

## CLIMATIC TESTS

### ② Environmental conditions and temperature stresses

can affect the mechanical and functional characteristics of materials and potentially damage them. The complexity of these parameters is such that their effect on system compliance is difficult to assess (temperature coefficients, thermal inertia, ice load on overhead lines).

The Laboratories have climatic-controlled facilities able to simulate the environmental constraints (temperature, humidity, solar radiation, ice), in accordance with international standards. The size of the climatic chamber allows us to test very bulky apparatus including military equipment or civil engineering structures and thus to respond to a wide range of customer needs.



Commissioned in 1982, this climate room has been renovated to keep up with the needs of our customers and to carry out more and more innovative tests.

The performance of the new installation has a temperature range from  $-40^{\circ}\text{C}$  to  $+60^{\circ}\text{C}$ , during summer and winter. It is also equipped with a moisture production system.



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CARACTERISTICS	CLIMATIC ROOM	
DIMENSIONS	14,6 m x 6,55 m x 12,6 m	
VOLUME CAPACITY	1200 m <sup>3</sup>	
TEMPERATURE RANGE	-40 °C to +60 °C	
TEMPERATURE VARIATION	Drop 5 K/h Rise 7 K/h	
REGULATION	± 2 K	
HUMIDITY	Up to 95 % at 60 °C	
PAVEMENT LOAD	50 t/m <sup>2</sup>	
COOLING POWER	736 kW cold (CO <sub>2</sub> ) 133 kW hot	
EQUIPEMENT		
ICE DEVICE DIMENSIONS	1 12 m x 3 m	2 2,5 m x 5 m
SOLAR SIMULATION DEVICE DIMENSION	6 m x 2 m	
NUMBER OF LAMPS	432	
POWER	1120 W / m <sup>2</sup>	
CONTAMINATED GAS EXTRATION SYSTEM	Yes	
DIRECT CURRENT SOURCES DC	4 supplies 0-300 V 30 A	
ALTERNATING CURRENT SOURCES AC		
Single-phase source	2 supplies 0-250 V	
Three-phase source	2 supplies 0-440 V	
CURRENT SOURCE	10 V 0-150 A	

