

European Aviation Safety Agency

EASA TYPE-CERTIFICATE DATA SHEET

HR 100 series R 1000 series

Type Certificate Holder:

C.E.A.P.R.

1ter route de Troyes 21121 DAROIS FRANCE

Manufacturer: Robin Aviation

1 route de Dijon 21121 DAROIS FRANCE

For variants:

HR 100-200 HR 100-200 B HR 100-210 HR 100-210 D HR 100-285 TIARA HR 100-250 TR HR 100-285 C R 1180 T R 1180 TD

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SECTION A: HR 100-200

A.I. General

1.	a) Type: b) Variant:	HR 100-200 Not applicable
2.	Airworthiness Category:	Normal Category
3.	Type Certificate Holder:	C.E.A.P.R. 1 route de Troyes 21121 DAROIS FRANCE
4.	Manufacturer:	Robin Aviation 1 route de Dijon 21121 DAROIS FRANCE.
5.	(Reserved)	
6.	DGAC Type Certification Date:	July 16, 1971
7.	EASA Type Certification Date:	Transferred by Commission Regulation (EC) No. 1702/2003
8.	The EASA type Certificates replaces	s DGAC-France Type Certificate no. 61.
<u>A.II.</u>	Certification Basis	
1	Reference Date for determining	

Т.	Reference Date for determining	
	the applicable requirements:	9 February 1968

- (Reserved)
 (Reserved)
 Certification Basis: FAR 23
 Airworthiness Requirements: FAR part 23 as amended by amendment 1 through 6 included dated 1 August 1967.
 Requirements elected to comply: None
 EASA Special Conditions: None
 EASA Exemptions: None
 EASA Equivalent Safety Findings: None
- 10. EASA Environmental Standards: None

A.III. Technical Characteristics and Operational Limitations

- 1. (Reserved)
- 2. Description: Single-engine, four-seat, low-wing airplane, metal construction, fixed tricycle landing gear.
- 3. Equipment: The basic required equipment as prescribed in the applicable airworthiness regulations (see Certification Basis) must be installed in the aircraft for certification.

Stall warning system "Safe Flight" n°164 or approved equivalent must be installed.

4. Dimensions:

Span	9.00 m	(29.53 ft)
Height	2.26 m	(7.42 ft)
Length		(24.08 ft)
Wing Area	14.50 m²	(156.08 ft ²)

5. Engines: Lycoming IO-360-A1 D6

The EASA type certification standard includes that of FAA TC 1E10, based on individual EU member state acceptance or certification of this standard prior to 28 September 2003. Other standards confirming to TC/TCDS standards certificated by individual EU member state prior to 28 September 2003 are also acceptable.

5.1 Engine Limits:

Maximum Continuous Power: 2700 rpm (147 kW - 200 HP)

6. Propellers:

Manufacturer	Model	Ø	Number of blades	Governor	Minimum static RPM at sea level
Hartzell	HC-F2YR-1-7666A-2	1.88 m	2	Hartzell F2-7A	Constant speed

7. Fluids:

7.1 Fuel:

100/130 octane, minimum aviation grade gasoline. Refer to latest revision of Service Instruction Lycoming No. 1070.

7.2 Engine Oil:

Refer to latest revision of Service Instruction Lycoming No. 1014.

Air temperature	Ashless dispersant (AD)	Mineral
All temperature	grades	grades
All temperature	SAE15W50 or SAE20W50	
Above 80°F (+25°C)	SAE60	SAE60
Above 60°F (+15°C)	SAE40 or SAE50	SAE50
30°F to 90°F (O°C à +30°C)	SAE40	SAE40
0°F to 70°F (-15°C à +20°C)	SAE30, SAE40 or SAE20W40	SAE30
0°F to 90°F (-15°C à +30°C)	SAE20W50 or SAE15W50	SAE20W50
Below 10°F (-10°C)	SAE30 or SAE20W30	SAE20

8. Fluid capacities:

8.1 Fue	l:		
			(optional): 97 liters on each tank 3liters on each tank
8.2 Oil:			
9. Air spee	eds:	V _A V _{FE} V _C	

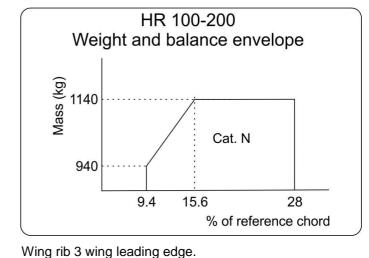
- 10. Maximum Operating Altitude:
- 11. Operational Capability:
- 12. Maximum Masses:
- 13. Centre of Gravity Range:

Refer to approved aircraft flight manual.

Refer to approved aircraft flight manual.

Take-Off:	1140 kg
Landing	1140 kg

Forward limit (9.4 % ref.): ... 0.15 m aft of datum at 940 kg Intermediate limit (15.6 % ref.):0.25 m aft of datum at 1140 kg Aft limit (28 % ref.): 0.35 m aft of datum at 1140 kg



Cord length at reference section: 1.600 m

14. Datum:

15. Design Limit Load Factor:

13. Design Linni Load Factor.	Flaps up+ 3.8 - 1.9				
	Flaps down+ 2				
16. Leveling Means:	Horizontal upper fuselage front spar (cabin)				
17. Minimum Flight Crew:	1 (pilot) at +0.21m aft of datum				
18. Maximum Passenger Seating Cap	acity: 1 at +0.21m aft of datum and 2 at +1.00m aft of datum.				
19. Baggage / Cargo Compartment	Maximum luggage compartment 40 kg at +1.86 m aft of datum.				
20. Wheels and Tires	Main gear track				

21. Control surface movements:							
	Elevato	r: aircraft refe	up	origin 2° nose up 6° ± 0.5 8° ± 0.5			
	Elevato	r tab:					
	E	levator up					
		Tab down position: Tab up position:					
	E	levator down					
		Tab down p	position:	15° ± 2			
		Tab up pos	ition:	1° ± 2			
	Ailerons	8:	up down	22° (+0, -4) 14° (+0, -2.5)			
	Ailerons	s tab:					
		down positi	ion:	7°5			
		up position	:	5°			
	Rudder			30° (+0, -5)			
	Wing Fl	aps:	1 st notch 2 nd notch	10° ± 2 			

A.IV. Operating and Service Instructions

Airplane Flight Manual	Refer to latest amendment of service letter n°6
Airplane Maintenance Manual	Refer to latest amendment of service letter n°6
Airplane Major Inspection Schedule	Refer to latest amendment of service letter n°6
Airplane Minor inspection schedule	Refer to latest amendment of service letter n°6

A.V. Note:

1. All HR 200-200 have been modified by the manufacturer and transformed into HR 100-200 B.

SECTION B: HR 100-200 B

B.I. General

1.	a) Type: b) Variant:	HR 100-200 B Not applicable
2.	Airworthiness Category:	Normal Category
3.	Type Certificate Holder:	C.E.A.P.R. 1 route de Troyes 21121 DAROIS FRANCE
4.	Manufacturer:	Robin Aviation 1 route de Dijon 21121 DAROIS FRANCE.
5.	(reserved)	
6.	DGAC Type Certification Date:	December 16, 1971
7.	EASA Type Certification Date:	Transferred by Commission Regulation (EC) No. 1702/2003
8.	The EASA type Certificates replace	s DGAC-France Type Certificate no. 61.
<u>B.II.</u>	Certification Basis	
1.	Reference Date for determining the applicable requirements:	22 November 1971
2.	(Reserved)	
3.	(Reserved)	

- 4. Certification Basis: FAR 23
- 5. Airworthiness Requirements: FAR part 23 as amended by amendment 1 through 6 included dated 1 August 1967.
- 6. Requirements elected to comply: None
- 7. EASA Special Conditions: None
- 8. EASA Exemptions: None
- 9. EASA Equivalent Safety Findings: None
- 10. EASA Environmental Standards: None

B.III. Technical Characteristics and Operational Limitations

1. (Reserved)

2.

Description:	Single-engine,	four-seat,	low-wing	airplane,	metal
	construction, fixe	ed tricycle la	nding gear.		

3. Equipment: The basic required equipment as prescribed in the applicable airworthiness regulations (see Certification Basis) must be installed in the aircraft for certification.

Stall warning system "Safe Flight" n°164 or approved equivalent must be installed.

