



European Aviation Safety Agency

EASA

**TYPE-CERTIFICATE
DATA SHEET**

**EASA.A.445
Z-37 - Series**

Type Certificate Holder:

Aircraft Industries, a.s
Na Záhonech 1177,
686 04 Kunovice
CZECH REPUBLIC

Manufacturer:

LET, n.p.
686 04 Kunovice 1177
CZECH REPUBLIC

Type: Z - 37, and
Variants: Z - 37 - 2
Z - 37A
Z - 37A - 2

Issue 01: 27-Mar-2007

List of effective Pages:

Page	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
Issue	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Page	19	20	21	22	23	24	25	26	27	28								
Issue	1	1	1	1	1	1	1	1	1	1								



CONTENTS

SECTION A1: GENERAL, Z - 37 Type Design

- I. General
- II. Certification Basis
- III. Technical Characteristics and Operational Limitations
- IV. Operating and Service Instructions
- V. Notes

SECTION A2: Reserved

SECTION B1: GENERAL, Z - 37 - 2 Type Design

- I. General
- II. Certification Basis
- III. Technical Characteristics and Operational Limitations
- IV. Operating and Service Instructions
- V. Notes

SECTION B2: Reserved

SECTION C1: GENERAL, Z - 37A Type Design

- I. General
- II. Certification Basis
- III. Technical Characteristics and Operational Limitations
- IV. Operating and Service Instructions
- V. Notes

SECTION C2: Reserved

SECTION D1: GENERAL, Z - 37A - 2 Type Design

- I. General
- II. Certification Basis
- III. Technical Characteristics and Operational Limitations
- IV. Operating and Service Instructions
- V. Notes

SECTION D2: Reserved

CHANGE RECORD



SECTION A1: GENERAL, Z - 37 Type Design

A.I. General

1. a) Type: Z - 37
b) Variant: ---
2. Airworthiness Category: Restricted Category (see Note 1)
3. Type Certificate Holder: Aircraft Industries, a.s.
Na Záhonech 1177
686 04 Kunovice
CZECH REPUBLIC
4. Manufacturer: From S/N 00-01 to S/N 27-19
LET, n.p.
686 04 Kunovice 1177
CZECH REPUBLIC
5. Certification Application Date: --
6. The CAA CZ Certificate Date: 25.07.1966
7. EASA Type Certificate Date: 27-Mar-2007 (reissue, EASA)

EASA Type Certificate replaces Czech Type Certificate No. 66-05

A.II. Certification Basis

1. Reference Date for determining the applicable requirements --
2. Certification Basis --
3. Airworthiness Requirements: British Civil Airworthiness Requirements BCAR, Section D, valid to 01.12.1963
4. Requirements elected to comply: None
5. EASA Special Conditions: None
6. EASA Exemptions:

D2-7 5.1 The side component of the wind at which the directional controllability at taxiing complies with regulation is not determined.

D2-8 5.4.1 Longitudinal control forces change caused by concurrent increase of engine power and flaps retraction is 16 to 19 daN

D2-9 2.1.3 Non-compliance with requirement for control force balancing at aft position of center of gravity, maximum continuous power of the engine and maximum take-off weight at $0.9 v_{NO}$



D2-9 2.1.6 Non-compliance with requirement for control force balancing at forward position of center of gravity at descent flight with engine idle in the speed range from 1.2 to 1.4 v_{SO}

D5-5 3.3 Supplement - not installed emergency heating of suction air for carburetor

D5-8 7 Fuel and oil piping in the engine space is not fire-resistant

D5-8 2.1. Oil tank, its installation and attachment is not fireproof

D6-1 4.2.1 e) Not installed flight indicator of oil quantity that is required with regard to the engine oil usage for the setting of propeller blades

D6-7 8.1 Non-compliant color of position lights

D6-7 5.2 Non-compliant intensity of position lights

D6-7 5.3 Non-compliant intensity of position lights

7. EASA Equivalent Safety Findings: None

8. EASA Environmental Standards: None

A.III. Technical Characteristics and Operational Limitations

1. Type Design Definition: Specification Sheet , drawing No. Z37.0000-00/1
2. Description: Z - 37 aircraft is single-engine, low-wing aircraft of compound design with usage of metal and fabric materials.
3. Equipment:

Flight and navigation instruments:		
Magnetic compass		LUN 1221
Altimeter		LUN 1121
Airspeed indicator with over-pulling indication		LUN 1107
Vertical speed indicator		LUN 1147
Turn indicator		LUN 1213
Stall warning indication light		CHS – 39
Engine instruments:		
RPM indicator		LUN 1341
Blower pressure gauge		LUN 1401
Quadruplicate indicator of engine parameters		LUN 1527
Thermometer of cylinder heads		LUN 1380
Volt-ammeter		LUN 2715
Warning light of engine fire		SLC - 51
Inlet air temperature indicator		TUE – 48



Airframe and systems instruments:

Pneumatic system pressure gauge	MA-100
Earlier	MV-80-100
Chemical pressure gauge	AP-6
Chemical weight indicator	AP-6
Dual fuel quantity indicator	LUN 1626
Warning remaining fuel light	SLC - 51

4. Dimensions:

Wing Span:	12.224 m
Length:	8.550 m
Height:	2.898 m
Wing Area:	23.8 sq.m

5. Engine:

5.1 Model: M 462 R F

5.2 Type Certificate: EASA approved (CAA CZ TC No. 66-04) (see Note 2)

5.3 Limitations:

Maximum take-off power

Power	315 HP
Speed	2450 RPM

Maximum continuous (nominal) power:

