Moscow Aviation Institute

(State University of Aerospace Technologies)

REMZ-Avia

Multi-Purpose Airplane

MAI-407

Commercial Offer

Description

MAI-407 multi-purpose four-seat twin engine airplane has been designed according to AP-23 Aviation Rule requirements, analog of European CS-23 and American FAR-23.

In addition, while designing the following features were put to airplane concept:

- spacious cabin allowing to house a crew and passengers dressed in winter clothes but herewith all the rest is achievement of maximum aerodynamic efficiency: a cantilever wing, retractable landing gear, etc.;
- boarding and deboarding comfort: four car-type doors, the cabin floor height demanding neither step-ladders nor footboard;
- ability to operate from unprepared runway as well as to have ski or float-type landing gear mounted;
- proven, including testing in Russia, engine with a qualified dealer accompaniment;
- efficient ventilation and heating systems.

MAI-407 airplane application may be promising in the following fields:

- air transportation;
- initial training and professional selection of pilot personnel;
- oil and gas pipeline, power lines, forest tract, water reservoirs, etc. air patrol;
- aerial photographing, instrument monitoring;
- air tourism.

An important feature is an ability of a multi-purpose single-type airplane employment for all the above tasks. This is provided by a reasonable combination of conflicting factors:

- maximum cruise and minimum landing speeds;
- easy flying and sufficient maneuverability;
- long range and ability of landing on unprepared runways.

Besides the afore-said, there are other distinguishing features:

- operation by cheap and available (e.g., automotive) fuels and lubricants;
- fuel consumption compared with that of a car;
- manufacturability and series-production worthiness;
- competitive cost.

The standard crew and passenger seating is side-by-side in two rows. The cabin height is 1220 mm, crew and passenger seating area width is 1275 mm, which provides comfortable conditions of housing the people dressed in winter clothes. Seat pitch is 1060 mm. This allows to have the backs of the front seat row reclined 25° with no damage for those passengers who take seats in the back row. The backs of an aft row can also recline 25° that allows long flight duration tolerance with no painful tiredness.

The cabin has ventilation and heating systems efficient within the whole range of operating conditions (-25…+40°C). The luggage section is located behind the backs of the 2nd row seats.

A vertical tail includes a fin integrated with a fuselage, and a rudder.

A horizontal tail comprises a cantilever stabilizer and an elevator. Both stabilizer and an elevator are made one-piece tailplane by span, which lowers the weight and improves efficiency.

Airplane have a tricycle retractable landing gear with a nose wheel. Large diameter wheels (445 mm) are applied. Landing gear have gas-liquid shock-absorbers. In nose leg compressing the wheel travels into an open well for its retraction that allowed to decrease a landing height of the cabin

floor from the ground and herewith employ a wheel of a large diameter. The airplane has an ability of a float-type and ski landing gear mounted.

A power plant includes two ROTAX 912S piston engines closed in engine nacelles and located on the wing symmetrically to the fuselage. The main fuel tanks are in the center-wing section. Additional (ferry) fuel tanks are possible to install in the outer wing plane.

The airplane is of a double control. A pilot’s seat is on the left.

The control consists of mini-handles and pedal posts.

