Cambridge University Supersonic Tunnel No. 1&2

TS1, TS2

Location: Cambridge

Designation: Transonic/supersonic
Open Return blow down

Owner(s):
Cambridge University Engineering Department, Trumpington Street, Cambridge, CB2 1PZ

Performance:
Mach Number: 0.6 - 3.5
Maximum Flow Speed: 650m/s
Reynolds No: 20 - 60x10^6/m
Total Pressure: 146 - 950 kPa
Dynamic Pressure: n/a
Total Temperature: 285 K
Turbulence intensity: n/k
Run Time: 30-60s
Typical Recharge Time: 20 mins

Test Section Size: 0.12m x 0.2m x 0.6m

NOTE: Two identical facilities

Operational Status: Active

Number and Type of Staff:
Scientific: 2+
Technical Support: 1/2

Test support:
Workshop for wind tunnel model design, manufacture and modification capability

Testing Capabilities:
Model support: 3-component sting balance.
Data Acquisition: Multiple channel simultaneous data acquisition.
Outputs: Forces & moments, pressure (3-hole and 5-hole Pitot probes) and velocity (2-component LDA & PIV)
Flow visualisation: shadowgraph, schlieren imaging, surface oil flow, liquid crystals, pressure sensitive paint.

Specialist Rigs:

Ejector system for boundary layer suction in working section