Power	280 HP
Speed	2200 RPM

Maximum cruise power:

Power	195 HP
Speed	1900-1950 RPM

6. Propeller:

6.1 Model: V 520 /7/

6.2 Type Certificate: EASA approved (CAA CZ TC No. 66-01) (see Note 3)

6.3 Number of blades: 2

6.4 Sense of Rotation: Anticlockwise in the view of the flight direction

6.5 Diameter: 2700 mm

7. Fluids

7.1 Fuel:

Jet fuel ESSO ICP 80
SHELL Avgas 80
SHELL Avgas 100 LL
BP 100 L
BL 78 according to ČSN 65 6510

7.2 Oil:

AEROSHELL Oil W 100, 120
ELF Aviation AD 100
MOBIL Aero D 100
BP Aero Oil 100
CASTROL Aero AD 100
TOTAL Aero D 100



7.3 Coolant	None
8. Fluid capacities	
8.1. Fuel:	Total: Main Fuel Tank 127 liters Auxiliary Fuel Tank 127 liters Usable: Main Fuel Tank 126.5 liters Auxiliary Fuel Tank 126.5 liters
8.2. Oil:	17.3 liters
9. Air Speeds:	Never exceeding speed v_{NE} 270 km/h IAS Maximum speed for normal manoeuvres v_{NO} 175 km/h IAS Design manoeuvring speed v_A 170 km/h IAS Maximum flaps extended speed v_{FE} 150 km/h IAS
10. Maximum Operating Altitude:	Without agricultural equipment 4000 m With agricultural equipment 3670 m
11. All-Weather Operation Capability	VFR-Day operations
12. Maximum Weights:	Maximum take-off weight for aerial works 1850 kg cargo 1725 kg
13. Center of Gravity Range:	23 - 31 % MAC
14. Datum:	Fuselage System frame No. 1 (firewall)
15. Mean Aerodynamic Cord (MAC):	2.0 m
16. Leveling Means:	Identical with the basic fuselage level – see the Aircraft Maintenance Manual
17. Minimum Flight Crew:	1
18. Number of seats:	2 including the pilot seat, category for aerial works only
19. Baggage/Cargo Compartments:	for aerial works, (in chemical tank, 650 l volume) 600 kg for cargo 490 kg
20. Wheels and Tyres:	Main landing gear wheel K 560.3-00-7 with tyre 556 x 163 mm Model 2 Rear landing gear wheel K 290-00-7 with tyre 290 x 110 mm Ant shimmy



21. Control surface deflections:

Ailerons	up	$+26^{\circ} \pm 1^{\circ}$
	down	$-18,5^{\circ} \pm 1^{\circ}$
Elevator	up	$+35^{\circ} - 0^{\circ} + 2^{\circ}$
	down	$-20^{\circ} - 0^{\circ} + 2^{\circ}$
Rudder		$\pm 26^{\circ} + 2^{\circ} - 1^{\circ}$
Inner flaps	retracted	8.5°
	take-off	18.5°
	landing	53.5°
Outer flaps	retracted	5°
	take-off	15°
	landing	50°

22. Load factors:

Aerial works	$+ 3.5 \text{ g} - 1.4 \text{ g}$
Cargo	$+ 3.8 \text{ g} - 1.52 \text{ g}$



A.IV. Operating and Service Instructions

1. Flight manual:

-In Czech language: Letová příručka pro letoun Z – 37
Do-Z37-1010.0

2. Maintenance manual:

-In Czech language: Technický popis letounu Z – 37
Do-Z37-1023.0

-In Czech language: Příručka pro obsluhu a údržbu letounu Z – 37
Do-Z37-1031.0

-In Czech language: Technický popis a návod k obsluze násypného zařízení LN 2-00
Do-Z37-1042.0

-In Czech language: Popis a návod k obsluze nádrže mechanického náhonu
Do-Z37-1045.0

-In Czech language: Popis a návod k obsluze rozmetacího a poprašovacího zařízení
Do-Z37-1040.0

-In Czech language: Popis a návod k obsluze postřikovacího zařízení, vodní trysky, olejové trysky
Do-Z37-1041.0

3. Operational manuals for engine and propeller:

-In Czech language: Příručka: Letecký motor M 462 RF - technický popis a návod k obsluze

-In Czech language: Technický popis a provozní instrukce vrtule V 520



A.V. Notes

- Note 1: No general restrictions applicable. Any restrictions necessary for a single airplane to be listed in the Certificate of Airworthiness of the affected airplane
- Note 2: The EASA type certification standard includes that of CAA Cz TC No. 66-04 based on individual EU member state acceptance or certification of this standard prior to 28 September 2003. Other standards confirming to TC/TCDS standards certificated by individual EU member state prior to 28 September 2003 are also acceptable.
- Note 3: The EASA type certification standard includes that of CAA Cz TC No. 66-01 based on individual EU member state acceptance or certification of this standard prior to 28 September 2003. Other standards confirming to TC/TCDS standards certificated by individual EU member state prior to 28 September 2003 are also acceptable.

