



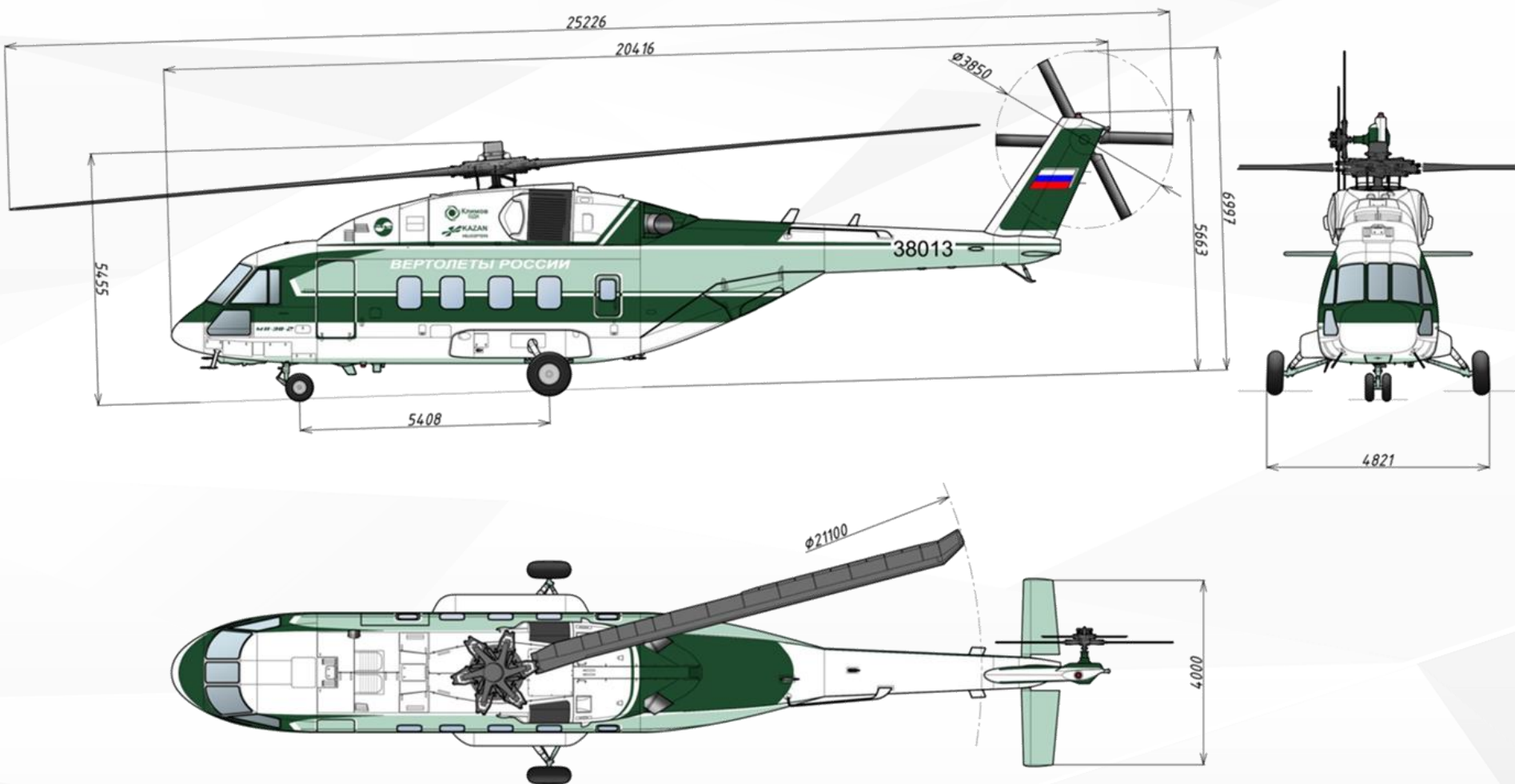
Mi-38 HELICOPTER

Mi-38 HELICOPTER:

- Is a new medium-to-heavy class transport category multipurpose helicopter;
- Designed accordingly contemporary airworthiness requirements;
- Designed using modern CAD/CAM/CAE software;
- Certified in accordance with Russian Certification requirements АП-29 (harmonized with CS-29/FAR 29).



