Civil Aviation Authority Czech Republic

CAA CZ

TYPE-CERTIFICATE DATA SHEET

L 13 SL Vivat

Type Certificate Holder:

EVEKTOR, spol. s r.o.

Letecká 1008 686 04 Kunovice CZECH REPUBLIC

Manufacturer:

Aerotechnik – podnik ÚV Svazarmu

Letiště Kunovice 686 04 Kunovice CZECHOSLOVAKIA

Aerotechnik s.r.o.

686 04 Kunovice CZECH REPUBLIC

For variants: L 13 SL Vivat L 13 SDL Vivat

Issue 4: August 01, 2005

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SECTION A1: GENERAL, L 13 SL Vivat Type Design

Al. General

Da	ta Sheet No.: 92-01	Issue: 4	Date: August 01, 2005
1.	a) Type:b) Variant:	L 13 SL Vivat L 13 SL Vivat	
2.	Airworthiness Category:	Utility	
3.	Type Certificate Holder:	EVEKTOR, spol. s Letecká 1008 686 04 Kunovice CZECH REPUBLIC	r.o.
4.	Manufacturer:	Aerotechnik – podni Letiště Kunovice 686 04 Kunovice CZECHOSLOVAK	ik ÚV Svazarmu IA
5.	Certification Application Date:	June 15, 1990	
6.	CAA CZ Certification Date:	April 2, 1992	
<u>All.</u>	Certification Basis		
1.	Reference Date for determining the applicable requirements:	June 15, 1990	
2.	Certification Basis:		
3.	Airworthiness Requirements:	JAR-22, Sailplanes Change 4, issued Ma	and Powered Sailplanes, ay 7, 1987
4.	Requirements elected to comply:	None	
5.	Special Conditions:	Preliminary directiv equipment of power	ve LBA for certifying electrical electrical gliders 334-MS90.
6.	Exemptions:	None	
7.	Equivalent Safety Findings:	None	
8.	Environmental Standards:	ICAO Annex 16 and from January 1, 198	d LSL Noise Regulations, valid 9 including Change II-69/90

All. Technical Characteristics and Operational Limitations

1. Type Design Definition:

- List of drawings for powered sailplane L 13 SL Vivat, condition to March 31, 1992 or later CAA CZ approved revision.

- List of drawings for powered sailplane L 13 SL Vivat, condition to July 31, 1993 or later CAA CZ

approved revision, applicable for $\$ S/N 930510 and

			high	er.				
2.	Descrip	otion:	L 13 glide with Sing rear on th The the v	L 13 SL Vivat is a two-seater, all metal powered glider with side by side seats. The wing is equipped with air brakes on the upper and the lower side. Single- wheel retractable gear with the controllable rear wheel and with the supporting retractable gears on the wing tips. The gliders S/N 930508 and lower numbers have the wing equipped with the wing flaps.				
3.	. Equipment:			 Minimum equipment: 1 Airspeed indicator (up to 300 km/h) 1 Altimeter 1 Magnetic compass 1 Tachometer with a Engine hours 1 Fuel gauge 1 Oil thermometer 1 Oil pressure gauge 1 Nitrogen pressure gauge in the center-section flange 2 Safety harness 				
4.	Dimens	sions:						
		Span Length Height Wing Area	16.8 8.3 1 2.3 1 20.2	m n m ²				
5.	Engine	:						
	5.1	Model:	Limbach L	2000 E01				
	5.2	Type Certificate:	LBA No. 4. CAA CSFF	597 issued January 20, R TAC No. 92-93 issued	1989 1 September 3, 1992			
	5.3	Limitations:	Takeoff Po Max. Conti Cruising Po Max. Engir Max. Conti Idle RPM Max. Cylin Min. Cylino Max. Oil Pr Min. Oil Pr Max. Oil To Min. Oil To	wer nuous Power wer he RPM (max. 5 min) nuous RPM der Head Temperature der Head Temperature ressure essure emperature emperature	59 kW 51 kW 3400 RPM 3000 RPM 250°C 4 bar 1 bar 120°C 50°C			
6.	Propel	ler:						
	6.1 Model: MTV-			/-01-A				
	6.2 Type Certificate: LBA CAA			No. 32.130/53 of October 10, 1989 CSFR TAC No. 92-24 issued September 3, 1992				
	6.3 Nu	mber of Blades:	2					

