



**Moscow Aviation Institute**  
(National Research University)



# SkyBoat HELIOS

The hybrid airship





# SkyBoat HELIOS

## The hybrid airship



SkyBoat **HELIOS** uses aerostatic and aerodynamic lift in approximately equal degrees.

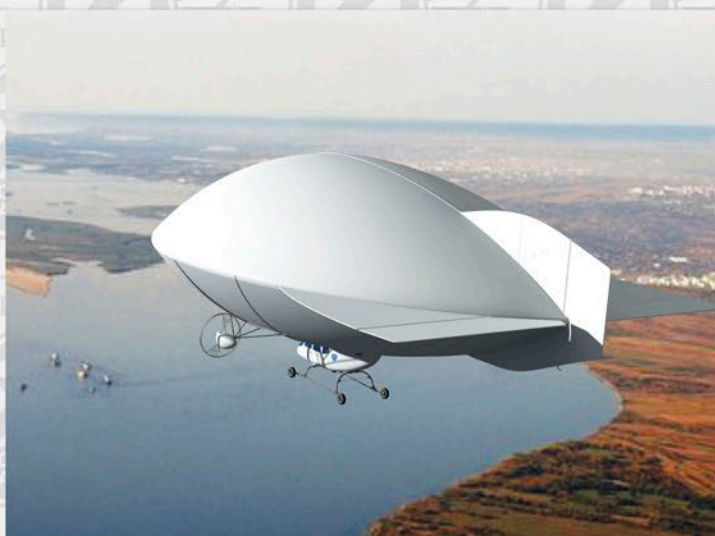
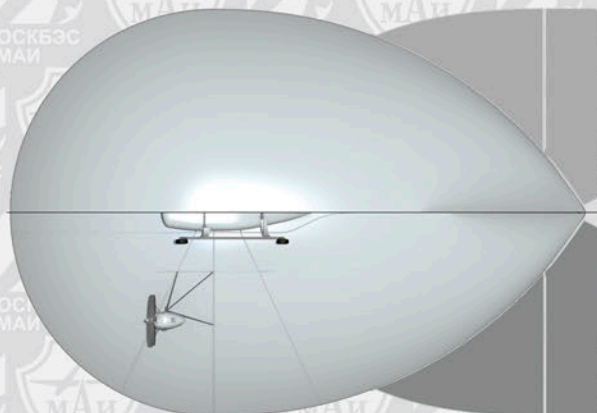
**Due to such a combination we achieve performances, which can not be obtained for heavier-than-air (HTA) and lighter-than-air (LTA) aircraft apart, namely:**

- Ground handling of airships has historically presented a great difficulty and needs many ground crew members and a mooring mast. Our SkyBoat is a steel HTA aircraft and can go on an air trip without the ground crew.
- In comparison with the airplane we have a very low take-off and landing speed and no stall. **HELIOS** does not need prepared runways.
- An empennage flowing and two engines allow to achieve excellent controllability at low and about-zero speeds.
- The location of the engines and crew compartment allow the aircraft to operate from land, snow and water (with optional detachable inflatable floats).



## SkyBoat HELIOS specifications

Envelope volume .....	1036 m <sup>3</sup>
Dimensions (Length × Width × Height) .....	23,5 × 15,2 × 9,7 m
Maximum take-off weight .....	1300 kg
Overweight .....	230 kgf
Maximum payload .....	558 kg
Minimal speed .....	0 km/h
Take-off run / Landing run .....	0–15 / 0–20 m
Cruising speed .....	80–90 km/h
Maximum speed .....	100 km/h
Rotax 912i Sport engines.....	2×100 h.p.
Maximum range .....	420 km
Rate of climb .....	10,5 m/s
Maximum duration of flight .....	8 h
Number of seats .....	4



*SkyBoat HELIOS is proposed  
as a vehicle for, amongst other roles,  
fans of traveling  
including family trips  
and those who wish to feel  
the pleasure of flight  
in safe and comfortable conditions.*





ИЗД.1  
Форма Д-1

МЕЖГОСУДАРСТВЕННЫЙ АВИАЦИОННЫЙ КОМИТЕТ  
INTERSTATE AVIATION COMMITTEE

АВИАЦИОННЫЙ РЕГИСТР  
AVIATION REGISTER

**СЕРТИФИКАТ**  
РАЗРАБОТЧИКА АВИАЦИОННОЙ ТЕХНИКИ  
DESIGN ORGANIZATION CERTIFICATE

№ P-52

**НАСТОЯЩИЙ СЕРТИФИКАТ,  
ВЫДАННЫЙ**  
*THIS CERTIFICATE ISSUED TO*

Федеральному государственному бюджетному образовательному  
учреждению высшего профессионального образования  
"Московский авиационный институт  
(национальный исследовательский университет)" (МАИ)

г. Москва, Российская Федерация

УДОСТОВЕРЯЕТ, ЧТО УКАЗАННАЯ ОРГАНИЗАЦИЯ ПРИЗНАНА В КАЧЕСТВЕ  
РАЗРАБОТЧИКА ГРАЖДАНСКОЙ АВИАЦИОННОЙ ТЕХНИКИ  
*CERTIFIES THAT THE ABOVE ORGANIZATION IS RECOGNIZED AS A CIVIL AERONAUTICAL PRODUCTS DESIGN  
ORGANIZATION*

СЕРТИФИКАТ ОГРАНИЧЕН В СООТВЕТСТВИИ С ПРИЛАГАЕМОЙ ОБЛАСТЬЮ  
ДЕЙСТВИЯ, КОТОРАЯ ЯВЛЯЕТСЯ НЕОТЪЕМЛЕМОЙ ЧАСТЬЮ НАСТОЯЩЕГО  
СЕРТИФИКАТА  
*THE CERTIFICATE IS LIMITED TO THAT SPECIFIED IN THE ENCLOSED TERMS OF APPROVAL WHICH IS AN  
INTEGRAL PART OF THIS CERTIFICATE*

СЕРТИФИКАТ СОХРАНЯЕТ ДЕЙСТВИЕ, ПОКА ОРГАНИЗАЦИЯ ПРОДОЛЖАЕТ  
СООТВЕТСТВОВАТЬ ТРЕБОВАНИЯМ АВИАЦИОННЫХ ПРАВИЛ  
*THE CERTIFICATE IS VALID WHILST THE ORGANIZATION REMAINS IN COMPLIANCE WITH THE REQUIREMENTS  
OF AVIATION REGULATIONS*

**ДАТА И МЕСТО ВЫДАЧИ**  
*DATE AND PLACE OF ISSUANCE*

13 ноября 2012 г.  
г. Москва

Дата первоначальной выдачи  
*Date of the First Issuance*  
27 апреля 1998г.



  
В.В. Беспалов  
ПОДПИСЬ  
*SIGNATURE*

Председатель  
Авиационного регистра МАК  
ДОЛЖНОСТЬ  
*TITLE*

# OSKBES MAI. The Design Bureau of Moscow Aviation Institute (National Research University)

Tel.: +7 499-158-44-68; +7 903-628-80-33

Chief Designer: Vadim Demin

Email: [oskbes@mai.ru](mailto:oskbes@mai.ru)

Web: [www.oskbes.ru](http://www.oskbes.ru)

