



TYPE-CERTIFICATE DATA SHEET

NO. EASA.A.656

for
AS 33

Type Certificate Holder
Alexander Schleicher GmbH & Co. Segelflugzeugbau

Alexander-Schleicher-Str. 1
36163 Poppenhausen
Germany

For models: AS 33 Es



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Section A: **AS 33 Es**

A.I General

- | | |
|---|---|
| 1. Type/ Model/ Variant | |
| 1.1 Type: | AS 33 |
| 1.2 Variant: | AS 33 Es |
| 2. Airworthiness Category | Powered Sailplane, CS 22 -Utility |
| 3. Manufacturer | Alexander Schleicher GmbH & Co.
Segelflugzeugbau
Alexander-Schleicher-Str. 1
36163 Poppenhausen
Germany |
| 4. EASA Type Certification Application Date | 23 August 2018 |
| 5. EASA Type Certification Date | 25 September 2020 |

A.II EASA Certification Basis

- | | |
|---|--|
| 1. Reference Date for determining the applicable requirements | 26 August 2018 |
| 2. Airworthiness Requirements | Certification Specification for Sailplanes and Powered Sailplanes CS 22, Amend. 2, effective on March 5 2009 |
| 3. Special Conditions | None |
| 4. Exemptions | None |
| 5. Deviations | DEV-B22.335-01
(CS 22.73, CS 22.221, CS 22.223, CS 22.335 (f)) |
| 6. Equivalent Safety Findings | CS 22.331 (d)(2)
CS 22.585 (a) |
| 7. Environmental Protection | None |



A.III Technical Characteristics and Operational Limitations

1. Type Design Definition
List of drawing files AS 33 Es, issue 01
September 2020
2. Description
Single-seat, shoulder-winged non-self launching powered sailplane, CFRP/GFRP/AFRP-composite construction for FAI 18m class; four part wing with triple-panel Schempp-Hirth type airbrakes on upper wing surface, detachable winglets, water ballast tanks in the wing and optional in the fin, retractable landing gear with hydraulic disc brake, T-shaped horizontal tail (fixed horizontal stabilizer with elevator, fin and rudder).
3. Equipment
Min. required Equipment:
 - 1 Air speed indicator (up to 300 km/h)
 - 1 Altimeter
 - 1 Magnetic compass
 - 1 Outside air temperature indicator (when flying with water ballast)
 - 1 4-point harness (symmetrical)
 - 1 Parachute or back cushion (thickness approx. 8 cm)With engine installed:
 - 1 Power-plant instrument, ILEC MCU type AS 33 EsAdditional equipment refer to Flight and Maintenance Manual
4. Dimensions

Span:	18,0 m
Wing area:	10,0 m ²
Length:	6,5 m
5. Engine
 - 5.1 Model
SOLO 2350 (SOLO 2350e according Technical Note 4603-16)
 - 5.2 Type Certificate
Type Certificate Data Sheet No. EASA.E.219
 - 5.3 Limitations

Maximum RPM:	5400 min ⁻¹
Maximum continuous RPM:	5400 min ⁻¹
 - 5.4 Maximum Continuous Power
18,0 kW



6. Propeller		
6.1 Model		AS2F1-3/L100-56-N2
6.2 Type Certificate		Type Certificate Data Sheet No. EASA.P.004
6.3 Number of blades		2
6.4 Diameter		100 cm
6.5 Sense of Rotation		counter-clockwise
7. Fluids:		
7.1 Fuel:		2-stroke mixture from AVGAS 100LL or unleaded MOGAS 95 ROZ
7.2 Oil:		Oil-to-fuel mixture 1:40 2-stroke oil Castrol RS 2T, Castrol Super TT, Castrol TTS or Castrol Go!2T.
7.3 Coolant:		N/A
8. Fluid capacities:		
8.1 Fuel:		
	Max. capacity	7,0 l
	Max. usable	6,8 l
8.2 Oil		N/A
8.3 Coolant system capacity		N/A
9. Launching Hooks		1) Nose tow hook Tost "E 22", LBA Datasheet No. 11.402/9 NTS 2) Safety hook Tost "Europa G 88", LBA Datasheet No. 60.230/2
10. Weak Links		Ultimate strength: - For aero tow: max. 825 daN
11. Load Factors		+5,3 / -2,65 (up to V_A) +4,0 / -1,5 (up to V_{NE})
12. Air Speeds		
12.1 Manoeuvring speed	V_A	200 km/h
12.2 Never exceed speed	V_{NE}	220 km/h
12.3 Maximum permitted speeds		
- in strong turbulence	V_{RA}	210 km/h
- in aero-tow	V_T	180 km/h
- in winch-launch	V_W	N/A
- for gear operation	V_{LO}	200 km/h
- for extracting engine	$V_{PO,max}$	140 km/h
- with wing flaps at pos. 1,2,3,4	$V_{FE 1,2,3,4}$	220 km/h
- with wing flaps at pos. N,5,6	$V_{FE N,5,6}$	200 km/h
- with wing flaps at pos. L	$V_{FE L}$	150 km/h
13. Maximum Operating Altitude		4000 m



14. Approved Operations Capability	VFR Day only Cloud flying not permitted Aerobatic manoeuvres not permitted Spinning not permitted Licensed pilots only (no flight training permitted)
15. Launch methods	Aero tow
16. Maximum Masses	
16.1 Maximum Take-off Mass	600 kg
16.2 Max. Mass of non-lifting parts	300 kg
17. Centre of Gravity Range	210 mm – 340 mm aft of datum
18. Datum	Wing leading edge at root rib
19. Levelling Means	Wedge 1000:54 placed horizontal on upper side of the fuselage boom horizontal
20. Control Surface Deflections	Refer to Maintenance Manual
21. Minimum Flight Crew	1
22. Maximum Passenger Seating Capacity	0
23. Baggage/ Cargo Compartments	12 kg (upper baggage compartment) 5 kg (lower baggage compartment)
24. Lifetime limitations	Refer to Maintenance Manual



A.IV Operating and Service Instructions

1. Flight Manual
Flight Manual for the self-sustaining powered sailplane AS 33 Es, Issue 25 August 2020, or later EASA approved revisions
2. Maintenance Manual
Maintenance Manual for the self-sustaining powered sailplane AS 33 Es, Issue 25 August 2020, or later EASA approved revisions
3. Structural Repair Manual
Repair Manual Alexander Schleicher, latest approved revision
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
Operating and Maintenance Manual for the propeller AS2F1, series AS2F1-3, in the latest valid edition
6. Manual for the Tost release, latest approved issue



A.V Notes

1. Production is confined to industrial production
2. All parts made from fibre reinforced plastic exposed to sun radiation – except the areas for markings and registration and except from the inner sides of the engine supports – must have a white colour surface.



Section B: Administrative Section

B.I Acronyms & Abbreviations

AFRP	Aramid Fibre Reinforced Plastic
CFRP	Carbon Fibre Reinforced Plastic
CS	Certification Specification
EASA	European Union Aviation Safety Agency
GFRP	Glass Fibre Reinforced Plastic
LBA	Luftfahrt-Bundesamt
MCU	Motor Control Unit
ROZ	Researched-Oktanzahl
VFR	Visual Flight Rules

B.II Type Certificate Holder Record

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

B.III Change Record

Issue	Date	Changes	TC Issue No. & Date
01	25 September 2020	Initial Issue	Initial, 25 September 2020

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