RZECZPOSPOLITA POLSKA
REPUBLIC of POLAND

Urząd Lotnictwa Cywilnego

Prezes Urzędu Lotnictwa Cywilnego
President of the Civil Aviation Authority

ŚWIADECTWO UZNANIA ZATWIERDZENIA TYPU
Type Approval Recognition Certificate

NUMER: **UL.A.00 – 001/2024**
Reference:

Niniejsze świadectwo uznania zatwierdzenia typu zaświadcza, że określony typ/model ultralekkiego statku powietrznego został uznany za akceptowalny w Rzeczypospolitej Polskiej zgodnie z obowiązującymi przepisami polskiego lotnictwa cywilnego i pozostaje w mocy przez czas nieokreślony, chyba że zatwierdzenie zostanie zrzeczone, zawieszone lub cofnięte oraz że został wpisany na listę typów zatwierdzonych prowadzoną przez Prezesa Urzędu Lotnictwa Cywilnego, o której mowa w przepisach wydanych na podstawie art. 33 ust. 2 i 4 ustawy – Prawo lotnicze (Dz.U. z 2022 r. poz. 1235, 1715, 1846, 2185, 2642 oraz z 2023 r. poz. 1720, 1489, 1688).

This Type Approval Recognition Certificate certifies that the ultralight aircraft type/model specified has been found acceptable in Republic of Poland in accordance with the applicable Polish Civil Aviation regulations and shall remain as such for an unlimited duration unless the approval is surrendered, suspended or revoked and has been entered on the list of approved flying device types managed by the President of the Civil Aviation Authority, referred to in the regulations issued on the basis of Art. 33 para. 2 and 4 of the Aviation Law Act dated July 3rd, 2002 (JL. 2022, item 1235, 1715, 1846, 2185, 2642 and JL. 2023, item 1720, 1489, 1688).

Państwo projektu *State of Design*	**Czech Republic**
Państwo produkcji *State of Manufacture*	**Czech Republic**
Posiadacz zatwierdzenia typu *Type Approval Holder*	**Dova Aircraft s.r.o.** Kirilova 115, 739 01 Paskov, Czech Republic
Wytwórca *Manufacturer*	**Dova Aircraft s.r.o.** Kirilova 115, 739 01 Paskov, Czech Republic
Oznaczenie typu produktu *Product Type Designation*	**DV-1 Skylark**
Numer zatwierdzenia typu *Type Approval Number*	**ULL 05/2022**
Arkusz danych do zatwierdzenia typu *Type Certificate Data Sheet*	**ULL 05/2022**
Przyjęte wymagania techniczne *Type Certification Basis*	Airworthiness requirements: UL2 – part I. edition 1. 2019. Aerodynamically controlled ultralight aircraft, revised version of 27.03.2019.
Uwagi *Remarks*	Approved by Approved by LAA CR the Technical Commission on: 01.06.2022 – ULL 05/2022 - first edition, EZD ref. LTT-3.5460.2.2024

Z upoważnienia Prezesa Urzędu Lotnictwa Cywilnego
On behalf of President of the Civil Aviation Authority
Marcin Perkowski
Zastępca Dyrektora Departamentu Techniki Lotniczej
Deputy Director, Aviation Technical Department
(pismo zostało wydane w postaci elektronicznej
i opatrzone kwalifikowanym podpisem elektronicznym)
(the letter was published in electronic form
and signed with a qualified electronic signature)

Data pierwszego wydania: **27.03.2024**
Date of original issue:
Data ostatniej zmiany: --
Date of last revision:

CZECH REPUBLIC

Letecká amatérská asociace ČR – Light Aircraft Association of the Czech Republic

Type Certificate

Issued by the Light Aircraft Association of the Czech Republic (hereinafter LAACR), based on the delegation by the Ministry of Transport to perform the state administration in the matters of sports flying equipmentin accordance with the Section 82, Subsection 1 of Act No. 49/1997 Coll. On civil aviation and amending and supplementing Act No. 455/1991 Coll. On Trade Licensing (The Trade Licensing Act), as amended by later regulations of the Ministry of Transport

Aircraft type designation:

Two-seat, single-engine, aerodynamically controlled , all-metal construction, low flying aircraft– Sport Flying Equipment.

