



Mi-171A3

for offshore and SAR flights



Mi-171A3

Performance



Max takeoff weight (category A), kg	13,500
Internal payload, kg	4,000
External sling payload, kg	5,000
Maximum speed, km/h	280
Cruise speed, km/h	250
Service ceiling, m	6,000
Flight range with 2 tons of cargo (20 min en-route fuel reserve), km	820
Number of passengers	16 / 19 / 24
Crew	2
Operating temperature range	-50 +50°C

- iOGP compliance
- High flight performance
- Equipment conversion by operator
- Operation in high latitudes
- Various passenger cabin layouts
- Easy operation and maintenance



Main design features

X-shaped tail rotor

Energy absorption fuselage structure

High-power engines with FADEC system

Flight-and-navigation equipment compliant with IOGP recommendations

Composite main rotor blades

Bird impact-resistant heated windshields with increased observability

Energy attenuating seats for passengers and pilots

Enhanced aerodynamics due to composite materials in the fuselage structure

Pushout windows

Emergency flotation system compliant with IOGP

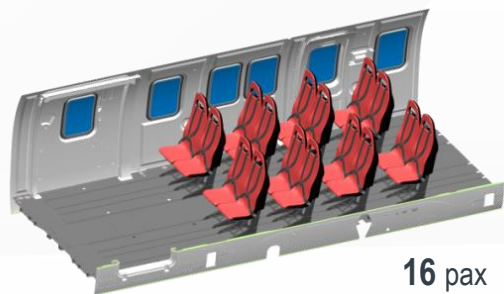
Crash resistant fuel system

Offshore / passenger configuration

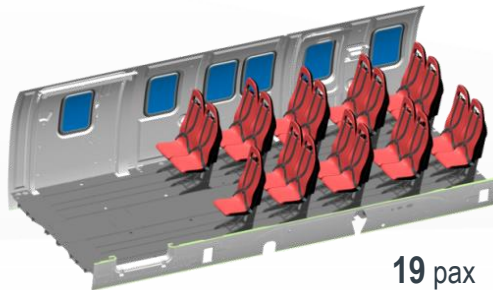


Offshore / passenger configuration

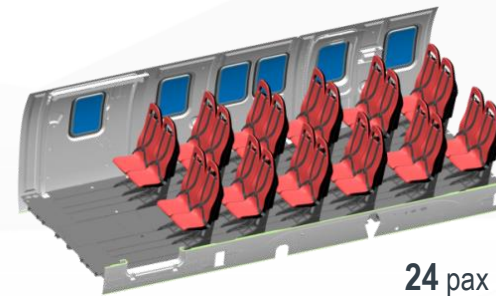
Layout options



16 pax



19 pax



24 pax

Offshore / passenger configuration

Passenger/cargo cabin

Individual lighting and air conditioning

The luggage compartment is separated from the passenger compartment by a partition

4-point safety belts

Energy-attenuating seats

Helicopter Emergency Egress Lighting (HEELS)

Airstair for embarking/disembarking passengers

Helicopter Emergency Egress Lighting (HEELS)

Wide sliding door for search and rescue

Rapid reconfiguration of the cabin: passenger (16 / 19 / 24 seats) or SAR with special equipment