SECTION A2: Reserved



SECTION B1: GENERAL, Z - 37 - 2 Type Design

B.I. General

1. a) Type: Z - 37
b) Variant: Z - 37 - 2
 2. Airworthiness Category: Restricted (see Note 1)
 3. Type Certificate Holder: Aircraft Industries, a.s.
Na Záhonech 1177
686 04 Kunovice
CZECH REPUBLIC
 4. Manufacturer: From S/N 00-10
LET, n.p.
686 04 Kunovice 1177
CZECH REPUBLIC
 5. Certification Application Date: --
 6. The CAA CZ Certificate Date: 07.05.1967
 7. EASA Type Certificate Date: 27-Mar-2007 (reissue, EASA)
- EASA Type Certificate replaces Czech Type Certificate No. 66-05

B.II. Certification Basis

1. Reference Date for determining the applicable requirements --
2. Certification Basis --
3. Airworthiness Requirements: British Civil Airworthiness Requirements BCAR, Section D, valid to date 01.12.1963
4. Requirements elected to comply: None
5. EASA Special Conditions: None
6. EASA Exemptions:
 - D2-7 5.1 The side component of the wind at which the directional controllability at taxiing complies with regulation is not determined.
 - D2-8 5.4.1 Longitudinal control forces change caused by concurrent increase of engine power and flaps retraction is 16 to 19 daN
 - D2-9 2.1.3 Non-compliance with requirement for control force balancing at aft position of center of gravity, maximum continuous power of the engine and maximum take-off weight at $0.9 v_{NO}$



D2-9 2.1.6 Non-compliance with requirement for control force balancing at forward position of center of gravity at descent flight with engine idle in the speed range from 1.2 to 1.4 v_{SO}

D5-5 3.3 Supplement - not installed emergency heating of suction air for carburetor

D5-8 7 Fuel and oil piping in the engine space is not fire-resistant

D5-8 2.1.2 Oil tank, its installation and attachment is not fireproof

D6-1 4.2.1 e) Not installed flight indicator of oil quantity that is required with regard to the engine oil usage for the setting of propeller blades

D6-7 8.1 Non-compliant color of position lights

D6-7 5.2 Non-compliant intensity of position lights

D6-7 5.3 Non-compliant intensity of position lights

7. EASA Equivalent Safety Findings: None

8. EASA Environmental Standards: None

B.III. Technical Characteristics and Operational Limitations

1. Type Design Definition: Specification Sheet , drawing No. Z37.0000-00/1
2. Description: Z - 37 aircraft is two-seat, single-engine, low-wing aircraft of compound design using metal and fabric materials and with dual control system.
3. Equipment:
 - Standard equipment of the forward cockpit:
 - Flight and navigation instruments:
 - Magnetic compass LUN 1221
 - Altimeter LUN 1121
 - Airspeed indicator with over-pulling indication LUN 1107
 - Vertical speed indicator LUN 1147
 - Turn indicator LUN 1213
 - Stall warning indication light CHS – 39
 - Engine instruments:
 - RPM indicator LUN 1312
 - Blower pressure gauge LUN 1401
 - Quadruplicate indicator of engine parameters LUN 1527



	Cylinder heads thermometer	LUN 1380
	Volt-ammeter	LUN 2715 from 3-rd series
	or	VA 240 to 2-nd series
	Warning light of engine fire	SLC - 51
	Inlet air temperature indicator	TUE - 48
	Dynamo warning light	SLC – 51
	Airframe and systems instruments:	
	Pneumatic system thermometer	MV-80
	Fuel indicator	LUN 1626
	Remaining fuel warning light	SLC – 51
	Standard equipment of the rear cockpit:	
	Flight and navigation instruments:	
	Altimeter	LUN 1121
	Airspeed indicator	LUN 1106
	Vertical speed indicator	LUN 1147
	Turn indicator	LUN 1213
	Engine instruments:	
	RPM indicator	LUN 1312
	Blower pressure gauge	LUN 1401
	Quadruple indicator of engine parameters	LUN 1527
	Warning light of engine fire	SLC - 51
	Inlet air temperature indicator	TUE - 48
	Dynamo warning light	SLC - 51
	Push-button for over-switching of indicators	A 09-9430-64
	Airframe and systems instruments:	
	Fuel cock position warning light	SLC - 51
	Mechanical indicator of the elevator trim tab position	Z37.4411-00
	Mechanical indicator of the oil cooler flap position	Z237.8230-00
	Mechanical indicator of the sun-blind position	Z237.7360-00
4. Dimensions:	Wing Span:	12.224 m
	Length:	8.550 m
	Height:	2.898 m
	Wing Area	23.8 sq.m
5. Engine:		
5.1 Model:	M 462 R F	
5.2 Type Certificate:	EASA approved (CAA CZ TC No. 66-04) (see Note 2)	
5.3 Limitations:	Maximum take-off power	
	Power	315 HP
	Speed	2450 RPM
	Maximum continuous power	
	Power	280 HP
	Speed	2200 RPM



	Maximum cruise power		
	Power		195 HP
	Speed		1900-1950 RPM
6.	Propeller:		
6.1	Model:		V 520 /7/
6.2	Type Certificate:		EASA approved (CAA Cz TC No. 66-01) (see Note 3)
6.3	Number of blades:		2
6.4	Sense of Rotation:		Anticlockwise in the view of the flight direction
6.5	Diameter:		2700 mm
7.	Fluids		
7.1.	Fuel:		Jet fuel ESSO ICP 80 SHELL Avgas 80 SHELL Avgas 100 LL BP 100 L BL 78 according to ČSN 65 6510
7.2.	Oil:		AEROSHELL Oil W 100, 120 ELF Aviation AD 100 MOBIL Aero D 100 BP Aero Oil 100 CASTROL Aero AD 100 TOTAL Aero D 100
8.	Fluid capacities		
8.1.	Fuel:	Total:	
		Main Fuel Tank	127 liters
		Auxiliary Fuel Tank	127 liters
		Usable:	
		Main Fuel Tank	126.5 liters
		Auxiliary Fuel Tank	126.5 liters
8.2.	Oil:		17.3 litres
9.	Air Speeds:		
	Never exceeding speed	v_{NE}	270 km/h IAS
	Maximum speed for normal manoeuvres	v_{NO}	175 km/h IAS
	Design manoeuvring speed	v_A	170 km/h IAS
	Maximum flaps extended speed	v_{FE}	150 km/h IAS
10.	Maximum Operating Altitude:		3785 m (only without agricultural equipment)
11.	All-weather Operational Capability		VFR-Day operations
12.	Maximum Weights:		
	Maximum take-off weight		1600 kg



