine  
Handbuch für den Motor Rectimo 4 AR 1200,  
Ausgabe Oktober 1967
3. Operating Manual and Maintenance Manual for Propeller
  - a) refer to: [Hoffmann-prop.com](http://Hoffmann-prop.com)
  - b) refer to: [helices-evra.com](http://helices-evra.com)



## **B.V Notes**

1. Only industrial manufacturing is permitted.
2. Optional installation of an electrical engine start-unit is permitted in accordance with Technical Note of Sportavia-Pützer, No S-01-76, dated 2 September 1976, LBA approved.  
Der wahlweise Einbau einer elektrischen Starteranlage gemäß den Angaben in der Technischen Mitteilung S-01.76 vom 2.9.1976 der Fa. Sportavia-Pützer GmbH & Co KG, LBA-anerkannt, ist zulässig.
3. Optional installation of engine Limbach L 1700 EA.A in combination with propeller MT 133 L 100 – 1A is permitted in accordance with Technical Note of Fa. Günter Wiebusch, 4508 Bohmte, No. 666-1, LBA approved.  
Die wahlweise Umrüstung des Motorseglers auf den Motor Limbach L 1700 EA.A unter Verwendung des Propellers MT 133 L 100 – 1A der Firma MT-Propeller Entwicklung gemäß den Angaben der Technischen Mitteilung Nr. 666-1, LBA-anerkannt, der Firma Günter Wiebusch, 4508 Bohmte, ist zulässig.
4. This section covers some RF 4 models that have been converted to a RF 4 D model.  
Dieser Abschnitt des Kennblatt betrifft auch einige Motorsegler der Baureihe RF 4, die später in die Baureihe RF 4 D umgewandelt wurden.



**Section C: Fournier RF 5**

**C.I General**

- |  |   |
|--|---|
| 1. Type/ Model/ Variant  |   |
| 1.1 Type:  | <b>Fournier-Pützer Powered Sailplanes</b>   |
| 1.2 Model:   | Fournier RF 5   |
| 2. Airworthiness Category                                      | utility   |
| 3. Manufacturer  | Sportavia Pützer GmbH & Co KG<br>Flugplatz Dahlemer Binz<br>5377 Dahlem-Schmidtheim |
| 4. State of Design Authority                                   | Germany   |
| 5. State of Design Auth. Type Certificate Date                 | 28 May 1969   |
| 6. This EASA TCDS cancels and replaces the German TCDS No 695. |   |

**C.II EASA Certification Basis**

- |   |  |
|---|--|
| 1. Reference Date for determining the applicable requirements | -  |
| 2. Airworthiness Requirements                                 | French Airworth. Requirements AIR 2052<br>Ch. 9<br>LFS Ausgabe Februar 1966<br>Preliminary directive for the certification of<br>powered sailplanes (LBA-Information No<br>10.05, dated 8 January 1959, amendment of<br>14 April 1967).<br>Vorläufige Richtlinien für die Prüfung und<br>Zulassung von Motorseglern (LBA-Mitteilung Nr.<br>10.05 vom 8.1.1959, sowie Änderung zu dieser<br>Mitteilung vom 14.4.1967)<br>2.2 additional requirements:<br>JAR-22, Ch. 3 refer to III.5.3.5 and III.5.3.6<br>JAR-22, Ch. 4 refer to III.5.4.3<br>LBA-Note II 11-603.4/5/86, dated 9 May<br>1986, on electrical variable pitch propeller,<br>take-off to feathered pitch, refer to III.5.3.6<br>and III.5.4.3. |
| 3. Special Conditions   | n/a  |
| 4. Exemptions   | n/a  |
| 5. (Reserved) Deviations                                      | n/a  |
| 6. Equivalent Safety Findings                                 | n/a  |
| 7. Environmental Protection                                   | :  |





Noise requirements for aircraft, Germany,  
(Lärmschutzanforderungen für Luft-  
fahrzeuge (LSL), Kap. VI, dated 1 January  
1991

### **C.III Technical Characteristics and Operational Limitations**

1. Type Design Definition  
List of drawings, dated 28 May 1969  
List of placards, report 22-69  
or later LBA approved data
2. Description  
:  
Powered sailplane self-launching  
Single engine, two-seated, wooden  
cantilever low-wing aircraft, retractable and  
suspended mono wheel landing gear,  
outriggers below wing, foldable outer wing,  
and air brakes.  
Eigenstartfähiger Motorsegler.  
Einmotoriger, zweisitziger freitragender  
Tiefdecker in Holzbauweise mit einziehbarem,  
gefedertem Einradfahrwerk und Stützbügel am  
Flügel, klappbare Außenflügel und Störklappen.  
2 airspeed indicator (range up to 265 km/h)  
2 altimeter  
1 magnetic compass with deviation table  
1 stall warning indicator  
1 RPM indicator  
1 manifold pressure (III.5.3.5, 5.3.6, and  
5.5.2)  
1 indicator for take-off propeller pitch  
(III.5.3.5 and 5.3.6)  
1 oil pressure indicator  
1 oil temperature indicator  
1 fuel quantity indicator  
1 running time indicator  
2 4-piece harness (symmetrical)  
2 back cushion or rescue parachute
4. Dimensions  
Wingspan: 13,74 m  
1 engine  
1 propeller
5. Engines  
5.1 Engine 1



