Courtesy translation

MINISTRY OF TRANSPORT OF THE RUSSIAN FEDERATION
FEDERAL AIR TRANSPORT AGENCY

TYPE CERTIFICATE DATA SHEET
TRANSPORT CATEGORY AIRCRAFT

№ FATA-02063A

Aircraft:
AirbusA320
AirbusA321
Airbus A319

Models:		
A320-211	**A321-111**	**A319-111**
A320-212	**A321-112**	**A319-112**
A320-214	**A321-131**	**A319-113**
A320-231	**A321-211**	**A319-114**
A320-232	**A321-231**	**A319-115**
A320-233	**A321-232**	**A319-131**
A320-271N	**A321-271N**	**A319-132**
A320-251N	**A321-251N**	**A319-133**
	A321-253N	

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13 December 2017

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1.2 Brief Aircraft Description	Transport category passenger airplane
1.3 Initial Certification	Type Certificate No 65-A320/A321 issued by IAC AR on 22.12.1994
1.4 Certification Basis	**For A320-211, A320-212, A320-214, A320-231, A320-232, A320-233 aircraft models**: Civil Transport Airplane Airworthiness Standards (NLGS-3) thru Amendment 36 ICAO Annex 16 “Environmental Noise”, Volume 1, “Aircraft Noise” **For A320-271N, A320-251N aircraft models**: Aviation Regulations, Part 25 "Airworthiness requirements for transport category airplanes" (AP-25), Amendments 1 – 6. Aviation Regulations, Part 36 (AP-36) "Aircraft External Noise Certification" and Annex 16 ICAO "Environmental Protection", Volume 1, “Aircraft Noise”
1.5 Type Design Definition	FATA Type Certificate № FATA-02063A is applicable to A320 aircraft which Type Design is defined by: 1. EASA Type Certificate Data Sheet № A.064; 2. Document “FATA Type Design Definition”, Ref. SA00SP1702339 Issue 02; 3. Airbus A320 operational documentation: - A319/A320/A321 Airplane Flight Manual (AFM) with Supplement “Regulatory Differences, FATA Supplement”, approved by EASA; - A319/A320/A321 Airworthiness Limitations Section (ALS), approved by EASA; - A319/A320/A321 Maintenance Planning Document (MPD); - Flight Crew Operating Manual (FCOM); - A319/A320/A321 Maintenance Manual (AMM); Note: A319/A320/A321 Master Minimum Equipment List (MMEL) is approved by EASA as a part of the Operational Suitability Data.

1.6 Aircraft models
1.6.1 Model A320-211

1.6.1.1 Engines Two CFMI turbofan engines CFM 56-5A1/F (MOD 23755)

1.6.1.2 Weight Limits (kg)

VARIANT	000 (Basic)	001 MOD 20966	002 MOD 21601	003 MOD 22269	004 MOD 21532	005 MOD 21711	006 MOD 22436	007 MOD 23264	008 MOD 23900	009 MOD 23900
Maximum ramp weight	73900	68400	70400	75900	71900	67400	66400	77400	73900	75900
Maximum take-off weight	73500	68000	70000	75500	71500	67000	66000	77000	73500	75500
Maximum landing weight	64500	64500	64500	64500	64500	64500	64500	64500	64500	64500
Maximum zero fuel weight	60500	60500	60500	60500	60500	60500	60500	60500	61000	61000
Minimum weight	37230	37230	37230	37230	37230	37230	37230	37230	37230	37230

VARIANT	010 MOD 23900 & 23264	011 MOD 30307	012 MOD 30479	013 MOD 31132	014 MOD 31385	016 MOD 34094	018 MOD 151710	019 MOD 156523
Maximum ramp weight	77400	75900	77400	71900	73900	73900	71900	70400
Maximum take-off weight	77000	75500	77000	71500	73500	73500	71500	70000
Maximum landing weight	64500	66000	66000	64500	64500	66000	66000	64500
Maximum zero fuel weight	61000	62500	62500	61000	61500	62500	62500	61000
Minimum weight	37230	37230	37230	37230	37230	37230	37230	37230

1.6.2 Model A320-212

1.6.2.1 Engines Two CFMI turbofan engines CFM56-5A3 (MOD 22093)

1.6.2.2 Weight Limits (kg) Same as A320-211 above (see §1.6.1.2).

1.6.3 Model A320-214

1.6.3.1 Engines Two CFMI turbofan engines CFM56-5B4 (MOD 24251) or CFM56-5B4/2P (MOD 24405 and 26610)

Notes:

1) If modification 25800 is embodied on aircraft with CFM56-5B4 engines the engine denomination changes to CFM 56-5B4/P. CFM56-5B4 and CFM 56-5B4/P engines can be intermixed on the same aircraft.
2) CFM56-5B4 or CFM 56-5B4/P and CFM 56-5B4/2P engine models can be intermixed on the same aircraft.
3) If modification 37147 is embodied in production or modification 38770 is embodied in field on aircraft with CFM56-5B4/P (SAC) engines the engine denomination changes to CFM56-5B4/3. CFM56-5B4/3 engines can be intermixed with CFM56-5B4/P engines on the same aircraft on condition modification 38573 is embodied. It was demonstrated that embodiment of modification 37147 did not change certified noise levels.

1.6.3.2 Weight Limits (kg)

VARIANT	000 (Basic)	001 MOD 20966	002 MOD 21601	003 MOD 22269	005 MOD 21711	007 MOD 23264	008 MOD 23900	009 MOD 23900 & 22269	010 MOD 23900 & 23264
Max. ramp weight	73900	68400	70400	75900	67400	77400	73900	75900	77400
Max. take-off weight	73500	68000	70000	75500	67000	77000	73500	75500	77000
Max. landing weight	64500	64500	64500	64500	64500	64500	64500	64500	64500
Max. zero fuel weight	60500	60500	60500	60500	60500	60500	61000	61000	61000
Min. weight	37230	37230	37230	37230	37230	37230	37230	37230	37230

VARIANT	011 MOD 30307	012 MOD 30479	013 MOD 31132	014 MOD 31385	015 MOD 34047	016 MOD 34094	017 MOD 151634	018 MOD 151710	019 MOD 156523
Max. ramp weight	75900	77400	71900	73900	78400	73900	78400	71900	70400
Max. take-off weight	75500	77000	71500	73500	78000	73500	78000	71500	70000
Max. landing weight	66000	66000	64500	64500	64500	66000	66000	66000	64500
Max. zero fuel weight	62500	62500	61000	61500	61000	62500	62500	62500	61000
Min. weight	37230	37230	37230	37230	37230	37230	37230	37230	37230

For aircraft model A320-214 a Significant Major Type Design change according to modification 160500 – installation of Sharklet is approved.

For aircraft with embodied modification 160500 weight variants from WV000 to WV007 are not applicable.
For aircraft model A320-214 a Significant Major Type Design change according to modification 160080 – Sharklet In-service Retrofit is applicable to weight variants from WV008 till WV014, to WV016, WV018 and WV019 on condition modification 37147 or 38770 is incorporated.
Modification 160080 is not compatible with modification 26610.

1.6.4 Model A320-231

1.6.4.1 Engines Two IAE turbofan engines V2500-A1 (MOD 20165)

1.6.4.2 Weight Limits (kg) Same as A320-211 above (see §1.6.1.2)

1.6.5 Model A320-232

1.6.5.1 Engines Two IAE turbofan engines V2527-A5 (MOD 23008)

1.6.5.2 Weight Limits (kg) Same as A320-214 above (see §1.6.3.2)

For aircraft model A320-232 a Significant Major Type Design change according to modification 160500 – installation of Sharklet is approved.
For aircraft with embodied modification 160500 weight variants from WV000 to WV007 are not applicable.
For aircraft model A320-232 a Significant Major Type Design change according to modification 160080 – Sharklet In-service Retrofit is applicable to weight variants from WV008 till WV014, to WV016, WV018 and. WV019.