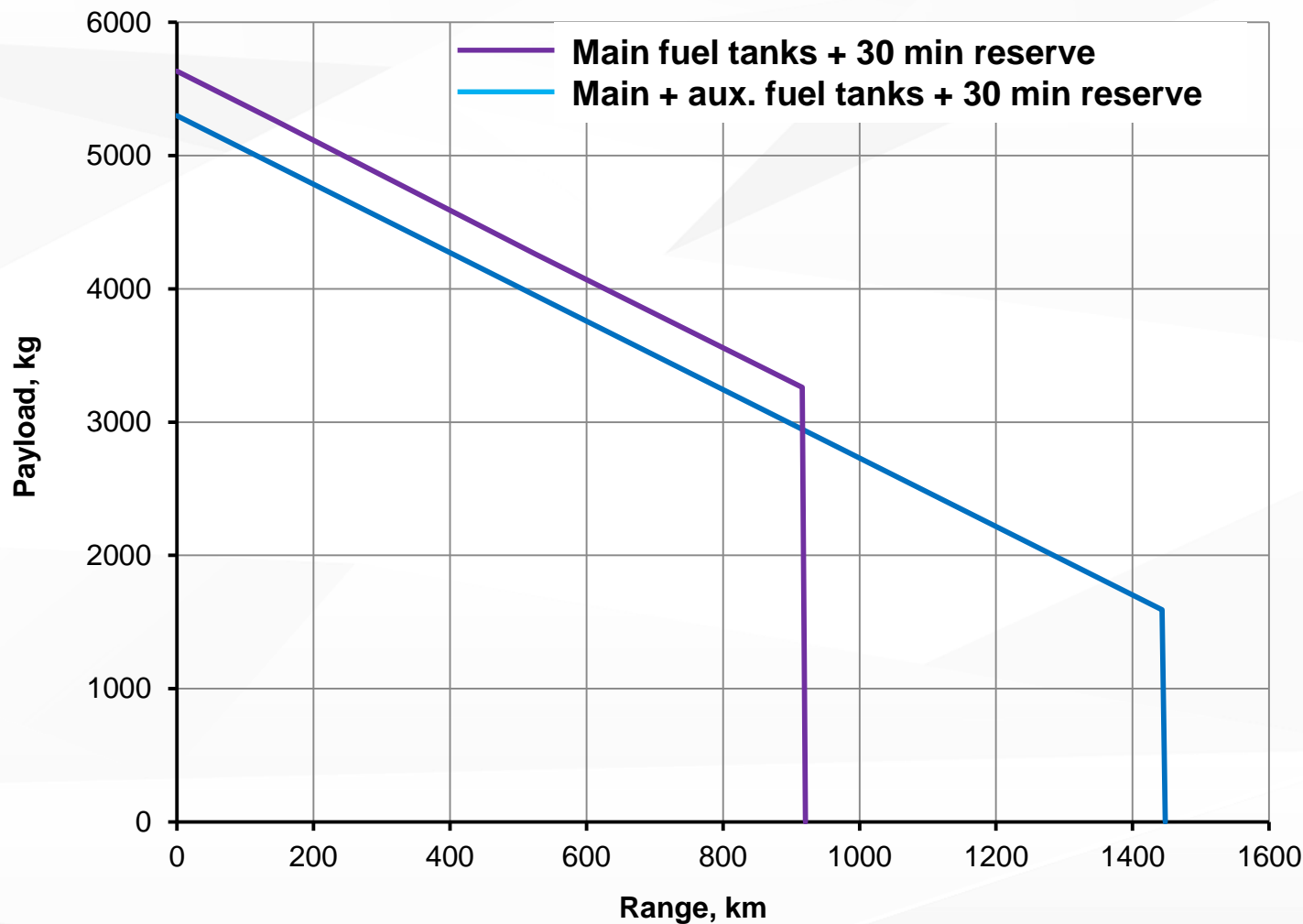
Mi-38 HELICOPTER GENERAL DIMENSIONS



Mi-38 HELICOPTER FLIGHT PERFORMANCE

Characteristics	Value
Max. take off weight	15600 kg / 34392 lb
Maximum speed	300 km/h / 186,4 mph
Cruising speed	285 km/h / 177,1 mph
Service ceiling	6300 m / 20669 ft
Range with 2000 kg (4409 lb) payload with en-route fuel reserve for 30 min flight	910 km / 491 nm
Range with 2000 kg (4409 lb) payload with one aux. fuel tank with en-route fuel reserve for 30 min flight	1250 km / 675 nm
Ferry range	1400 km / 756 nm
Max. internal load weight	5000 kg / 11023 lb
Max. external load weight	6000 kg / 13228 lb
Capacity (with one air steward)	up to 29 passengers

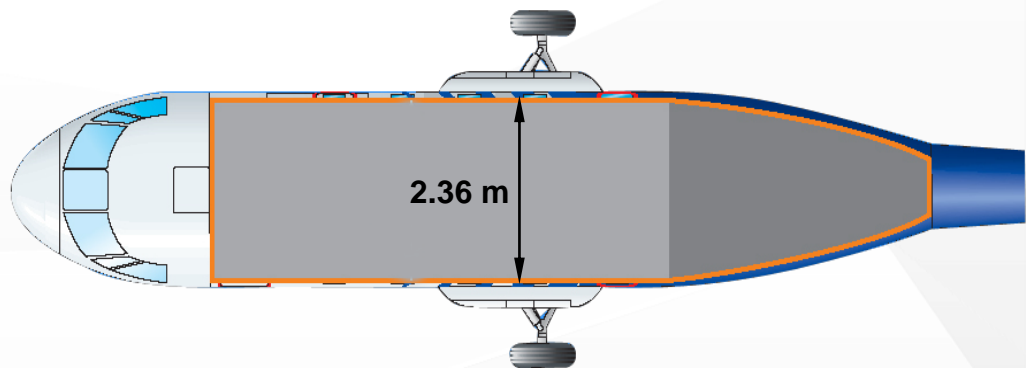
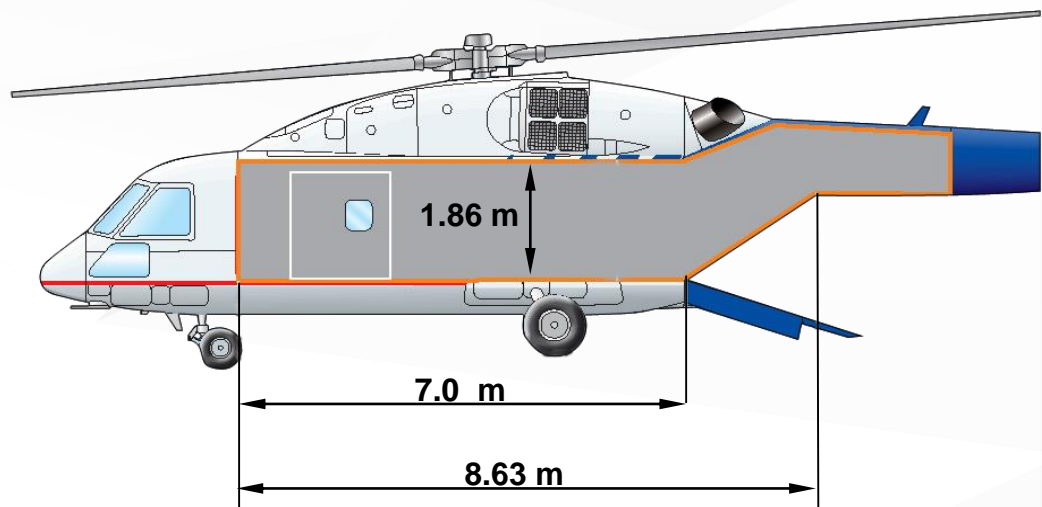
Mi-38 HELICOPTER PAYLOAD/RANGE



