
Type Acceptance Report

TAR 22/21B/16

BRISTELL B23 Series

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Executive Summary

New Zealand Type Acceptance has been granted to the Bristell B23 Series based on validation of Type Certificate number EASA.A.642. 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 §21.191, 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. 22/21B/16 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 Bristell B23 Series type acceptance in New Zealand under type certificate EASA.A.642 is listed in Appendix 1.

2. Aircraft Certification Details

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

Manufacturer: BRM Aero s.r.o.
Type Certificate: EASA.A.642
Issued by: European Aviation Safety Agency
Production Approval: CZ.21G.0063

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

- (i) **Model:** Bristell B23
- MCTOW: 750 kg [1653 lb.]
- Max. No. of Seats: 2
- Noise Standard: ICAO Annex 16
- Engine:** ROTAX 912 S3
- Type Certificate: EASA.E.121
Issued by: European Aviation Safety Agency
- Propeller:** MTV-34-1-A/175-200
- Type Certificate: EASA.P.049
Issued by: European Aviation Safety Agency
- (ii) **Model:** Bristell B23-915
- MCTOW: 750 kg [1653 lb.]
- Max. No. of Seats: 2
- Noise Standard: ICAO Annex 16
- Engine:** ROTAX 915iSc3 A
- Type Certificate: EASA.E.121
Issued by: European Aviation Safety Agency
- Propeller:** MTV-34-1-A/175-200
- Type Certificate: EASA.P.049
Issued by: European Aviation Safety Agency

3. Application Details and Background Information

The application for New Zealand type acceptance of the Bristell B23 Series was from the manufacturer, dated 10 January 2022. The B23 is a two-seat primarily all-metal low-wing light aeroplane of conventional configuration with fixed undercarriage and single piston engine. The B23-915 is a development using the more powerful 141 hp Rotax 915i fuel-injected engine, with an optional glider towing system.

Type Acceptance Certificate No. 22/21B/16 was granted on 22 September 2022 to the Bristell B23 Series based on validation of Type Certificate EASA.A.642. Specific applicability is limited to the coverage provided by the operating documentation supplied. There are no special requirements for import into New Zealand.

The Bristell B23 a certified development of the Bristell NG5 light aircraft, which has been in production in a range of variants since 2010, including an LSA version. The B23 is the first aircraft type certificated by EASA under CS 23 Amendment 5.

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.642

EASA Type Certificate Data Sheet no. A.642 at Issue 02 dated 13 January 2022

– Model Bristell B23 approved 07 October 2020

– Model Bristell B23-915 approved 13 January 2022

(2) Airworthiness design requirements:

(i) *Airworthiness Design Standards:*

The certification basis of the Bristell B23 Series is CS-23 at Amendment 5 dated 29 March 2017, plus CS-ACNS Issue 2 dated 26 April 2019. (CS-VLA was specified as AMC [No.3].) Additional Acceptable Means of Compliance were used for approval of specific types of operations or design features, as follows:

- SC-ELA.2015-01 [Lithium battery installations] Issue 1
- SC-OVLA.div-03 [Night VFR operation with VLA] Issue 2
- ASTM F2316-12 [Aircraft Emergency Parachute System]
- ELOS-VLA.0991-01 [Fuel Pumps], Issue 2, dated 13-Nov-2018
- SC-OVLA-div-02 [Glider Towing], Issue 1, dated 02-Jun-2015

This is an acceptable certification basis in accordance with NZCAR Part 21B paragraph §21.41 and Advisory Circular 21-1A, because CS-23 is equivalent to FAR Part 23, which is the basic standard for Normal Category Airplanes called up under Part 21 Appendix C. There are no non-compliances and no additional special conditions have been prescribed by the Director under §21.23.

(ii) *Special Conditions:*

Nil

(iii) *Equivalent Level of Safety Findings:*

Nil

(iv) *Airworthiness Limitations:*

See AMM Chapter 04 – Airworthiness Limitations

(3) Aircraft Noise and Engine Emission Standards:

(i) *Environmental Standard:*

The Model B23 has been certificated for noise under ICAO Annex 16, Volume 1, which corresponds to CS-36 up to Amendment Level 5.