1.6.6 Model A320-233

1.6.6.1 Engines Two IAE turbofan engines V2527E-A5 (MOD 25068)

1.6.6.2 Weight Limits (kg) Same as A320-214 above (see §1.6.3.2)

For aircraft model A320-233 a Significant Major Type Design change according to modification 160500 – installation of Sharklet is approved.
For aircraft with embodied modification 160500 weight variants from WV000 to WV007 are not applicable.
For aircraft model A320-233 a Significant Major Type Design change according to modification 160080 – Sharklet In-service Retrofit is applicable to weight variants from WV008 till WV014, to WV016, WV018 and. WV019.

1.6.7 Model A320-271N

1.6.7.1 Engines Two IAE Geared Turbofan engines PW1127G-JM (MOD 161000) or PW1127GA-JM (MOD 161562)

1.6.7.2 Weight Limits (kg)

VARIANT	050 MOD 161248	051 MOD 161380	052 MOD 161379	053 MOD 161384	054 MOD 161381	055 MOD 161249
Max. ramp weight	73 900	73 900	77 400	77 400	79 400	79 400
Max. take-off weight	73 500	73 500	77 000	77 000	79 000	79 000
Max. landing weight	66 300	67 400	66 300	67 400	66 300	67 400
Max. zero fuel weight	62 800	64 300	62 800	64 300	62 800	64 300
Minimum Weight	40 600	40 600	40 600	40 600	40 600	40 600

VARIANT	056 MOD 161383	057 MOD 161382	068 MOD 157907	069 MOD 157908	071 MOD 157910	078 MOD 157917	082 MOD 157921
Max. ramp weight	70 400	70 400	75 900	75 900	75 400	72 900	71 900
Max. take-off weight	70 000	70 000	75 500	75 500	75 000	72 500	71 500
Max. landing weight	66 300	67 400	66 300	67 400	67 400	66 300	66 300
Max. zero fuel weight	62 800	64 300	62 800	64 300	64 300	62 800	62 800
Minimum Weight	40 600	40 600	40 600	40 600	40 600	40 600	40 600

1.6.8 Model A320-251N

1.6.8.1 Engines Two CFMI Turbofan Engines LEAP-1A26 (MOD 161003)

1.6.8.2 Weight Limits (kg) Same as A320-271N above (see §1.6.7.2)
A320-251N has a Minimum Weight of 40300 kg

1.7 Engine Limits Performance and operational limitations of the engines are given in A319/A320/A321 Airplane Flight Manual, approved by EASA, and also in:

- Data Sheet to Type Certificate № 55-Д with Supplements to it for CFMI engines of CFM56 family;
- Data Sheet to Type Certificate № 56-Д with Supplements to it for IAE engines of V2500 family
- Data Sheet to FATA Type Certificate № FATA-0105E for IAE engines of PW1100G-JM family
- Data Sheet to FATA Type Certificate № FATA-01015E for CFMI engines of LEAP-1A family;

1.8 Auxiliary Power Unit

Gas turbine engine GTCP 36-300 (A) developed by Garrett Airesearch;
Gas turbine engine 131-9A developed by Honeywell International (AlliedSignal) (Mod № 25888);
Gas turbine engine APS 3200 developed by Pratt & Whitney Rzeszow S.A. (Mod 22562 or Mod 35864);
Note: For A320 models APU Pratt & Whitney Rzeszow S.A. APS 3200 (Mod 35864) is the production standard from MSN 2645.

1.9 Fuel

For approved fuel grades see EASA Type Certificate Data Sheet № A.064 and A319/A320/A321 Airplane Flight Manual (AFM) approved by EASA.
Approved fuel additives are listed in the corresponding "Installation and Operating Manual".

1.10 Fuel Quantity (at fuel density of 0.8 kg/liter)

A320-211, A320-212, A320-214, A-320-231, A320-232, A320-233 Aircraft without MOD 160001:

TANK	3 tanks aircraft		4 or 5 tanks aircraft (1)	
	Usable fuel, liters (kg)	Unusable fuel, liters (kg)	Usable fuel, liters (kg)	Unusable fuel, liters (kg)
Wing	15609 (12487)	58.9 (47.1)	15609 (12487)	58.9 (47.1)
Center	8250 (6600)	23.2 (18.6)	8250 (6600)	23.2 (18.6)
ACT			2992/5984 (2393/4786)	17/34 (13.6/27.2)
Total	23859 (19087)	82.1 (65.7)	26851/29843 (21480/23873)	99.1/116.1 (79.3/92.9)

A320-211, A320-212, A320-214, A-320-231, A320-232, A320-233 with modification 160001

TANK	3 tanks aircraft		4 or 5 tanks aircraft (1)	
	Usable fuel, liters (kg)	Unusable fuel, liters (kg)	Usable fuel, liters (kg)	Unusable fuel, liters (kg)
Wing	15569 (12455)	58.9 (47.1)	15569 (12455)	58.9 (47.1)
Center	8248 (6598)	23.2 (18.6)	8248 (6598)	23.2 (18.6)
ACT			2992/5984 (2393/4786)	17/34 (13.6/27.2)
Total	23817 (19054)	82.1 (65.7)	26809/29801 (21447/23841)	99.1/116.1 (79.3/92.9)

NOTES:

(1) Installation of one or two Additional Center Tanks (ACT) on A320-200 aircraft is approved according to modification 28378.

(2) On series A320-200 aircraft equipped with CFM engines, introduction of standard of wingbox without dry bay (modification 37331) increases the wing fuel capacity by 350 liters (280 kg).

A320-271N, A320-251N:

TANK	3 TANK AIRPLANE	
	Usable fuel liters (kg)	Unusable fuel liters (kg)
WING	15476.7 (12427.8)	58.9 (47.3)
CENTER	8248.0 (6623.1)	23.2 (18.6)
TOTAL	23724.7 (19050.9)	82.1 (65.9)

1.11 Minimum Flight Crew 2 pilots (captain and co-pilot)

1.12 Maximum number of passengers 180

1.13 Maximum baggage and cargo weight

Cargo compartment	Maximum load (kg)
Forward	3402
Aft	4536
Rear (bulk)	1497

For layout and loading procedure (containers, pallets and corresponding weights) see Loading and Balance Manual (00D080A0001/C1S, Chapter 1.10).

1.14 Speed Limits (Indicated Airspeed - IAS unless otherwise stated)

Maximum Operating Mach M_{MO}	0.82
Maximum Operating Speed V_{MO}	350 kt
Maneuvering Speed V_A	See A319/A320/A321 Airplane Flight Manual (AFM), Chapter 2 approved by EASA

Maximum allowed slats/flaps extended speed – (V_{FE}):

Configuration	Slats/Flaps (°)	V_{FE}(kt)	
1	18/0 18/10*	230 215	Intermediate approach Take-off
2	22/15	200	Take-off, approach
3	22/20	185	Take-off, approach and landing
Full	27/35**	177	Landing

*Automatic flaps retraction at 210 kt in take-off configuration
** 27/40 for A320 equipped with V2500 or CFM LEAP-1A family engines

Maximum speed with landing gear extended V_{LE}:	280 kt/Mach 0.67
Maximum speed at landing gear extension/retraction V_{LO} Landing gear extension: Landing gear retraction:	 250 kt 220 kt

Maximum ground speed: 195.5 kt

1.15 Center of gravity range

See A319/A320/A321 Airplane Flight Manual approved by EASA

1.16 Maximum operating altitude

39100 feet
39800 feet (with Mod 30748)

1.17 Ambient air temperature limits near the ground for take-off and landing

1.17.1 Operation of A320-211, A320-212, A320-231, A320-232, A320-233 and A321-251N aircraft is allowed at ambient air temperature near the ground not lower than minus 40°C.