	6.4 Diameter:	1600 mm				
	6.5 Sense of Rotation	anticlo	ockwise			
7.	Fluids:					
	7.1 Fuel:	Leade Leade	d aviation petro d car petrol	ol	min. 96 oct min. 96 oct	
	7.2 Oil:	Motor	-car engine oil	API p	berformance	rating SE minimum
8.	$\begin{array}{l} \mbox{Air Speeds:} & & \\ & \mbox{Manoeuvering Speed } V_A & \\ & \mbox{Never Exceed Speed } V_{NE} & \\ & \mbox{Rough Air Speed } V_{RA} & \\ & \mbox{Max. Flap Extended Speed } V_{FE} & \\ & \mbox{Max. Landing Gear Operating Speed } V_L & \\ \end{array}$.0	160 km/h IAS 205 km/h IAS 160 km/h IAS 105 km/h IAS 140 km/h IAS			
9.	Operational Capability:		VFR, cloud fl	ying (engine off)	
10.	Maximum Weights:					
	Maximum Takeoff weight: Maximum Weight of non-lifting parts: Empty Weight: Maximum Baggage Weight		720 kg 440 kg 500 kg ± 3% 20 kg			
11.	Centre of Gravity Range:		24 % ÷ 38.5 % [1216 - 1401 1	% MA mm fr	C (operating) om Referenc) e plane]
12.	Datum:		Firewall			
13.	Levelling Means:		The Reference points under t sailplane set the leveling pr Record).	te pla he fire to a h oints 3	ane is define ewall. For we norizontal po 3 and 4 (defin	ed by the support sighing is the sition according to ned by the Leveling
14.	Minimum Flight Crew:		1 (Pilot)			
15.	Maximum Passenger Seating Capacity:		1			
16.	Lifetime limitations:	Refer	to Maintenance	e Man	ual	
17.	Other limitations:	Load f	factors	+5.3 -2,65	G G	
18.	Deflection angles of control surfaces:	Ailero	n	l C	ıp lown	$\begin{array}{c} 32^\circ \pm 2^\circ \\ 13^\circ \pm 2^\circ \end{array}$
		Elevat	or	l C	ıp lown	$\begin{array}{l} 32^\circ\pm2^\circ\\ 22^\circ\pm2^\circ\end{array}$
		Air br	akes	เ 1	apper ower	$\begin{array}{l} 150 \text{ mm} \pm 10 \text{ mm} \\ 130 \text{ mm} \pm 10 \text{ mm} \end{array}$
		Rudde	er to both sides			$30^\circ \pm 2^\circ$

	Flaps			3°30' ± 1°
	Trim	tab	up down	$\begin{array}{l} 12^\circ \pm 1^\circ \\ 35^\circ \pm 1^\circ \end{array}$
AIV. Operating and Service Instruction	<u>IS</u>			
1. Flight Manual:		Flight Manual sailplane, issued approved revision	for L 13 S January 1992 , valid for S/N	L Vivat powered or later CAA CZ 930508 and lower
		Flight Manual sailplane-2nd edit CAA CZ approve and higher	for L 13 S ion, issued M d revision, va	L Vivat powered farch 1993 or later lid for S/N 930510
2. Operating and Maintenance Manual:				
- Powered sailplane		Document No. Operating Instruct L 13 SL Vivat g approved revision	730941 Tech ions and Main lider, issued , valid for S/N	nnical Description, atenance Manual for May, 1991 or later 930508 and lower
- Powered sailplane		Document No. Operating Instruct L 13 SL Vivat gl: approved revision	750941 Tech ions and Main ider, issued A , valid for S/N	nnical Description, ntenance Manual for ugust, 1993 or later 930510 and higher
- Engine		"Operation and M LIMBACH L 200	aintenance Ma 0 issued Febru	anual for engine ary, 1984
- Propeller		Document No. E- Mühlbauer MTV-	118, "User Ma 1-A, 6 th issue,	nual of propeller May 1990
AV. Notes				

1. EASA TC No. EASA.A.046 was issued for model L 13 SL Vivat aircraft on 12.08.2005.

SECTION A2: Reserved

SECTION B1: GENERAL, L 13 SDL Vivat Type Design

Bl. General

Da	ata Sheet No.: 92-01	Issue: 4 Date: August 01, 2005					
1.	a) Type:b) Variant:	L 13 SL Vivat L 13 SDL Vivat					
2.	Airworthiness Category:	Utility					
3.	Type Certificate Holder:	EVEKTOR, spol. s Letecká 1008 686 04 Kunovice CZECH REPUBLIC	r.o.				
4.	Manufacturer:	Aerotechnik – podni Letiště Kunovice 686 04 Kunovice CZECHOSLOVAK S/N 910428 Aerotechnik s.r.o. 686 04 Kunovice CZECH REPUBLIC S/N 950612	ik ÚV Svazarmu IA				
5.	Certification Application Date:						
6.	CAA CZ Certification Date:	February 9, 1994					
BII.	Certification Basis						
1.	Reference Date for determining the applicable requirements:						
2.	Certification Basis:						
3.	Airworthiness Requirements:	JAR-22 Sailplanes a Change 4, issued Ma Amendment 22/92/1	nd Powered Sailplanes, ay 7, 1987 including the				
4.	Requirements elected to comply:	None					
5.	Special Conditions:	Preliminary directiv equipment of power	e LBA for certifying electrical ed gliders 334-MS90.				
6.	Exemptions:	None					
7.	Equivalent Safety Findings:	None					
8.	Environmental Standards:	ICAO Annex 16 and from January 1, 198	d LSL Noise Regulations, valid 9 including Change II-69/90				