Type designation: **DV-1 Skylark**

Maximum take off mass 600 kg including the ballistic recovery parachute.
Detailed technical specification is stated in the Data Sheet.

Type certificate holder:

DOVA Aircraft, s.r.o.
Kirilova 115
739 21 Paskov
Czech Republic

ID: 27773582

Approved by the LAA CR Technical commission on:

June 1, 2022

The Type certificate is registered at the LAA CR under the reference:

ULL 05 / 2022

Letecká amaterérská asociace ČR
Ke Kablu 289
102 00 Praha 10
TEL.: 242 403 274

LAA CR Chief Technical Inspector: ***ing. Petr Tax***

Type certificate number:	**ULL – 05 / 2022**
Type certificate holder:	**DOVA Aircraft, s.r.o.**
Type SLZ:	**DV-1 Skylark**
Date of issuance:	19th December 2022

Type certificate annex no. ULL - 05 / 2022

I. Generally

1. Type designation: **DV-1 Skylark**
2. Category: Light sport aircraft, microlight aerodynamically controlled aircraft
3. Type certificate holder: Dova Aircraft, s.r.o.
   Kirilova 115
   739 01 Paskov
   Czech Republic
   ID: 27773582
5. Application date: 15th June 2020
6. Approval date: 1th June 2022

II. Certification specification

1. Airworthiness requirements: UL2 – part I. edition 1. 2019.
   Aerodynamically controlled ultralight aircraft, revised version of 27.3.2019.
2. Special conditions: N/A
3. Exceptions: N/A

III. Technical data, performance, operation limitation

1. Type definition: Aircraft type is defined by set of drawings and the Type definition.

2. Description: The airplane DV–1 Skylark is single engine, two-seater cantilever low-wing monoplane with T-tail, tricycle landing gear and tractor engine configuration. It is designed for recreational, training and cross-country flights. The airplane is designed as all-metal from duralumin profiles and sheets. The construction is designed as semi monocoque consisting of bulkheads stringers and skin. Individual parts are connected by riveting with blind rivets (heavily loaded joints with solid rivets) or by means of bolts or pins. Secondary construction parts (wingtips, engine cowlings) are designed as laminate.

The trapezoidal wing is main spar type with an auxiliary spar, on which ailerons and flaps are suspended on the piano hinge. Fuel tanks are located in the wings and the wing is equipped with a laminate winglet at the end. The wing consists of the left and right halves, connected to the fuselage by three hinges each. Flaps are designed as folding, four-position. Negative deflection (-10 degrees), neutral position (0 degrees), take-off position (+10 degrees) and landing position (+40 degrees).

The cross-section of the fuselage is rectangular in the lower part with rounded corners and elliptical in the upper part. An integral part of the fuselage is the keel. In the central part of the fuselage there is space for a two-member crew, covered by a one-piece hinged or sliding canopy made of organic glass. The engine compartment is separated from the crew compartment by a stainless-steel fire wall, on which the engine supporting frame attachment points are created.

The tail surfaces are of the T type. Rectangular horizontal tail surfaces consist of a stabilizer and a one-piece elevator, suspended on the piano hinges. The stabilizer is connected by means of four bolts to the keel structure. On the left half of the elevator there is an electrically operated elevator trim surface on the piano hinge. The position of the elevator trim surface is indicated by an electrical indicator in the aircraft cabin.

The trapezoidal rudder is suspended on the keel structure on two pins.

The control of the aircraft is classic, double. Control of ailerons and elevator is made by rods, rudder control is cable. The flaps are controlled by a hand lever on the central panel, alternatively by an electric servomotor. The elevator trim surface is controlled by an electric servomotor.

The main undercarriage legs are made of composite springs. The main undercarriage wheels are hydraulically braked. The nose undercarriage leg is suspended by a rubber element. The bike is mounted in a duralumin fork and is steerable. The size of the tires is different for the wheels of the main and nose undercarriage.

3. Equipment: For technical airworthiness approval of light sport aircraft issue, basic equipment according certification specification listed in chapter II must be installed.

