

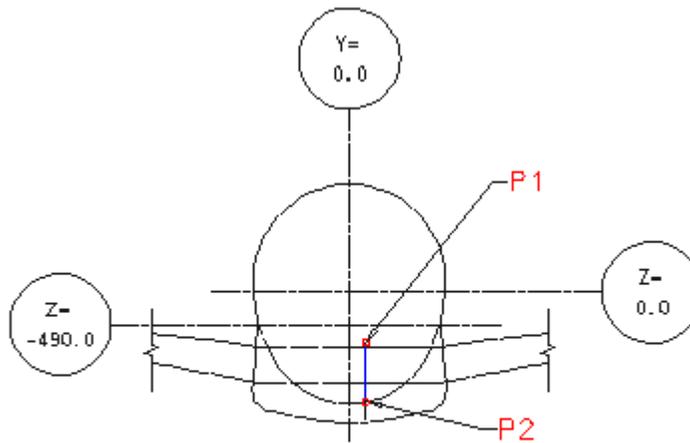


<u>Airspeed Limits (I.A.S.)</u>	$V_{MO}$	300 KIAS from sea level to 8,000 ft increasing linearly to 320 KIAS at 10,000 ft												
	$V_{MO}$	320 KIAS from 10,000 ft to 28,887 ft												
	$M_{MO}$	0.82 from 28,887 ft to 41,000 ft												
	$V_A$ (Maneuvering)	240 KIAS from sea level, increasing linearly to 245 KIAS at 20,000 ft., 269 KIAS at 28,888 ft., and to 286 KIAS at 33,999 ft.												
	$V_A$ (Maneuvering)	0.82 Mach from 33,999 ft. to 41,000 ft.												
	$V_{FE}$ (Flaps Extended)	<table border="0"> <tr><td>Detent 1</td><td>230 KIAS</td></tr> <tr><td>Detent 2</td><td>215 KIAS</td></tr> <tr><td>Detent 3</td><td>200 KIAS</td></tr> <tr><td>Detent 4</td><td>180 KIAS</td></tr> <tr><td>Detent 5</td><td>180 KIAS</td></tr> <tr><td>Detent FULL</td><td>165 KIAS</td></tr> </table>	Detent 1	230 KIAS	Detent 2	215 KIAS	Detent 3	200 KIAS	Detent 4	180 KIAS	Detent 5	180 KIAS	Detent FULL	165 KIAS
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 ( $V_{LO}$ )	250 KIAS												
	Maximum Landing Gear Extended Speed ( $V_{LE}$ )	250 KIAS												
	Tire Speed	225 MPH												

Datum A perpendicular plane to the fuselage centerline, located at 11650 mm ahead of the wing stub front spar. This spar is located 373 mm ahead of the wing jack points.

Mean Aerodynamic Chord The MAC length is 3194 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 FUSLGE COORDINATE POINTS			
POINT	X	Y	Z
P1	14935.36	-246.60	-768.91
P2	14935.36	-246.60	-1675.09

<u>Center of Gravity Limits</u>	Refer to AFM No. AFM-1385		
<u>Maximum Weights</u>	Max Ramp Weight:	79,697 lb (36,150 kg)	
		85,450 lb (38,760 kg)**	
	Max Takeoff Weight:	79,344 lb (35,990 kg)	
		85,097 lb (38,600 kg)**	
	Max Landing Weight:	72,311 lb (32,800 kg)	
		73,414 lb (33,300 kg)*	
		73,413 lb (33,300 kg)**	
	Max Zero Fuel Weight:	65,257 lb (29,600 kg)	
		66,447 lb (30,140 kg)***	
		68,122 lb (30,900 kg)**	
	* post-mod. SB 170-00-0003		
	** post-mod SB 170-00-0016		
	*** applicable to airplane serial numbers 1700001 to 1700064, post-mod SB 170-00-0024, 170-53-0078, 170-53-0079, 170-53-0080, 170-55-0007, and 170-57-0037		
<u>Maximum Baggage</u>	Forward Cargo Compartment	3,020 lb (1,370 kg)	
	Aft Cargo Compartment	2,271 lb (1,030 kg)	
<u>Fuel Capacity</u>	3063.4 gallons (11596 liters) in two tanks of 1531.7 gallons (5798 liters) each. Unusable fuel of 22.2 gallons (84 liters); 11.1 gallons (42 liters) in each tank.		
<u>Minimum Crew</u>	2 - Pilot and copilot		
<u>Maximum Passenger Seating Capacity</u>	78		
<u>Oil Capacity</u>	Oil capacity per Engine		
	Total 9.9 liters (10.5 US quarts)		
	Useable 6.8 liters (7.2 US quarts)		
<u>Maximum Altitudes</u>	41,000 ft. (operating)		
	10,000 ft. (takeoff and landing)		
<u>Control Surface Movements</u>	Ailerons	25° TE up, 15° TE down	
	Elevator	24.7° TE up, 14.9° TE down	
	Stabilizer	13° TE up, 2° TE down	
	Rudder	30.7° right, 30.7° left	
	Ground Spoiler	60°	
	Outboard Spoiler	40°	
	Flap and Slat		
	Detent	Inboard Flap	Outboard Flap      Slat 1/Slat 2,3,&4
		Main/Aft	Main/Aft
	0	0°/0°	0°/0°      0°/0°
	1	4.9°/7.3°	4.5°/7.4°      12°/15°
	2	9.7°/9.2°	9.2°/10.2°      12°/15°
	3	19.6°/11.8°	19.3°/13.3°      12°/15°
	4	19.6°/11.8°	19.3°/13.3°      20°/25°
	5	19.6°/11.8°	19.3°/13.3°      20°/25°
	Full	34.5°/13.8°	34.2°/15.3°      20°/25°

