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# **Type Acceptance Report**

**TAR 5/21B/21**

**Robin R1000 Series**



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## Executive Summary

New Zealand Type Acceptance has been granted to the Avions Pierre Robin R 1180T Series based on validation of DGAC Type Certificate number 61. There are no special requirements for import.

Applicability is currently limited to the Models and serial numbers detailed in Appendix 1, which are now eligible for the issue of an Airworthiness Certificate in the Standard Category in accordance with CAR §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 CAR §21.43(2).

## 1. Introduction

This report details the basis on which Type Acceptance Certificate No. 5/21B/21 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.

## 2. Foreign Type Certificate Details

Manufacturer: Avions Pierre Robin

Model(s): R 1180 TD

Type Certificate: N° 61  
Issued by: Direction Generale de l'Aviation Civile

MCTOW 1150 kg (2535 lb.)

Max no. of Seats:

Noise Standard: Not Applicable

**Engine:** Lycoming O-360-A

Type Certificate: E-286  
Issued by: Federal Aviation Administration

**Propeller:** Sensenich 76 EM 8S5-058 or -064

Type Certificate: P4EA  
Issued by: Federal Aviation Administration

**Propeller:** Hoffmann HO27 HM 180/160

Type Certificate: LBA 32.110/001  
Issued by: Federal Aviation Administration

**Propeller:** EVRA 94.79-26

Type Certificate: None – DGAC advises that this propeller was originally certified on the Jodel D140 under code AIR 2052 and their law "*circulaire n°10777 SFACT/D*" which did not require a type certificate. This approval was grandfathered for the Robin R1180T.

### 3. Type Acceptance Certificate

The application for New Zealand type acceptance was from the importer, Izard Pacific Aviation Ltd dated 25 November 2004. The first-of-type example was R1180TD serial number 263, registered ZK-TZW. The HR100/R1180T Series is an all-metal four-seat low wing single-engined touring aircraft with the typical Robin forward sliding canopy.

Type Acceptance Certificate No. 5/21B/21 was granted on 23 November 2005 to the R1180TD based on validation of DGAC Type Certificate 61. Specific applicability is limited to the coverage provided by the operating documentation supplied. There are no special requirements for import into New Zealand.

The HR100 is essentially a four-seat version of the HR200 trainer, with some changes for its touring role. The HR100 was developed in a number of versions with different engines. The R1180T is similar to the HR200-210, but uses the new wing section introduced on the R2000. The TD is identical except that engine RPM is limited to 2600 to reduce noise.

### 4. Type Data

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) Type certificate:

Fiche de Navigabilite No.131 Associee au Certificat de Navigabilite de Type No.61  
The manufacturer advised that although the type is approved in the UK (there is no AAN on the UK CAA database), there is no known English language translation.

(2) Airworthiness design requirements:

The certification basis of the HR100/R1180 Series is FAR 23 including Amendments 1 through 6. The standard special condition that it must be jettisonable was applied to the forward-sliding canopy. This is an acceptable certification basis in accordance with NZCAR Part 21B Para §21.41, as FAR 23 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.

(3) Certification compliance listing:

The original Compliance Checklist Ref X 1005 with last revision dated 13/7/78, Apex Folder 5 (yellow case) Shelf DT12, is only available in French. A summary translation was provided by the manufacturer.

(4) Flight manual: DGAC-Approved Flight Manual R 1180 TD  
CAA Accepted as AIR 2908

(5) Illustrated Parts Catalogue: Serie R1000 Spare Parts Catalog – Edition 2

(6) Maintenance manual and service data for aircraft, engine and propeller:

Service Manual R1000 – Volumes 1 and 2 – Issue 1 January 79

Service data for EVRA propellers is available at [www.helice-evra.fr.st](http://www.helice-evra.fr.st)

(7) Agreement from manufacturer to supply updates of data in (4), (5) and (6):

CAA 2171 from Guy Pellissier, Head Design Office dated 17 November 2005

## 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	
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	FAR §23.785
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	FAR §23.1303(a) – Std.Eqpt * N/A – No Mach limitations FAR §23.1303(b) – Std.Eqpt. * FAR §23.1303(c) – Std.Eqpt. * FAR §23.1305(a) – Std.Eqpt. * FAR §23.1305(d) – Std.Eqpt. * FAR §23.1305(b) – Std.Eqpt. *
		(8) Coolant Temp (9) Oil Temperature (10) Manifold Pressure (11) Cylinder Head Temp. (12) Flap Position (13) U/c Position (14) Ammeter/Voltmeter
		N/A – Air-cooled engines FAR §23.1305(c) – Std.Eqpt.* FAR §23.1305(h) – Std.Eqpt. * FAR §23.1305(f) – Std.Eqpt. * FAR §23.699(a)(2) – Std.Eqpt.* FAR §23.729(e) – Std.Eqpt. * FAR §23.1351(d) – Both Std *
	* For Standard Equipment see the Flight Manual Section 1 General Description	

91.511 Night	(1) Turn and Slip (2) Position Lights	Fitted as Standard * FAR §23.1385 – Std. Eqpt.*	(3) Anti-collision Lights (4) Instrument Lighting	FAR §23.1401 – Std. Eqpt. * FAR §23.1381 – Std. Eqpt. *
Compulsory Night VFR Equipment is listed in the Flight Manual Section 7 sub-section H				
91.517	IFR Instruments and Equipment		Not Applicable – Only approved for Day and Night VFR	
91.519	IFR Communication and Navigation Equipment		Not Applicable – Only approved for Day and 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 C91a after 1/4/97 (or replacement)		<i>To be determined on an individual aircraft basis</i>	
91.531	Oxygen Indicators - Volume/Pressure/Delivery		Not fitted as Standard	
91.533	Oxygen for Non-pressurised Aircraft		<i>Operational requirement – To be determined as applicable</i>	
91.541	SSR Transponder and Altitude Reporting Equipment		<i>Operational requirement – To be determined as applicable</i>	
91.543	Altitude Alerting Device - Turbojet or Turbofan		Not Applicable – Not turbojet or turbofan powered	
91.545	Assigned Altitude Indicator		<i>Operational requirement – To be determined as applicable</i>	
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 and Restraints – Shoulder harness flight-crew seats	FAR §23.785 Amendment 7
135.357	Additional Instruments (Powerplant and Propeller)	Certificated to FAR Part 23, including §23.1305
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>Operating Requirement – Compliance as applicable</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

## Attachments

The following documents form attachments to this report:

- Photographs first-of-type example R1180TD s/n 263 ZK-TZW
- Three-view drawing Robin Model R1180TD
- Copy of DGAC Type Certificate Data Sheet Number 61

## Sign off

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David Gill  
Team Leader Airworthiness

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Checked – AWE3 Peter Gill  
Date: 29 November 2006

## Appendix 1

### List of Type Accepted Variants:

<i>Model:</i>	<i>Applicant:</i>	<i>CAA Work Request:</i>	<i>Date Granted:</i>
R 1180 TD	Izard Pacific Aviation Ltd	5/21B/21	23 November 2005