Acoustically optimised Large Wind Tunnel

The acoustically optimised large scale wind tunnel with its specific design is particularly apt for aero-acoustic research & development projects. It also allows for testing on comparatively large components and realistic models. Calibration and function tests of wind measurement sensors at high flow velocities are also possible, just as the use for R&D projects for the industry as well as for scientific institutions.

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Test Section Dimensions:

1. Closed test section	B x H x L = 2.75 m x 1.25 m x 5 m Vmax = 100 m/s
2. ¾ open test section	B x H x L = 4 m x 2.8 m x12 m Vmax = 40 m/s

Flow Characteristics

1. Flow Speed	up to 100 m/s
2. Reynoldsnumber	up to 6 million (based on a 900 mm chord model)
3. Turbulence Intensity in [20:5000] Hz range	≤ 0.05%
4. Flow velocity deviation	ΔV ≤ 0.5%

Measurement Systems

1. Redundant measurement system	surface & wall press., forces, wake rake
2. 360 degree polars	at Reynolds numbers of up to 1.5 millio
3. Thermography for Laminar/ Turbulent transition detection	output data in absolute x/c coordinates
4. Online monitoring of live measurements	no need to travel

Electrical power 1 MW