4. Dimensions:

Span	9.00 m	(29.53 ft)
Height	2.26 m	(7.42 ft)
Length		(24.08 ft)
Wing Area	14.50 m²	(156.08 ft ²)

5. Engines: Lycoming IO-360-A1 D6

The EASA type certification standard includes that of FAA TC 1E10, based on individual EU member state acceptance or certification of this standard prior to 28 September 2003. Other standards confirming to TC/TCDS standards certificated by individual EU member state prior to 28 September 2003 are also acceptable.

5.1 Engine Limits:

Maximum Continuous Power: 2700 rpm (147 kW - 200 HP)

6. Propellers:

Manufacturer	Model	Ø	Number of blades	Governor	Minimum static RPM at sea level
Hartzell	HC-F2YR-1-7666 A-2	1.88 m	2	Hartzell F2-7A	Constant speed

- 7. Fluids:
 - 7.1 Fuel:

100/130 octane, minimum aviation grade gasoline. Refer to latest revision of Service Instruction Lycoming No. 1070.

7.2 Engine Oil:

Refer to latest revision of Service Instruction Lycoming No. 1014.

Air temperature	Ashless dispersant (AD)	Mineral
All temperature	grades	grades
All temperature	SAE15W50 or SAE20W50	
Above 80°F (+25°C)	SAE60	SAE60
Above 60°F (+15°C)	SAE40 or SAE50	SAE50
30°F to 90°F (O°C à +30°C)	SAE40	SAE40
0°F to 70°F (-15°C à +20°C)	SAE30, SAE40 or SAE20W40	SAE30
0°F to 90°F (-15°C à +30°C)	SAE20W50 or SAE15W50	SAE20W50
Below 10°F (-10°C)	SAE30 or SAE20W30	SAE20

8. Fluid capacities:

8.1 Fuel:	Main wing fuel tanks:	
	Not usable:	3 liters on each tank
	Auxiliary wing fuel tank (opti	ional):
	Usable:	
8.2 Oil:		
	Usable	6 U.S. quarts (5.7 liters)
9. Air speeds:		
	V _{NE}	306 km/h (165 knots IAS)
	V _{NO}	260 km/h (140 knots IAS)
	V _A	248 km/h (134 knots IAS)
	V _{FE}	195 km/h (105 knots IAS)
	V _C	260 km/h (140 knots IAS)
	V _D	340 km/h (184 knots IAS)

10. Maximum Operating Altitude:

11. Operational Capability:

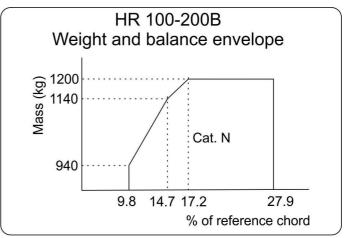
- 12. Maximum Masses:
- 13. Centre of Gravity Range:

Refer to approved aircraft flight manual.

Refer to approved aircraft flight manual.

Take-Off:	1200 kg
Landing:	1140 kg

Forward limit (9.8 % ref.):.... 0.157 m aft of datum at 940 kg Intermediate limit (14.7 % ref.):0.237 m aft of datum at 1140 kg Intermediate limit (17.2 % ref.):0.277 m aft of datum at 1200 kg Aft limit (27.9 % ref.):...... 0.450 m aft of datum at 1200 kg



14. Datum:

Wing rib 3 wing leading edge. Cord length at reference section: 1.607 m.

15. Load factor (n) at maximum weight:	Flaps retracted positive n+ 3.8 Flaps retracted negative n 1.9 Flaps extended+ 2
16. Leveling Means:	Horizontal upper fuselage front spar (cabin)
17. Minimum Flight Crew:	1 (pilot) at +0.21m aft of datum
18. Maximum Passenger Seating Cap	pacity: 1 at +0.21m aft of datum and 2 at +1.00m aft of datum.
19. Baggage / Cargo Compartment	Maximum luggage compartment 40 kg at +1.86 m aft of datum.
20. Wheels and Tires	Main gear track 3.20 m (10.5 ft) Wheel tire size main gear: 420 x 150 front gear: 420 x 150 Tire pressure main gear: 2.0 bar front gear: 1.8 bar Oleo strut pressure main gear: 6 (+0, -1) bar front gear: 5 (+0, -1) bar

21. Control surface movements:			
	Elevator: airc	craft reference angular origin 2° nose u up6	
		down 8	
	Elevator tab:	:	
	Elevat	tor up	
	Tab	b down position:	1° ± 2
	Tat	b up position:	35° ± 2
	Elevat	tor down	
	Tat	b down position:	15° ± 2
		b up position:	
	Ailerons:	up 22° (down 14° (+0	
	Ailerons tab:		
	dov	wn position: position:	7°5 5°
	Rudder:		+0, -5)
	Wing Flaps:	1 st notch 2 nd notch	

B.IV. Operating and Service Instructions

B.V. Note:

1. This model is identical to HR 100-200 except:

- wings root fairings (Karman)
- wings leading edge
- flaps deflection
- several technological improvements

SECTION C: HR 100-210

C.I. General

<u>C.I. Ge</u>	eneral	
1.	a) Type: b) Variant:	HR 100-210 Not applicable
2.	Airworthiness Category:	Normal Category
3.	Type Certificate Holder:	C.E.A.P.R. 1 route de Troyes 21121 DAROIS FRANCE
4.	Manufacturer:	Robin Aviation 1 route de Dijon 21121 DAROIS FRANCE.
5.	(Reserved)	
6.	DGAC Type Certification Date:	September 27, 1972
7.	EASA Type Certification Date:	Transferred by Commission Regulation (EC) No. 1702/2003
8.	The EASA type Certificates replace	s DGAC-France Type Certificate no. 61.
<u>C.II.</u>	Certification Basis	
1.	Reference Date for determining the applicable requirements:	9 December 1971
2.	(Reserved)	
3.	(Reserved)	
4.	Certification Basis:	FAR 23
5.	Airworthiness Requirements:	FAR part 23 as amended by amendment 1 through 6 included dated 1 August 1967.
6.	Requirements elected to comply:	None
7.	EASA Special Conditions:	Canopy emergency release system
8.	EASA Exemptions:	None
9.	EASA Equivalent Safety Findings:	None
10	. EASA Environmental Standards:	None
<u>C.III.</u>	Technical Characteristics and Op	erational Limitations
1.	(Reserved)	
2.	Description:	Single-engine, four-seat, low-wing airplane, metal construction, fixed tricycle landing gear.
3.	Equipment:	The basic required equipment as prescribed in the applicable airworthiness regulations (see Certification Basis) must be installed in the aircraft for certification.
		Stall warning system "Safe Flight" n°164 or approved equivalent must be installed.

4. Dimensions:

Span	9.08 m	(29.79 ft)
Height		(7.42 ft)
Length	7.45 m	(24.44 ft)
Wing Area	15.10 m²	(162.54 ft ²)

5. Engines:

Continental IO-360 D or IO-360 H

The EASA type certification standard includes that of FAA TC E1CE, based on individual EU member state acceptance or certification of this standard prior to 28 September 2003. Other standards confirming to TC/TCDS standards certificated by individual EU member state prior to 28 September 2003 are also acceptable

5.1 Engine Limits:

Maximum Continuous Power:2800 rpm (155 kW - 210 HP)

6.	Propellers	5:				
Mar	ufacturer	Model	Ø	Number of blades	Governor	Minimum static RPM at sea level
Hart		BHC-J2YF-1-7663	1.93 m (1)	2	Woodward F210452 or	Constant speed
Mac (2)	Cauley	2A 34 C 210-78 CCA -2	1.93 m (1)	2	Mc Cauley C-290 D3/T6	Constant speed
7.	Note 1: the minimum repair diameter is 1.854 m (73 inches). (Requirement of P. Robin manufacturer - due to climb performance). Note 2: Mac Cauley propeller can only be installed with Continental IO-360 H engine.					ufacturer - due to
1.	7.1 Fuel:		Aviation	Grade Fu	el: 100/130 oc	tane, minimum.
	7.2 Engi	ne Oil:	Above +	-5°C	SAE 5	0 Aviation oil 100
8.	Fluid capa	acities:				
	8.1 Fuel: Main wing fuel tanks: Usable:					
			Usable:		(optional): 113.5 li 4.5 li	
			Usable:		ed: 118 li 6.5 li	
	8.2 Oil:				10 US 7 US	
9.	Air speed	s:	V _{NO} V _A V _{FE} V _C			h (140 knots IAS) h (134 knots IAS) h (105 knots IAS) h (140 knots IAS)
10.	Maximum	Operating Altitude:	Refer to	approved	aircraft flight manual.	
11.	11. Operational Capability: Refer to approved aircraft flight manual.					