|         |                     |   |
|---------|---------------------|---|
| 5.1.1.1 | Model               | Limbach L 1700 E0 2   |
| 5.1.1.2 | Type Certificate    | EASA.E.082  |
| 5.1.1.3 | Max revs            | 3600 r.p.m.   |
| 5.1.1.4 | Max Continuous revs | 3200 r.p.m.   |
| 5.1.1.5 | Optional silencer   | Sportavia-Pützer Change No 18   |
| 5.1.2   | Propeller 1         |   |
| 5.1.2.1 | Model               | HO 11*-145 B 80 L   |
| 5.1.2.2 | Type Certificate    | DE 32.110/1   |
| 5.1.2.3 | Number of blades    | 2   |
| 5.1.2.4 | Diameter            | 1450 mm, + 0mm, - 0 mm  |
| 5.1.2.5 | Sense of Rotation   | L   |
| 5.1.3   | Propeller 2         |   |
| 5.1.3.1 | Model               | HO 11A-145 B 80 L   |
| 5.1.3.2 | Type Certificate    | DE 32.110/1   |
| 5.1.3.3 | Number of blades    | 2   |
| 5.1.3.4 | Diameter            | 1450 mm, + 0 mm, - 50 mm  |
| 5.1.3.5 | Sense of Rotation   | L   |
| 5.2     | Engine 2            |   |
| 5.2.1.1 | Model               | Limbach L 1700 E0 1   |
| 5.2.1.2 | Type Certificate    | EASA.E.082  |
| 5.2.1.3 | Max revs            | 3600 r.p.m.   |
| 5.2.1.4 | Max Continuous revs | 3200 r.p.m.   |
| 5.2.1.5 | Optional silencer   | Sportavia-Pützer Change No 18   |
| 5.2.2   | Propeller 1         |   |
| 5.2.2.1 | Model               | HO V62 R/L 150 A  |
| 5.2.2.2 | Type Certificate    | EASA.P.065  |
| 5.2.2.3 | Number of blades    | 2   |
| 5.2.2.4 | Diameter            | 1500 mm, + 0mm, - 50 mm   |
| 5.2.2.5 | Sense of Rotation   | L   |
| 5.2.2.6 | Approved by         | Sportavia-Pützer Change No 32, dated 20.09.1973, amended by No 33, dated 02.10.1974 |
| 5.3     | Engine 3            |   |
| 5.3.1.1 | Model               | Limbach L 2000 E0 1   |
| 5.3.1.2 | Type Certificate    | EASA.E.083  |
| 5.3.1.3 | Max revs            | 3400 r.p.m.   |
| 5.3.1.4 | Max Continuous revs | 3000 r.p.m.   |
| 5.3.2   | Propeller 1         |   |
| 5.3.2.1 | Model               | HO 11A-150 B 90 L   |
| 5.3.2.2 | Type Certificate    | DE 32.110/1   |



|         |                    |  |
|---------|--------------------|--|
| 5.3.2.3 | Number of blades   | 2  |
| 5.3.2.4 | Diameter           | 1500 mm, + 0mm, - 0 mm   |
| 5.3.2.5 | Sense of Rotation  | L  |
| 5.3.2.6 | Approved by        | Sportavia-Pützer Change No 46, dated<br>25.05.1981             |
| 5.3.3   | Propeller 2        |  |
| 5.3.3.1 | Model              | HO-V 62 R/L 160 BT   |
| 5.3.3.2 | Type Certificate   | EASA.P.065   |
| 5.3.3.3 | Number of blades   | 2  |
| 5.3.3.4 | Diameter           | 1600 mm, + 0mm, - 50 mm  |
| 5.3.3.5 | Sense of Rotation  | L  |
| 5.3.3.6 | Approved by        | Rhein-Flugzeugbau, Change No 47, dated<br>05.12.1983           |
| 5.3.4   | Propeller 3        |  |
| 5.3.4.1 | Model              | HO-V 62 R/L 160 T  |
| 5.3.4.2 | Type Certificate   | EASA.P.065   |
| 5.3.4.3 | Number of blades   | 2  |
| 5.3.4.4 | Diameter           | 1600 mm, + 0mm, - 50 mm  |
| 5.3.4.5 | Sense of Rotation  | L  |
| 5.3.4.6 | Approved by        | Sportavia-Pützer Change No 46, dated<br>25.05.1981             |
| 5.3.5   | Propeller 4        |  |
| 5.3.5.1 | Model              | HO-V 62-A/VL 160 BT  |
| 5.3.5.2 | Type Certificate   | EASA.P.065   |
| 5.3.5.3 | Number of blades   | 2  |
| 5.3.5.4 | Diameter           | 1600 mm, + 0mm, - 50 mm  |
| 5.3.5.5 | Sense of Rotation  | L  |
| 5.3.5.6 | Approved by        | Hoffmann-Propeller, Technical Note No<br>329, dated 10.10.1986 |
| 5.3.6   | Propeller 5        |  |
| 5.3.6.1 | Model              | MTV-1-A/L 160-03   |
| 5.3.6.2 | Type Certificate   | DE 32.130/53   |
| 5.3.6.3 | Number of blades   | 2  |
| 5.3.6.4 | Diameter           | 1600 mm, + 0mm, - 50 mm  |
| 5.3.6.5 | Sense of Rotation  | L  |
| 5.3.6.6 | Pitch control unit | P-120-M  |
| 5.3.6.7 | Approved by        | MT-Propeller, Technical Note No E-138,<br>dated 14.09.1985     |
| 5.4     | Engine 4           |  |
| 5.4.1.1 | Model              | Sauer S 2100-1-SS1   |
| 5.4.1.2 | Type Certificate   | DE 4608  |



