Page 1 of 18

Date: 17 September 2024

TCDSN No.: EASA.IM.A.086

Issue: 6



# TYPE-CERTIFICATE DATA SHEET FOR NOISE

No. EASA.IM.A.086

for

HR200 and R2000 series

Type Certificate Holder:
Alpha Aviation Concept Ltd

Hamilton NEW ZEALAND

For models: HR200-100 R2160 R2160i

HR200-120 R2100 R2120U

HR200-120B R2100A HR200-160 R2160D

R2112



Alpha HR200 and R2000 series

Page 2 of 18

TCDSN No.: EASA.IM.A.086 Date: 17 September 2024 Issue: 6

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Issue: 6

Page 3 of 18 Date: 17 September 2024

Type Certificate Holder<sup>1</sup> Alpha Aviation Concept Ltd Aircraft Type Designation<sup>1</sup> HR200-100

Engine Manufacturer<sup>1</sup> Lycoming Engines Engine Type Designation<sup>1</sup> O-235-H2C

Noise Certification Basis ICAO Annex 16, Volume I Edition / Amendment Chapter<sup>1</sup> 6

EASA Record No.	Propeller Manufacturer <sup>1</sup>	Propeller Type Designation <sup>1</sup>	Additional modifications essential to meet the requirements or needed to attain the certificated noise levels <sup>1</sup>	Maximum	Overflight dB(A)		See
				Take-Off Mass¹ (kg)	Level <sup>1</sup>	Limit	Note
C422	McCauley Propeller Systems	1A105/BCM7056	None	780	66.7	70.4	-
C423	Hoffmann Propeller	HO-14-178-115	None	780	66.7	70.4	-

<sup>&</sup>lt;sup>1</sup> See Note 1.



Page 4 of 18 TCDSN No.: EASA.IM.A.086 Date: 17 September 2024

Issue: 6

Type Certificate Holder<sup>1</sup> **Alpha Aviation Concept Ltd** Aircraft Type Designation<sup>1</sup> HR200-120

Engine Manufacturer<sup>1</sup> **Lycoming Engines** Engine Type Designation<sup>1</sup> O-235-J2A

ΓΛΩ			Additional modifications essential to	Maximum	Overflig	ht dB(A)	Soo
EASA Record No.	Propeller Manufacturer <sup>1</sup>	Propeller Type Designation <sup>1</sup>	meet the requirements or needed to attain the certificated noise levels <sup>1</sup>	Take-Off Mass <sup>1</sup> (kg)	Level <sup>1</sup>	Limit	See Note
C9472	McCauley Propeller Systems	1A135/JCM7154	None	780			2

<sup>&</sup>lt;sup>1</sup> See Note 1.



Page 5 of 18 TCDSN No.: EASA.IM.A.086 Date: 17 September 2024

Issue: 6

Type Certificate Holder<sup>1</sup> **Alpha Aviation Concept Ltd** Aircraft Type Designation<sup>1</sup> HR200-120B

Engine Manufacturer<sup>1</sup> **Lycoming Engines** Engine Type Designation<sup>1</sup> O-235-L2A

Noise Certification Basis Edition / Amendment Chapter<sup>1</sup> 10 (10.4a) ICAO Annex 16, Volume I

FACA Drandler	Dropollor		Additional modifications essential to meet	Maximum	Take-O	See	
EASA Record No.	Propeller Manufacturer <sup>1</sup>	Propeller Type Designation <sup>1</sup>	the requirements or needed to attain the certificated noise levels <sup>1</sup>	Take-Off Mass <sup>1</sup> (kg)	Level <sup>1</sup>	Limit	Note
C93	Hoffmann Propeller	HO-14-178-115	None	780	79.1	79.7	-

<sup>&</sup>lt;sup>1</sup> See Note 1.



Issue: 6

Page 6 of 18 Date: 17 September 2024

Type Certificate Holder<sup>1</sup> Alpha Aviation Concept Ltd Aircraft Type Designation<sup>1</sup> HR200-120B

Engine Manufacturer<sup>1</sup> Lycoming Engines Engine Type Designation<sup>1</sup> O-235-L2A

Noise Certification Basis ICAO Annex 16, Volume I Edition / Amendment Chapter<sup>1</sup> 6

EASA			Additional modifications essential to	Maximum	Overflig	ht dB(A)	See
Record No.	Propeller Manufacturer <sup>1</sup>	Propeller Type Designation <sup>1</sup>	meet the requirements or needed to attain the certificated noise levels <sup>1</sup>	Take-Off Mass¹ (kg)	Level <sup>1</sup>	Limit	Note
C424	McCauley Propeller Systems	1A135/JCM7147	None	780	70.3	70.4	-



Page 7 of 18 TCDSN No.: EASA.IM.A.086 Date: 17 September 2024

Issue: 6

Type Certificate Holder<sup>1</sup> **Alpha Aviation Concept Ltd** Aircraft Type Designation<sup>1</sup> HR200-160

Engine Manufacturer<sup>1</sup> **Lycoming Engines** Engine Type Designation<sup>1</sup> O-320-D2A

Noise Certification Basis Edition / Amendment Chapter<sup>1</sup> 10 (10.4a) ICAO Annex 16, Volume I

EASA Propeller	Propollor		Additional modifications essential to meet	Maximum	Take-Off dB(A)		See
Record No.	Manufacturer <sup>1</sup>	Propeller Type Designation <sup>1</sup>	the requirements or needed to attain the certificated noise levels <sup>1</sup>	Take-Off Mass¹ (kg)	Level <sup>1</sup>	Limit	Note
C94	Sensenich Propeller Manufacturing Company, Inc.	74DM6S5-2-66	None	800	66.1	80.1	-

<sup>&</sup>lt;sup>1</sup> See Note 1.



Issue: 6

Page 8 of 18 Date: 17 September 2024

Type Certificate Holder<sup>1</sup> Alpha Aviation Concept Ltd Aircraft Type Designation<sup>1</sup> R2100

Engine Manufacturer<sup>1</sup> Lycoming Engines Engine Type Designation<sup>1</sup> O-235-H2C

Noise Certification Basis ICAO Annex 16, Volume I Edition / Amendment Chapter<sup>1</sup> 6

EASA Record No.	Propeller Manufacturer <sup>1</sup>	Propeller Type Designation <sup>1</sup>	Additional modifications essential to meet the requirements or needed to attain the certificated noise levels <sup>1</sup>	Maximum	Overflight dB(A)		See
				Take-Off Mass¹ (kg)	Level <sup>1</sup>	Limit	Note
C437	McCauley Propeller Systems	1A105/BCM7056	None	760	68.1	70.1	-
C438	Hoffmann Propeller	HO-14-178-115	None	760	68.1	70.1	-

<sup>&</sup>lt;sup>1</sup> See Note 1.



Issue: 6

Page 9 of 18

Date: 17 September 2024

Type Certificate Holder<sup>1</sup> **Alpha Aviation Concept Ltd** Aircraft Type Designation<sup>1</sup> R2100A

Engine Type Designation<sup>1</sup> Engine Manufacturer<sup>1</sup> **Lycoming Engines** O-235-H2C

EASA Record No.			Additional modifications essential to	Maximum	Overflig	ht dB(A)	See
	Propeller Manufacturer <sup>1</sup>	Propeller Type Designation <sup>1</sup>	meet the requirements or needed to attain the certificated noise levels <sup>1</sup>	Take-Off Mass¹ (kg)	Level <sup>1</sup>	Limit	Note
C439	McCauley Propeller Systems	1A105/BCM7056	None	775	67.8	70.3	-

<sup>&</sup>lt;sup>1</sup> See Note 1.



Page 10 of 18 TCDSN No.: EASA.IM.A.086 Date: 17 September 2024

Issue: 6

Type Certificate Holder<sup>1</sup> **Alpha Aviation Concept Ltd** Aircraft Type Designation<sup>1</sup> R2112

Engine Type Designation<sup>1</sup> Engine Manufacturer<sup>1</sup> **Lycoming Engines** O-235-L2A

EASA Record No.	Propeller Manufacturer <sup>1</sup>	Propeller Type Designation <sup>1</sup>	Additional modifications essential to meet the requirements or needed to attain the certificated noise levels <sup>1</sup>	Maximum	Overflight dB(A)		See
				Take-Off Mass <sup>1</sup> (kg)	Level <sup>1</sup>	Limit	Note
C15345	Sensenich Propeller Manufacturing Company, Inc.	72CKS6-0-52	None	800	67.5	70.7	-
C440	Sensenich Propeller Manufacturing Company, Inc.	72CKS6-0-56	None	800	67.5	70.7	-

<sup>&</sup>lt;sup>1</sup> See Note 1.



Page 11 of 18 TCDSN No.: EASA.IM.A.086 Date: 17 September 2024

Issue: 6

Type Certificate Holder<sup>1</sup> **Alpha Aviation Concept Ltd** Aircraft Type Designation<sup>1</sup> R2120U

Engine Manufacturer<sup>1</sup> **Lycoming Engines** Engine Type Designation<sup>1</sup> O-235-L2A

Noise Certification Basis Edition / Amendment Chapter<sup>1</sup> 10 (10.4a) ICAO Annex 16, Volume I

EASA	Dranallar		Additional modifications essential to meet	Maximum	Take-Off dB(A)		See
Record No.	Propeller Manufacturer <sup>1</sup>	Propeller Type Designation <sup>1</sup>	the requirements or needed to attain the certificated noise levels <sup>1</sup>	Take-Off Mass¹ (kg)	Level <sup>1</sup>	Limit	Note
C146	Sensenich Propeller Manufacturing Company, Inc.	72CKS6-0-54	None	800	75.2	80.1	-



Page 12 of 18 TCDSN No.: EASA.IM.A.086 Date: 17 September 2024

Issue: 6

Type Certificate Holder<sup>1</sup> **Alpha Aviation Concept Ltd** Aircraft Type Designation<sup>1</sup> R2160

Engine Manufacturer<sup>1</sup> **Lycoming Engines** Engine Type Designation<sup>1</sup> O-320-D2A

Noise Certification Basis Edition / Amendment Chapter<sup>1</sup> 10 (10.4a) ICAO Annex 16, Volume I

EASA Propello	Propollor		Additional modifications essential to meet	Maximum	Take-Off dB(A)		See
Record No.	Manufacturer <sup>1</sup>	Propeller Type Designation <sup>1</sup>	the requirements or needed to attain the certificated noise levels <sup>1</sup>	Take-Off Mass¹ (kg)	Level <sup>1</sup>	Limit	Note
C10252	Sensenich Propeller Manufacturing Company, Inc.	74DM6S5-2-64	None	900	73.1	81.7	2



Page 13 of 18 TCDSN No.: EASA.IM.A.086 Date: 17 September 2024

Issue: 6

Type Certificate Holder<sup>1</sup> **Alpha Aviation Concept Ltd** Aircraft Type Designation<sup>1</sup> R2160

Engine Type Designation<sup>1</sup> Engine Manufacturer<sup>1</sup> **Lycoming Engines** O-320-D2A

Noise Certification Basis Edition / Amendment Chapter1 ICAO Annex 16, Volume I

EASA			Additional modifications essential to	Maximum	Overflig	ht dB(A)	See	
Record No.	Propeller Manufacturer <sup>1</sup>	Propeller Type Designation <sup>1</sup>	meet the requirements or needed to attain the certificated noise levels <sup>1</sup>	Take-Off Mass¹ (kg)	Level <sup>1</sup>	Limit	Note	
C444	Sensenich Propeller Manufacturing Company, Inc.	74DM6S5-2-64	None	800			3	



Page 14 of 18 TCDSN No.: EASA.IM.A.086 Date: 17 September 2024

Issue: 6

Type Certificate Holder<sup>1</sup> **Alpha Aviation Concept Ltd** Aircraft Type Designation<sup>1</sup> R2160D

Engine Manufacturer<sup>1</sup> **Lycoming Engines** Engine Type Designation<sup>1</sup> O-320-D2A

Noise Certification Basis Edition / Amendment Chapter<sup>1</sup> 10 (10.4a) ICAO Annex 16, Volume I

EASA Record No.	Propeller		Additional modifications essential to meet the requirements or needed to attain the certificated noise levels <sup>1</sup>	Maximum Take-Off Mass <sup>1</sup> (kg)	Take-Off dB(A)		See
	Manufacturer <sup>1</sup>	Propeller Type Designation <sup>1</sup>			Level <sup>1</sup>	Limit	Note
C443	Sensenich Propeller Manufacturing Company, Inc.	74DM6S5-2-64	None	900	73.1	81.7	-
C8798	Sensenich Propeller Manufacturing Company, Inc.	74DM6S5-2-66	None	900	73.1	81.7	-

<sup>&</sup>lt;sup>1</sup> See Note 1.



Page 15 of 18 TCDSN No.: EASA.IM.A.086 Date: 17 September 2024

Issue: 6

Type Certificate Holder<sup>1</sup> **Alpha Aviation Concept Ltd** Aircraft Type Designation<sup>1</sup> R2160D

Engine Type Designation<sup>1</sup> Engine Manufacturer<sup>1</sup> **Lycoming Engines** O-320-D2A

EASA Record No.	Propeller Manufacturer <sup>1</sup>	Propeller Type Designation <sup>1</sup>	Additional modifications essential to	Maximum Take-Off Mass¹ (kg)	Overflight dB(A)		500
			meet the requirements or needed to attain the certificated noise levels <sup>1</sup>		Level <sup>1</sup>	Limit	See Note
C441	Sensenich Propeller Manufacturing Company, Inc.	74DM6S5-2-64	Valid up to S/N 264; Maximum Take-off power and Highest power in the normal operating range set to 2600 rpm	800	68.8	70.7	-
C8797	Sensenich Propeller Manufacturing Company, Inc.	74DM6S5-2-66	Valid up to S/N 264; Maximum Take-off power and Highest power in the normal operating range set to 2600 rpm	800	68.8	70.7	-

<sup>&</sup>lt;sup>1</sup> See Note 1.



Page 16 of 18 TCDSN No.: EASA.IM.A.086 Date: 17 September 2024

Issue: 6

Type Certificate Holder<sup>1</sup> **Alpha Aviation Concept Ltd** Aircraft Type Designation<sup>1</sup> R2160i

Engine Manufacturer<sup>1</sup> **Lycoming Engines** Engine Type Designation<sup>1</sup> **AEIO-320-D2B** 

Noise Certification Basis Edition / Amendment Chapter<sup>1</sup> 10 (10.4a) ICAO Annex 16, Volume I

EASA	Propeller Manufacturer <sup>1</sup>	Propeller Type Designation <sup>1</sup>	Additional modifications essential to meet	Maximum	Take-Off dB(A)		See
Record No.			the requirements or needed to attain the certificated noise levels <sup>1</sup>	Take-Off Mass¹ (kg)	Level <sup>1</sup>	Limit	Note
C148	Sensenich Propeller Manufacturing Company, Inc.	74DM7S5-2-64	None	900	72.1	81.7	-

<sup>1</sup> See Note 1.



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Issue: 6 Date: 17 September 2024

### **CS-36 Amendment level**

ICAO, Annex 16, Volume I Amendment level	7	8	9	10	11-B	12	13
Corresponding CS-36 Amendment level	Initial	1	2	3	4	5	6

#### **TCDSN EASA.IM.A.086 Notes**

- 1. In cases where it is appropriate to issue a noise certificate, items so marked shall be included on EASA Form 45.
- 2. This aircraft type conforms with the provisions of Art 9 (2) of Regulation 2018/1139 without the need to comply with the Standards of ICAO Annex 16, Volume I, by virtue of the date of type certification. However individual examples of this type which were first issued with a certificate of airworthiness on or after 1 January 1980 are required to demonstrate compliance with the Standards of ICAO Annex 16, Volume I, Chapter 6.
- 3. This aircraft type conforms with the provisions of Art 9 (2) of Regulation 2018/1139 without the need to comply with the Standards of ICAO Annex 16, Volume I, by virtue of being specifically designed for aerobatic purposes.

TCDSN No.: EASA.IM.A.086 Page 18 of 18

Issue: 6 Date: 17 September 2024

## **Change Record**

Issue	Date	Changes
Issue 1	08 January 2007	Initial Issue
Issue 2	11 May 2007	Revised
Issue 3	15 December 2008	Revised
Issue 4	25 January 2011	Added record C10252, amended records C441, C444 and C8797
Issue 5	19 May 2015	TC holder name revised.
Issue 6	17 September 2024	Record C15345 added.

-END-