12. Maximum Masses:	Take-Off:1250 kg Landing:1250 kg
13. Centre of Gravity Range:	Forward limit (10 % ref.): 0.167 m aft of datum at 940 kg Intermediate limit (15 % ref.):0.251 m aft of datum at 1250 k Aft limit (28 % ref.): 0.469 m aft of datum at 1250 kg
	HR 100-210
	Weight and balance envelope
	1250 (b) ssee W Cat. N
	940 ······
	10 15 28
	% of reference chord
14. Datum:	Wing rib 3 wing leading edge. Cord length at reference section: 1.675 m.
15. Load factor (n) at maximum weigh	nt:
	Flaps retracted positive n+ 3.8 Flaps retracted negative n 1.9 Flaps extended+ 2
16. Leveling Means:	Horizontal upper fuselage front spar (cabin)
17. Minimum Flight Crew:	1 (pilot) at +0.21m aft of datum
18. Maximum Passenger Seating Ca	apacity: 1 at +0.21m aft of datum and 2 at +1.00m aft of datum.
19. Baggage / Cargo Compartment	Maximum luggage compartment 60 kg at +1.86 m aft of datum.
20. Wheels and Tires	Main gear track3.20 m (10.5 ft)Wheel tire sizemain gear:Main gear:420 x 150Main gear:420 x 150
	front gear:420 x 150 Tire pressure main gear:
	Oleo strut pressure main gear:
21. Control surface movements:	
	Elevator: aircraft reference angular origin 2° nose up up8.5° ± 0.5 down8° ± 0.5
	Elevator tab:
	Elevator up Tab down position:10° ± 3
	Tab up position:42° ± 3
	Elevator down Tab down position:10° ± 3
	Tab up position: $2^{\circ} \pm 3$

Tab up position: $3^{\circ} \pm 3$

Ailerons:	up22° ± 1.	5
	down15° ± 1.	5
Rudder:		5)
Wing Flaps:	maximum 30° (+1, -4	4)

C.IV. Operating and Service Instructions

Airplane Flight Manual	Refer to latest amendment of service letter n°6
Airplane Maintenance Manual	Refer to latest amendment of service letter n°6
Airplane Major Inspection Schedule	Refer to latest amendment of service letter n°6
Airplane Minor inspection schedule	Refer to latest amendment of service letter n°6

C.V. Note:

1. This model is identical to HR 100-200 B except:

- power plant
- wings, flaps and ailerons
- structure reinforced
- tab-flaps coupling suppressed
- main landing gear
- Instrument panel installation

SECTION D: HR 100-210 D

D.I. General	
1. a) Type: b) Variant:	HR 100-210 D Not applicable
2. Airworthiness Category:	Normal Category
3. Type Certificate Holder:	C.E.A.P.R. 1 route de Troyes 21121 DAROIS FRANCE
4. Manufacturer:	Robin Aviation 1 route de Dijon 21121 DAROIS FRANCE.
5. (Reserved)	
6. DGAC Type Certification Date:	September 24, 1973
7. EASA Type Certification Date:	Transferred by Commission Regulation (EC) No. 1702/2003
8. The EASA type Certificates replaces	DGAC-France Type Certificate no. 61.
D.II. Certification Basis	
 D.II. Certification Basis 1. Reference Date for determining the applicable requirements: 	9 December 1971
1. Reference Date for determining	9 December 1971
 Reference Date for determining the applicable requirements: 	9 December 1971
 Reference Date for determining the applicable requirements: (Reserved) 	9 December 1971 FAR 23
 Reference Date for determining the applicable requirements: (Reserved) (Reserved) 	
 Reference Date for determining the applicable requirements: (Reserved) (Reserved) Certification Basis: 	FAR 23 FAR part 23 as amended by amendment 1 through 6
 Reference Date for determining the applicable requirements: (Reserved) (Reserved) Certification Basis: Airworthiness Requirements: 	FAR 23 FAR part 23 as amended by amendment 1 through 6 included dated 1 August 1967.
 Reference Date for determining the applicable requirements: (Reserved) (Reserved) Certification Basis: Airworthiness Requirements: Requirements elected to comply: 	FAR 23 FAR part 23 as amended by amendment 1 through 6 included dated 1 August 1967. None
 Reference Date for determining the applicable requirements: (Reserved) (Reserved) Certification Basis: Airworthiness Requirements: Requirements elected to comply: EASA Special Conditions: 	FAR 23 FAR part 23 as amended by amendment 1 through 6 included dated 1 August 1967. None Canopy emergency release system
 Reference Date for determining the applicable requirements: (Reserved) (Reserved) Certification Basis: Airworthiness Requirements: Requirements elected to comply: EASA Special Conditions: EASA Exemptions: 	FAR 23 FAR part 23 as amended by amendment 1 through 6 included dated 1 August 1967. None Canopy emergency release system None
 Reference Date for determining the applicable requirements: (Reserved) (Reserved) Certification Basis: Airworthiness Requirements: Requirements elected to comply: EASA Special Conditions: EASA Exemptions: EASA Equivalent Safety Findings: 	FAR 23 FAR part 23 as amended by amendment 1 through 6 included dated 1 August 1967. None Canopy emergency release system None None None

2. Description:	Single-engine, four-seat, low-wing airplane, metal construction, fixed tricycle landing gear.	
3. Equipment:	The basic required equipment as prescribed in the applicable airworthiness regulations (see Certification Basis) must be installed in the aircraft for certification.	
	Stall warning system "Safe Flight" n°164 or approved equivalent must be installed.	
4. Dimensions:		
	Span9.08 m (29.79 ft)	
	Height2.26 m (7.42 ft)	
	Length7.45 m (24.44 ft)	

Wing Area 15.10 m² (162.54 ft²)

5. Engines:

Continental IO-360 D or IO-360 H

The EASA type certification standard includes that of FAA TC E1CE, based on individual EU member state acceptance or certification of this standard prior to 28 September 2003. Other standards confirming to TC/TCDS standards certificated by individual EU member state prior to 28 September 2003 are also acceptable

5.1 Engine Limits:

Maximum Continuous Power:2700 rpm (155 kW - 210 HP)

6.	Propelle	rs:				
Manuf	acturer	Model	Ø	Number of blades	Governor	Minimum static RPM at sea level
Hartzel	II	BHC-J2YF-1-7663-2.4R	1.87 m (1)	2	Woodward F210452 or	2700 rpm
Mac Ca (2)	auley	2A 34 C 210-78 CCA - 4.4	1.87 m (1)	2	Mc Cauley C-290 D3/T6	(limited by regulator)
			(Require perform (2) Mae	minimum i ement of ance). c Cauley	repair diameter is 1.85 P. Robin manufacture propeller can only b 0 H engine.	er - due to climb
7.	Fluids:					
	7.1 Fuel	:	100/130	octane, n	ninimum aviation grade	e gasoline.
	7.2 Enç	gine Oil:		Above +5°CSAE 50 Aviation oil 100 Below +5°CSAE 30 Aviation oil 65		
8.	8. Fluid capacities:					
8.1 Fuel:		Main wing fuel tanks: Usable:				
		Usable:	Auxiliary fuel tank (optional): Usable:			
	If Mod 51 is installed: Usable:118 liter: Not usable:6.5 liter:					
	8.2 Oil:				10 US 7 US	
9.	Air spee	ds:	V _{NO} V _A V _{FE} V _C			h (140 knots IAS) h (134 knots IAS) h (105 knots IAS) h (140 knots IAS)
10.	Maximu	m Operating Altitude:	Refer to	approved	aircraft flight manual.	
11. Operational Capability: Refer to approved aircraft flight manual.						