Payload/Range Diagram for Mi-38 Helicopter

Mi-38 HELICOPTER CARGO CABIN

- High-volume cargo cabin ($V = 29.9 \text{ m}^3$) with hydraulic powered ramp
- Width slide door ($w = 1,43 \text{ m}$)
- Internal payload up to 5000 kg
- External payload up to 6000 kg



Mi-38 HELICOPTER INTERNATIONAL COOPERATION



ZODIAC
AEROSPACE



AVIATEST
LNK AEROSPACE



Pall Corporation

Mi-38 HELICOPTER DESIGN FEATURES: MAIN GEARBOX & DUST PROTECTION DEVICE (DPD)



Main gearbox with 30 minutes dry run

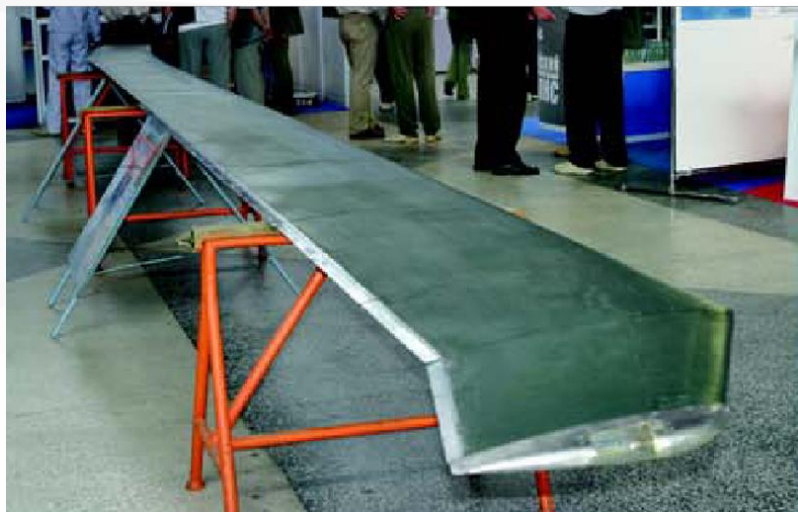


KRASNY OGTIABR

**Engine inlets with dust protection
device ensure up to 95% purification**



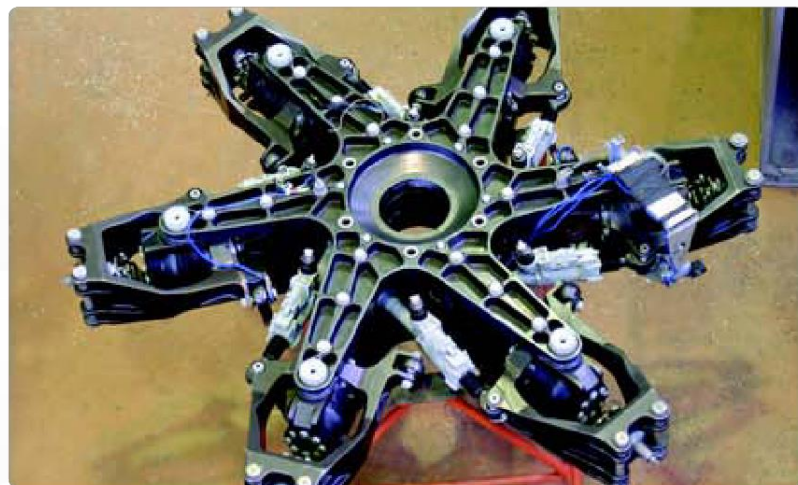
Mi-38 HELICOPTER DESIGN FEATURES: MAIN ROTOR BLADES & HUB



Main Rotor Blade Made of Composite Materials



**Titanium Hub
with Elastomeric Bearings**



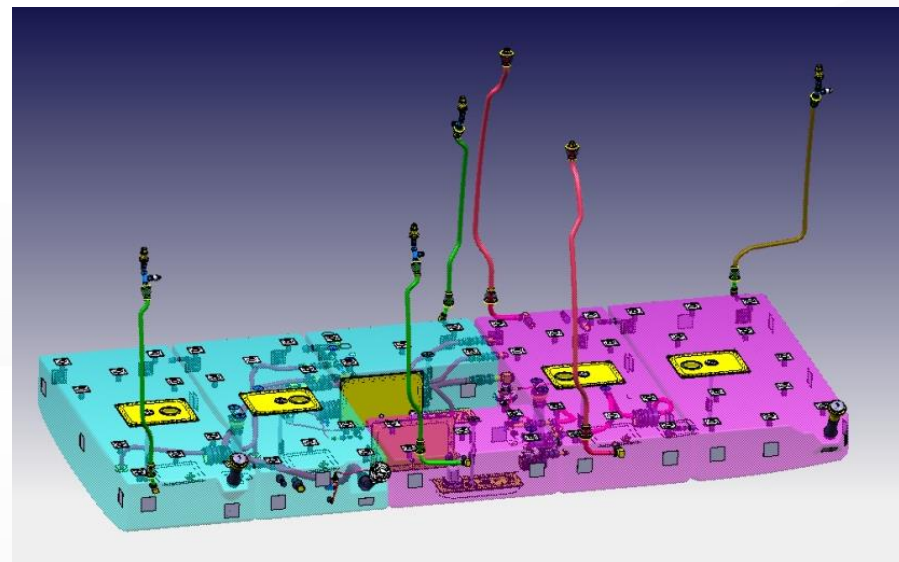
Mi-38 HELICOPTER DESIGN FEATURES: LANDING GEARS & FUEL SYSTEM



Emergency landing energy absorbing
landing gear



Crashworthy fuel system



Mi-38 HELICOPTER DESIGN FEATURES: AVIONICS

The complex enables a 2-member crew to perform flights according to VFR and IFR at day and night in different geographical and climatic conditions



The IBKO-38 complex includes:

- piloting and navigation equipment suite
- information control suite
- BSK-38 built-in test
- radio communication equipment
- emergency equipment
- backup instruments

Mi-38 HELICOPTER FIRST TO BE CERTIFIED BY FATA



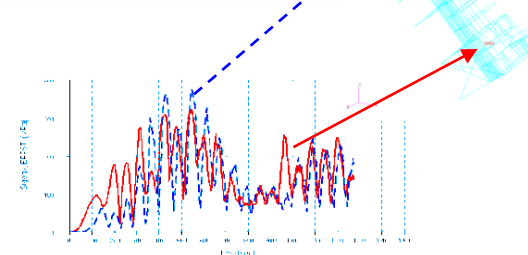
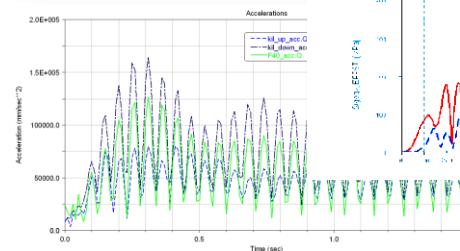
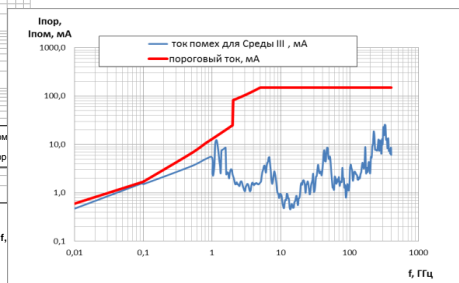
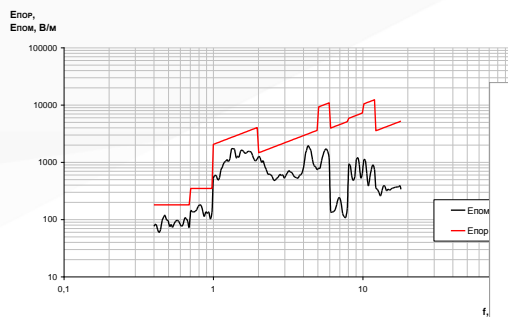
- Transport category rotorcraft
- Applicable regulation – AP-29 (harmonized with CS-29/FAR-29)
- Cargo variant
- Performance category B according to 29.1(d)