Cabin interior view looking aft with seats

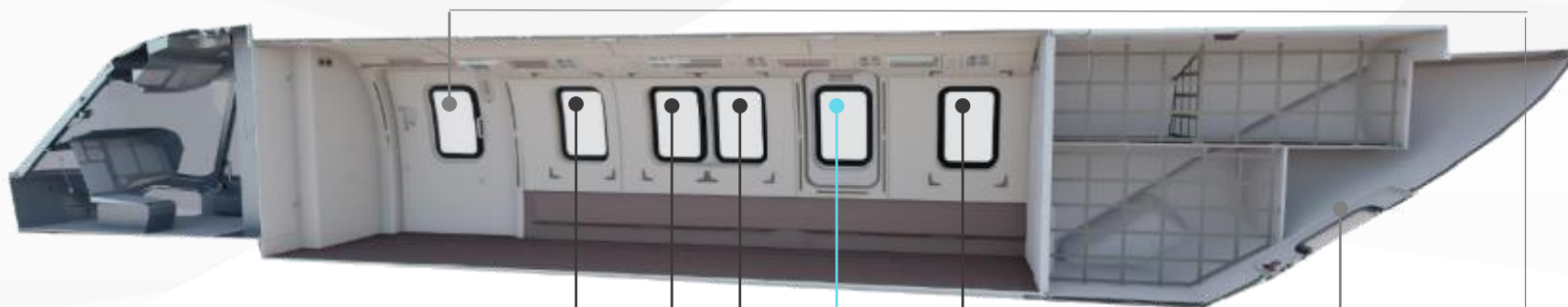
Offshore / passenger configuration

Cargo compartment



Offshore / passenger configuration

Emergency exits



The windows are type IV emergency exits with a structurally possible maximum size and provide emergency escape of passengers from the cabin

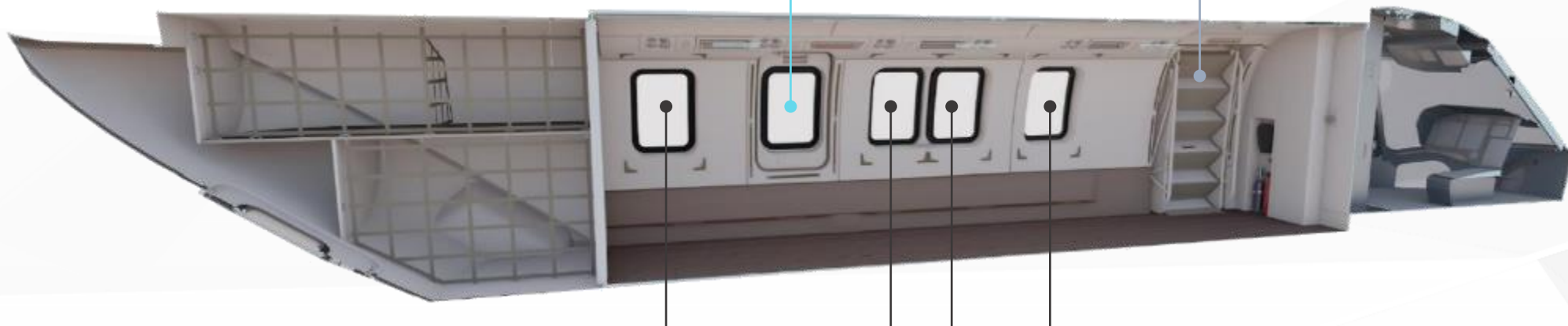
8 type IV exits
(485 x 676 mm)

2 type III exits
(600 x 1,000 mm)

1 type III exit
(514 x 925 mm)

1 type I exit
(1,248 x 1,560 mm)

1 type I exit
(810 x 1,560 mm)