12. Maximum Masses:	Normal Category Take-Off:1250 kg Landing:1250 kg	
13. Centre of Gravity Range:	Forward limit (10 % ref.): 0.167 m aft of datum at 940 kg Intermediate limit (15 % ref.):0.251 m aft of datum at 1250 kg Aft limit (28 % ref.): 0.469 m aft of datum at 1250 kg	g
	HR 100-210D Weight and balance envelope	
	1250 Strange Cat. N	
	940 28	
	% of reference chord	
14. Datum:	Wing rib 3 wing leading edge. Cord length at reference section: 1.675 m	
15. Load factor (n) at maximum weight		
	Flaps retracted positive n+ 3.8 Flaps retracted negative n 1.9 Flaps extended+ 2	
16. Leveling Means:	Horizontal upper fuselage front spar (cabin)	
17. Minimum Flight Crew:	1 (pilot) at +0.21m aft of datum	
18. Maximum Passenger Seating Cap	bacity: 1 at +0.21m aft of datum and 2 at +1.00m aft of datum.	
19. Baggage / Cargo Compartment	Maximum luggage compartment 60 kg at +1.86 m aft of datum.	
20. Wheels and Tires	Main gear track 3.20 m (10.5 ft) Wheel tire size main gear: 420 x 150 front gear: 420 x 150	
	Tire pressure main gear: 2.3 bar	
	front gear:2.3 barOleo strut pressuremain gear:9 (+0, -1) barfront gear:6 (+0, -1) bar	
21. Control surface movements:		
	Elevator: aircraft reference angular origin 2° nose up up8.5° ± 0.5	
	down8° ± 0.5	
	Elevator tab: Elevator up Tab down position:	
	Tab up position: $42^{\circ} \pm 3$	
	Elevator down	

Tab down position: $10^{\circ} \pm 3$ Tab up position: $3^{\circ} \pm 3$

Ailerons:	up	22° ± 1.5
	down	15° ± 1.5
Rudder:		28° (+0, -5)
Wing Flaps:	maximum	30° (+1, -4)

D.IV. Operating and Service Instructions

Airplane Flight Manual	Refer to latest amendment of service letter n°6
Airplane Maintenance Manual	Refer to latest amendment of service letter n°6
Airplane Major Inspection Schedule	Refer to latest amendment of service letter n°6
Airplane Minor inspection schedule	Refer to latest amendment of service letter n°6

D.V. Note:

- 1. This model is identical to HR100-210 except:
 - Propeller blades shortened and rounded.
 - Limited to 2700 rpm

SECTION E: HR 100-285 TIARA

E.I. General

-		General			
	1.	a) Type: b) Variant:	HR 100-285 Not applicable		
	2.	Airworthiness Category:	Utility Category		
	3.	Type Certificate Holder:	C.E.A.P.R. 1 route de Troyes 21121 DAROIS FRANCE		
	4.	Manufacturer:	Robin Aviation 1 route de Dijon 21121 DAROIS FRANCE.		
	5.	(Reserved)			
	6.	DGAC Type Certification Date:	July 23, 1974		
	7.	EASA Type Certification Date:	Transferred by Commission Regulation (EC) No. 1702/2003		
	8.	The EASA type Certificates replace	es DGAC-France Type Certificate no. 61.		
<u>E.II</u>		Certification Basis			
<u>E.II</u>		Certification Basis Reference Date for determining the applicable requirements:	9 December 1971		
<u>E.II</u>		Reference Date for determining	9 December 1971		
<u>E.II</u>	1.	Reference Date for determining the applicable requirements:	9 December 1971		
<u>E.II</u>	1. 2.	Reference Date for determining the applicable requirements: (Reserved)	9 December 1971 FAR 23		
<u>E.II</u>	1. 2. 3.	Reference Date for determining the applicable requirements: (Reserved) (Reserved)			
<u>E.II</u>	1. 2. 3. 4.	Reference Date for determining the applicable requirements: (Reserved) (Reserved) Certification Basis:	FAR 23 FAR part 23 as amended by amendment 1 through 6		
<u>E.II</u>	1. 2. 3. 4. 5.	Reference Date for determining the applicable requirements: (Reserved) (Reserved) Certification Basis: Airworthiness Requirements:	FAR 23 FAR part 23 as amended by amendment 1 through 6 included dated 1 August 1967.		
<u>E.II</u>	 1. 2. 3. 4. 5. 6. 7. 	Reference Date for determining the applicable requirements: (Reserved) (Reserved) Certification Basis: Airworthiness Requirements: Requirements elected to comply:	FAR 23 FAR part 23 as amended by amendment 1 through 6 included dated 1 August 1967. None FAR23-143 and 23-729 (refer to Note 1)		
<u>E.II</u>	 1. 2. 3. 4. 5. 6. 7. 	Reference Date for determining the applicable requirements: (Reserved) (Reserved) Certification Basis: Airworthiness Requirements: Requirements elected to comply: EASA Special Conditions:	FAR 23 FAR part 23 as amended by amendment 1 through 6 included dated 1 August 1967. None FAR23-143 and 23-729 (refer to Note 1) Canopy emergency release system		
<u>E.II</u>	 1. 2. 3. 4. 5. 6. 7. 8. 9. 	Reference Date for determining the applicable requirements: (Reserved) (Reserved) Certification Basis: Airworthiness Requirements: Requirements elected to comply: EASA Special Conditions: EASA Exemptions:	FAR 23 FAR part 23 as amended by amendment 1 through 6 included dated 1 August 1967. None FAR23-143 and 23-729 (refer to Note 1) Canopy emergency release system FAR23-177 (refer to Note 2)		

E.III. Technical Characteristics and Operational Limitations

1.	(Reserved)	
2.	Description:	Single-engine, four-seat, low-wing airplane, metal construction, retractable tricycle landing gear.
3.	Equipment:	The basic required equipment as prescribed in the applicable airworthiness regulations (see Certification Basis) must be installed in the aircraft for certification.
		Stall warning system "Safe Flight" n°164 or approved equivalent must be installed.

4. Dimensions:

5. Engines:

Span	9.08 m	(29.79 ft)
Height	2.71 m	(8.89 ft)
Length	7.59 m	(24.90 ft)
Wing Area	15.10 m²	(162.54 ft ²)

Continental TIARA 6-285 B or TIARA 6-285 C

The EASA type certification standard includes that of FAA TC E12CE, based on individual EU member state acceptance or certification of this standard prior to 28 September 2003. Other standards confirming to TC/TCDS standards certificated by individual EU member state prior to 28 September 2003 are also acceptable

- 5.1 Engine Limits:Maximum Continuous Power: 2000 rpm (210 kW 285 HP)5.2 GearboxARP 502 Type I
- 6. Propellers:

Number Governor Minimum static Manufacturer Model Ø of RPM at sea level blades 2 m HO-V 123 F - 200P 3 Woodward 210690 Hoffmann 2000 rpm (1) Remark: (1) the minimum repair diameter is 1.95 m (76.77 inches). 7. Fluids: 7.1 Fuel: 100/130 octane, minimum aviation grade gasoline. Above +5°C SAE 50 7.2 Engine Oil: Below +5°C SAE 30 8. Fluid capacities: 8.1 Fuel: Main wing fuel tanks: Usable:.....110 liters on each wing Auxiliary fuel tank (optional): Usable:.....110 liters on each wing If Mod 51 is installed: 8.2 Oil: 9. Air speeds:

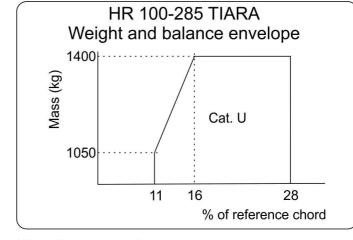
10. Maximum Operating Altitude:	Refer to approved aircraft flight manual.
11. Operational Capability:	Refer to approved aircraft flight manual.

12. Maximum Masses: Take-Off:.....1400 kg

13. Centre of Gravity Range:

Landing:1400 kg

Forward limit (11 % ref.): 0.184 m aft of datum at 1050 kg Intermediate limit (16 % ref.):0.268 m aft of datum at 1400 kg Aft limit (28 % ref.): 0.469 m aft of datum at 1400 kg



Wing rib 3 wing leading edge.

Cord length at reference section: 1.675 m.

