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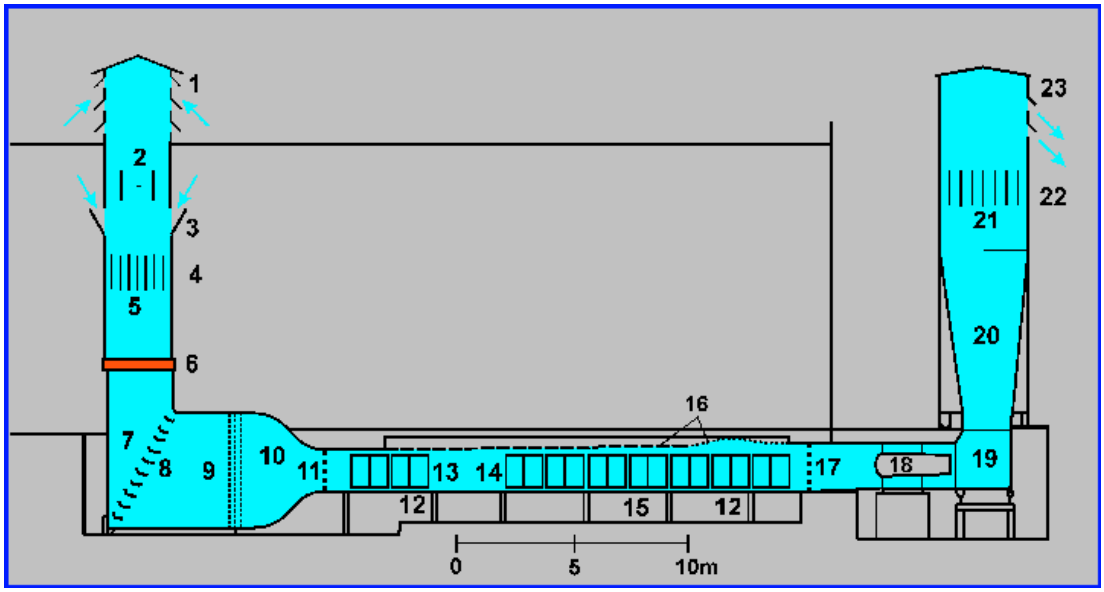
Atmospheric Wind Tunnel:



1 Air Flap	9 Turbulence Screens	17 Honeycomb
2 Air Flap	10 Nozzle 1,85m x 1,85m	18 Fan Motor 350 kW
3 Bypass Flaps	11 Honeycomb	19 Turning Corner
4 Blow-In Tower	12 Turntable	20 Diffusor
5 Sound Absorber	13 Test Section	21 Sound Absorber
6 Heating 1,2 MW	14 Windows / Doors	22 Blow-Out Tower
7 Turning Corner	15 Floor Panels heated/cooled	23 Air Flap
8 Turning Vanes	16 Flexible Ceiling	

Technical Characteristics of the Atmospheric Wind Tunnel

Electrical heating in the blow-in tower (N = 1,2 MW) to heat the air up to a maximum of 80 °C at a test section velocity of 4.0 m/s. Heating and cooling of the floor panels in the range between 0 °C and 150 °C in order to simulate neutral, robust and instable layered atmospheric boundary layer flows at ground level for Richardson numbers Ri between -0.4 and +0.4 and for geometric scales between 1 to 100 and 1 to 1000.

Open circuit with a closed test section. Flexible test section ceiling with adjustable height in order to arrange for preset pressure gradients (for example: dp/dx = 0) within the test section. Test section of great length (L = 22.0 m) for the natural generation of fully developed boundary layer flows of big height (up to 1.5 m). Cross sectional area of the test section about 4 m². Velocity in the test section adjustable between 2 m/s and 45 m/s.