
Type Acceptance Report

TAR 10/21B/11 – Revision 1

SCHLEICHER ASK 21 Series

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Executive Summary

New Zealand Type Acceptance has been granted to the Schleicher ASK 21 based on validation of EASA Type Certificate number A.221. There are no special requirements for import.

Applicability is currently limited to the Models and/or serial numbers detailed in Section 2, which are now eligible for the issue of an Airworthiness Certificate in the Standard Category in accordance with NZCAR §21.177, subject to any outstanding New Zealand operational requirements being met. (See Section 5 of this report for a review of compliance of the basic type design with the operating Rules.) Additional variants or serial numbers approved under the foreign type certificate can become type accepted after supply of the applicable documentation, in accordance with the provisions of NZCAR §21.43(c).

NOTE: The information in this report was correct as at the date of issue. The report is generally only updated when an application is received to revise the Type Acceptance Certificate. For details on the current type certificate holder and any specific technical data refer to the latest revision of the State-of-Design Type Certificate Data Sheet referenced herein.

1. Introduction

This report details the basis on which Type Acceptance Certificate No.10/21B/11 was granted in the Standard Category in accordance with NZCAR Part 21 Subpart B.

Specifically the report aims to:

- (a) Specify the foreign type certificate and associated airworthiness design standard used for type acceptance of the model(s) in New Zealand; and
- (b) Identify any special conditions for import applicable to any model(s) covered by the Type Acceptance Certificate; and
- (c) Identify any additional requirements which must be complied with prior to the issue of a NZ Airworthiness Certificate or for any subsequent operations.

The report notes the status of all models included under the State-of-Design type certificate which have been granted type acceptance in New Zealand, which are listed in Section 2. The history of the ASK 21 model type acceptance in New Zealand under type certificate EASA.A.221 is listed in Appendix 1.

2. Aircraft Certification Details

(a) State-of-Design Type and Production Certificates:

Manufacturer: Alexander Schleicher GmbH & Co.
Type Certificate: EASA.A.221
Issued by: European Aviation Safety Agency
(supersedes LBA Type Certificate No. 339)
Production Approval: DE.21G.0010

(b) Models Covered by the Part 21B Type Acceptance Certificate:

(i) **Model:** ASK 21
MCTOW: 600 kg. [1322 lb.]
Max. No. of Seats: 2
Noise Standard: Not Applicable

(ii) **Model:** ASK 21 B
MCTOW: 600 kg. [1322 lb.]
Max. No. of Seats: 2
Noise Standard: Not Applicable

3. Application Details and Background Information

The application for New Zealand type acceptance of the Schleicher ASK 21 was from the importer, Auckland Gliding Club, dated 10 October 2009. The first-of-type example was serial number 21860, registered ZK-GAK. The ASK 21 is a 17-metre span mid-wing tandem two-seat all-composite training sailplane.

Type Acceptance Certificate Number 10/21B/11 was granted on 18 November 2009 to the Schleicher Model ASK 21 based on validation of EASA Type Certificate number A.221. Specific applicability is limited to the coverage provided by the operating documentation supplied. There are no special requirements for import into New Zealand.

This report was raised to Revision 1 to add the latest ASK 21 B production version. The applicant was the Taupo Gliding Club and the first-of-type example was serial number 21989 registered ZK-GCP. Type acceptance was granted on 11 January 2021.

The ASK 21 was designed by Rudolf Kaiser as a Glass-Reinforced-Plastic successor to the popular ASK 13 high performance tandem training glider, and first flew in December 1978. Manufacture started in 1979 and it remains in production with over 750 delivered. A self-launching version, the ASK 21 Mi, was approved in March 2008.

The ASK 21 B is the same aerodynamically and structurally as the original ASK 21, the main changes being a re-designed cockpit area with increased size seat pans and associated safety harness attachments to accommodate larger and heavier occupants, and automatic connection of the aileron and dive brake controls similar to that used on other Schleicher models. Other improvements include fitting the larger-wheel undercarriage from the ASK 21 Mi; provision for spin ballast in the fin; and slightly increased aileron deflections.

4. NZCAR §21.43 Data Requirements

The type data requirements of NZCAR Part 21B Para §21.43 have been satisfied by supply of the following documents, or were already held by the CAA:

(1) State-of-Design Type certificate:

EASA Type Certificate Number A.221

EASA Type Certificate Data Sheet no. A.221 at Issue 05 dated 9 August 2018

– Model ASK 21 LBA approved 18 April 1980

– Model ASK 21 Mi approved 4 March 2008

– Model ASK 21 B approved 9 August 2018

(2) Airworthiness design requirements:

(i) *Airworthiness Design Standards:*

The certification basis of the model ASK 21 is the Airworthiness Requirements for Sailplanes and Powered Sailplanes – (LFSM), issue October 23, 1975, plus Standards for the Substantiation of the stress analysis of sailplane components made from fibreglass-reinforced plastics, issue March 1965.

For the model ASK 21 B some paragraphs of CS-22 at Amendment 2 dated 05 March 2009 were added on an elect-to-comply basis, related to the interior modification of the cockpit.

This is an acceptable certification basis in accordance with NZCAR Part 21B paragraph §21.41, because LFSM is the predecessor of JAR-22, which has now been superseded by CS 22, and is the basic standard for sailplanes and powered sailplanes called up under Part 21 Appendix C and Advisory Circular 21-1A. There are no non-compliances and no additional special conditions have been prescribed by the Director under CAR §21.23.