|         |                     |   |
|---------|---------------------|---|
| 5.4.1.3 | Max revs            | 3200 r.p.m.   |
| 5.4.1.4 | Max Continuous revs | 2700 r.p.m.   |
| 5.4.2   | Propeller 1         |   |
| 5.4.2.1 | Model               | HO-V 62 R/L 160 BT  |
| 5.4.2.2 | Type Certificate    | EASA.P.065  |
| 5.4.2.3 | Number of blades    | 2   |
| 5.4.2.4 | Diameter            | 1600 mm, + 0mm, - 50 mm   |
| 5.4.2.5 | Sense of Rotation   | L   |
| 5.4.2.6 | Approved by         | Gomolzig Flugzeug- und Maschinenbau,<br>Technical Note No 97-1    |
| 5.4.3   | Propeller 2         |   |
| 5.4.3.1 | Model               | MTV-1-A/L 160-03  |
| 5.4.3.2 | Type Certificate    | DE 32.130/53  |
| 5.4.3.3 | Number of blades    | 2   |
| 5.4.3.4 | Diameter            | 1600 mm, + 0mm, - 50 mm   |
| 5.4.3.5 | Sense of Rotation   | L   |
| 5.4.3.6 | Pitch control unit  | P-120-A   |
| 5.4.3.7 | Approved by         | Sauer Motorenbau, Technical Note No<br>695/1                      |
| 5.5     | Engine 5            |   |
| 5.5.1.1 | Model               | Sauer S-2500-1-HS1  |
| 5.5.1.2 | Type Certificate    | DE 4580   |
| 5.5.1.3 | Max revs            | 3000 r.p.m.   |
| 5.5.1.4 | Max Continuous revs | 2700 r.p.m.   |
| 5.5.2   | Propeller 1         |   |
| 5.5.2.1 | Model               | MTV-21-A/L 160-03   |
| 5.5.2.2 | Type Certificate    | EASA.P.101  |
| 5.5.2.3 | Number of blades    | 2   |
| 5.5.2.4 | Diameter            | 1600 mm, + 0mm, - 50 mm   |
| 5.5.2.5 | Sense of Rotation   | L   |
| 5.5.2.6 | Approved by         | Sauer Motorenbau, Technical Note No<br>SA01-695, dated 25.07.1996 |
| 5.5.3   | Propeller 2         |   |
| 5.5.3.1 | Model               | MTV-1-A/L 160-03  |
| 5.5.3.2 | Type Certificate    | DE 32.130/53  |
| 5.5.3.3 | Number of blades    | 2   |
| 5.5.3.4 | Diameter            | 1600 mm, + 0mm, - 50 mm   |
| 5.5.3.5 | Sense of Rotation   | L   |
| 6.      | Fluids:             |   |
| 6.1     | Fuel:               | refer to manual   |



7. Fluid capacities:
- 7.1 Fuel:
- |             |        |
|-------------|--------|
| wing tank   | 63,0 l |
| Max. usable | 60,0 l |
8. Air Speeds
- 8.1 Manoeuvring speed 200 km/h
- 8.2 Never exceed speed 250 km/h
- 8.3 Maximum permitted speeds
- |                            |          |
|----------------------------|----------|
| - in cruise                | 210 km/h |
| - for gear operation       | 130 km/h |
| - with extended            | 250 km/h |
| - for extracting airbrakes | 180 km/h |
9. Approved Operations Capability VFR Day only  
Cloud flying not permitted  
Basic Aerobatic manoeuvres as permitted by the Flight Manual
10. Maximum Masses
- 10.1 Maximum Take-off Mass 650 kg
11. Centre of Gravity Range :
- |                |                      |
|----------------|----------------------|
| Forward limit: | 2313 mm behind datum |
| Rear limit:    | 2513 mm behind datum |
12. Datum 2,00 m forward of leading edge at y = 1,1 m  
(0,78 m from fuselage side)  
2,00 m vor Flügelvorderkante by y = 1,1 m  
(0,78 m von Bordwand)
13. Levelling Means Fuselage upper chord (Cockpitframe) level  
Rumpfobergurt(Kabinenrahmen) waagerecht
14. Control Surface Deflections refer to Maintenance Manual
15. Minimum Flight Crew 1  
single pilot operation: front seat only
16. Maximum Passenger Seating Capacity 1
17. Life time limitations refer to Maintenance Manual



## **C.IV Operating and Service Instructions**

### **1. Flight Manual**

- Flughandbuch für den Motorsegler Fournier RF 5, Ausgabe 19.05.1969, LBA-anerkannt
- Flughandbuch für den Motorsegler Fournier RF 5, Ausgabe 26.09.1974, LBA-anerkannt, mit Austausch- und Ergänzungsseiten (Berichtigungsstand 1 bis 11) (siehe auch III.8)
- Flughandbuch für den Motorsegler Fournier RF 5, Ausgabe 15.12.1985 LBA-anerkannt, (siehe auch III.5.3.2, III.5.3.3, III.5.3.4 und III.5.3.6)
- Flughandbuch für den Motorsegler Fournier RF 5, Ausgabe 15.12.1985, LBA-anerkannt, mit Austauschseiten vom 15.10.1986 gemäß den Angaben der Technischen Mitteilung Nr. 329 der Firma Hoffmann Propeller GmbH & Co.KG (siehe auch III.5.3.5)
- Flughandbuch für den Motorsegler Fournier RF 5, Ausgabe 15.09.1988, LBA-anerkannt, der Firma Sauer Motorenbau (siehe auch V.5.4.3)
- Flughandbuch Motorsegelflugzeug Fournier RF 5 mit Motor Sauer SH 2500 H1S und Propeller MTV 21-A/L 160-03, Ausgabe 17.07.1996, LBA-anerkannt.
- Flughandbuch für den Motorsegler Fournier RF 5 mit Motor: Sauer SS 2100 H1S und Propeller HO-V 62 R/L 160 BT, Ausgabe 25.04.1996, LBA-anerkannt (siehe auch III.5.4.2).

