



TECHNICAL PROPOSAL
for Mi-171E
multipurpose helicopters

(ser. №№ 171E00643157509U, 171E00643157510U)

1. HELICOPTER GENERAL INFORMATION

Mi-8AMT helicopter is an advanced version of world famous Mi-8 helicopter. More than 10000 of Mi-8/Mi-17/Mi-171 helicopters were produced, around 4000 among them were exported. At present Mi-8/Mi-17 helicopters are operated in more than 80 countries worldwide. Total flying hours for these helicopters exceed 35 million.

Design, useable materials, documentation, manufacturing procedure and performances of the helicopter ensure its safe operation.

The helicopter is being used in all climate conditions: aland, asea, in any microclimatic area including marine, tropical and cold types of climate, under the influence of maritime fog and sea water.

The helicopter can be operated within outside temperature from minus 50°C to plus 50°C and at relative humidity up to 100%.

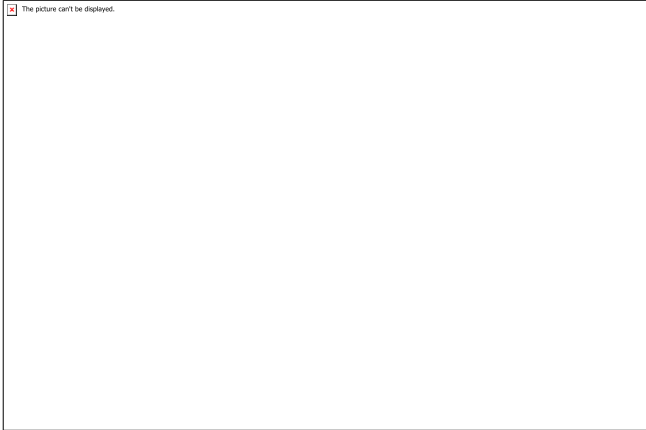
Mi-171E helicopter in transport configuration is design for:

- carriage:
 - cargo carriage inside the cargo cabin and on external sling up to 4 000 kg;
 - carriage of passengers (up to 30) on folding troop seats;
 - search-and-rescue operations (SAR);
 - patrolling (if optional equipment is installed);
 - firefighting (if optional equipment is installed);
 - medevac operations (if optional equipment is installed);
- production cycle of the helicopters is complete and the helicopters serial numbers

171E00643157509U and 171E00643157510U are ready for delivery.

Key advantages:

- Mi-171E helicopters are ready to be delivered;
- At Buyer's option the helicopter can be repainted in accord with any color scheme (under separate agreement);
- The helicopters have built-in attachment points for installation of external sling, troop seats, mooring and medical equipment;



Ramp (with hatch)

