TYPE-CERTIFICATE

DATA SHEET

NO. EASA.A.627

for

Ventus-3

Type Certificate Holder
Schempp-Hirth Flugzeugbau GmbH

Krebenstraße 25
73230 Kirchheim/Teck
Germany

For models: Ventus-3T
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Section A:  Ventus-3T

A.I  General

1. Type/ Model/ Variant
   1.1 Type: Ventus-3
   1.2 Variant: Ventus-3T

2. Airworthiness Category
   Powered Sailplane, CS 22 - Utility

3. Manufacturer
   Schempp-Hirth Flugzeugbau GmbH
   Krebenstraße 25
   73230 Kirchheim / Teck
   Germany

4. EASA Type Certification Application Date
   30th September 2015

A.II  EASA Certification Basis

1. Reference Date for determining the applicable requirements
   EASA CRI-A01, dated 10th July 2018

2. Airworthiness Requirements
   Certification Specifications for Sailplanes and Powered Sailplanes CS 22, Amend. 2, effective on March 5 2009

3. Special Conditions
   None

4. Exemptions
   None

5. (Reserved) Deviations
   None

6. Equivalent Safety Findings
   CS 22.207 (a), (c)
   CS 22.335 (f)

7. Environmental Protection
   None
A.III  Technical Characteristics and Operational Limitations

1. Type Design Definition
   List of drawing files Ventus-3T, Issue April 2018

2. Description
   Single seat, mid-wing non-self-launching powered sailplane, CFRP/GFRP/AFRP-construction, 6-piece 18 m wing with Winglets, chamber changing-flaps, triple-panel Schempp-Hirth type airbrakes on upper wing surface, water ballast tanks in wings and fin (optional), CFRP/GFRP/AFRP-fuselage, retractable main wheel with hydraulic disc brake, T-shaped horizontal tail (fixed horizontal stabilizer with elevator, fin and rudder), retractable power plant with folding propeller.

3. Equipment
   Min. required Equipment:
   1 Air speed indicator (up to 300 km/h)
   1 Altimeter
   1 Magnetic compass
   1 Outside air temperature indicator with sensor (when flying with water ballast)
   1 Engine control unit featuring:
     - RPM indicator
     - Engine hour meter
     - Fuel quantity indicator
   1 Rear view mirror
   1 4-point harness (symmetrical)
   1 Automatic or manual parachute or
   1 Back cushion (thickness approx. 8 cm when compressed) when flying without parachute
   Additional equipment refer to Flight and Maintenance Manual

4. Dimensions
   Span: 18,0 m
   Wing area: 10,84 m²
   Length: 6,63 m

5. Engine
   5.1 Model
   SOLO 2350
   5.2 Type Certificate
   LBA-Data Sheet No. 4603
   5.3 Limitations
   Maximum RPM: 5800 min⁻¹
   Maximum continuous RPM: 5500 min⁻¹
   5.4 Maximum Continuous Power
   15,3 kW
6. Propeller
   6.1 Model  
   OE-FL 5.83/83 a5, v92
   6.2 Type Certificate  
   Data Sheet No. OE-FL/83
   6.3 Number of blades  
   5
   6.4 Diameter  
   830 mm +/- 0mm
   Note: Propeller features blades of different lengths (d_{min}/d_{max} = 92%)
   6.5 Sense of Rotation  
   counter-clockwise

7. Fuel capacities
   7.1 Tank in the fuselage  
   10,5 l
   7.2 Non usable fuel  
   0,3 l

8. Launching Hooks
   Safety hook Tost “Europa G 88”, LBA
   Datasheet No. 60.230/2
   Nose tow hook Tost “E22”, Datasheet 11.402/9NTS