Deflections are in the planes normal to the hinge lines, except for the flaps, which are in streamwise 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. Control surface deflection tolerances are given in the Embraer report 170EBD001 "Engineering Basic Data", rev. C dated 27 January 2004.

Serial Numbers

17000004, 17000005 and subsequent.

**II. Model ERJ 170-100 LR (Transport Category Airplane) approved February 20, 2004**

Same as model ERJ 170-100 STD, except for the following items:

<u>Maximum Weights</u>	Max Ramp Weight:	82,363 lb (37,360 kgf)
		85,450 lb (38,760 kg)*
	Max Takeoff Weight:	82,011 lb (37,200 kgf)
		85,097 lb (38,600 kg)*
	Max Landing Weight:	72,311 lb (32,800 kgf)
		73,413 lb (33,300 kg)*
	Max Zero Fuel Weight:	65,257 lb (29,600 kgf)
		68,122 lb (30,900 kg)*
		66,447 lb (30,140 kg)**

\* post-mod SB 170-00-0016

\*\* applicable to airplane serial numbers 1700001 to 1700064, post-mod SB 170-00-0024, 170-53-0078, 170-53-0079, 170-53-0080, 170-55-0007, and 170-57-0037

Center of Gravity Limits

Refer to AFM No. AFM-1385

**III. Model ERJ 170-100 SU (Transport Category Airplane) approved May 14, 2004**

Same as model ERJ 170-100 LR, except for the following item:

Maximum Passenger Seating Capacity 76**IV. Model ERJ 170-100 SE (Transport Category Airplane) approved September 17, 2004**

Same as model ERJ 170-100 LR, except for the following item:

Maximum Passenger Seating Capacity 70**V. Model ERJ 170-200 STD (Transport Category Airplane) approved August 31st, 2006**

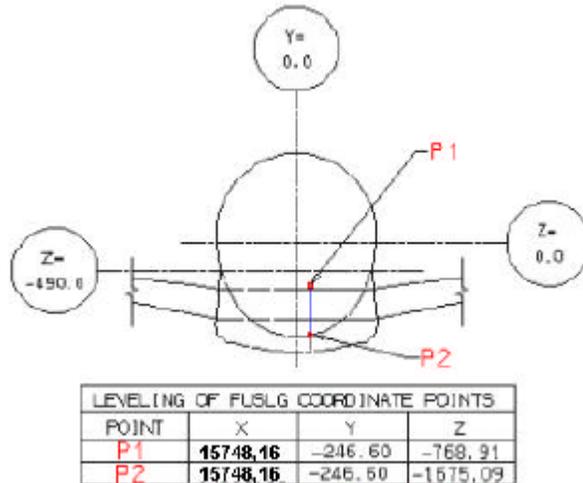
Same as model ERJ 170-100 LR, except for the following items:

Datum

A perpendicular plane to the fuselage centerline, located at 12488 mm ahead of the wing stub front spar. This spar is located 373 mm ahead of the wing jack points.