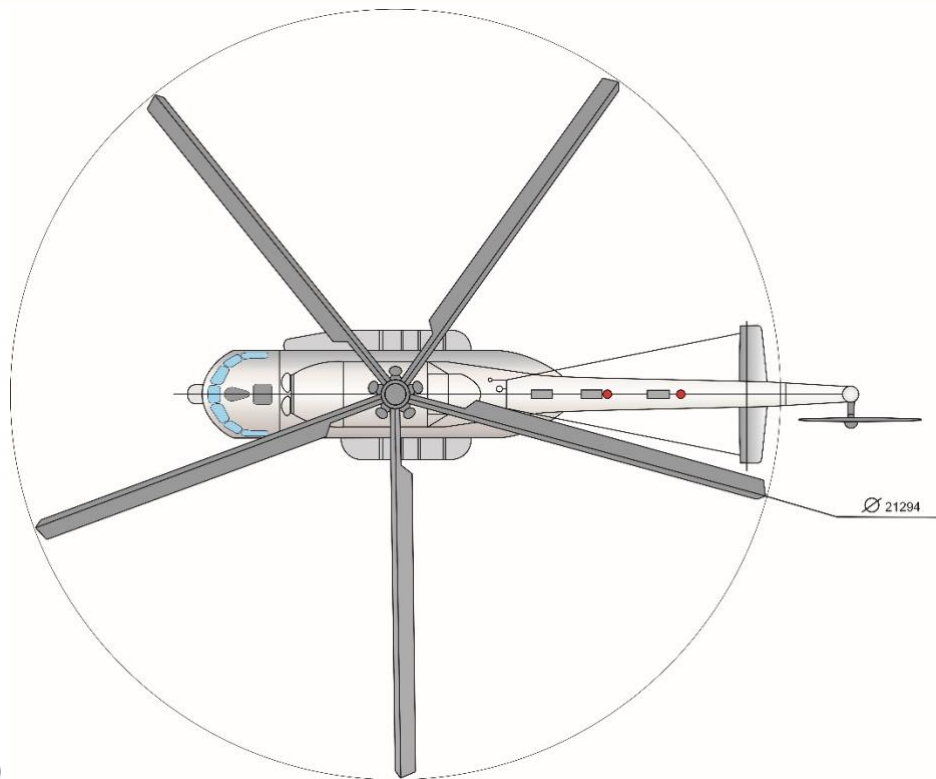
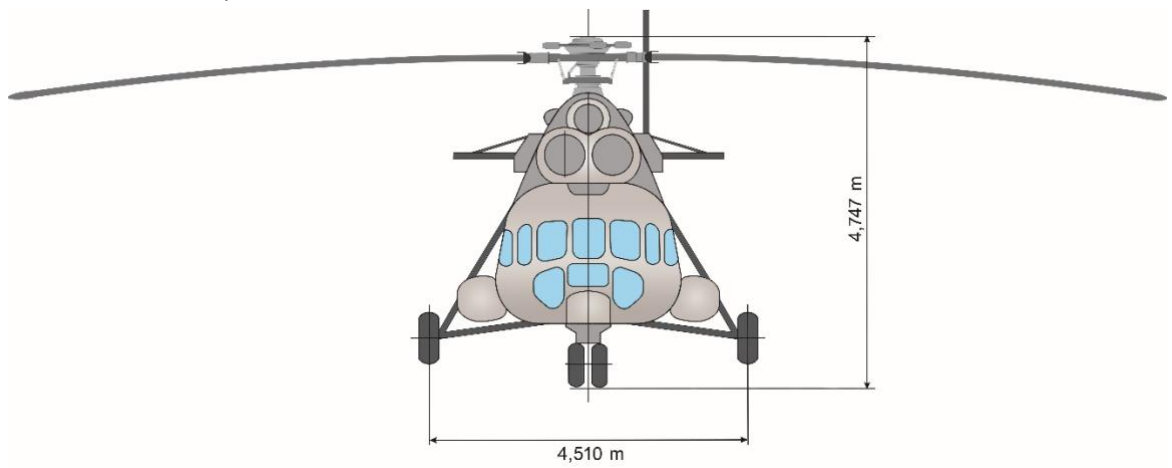
2. GENERAL PERFORMANCES