13. Center of Gravity Range:	23 - 31 % MAC		
14. Datum:	Fuselage System frame No. 1 (firewall)		
15. Mean Aerodynamic Chord (MAC):	2.0 m		
16. Levelling Means:	Identical with the basic fuselage level – see the Aircraft Maintenance Manual		
17. Minimum Flight Crew:	1		
18. Number of seats:	2 including the pilot seat		
19. Baggage/Cargo Compartments:	38 kg		
20. Wheels and Tyres:	Main landing gear wheel K 560.3-00-7 with tyre 556 x 163 mm Model 2 Rear landing gear wheel K 290-00-7 with tyre 290 x 110 mm Ant shimmy		
21. Control surface deflections:	Ailerons	up down	$+26^{\circ} \pm 1^{\circ}$ $-18,5^{\circ} \pm 1^{\circ}$
	Elevator	up down	$+35^{\circ} - 0^{\circ} + 2^{\circ}$ $-20^{\circ} - 0^{\circ} + 2^{\circ}$
	Rudder		$+26^{\circ} + 2^{\circ} - 1^{\circ}$
	Inner flaps	retracted take-off landing	8.5° 18.5° 53.5°
	Outer flaps	retracted take-off landing	5° 15° 50°
22. Load factors:	Limit load factor		+ 3.8 g - 1.4 g



B.IV. Operating and Service Instructions

1. Flight manual:

- In Czech language: Letová příručka pro letoun Z – 37
Do-Z37-1010.0
- In Czech language: Doplněk k letové příručce pro letoun Z - 37 – 2
Do-Z37-3022.0

2. Maintenance manual:

- In Czech language: Technický popis letounu Z – 37
Do-Z37-1023.0
- In Czech language: Doplněk k technickému popisu pro letoun Z-37-2
Do-Z37-3022.0
- In Czech language: Příručka pro obsluhu a údržbu letounu Z – 37
Do-Z37-1031.0
- In Czech language: Doplněk k příručce pro obsluhu a údržbu letounu Z - 37 – 2
Do-Z37-3022.0
- In Czech language: Palubní a elektrické přístroje použité na letounu Z – 37
Do-Z37-3311.0

3. Operational manuals for engine and propeller:

- In Czech language: Příručka: Letecký motor M 462 RF - technický popis a návod k obsluze
- In Czech language: Technický popis a provozní instrukce vrtule V 520



B.V. Notes

- Note 1: No general restrictions applicable. Any restrictions necessary for a single airplane to be listed in the Certificate of Airworthiness of the affected airplane
- Note 2: The EASA type certification standard includes that of CAA Cz TC No. 66-04 based on individual EU member state acceptance or certification of this standard prior to 28 September 2003. Other standards confirming to TC/TCDS standards certificated by individual EU member state prior to 28 September 2003 are also acceptable.
- Note 3: The EASA type certification standard includes that of CAA Cz TC No. 66-01 based on individual EU member state acceptance or certification of this standard prior to 28 September 2003. Other standards confirming to TC/TCDS standards certificated by individual EU member state prior to 28 September 2003 are also acceptable.

SECTION B2: Reserved



SECTION C1: GENERAL, Z - 37A Type Design

C.I. General

1. a) Type: Z - 37
b) Variant: Z - 37A
2. Airworthiness Category: Restricted Category (see Note 1)
3. Type Certificate Holder: Aircraft Industries, a.s.
Na Záhonech 1177
686 04 Kunovice
CZECH REPUBLIC
4. Manufacturer: From S/N 01-05 to S/N 25-38
LET, n.p.
686 04 Kunovice 1177
CZECH REPUBLIC
5. Certification Application Date: --
6. The CAA CZ Certificate Date: 03.01.1971
7. EASA Type Certificate Date: 27-Mar-2007

EASA Type Certificate replaces Czech Type Certificate No. 66-05

C.II. Certification Basis

1. Reference Date for determining the applicable requirements --
2. Certification Basis --
3. Airworthiness Requirements: British Civil Airworthiness Requirements BCAR, Section D, valid to date 01.12.1963
4. Requirements elected to comply: None
5. EASA Special Conditions: None
6. EASA Exemptions:
 - D2-7 5.1 The side component of the wind at which the directional controllability at taxiing complies with regulation is not determined.
 - D2-8 5.4.1 Longitudinal control forces change caused by concurrent increase of engine power and flaps retraction is 16 to 19 daN
 - D2-9 2.1.3 Non-compliance with requirement for control force balancing at aft position of center of gravity, maximum continuous power of the engine and maximum take-off weight at $0.9 v_{NO}$



D2-9 2.1.6	Non-compliance with requirement for control force balancing at forward position of center of gravity at decent flight with engine idle in the speed range from 1.2 to 1.4 v_{SO}
D5-5 3.3	Supplement - not installed emergency heating of suction air for carburetor
D5-8 7	Fuel and oil piping in the engine space is not fire-resistant
D5-8 2.1.2	Oil tank, its installation and attachment is not fireproof
D6-1 4.2.1	e) Not installed flight indicator of oil quantity that is required with regard to the engine oil usage for the setting of propeller blades
D6-7 8.1	Non-compliant color of position lights
D6-7 5.2	Non-compliant intensity of position lights
D6-7 5.3	Non-compliant intensity of position lights

