

DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION

A65EU
Revision 3
SME Aero, Inc
MD3-160

March 27, 1996

TYPE CERTIFICATE DATA SHEET NO. A65EU

This data sheet, which is part of Type Certificate No. A65EU prescribes conditions and limitations under which the product for which the Type Certificate was issued meets the airworthiness requirements of the Federal Aviation Regulations (FAR).

Type Certificate Holder	SME Aero, Inc. 3226 Capital Circle Tallahassee, Florida
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I - Model Swiss Trainer MD3-160, Utility and aerobatic aircraft certified by the Swiss Federal Office for Civil Aviation on 22nd January, 1961

<u>Engine</u>	Avco Lycoming 0-320-D2A						
<u>Fuel</u>	AVGAS, 100 & 100 LL Octanes						
<u>Engine Limits</u>	<table border="0" style="width: 100%;"> <tr> <td>Normal rated power</td> <td style="text-align: center;">160 HP</td> <td style="text-align: right;">117.7 KW</td> </tr> <tr> <td>Full throttle RPM</td> <td style="text-align: center;">2700</td> <td></td> </tr> </table>	Normal rated power	160 HP	117.7 KW	Full throttle RPM	2700	
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<u>Propeller and Propeller Limits</u>	<table border="0" style="width: 100%;"> <tr> <td colspan="3">McCauley 1-C172 AGM 7462</td> </tr> <tr> <td>Weight</td> <td style="text-align: center;">14.9kg</td> <td style="text-align: right;">32.8lb</td> </tr> <tr> <td>Diameter</td> <td style="text-align: center;">1.88m</td> <td style="text-align: right;">74.0 in</td> </tr> <tr> <td colspan="3">Static RPM at permissible throttle setting, not over 2400, not under 2250</td> </tr> </table>	McCauley 1-C172 AGM 7462			Weight	14.9kg	32.8lb	Diameter	1.88m	74.0 in	Static RPM at permissible throttle setting, not over 2400, not under 2250		
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<u>Propeller Spinner</u>	Mt-Propeller	P/N 3.03.15.13.31
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Airspeed Limits (Continued)

	Utility Category (IAS) MPH/Kts	Acrobatic Category (IAS) MPH/kts
V _D	201/175	226/196
V _{NF}	182/158	201/175
V _C	142/123	159/138
V _A	127/110	139/121
V _{FE}	104/90	104/90

Flight Load Factor
Limits

	Utility Category	Acrobatic Category
Max Positive	+4.4g	+6g
Max Negative	-2.2	-3g

C. G. RangeMost forward C.G.

11.81 in (300 mm) aft datum at 1790 lb (812 kg)
13.82 in (351 mm) aft of datum at 2028 lb (920 kg)
Between the given values linear variation.

Most rearward C.G.

14.76 in (375mm) aft of datum.

Empty Weight C.G. Range

See Flight Manual, Section 6: Weight & Balance

Datum

Wing Leading Edge.

Leveling Means

Canopy rails.

Maximum Weight

	Utility Category	Aerobatic Category
Maximum Take-Off Weight TOW	2028 lb (920 kg)	1852 lb (40 kg)
Maximum Landing Weight MLW	1964 lb (891 kg)	1852 lb (840 kg)

Minimum Crew

1 pilot

Number of Seats

2 (side by side) 7.6 in (193.4 mm) aft of datum.

Maximum Luggage

110 lb (50kg) 38.6 in (980 mm) aft of datum

Fuel Quantity

Total	Usable	Arm
39.1 US Gal (148 lt)	38.0 US Gal (144 lt)	30.9 in aft of datum (785 mm)

<u>Oil Quantity</u>	Total	Arm	
	8 Quarts (7.6 lt)	39.8 in forward of datum (1011 mm)	
<u>Control Surface Deflection</u> (measured from neutral):	Flaps	Take-Off $15^{\circ} \pm 2^{\circ}$	Landing $48^{\circ} \pm 2^{\circ}$
	Ailerons	Up $30^{\circ} \pm 2^{\circ}$	down $20^{\circ} \pm 2^{\circ}$
	Elevator	Up $24^{\circ} \pm 2^{\circ}$	down $18^{\circ} \pm 2^{\circ}$
	Rudder	left $32^{\circ} \pm 2^{\circ}$	right $32^{\circ} \pm 2^{\circ}$
Trim Tabs	Aileron left	up $18^{\circ} \pm 2^{\circ}$	down $18^{\circ} \pm 2^{\circ}$
	Elevator	up $18^{\circ} \pm 2^{\circ}$	down $18^{\circ} \pm 2^{\circ}$
	Rudder	left $7^{\circ} \pm 1^{\circ}$	
Balance Tabs	Aileron right left at 0° trim, up 27° down 27° , $\pm 2^{\circ}$ right at 0° trim, up 27° down 27° , $\pm 2^{\circ}$		
	Rudder	left at 0° trim right at 0° trim	right $54^{\circ} \pm 2^{\circ}$ left $40^{\circ} \pm 2^{\circ}$
<u>Nose Wheel Steering</u>	Left 30°	right 44°	
<u>Serial Nos. Eligible</u>	S/N 003 to 005.		
<u>Certification Basic</u>	14 CFR Part 21.29, dated June 30th, 1988, utility and aerobatic category. (14 CFR Part 23, dated June 30th, 1988, utility and aerobatic category including amendments 23-1 to 23-35)		
<u>Equipment</u>	The basic required equipment as prescribed in the applicable airworthiness regulations (see Certification Basis) must be installed in the aircraft for certification.		
	Exhaust system installation of Either:		
	a) Long exhaust system (MM 78-00-00)		
	b) Short exhaust system (MM 78-00-00) in combination with the ventral fin P/N 0.03.12.59.52 on underside of rear fuselage.		
<u>NOTES</u>			
<u>Note 1.</u>	Current weight and balance data together with a list of equipment included in the certificated empty weight and loading instructions, when necessary, must be provided for each aircraft at the time of original certification.		
<u>Note 2.</u>	The placards listed in Section 2 of the Swiss FOCA - approved Airplane Flight Manual MD3-160 must be displayed.		

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