RESTRICTED
TYPE CERTIFICATE
DATA SHEET

No. EASA.IM.R.133

for

Ka-32A

Type Certificate Holder

National Helicopter Center Mil&Kamov, JSC

26/1, Garshina str.
Tomilino, Lyubertsy District
Moscow Region, 140070
Russian Federation

For Model: Ka-32A11BC

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SECTION 1: Ka-32A11BC

I. General

1.	Type/ Model/ Variant	
	1.1 Type	Ka-32A
	1.2 Model	Ka-32A11BC
2.	Airworthiness Category	Large Rotorcraft, Restricted Category
3.	Manufacturer	National Helicopter Center Mil&Kamov, JSC Lubertsy, Moscow Region Russian Federation and, KumAPP Company Kumertau, Bashkortostan Republic Russian Federation Before 1 April 2020: Kamov Company Lubertsy, Moscow Region Russian Federation and, KumAPP Company Kumertau, Bashkortostan Republic Russian Federation
4.	Type Certification Application Date to	Interstate Aviation Committee – Aviation Register (IAC AR): 16 July 1988 DGAC ES: 26 November 1999
5.	State of Design Authority	IAC AR (from 21 January 1997 until 1 April 2020) FATA (from 1 April 2020)
6.	Type Certificate Date by	IAC AR: 21 January 1997 FATA: 1 April 2020
7.	Type Certificate n° by	IAC AR: 36-32A (before 1 April 2020) FATA: FATA-01096R (after 1 April 2020)
8.	Type Certificate Data Sheet n° by	IAC AR: 36-32A (before 1 April 2020) FATA: FATA-01096R (after 1 April 2020)
9.	EASA Type Certification Date	28 September 2009

II. Certification Basis

1.	Reference Date for determining the applicable requirements	16 July 1988
2.	Airworthiness Requirements	FAR 29, Amdt. 29-24, effective 6 December 1984 FAR 29.1459 Amdt. 29-25, effective 11 October 1988 FAR 29.954, 29.963, 29.991, 29.1011, 29.1027 Amdt. 29-26, effective 3 October 1988
3.	Special Conditions	none
4.	Deviations	none
5.	Equivalent Safety Findings (ESF)	The following ESF were reviewed and accepted: FAR 29.173 (b) FAR 29.175 (c) (B-21) FAR 29.177 FAR 29.923 (c) and (i)

		FAR 29.1027 (b)(1) FAR 29.1351 (d)(3) FAR 29.1459 (a)(5)
6.	Exemptions	none
7.	Exceptions	The following paragraphs of the certification basis are not complied with: FAR 29.613 (d) (D-01) FAR 29.1305 (a)(14) (B-05)
8.	Environmental Protection Requirements	
	7.1 Noise Requirements	See TCDSN EASA.IM.R.133
	7.2 Emission Requirements	n/a
9.	Operational Suitability Data (OSD)	Not required for rotorcraft with eligible serial numbers listed in Note V.1. CR (EU) 748/2012, as amended by CR (EU) 69/2014 does not require OSD elements for this model (see Article 7a, 1.).

III. Technical Characteristics and Operational Limitations

1.	Type Design Definition	The type design of Ka-32A11BC helicopter defined by the following (see Note 6 and Note 7): - The type design approved by IAC AR and, later, endorsed by FATA is defined as Set of Design and Operational documentation: № 323.0000.0000.000Д, № 324.0000.0000.000D, № 324.0000.0000.000D1, № 324.0000.0000.000D2, № 324.0000.0000.000D3, and RFM Issue 3, and MM Issue 2007. - The changes in type design based on the results of the EASA type certification are defined by the 'List of Technical Documentation №324.0000.0000.000ДПЧ Defining Ka-32A11BC Type Design Based on the Results of EASA Type Certification'.
2.	Description	The Kamov Ka-32A11BC is a twin engine, co-axial rotor, transport category helicopter. Powered by two Klimov TV3-117VMA turboshaft engines through the VR-252 gearbox to the two, three bladed co-axial rotors. The Maximum take-off weight is 11 000 kg plus a maximum 5 000 kg external load up to a maximum weight of 12 700 kg.
3.	Equipment	Refer to equipment list in approved RFM
4.	Dimensions	
	4.1 Fuselage	Length: 11.22 m Width: 3.81 m Height: 5.45 m
	4.2 Main Rotors	Diameter: 15.90 m
5.	Engine	
	5.1 Model	Klimov Scientific and Industrial Enterprise 2 x Model TV3-117VMA, or, 2 x Model TV3-117VMA Series 02 Turboshaft
	5.2 Type Certificate	IAC AR TC/TCDS: № 34-Д (before 14 December 2018)

FATA TC/TCDS: № FATA-01045E (after 14 December 2018)
EASA TC/TCDS n°: n/a (see Note 9)

