SAIVER®

SINCE 1959

INTEGRATED AIR HANDLING SYSTEM

A1-Series

EUROVENT CERTIFIED PERFORMANCE
AHU N° 03.05.389
Range: A1(M)
www.eurovent-certification.com

Handling air to SAIVER® is as natural as breathing.

SAIVER® has been manufacturing high quality Air Handling Units for almost half of a century. The series A1 Air Handling System is the culmination of experience over the years together with continuing improvement through Research and Development.

The superior quality of the series A1 have also been recognized by the world, including the certification of EUROVENT.

EUROVENT Certificate Result

Panel Thickness	Casing Strength	Casing Air Leakage Under -400Pa	Casing Air Leakage Under +700Pa	Filter Bypass Leakage	Thermal Transmittance	Thermal Bridging Factor
88mm	D1	L1	L1	F9	T1	TB1
60mm	D1	L1	L1	F9	T2	TB2


Eurovent Certita Certification
CERTIFICATE N° 03.05.389
Air Handling Unit / Centrales de traitement d'air
Range Name / Nom de Gamme : A1(M)
Participant/Titulaire
SAIVER SRL
Via M. de Bernardi, 18
20050 Monza (MI), Italy
Paris, 13 décembre 2022
MANAGING BOARD MEMBER / MEMBRE DIRECTOIRE


Eurovent Certita Certification
CERTIFICATE N° 03.05.043
Air Handling Unit / Centrales de traitement d'air
Range Name / Nom de Gamme : A1(S)
Participant/Titulaire
SAIVER SRL
Via M. de Bernardi, 18
20050 Monza (MI), Italy
Paris, 16 juin 2022
MANAGING BOARD MEMBER / MEMBRE DIRECTOIRE


Eurovent Certita Certification
CERTIFICATE N° 03.05.390
Air Handling Unit / Centrales de traitement d'air
Range Name / Nom de Gamme : A1(C)
Participant/Titulaire
SAIVER SRL
Via M. de Bernardi, 18
20050 Monza (MI), Italy
Paris, 13 décembre 2022
MANAGING BOARD MEMBER / MEMBRE DIRECTOIRE

COMPANY PROFILE

SAIVER® Air Handling Units incorporate the finely tuned, value engineered cost effective design aided by computer coupled with human ingenuity.

SAIVER® team comprises of highly experienced Engineers and Technicians totally committed to produce one of the finest Double Skinned Air Handling Units range in the World to meet the requirements of most demanding Cost and Quality conscious customer.

SAIVER
SINCE 1359
INTEGRATED
AIR HANDLING SYSTEM

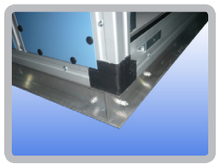
SAIVER S.R.L

Zhongshan SAIVER WELAIRE Air-Cond. Equip. Co. Ltd.

Welcome Air-Tech (Malaysia) Sdn. Bhd.

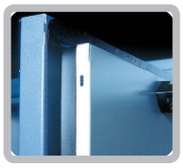
SAIVER® has kept pace with the time and has always been ahead of its competitors. With automized production (directly from selection program), SAIVER® manufactures CUSTOM-MADE units economically, efficiently and quality assuringly.

SAIVER® units incorporate the finest corrosion resistant materials, such as Stainless Steel, Marine Aluminium Alloy and Copper to ensure long years of trouble free operation in the most adverse conditions.



The Frame

SAIVER® unique frame design has inherent strength stability. The modular framework utilises a corrosion resistant, extruded marine aluminium alloy, patented twin box section with True Thermal Break Construction. The entire module is subsequently mounted on a heavy sectional aluminium alloy or galvanized steel channel base.



