TYPE-CERTIFICATE

DATA SHEET

NO. EASA.A.599

for

ASG 32

Type Certificate Holder

Alexander Schleicher GmbH & Co. Segelflugzeugbau

Alexander-Schleicher-Str. 1
36163 Poppenhausen
Germany

For model: ASG 32
ASG 32 El

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Contents

Section A: ASG 32

A.I General

1.	Type/ Model/ Variant	
	1.1 Type:	ASG 32
	1.2 Model:	ASG 32
	1.3 Variants:	ASG 32 ASG 32 Mi (with propulsion, self-launchable)
2.	Airworthiness Category	Sailplane, CS-22 - Utility
3.	Manufacturer	Alexander Schleicher GmbH & Co. Segelflugzeugbau
4.	EASA Type Certification Application Date	01 November 2012
5.	EASA Type Certification Date	11 Februray 2016

A.II EASA Certification Basis

1.	Reference Date for determining the applicable requirements	
2.	Airworthiness Requirements	Certification Specification for Sailplanes and Powered Sailplanes, issued 24. September 2008 (CS-22, Amdt. 2)
3.	Special Conditions	EASA SC A.22.1-01 - 850 kg MTOM for variant ASG 32
4.	Exemptions	None
5.	(Reserved) Deviations	None
6.	Equivalent Safety Findings	CS 22.335 (f) calculation of V_D according to OSTIV CS 22.585(a) reduced by factor 1.2
7.	Environmental Protection	ICAO Annex 16 (details refer to TCDSN EASA.A.599)

A.III Technical Characteristics and Operational Limitations

1. Type Design Definition: List of the drawing files ASG 32, issue 31.01.2016

2. Description: Double-seat, mid-wing CRP/GRP/ARP-composite construction for FAI 20m class with flaps, double-panel Schempp-Hirth airbrakes on upper wing surface, winglets, water ballast tanks in the wing and optional in the fuselage, retractable landing gear with hydraulic disc brake, T-shaped horizontal tail (fixed horizontal stabilizer with elevator) fin and rudder.

   Variant ASG 32 Mi:
   Self-launching, power-plant mounted in the centre fuselage.

3. Equipment

   3.1 Min. required Equipment:

   1 Air speed indicator (up to 300 km/h) (front seat)
   1 Altimeter (front seat)
   1 Outside air temperature gauge (front seat)
   2 4-Point safety harness (symmetrical)
   2 Parachute or Cushion for back rest (~ 8cm thickness)
   Additional Equipment refer to Flight and Maintenance Manual

   3.2 Additional Equipment if propulsion system installed (variant ASG 32 Mi):

   1 Magnetic compass (front seat)
   1 Power-plant instrument, type ILEC MCU ASH 30Mi (front seat); when engine installed
   1 Rear view mirror (front seat); when engine installed

4. Dimensions

Span:	20,00 m
Wing area:	15,70 m²
Length:	9,07 m
Height:	1,84 m

5. Engine (optional Variant ASG 32 Mi)

   5.1 Model: Austro Engine IAE50R-AA

   5.2 Type Certificate: EASA.E.085

   5.3 Limitations: Maximum Take-off Power (max. 3 min.): 37,3 kW at 7750 rpm

   5.4 Maximum Continuous Power 35,8 kW at 7100 rpm

6. Propeller (optional Variant ASG 32 Mi)

6.1	Model	Alexander Schleicher AS2F1-1/R153-92-N1
6.2	Type Certificate	EASA.P.004
6.3	Number of blades	2
6.4	Diameter	1530 mm ± 5 mm
6.5	Sense of Rotation	Right
	or	
6.6	Model	Alexander Schleicher AS2F1-5/R153-88-N1
6.7	Type Certificate	EASA.P.004
6.8	Number of blades	2
6.9	Diameter	1530 mm ± 5 mm
6.10	Sense of Rotation	Right

7. Fuel capacities/Battery (optional Variant ASG 32 Mi)

7.1	Tank in the fuselage	14 l
7.2	Tank in right wing	15 l
7.3	Tank in left wing	15 l
7.4	Non-usable fuel	0,4 l

8. Launching Hooks
Nose tow hook “E 22”, LBA Datasheet No. 11.402/9 NTS
Safety hook „Europa G 88“, LBA Datasheet No. 60.230/2

9. Weak Links
Ultimate Strength:
- for winch- and auto-tow launching max. 1100 daN
- for aero-tow max. 1100 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}	270 km/h
Maximum permitted Speeds		
- with flaps at 1, 2, 3, 4	V_{FE}	270 km/h
- with flaps at 5,6	V_{FE}	180 km/h
- with flaps at L	V_{FE}	150 km/h
- in rough air	V_{RA}	180 km/h
- for winch launching	V_W	140 km/h
- for aerotowing	V_T	180 km/h
- for gear operation	V_{LO}	180 km/h
- for propeller operation	V_{PO}	120 km/h
- with propeller extended	V_{PE}	180 km/h

