

**DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION**

G72EU
Revision 1
EVEKTOR, spol. s r.o.
L 13 SEH VIVAT
L 13 SDM VIVAT
November 10, 2015

TYPE CERTIFICATE DATA SHEET NO. G72EU

This data sheet, which is part of Type Certificate No. G72EU prescribes conditions and limitations under which the product for which the Type Certificate was issued meets the airworthiness requirements of the Federal Aviation Regulations.

Type Certificate Holder EVEKTOR, spol. s r.o.
Letecká 1008
686 04 Kunovice
Czech Republic

Type Certificate Holder Record AEROTECHNIK s.r.o. transferred TC G72EU to EVEKTOR, spol. s r.o. on August 14, 2001.

I. L13 SEH VIVAT, Self-Launching Motor Glider, Utility Category, approved November 12, 1993

Description The L13 SEH VIVAT is a two-seat (side-by-side), self-launching, all metal motor glider with a conventional tail configuration. It has a single wheel, retractable main landing gear, a tail wheel, and retractable outriggers. The wing is equipped with airbrakes on the upper and lower surface.

Engine Mikron III AE

Fuel Unleaded AVGAS, or Automotive Gas, 72 Octane Minimum

Oil SAE 15W50, API SE minimum classification (See Flight Manual).

Engine Limits

Flight Conditions	R.P.M.	Power (HP)	Power (kW)	Time Limit
Maximum Take-Off Power	2600	65	48	no restriction
Maximum Transient Overspeed	2860	-	-	3 seconds

Oil Pressure:	72.5 psi (500 kPa) maximum,	21.8 psi (150 kPa) minimum
Oil Temperature:	248°F (120°C) maximum,	104°F (40°C) minimum
Cylinder Head Temperature:	464°F (240°C) maximum,	158°F (70°C) minimum

Propeller and Propeller Limits Hoffmann Ho-V62R/L160BT
No. of Blades: 2
Pitch: Three position mechanically adjustable
Takeoff 10°45'±10', Cruise 14°45'±10', Feather 82°30'±10'
(3/4 Station)

Diameter (No Cutoff Allowed): 63 inches
Maximum RPM: 2860
Direction of Rotation: Counter-Clockwise (viewed from the rear)

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Airspeed Limits (C.A.S.)

Airspeed	Limits		
	KNOTS	m.p.h.	km/hour
V _{NE} (Never exceed)	114	131	210
V _{RA} (Never exceed in rough air)	90	103	165
V _A (Maneuvering)	90	103	165
V _{LO} (Maximum Landing Gear Operating Speed)	80	90	148

C.G. Position Range	24% - 38.5% MAC 47.87-55.16 inches (1216-1401 mm) aft of datum		
Empty Weight C.G. Position Range	33±2.5% MAC 52.40±1.26 inches (1331±32 mm) aft of datum		
Datum	Engine Firewall		
Leveling Means	Points marked on the sides of the fuselage and on the downward surfaces of the wings and horizontal tail surface.		
Maximum Take-Off Weight	1587 lbs (720 kg)		
Empty Weight	1102 lbs (500 kg) ± 3%		
Minimum Crew	One		
Number of Seats	2		
Equipment and Baggage Weight	Baggage 44 lbs (20kg)		
Fuel Tank Capacity (See NOTE 1)	Total: 13.2 U.S. gallons (50 liters) Usable: 13 U.S. gallons at 88.58 inches (49.3 liters at 2250 mm)		
Oil Capacity (See NOTE 1)	1.1 IMP gallons Total: 5.48 quarts at 2.76 inches (5.2 liters at 70 mm)		
Flight Load Factors	+5.3 to -2.65		
Control Surface Movements		<u>Up</u>	<u>Down</u>
	Aileron	32 degrees	13 degrees
	Elevator	32 degrees	22 degrees
		<u>Left</u>	<u>Right</u>
	Rudder	30 degrees	30 degrees

For measuring points and tolerances see Operating and Maintenance Manual.

II. L13 SDM VIVAT, Self-Launching Motor Glider, Utility Category, approved October 12, 1995

Description	The L13 SDM VIVAT is a two-seat (side-by-side), self-launching, all metal motor glider with a conventional tail configuration. It has a fixed two-wheel landing gear with a tail wheel. The wing is equipped with airbrakes on the upper and lower surface.
Engine	Mikron III AE
Fuel	Unleaded AVGAS, or Automotive Gas, 72 Octane Minimum
Oil	SAE 15W50, API SE minimum classification (See Flight Manual).