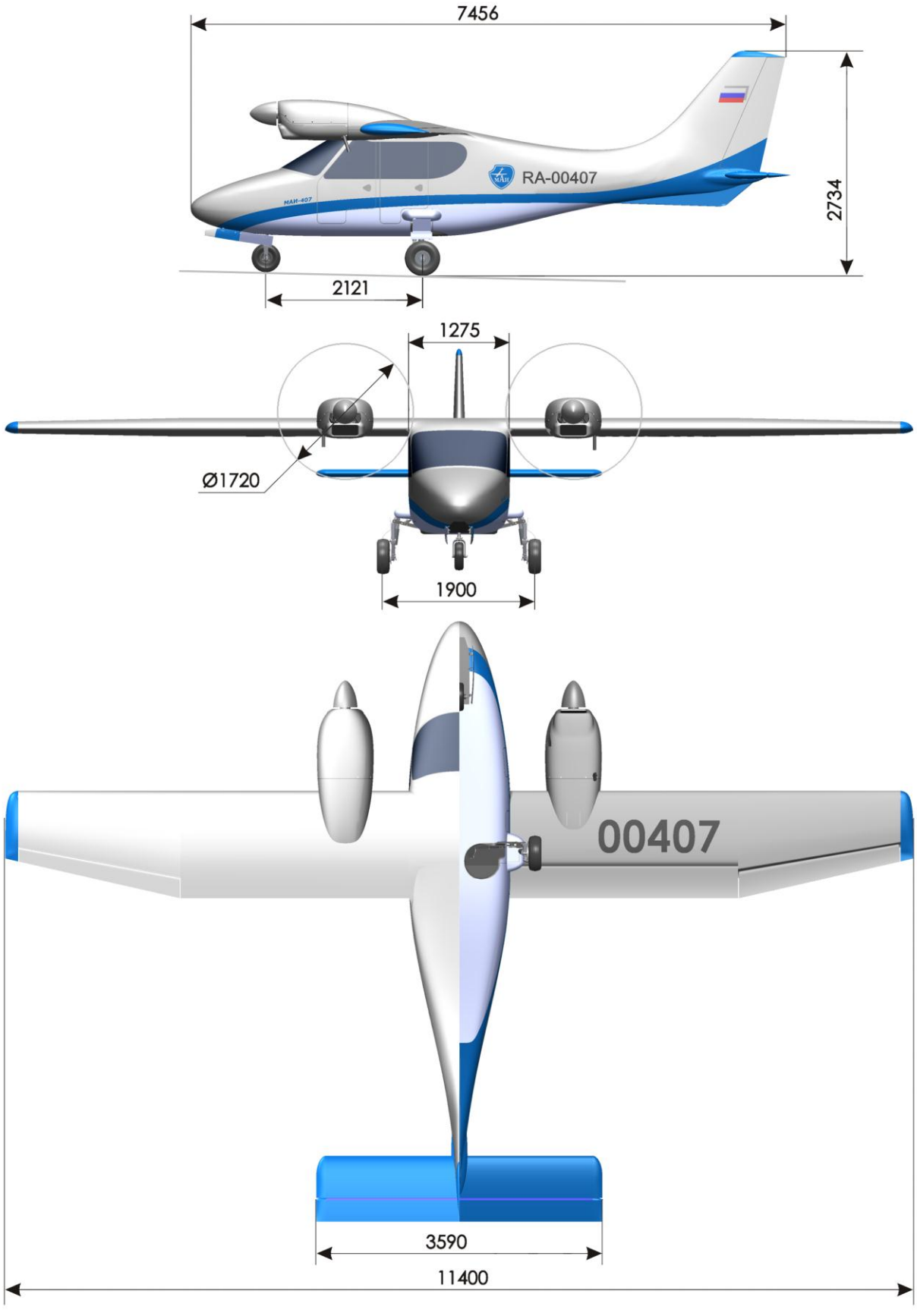
For airplane control convenience the pilots’ seats have an adjustment ability.

The airplane is fitted with a full set of up-to-date navigation equipment to provide for instrument flight rule requirements.

Main Performance Data

1	Wing area	sq. m	14,3
2	Wing span	m	11,4
3	Wing aspect ratio	–	9,1
4	Wing profile	–	GA(W)-1
5	Fuselage height	m	1,48
6	Fuselage width	m	1,28
7	Fuselage length	m	7,45
8	Landing gear base	m	2,23
9	Wheel track	m	1,90
10	Wheels	mm	∅445x160
11	Engine number	pcs	2
12	Engine type	–	Rotax 912S, 100 h. p.
13	Max takeoff weight	kg	1250
14	Useful load	kg	325
15	Passenger capacity	men	3
16	Crew	man	1
17	Maximum speed of level flight	km/h	290
18	Maximum cruising speed	km/h	270
19	Maximum rate-of-climb	m/s	6
20	Maximum cruising altitude	m	up to 3000
21	Maximum payload range	km	1500
22	Take-off run	m	150
23	Take-off distance	m	400
24	Landing run	m	180
25	Landing distance	m	400

General View



Warranty

Guaranteed service life in years, accrued operation time in hours and landings are subject for mutual agreement and should be indicated in a contract for supply of airplanes. They should be no less than 12 months or 200 flight hours.

For the engine ROTAX-912S operation time until the first overhaul makes 1500 flight hours.

For performing service works with the period of guaranteed service life, the Buyer may be provided with the maintenance team on term which should be agreed upon in the contract for supply of airplanes.

Payment Procedure And Delivery Terms

MAI-407 airplane costs 280 000 € as a complete equipment.
A pre-payment amount and delivery terms are determined at the contract conclusion. Final payment settlement is effected after the Airplane acceptance document signature date.

Airplane developer

МЕЖГОСУДАРСТВЕННЫЙ АВИАЦИОННЫЙ КОМИТЕТ
INTERSTATE AVIATION COMMITTEE

АВИАЦИОННЫЙ РЕГИСТР
AVIATION REGISTER

СЕРТИФИКАТ
РАЗРАБОТЧИКА АВИАЦИОННОЙ ТЕХНИКИ
DESIGN ORGANIZATION CERTIFICATE

№ Р-62

НАСТОЯЩИЙ СЕРТИФИКАТ ВЫДАН Московскому государственному авиационному институту "МАИ", г.Москва, Россия.
THIS CERTIFICATE IS ISSUED TO

УДОСТОВЕРЯЕТСЯ, ЧТО ДЕРЖАТЕЛЬ НАСТОЯЩЕГО СЕРТИФИКАТА, ПРИЗНАН В КАЧЕСТВЕ
IT IS HEREBY CERTIFIED THAT THIS CERTIFICATE HOLDER IS RECOGNIZED AS
разработчика легких гражданских воздушных судов, предназначенных для эксплуатации по правилам визуального полета

ПРИ УСЛОВИИ СОБЛЮДЕНИЯ ИМ ПРОЦЕДУР, НОРМ И СТАНДАРТОВ, УСТАНОВЛЕННЫХ АВИАЦИОННЫМИ ПРАВИЛАМИ.
ON CONDITION OF HIS ADHERENCE TO THE REGULATIONS, PROCEDURES, AND STANDARDS ESTABLISHED BY AVIATION REGULATIONS

ДАТА И МЕСТО ВЫДАЧИ
DATE AND PLACE OF ISSUANCE
27 апреля 1998г.
г.Москва

ПОДПИСЬ
SIGNATURE
А.Г.Кругов

ДОЛЖНОСТЬ, TITLE
Председатель
Авиарегистра МАК

An airplane has been designed at Design Bureau of Moscow Aviation Institute (**OSKBES MAI** www.oskbes.ru) that has more than 40-year-long experience of designing light airplanes.