Mi-38 HELICOPTER CERTIFICATION TESTS: HIRF & LIGHTNING



The State Scientific
Research Institute of Civil Aviation

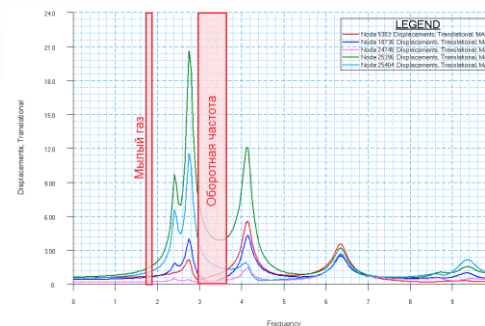
GosNII GA



Mi-38 HELICOPTER CERTIFICATION TESTS: HIC & IRON BIRD



AVIATEST
LNK AEROSPACE



Mi-38 HELICOPTER CERTIFICATION TESTS: BIRD STRIKE



Центральный институт авиационного
моторостроения имени П.И. Баранова

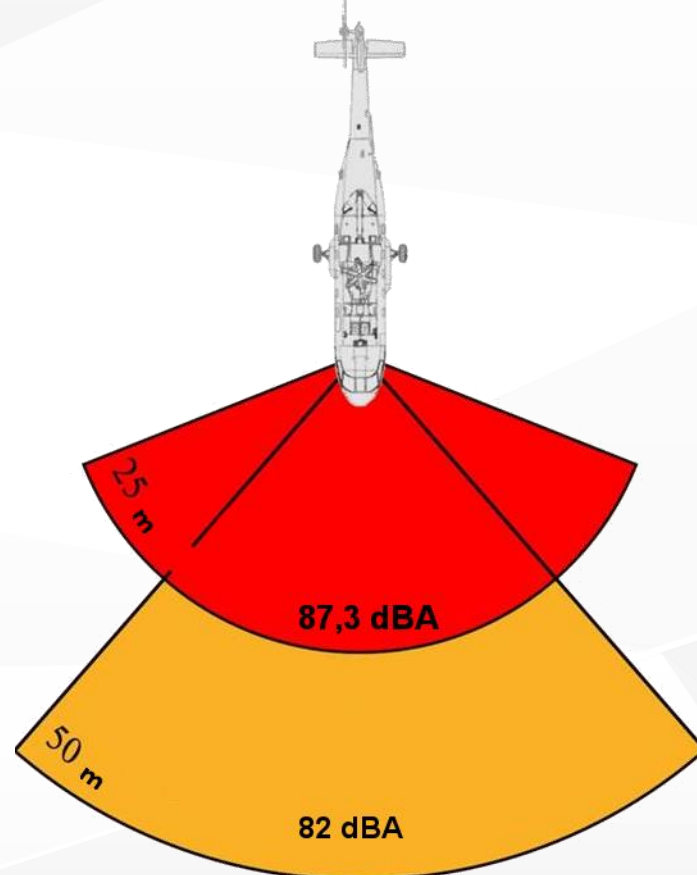


Mi-38 HELICOPTER CERTIFICATION TESTS: FUEL SYSTEM & NOISE LEVEL

ZODIAC
AEROSPACE



NOISE LEVEL MEASUREMENT RESULTS





Mi-38 HELICOPTER CERTIFICATION TESTS: AUTOROTATION LANDING FLIGHT TEST



Mi-38 HELICOPTER RECORDS SET FAI SUBCLASS E-1h TOW = 10000-20000 KG

Altitude with no payload – 8620 m

Altitude with 1000 kg payload – 7895 m

**Time to reach 6000 m height –
10 min 52 sec**



Time to reach 3000 m height – 6 min 00 sec



Altitude with 2000 kg payload – 7020 m

Mi-38 HELICOPTER CERTIFICATION: CURRENT CERIFICATION PROCESS

Icing conditions simulation and flight tests

Full ice protection system (FIPS):

- Ice detectors
- Automatic activation system with manual backup
- Engines intake protection and suitable Pureair DPD
- Heated windshield and Pitot tube
- Main and tail rotor blades protection



Mi-38 HELICOPTER CERTIFICATION: CURRENT CERIFICATION PROCESS

**Version for extreme cold condition
operations**





MI-38 HELICOPTER CERTIFICATION: CURRENT CERIFICATION PROCESS

Highlands operations



Mi-38 HELICOPTER VARIANTS

CARGO



PASSENGER



VIP



OFFSHORE



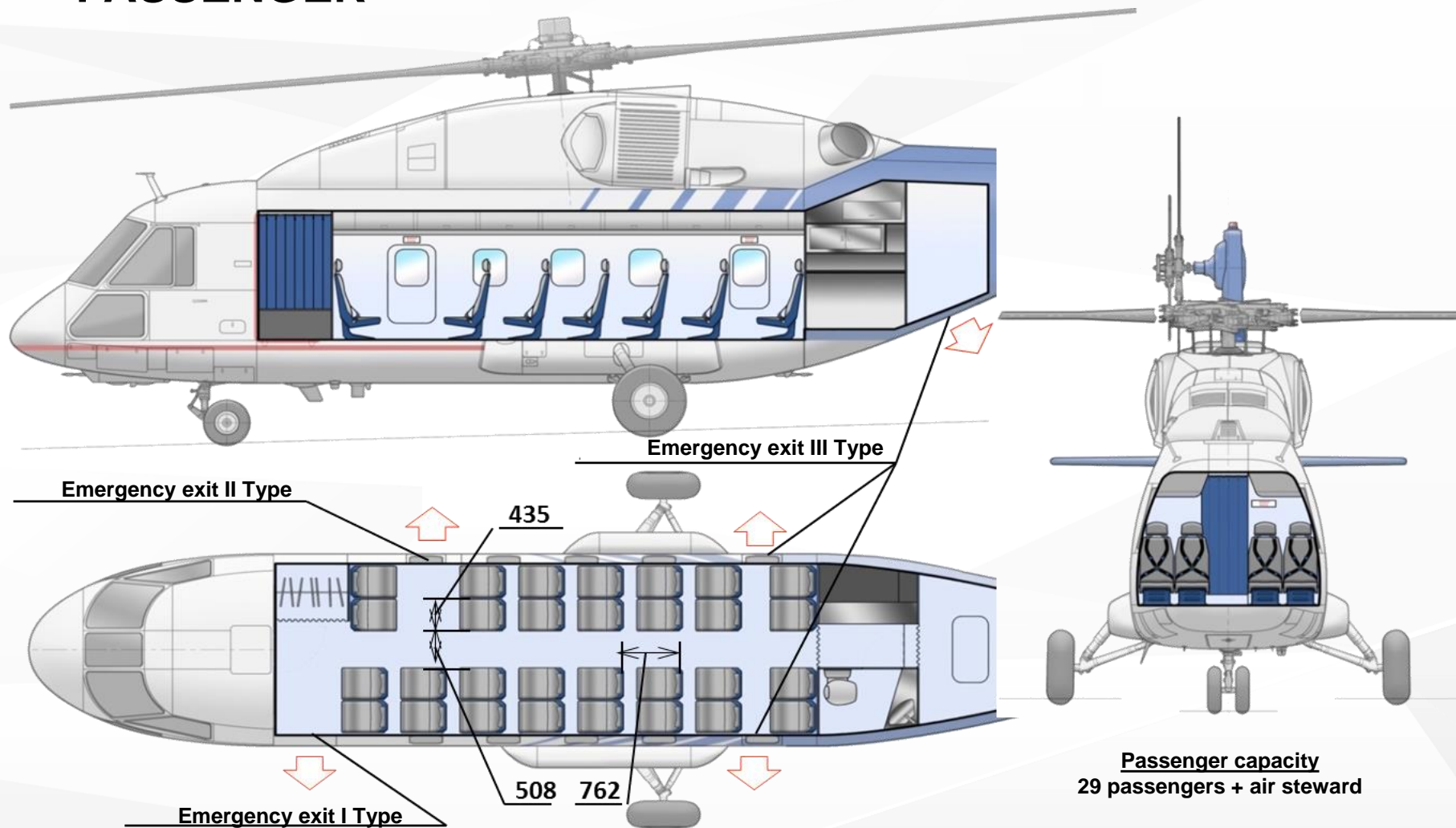
SAR



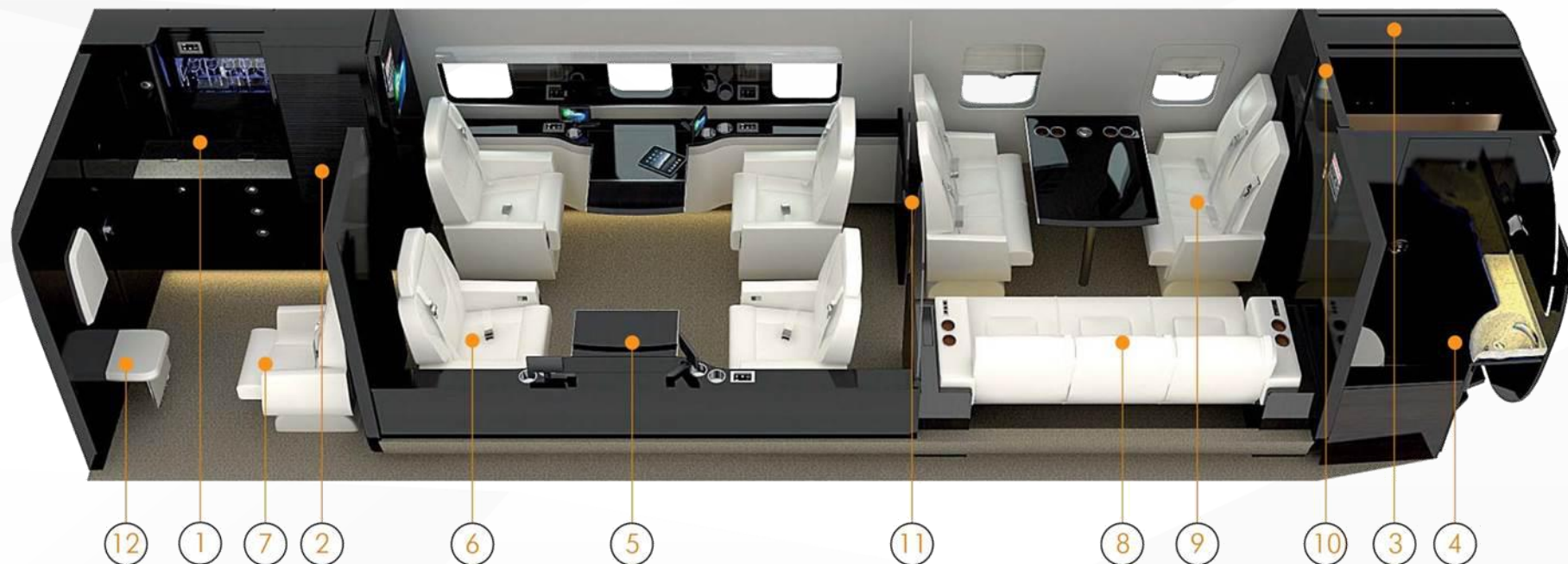
MEDEVAC



Mi-38 HELICOPTER VARIANTS: PASSENGER

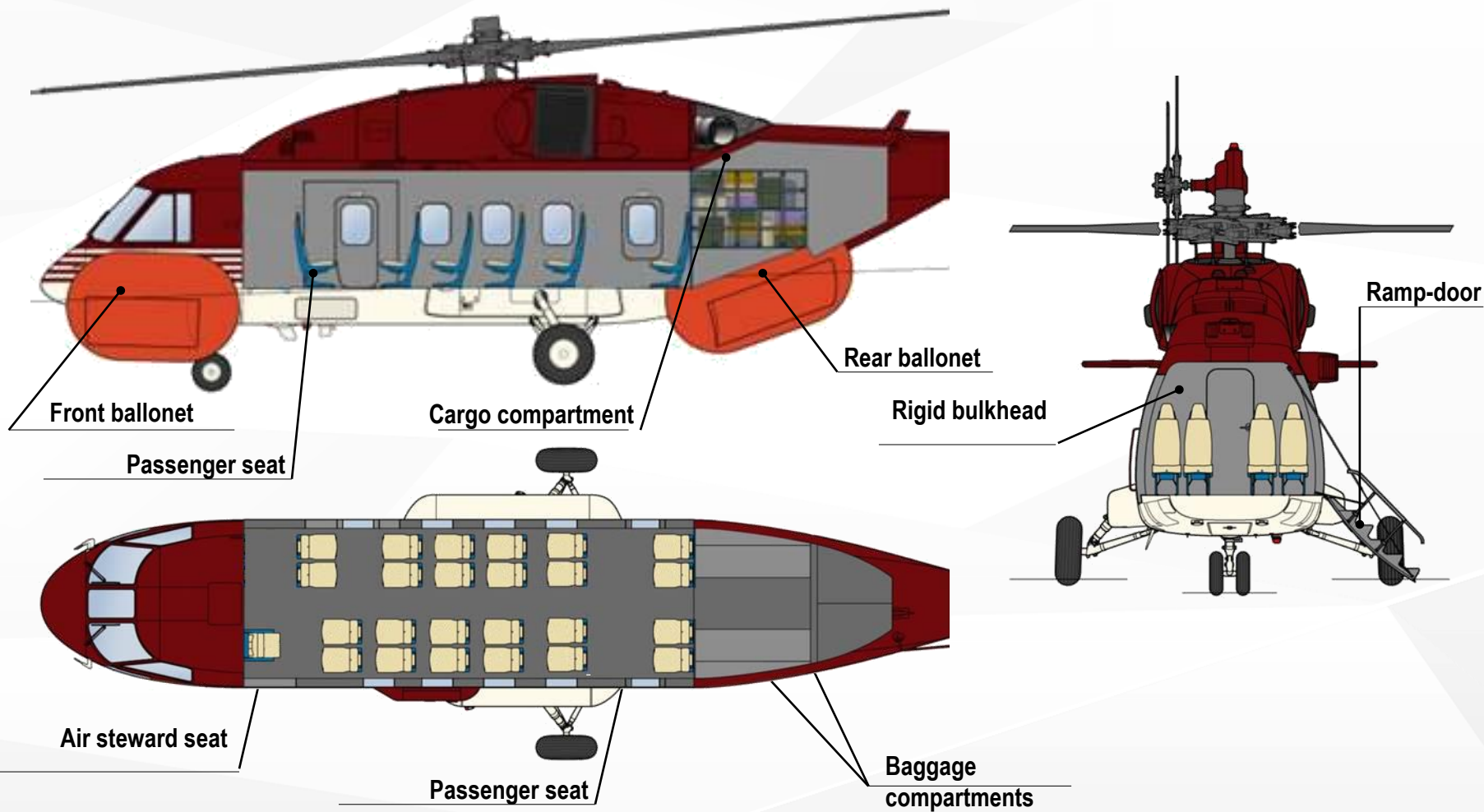


Mi-38 HELICOPTER VARIANTS: VIP

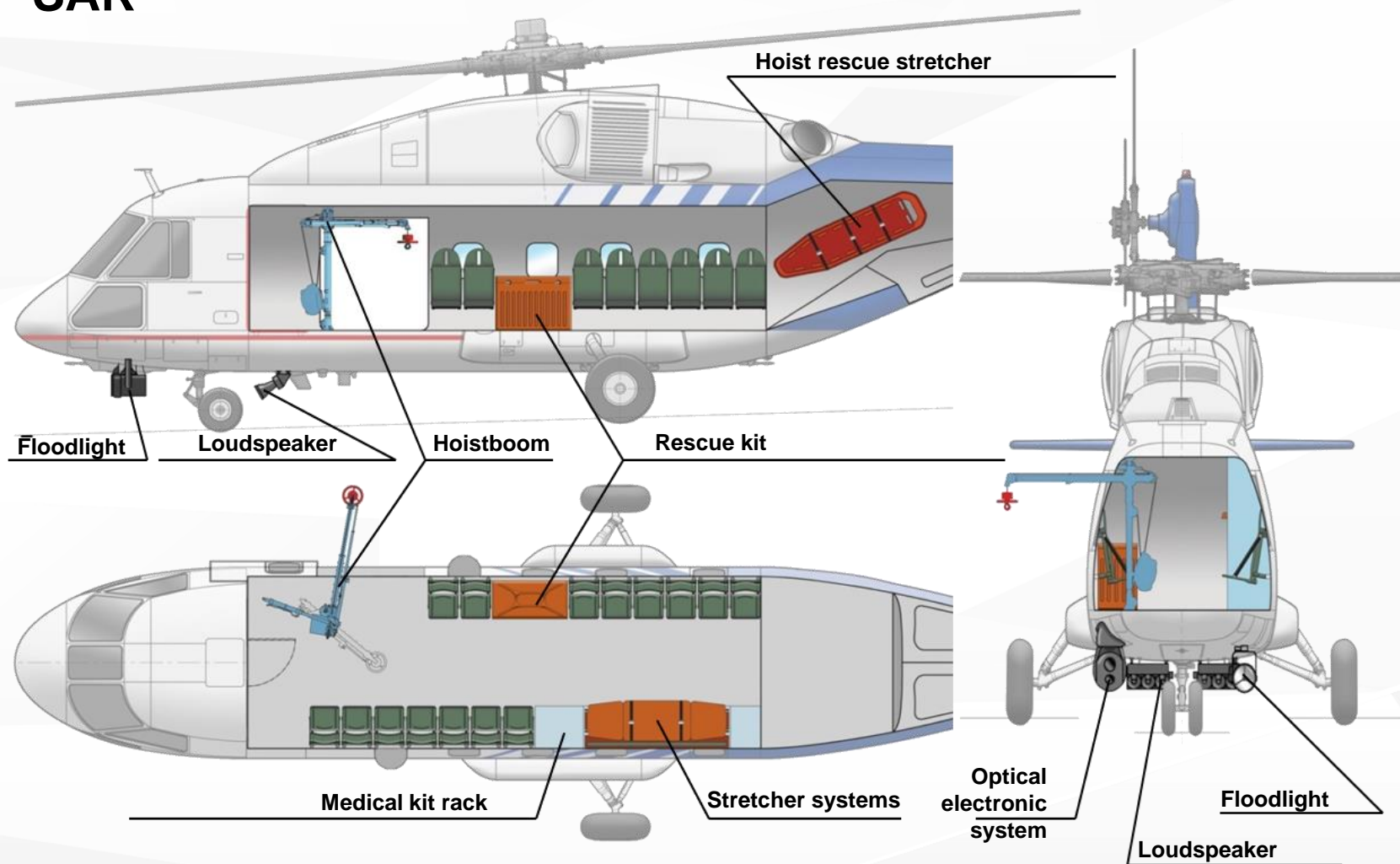


- | | |
|----------------------------|---------------------------------|
| 1. Galley/buffet | 7. Single seat |
| 2. Crew coat stowage | 8. Three-seat coach |
| 3. Passengers coat stowage | 9. Twin seat |
| 4. Lavatory | 10. Partition with sliding door |
| 5. Folding table | 11. Transparent partition |
| 6. VIP seat | 12. Air steward seat |