5.3 Limitations

5.3.1 Installed Engine Limitations and Transmission Torque Limits as per No. 34-Д and No. FATA-01045E.

	Output shaft PWR [shp]	Gas producer speed (Ng) [%]	Free turbine speed (Nf) [%]	Gas Temperature [°C]
AEO TOP (15 min)	2 200	101 (Max)	89 (Max) 87 (Min)	990
AEO MCP	1 700	99 (Max)	92 (Max) 88 (Min)	955
OEI 2½ min	2 400	101 (Max)	89 (Max) 87 (Min)	990
OEI 30 min	2 200	101 (Max)	89 (Max) 87 (Min)	990
OEI MCP	1 700	99 (Max)	92 (Max) 88 (Min)	955

6. Fluids (Fuel/ Oil/ Additives)

6.1 Fuel

Nomenclature	Specification		
	Russian Federation	USA	Europe
PT, TC-1	ГОСТ 10227-85	- - -	- - -
Kerosene Jet A, A-1	- - -	ASTM D1655	- - -
High Flash JP4, JP5	- - -	MIL-T-5624	- - -

6.2 Oil Refer to approved RFM

6.3 Additives

Nomenclature	Specification		
	Russian Federation	USA	Europe
Anti-Icing additive fluid И	ГОСТ 8313-88	- - -	- - -

7. Fluid capacities

7.1 Fuel
Fuel tank capacity: 2 450 litres
Usable: 2 424 litres
Unusable: 26 litres

7.2 Oil 90 litres

7.3 Coolant System Capacity n/a

8. Air Speed Limitations
$V_{NE\ PWR\ ON}$: 140 KIAS (260 km/h) MSL
$V_{NE\ PWR\ OFF}$: 95 KIAS (180 km/h) MSL
$V_{min\ VFR\ PWR\ ON}$: 27 KIAS (50 km/h) at altitudes above hover ceiling

9. Rotor Speed Limitations
Nominal rotor rpm is 90% (272 rpm) ±2%

Power on:
Maximum 98%
Minimum 83%
Power on OEI:

		Maximum 98% Minimum 73% Power off: Maximum 98% Minimum 70%
10.	Maximum Operating Altitude and Temperature	
	10.1 Altitude	16 400 ft (5 000 m) PA Refer to approved RFM for altitude limitations
	10.2 Temperature	Refer to approved RFM for temperature limitations
11.	Operating Limitations	VFR Day and Night Category B
12.	Maximum Mass	With internal load: 11 000 kg (24 251 lb) With external load: 12 700 kg (27 999 lb)
13.	Centre of Gravity Range	Refer to approved RFM (see Note 2)
14.	Datum	Longitudinal: the datum plane (STA 0) is located at 5 280 mm forward of the main rotor axis. Lateral: Refer to approved RFM
15.	Levelling Means	Rotor axis to be vertical. See Maintenance Manual for details
16.	Minimum Flight Crew	2 pilots for VFR, Category B operations
17.	Maximum Seating Capacity	9, persons essential to the aerial work being performed only. No passengers allowed.
18.	Emergency Exit	Refer to approved RFM
19.	Maximum Baggage/ Cargo Loads	For cabin floor loading see Note 5 Internal cargo loading: 3 700 kg (8 157 lb) External cargo loading: 5 000 kg (11 023 lb)
20.	Rotor Blade Control Movement	For rigging information refer to Maintenance Manual
21.	Auxiliary Power Unit (APU)	АИ-9
22.	Life-limited Parts	Life limited components and approved retirement times are listed in the approved Chapter 4, Airworthiness Limitations section of the Maintenance Manual MM32A11BC-01-1, dated 28 September 2009, or later EASA approved revision (see Note 4).
23.	Wheels and Tyres	See Maintenance Manual listed in Section IV

IV. Operating and Service Instructions

1.	Flight Manual	See Note 3 and Note 8. - Model Ka-32A11BC Rotorcraft Flight Manual, Revision 3, approved 28 September 2009, or later EASA approved revision; - Model Ka-32A11BC Rotorcraft Flight Manual Supplement Ka-32A11BC-FMS-1.1 for external loading operation, Revision 3, approved 28 September 2009, or later EASA approved revision; - Model Ka-32A11BC Rotorcraft Flight Manual Supplement Ka-32A11BC-FMS-2.1 Skis, Revision 3, approved 28 September 2009, or later EASA approved revision.

2.	Maintenance Manual	Model Ka-32A11BC Rotorcraft Maintenance Manual MM32A11BC-01-1, Issue 2007, or later approved revision
3.	Structural Repair Manual	not recorded
4.	Weight and Balance Manual	Refer to approved RFM Section 5 "Weight and Balance"
5.	Illustrated Parts Catalogue	not recorded
6.	Miscellaneous Manuals	not recorded
7.	Service Letters and Service Bulletins	As published by Kamov Company or 'National Helicopter Centre Mil & Kamov, JSC' and approved by IAC AR (before 1 April 2020) or FATA (after 01 April 2020).
8.	Required Equipment	The basic required equipment as prescribed in the applicable airworthiness regulations (see Certification Basis and Type Design) must be installed in the helicopter for certification. Removable equipment list is presented in Weight and Balance Manual, or RFM, Section 5 'Weight and Balance'.