12. Approved Operations Capability
VFR-Day
Cloud flying not permitted
Aerobatic manoeuvers not permitted, except Spinning

13. Launch methods
Aerotow
Winch and Auto-Tow
Self Launch (only variant ASG 32 Mi)

14.	Maximum Masses	Max. Mass: 850 kg Max. Mass of Non-Lifting Parts: 550 kg
15.	Centre of Gravity Range	156 mm – 385 mm aft of datum
16.	Datum	Wing leading edge at root rib
17.	Levelling Means	Slope 1000 : 27 placed on upper side of fuselage boom horizontal
18.	Control Surface Deflections	Refer to Maintenance Manual
19.	Minimum Flight Crew	1
20.	Maximum Passenger Seating Capacity	1
21.	Baggage/ Cargo Compartments	9 kg
22.	Lifetime limitations	Refer to Maintenance Manual

A.IV Operating and Service Instructions

1. Flight Manuals:
    1.1 Variant ASG 32: Flight Manual ASG 32, issue 01.12.2015, or later EASA approved revisions
    1.2 Variant ASG 32 Mi: Flight Manual ASG 32 Mi, issue 01.12.2015, or later EASA approved revisions
2. Maintenance Manuals:
    2.1 Variant ASG 32: Maintenance Manual ASG 32, issue 15.01.2016, or later revisions
    2.2 Variant ASG 32 Mi: Maintenance Manual ASG 32 Mi, issue 15.01.2016, or later revisions
3. General Repair Manual for Alexander Schleicher Sailplanes and Powered Sialplanes, latest revision
4. Operating Manual and Maintenance Manual for Engine Austro Engine IAE50R-AA series, latest approved version *)
5. Operating Manual and Maintenance Manual for Propeller Alexander Schleicher AS2F1-1, latest approved version *), or as applicable
6. Operating Manual and Maintenance Manual for Propeller Alexander Schleicher AS2F1-5, latest approved version *)
7. Manual for the TOST Release, latest approved version

*) For Variant ASG 32 Mi: The operation and maintenance manuals are elements of the operation instructions of the ASG 32 Mi. Necessary revisions are not be done in the manuals of the ASG 32 Mi but separately by the engine and propeller manufacturer.

A.V Notes

1. Manufacturing is confined to industrial production.
2. The surface colour of all fibre reinforced parts, which are exposed to sun radiation, must be painted either in
   White
   RAL 2004 (Reinorange)
   RAL 2009 (Verkehrsorange)
   RAL 3020 (Verkehrsrot)
   or other colours listed in the maintenance manual section 13.4, maintenance instruction "coloured surfaces"
   Exceptions are the areas for markings and registration, engine bay and cockpit.

Section B: ASG 32 El

B.I General

1. Type/ Model/ Variant
   - 1.1 Type: ASG 32
   - 1.2 Model: ASG 32 El

2.	Airworthiness Category	Sailplane, CS-22 - Utility
3.	Manufacturer	Alexander Schleicher GmbH & Co. Segelflugzeugbau
4.	EASA Type Certification Application Date	28 October 2013
5.	EASA Type Certification Date	22 December 2017

B.II EASA Certification Basis

1.	Reference Date for determining the applicable requirements	
2.	Airworthiness Requirements	Certification Specification for Sailplanes and Powered Sailplanes, issued 24. September 2008 (CS-22, Amdt. 2)
3.	Special Conditions	CRI E-101 – Electrical Propulsion CRI H-101 – Electrical Engine
4.	Exemptions	None
5.	(Reserved) Deviations	None
6.	Equivalent Safety Findings	CS 22.335 (f) calculation of V_D according to OSTIV CS 22.585(a) reduced by factor 1.2
7.	Environmental Protection	ICAO Annex 16 (details refer to TCDSN EASA.A.599)

B.III Technical Characteristics and Operational Limitations

1. Type Design Definition — List of the drawing files ASG 32 EI, issue 15.12.2017

2. Description — Double-seat, mid-wing CRP/GRP/ARP-composite construction for FAI 20m class with flaps, double-panel Schempp-Hirth airbrakes on upper wing surface, winglets, water ballast tanks in the wing and optional in the fuselage, retractable landing gear with hydraulic disc brake, T-shaped horizontal tail (fixed horizontal stabilizer with elevator) fin and rudder.

   Self-sustaining, electrical power-plant mounted in the centre fuselage.

