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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 m^3/s (30 000 m^3/h) (density 1.2 kg/m^3)
- minimum flow rate: 0.04 m^3/s (density 1.2 kg/m^3)
- 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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