Glasgow University 9 x 7 Low Speed Wind Tunnel

LS5

Location: University of Glasgow

Designation: Low Speed
Closed Return

Owner(s):
Aerospace Sciences Division.
School of Engineering
University of Glasgow, Glasgow, G12 8QQ
United Kingdom

Performance:
Mach Number: 0.2 (max)
Maximum Flow Speed: 70 m/s
Reynolds No: $4x10^6$/m (max)
Total Pressure: 1 bar
Dynamic Pressure: Up to 2.94 kN/m^2
Total Temperature: Ambient to 300K
Turbulence intensity: <0.2%
Run Time: Continuous
Typical Recharge Time: n/a.

Test Section Size: 2.74m x 2.1m x 5m
5:1 contraction ratio.

Operational Status: Active

Number and Type of Staff:
Scientific: 2
Technical Support: 5+

Testing Capabilities:
Model Support: platform load cell beneath working section, and various capacity load cells
Data Acquisition: 192 channel simultaneous data acquisition (16 bit) at up to 500kHz.
64 channel simultaneous data acquisition (24 bit) at up to 128kHz.
Outputs: Forces & moments, pressure, velocity (Stereo PIV for high resolution over large area – up to 1m x 1m)
Flow visualisation: Smoke, video, surface fluorescent oilflow.

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

Notes:
This is the former British Aerospace/ deHavilland wind tunnel from Hatfield, Herts. It was moved to Glasgow in the early 1990s.

Specialist Rigs:

- Dynamic stall;
- Rotor rigs have been developed and used in this tunnel.
- Sting support system