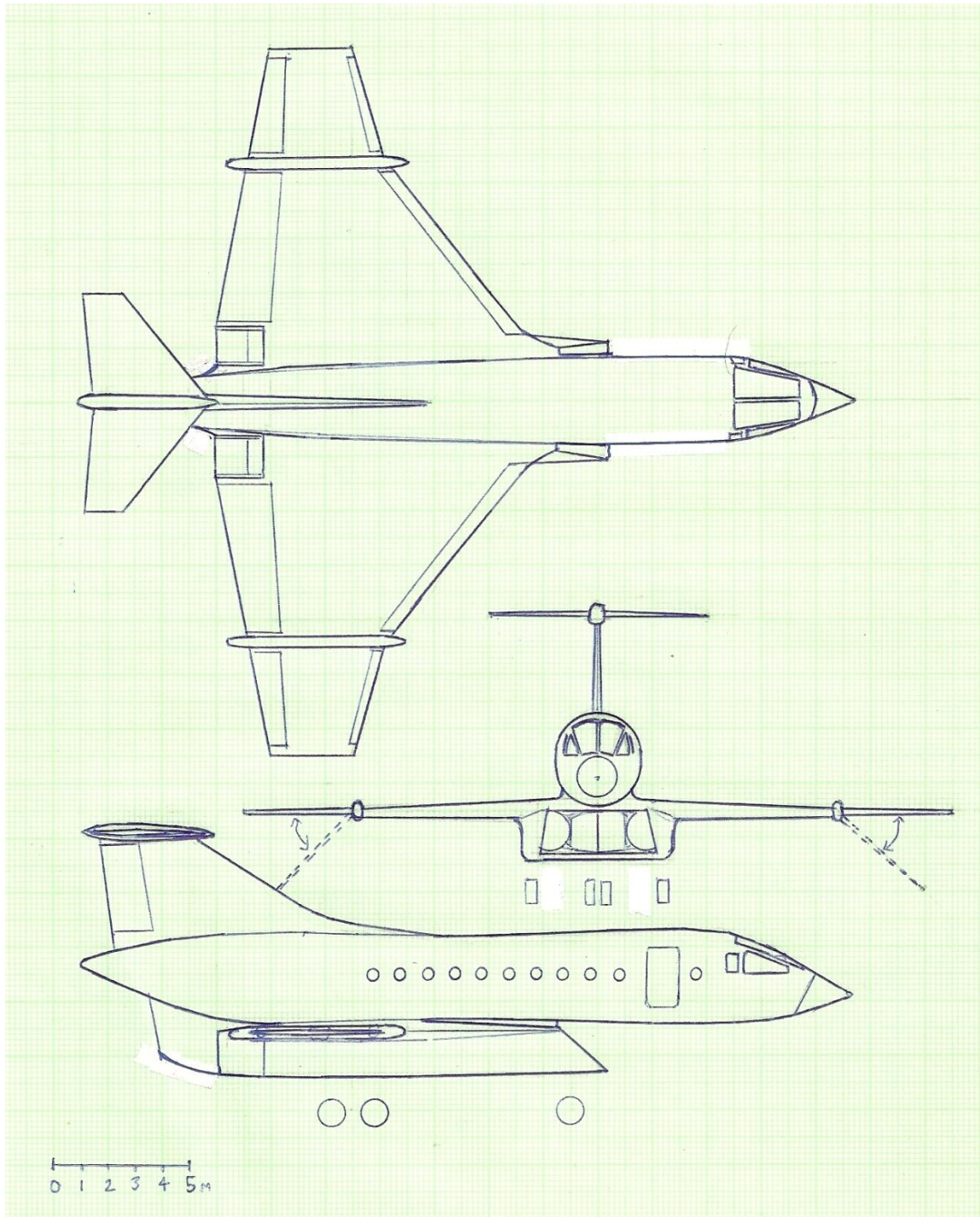


McDonnell C-20A NOMAD



Characteristics :

- Supersonic V.I.P. transport and liaison.
- Crew : 3 (Pilot, Copilot, Cabin Attendant).

