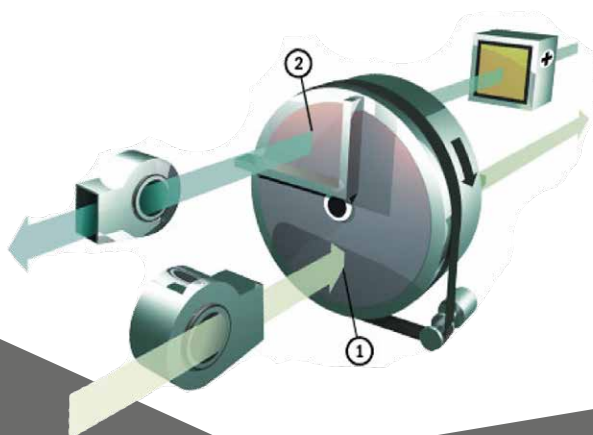


SAMP SOLVES THE PROBLEM OF CONTROL OF HUMIDITY OF DURING THE DIESEL MOTOR TESTS AT GENERAL MOTORS

Samp[®]
SOLUZIONI AEROMECCANICHE S.p.A.



At the GM PowerTrain in Turin, directly in Campus of the Polytechnic University of Turin, the General Motors Diesel motors are created, destined to all worldwide markets. The PowerTrain is an Italian excellence which was born inside the Polytechnic University and it's preparing to develop more and more modern and efficient motors. It was created in 2005 with 80 employees. Now in the GM centre work more than 550 engineers who are designing all the world General Motors' Diesel motors. GM invested more than 50 million euros in Turin PowerTrain Center. It is now equipped with 4 new testing benches, two of which for climatic tests. In

particular, one of the two test benches is dedicated to make climatic tests that chamber. For the correct performance of the tests with such low temperatures, humidity represents an issue. In fact, the eventual presence of condensation in the treated air would turn into ice, impeding the correct performances of the climatic test bench and preventing the carrying out of the test or making it invalid.

SAMP, thanks to their know-how, solved this problem. The air handling and dehumidifying unit works with 100% fresh air and once the air is treated, it is post-cooled to -30°C by a post-cooling system and introduced into the test chamber. **SAMP**, with their technicians,

designed and produced: **one single-piece adsorption dehumidification unit**. This, through the adsorption dehumidification technology make it possible to reach, maintain and precisely control a dew point way below the air condensation point. **One single-piece post-cooling unit to -30°C** designed and built to treat the air exiting the dehumidifier to reach the -30°C temperature with a relative humidity lower than 20%!



MAIN TECHNICAL DATA

DEUMIDIFICAZIONE

Q aria di Processo 5000 m³/h

Condizioni richieste:

Temperatura: - 30°C
Umidità specifica: 0,3 gr/kg
Td, punto di rugiada: - 30°C

Deumidificazione con ROTORE PPS

Q aria di Rigenerazione: 937 m³/h 2000 m³/h

CARATTERISTICHE MECCANICHE EN 1886

Resistenza Meccanica: D1
Trafilamenti: L2
Trasmittanza termica: T2
Ponte termico: TB2

Struttura in AL a taglio termico
Pannelli sandwich spessore 60mm

Isolamento:

Processo Poliuretano espanso densità 50 kg/m³
Rigenerazione lana minerale densità 90 kg/m³

POST RAFFREDDAMENTO

5000 m³/h

- 30°C

D1

L1

T1

TB2

Struttura in AL a taglio termico
Pannelli sandwich spessore 100mm

Isolamento:

Poliuretano espanso densità 50 kg/m³

QUALITY SAMP CERTIFICATIONS

ISO9000:2000

CESI - ATEX

EUROVENT HYGIENE VDI 6022

ISO 14001:2004 Environmental Management System

BS OHSAS 18001:2007

GOST R (СИСТЕМА СЕРТИФИКАЦИИ ГОСТ Р)

SAMP “was born” in Monza in 1969 and was one of the first Italian companies to specialize in the production of air handling unit. Today SAMP is the market leader of Air treatment m not only due to the quality of its products, but mainly about the total quality which is able to provide to its customers from the start of design to delivery ... and even after

PRODUCTS

> **SORPTION DEHUMIDIFIERS:** Standard e Custom

> **AHU EVO:** AHUPlug&Play

> **AHU:** From 2.000 a 91.000 m³/h with pressure until 3.000 Pa

> **AHU POOL:** Units for swimming pool and fitness

> **AHU HOR:** Units for operating theaters

REFERENCES



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