### **2. Maintenance Manual**

- Wartungshandbuch für den Motorsegler Fournier RF 5, Ausgabe 15.01.1970
- Wartungshandbuch für den Motorsegler Fournier RF 5 mit Motor Sauer SS 2100 H1S und Propeller HO-V 62 R/L 160 BT, Ausgabe 25.04.1996 (siehe auch III.5.4.2).
- Ersatzteilkatalog Fournier RF 5, Ausgabe Juni 1971
- Betriebshandbuch Flugmotoren für Motorsegler Sportavia-Limbach SL 1700 E, Limbach SL 1700 EA und weitere Baureihen mit Änderung vom 01.08.1976 (siehe auch III.5.1.3)
- Betriebshandbuch Flugmotoren für Motorsegler Limbach L 2000 und weitere Baureihen in der jeweils gültigen Ausgabe (siehe auch III.5.3)
- Betriebshandbuch Flugmotor für Motorsegler SS 2100 H1S, Ausgabe 01.01.1986, (siehe auch III.5.4.3)
- Betriebshandbuch Sauer-Motor SH 2500 H1S, Handbuch Nr. 903/BHB-001() Ausgabe 13.07.1995. (siehe auch III.5.5.2)
- Betriebs- und Wartungshandbuch Nr. 0207.71 der Firma Propellerwerk Hoffmann GmbH & Co.KG in der jeweils gültigen Ausgabe (siehe auch III.5.3.4)
- Betriebs- und Wartungshandbuch Nr. 0107.72 der Firma Propellerwerk Hoffmann GmbH & Co.KG in der jeweils gültigen Ausgabe (siehe auch III.5.2.2, III.5.3.2, III.5.3.3, III.5.3.5 und III.5.4.2)
- Betriebs- und Einbauanweisung Nr. E-118 der Firma MT-Propeller-Entwicklung für elektrische Verstellpropeller MTV-1-() und MTV-20-() in der jeweils gültigen Ausgabe (siehe auch III.5.3.6 und III.5.4.3).
- Betriebs- und Einbauanweisung Nr. E-124 für hydraulische Verstellpropeller  
Überholungshandbuch und Teileliste Nr. E-128 für hydraulische Verstellpropeller



**C.V Notes**

1. Only industrial manufacturing is permitted.



**Section D: Sportavia-Pützer RF 5 B "Sperber"**

**D.I General**

- |  |   |
|--|---|
| 1. Type/ Model/ Variant  |   |
| 1.1 Type:  | <b>Fournier-Pützer Powered Sailplanes</b>   |
| 1.2 Model:   | Sportavia-Pützer RF 5 B "Sperber"   |
| 2. Airworthiness Category                                      | utility   |
| 3. Manufacturer  | Sportavia Pützer GmbH & Co KG<br>Flugplatz Dahlemer Binz<br>5377 Dahlem-Schmidtheim |
| 4. State of Design Authority                                   | Germany   |
| 5. State of Design Auth. Type Certificate Date                 | 10 May 1972   |
| 6. This EASA TCDS cancels and replaces the German TCDS No 695. |   |

**D.II EASA Certification Basis**

- |   |  |
|---|--|
| 1. Reference Date for determining the applicable requirements | -  |
| 2. Airworthiness Requirements                                 | :<br>French Airworth. Requirements AIR 2052<br>Ch. 9<br>LFS Ausgabe Februar 1966<br>Preliminary directive for the certification of<br>powered sailplanes (LBA-Information No<br>10.05, dated 8 January 1959, amendment of<br>14 April 1967).<br>Vorläufige Richtlinien für die Prüfung und<br>Zulassung von Motorseglern (LBA-Mitteilung Nr.<br>10.05 vom 8.1.1959, sowie Änderung zu dieser<br>Mitteilung vom 14.4.1967)<br>2.2 additional requirements:<br>JAR-22, Ch. 3 refer to III.13 and III.14<br>JAR-22, Ch. 4 refer to III.17<br>LBA-Note II 11-603.4/5/86, dated 9 May<br>1986, on electrical variable pitch propeller,<br>take-off to feathered pitch, refer to III.14 and<br>III.17. |
| 3. Special Conditions   | n/a  |
| 4. Exemptions   | n/a  |
| 5. (Reserved) Deviations                                      | n/a  |
| 6. Equivalent Safety Findings                                 | n/a  |
| 7. Environmental Protection                                   | :  |





Noise requirements for aircraft, Germany, (Lärmschutzanforderungen für Luftfahrzeuge (LSL), Kap. VI, dated 1 January 1991

### **D.III Technical Characteristics and Operational Limitations**

1. Type Design Definition  
List of drawings, report D-01, dated 11 January 1972  
List of materials, report D-02, dated 20 December 1971  
List of placards, report D-05, dated 08 December 1971  
or later LBA approved data
  
2. Description  
:  
Powered sailplane self-launching  
Single engine, two-seated, wooden cantilever low-wing aircraft, retractable and suspended mono wheel landing gear, outriggers below wing, foldable outer wing, and air brakes.  
Eigenstartfähiger Motorsegler.  
Einmotoriger, zweisitziger freitragender Tiefdecker in Holzbauweise mit einziehbarem, gefedertem Einradfahrwerk und Stützbügel am Flügel, klappbare Außenflügel und Störklappen.
  
