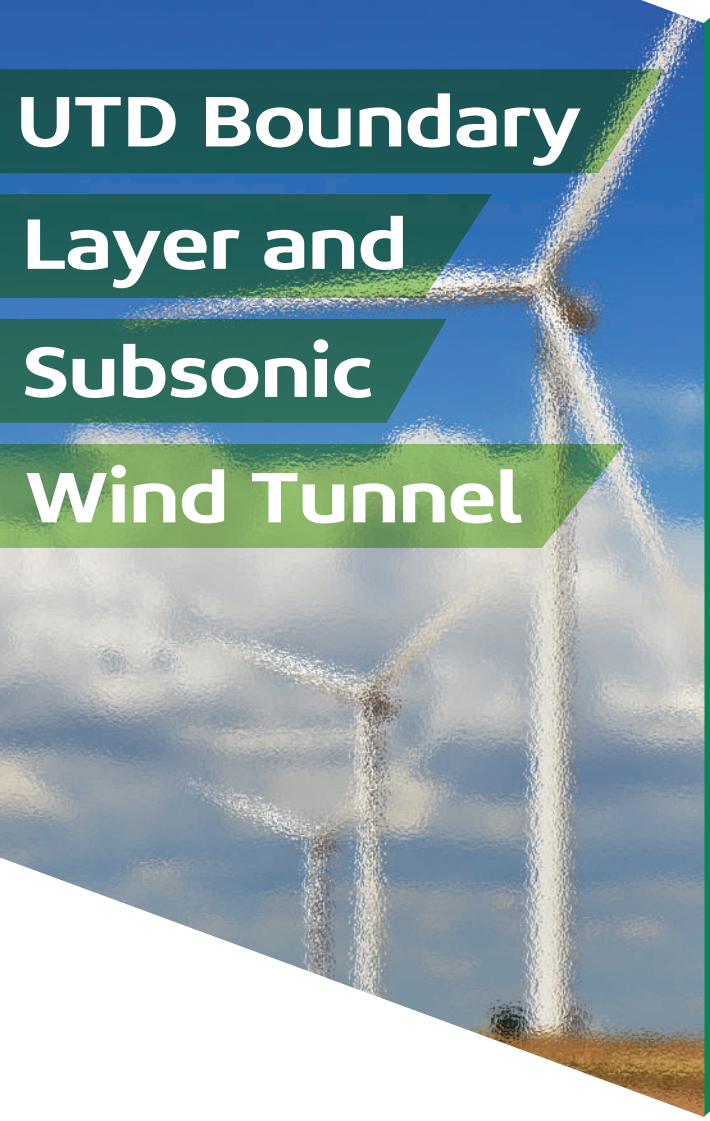
UT DALLAS
The University of Texas at Dallas

UTD Boundary Layer and Subsonic Wind Tunnel



About Us

The dual test-section wind tunnel facility enables performance of tests for a wide range of applications, such as boundary-layer flows, transport phenomena, wind engineering, wind energy, urban flows, aerodynamics, aeronautics, aeroelasticity, and sport aerodynamics. Full optical access to the test sections and state-of-the art instrumentation are available for highly accurate experiments.

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Specifications

- Complete optical access
- Automated turntables in each test section
- Turbulence intensity <0.1%
- 4-DOF traversing system

Dimensions

Boundary Layer Test Section:
2.1 m (H) x 2.8 m (W) x 30 m (L)
Max. speed 34 m/s

Subsonic Test Section:
2.1 m (H) x 2.1 m (W) x 4 m (L)
Max. speed 50 m/s

Instrumentation

COBRA PROBE

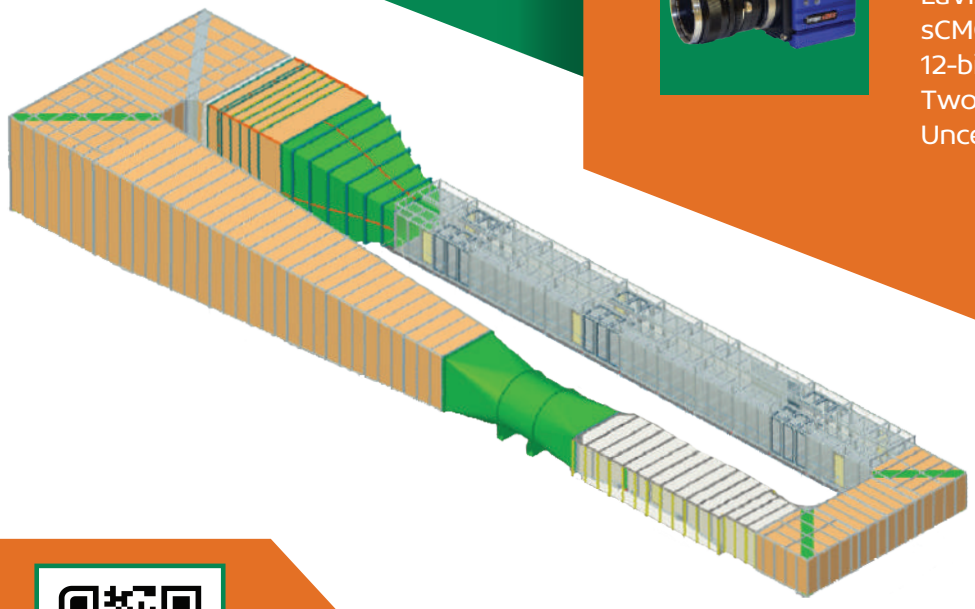
Two cobra probes with frequency response up to 3kHz from TFI, Inc. Capable of measuring three velocity components. Aerodynamic probe mounts.

HOTWIRE ANEMOMETRY

Four channel hot-wire (three heated channels, one cold channel) from AA Lab Systems. Automatic probe calibrator with roll-pitch manipulator.

PIV SYSTEM

3-component stereo-PIV system from LaVision. Setup includes: Two 6MP sCMOS 16-bit cameras, Two 22MP CCD 12-bit cameras, 380mJ dual-cavity laser, Two-plane calibration target, Uncertainty quantification



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