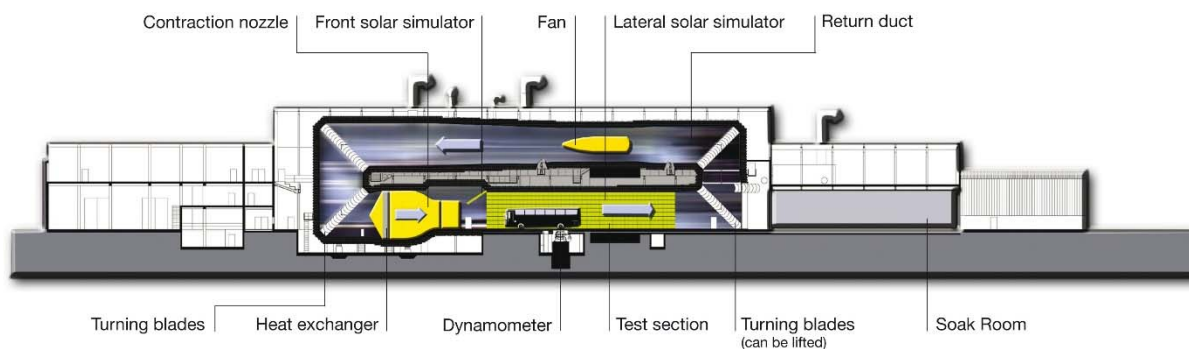
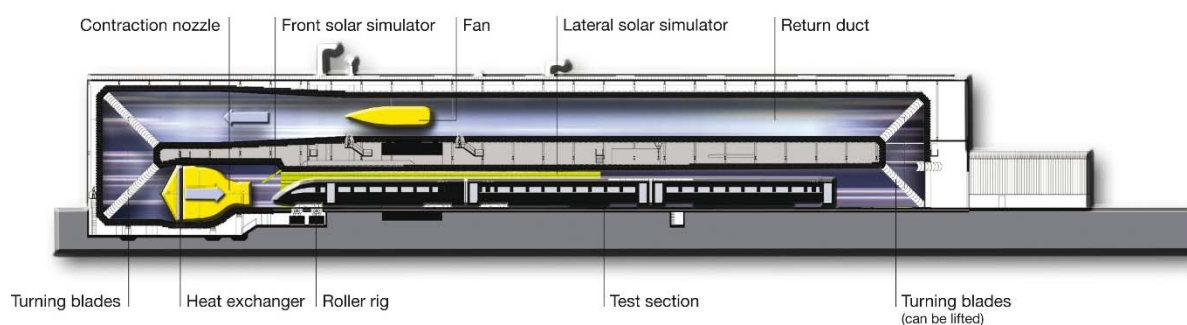


Technical Data

Small Climatic Wind Tunnel (small CWT)



Large Climatic Wind Tunnel (large CWT)



Description	small CWT	large CWT
Contraction nozzle dimensions width / height / area	3.5 m / 4.6 m / 16.1 m ²	
Contraction ratio of nozzle	3.98	5.72
Test section width height cross sectional area	4.9 m to 5.1 m 5.9 m to 6.0 m 27.2 m ² to 28.7 m ²	4.9 m to 5.6 m 5.9 m to 6.2 m 27.2 m ² to 32.2 m ²
Distance between nozzle and start of test section (also begin of lateral solar simulator)	3.5 m	
Test section length	33.8 m	100.0 m
Distance between nozzle and dynamometer / roller rig	16.0 m	7.5 m

Description	small CWT	large CWT
Dimensions of lateral solar simulator length / height	30.0 m / 4.3 m	60.0 m / 4.3 m
Maximum temperature range	-45°C to +60°C	
Maximum wind speed	120 km/h	300 km/h
restrictions at low temperatures e.g. at -20°C	120 km/h	200 km/h
Maximum temperature gradient in the temperature range -20°C to +60°C	10 K/h	
Relative humidity at temperatures > +10°C	10% to 98%	
Solar intensity of lateral solar simulator at fixed 30° angle of incidence operating temperature > -10°C	200 W/m ² to 1,000 W/m ²	
Solar intensity of front solar simulator maximum wind speed: at incidence angles < 45° up to 120 km/h at incidence angles >= 45° up to 50 km/h operating temperature > -10°C	200 W/m ² to 1,000 W/m ²	
Rain, snow and icing systems	stationary ceiling mounted rain and icing system spray rig covering entire tunnel cross section mobile (snow) nozzles	
Braking and load simulation	dynamometer with one driven axle	roller rig with one driven and one nondriven axle
Maximum power	250 kW drive power 300 kW brake power	850 kW drive and brake power 1.5 MW overload for 90 s
Maximum speed	160 km/h	280 km/h
Load simulation	4,000 to 20,000 kg	Up to 20,000 kg
Maximum axle load	14,000 kg	20,000 kg
Roller diameter	1,591.5 mm	1,000 mm
Roller surface	tungsten carbide coated	-
Roller spacing	1,000 mm	-
Roller width	1,000 mm	track profile
Distance between axels, adjustable	-	1,100 mm to 3,000 mm
Gauge of track	-	1,435 mm
Passenger simulation	latent and sensible load continuously adjustable in accordance with standard requirements	

Soak Room for pre-tests and alternating climate tests in combination with the small CWT.

Dimensions length / width / height	30 m / 8 m / 6 m
Temperature range	+5°C to + 60°C
Relative humidity at temperatures > +10°C	10% to 98%

Preparation halls for setup and adjustment work

	Small preparation hall	Large preparation hall
Dimensions length / width / height	60 m / 11 m / 7,5 m	100 m / 11 m / 8,5 m
5 t ground controlled gantry crane	-	along entire hall length

Auxiliary and test voltages

200 – 1,000 V DC	2 x 175 kVA 350 A max
1,000 – 3,600 V DC	350 kVA 235 A max
3x200–1,000 V 40 – 60 Hz	350 kVA 500 A max
200 – 1,200 V 16 2/3 Hz	350 kVA 350 A max
500 – 1,800 V 40 - 60 Hz	350 kVA 350 A max
3 x 400 V 50 Hz	350 kVA 500 A max
20 – 200 V DC	200 A max