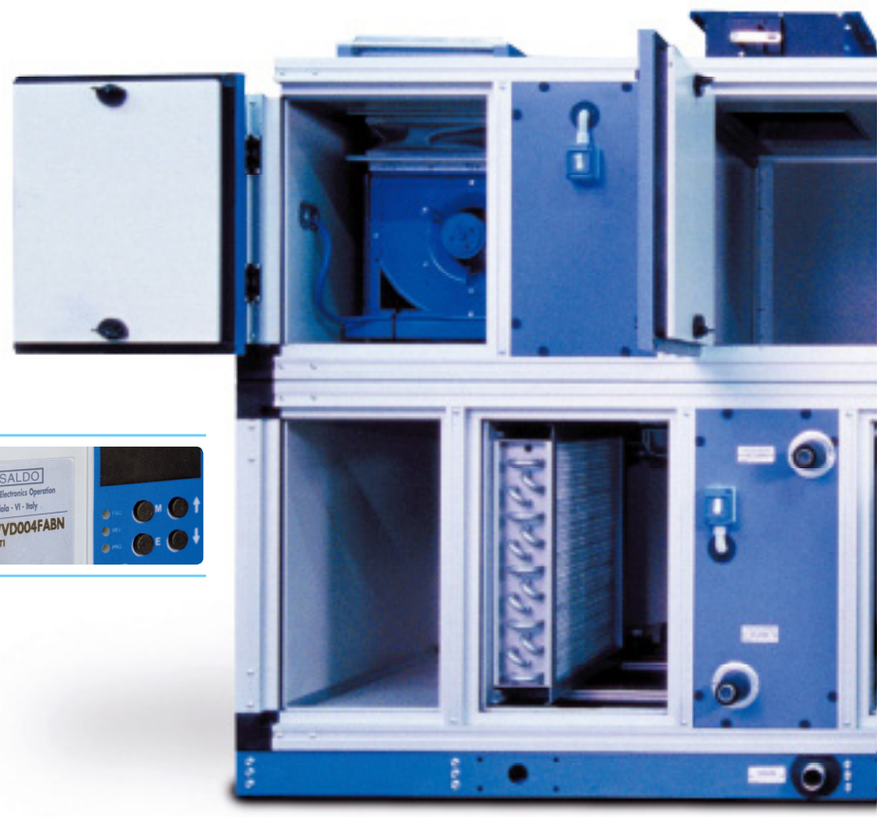
Infill Panels

Standard 60mm or 88mm thick infill panels are of double skinned construction from pressure injected polyurethane foam insulation with 'K' value of 0.02Watt/m°c and density 40kg/m^3, sandwiched between galvanized steel with optional pre-plasticized or pre-painted finish, PERALLUMAN and stainless steel sheet is also available.

Accessibility

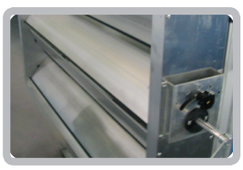
Filter, Coils, Air Washers and Fan Sections requiring regular maintenance and inspection, have hinged or fully removable access panels. These are fitted to the frame with easy release, half-turn nylon handles and cam locks. Handles can be operated internally for additional safety.

Hinges are of heavy duty, load-bearing design with stainless steel pivot. Other panels can be detached, if necessary for access by removing screws with simple hand tools.



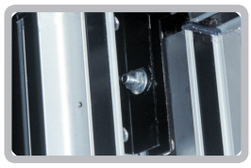
Inlet Section / Mixing Section

Plenum completed with dampers are specifically designed to minimize the stratification of entering air streams for maximum efficiency. Dampers are assembled within a rigid extruded aluminum frame, flanged and pre-drilled for easy fitting to connecting ductwork. Dampers are opposed blade type and available in both flat and double skinned aerofoil sections. Blades are formed from extruded aluminum with edge interlocks. Gaskets are provided to minimize leakage of air.



Coils Section

Coils are computer selected to obtain optimum psychometric efficiency with low air and water pressure drops. Chilled water, direct expansion, hot water and steam coils are constructed from copper tubes, mechanically bonded to aluminum fins as standard. Other fin materials are available including vinyl coated aluminum, copper, tinned copper and galvanized steel. For corrosive flow media, stainless steel tubes and fins are available as an option. The coils assembly completed with carbon steel, copper or stainless steel headers is located within the coil section on aluminum support or easy withdrawal from either side.

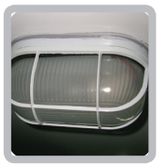


On Site Assembly

The lightweight construction material and modular nature of the units make them particularly suitable for lifting and maneuvering in difficult or confined locations.

Modules can be easily aligned on site and locked together by sturdy stainless steel bolts, located in factory pre-drilled assembly holes. Continuous gaskets between each section ensure an airtight seal and thermal insulated. All fixings and gaskets are concealed within the unit.