1.17.2 Operation of A320-214 and A320-271N aircraft is allowed at ambient air temperature near the ground down to minus 46°C on condition that Modification 154702 is incorporated.

1.17.3 In case conditions referenced in §1.17.2 are not provided operation of A320-214 and A320-271N aircraft is allowed at ambient air temperature near the ground not lower than minus 40°C.

1.17.4 A320-214 and A320-271N aircraft are allowed to perform take-offs and landings with short-term parking during time interval not longer than 2 hours at ambient air temperature near the ground down to minus 54°C on condition that modification 155935 is incorporated.

1.17.5 The maximum ambient air temperature near the ground for take-offs and landings is specified in the A319/A320/A321 Airplane Flight Manual (Chapter "Limitations") approved by EASA.

1.18 Airworthiness Limitations

1.18.1 Limitations applicable to Safe Life Airworthiness Limitations Items are provided in the A319/A320/A321 Airworthiness Limitations Section (ALS) sub-parts 1-2 and 1-3 approved by the EASA;

1.18.2 Limitations applicable to Damage Tolerant Airworthiness Limitations Items are provided in the A319/A320/A321 Airworthiness Limitations Section (ALS Part 2) approved by the EASA;

1.18.3 Certification Maintenance Requirements are provided in A319/A320/A321 Airworthiness Limitations Section (ALS) Part 3 – CMR, approved by the EASA;

1.18.4 Ageing Systems Maintenance (ASM) limitations are included in A319/A320/A321 Airworthiness Limitations Section (ALS) Part 4, approved by the EASA

1.18.5 Fuel Safety Airworthiness Limitations are provided in A318/A319/A320/A321 Airworthiness Limitations Section (ALS Part 5) approved by the EASA.

Note: When modification 39020 is incorporated on A320-211, -212, -214, -231, -232, -233 aircraft without Sharklets, maintenance program and its Limit of Validity changes from 48000 flights/60000 flight hours to 60000 flights/120000 flight hours (whatever occurs earlier).

1.19 Aircraft Noise

All A320 aircraft models are approved for compliance with Chapter 4 Annex 16 ICAO "Environmental Protection", Volume 1 "Aircraft Noise"

Note: Noise levels for A320 aircraft models depending on incorporated modifications are given in the Noise TCDS to the EASA Type Certificate No A.064, Volume 3.

1.20 Required Equipment

1.20.1 All mandatory modifications listed in the document "FATA Type Design Definition", SA00SP1702339 Issue 02, shall be embodied.
Note: Document "FATA Type Design Definition", Ref. SA00SP1702339, shall be provided by Airbus to each Operator together with a set of operational documentation listed in §1.5.

1.20.2 Modifications listed in the document "FATA Type Design Definition", Ref. SA00SP1702339, Chapter 3.2, shall not be embodied.

1.20.3 To perform flights when continuous radio communication by means of VHF radio is not provided, aircraft shall be equipped with
- One HF radio if interruptions in VHF covering zone are less than 1 hour of flight;
- Two HF radios if interruptions of VHF covering zone are longer than 1 hour of flight

1.20.4 All inscriptions and placards related to rescue equipment and addressed to passengers must be bilingual: in English and in Russian.

1.20.5 Aircraft Type Design shall include:
- emergency flight data recorder;
- emergency voice recorder with recording duration not less than two hours and with capability of time recording

1.20.6 Flights over the extensive water areas are allowed for aircraft when equipped with combined gangways-rafts (located on emergency exit door) and with the additional rafts (number and capacity are defined by max. number of passengers).

1.21 Operational Limitations

1.21.1 Flights are allowed in airspace where secondary radar control is provided using RBS mode.

1.21.2 ADIRS alignment for aircraft equipped with Litton ADIRS are allowed up to latitude of 82 N., and for aircraft equipped with Honeywell ADIRS up to latitude of 73 N.

1.21.3 Navigation and approach to landing using automatic radio compass are allowed only if aircraft is equipped with not less than two automatic radio compasses or with one automatic radio compass with two frequency selectors.

1.21.4 A320-211 andA320-212 aircraft with modification 21038 are approved for Cat IIIB automatic approaches.
A320-231 aircraft with modification 21039 is approved for Cat IIIB automatic approaches.
A320-214, A320-232 and A320-233 aircraft in basic configuration are approved for Cat IIIB automatic approaches.
A320-251N/-271N aircraft with modification 161765 is approved for CAT IIIB precision approaches.

1.21.5 A320-211, A320-212, A320-214, A320-231, A320-232, A320-233, A320-351N and A320-271N aircraft models with all applicable engines are approved for ETOPS flights. Aircraft configuration, operational and maintenance procedures for ETOPS flights are included in the document SA/EASA AMC 20-6/CMP at the effective issue.

120 minutes ETOPS flights are approved for aircraft with modification 36666.

180 minutes ETOPS flights are approved for aircraft with modification 32009.

Nevertheless such approval does not exclude the necessity to perform operational approval of the possibility to perform ETOPS flights in relation to each specific operator.

1.21.6 Any changes and additions to operational documentation developed by Airbus based on request from Operator may be incorporated only upon FATA approval.

1.21.7 For other limitations see A319/A320/A321 Airplane Flight Manual with Supplement “Regulatory Differences - FATA Supplement”, approved by EASA.

Section II. A321 Aircraft

2.1 Developer and Manufacturer	AIRBUS SAS, 2 rond-point Emile Dewoitine 31700 BLAGNAC-France
2.2 Brief Aircraft Description	Transport category passenger airplane.
2.3 Initial Certification	Type Certificate No 65-A320/A321 issued by IAC AR on 22.12.1994
2.4 Certification Basis	**For A321-111, A321-112, A321-131, A321-211, A321-231, A321-232 aircraft models**: Civil Transport Airplane Airworthiness Standards (NLGS-3) thru Amendment 36 ICAO Annex 16 “Environmental Noise”, Volume 1, “Aircraft Noise” **For A321-271N, A321-251N, A321-253N aircraft models**: Aviation Regulations, Part 25 "Airworthiness requirements for transport category airplanes" (AP-25), Amendments 1 – 6. Aviation Regulations, Part 36 (AP-36) "Aircraft External Noise Certification" and Annex 16 ICAO "Environmental Protection", Volume 1, “Aircraft Noise”
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2.6 Aircraft models

2.6.1 Model A321-111

2.6.1.1 Engines Two CFMI turbofan engines CFM56-5B1/P (MOD 23083 and MOD 25800) or CFM56-5B1/2P (MOD 24404 and MOD 26610)

Notes:

1) CFM56-5B1/P and CFM56-5B1/2P engines can be intermixed on the same aircraft.
2) If modification 37147 is embodied in production or modification 38770 is embodied in field on aircraft with CFM56-5B1/P (SAC) engines the engine denomination changes to CFM56-5B1/3. CFM56-5B1/3 and CFM56-5B1/P engines can be intermixed on the same aircraft on condition modification 38573 is embodied. It was demonstrated that embodiment of modification 37147 did not change certified noise levels.

2.6.1.2 Weight Limits (kg)

VARIANT	000 Basic	002 MOD 24178	003 MOD 24899	004 MOD 24308	005 MOD 25649	006 MOD 26600	007 MOD 26888	008 MOD 30334
Maximum ramp weight	83400	83400	85400	78400	83400	78400	80400	89400
Maximum take-off weight	83000	83000	85000	78000	83000	78000	80000	89000
Maximum landing weight	73500	74500	74500	73500	75000	74500	73500	75500
Maximum zero fuel weight	69500	70500	70500	69500	71000	70500	69500	71500
Minimum weight	47500	47500	47500	47500	47500	47500	47500	47500

2.6.2 Model A321-112

2.6.2.1 Engines Two CFMI turbofan engines CFM56-5B2 (Mod 23152)

Notes:

1) If modification 25800 is embodied engine denomination changes to CFM 56-5B2/P. CFM56-5B2 and CFM 56-5B2/P engines can be intermixed on the same aircraft.
2) If modification 37147 is embodied in production or modification 38770 is embodied in field on aircraft with CFM56-5B2/P (SAC) engines the engine denomination changes to CFM56-5B2/3. CFM56-5B2/3 and CFM56-5B2/P engines can be intermixed on the same aircraft on condition modification 38573 is embodied. It was demonstrated that embodiment of modification 37147 did not change certified noise levels.

