DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION

A57NM
Revision 26
Embraer
ERJ 190-100 STD
ERJ 190-100 LR
ERJ 190-100 IGW
ERJ 190-100 ECJ
ERJ 190-200 STD
ERJ 190-200 LR
ERJ 190-200 IGW
ERJ 190-300
ERJ 190-400

October 1, 2025

FAA TYPE CERTIFICATE DATA SHEET NO. A57NM

This data sheet which is part of Type Certificate No. A57NM prescribes conditions and limitations under which the product for which the Type Certificate was issued meets the airworthiness requirements of the US Federal Aviation Regulations.

Type Certificate Holder	Embraer S.A. Av. Brig. Faria Lima, 2170 12227-901 São Jose dos Campos, SP Brazil
Type Certificate Holder Record	Yaborã Indústria Aeronáutica S.A. transferred TC No A57NM to Embraer S.A. on January 1, 2022. Embraer S.A. transferred TC No A57NM to Yaborã Indústria Aeronáutica S.A. on January 31, 2020. Empresa Brasileira de Aeronáutica S.A. (Embraer) changed company name to Embraer S.A. effective November 2010.

I. Model ERJ 190-100 STD (Transport Category Airplane) approved on September 2, 2005

Engines

Two General Electric Aircraft Engines (GE) models: CF34-10E7, CF34-10E6, CF34-10E6A1, CF34-10E5, CF34-10E5A1. (Engine Type Certificate E00070EN) (See Note 8).

Auxiliary Power Unit

One – Hamilton Sundstrand APS 2300 Auxiliary Power Unit.

Fuel

Specifications:
- Brazilian Specification ANP nº 1/2003 - QAV1
- ASTM D-1655 JET A or JET A1
- MIL-T-83133 JP-8
- Russian GOST 10227-86 (RT, TS-1 Premium and TS-1 Regular)
- Ukranian GSTU 320.001.499.43.011 (TS-1)
- Ukranian GSTU 320.001.499.43.007 (RT)

Oil

Types of approved oils for use in engines or APU are:
- Synthetic Oil conforming to MIL-PRF-23699 or MIL-PRF-7808

Engine Limits

Refer to AFM No. AFM-1912.

APU Limits

Maximum RPM	108%
Maximum EGT	717ºC (continuous) 1032ºC (start)

Other limitations as stated in Hamilton Sundstrand Document No. ESR 1235.

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Airspeed Limits (I.A.S.)

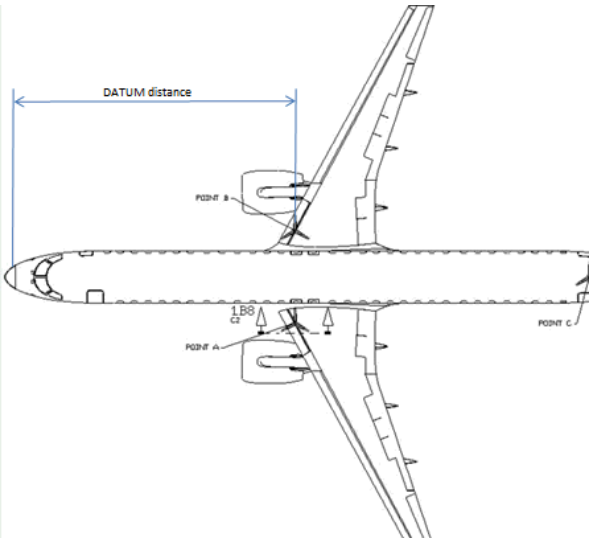
V_{MO}	300 KIAS from sea level to 8,000 ft. increasing linearly to 320 KIAS at 10,000 ft.	
V_{MO}	320 KIAS from 10,000 ft to 28,887 ft.	
M_{MO}	0.82 Mach from 28,887 ft to 41,000 ft.	
V_A (Maneuvering)	250 KIAS from sea level increasing linearly to 286 KIAS at 25,590 ft., and increasing linearly to 295 KIAS at 32,684 ft.	
V_A (Maneuvering)	0.82 Mach from 32,684 ft to 41,000 ft.	
V_{FE} (Flaps Extended) (IAS up to 25,590 ft)	Detent 1	230 KIAS
	Detent 2	215 KIAS
	Detent 3	200 KIAS
	Detent 4	180 KIAS
	Detent 5	180 KIAS
	Detent FULL	165 KIAS

Maximum Landing Gear Operating Speed (V_{LO}):
Retraction 235 KIAS
Extension265 KIAS
Maximum Landing Gear Extended Speed (V_{LE}): 265 KIAS

Tire Speed 225 MPH

Datum

A perpendicular plane to the fuselage centerline, located at 14,857 mm ahead of the wing jack points, as illustrated below.

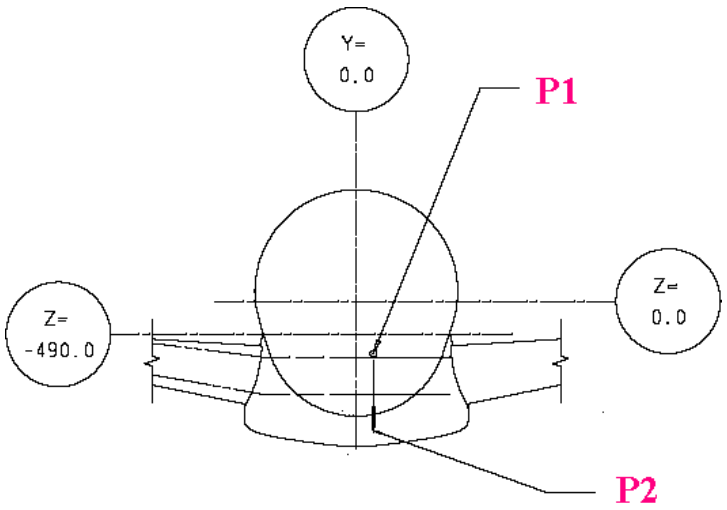


Mean Aerodynamic Chord

The MAC length is 3,682 mm.

Leveling Means

Plumb line between the points P1 and P2 located inside of the landing gear compartment on the left side, as illustrated below.



LEVELING OF FUSLG COORDINATE POINTS			
POINT	X	Y	Z
P1	17955.20	-250.00	-774.872
P2	17955.20	-250.00	-1683.47

Center of Gravity Limits — Refer to AFM No. AFM-1912.

Maximum Weights

Max Ramp Weight:	105,711 lb. (47,950 kg)
Max Takeoff Weight:	105,359 lb. (47,790 kg)
Max Landing Weight:	94,798 lb. (43,000 kg)
Max Zero Fuel Weight:	89,948 lb. (40,800 kg)

Maximum Baggage

Forward Cargo Compartment	4,078 lb. (1,850 kg)
Aft Cargo Compartment	3,638 lb. (1,650 kg)

Fuel Capacity — 4,267 gallons (16,152.6 liters) in two tanks of 2,133 gallons (8,076.3 liters) each.
Unusable fuel of 29.96 gallons (113.4 liters) (56.7 liters at 0.811 kg/liter in each tank).

Minimum Crew — 2 - Pilot and Copilot.

Maximum Passenger Seating Capacity — 110 maximum through S/N 190-00348.
112 maximum S/N 190-00349 and on.

Oil Capacity — Oil capacity per Engine:
Total: 13.8 liters (14.6 US quarts)
Useable: 9.4 liters (9.9 US quarts)

Maximum Altitudes — 41,000 ft. (operating)
10,000 ft. (takeoff and landing)*
14,000 ft. (takeoff and landing)**
* Standard Altitude
** If post-mod SB 190-35-0005

Control Surface Movements

Ailerons	25° TE up, 15° TE down
Elevator	25° TE up, 18° TE down
Stabilizer	11° TE up, 4° TE down
Rudder	31.5° right, 31.5° left
Ground Spoiler	60°
Outboard Spoiler	40°

Flap and Slat Detent	Inboard Flap Main/Aft	Outboard Flap Main/Aft	Slat 1/Slat 2,3&4
0	0°/0°	0°	0°/0°
1	7.07°/15.36°	7.04°	12°/15°
2	10.11°/16.62°	10.06°	12°/15°
3	20.20°/19.18°	19.99°	12°/15°
4	20.20°/19.18°	19.99°	20°/25°
5	20.20°/19.18°	19.99°	20°/25°
Full	37.07°/22.01°	36.49°	20°/25°

Deflections are in the planes normal to the hinge lines, except for the flaps, which are in stream wise planes normal to the wing reference plane. Deflections of a surface supported by another moveable surface are relative to the parent surface. Stabilizer deflections are relative to the airplane horizontal reference. Elevator and rudder maximum deflections are scheduled by the flight control system as a function of airspeed; the data presented herein correspond to zero airspeed. See AMM for control surface deflection tolerances.

