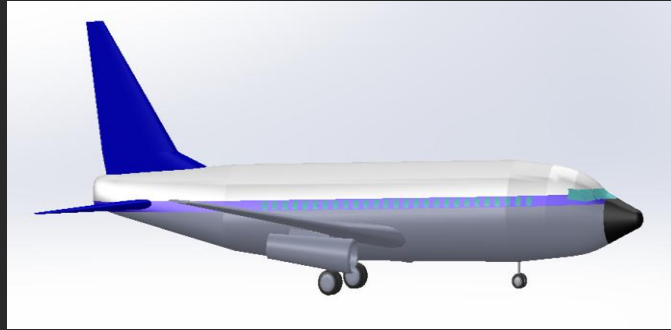


BOEING 737- 100



GROUP B1

NATHAN ATSEFF | ALEX HALE | MAYAR ELAMIN | DYLAN CAGLE | ELLEN HIRA

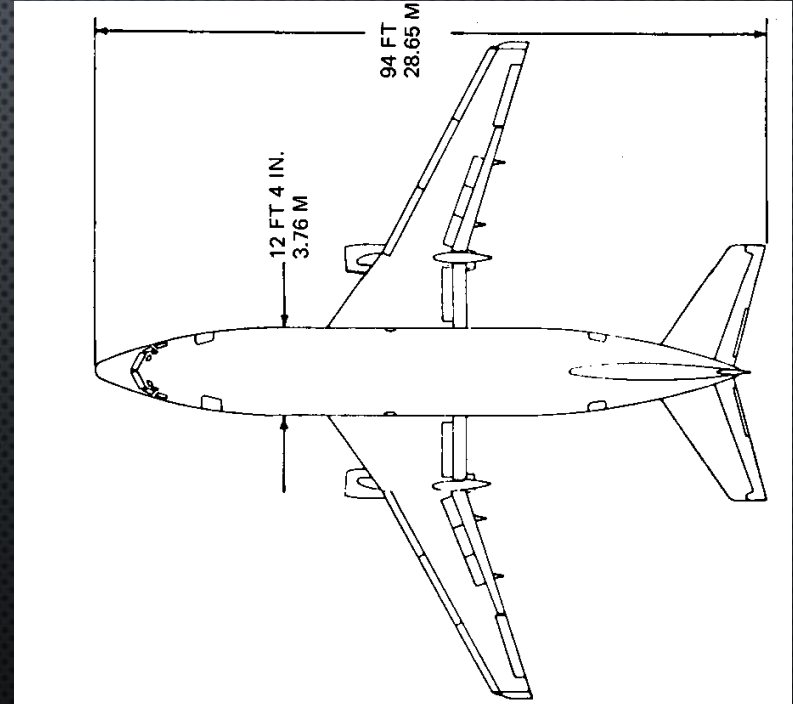
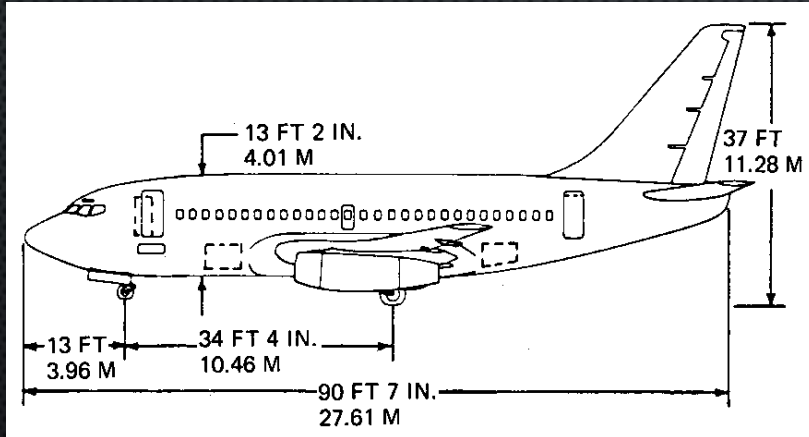
BOEING 737-100 AIRCRAFT INFORMATION