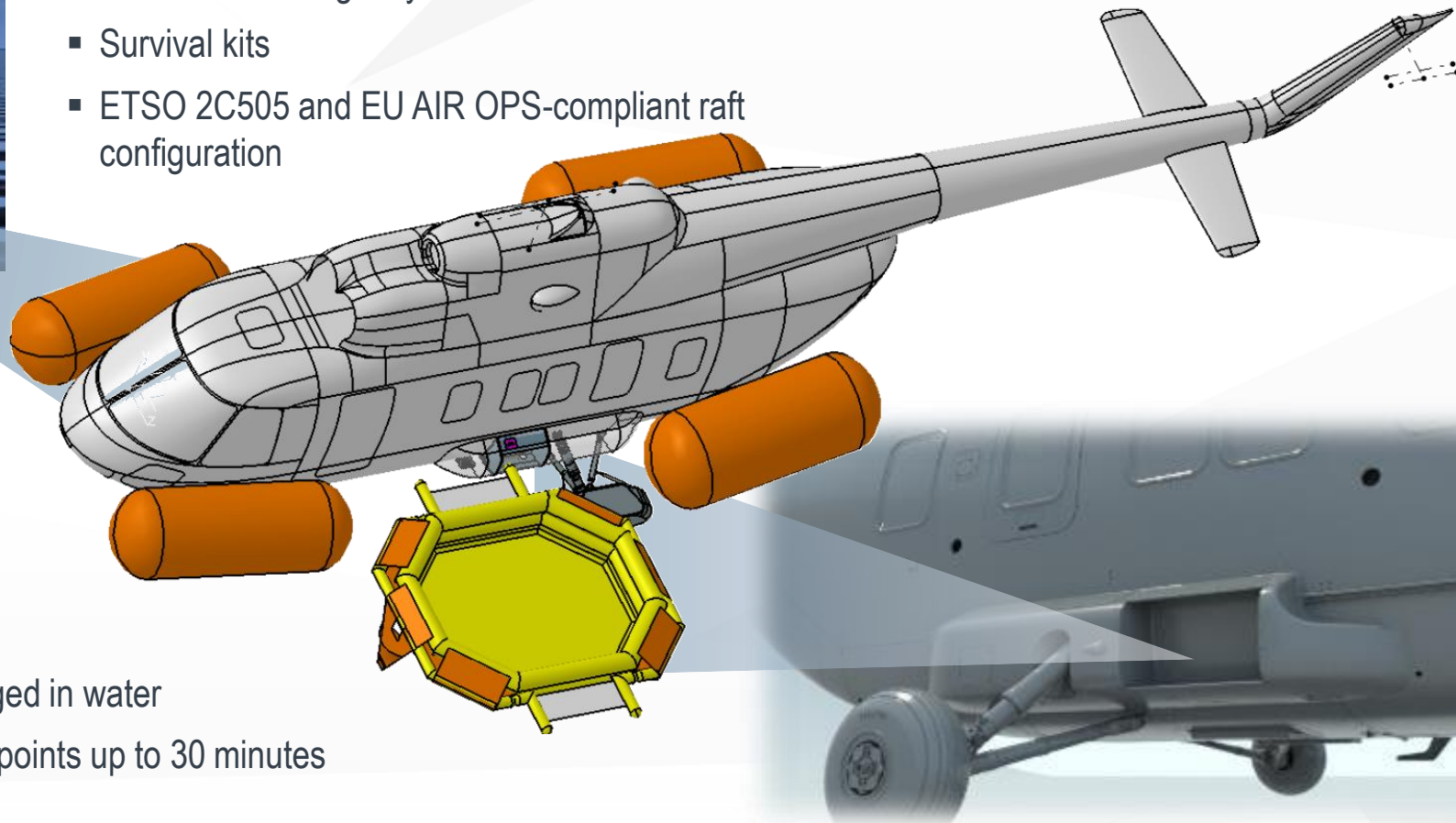
Offshore / passenger configuration

Emergency floatation system



Emergency life rafts

- 2 external life rafts with capacity of up to 27 people each
- Embedded emergency location transmitter
- Survival kits
- ETSO 2C505 and EU AIR OPS-compliant raft configuration



- 3-section front floats
- 4-section rear floats
- Manual activation capability
- Maintaining buoyancy with loss of 1 float
- Automatic inflation upon contact with water
- Emergency radio beacon detachable when submerged in water
- Providing buoyancy in water surface waves up to 5 points up to 30 minutes

External cargo sling

- Cargo capacity up to 5,000 kg
- Weight measurement system
- Cable length up to 33 m
- Capability to use synthetic lanyards
- Capability to carry bulky cargo



Search-and-Rescue missions



Cargo winch

Dual (redundant) winch with lifting capacity up to 300 kg of high reliability for rapid lifting of people and cargo aboard

- Capability to use various rescue equipment
- Lifting speed of people and loads - 0.6 m/s
- Descent speed of loads - 1.2 m/s
- Winch cable length - 85 m
- Winch weight is not more than 39.5 kg each
- Winch remote control from the transport cabin
- Cargo emergency release capability