2.6.2.2 Weight Limits (kg) Same as A321-111 above (see §2.6.1.2)

2.6.3 Model A321-131

2.6.3.1 Engines Two IAE turbofan enginesV2530-A5 (Mod 22989)

2.6.3.2 Weight Limits (kg)

VARIANT	000 (Basic)	002 MOD 24178	003 MOD 24899	004 MOD 24308	006 MOD 26600	007 MOD 26888	008 MOD 30334
Maximum ramp weight	83400	83400	85400	78400	78400	80400	89400
Maximum take-off weight	83000	83000	85000	78000	78000	80000	89000
Maximum landing weight	73500	74500	74500	73500	74500	73500	75500
Maximum zero fuel weight	69500	70500	70500	69500	70500	69500	71500
Minimum weight	47500	47500	47500	47500	47500	47500	47500

2.6.4 Model A321-211

2.6.4.1 Engines Two CFMI turbofan engines CFM56-5B3/P (Mod 26359 and 25800) or CFM56-5B3/2P (Mod 27640)

Notes:

1) CFM56-5B3/P and CFM56-5B3/2P engines can be intermixed on the same aircraft.
2) If modification 37147 is embodied in production or modification 38770 is embodied in field on aircraft with CFM56-5B3/P (SAC) engines the engine denomination changes to CFM56-5B3/3. CFM56-5B3/3 and CFM56-5B3/P engines can be intermixed on the same aircraft on condition modification 38573 is embodied. It was demonstrated that embodiment of modification 37147 did not change certified noise levels.

2.6.4.2 Weight Limits (kg)

VARIANT	000 (Basic)	001 MOD 28960	002 MOD 28721	003 MOD 31613	004 MOD 31614	005 MOD 27553	006 MOD 31616	008 MOD 31618
Maximum ramp weight	89400	93400	89400	91400	87400	85400	83400	80400
Maximum take-off weight	89000	93000	89000	91000	87000	85000	83000	80000
Maximum landing weight	75500	77800	77800	77800	75500	75500	75500	73500
Maximum zero fuel weight	71500	73800	73800	73800	71500	71500	71500	69500
Minimum weight	47500	47500	47500	47500	47500	47500	47500	47500

VARIANT	010 MOD 31321	011 MOD 32456
Maximum ramp weight	85400	93900
Maximum take-off weight	85000	93500
Maximum landing weight	77800	77800
Maximum zero fuel weight	73800	73800
Minimum weight	47500	47500

For aircraft model A321-211 a Significant Major Type Design change according to modification 160023 – installation of Sharklet is approved.
For aircraft with embodied modification 160023 all weight variants are applicable.

2.6.5 Model A321-231

2.6.5.1 Engines Two IAE turbofan engines V2533-A5 (MOD 25643)

2.6.5.2 Weight Limits (kg) Same as A321-211 above (see §2.6.4.2)

For aircraft model A321-231 a Significant Major Type Design change according to modification 160023 – installation of Sharklet is approved.

2.6.6 Model A321-232

2.6.6.1 Engines Two IAE turbofan engines V2530-A5 (MOD 22989)

2.6.6.2 Weight Limits (kg)

VARIANT	000 Basic	001 MOD 28960	002 MOD 28721	003 MOD 31613	004 MOD 31614	005 MOD 31615	006 MOD 31616	007 MOD 31617	008 MOD 31618	009 MOD 31619
Maximum ramp weight	89400	93400	89400	91400	87400	85400	83400	83400	80400	78400
Maximum take-off weight	89000	93000	89000	91000	87000	85000	83000	83000	80000	78000
Maximum landing weight	75500	77800	77800	77800	75500	75500	75500	73500	73500	73500
Maximum zero fuel weight	71500	73800	73800	73800	71500	71500	71500	69500	69500	69500
Minimum weight	47500	47500	47500	47500	47500	47500	47500	47500	47500	47500

VARIANT	010 MOD 31321	011 MOD 32456
Maximum ramp weight	85400	93900
Maximum take-off weight	85000	93500
Maximum landing weight	77800	77800
Maximum zero fuel weight	73800	73800
Minimum weight	47500	47500

For aircraft model A321-232 a Significant Major Type Design change according to modification 160023 – installation of Sharklet is approved.

2.6.7 Model A321-271N

2.6.7.1 Engines Two IAE geared turbofan engines PW1133G-JM (MOD 161002) or PW1133GA-JM (MOD 160684)

2.6.7.2 Weight Limits (kg)

VARIANT	50 MOD 161448	51 MOD 161555	52 MOD 16155	53 MOD 161557	70 MOD 161735
Maximum ramp weight	89 400	89 400	93 900	93 900	80 400
Maximum take-off weight	89 000	89 000	93 500	93 500	80 000
Maximum landing weight	77 300	79 200	77 300	79 200	71 500
Maximum zero fuel weight	73 300	75 600	73 300	75 600	67 000
Minimum weight	46300	46300	46300	46300	46300

2.6.8 Model A321-251N

2.6.8.1 Engines Two CFMI turbofan engines LEAP 1A32 (Mod 161005)

2.6.8.2 Weight Limits (kg) Same as A321-271N above (see §2.6.7.2)
A321-251N has a Minimum Weight of 46500 kg.

2.6.9 Model A321-253N

2.6.9.1 Engines Two CFMI turbofan engines LEAP 1A33 (Mod 161006)

2.6.9.2 Weight Limits (kg) Same as A321-271N above (see §2.6.7.2)
A321-253N has a Minimum Weight of 46500 kg.

2.7 Engine Limits Performance and operational limitations of the engines are given in A319/A320/A321 Airplane Flight Manual, approved by EASA, and also in:

- Data Sheet to Type Certificate № 55-Д with Supplements to it for CFMI engines of CFM56 family;
- Data Sheet to Type Certificate № 56-Д with Supplements to it for IAE engines of V2500 family
- Data Sheet to Type Certificate № FATA-0105E for IAE engines of PW1100G-JM family
- Data Sheet to Type Certificate № FATA-01015E for CFMI engines of LEAP-1A family;

2.8 Auxiliary Power Unit Gas turbine engine GTCP 36-300 (A) developed by Garrett Airesearch;
Gas turbine engine 131-9A developed by Honeywell International (AlliedSignal) (MOD № 25888);
Gas turbine engine APS 3200 developed by Pratt & Whitney Rzeszow S.A. (Mod 22562 or MOD 35864);
Note: For A321 models APU Pratt & Whitney Rzeszow S.A. APS 3200 (MOD 35864) is the production standard from MSN 2653.

2.9 Fuel For approved fuel grades see EASA Type Certificate Data Sheet № A.064 and A319/A320/A321 Airplane Flight Manual (AFM) approved by EASA.