Lamp Switch

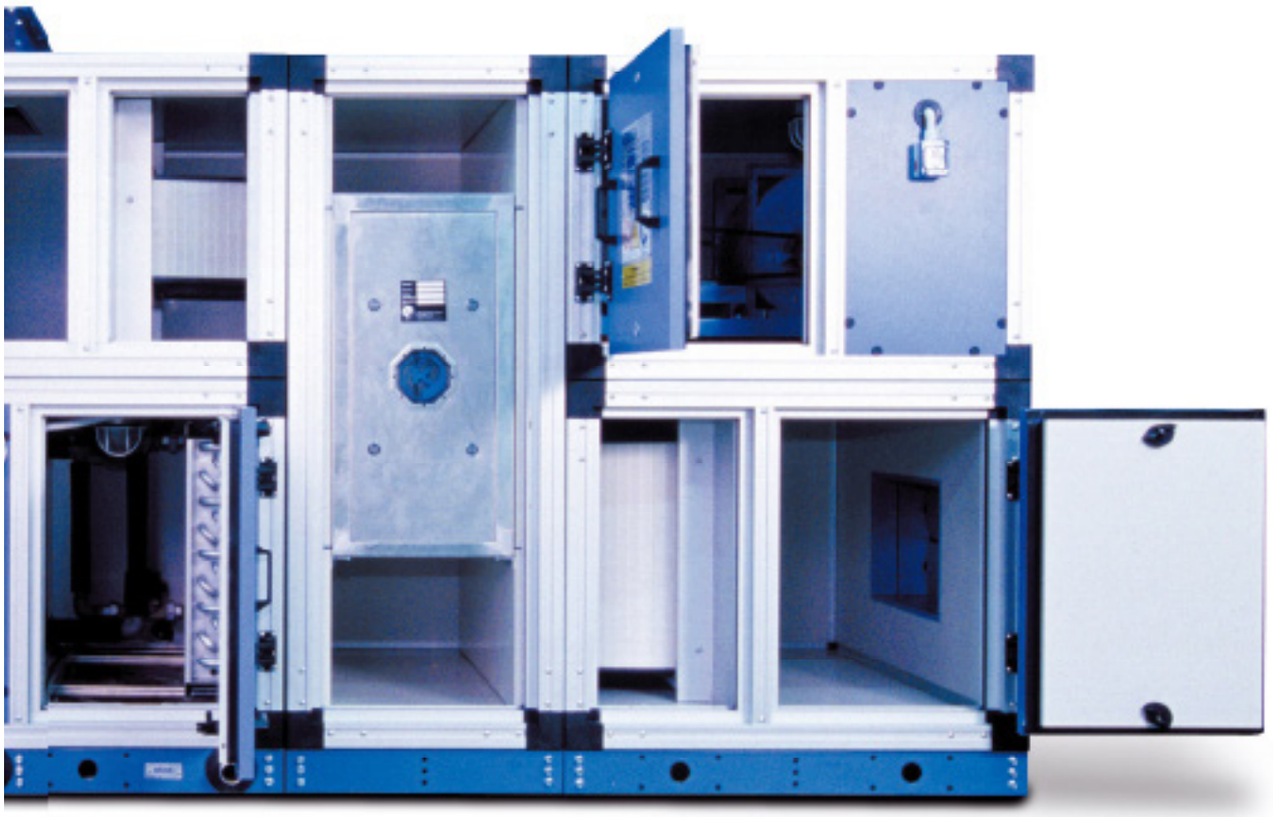


Bulkhead Lamp

Inspection Window

Accessories

Outdoor Type Design

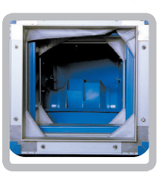


Filter Sections

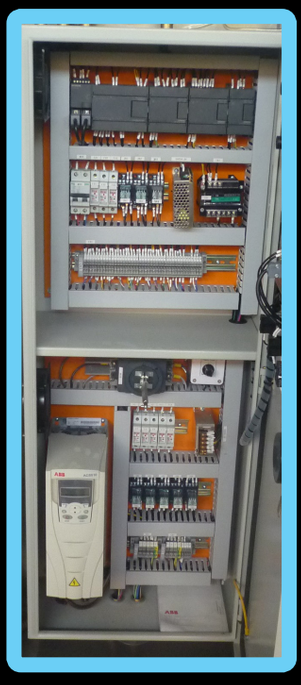
Fully sealed filter sections are designed for easy withdrawal and renewal of filter cells and, are constructed to house any type of primary or secondary filters of different media with varies efficiencies. In areas of particular importance, such as hospitals and clean rooms, absolute filters can be provided to ensure safe human and machine environments.