Serial Numbers: 19000002, 19000004, 19000006 and subsequent.

II. Model ERJ 190-100 LR (Transport Category Airplane) approved on September 2, 2005

Same as model ERJ 190-100 STD, except for the following items:

Maximum Weights

Max Ramp Weight:	111,245 lb. (50,460 kg)
Max Takeoff Weight:	110,892 lb. (50,300 kg)*
	110,230 lb. (50,000 kg)**
Max Landing Weight:	94,798 lb. (43,000 kg)
Max Zero Fuel Weight:	89,948 lb. (40,800 kg)

* Standard Weight or if post-mod SB 190-00-0003 is applied
** If post-mod SB 190-00-0002 is applied

Center of Gravity Limits: Refer to AFM No. AFM-1912.

III. Model ERJ 190-100 IGW (Transport Category Airplane) - This model has two unique configurations, Passenger and Freighter
III(a) Passenger configuration, approved on September 2, 2005

Same as model ERJ 190-100 LR, except for the following items:

Maximum Weights

Max Ramp Weight:	114,552 lb. (51,960 kg)
Max Takeoff Weight:	114,199 lb. (51,800 kg)*
Max Takeoff Weight:	101,412 lb. (46,000 kg)**
Max Takeoff Weight:	110,231 lb. (50,000 kg)***
Max Landing Weight:	97,003 lb. (44,000 kg)
Max Zero Fuel Weight:	90,169 lb. (40,900 kg)

* Standard Weight or if post-mod SB 190-00-0009 or 190-00-0021
** If post-mod SB 190-00-0008
*** If post-mod SB 190-00-0020

Center of Gravity Limits: Refer to AFM No. AFM-1912.

III(b) Freighter configuration (post-MOD SB 190-25-0270), approved on August 26, 2024

Same as model ERJ 190-100 IGW passenger configuration, except for the following items:

Maximum Weights

Max Ramp Weight:	114,552 lb. (51,960 kg)
Max Takeoff Weight:	114,199 lb. (51,800 kg)
Max Landing Weight:	97,003 lb. (44,000 kg)
Max Zero Fuel Weight:	90,169 lb. (40,900 kg)

Maximum Baggage

Forward Cargo Compartment	3,483 lb. (1,580 kg)
Aft Cargo Compartment	3,638 lb. (1,650 kg)

Maximum Passenger Seating Capacity: 01 Supernumerary
Center of Gravity Limits: Refer to AFM No. AFM-1912.

IV. Model ERJ 190-100 ECJ (Transport Category Airplane) approved on November 7, 2007

Same as model ERJ 190-100 IGW, except for the following items:

Engines	Two General Electric Aircraft Engines (GE) models: CF34-10E7-B (Engine Type Certificate E00070EN) (See Note 8) or CF34-10E6 (See Note 14).	
Airspeed Limits (I.A.S.)	V_A (Maneuvering)	265 KIAS from sea level increasing linearly to 269 KIAS at 15,000 ft., increasing linearly to 286 KIAS at 25,590 ft. and increasing linearly to 295 KIAS at 32,684 ft.
Maximum Passenger Seating Capacity	19 maximum. Limited by requirement §25.807(g) Emergency Exits.	
Maximum Baggage	Forward Cargo Compartment	705 lb. (320 kg)
	Aft Cargo Compartment	2,293 lb. (1,040 kg)
Serial number	19000109 and subsequent.	
Maximum Weights	Max Ramp Weight:	120,591 lb. (54,700 kg), 114,552 lb. (51,960 kg) (See Note 14)
	Max Takeoff Weight:	120,150 lb. (54,500 kg), 114,199 lb. (51,800 kg) (See Note 14) 100,000 lb. (45,360 kg)* 95,000 lb. (43,092 kg)** 90,000 lb. (40,824 kg)***
	Max Landing Weight:	100,970 lb. (45,800 kg), 97,003 lb. (44,000 kg) (See Note 14)
	Max Zero Fuel Weight:	80,467 lb. (36,500 kg), 90,169 lb. (40,900 kg) (See Note 14) 76,212 lb. (34,570 kg)**** 77,712 lb. (35,250 kg)*****
	* If post-mod SB 190LIN-00-0018 ** If post-mod SB 190LIN-00-0017 *** If post-mod SB 190LIN-00-0016 **** If post-mod SB 190LIN-00-0012 ***** If post-mod SB 190LIN-00-0007R01	
Fuel Capacity	Maximum usable fuel: 7,194 gallons (27,232.0 liters) in two wing tanks totaling 4,268 gallons (16,155 liters) and in auxiliary fuel tanks totaling 2,926 gallons (11,077.0 liters). Maximum usable fuel: 4,267 gallons (16,152.6 liters) in two tanks of 2,133 gallons (8,076.3 liters) each (See Note 14) Unusable fuel: 43.5 gallons (165.2 liters) (72.1 liters at 0.803 kg/liter in each wing tank and 21 liters in auxiliary tanks). Unusable fuel: 29.96 gallons (113.4 liters) (56.7 liters at 0.811 kg/liter in each wing tank) (See Note 14).	
Center of Gravity Limits	Refer to AFM No. AFM-1912.	
Maximum Altitudes	41,000 ft. (operating) 10,000 ft. (takeoff and landing)* 14,000 ft. (takeoff and landing)** * Standard Altitude ** If post-mod SB 190LIN-35-0004	

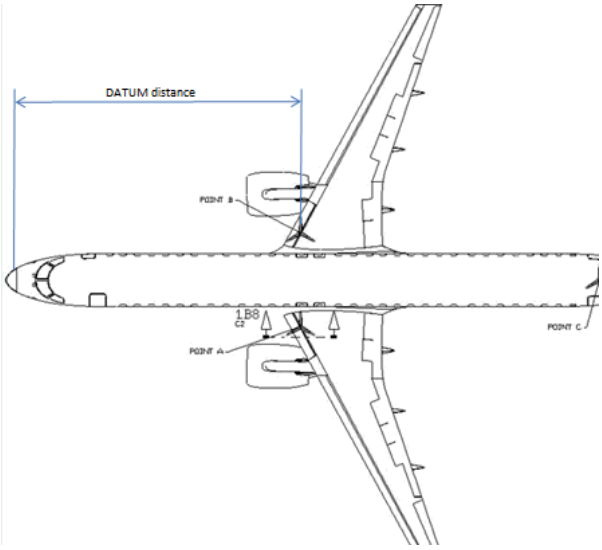
V. Model ERJ 190-200 STD (Transport Category Airplane) approved on June 20, 2007

Same as model ERJ 190-100 LR, except for the following items:

Engines	Two General Electric Aircraft Engines (GE) models: CF34-10E6, CF34-10E6A1, CF34-10E5, CF34-10E5A1, CF34-10E7. (Engine Type Certificate E00070EN) (See Note 8).	
Airspeed Limits (I.A.S.)	V_A (Maneuvering)	253 KIAS from sea level increasing linearly to 288 KIAS at 25,590 ft., and increasing linearly to 295 KIAS at 32,680 ft.
	V_A (Maneuvering)	0.82 Mach from 32,680 ft. to 41,000 ft.

Datum

A perpendicular plane to the fuselage centerline, located at 15,670 mm ahead of the wing jack points, as illustrated below.

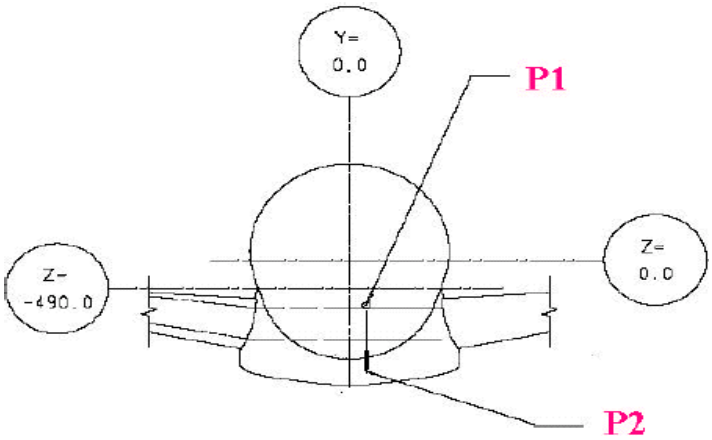


Mean Aerodynamic Chord

The MAC length is 3,682 mm.