- | | |
|-------------------------------------|------|
| 7. EASA Equivalent Safety Findings: | None |
| 8. EASA Environmental Standards: | None |

C.III. Technical Characteristics and Operational Limitations

- | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|--|--------------------------|------------------------------------|------------------|------------|-----------|---------------|---|------------|--------------------------|---------------|----------------|------------|--------------------------------|----------|---------------------|---------------|-------------|-----------------------|------------|--|------------|-------------------------------|------------|--------------|------------|------------------------------|----------|---------------------------------|----------|
| 1. Type Design Definition: | Specification Sheet, drawing No. Z37.0000-00/1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2. Description: | Z - 37 aircraft is single-engine, low-wing aircraft of compound design with usage of metal and fabric materials. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 3. Equipment: | <table><tr><td>Aircraft up to S/N 01-05</td></tr><tr><td>Flight and navigation instruments:</td></tr><tr><td>Magnetic compass</td><td>LUN 1221-8</td></tr><tr><td>Altimeter</td><td>LUN 1121.02-8</td></tr><tr><td>Airspeed indicator with over-pulling indication</td><td>LUN 1107-8</td></tr><tr><td>Vertical speed indicator</td><td>LUN 1147.10-8</td></tr><tr><td>Turn indicator</td><td>LUN 1213-8</td></tr><tr><td>Stall warning indication light</td><td>CHS – 39</td></tr><tr><td>Engine instruments:</td></tr><tr><td>RPM indicator</td><td>LUN 1341-48</td></tr><tr><td>Blower pressure gauge</td><td>LUN 1401-8</td></tr><tr><td>Quadruplicate indicator of engine parameters</td><td>LUN 1527-8</td></tr><tr><td>Heads temperature thermometer</td><td>LUN 1380-8</td></tr><tr><td>Volt-ammeter</td><td>LUN 2715-8</td></tr><tr><td>Warning light of engine fire</td><td>SLC - 51</td></tr><tr><td>Inlet air temperature indicator</td><td>TUE – 48</td></tr></table> | Aircraft up to S/N 01-05 | Flight and navigation instruments: | Magnetic compass | LUN 1221-8 | Altimeter | LUN 1121.02-8 | Airspeed indicator with over-pulling indication | LUN 1107-8 | Vertical speed indicator | LUN 1147.10-8 | Turn indicator | LUN 1213-8 | Stall warning indication light | CHS – 39 | Engine instruments: | RPM indicator | LUN 1341-48 | Blower pressure gauge | LUN 1401-8 | Quadruplicate indicator of engine parameters | LUN 1527-8 | Heads temperature thermometer | LUN 1380-8 | Volt-ammeter | LUN 2715-8 | Warning light of engine fire | SLC - 51 | Inlet air temperature indicator | TUE – 48 |
| Aircraft up to S/N 01-05 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Flight and navigation instruments: | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Magnetic compass | LUN 1221-8 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Altimeter | LUN 1121.02-8 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Airspeed indicator with over-pulling indication | LUN 1107-8 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Vertical speed indicator | LUN 1147.10-8 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Turn indicator | LUN 1213-8 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Stall warning indication light | CHS – 39 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Engine instruments: | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| RPM indicator | LUN 1341-48 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Blower pressure gauge | LUN 1401-8 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Quadruplicate indicator of engine parameters | LUN 1527-8 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Heads temperature thermometer | LUN 1380-8 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Volt-ammeter | LUN 2715-8 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Warning light of engine fire | SLC - 51 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Inlet air temperature indicator | TUE – 48 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |



Airframe and systems instruments:

Pneumatic system thermometer	MA-100
Chemical pressure gauge	AP-6
Chemical weight indicator	LUN-1472-8
Fuelmeter	LUN 1626-8
Warning light of remaining fuel	SLC – 51

4. Dimensions:

Wing Span:	12.224 m
Length:	8.550 m
Height:	2.898 m
Wing Area:	23.8 sq.m

5. Engine

5.1 Model:

M 462 R F

5.2 Type Certificate:

EASA approved (CAA Cz TC No. 66-04) (see Note 2)

5.3 Limitations:

Maximum take-off power:

Power	315 HP
Speed	2450 RPM

Maximum continuous power:

Power	280 HP
Speed	2200 RPM

Maximum cruise power:

Power	195 HP
Speed	1900-1950 RPM

6. Propeller:

6.1 Model:

V 520 /7/

6.2 Type Certificate:

EASA approved (CAA Cz TC No. 66-01) (see Note 3)

6.3 Number of blades:

2

6.4 Sense of Rotation:

Anticlockwise in the view of the flight direction

6.5 Diameter:

2700 mm

7. Fluids:

7.1 Fuel:

Jet fuel ESSO ICP 80
SHELL Avgas 80
SHELL Avgas 100 LL
BP 100 L
BL 78 according to ČSN 65 6510

7.2 Oil:

AEROSHELL Oil W 100, 120
ELF Aviation AD 100
MOBIL Aero D 100
BP Aero Oil 100
CASTROL Aero AD 100
TOTAL Aero D 100



8. Fluid capacities:

8.1. Fuel:

Total:		
	Main Fuel Tank	127 liters
	Auxiliary Fuel Tank	127 liters
Usable:		
	Main Fuel Tank	126.5 liters
	Auxiliary Fuel Tank	126.5 liters