4. Basic technical data:

1. Dimensions

Span	8,4023 m
Length	6,6056 m
High	2,283 m

Wing

Area	9,44 m^2
MAC	1,241 m
Profil	IARV 419
Aspect ratio	6,66
Wing loading at MTOM 600kg	63,6 kg/m^2

Aileron

Aileron lenght	1,6068 m
Area	0,362 m^2
Aileron deflection (up/down)	15 ^{0}/10 ^{0}

Wing trailing edge flap

Flap length	1,6068 m
Area	0,362 m^2
Flap deflection - cruise	0 ^{0}, -10^0
Flap deflection – take-off	10^0
Flap deflection – approach, landing	21^0, 40^0

Horizontal stabilizer

Span	2,743 m
Area	1,407 m^2
Elevator area	0,524 m^2
Elevator deflection (up/down)	30^0 / 20^0

Vertical fin

Area	1,177 m^2
Rudder area	0,309 m^2
Rudder deflection	+/- 30^0

Undercarriage

Main undercarriage wheelbase	1,749 m
Main and front undercarriage wheelbase	1,397 m
Main and front/main wheel dimensions	14x4-6”/16x6-6”
Main undercarriage tire pressure	1,8-2 bar
Front undercarriage tire pressure	1,6-1,8 bar
Brakes	hydraulic disc brakes
Main undercarriage suspension	compozite spring
Front undercarriage suspension	elastomer spring

2. Mass

Max. take-off mass	600 kg
Max. useful load	270 kg
Min. crew mass	60 kg
Max. baggage mass	20 kg
Wing fuel tanks	2x45 l
Standard Empty mass including emergency parachute system	330 kg

3. Airspeed and performance

Engine ROTAX 912 ULS (73,5 kW / 100 HP), propeller Kašpar KA-4/3-PA

Performance in ISA conditions.	Take-off mass 600 kg Airspeed CAS
Stall speed flaps extended V_{SO}	71 km/h
Stall speed flaps retracted V_{S1}	84 km/h
Max. speed – flaps extended (40°) V_{FE}	140 km/h
Design airspeed V_A	180 km/h
Max. horizontal flight airspeed V_H	221 km/h
Flaps (-10^0) airspeed	160-250 km/h
Never exceed speed V_{NE}	250 km/h
Take-off length 15 m obstacle, grass - concrete	355 m, 345 m
Rate of climb	4,0 m/s at 110 km/h
Rough airspeed V_{RA}	210 km/h

Engine ROTAX 912 ULS (73,5 kW / 100 HP), propeller Kašpar KP-4/3-PA

Performance in ISA conditions.	Take-off mass 600 kg Airspeed CAS
Stall speed flaps extended V_{SO}	71 km/h
Stall speed flaps retracted V_{S1}	84 km/h
Max. speed – flaps extended (40°) V_{FE}	140 km/h
Design airspeed V_A	180 km/h
Max. horizontal flight airspeed V_H	189 km/h

Flaps (-10^0) airspeed	160-250 km/h
Never exceed speed V_{NE}	250 km/h
Take-off length 15 m obstacle, grass - concrete	440 m, 450 m
Rate of climb	4,0 m/s at 110 km/h
Rough airspeed V_{RA}	210 km/h

4. CG position range

Limit front CG position: **24 %** MAC
Limit aft CG position: **36 %** MAC

The reference plane is the fire wall/ engine plate. The stroke of the MAC is 529,7 mm. Middle aerodynamic chord - depth of the middle aerodynamic chord MAC=1,241 m.

5. Flight load factors

Maximal positive / negative ……. +4,0 / -2,0.

6. Power-plant
Rotax 912 ULS.
Maximal take-off power 73,5 kW/ 5800 min^{-1} (max duration 5 min).
Maximal continuous power 68,5 kW/ 5500 min^{-1}.

7. Propellers

Adjustable hydraulic triple-bladed in flight Kašpar KA 4/3-PA.

8. Fuel

EUROSUPER RON 95 unleaded according DIN 51607,Ö- NORM 1100 AVGAS 100 LL.
BA 95 Natural recommended in Czech republic.

9. Oil

Oil specification API SF(SG) or higher, designated for 4-stroke motorcycles
(with gear lubrication additives).

10. Rescue parachute system

Magnum 601 installed according Stratos company standards.
Galaxy600 SD installed according Galaxy company standards.

IV. Operation and maintenance documents:

- Flight and maintenance manual together with appendix of optional equipment.