3. Equipment  
2 airspeed indicator (range up to 265 km/h)  
2 altimeter  
1 magnetic compass with deviation table  
1 RPM indicator  
1 manifold pressure (III.5.3.5, 5.3.6, and 5.5.2)  
1 indicator for take-off propeller pitch (III.5.3.5 and 5.3.6)  
1 oil pressure indicator  
1 oil temperature indicator  
1 fuel quantity indicator  
1 running time indicator  
2 4-piece harness (symmetrical)  
2 back cushion or rescue parachute
  
4. Dimensions  
Wingspan: 17,02 m
  
5. Engines  
5.1 Engine 1  
5.1.1.1 Model Limbach L 1700 E0 2



|         |                     |                               |
|---------|---------------------|-------------------------------|
| 5.1.1.2 | Type Certificate    | EASA.E.082                    |
| 5.1.1.3 | Max revs            | 3600 r.p.m.                   |
| 5.1.1.4 | Max Continuous revs | 3200 r.p.m.                   |
| 5.1.1.5 | Optional silencer   | Sportavia-Pützer Change No 18 |
| 5.1.2   | Propeller 1         |                               |
| 5.1.2.1 | Model               | HO 11*-145 B 80 L             |
| 5.1.2.2 | Type Certificate    | DE 32.110/1                   |
| 5.1.2.3 | Number of blades    | 2                             |
| 5.1.2.4 | Diameter            | 1450 mm, + 0mm, - 0 mm        |
| 5.1.2.5 | Sense of Rotation   | L                             |
| 5.1.3   | Propeller 2         |                               |
| 5.1.3.1 | Model               | HO 11A-145 B 80 L             |
| 5.1.3.2 | Type Certificate    | DE 32.110/1                   |
| 5.1.3.3 | Number of blades    | 2                             |
| 5.1.3.4 | Diameter            | 1450 mm, + 0 mm, - 50 mm      |
| 5.1.3.5 | Sense of Rotation   | L                             |
| 5.1.4   | Propeller 3         |                               |
| 5.1.4.1 | Model               | HO-V 62-R/L 150 A-5           |
| 5.1.4.2 | Type Certificate    | EASA.P.065                    |
| 5.1.4.3 | Number of blades    | 2                             |
| 5.1.4.4 | Diameter            | 1500, + 0mm, -0 mm            |
| 5.1.4.5 | Sense of Rotation   | L                             |
| 5.2     | Engine 2            |                               |
| 5.2.1.1 | Model               | Limbach L 1700 E0 1           |
| 5.2.1.2 | Type Certificate    | EASA.E.082                    |
| 5.2.1.3 | Max revs            | 3600 r.p.m.                   |
| 5.2.1.4 | Max Continuous revs | 3200 r.p.m.                   |
| 5.2.2   | Propeller 1         |                               |
| 5.2.2.1 | Model               | HO V62 R/L 150 A              |
| 5.2.2.2 | Type Certificate    | EASA.P.065                    |
| 5.2.2.3 | Number of blades    | 2                             |
| 5.2.2.4 | Diameter            | 1500 mm, + 0mm, - 50 mm       |
| 5.2.2.5 | Sense of Rotation   | L                             |
| 5.2.2.6 | Approved by         | Sportavia-Pützer Change No 9  |
| 5.3     | Engine 3            |                               |
| 5.3.1.1 | Model               | Limbach L 2000 E0 1           |
| 5.3.1.2 | Type Certificate    | EASA.E.083                    |
| 5.3.1.3 | Max revs            | 3400 r.p.m.                   |
| 5.3.1.4 | Max Continuous revs | 3000 r.p.m.                   |
| 5.3.2   | Propeller 1         |                               |



|         |                     |  |
|---------|---------------------|--|
| 5.3.2.1 | Model               | HO-V 62 R/L 160 BT   |
| 5.3.2.2 | Type Certificate    | EASA.P.065   |
| 5.3.2.3 | Number of blades    | 2  |
| 5.3.2.4 | Diameter            | 1600 mm, + 0mm, - 50 mm  |
| 5.3.2.5 | Sense of Rotation   | L  |
| 5.3.2.6 | Approved by         | Rhein-Flugzeugbau, Change No 41, dated 05.12.1983; markings of RPM indicator i.a.w. Hoffmann-Propeller Technical Note No 233 |
| 5.3.3   | Propeller 2         |  |
| 5.3.3.1 | Model               | HO-V 62 R/L 160 T  |
| 5.3.3.2 | Type Certificate    | EASA.P.065   |
| 5.3.3.3 | Number of blades    | 2  |
| 5.3.3.4 | Diameter            | 1600 mm, + 0mm, - 50 mm  |
| 5.3.3.5 | Sense of Rotation   | L  |
| 5.3.3.6 | Approved by         | Sportavia-Pützer Change No 38  |
| 5.3.4   | Propeller 3         |  |
| 5.3.4.1 | Model               | HO-V 62-A/VL 160 BT  |
| 5.3.4.2 | Type Certificate    | EASA.P.065   |
| 5.3.4.3 | Number of blades    | 2  |
| 5.3.4.4 | Diameter            | 1600 mm, + 0mm, - 50 mm  |
| 5.3.4.5 | Sense of Rotation   | L  |
| 5.3.4.6 | Approved by         | Hoffmann-Propeller, Technical Note No 329, dated 10.10.1986  |
| 5.3.5   | Propeller 4         |  |
| 5.3.5.1 | Model               | MTV-1-A/L 160-03   |
| 5.3.5.2 | Type Certificate    | DE 32.130/53   |
| 5.3.5.3 | Number of blades    | 2  |
| 5.3.5.4 | Diameter            | 1600 mm, + 0mm, - 50 mm  |
| 5.3.5.5 | Sense of Rotation   | L  |
| 5.3.5.6 | Pitch control unit  | P-120-M  |
| 5.3.5.7 | Approved by         | MT-Propeller, Technical Note No E-118  |
| 5.4     | Engine 4            |  |
| 5.4.1.1 | Model               | Sauer SS 2100 H1S  |
| 5.4.1.2 | Type Certificate    | DE 4608  |
| 5.4.1.3 | Max revs            | 3200 r.p.m.  |
| 5.4.1.4 | Max Continuous revs | 2700 r.p.m.  |
| 5.4.2   | Propeller 1         |  |
| 5.4.2.1 | Model               | HO-V 62 R/L 160 BT   |
| 5.4.2.2 | Type Certificate    | EASA.P.065   |