Kvant Airplane set 5 official world records during 1978-1980, and *Acrobat Aviatika-MAI-900* won higher aerobatics Grand Prix in 2005.

For one of the latest designs – *Aviatika-MAI-890* series airplanes put in series production at Russian Aircraft Corporation "MiG" a team of authors was awarded the State Prize of Russian Federation entrusted by V. Putin.

Airplanes supplier

REMZ-Avia is the planned manufacturer and the supplier of **MAI-407** airplanes.

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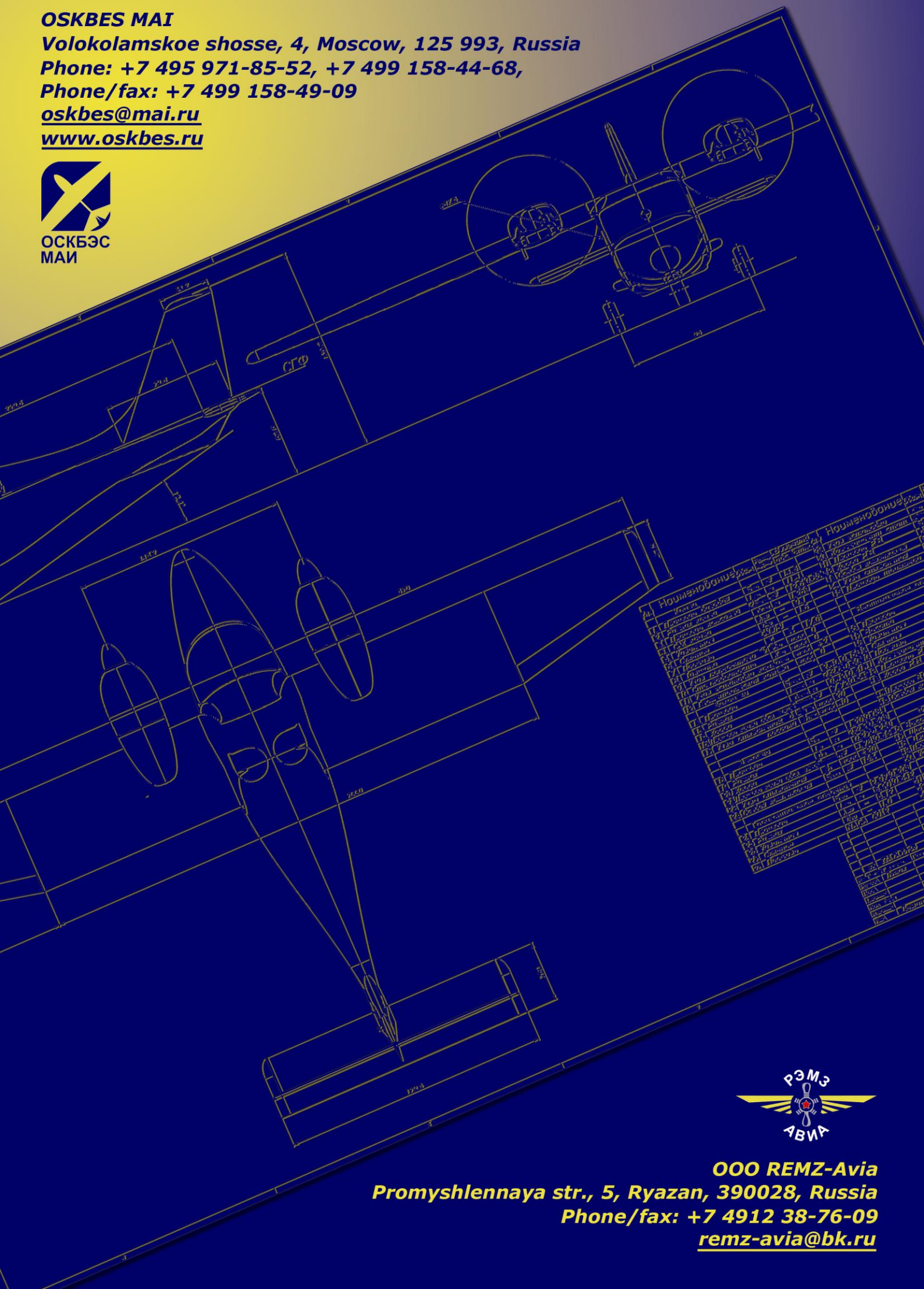
ОСКБЭС
МАИ



РЭМЗ
АВИА

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