



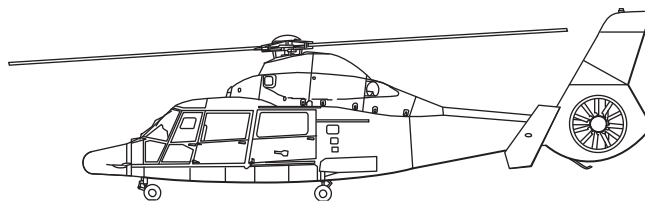
# AS565 MBe

Technical Data  
2016



**AIRBUS**  
HELICOPTERS

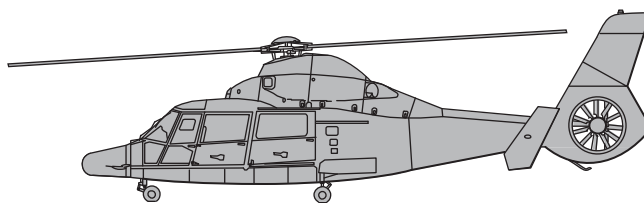
**DAUPHIN**  
(Civil Version)



**AS365 N3+**

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**PANTHER**  
(Military Version)



**AS565 MBe**

### 3 Baseline Aircraft Definition

#### GENERAL

- Fuselage comprising the cabin and hold compartment
- Nose capable of accommodating various radars (long radome)
- Hold compartment with floor, tie-down net, access door (RH), fire detection and fire extinguishing system.
- Tail boom with stabilizer fitted with 2 lateral fins and terminated by shrouded tail rotor built in the vertical main fin
- Retractable tricycle landing gear with axially lockable castering nose wheel unit, assisted differential brakes on pilot's and copilot's stations and parking brake
- 3 heated pitot heads
- 2 ADU3200 Air Data Units
- 2 Aircraft Piloting Inertial Reference Sensors - APIRS
- Built in foot-steps (2 on each side) for access to transmission deck
- Anti-corrosion protection
- Fixed parts for the main blade-folding system
- Structural reinforcements for armament supports or commando footsteps
- Structural reinforcements for 907 kg (2,000 lb) cargo hook
- Structural reinforcements for 1,600 kg (3,527 lb) cargo-sling
- Structural reinforcements for hoist
- Fixed Parts for "Category 1" hoist
- Jacking, hoisting, mooring and gripping points
- Towing adaptors
- Interior colour: matt black for all surfaces within the pilot or copilot field of view (including instrument panel, overhead panel and radio console), grey for the cabin rear section
- Exterior colour:
  - the fuselage is single colour painted (gloss or matt polyurethane finish, colour to be selected in RAL K7 chart, excluding metallic, fluorescent paints and special paints), unless modified by option,
  - the landing gears are light blue,
  - the transmission deck (MGB & tail rotor drive shaft) are white,
  - the main rotor and tail rotor are grey,
  - the main rotor blades are kaki and the tail rotor blades are black

#### COCKPIT / CABIN

- 1 strengthened, water-proof cabin floor fitted with a fluid barrier and capable of various types of optional arrangements
- 2 removable pilot and copilot high back-rest seats, adjustable in reach and height, each fitted with a safety belt and shoulder 4-point harness
- Floor inserts and capabilities for 10 commando seats
- 2 pilot and copilot jettisonable doors, each fitted with bad weather window and an internal storage unit
- 2 hinged, jettisonable cabin front doors
- 2 enlarged and bubbled rear sliding-doors with jettisonable window from inside and outside
- 1 instrument panel, one console and one ceiling panel
- Dual flight controls
- Engine controls
- Rotor brake control
- 1 heating/demisting/ventilation system
- 1 hold ventilation system
- 2 upper tinted panes
- 2 front glass panes
- 2 windshield wipers
- 1 windshield washer
- 2 illuminated chart holders
- 2 headset holders
- 1 portable fire-extinguisher
- 1 flight manual