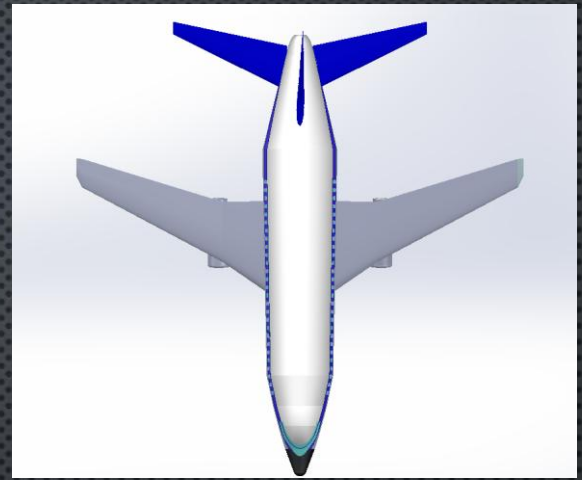
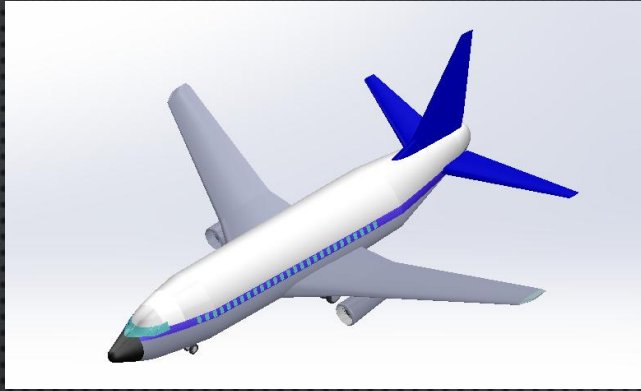
- Seating capacity of up to 118 passengers
- Introduced in 1967 and served into the 2000's
- First of the well-known Boeing 737 line
- 22 of the 30 produced were purchased by Lufthansa



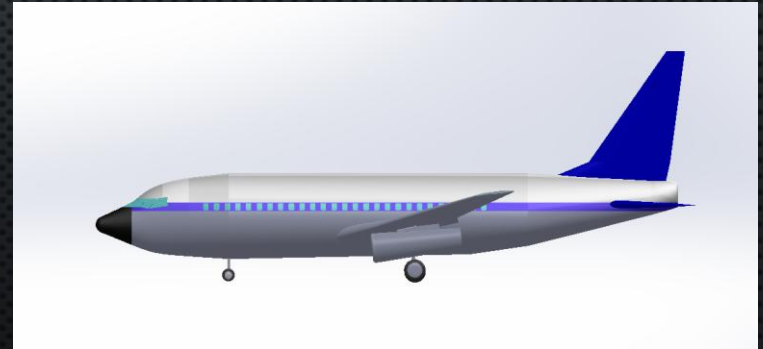
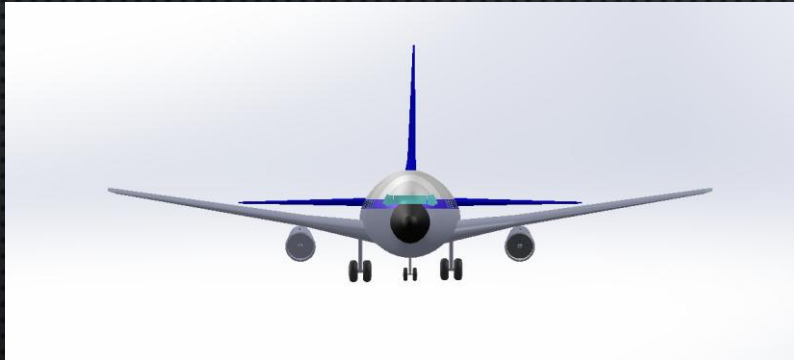
SPECIFICATIONS

- LENGTH OF 28.65 METERS
- FUSELAGE HEIGHT OF 4.01 METERS
- AIRCRAFT HEIGHT OF 11.28 METERS
- WINGSPAN OF 28.35 METERS
- FUSELAGE WIDTH OF 3.76 METERS