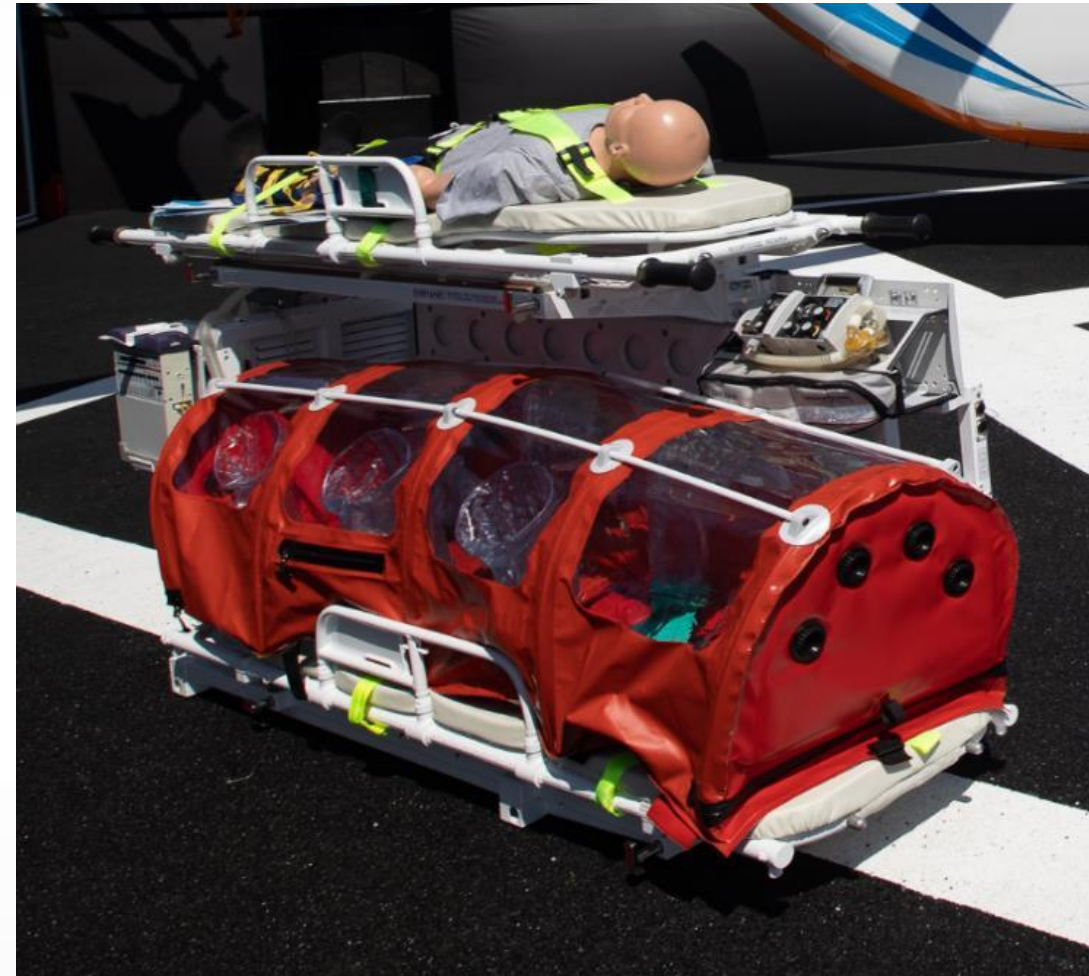
Rescue equipment configuration

- Cradle
- Universal lifting chair
- Rescuer belt
- Life belt for evacuees
- Hammock
- Lift device



Medical module

- Placement of up to two casualties on one module
- Possibility to install up to 2 modules (evacuation of up to 4 casualties)
- Provision of first aid medical care using medical equipment (including a full range of intensive care)
- Dismantling of easily removable modules in a short time (up to 20 min)
- Wide range of medical equipment (defibrillator, electrocardiograph, aspirators, lung ventilator, pulse oximeter, etc.)