2.1 Performance

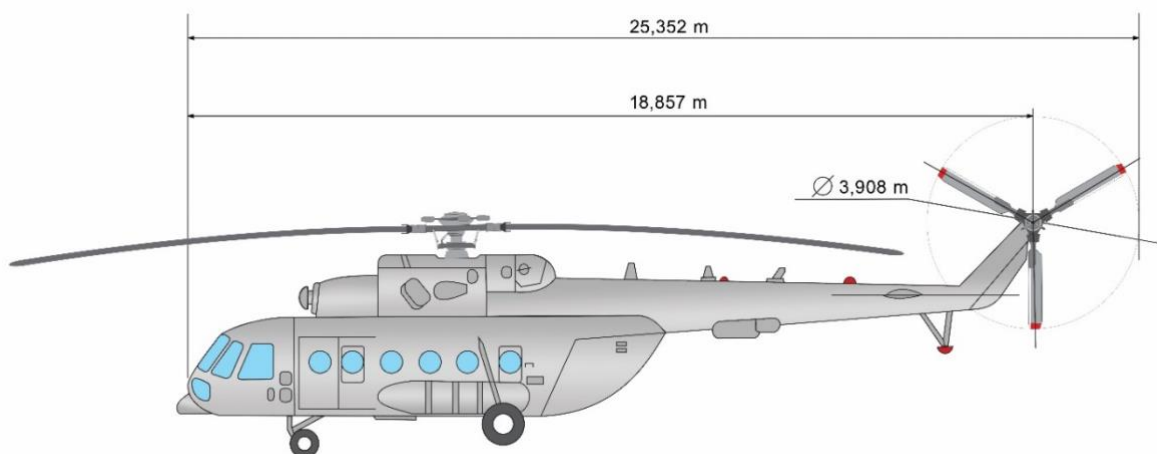
1. Takeoff weight:	
• maximum	13,000 kg
• normal	11,100 kg
2. Cargo cabin dimensions:	
• length	5.34 m
• width	2.34 m
• height	1.8 m
• usable area	12.5 m ²
• usable volume	23 m ³
3. Ceiling without ground effect (anti-ice system off)	
• with normal takeoff weight	3,980 m
4. Service ceiling:	
• with normal takeoff weight	6,000 m
• with maximum takeoff weight	4,800 m
5. Range with 30 minutes guarantee fuel supply and maximum takeoff weight:	
• with main fuel tanks	610 km
6. Maximum speed:	
• with takeoff weight no less than 11,100 kg	250 km/h
• with takeoff weight no more than 11,100 kg	230 km/h
7. Cruise speed:	
• with takeoff weight no less than 11,100 kg	230 km/h
• with takeoff weight no more than 11,100 kg	215 km/h
8. Engine power:	
• emergency	2 x 2,200 hp
• takeoff	2 x 2,000 hp
• nominal	2 x 1,700 hp
• cruise	2 x 1,500 hp

2.2 Helicopter assigned service life and life time: 18,000 hours or 30 years

2.3 Dimensions (standard



configuration)



3. SPECIFICATION OF MI-171E HELICOPTERS BEING READY FOR DELIVERY

3.1 List of main components of Mi-171E helicopter

No	Part number	Name	UoM	Q-ty
1. Power plant, rotors and transmission				
1.1	TV3-117VM ser.02	Engine	pc	2
1.2	8AMT-6820-00-01/02	Dust protection device	set	1
1.3	VR-14	Main gearbox	pc	1
1.4	8A-1515-000	Intermediate gearbox	pc	1
1.5	246-1517-000	Tail gearbox	pc	1
1.6	8A-1516-000	Tail rotor drive shaft	pc	1
1.7	8A-6311-000 ser.4	Fan	pc	1
1.8	8A-6314-00	Fan drive shaft	pc	1
1.9	8-1930-000 ser. 02	Main rotor hub	pc	1
1.10	8-1950-000	Swash plate	pc	1
1.11	8AT-2710-00	Main rotor blades (5 pc.)	set	1
1.12	246-3904-000 ser.01	Tail rotor	pc	1
1.13	8AMT-1250-00SB	Vibration damper	pc	1
2. Fuel and oil systems				
2.1	ETsN91S	Electrically driven centrifugal pump	pc	2
2.2	463B	Electrically driven centrifugal pump	pc	1
2.3	766300A-1-T	Floating regulating valve	pc	1
2.4	768600MA	Shutoff valve	pc	5
2.5	610200A	Electric magnet valve	pc	2
2.6	637000	Bypass cock	pc	1
2.7	633630	Shutoff valve	pc	1

