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

Intentionally left blank

Contents

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	07 July 2014

A.II EASA Certification Basis

1.	Reference Date for determining the applicable requirements	
2.	Airworthiness Requirements	Certification Specifications for Sailplanes and Powered Sailplanes CS 22, Amendment 2, 5 March 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 m^2
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 = 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	Manoeuvering 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 aerotowing 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 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
2.	Maintenance Manual	Maintenance Manual Ventus-3T, Issue April 2018
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 Engine	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: Model B Designation

[insert additional sections as applicable]

B.I General

1. Type/ Model/ Variant
   - 1.1 Type: [type]
   - 1.2 Model: [model]
   - 1.3 Variant: [variant]
2. Airworthiness Category
3. Manufacturer

4. EASA Type Certification Application Date

Note: State of Design Authority certification application date for grandfathered products

5. State of Design Authority
6. State of Design Auth. Type Certificate Date
7. EASA Type Certification Date

B.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

B.III Technical Characteristics and Operational Limitations

1. Type Design Definition

2. Description

3. Equipment

4. Dimensions

5. Engine
   - 5.1 Model
   - 5.2 Type Certificate
   - 5.3 Limitations
   - 5.4 Maximum Continuous Power

6. Engine [electrical propulsion]
   - 6.1 Model
   - 6.2 Type Certificate
   - 6.3 Limitations
   - 6.4 Max. continuous revs
   - 6.5 Max. over speed revs
   - 6.6 Max. motor temperature
   - 6.7 Max. power electronics temp.

7. Propeller
   - 7.1 Model
   - 7.2 Type Certificate
   - 7.3 Number of blades
   - 7.4 Diameter
   - 7.5 Sense of Rotation

8. Fuel capacities
   - 8.1 Tank in the fuselage
   - 8.2 Tank in right wing
   - 8.3 Tank in left wing
   - 8.4 Non-usable fuel

9. Battery [electrical propulsion]
   - 9.1 Battery capacity
   - 9.2 Non-usable battery capacity
   - 9.3 Max battery discharge temperature
   - 9.4 Min battery discharge temperature
   - 9.5 Max battery charge temperature
   - 9.6 Min battery charge temperature

9.7 Range of permissible cell voltage

10. Launching Hooks
11. Weak Links
12. Load Factors

13. Air Speeds

14. Approved Operations Capability	VFR Day [and VFR Night]
	Cloud flying [not] permitted
	Aerobatic manoeuvres [not] permitted
15. Launch methods	Aero tow
	Winch launch and car launch
	Self-launch
	Bungee launch

16. Maximum Masses
17. Centre of Gravity Range
18. Datum
19. Levelling Means
20. Control Surface Deflections
21. Minimum Flight Crew
22. Maximum Passenger Seating Capacity
23. Baggage/ Cargo Compartments
24. Lifetime limitations

B.IV Operating and Service Instructions

1. Flight Manual
2. Maintenance Manual
3. Structural Repair Manual
4. Operating Manual and Maintenance Manual for Engine
5. Operating Manual and Maintenance Manual for Propeller
6. Operating Manual for the Launching Hooks

B.V Notes

1. [text]

Section C: Administrative Section

C.I Acronyms & Abbreviations

[insert list or table]

C.II Type Certificate Holder Record

[insert list or table]

C.III Change Record

Issue	Date	Changes	TC Issue No. & Date
01	dd month yyyy	Initial Issue	Initial Issue, dd month yyyy

[insert rows as needed]

-END-