|         |                                |  |          |
|---------|--------------------------------|--|----------|
| 5.4.2.3 | Number of blades               | 2  |          |
| 5.4.2.4 | Diameter                       | 1600 mm, + 0mm, - 50 mm  |          |
| 5.4.2.5 | Sense of Rotation              | L  |          |
| 5.4.2.6 | Approved by                    | Gomolzig Flugzeug- und Maschinenbau,<br>Technical Note No 93-2                   |          |
| 5.4.3   | Propeller 2                    |  |          |
| 5.4.3.1 | Model                          | MTV-1-A/L 160-03   |          |
| 5.4.3.2 | Type Certificate               | DE 32.130/53   |          |
| 5.4.3.3 | Number of blades               | 2  |          |
| 5.4.3.4 | Diameter                       | 1600 mm, + 0mm, - 50 mm  |          |
| 5.4.3.5 | Sense of Rotation              | L  |          |
| 5.4.3.6 | Pitch control unit             | P-120-M  |          |
| 5.4.3.7 | Approved by                    | Sauer Motorenbau, Technical Note No<br>695/1                                     |          |
| 6.      | Fluids:                        |  |          |
| 6.1     | Fuel:                          | refer to manual  |          |
| 6.2     | Fluid capacities:              |  |          |
| 6.3     | Fuel:                          |  |          |
|         | fuselage tank                  | 38,0 l   |          |
|         | Not usable fuel quantity       | 3,0 l  |          |
| 7.      | Air Speeds                     |  |          |
| 7.1     | Manoeuvring speed              | V <sub>A</sub>   | 165 km/h |
| 7.2     | Never exceed speed             | V <sub>NE</sub>  | 225 km/h |
| 7.3     | Maximum permitted speeds       |  |          |
|         | - in cruise                    |  | 210 km/h |
|         | - for gear operation           | V <sub>LO</sub>  | 130 km/h |
|         | - with extended gear           |  | 225 km/h |
|         | - with extended airbrakes      |  | 225 km/h |
| 8.      | Approved Operations Capability | VFR Day only<br>Cloud flying not permitted<br>Aerobatic manoeuvres not permitted |          |
| 9.      | Maximum Masses                 |  |          |
| 9.1     | Maximum Take-off Mass          | 680 kg   |          |
| 10.     | Centre of Gravity Range        | :  |          |
|         | Forward limit:                 | 2331 mm behind datum   |          |
|         | Rear limit:                    | 2508 mm behind datum   |          |
| 11.     | Datum                          | 2,00 m forward of leading edge at y = 1,07                                       |          |
|         | m                              | (0,78 m from fuselage side)  |          |



|  |  |
|--|--|
|  | 2,00 m vor Flügelvorderkante by y = 1,1 m<br>(0,78 m von Bordwand)                   |
| 12. Levelling Means                    | Fuselage upper chord (Cockpitframe) level<br>Rumpfobergurt(Kabinenrahmen) waagerecht |
| 13. Control Surface Deflections        | refer to Maintenance Manual  |
| 14. Minimum Flight Crew                | 1<br>single pilot operation: front seat only   |
| 15. Maximum Passenger Seating Capacity | 1  |
| 16. Lifetime limitations               | refer to Maintenance Manual  |



## **D.IV Operating and Service Instructions**

### **1. Flight Manual**

Flughandbuch für den Motorsegler RF 5 B "Sperber", Ausgabe 15.06.1974, LBA-anerkannt

Flughandbuch für den Motorsegler RF 5 B "Sperber", Ausgabe 15.05.1981, LBA-anerkannt,  
(siehe auch D.V2, III.5.3.3, D.V3)

Flughandbuch für den Motorsegler RF 5 B "Sperber", Ausgabe 15.12.1985, LBA-anerkannt,  
(siehe auch D.V2, III.5.3.3, III.5.3.2, III.5.3.5, D.V3)

Flughandbuch für den Motorsegler RF 5 B "Sperber", Ausgabe 15.12.1985, LBA-anerkannt,  
mit Austauschseiten vom 15.10.1986 gemäß den Angaben der Technischen Mitteilung Nr.  
329 der Firma Hoffmann Propeller GmbH & Co.KG (siehe auch III.5.3.4)

Flughandbuch für den Motorsegler RF 5 B "Sperber", Ausgabe 15.09.1988, LBA-anerkannt,  
der Firma Sauer Motorenbau (siehe auch III.5.4.3)

Flughandbuch für den Motorsegler RF 5 B "Sperber" mit Motor Sauer SS 2100 H1S und  
Propeller HO-V 62 R/L 160 BT, Ausgabe 25.08.1993, der Fa. Gomolzig, LBA-anerkannt  
(siehe III.5.4.2)

