NWTF >

University of Bristol Anechoic Wind Tunnel

Location:

University of Bristol Lawson Wind Tunnel Lab

Owner(s):

University of Bristol United Kingdom

Test Section Size:

Anechoic chamber: approximately 7 x 4.5 x 3.5m High-Speed nozzle: 0.6 x 0.2m maximum speed 100m/s Medium-Speed nozzle: 0.6 m x 0.4 m; maximum speed 60m/s Low-Speed nozzle: 0.5 m x 0.755 m; maximum speed 40m/s Jet Noise Facility: 1.5inch diameter; maximum speed 1.4 Mach

Operational Status: Operational

Number and Type of Staff: Scientific: 6 Technical Support: 4

Test support:

Workshop for wind tunnel model design, manufacture and modification capability.

Specialist Rigs:

- Source location microphone array (73 microphones)
- Source location microphone array (83 microphones)
- Mems-based microphone array (124 microphones)
- Array of over 80 GRAS and B&K free-field microphones for far-field noise measurements
- Several single-rotor and multi-rotor propeller systems
- Several highly instrumented airfoils, and high-lift devices, cylinders, jet nozzles, etc.

Designation: Closed-circuit wind tunnel and a large anechoic chamber; Jet noise test facility

Performance:

Mach Number: Jet:1.4Mach Maximum Flow Speed: Low speed nozzle: 40m/s. High speed nozzle: 100m/s. Jet: 1.4Mach Reynolds No: -Total Pressure: -Dynamic Pressure: -Total Temperature: Controllable Turbulence intensity: <0.1% Run Time: -Typical Recharge Time: -

Testing Capabilities:

Acoustic: Near-field and far-field Flow visualisation: Hotwire, hotfilm Aerodynamic loads: Force plates, force cubes, load cells, etc Laser Measurements: TR-PIV