Leveling Means

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

Maximum Weights

Max Ramp Weight:	83,026 lb (37,660 kg)
Max Takeoff Weight:	82,673 lb (37,500 kg)
	77,157 lb (34,998 kg)*
	79,362 lb (35,998 kg)**
Max Landing Weight:	74,957 lb (34,000 kg)
Max Zero Fuel Weight:	69,886 lb (31,700 kg)

\* post-mod SB 170-00-0039

\*\* post-mod SB 170-00-0037

Maximum Weights\*\*\*

Max Ramp Weight:	89,353 lb (40,530 kg)***
Max Takeoff Weight:	89,001 lb (40,370 kg)***
Max Landing Weight:	75,178 lb (34,100 kg)***
Max Zero Fuel Weight:	70,548 lb (32,000 kg)***

\*\*\* post-mod SB 170-00-0016.

Maximum Baggage

Forward Cargo Compartment	3,307 lb (1,500 kg)
Aft Cargo Compartment	2,535 lb (1,150 kg)

Maximum Passenger Seating Capacity 88Serial Numbers

17000014 and subsequent.

**VI. Model ERJ 170-200 LR (Transport Category Airplane) approved August 31st, 2006**

Same as model ERJ 170-200 STD, except for the following item:

<u>Maximum Weights</u>	Max Ramp Weight:	85,870 lb (38,950 kg)
	Max Takeoff Weight:	85,517 lb (38,790 kg)

**VII. Model ERJ 170-200 SU (Transport Category Airplane) approved August 31st, 2006**

Same as model ERJ 170-200 LR, except for the following item:

Maximum Passenger Seating Capacity 76

**DATA PERTINENT TO ALL MODELS EXCEPT AS INDICATED****Import Requirements**

To be considered eligible for operation in the United States, each aircraft manufactured under this type certificate must be accompanied by a certificate of airworthiness for export or certifying statement endorsed by the exporting foreign civil airworthiness authority which states (in the English language): The [insert aircraft model and series] covered by this certificate conforms to the type design approved under U.S. Type Certificate No. A56NM, TCDS Revision [insert number], dated [insert date] and is found to be in a condition for safe operation.

**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 25-106, §§ 25.795(a)(1) and (a)(2) only
- Amendment 25-107, § 25.731(d) and (e); § 25.735(a) through (g), and (i) through (k) only
- Amendments 25-108 and 25-109 in entirety

For 170-200( ), airplane serial numbers 17000388, 17000390, 17000376 thru 17000378, 17000381 thru 17000387, 17000392 and on, post-mod SB 170-57-0058 or with the equivalent modifications factory-incorporated, the following additional regulations apply at the listed amendment level in the areas described:

- Amendment 25-112, § 25.613 (structure of center fuselage 2, wing stub, wing and wingtip);
- Amendment 25-113, §§ 25.1353 and 25.1431 (both for the position and anti-collision lights and associated EWIS installed in wingtip);
- Amendment 25-115, §§ 25.147, 25.161 and 25.175;
- Amendment 25-121, §§ 25.103, 25.105, 25.111, 25.119, 25.121, 25.123, 25.125 and 25.237;
- Amendment 25-129, §§ 25.143, 25.207 and 25.1419 (wing);
- Amendment 25-135, §§ 25.21, 25.107, 25.177 and 25.253.

**Special Conditions:**

No. 25-231-SC, consisting of the following subject:

- Engine Torque Loads for Sudden Engine Stoppage
- Operation without Normal electrical Power
- Interaction of Systems and Structure

No. 25-223-SC, consisting of the following subject:

- High Intensity Radiated Fields

No. 25-241-SC, consisting of the following subjects:

- Electronic Flight Controls; Control Surface Position Awareness
- Performance Credit for Automatic takeoff Thrust Control System during Go-Around

No. 25-250-SC, consisting of the following subject:

- Electronic Flight Controls; Command Signal Integrity

No. 25-543-SC, consisting of the following subject:

- Seats with Large, Non-Traditional, Non-Metallic Panels

NOTE: The FAA Special Conditions referenced above may be accessed at the FAA's Regulatory and Guidance Library website.

**Equivalent Level of Safety Findings:**

- § 25.331(c)(2): Pitch Maneuver Conditions (documented in FAA Memo TC0056IB-T-HES-13)
- §§ 25.1301, 25.1309: Equipment, Systems, and Installations (documented in FAA Memo TC0056IB-T-HSI-15)
- § 25.933(a)(1)(ii): Flight Critical Thrust Reverser (documented in FAA Memo TC0056IB-T-HPR-06)
- 14 CFR part 25 subparts E, F, & G requirements applicable to APU installations: APU Certification Rules (documented in FAA Memo TC0056IB-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 FAA Memo TC0056IB-T-HDE-16)

