

# teamEUROSTAR

**EV-97 teamEUROSTAR** is an ultralight, aerodynamically controlled, single-engine, two-seated, low-wing all metal plane with a fixed tricycle undercarriage. The plane meets the UL-2 airworthiness requirements of the Czech Light Aircraft Association and most other European ultralight requirements (German LTF-UL, British BCAR-S etc.)

## 1. GENERAL DESCRIPTION OF THE PLANE

### 1.1. Fuselage

The fuselage has a semimonocoque construction formed with reinforcements and duralumin skins. The fuselage cross-section is rectangular in the lower section, elliptical in the upper one. The tail fin is an integral part of the fuselage. In the middle section of the fuselage there is a two-man crew cockpit accessible after unfolding the one-part perspex overlap canopy. The engine section is separated from the crew by a firewall in the nose, which the engine bed is attached to.

### 1.2. Wing

The rectangular wing is a monospar construction with an auxiliary spar for the ailerons and flaps attachments. All the elements are riveted together. At the ends of the wings are riveted fiberglass wing tips.

### 1.3. Horizontal tail unit (HTU)

The HTU consists of a stabilizer and elevator with a trim tab. The semimonocoque construction of the HTU consists of duralumin ribs, spar and skin. The shape of the HTU is rectangular. The width of 2.5 m enables transport on a trailer without dismantling.

### 1.4. Vertical tail unit (VTU)

The VTU has a trapezoidal shape. Its fin part is an integral part of the fuselage rear. The rudder is attached to the fin part by two hinges. The construction of the VTU is composed of a metal sheet spar and a duralumin skin.

### 1.5. Landing gear

The plane has a fixed undercarriage with a nose wheel. The main undercarriage legs are composed of a milled and bent fiberglass springs. The wheels on both undercarriage legs are standardly equipped with 15x6 tires and with hydraulic disc brakes, controlled by two-brake pedals on the rudder pedals. The undercarriage leg of the nose wheel is produced from steel tube and equipped with the sprung by bungees. A steerable nose wheel enables easier taxiing of the aircraft on the ground.

### 1.6. Control

The plane is equipped with a classic dual control system. The ailerons and elevator are controlled by control sticks, connecting push-pull rods and bell cranks. The rudder is controlled by pedals and cables. The flaps are controlled mechanically; the flaps control lever is located between the seats. There is also the elevator trim tab control lever located between the seats. Electric flaps and trim can be on request.

### 1.7. Power plant

Standard power plant consists of Rotax 912 80 HP engine (100 HP option) and a wooden fixed two-bladed propeller V 230C with a conical spinner. Rotax 912 is a four-cylinder, four-stroke horizontally opposed engine with a central camshaft and OHV distribution. The engine is attached to the engine bed suspended on the firewall. Engine cooling is combined, the cylinder heads are liquid cooled, and the cylinders are air-cooled. Dry sump forced lubrication. Two spark electronic ignition. The engine is equipped with an electric starter, an AC generator and a mechanic fuel pump. Integrated reducer with a reduction ratio of 2.273 (2.43 for 100 HP engine) drives the propeller. Alternative power unit and propellers can be installed on request.

### 1.8. Fuel system

Fuel system consists of a 65liter tank, a fuel cock, a filter and a fuel pump on the engine. The tank is located in a closed space behind the seats, has a drain pocket and a drain valve. The outlet is situated below the fuselage.

### 1.9. Electric system

Electric system is single-wire type with the negative connected to the chassis. As a power source serves the single-phase generator integrated to the engine and the 12V maintenance less battery located on the firewall. The system is protected by the main circuit breaker positioned on the instrument panel. Circuit breakers guard the circuits of the particular sections separately.

### 1.10 Seats and seatbelts

The plane has two side-by-side seats, which are fixed, thin-cushioned, each equipped with a seatbelts. The seatbelts are attached alongside the seat and in the middle of the bulkhead behind the baggage compartment.

### 1.11 Baggage compartment

Behind the backrests located baggage compartment is designed for maximum 15 kg (33 lbs) baggage.