3. Equipment

   3.1 Min. required Equipment:

   1 Air speed indicator (up to 300 km/h) (front seat)
   1 Altimeter (front seat)
   1 Magnetic compass (front seat)
   1 Power-plant instrument (front seat)
   1 Rear view mirror
   1 Outside air temperature gauge (front seat)
   1 4-Point safety harness (symmetrical) for each occupant
   1 Parachute or Cushion for back rest (~ 8cm thickness) for each occupant
   Additional Equipment refer to Flight and Maintenance Manual

   Additionally required for instruction or of the pilot in command sits in the rear seat:

   1 Air seed indicator in the rear seat (up to 300 km/h)
   1 Altimeter in the rear seat

4. Dimensions

Span:	20,00 m
Wing area:	15,70 m²
Length:	9,07 m
Height:	1,84 m

5. Engine

5.1	Model	Alexander Schleicher EA900/1-25LK
5.2	Type Certificate	n/a (accepted as part of the airframe)
5.3	Limitations	Maximum Power: 25 kW at 3000 rpm
5.4	Max. continuous revs	2500 rpm
5.5	Max. overspeed revs	3000 rpm
5.6	Max. motor temperature	110°C
5.7	Max. power electronics temperature	80°C

6. Propeller

6.1	Model	Alexander Schleicher AS2F1-4/L155-88-N3
6.2	Type Certificate	EASA.P.004
6.3	Number of blades	2
6.4	Diameter	1550 mm +3mm / -10 mm
6.5	Sense of Rotation	Left

7. Battery

7.1	Battery capacity	26 Ah
7.2	Non-usable battery capacity	10 Ah (39%)
7.3	Max battery discharge temperture	60°C
7.4	Min battery discharge temperture	-20°C
7.5	Max battery charge temperture	50°C
7.6	Min battery charge temperture	0°C
7.7	Range of permissiable cell voltage	3 – 4,15 V

8. Launching Hooks

Nose tow hook “E 22”, LBA Datasheet No. 11.402/9 NTS
Safety hook „Europa G 88“, LBA Datasheet No. 60.230/2

9. Weak Links

Ultimate Strength:
- for winch- and auto-tow launching max. 1100 daN
- for aero-tow max. 1100 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}	270 km/h
Maximum permitted Speeds		
- with flaps at 1, 2, 3, 4	V_{FE}	270 km/h
- with flaps at 5,6	V_{FE}	180 km/h
- with flaps at L	V_{FE}	150 km/h
- in rough air	V_{RA}	180 km/h
- for winch launching	V_W	140 km/h
- for aerotowing	V_T	180 km/h
- for gear operation	V_{LO}	180 km/h
- for propeller operation	V_{PO}	120 km/h
- with propeller extended	V_{PE}	180 km/h

12. Approved Operations Capability

VFR-Day

Cloud flying not permitted

Aerobatic manoeuvres are not permitted, except spinning

13. Launch methods

Aerotow

Winch and Auto-Tow

14. Maximum Masses

Max. Mass: 850 kg
Max. Mass of Non-Lifting Parts: 550 kg

15. Centre of Gravity Range

156 mm – 385 mm aft of datum

16.	Datum	Wing leading edge at root rib
17.	Levelling Means	Slope 1000 : 27 placed on upper side of fuselage boom horizontal
18.	Control Surface Deflections	Refer to Maintenance Manual
19.	Minimum Flight Crew	1
20.	Maximum Passenger Seating Capacity	1
21.	Baggage/ Cargo Compartments	9 kg
22.	Lifetime limitations	Refer to Maintenance Manual

B.IV Operating and Service Instructions

1. Flight Manual ASG 32 El, issue 15.09.2017, or later EASA approved revisions
2. Maintenance Manual ASG 32 El, issue 01.04.2017, or later revisions
3. General Repair Manual for Alexander Schleicher Sailplanes and Powered Sialplanes, latest revision
4. Operating Manual and Maintenance Manual for Engine Alexander Schleicher EA900, latest approved version *)
5. Operating Manual and Maintenance Manual for Propeller Alexander Schleicher AS2F1-4, latest approved version *)
6. Manual for the TOST Release, latest approved version

*) The operation and maintenance manuals are elements of the operation instructions of the ASG 32 El. Necessary revisions are not be done in the manuals of the ASG 32 El but separately by the engine and propeller manufacturer.

B.V Notes

1. Manufacturing is confined to industrial production.
2. The surface colour of all fibre reinforced parts, which are exposed to sun radiation, must be painted either in
   White
   RAL 2004 (Reinorange)
   RAL 2009 (Verkehrsorange)
   RAL 3020 (Verkehrsrot)
   or other colours listed in the maintenance manual section 13.4, maintenance instruction "coloured surfaces"
   Exceptions are the areas for markings and registration, engine bay and cockpit.

Section C: Administrative Section

C.I Acronyms & Abbreviations

n/a

C.II Type Certificate Holder Record

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

C.III Change Record

Issue	Date	Changes	TC Issue No. & Date
Issue 01	11 February 2016	Initial Issue	Initial Issue, 11 February 2016
Issue 02	17 March 2016	Correction missing SC in A.II.3, separate manuals for both variants.	
Issue 03	11 January 2018	Addition of model ASG 32 El	11 January 2018
Issue 4	06 June 2019	Alternative propeller for variant ASG 32 Mi	

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