V. Notes

1. Manufacturer's eligible serial numbers:
   s/n 8607/04, 8807/016, 8811/11(9624), 8812/12(9625)
   s/n 9708/23, 9709/24, 9710, 9712, 9713, 9714, 9715, 9801, 9804, 9805, 9814, 9815
   s/n (31587) 8709/2, (31599) 8809/09.
2. Current weight and balance report including list of equipment and undrainable oil and unusable fuel included in the certificated empty weight, and loading instructions, when necessary, must be provided for each helicopter at the time of original certification.
   The certificated empty weight must include the total oil system capacity of 90 litres/90 kg (489 mm rearward to rotor axis) and the total unusable fuel of 26 litres/20 kg (rotor axis).
   Weight of de-icing fluid is not included in empty weight.
3. The following placard must be installed in front of and in clear view of the pilot:
   'This Helicopter is approved for operation in compliance with the operating limitation specified in the approved Rotorcraft Flight Manual.'
4. The airworthiness limitations of the rotorcraft components are specified in the Maintenance Manual Airworthiness Limitation Section (subsection) approved by EASA. This data may be changed only according to procedure established by EC Regulation 1702/2003, or later for major changes.
   In addition, instructions on the scheduled and unscheduled maintenance of the helicopter, time limits and service lives of the helicopter and its components established providing airworthiness limitations which are to be observed are contained in the Maintenance Manual. These data may be changed according to procedure established for minor changes by Federal Aviation Regulation, Part 21, issued by FATA.
5. Maximum allowable floor loading for transport (cargo) compartment is limited to:
   - 3 000 kg/m² between frames No. 4 to No. 7, and,
   - 1 500 kg/m² between frames No. 7 to No. 13.

6. Ka-32A11BC helicopters s/n (31587) 8709/2 and (31599) 8809/09 bear the designation 'Ka-32A12'. These s/n have the following changes incorporated:

	Documentation for Introduction of change		
	Notification №	to Design Documentation №	Modification Description
1	324.053.2925ПИ 2941ПИ	5.00.5320.0200.000 5.00.5320.0500.000	Hydraulic reservoir modification for leakage sensor installation
2	324.177.4321ПИ 4322ПИ	323.7201.0800.000	Electric equipment harness installation in the hydraulic system compartment
3	324.172.12940ПИ 12947ПИ	521.7200.0011.999	Hydraulic system control. Schematic electric connection diagram change
4	324.171.1389ПИ 1396ПИ	521.7200.0021.999	Caution/warning indication system. Schematic electric connection diagram change.
5	326.00.078.4224C3		Modification of instrument panel and overhead control panel in connection with introduction of hydraulic system leakage warning indication

7. Ka-32A11BC and Ka-32A12 helicopters must have Kamov Service Bulletin No. 324.01-061-БД applied.

8. Ka-32A12 helicopters must be operated in accordance with Model Ka-32A11BC Rotorcraft Flight Manual, Revision 3, approved 28 September 2009, or later EASA approved revision and EASA approved Flight Manual Supplements.

9. The engine is accepted as part of this type design and was approved using the following requirements: FAR 33, Amdt. 33-14, effective 10 September 1990.

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SECTION: ADMINISTRATIVE

I. Acronyms and Abbreviations

AEO	All Engines Operative	PA	Pressure Altitude
Amdt.	Amendment	PWR	Power
C.G.	Centre of Gravity	RFM	Rotorcraft Flight Manual
CR	(European) Commission Regulation	RFMS	Rotorcraft Flight Manual supplement
DP	Datum Point	R-TCDS	Restricted TCDS
KIAS	Knots Indicated Air Speed	sec	Seconds
Max	Maximum	s/n	Serial Number
MCP	Maximum Continuous Power	STA	Station
Min	Minimum	TOP	Take-Off Power
min	Minute	TOT	Turbine Outlet Temperature
MMEL	Master Minimum Equipment List	VFR	Visual Flight Rules
MSL	Mean Sea Level	V_{NE}	Never Exceed Speed
OEI	One Engine Inoperative	$V_{PWR\ OFF}$	Power-off Speed (Autorotation)
OSD	Operational Suitability Data	$V_{PWR\ ON}$	Power-on Speed

II. Type Certificate Holder Record

II.1 Type Certificate Holder	**Period**
Kamov Company	From 21 January 1997
National Helicopter Center Mil&Kamov, JSC	From 1 April 2020

III. Change Record

Issue	**Date**	**Changes**	**TC issue**
Issue 1	28 Sep 2009	Initial issue of EASA TCDS	Initial Issue, 28 September 2009
Issue 2	8 Jun 2011	Eligible serial numbers and NOTE 5, 6 and 7 added.	- - -
Issue 3	28 Oct 2021	TC holder name change; State of Design Authority change; Section III: III.18 inserted, III.23 became NOTE 1. Section V: NOTE 9. added EASA TCDS format updated and editorial corrections.	re-issued 28 October 2021

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