Leveling Means

Plumb line between the points P1 and P2 located inside of the landing gear compartment on the left side, as illustrated below.



LEVELING OF FUSLG COORDINATE POINTS			
POINT	X	Y	Z
P1	18768.00	-250.00	-774.87
P2	18768.00	-250.00	-1683.47

Maximum Weights

Max Ramp Weight:	107,914 lb. (48,950 kg)
Max Takeoff Weight:	107,562 lb. (48,790 kg)
Max Landing Weight:	99,206 lb. (45,000 kg)
Max Zero Fuel Weight:	93,695 lb. (42,500 kg)

Center of Gravity Limits

Refer to AFM No. AFM-1912.

Maximum Baggage

Forward Cargo Compartment	4,189 lb. (1,900 kg)
Aft Cargo Compartment	3,968 lb. (1,800 kg)

Maximum Passenger Seating Capacity

124 maximum (Note 13).

Serial Numbers

19000005, 19000029 and subsequent.

VI. Model ERJ 190-200 LR (Transport Category Airplane) approved on June 20, 2007

Same as model ERJ 190-200 STD, except for the following items:

Maximum Weights	Max Ramp Weight:	112,324 lb. (50,950 kg)
	Max Takeoff Weight:	111,971 lb. (50,790 kg)*
	Max Landing Weight:	99,206 lb. (45,000 kg)
	Max Zero Fuel Weight:	93,695 lb. (42,500 kg)

Center of Gravity Limits: Refer to AFM No. AFM-1912.

VII. Model ERJ 190-200 IGW (Transport Category Airplane) approved on June 20, 2007

Same as model ERJ 190-200 LR, except for the following items:

Maximum Weights	Max Ramp Weight:	115,631 lb. (52,450 kg)
	Max Takeoff Weight:	115,278 lb. (52,290 kg)
	Max Landing Weight:	100,970 lb. (45,800 kg)
	Max Zero Fuel Weight:	93,915 lb. (42,600 kg)

VIII. Model ERJ 190-300 (Transport Category Airplane) approved on February 28, 2018

Engines: Two Pratt & Whitney Engine PW1900G series, models: PW1919G and PW1922G (Engine Type Certificate E00090EN).

Auxiliary Power Unit: Pratt & Whitney model APS2600[E].

Fuel: Specifications:
Brazilian Specification RANP37-2009 and RANP38-2011 from ANP, QAV-1 Jet Fuel
ASTM Specification D1655, Grades JET A and JET A-1 neat (no additives);
Specification DEF STAN 91-91 JET A-1;
Specification MIL-DTL-83133 JP-8 (NATO codes F-34 / F-35) and JP-8+100 (NATO code F-37);
Specification MIL-DTL-5624 JP-5;
Russian Specification GOST 10227-86 grades TS-1 and RT;
Ukrainian Specification GSTU 320.00149943.011 grade TS-1 and .007 grade RT;
Chinese Specification GB 6537-2006, No.3.

Oil: Types of approved oils for use in engines or APU are:
Synthetic Oil conforming to MIL-PRF-23699 or MIL-PRF-7808

Engine Limits: Refer to AFM No. AFM-5692.

APU Limits: Maximum RPM 108%

Other limitations as stated in Hamilton Sundstrand Document No. ESR 1235.

Airspeed Limits (I.A.S.)

V_{MO} (Maximum operating limit speed):
300 KIAS from sea level to 8,000 ft.
increasing linearly to 320 KIAS at 10,000 ft.
320 KIAS from 10,000 ft. to 28,887 ft.
0.82 Mach from 28,887 ft. to 41,000 ft.

V_A (Maneuvering):
265 KIAS from sea level to 15,000 ft.
increasing linearly to 320 KIAS at 28,887 ft.
0.82 Mach from 28,887 ft to 41,000 ft.

V_{FE} (Flaps Extended) (IAS up to 25,590 ft)

Detent 1	230 KIAS
Detent 2	215 KIAS
Detent 3	200 KIAS
Detent 4	180 KIAS
Detent 5	180 KIAS
Detent FULL	165 KIAS

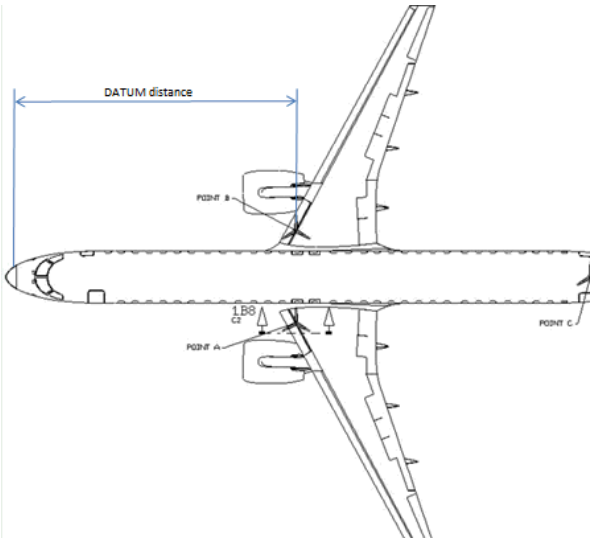
Maximum Landing Gear Operating Speed (V_{LO}):

Retraction	220 KIAS
Extension	250 KIAS

Maximum Landing Gear Extended Speed (V_{LE}): 265 KIAS
Tire Speed 225 MPH

Datum

A perpendicular plane to the fuselage centerline, located at 13,571 mm ahead of the wing jack points, as illustrated below.

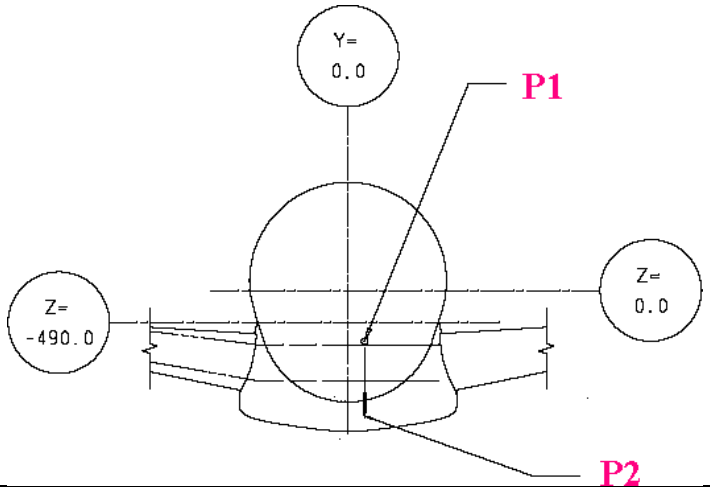


Mean Aerodynamic Chord

The MAC length is 3,665 mm.

Leveling Means

Plumb line between the points P1 and P2 located inside of the landing gear compartment on the left side, as illustrated below.



LEVELING OF FUSELAGE COORDINATE POINTS			
POINT	X	Y	Z
P1	15,881.02	-211.00	-851.49
P2	15,881.02	-211.00	-1,736.42

Center of Gravity Limits

Refer to AFM No. AFM-5692.

Maximum Weights

Max Ramp Weight:	124,781 lb. (56,600 kg)
Max Takeoff Weight:	124,340 lb. (56,400 kg)
Max Landing Weight:	108,136 lb. (49,050 kg)
Max Zero Fuel Weight:	102,876 lb. (46,700 kg)

Maximum Baggage

Forward Cargo Compartment	3,505 lb. (1,590 kg)
Aft Cargo Compartment	4,210 lb. (1,910 kg)

Fuel Capacity

4,504 gallons (17,060 liters)
720 gallons (2,730 liters) in each LH or RH wing tank and 3064 gallons (11,600 liters) in center tank.
Unusable fuel of 19.65 gallons (74.4 liters) (37.2 liters at 0.803 kg/liter in each wing tank).