2.8	601100-1	Drain valve	pc	2
2.9	636700A	Drain valve	pc	4
2.10	5349T	Oil-air cooler unit	pc	2
3. Control and hydraulic system				
3.1	KAU-115AM	Combination control hydraulic actuator	pc	4
3.2	8D2.966.017-2	Hydraulic filter	pc	2
3.3	FG11BN	Hydraulic fine filter	pc	2
3.4	EMT-2M	Solenoid brake	pc	3
3.5	GA-77V	Pressure control unit	pc	2
3.6	GA-74M/5	Two-position valve	pc	2
3.7	GA192T	Electric magnet valve	pc	6
3.8	GA172-00-2/T	Metering device	pc	1
3.9	NSh39M	Gear pump	pc	2
3.10	OK-10A	Check valve	pc	4
3.11	GA-59/1	Emergency supply valve	pc	1
3.12	MP-100M ser.2	Electric actuator	pc	2
3.13	PR 15.875-2300-1-67	Chain, 67 links	pc	1
3.14	RU-2	Handle	pc	2
3.15	SPUU-52	Tail rotor pitch limit system	pc	1
4. Fuselage, landing gear and pneumatic system				
4.1	595X185 model 14	Tire of nose landing gear	pc	2
4.2	865X280 model 1A	Tire of main landing gear	pc	2
4.3	8A-4101-00B-1	Shock absorber of main landing gear	pc	1
4.4	8A-4101-00B-2	Shock absorber of main landing gear	pc	1
4.5	8A-4201-00A	Nose landing gear lever shock strut	pc	1
4.6	AK-50T1 ser.3	Compressor	pc	1
4.7	V8BP.000	Side view glass (RH)	pc	1
4.8	V8BP.000-01	Side view glass (LH)	pc	1
4.9	K2116	Wheel without brake for tire 595*185	pc	2

4.10	KT97-310	Wheel for tire 865*280	pc	2
4.11	KT97-220-1	Wheel brake	pc	1
4.12	KT97-220-2	Wheel brake	pc	1
4.13	UP25/2	Pressure relief valve	pc	1
4.14	UPO3/2M	Reduction accelerator	pc	1
4.15	V24-4301-100-7	Tail leg strut	pc	1
5. Firefighting, ice-protection systems, and systems of heating and ventilation				
5.1	1-4-4	Fire extinguisher	set	2
5.2	1919T	Governing gate	pc	2
5.3	DV-302T	Electric fan	pc	3
5.4	EV-0,7-1640	Electric fan	pc	4
5.5	OR1-2,0-20-30	Hand fire extinguisher	pc	2
5.6	SSP-FK ser.2	Fire detection system	pc	3
5.7	TER-1M	Temperature governor	pc	6
5.8	AT-8-3	Autotransformer	pc	2
5.9	EPK-2T-60	Electromechanism of windshield wiper	pc	2
5.10	PKM-21TB cep.3	Programming mechanism	pc	1
5.11	TSV36M313	Current collector	pc	1
5.12	8AT-7420	Tail rotor current collector	pc	1
5.13	SO-121VM var. "A"	Ice detector unit	pc	1
5.14	TV-19T	Air thermometer	set	1
6. Electrical equipment units and switching equipment				
6.1	GT40PCh8V	Alternator	pc	2
6.2	RM-355G	Mounting frame	pc	2
6.3	BRN120T5A-3S	Voltage control unit	pc	2
6.4	BZUNP355G	Protection and control unit	pc	2
6.5	BTT40BT	Current transformer unit	pc	2
6.6	BChF-208	Phase-sequence unit	pc	1
6.7	TS310C04B	Transformer	pc	2

6.8	TR-115/36	Reducing transformer	pc	2
6.9	PTS-800БМ	Three-phase static converter	pc	1
6.10	SPO-9	Single-phase static converter	pc	1
6.11	APSh-3M	Bus switch unit	pc	2
6.12	BSGO-400A	Unit	pc	1
6.13	VU-6B	Rectifier	set	2
6.14	DMR-200BY	Integrated device	pc	2
6.15	APD-78A	Automatic starting control	pc	1
6.16	ShRAP-500K	Ground power supply connector	pc	1
6.17	ShRAP-400-3F	Ground power supply connector	pc	1
7. Lighting equipment				
7.1	SBK	Cabin light	pc	2
7.2	SM-1BM	Lamp	pc	1
7.3	TR-100/2	Regulating transformer	pc	2
7.4	SAS-4-9	Alarm, warning, and caution system	set	1
7.5	PBS-1	Dome light	pc	6
7.6	P-39	Dome light	pc	16
7.7	FR-100	Light	pc	2
7.8	BANO-64	Navigation light	pc	2
7.9	KhS-62	Tail navigation light	pc	1
7.10	FPP-7M	Landing and search light	pc	3
7.11	OPS-57	Formation lights	pc	3
7.12	TN-115-7,5	Transformer	pc	1
7.13	S-1	Siren	pc	1
7.14	7-K-991(EKSR-46)	Cassette	pc	2
7.15	7-P-662K	Missile control console	pc	2
7.16	MSL-3A-2S	Light beacon	pc	2
8. Engine and gearboxes control instruments				
8.1	UI1-3K	Indicator	pc	1

