H135
Technical Description
2020
## 3 Baseline Aircraft Definition

### GENERAL
- Energy absorbing fuselage
- Tail boom with fixed horizontal stabilizer
- Vertical fin with faired-in Fenestron
- Upper deck with fittings for main gearbox, engines, hydraulic and cooling system
- Cowings 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 for pilot side; fixed provisions of flight controls for copilot side
- Covers for copilot collective lever, cyclic stick and pedals
- Engine controls with manual engine back-up system at pilot's collective pitch lever
- Single pilot instrument panel with glare shield and slant console
- Ram-air and electrical ventilating system for cockpit and cabin
- Helmet 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) for pilot side

### INSTRUMENTS
- Flight Display Subsystem (FDS) composed of 2 smart multifunction displays (6 x 8 inch) providing the following functions:
  - Flight and Navigation Display (FND) format (incl. PFD, FLI, Master List, NAV, RPM, mast moment & fuel indication)
  - Vehicle Management System (VMS) format (incl. engine, gearbox, fuel, electrical system, RPM & clock indication)
- Vehicle Management System (VMS) including:
  - 2 duplex Aircraft Management Computer (AMC)
- Reference sensors:
  - 1 Attitude and Heading Reference System
  - Air Data sensor pilot side (electrically heated pitot tube and static port)
  - 1 Magnetometer
- Standby instruments:
  - Integrated Electronic Standby Instrument (IESI)
  - Standby compass
  - Usage Monitoring System (UMS)
  - Flight Data Continuous Recorder (FDCR)
  - "One hundred feet" alert
  - Directional Gyro Free Steering Mode
  - Warning unit:
    - Engine fire warning with fuel emergency shut-off
    - Warning lights
    - Fire extinguishing system warning
  - Cockpit Control Panel (CCP) for FDS
  - Data Transfer Device (DTD)
  - Engine switch panel

### POWER PLANT
- Two Pratt & Whitney Canada PW206B3 turbine engines or two Safran Helicopter Engines ARRIUS 2B2plus turbine engines
- Twin-engine OEI-training mode
- Oil cooling and lubricating system with thermostatic valve
- Crash resistant fuel system with a flexible bladder-type main tank and supply tank (split into two sections)
- Automatically controlled variable rotor speed system
- Fuel tank filler flap, lockable
- Drain system
- Fire walls

### 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 CONTROLS**

- Bearingless Main Rotor system (BMR) with improved dynamic characteristics, 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

- 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
  - Digital 3-axis SAS (Stability Augmentation System)
  - Mast moment system

**ELECTRICAL INSTALLATION**

- Two starter / generators (2x200 A, 28 VDC)
- Nickel-Cadmium battery, (24 VDC, 27 Ah)
- External power connector (STANAG 3302, LN9064, SAE AS 25018, SAE AS 3506/1)
- 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 (28 VDC, 10 A)
- Lighting:
  - Anti-collision warning light (red flashing), LED
  - Fixed, nose-mounted landing light, LED
  - Three position lights (red, green, white), LED
  - Adjustable instrument lighting
  - One utility light in the cockpit
  - 5 spot-lights in the cabin
- One light in cargo compartment RH side
- Radio:
  - Two radio master switches

**GROUND HANDLING KIT**

- Basic aircraft covers (short term)
- Oil drain kit
- Fuel tank drain device
- Keys for cockpit doors, cabin doors, baggage compartment doors and tank flap (one-key system)
- Battery key
- Lifting points
- Maintenance Ground Station (MGS) software

**DOCUMENTATION (in English)**

- One Flight Manual (on paper)
- One Pilots Checklist (on paper)
- Master Minimum Equipment List (MMEL) online via Keycopter portal
- One Logbook (on paper, CD-ROM on demand)
- One Historical Record (on paper, CD-ROM on demand)
- Technical Documentation incl. AMM, SDS, WDM, IPC, MSM, CECG, SRM online via Keycopter portal
- One DBox
- One Avionics Manual (on CD-ROM and online via Keycopter)
- Online Component Maintenance Manual (OCMM) for vendor manuals online via Keycopter portal
- One Engine Documentation (format depends on engine manufacturer), furnished by supplier, including:
  - Maintenance Manual
  - Illustrated Parts Catalogue

**a.** Weight not included in the standard helicopter empty weight.
**b.** Licences for one year and one helicopter included.
**c.** Two licenses for one year and one helicopter included. Availability date to be confirmed.
**d.** Customized documentation