

ES-1 by OROS

FLYING SHIP, FLOATING PLANE

Introduction

Characteristics

Advantages

Usage



About us.

Our team consists of professionals in the field of aviation and marine technology, including specialists who have devoted their careers to the design and production of ground effect vehicles (GEV*).

Our design bureau consists of 60 design engineers and a production unit located in Petrozavodsk.

Our goal is to build a line of GEV that will be used on a commercial basis around the World.

We believe in the importance of this goal, the achievement of which will change the key transport arteries in key parts of our planet, facilitate access to more destinations and open up significant business opportunities.

GEV are recognized as a marine vehicle by the international community (the safety code for high-speed vessels developed jointly by IMO and the ICAO) and the Register of Maritime Navigation of the Russian Federation.

We present to you the ES-1-the first GEV in our model range, the serial production of which will begin in 2022.

**GEV - a high-speed vehicle flying at a relatively small (up to several meters) height from the surface of water, earth, snow or ice due to the screen effect*

ES-1 is the first GEV in our model line.

Fast and maneuverable, it may be the best friend in your new business.

- year-round operation
- amphibious
- easy and cheap maintenance
- simple requirements for crew training
- simplified operating and basing conditions at minimal cost - no special infrastructure required



*Renderers demonstrate folding consoles. The appearance of the ES-1 differs from the presented images.

Technologies

"Screen effect" which ES-1 use is manifested in an increase in aerodynamic lift while reducing aerodynamic drag when moving at low altitudes (lower wing chord) due to the creation of a dynamic air cushion between the body-center and the surface of the movement. Speed is 220 km/hour at altitudes of up to 3-4 m.

«Blowing» technology consists in creating an air cushion when air is injected from the front of the located propellers under the bottom of the body-center section, which provides acceleration and access to non-contact with the underlying relatively flat surface movement (on the main mode of movement - on the screen).

ES-1 is the best in terms of flight speed, variations in usage, fuel consumption and operating costs.

ES-1 will attract consumers with the following unique qualities:

- higher (compared to the aircraft) flight safety, as the runway is always under the screenplane and it can land at almost any time of take-off and movement on the screen;
- high comfort due to the lack of pitching and «air holes»;
- the absence of a sudden change in pressure due to the lack of elevation changes;
- the possibility of arrival of ES-1 in the port of the city, thereby reducing the time spent by the passenger on the road compared to the aircraft.
- high speed-up to 220 km/h

Shipowners will attract and their other properties:

- the presence of the ES-1 small draft and the ability to move over shallow water and small areas of land allows you to open new passenger and tourist lines, inaccessible to sea passenger ships;
- air speed, low impact of excitement on screen flight after take-off and the ability to land on the high seas;
- effectively carry out search and rescue operations in case of disasters at sea and on the coast, deliver urgent cargo to fishing vessels, drilling rigs and change their crews.
- fuel economy (on the screen mode fuel economy up to 30%);