TSL-1600 Search light

- Search operation at night time
- Illuminating range - 1,000 m



SGU-600 Signal loudspeaker device

- Warning and issuing commands by a helicopter crew via external acoustic systems during SAR and fire fighting operations



Gyro-stabilized optoelectronic system

- Dual circuit stabilization system
- Round-the-clock detection, recognition, capture and automatic target tracking
- Measurement of the slant range distance to the object in VFR and IFR weather conditions.
- Image and information output to the operator's console and to the cockpit indicators
- Cockpit operated capability
- Capable of transmitting information to a mobile ground control station

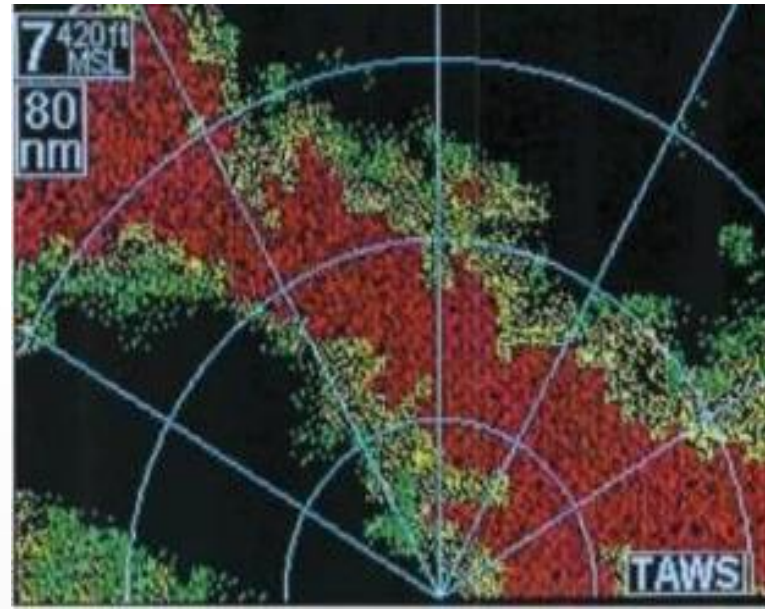
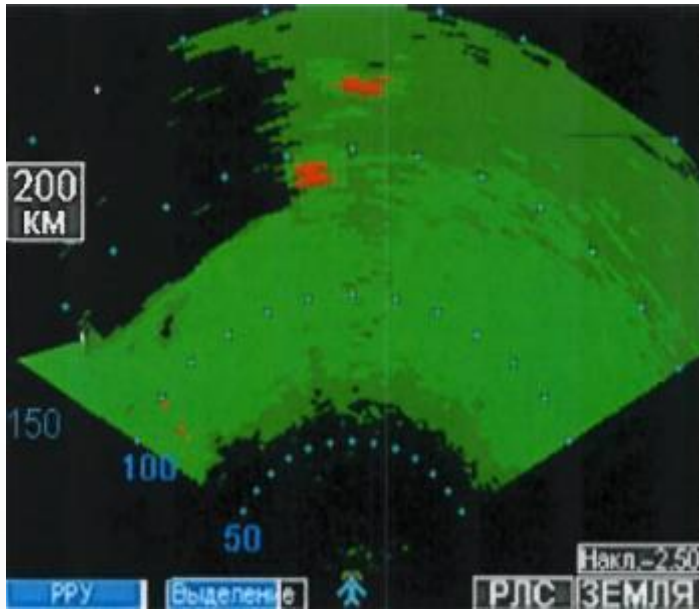
Performances

- Object detection range:
 - TV camera – 10 km
 - IR camera – 10 km
- Video resolution - not less 1920×1080
- Azimuth, degrees - $n \times 360$ (unrestricted rotation)
- Pitch, degrees - not less from +10 to -110



Radar

- Expanded area of antenna array
- Scanning and presentation of horizontal and vertical profile of moisture targets on display
- Providing radar imaging of underlying surface