8.2	ID-3	Inductive sensor	pc	1
8.3	ITE-1	Tachometer	set	2
8.4	D-1M U2	Primary converter	pc	2
8.5	IP-21-15N	Position indicator of moving elements	pc	1
8.6	DS-11	Selsyn sensor	pc	1
8.7	RT-12-6 ser.2	Temperature probe	pc	2
8.8	P-77 var.2	Temperature probe	pc	2
8.9	IKD27Da-220-780	Pressure measuring complex	pc	2
8.10	IR-117MN	Mode indicator	set	1
8.11	ITE-2	Tachometer	set	2
8.12	D-2M U2	Primary converter	pc	2
8.13	2IA-6	Dual measuring equipment	set	1
8.14	IV-500E ser.2	Vibration indicator	set	1
8.15	UIZ-3K	Indicator	pc	2
8.16	IMD-8	Induction sensor	pc	2
8.17	P-1	Oil temperature head	pc	3
8.18	UIZ-6K	Indicator	pc	1
8.19	ID-8	Inductive sensor	pc	1
8.20	TUE-48	Multipurpose electrical resistance thermometer	pc	1
9. Control equipment of fuel, hydraulic, pneumatic, and electrical systems				
9.1	SKES-2027B ver. 2	Fuel gauge sensor	set	1
9.2	SD-29A	Pressure switch	pc	3
9.3	MST-25A	Pressure switch	pc	1
9.4	MST-30A	Pressure switch	pc	1
9.5	MVU-100K	Air gauge	pc	1
9.6	MA-60	Aircraft pressure gauge	pc	1
9.7	VF-0,4-150	Voltmeter	pc	1
9.8	V-1	Voltmeter	pc	1
9.9	A-2	Amperemeter	pc	3

9.10	AF1-150	Amperemeter	pc	4
9.11	TF1-75.150/1A	Transformer	pc	3
9.12	TF1-25.50.100/1A	Transformer	pc	4
9.13	UI1-100K	Indicator	pc	2
9.14	ID-100	Inductive sensor	pc	2
10. Flight and navigation equipment				
10.1	AP-34B ser.2	Autopilot	set	1
10.2	6C2.553.002	Compensation sensor	pc	1
10.3	BF-34 party A	Filter unit	pc	1
10.4	BS-34-01	Communication unit	pc	1
10.5	TV-45K	Thermometer	pc	1
10.6	KZSP	IAS controller / selector	pc	1
10.7	BSG	Ready signal unit	pc	1
10.8	AGB-96D-S	Gyro horizon	pc	2
10.9	AGB-96R-S	Gyro horizon	pc	1
10.10	GMK-1GEN	Compass system	set	1
10.11	UGR-4UK ser.3	Indicator	pc	2
10.12	KI-13KA	Liquid magnetic compass	pc	1
10.13	BKK-18	Roll monitoring unit	pc	1
10.14	SNP-1	Power supply failure switch	pc	1
10.15	VK-53E-RV	Electric cut-out switch	pc	1
10.16	VD-10VK 2 ser.	Altimeter	pc	2
10.17	US-450K 2 ser.	Air speed indicator	pc	2
10.18	VAR-30MK ser.4	Diaphragm-type vertical speed indicator	pc	2
10.19	PVD-6M	Pitot-static tube	pc	2
10.20	623700-3	Static pressure valve	pc	1
10.21	AChS-1MK	Aviation watch	pc	1
11. Control equipment				
11.1	BUR-1-2 ser.2	Flight data recorder	set	1