15. Load factor (n) at maximum weight:

14. Datum:

	Flaps retracte	ed positive n+ 4.4 ed negative n 1.8 ed+ 2
16. Leveling Means:	Horizontal upper fu	selage front spar (cabin)
17. Minimum Flight Crew:	1 (pilot) at +0.21m a	aft of datum
18. Maximum Passenger Seating Cap	acity: 1 at +0.21m datum.	aft of datum and 2 at +1.00m aft of
19. Baggage / Cargo Compartment	Maximum luggage datum.	compartment 60 kg at +1.86 m aft of
20. Wheels and Tires	Main gear track Wheel tire size	
	Tire pressure	main gear: 2.4 bar front gear: 2.2 bar
	Oleo strut pressure	
21. Control surface movements:	Elevator: aircraft ref	ference angular origin 2° nose up up9.5° ± 0.5 down8° ± 0.5
	Tab up po Elevator dow Tab down	position:
	Ailerons:	up

Rudder:		28° (+0, -5)
Wing Flaps:	maximum	. 30° (+1, -4)

E.IV. Operating and Service Instructions

Airplane Flight Manual	Refer to latest amendment of service letter n°6
Airplane Maintenance Manual	Refer to latest amendment of service letter n°6
Airplane Major Inspection Schedule	Refer to latest amendment of service letter n°6
Airplane Minor inspection schedule	Refer to latest amendment of service letter n°6

E.V. Note:

1. Special Condition FAR23-143 and 23-729:

Since the landing gear is not locked retracted, the requirements of paragraphs 23-143 and 23-729 are changed as follows:

- a) The speed "1.6 VS1" is to be replaced with "VNO" in 23-729 (a)
- b) As far as gear extending is concerned, the condition 23-143 must be checked up to VNO. The checks up to VNO (not VNE) are considered as sufficient since the landing gear does not extend at once (at one go) in case of hydraulic system failure, on one hand, and secondly, because a warning is fitted on the hydraulic system.
- 2. Exemption to FAR 23-177:

At 1.2 VSO in configuration: landing gear extended flaps in landing position at 75% of maximum continuous power The deviation to 23-177 corresponds to a short duration flight when airplane does not sideslip (landing go around).

- 3. This model is identical to HR100-210 D except:
 - vertical stabilizer and rudder increased
 - maximum take-off mass: 1400 kg
 - hydraulic retractable landing gear
 - wings structure and under fuselage
 - thicker skin
 - elevator tab (same as HR100-200 B)
 - crash skids
 - pitch and bank (roll) control system equipped with spring loaded neutral for bank control
 - system reduction ratio of aileron control
 - may be equipped with a bank stabilator
 - wheels equipped with disk brakes

SECTION F: HR 100-250 TR

SE		ION F: HR 100-250 TR	
<u>F.I.</u>		General	
	1.	a) Type: b) Variant:	HR 100-250 TR Not applicable
	2.	Airworthiness Category:	Utility Category
	3.	Type Certificate Holder:	C.E.A.P.R. 1 route de Troyes 21121 DAROIS FRANCE
	4.	Manufacturer:	Robin Aviation 1 route de Dijon 21121 DAROIS FRANCE.
	5.	(Reserved)	
	6.	DGAC Type Certification Date:	September 25, 1975
	7.	EASA Type Certification Date:	Transferred by Commission Regulation (EC) No. 1702/2003
	8.	The EASA type Certificates replace	s DGAC-France Type Certificate no. 61.
<u>F.II.</u>		Certification Basis	
	1.	Reference Date for determining the applicable requirements:	9 December 1971
	2.	(Reserved)	
	3.	(Reserved)	
	4.	Certification Basis:	FAR 23
	5.	Airworthiness Requirements:	FAR part 23 as amended by amendment 1 through 6 included dated 1 August 1967.
	6.	Requirements elected to comply:	None
	7.	EASA Special Conditions:	FAR23-143 and 23-729 (refer to Note 1) Canopy emergency release system
	8.	EASA Exemptions:	FAR23-177 (refer to Note 2)
	9.	EASA Equivalent Safety Findings:	None
	10.	EASA Environmental Standards:	ICAO Annex 16, Vol.1. Chap 6.
<u>F.III</u>		Technical Characteristics and Op	erational Limitations
	1.	(Reserved)	
	2.	Description:	Single-engine, four-seat, low-wing airplane, metal construction, retractable tricycle landing gear.

3. Equipment: The basic required equipment as prescribed in the applicable airworthiness regulations (see Certification Basis) must be installed in the aircraft for certification.

Stall warning system "Safe Flight" n°164 or approved equivalent must be installed.

4. Dimensions:

5. Engines:

Span	9.08 m	(29.79 ft)
Height	2.71 m	(8.89 ft)
Length	7.59 m	(24.90 ft)
Wing Area	.15.10 m²	(162.54 ft ²)

Lycoming IO-540-C4 B5

The EASA type certification standard includes that of FAA TC 1E4, based on individual EU member state acceptance or certification of this standard prior to 28 September 2003. Other standards confirming to TC/TCDS standards certificated by individual EU member state prior to 28 September 2003 are also acceptable

5.1 Engine Limits:

Maximum Continuous Power:2575 rpm (184 kW - 250 HP)

6. Propellers:

Manufacturer	Model	Ø	Number of blades	Governor	Minimum static RPM at sea level
Hartzell	HC-C2YK-1B-8477-4 or 8477-4R	2.03 m (1)	2	Woodward 210681 or F210761	Constant speed

Remark:

(1) the minimum repair diameter is 1.98 m (78 inches).

7. Fluids:

7.1 Fuel:

7.2 Engine Oil:

100/130 octane, minimum aviation grade gasoline.

ine Oil:

Refer to latest revision of Service Instruction Lycoming No. 1014.

Air temperature	Ashless dispersant (AD) grades	Mineral grades
All tomporaturo	SAE15W50 or SAE20W50	grades
All temperature		
Above 80°F (+25°C)	SAE60	SAE60
Above 60°F (+15°C)	SAE40 or SAE50	SAE50
30°F to 90°F (O°C à +30°C)	SAE40	SAE40
0°F to 70°F (-15°C à +20°C)	SAE30, SAE40 or SAE20W40	SAE30
0°F to 90°F (-15°C à +30°C)	SAE20W50 or SAE15W50	SAE20W50
Below 10°F (-10°C)	SAE30 or SAE20W30	SAE20

8. Fluid capacities:

	8.1 Fuel:	Main wing fuel tanks: Usable:
		Auxiliary fuel tank (optional): Usable:
		If Mod 51 is installed: Usable:211 liters on each tank Not usable:6.5 liters on each tank
	8.2 Oil:	Oil sump capacity 12 US Qts (11.4 liters) Usable9.25 US Qts (8.8 liters)
9.	Air speeds:	V _{NE} 360 km/h (194 knots IAS) V _{NO} 290 km/h (157 knots IAS)

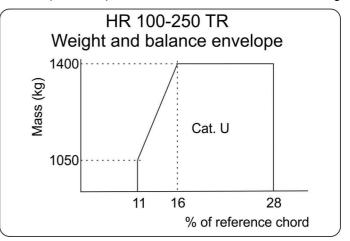
V _A	
V _{FE}	
V _C	
V _D	
V _{LE}	

Refer to approved aircraft flight manual.

Refer to approved aircraft flight manual.

Take-Off:	1400 kg
Landing:	1400 kg

Forward limit (11 % ref.): 0.184 m aft of datum at 1050 kg Intermediate limit (16 % ref.):0.268 m aft of datum at 1400 kg Aft limit (28 % ref.): 0.469 m aft of datum at 1400 kg



10. Maximum Operating Altitude:

11. Operational Capability:

12. Maximum Masses:

14. Datum:

13. Centre of Gravity Range:

Cord length at reference section: 1.675 m. 15. Load factor (n) at maximum weight: Flaps retracted positive n+ 4.4 Flaps retracted negative n.....- 1.8 Flaps extended+ 2 16. Leveling Means: Horizontal upper fuselage front spar (cabin) 17. Minimum Flight Crew: 1 (pilot) at +0.21m aft of datum 18. Maximum Passenger Seating Capacity: 1 at +0.21m aft of datum and 2 at +1.00m aft of datum. Maximum luggage compartment 60 kg at +1.86 m aft of 19. Baggage / Cargo Compartment datum. 20. Wheels and Tires main gear:420 x 150 Wheel tire size Tire pressure main gear: 2.4 bar front gear: 2.2 bar front gear:6 (+0, -1) bar 21. Control surface movements: Elevator: aircraft reference angular origin 2° nose up

Wing rib 3 wing leading edge.

