



[4910-13]

**DEPARTMENT OF TRANSPORTATION**

**Federal Aviation Administration**

**14 CFR Part 21**

[Docket No. FAA-2017-0863]

**Airworthiness Criteria: Glider Design Criteria for Alexander Schleicher GmbH & Co.**

**Models ASG 32 & ASG 32 Mi Gliders**

**AGENCY:** Federal Aviation Administration (FAA), DOT

**ACTION:** Airworthiness design criteria.

**SUMMARY:** These airworthiness design criteria for the Alexander Schleicher GmbH & Co. models ASG 32 & ASG 32 Mi gliders. The administrator finds the design criteria, which make up the certification basis for the ASG 32 & ASG 32 Mi gliders, acceptable.

**DATES:** These airworthiness design criteria are effective [INSERT A DATE 30 DAYS AFTER THE DATE OF PUBLICATION]

**FOR FURTHER INFORMATION CONTACT:** Mr. Jim Rutherford, AIR-692, Federal Aviation Administration, Policy & Innovation Division, Small Airplane Standards Branch, 901 Locust, Room 301, Kansas City, MO 64106, telephone (816) 329-4165, facsimile (816) 329-4090.

**SUPPLEMENTARY INFORMATION:**

**Background**

On August 23, 2016, Alexander Schleicher GmbH & Co. submitted an application for type validation of the ASG 32 glider and ASG 32 Mi powered glider in accordance with the Technical Implementation Procedures for Airworthiness and Environmental Certification Between the

FAA and the European Aviation Safety Agency (EASA), Revision 5, dated September 15, 2015. Both models will be documented on a single type certificate. The model ASG 32 is a two-seat, mid-wing, glider constructed from carbon-, glass-, and synthetic-fiber reinforced plastic and features a 65.6 foot (20 meter) wingspan with flaps, double-panel Schempp-Hirth airbrakes on the upper wing surface, winglets, water ballast tanks in the wing, and optional tanks in the fuselage. The glider also features a retractable landing gear with hydraulic disc brakes and a conventional T-type tailplane. The model ASG 32 Mi adds a retractable engine and fixed pitch propeller mounted in the center fuselage behind the cockpit which allows the glider to be self-launching. Both glider versions have a maximum weight of 1,874 pounds (850 kilograms). The EASA type certificated the ASG 32 and ASG 32 Mi gliders under Type Certificate Number (No.) EASA.A.599 on February 11, 2016. The associated EASA Type Certificate Data Sheet (TCDS) No. EASA.A.599 defined the certification basis Alexander Schleicher GmbH & Co. submitted to the FAA for review and acceptance.

The applicable requirements for glider certification in the United States can be found in FAA Advisory Circular (AC) 21.17-2A, "Type Certification—Fixed-Wing Gliders (Sailplanes), Including Powered Gliders," dated February 10, 1993. AC 21.17-2A has been the basis for certification of gliders and powered gliders in the United States for many years. AC 21.17-2A states that applicants may utilize the Joint Aviation Requirements (JAR)-22, "Sailplanes and Powered Sailplanes," or another accepted airworthiness criteria, or a combination of both, as the accepted means for showing compliance for glider type certification.

### **Type Certification Basis**

The certification basis is based on EASA Certification Specification (CS)-22, "Sailplanes and Powered Sailplanes", amendment 2, dated March 05, 2009. In addition to CS-22 requirements,

the applicant will comply with other requirements from the certification basis referenced in EASA TCDS No. EASA.A.599, including special conditions and equivalent safety findings.

### **Discussion of Comments**

Notice of proposed airworthiness design criteria for the Alexander Schleicher GmbH & Co. models ASG 32 & ASG 32 Mi gliders was published in the Federal Register on September 6, 2017 (82 FR 42049). No comments were received; therefore, these airworthiness design criteria are adopted as proposed.

### **The Airworthiness Design Criteria**

Applicable Airworthiness Criteria under § 21.17(b).

Based on the Special Class provisions of § 21.17(b), the following airworthiness requirements form the FAA Certification Basis for this design:

1. 14 CFR part 21, effective February 1, 1965, including amendments 21-1 through 21-98 as applicable.
2. EASA CS-22, amendment 2, dated March 05, 2009.
3. EASA Special Condition No. SC-A.22.1.01, "Increase in maximum mass for sailplanes and powered sailplanes."
4. EASA Equivalent Safety Finding to CS-22.335(f) – Alternate method to calculate the Design Maximum Speed ( $V_D$ ) using the Organisation Scientifique et Technique Internationale du Vol á Voile (OSTIV), Airworthiness Standards for Sailplanes, dated July 1997.
5. EASA Equivalent Safety Finding to CS-22.585(a) – Alternate basis for lower towing loads and subsequent lower launching hook attachment loads.

6.

“Standards for Structural

Substantiation of Sailplane and Powered Sailplane Parts Consisting of Glass or Carbon Fiber Reinforced Plastics,” Luftfahrt-Bundesamt (LBA) document no. I4-FVK/91, issued July 1991.

7.

“Guideline for the analysis of the electrical system for powered sailplanes,” LBA document no. I334-MS 92, issued September 15, 1992.

8.

Operations allowed: VFR-Day

9.

EASA Type Certificate Data Sheet No. EASA.A.599, Issue 02, dated March 17, 2016.

10.

Date of application for FAA Type Certificate: August 23, 2016.

Issued in Kansas City, Missouri on October 31, 2017.

Pat Mullen

Manager, Small Airplane Standards Branch

Aircraft Certification Service

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