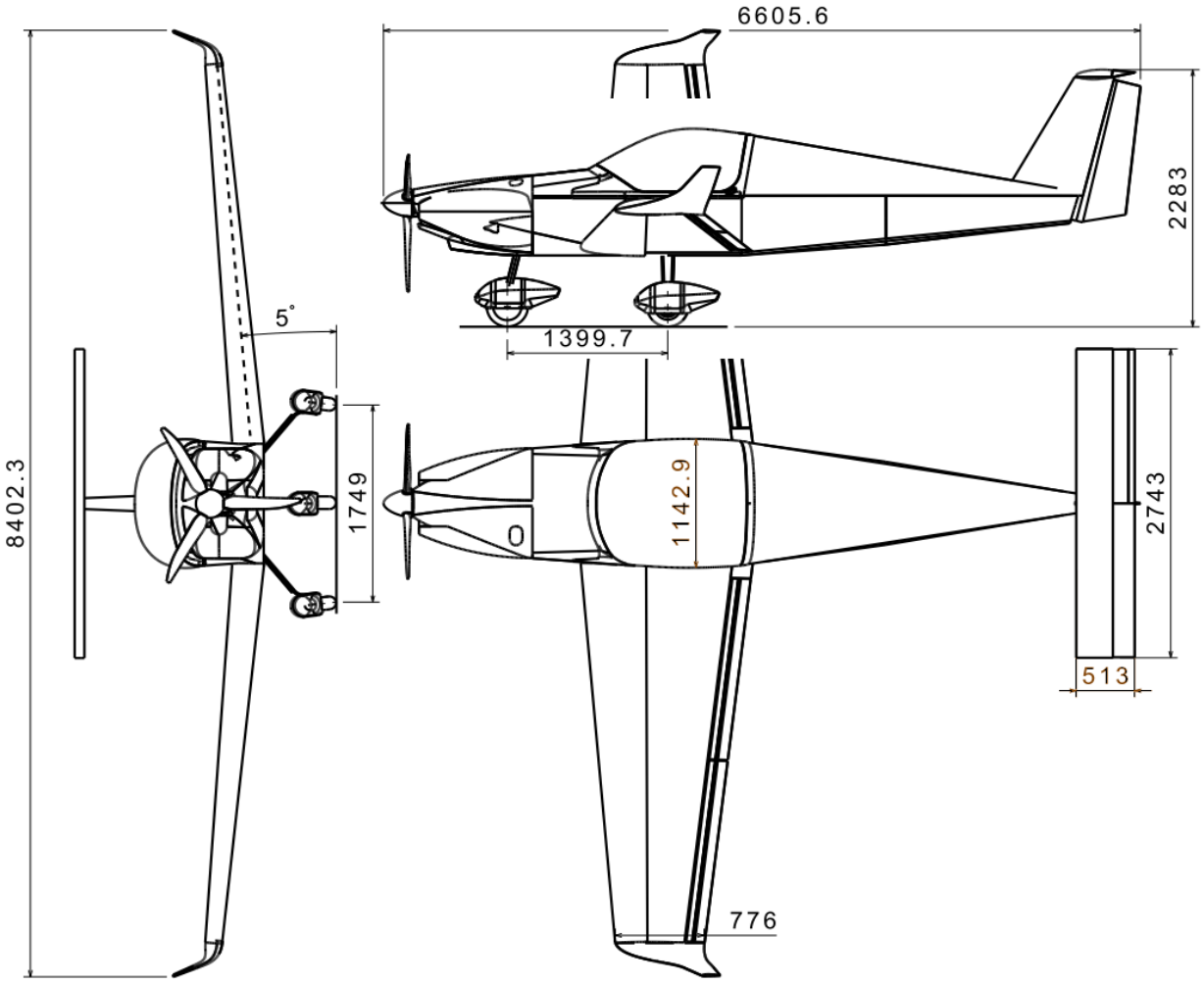
- Operation manual ROTAX 912.
- Propeller technical description and operation manual.
- Operation manual Magnum 601/ Galaxy600 SD.
- Optional equipment manuals.

V. Annex:

Notes:

1. Each aircraft must be equipped with actual weight and balance protocol with equipment list to issue airworthiness technical approval
2. Aircraft must be equipped with placards listed in flight manual

VI. 3-view DV-1 Skylark aircraft drawing according type definition.



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