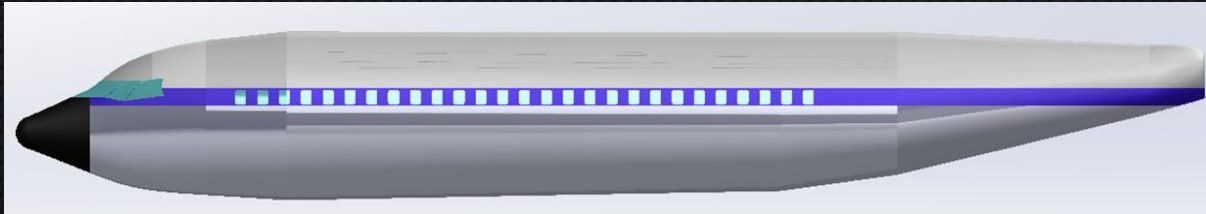
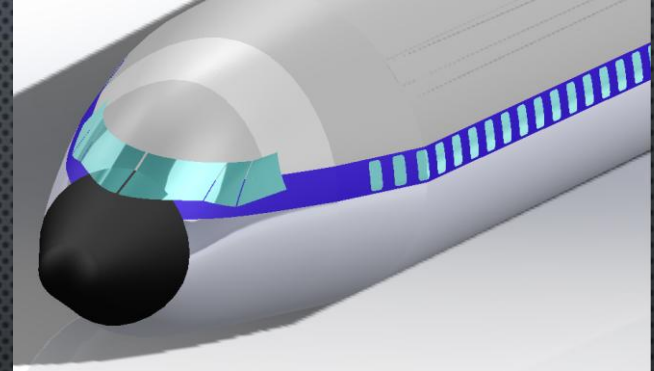


SOLID MODELING



FUSELAGE

- SOURCED 3 SKETCHES OF THE AIRCRAFT: TOP, SIDE, AND FRONT.
- UTILIZED THE SPLINE TOOL AND LOFT FEATURE TO CREATE GUIDELINES, PROFILE AND BODY OF THE AIRCRAFT.
- FOLLOWED STANDARD BOEING 737 MODELS PASSENGER WINDOW SIZE OF 14" X 10".
- ASSUMED COCKPIT DIMENSIONS FROM IMAGES.
- SPLIT FEATURE WAS USED TO CUT OUT THE WINDOWS.



WINGS

- IMPORT NACA AIRFOILS

- ❑ ROOT

- ❑ MIDSPAN

- ❑ MIDSPAN

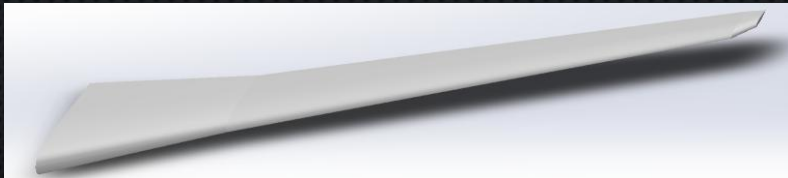
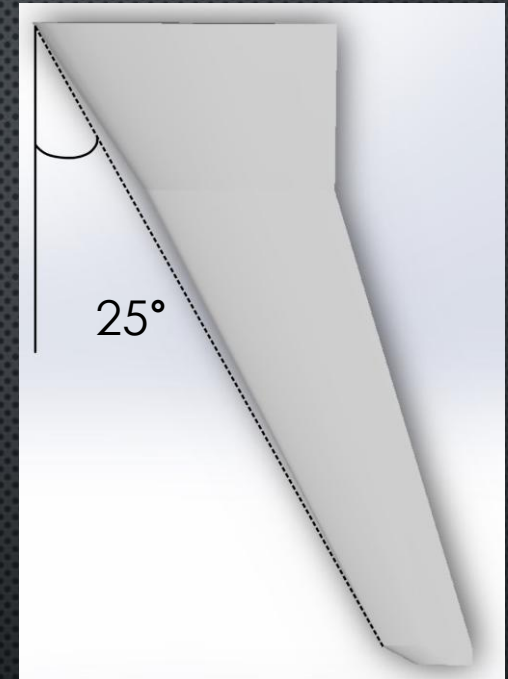
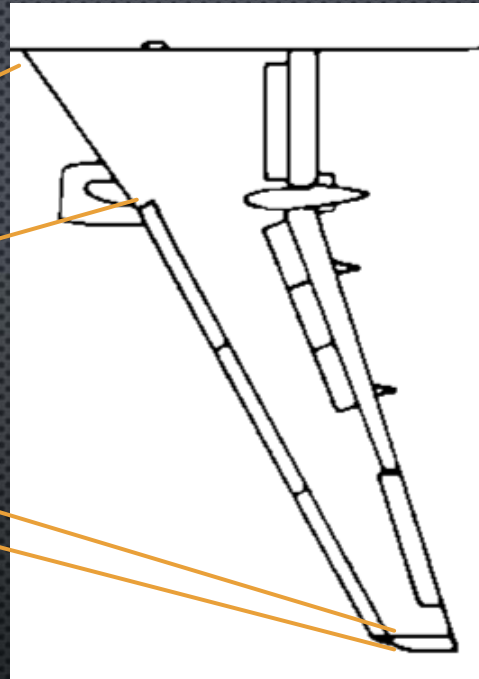
- ❑ OUTBOARD

