

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 Ventus-3M Ventus-3F Ventus-3E



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Section A: Ventus-3T A.I General 1. Type/ Model/ Variant 1.1 Type: Ventus-3 1.2 Model: Ventus-3T Powered Sailplane, CS 22 - Utility 2. Airworthiness Category 3. Manufacturer Schempp-Hirth Flugzeugbau GmbH Krebenstraße 25 73230 Kirchheim / Teck Germany 4. EASA Type Certification Application Date 30 September 2015 5. EASA Type Certification Date 20 July 2018 A.II EASA Certification Basis 1. Reference Date for determining 30 September 2015 the applicable requirements 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 ICAO Annex 16 (details refer to TCDSN EASA.A.627)



A III Technical Characteristics and Operational Limitations

| A.II | l <u>lechnical</u> | Characteristics and Operational Lim | litations | | | | |
|------|--------------------|-------------------------------------|---|------------------------------------|---------------------|--------------------|--|
| 1. | Type Design | Definition | Lis | t of drawing files Ve | entus-3T, | | |
| | | | lss | ue April 2018 | | | |
| 2. | Description | | | gle seat, mid-wing | non-self-laun | ching | |
| | • | | | wered sailplane, CF | | - | |
| | | | | piece 18 m wing wit | | | |
| | | | • | anging-flaps, triple- | | | |
| | | | | brakes on upper wi | | | |
| | | | inv | wings and fin (optio | onal), CFRP/G | FRP/AFRP- | |
| | | | fus | elage, retractable i | main wheel w | ith hydraulic disc | |
| | | | | ake, T-shaped horiz | • | | |
| | | | | bilizer with elevato | | - | |
| | | | | wer plant with fold | •••• | | |
| 3. | Equipment | | | n. required Equipm | | | |
| | | | 1 | Air speed indicat | or (up to 300 | km/h) | |
| | | | 1 1 | Altimeter | ~~ | | |
| | | | 1 | Magnetic compa Outside air temp | | ator with sonsor | |
| | | | T | (when flying with | | | |
| | | | 1 | Engine control ur | | - / | |
| | | | | - RPM indicator | | | |
| | | | | - Engine hour me | eter | | |
| | | | | - Fuel quantity in | dicator | | |
| | | | 1 | Rear view mirror | | | |
| | | | 1 | 4-point harness (| | | |
| | | | 1 | Automatic or ma or | or manual parachute | | |
| | | | 1 | | ickness annro | x 8 cm when | |
| | | | Back cushion (thickness approx. 8 cm when compressed) when flying without | | | | |
| | | | | parachute | | | |
| | | | Ad | , ditional equipment | t refer to Fligh | nt and | |
| | | | | Maintenance Ma | inual | | |
| 4. | Dimensions | | Spa | an: | 15 <i>,</i> 0 m | 18,0 m | |
| | | | Wi | ng area: | 9,53 m² | 10,84 m² | |
| | | | | | • | ee AV.4) | |
| | | | | ngth: | 6,63 m | | |
| | | | | nen according AV.5 | | | |
| - | _ . | | Ler | ngth: | 6,78 m | | |
| 5. | Engine | | | 0 0050 | | | |
| | | Model | | LO 2350 | | | |
| | | Type Certificate | | be Certificate Data | | | |
| | 5.3 | Limitations | | aximum RPM: | | min ⁻¹ | |
| | | | | aximum continuous | S RPIM: 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 | 830mm +/- 0mm Note: Propeller features blades of o = 92%) | different | lengths (d _{min} /d |
| | 6.5 | Sense of Rotation | counter-clockwise | | |
| 7. | Fuel capacit | ies | | | |
| | 7.1 | Tank in the fuselage | 10,5 l 11,6 l, whe | n accord | ling AV.5 |
| 8. | 7.2 Launching H | Non-usable fuel looks | 0,3 l Safety hook Tost "Europa G 8 Datasheet No. 60.230/2 Nose tow hook Tost "E22", D | 8", LBA | - |
| 9. | Weak Links | | Ultimate strength: - for winch- and car launch: - for aero tow: | max. 8 max. 6 | |
| 10. | Load Factor | S | +5,3 / -2,65 (up to V _A) +4,0 / -1,5 (up to V _{NE}) | | |
| 11. | Air Speeds | | Manoeuvring Speed Never exceed speed Maximum permitted speeds - with flaps at 0, -1, -2, S, S1 - with flaps at +2, +1 - with flaps at L - in rough air - for winch / car launching | Va Vne Vfe Vfe Vre Vra Vw | 180 km/h 280 km/h 280 km/h 180 km/h 150 km/h 180 km/h 150 km/h |
| | | | - for aero towing | VT | 180 km/h |
| | | | for gear operation for extended power plant: Ignition ON Ignition OFF | V _{LO} V _{MAX1} V _{MAX2} | 180 km/h 150 km/h 180 km/h |
| | | | for extending / retracting th | • | • |
| | | | | V _{POmin} V _{POmax} | 90 km/h 120 km/h |
| 12. | Approved C | perations Capability | VFR Day only Cloud flying permitted Aerobatic manoeuvres not pe | ermitted | I |
| 13. | Launch met | hods | Aero tow Winch launch and car launch | | |