8.2. Oil:

17,3 litres

9. Air Speeds:

Never exceeding speed	V_{NE}	270 km/hr IAS
Maximum speed for normal maneuvers	V_{NO}	175 km/hr IAS
Design manoeuvring speed	V_A	170 km/hr IAS
Maximum flaps extended speed	V_{FE}	150 km/hr IAS

10. Maximum Operating Altitude:

Without agricultural equipment	4000 m
With agricultural equipment	3670 m

11. All-weather Operational Capability

VFR-Day operations

12. Maximum Weights:

Maximum take-off weight	
- for aerial works	1850 kg
- cargo	1725 kg

13. Center of Gravity Range:

23 - 31 % MAC

14. Datum:

Fuselage System frame No. 1 (firewall)

15. Mean Aerodynamic Chord (MAC):

2.0 m

16. Leveling Means:

Identical with the basic fuselage level – see the Aircraft Maintenance Manual

17. Minimum Flight Crew:

1

18. Number of seats:

2 including the pilot seat, category for aerial works only

19. Baggage/Cargo Compartments:

for aerial works, (in chemical tank, 650 l volume)	600 kg
for cargo	490 kg

20. Wheels and Tyres:

Main landing gear wheel K 560.3-00-7
with tyre 556 x 163 mm Model 2

Rear landing gear wheel K 290-00-7
with tyre 290 x 110 mm Ant shimmy



21. Control surface deflections:	Ailerons	up down	$+26^{\circ} \pm 1^{\circ}$ $-18,5^{\circ} \pm 1^{\circ}$
	Elevator	up down	$+35^{\circ} - 0^{\circ} + 2^{\circ}$ $-20^{\circ} - 0^{\circ} + 2^{\circ}$
	Rudder		$\pm 26^{\circ} + 2^{\circ} - 1^{\circ}$
	Inner flaps	retracted take-off landing	8.5° 18.5° 53.5°
	Outer flaps	retracted take-off landing	5° 15° 50°
22. Load factors:	For aerial works		$+ 3.5 \text{ g} - 1.4 \text{ g}$
	Cargo		$+ 3.8 \text{ g} - 1.52$



C.IV. Operating and Service Instructions

1. Flight manual:

-In Czech language: Letová příručka pro letoun Z - 37A
Do-Z37-1011.1

2. Maintenance manual:

-In Czech language: Technický popis letounu Z - 37A
Do-Z37-1021.1

-In Czech language: Příručka pro obsluhu a údržbu letounu Z - 37A
Do-Z37-1031.0

-In Czech language: Technický popis a návod k obsluze násypného zařízení LN 2-00
Do-Z37-1042.0

-In Czech language: Popis a návod k obsluze nádrže mechanického náhonu
Do-Z37-1045.0

-In Czech language: Popis a návod k obsluze rozmetacího a poprašovacího zařízení
Do-Z37-1040.0

-In Czech language: Popis a návod k obsluze postřikovacího zařízení, vodní trysky, olejové trysky
Do-Z37-1041.0

3. Operational manuals for engine and propeller:

-In Czech language: Příručka: Letecký motor M 462 RF - technický popis a návod k obsluze

-In Czech language: Technický popis a provozní instrukce vrtule V 520



C.V. Notes

- Note 1: No general restrictions applicable. Any restrictions necessary for a single airplane to be listed in the Certificate of Airworthiness of the affected airplane
- Note 2: The EASA type certification standard includes that of CAA Cz TC No. 66-04 based on individual EU member state acceptance or certification of this standard prior to 28 September 2003. Other standards confirming to TC/TCDS standards certificated by individual EU member state prior to 28 September 2003 are also acceptable.
- Note 3: The EASA type certification standard includes that of CAA Cz TC No. 66-01 based on individual EU member state acceptance or certification of this standard prior to 28 September 2003. Other standards confirming to TC/TCDS standards certificated by individual EU member state prior to 28 September 2003 are also acceptable.

SECTION C2: Reserved



SECTION D1: GENERAL, Z - 37A - 2 Type Design

D.I. General

- | | | |
|----|---------------------------------|--|
| 1. | a)Type: | Z - 37 |
| | b)Variant: | Z - 37A - 2 |
| 2. | Airworthiness Category: | Restricted (see Note 1) |
| 3. | Type Certificate Holder: | Aircraft Industries, a.s.
Na Záhonech 1177
686 04 Kunovice
CZECH REPUBLIC |
| 4. | Manufacturer: | From S/N 05-17
LET, n.p.
686 04 Kunovice 1177
CZECH REPUBLIC |
| 5. | Certification Application Date: | -- |
| 6. | The CAA CZ Certificate Date: | 03.01.1971 |
| 7. | EASA Type Certificate Date: | 27-Mar-2007 (reissue, EASA) |