- 14 CFR part 25 Appendix I25.5(b)(4): ATTCs - Deactivation control (documented in FAA Memo TC0056IB-T-HPR-23)
- § 25.1305(c)(3): Digital Only Display of Turbine Engine High/Intermediate Pressure Rotor Speed (documented in FAA Memo TC0056IB-T-HPR-14)
- § 25.783: Adoption of Draft Harmonized Rules for Fuselage Doors Certification (documented in FAA Memo TC0056IB-T-A-6)
- §§ 25.1389(b), 25.1391, 25.1393, 25.1395: Position Light Intensities (documented in FAA Memo TC0056IB-T-S-34)
- §§ 25.1389(b), 25.1395: Position Light Intensities (documented in FAA Memo AT10314IB-T-S-63)
- §§ 25.1389(b), 25.1395: Position Light Intensities (documented in FAA Memo AT10160IB-T-S-62)\*
- § 25.1443(c): Determination of Minimum Oxygen Flow for the Lavatory Oxygen System (documented in TAD ELOS Memo AT10107IB-T-SM-1)
- § 25.1441(c): Crew Determination of Quantity of Oxygen in Lavatory Oxygen System Distributed Bottles (documented in TAD ELOS Memo AT10107IB-T-SM-2)

\* applicable to 170-200( ), airplane serial numbers 17000388, 17000390, 17000376 thru 17000378, 17000381 thru 17000387, 17000392 and on, post-mod SB 170-57-0058 or with the equivalent modifications factory-incorporated

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

#### Exemptions:

- Exemption No. 8072, 14 CFR part 25, Section 25.901(c) Uncontrollable High Thrust
- Exemption No. 8160, 14 CFR part 25, Section 25.841(a)(2)(ii) Pressurized Cabins
- Exemption No. 8151, 14 CFR part 25, Section 25.831(g) Ventilation (humidity requirement)

NOTE: The FAA Exemptions referenced above may be accessed at the FAA's Regulatory and Guidance Library website.

#### Optional Requirements complied with:

Section 25.801	Ditching (170-100( ) and 170-200( ) pre-mod SB 170-57-0058)
Section 25.1403	Wing icing detection lights
Sections 25.1411, 25.1415	Safety equipment required for ditching certification
Section 25.1419	Ice protection
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:

- FAR Part 36 effective December 1, 1969, including Amendments 36-1 through 36-24.
- FAR Part 36, Amendment 36-28 (post-mod SB 170-00-0039)
- FAR Part 34 effective September 10, 1990, including Amendment 34-1 through 34-3.

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 No. 170-100TDSD\_01 for the ERJ 170-100 models and Type Design Standard Document No. 170-200TDSD\_FAA for the ERJ 170-200 models.

Airplane Flight Manual

ANAC approved Airplane Flight Manual AFM-1385.

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 8). 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 8).

**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.

All the life limitations are provided in the "Appendix A Part 4 – Life - Limited Items (LLI)", of the document MRB-1621.

The mandatory structure certification maintenance requirements, raised from the damage tolerance analysis, are listed in the "Appendix A Part 2 - Airworthiness Limitation Items (ALI) Structures" of the document MRB-1621.

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-1621.

The mandatory fuel systems limitations items (FSL), raised from the Fuel Tanks safety requirement, are listed in the "Appendix A Part 3 – Fuel System Limitation Items (FSL)" of the document MRB-1621.

The Structures Repair Manual SRM 1583 is approved and controlled by ANAC, and all Service Bulletins issued by Embraer are approved by ANAC. An approval statement is stamped in each Service Bulletin.

NOTE 4.

The systems containing User Modifiable Software 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);
- APM System Setting Data (Airline Operational Data);
- User Application of the Aircraft Condition Monitoring Function (ACMF);

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

NOTE 5.

The CF34-8E5 and CF34-8E5A1 engines designation, as presented in the Engine Part List, must contain the suffix Gxx, which defines the specific engine configuration. For the ERJ 170-100 and ERJ 170-200 model, the following designations are approved for operation: CF34-8E5G01 and CF34-E5A1G01.

NOTE 6.

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)

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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 7. The Models ERJ 170-100 xx and ERJ 170-200 xx are often referred to in Embraer marketing literature as the "Embraer 170 xx and Embraer 175 xx", respectively, with the appropriate model (LR, STD, etc.) substituted for the "xx". This name is strictly a marketing designation and is not part of the official model designations.

NOTE 8. As stated in Exemption No. 8072 (ERJ 170) 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
- FMU – Fuel Metering Unit

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

NOTE 10. Initial airworthiness requirements for operation in Reduced Vertical Separation Minimum (RVSM) airspace have been met. Refer to AFM No. AFM-1385.

Each operator must obtain RVSM operating approval directly from the FAA.

...END...