Comparison with the nearest competitor

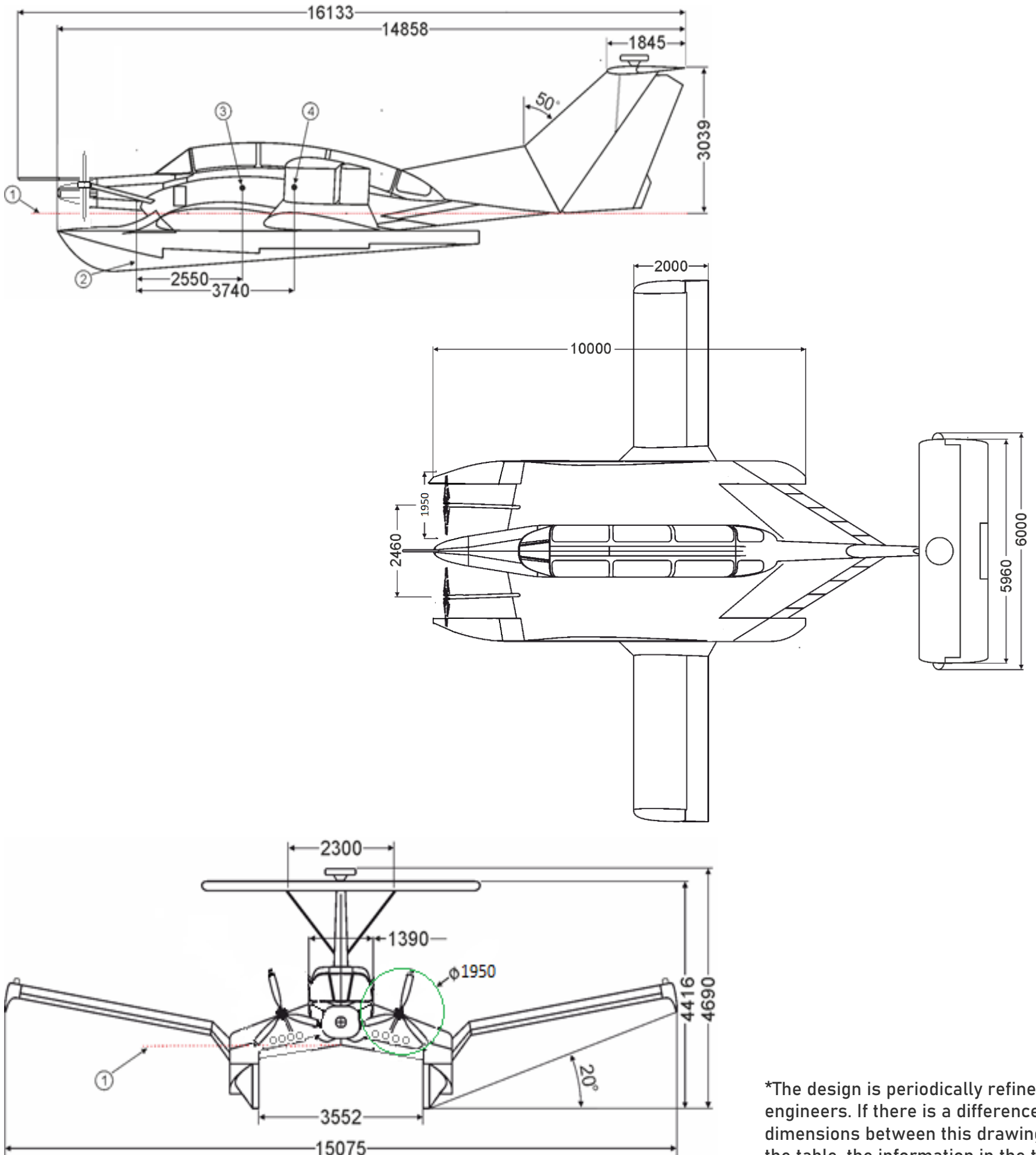
	ES-1	Airfish 8
Starting weigh, kg.	5300	n/a
Weight of empty car (without fuel and without cargo), kg	Up to 3800	n/a
Crew / passengers, persons	2/10	2/6
Usable load, kg	Up to 1000	Up to 1000
Engines (power (horsepower))	2*CHEVROLET LS3, 525 hp each	1*500 hp
Altitude cruising /at "bounce"	Up to 3 / ≤ 100	Up to 7/ n/a
The duration of the motion with one refill .	Up to 6	Up to 3
Range, km.	Up to 1000	Up to 500
Flight speed, cruising /maximum (km/h)	185/220	150/200
Fuel type	Gasoline 92	Gasoline 95 and above
Seaworthiness	Up to 3 points	n/a
Draft at drift on water (the switched-off engines), m.	$\leq 0,6$	n/a
Overall	17,3*13,1*3,7	17,2*3.5
Cabin	5,2*1,32*1,48	4.0*1.4
Operating surface	water, ice, swamp, ground	n/a

ES-1 has lots of advantages, the most significant are:

- Range
- Flight Speed
- Passenger capacity
- Ability to perform a jump to avoid obstacles

All of the above give a significant advantage in the commercial operation.

ES-1 overall dimensions



*The design is periodically refined by engineers. If there is a difference in dimensions between this drawing and the table, the information in the table is considered priority

Scheme of structural and technological division of ES-1



This scheme allows for the transportation of the ekranoplan in standard sea containers.

Engine performance



Embodiment	V-shaped cylinders
Working volume of cylinders according to the calculation formula CC	6162
Power at speed kW / HP rpm	392/525 6600
Maximum torque at speed	553 Hm 4600 revol/min
Type of fuel	Gazoline 95

Priority markets for the use of screenplanes



ES-1 can be made in any convenient design:

mobile research station

tourist transport

mobile care unit

rescue vehicle

border service

patrol vehicle

VIP layout





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