### **2. Maintenance Manual**

Wartungshandbuch für den Motorsegler RF 5 B "Sperber", Ausgabe 15.09.1972

Ersatzteilkatalog RF 5 B "Sperber", Ausgabe 01.07.1976

Betriebshandbuch Flugmotoren für Motorsegler Sportavia-Limbach SL 1700 E, Limbach SL  
1700 EA und weitere Baureihen mit Änderung vom 01.08.1976 (siehe auch III.5.2.2)

Betriebshandbuch Flugmotoren für Motorsegler Limbach L 2000 und weitere Baureihen in  
der jeweils gültigen Fassung (siehe auch III.5.3)

Betriebshandbuch Flugmotor für Motorsegler SS 2100 H1S, Ausgabe 01.01.1986 (siehe auch  
III.5.4)

Betriebs- und Wartungshandbuch Nr. 0207.71 der Firma Propellerwerk Hoffmann GmbH &  
Co.KG in der jeweils gültigen Ausgabe / Betriebs- und Wartungshandbuch Nr. 0107.72 der  
Firma Propellerwerk Hoffmann GmbH & Co.KG in der jeweils gültigen Ausgabe (siehe auch  
III.5.2.2, III.5.3.3, III.5.3.2, III.5.3.4)

Betriebs- und Einbausanweisung Nr. E-118 der Firma MT-Propeller-Entwicklung für  
elektrische Verstellpropeller MTV-1-() und MTV-20-() in der jeweils gültigen Ausgabe  
(siehe auch III.5.3.5 und III.5.4)



## **D.V Notes**

1. Only industrial manufacturing is permitted.
2. The optional increase of the Maximum Take-off Mass to 700 kg is permitted in accordance with Sportavia-Pützer Change No 39, LBA approved.  
Die wahlweise Erhöhung der Höchstmasse auf 700 kg gemäß den Angaben der Änderung Nr.39, LBA-anerkannt, der Firma Sportavia-Pützer GmbH & Co.KG ist zulässig
3. The installation of wing tanks of 65 l capacity (62 l usable) in combination with V.2 (700 kg) is permitted in accordance with Sportavia-Pützer Change No 40, LBA approved.  
Der Einbau eines Flügeltanks mit einem Fassungsvermögen von 65 Litern (62 Liter ausfliegbar) in Verbindung mit einer Erhöhung der Höchstmasse auf 700 kg (Änderung Nr.39 (siehe auch V.4)) gemäß den Angaben der Änderung Nr.40, LBA-anerkannt, der Firma Sportavia-Pützer GmbH & Co.KG ist zulässig
4. Powered sailplanes that have been imported from Egypt, need to have a conformity inspection on record that was performed by:  
Alle Motorsegler, die aus Ägypten importiert wurden, müssen einer speziellen, umfassenden Nachprüfung zwecks Feststellung der Übereinstimmung mit dem Muster unterzogen worden sein:  
Sportavia GmbH  
Flugplatz  
5377 Dahlem 1



**Section E: SFS 31 "Milan"**

**E.I General**

1. Type/ Model/ Variant
  - 1.1 Type: Fournier-Pützer Sailplanes
  - 1.2 Model: SFS 31 "Milan"
2. Airworthiness Category utility
3. Manufacturer Sportavia-Pützer GmbH & Co KG  
Flugplatz Dahlemer Binz  
5377 Post Schmidtheim
  
4. State of Design Auth. Type Certificate Date 30 July 1971
5. This EASA TCDS cancels and replaces the German TCDS No. 755

**E.II EASA Certification Basis**

1. Reference Date for determining the applicable requirements: -
  
2. Airworthiness Requirements
  - Preliminary directive for the certification of powered sailplanes (LBA-Information No 10.05, dated 8 January 1959, amendment of 14 April 1967).
  - Vorläufige Richtlinien für die Prüfung und Zulassung von Motorseglern (LBA-Mitteilung Nr. 10.05 vom 8.1.1959, sowie Änderung zu dieser Mitteilung vom 14.4.1967)
  
3. Special Conditions n/a
4. Exemptions n/a
5. (Reserved) Deviations n/a
6. Equivalent Safety Findings n/a
7. Environmental Protection ?





### **E.III Technical Characteristics and Operational Limitations**

1. Type Design Definition -
2. Description  
Powered sailplane self-launching  
Single engine, single-seated, wooden cantilever low-wing aircraft, retractable and suspended mono wheel landing gear, and air brakes.  
Eigenstartfähiger Motorsegler.  
Einmotoriger, einsitziger freitragender Tiefdecker in Holzbauweise mit einziehbarem, gefedertem Zentralradfahrwerk und Störklappen.
3. Equipment  
1 airspeed indicator  
1 altimeter  
1 RPM indicator  
1 oil pressure indicator  
1 oil temperature indicator  
1 fuel quantity indicator  
1 4-piece harness (symmetrical)  
1 magnetic compass with deviation table  
1 Cushion (thickness 6cm compressed) or personal rescue parachute
4. Dimensions  
15 m
5. Engine
  - 5.1 Model Rectimo 4 AR 1200
  - 5.2 Type Certificate Included into aircraft type certificate
  - 5.3 Take-off power 28,7 kW (39 HP) at 3600 rpm
  - 5.4 Maximum Continuous Power 20,2 kW (27,5 HP) at 3200 rpm
  - 5.5 Limitations Max. revolutions 3600 rpm
6. Propeller
  - 6.1 Propeller 1
    - 6.1.1 Model HO 11\*-133 S 70 L
    - 6.1.2 Type Certificate DE 32.110/1/PR
    - 6.1.3 Number of blades 2
    - 6.1.4 Diameter 133 cm
    - 6.1.5 Sense of Rotation L
    - 6.1.6 Standard revolutions 2700 ± 100 r.p.m.
  - 6.2 Propeller 2
    - 6.2.1 Model HO-V 42/48-02-11/L-665+15-7,6-LP



