

University of Southampton Anechoic Wind Tunnel

LS8

Location: Southampton	Designation: Anechoic Wind Tunnel
Owner(s): University of Southampton Southampton SO17 1BJ United Kingdom	Performance: Mach Number: 0.23 Maximum Flow Speed: 80 m/s Reynolds No: $5.4 \times 10^6/m$ Total Pressure: 1.04 bars Dynamic Pressure: Up to 3.9 kN/m ² Total Temperature: Ambient to 296K Turbulence intensity: n/k Run Time: Continuous Typical Recharge Time: n/a.
Test Section Size: 1.0m x 0.75m 8.7:1 contraction ratio. Anechoic Chamber Size: 8.15m x 5.5m x 4.75m	Testing Capabilities: Acoustic: Farfield microphones and phased microphone array Flow visualisation: Video, surface fluorescent oilflow. Aerodynamic loads: Capability to measure surface pressures and loads Laser Measurements: Capability to perform particle image velocimetry measurements
Operational Status: Active	
Number and Type of Staff: Scientific: 5-8 Technical Support: 1-2	
Test support: Workshop for wind tunnel model design, manufacture and modification capability.	
Specialist Rigs: <ul style="list-style-type: none"> • Arc of farfield microphones to obtain comprehensive directivity information • Simultaneous microphone array and laser diagnostics • It will be a unique facility within the UK that is able to conduct airframe noise and loads tests, high speeds train research as well as some specialist propulsive (engine) research 	