Minimum Crew — 2 - Pilot and Copilot.

Maximum Passenger Seating Capacity — 114

Oil Capacity — Oil capacity per Engine:
Total: 24.4 liters (25.8 US quarts)
Useable: 6.1 liters (6.4 US quarts)

Maximum Altitudes — 41,000 ft. (operating)
14,000 ft. (takeoff and landing)

Control Surface Movements

Ailerons	25° TE up, 15° TE down
Elevator	25° TE up, 18° TE down
Stabilizer	11.6° TE up, 4.4° TE down
Rudder	30.0° right, 30.0° left
Ground Spoiler	60°
Outboard Spoiler	40°

Flap and Slat

Flap setting position	Inboard flap	Outboard flap	Slat position 1	Slat position 2, 3 & 4
0	0.0°	0.0°	0.0°	0.0°
1	11.2°	10.6°	7.3°	8.0°
2	11.2°	10.6°	18.2°	20°
3	21.5°	22.0°	18.2°	20°
4	25.9°	26.9°	22.8°	25°
5	25.9°	26.9°	22.8°	25°
Full	33.0°	35.1°	22.8°	25°

Deflections shown in degrees (°) are in the planes normal to hinge lines, excepting for the flaps, which are in stream wise planes normal to wing reference plane.

Deflections of a surface supported at another movable surface are relative to the parent surface. Stabilizer defections are relative to the airplane horizontal reference.

For tolerances, see AMM.

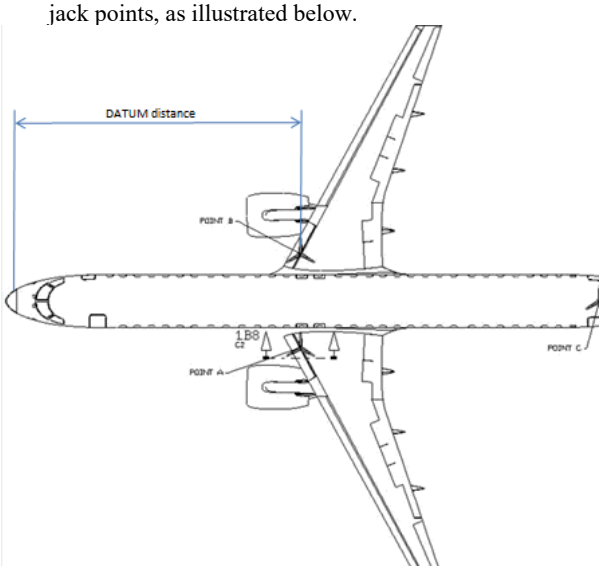
Serial Numbers — 19020009, and subsequent

IX. Model ERJ 190-400 (Transport Category Airplane) approved on April 15, 2019

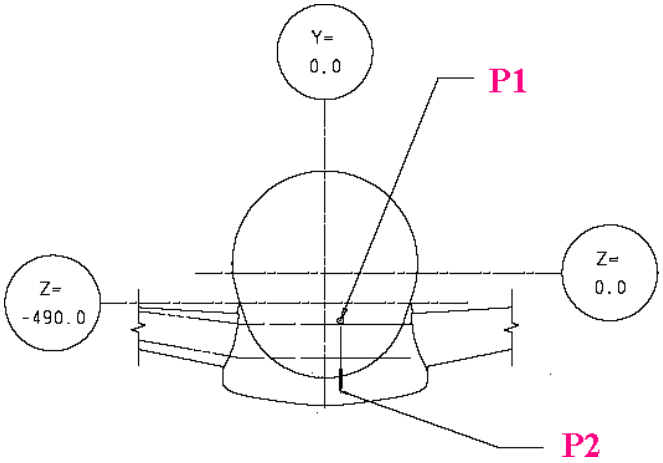
Same as model ERJ 190-300, except for the following items:

Engines — Two Pratt & Whitney Engine PW1900G series, models: PW1921G, PW1923G and PW1923G-A (Engine Type Certificate E00090EN).

Datum — A perpendicular plane to the fuselage centerline, located at 16,497 mm ahead of the wing jack points, as illustrated below.



Leveling Means — Plumb line between the points P1 and P2 located inside of the landing gear compartment on the left side, as illustrated below.



LEVELING OF FUSELAGE COORDINATE POINTS			
POINT	X	Y	Z
P1	18,807.02	-211.00	-851.49
P2	18,807.02	-211.00	-1,736.42

Maximum Weights	Max Ramp Weight:	136,025 lb. (61,700 kg)
	Max Takeoff Weight:	135,584 lb. (61,500 kg)
	Max Landing Weight:	119,049 lb. (54,000 kg)
	Max Zero Fuel Weight:	114,309 lb. (51,850 kg)
Maximum Baggage	Forward Cargo Compartment	5,236 lb. (2,375 kg)
	Aft Cargo Compartment	5,634 lb. (2,555 kg)
Maximum Passenger Seating Capacity	146	
Control Surface Movements	Stabilizer	12.0° TE up, 3.5° TE down
Serial Numbers	19020018, and subsequent	

DATA PERTINENT TO MODELS ERJ 190-100 AND ERJ 190-200 EXCEPT AS INDICATED

Import Requirements

Refer to the applicable bilateral agreement to verify eligibility for import into the United States of both new and used aircraft based on the scope of the agreement, to identify any required statements by the exporting authority on the export certificate of airworthiness (or equivalent document), and for procedures for coordinating exceptions to conformity statements on these documents. Refer to FAA Order 8130.2, *Airworthiness Certification of Aircraft*, for requirements for issuance of an *airworthiness certificate* for imported aircraft.

Certification Basis **14 CFR part 25**, effective February 1, 1965, including the following amendments:

- Amendments 25-1 through 25-101 in entirety;
- Amendment 25-102, §§ 25.981(a) and (b), H25.4 only;
- Amendments 25-103 through 25-105 in entirety;
- Amendment 25-107, § 25.731(d) and (e); § 25.735(a) through (g), and (i) through (k) only;
- Amendments 25-108 through 25-110 in entirety;
- Amendments 25-112 through 25-114 in entirety;
- Amendment 25-117 in entirety; and
- Amendment 25-120 in entirety.

Note: The ERJ 190-100 ECJ (Commercially Known as Lineage 1000) auxiliary fuel tanks comply with the requirement 25.981(c) of Amendment 25-102.

Special Conditions:

No. 25-296-SC, consisting of the following subjects:
- Interaction of Systems and Structure;
- Limit Engine Torque Loads for Sudden Engine Stoppage;
- Control Surface Position Awareness;
- Performance Credit for ATTCS During Go-Around;
- High Intensity Radiated Fields (HIRF); and
- Operations without Normal Electrical Power.

No. 25-559-SC, Enhanced Flight-Vision System.

No. 25-685-SC, Non-Rechargeable Lithium Batteries (Effective to design changes applied for after May 31, 2017. See the applicability section of this special condition for more information on which design changes must meet it.)

For the ERJ 190-100 ECJ:
No. 25-372-SC, Multiple Electrical/Electronic equipment bays; and
No. 25-273-SC, Flight Accessible Class C Cargo Compartment.

For the ERJ 190-100 STD, 190-100 LR, and 190-100 IGW:
No. 25-408-SC, Seats with Non-Traditional, Large, Non-Metallic Panels.

NOTE: The FAA Special Conditions referenced above may be accessed at the FAA's Dynamic Regulatory System website.

