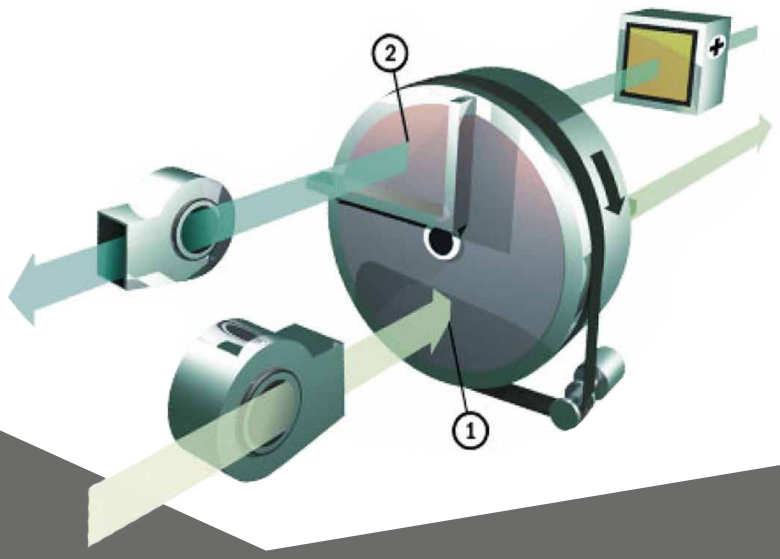
SAMP AS PART OF ALICE PROJECT SOLVE THE PROBLEM OF MOISTURE AND TEMPERATURE AT CERN GENEVA



The CERN “Conseil Européen pour la Recherche Nucléaire”, based in Geneva. Is a scientific organization founded in 1952 with the aim of to develop the research in fundamental physics. At CERN using the largest and most complex scientific instruments to investigate the structure of matter through the simulation of the “Big Bang” which is done by the collision matter particles at the speed of light within an underground tunnel. In this way scientists can see how the particles interact by providing an overview of the fundamental laws of nature. The instruments used at CERN are designed and built specifically: particle accelerator and detectors. Accelerator allow to “throw” high- energy particles, the detect ors make it possible to observe and record the results of the se collisions. ALICE, an acronym for “ a Large Ion Experiment collider at CERN “is a project involving a thousand researchers from 86 institutes of 29 countries, has as purpose the construction of a detector for heavy ions which allows to verify the effects of interactions between the nuclei at energies obtainable with the large Hadron Collider (LHC), in operation at CERN since 2008. The large Hadron Collider (LHC) is the largest and powerful accelerator of the World LHC consists of a ring of 27 Kilometers of super conducting magnets with a number of accelerating structures to increase ‘energy of th e particles. The project is therefore based on the ion detector. This device is the he art of the experiment and need for very accurate and stable temperature and humidity conditions. The technical SAMP in collaboration with CERN have designed and produced a system for th e humidity and temperature control that allows to CERN to reach and maintain the strict specifications required by researchers. The technology used involves the use of absorption dehumidifier with a special configuration of the air flow that, together with hydronic devices for the achievement of the required parameters.

Large Hadron Collider

MAIN TECHNICAL DATA

PROCESS AIR FLOW

IN 300 m³/h aexternal air
OUT dry air: X =< 1 gr/kg
td=< -15°C to 18°C

REACTIVATION AIR FLOW IN 180 m3/h external air

IN 180 m³/h a tutta aria esterna
OUT: = 130°C
Installed power: KW 3,75

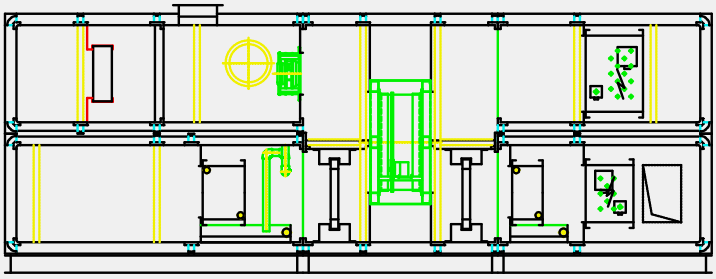
SORPTION ROTOR Type: PPS

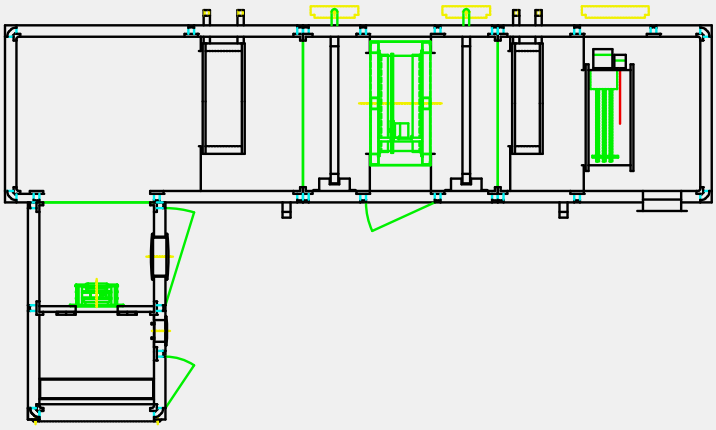
Configuration with energy recovery

MECHANICAL SPECIFICATIONS EN 1886

Mechanical strength: D1
Leakage: L1
Thermal transmittance: T2
Thermal bridge: TB2

Structure in AL without thermal bridge
Sandwich panels 60 mm thick
Insulation mineral wool density 90 kg/m³





QUALITY SAMP CERTIFICATIONS

ISO9000:2000
CESI - ATEX
EUROVENT HYGIENE VDI 6022
ISO 14001:2004 Enviromental 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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