9. Weak Links
   Ultimate strength:
   - for winch- and car launch:  max. 825 daN
   - for aero tow:  max. 660 daN

10. Load Factors
    +5,3 / -2,65 (up to V_A)
    +4,0 / -1,5 (up to V_{NE})

11. Air Speeds
    Manoeuvring Speed  V_A  180 km/h
    Never exceed speed  V_{NE}  280 km/h
    Maximum permitted speeds
    - with flaps at 0, -1, -2, S, S1  V_{FE}  280 km/h
    - with flaps at +2, +1  V_{FE}  180 km/h
    - with flaps at L  V_{FE}  150 km/h
    - in rough air  V_{RA}  180 km/h
    - for winch / car launching  V_{W}  150 km/h
    - for aero towing  V_{T}  180 km/h
    - for gear operation  V_{LO}  180 km/h
    - for extended power plant:
      Ignition ON  V_{MAX1}  150 km/h
      Ignition OFF  V_{MAX2}  180 km/h
    - for extending / retracting the power plant:
      V_{POMIN}  90 km/h
      V_{POMAX}  120 km/h

12. Approved Operations Capability
    VFR Day only
    Cloud flying permitted
    Aerobatic manoeuvres not permitted

13. Launch methods
    Aero tow
    Winch launch and car launch

14. Maximum Masses
    Max. Mass: 600 kg
Max. Mass of non-lifting parts:
Power-plant installed: 320 kg
Power-plant removed: 280 kg

15. Centre of Gravity Range
Power-plant installed:
300 mm – 430 mm aft of datum
Power-plant removed:
290 mm – 430 mm aft of datum

16. Datum
Wing leading edge at root rib

17. Levelling Means
Wedge 100 : 3,0 on slope of rear top fuselage to be horizontal

18. Control Surface Deflections
Refer to Maintenance Manual

19. Minimum Flight Crew
1

20. Maximum Passenger Seating Capacity
0

21. Baggage/ Cargo Compartments
2 kg

22. Lifetime limitations
Refer to Flight Manual, section 2
A.IV Operating and Service Instructions

1. Flight Manual
   Flight Manual Ventus-3T, Issue April 2018

   Maintenance Manual Ventus-3T, Issue April 2018

   Repair Manual for the GFRP/CFRP powered sailplane model “Ventus-3T”, latest applicable issue

   Approved manual for the SOLO Engine type 2350, latest applicable issue, by SOLO Kleinmotoren GmbH

5. Operating Manual and Maintenance Manual for Propeller
   Approved manual for the folding propeller type OE-FL./83, latest applicable issue, Ingrid Oehler TB GmbH

6. Manual for the Tost release, latest approved issue
A.V  Notes

1. Manufacturing is confined to industrial production

2. All parts exposed to sun radiation – except the areas for markings, registration and the cockpit area – must have a white colour surface.

3. Approved for operations with power plant temporarily removed or inoperative in accordance with the instructions given in the flight manual
Section B: Administrative Section

B.I Acronyms & Abbreviations

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<thead>
<tr>
<th>Acronym</th>
<th>Description</th>
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<tbody>
<tr>
<td>AFRP</td>
<td>Aramid Fibre Reinforced Plastic</td>
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<tr>
<td>CFRP</td>
<td>Carbon Fibre Reinforced Plastic</td>
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<tr>
<td>GFRP</td>
<td>Glass Fibre Reinforced Plastic</td>
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<tr>
<td>CRI</td>
<td>Certification Review Item</td>
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<tr>
<td>CS</td>
<td>Certification Specification</td>
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<tr>
<td>EASA</td>
<td>European Aviation Safety Agency</td>
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<tr>
<td>LBA</td>
<td>Luftfahrt-Budesamt</td>
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<tr>
<td>VFR</td>
<td>Visual Flight Rules</td>
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B.II Type Certificate Holder Record

Schempp-Hirth Flugzeugbau GmbH
Krebenstr. 25
73230 Kirchheim / Teck
Germany

B.III Change Record

<table>
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<tr>
<th>Issue</th>
<th>Date</th>
<th>Changes</th>
<th>TC Issue No. &amp; Date</th>
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<tr>
<td>01</td>
<td>20 July 2018</td>
<td>Initial Issue</td>
<td>Initial Issue, 20. July 2018</td>
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<td>02</td>
<td>01 July 2019</td>
<td>Some editorial and layout changes.</td>
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