



**EC155 B1**  
Technical Data  
2015

### 3 Baseline Aircraft Definition

#### GENERAL

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| <ul style="list-style-type: none"> <li>● Fuselage comprising cabin and baggage hold</li> <li>● Baggage hold with floor tie-down net (LH and RH side)</li> <li>● Tail boom with stabilizer fitted with 2 lateral fins and a shrouded tail rotor built into the vertical fin</li> <li>● Retractable tricycle landing gear with axially lockable castering nose wheel unit, assisted differential brakes on pilot's and copilot's stations and parking brake</li> <li>● 3 heated pitot heads</li> <li>● 6 built-in foot-steps (3 on each side) for access to transmission deck</li> <li>● Anti-corrosion protection</li> <li>● Structural reinforcements for 1,600 kg (3,527 lb) cargo-sling</li> </ul> | <ul style="list-style-type: none"> <li>● Structural reinforcements for external hoist</li> <li>● Jacking, hoisting, mooring and gripping points</li> <li>● Interior colour: light grey</li> <li>● Exterior colour: <ul style="list-style-type: none"> <li>■ the fuselage is painted following per standard colour chart (scheme and colours, gloss or matt polyurethane finish, white + 2 colours), unless modified by option</li> <li>■ the landing gears are light blue</li> <li>■ the transmission deck (MGB &amp; tail rotor drive shaft) are white</li> <li>■ the main rotor and tail rotor cover are grey</li> <li>■ the main rotor blades are kaki and the tail rotor blades are black</li> </ul> </li> </ul> |
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#### COCKPIT / CABIN

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| <ul style="list-style-type: none"> <li>● 1 multipurpose cabin</li> <li>● 2 removable pilot and copilot energy attenuating high back-rest seats, adjustable in reach and height, each fitted with a 5 points harness</li> <li>● 1 glass windshield</li> <li>● 2 hinged pilot and copilot doors, jettisonable with tinted windows, allowing access to cockpit and front passenger row, each fitted with a sliding window</li> <li>● 2 jettisonable tinted windows located between cockpit and cabin doors</li> <li>● 2 passenger sliding doors with jettisonable tinted windows</li> <li>● 2 externally mounted cockpit and cabin footsteps on each side</li> </ul> | <ul style="list-style-type: none"> <li>● 2 tinted upper panes</li> <li>● Cabin upholstery</li> <li>● Dual flight controls</li> <li>● Fuel shut-off controls</li> <li>● 1 rotor brake control</li> <li>● 1 heating / demisting / ventilation system</li> <li>● 2 windshield wipers</li> <li>● 1 portable fire-extinguisher in cockpit</li> <li>● 2 illuminated chart holders</li> <li>● 2 headset hooks</li> <li>● Stowage place in the doors for flight documents</li> <li>● 1 flight manual</li> </ul> |
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#### INSTRUMENTS

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| <ul style="list-style-type: none"> <li>● 2 Primary Flight Displays (PFD)</li> <li>● 2 Navigation Displays (ND)</li> <li>● 1 dual screen Vehicle and Engine Management Display (VEMD®) providing the following information: <ul style="list-style-type: none"> <li>■ First Limitation Indicator (FLI): limitation related to the first power limitation: NG, T4, TRQ</li> <li>■ Engine oil temperature/pressure indicator</li> <li>■ Hydraulic pressure</li> <li>■ Ammeter and voltmeter</li> <li>■ OAT</li> <li>■ Enhanced usage monitoring functions <ul style="list-style-type: none"> <li>◆ Engine cycle counting</li> <li>◆ Automatic engine check</li> </ul> </li> </ul> </li> <li>● 1 Caution Advisory Display (CAD) providing the following information: <ul style="list-style-type: none"> <li>■ Caution advisory display (amber, green and blue messages)</li> <li>■ Fuel quantity</li> <li>■ Fuel pressure</li> <li>■ ΔNG (back-up mode)</li> </ul> </li> <li>● 2 Instrument Control Panels (ICP)</li> <li>● 1 mission display 10.4"</li> <li>● 1 stand-by gyro-horizon</li> <li>● 1 stand-by anemometer</li> <li>● 1 stand-by altimeter</li> <li>● 1 stand-by magnetic compass</li> <li>● 1 stand alone DME indicator</li> </ul> | <ul style="list-style-type: none"> <li>● 1 landing gear position selector and indicator</li> <li>● 2 stop watches</li> <li>● 1 triple tachometer for rotor and engine 1 and 2 free turbine r.p.m.</li> <li>● 1 tachometer for rotor on copilot's side</li> <li>● 1 warning panel (red alarms)</li> <li>● 2 master alarm lights</li> <li>● 2 manoeuvre limit lights</li> <li>● 2 "L/G not extended" warning lights</li> <li>● 1 Automatic Pilot Mode Selector (APMS)</li> <li>● 1 Reconfiguration Control Unit (RCU)</li> <li>● 1 fuel circuit control and inspection panel</li> <li>● 1 AHRS control box</li> <li>● 1 overhead panel including an engine control panel, 2 dual fire extinguishing controls for engine bays, 1 dual fire extinguishing control for baggage hold and 1 electrical control panel</li> <li>● 1 brake hydraulic circuit pressure gauge on pilot side floor</li> <li>● 2 Attitude and Horizontal Reference Systems (AHRS)</li> <li>● 2 Air Data Computers (ADC)</li> <li>● 1 radar altimeter (radar altitude displayed on NDs)</li> <li>● 1 nose mounted rack with the following avionics modules: <ul style="list-style-type: none"> <li>■ 2 Flight Data Computer Modules (FDCM)</li> <li>■ 1 Automatic Pilot Module (APM)</li> <li>■ Spare for 1 Miscellaneous Flight Data Acquisition Unit (MFDAU)</li> </ul> </li> </ul> |
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## POWER PLANT