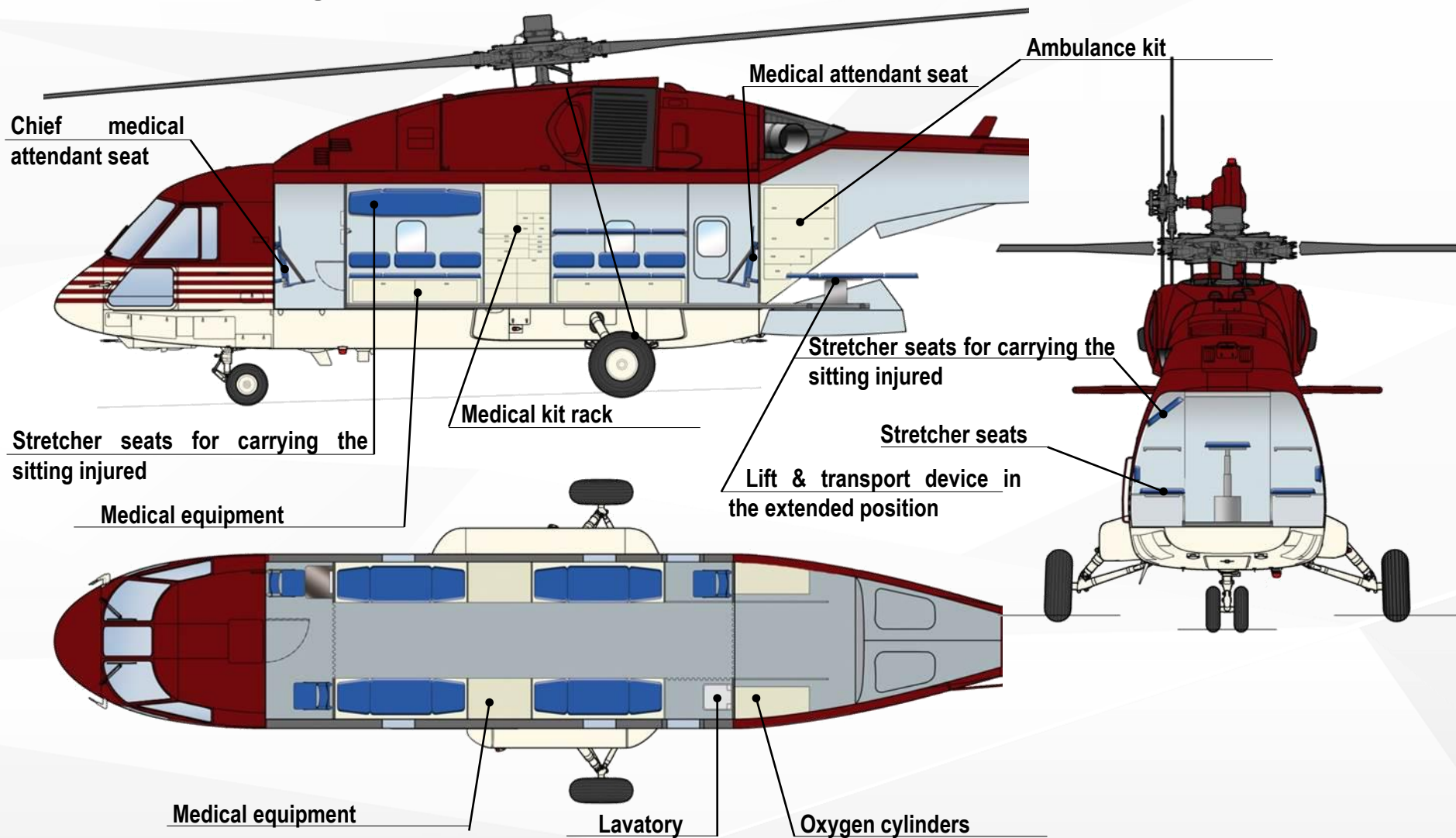
Mi-38 HELICOPTER VARIANTS: OFFSHORE



Mi-38 HELICOPTER VARIANTS: SAR



Mi-38 HELICOPTER VARIANTS: MEDEVAC



Thank you for your attention

AUTHORS:

- **Mikhail KOROTKEVICH – EXECUTIVE DIRECTOR**
MIL MOSCOW HELICOPTER PLANT, JSC
- **Nikolay PAVLENKO – GENERAL DESIGNER**
MIL MOSCOW HELICOPTER PLANT, JSC;
- **Alexander AKHROMEYEV – Mi-38 PROGRAM DIRECTOR**
RUSSIAN HELICOPTERS, JSC
- **Georgiy SINELSHCHIKOV – MI-38 CHIEF DESIGNER**
MIL MOSCOW HELICOPTER PLANT, JSC;
- **Nikolay CHALOV – CHIEF DESIGNER**
MIL MOSCOW HELICOPTER PLANT, JSC;
- **Evgeny Kostin – Head of General Layouts Department**
MIL MOSCOW HELICOPTER PLANT, JSC.

SPEAKERS:

- **Maxim ANDREEV – Mi-38 CHIEF DESIGNER FOR MODIFICATIONS**
MIL MOSCOW HELICOPTER PLANT, JSC
- **Alexander TARASOV – CHIEF DESIGNER, HEAD OF AIRWORTHINESS**
MIL MOSCOW HELICOPTER PLANT, JSC;
- **Dmitry PRASLOV – CERTIFICATION DEPARTMENT CHIEF EXPERT**
MIL MOSCOW HELICOPTER PLANT, JSC.