CIVIL AVIATION AUTHORITY
OF THE CZECH REPUBLIC

1622/58
Revision 5
HPH spol. s r.o.
L - 40
24.07.2018

TYPE CERTIFICATE DATA SHEET No. 1622/58

This data sheet which is a part of Type Certificate No. 1622/58 prescribes conditions and limitations under which the product for which the type certificate was issued meets the airworthiness requirements of the Czech Republic.

Model	Application Date	Certification Date
L - 40	-	27.09.1958

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Model L - 40

I. General

1.	Data Sheet No.:	1622/58
2.	Model:	L - 40
3.	Airworthiness category:	Normal
4.	Type Certificate Holder:	HPH spol. s r.o. Čáslavská 234, 284 01 Kutná Hora, Czech Republic
5.	Manufacturer:	Orličan n.p. Choceň
6.	Application Date:	-
7.	Certificate Date:	27.09.1958

II. Certification Basis

1.	Certification Basis:	British Civil Airworthiness Requirements (BCAR), normal category, Section D
2.	Special Conditions:	None
3.	Exemptions:	Control surfaces balance: Rudder and ailerons are not balanced by mass.
4.	Equivalent Safety Findings:	It was demonstrated by flight tests that there has not been detected any unsafe effects up to V_{DF}=336 km/h. VZLÚ Report No. 462, chapter II page No. 23 and chapter III page No. 48.
5.	Environmental Standards:	None

III. Technical Characteristics and Operational Limitations

1. Type Design Definition: S – L - 40.01 list of material

2. Description: Single engine low wing monoplane with sheltered cockpit, all-metal design normal empennage, mechanically retractable undercarriage and advanced tail wheel.

3. Equipment: Minimum equipment:
Magnetic compass
Turn and bank indicator
Variometer
Airspeed indicator up to 400 km/h
Altimeter
Tachometer 0 to 3600 RPM
Oil manometer
Fuel manometer
Oil temperature indicator up to 150 °C
Voltammeter
Supercharger manometer

4. Dimensions:

Span:	10,058 m
Length:	7,54 m
Height:	2,52 m
Wing Area:	14,5 m^2

5. Engine:

5.1.1. Model: M 332

5.1.2. Type Certificate: 92 - 08

5.1.3. Limitations:

Max. take-off performance	103 kW	5 minutes
Max. revolution	2700 RPM	5 minutes
Allowable revolution exceeding	2860 RPM	30 seconds
Max. instant revolution	3025 RPM	1 second

or

5.2.1. Model: M 332 A

5.2.2. Type Certificate: 92 – 08

5.2.3. Limitations:

Max. take-off performance	103 kW	5 minutes
Max. revolution	2700 RPM	5 minutes
Allowable revolution exceeding	2860 RPM	30 seconds
Max. instant revolution	3025 RPM	1 second

or

5.3.1. Model:	M 332 AK		
5.3.2. Type Certificate:	92 – 08		
5.3.3. Limitations:	Max. take-off performance	103 kW	5 minutes
	Max. revolution	2700 RPM	5 minutes
	Allowable revolution exceeding	2860 RPM	30 seconds
	Max. instant revolution	3025 RPM	1 second

6. Propeller:

6.1.1. Model:	VJ1.410/1850
6.1.2. Type Certificate:	783/58
6.1.3. Number of blades:	2
6.1.4. Diameter:	1850 mm
6.1.5. Sense of Rotation:	Left in flight direction.
	or
6.2.1. Model:	VJ1.410A/1800
6.2.2. Type Certificate:	783/58
6.2.3. Number of blades	2
6.2.4. Diameter	1800 mm
6.2.5. Sense of Rotation	Left in flight direction.

7. Fuel:
ESSO ICP 80
SHELL Avgas 80
SHELL Avgas 100 LL
BP 100 L
BL 78 dle ČSN 65 6510

8. Oil:
AEROSHELL Oil W 100
AEROSHELL Oil W 120
ELF Aviation AD 100
MOBIL Aero Oil 100
BP Aero D 100
CASTROL Aero AD 100
TOTAL Aero D 100

9. Air Speeds:	Max. never-exceeding airspeed V_{NE}	250 km/h IAS
	Max. allowable airspeed V_{NO}	225 km/h IAS
	Max. manoeuvring airspeed V_A	190 km/h IAS
	Max. rough air airspeed V_B	160 km/h IAS
	Max. airspeed with flaps extended V_{FE}	145 km/h IAS
	Max. airspeed with U/C extended V_{LE}	145 km/h IAS
	Max. airspeed for U/C extension V_{LO}	145 km/h IAS
10. Load factors:	At V_{NO} = 225 km/h	n = +3,57
		n = –1,55
	At V_{NE} = 250 km/h	n = +2,65
		n = –0
11. Maximum Operating Altitude:	6000 m ISA	
12. Weights:	Maximum take-off	950 kg
	Maximum landing	950 kg
	Maximum cockpit load	300 kg
	front seats	160 kg
	rear seats	160 kg
	Max. luggage weight in cockpit	30 kg
	Standard empty weight	534 kg
13. Centre of Gravity Range:	13 – 30 % MAC	
14. Datum:	Front side fire bulkhead – vertically	
15. Mean Aerodynamic Cord (MAC):	1,522 m	
16. Levelling Means:	Join rigging points 2 and 3 in horizontal plane	
17. Minimum Flight Crew:	1	
18. Number of seats:	4 include the pilot seat	
19. Baggage/Cargo Compartments:	None	

20. Control surface deflections:	Ailerons	up	20° ± 1°
		down	15° ± 1°
	Flaps	take-off	15° ± 1°
		landing	33° ± 1°
	Stabiliser	leading edge up	2°
		leading edge down	8°
	Elevator	up	15° ± 2°
		down	15° ± 2°
	Rudder	left	31,5° ± 2°
		right	28,5° ± 2°

21. Wheels and Tyres:

Main wheel:

K 420.00 with brake 20006-A3 with tyre 420 x 150

or K 420.1 with brake BH 420.1 with tyre 420 x 150

Tail wheel:

K 255 with tyre 255 x 110 4 PR

or K 290.1-00 with tyre 290 x 110 4 PR ANTI with modification according to Mandatory Bulletin L - 40/12a – Rev.1

22. Other Limitations: The aircraft is approved for Day VFR flights.

IV. Operating and Service Instructions

1. Letová příručka, issue 1991
2. Technická příručka pro letoun L 40 Meta Sokol
3. Příručka pro generální revizi letounu L 40, issue 1960
4. Předpis pro generální revizi letounu L 40 Dodatek č.1, issue 1995
5. Kusovník MPSt – HS1, issue 2.12.1957

V. Notes

None