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

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SECTION A1: GENERAL, Z - 37 Type Design

A.I. General

1.	a)Type: b) Variant:	Z – 37 ---
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 manoeuvers	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° ±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:

Aerial works	+ 3.5 g - 1.4 g
Cargo	+ 3.8 g - 1.52 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: b) Variant:	Z – 37 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 manoeuvers	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° ±1° –18,5° ±1°
		Elevator	up down	+35° –0° +2° –20° - 0° +2°
		Rudder		+26° + 2°–1°
		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: b) Variant:	Z – 37 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: 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	+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:	For aerial works		+ 3.5 g - 1.4 g
	Cargo		+ 3.8 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: b)Variant:	Z – 37 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:	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 manoeuvers	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:

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

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SECTION D2: Reserved

CHANGE RECORD

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