Fan and Motor Section

SAIVER® manufactured fans form the heart of all systems. Forward curved or backward curved non-overloading aerofoil centrifugal fans are available with various outlet configurations. All fan wheels and pulleys are individually tested and precision balanced, statically and dynamically, and keyed to the shaft. Motors, mounted on slide rails with provision for easy belt tensioning, drive the fan with heavy duty V-belts. Combination spring and rubber vibration isolators are selected to match the power/weight ration of each fan for maximum isolation.



INTEGRATED PACKAGE



Integrated Motor Control Center

SAIVER® Integrated Air Handling System equips with various operative and control devices to optimize unit running conditions.

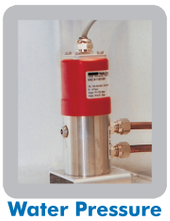
Motor control panel (MCP module) and direct digital controller (DDC module) can be integrated into our SAIVER® Integrated Air Handling System.

All-in-one modular control center results a fast and simple installation as well as a flexible and reliable operations. A unit mounted feature means space and cost saving.

MCP Modules

- Inverter completed with EMC Filters to comply with EN regulations.
- Auto-bypass starting in case of inverter failure
- Marshalling box for other services interfacing / connection, e.g. Fire Services/BMS/M&E.


Control Valve


Water Pressure Sensor


Damper Actuator

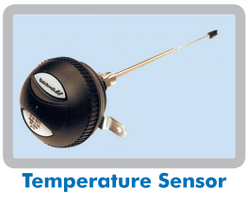

Air Pressure Sensor


Micro Switch

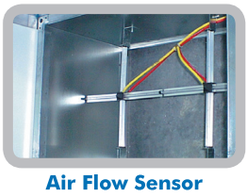

Emergency Stop


EC Fan


Control Panel


Temperature Sensor


Smoke Detector


Air Flow Sensor

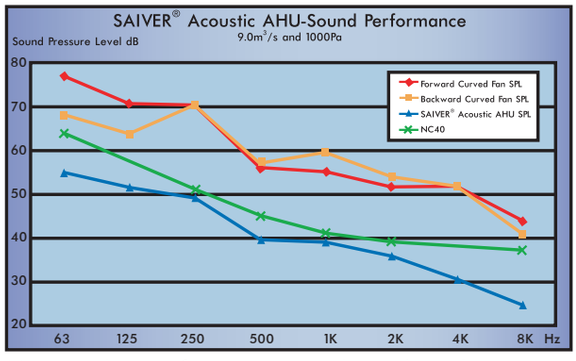

Carbon Dioxide Sensor

Super Quiet Operation

Through continuous Research and Development, SAIVER® is capable to design and manufacture Acoustic AHU with much lower noise level. For VAV application, with the combination of plug fan and SAIVER® Acoustic Panel, we are able to meet NC39 at 9.0m^3/s and 1000Pa without supply silencer.

DDC Modules

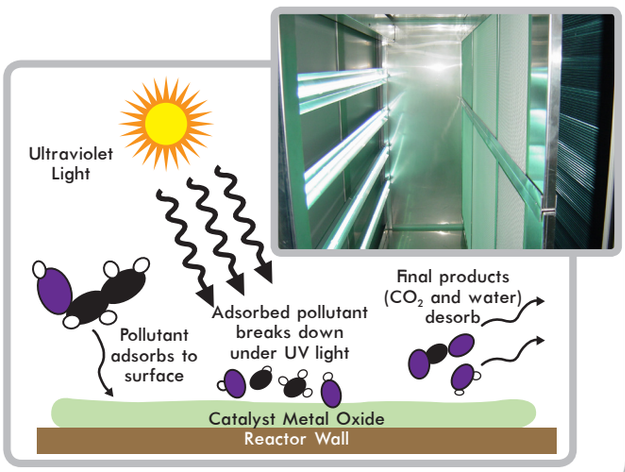
- DDC controller for local / remote controlling/ monitoring
- Chilled water valve completed with electronic control actuator
- Water / Air differential pressure sensor
- Water / Air temperature sensor
- Micro switch adjacent to access door
- Damper actuator at supply section
- Probe type smoke detector at return air section
- Carbon Dioxide sensor at return air section
- Filter differential pressure sensor



Measured 1.5m from return and supply outlet

Photo Catalytic Oxidation (PCO)

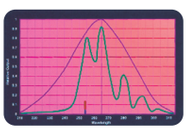
The photo catalytic oxidation (PCO) technology utilizes ultraviolet light (UV-C) focused on a catalyst in the presence of water vapor can generate an energy field equals to 10,000 times of nature sunlight which destroy microbes and oxides volatile organic compounds (VOC) in the air.