### 1.12 Cockpit canopy

A bubble canopy consists of a steel frame on which the perspex canopy is attached. The canopy is attached to the nose section of the fuselage by two pins, on which it may be tilted forward. For easier manipulation, the weight of the canopy is counterbalanced by two gas struts, which allow it to open effortlessly. On the lower frame there are handles outside the canopy. The canopy is equipped with a lock in the rear upper section of the frame. Big-bubble or tinted canopy can be ordered extra.

### 1.13 Pitot-static system

The Pitot-static head to read air pressure is located under the left wing. Pressure distribution to individual instruments is done through flexible plastic hoses.

### 1.14 Painting versions

**Standard versions:** one color only, 3× registration marks (adhesive foil), 2× type of aircraft (foil), 2× teamEurostar logo (foil).

**Other versions** are defined in paint catalogue. Special customer design can be ordered separately.

### 1.15 Standard aircraft specification

Standard EV-97 Eurostar aircraft is ready to fly aircraft with the following equipment:

<b>ENGINE INSTRUMENTS</b>	<b>FLIGHT INSTRUMENTS</b>
RPM indicator	Air speed indicator (knots or km/h)
Cylinder head temperature indicator (°C or °F)	Altimeter (feet)
Electric fuel gauge	Magnetic compass
Oil temperature indicator (°C or °F)	Vertical speed indicator (ft/min or m/s)
Oil pressure indicator (MPa or psi)	Bank indicator

<b>CONTROLS</b>	<b>FIREWALL FORWARD</b>
Hydraulic brakes (4 pumps)	V230C propeller, 2 blades, wooden, fixed pitch
Dual control sticks	Rotax 912 UL (80 HP)
Mechanical flaps	12 V battery
Throttle control with friction lock	Exhaust system
Adjustable pedals	Combined engine cooling
New design of instrument panel	Dry sump forced lubrication
Press-button circuit breaker	Two spark electronic ignition
Nose wheel steering	Electric starter
Combined starting switch	AC generator
Choke lever	Engine oil check cap

<b>INTERIOR</b>	<b>EXTERIOR</b>
Windshield air vents	Key-locking narrow canopy
12 volt auxiliary outlet	All metal construction
Four points safety pantie-belts	65 liters fuel tank
Deluxe lined interior	Painting (white color only)
Thin upholstered seats	Main tires 14x4.00-6
Aft baggage compartment with luggage nets	Nose tire 13x5.00-6
	Tricycle landing gear with steerable nosewheel

<b>ACCESSORIES</b>
Pilot operating handbook
Maintenance manual
Log book
Ground equipment
Set of test records
Sun shields (2 pcs)

NOTE: Other modification you can see in price list as an extras.

## 2. TECHNICAL SPECIFICATION

Wing span	8,10 m
Wing area	9,84 m <sup>2</sup>
Length	5,98 m
Cabin width	1,04 m
Optional wider canopy	1,18 m
Height	2,34 m

Empty weight	269 kg
MTOW	450 kg
MTOW with ballistic recovery system	472,5 kg
Load factors (Ultimate)	+6g / -3g
Glide ratio	1:9
Baggage capacity	15 kg
Fuel tank capacity	65 l

### 3. PERFORMANCES

Engine	Rotax 912 ULS 100 HP	Rotax 912 UL 80 HP
Never exceed speed $v_{ne}$	270 km/h	270 km/h
Max. level speed at full throttle	245 km/h	225 km/h
Cruising speed $v_{no}$	200 km/h	180 km/h
Stall speed $v_{s0}$	65 km/h	65 km/h
Rate of climb $v_z$	8,0 m/s	5,5 m/s
Service ceiling	5000 m	5000 m
Take off roll	100 m	145 m
Take off distance	200 m	280 m
Landing roll	90 m	90 m
Landing distance	400 m	400 m
Average fuel consumption	14 l/h	11 l/h
Range	750 km	750 km

All performances at MTOW with in-flight variable propeller.

### 4. PRICE AND OPTIONAL AVIONICS AND INSTRUMENTATION

The prices are binding for the aircraft being manufactured during price list validity. The Producer reserves the right of keeping price validity further to aircraft term manufacture.

All prices are EXW EVEKTOR – AEROTECHNIK a.s. Kunovice, Czech Republic

### 5. WARRANTY CONDITIONS

200 flight hours or 24 months, whichever comes first.

All other details available in

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