Helicopter baseline configuration



AIRFRAME

Fuselage

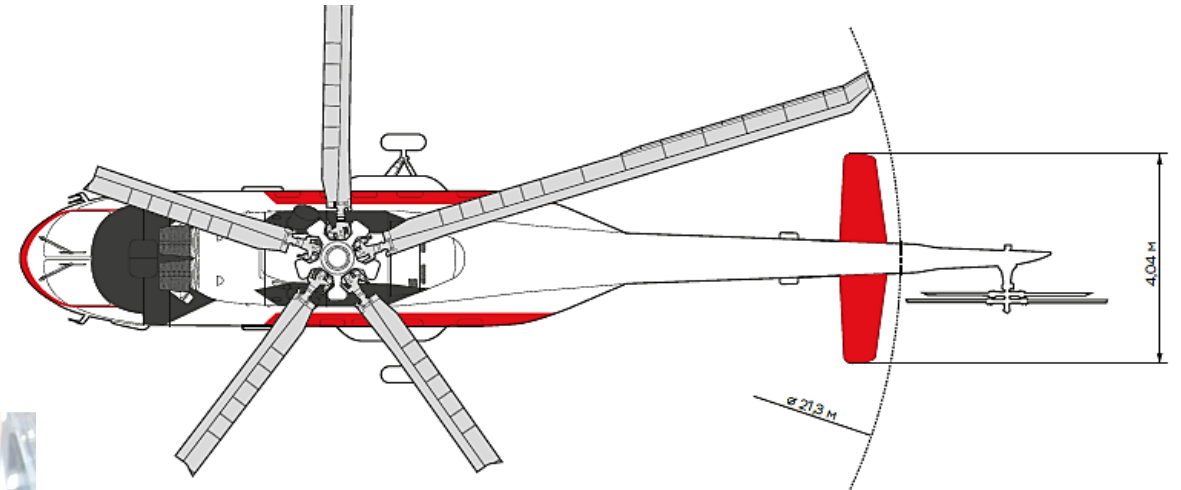
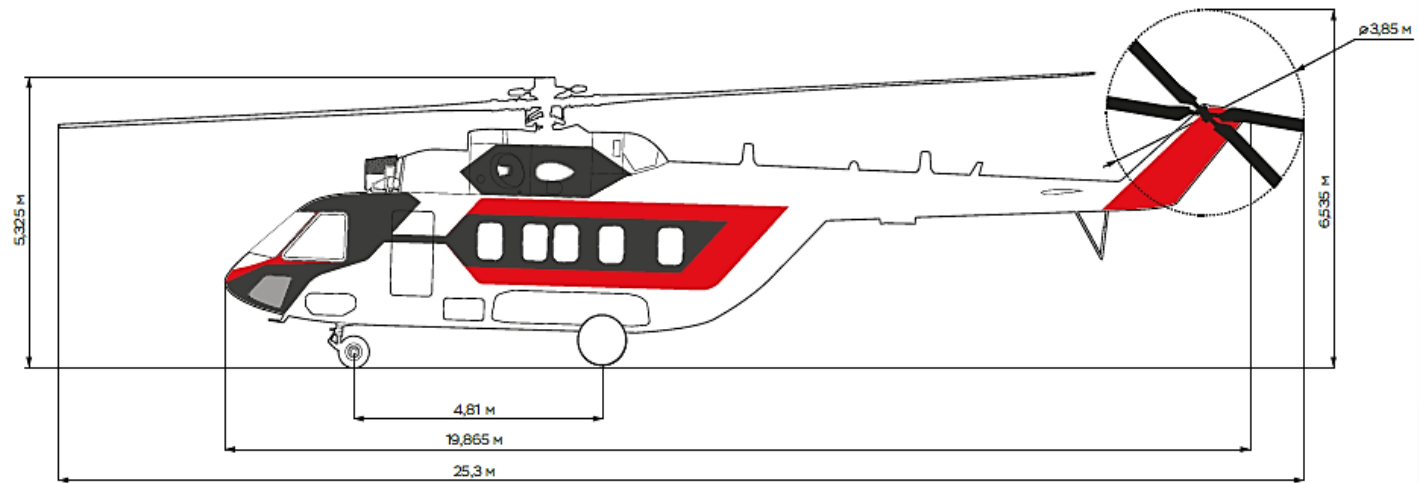
- Energy absorption fuselage structure (up to 20 g)
- Airframe enhanced aerodynamics
- Crash resistant fuel system
- Pushout windows
- RH sliding door, LH airstair
- Bird impact-resistant heated windshields with increased observability
- Heating and air conditioning system placed in the helicopter floor