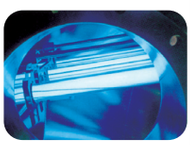


IAQ PACKAGE

UV Sterilizing Light

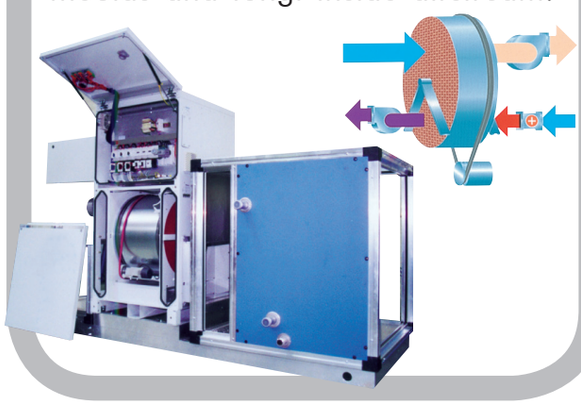
An UV system intends to "capture and kill" airborne pathogens, improve IAQ and worker safety. The germicidal UV lamps in our SAIVER® air handler disinfect the air by irradiation and provide full coverage of the target surfaces. Installation sights include coils, drain pans, filters, exhaust systems, or anywhere mold, bacteria and pathogens can breed.

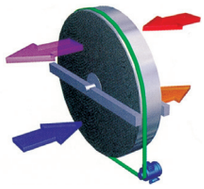




Desiccant Package

SAIVER® is working closely with desiccant wheel manufacturers in order to provide All-in-one dehumidification control system (able to reach below 10% relative humidity). Desiccant dehumidification ensures a hygienic and healthy environment by preventing the formation of moulds and fungi inside airstream.



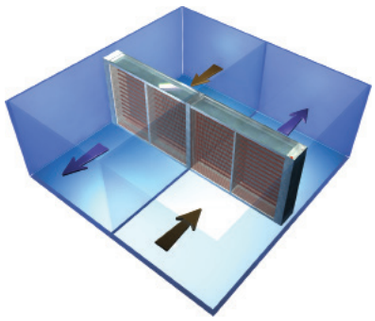


Heat Recovery Unit

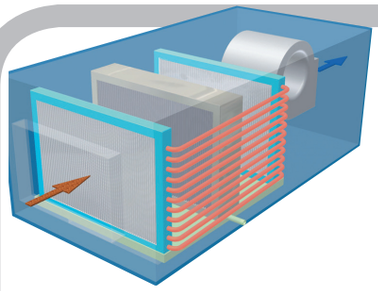
To improve Indoor Air Quality (IAQ), one of the best solutions is to increase the fresh air quantity. However, fresh air is always expensive no matter in winter & summer condition. A rotary heat recovery unit allows energy exchange between supply and exhaust air streams. This high efficient heat exchanger can reduce the annual energy consumption in AHU by as much as 90%. (Latent and Sensible Heat Recovery)

Heat Pipes (Heat Recovery)

Utilising a heat pipe, thermal energy can be recovered from warmer air and added to cooler air. In temperate climates this permits energy saving to be realised through preheating of the outside air. Conversely, in hot climates the savings are associated with pre-cooling of the outside air.



Heat Pipes can be arranged with airstreams side by side using tubes sloping down to the warmer air. Alternatively the air streams can be stacked with the warmer airstream at the bottom. This coupled with flexibility of sizing to suit the ductwork or air handling unit makes Heat Pipes the ideal heat recovery solution.

