



MOTOR SICH JSC



# MOTOR SICH JSC

AERO-UA  
Zaporozhye  
25 April 2019

# Who we are:

# MOTOR SICH JSC



History of Ukrainian aviation industry goes hand in hand with MOTOR SICH JSC based in the city of Zaporozhye.

At present, MOTOR SICH is one of the world largest companies in development, manufacture, testing, in-service support and overhaul of cost-efficient and reliable engines for different-purpose airplanes and helicopters. The company has created an up-to-date after-sale service system, including the world-wide network of service centers. Aircraft powered by MOTOR SICH engines are operated in more than 100 countries.

Engine builders from Zaporozhye offer the world market their products manufactured on the certified production facilities.

The innovative research, design and engineering solutions elaborated and implemented at MOTOR SICH are based on the latest scientific and technical achievements.

Owing to close ties with designers and numerous partners the company creates “dream” engines for airplanes and helicopters. We welcome our traditional and new partners and are always interested in collaboration and mutually beneficial cooperation.

President, Motor Sich JSC

Vyacheslav Boguslayev



# What we do: MOTOR SICH Products

## AIRPLANE ENGINES



### 1. Turboprop engines



**AI-20  
engine family**



**AI-24  
engine family**



**TV3-117VMA-SBM1**



**AI-450C/C-2**



**MS-14**



**An-32**



**An-12**



**An-24**



**An-26**



**An-140**



**DART-450**



**An-2-100**

### 2. Turbofan engines



**D-36 engine  
family**



**D-436 engine family**



**D-18 engine family**



**AI-222-25/AI-322**



**AI-25TL/TLK/TLSh**



**An-74 family**



**An-148/158**



**Be-200**



**An-124-100  
«RUSLAN»**



**An-225  
«MRIYA»**



**Up-to-date  
trainer aircrafts**



**Trainer aircrafts**



# What we do: MOTOR SICH Products



## HELICOPTER ENGINES



**TV3-117VMA family**



**VK-2500**



**D-136 family**



**TV3-117VMA-SBM1V**



**Mi-8AMT**



**Mi-17**



**Mi-26 family**



**Mi-8MT**



**AI-450M**



**MS-500V**



**TV3-117VMA-SBM1V  
series 4 and 4E**



**MSB-2 (Nadiya)**



**Helicopters with takeoff  
weight 3,5...5 t**



**Mi-8MSB**

# What we do: MOTOR SICH Products



## CIVIL HELICOPTERS



**Mi-8MSB**

*Medium  
multipurpose  
helicopter*



**Mi-2 with AI-450M engines**

*Light  
multipurpose  
helicopter*



**MSB-2 (Nadiya)**

*Light  
multipurpose  
helicopter*

# Our EU partners:



## CZECH REPUBLIC:



Aero Vodochody



Dozon S.R.O.



Aircraft Repair Plant  
LOM-Praha

## POLAND:



INSTYTUT TECHNICZNY  
WOJSK LOTNICZYCH



"Green Aviation"  
sp. z o.o.

## AUSTRIA:



Diamond Aircraft

## LATVIA:



AviaTest LNK Aerospace

## BELGIUM:



Solvay S. A.



Centre Composite

# Participation in International Projects:



**7th Framework Programme of the EU**  
the European Union's Research and Innovation  
funding programme for 2007-2013.



***ESPOSA (Efficient Systems and Propulsion  
for Small Aircraft) Project.***

EFFICIENT SYSTEMS  
AND PROPULSION  
FOR SMALL AIRCRAFT



This Project purpose was aimed at the development and improvement of technologies for a family of small turboprop/turboshaft engines in the power range from 180 kW to 450 kW.

The Project included development of engine related systems contributing to the overall propulsion unit efficiency, safety and pilot workload reduction.

# Participation in International Projects:



**Horizon 2020 - the European Union's Research and Innovation funding programme for 2014-2020.**



Clean Sky is the largest European research programme developing innovative, cutting-edge technology aimed at reducing CO<sub>2</sub>, gas emissions and noise levels produced by aircraft. Funded by the EU's Horizon 2020 programme.



***AMBEC (Advanced Modelling Methodology for Bearing Chamber in Hot Environment) Project.***

The AMBEC project aims to develop a reliable experimentally validated methodology able to calculate heat transfer coefficients and fluid distribution in different zones of bearing chamber. The methodology will be used for improvement of the design of compact bearing chambers in hot environment.

Application of AMBEC methodology for aircraft engine design will ensure less oil flow rate, which will lead to reduction of power consumption by oil pumps and thus overall fuel savings. This will give European aeronautical industry an opportunity to better compete at global market and will contribute to greening of EU aviation.



# Participation in International Projects:



## MOTOR SICH Helicopter Program

*One of the priority international projects of MOTOR SICH JSC is Helicopter Program.*

This Program includes four stages: from modernization and re-engining to designing and certification of helicopters with their subsequent batch production.





# Potential areas of cooperation with European Union Countries.

## (EC-MOTOR SICH COOPERATION) .

- » Supply and overhaul of aero engines of various types and modifications manufactured by MOTOR SICH JSC operated in the European Union countries, supply of spare parts, and services on technical support in service.
- » Supply of modernized Mi-8MSB and Mi-2 helicopters powered by AI-450 engines to European Union countries, maintenance, overhaul and upgrading of helicopters of Mi-8, Mi-17, and Mi-24 types with replacement of existing engines by promising engines designed and manufactured by MOTOR SICH JSC.
- » Use of engines manufactured by MOTOR SICH JSC in the airplanes and helicopters manufactured in European Union countries (family of AI-450 and MS-14 engines, family of MS-500V, AI-222/AI-322, AI-25TL/TLSh, TV3-117VMA-SBM1V and TV3-117VMA-SBM1V 4E series engines).
- » Use of accessories and vendor items manufactured by European Union countries when manufacturing products of MOTOR SICH JSC, mutual development of new production processes.
- » Certification of MOTOR SICH JSC products according to the European Regulations.

# Seeking R&D Partnerships for Aeronautics-Related Joint Projects:



## PROMISING AREAS OF COOPERATION

1. Development and finalization of new low-emission gas turbine engines.



2. Development of aviation structures made of composite materials.



3. Development and application of 3D prototyping technologies.

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***Thank you for your attention!***