Landing Gear

- Landing gear with shock struts
- Running takeoff capability
- Brake system
- Capability to taxi and tow the helicopter on ground

Aircrew energy-attenuating seats

- Adjustable seats
- Four-point safety harnesses
- Manual and automatic lock of shoulder harness



High level of flight safety

VK-2500PS-03 Engines with enhanced power at emergency mode

- Increased power at cruise and nominal flight modes
- Continuous flight with OEI within 60 minutes
- Continuous take-off with OEI
- Digital engine control system of FADEC type
- Anti-surge control
- PALL is a multi-cyclone type EAPS with a higher degree of purification

Composite main rotor blades and X-shaped tail rotor

- Increased lift and thrust/weight ratio (up to 700 kg)
- Increased directional control efficiency, maneuverability and side wind resistance

Energy absorption fuselage structure

- Ensuring safety during overloads up to 20g

Dual fuel and hydraulic systems

- Separate engine fuel supply
- Simultaneous operation of 2 fully independent hydraulic systems
- Dual-chamber actuators
- Wearproof Teflon hoses with extended service life

SOKD objective control and diagnostic systems (HUMS function)

- Prediction of malfunctions of helicopter major components and systems
- Continuous health monitoring of the helicopter systems

Integrated flight and navigation suite with digital autopilot

- Indication of information and alarm signaling on obstacles (EGPWS, TCAS-1 V, etc.)
- Safety in manual, automatic, combined control modes
- Improved stability and controllability of the helicopter
- Enhanced situational awareness
- Reduced burden on the crew



Power plant

VK-2500PS-03 Engines



- Emergency power rating up to 2,700 h.p.
- Improved high-altitude and climatic performance
- Horizontal flight and continued take-off with OEI within 60 minutes
- FADEC Digital Engine Control System
- Maintaining the engine RPM in automatic mode on various flight modes
- Anti-surge Control

APU TA-14-130-08

- Start altitude up to 5,000 m
- Continuous operation time is up to 5 hours
- Powerful generator - 30kW
- Efficient fuel consumption



DPD

- High purification rate



Rotor System

Composite MR blades



- High efficiency when operated in high mountains
- Increase in main rotor thrust
- Increased speed
- Enhanced maneuverability
- Improved carrying capacity
- Low corrosibility

