

# General Specification for GECAS Embraer 170

**Manufacturer, Model / Series:** Embraer 170 Standard Version

**Specification basis:** PTD 170 GE Commercial Finance, First Issue dated April 2002  
Proposed spec changes GECAS purchase agreement  
Optional Equipment

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## General Information

Engine installation: 2 x CF34-8E5  
Take off thrust - normal 13,000 lbs (modes B & C)  
- max 14,200 lbs

**Maximum Ramp Weight:** 36,150 kgs / 79,696 lbs  
**Maximum Take-off Weight (MTOW):** 35,990 kgs / 79,343 lbs  
**Maximum Landing Weight (MLW):** 32,800 kgs / 72,311 lbs  
**Maximum Zero Fuel Weight (MZFW):** 29,600 kgs / 65,256 lbs

Certification Basis: JAA (JAR 25) and FAA (FAR 25)  
Brazilian Depart. of Civil Aviation Regulations

Noise Certification: Stage III

Auto land/Approach Category: CAT IIIa – GECAS Option (available 12 months  
after GECAS first delivery)

Units of Measure: Metric

## Detailed Specification by System (ATA)

### ATA 11 – Placards and Markings

Interior placards  
Paint Scheme – exterior livery

### ATA 21 – Air Conditioning

Standard air conditioning system

### ATA 22 – Autoflight

Dual AFCS  
Auto-throttle

### ATA 23 – Communications

VHF modules x 2, with 8.33 MHz spacing  
Full provisions for 3<sup>rd</sup> VHF dedicated to ACARS – GECAS Option  
Full provisions for HF system – GECAS Option  
3 digital audio panels in cockpit  
CVR – solid state 2 hours recording (combined dual CVR/DFR)  
SELCAL – GECAS Option  
Interface between SELCAL and VHF/HF  
Complete provisions for SATCOM – GECAS Option  
Boarding music and pre-recorded announcement system – GECAS Options  
PA system – standard from cockpit and 2 x F/A stations

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## ATA 23 – Communications (continued)

Full provisions for Data-link – CMU/ACARS - GECAS Option  
Interface between ACARS and VHF  
Full provisions for printer in Cockpit linked to CMC, ACARS and FMC

## ATA 24 – Electrical Power

Standard electrical system  
Engine generators x 2 - 40 kVA IDG  
APU generators x 1 - 40 kVA  
Emergency generator – RAT  
27 Ah Ni-cad batteries x 2 for APU start and avionics back-up

## ATA 25 – Equipment / Furnishings

Economy class seating – 2 x 2, 70 seats @ 32" pitch  
In-arm tray forward row  
Life vest pouch under each seat  
Flotation cushions installed – GECAS Option  
Recline  
Standard configuration for JAA, but incorporates FAA requirements  
Provisions for moveable class divider – GECAS Option

Flight crew  
Captain, F/O and single observer seats  
Sheepskin covers for pilot seats – GECAS Option  
Headrests for pilot seats  
Pilot foot rests – GECAS Option

2 F/A seats, with aft folding F/A seat, each with communications handset  
3<sup>rd</sup> F/A seat installed – GECAS Option

Galleys  
Two galleys forward and one aft

Lavatory – forward LHS of cabin, forward of L1 door  
Vacuum system

Lavatory – aft cabin  
Vacuum system  
Handicap access  
Baby diaper table

Safety Equipment – locations, quantities and requirements TBD

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## ATA 25 – Equipment / Furnishings (continued)

### Passenger Service Units

Air gaspers

Reading lights

Oxygen generators with 3<sup>rd</sup> mask in each PSU – GECAS Options

12-minute Oxygen generators

### Forward Under Floor Cargo Compartment

Located below passenger cabin and forward of center wing box  
Class 'C' compartment with ventilation, smoke detection and fire  
extinguishing - 60 minute diversion to a suitable airport