EASA Type Certificate replaces Czech Type Certificate No. 66-05

D.II. Certification Basis

- | | | | | | | | | |
|------------|---|--|----------|--|------------|---|------------|---|
| 1. | Reference Date for determining the applicable requirements | -- | | | | | | |
| 2. | Certification Basis | -- | | | | | | |
| 3. | Airworthiness Requirements: | British Civil Airworthiness Requirements BCAR, Section D, valid to date 01.12.1963 | | | | | | |
| 4. | Requirements elected to comply: | None | | | | | | |
| 5. | EASA Special Conditions: | None | | | | | | |
| 6. | EASA Exemptions: | <table border="0"><tr><td>D2-7 5.1</td><td>The side component of the wind at which the directional controllability at taxiing complies with regulation is not determined.</td></tr><tr><td>D2-8 5.4.1</td><td>Longitudinal control forces change caused by concurrent increase of engine power and flaps retraction is 16 to 19 daN</td></tr><tr><td>D2-9 2.1.3</td><td>Non-compliance with requirement for control force balancing at aft position of center of gravity, maximum continuous power of the engine and maximum take-off weight at 0.9 V_{NO}</td></tr></table> | D2-7 5.1 | The side component of the wind at which the directional controllability at taxiing complies with regulation is not determined. | D2-8 5.4.1 | Longitudinal control forces change caused by concurrent increase of engine power and flaps retraction is 16 to 19 daN | D2-9 2.1.3 | Non-compliance with requirement for control force balancing at aft position of center of gravity, maximum continuous power of the engine and maximum take-off weight at 0.9 V _{NO} |
| D2-7 5.1 | The side component of the wind at which the directional controllability at taxiing complies with regulation is not determined. | | | | | | | |
| D2-8 5.4.1 | Longitudinal control forces change caused by concurrent increase of engine power and flaps retraction is 16 to 19 daN | | | | | | | |
| D2-9 2.1.3 | Non-compliance with requirement for control force balancing at aft position of center of gravity, maximum continuous power of the engine and maximum take-off weight at 0.9 V _{NO} | | | | | | | |



D2-9 2.1.6	Non-compliance with requirement for control force balancing at forward position of center of gravity at descent flight with engine idle in the speed range from 1.2 to 1.4 v_{SO}
D5-5 3.3	Supplement - not installed emergency heating of suction air for carburetor
D5-8 7	Fuel and oil piping in the engine space is not fire-resistant
D5-8 2.1.2	Oil tank, its installation and attachment is not fireproof
D6-1 4.2.1	e) Not installed flight indicator of oil quantity that is required with regard to the engine oil usage for the setting of propeller blades
D6-7 8.1	Non-compliant color of position lights
D6-7 5.2	Non-compliant intensity of position lights
D6-7 5.3	Non-compliant intensity of position lights

7. EASA Equivalent Safety Findings: None
8. EASA Environmental Standards: None

D.III. Technical Characteristics and Operational Limitations

1. Type Design Definition: Specification Sheet , drawing No. Z37.0000-00/1
2. Description: Z - 37 aircraft is two-seat, single-engine, low-wing aircraft of compound design using metal and fabric materials and equipped with dual control.
3. Equipment:
- Standard equipment of the forward cockpit:
- Flight and navigation instruments:
- | | |
|---|----------|
| Magnetic compass | LUN 1221 |
| Altimeter | LUN 1121 |
| Airspeed indicator with over-pulling indication | LUN 1107 |
| Vertical speed indicator | LUN 1147 |
| Turn indicator | LUN 1213 |
| Stall warning indication light | CHS - 39 |
- Engine instruments:
- | | |
|--|---------------------------|
| RPM indicator | LUN 1312 |
| Blower pressure gauge | LUN 1401 |
| Quadruplicate indicator of engine parameters | LUN 1527 |
| Cylinder heads thermometer | LUN 1380 |
| Volt-ammeter | LUN 2715 from 3-rd series |
- or VA 240 to 2-nd series



Warning light of engine fire	SLC - 51
Inlet air temperature indicator	TUE - 48
Dynamo warning light	SLC - 51

Airframe and systems instruments:	
Pneumatic system thermometer	MV-80
Fuel indicator	LUN 1626
Remaining fuel warning light	SLC - 51

Standard equipment of the rear cockpit:	
Flight and navigation instruments:	
Altimeter	LUN 1121
Airspeed indicator	LUN 1106
Vertical speed indicator	LUN 1147
Turn indicator	LUN 1213

Engine instruments:	
RPM indicator	LUN 1312
Fan pressure gauge	LUN 1401
Quadruple indicator of engine parameters	LUN 1527
Warning light of engine fire	SLC - 51
Inlet air temperature indicator	TUE - 48
Dynamo warning light	SLC - 51
Push-button for over-switching of indicators	A 09-9430-64

Airframe and systems instruments:	
Fuel cock position warning light	SLC - 51
Mechanical indicator of the elevator trim tab position	Z37.4411-00
Mechanical indicator of the oil cooler flap position	Z237.8230-00
Mechanical indicator of the sun-blind position	Z237.7360-00

4. Dimensions:	Wing Span:	12.224 m
	Length:	8.550 m
	Height:	2.898 m
	Wing Area	23.8 sq.m

5. Engine

5.1 Model:	M 462 R F
------------	-----------

5.2 Type Certificate:	EASA approved (CAA CZ TC No. 66-04) (see Note 2)
-----------------------	--

5.3 Limitations:	Maximum take-off power:	
	Power	315 HP
	Speed	2450 RPM

Maximum continuous (nominal) power:		
Power	280 HP	
Speed	2200 RPM	

Maximum cruise power		
Power	195 HP	
Speed	1900-1950 RPM	



6. Propeller:
- 6.1 Model: V 520 /7/
- 6.2 Type Certificate: EASA approved (CAA CZ TC No. 66-01) (see Note 3)
- 6.3 Number of blades: 2
- 6.4 Sense of Rotation: Anticlockwise in the view of the flight direction
- 6.5 Diameter: 2700 mm
7. Fluids
- 7.1. Fuel: Jet fuel ESSO ICP 80
SHELL Avgas 80
SHELL Avgas 100 LL
BP 100 L
BL 78 according to ČSN 65 6510
- 7.2 Oil: AEROSHELL Oil W 100, 120
ELF Aviation AD 100
MOBIL Aero D 100
BP Aero Oil 100
CASTROL Aero AD 100
TOTAL Aero D 100
8. Fluid capacities
- 8.1. Fuel:
- | | | |
|---------|---------------------|--------------|
| Total: | | |
| | Main Fuel Tank | 127 liters |
| | Auxiliary Fuel Tank | 127 liters |
| Usable: | | |
| | Main Fuel Tank | 126.5 liters |
| | Auxiliary Fuel Tank | 126.5 liters |
- 8.2. Oil: 17,3 litres
9. Air Speeds:
- | | | |
|-------------------------------------|----------|---------------|
| Never exceeding speed | v_{NE} | 270 km/hr IAS |
| Maximum speed for normal manoeuvres | v_{NO} | 175 km/hr IAS |
| Design manoeuvring speed | v_A | 170 km/hr IAS |
| Maximum flaps extended speed | v_{FE} | 150 km/hr IAS |
10. Maximum Operating Altitude: Without agricultural equipment 3785 m
11. Operational Capability VFR-Day operations
12. Maximum Weights: Maximum take-off weight 1600 kg
13. Center of Gravity Range: 23 - 31 % MAC
14. Datum: Fuselage System frame No. 1 (firewall)



- | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|-----------------------------------|---|---------------|----|----------|--|------|------------|----------|----|--------------|--|------|---------------|--------|--|--------------|-------------|-----------|------|--|----------|-------|--|---------|-------|-------------|-----------|----|--|----------|-----|--|---------|-----|
| 15. Mean Aerodynamic Chord (MAC): | 2.0 m | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 16. Levelling Means: | Identical with the basic fuselage level – see the Aircraft Maintenance Manual | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 17. Minimum Flight Crew: | 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 18. Number of seats: | 2 including the pilot seat | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 19. Baggage/Cargo Compartments: | 38 kg | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 20. Wheels and Tyres: | Main landing gear wheel K 560.3-00-7
with tyre 556 x 163 mm Model 2

Rear landing gear wheel K 290-00-7
with tyre 290 x 110 mm Ant shimmy | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 21. Control surface deflections: | <table border="0"><tr><td>Ailerons</td><td>up</td><td>+26° ±1°</td></tr><tr><td></td><td>down</td><td>-18,5° ±1°</td></tr><tr><td>Elevator</td><td>up</td><td>+35° -0° +2°</td></tr><tr><td></td><td>down</td><td>-20° - 0° +2°</td></tr><tr><td>Rudder</td><td></td><td>±26° + 2°-1°</td></tr><tr><td>Inner flaps</td><td>retracted</td><td>8.5°</td></tr><tr><td></td><td>take-off</td><td>18.5°</td></tr><tr><td></td><td>landing</td><td>53.5°</td></tr><tr><td>Outer flaps</td><td>retracted</td><td>5°</td></tr><tr><td></td><td>take-off</td><td>15°</td></tr><tr><td></td><td>landing</td><td>50°</td></tr></table> | Ailerons | up | +26° ±1° | | down | -18,5° ±1° | Elevator | up | +35° -0° +2° | | down | -20° - 0° +2° | Rudder | | ±26° + 2°-1° | Inner flaps | retracted | 8.5° | | take-off | 18.5° | | landing | 53.5° | Outer flaps | retracted | 5° | | take-off | 15° | | landing | 50° |
| Ailerons | up | +26° ±1° | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | down | -18,5° ±1° | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Elevator | up | +35° -0° +2° | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | down | -20° - 0° +2° | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Rudder | | ±26° + 2°-1° | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Inner flaps | retracted | 8.5° | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | take-off | 18.5° | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | landing | 53.5° | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Outer flaps | retracted | 5° | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | take-off | 15° | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | landing | 50° | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 22. Load factors: | + 3.8 g - 1.4 g | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |



D.IV. Operating and Service Instructions

1. Flight manual:

- In Czech language: Letová příručka pro letoun Z – 37A
Do-Z37-1011.1
- In Czech language: Letová příručka pro letoun Z-37A-Čmelák modifikace C2,C3
Do-Z37-1012.1

2. Maintenance manual:

- In Czech language: Technický popis letounu Z – 37A
Do-Z37-1021.1
- In Czech language: Doplněk k technickému popisu pro letoun Z-37A-2
Do-Z37-3022.0
- In Czech language: Příručka pro obsluhu a údržbu letounu Z – 37A
Do-Z37-1031.0
- In Czech language: Doplněk k příručce pro obsluhu a údržbu letounu Z – 37A – 2
Do-Z37-3022.0
- In Czech language: Palubní a elektrické přístroje použité na letounu Z – 37A
Do-Z37-3311.0

3. Operational manuals for engine and propeller:

- In Czech language: Příručka: Letecký motor M 462 RF - technický popis a návod k obsluze
- In Czech language: Technický popis a provozní instrukce vrtule V 520



D.V. Notes

- Note 1: No general restrictions applicable. Any restrictions necessary for a single airplane to be listed in the Certificate of Airworthiness of the affected airplane
- Note 2: The EASA type certification standard includes that of CAA Cz TC No. 66-04 based on individual EU member state acceptance or certification of this standard prior to 28 September 2003. Other standards confirming to TC/TCDS standards certificated by individual EU member state prior to 28 September 2003 are also acceptable.
- Note 3: The EASA type certification standard includes that of CAA Cz TC No. 66-01 based on individual EU member state acceptance or certification of this standard prior to 28 September 2003. Other standards confirming to TC/TCDS standards certificated by individual EU member state prior to 28 September 2003 are also acceptable.

SECTION D2: Reserved



CHANGE RECORD

Issue	Date	Changes
Issue 1	27-Mar-2007	Transfer of Z-37 Type Design to EASA