11.2	M11A	Unit	pc	2
11.3	MP-95+/-1,5	Accelerometer	pc	1
11.4	MP-95+3-1	Overload detector	pc	1
11.5	MU-615A ser.1	Angular motion potentiometry detector	pc	8
11.6	DV-15MV ser.2	Altitude transmitter	pc	1
11.7	DPSM-1	IAS sensor	pc	1
11.8	MSTV-2,5C	Heat-resistant vibration-proof pressure switch	pc	1
12. Helicopter control equipment				
12.1	ARK-15M ver.14	Automatic direction finder	pc	1
12.2	A-037 ver.4	Radio altimeter	set	1
12.3	BMP ser.2	Mechanical adapting unit	pc	1
13. Radio communication equipment				
13.1	PRIMA-KV	Radio station	set	1
13.2	ORLAN-85ST	VHF radio station (principal)	set	1
13.3	SPU-7 лит.119	Aircraft intercom	set	1
13.4	ALMAZ-UPM	Аппаратура речевого оповещения	set	1
13.5	GSSh-A-18	Headset	set	3
13.6	P-503M1	Tape recorder	pc	1

4.2 List of additional equipment installed on MI-171E helicopter ready to supply*.

No.	Part number	Name	UoM	Q-ty
1. Airframe				
1.1	8AT-0338-1000	Right extended sliding door	set	1
1.2	171M.0700.0000.000	Ramp (with hatch 171M.0700.0400)	pc	1
2. Power plant, rotor system and transmission				
2.1	SAFIR 5K/G MI	Auxiliary power unit	set	1
3. Fuel and oil system				

3.1	8AMT-6102-550	Right fuel tank of increased capacity	pc.	1
4. Hoisting and transportation equipment				
4.1	8AMT.9611.000 (ver.903)	External sling with hydraulic measuring device (with 20 meters ropes). Additional communication point for operation with external sling.	set	1
4.2	SLG-300	On-board boom for installation by right door	pc.	1
4.3	TU-80AMT-2k	Rescue equipment for operation with hoist SLG-300	pc.	1
5. Air delivery system				
5.1	TU-80AMT-23-1.4	Folding seats, 20 seats	set	1
5.2	TU-80AMT-23-2	Additional sets, middle row, 10 seats	set	1
5.3	8AT-0325-00	Short cable for troops in portside	pc.	1
5.4	8AMT-0327-000-1	Long cable for troops in starboard	pc.	1
6. Heating, ventilation and air conditioning system				
6.1	KO-50	Heating and ventilation system with upper position of heater	set	1
7. Furnishing, oxygen, emergency and rescue equipment				
7.1	KKO-LS2	Oxygen equipment set (for crew) with KM-32AG mask and MG-2 microphone	set	3
8. Equipment for operation in night conditions				
8.1	-	Cockpit and external lighting adaptation for using of night vision goggles.	set	1
8.2	-	Cargo cabin lighting equipment adaptation for using of night vision goggles	set	1
9. Miscellaneous				
9.1	20FP25H1CT-R	"VARTA" storage battery	pc.	2
10. Communication equipment and intercom system				
10.1	ORLAN-85ST	VHF radio station (stand-by)	set	1
11. Safety improvement means				
11.4	8AMT-6102-6000	Main fuel tanks protection 8AMT-6102-6000	set	1
11.5	8TV.6101.500	Protected service tank	pc.	1

*- Upon the Customer request the helicopters can be equipped with Search Light TSL-1600 and large variety of other additional equipment

4.3. List of equipment supplied with helicopter

In order to provide the continuous operation helicopter is supplied with:

- spare parts;
- tools set;
- ground operational equipment and accessories;
- helicopter protection means on ground (covers, blanks);
- operational-maintenance documentation set.
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5. ADDITIONAL SERVICES

Upon individual agreement it is possible to render the following additional services:

- Installation of additional optional equipment to enhance helicopter performance capabilities;
- Maintenance of helicopter life cycle;
- Flight, and engineering and technical staff training in certified Aviation Training Center of JSC "U-UAP" on the Mi-8/17 Helicopter Training Simulator for professional development and practicing of the actions in emergency situations;
- Delivery of spare parts, ground support equipment, and verification and checkout equipment;
- Delivery of helicopter by air transport worldwide.

Annex 1: Photos of the helicopters MI-171E serial numbers 171E00643157509U and 171E00643157510U