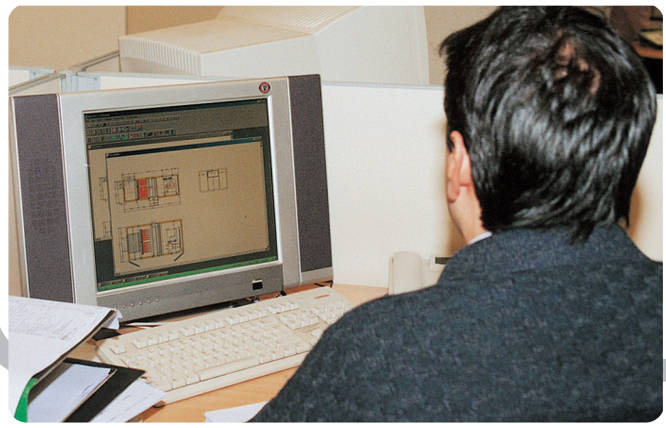


Heat Pipes (Dehumidification)

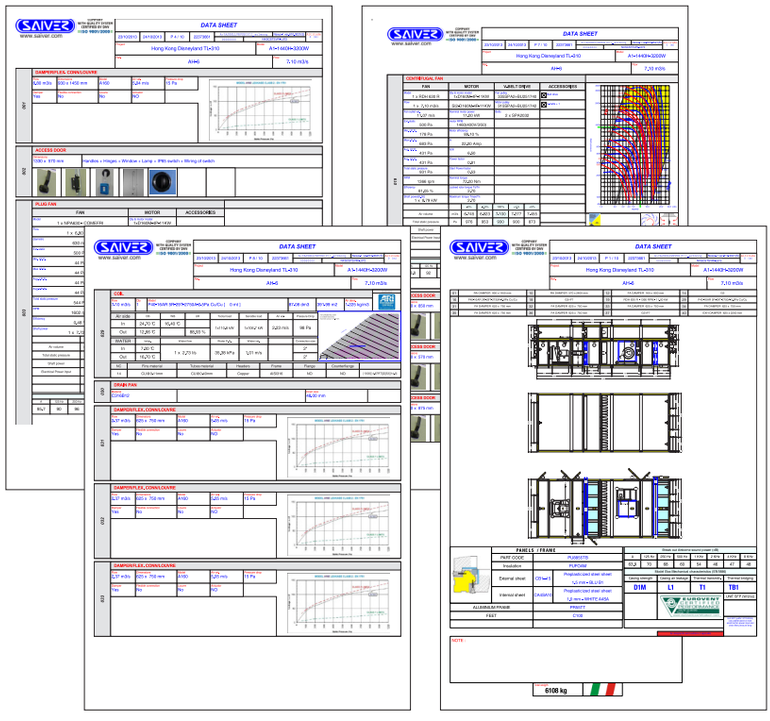
Besides the heat recovery application, heat pipes are now widely used in dehumidification. Heat pipes can increase an air handler moisture removal capability by 50% to 100%. The heat pipes not only reduced the chiller load by free pre-cooling but also provide free re-heating to lower the relative humidity of supply air. As most today's primary indoor air quality concerns are humidity related, the health benefits of heat pipes are noticeable.

Computer Selection Program

SAIVER® use their own developed software program to make optimum equipment selection and submit quotation together with full technical information and drawings. Any variables such as local climatic conditions, unusual psychometric and physical parameters, are taken into account automatically. Clients are presented with computer generated, certified drawings for approval prior to equipment manufacturing.