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| 14. Maximum Masses | Max. Mass: |
|--|--|
| | With 15 m Wing Span: 525 kg (see AV.4) |
| | With 18 m Wing Span: 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 |
| | When according AV.5: |
| | Wedge 100 : 4,4 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, or later EASA approved revisions When according AV.4: Flight Manual Ventus-3T, Issue January 2021, or later EASA approved revisions When according AV.5: Flight Manual Ventus-3T "Performance", Issue October 2021, or later EASA approved revisions |
|----|--|--|
| 2. | Maintenance Manual | Maintenance Manual Ventus-3T, Issue April 2018, or later EASA accepted revisions When according AV.4: Maintenance Manual Ventus-3T, Issue January 2021, or later EASA accepted revisions When according AV.5: Maintenance Manual Ventus-3T "Performance", Issue October 2021, or later EASA accepted revisions |
| 3. | Structural Repair Manual | Repair Manual for the GFRP/CFRP powered sailplane model "Ventus-3T", latest applicable issue |
| 4. | Operating Manual and Maintenance Manual for Eng | |
| | | Approved manual for the SOLO Engine type 2350, latest applicable issue, by SOLO Kleinmotoren GmbH |
| 5. | Operating Manual and Maintenance Manual for Pro | - |
| | | 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.
- 4. Introduction of option for 15m-wingspan outer wing panels and new issues of Flight and Maintenance Manual with Modification Bulletin 627-2.
- 5. With Modification Bulletin 627-3 the "Performance-Edition"-fuselage can be used.



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Section B: Ventus-3M **B.I** General 1. Type/ Model/ Variant 1.1 Type: Ventus-3 1.2 Model: Ventus-3M 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 2 October 2017 5. EASA Type Certification Date 15 November 2019 B.II EASA Certification Basis 1. Reference Date for determining 2 October 2017 the applicable requirements **Certification Specifications for Sailplanes** 2. Airworthiness Requirements 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 ICAO Annex 16 (details refer to TCDSN EASA.A.627)



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B.III Technical Characteristics and Operational Limitations

| 1. | Type Desigr | Definition | List of drawing files | |
|----|-------------|------------------|---|--|
| 2. | Description | | CFRP/GFRP/AFRP-c with Winglets, char Schempp-Hirth typ surface, water balla (optional), CFRP/GI main wheel with hy horizontal tail (fixe | ng powered sailplane, construction, 6-piece 18 m wing mber changing-flaps, triple-panel e airbrakes on upper wing ast tanks in wings and fin FRP/AFRP-fuselage, retractable ydraulic disc brake, T-shaped d horizontal stabilizer with dder), retractable power plant |
| 3. | Equipment | | Altimeter Magnetic com Outside air ter (when flying w Power plant o RPM indicato Engine hour Fuel quantity Coolant liquity Warning sign Rear view mirr 4-point harnes Automatic or roor Back cushion (compressed) w | cator (up to 300 km/h) pass nperature indicator with sensor vith water ballast) perating unit featuring: or meter indicator d temperature indicator als for ss (symmetrical) manual parachute thickness approx. 8 cm when when flying without parachute ent refer to Flight and |
| 4. | Dimensions | | Span: | 18,0 m |
| | | | Wing area: | 10,84 m ² |
| 5. | Engine | | Length: | 6,78 m |
| Э. | - | Model | SOLO 2625, variatio | n SOLO 2625-01 i |
| | 5.1 | model | When according to | |
| | | | U U | on SOLO 2625-01 i neo |
| | 5.2 | Type Certificate | | ta Sheet No. EASA.E.218 |
| | 5.3 | Limitations | Maximum RPM: | 6600 min ⁻¹ |
| | | | Maximum continue | bus RPM: 6250 min ⁻¹ |
| | | | | |