- Length : 28.4 m.
- Span : 26 m (wingtips straight) / 24 m (wingtips down 45°).
- Height : 9.5 m.
- Fuselage diameter : 2.8-3.2 m (external) / 2.4 m (internal, cabin).
- Passenger cabin : 11 m long, 2.0 m wide (at floor level), 1.85 m high. 18 x seats (2-abreast), plus two sofas at rear of cabin. First class level of accommodations. Cabin and cockpit are fully pressurized and air-conditioned. Seat aft of cockpit for cabin attendant (facing aft).
- Passengers/crew facilities : Small galley aft of cockpit, near port side access door. Luggage storage and cloakroom aft of cabin (direct access in flight). One chemical bathroom stall aft of cloakroom. Integrated air stair for port side forward access door (stowed under the floor, deploys mechanically).
- Weights : 20,000 kg (empty, operational) / 52,000 kg (max takeoff mass).
- Wing area : 114 m². Wingtips can lower down by 45° to give extra longitudinal stability at supersonic cruise speeds.
- Wing loading : 456.14 kg/m² (at max takeoff mass) / 333.3 kg/m² (at 38,000 kg).
- Engines : Two Pratt & Whitney TF-58P augmented turbofans with 2D nozzles and thrust reversers. Total thrust of 24,000 kg st (dry) / 34,000 kg (augmented). Fixed geometry engine air inlet. Small APU in the tail to provide onboard power on the ground while main engines are shut down.
- Thrust/weight ratio : 0.46 (at max takeoff mass, dry thrust) / 0.65 (augmented thrust, max takeoff mass).
- Fuel : Total of 28,000 kg / 35,000 L of internal fuel (in belly tank between the engines). Retractable air refueling probe.
- Construction : Classic aluminum alloy structure, except for hot engine parts (steel alloy). Wings use 'flexible wing profile' system patented by Ingrid Dows (USAF can use system for a nominal \$1.00). C-20 capable of using short, hot and high runways.
- **Sensors/electronics :**
 - Air/meteorological search radar in the nose.
 - Surface mapping and navigation radar in the chin.
 - Radar altimeter.
 - Inertial navigation system with cockpit map display unit.
 - Heads-up display units for pilot and copilot, linked with forward-looking e/o camera pack (FLIR + LLLTV) and aircraft attitude display.
 - Four other e/o camera packs giving night view in frontal arc, down-forward and down vertical views.

- Radar warning receiver set.
- TACAN receiver.
- IFF transponder.
- Four clear comms radios (2 UHF, 1 VHF, 1 HF) for joint services communications.
- ILS and VOR navigation and landing aid systems.
- **Performances :**
 - Max speed : Mach 2.2 (1,450 mph / 2,320 kmh at 11,000 m, augmented thrust).
 - Supersonic supercruise (dry engine thrust) at Mach 1.8 (1,188 mph / 1,901 kmh at 11,000 m).
 - Subsonic cruise at Mach 0.9 (594 mph / 950 kmh at 11,000 m).
 - Range : 3,760 miles / 6,016 km on Mach 1.8 supercruise (can fly direct New York City to Paris in four hours); 6,500 miles / 10,400 km on subsonic cruise.
 - Payload : 18 V.I.P. seats, plus 4 optional extra passengers on sofas. Max payload of 4,000 kg (passengers, luggage and cargo).
- **Variants :**
 - **McDonnell C-20A NOMAD** : Supersonic V.I.P. transport and liaison aircraft. In USAF service in December 1952 'C' (number of C-20As to be made available for US State Department and Congress use). In US Air National Guard service in November 1953 'C'. In French Air Force service in December 1953 'C'.
 - **C-20M** : Supersonic medical evacuation variant of C-20A. Cabin modified to accommodate up to four patients on medical gurneys and four seats for medical personnel. Special gurney lift fitted to forward right corner of cabin, with lift going down through a floor hatch. In USAF service in december 1952 'C'. In US Air National Guard service in November 1953 'C'. In French Air Force service in December 1953 'C'.
 - **McDonnell NOMAD** : Civilian executive jet variant of C-20A. Same basic accommodations than in C-20A but can be custom-fitted at the customer's request. In US commercial service in March 1953 'C' (first customer : Pan Am President Juan Trippe).