Equivalent Level of Safety Findings:

- § 25.331(c)(2), Pitch Maneuver Conditions (documented in TAD ELOS Memo TC0099IB-T-A-10);
- § 25.1301, 25.1309, Equipment, Systems, and Installations (documented in TAD ELOS Memo TC0099IB-T-S-13);
- § 25.933(a)(1)(ii), Flight Critical Thrust Reverser (documented in TAD ELOS Memo TC0099IB-T-P-3 for ERJ 190-100 models and TAD ELOS Memo AT0286IB-T-P-22 for ERJ 190-200 models);
- 14 CFR part 25 subparts E, F, & G requirements applicable to APU installations, APU Certification Rules (documented in TAD ELOS Memo TC0099IB-T-P-4);
- 14 CFR part 25 Appendix I25.4(a), ATTCS - Reduction in initial power setting to less than 90% of takeoff thrust (documented in TAD ELOS Memo TC0099IB-T-F-28);
- 14 CFR part 25 Appendix I25.5(b)(4), ATTCS - Deactivation control (documented in TAD ELOS Memo TC0099IB-T-P-10);
- § 25.1305(c)(3), Digital Only Display of Turbine Engine High/Intermediate Pressure Rotor Speed (documented in TAD ELOS Memo TC0099IB-T-P-18);

- § 25.1389(b), 25.1391, 25.1393, 25.1395, Position Light Intensities (documented in TAD ELOS Memo TC0099IB-T-S-34);
- § 25.831(g), Humidity Requirement (documented in TAD ELOS Memo TC0099IB-T-S-36);
- § 25.811(d)(1) and (3), Emergency Exit Locator Sign (documented in TAD ELOS Memo TC0099IB-T-C-9) (See Note 11);
- § 25.811(d)(1), (2), (3) and 25.812(b)(1), Emergency Exit Sign for the ERJ 190-100 ECJ (documented in TAD ELOS Memo TD0490IB-T-C11);
- § 25.841(b)(6), Cabin Altitude Warning System – High Altitude Takeoff and Landing Operations (documented in TAD ELOS Memo TD0629IB-T-S-58);
- § 25.1443(c), Determination of Minimum Oxygen Flow for the Lavatory Oxygen System (documented in TAD ELOS Memo AT10108IB-T-SM-1);
- § 25.1441(c), Crew Determination of Quantity of Oxygen in Lavatory Oxygen System Distributed Bottles (documented in TAD ELOS Memo AT10108IB-T-SM-2);
- § 26.43, Sec. 26.45, Sec. 26.47, Three Stage Approval Process for New Repairs to Alteration Structure (documented in TAD ELOS Memo TD0756IB-T-A-1); and
- § 26.43, Sec. 26.45, Sec. 26.47, DT data for Existing Unpublished Repairs to Alteration Structure (documented in TAD ELOS Memo TD0756IB-T-A-1).
- § 25.1389(b), 25.1395 LED Position Light Intensities (documented in TAD ELOS Memo AT10315IB-T-S-61
- § 25.1389(b)(1) and (b)(2), 25.1391, 25.1393 Minimum Intensity of Position Lights System with Protective Tape (documented in ELOS Memorandum AT11188IB-T-25.1389-1)

NOTE: The FAA Equivalent Level of Safety Memos referenced above may be accessed at the FAA's Dynamic Regulatory System website.

Exemptions:

- Exemption No. 8613, 14 CFR part 25, Section 25.901(c), Uncontrollable High Thrust; and
- Exemption No. 8612, 14 CFR part 25, Section 25.841(a)(2)(i) and (ii), Pressurized Cabin.

For the ERJ 190-100 ECJ:

- Exemption No. 9459, 14 CFR part 25, Section 25.785(b), General occupant protection for occupants of multiple-place side-facing seats that are occupied during takeoff and landing;
- Exemption No. 9457, 14 CFR part 25, Section 25.785(j), Firm handhold along each aisle; and
- Exemption No. 9458A, 14 CFR part 25, Section 25.813(e), Prohibits installation of interior doors in between passenger compartments.

NOTE: The FAA Exemptions referenced above may be accessed at the FAA's Dynamic Regulatory System website.

Optional Requirements complied with:

- Section 25.801	Ditching;
- Sections 25.1411, 25.1415	Safety equipment required for ditching certification (ERJ190-100 models only);
- Section 25.1403	Wing icing detection lights;
- Section 25.1419	Ice protection; and
- Section 25.1421	Megaphones

Part 26 of the Federal Aviation Regulations:

Based on § 21.29(a) for new TCs, or § 21.101(g) for changes to TCs, applicable provisions of part 26 are included in the certification basis.

For any future part 26 amendments, the holder of this TC must demonstrate compliance with the applicable sections.

Environmental Standards complied with:

- All Models: 14 CFR Part 36 effective December 1, 1969, including Amendments 36-1 through 36-24, Stage 3. See the appropriate FAA Approved Airplane Flight Manual for aircraft configurations certified as Stage 3 through amendment 36-28 and for applicability of Stage 4 Noise Recertification through amendment 36-31.
- ERJ 190-100 ECJ: 14 CFR Part 36 effective December 1, 1969, including Amendments 36-1 through 36-28, Stage 3.
- 14 CFR Part 34 effective September 10, 1990, including all amendments effective on the TC date.

Equipment

The basic required equipment as prescribed in the applicable airworthiness regulations (see the Certification Basis) must be installed in the aircraft. The lists of all equipment as well as optional approved equipment are contained in the Embraer documents:

- Type Design Standard Document for ERJ 190-100 No. 190-100TDSD;
- Type Design Standard Document for ERJ 190-200 No. 190-200TDSD_FAA; and
- Type Design Standard Document for ERJ 190-100 No. 190-100TDSD_ECJ,

Airplane Flight Manual

ANAC approved Airplane Flight Manual AFM-1912.

Service Information

Service bulletins, repair instructions (letters, drawings, specifications, forms used for transmitting repair descriptions, etc.), structural repair manuals, airplane flight manuals, vendor manuals, and overhaul and maintenance manuals that are published in the English language and indicate applicability to the U.S. approved type designs included in this Type Certificate and that include a statement "ANAC Approved" are accepted by the FAA and are considered "FAA Approved" (See Note 9). These approvals pertain to the type design only.

Additionally, changes to type design that are approved by ANAC designated engineering representatives via ANAC form F-200-06 are also considered FAA approved (See Note 9).

DATA PERTINENT TO MODEL ERJ 190-100 IGW post-MOD SB 190-25-0270

Import Requirements

Refer to the applicable bilateral agreement to verify eligibility for import into the United States of both new and used aircraft based on the scope of the agreement, to identify any required statements by the exporting authority on the export certificate of airworthiness (or equivalent document), and for procedures for coordinating exceptions to conformity statements on these documents. Refer to FAA Order 8130.2, *Airworthiness Certification of Aircraft*, for requirements for issuance of an *airworthiness certificate* for imported aircraft.

Certification Basis

Airworthiness Standards for Components and Areas Not Affected by the Change:

The original certification basis for the Model ERJ 190-100 IGW as shown in this TCDS

Airworthiness Standards for Components and Areas Affected by the Change:

14 CFR Part 25 – Based on the RBAC 21.101, the certification basis for ERJ 190-100 Freighter Configuration is as follows:
14 CFR Part 25 up to Amendment 146, with exceptions requested and permitted by 14 CFR Part §21.101 for the requirements 14 CFR Part §25.611, §25.571, Appendix H25.4, §25.795(c)(2), §25.855, §25.869, §25.1301, §25.1302, §25.1309, §25.1316(*), §25.1317(*), §25.1322, §25.1353, §25.1357, §25.1435(c)(3) and Subpart H (§25.1701 to §25.1733) for which the baseline certification basis is maintained, plus additional applicable Special Conditions, Equivalent Levels of Safety Findings, Exemptions and Deviations.
(*) Applicable to Air Management System and Smoke Detection System only.

Equivalent Levels of Safety:

- 14 CFR 25.812(g)(2) Emergency Lighting
  (documented in P&S ELOS Memorandum AT11666IB-T-25.812-1)
- 14 CFR 25.855(i) Cargo or Baggage Compartments
  (documented in P&S ELOS Memorandum AT11666IB-T-25.855-1)

Exemptions:

- Exemption No. 22556, 14 CFR part 25, Section §25.810(a)(1), §25.813(b) and §25.857(e).

DATA PERTINENT TO MODEL ERJ 190-300

Import Requirements

Refer to the applicable bilateral agreement to verify eligibility for import into the United States of both new and used aircraft based on the scope of the agreement, to identify any required statements by the exporting authority on the export certificate of airworthiness (or equivalent document), and for procedures for coordinating exceptions to conformity statements on these documents. Refer to FAA Order 8130.2, *Airworthiness Certification of Aircraft*, for requirements for issuance of an *airworthiness certificate* for imported aircraft.

In order for the FAA to make the finding that the first ERJ 190-300 aircraft to be registered in the US is in a condition for safe operation, the FAA certificating inspector or other authorized person must contact the Manager, Certification Program Management Branch, AIR-510, FAA Integrated Certificate Management Division; 2200 South 216th Street; Des Moines, Washington 98198; telephone 1-516-228-7300, prior to issuance of the US airworthiness certificate to obtain the FAA Required Airworthiness Action List (RAAL) for the ERJ 190-300.