Engine Limits

Flight Conditions	R.P.M.	Power (HP)	Power (kW)	Time Limit
Maximum Take-Off Power	2600	65	48	no restriction
Maximum Transient Overspeed	2860	-	-	3 seconds

Oil Pressure: 72.5 psi (500 kPa) maximum, 21.8 psi (150 kPa) minimum
 Oil Temperature: 248°F (120°C) maximum, 104°F (40°C) minimum
 Cylinder Head Temperature: 464°F (240°C) maximum, 158°F (70°C) minimum

Propeller and
Propeller Limits

Hoffmann Ho-V62R/L160BT
 No. of Blades: 2
 Pitch: Three position mechanically adjustable
 Takeoff 10°45'±10', Cruise 14°45'±10', Feather 82°30'±10'
 (3/4 Station)
 Diameter (No Cutoff Allowed): 63 inches
 Maximum RPM: 2860
 Direction of Rotation: Counter-Clockwise (viewed from the rear)

Airspeed Limits (C.A.S.)

Airspeed	Limits		
	KNOTS	m.p.h.	km/hour
V _{NE} (Never exceed)	110	127	205
V _{RA} (Never exceed in rough air)	86	99	160
V _A (Maneuvering)	86	99	160

C.G. Position Range

24% - 38.5% MAC
 47.87-55.16 inches (1216-1401 mm) aft of datum

Empty Weight C.G.
Position Range

33±2.5% MAC
 52.40±1.26 inches (1331±32 mm) aft of datum

Datum

Engine Firewall

Leveling Means

Points marked on the sides of the fuselage and on the downward surfaces of the wings and horizontal tail surface.

Maximum Take-Off Weight 1587 lbs (720 kg)

Empty Weight 1124 lbs (510 kg) ± 3%

Minimum Crew One

Number of Seats 2

Equipment and Baggage Weight 33 lbs (15kg)

Fuel Tank Capacity (See NOTE 1) Total: 13.2 U.S. gallons (50 liters)
 Usable: 13 U.S. gallons at 88.58 inches (49.3 liters at 2250 mm)

Oil Capacity (See NOTE 1) 1.1 IMP gallons
 Total: 5.48 quarts at 2.76 inches (5.2 liters at 70 mm)

Flight Load Factors +5.3 to -2.65

Control Surface Movements		<u>Up</u>	<u>Down</u>
	Aileron	32 degrees	13 degrees
	Elevator	32 degrees	22 degrees
		<u>Left</u>	<u>Right</u>
	Rudder	30 degrees	30 degrees

For measuring points and tolerances see Operating and Maintenance Manual.

Data Pertinent to All Models

Serial Nos. Eligible	<p>The following serial numbers are eligible for a U.S. Standard Airworthiness Certificate if all import requirements of this TCDS are satisfied and applicable Airworthiness Directives have been implemented:</p> <p>L 13 SEH VIVAT: 930429 and subsequent. L 13 SDM VIVAT: 940509 and subsequent.</p>
Import Requirements	<p>A U.S. Standard Airworthiness Certificate may be issued on the basis of an Export Certificate of Airworthiness (Export C of A) signed by a representative of the Czech Republic civil airworthiness authority, the Civil Aviation Inspectorate (CAI), on behalf of the European Community. The Export C of A should contain the following statement: "The aircraft covered by this certificate has been examined, tested and found to conform to the type design approved under FAA Type Certificate No. G72EU and is in a condition for safe operation."</p>
Certification Basis	<p>JAR 22 Change 4 issued April 1, 1980 (Amendment 22/92/1, effective January 1, 1992), amended as follows:</p> <ul style="list-style-type: none"> - JAR 22.177(b) including AC 21.17-2, dated July 13, 1989, para. 6.c. (6)(i)(A), (B), (C), and (D); - JAR 22.207(b) including AC 21.17-2, para. 6.c. (6)(ii); - JAR 22.1545 including AC 21.17-2, para 6.c. (6)(iii); and AC 21.17-2, para. 6.c.(7). <p>The Czech Republic CAI, originally type certificated these gliders under its type certificate No. 92-04. The FAA validated these products under U.S. Type Certificate No. G72EU. Effective August 12, 2005, the European Aviation Safety Agency (EASA) began oversight of these models on behalf of the Czech Republic. The EASA TCDS is No. EASA.A.046.</p>
Validation Basis	<p>Type Certificate No. G72EU was issued pursuant to FAR 21.29 in validation of a CAI certification of compliance with the aforementioned certification basis, and in accordance with the standard airworthiness certificate provisions of FAR 21.183(c).</p>
Production Basis	<p>AEROTECHNIK CZ, s.r.o. Letiště Kunovice 686 04 Kunovice Czech Republic L 13 SDM VIVAT: S/N 950613-950615</p> <p>Manufacturer Historical Record:</p> <p>AEROTECHNIK s.r.o. Letiště Kunovice 686 04 Kunovice Czech Republic L 13 SEH VIVAT: S/N 950606 L 13 SDM VIVAT: S/N 950607-950610</p> <p>Aerotechnik – podnik ÚV Svazarmu Letiště Kunovice 686 04 Kunovice Czechoslovakia L 13 SEH VIVAT: S/N 910420-910425, 930429-930438, 940516-940521 L 13 SDM VIVAT: S/N 930515</p>

