

FAN COIL PERFORMANCE

TEST LABORATORY & RESEARCH CENTER

"Each kW is under control!"

Discover Our Innovative Fan Coil Test and Validation Laboratory!

Untes Fan Coil Performance Test Laboratory and Research Center provides its customers and business partners to eliminate all the risks at start up, know in advance the unit performance at actual operating conditions, and verify unit limits at severe operating conditions. Thanks to the tests applied in research center, the operating performance of the units is measured in a comprehensive manner and fault management functions are optimized before installation.



Eliminate all the risks at start up



Know in advance how the unit will operate at actual operating conditions



Verify unit limits at severe operating conditions



Test and Measurement Standards

Fan coil test and measurements are performed in comply with ASHRAE and EN-1394 standards. Basically; heating and cooling capacities, air flow rates and supply pressure values are measured as air side & water side measurement parameters.

Testimony Structural Features

- 1. Thermal isolated control room:** Control room, where the test sample is installed and space temperature & humidity level is precisely kept constant, is designed and built according to related international reliability standards. Both the walls and ground are insulated and built up as for relevant geometric & design standards.
- 2. Test and measurement set up:** The section, where the fan coil air flow, and all other measured parameters are tested and remotely monitored, is built and equipped with pre insulated air tight ducts, remote temperature, pressure, and humidity sensors.

- 3. Data control processing and reporting center:** The section, where all mechanical, electrical and electronic infrastructure is available and controlled during test and measurement. All variables are defined in this section, and system performance is measured and monitored. All digital data is compiled and reported by specific software tools. The reported screens are totally result oriented and commented by Untes test professionals.

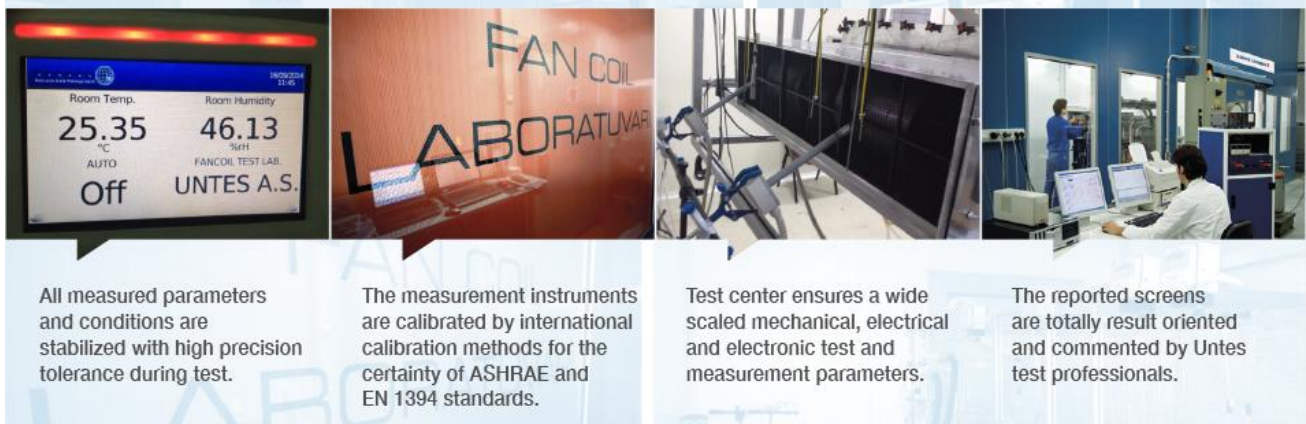
Performance and Witness Tests

All the measured parameters and conditions are stabilized with high precision tolerance during test. The measurement instruments are calibrated by international calibration methods for the certainty of ASHRAE and EN 1394 standards.

Test center ensures a wide scaled mechanical, electrical and electronic test and measurement parameters:

- ✓ Heating Capacity
- ✓ Cooling Capacity
- ✓ Airflow Rate
- ✓ Supply Air Pressure

Thanks to the tests applied in research center, the operating performance of the units is measured in a comprehensive manner and fault management functions are optimized before installation.



All measured parameters and conditions are stabilized with high precision tolerance during test.

The measurement instruments are calibrated by international calibration methods for the certainty of ASHRAE and EN 1394 standards.

Test center ensures a wide scaled mechanical, electrical and electronic test and measurement parameters.

The reported screens are totally result oriented and commented by Untes test professionals.

Failure Diagnosis

This is the phase that virtual failures are simulated for the unit tested, and the troubleshooting analysis & solution methods are optimized while solving active faults or alarms.

Function and Performance Measurement Parameters

Thermodynamic Measurements

- ✓ Control room air temperature (°C)
- ✓ Coil water inlet and outlet temperatures (°C)
- ✓ Cooling capacity (kW)
- ✓ Heating capacity (kW)
- ✓ Coil volumetric water flow rate (m³/h)

Electrical Measurements

- ✓ Phase current (A)
- ✓ Supply voltage (V)
- ✓ Absorbed power (kW)
- ✓ Power factor (Ø)