The RAAL contains a list of type design modifications and inspections that have been determined by the Agência Nacional de Aviação Civil (ANAC), which is the state of design authority for the Embraer ERJ 190-300, to be required to correct unsafe conditions discovered on the original type design of the ERJ 190-300. ANAC has issued Airworthiness Directives that require the accomplishment of these modifications and inspections to correct the identified unsafe conditions and has advised the FAA of this mandatory continuing airworthiness information (MCAI). Based on this MCAI, the FAA has determined that the airworthiness actions identified in the ANAC ADs listed in Model ERJ 190-300 RAAL are required in the interest of safety and are necessary for this airplane to be in a condition for safe operation.

Prior to the issuance of a Standard Certificate of Airworthiness (C of A) on any Embraer ERJ 190-300 model aircraft, all airworthiness actions shown in the Model ERJ 190-300 RAAL must be accomplished in accordance with the compliance times listed in the MCAI, except as noted in the RAAL. The MCAI listed in the RAAL are airworthiness limitations in addition to those listed in note 3 of this TCDS and must be included in the operator's airplane maintenance or inspection program. All inspections, or modifications required by the ANAC MCAI, that have surpassed the initial compliance time, must be accomplished prior to issuance of the C of A.

The ERJ 190-300 RAAL will be finalized before the first ERJ 190-300 aircraft is registered in the US.

Any deviation from the requirements of the MCAIs listed in the RAAL must be approved by the Manager of the Certification Program Management Branch, AIR-510, FAA Integrated Certificate Management Division. A Notice of Policy Statement announcing the FAA's policy with respect to foreign MCAI, when no aircraft of the affected design are currently registered in the U.S. was published in the Federal Register on May 1, 1998, docket 98-11648. Additional guidance is contained in FAA advisory Circular 21-23, Airworthiness Certification of Civil Aircraft, Engines, Propellers, and Related Products Imported into the United States.

Certification Basis

Airworthiness Standards for Components and Areas Not Affected by the Change:

The original certification basis for the Model ERJ 190-100 IGW as shown in this TCDS

Airworthiness Standards for Components and Areas Affected by the Change:

14 CFR Part 25 – Airworthiness Standards: Transport Category Airplanes, effective February 1, 1965, including Amendments 25-1 through 25-139 and Amendment 25-141.

Special Conditions:

- No. 25-693-SC, Interaction of Systems and Structures
- No. 25-643-SC, Dive Speed Definition with Speed Protection System
- No. 25-624-SC, Landing Pitchover Condition
- No. 25-697-SC, Design Roll Maneuver Requirement for Electronic Flight Controls
- No. 25-408-SC, Large Surface Area Seat Panels
- No. 25-655-SC, Flight Envelope Protection: General Limiting Requirements
- No. 25-646-SC, Flight Envelope Protection: Pitch and Roll and High Speed Limiting Functions
- No. 25-694-SC, Flight Envelope Protection: Normal Load Factor (g) Limiting
- No. 25-699-SC, Flight Envelope Protection: High Incidence Protection and Situation

Awareness
- No. 25-296-SC, Performance Credit for ATTCS during Go-Around
- No. 25-668-SC, Operation Without Normal Electrical Power
- No. 25-685-SC, Installed Non-Rechargeable Lithium Batteries Special Conditions
- No. 25-689-SC, Aircraft Electronic System security Protection from Unauthorized External Access
- No. 25-690-SC, Isolation of Aircraft Electronic System Security Protection from Unauthorized Internal Access
- No. 25-640-SC, Electrical/Electronic Equipment Bay Fire Detection and Smoke Penetration
- No. 25-639-SC, Electronic Flight Control System: Control Surface Position Awareness, Multiple Modes of Operation, Flight Control in all attitudes

Equivalent Level of Safety Findings:
- § 25.629, Failure Criteria considered under the Aeroelastic Stability Requirements of § 25.629 (documented in ELOS Memo AT10219IB-T-A-12);
- § 25.811, Exit Handle Marking (documented in ELOS Memo AT10219IB-T-C-2);
- § 25.811(d)(1) and (d)(3), Emergency Exit Locator Sign (documented in ELOS Memo AT10219IB-T-C-3);
- § 25.811, Graphical/Symbolic Exit Signs (documented in ELOS Memo AT10219IB-T-C-8);
- § 25.795(a)(1), Protection of flight crew compartment – Reduced Energy (documented in ELOS Memo AT10219IB-T-C-10);
- §§ 25.809(b) 25.810(a)(1)(ii), Emergency Assist Means Time (documented in ELOS Memo AT10219IB-T-C-12);
- § 25.813(c)(2)(i), Minor Obstruction to the Type III Exit Provided (documented in ELOS Memo AT10219IB-T-C-13);
- §§ 25.904; 25.149; part 25, appendix I, paragraph I25.4(a), Performance Credit for Use of Automatic Power Reserve (APR) during Reduced Thrust Takeoffs (documented in ELOS Memo AT10219IB-T-F-13);
- § 25.255, Electronic Flight Control System: Mistrim Maneuvering (documented in ELOS Memo AT10219IB-T-F-3);
- § 25.1549(a)(b)(c), Digital only Display of turbine engine high/ pressure sensor, oil pressure, oil temperature and fuel flow (documented in ELOS Memo AT10219IB-T-P-10);
- 14 CFR part 25 Appendix I25.5(b)(4), Lack of On/Off Switch for Automatic Thrust Takeoff Control System (ATTCS) (documented in ELOS Memo AT10219IB-T-P-12);
- 14 CFR part 25 subparts E, F, & G requirements applicable to APU installations, Adoption of APU Harmonized Requirements (documented in ELOS Memo AT10219IB-T-P-14);
- § 25.1141(f)(2), Engine shutoff valve indication (documented in ELOS Memo AT10219IB-T-P-16);
- §§ 25.1181(a)(6) 25.1182(a), Fire Safety Requirements for the Engine Fan Case Compartment (documented in ELOS Memo AT10219IB-T-P-17);
- § 25.1193(e)(3), Resistance to Fire of Nacelle Cowlings (documented in ELOS Memo AT10219IB-T-P-4);
- § 25.933(a)(1)(ii), Flight Critical Thrust Reverser (documented in ELOS Memo AT10219IB-T-P-9);
- §§ 25.1301, 25.1309, Equipment, Systems and Installations Requirements: Use of ARAC Recommendations (documented in ELOS Memo AT10219IB-T-S-1);
- § 25.671(c)(2) and (c)(3), Flight Control System Failure Criteria (documented in ELOS Memo AT10219IB-T-S-19);
- § 25.1443(c), Determination of Minimum Oxygen Flow to Cabin Occupant Masks (documented in ELOS Memo AT10219IB-T-S-24);
- § 25.1443(c), Determination of Minimum Oxygen Flow to Lavatory Occupant Masks (documented in ELOS Memo AT10219IB-T-S-25);
- § 25.841(a) and (b)(6), Cabin Pressurization - High Altitude Takeoff and Landing Operations up to 14,000ft (documented in ELOS Memo AT10219IB-T-S-28);
- § 25.1441(c), Crew Determination of Quantity of Oxygen in Lavatory Oxygen System Distributed Bottles (documented in ELOS Memo AT10219IB-T-S-32);
- § 25.831(g), Cabin Ventilation - humidity requirement (documented in ELOS Memo AT10219IB-T-S-34);
- § 25.1438, Pneumatic Systems – Harmonized 25.1438 (documented in ELOS Memo AT10219IB-T-S-36);
- § 25.841(b)(1), Combined Aircraft Pressurization Outflow and Positive

Pressure Differential Relief Valves (documented in ELOS Memo AT10219IB-T-S-37);
- §§ 25.1389(b)(3), 25.1395, Position Lighting Systems Maximum Overlapping Intensity Deviations (documented in ELOS Memo AT10219IB-T-S-43);
- §§ 25.251(b), Vibration and Buffeting Requirements for External Modifications (documented in ELOS Memo AT10939IB-T-EV-04);

NOTE: The FAA Equivalent Level of Safety Memos referenced above may be accessed at the FAA's Dynamic Regulatory System website.