Elevator tab:		
Elevator up		
Tab down	position:	8.5° ± 5
Tab up po	sition:	41° ± 5
Elevator dow	n	
Tab down	position:	13.5° ± 5
Tab up po	sition:	1.5° ± 5
Ailerons:	up	
		14° ± 1.5
Rudder:		28° (+0, -5)
Wing Flaps:	maximum	30° (+1, -4)

F.IV. Operating and Service Instructions

Airplane Flight Manual......Refer to latest amendment of service letter n°6 Airplane Maintenance Manual Refer to latest amendment of service letter n°6 Airplane Major Inspection ScheduleRefer to latest amendment of service letter n°6 Airplane Minor inspection schedule Refer to latest amendment of service letter n°6

F.V. Note:

1. Special Condition FAR23-143 and 23-729:

Since the landing gear is not locked retracted, the requirements of paragraphs 23-143 and 23-729 are changed as follows:

- a) The speed "1.6 VS1" is to be replaced with "VNO" in 23-729 (a)
- b) As far as gear extending is concerned, the condition 23-143 must be checked up to VNO. The checks up to VNO (not VNE) are considered as sufficient since the landing gear does not extend at once (at one go) in case of hydraulic system failure, on one hand, and secondly, because a warning is fitted on the hydraulic system.

2. Exemption to FAR 23-177

At 1.2 VSO in configuration: landing gear extended flaps in landing position at 75% of maximum continuous power The deviation to 23-177 corresponds to a short duration flight when airplane does not sideslip (landing go around).

3. This model is identical to HR100-285 TIARA except:

- cowling flaps

- engine

SECTION G: HR 100-285 C

<u>3E(</u>			
<u>G.I.</u>		General	
	1.	a) Type: b) Variant:	HR 100-285C Not applicable
	2.	Airworthiness Category:	Normal and Utility Category
;	3.	Type Certificate Holder:	C.E.A.P.R. 1 route de Troyes 21121 DAROIS FRANCE
4	4.	Manufacturer:	Robin Aviation 1 route de Dijon 21121 DAROIS FRANCE.
į	5.	(Reserved)	
(6.	DGAC Type Certification Date:	February 09, 1977
-	7.	EASA Type Certification Date:	Transferred by Commission Regulation (EC) No. 1702/2003
8	8.	The EASA type Certificates replace	s DGAC-France Type Certificate no. 61.
<u>G.II.</u>		Certification Basis	
	1.	Reference Date for determining the applicable requirements:	9 December 1971
	2.	(Reserved)	
	2. 3.	(Reserved) (Reserved)	
		. ,	FAR 23
	3. 4.	(Reserved)	
:	3. 4.	(Reserved) Certification Basis:	FAR 23 FAR part 23 as amended by amendment 1 through 6
:	3. 4. 5.	(Reserved) Certification Basis: Airworthiness Requirements:	FAR 23 FAR part 23 as amended by amendment 1 through 6 included dated 1 August 1967.
	3. 4. 5. 6. 7.	(Reserved) Certification Basis: Airworthiness Requirements: Requirements elected to comply:	FAR 23 FAR part 23 as amended by amendment 1 through 6 included dated 1 August 1967. None FAR23-143 and 23-729 (Refer to Note 1)
	3. 4. 5. 6. 7.	(Reserved) Certification Basis: Airworthiness Requirements: Requirements elected to comply: EASA Special Conditions:	FAR 23 FAR part 23 as amended by amendment 1 through 6 included dated 1 August 1967. None FAR23-143 and 23-729 (Refer to Note 1) Canopy emergency release system
	3. 4. 5. 6. 7. 8.	(Reserved) Certification Basis: Airworthiness Requirements: Requirements elected to comply: EASA Special Conditions: EASA Exemptions:	FAR 23 FAR part 23 as amended by amendment 1 through 6 included dated 1 August 1967. None FAR23-143 and 23-729 (Refer to Note 1) Canopy emergency release system FAR23-177 (refer to Note 2)
	3. 4. 5. 6. 7. 8. 9.	(Reserved) Certification Basis: Airworthiness Requirements: Requirements elected to comply: EASA Special Conditions: EASA Exemptions: EASA Equivalent Safety Findings:	FAR 23 FAR part 23 as amended by amendment 1 through 6 included dated 1 August 1967. None FAR23-143 and 23-729 (Refer to Note 1) Canopy emergency release system FAR23-177 (refer to Note 2) None ICAO Annex 16, Vol.1. Chap 6.
((- - - - - - - - - - - - - - - - - -	3. 4. 5. 6. 7. 8. 9.	(Reserved) Certification Basis: Airworthiness Requirements: Requirements elected to comply: EASA Special Conditions: EASA Exemptions: EASA Equivalent Safety Findings: EASA Environmental Standards:	FAR 23 FAR part 23 as amended by amendment 1 through 6 included dated 1 August 1967. None FAR23-143 and 23-729 (Refer to Note 1) Canopy emergency release system FAR23-177 (refer to Note 2) None ICAO Annex 16, Vol.1. Chap 6.
(3. 4. 5. 6. 7. 8. 9.	 (Reserved) Certification Basis: Airworthiness Requirements: Requirements elected to comply: EASA Special Conditions: EASA Exemptions: EASA Equivalent Safety Findings: EASA Environmental Standards: Technical Characteristics and Operation 	FAR 23 FAR part 23 as amended by amendment 1 through 6 included dated 1 August 1967. None FAR23-143 and 23-729 (Refer to Note 1) Canopy emergency release system FAR23-177 (refer to Note 2) None ICAO Annex 16, Vol.1. Chap 6.

The basic required equipment as prescribed in the applicable airworthiness regulations (see Certification Basis) must be installed in the aircraft for certification. Stall warning system "Safe Flight" n°164 or approved

Stall warning system "Safe Flight" n°164 or approved equivalent must be installed.

4. Dimensions:

5. Engines:

Span	9.08 m	(29.79 ft)
Height	2.71 m	(8.89 ft)
Length	7.59 m	(24.90 ft)
Wing Area	15.10 m²	(162.54 ft ²)

Continental TIARA 6-285 B or TIARA 6-285 C

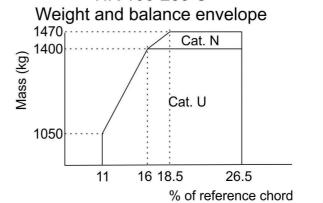
The EASA type certification standard includes that of FAA TC E12CE, based on individual EU member state acceptance or certification of this standard prior to 28 September 2003. Other standards confirming to TC/TCDS standards certificated by individual EU member state prior to 28 September 2003 are also acceptable

6. Propellers:

6. Propellers	•				· · · · · · · · · · · · · · · · · · ·
Manufacturer	Model	Ø	Number of blades	Governor	Minimum static RPM at sea level
Hoffmann	HO-V 123 F – 200P	2 m (1)	3	Woodward 210690	2000 rpm
		Rema (1) the		repair diameter is 1.9	5 m (76.77 inches).
7. Fluids:					
7.1 Fuel:		Aviati	on Grade F	Fuel: 100/130 d	octane, minimum.
7.2 Engin	ne Oil:				
8. Fluid capa	icities:				
8.1 Fuel:		Usabl		anks: 110 3	
		Usabl	e:	nk (optional): 110 3	
		Usabl		alled: 211 6.5	
8.2 Oil:				ty	
9. Air speeds	S:				
<u>Nori</u>	mal Category:	V _{NO} V _A V _{FE} V _C V _D V _{LE}			n/h (157 knots IAS) n/h (138 knots IAS) n/h (111 knots IAS) n/h (157 knots IAS) n/h (211 knots IAS) n/h (127 knots IAS)

^{5.1} Engine Limits:Maximum Continuous Power: 2000 rpm (210 kW - 285 HP)5.2 GearboxARP 502 Type I