(ii) *Special Conditions:*

Nil

(iii) *Equivalent Level of Safety Findings:*

Nil

(iv) *Airworthiness Limitations:*

See Maintenance Manual Section IV

(3) Aircraft Noise and Engine Emission Standards:

(i) *Environmental Standard:*

Not Applicable

(4) Certification Compliance Listing:

MZ-Liste Nachweisliste ASK 21 L-339

Compliance Checklist ASK 21 B dated 10.07.2018

(5) Flight Manual: LBA-Approved Flight Manual for the Sailplane Model ASK 21
CAA Accepted as AIR 3109

EASA-Approved Flight Manual for the Sailplane Model ASK 21 B
CAA Accepted as AIR 3973

(6) Operating Data for Aircraft:

(i) *Maintenance Manual:*

Maintenance Manual for the Sailplane Model ASK 21

Maintenance Manual for the Sailplane Model ASK 21 B

Repair Manual Alexander Schleicher

(ii) *Current service Information:*

Table of AD-Notes and Technical Notes, plus copies

(iii) *Illustrated Parts Catalogue:*

Not produced

(7) Agreement from manufacturer to supply updates of data in (5), and (6):

See email from Alexander Schleicher Pruefbuero dated 3 December 2009

CAA 2171 form from Head of Quality Assurance dated 4 January 2021

All Technical Notes and corresponding AFM and AMM changes are available on their website at <https://www.alexander-schleicher.de/en/tm-lta-wa/>

5. Additional New Zealand Requirements

Compliance with the retrospective airworthiness requirements of NZCAR Part 26 is a prerequisite for the grant of a type acceptance certificate.

Civil Aviation Rules Part 26

Subpart B – Additional Airworthiness Requirements

Appendix B – All Aircraft

PARA:	REQUIREMENT:	MEANS OF COMPLIANCE:
B.1	Marking of Doors and Emergency Exits	<i>To be determined on an individual aircraft basis</i>
B.2	Crew Protection Requirements – CAM 8 Appdx. B # .35	Not Applicable – Agricultural Aircraft only

Compliance with the following additional NZ operating requirements has been reviewed and were found to be covered by either the original certification requirements or the basic build standard of the aircraft, except as noted:

Civil Aviation Rules Part 91

Subpart F – Instrument and Equipment Requirements

PARA:	REQUIREMENT:	MEANS OF COMPLIANCE:
91.505	Shoulder Harness if Aerobatic; >10 pax; Flight Training	Required Equipment – See TCDS §.III.3.a
91.507	Pax Information Signs - Smoking, safety belts fastened	Not Applicable – Two-seat glider
91.509	Minimum Instruments and Equipment	Not Applicable – Glider
91.511	Night VFR Instruments and Equipment	Not Applicable – Certificated for Day VFR flight only
91.513	VFR Communication Equipment	<i>Operational requirement – compliance as applicable</i>
91.517	IFR Instruments and Equipment	Not Applicable – Certificated for Day VFR flight only
91.519	IFR Communication and Navigation Equipment	Not Applicable – Certificated for Day VFR flight only
91.523	Emergency Equipment	N/A – Two-seat glider [Superseded by §104.101(5)]
91.529	ELT – TSO C126 after 1/4/2008 – Appendix A.15	<i>Operational requirement – compliance as applicable</i>
91.531	Oxygen Indicators - Volume/Pressure/Delivery	Optional factory oxygen provisions – See MM §II.4
91.533	Oxygen for Non-Pressurised Aircraft For flight >30 min above FL100 – Supplemental for crew	<i>Operational requirement – compliance as applicable</i>
91.541	SSR Transponder and Altitude Reporting Equipment	<i>Operational requirement – compliance as applicable</i>
91.543	Altitude Alerting Device - Turbojet or Turbofan	Not Applicable – Certificated for Day VFR flight only
91.545	Assigned Altitude Indicator	Not Applicable – Certificated for Day VFR flight only
A.15	ELT Installation Requirements	<i>Operational requirement – compliance as applicable</i>

Civil Aviation Rules Part 104

Subpart C - Equipment and Maintenance Requirements

PARA:	REQUIREMENT:	MEANS OF COMPLIANCE:
104.101	(1) Airspeed Indicator (2) Altimeter (Adjustable for barometric pressure) (3) Magnetic Compass (4) Safety Harness for each seat (5) A First Aid Kit (6) For powered gliders – (7) For IMC flight – (i) A variometer (ii) Turn & Slip/Artificial Horizon (iii) Radio transceiver	Required as Minimum Equipment – See TCDS Section #*.III.3 Required as Minimum Equipment – See TCDS Section #*.III.3 <i>Operational requirement – compliance as applicable</i> Required as Minimum Equipment – See TCDS Section #*.III.3 <i>Operational requirement – compliance as applicable</i> Not Applicable { Required for IMC (Cloud) Flight – See FM Section II.3.c

NOTES: 1. A Design Rule reference in the Means of Compliance column indicates the Design Rule was directly equivalent to the CAR requirement, and compliance is achieved for the basic aircraft type design by certification against the original Design Rule.

2. The CAR Compliance Tables above were correct at the time of issue of the Type Acceptance Report. The Rules may have changed since that date and should be checked individually.

3. Some means of compliance above are specific to a particular model/configuration. Compliance with Part 91/119 operating requirements should be checked in each case, particularly oxygen system capacity and emergency equipment.

Attachments

The following documents form attachments to this report:

Copy of EASA Type Certificate Data Sheet Number EASA.A.221

Sign off



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David Gill
Team Leader Aircraft Inspection



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Checked – Greg Baum
Team Leader Product Certification

Appendix 1

List of Type Accepted Variants:

<i>Model:</i>	<i>Applicant:</i>	<i>CAA Work Request:</i>	<i>Date Granted:</i>
ASK 21	Auckland Gliding Club	10/21B/11	18 November 2009
ASK 21 B	Taupo Gliding Club	21/21B/12	11 January 2021

Appendix 2

Three-view drawing Schleicher Model ASK 21 B:

