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# 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	



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

Engine Manufacturer<sup>1</sup>      **Lycoming**      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	Maximum Take-off mass <sup>1</sup> (kg)	Overflight dB(A)		See Note
					Level <sup>1</sup>	Limit	
C422	<b>McCauley</b>	<b>1A105/BCM7056</b>	<b>none</b>	<b>780</b>	<b>66.7</b>	<b>70.4</b>	-
C423	<b>Hoffmann Propeller</b>	<b>HO-14-178-115</b>	<b>none</b>	<b>780</b>	<b>66.7</b>	<b>70.4</b>	-

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



Type Certificate Holder	<b>Alpha Aviation Concept Ltd</b>	Aircraft Type Designation	<b>HR200-120</b>
Engine Manufacturer	<b>Lycoming</b>	Engine Type Designation	<b>O-235-J2A</b>
Noise Certification Basis	<b>ICAO Annex 16, Volume I</b>	Edition / Amendment	Chapter

EASA Record No.	Propeller Manufacturer	Propeller Type Designation	Additional modifications essential to meet the requirements or needed to attain the certificated noise levels	Maximum Take-off mass (kg)	Take-off dB(A)		See Note
					Level	Limit	
C9472	<b>McCauley</b>	<b>1A135/JCM7154</b>	<b>none</b>	<b>780</b>	-		<b>2</b>



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

Engine Manufacturer<sup>1</sup>      **Lycoming**      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 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	Maximum Take-off mass <sup>1</sup> (kg)	Overflight dB(A)		See Note
					Level <sup>1</sup>	Limit	
C424	<b>McCauley</b>	<b>1A135/JCM7147</b>	<b>none</b>	<b>780</b>	<b>70.3</b>	<b>70.4</b>	-

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



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

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

Noise Certification Basis      **ICAO Annex 16, Volume I**      Edition / Amendment      Chapter<sup>1</sup>      **10**

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	Maximum Take-off mass <sup>1</sup> (kg)	Take-off dB(A)		See Note
					Level <sup>1</sup>	Limit	
C93	<b>Hoffmann Propeller</b>	<b>HO-14-178-115</b>	<b>none</b>	<b>780</b>	<b>79.1</b>	<b>79.7</b>	-

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



Type Certificate Holder <sup>1</sup>	<b>Alpha Aviation Concept Ltd</b>	Aircraft Type Designation <sup>1</sup>	<b>HR200-160</b>
Engine Manufacturer <sup>1</sup>	<b>Lycoming</b>	Engine Type Designation <sup>1</sup>	<b>O-320-D2A</b>
Noise Certification Basis	<b>ICAO Annex 16, Volume I</b>	Edition / Amendment	Chapter <sup>1</sup> <b>10</b>

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	Maximum Take-off mass <sup>1</sup> (kg)	Take-off dB(A)		See Note
					Level <sup>1</sup>	Limit	
C94	<b>Sensenich</b>	<b>74DM6S5-2-66</b>	<b>none</b>	<b>800</b>	<b>66.1</b>	<b>80.1</b>	-

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



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

Engine Manufacturer<sup>1</sup>      **Lycoming**      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	Maximum Take-off mass <sup>1</sup> (kg)	Overflight dB(A)		See Note
					Level <sup>1</sup>	Limit	
C437	<b>McCauley</b>	<b>1A105/BCM7056</b>	<b>none</b>	<b>760</b>	<b>68.1</b>	<b>70.1</b>	-
C438	<b>Hoffmann Propeller</b>	<b>HO-14-178-115</b>	<b>none</b>	<b>760</b>	<b>68.1</b>	<b>70.1</b>	-

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





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

Engine Manufacturer<sup>1</sup>      **Lycoming**      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	Maximum Take-off mass <sup>1</sup> (kg)	Overflight dB(A)		See Note
					Level <sup>1</sup>	Limit	
C439	<b>McCauley</b>	<b>1A105/BCM7056</b>	<b>none</b>	<b>775</b>	<b>67.8</b>	<b>70.3</b>	-

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



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

Engine Manufacturer<sup>1</sup>      **Lycoming**      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 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	Maximum Take-off mass <sup>1</sup> (kg)	Overflight dB(A)		See Note
					Level <sup>1</sup>	Limit	
C440	<b>Sensenich</b>	<b>72CK56-0-56</b>	<b>none</b>	<b>800</b>	<b>67.5</b>	<b>70.7</b>	-

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



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

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

Noise Certification Basis      **ICAO Annex 16, Volume I**      Edition / Amendment      Chapter<sup>1</sup>      **10**

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	Maximum Take-off mass <sup>1</sup> (kg)	Take-off dB(A)		See Note
					Level <sup>1</sup>	Limit	
C146	<b>Sensenich</b>	<b>72CK56-0-54</b>	<b>none</b>	<b>800</b>	<b>75.2</b>	<b>80.1</b>	-

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



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

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

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

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	Maximum Take-off mass <sup>1</sup> (kg)	Take-off dB(A)		See Note
					Level <sup>1</sup>	Limit	
C10252	<b>Sensenich</b>	<b>74DM6S5-2-64</b>	<b>none</b>	<b>900</b>	<b>73.1</b>	<b>81.7</b>	<b>2</b>

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



Type Certificate Holder	<b>Alpha Aviation Concept Ltd</b>	Aircraft Type Designation	<b>R2160</b>
Engine Manufacturer	<b>Lycoming</b>	Engine Type Designation	<b>O-320-D2A</b>
Noise Certification Basis	<b>ICAO Annex 16, Volume I</b>	Edition / Amendment	Chapter

EASA Record No.	Propeller Manufacturer	Propeller Type Designation	Additional modifications essential to meet the requirements or needed to attain the certificated noise levels	Maximum Take-off mass (kg)	Take-off dB(A)		See Note
					Level	Limit	
C444	<b>Sensenich</b>	<b>74DM6S5-2-64</b>	<b>none</b>	<b>800</b>	-		<b>3</b>



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

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

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	Maximum Take-off mass <sup>1</sup> (kg)	Overflight dB(A)		See Note
					Level <sup>1</sup>	Limit	
C441	<b>Sensenich</b>	<b>74DM6S5-2-64</b>	<b>Valid up to S/N 264; Maximum Take-off power and Highest power in the normal operating range set to 2600 rpm</b>	<b>800</b>	<b>68.8</b>	<b>70.7</b>	-
C8797	<b>Sensenich</b>	<b>74DM6S5-2-66</b>	<b>Valid up to S/N 264; Maximum Take-off power and Highest power in the normal operating range set to 2600 rpm</b>	<b>800</b>	<b>68.8</b>	<b>70.7</b>	-

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



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

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

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

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	Maximum Take-off mass <sup>1</sup> (kg)	Take-off dB(A)		See Note
					Level <sup>1</sup>	Limit	
C443	<b>Sensenich</b>	<b>74DM6S5-2-64</b>	<b>none</b>	<b>900</b>	<b>73.1</b>	<b>81.7</b>	-
C8798	<b>Sensenich</b>	<b>74DM6S5-2-66</b>	<b>none</b>	<b>900</b>	<b>73.1</b>	<b>81.7</b>	-

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



Type Certificate Holder <sup>1</sup>	<b>Alpha Aviation Concept Ltd</b>	Aircraft Type Designation <sup>1</sup>	<b>R2160i</b>
Engine Manufacturer <sup>1</sup>	<b>Lycoming</b>	Engine Type Designation <sup>1</sup>	<b>AEIO-320-D2B</b>
Noise Certification Basis	<b>ICAO Annex 16, Volume I</b>	Edition / Amendment	Chapter <sup>1</sup> <b>10</b>

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	Maximum Take-off mass <sup>1</sup> (kg)	Take-off dB(A)		See Note
					Level <sup>1</sup>	Limit	
C148	<b>Sensenich</b>	<b>74DM7S5-2-64</b>	<b>none</b>	<b>900</b>	<b>72.1</b>	<b>81.7</b>	-

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





### **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 Article 6.1 of Regulation 216/2008 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 Article 6.1 of Regulation 216/2008 without the need to comply with the Standards of ICAO Annex 16, Volume I, by virtue of being specifically designed for aerobatic purposes.



### **Change Record**

<b>Issue</b>	<b>Date</b>	<b>Changes</b>
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.

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