Utility Category:	V _{NO} V _A V _{FE} V _C V _D	
10. Maximum Operating Altitude:	Refer to approved	l aircraft flight manual.
11. Operational Capability:		l aircraft flight manual. ations including spins are prohibited.
12. Maximum Masses:	Normal category	Take-Off:1470 kg Landing:1400 kg
	Utility category	Take-Off:1400 kg Landing:1400 kg
13. Centre of Gravity Range:	Intermediate limit Intermediate limit	% ref.): 0.184 m aft of datum at 1050 kg (16 % ref.):0.268 m aft of datum at 1400 kg (18.5 % ref.)0.310 m aft of datum at 1470 kg ef.): 0.444 m aft of datum at 1470 kg
	Intermediate limit	% ref.): 0.184 m aft of datum at 1050 kg (16 % ref.):0.268 m aft of datum at 1400 kg əf.): 0.444 m aft of datum at 1470 kg
		HR 100-285 C and balance envelope



14. Datum:	Wing rib 3 wing leading edge. Cord length at reference section: 1.675 m.
15. Load factor (n) at maximum weight:	Normal Category Flaps retracted positive n+ 3.8 Flaps retracted negative n+ 2 Flaps extended positive n+ 2 Flaps extended negative n+ 0
	Utility Category Flaps retracted positive n+ 4.4 Flaps retracted negative n+ 1.76 Flaps extended positive n+ 2 Flaps extended negative n+ 0

16. Leveling Means:	Horizontal upper fuse	elage front spar (cabin)
17. Minimum Flight Crew:	1 (pilot) at +0.21m af	ft of datum
18. Maximum Passenger Seating Cap	acity: 1 at +0.21m a datum.	ft of datum and 2 at +1.00m aft of
19. Baggage / Cargo Compartment	Maximum luggage c datum.	compartment 60 kg at +1.86 m aft of
20. Wheels and Tires	Wheel tire size Tire pressure Oleo strut pressure	
21. Control surface movements:		erence angular origin 2° nose up up9.5° ± 0.5 down8° ± 0.5
	Tab up pos Elevator down Tab down p	position:
	Ailerons:	up
	Rudder:	
	Wing Flaps:	maximum 30° (+1, -4)

G.IV. Operating and Service Instructions

Airplane Flight Manual	Refer to latest amendment of service letter n°6
Airplane Maintenance Manual	Refer to latest amendment of service letter n°6
Airplane Major Inspection Schedule	Refer to latest amendment of service letter n°6
Airplane Minor inspection schedule	Refer to latest amendment of service letter n°6

G.V. Note:

1. Special Condition FAR23-143 and 23-729:

Since the landing gear is not locked retracted, the requirements of paragraphs 23-143 and 23-729 are changed as follows:

- a) The speed "1.6 VS1" is to be replaced with "VNO" in 23-729 (a)
- b) As far as gear extending is concerned, the condition 23-143 must be checked up to VNO. The checks up to VNO (not VNE) are considered as sufficient since the landing gear does not extend at once (at one go) in case of hydraulic system failure, on one hand, and secondly, because a warning is fitted on the hydraulic system.

2. Exemption to FAR 23-177

At 1.2 VSO in configuration: landing gear extended flaps in landing position at 75% of maximum continuous power

The deviation to 23-177 corresponds to a short duration flight when airplane does not sideslip (landing go around).

3. This model is identical to HR100-285 TIARA except:

- Maximum take-off mass changed to 1470 kg for N category.
- Aft position of Center of Gravity set to 26.5 %
- Concession nr 16 (spring loaded rudder trim suppressed) inserted into basic design

SECTION H: R 1180 T

H.I. General

1.	a) Type: b) Variant:	R 1180 T Not applicable
2.	Airworthiness Category:	Utility Category
3.	Type Certificate Holder:	C.E.A.P.R. 1 route de Troyes 21121 DAROIS FRANCE
4.	Manufacturer:	Robin Aviation 1 route de Dijon 21121 DAROIS FRANCE.
5.	(Reserved)	
6.	DGAC Type Certification Date:	September 19, 1978
7.	EASA Type Certification Date:	Transferred by Commission Regulation (EC) No. 1702/2003
8.	The EASA type Certificates replaces	s DGAC-France Type Certificate no. 61.
<u>H.II.</u>	Certification Basis	
1.	Reference Date for determining the applicable requirements:	9 December 1971
2.	(Reserved)	

3. (Reserved)

4. Certification Basis:

5. Airworthiness Requirements:

FAR 23 FAR part 23 as amended by amendment 1 through 6 included dated 1 August 1967.

- 6. Requirements elected to comply: None
- 7. EASA Special Conditions: Canopy emergency release system
- 8. EASA Exemptions: None
- 9. EASA Equivalent Safety Findings: None
- 10. EASA Environmental Standards: ICAO Annex 16, Vol.1. Chap 6.

H.III. Technical Characteristics and Operational Limitations

(Reserved)
 Description:

Single-eng	gine, four-seat,	low-wing	airplane,	metal
constructio	on, fixed tricycle	landing gear		

3. Equipment: The basic required equipment as prescribed in the applicable airworthiness regulations (see Certification Basis) must be installed in the aircraft for certification.

Stall warning system "Safe Flight" n°164 or approved equivalent must be installed.

4. Dimensions:

Span	9.08 m	(29.79 ft)
Height	2.38 m	(7.81 ft)
Length	7.26 m	(23.82 ft)
Wing Area	15.10 m²	(162.54 ft ²)

5. Engines:

Lycoming O-360-A

The EASA type certification standard includes that of FAA TC E-286, based on individual EU member state acceptance or certification of this standard prior to 28 September 2003. Other standards confirming to TC/TCDS standards certificated by individual EU member state prior to 28 September 2003 are also acceptable

5.1 Engine Limits: Maximum Continuous Power:2700 rpm (134 kW - 182 HP)

6. Propellers:

Manufacturer	Model	Ø	Number of blades	Minimum static RPM at sea level	
Sensenich	76 EM8S5-058	1.93 m (1)	2	2500 (2) rpm	
Sensenich	76 EM8S5-064	1.93 m (1)	2	2250 (2) rpm	
Hoffmann	HO27 HM 180/160	1.80 m	2		
EVRA	94.79-26	1.88 m	2	2300 rpm	
Demerker					

Remarks:

(1) no diameter reduction allowed for repair.

(2) avoid a continuous operation between 2150 rpm and 2350 rpm.

- 7. Fluids:
 - 7.1 Fuel:

100/100LL minimum aviation grade gasoline. Refer to latest revision of Service Instruction Lycoming No. 1070.

7.2 Engine Oil:

Refer to latest revision of Service Instruction Lycoming No. 1014.

Air temperature	Ashless dispersant (AD)	Mineral
•	grades	grades
All temperature	SAE15W50 or SAE20W50	
Above 80°F (+25°C)	SAE60	SAE60
Above 60°F (+15°C)	SAE40 or SAE50	SAE50
30°F to 90°F (O°C à +30°C)	SAE40	SAE40
0°F to 70°F (-15°C à +20°C)	SAE30, SAE40 or SAE20W40	SAE30
0°F to 90°F (-15°C à +30°C)	SAE20W50 or SAE15W50	SAE20W50
Below 10°F (-10°C)	SAE30 or SAE20W30	SAE20

8. Fluid capacities:

 8.1 Fuel:
 Main wing fuel tanks:

 Usable:
 114 liters on each tank

 Not usable:
 7 liters on each tank

 8.2 Oil:
 Oil sump capacity

 Usable:
 6 U.S. quarts (7.6 liters)

 Usable:
 6 U.S. quarts (5.7 liters)

down $5^\circ \pm 0.5$

9. Air speeds:	V _{NE}
10. Maximum Operating Altitude:	Refer to approved aircraft flight manual.
11. Operational Capability:	Refer to approved aircraft flight manual. All aerobatic operations including spins are prohibited.
12. Maximum Masses:	Take-Off:1150 kg Landing:1150 kg
13. Centre of Gravity Range:	Forward limit (12 % ref.): 0.201 m aft of datum at 940 kg Intermediate limit (20 % ref.):0.335 m aft of datum at 1150 kg Aft limit (26 % ref.) 0.436 m aft of datum at 1150 kg R 1180 T Weight and balance envelope
	Image: Display state Image: Display state Image: Display state Ima
	% of reference chord
14. Datum:	Wing rib 7 wing leading edge. Cord length at reference section: 1.675 m.
15. Load factor (n) at maximum weight	
	Flaps retracted positive n+ 4.4 Flaps retracted negative n 1.8 Flaps extended+ 2
16. Leveling Means:	Horizontal upper fuselage front spar (cabin)
17. Minimum Flight Crew:	1 (pilot) at +0.21m aft of datum
18. Maximum Passenger Seating Ca	pacity: 1 at +0.21m aft of datum and 2 at +1.00m aft of datum
19. Baggage / Cargo Compartment	Maximum luggage compartment 60 kg at +1.86 m aft of datum.
20. Wheels and Tires	Main gear track 3.20 m (10.5 ft) Wheel tire size main gear: 380 x 150 front gear: 380 x 150
	Tire pressure main gear:
	Oleo strut pressure main gear:
21. Control surface movements:	
	Elevator: aircraft reference angular origin 2° nose up
	up 10.5° ± 0.5 down 5° ± 0.5