Approved fuel additives are listed in the corresponding engine "Installation and Operating Manual"

2.10 Fuel Quantity (at fuel density of 0.8 kg/liter)

For A321-111/-112/-131/-211/-231/-232 the following table applies:

TANK	3 tanks aircraft		4 or 5 tanks aircraft (1)	
	Usable fuel, liters (kg)	Unusable fuel, liters (kg)	Usable fuel, liters (kg)	Unusable fuel, liters (kg)
Wing	15500 (12400)	22.6 (18)	15500 (12400)	22.6 (18)
Center	8200 (6560)	23.2 (18.6)	8200 (6560)	23.2 (18.6)
ACT (*)(**)			2900 or 2992/5984** (2320 or 2393/4786)	17/34 (13.6/27.2)
Total	23700 (18960)	45.8 (36.6)	26600 or 26692/29684** (21280 or 21353/23746)**	62.8/79.8 (50.2/63.8)

For A321-271N/-251N/-253N the following table applies:

TANK	3 tanks aircraft		4 or 5 tanks aircraft (*)(**)	
	Usable fuel, liters (kg)	Unusable fuel, liters (kg)	Usable fuel, liters (kg)	Unusable fuel, liters (kg)
Wing	15380 (12073)	22.6 (18)	15380 (12073)	22.6 (18)
Center	8200 (6437)	23.2 (18.6)	8200 (6437)	23.2 (18.6)
ACT (*)(**)			2900 or 2992/5984** (2320 or 2393/4786)	17/34 (13.6/27.2)
Total	23580 (18510)	45.8 (36.6)	26480 or 26572/29564** (20830 or 20903/23296)**	62.8/79.8 (50.2/63.8)

* See notes 2 and 3 below
** 1 ACT high pressure system, 2900 liters on A321-200; 1 / 2 ACT low pressure system 2992/5984 liters on A321-200.

NOTE (1) On series A321-200 equipped with CFM56 engines, introduction of standard of wingbox without dry bay (modification 38616) will increase the fuel capacity by 350 liters.

(2) Installation of one Additional Center Tanks (ACT) in bulk version is defined by modification 25453 (high pressure system).

(3) Installation of one or two Additional Center Tanks (ACT) on A321-200 aircraft is approved according to modification 30422 (low pressure system).

2.11 Minimum Flight Crew 2 pilots (captain and co-pilot)

2.12 Maximum number of passengers 220

2.13 Maximum baggage and cargo weight

Cargo compartment	Maximum load (kg)
Forward	5670
Aft	5670
Rear (bulk)	1497

For layout and loading procedure (containers, pallets and corresponding weights) see Loading and Balance Manual (00D080A0001/C1S, Chapter 1.10).

2.14 Speed Limits (Indicated Airspeed - IAS unless otherwise stated)

Maximum Operating Mach M_{MO}	0.82
Maximum Operating Speed V_{MO}	350 kt
Maneuvering Speed V_A	See A319/A320/A321 Airplane Flight Manual (AFM), Chapter 2 approved by EASA

Maximum allowed slats/flaps extended speed – (V_{FE}):

For A321-111/-112/-131/-211/-231/-232 the following table applies:

Configuration	Slats/Flaps (°)	V_{FE}(kt)	
1	18/0 18/10	230 215	Intermediate approach Take-off
2	22/14	205	Take-off, approach
3	22/21	195	Take-off, approach and landing
Full	27/25	190	Landing

For A321-271N/-251N/-253N the following table applies:

Configuration	Slats/Flaps (°)	V_{FE} (kt)	
1	18/0 18/10	238 225	Intermediate approach Take-off
2	22/14	215	Take-off and approach
3	22/21	195	Take-off, approach, landing
Full	27/34	186	Landing

Maximum speed with landing gear extended V_{LE}:	280 kt/Mach 0.67
Maximum speed at landing gear extension/retraction VLO Landing gear extension: Landing gear retraction:	 250 kt 220 kt

Maximum ground speed: 195.5 kt

2.15 Center of gravity range See A319/A320/A321 Airplane Flight Manual approved by EASA

2.16 Maximum operating altitude

39100 feet
39800 feet (with Mod 30748)

2.17 Ambient air temperature limits near the ground for take-off and landing

2.17.1 Operation of A321-111, A321-112, A321-131, A321-231, A321-232, A321-251N and A321-253N aircraft is allowed at ambient air temperature near the ground not lower than minus 40°C.
2.17.2 Operation of A321-211 and A321-271N aircraft is allowed at ambient air temperature near the ground down to minus 46°C on conditions that Modification 154702 is incorporated.
2.17.3 In case conditions referenced in §2.17.2 are not provided operation of A321-211 and A321-271N aircraft models are allowed at ambient air temperature near the ground not lower than minus 40°C.
2.17.4 A321-211 and A321-271N aircraft are allowed to perform take-offs and landings with short-term parking during time interval not longer than 2 hours at ambient air temperature near the ground down to minus 54°C on condition that modification 155935 is incorporated.
2.17.5 The maximum ambient air temperature near the ground for take-offs and landings is specified in the A319/A320/A321 Airplane Flight Manual (Chapter "Limitations") approved by EASA.

2.18 Airworthiness Limitations

2.18.1 Limitations applicable to Safe Life Airworthiness Limitations Items are provided in the A319/A320/A321 Airworthiness Limitations Section (ALS) sub-parts 1-2 and 1-3 approved by the EASA.
2.18.2 Limitations applicable to Damage Tolerant Airworthiness Limitations Items are provided in the A319/A320/A321 Airworthiness Limitations Section document (ALS Part 2) approved by the EASA.
2.18.3 Certification Maintenance Requirements are provided in A319/A320/A321 Airworthiness Limitations Section (ALS) Part 3 – CMR, approved by the EASA.
2.18.4 Ageing Systems Maintenance (ASM) limitations are included in A319/A320/A321 Airworthiness Limitations Section (ALS) Part 4, approved by the EASA
2.18.5 Fuel Safety Airworthiness Limitations are provided in A319/A320/A321 Airworthiness Limitations Section (ALS Part 5) approved by the EASA.

Note: When modification 154881 is incorporated on A321-211, -231, -232 aircraft without Sharklet, maintenance program and its Limit of Validity changes from 48000 flights/60000 flight hours to 37000 flights/74000 flight hours (whatever occurs earlier)

2.19 Aircraft Noise

All A321 aircraft models are approved for compliance with Chapter 4 Annex 16 ICAO "Environmental Protection", Volume 1 "Aircraft Noise", except for the following models approved for compliance with Chapter 3 Annex 16 ICAO "Environmental Protection", Volume 1 "Aircraft Noise":

- A321-111
  - Weight variants WV001, WV003, WV008 with modifications 25800 and 37147,
  - Weight variant WV008 with modifications 25800 and (26610 or 27727),
- A321-112 weight variants WV000, WV001, WV002, WV003, WV004,

WV005, WV006, WV007, WV008 with modifications 25800 or 37147,
- A321-211 weight variants WV000, WV001, WV002, WV003, WV004, WV005, WV006, WV010, WV011with modifications 25800 or/and 37147.

Note: Noise levels for A321 aircraft models depending on incorporated modifications are given in the Noise TCDS to the EASA Type Certificate No A.064

2.20 Required Equipment

2.20.1 All mandatory modifications listed in the document "FATA Type Design Definition", Ref. SA00SP1702339 Issue 02, shall be embodied.

Note: Document "FATA Type Design Definition", Ref. SA00SP1702339, shall be provided by Airbus to each Operator together with a set of operational documentation listed in §2.5.

2.20.2 Modifications listed in the document "FATA Type Design Definition", Ref. SA00SP1702339, Chapter 3.2, shall not be embodied.

2.20.3 To perform flights when continuous radio communication by means of VHF radio is not provided, aircraft shall be equipped with
- One HF radio if interruptions in VHF covering zone are less than 1 hour of flight;
- Two HF radios if interruptions of VHF covering zone are longer than 1 hour of flight

2.20.4 All inscriptions and placards related to rescue equipment and addressed to passengers must be bilingual: in English and in Russian.

2.20.5 Aircraft Type Design shall include:
- emergency flight data recorder;
- emergency voice recorder with recording duration not less than two hours and with capability of time recording.

2.20.6 Flights over the extensive water areas are allowed for aircraft when equipped with combined gangways-rafts (located on emergency exit door) and with the additional rafts (number and capacity are defined by max. number of passengers).