BIII. Technical Characteristics and Operational Limitations

1.	Type Design Definition:			List of Drawings for powered sailplane L 13 SDL Vivat, condition to January 21, 1994 or later CAA CZ approved revision				
2.	Descrip	tion:		L 13 SL Vivat is a two-seater, all metal powered glider with side by side seats. The wing is equipped with air brakes on the upper and the lower side. Two-wheel fixed landing gear with the tail gears.				
3.	3. Equipment:			 Minimum equipment: 1 Airspeed indicator (up to 300 km/h) 1 Altimeter 1 Magnetic compass 1 Tachometer with a Engine hours 1 Fuel gauge 1 Oil thermometer 1 Oil pressure gauge 1 Nitrogen pressure gauge in the center-section flange 2 Safety harness 				
4.	Dimens	ions: Span Length Height Wing Area		16.8 m 8.3 m 2.3 m 20.2 m ²				
5.	Engine	:						
	5.1	Model:	Limba	ach L 2000 E01				
	5.2	Type Certificate:	LBA I CAA	No. 4597 issued January 20, CSFR TAC No. 92-93 issued	1989 1 September 3, 1992			
	5.3	Limitations:	Takeo Max. 0 Cruisi Max. 1 Max. 0 Idle R Max. 0 Min. 0 Max. 0 Min. 0 Max. 0 Min. 0	ff Power Continuous Power ng Power Engine RPM (max. 5 min) Continuous RPM PM Cylinder Head Temperature Cylinder Head Temperature Oil Pressure Oil Pressure Oil Temperature Dil Temperature	59 kW 51 kW 3400 RPM 3000 RPM 250°C 4 bar 1 bar 120°C 50°C			
6.	Propeller:							
	6.1 Model: MTV			V-01-A				
	6.2 Type Certificate: LBA CAA			No. 32.130/53 of October 10, 1989 CSFR TAC No. 92-24 issued September 3, 1992				
	6.3 Nu	mber of Blades:	2					

	6.4 Diameter:	1600 mm					
	6.5 Sense of Rotation	anticlockwise					
7.	Fluids:						
	7.1 Fuel:	Leaded aviation petrol Leaded car petrol	min. 96 oc min. 96 oc	et. et.			
	7.2 Oil:	Motor-car engine oil API	e performance	rating SE minimum			
8.	Air Speeds: Manoeuvering Speed V_A Never Exceed Speed V_{NE} Rough Air Speed V_{RA}	160 km/h IAS 205 km/h IAS 160 km/h IAS					
9.	Operational Capability:	VFR, cloud flying	g (engine off)				
10.	Maximum Weights:						
	Maximum Takeoff weight: Maximum Weight of non-lifting parts: Empty Weight: Maximum Baggage Weight:	720 kg 440 kg 510 kg ± 3% 20 kg					
11.	Centre of Gravity Range:	24 % ÷ 38,5 % MAC (operating) [1216 - 1401 mm from Reference plane]					
12.	Datum:	Firewall					
13.	Levelling Means:	The Reference p points under the fi sailplane set to a the leveling point 4L and at lateral the Leveling Reco	plane is defin irewall. For w horizontal p s at longituda axis – No. 9L ord).	ned by the support eighing is the osition according to axis - No. 2L and and 9P (defined by			
14.	Minimum Flight Crew:	1 (Pilot)					
15.	Maximum Passenger Seating Capacity:	1					
16.	Lifetime limitations:	Refer to Maintenance Ma	anual				
17.	Other limitations:	Load factors +5.7	3 G 55 G				
18.	Deflection angles of control surfaces:	Aileron	up down	$\begin{array}{c} 32^\circ \pm 2^\circ \\ 13^\circ \pm 2^\circ \end{array}$			
		Elevator	up down	$\begin{array}{c} 32^\circ \pm 2^\circ \\ 22^\circ \pm 2^\circ \end{array}$			
		Air brakes	upper lower	$\begin{array}{l} 150 \text{ mm} \pm 10 \text{ mm} \\ 130 \text{ mm} \pm 10 \text{ mm} \end{array}$			
		Rudder to both sides		$30^\circ \pm 2^\circ$			

	Trim tab	up down	$\begin{array}{l} 12^\circ\pm1^\circ\\ 35^\circ\pm1^\circ\end{array}$
BIV. Operating and Service Instruction	<u>s</u>		
1. Flight Manual:	Flight Manual for Vivat, issued June • Document • Document • Document • Document	the Powered 1993 No. 750951 - No. 750952 - No. 750953 - No. 750954 -	Sailplane L 13 SDL Czech language English language German language USA
2. Operating and Maintenance Manual:			
- Powered sailplane	Technical Descrip Maintenance Mar Sailplane, issued Document Document Document Document	ption, Operational for L 13 September 19 No. 750961 - No. 750962 - No. 750963 - No. 750964 -	ng Instructions and SDL Vivat Powered 93 Czech language English language German language USA
- Engine	"Operation and M LIMBACH L 200	aintenance M 0 issued Febr	anual for engine uary, 1984
- Propeller BV. Notes	Document No. E- Mühlbauer MTV-	118, "User M 1-A, 6 th issue	anual of propeller , May 1990

1. EASA TC No. EASA.A.046 was issued for model L 13 SDL Vivat aircraft on 12.08.2005.

SECTION B2: Reserved