- MODIFICATION

- ❑ 25° SWEEP

- ❑ 6° DIHEDRAL

- LOFT

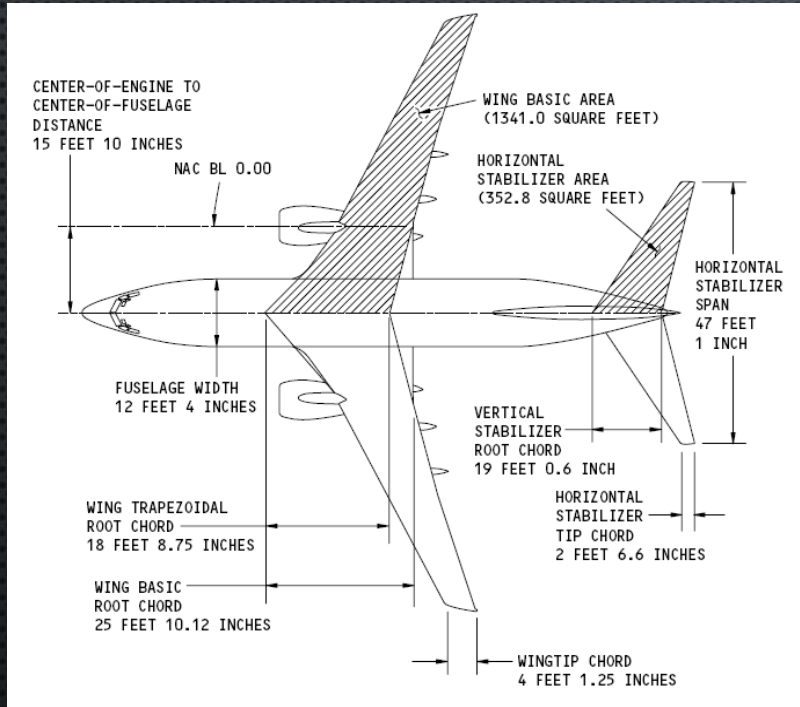


STABILIZERS

- LACK OF INFORMATION WAS A CHALLENGE
- USED B737A-IL AND B737D-IL AIRFOILS FOR THE HORIZONTAL STABILIZERS
- USED B540OLS-IL FOR THE VERTICAL STABILIZER
- MODELS WERE CREATED BY SKETCHING THE AIRFOILS AND CREATING
LOFTED BOSSES