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| 6. | Propeller | | | | |
|-----|--------------------|--------------------------|--|-----------------------------------|----------------------|
| | 6.1 | Model | KS-1G-152-R 122 | | |
| | 6.2 | Type Certificate | LBA-Data Sheet No. 32.110/1 | .8 | |
| | 6.3 | Number of blades | 2 | | |
| | 6.4 | Diameter | 1580 mm +/-50mm | | |
| | 6.5 | Sense of Rotation | counter-clockwise | | |
| 7. | Fuel capacit | ies | | | |
| | 7.1 | Tank in the fuselage | 13,0 l | | |
| | 7.2 | Non-usable fuel | 0,3 | | |
| 8. | 7.3 Launching H | Tank in wing(s) looks | optional, see Flight Manual Safety hook Tost "Europa G 8 Datasheet No. 60.230/2 Nose tow hook Tost "E22", D | | t 11.402/9NTS |
| 9. | Weak Links | | Ultimate strength: - for winch- and car launch: - for aero tow: | max. 82 max. 60 | |
| 10. | Load Factor | S | +5,3 / -2,65 (up to V _A) +4,0 / -1,5 (up to V _{NE}) | | |
| 11. | Air Speeds | | Manoeuvring Speed Never exceed speed Maximum permitted speeds | V _A V _{NE} | 180 km/h 280 km/h |
| | | | - 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 | Vw | 150 km/h |
| | | | - for aero towing - for gear operation | V _T V _{LO} | 180 km/h 180 km/h |
| | | | - for extended power plant | V _{MAX} | 180 km/h |
| | | | - for extending / retracting th | | |
| | | | | V _{POmin} | 92 km/h 120 km/h |
| 12. | Approved O | perations Capability | VFR Day only Cloud flying permitted Aerobatic manoeuvres not pe | ermitted | |
| 13. | Launch met | hods | Aero tow Winch launch and car launch Self launch | | |
| 14. | Maximum N | Aasses (| Max. Mass: 600 kg Max. Mass of non-lifting part Power-plant installed: Power-plant removed: | s: 365 kg 320 kg | |

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| 15. Centre of Gravity Range | Power-plant installed: 320mm – 430mm aft of datum Power-plant removed: 300mm – 430mm aft of datum |
|--|--|
| 16. Datum | Wing leading edge at root rib |
| 17. Levelling Means | Wedge 100 : 4,4 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 |

B.IV Operating and Service Instructions

| 1. | Flight Manual | Flight Manual Ventus-3M, Issue March 2019, or later EASA approved revisions When according BV.4: Flight Manual Ventus-3M, Issue February 2021, or later approved revisions |
|----|--|--|
| 2. | Maintenance Manual | Maintenance Manual Ventus-3M, Issue March 2019, or later EASA accepted revisions When according BV.4: Maintenance Manual Ventus-3M, Issue February 2021, or later accepted revisions |
| 3. | Structural Repair Manual | Repair Manual for the GFRP/CFRP powered sailplane model "Ventus-3M", latest applicable issue |
| 4. | Operating Manual and Maintenance Manual for Eng | gine |
| | | Approved manual for the SOLO Engine type 2625- 01i, latest applicable issue, by SOLO Kleinmotoren GmbH |
| | | When according to BV.4: |
| | | Approved manual for the SOLO Engine type 2625- 01i neo, latest applicable issue, by SOLO Kleinmotoren GmbH |
| 5. | Operating Manual and Maintenance Manual for Pro | peller |
| | | Operation and Installation Manual No. P3 for the two blade composite propellers with fixed pitch KS 1 G()()() KS 1 C ()()(), valid issue as appropriate |
| 6. | Manual for the Tost release, latest approved issue | |



B.V <u>Notes</u>

- 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.
- 4. Introduction of new engine variant SOLO 2625-01 I neo and new issues of Flight and Maintenance Manuals with Modification Bulletin 627-1.