COMPUTER SELECTION



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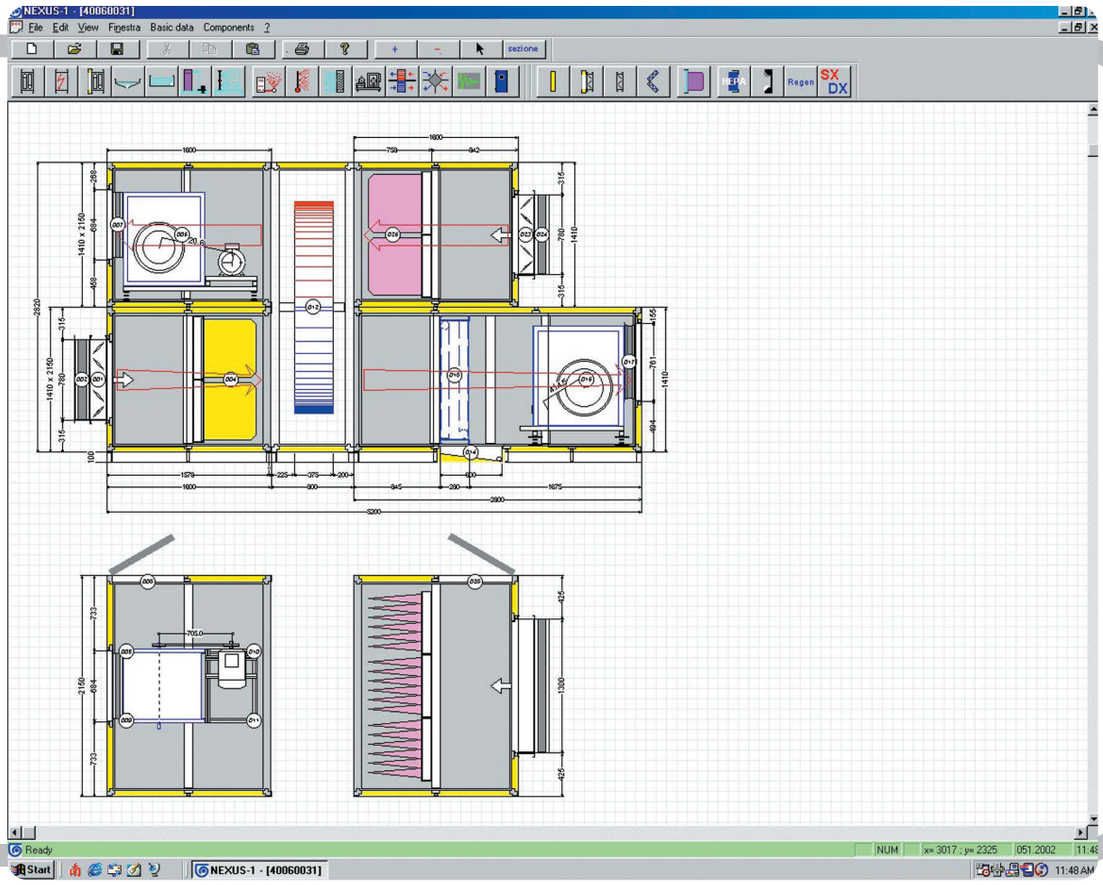
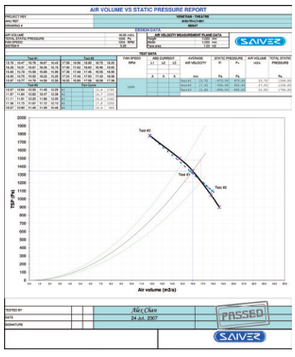


PROGRAM

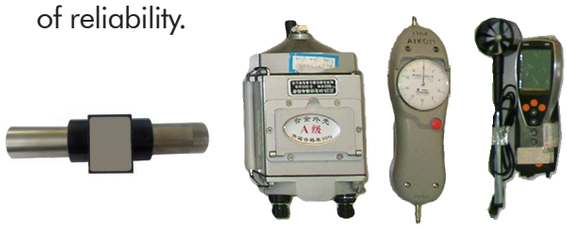


Testing and Inspection

SAIVER® reputation for consistent high standard is rigorously maintained by a strict quality control program (ISO9001 Quality System Certified).

Continuous monitoring is carried out at all manufacturing stages. Besides, on request, we can also do the variable speed dynamic fan test, sampling digital pressure test, sound performance test, casing strength & casing air leakage test and vibration test.

A full range of test instrumentation to check every aspect of performance offer further guarantees of reliability.



SAIVER
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SAIVER S.R.L
Via M. da Besozzo,
16 20052 Monza (Milan) Italy.
Tel: +39. 039. 282 831
Fax: +39. 039. 202 5668
Email: info@saiver.com
Website: www.saiver.com

Zhongshan SAIVER WELAIRE Air Cond. Equip. Co., Ltd.
Block 1, Meiping Street, Maling Village,
South District, Zhongshan City,
Guangdong Province, 528455, China.
Tel: +86 760 2333 1878
Fax: +86 760 2333 1178
Email: sales@saiver-welaire.com.cn
Website: www.saiver-welaire.com.cn

Welcome Air-Tech (Malaysia) Sdn. Bhd.
Lot 4351, Jalan Bukit Kemuning, Batu 8,
42450 Shah Alam,
Selangor Darul Ehsan, Malaysia
Tel: +603 5121 8090
Fax: +603 5122 8090
Email: sales@saiver-welaire.com.my
Website: www.saiver-welaire.com.my

CE-SR-AHU-MY Range-2023.01