2.21 Operational Limitations

2.21.1 Flights are allowed in airspace where secondary radar control is provided using RBS mode.

2.21.2 ADIRS alignment for aircraft equipped with Litton ADIRS are allowed up to latitude of 82 N., and for aircraft equipped with Honeywell ADIRS up to latitude of 73 N.

2.21.3 Navigation and approach to landing using automatic radio compass are allowed only if aircraft is equipped with not less than two automatic radio compasses or with one automatic radio compass with two frequency selectors.

2.21.4 A321-111 and A321-112 aircraft models with modification 25199 are approved for Cat IIIB automatic approaches.
A321-131 aircraft model with modification 25200 is approved for Cat

IIIB automatic approaches.

A321-211, A321-231 and A321-232 aircraft models are basic configuration are approved for Cat IIIB automatic approaches.

2.21.5 A321-111, A321-112, A321-131, A321-211, A321-231, A321-232, A321-251N, A321-253N and A321-271N aircraft models with all applicable engines are approved for ETOPS flights. Aircraft configuration, operational and maintenance procedures for ETOPS flights are included in the document SA/EASA AMC 20-6/CMP at the effective issue.

120 minutes ETOPS flights are approved for aircraft with modification 36666.

180 minutes ETOPS flights are approved for aircraft with modification 32009.

Nevertheless such approval does not exclude the necessity to perform operational approval of the possibility to perform ETOPS flights in relation to each specific operator.

2.21.6 Any changes and additions to operational documentation developed by Airbus based on request from Operator may be incorporated only upon FATA approval.

2.21.7 For other limitations see A319/A320/A321 Airplane Flight Manual with Supplement “Regulatory Differences. FATA Supplement”, approved by EASA.

Section III. A319 Aircraft

3.1 Developer and Manufacturer	AIRBUS SAS, 2 rond-point Emile Dewoitine 31700 BLAGNAC-France
3.2 Brief Aircraft Description	Transport category passenger airplane
3.3 Initial Certification	Type Certificate No 113-A319 issued by IAC AR on 18.12.1996
3.4 Certification Basis	Aviation Regulations, Part 25 "Airworthiness requirements for transport category airplanes" (AP-25), Amendment 1 Aviation Regulations, Part 36 (AP-36) "Aircraft External Noise Certification" and Annex 16 ICAO "Environmental Protection", Volume 1, “Aircraft Noise”
3.5 Type Design Definition	FATA Type Certificate № FATA-02063A is applicable to A319 aircraft which Type Design is defined by: 1. EASA Type Certificate Data Sheet № A.064; 2. Document “FATA Type Design Definition”, Ref. SA00SP1702339 Issue 02; 3. Airbus A319 operational documentation: - A319/A320/A321 Airplane Flight Manual (AFM) with Supplement “Regulatory Differences, FATA Supplement”, approved by EASA; - A319/A320/A321 Airworthiness Limitations Section (ALS), approved by EASA; - A319/A320/A321 Maintenance Planning Document (MPD); - Flight Crew Operating Manual (FCOM); - A319/A320/A321 Maintenance Manual (AMM) Note: A319/A320/A321 Master Minimum Equipment List (MMEL) approved by EASA as a part of the Operational Suitability Data.

3.6 Aircraft models

3.6.1 Model A319-111

3.6.1.1 Engines Two CFMI turbofan engines CFM56-5B5 (MOD 24932)

Notes:

1) If modification 25800 is embodied on aircraft with CFM56-5B5 (SAC) engines the engine denomination changes to CFM56-5B5/P. CFM56-5B5 and CFM 56-5B5/P engines can be intermixed on the same aircraft.
2) If modification 37147 is embodied in production or modification 38770 is embodied in field on aircraft with CFM56-5B5/P (SAC) engines the engine denomination changes to CFM56-5B5/3. CFM56-5B5/3 and CFM56-5B5/P engines can be intermixed on the same aircraft on condition modification 38573 is embodied. It was demonstrated that embodiment of modification 37147 did not change certified noise levels.

3.6.1.2 Weight Limits (kg)

VARIANT	000 (Basic)	001 MOD 25328	002 MOD 27112	003 MOD 26457	004 MOD 28053	005 MOD 28136	006 MOD 33418	007 MOD 35197	008 MOD 36291
Maximum ramp weight	64400	70400	75900	68400	68400	70400	73900	75900	64400
Maximum take-off weight	64000	70000	75500	68000	68000	70000	73500	75500	64000
Maximum landing weight	61000	61000	62500	61000	62500	62500	62500	61000	62500
Maximum zero fuel weight	57000	57000	58500	57000	58500	58500	58500	57000	58500
Minimum weight	35400	35400	35400	35400	35400	35400	35400	35400	35400

VARIANT	009 MOD 36292	010 (*) MOD 39021	011 MOD 36933	012 MOD 36934
Maximum ramp weight	66400	76900	66400	62400
Maximum take-off weight	66000	76500	66000	62000
Maximum landing weight	62500	62500	61000	61000
Maximum zero fuel weight	58500	58500	57000	57000
Minimum weight	35400	35400	35400	35400

(*) Weight variant 010 is certified only for A319 aircraft in “Corporate Jet” configuration (see item 3.22 of the current TCDS).

For aircraft model A319-111 a Significant Major Type Design change according to modification 160500 – installation of Sharklet is applicable to all weight variants.

3.6.2 Model A319-112

3.6.2.1 Engines Two CFMI turbofan engines CFM56-5B6 (MOD 25287) or CFM56-5B6/2 (MOD 25530)

Notes:

1) CFM56-5B6 or CFM 56-5B6/2 (MOD 25532) engine models can be intermixed on the same aircraft.
2) If modification 25800 is embodied on aircraft with CFM56-5B6 (SAC) engines the engine denomination changes to CFM 56-5B6/P. CFM56-5B6 and CFM56-5B6/P engines can be intermixed on the same aircraft.
3) If modification 25800 is embodied on aircraft with CFM56-5B6/2 (DAC) engines the engine denomination changes to CFM 56-5B6/2P. CFM56-5B6/2 and CFM56-5B6/2P engines can be intermixed on the same aircraft.
4) If modification 26610 is embodied on aircraft with CFM56-5B6/2 (DAC) engines the engine denomination changes to CFM 56-5B6/2P (DAC II C). CFM56-5B6/2 and CFM 56-5B6/2P engines can be intermixed on the same aircraft.
5) CFM56-5B6/P or CFM 56-5B6 or CFM 56-5B6/2P engine models can be intermixed on the same aircraft.
6) If modification 37147 is embodied in production or modification 38770 is embodied in field on aircraft with CFM56-5B6/P (SAC) engines the engine denomination changes to CFM56-5B6/3. CFM56-5B6/3 and CFM56-5B6/P engines can be intermixed on the same aircraft on condition modification 38573 is embodied. It was demonstrated that embodiment of modification 37147 did not change certified noise levels.

3.6.2.2 Weight Limits (kg) Same as A319-111 above (see §3.6.1.2).

For aircraft model A319-112 a Significant Major Type Design change according to modification 160500 – installation of Sharklet is applicable to all weight variants.

3.6.3 Model A319-113

3.6.3.1 Engines Two CFMI turbofan engines CFM56-5A4 (MOD 25238) or CFM56-5A4/F (MOD 23755)

3.6.3.2 Weight Limits (kg) Same as A319-111 above (see §3.6.1.2).

3.6.4 Model A319-114

3.6.4.1 Engines Two CFMI turbofan engines CFM56-5A5 (MOD 25286) or CFM56-5A5/F (MOD 23755)

3.6.4.2 Weight Limits (kg) Same as A319-111 above (see §3.6.1.2).

3.6.5 Model A319-115

3.6.5.1 Engines Two CFMI turbofan engines CFM56-5B7 (MOD 27567)

Notes:

1) If modification 25800 is embodied on aircraft with CFM56-5B7 (SAC) engines the engine denomination changes to CFM 56-5B7/P. CFM56-5B7 and CFM 56-5B7/P engines can be intermixed on the same aircraft.
2) If modification 37147 is embodied in production or modification 38770 is embodied in field on aircraft with CFM56-5B7/P (SAC) engines the engine denomination changes to CFM56-5B7/3. CFM56-5B7/3 and CFM56-5B7/P engines can be intermixed on the same aircraft on condition modification 38573 is embodied. It was demonstrated that embodiment of modification 37147 did not change certified noise levels.