Section C: Ventus-3F

C.I General

- 1. Type/ Model/ Variant
 - 1.1 Type:
 - 1.2 Model:
- 2. Airworthiness Category
- 3. Manufacturer

Ventus-3 Ventus-3F Powered Sailplane, CS 22 - Utility Schempp-Hirth Flugzeugbau GmbH Krebenstraße 25 73230 Kirchheim / Teck Germany 04 May 2017 8 Juni 2022

- 4. EASA Type Certification Application Date
- 5. EASA Type Certification Date

C.II EASA Certification Basis

- 1. Reference Date for determining the applicable requirements
- 2. Airworthiness Requirements
- 3. Special Conditions
- 4. Exemptions
- 5. (Reserved) Deviations
- 6. Equivalent Safety Findings
- 7. Environmental Protection

04 May 2017

Certification Specifications for Sailplanes

and Powered Sailplanes CS 22, Amend. 2, effective on March 5, 2009

SC.22-2014-01 Installation of Electric Propulsion in sailplanes, SC E-01 Airworthiness Standard for CS-22H Electrical Retractable Engine to be operated in Powered Sailplanes None

None

CS 22.207 (c)(1), CS 22.335 (f)

ICAO Annex 16 (details refer to TCDSN EASA.A.627)

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C.III Technical Characteristics and Operational Limitations

| 1. | Type Design | Definition | | f drawing files | Ventus-3F, | |
|----|-------------|------------------|---|---|--|---|
| 2. | Description | | Issue Single powe 6-pie chang airbra in win fusela brake eleva | July 2021 e seat, mid-win ered sailplane, ce 18 m wing ging-flaps, trip akes on upper ngs and fin (op age, retractabl | ng non-self-l CFRP/GFRP, with Winglet le-panel Sch wing surfact tional), CFR le main whe l (fixed horiz dder), electr | /AFRP-construction, ts, chamber empp-Hirth type e, water ballast tanks P/GFRP/AFRP- el with hydraulic disc contal stabilizer with |
| 3. | Equipment | | 1 / / 1 / / 1 / / 1 / / - - - - - - - - - - - - - | (when flying w Engine control - RPM indicato - Engine time - Battery level - Motor tempe 4-point harnes Automatic or r or Back cushion (| cator (up to c pass nperature in rith water ba unit FCU: or (V meter, A erature ss (symmetri manual para thickness ap when flying v ent refer to f | ndicator with sensor illast) meter) cal) chute prox. 8 cm when vithout parachute |
| 4. | Dimensions | | Span: Wing Lengt | area: | 18,0 m 10,84 m 6,63 m | 2 |
| 5. | Engine | | 201181 | | 0,00 m | |
| | 5.1 | Model | Outru Magr | /EN-M100 unner BLDC br net motor with nutation syste | electronica | hronous permanent Ily controlled |
| | 5.2 | Type Certificate | accep | oted as part of | the aircraft | |
| | | Limitations | | mum Tempera continuous Te | | 90°C 70°C |

*** * * ***

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| 6. | Propeller | | | | |
|----------|-----------------------------|-----------------------|--|-----------------------------------|----------------------|
| | 6.1 | Model | FES-VEN-P1-102, traktor type | ! | |
| | 6.2 | Type Certificate | accepted as part of the aircra | ft | |
| | 6.3 | Number of blades | 2 | | |
| | 6.4 | Diameter | 1000 mm +20/- 0mm | | |
| | 6.5 | Sense of Rotation | clockwise | | |
| | 6.6 | Limitations | 4300 RPM max. continuous ro 4500 RPM maximum rotatior | | • |
| 7. 8. | Fuel capacit Launching F | | N/A Safety hook Tost "Europa G 8 Datasheet No. 60.230/2 Nose tow hook Tost "E 85", L Datasheet No. 60.230/2 | 8", LBA | |
| 9. | Weak Links | | Ultimate strength: - for winch- and car launch: - for aero tow: | | 25 daN 60 daN |
| 10. | Load Factor | S | +5,3 / -2,65 (up to V _A) +4,0 / -1,5 (up to V _{NE}) | | |
| 11. | Air Speeds | | Manoeuvring Speed Never exceed speed Maximum permitted speeds | V _A V _{NE} | 180 km/h 280 km/h |
| | | | - 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 | VFE | 150 km/h |
| | | | - in rough air - for winch / car launching | V _{RA} V _W | 180 km/h 150 km/h |
| | | | - for aero towing | v _W V _T | 130 km/h |
| | | | - for gear operation | VLO | 180 km/h |
| | | | for engine operation and for engine start: | V _{POmax} | 160 km/h |
| 12. | Approved C | Operations Capability | VFR Day only Cloud flying permitted Aerobatic manoeuvres not pe | ermittec | I |
| 13. | Launch met | hods | Aero tow Winch launch and car launch | | |
| 14. | Maximum M | Masses | Max. Mass: With 18 m Wing Span: Max. Mass of non-lifting part FES-Batteries installed: FES-Batteries removed: | 600 kg s: 320 kg 280 kg | |
| 15. | Centre of G | ravity Range | FES-Batteries removed. FES-Batteries installed: 300 mm – 430 mm aft of datu FES-Batteries removed: 290 mm – 430 mm aft of datu | um | |
| 16. | Datum | | Wing leading edge at root rib | 1 | |