|       |  |   |
|-------|--|---|
| 6.2.2 | Type Certificate                                 | DE 32.130/11/PR   |
| 6.2.3 | Number of blades                                 | 2   |
| 6.2.4 | Sense of Rotation                                | L   |
| 6.2.5 | Standard revolutions                             | 2600 ± 100 r.p.m.   |
| 6.3   | Propeller 3                                      |   |
| 6.3.1 | Model  | HO-V 42/48-02-11/L 136 J  |
| 6.3.2 | Type Certificate                                 | 32.130/11/PR  |
| 6.3.3 | Number of blades                                 | 2   |
| 6.3.4 | Sense of Rotation                                | L   |
| 6.3.5 | Standard revolutions                             | 2600 ± 100 r.p.m.   |
| 7.    | Fuel capacities                                  |   |
| 7.1   | Fuel:  |   |
|       | Max. usable                                      | 38 l  |
| 7.2   | Oil  |   |
|       | Min  | 1,25 l  |
|       | Max  | 2,5 l   |
| 8.    | Air Speeds                                       |   |
| 8.1   | Manoeuvring speed                                | 166 km/h  |
| 8.2   | Never exceed speed                               | 200 km/h  |
| 8.3   | Maximum permitted speeds<br>- for gear operation | 110 km/h  |
| 9.    | Approved Operations Capability                   | VFR Day only<br>Cloud flying not permitted<br>Aerobatic manoeuvres not permitted                          |
| 10.   | Maximum Masses                                   |   |
| 10.1  | Maximum Take-off Mass                            | 440 kg  |
| 10.2  | Maximum Mass of non-lifting parts                | 310 kg  |
| 10.3  | Empty Mass                                       | 310 kg  |
| 11.   | Centre of Gravity Range                          | Forward limit: 2287 mm behind datum<br>Rear limit: 2457 mm behind datum                                   |
| 12.   | Datum  | 2,00 m ahead of wing leading edge at fuselage side<br>2,00 m vor Flügelvorderkante an der Rumpfseitenwand |
| 13.   | Levelling Means                                  | Fuselage upper chord level<br>Rumpfobergurt waagrecht   |
| 14.   | Control Surface Deflections                      |   |
|       | Aileron  | 80 ± 5 mm upwards   |



|     |                             |  |
|-----|-----------------------------|--|
|     |                             | 65 ± 5 mm downwards<br>Measure at 243 mm from axle<br>Messpunkt 243 mm von Ruderachse                        |
|     | Rudder                      | 195 ± 10 mm left and right<br>Measure at 530 mm from axle<br>Messpunkt 530 mm von Ruderachse                 |
|     | Elevator                    | 100 ± 5 mm upwards<br>100 ± 5 mm downwards<br>Measure at 300 mm from axle<br>Messpunkt 300 mm von Ruderachse |
|     | Trimming tab                | 50 ± 2 mm upwards<br>Measure at 60 mm from axle<br>Messpunkt 60 mm von Ruderachse                            |
| 15. | Minimum Flight Crew         | 1  |
| 16. | Baggage/ Cargo Compartments | max. 10 kg   |



#### **E.IV Operating and Service Instructions**

1. Flight Manual :  
Flughandbuch für den Motorsegler SFS 31 „Milian“, Ausgabe 18. März 1971, mit Wägebericht und Beladeplan, LBA- anerkannt.
2. Maintenance Manual :  
Wartungshandbuch für den Motorsegler SFS 31 „Milan“, Ausgabe 6. Dezember 1972
3. Operating Manual and Maintenance Manual for Engine  
Handbuch für den Motor Rectimo 4 AR 1200, Ausgabe Oktober 1967
4. Operating Manual and Maintenance Manual for Propeller  
Bei Verwendung des Festpropellers HO 11\* - 133 S 70 L bzw. HO 11 E – 133 S 70 L:  
Betriebs- und Wartungshandbuch Nr. 0207.71 „feste Holz-Composite-Propeller“, Ausgabe Juli 1981, LBA- anerkannt.  
Bei Verwendung des Verstellpropellers HO-V 42/48-02-11/L-665+15-7,6-P bzw. HO-V 42/48-02-11/L 136 J:  
Betriebs- und Wartungshandbuch 0101.72 für Hoffmann-Verstellpropeller HO-42/48 u.a. Baureihen, Ausgabe Juli 1968, mit Änderung vom 1.2.1970 und 1.1.1972 oder spätere anerkannte Ausgaben.



**E.V Notes**

1. Only industrial manufacturing is permitted.
2. Serial numbers 6601 through 6603: Maximum mass of non-lifting parts: 300 kg



**Section F: Administrative Section**

**F.I Acronyms & Abbreviations**

|     |                                   |
|-----|-----------------------------------|
| G   | Load factor                       |
| Kg  | Kilograms                         |
| MAC | Mean aerodynamic chord            |
| RPM | Revolutions per minute            |
| VFR | Visual flight rules               |
| LBA | Luftfahrt-Bundesamt               |
| TM  | Technical Note (Service Bulletin) |

**F.II Type Certificate Holder Record**

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**F.III Change Record**

| Issue | Date             | Changes       | TC Issue No. & Date                |
|-------|------------------|---------------|------------------------------------|
| 01    | 21 December 2020 | Initial Issue | Initial Issue,<br>15 December 2020 |

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