AMCA 210 / ISO 5801 TEST LABORATORY SUCCESSFULLY INSTALLED IN POLAND

HW VENTILATION SUPPLIED DESIGN, CONSTRUCTION, INSTALLATION AND FINAL ON-SITE COMMISSIONING OF A TEST CHAMBER FOR TESTING THE AIRFLOW RATE OF HEAT EXCHANGERS



Rescaldina, 17/05/2023

HW VENTILATION'S ROLE



HW Ventilation was chosen by a leading manufacturer of energy recovery systems and heat exchangers for the design, construction and on-site installation of a new test laboratory for their R&D department in Poland.

SCOPE OF THE SUPPLY

The chamber, designed and built according to AMCA 210 and ISO 5801 standards, will enhance the test capabilities of the R&D laboratory and will be used to measure the performance of current and new products and prototypes.

As part of the project HW Ventilation supplied also the hardware (DAQ system), the instruments (pressure, temperature sensors, wattmeter...) and a Labview-based software to process the data acquired through the sensors.

THE SOLUTION

AMCA 210 test chamber, with 11kW auxiliary fan, automatic nozzles, instruments - dimensions 2000 mm W x 2000 mm H x 7400 mm L.

HW Ventilation was charged with the design, construction, on-site supervision to installation and final commissioning of a complete AMCA 210 test chamber.

In order to meet the customer's requests, the nozzle wall had to be properly designed with 9 nozzles, Ø200 mm each. The nozzles were machined from billet high-quality aluminum alloy and finished with polishing surface treatment to pass the tolerance tests according to AMCA 210 standards. The nozzles were supplied with mechanisms for automatic opening/closing, consisting of linear and rotary air compressed actuators.

The other crucial component of the chamber were the settling means: sequences of wire cloths positioned upstream and downstream the nozzles wall in order to ensure a substantially uniform airflow.

The instruments were also supplied by HW Ventilation and were integrated in the chamber during the assembly.

The hardware (DAQ system), the instruments (pressure, temperature sensors, wattmeter...) and a Labview-based software to process the data acquired through the sensors were also included in the turn-key project.

Main characteristics:

- maximum flow rate: 8.33 m³/s (30 000 m³/h) (density 1.2 kg/m³)
- minimum flow rate: 0.04 m³/s (density 1.2 kg/m³)
- maximum ?P at nozzle wall: 1000 Pa • 9 nozzles, Ø200 mm each

Dimensions: 2000 mm W x 2000 mm H x 7400 mm L

At HW Ventilation, we design and construct AMCA 210 / ISO 5801 test chambers according to the specific requirements of our customers. Every project is unique, and we pride ourselves on finding the most appropriate, tailor-made solutions to our clients.

Contact us now for a free preliminary consultation:

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