## Northrop B-50 CONDOR



## **Characteristics :**

• Heavy long range bomber.

- Crew : 5 (Pilot, Copilot, Navigator/Bombardier, Flight Engineer, Electronic Warfare Officer).
- Length : 50 m.
- Span : 50 m (wing tips level) / 41 m (tips down by 70 degrees).
- Height : 10 m.
- Weights : 103,000 kg (empty, operational) / 275,000 kg (max takeoff).
- Wing area : 679 m2 (wings), 34 m2 (canard surfaces).
- Wing loading : 405 kg/m2 (at max takeoff weight).
- Engines : Four Pratt & Whitney TF-58R turbofan-ramjets with 2D vectoring nozzles and thrust reversers. Each TF-58R has a maximum thrust of 117.4 KN / 26,400 lb st (dry thrust); 166.3 KN / 37,400 lb st (augmented); 198.7 KN / 44,000 lb st (ramjet at Mach 3+).
- Thurst/weight ratio : 0.29 (max takeoff mass, augmented thrust).
- Fuel : Total of maximum 160,000 kg / 200,000 L (all internal). Retractable air refueling probe.
- Construction : Stainless steel alloy honeycomb skin panels and structure (to resist high mach thermal stress). Wing tip scan lower down to 70° to augment longitudinal stability at high mach numbers or when flying low level penetration missions.
- Armament :
  - One main bomb bay (11 m x 2.2 m x 2.2 m) for nuclear or conventional (with rotary launcher) bombs or missiles.
  - Four secondary bomb bays (7.8 m x 1.7 m x 1.7 m) for nuclear or conventional bombs or missiles.
  - Ten missile bays (4.8 m x 70 cm x 70 cm) for medium air-air or airsurface missiles (one missile per bay).
  - Maximum bomb load : 65,000 kg / 143,000 lb.
  - Typical bomb load (nuclear) : 4 x Mark-15 H-bombs (3.8 MT yield each) or 6 x AGM-2N HELLHOUND nuclear-tipped air-surface missiles, plus ten AIM-1 COBRA / AGM-1 NAGA missiles for selfdefense.
  - Typical conventional bomb load : 196 x 500 lb GP bombs, plus ten AIM-1 COBRA / AGM-1 NAGA missiles for self-defense. Can also load and lay sea mines.
  - Two I.R./radar decoy launchers in tail section.
- Sensors/electronics :
  - Air surveillance radar in nose.
  - Target illumination and tracking radar (for AIM-1B air-air missiles) in starboard wing nacelle. Operated by the EWO.

- Long range identification e/o telescope with stabilized camera lens in port wing nacelle. Operated by the navigator/bombardier.
- Tail warning radar.
- Surface mapping and navigation radar in chin.
- Precision optical bomb sight.
- High definition bombing radar.
- Radar altimeter.
- o Inertial navigation system with cockpit map display unit.
- Heads-up display units for pilot and copilot, linked with forwardlooking e/o camera pack (FLIR + LLLTV), aircraft attitude display.
- Four other e/o camera packs giving night view in frontal arc, downforward and down vertical views.
- Bomb damage assessment camera in tail.
- Extensive electronic warfare suite (including radar warning receiver, radar and radio jammers, radio direction-finder).
- Encrypted secure HF and VHF radios and datalink.
- Four clear comms radios (2 UHF, 1 VHF, 1 HF) for joint services communications.
- TACAN receiver.
- IFF transponder.
- $\circ~$  ILS and VOR navigation and landing aids.

## • Performances :

- Max speed (at 20,000 m) : Mach 3.2 (2384 mph/3814 kmh).
- Cruise speed on ramjet (at 20,000 m) : Mach 2.6 (1937 mph/3099 kmh).
- Max low altitude speed (ground level) : Mach 1.4 (1043 mph/1669 kmh).
- Service ceiling : 28,000 m/92,400 ft.
- Combat radius : 5300 miles / 8464 km (nuclear strike, hi-lo-hi profile, max internal fuel, 22,000 kg of nuclear weapons)
- Unrefuelled range : 11,600 miles / 18,560 km (hi-hi-hi profile, 22,000 kg payload).
- Variants :
  - B-50A CONDOR: Strategic heavy supersonic bomber. In USAF service in December 1952 'C'.
  - VC-5000 SUPERLINER : Supersonic airliner. Cruising speed of Mach 2.8 over 11,600 mile range, with 210 passengers (5-abreast). Longer fuselage (62 m). In US commercial service in May 1953 'C' (first user : Pan Am).

 VC-5000P CAESAR : Presidential supersonic transport. Presidential suite and office. Secure communications center. Defensive electronic warfare suite, plus I.R./radar decoy launchers. Ten missile bays for defensive air-air and air-surface missiles. In service with Presidential Transport Squadron in February 1953 'C'.