Equipment	<p>The basic required equipment as prescribed in the applicable airworthiness regulations (see Certification Basis) must be installed in the aircraft for airworthiness certification. In addition, the following items of equipment are required:</p> <ol style="list-style-type: none"> 1. Model L 13 SEH VIVAT – CAI approved (for the FAA) Flight Manual, Ref. Aerotechnik Document No. 950934, dated September 24, 1993, or later approved revision. <p style="margin-left: 40px;">Model L 13 SDM VIVAT – CAI approved (for the FAA) Flight Manual, Ref. Aerotechnik Document No. 730954, dated May 1995, or later approved revision.</p> <ol style="list-style-type: none"> 2. Standard Equipment: <ol style="list-style-type: none"> (1) Airspeed indicator in knots (1) Altimeter – altitude scale in feet, pressure scale in inches Hg (1) Variometer in feet/min (vertical speed) (1) Magnetic compass (1) Tachometer with elapsed time indicator (1) Cylinder head temperature indicator (1) Oil thermometer (1) Oil pressure gauge (1) Volt-ammeter (1) Fuel quantity indicator (1) Indicator of nitrogen pressure in wing main spar (2) Sets of safety harness
Service Information	<p>Each of the documents listed below must state that it is approved by the European Aviation Safety Agency (EASA) or – for approvals made before August 12, 2005 – by the Czech Republic CAI.</p> <ul style="list-style-type: none"> • Flight Manual • Operating and Maintenance Manual • Service Bulletins • Vendor Manuals <p>The FAA accepts such documents and considers them FAA-approved for type design data unless one of the following conditions exist:</p> <ul style="list-style-type: none"> • The documents change the limitations, performance, or procedures of the FAA approved manuals. <p>The FAA uses the post type validation procedures to approve these documents. The FAA may delegate case-by-case approval to EASA on behalf of the FAA for the U.S. type certificate. If this is the case it will be noted on the document.</p> <p><u>Available Documents for Model L 13 SEH VIVAT:</u> Flight Manual, Aerotechnik Document No. 950934, CAI approved September 24, 1993, or later approved revision. Operating and Maintenance Manual, Aerotechnik Document No. 730944, CAI approved June, 1993, or later approved revision.</p> <p><u>Available Documents for Model L 13 SDM VIVAT:</u> Flight Manual, Aerotechnik Document No. 730954, CAI approved May, 1995, or later approved revision. Operating and Maintenance Manual, Aerotechnik Document No. 730964, CAI approved September, 1995, or later approved revision.</p>

NOTES

NOTE 1. A current weight and balance report including list of equipment in the certificated empty weight and loading instructions, must be provided with each aircraft at the time of original airworthiness certification, and at all times thereafter.

The certificated empty weight and the corresponding center of gravity location must include full oil (10.65 lbs at 2.76 inches), and unusable fuel (1.2 lbs at 88.58 inches).

NOTE 2. Placards - Refer to Manufacturer's Operating and Maintenance Manual for a complete listing. All required placards as listed in the approved Flight Manual must be installed in the appropriate locations.

L 13 SEH VIVAT: Operating and Maintenance Manual, Document No. 730944

L 13 SDM VIVAT: Technical Description, Operating and Maintenance Manual, Document No. 730964

(1) The following placard must be displayed in clear view of the pilot:

“THE MARKINGS AND PLACARDS INSTALLED IN THIS SAILPLANE CONTAIN OPERATING LIMITATIONS WHICH MUST BE COMPLIED WITH WHEN OPERATING THIS SAILPLANE IN THE UTILITY CATEGORY. OTHER OPERATING LIMITATIONS WHICH MUST BE COMPLIED WITH WHEN OPERATING THIS SAILPLANE IN THIS CATEGORY ARE CONTAINED IN THE SAILPLANE FLIGHT MANUAL.”

...END...