(ii) Compliance Listing:

TCDSN for Noise EASA.A.642 at Issue 03 dated 13 January 2022

Model:	Configuration:	MCTOW:	Take-off Noise Level:
Bristell B23	Standard	750 kg	69.2 dB(A)
Bristell B23	71B240100N Silencer	750 kg	64.7 dB(A)
Bristell B23-915	Standard	750 kg	64.9 dB(A)

(4) Certification Compliance Listing:

Document ADxC-73-CC-001 – Certification Program – BRM Bristell B23

Document ADxC-73-001-MCC – Compliance Report – BRM Bristell B23

Document ADxC-73-CC-003 – Certification Program – BRM Bristell B23-915

Document ADxC-73-003-MCC – Compliance Report – BRM Bristell B23-915

Document ADxC-73-C1-010 – Bristell B23 Powerplant Installation Description

Document ADxC-73-C2-002 – Bristell B23 Fatigue Assessment

Document ADxC-73-C4-100 – Bristell B23 Wing Test

Document ADxC-73-C4-104 – Bristell B23 Landing Gear Drop Test

Document ADxC-73-C4-107 – Bristell B23 Fuselage, Tail & Engine Mount Test

Document ADxC-73-C4-112 – Bristell B23 Seat, Harness and Luggage Test

Doc. ADxC-73-C6-101 – Stalling Speeds and Low Speed Flight Characteristics

Document ADxC-73-C7-001 – Bristell B23 Inspection Report

Note: Certification Reports and Technical Manuals have been produced by Aircraft Design Certification GmbH, a contracted DOA holder.

(5) Flight Manual: EASA-Approved Airplane Flight Manual for the Bristell B23
Document ADxC-73-001-AFM – CAA Accepted as AIR 3491

EASA-Approved Airplane Flight Manual for the Bristell B23-915
Document ADxC-73-003-AFM – CAA Accepted as AIR 3492

(6) Operating Data for Aircraft:*(i) Maintenance Manual:*

Bristell B23 Airplane Maintenance Manual – Document ADxC-73-001-AMM

Airplane Maintenance Manual Supplement – Bristell B23-915 Model –
Document ADxC-73-003-AMM Supplement Edition 1.0

(ii) *Current service Information:*
Service Bulletins

(iii) *Illustrated Parts Catalogue:*
Bristell B23 Illustrated Parts Catalog

(7) Agreement from manufacturer to supply updates of data in (5), and (6):
CAA Form 2171 dated 10 January 2022 from CEO BRM Aero s.r.o.

Publications are available online from the manufacturer at
<https://www.bristell.com/technical-documentation/> and
<https://www.bristell.com/bulletins/>

(8) Other information:

Document ADxC-73-001-EQL – Equipment & Equipment Qualification List

Document ADxC-73-001-TS – BRM Aero Bristell B23 Type Specification

Document ADxC-73-C2-050 – BRM Aero Bristell B23 Electrical Load Analysis

5. New Zealand Operational Rule Compliance

Compliance with the retrospective airworthiness requirements of NZCAR Part 26 has been assessed as they are a prerequisite for the grant of an airworthiness 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	Seating and Restraints – Safety belt/Shoulder Harness	CS §23.2500 VLA.785 (AMSafe 4031 harness to TSO C114)
91.507	Pax Information Signs – Smoking, safety belts fastened	Not Applicable – Less than 10 passenger seats
91.509 Min. VFR	(1) ASI (2) Machmeter (3) Altimeter (4) Magnetic Compass (5) Fuel Contents (6) Engine RPM (7) Oil Pressure	CS §23.2500 VLA.1303(a) N/A – No mach limitations CS §23.2500 VLA.1303(b) CS §23.2500 VLA.1303(c) CS §23.2500 VLA.1337(b) CS §23.2500 VLA.1305(d) CS §23.2500 VLA.1305(b)
91.511 Night	(1) Turn and Slip (2) Position Lights	(8) Coolant Temp (9) Oil Temperature (10) Manifold Pressure (11) Cylinder Head Temp. (12) Flap Position (13) U/c Position (14) Ammeter/Voltmeter (3) Anti-collision Lights (4) Instrument Lighting CS §23.2500 VLA.1305(j) CS §23.2500 VLA.1305(c) CS §23.2500 VLA.1305(g) CS §23.2500 VLA.1305(e) CS §23.2500 VLA.699 N/A – Fixed undercarriage CS §23.2500 VLA.1351(d) CS §23.2530 VLA_NVFR.1384 CS §23.2500 VLA_NVFR.1381
	NOTE: Garmin G3X EFIS Integrated Electronic Instrument System Fitted as Standard	
91.513	VFR Communication Equipment	Garmin GNC 225A Nav/Com Fitted as Standard
91.517	IFR Instruments and Equipment	Not Applicable – CS-VLA is limited to Day/Night VFR
91.519	IFR Communication and Navigation Equipment	Not Applicable – CS-VLA is limited to Day/Night VFR
91.523	Emergency Equipment: (a) More Than 9 pax – First Aid Kits per Table 7 – Fire Extinguishers per Table 8 (b) More than 20 pax – Axe readily accessible to crew (c) More than 61 pax – Portable Megaphones per Table 9	Not Applicable – Less than 10 passenger seats Not Applicable – Less than 10 passenger seats Not Applicable – Less than 20 passenger seats Not Applicable – Less than 61 passenger seats
91.529	ELT – TSO C126 406 MHz after 22/11/2007	Kannad Integra 406 AF-Compact Fitted as Standard
91.531	Oxygen Indicators – Volume/Pressure/Delivery	Not fitted as standard
91.533	Oxygen for non-Pressurised Aircraft:	Maximum certified altitude is 14,000 ft.
91.541	SSR Transponder and Altitude Reporting Equipment	Garmin GTX 345R (ADS-b) Fitted as Standard
91.543	Altitude Alerting Device – Turbojet or Turbofan	Not Applicable – CS-VLA is limited to Day/Night VFR
91.545	Assigned Altitude Indicator	Not Applicable – CS-VLA is limited to Day/Night VFR
A.15	ELT Installation Requirements	<i>To be determined on an individual aircraft basis</i>

Civil Aviation Rules Part 135

Subpart F – Instrument and Equipment Requirements

PARA:	REQUIREMENT:	MEANS OF COMPLIANCE:
135.355	Seating/Restraints – Shoulder harness flight-crew seats	CS §23.2500 VLA.785 (AMSafe 4031 harness to TSO C114)
135.357	Additional Instruments (Powerplant and Propeller)	CS §23.2500 VLA.1305
135.359	Night Flight	Landing light, Pax compartment
135.361	IFR Operations	Speed, Alt, spare bulbs/fuses
135.363	Emergency Equipment (Part 91.523 (a) and (b))	<i>To be determined on an individual aircraft basis</i>
135.367	Cockpit Voice Recorder	N/A – Only for 2-crew helicopters with more than 10 pax
135.369	Flight Data Recorder	Not Applicable – Less than 10 passenger seats
135.371	Additional Attitude Indicator	Not Applicable – Not turbo jet or turbofan powered

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 Type Certificate Data Sheet Number EASA.A.642

Sign off

A blue ink signature of David Gill is written over a circular blue stamp. The stamp contains the text 'CIVIL AVIATION AUTHORITY OF NEW ZEALAND' around the perimeter, 'CAA' in the center, and '0053' at the bottom.

.....
David Gill
Team Leader Aircraft Inspection

A blue ink signature of Lino Miguel is written over a circular blue stamp. The stamp contains the text 'CIVIL AVIATION AUTHORITY OF NEW ZEALAND' around the perimeter, 'CAA' in the center, and '5480' at the bottom.

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Checked – Lino Miguel
Certification Engineer

Appendix 1

List of Type Accepted Variants:

<i>Model:</i>	<i>Applicant:</i>	<i>CAA Work Request:</i>	<i>Date Granted:</i>
Bristell B23	BRM Aero s.r.o.	22/21B/16	22 September 2022
Bristell B23-915	BRM Aero s.r.o.	22/21B/16	22 September 2022

Appendix 2

Three-view drawing Bristell B23