#### INSTRUMENTS

- 2 x Primary Flight Displays Collins MFD-255
- 2 x Navigation Displays Collins MFD-255
- 1 mission display 10.4"
- 1 dual Vehicle and Engine Management Display (VEMD) providing the following information:
  - First Limitation Indicator (FLI): limitation related to the first power limitation: NG, T4, TRQ
  - Engine oil Pressure & Temperature
  - Main gear box oil Pressure & Temperature
  - Hydraulic parameters
  - Electrical parameters
  - Fuel parameters
  - OAT
  - Flight duration
  - Enhanced usage monitoring functions
    - ◆ Engine cycle counting
    - ◆ Engine power check
    - ◆ AEO/OEI management
    - ◆ Maintenance functions
- 1 electrical control panel
- 1 Automatic Pilot Mode Selector – APMS
- 1 AHRS control box
- Stand-by instruments:
  - 1 Integrated Electronic Standby Instrument (IESI)
    - ◆ Air data / Baro altitude
    - ◆ Airspeed indication (CAS)
    - ◆ Attitudes & inertial measurements
    - ◆ Attitudes (pitch and roll)
    - ◆ Slip / skid indication
  - 1 stand-by magnetic compass
- 1 landing gear position selector and indicator
- 2 stop watches
- 1 triple tachometer for rotor and engines 1 and 2 free turbine r.p.m., on pilot's side
- 1 rotor tachometer on copilot's side
- 1 warning panel
- 2 master alarm lights
- 2 manoeuvre limit warning lights
- 1 overhead panel including engine control panel with 2 fire warning lights and 2 dual fire extinguishing controls for engine bays, fuel management system.
- 1 "L/G not extended" warning light
- 1 radar altimeter (radar altitude displayed on MFD255)

## POWER PLANT

- 2 Turbomeca ARRIEL 2N turbine engines each providing 842 kW (1144ch – 1129 shp) super contingency rating, Full dual channel Authority Digital Engine Control system (FADEC) with an ultimate back-up mode provides the following main functions: variable rotor speed governing, training mode, automatic starting sequence.
- 1 fuel system including 5 tanks split into 2 groups, with a total usable capacity of 1,135 litres (300 US gal), 4 immersed canister booster pumps, 1 transfer pump and an indication of low levels.
- 2 engine lubrication and oil cooling systems
- 1 fuzz burner system on engine lubrication system
- 2 fire detection and extinguishing systems
- 2 engine anti-icing air-intake grids
- 2 phase angle torquemeter sensors built into the engines
- 2 engines exhaust pipes
- Single side engine flushing port (without cowlings removal)
- Single side fuel filler with door

## TRANSMISSION SYSTEM

- 1 main gearbox, anti-vibration mounted, with oil level sight, oil pressure and temperature probes, 1 dual pump lubrication system, thermal-switch, 2 rotor tachometer magnetic sensors and access ports for endoscope and oil sampling, and 4 chip detectors wired to the Warning Panel.
- 1 tail gearbox with oil sight and magnetic plug
- 1 main gearbox oil cooling system
- 2 engine/main gearbox coupling shafts
- 1 tail rotor drive shaft
- 1 reinforced rotor brake system
- 2 free wheels integral with main gearbox

## ROTORS AND FLIGHT CONTROLS

- 1 main rotor with 4 glass and carbon-fibre blades with STARFLEX<sup>®</sup> head fitted with gust and droop stops, mast fitted with rotor r.p.m. phonic-wheel
- 1 FENESTRON<sup>®</sup> type tail rotor with 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 servo-unit (on tail rotor pitch control channel)
- 1 Dual Digital Automatic Flight Control System (4-axes) including upper modes

## ELECTRICAL INSTALLATION

- Power generation system:
  - 2 static inverters (800 VA, 115/26 V, 400 Hz 1- phase)
  - 2 starter-generators (4,8 kW, 28 V D.C.)
  - one 43 amp.hr cadmium-nickel battery with temperature detector and warning light
  - 1 external 28V.DC power receptacle
  - 1 additional maintenance ICS jack in the ground power receptacle compartment
  - 1 instrument white/blue lighting system
  - 2 cabin extension lights
  - 2 cabin dome-lights
- Power distribution system:
  - 2 breaker panels in cockpit
  - 1 breaker panel in the hold
- Lighting:
  - 1 luggage hold dome-light
  - 3 position lights
  - 1 double red and white tail fin anti-collision light
  - Retractable LH landing light, adjustable in elevation
  - Retractable RH landing light, adjustable in elevation and in azimuth allowing search-light and hoist light
- 1 cabin power outlet (28 V D.C.)

## HYDRAULIC GENERATION

- 2 independent hydraulic systems feeding the servo-units, landing gear actuation system and assisted brakes
- Self-sealing hydraulic ground coupling
- 1 stand-by hydraulic system with electro-pump for emergency actuating of the landing gear, hydraulic assistance for flight control tests on ground with rotor stopped and park brake pressure.

## AIRBORNE KIT <sup>1</sup>

- 3 pitot head covers
- 2 static vent blanks
- 2 engine air-intake blanks
- 2 engine exhaust pipe blanks
- 7 mooring rings
- 2 rough weather tie-down rings
- 2 gripping rings
- 1 main blade 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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Marseille Provence - 13725 Marignane Cedex -  
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