Exemptions:

- Exemption No. 17561, 14 CFR part 25, Section 25.841(a)(2)(i) and (ii), Relief of the requirement that during a decompression the airplane cabin altitude cannot exceed 40,000 feet for any duration;
- Exemption No. 17529, 14 CFR part 25, Section 25.809(a), Relief of the outside viewing requirements for the overwing exits
- Exemption No. 17535, 14 CFR part 25, Section 25.901(c), Uncontrollable High Thrust; and
- Exemption No. 17708, 14 CFR part 25, Section 25.981(a)(3), Alternative Fuel Tank Structural Lightning Protection

Optional Requirements complied with:

- Section 25.1403	Wing Icing Detection Lights;
- Section 25.801	Ditching;
- Sections 25.1411 and 24.1415	Safety Equipment Required for Ditching Certification;
- Section 25.1419	Ice protection; and
- Section 25.1421	Megaphones

Part 26 of the Federal Aviation Regulations:

Continued Airworthiness and Safety Improvements for Transport Category Airplanes, effective December 10, 2007, including Amendments 26-1 through 26-6.

Environmental Standards complied with:

- 14 CFR Part 36 effective December 1, 1969, including Amendments 36-1 through 36-29, Stage 4. See the appropriate FAA Approved Airplane Flight Manual for applicability of Stage 5 Noise Recertification through amendment 36-31.
- 14 CFR Part 34 effective September 10, 1990, including all amendments effective on the amended TC date.

Equipment

The basic required equipment as prescribed in the applicable airworthiness regulations (see the Certification Basis) must be installed in the aircraft. The lists of all equipment as well as optional approved equipment are contained in the Embraer document:

- Type Design Standard Document for ERJ 190-300- Nº196TDD300 Rev./

Airplane Flight Manual

ANAC approved Airplane Flight Manual AFM-5692

Service Information

Service bulletins, repair instructions (letters, drawings, specifications, forms used for transmitting repair descriptions, etc.), structural repair manuals, airplane flight manuals, vendor manuals, and overhaul and maintenance manuals that are published in the English language and indicate applicability to the U.S. approved type designs included in this Type Certificate and that include a statement "ANAC Approved" are accepted by the FAA and are considered "FAA Approved" (See Note 9). These approvals pertain to the type design only.

Additionally, changes to type design that are approved by ANAC designated engineering representatives via ANAC form F-200-06 are also considered FAA approved (See Note 9).

DATA PERTINENT TO MODEL ERJ 190-400

Import Requirements

Refer to the applicable bilateral agreement to verify eligibility for import into the United States of both new and used aircraft based on the scope of the agreement, to identify any required statements by the exporting authority on the export certificate of airworthiness (or equivalent document), and for procedures for coordinating exceptions to conformity statements on these documents. Refer to FAA Order 8130.2, *Airworthiness Certification of Aircraft*, for requirements for issuance of an *airworthiness certificate* for imported aircraft.

In order for the FAA to make the finding that the first ERJ 190-400 aircraft to be registered in the US is in a condition for safe operation, the FAA certificating inspector or other authorized person must contact the Manager, Certification Program Management Branch, AIR-510, FAA Integrated Certificate Management Division; 2200 South 216th Street; Des Moines, Washington 98198; telephone 1-516-228-7300, prior to issuance of the US airworthiness certificate to obtain the FAA Required Airworthiness Action List (RAAL) for the ERJ 190-400.

The RAAL contains a list of type design modifications and inspections that have been determined by the Agência Nacional de Aviação Civil (ANAC), which is the state of design authority for the Embraer ERJ 190-400, to be required to correct unsafe conditions discovered on the original type design of the ERJ 190-400. ANAC has issued Airworthiness Directives that require the accomplishment of these modifications and inspections to correct the identified unsafe conditions and has advised the FAA of this mandatory continuing airworthiness information (MCAI). Based on this MCAI, the FAA has determined that the airworthiness actions identified in the ANAC ADs listed in Model ERJ 190-400 RAAL are required in the interest of safety and are necessary for this airplane to be in a condition for safe operation.

Prior to the issuance of a Standard Certificate of Airworthiness (C of A) on any Embraer ERJ 190-400 model aircraft, all airworthiness actions shown in the Model ERJ 190-400 RAAL must be accomplished in accordance with the compliance times listed in the MCAI, except as noted in the RAAL. The MCAI listed in the RAAL are airworthiness limitations in addition to those listed in note 3 of this TCDS and must be included in the operator's airplane maintenance or inspection program. All inspections, or modifications required by the ANAC MCAI, that have surpassed the initial compliance time, must be accomplished prior to issuance of the C of A.

The ERJ 190-400 RAAL will be finalized before the first ERJ 190-400 aircraft is registered in the US.

Any deviation from the requirements of the MCAIs listed in the RAAL must be approved by the Manager of the Certification Program Management Branch, AIR-510, FAA Integrated Certificate Management Division. A Notice of Policy Statement announcing the FAA's policy with respect to foreign MCAI, when no aircraft of the affected design are currently registered in the U.S. was published in the Federal Register on May 1, 1998, docket 98-11648. Additional guidance is contained in FAA advisory Circular 21-23, Airworthiness Certification of Civil Aircraft, Engines, Propellers, and Related Products Imported into the United States.

Certification Basis

Airworthiness Standards for Components and Areas Not Affected by the Change:

The original certification basis for the Model ERJ 190-300 as shown in this TCDS

Airworthiness Standards for Components and Areas Affected by the Change:

14 CFR Part 25 – Airworthiness Standards: Transport Category Airplanes, effective February 1, 1965, including Amendments 25-1 through 25-139 and Amendment 25-141.

Equivalent Level of Safety Findings:

- §§ 25.1389(b)(1), (b)(2), (b)(3); 25.1391; 25.1393; 25.1395, Position Lighting Systems Maximum Overlapping Intensity Deviations (documented in Transport Standards Branch ELOS Memorandum AT10316IB-T-SE-14)
- §§ 25.251(b), Vibration and Buffeting Requirements for External Modifications (documented in ELOS Memo AT10939IB-T-EV-04);

NOTE: The FAA Equivalent Level of Safety Memo referenced above may be accessed at the FAA's Dynamic Regulatory System website.

Optional Requirements complied with:

- Section 25.1403	Wing Icing Detection Lights;
- Section 25.801	Ditching;
- Sections 25.1411 and 25.1415	Safety Equipment Required for Ditching Certification;
- Section 25.1419	Ice protection; and
- Section 25.1421	Megaphones

Part 26 of the Federal Aviation Regulations:

Continued Airworthiness and Safety Improvements for Transport Category Airplanes,

effective December 10, 2007, including Amendments 26-1 through 26-6.

Environmental Standards complied with:
- 14 CFR Part 36 effective December 1, 1969, including Amendments 36-1 through 36-30, Stage 4. See the appropriate FAA Approved Airplane Flight Manual for applicability of Stage 5 Noise Recertification through amendment 36-31.
- "No Emissions Change" in accordance with §21.93(c)

Equipment

The basic required equipment as prescribed in the applicable airworthiness regulations (see the Certification Basis) must be installed in the aircraft. The lists of all equipment as well as optional approved equipment are contained in the Embraer document:
- Type Design Standard Document for ERJ 190-400 – Report Nº 196TDD400 Rev. B

Airplane Flight Manual

ANAC approved Airplane Flight Manual AFM-5692

Service Information

Service bulletins, repair instructions (letters, drawings, specifications, forms used for transmitting repair descriptions, etc.), structural repair manuals, airplane flight manuals, vendor manuals, and overhaul and maintenance manuals that are published in the English language and indicate applicability to the U.S. approved type designs included in this Type Certificate and that include a statement "ANAC Approved" are accepted by the FAA and are considered "FAA Approved" (See Note 9). These approvals pertain to the type design only.

Additionally, changes to type design that are approved by ANAC designated engineering representatives via ANAC form F-200-06 are also considered FAA approved (See Note 9).

NOTES:

NOTE 1:

Weight and balance. Current weight and balance report including a form of weight and list of equipment included in certificated empty weight and loading instructions must be provided for each aircraft at the time of original certification.

The certificated basic empty weight and corresponding center of gravity location must include the total engine oil, hydraulic fluid and unusable fuel.

