

1 EC135 Baseline Aircraft Definition

GENERAL

- Energy absorbing fuselage
- Tail boom with fixed horizontal stabilizer and two end-plates
- Vertical fin with faired-in Fenestron®
- Upper deck with fittings for main gearbox, engines, hydraulic and cooling system
- Cowlings for main transmission and engine
- Skid-type landing gear with skid protectors, capable of taking ground-handling wheels
- Long boarding steps, LH and RH
- Maintenance built-in steps and grips
- Exterior painting (single color)

COCKPIT, CABIN AND CARGO COMPARTMENT

- One-level cabin and cargo compartment floor with integrated rails
- Glazed canopy
- Two hinged cockpit doors with sliding window
- Map case in pilot's door
- Two wide passenger sliding doors
- Two rear hinged clam-shell doors
- Longitudinally adjustable energy absorbing pilot and copilot seats with head rest and 4-point safety belts with automatic locking system
- Cabin boarding grips (LH and RH)
- Interior paneling with integrated basic sound insulation
- Flight controls (pilot side)
- Engine controls with manual engine back-up system at pilot's collective pitch lever
- Instrument panel with extension on pilot's side and glare shield
- Ram-air and electrical ventilating system for cockpit and cabin
- Headset holder in the cockpit
- Headset holder in the cabin
- Portable fire extinguisher
- Stowage net for first aid kit at the LH rear clam-shell door
- Flash light (torch)
- 4 Mobile tie-down rings

BASIC INSTRUMENTATION

- Central Panel Display System (CPDS), consisting of:
 - Caution Advisory Display (CAD) with indication of:
 - Caution and advisory information
 - Fuel quantity indication
 - Vehicle and Engine Multifunction Display (VEMD) with indication of:
 - Torque
 - Engine parameters (N1-RPM (for P&W) or Δ N1-RPM (for TM), oil pressure, oil temperature, Turbine Outlet Temperature (TOT), engine/FADEC rep EEC failure and parameter code messages, self diagnoses)
 - FLI (First Limit Indicator) for TQ, TOT, N1 (for P&W) or Δ N1 (for TM) as analogue display
 - Main transmission parameters (oil pressure, oil temperature)
 - Dual ammeter (generator)
 - Ammeter (battery)
 - Dual voltmeter
 - Outside Air Temperature (OAT)
 - Automatic in flight power check
 - Parameters of optional equipment (e.g. internal long range fuel tank)
- Clock (2")
- Magnetic compass
- Engine cycle counter (on flight report page)
- Triple (rotor and engines) RPM-indicator (2")
- Standard instruments: (single pilot)^a
 - Airspeed indicator (3")
 - Encoding altimeter (3")
 - Vertical speed indicator (3")
- Warning unit:
 - Engine fire warning with fuel emergency shut-off
 - Warning lights
 - Aural warning
- Main switch panel:
 - DC power control
 - Digital engine control (FADEC)
- Pitot / static system with electrical heated pitot tube, pilot side
- Static pressure crossover system
- Air Data computer

a. If glass cockpit instrumentation is chosen as optional equipment, these standard instruments are deleted and an altimeter (2") and an airspeed indicator (2") as back-up instruments are added.

POWER PLANT

- Two PRATT & WHITNEY PW206B2 turbine engines or Two TURBOMECA ARRIUS 2B2 turbine engines
These 2 engines are equipped with:
 - Fire detectors
 - Electronic engine control (FADEC-BOX)
 - Chip detectors with quick-disconnect plugs
 - Overspeed protection system
- Twin-engine OEI-training mode
- Oil cooling and lubricating system with thermostatic valve
- Crash resistant fuel system with a flexible bladder-type fuel main tank and supply tank (split into two sections)
- Automatically controlled variable rotor speed system
- Fuel tank filler flap, lockable

TRANSMISSION SYSTEM

- Flat-shaped main gearbox with two stages
- Chip detector system with quick-disconnect plug (main gearbox)
- Redundant oil cooling and lubrication system
- Main gearbox attachment with Anti-Resonance Isolation System (ARIS)
- Free wheel assemblies in the engine input drives
- Tail rotor drive shaft
- Tail rotor gearbox with splash lubrication and oil level sight gauge
- Chip detector system with quick-disconnect plug (tail rotor gearbox)

ROTOR AND FLIGHT CONTROL

- Bearingless Main Rotor system (BMR), consisting of:
 - Rotor head/mast in one piece
 - Four fiber-reinforced composite main rotor blades with anti-erosion strips, control cuff, elastomeric lead-lag dampers and special blade tip painting
- Main rotor control system with dual hydraulic boost system
- Electrical trim system (cyclic)
- Basic provisions for an easy integration of a track and balance system
- Fenestron®-type tail rotor with ten metal blades (asymmetric blade spacing) and stator
- Tail rotor gearbox cover
- Tail rotor control system with flexball cable and single hydraulic booster
- Yaw-SAS (Stability Augmentation System)
- Mast moment system

ELECTRICAL INSTALLATION

- Two starter/generators (2 x 160 A, 28 VDC)
- Nickel-Cadmium battery, (24 V, 17 Ah)
- External power connector (STANAG 3302)
- Power distribution system:
 - Two primary busbars
 - Two shedding busbars
 - Two essential busbars
 - Two high load busbars (80 A) - for optional equipment only
 - Two high power busbars (200 A)
- Battery bus
- One utility receptacle in LH side of cargo compartment (28VDC, 10A)
- Lighting:
 - Anti-collision warning light (red flashing)
 - Fixed, nose-mounted landing light (250 W)
 - Three position lights (red, green, white)
 - Adjustable instrument lighting
 - One utility light in the cockpit
 - 5 spot-lights in the cabin
 - One light in cargo compartment RH side

GROUND HANDLING KIT^a

- Two ground-handling wheels
- Basic aircraft covers (short time)
- Main rotor blade tie-down lash bags
- Oil drain hoses
- Fuel tank drain device
- Keys for cockpit doors, cabin doors, baggage compartment doors and tank flap (one-key system)
- Battery key
- Lifting points

a. Weight not included in the standard helicopter empty weight

DOCUMENTATION (in English)

- One Flight Manual^a
- One Pilots-Checklist, revision service for five years^b
- One Logbook^b (only paper, CD ROM on demand)
- One Historical Record^a (only paper, CD ROM on demand)
- One CD-ROM^{a b} including AMM^c, SDS^c, WDM^c, MSM, IPC
- One add. Master Servicing Manual (MSM)^{a b} on paper
- One Service Bulletin Catalogue (SB)^{a b} per contract, on paper
- One List Of Applicable Publications (LOAP)^{a b} on paper
- One Avionics Manual (if avionics equipment is installed by EUROCOPTER Deutschland GmbH)^{b c} on paper
- Engine Documentation^b, furnished by supplier, including:
 - Maintenance Manual
 - Illustrated Parts Catalogue (IPC)
- Service Bulletins

a. Revision service included as long as the aircraft is operational

b. Weight not included in the standard helicopter empty weight

c. Customized documentation