Elevator tab:	
Elevator up	
	position:10° ± 2
Tab up pos	sition:17.5° ± 2
Elevator down	
	position:9° ± 2
Tab up pos	sition:1° ± 2
Ailerons:	up21° (+3, -0)
	down
Rudder:	
Wing Flaps:	maximum 40° ± 2

H.IV. Operating and Service Instructions

Airplane Flight Manual	Refer to latest amendment of service letter n°6
	Refer to latest amendment of service letter n°6
•	Refer to latest amendment of service letter n°6
· · · ·	Refer to latest amendment of service letter n°6

H.V. Note:

1. This model is identical to HR100-210 except:

- Power plant
- NACA 23015 airfoil wing setting: 3° twist: 0°
- wings, ailerons and flaps structure
- wings root fairings (Karman)
- fuel tank
- horizontal tail profile and structure
- vertical tail structure
- wheels (380 x 150) equipped with disk brakes
- front wheel strut displacement increased
- fairings
- pitch and bank (roll) control system equipped with spring loaded neutral for bank control
- dome set aft and upper fuselage
- sliding canopy framework
- access door on front upper fuselage
- bottom fuselage fairing
- battery installed on firewall
- rudder balanced

SECTION I: R 1180 TD

<u>I.I.</u>		General	
	1.	a) Type: b) Variant:	R 1180 TD Not applicable
:	2.	Airworthiness Category:	Utility Category
:	3.	Type Certificate Holder:	C.E.A.P.R. 1 route de Troyes 21121 DAROIS FRANCE
	4.	Manufacturer:	Robin Aviation 1 route de Dijon 21121 DAROIS FRANCE.
:	5.	(Reserved)	
	6.	DGAC Type Certification Date:	March 27, 1979
	7.	EASA Type Certification Date:	Transferred by Commission Regulation (EC) No. 1702/2003
i	8.	The EASA type Certificates replaces	s DGAC-France Type Certificate no. 61.
<u>I.II.</u>		Certification Basis	
	1.	Reference Date for determining the applicable requirements:	9 December 1971
1	2.	(Reserved)	
:	3.	(Reserved)	
	4.	Certification Basis:	FAR 23
:	5.	Airworthiness Requirements:	FAR part 23 as amended by amendment 1 through 6 included dated 1 August 1967.
	6.	Requirements elected to comply:	None
·	7.	EASA Special Conditions:	Canopy emergency release system
	8.	EASA Exemptions:	None
1	9.	EASA Equivalent Safety Findings:	None
	10.	EASA Environmental Standards:	ICAO Annex 16, Vol.1. Chap 6.
<u>I.III.</u>		Technical Characteristics and Op	erational Limitations
	1.	(Reserved)	
:	2.	Description:	Single-engine, four-seat, low-wing airplane, metal construction, fixed tricycle landing gear.
:	3.	Equipment:	The basic required equipment as prescribed in the applicable airworthiness regulations (see Certification Basis) must be installed in the aircraft for certification.
			Stall warning system "Safe Flight" n°164 or approved equivalent must be installed.

4.

Dimensions:	Span9.08 m	(29.79 ft)
	Height 2.38 m	(7.81 ft)
	Length 7.26 m	(23.82 ft)
	Wing Area 15.10 m ²	(162.54 ft ²)

requirements)

6. Propellers:

Manufacturer	Model	Ø	Number of blades	Minimum static RPM at sea level
Sensenich	76 EM 8S5-058	1.93 m (1)	2	2500 (2) rpm
Sensenich	76 EM 8S5-064	1.93 m (1)	2	2250 (2) rpm
Hoffmann	HO27 HM 180/160	1.80 m	2	
EVRA	94.79-26	1.88 m	2	2300 rpm

Remarks:

(1) no diameter reduction allowed for repair.(2) avoid a continuous operation between 2150 rpm and 2350 rpm.

7. Fluids:

7.1 Fuel:

100/100LL minimum aviation grade gasoline. Refer to latest revision of Service Instruction Lycoming No. 1070.

7.2 Engine Oil:

Refer to latest revision of Service Instruction Lycoming No. 1014.

Air temperature	Ashless dispersant (AD)	Mineral
All temperature	grades	grades
All temperature	SAE15W50 or SAE20W50	
Above 80°F (+25°C)	SAE60	SAE60
Above 60°F (+15°C)	SAE40 or SAE50	SAE50
30°F to 90°F (O°C à +30°C)	SAE40	SAE40
0°F to 70°F (-15°C à +20°C)	SAE30, SAE40 or SAE20W40	SAE30
0°F to 90°F (-15°C à +30°C)	SAE20W50 or SAE15W50	SAE20W50
Below 10°F (-10°C)	SAE30 or SAE20W30	SAE20

8. Fluid capacities:

8.1 Fuel:	Main wing fuel tanks:	
	Usable:	114 liters on each tank
	Not usable:	7 liters on each tank
8.2 Oil:		

down $5^\circ \pm 0.5$

9. Air speeds:	V _{NE}
10. Maximum Operating Altitude:	Refer to approved aircraft flight manual.
11. Operational Capability:	Refer to approved aircraft flight manual. All aerobatic operations including spins are prohibited.
12. Maximum Masses:	Take-Off:1150 kg Landing:1150 kg
13. Centre of Gravity Range:	Forward limit (12 % ref.): 0.201 m aft of datum at 940 kg Intermediate limit (20 % ref.):0.335 m aft of datum at 1150 kg Aft limit (26 % ref.) 0.436 m aft of datum at 1150 kg R 1180 TD Weight and balance envelope
	Dr 1150 Sgr Cat. U 940 12 20 26
	% of reference chord
14. Datum:	Wing rib 7 wing leading edge. Cord length at reference section: 1.675 m.
15. Load factor (n) at maximum weight	Flaps retracted positive n+ 4.4 Flaps retracted negative n 1.8 Flaps extended+ 2
16. Leveling Means:	Horizontal upper fuselage front spar (cabin)
17. Minimum Flight Crew:	1 (pilot) at +0.21m aft of datum
Ũ	bacity: 1 at +0.21m aft of datum and 2 at +1.00m aft of datum.
19. Baggage / Cargo Compartment	Maximum luggage compartment 60 kg at +1.86 m aft of datum.
20. Wheels and Tires	Main gear track
	front gear:
	Oleo strut pressure main gear:
21. Control surface movements:	
	Elevator: aircraft reference angular origin 2° nose up up

Elevator tab:	
Elevator up	
•	position:
l ab up pos	ition: 17.5° ± 2
Elevator down	
	position:9° ± 2
Tab up pos	ition: 1° ± 2
Ailerons:	up21° (+3, -0)
	down
Rudder:	
Wing Flaps:	maximum 40° ± 2

I.IV. Operating and Service Instructions

Airplane Flight Manual	Refer to latest amendment of service letter n°6
	Refer to latest amendment of service letter n°6
	Refer to latest amendment of service letter n°6
Airplane Minor inspection schedule	Refer to latest amendment of service letter n°6

I.V. Note:

1. This model is identical to R 1180 T except the maximum continuous power of the engine (limited to 2600 rpm due to noise limitation).

ADMINISTRATIVE SECTION

- I. Acronyms
- II. Type Certificate Holder Record

Société Avions Robin ROBIN Aviation APEX Aircraft

III. Change Record

Issue 1	10 May 2013	Initial issue on transfer of this Type Certificate to CEAPR	