NOTE 2:

All placards required by either FAA Approved Airplane Flight Manual, the applicable operating rules, or the Certification Basis must be installed in the airplane.

NOTE 3:

For the ERJ 190-100 and -200 models, excluding the ERJ 190-100 ECJ, the mandatory systems certification maintenance requirements, raised from the safety analysis, are listed in the "Appendix A Part 1 – Certification Maintenance Requirements (CMR)" of the document MRB Report P/N 1928. The mandatory structure certification maintenance requirements, raised from the damage tolerance analysis, are listed in the "Appendix A Part 2 - Airworthiness Limitation Inspections (ALI) - Structures" of the document MRB Report P/N 1928. The list of the tasks raised from the compliance with the RBHA/FAR 25-981 Amdt. 102 (a) and (b) is provided in the "Appendix A Part 3 – Fuel System Limitation Items (FSL)" of the document MRB Report P/N 1928.

For the ERJ 190-100 ECJ model, the Appendix A (Part 1, 2, 3 and 4) of the Maintenance Planning Guide (MPG-2928) document must be considered as reference for mandatory maintenance requirements mentioned above.

For the ERJ 190-300 model, the Airworthiness Limitations Section is found in Appendix A (Part 1, 2, 3, 4 and 5) of the document MRB Report P/N 5881, revision 0 or subsequent ANAC approved revision. For the ERJ 190-400 model, the Airworthiness Limitations Section is found in Appendix A (Part 1, 2, 3, 4 and 5) of the document MRB Report P/N 5881, revision 1 or subsequent ANAC approved revision.

The list of the life-limited components is provided in the "Appendix A Part 4 – Life - Limited Items (LLI) of the document MRB Report 1928 for the 190-100 and 190-200 models (excluding 190-100 ECJ), MPG 2928 for the 190-100 ECJ model, and MRB Report 5881 for the 190-300 and 190-400 model.

The Structures Repair Manual P/N 1929 is applicable to all ERJ 190-100 and ERJ 190-200, except for the ERJ 190-100 ECJ model, and it is approved and controlled by ANAC. The Structures Repair Manual P/N 2773 is applicable to model ERJ 190-100 ECJ. The Structures Repair Manual P/N 6736 is applicable to the ERJ 190-300 and ERJ 190-400 models and it is approved and controlled by ANAC. An approval statement is stamped in each Service Bulletin (See Note 9).

For the ERJ 190-300 and ERJ 190-400, the airworthiness corrective actions required by the ANAC ADs are listed in the ERJ 190-300/ERJ 190-400 RAAL.

NOTE 4: The systems containing User Modifiable Data are:

- User Partition of the Owner Requirements Table (ORT) of the SATCOM (Satellite Communication System);
- Airline Modifiable Information (AMI) of the Communication Management Function (CMF);
- System Setting Data - Airline Operational Data (APM) System Setting Data (Airline Operational Data); and
- User Application of the Aircraft Condition Monitoring Function (ACMF).

User Modifiable Data is not approved as part of the type design.

NOTE 5: Any new interior configuration affecting the cockpit door access area, including adjacent structures such as galleys and wardrobes, must be submitted for FAA Aircraft Certification Office (ACO) approval, specifically for compliance with 14 CFR 25.809(b). FAA ACO's should coordinate any such changes with the TC issuing office (ANM-116).

NOTE 6: The Model ERJ 190-100 xx and ERJ 190-200 xx are often referred to in Embraer marketing literature as the "Embraer 190 xx" and "Embraer 195 xx," respectively, with the appropriate model (LR, STD, etc.) substituted for the "xx". These names are strictly marketing designations and are not part of the official model designations. The exceptions to this rule are the Models ERJ 190-100 IGW and ERJ 190-200 IGW, which have been given the marketing designation "Embraer 190 AR" and "Embraer 195 AR," respectively.
The ERJ 190-100 ECJ model is frequently mentioned in Embraer publicity literature as "Lineage1000."
The ERJ 190-300 model is often mentioned in Embraer publicity literature as the "Embraer 190E2."
The ERJ 190-400 model is often mentioned in Embraer publicity literature as the "Embraer 195E2."

NOTE 7: As stated in Exemption No. 8613 (ERJ 190), the FAA has concluded that the occurrence of any uncontrollable high thrust failure condition or any of the associated causal failures listed below, are reportable under §§ 121.703 (c), 125.409 (c), and 135.415(c):

- FADEC – Full Authority Digital Engine Control;
- TCQ – Thrust Control Quadrant; and
- FMU – Fuel Metering Unit.

NOTE 8: The CF34-10E engines configuration, according to the designation presented in the Engine Parts List, must follow the suffix Gxx. For the ERJ 190-100 models, the following designation list is approved for operation (mixing of different engine configurations on the same airplane is permitted for the listed trios only):

- CF34-10E6G03, CF34-10E6G05 and CF34-10E6G07
- CF34-10E6A1G03, CF34-10E6A1G05 and CF34-10E6A1G07
- CF34-10E5G03, CF34-10E5G05 and CF34-10E5G07
- CF34-10E5A1G03, CF34-10E5A1G05 and CF34-10E5A1G07
- CF34-10E7-BG03, CF34-10E7-BG05 e CF34-10E7-BG07.

For the ERJ 190-200 models, the following designation list is approved for operation (mixing of different engine configurations on the same airplane is permitted for the listed pairs only):

- CF34-10E6G03 and CF34-10E6G05
- CF34-10E6A1G03 and CF34-10E6A1G05
- CF34-10E5G03 and CF34-10E5G05
- CF34-10E5A1G03 and CF34-10E5A1G05
- CF34-10E7G03 and CF34-10E7G05.

Engine configuration part numbers ECP 2041M42P02, -P06, -P08, and -P09 are not permitted on any ERJ 190 CF34-10E engines configuration.

NOTE 9: The "Agência Nacional de Aviação Civil" - ANAC (National Agency of Civil Aviation) took over responsibility for Brazilian civil aircraft certification on March 21, 2006. Approvals made prior to that date will reference the CTA as the responsible Brazilian aviation authority.

NOTE 10: For the ERJ 190-100 ECJ model, the compliance requirements of cabin safety will be demonstrated on interior installation and certification of aircraft.

NOTE 11: Emergency Exit Locator Sign ELOS is not applicable for ERJ 190-100 ECJ.

NOTE 12: The type design reliability and performance of the Model 190-100 STD, -100 LR and -100 IGW airplanes have been approved in accordance with 14 CFR 25.1535 and found suitable for extended

operations (ETOPS) up to 120 minutes when operated and maintained in accordance with the ERJ 190 Configuration, Maintenance and Procedures (CMP) document, CMP-2925. For the Model ERJ 190-100 ECJ the ERJ 190 CMP document, CMP-2927. This finding does not constitute approval to conduct ETOPS operations.

The type design reliability and performance of the Model 190-300 and -400 airplanes have been approved in accordance with 14 CFR 25.1535 and found suitable for extended operations (ETOPS) up to 120 minutes when operated and maintained in accordance with the ERJ 190 CMP document, CMP-8507. This finding does not constitute approval to conduct ETOPS operations.

NOTE 13: For the ERJ 190-200 models, the maximum passenger limit is a total of 124 passengers with a maximum of 72 passengers seats located aft of the centerline of the overwing exits.

NOTE 14: Data applicable only to airplanes S/N 19000109 to 19000225 without SB190LIN-28-0011 incorporated.

NOTE 15: For ERJ 190-100 and ERJ 190-200 models, initial airworthiness requirements for operation in Reduced Vertical Separation Minimum (RVSM) airspace have been met. Refer to AFM No. AFM- 1912.
For the ERJ 190-300 and ERJ 190-400 models, RVSM operation is limited to 50 aircraft from S/N 19020009.
Each operator must obtain RVSM operating approval directly from the FAA.

NOTE 16: The ERJ 190-100 IGW is converted to freighter configuration by application of Embraer Service Bulletin (SB) nº SB190-25-0270 (aircraft conversion to full cargo configuration).

NOTE 17: The ERJ190-100 IGW post-MOD SB190-25-0270 does not constitute a new model, and it can be referred to in marketing literature as “EMBRAER 190F”, “E190F”, “E-Freighter”.

NOTE 18: To carry cargo on ERJ190-100 IGW post-MOD SB190-25-0270, an FAA approved Cargo Loading System must be installed, which is not part of this TC.

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