

Natilus Model

WIND TUNNEL MODELING & TESTING

AeroTEC offers all-inclusive Wind Tunnel Modeling & Testing. From model design, to data analysis, we can help you design, build and test the model needed to get you the data that supports your program.

WIND TUNNEL MODELING & TESTING

AeroTEC's team of specialized engineers uses advanced design & simulation tools to **develop, fabricate, instrument and test highly complex wind tunnel models** for a variety of applications. Our models are designed for rapid configuration changes and can include powered control surfaces or powered motors for propulsion system effects.

CRM Model

ALL-INCLUSIVE CAPABILITIES

- Model Design
- Model Manufacturing
- Coordination
- Test Conduct
- Data Analysis

WIND TUNNEL FABRICATION

Our Wind Tunnel models are **designed in-house for efficient testing and rapid turnaround**; low-speed models can typically be produced in 2-3 months. A variety of materials and manufacturing processes are utilized to find the best **balance between production cost, speed of manufacturing and accuracy** - making it possible to design for low-cost.

TYPICAL MODEL MATERIALS

- Aluminum
- Steel
- Plastic
- High Density Foam
- Composites

MANUFACTURING PROCESS

- CNC Machining
- 3D Printing
- Composite Layup

OPTIONAL FEATURES

- Powered Control Surfaces
- Instrumentation and Pressure Ports
- Control Surface Forces & Hinge Moments
- Component Force Balances

LOW & HIGH-SPEED TESTING

LOW SPEED

- Stability and Control
- Drag Increments
- High Lift Development
- Simulation Database Development
- Preliminary Aircraft Design

HIGH SPEED & SPECIALTY

- Transonic Effects
- Supersonic Configurations
- Shock Wave Interactions
- Icing Systems Testing
- Airspeed Calibrations

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TYPICAL TESTING FACILITIES



NASA Ames Research Center



Boeing Transonic Wind Tunnel (BTWT)



San Diego LSWT



UNIVERSITY of WASHINGTON

University of Washington



WICHITA STATE
UNIVERSITY

Wichita State University

CATB Model

WIND TUNNEL TESTING

- Wind Tunnel Facility Coordination
- Test Plans
- Test Conduct
- Mid-Test Manufacturing Support
- Data Analysis

MODEL INSTRUMENTATION

TYPICAL INSTRUMENTATION

- Strain Gages
- Shear Sensors
- Temperature Sensors
- Pressure Sensors & EPS Scanners
- Accelerometers
- RPM Sensors

POWER SYSTEM INSTALLATION

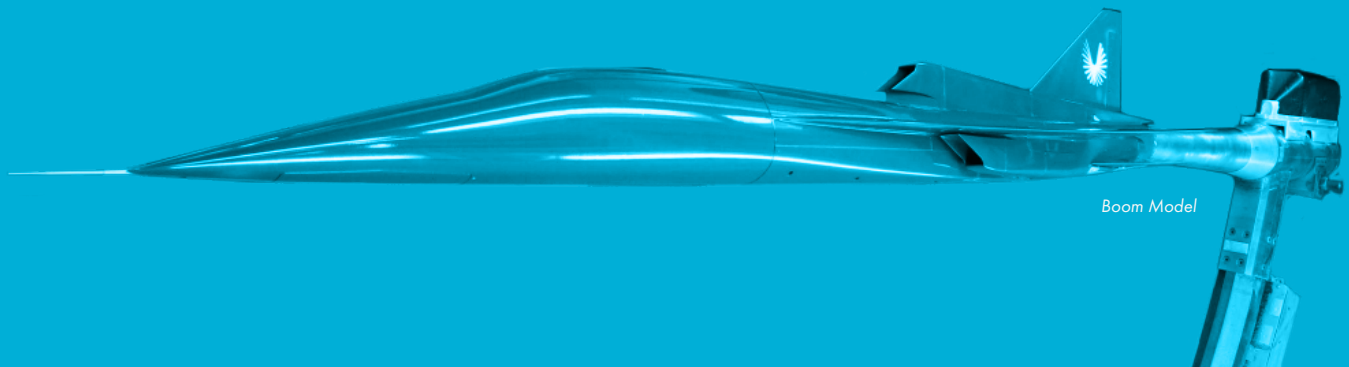
- Propeller Testing
- EDF Installations
- EVTOL Design Development
- Propulsion System Integration Testing

DATA ANALYSIS

- Force & Moment Data
- Loads Data
- Hinge Moments
- Stability & Control Parameters
- Thrust Effects

PREVIOUS CUSTOMERS

- Aurora Flight Sciences
- Aviation Partners
- Boeing
- Boom
- General Atomics
- Jetopectra
- Natilus
- Sierra Nevada Corporation
- Supernal
- University of Washington
- U.S. Air Force
- U.S. Army
- Wichita State University



CONTACT

SALES@AEROTEC.COM
206.763.6087
5601 6TH AVE S #410
SEATTLE, WA 98108



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AEROTEC.COM