3.6.5.2 Weight Limits (kg) Same as A319-111 above (see §3.6.1.2).

For aircraft model A319-115 a Significant Major Type Design change according to modification 160500 – installation of Sharklet is applicable to all weight variants.

3.6.6 ModelA319-131

3.6.6.1 Engines Two IAE turbofan engines V2522-A5 (MOD 26152)

3.6.6.2 Weight Limits (kg) Same asA319-111 above (see §3.6.1.2)

For aircraft model A319-131 a Significant Major Type Design change according to modification 160500 – installation of Sharklet is applicable to all weight variants.

3.6.7 Model A319-132

3.6.7.1 Engines Two IAE turbofan engines V2524-A5 (MOD 26298)

3.6.7.2 Weight Limits (kg) Same as A319-111 above (see §3.6.1.2)

For aircraft model A319-132 a Significant Major Type Design change according to modification 160500 – installation of Sharklet is applicable to all weight variants.

3.6.8 Model A319-133

3.6.8.1 Engines Two IAE turbofan engines V2527M-A5 (MOD 27568)

3.6.8.2 Weight Limits (kg) Same as A319-111 above (see §3.6.1.2)

For aircraft model A319-133 a Significant Major Type Design change according to modification 160500 – installation of Sharklet is applicable to all weight variants.

3.7 Engine Limits Performance and operational limitations of the engines are given in A319/A320/A321 Airplane Flight Manual, approved by EASA, and also in:

- Data Sheet to Type Certificate № 55-Д with Supplements to it for CFMI engines of CFM56 family;
- Data Sheet to Type Certificate № 56-Д with Supplements to it for IAE engines of V2500 family

3.8 Auxiliary Power Unit Gas turbine engine GTCP 36-300 (A) developed by Garrett Airesearch;

Gas turbine engine 131-9[A] developed by Honeywell International (AlliedSignal) (Mod № 25888);

Gas turbine engine APS 3200 developed by Pratt & Whitney Rzeszow S.A. (Mod 22562 or Mod 35864);

Note: For A319 models APU Pratt & Whitney Rzeszow S.A. APS 3200 (Mod 35864) is the production standard from MSN 2643.

3.9 Fuel For approved fuel grades see EASA Type Certificate Data Sheet № A.064 and A319/A320/A321 Airplane Flight Manual (AFM) approved by EASA.

Approved fuel additives are listed in the corresponding "Installation and Operating Manual"

3.10 Fuel Quantity (at fuel density of 0.8 kg/liter)

Aircraft without MOD 160001

TANK	3 tanks aircraft		4 or 5 tanks aircraft(1)	
	Usable fuel, liters (kg)	Unusable fuel, liters (kg)	Usable fuel, liters (kg)	Unusable fuel, liters (kg)
Wing	15609 (12487)	58.9 (47.1)	15609 (12487)	58.9 (47.1)
Center	8250 (6600)	23.2 (18.6)	8250 (6600)	23.2 (18.6)
ACT			3121/6242 (2497/4994)	17/34 (13.6/27.2)
Total	23859 (19087)	82.1 (65.7)	26980/30101 (21584/24081)	99.1/116.1 (79.3/92.9)

TANK	6 or 7 tanks aircraft [1]		8 or 9 tanks aircraft	
	Usable fuel, liters (kg)	Unusable fuel, liters (kg)	Usable fuel, liters (kg)	Unusable fuel, liters (kg)
Wing	15609 (12 487)	58.9 (47.1)	15609 (12487)	58.9 (47.1)
Center	8250 (6600)	23.2 (18.6)	8250 (6600)	23.2 (18.6)
ACT	8428/10614 (6743/8492)	56/78 (44.8/62.4)	13660/16781 (10929/13426)	90/107 (72/85.6)
Total	32287/34473 (25830/27579)	138.1/160.1 (110.5/128.1)	37519/40640 (30016/32513)	172.1/189.1 (137.7/151.3)

Aircraft with Mod160001

TANK	3 tanks aircraft		4 tanks aircraft		4 or 5 tanks aircraft[1]	
	Usable fuel, liters (kg)	Unusable fuel, liters (kg)	Usable fuel, liters (kg)	Unusable fuel, liters (kg)	Usable fuel, liters (kg)	Unusable fuel, liters (kg)
Wing	15569 (12455)	58.9 (47.1)	15569 (12455)	58.9 (47.1)	15569 (12455)	58.9 (47.1)
Center	8248 (6598)	23.2 (18.6)	8248 (6598)	23.2 (18.6)	8248 (6598)	23.2 (18.6)
ACT[2]			2992 (2393)	17 (13.6)	2992/5984 (2393/4786)	17/34 (13.6/27.2)
Total	23817 (19054)	82.1 (65.7)	26809 (21447)	99.1 (79.3)	26809/29801 (21447/ 23841)	99.1/116.1 (79.3/92.9)

TANK	6 or 7 tank aircraft [1]		8 or 9 tank aircraft [1]	
	Usable fuel, liters (kg)	Unusable fuel, liters (kg)	Usable fuel, liters (kg)	Unusable fuel, liters (kg)
Wing	15569 (12455)	58.9 (47.1)	15569 (12455)	58.9 (47.1)
Central	8248 (6598)	23.2 (18.6)	8248 (6598)	23.2 (18.6)
ACT	8428/10614 (6743/8492)	56/78 (44.8/62.4)	13660/16781 (10929/13426)	90/107 (72/85.6)
Total	32245/34431 (25796/27545)	138.1/160.1 (110.5/128.1)	37477/40598 (29982/32479)	172.1/189.1 (137.7/151.3)

NOTES:
1) On A319 for Corporate Jet use installation of up to six Additional Center Tanks (ACT) is approved in accordance with modification 28238.
2) Installation of one or two Additional Center Tanks (ACT) is approved according to modification 33973.
3) On A319 aircraft equipped with CFM56 family engines, introduction of standard of wingbox without dry bay (modification 37331) increases the wing fuel capacity by 350 liters (280kg).

3.11 Minimum Flight Crew 2 pilots (captain and co-pilot)

3.12 Maximum number of passengers 145
NOTE:
Installation of a second pair of Type III over wing emergency exits (Mod 32208) increases the maximum number of passengers up to 160

3.13 Maximum baggage and cargo weight

Cargo compartment	Maximum load (kg)
Forward	2268
Aft	3021
Rear (bulk)	1497

For layout and loading procedure (containers, pallets and corresponding weights) see Loading and Balance Manual (00J080A0001/C1S, Chapter 1.10).

3.14 Speed Limits (Indicated Airspeed - IAS unless otherwise stated)

Maximum Operating Mach M_{MO}	0.82
Maximum Operating Speed V_{MO}	350 kt
Maneuvering Speed V_A	See A319/A320/A321 Airplane Flight Manual (AFM), Chapter 2 approved by EASA

Maximum allowed slats/flaps extended speed – (V_{FE}):

Configuration	Slats/Flaps (°)	V_{FE} (kt)	
1	18/0 18/10*	230 215	Intermediate approach Take-off
2	22/15	200	Take-off, approach
3	22/20	185	Take-off, approach and landing
Full	27/40	177	Landing

* Automatic flaps retraction at 210 kt in take-off configuration

Maximum speed with landing gear extended V_{LE}:	280 kt/Mach 0.67
Maximum speed at landing gear extension/retraction V_{LO} Landing gear extension: Landing gear retraction:	 250 kt 220 kt

Maximum ground speed:195.5 kt

3.15 Center of gravity range

See A319/A320/A321 Airplane Flight Manual approved by EASA

3.16 Maximum operating altitude

39100 feet
39800 feet (with Mod3 0748)
41000 feet (only for A319-112/-115/-132/-133 in "Corporate Jet" variant if MOD No. 28162 is embodied)

3.17 Ambient air temperature limits near the ground for take-off and landing

3.17.1 Operation of A319-113, A319-114, A319-131, A319-132 and A319-133 aircraft is allowed at ambient air temperature near the ground not lower than minus 40°C.