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| 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 |



C.IV Operating and Service Instructions

| 1. | Flight Manual | Flight Manual Ventus-3F, Issue August 2021 |
|----|--|--|
| 2. | Maintenance Manual | Maintenance Manual Ventus-3F, Issue August 2021 |
| 3. | Structural Repair Manual | Repair Manual for the GFRP/CFRP powered sailplane model "Ventus-3F", latest applicable issue |
| 4. | Manual for the Tost release, latest approved issue | |



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C.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 FES-Batteries and/or propeller temporarily removed in accordance with the instructions given in the flight manual.
- 4. Engine and propeller are accepted as part of the aircraft according to PART 21.A.23(b)(2).



Section D: Ventus-3E

D.I General

- 1. Type/ Model/ Variant
 - 1.1 Type:
 - 1.2 Model:
- 2. Airworthiness Category
- 3. Manufacturer

Ventus-3 Ventus-3E Powered Sailplane, CS 22 - Utility Schempp-Hirth Flugzeugbau GmbH Krebenstraße 25 73230 Kirchheim / Teck Germany 24 July 2023 13 June 2025

- 4. EASA Type Certification Application Date
- 5. EASA Type Certification Date

D.II EASA Certification Basis

- Reference Date for determining the applicable requirements
- 2. Airworthiness Requirements
- 3. Special Conditions
- 4. (Reserved) Deviations
- 5. Equivalent Safety Findings
- 6. Environmental Protection

24 July 2023

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

SC.22-2014-01 Installation of Electric Propulsion in sailplanes, SC E-01 Airworthiness Standard for

None

CS 22.207 (a) (c), CS 22.335 (f) ICAO Annex 16 (details refer to TCDSN EASA.A.627)



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D.III Technical Characteristics and Operational Limitations

| D.III Technical Characteristics and Operational Limitations | | | |
|--|---|--|--|
| 1. Type Design Definition | List of drawing files Ventus-3E, Issue February 2025 2DescriptionSingle seat, mid-wing self-launching powered sailplane, CFRP/GFRP/AFRP-construction, 6-piece 18/15 m wing with Winglets, chamber changing-flaps, triple-panel Schempp-Hirth type airbrakes on upper wing surface, water ballast tanks in wings and fin, CFRP/GFRP/AFRP-fuselage, retractable main wheel with hydraulic disc brake, T- shaped tail (fixed horizontal stabilizer with elevator, fin and rudder), retractable electric motor with fixed propeller. | | |
| 2. Equipment | Min. required Equipment: Air speed indicator (up to 300 km/h) Altimeter Magnetic compass Outside air temperature indicator with sensor (when flying with water ballast) Engine control unit DCU: RPM indicator Engine time Battery level (V meter, A meter) Battery temperature Motor temperature Controller temperature Automatic or manual parachute or Back cushion (thickness approx. 8 cm when compressed) when flying without parachute Additional equipment refer to Flight and Maintenance Manual | | |
| Dimensions Engine | Span: 15m 18,0 m Wing area: 9,53 m² 10,84 m² Length: 6,63m 6,63 m | | |
| 4.1 Model | SOLO 8000/401 System axial flux motor, 228mm in diameter with two resolvers for determination of RPM and position Outrunner BLDC brushless synchronous permanent | | |
| 4.2 Type Certificate4.3 Limitations | EASA.E.237Maximum revs.:3500rpmMax. continuous revs.:3200rpmMax. over speed revs.:3200rpmMax. motor temperature:120°CMax. power electronics temp.:85°C | | |