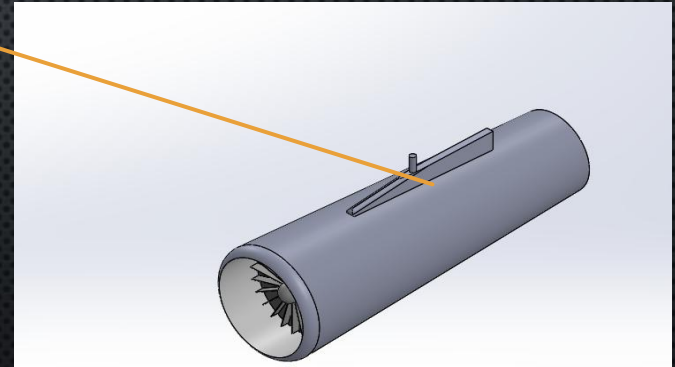
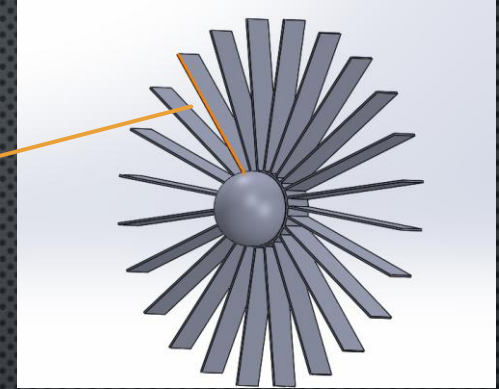
STABILIZER REFERENCE IMAGES



Aircraft Height (m)	11.23
Fin Height (m)	6.15
Fin Area (m ²)	20.81
Rudder Area (m ²)	5.22
Aspect Ratio	1.64
Taper Ratio	0.288
¼ Chord Sweep (°)	35

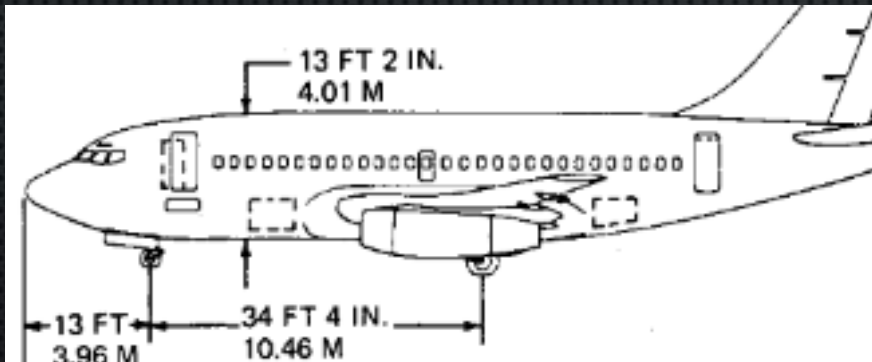
ENGINE

- MADE USING LOFT AND CIRCULAR PATTERN
- OPENING DIAMETER OF 48 INCHES
- FAN BLADE LENGTH OF 19 INCHES
- WING ENGINE MOUNT



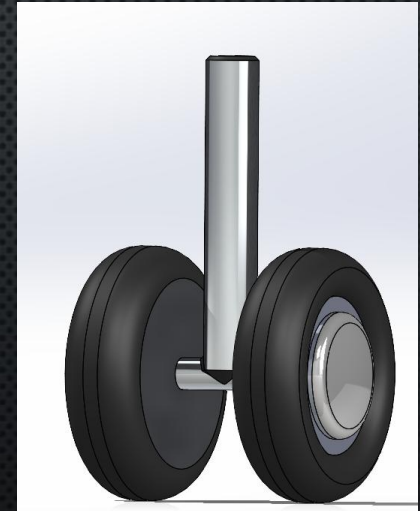
LANDING GEAR

- LANDING GEAR FEATURES
 - ❑ TREAD WIDTH
 - ❑ WHEEL DIAMETER
 - ❑ LANDING GEAR HEIGHT
 - ❑ LANDING GEAR POSITION



Main landing gear

Nose Landing gear



SOURCES

- [BOEING 737 DETAILED TECHNICAL DATA \(B737.ORG.UK\)](http://b737.org.uk)
- [HTTPS://WWW.PRATTWHITNEY.COM/EN/PRODUCTS/COMMERCIAL-ENGINES/JT8D](https://www.prattwhitney.com/en/products/commercial-engines/jt8d)
- [HTTPS://TRAVELUPDATE.COM/AIRCRAFT-LARGEST-WINDOWS/#:~:TEXT=FOR%20BOEING%20MODELS%20THAT%](https://travelupdate.com/aircraft-largest-windows/#:~:text=For%20Boeing%20models%20that%20)
- [MODERN AIRLINERS - BOEING 737](#)