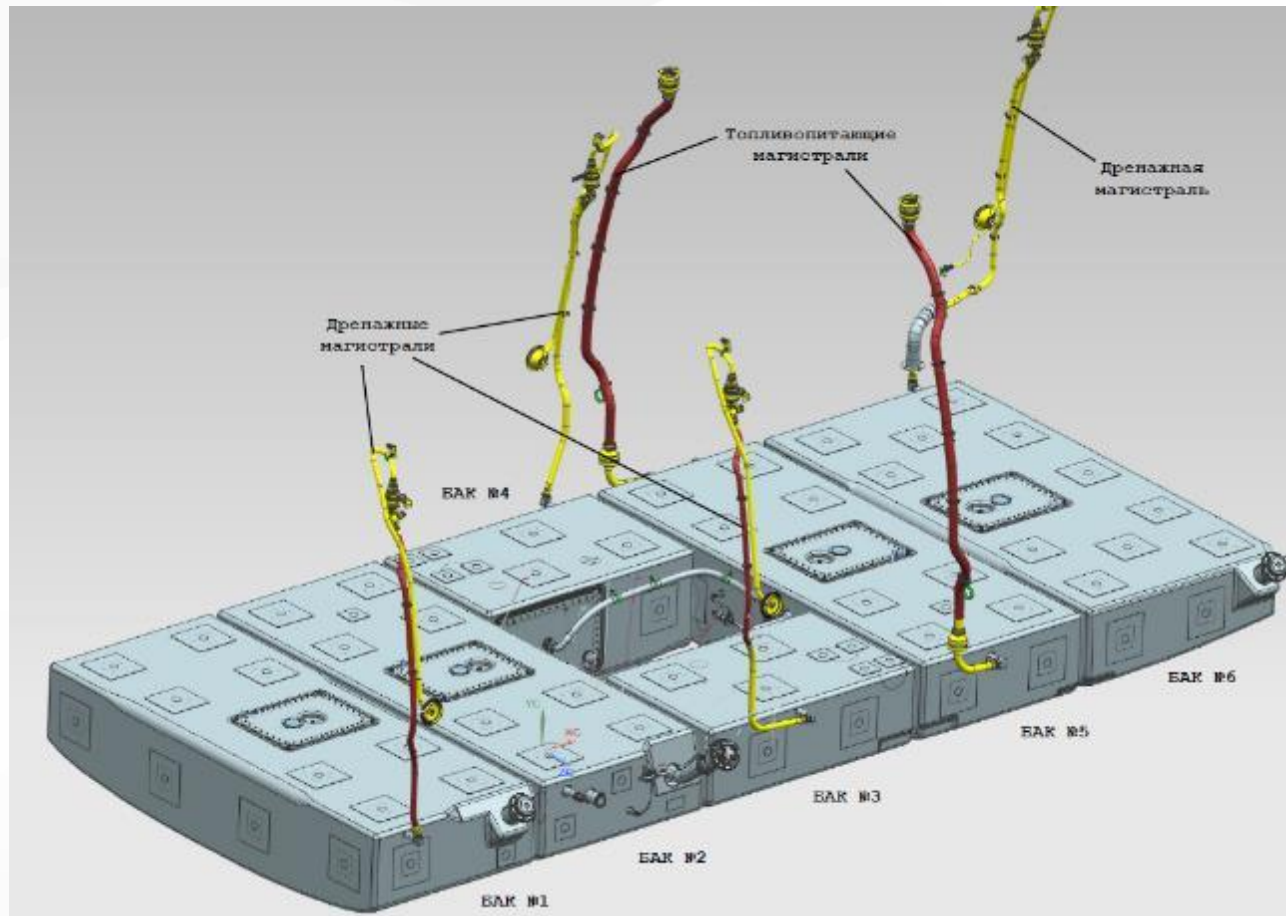
X-shaped TR



- Improved yaw stability
- Increased crosswind resistance
- Reduced noise level



Crash resistant fuel system



- Independent feeding of each engine with even distribution of fuel supply to the engine
- Pressure hot-refueling system
- Fuel supply to both engines in case of failure of one booster pump
- Fuel distribution system during helicopter refueling

Flight-and-navigation equipment

- Digital autopilot with backup function
- Piloting by two crew members
- NSI-2000MTG Integrated navigation system
- TCAS-1 System
- Integrated system of standby instruments
- Radio communication facilities suite with a wide range of frequencies (VHF, HF)
- Interactive operational documentation in electronic form in a pilot's tablet
- Flight safety in manual, automatic, combined control modes
- Precise approach
- Completely automatic flight
- RPA-500 Built-in direction finder



After-sales service

JSC Russian Helicopters and JSC U-UAP provide:

- Warranty and post-warranty service
- Supply of spare parts, tools, and ground support equipment
- Overhaul and reconditioning repair
- Helicopter upgrade



Training and retraining of flight and maintenance personnel

- Certified aviation training center
- Helicopter training simulator for practicing piloting skills
- State-of-the-art computer technologies
- High-quality visual aids
- Teachers and instructors

Efficient operation and maintenance system

Description	TBO Flight hours / years	Assigned service life Flight hours / years
Fuselage	-	18,000 / -
Engines	3,000 / 12	9,000 / -
Auxiliary power unit	1,000 / 12	3,000 / -
Main rotor blades	-	9,000 / 12
Main rotor hub	1,500 / 8	6,000 / -
Main gear box	3,000 / 10	9,000 / -

The table shows target values

- Reduced scope of scheduled maintenance
- Quick diagnostics and troubleshooting due to use of NASKD-200MB Multifunctional Testing System
- Failure prediction
- Increased service life of units and components

Thank you for attention!

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