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| 5. | Propeller | | | | |
|-----|--------------|----------------------|--|---------------------------------------|---|
| | 5.1 | Model | SHK 1-1 | | |
| | 5.2 | Type Certificate | accepted as part of the aircra | ıft | |
| | 5.3 | Number of blades | 2 | | |
| | 5.4 | Diameter | 1400 mm +10/- 10mm | | |
| | 5.5 | Sense of Rotation | clockwise | | |
| | | Limitations | 3200 RPM maximum rotation | nal snee | d |
| 6. | Fuel capacit | | N/A | iui spec | 4 |
| 0. | Fuercapacit | 165 | N/A | | |
| 7. | Battery | | Model: Battery capacity: Non-usable battery capacity: Max battery discharge tempe Min battery discharge temperat Max battery charge temperat Min battery charge temperat Range of permissible cell volt | erature: rature: ture: cure: | Battery BM384 11.2Ah 1.0 Ah(~10%) 70°C -20°C 50°C 0°C 2,5-4,2V |
| 8. | Launching F | łooks | Safety hook Tost "Europa G 8 Datasheet No. 60.230/2 Nose tow hook Tost "E 85", L Datasheet No. 60.230/2 | | |
| 9. | Weak Links | | Ultimate strength: - for winch- and car launch: - for aero tow: | | 25 daN 60 daN |
| 10. | Load Factor | S | +5,3 / -2,65 (up to V _A) +4,0 / -1,5 (up to V _{NE}) | | |
| 11. | Air Speeds | | Manoeuvring Speed | VA | 180 km/h |
| | | | Never exceed speed Maximum permitted speeds | V_{NE} | 280 km/h |
| | | | - 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 | Vw | 150 km/h |
| | | | - for aero towing | VT | 180 km/h |
| | | | - for gear operation | V_{LO} | 180 km/h |
| | | | - for engine operation and | ., | 4601 |
| | | | for engine start: | V _{POmax} | 160 km/h |
| 12. | Approved C | perations Capability | VFR Day only Cloud flying permitted Aerobatic manoeuvres not pe | ermitteo | ł |

* * * * * * *

| 13. | Launch methods | Aero tow Winch launch and car launch Self-launch | |
|-----|------------------------------------|--|----------------------------|
| 14. | Maximum Masses | Max. Mass: Max. Mass of non-lifting parts: Engine and batteries installed: Engine and Batteries removed: | 600 kg 365 kg 320 kg |
| 15. | Centre of Gravity Range | Engine and Batteries installed: 320 mm – 430 mm aft of datun Engine and Batteries removed: 300 mm – 430 mm aft of datun | |
| 16. | Datum | Wing leading edge at root rib | |
| 17. | Levelling Means | Wedge 100 : 3,0 on slope of rea fuselage to be horizontal | ar top |
| 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 | |

D.IV Operating and Service Instructions

| 1. 2. | Flight Manual Maintenance Manual | Flight Manual Ventus-3E, Issue February 2025 Maintenance Manual Ventus-3F, Issue February 2025 | |
|----------|---|--|--|
| 3. | Structural Repair Manual | Repair Manual for the GFRP/CFRP powered sailplane model "Ventus-3E", latest applicable issue | |
| 4. | 4. Operating Manual and Maintenance Manual for Engine | | |
| | | Approved manual for the SOLO Engine 8000/401, latest applicable issue, by SOLO Kleinmotoren GmbH | |
| 5. | Operating Manual and Maintenance Manual for Propeller | | |
| | | "Betriebshandbuch für den Propeller SHK 1", latest applicable issue | |
| c | Manual for the Test values a latest energy of issue | | |

6. Manual for the Tost release, latest approved issue

D.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.



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4. Propeller is accepted as part of the aircraft according to PART 21.A.23(b)(2).



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Section E: <u>Administrative Section</u>

E.I <u>Acronyms & Abbreviations</u>

| AFRP | Aramid Fibre Reinforced Plastic |
|------|---------------------------------------|
| CFRP | Carbon Fibre Reinforced Plastic |
| GFRP | Glass Fibre Reinforced Plastic |
| CRI | Certification Review Item |
| CS | Certification Specification |
| EASA | European Union Aviation Safety Agency |
| LBA | Luftfahrt-Bundesamt |
| VFR | Visual Flight Rules |

E.II Type Certificate Holder Record

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

E.III Change Record

| Issue | Date | Changes | TC Issue No. & Date |
|-------|---|--|---------------------------------|
| 01 | 20 July 2018 | Initial Issue | Initial Issue, 20. July 2018 |
| 02 | 01 July 2019 Some editorial and layout changes. | | |
| 03 | 15 November 2019 | Addition of new model Ventus-3M | 15 November 2019 |
| 04 | 28 April 2021 | Introduction of 15m-wingtips for variant Ventus-3T and some editorial changes | n/a |
| 05 | 15 October 2021 | Introduction of modification bulletin 627-1 for Ventus-3M | n/a |
| 06 | 22 July 2022 | Introduction of new model Ventus-3F Introduction of modification bulletin 627-3 for Ventus 3T Some editorial changes | 08 June 2022 |
| 07 | 18 June 2025 | Addition of new model Ventus-3E | 13 June 2025 |

-END-



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