Live animals forward baggage compartment – GECAS Option

Cargo door sill protection – GECAS Option

Cargo nets

### Aft Under Floor Cargo Compartment

Located below passenger cabin and aft of center wing box

Class 'C' compartment with ventilation, smoke detection and fire  
extinguishing - 60 minute diversion to a suitable airport

Cargo door sill protection – GECAS Option

Cargo nets

## ATA 26 – Fire Protection System

Standard system

## ATA 27 – Flight Control System

Fly-by-wire flight control system consisting of primary and secondary flight  
controls, excluding ailerons

## ATA 28 – Fuel System

12,100 litres

Wing tanks

Fuel measurement in kgs

## ATA 29 – Hydraulic System

Standard system – 3 independent systems 3,000 p.s.i.

## ATA 30 – Ice and Rain Protection

Standard system – wing and intake cowl anti-ice

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## **ATA 31 – Indicating and Recording System**

5 x Active matrix liquid crystal, full color displays  
2 x Cursor control devices  
EFIS – PFD and ND displays for Captain and F/O  
EICAS displays x 1 – center instrument panel  
DFDR – solid state recording (combined dual CVR/DFR) – up to 2 hours  
audio and 256 wps  
Modular avionics units x 3  
Centralised maintenance computer x 1  
Windshear detection from EGPWS and guidance from AFCS system

## **ATA 32 – Landing Gear System**

Brakes x 4, 3 rotor carbon  
Main tires x 4, H38 x 13-18 bias ply rated for 225 mph  
Nose tires x 2, 24 x 7.7 Type VII 12 PR rated for 225 mph  
Nose wheel steering through pilot's hand wheel and/or rudder (limited)

## **ATA 33 – Lighting Systems**

Standard lighting and emergency lighting provided  
Red beacons  
Tail logo lights  
Emergency escape path lighting – floor mounted photo-illuminiscent  
Aft cabin lighting control panel integrated with F/A panel

## **ATA 34 – Navigation**

IRS x 2  
Provisions for 3<sup>rd</sup> IRS – GECAS Option  
FMS x 2, ACARS compatible – GECAS Option to install 2<sup>nd</sup> FMS  
GPS x 2 – GECAS Option to install 2<sup>nd</sup> GPS  
Radio Altimeter x 2 – 2<sup>nd</sup> RA GECAS Option  
Air Data System – integrated ADS  
ATC Transponders x 2  
DME modules x 2 (2<sup>nd</sup> DME now standard)  
ADF module x 1  
Complete provisions for 2<sup>nd</sup> ADF module – GECAS Option  
VHF Navigation module x 2, VOR/ILS/Marker – FM immunity  
Weather radar x 1  
EGPWS x 1  
RVSM capability  
TCAS system x 1 – change 7.0 TCAS 2000  
CAT IIIa – GECAS Option available 12 months after first GECAS delivery  
Space provisions for HGS

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## ATA 35 – Oxygen

Chemical oxygen generators x 35 for passengers – 12 minutes  
Lavatory – single generator with 2 masks  
F/A – one generator with masks for each F/A station  
Flight crew oxygen bottle – 50 cubic feet  
Flight crew full donning mask x 3

## ATA 36 – Pneumatic System

Standard pneumatic system

## ATA 38 – Water/Waste System

Two vacuum lavatories – Forward L/H and Aft L/H  
Potable water – 110 litres is standard  
Water heater in lavatories

## ATA 49 – APU System

APU installed in aft fuselage  
Provides bleed air and electrical  
Start up to 30,000 feet, operates to 33,000 feet

## ATA 52 – Passenger Doors

L1 passenger door – L/H, Type I  
Provisions for manual airstairs at L1 – GECAS Option  
R1 service door – R/H, Type I  
L2 passenger door – L/H, Type I  
R2 service door – R/H, Type I  
Cargo compartment doors – aft and forward of wing center box R/H  
Each cabin passenger and service doors have slides installed