- 2 Turbomeca ARRIEL 2C2 turbine engines with dual channel Full Authority Digital Engine Control (FADEC) system, and fitted with 4 chip detectors cabled with 1 warning light on warning panel  
The Digital Engine Control Unit (FADEC) provides the following main functions:
  - Variable rotor speed governing
  - OEI training mode
  - Automatic starting sequence
- Each engine is equipped with an anti-icing fuel system (efficient down to O.A.T. = -20° C)
- Automatic (FADEC controlled) engine governing in back-up mode
- 1 fuel system including 6 tanks split into 2 groups, with a total usable capacity of 1,257 litres (332 US gal), 4 immersed canister booster pumps, 1 transfer pump and low level fuel indication
- 2 engine lubrication and oil cooling systems
- 1 fuzzi burner system on engine lubrication system
- 2 engine fire detection and extinguishing systems
- 2 engine anti-icing air-intake grids
- 2 phase angle torquemeter sensors
- Single side engine flushing port (without cowlings removal)
- Single side fuel filler with door

## TRANSMISSION SYSTEM

- 1 main gearbox with oil level sight, magnetic plug, oil pressure and temperature sensors, 1 dual-pump lubrication system, thermal-switch, 2 rotor tachometer sensors, access ports for endoscope and oil sampling, and 2 chip detectors wired to the Caution Advisory Display
- 2 free wheels integrated to the main gearbox
- 1 main gearbox oil cooling system
- 2 engine / main gearbox coupling shafts
- 1 tail rotor drive shaft
- 1 rotor brake
- 1 tail gearbox with oil level sight and 1 chip detector wired to the Caution Advisory Display

## ROTORS AND FLIGHT CONTROLS

- 1 main rotor with:
  - 5 glass / carbon-fibre blades
  - 1 SPHERIFLEX® rotor head fitted with lower gust and droop stops
  - 1 rotor mast fitted with rotor r.p.m. phonic-wheel
- 1 FENESTRON® type tail rotor with 10 composite material blades built into the vertical fin.
- 1 flight control system, fitted with 3 dual-chamber / dual-body main servo-units (on cyclic and collective pitch channels) and 1 dual-chamber / dual-body rear servo-unit (on tail rotor pitch control channel)
- 1 Dual Digital Automatic Flight Control System (4-axis type) including upper modes

## ELECTRICAL INSTALLATION

- Power generation system:
  - 2 starter / generators (160 Amp, 28 V DC)
  - 43 Amp / hr nickel-cadmium battery with temperature sensor and warning light
  - 1 external 28 V DC power connector
  - 1 additional maintenance ICS jack in the ground power receptacle compartment
- Power distribution system:
  - 2 primary bus bars
  - 2 essential bus bars
  - 2 high load bus bars (80 A) – for optional equipment only
  - 1 battery bus
  - 2 breaker panels in radome
- 1 breaker panel in cockpit
- Lighting:
  - 1 double red and white tail fin anti-collision light
  - 1 LH side retractable landing light (450 W)
  - 1 RH side retractable swivel light (450 W)
  - 3 position lights (red, green, white)
  - adjustable instrument lighting
  - 2 utility lights in the cockpit
  - 1 instrument light for flight in stormy conditions
  - overhead lights in cabin and cargo compartment
- 2 x 28 V DC power outlets in cabin
- 1 emergency battery for automatic lighting of the cabin central overhead lights and call signs

## HYDRAULIC GENERATION

- 2 independent hydraulic systems feeding the servo-units, landing gear actuation system and assisted brakes
- 1 self-sealing hydraulic ground coupling
- 1 stand-by hydraulic system with electro-pump for emergency activation of the landing gear and for hydraulic assistance on ground (engines not running)

## AIRBORNE KIT 1

- 3 pitot head covers
- 2 static vent plugs
- 2 engine air-intake covers
- 2 engine exhaust pipe covers
- 7 mooring rings
- 2 rough weather tie-down rings
- 2 gripping rings
- 1 main blades tie-down kit
- 1 set of jacking pads
- 1 fuel tanks bleed tool
- 1 data case
- 1 airborne kit stowing bag

<sup>1</sup> Weight not included in standard aircraft empty weight.



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