3.17.2 Operation of A319-111, A319-112 and A319-115 aircraft is allowed at ambient air temperature near the ground down to minus 46°C on the condition that Modification 154702 is incorporated.

3.17.3 In case conditions referenced in §3.17.2 are not provided operation of A319-111, A319-112 and A319-115 aircraft is allowed at ambient air temperature near the ground not lower than minus 40°C.

3.17.4 A319-111, A319-112 and A319-115 aircraft are allowed to perform take-offs and landings with short-term parking during time interval not longer than 2 hours at ambient air temperature near the ground down to minus 54°C on condition that modification 155935 is incorporated.

3.17.5 The maximum ambient air temperature near the ground for take-offs and landings is specified in the A319/A320/A321 Airplane Flight Manual (Chapter “Limitations”) approved by EASA.

3.18 Airworthiness Limitations

3.18.1 Limitations applicable to Safe Life Airworthiness Limitations Items are provided in the A319/A320/A321 Airworthiness Limitations Section (ALS) sub-parts 1-2 and 1-3 approved by the EASA

3.18.2 Limitations applicable to Damage Tolerant Airworthiness Limitations Items are provided in the A319/A320/A321 Airworthiness Limitations Section (ALS Part 2) approved by the EASA.

3.18.3 Certification Maintenance Requirements are provided in A319/A320/A321 Airworthiness Limitations Section (ALS) Part 3 – CMR, approved by the EASA.

3.18.4 Ageing Systems Maintenance (ASM) limitations are provided in the A319/A320/A321 Airworthiness Limitations Section (ALS) Part 4 approved by the EASA.

3.18.5 Fuel Safety Airworthiness Limitations are provided in A319/A320/A321 Airworthiness Limitations Section (ALS Part 5) approved by the EASA.

Note: When modification 155789 is incorporated on A319-111, -112, -113, -114, -115, -131, -132, -133 aircraft without Sharklet, maintenance program and its Limit of Validity changes from 48000 flights/60000 flight hours to

60000 flights/120000 flight hours (whatever occurs earlier).

3.19 Aircraft Noise

All A319aircraft models are approved for compliance with Chapter 4 Annex 16 ICAO "Environmental Protection", Volume 1 "Aircraft Noise"

Note: Noise levels for A319 aircraft models depending on incorporated modifications are given in the Noise TCDS to the EASA Type Certificate No A.064, Volume 3

3.20 Required Equipment

3.20.1 All mandatory modifications listed in the document "FATA Type Design Definition", Ref. SA00SP1702339 Issue 2, shall be embodied.

Note: Document "FATA Type Design Definition", Ref. SA00SP1702339, shall be provided by Airbus to each Operator together with a set of operational documentation listed in §3.5.

3.20.2 Modifications listed in the document "FATA Type Design Definition", Ref. SA00SP1702339, Chapter 3.2, shall not be embodied.

3.20.3 To perform flights when continuous radio communication by means of VHF radio is not provided, aircraft shall be equipped with
- One HF radio if interruptions in VHF covering zone are less than 1 hour of flight;
- Two HF radios if interruptions of VHF covering zone are longer than 1 hour of flight

3.20.4 All inscriptions and placards related to rescue equipment and addressed to passengers must be bilingual: in English and in Russian.

3.20.5 Aircraft Type Design shall include:
- emergency flight data recorder;
- emergency voice recorder with recording duration not less than two hours and with capability of time recording.

3.20.6 Flights over the extensive water areas are allowed for aircraft when equipped with combined gangways-rafts (located on emergency exit door) and with the additional rafts (number and capacity are defined by max. number of passengers).

3.21 Operational Limitations

3.21.1 Flights are allowed in airspace where secondary radar control is provided using RBS mode.

3.21.2 ADIRS alignment for aircraft equipped with Litton ADIRS are allowed up to latitude of 82 N., and for aircraft equipped with Honeywell ADIRS up to latitude of 73 N.

3.21.3 Navigation and approach to landing using automatic radio compass are allowed only if aircraft is equipped with not less than two automatic radio compasses or with one automatic radio compass with two frequency selectors.

3.21.4 A319-111, A319-112, A319-113 and A319-114 aircraft with modification 26799 or 26968 are approved for Cat IIIB automatic approaches.
A319-131 and A319-132 aircraft with modification 26716 or 26717 are approved for Cat IIIB automatic approaches.
A319-115 and A319-133 aircraft in basic configuration is approved for Cat IIIB automatic approaches.

3.21.5 A319-111, A319-112, A319-113, A319-114, A319-115, A319-131, A319-132 and A319-133 aircraft models with all applicable engines are approved for ETOPS flights. Aircraft configuration, operational and maintenance procedures for ETOPS flights are included in the document SA/EASA AMC 20-6/CMP at the effective issue.
120 minutes ETOPS flights are approved for aircraft with modification 36666.
180 minutes ETOPS flights are approved for aircraft with modification 32009.
Nevertheless such approval does not exclude the necessity to perform operational approval of the possibility to perform ETOPS flights in relation to each specific operator.

3.21.6 Any changes and additions to operational documentation developed by Airbus based on request from Operator may be incorporated only upon FATA approval.

3.21.7 For other limitations see A319/A320/A321 Airplane Flight Manual with Supplement “Regulatory Differences. FATA Supplement”, approved by EASA.

3.22 Corporate Jet Variant

Aircraft basic models intended for Corporate Jet use:
A319-112, A319-115, A319-132, A319-133.

Corporate Jet configuration is defined by a set of the following modifications:

- Modification 28238: Installation of up to 6 ACTs (Auxiliary Center Tank);
- Modification 28162: Extension of flight envelope up to 41000 ft;
- Modification 28342: Extension of the forward C.G. Limits

In addition the following major modifications are associated to the previous ones:

- Adapt lower fuselage structure and fuel system definition for A319 CJ (MOD 27117)
- Specific Nose Landing gear setting (MOD 28376*), linked to new forward C.G.
- FWC std H1/E3 (MOD 28702)
- Modified AFMC/ALSCU (MOD 28719), linked to ACT installation

For the preparation of the installation of a VIP cabin, modification 27470

"Cabin Basic Provision for A319 Corporate Jet" or modifications 34922 "Cabin Basic Provision for A319 Corporate Jet "Green Plus" and 34921 "Structural and System Conversion of A319-100 standard aircraft into A319-100 Corporate Jetliner Configuration" shall be applied.

Due to their intended use, the A319 CJ will have the Weight Variant 010 (MOD 39021) - see §3.6.1.2 of this TCDS

**Note: Refer to document "FATA Type Design Definition", Ref. SA00SP1702339 for Nose Landing gear setting for aircraft certified by the FATA.*

3.23 List of approved STC (Supplemental Type Certificates)

№	STC Description	STC Holder	STC Number	Issued by	Aircraft Model
1.	Airbus Corporate Jet Centre Modification CJ0950 Issue 1 – VIP Interior – "Metropole"	AIRBUS S.A.S.	10038826	European Aviation Safety Agency (EASA)	A319-115

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Original copy in Russian signed by Mikhail Bulanov, Deputy Director General