



Abbiamo cercato di realizzare una brochure di struttura agile, semplice e concisa, luminosa nell'aspetto, concreta ed essenziale nei contenuti, oltre che estremamente rapida da sfogliare; con lo scopo di fornire informazioni utili che, possano effettivamente costituire una buona base di informazione e riflessione, un solido punto di partenza per un successivo (se desiderato), più concreto e circostanziato contatto diretto.

In ogni caso, la natura eminentemente tecnica dell'argomento e l'inevitabile singolarità di ogni problematica rende quasi sempre consigliabile uno scambio diretto di informazioni prima di qualsiasi decisione.

We tried to realize a simple, brief, quick structured catalogue, concrete and essential in contents, extremely rapid to dip into, with the intent to provide useful details: the first step for a next (if required) direct contact. However the strictly technical subject often requires specific information, before coming to a decision.

For further information and to explain us your applications, please contact our technical office: qualified people will attend you.

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Our company is specialized in air treatment systems in the fields: dust and smoke suction, dehumidification, air-conditioning and integrated systems for industry: food, pharmaceutical, chemical, mechanical and textiles.

SEGU' S.r.l. is specialized in the production of dust and smoke suction systems, dehumidification, air conditioning and integrated plants for industry.

Thanks to a strong knowledge accumulated in over 20 years of activity, SEGU' S.r.l. is a company with a strong vocation in the field of plant design, by adopting innovative technologies; SEGU' S.r.l. is proposed as design partner to create simple and complex systems.

The company was founded in 1989, and is specialized in industrial plants (mainly in these sectors: plastic, chemical, pharmaceutical and mechanical).

SEGU' S.r.l. has always set its approach to the market based on the highest quality of services offered, through the constant and careful monitoring of all phases of design, development and processing.

SEGU' S.r.l. care with great attention the selection of its suppliers, management of supply, advanced process technology, assistance to its customers.

SEGU' S.r.l. is able to ensure a close relationship with the customer and then a good balance time/cost.



SEGU' S.r.l. operates mainly within the national territory, well integrated in recent years abroad, offering their design services, consulting, realization and maintenance of facilities whether in Europe market either outside Europe.

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A series of connected plants for a single objective: "PRODUCE" (ENVIRONMENTALLY AND SECURITY)

In industrial sector, SEGU' S.r.l. offers turnkey projects related to:

- - fume extraction from extruders
- - dust suction extruder with subsequent dedusting
- - refrigeration (cooling of extruder circuits)
- - systems and components in accordance with ATEX directive 
- - detection of explosive atmospheres of production ATEX areas 
- - Industrial dehumidification
- - Precision Air Conditioning
- - Clean rooms and facilities

the first step is the analysis of customer needs, and then move to the design, construction and finally the validation of the works. The turnkey process allows the optimization of the balance cost / performance, in accordance with the standards of Quality Control.

Design

Our technological development passes through a deep knowledge of processes and plants products and managed, then the ability to design and build.

The design office is equipped with a modern studio, complete with software for thermodynamics and aerotechnics design with which is possible to evaluate the proper design of liquid or gaseous fluids, but also the mechanical part of the structural systems and their proper positioning.

Realization


The Mechanical Department is able to implement projects, in addition to construction, the department is responsible for plant's maintenance, particularly important to ensure the consistency of product quality over time.

Technical support

The constant attention to the customer is being pursued in all business sectors and the same procedures provide for the ongoing evaluation of the "degree of customer satisfaction" (quality and product reliability, availability of items in stock, quick delivery, timely technical assistance)



D U S T A N D S M O K E F I L T E R S

- ⇒ Smoke filters - Sleeves filters – Cartridge filters
- ⇒ Accessories for saving energy and special filter media
- ⇒ Fire Systems and anti-explosion ATEX 



STRUCTURE

The external structure is made of galvanized sheet, painted according to customer requirements. Each filter is equipped with guardrails and ladder for access to top and maintenance of the valves group.

OPERATION

The dust collector works "in depression", the dusty air is sucked from the centrifugal fan, located downstream of the system, which creates the necessary depression to win both the flow resistance of the circuit, both those caused by the resistance of the filters. The dusty air is drawn by the fan, enters the decanting chamber, where the gravity causes the slackening of input speed and an initial separation of the coarser particles and the finer, then makes a fine filtration (specific to each use) to ensure proper treatment in accordance with the regulations of environmental reference provided.



FILTRATION

Can be used bag filters or cartridge filters. In both cases are arranged vertically in the filter chamber and are traversed by air from the outside. The air loses its dust content, which is deposited on the outer surface of the bags or cartridges. The air in its path, reaches the "clean chamber" through the hole where is placed the venturi ejector. Hence the filtered air exits the body of the filter, through the fan and is expelled into the atmosphere through the chimney.

CLEANING SYSTEM

The cleaning system is operated by a cyclical sequence, optimizing the consumption of compressed air with a microcontroller technology combined with a pressure sensor.

DUST COLLECTION

The filtered dusts and separate from the air are collected in special metal containers or conveyed outside by means of mechanical systems such as rotary valves, screw conveyors.



EVACUATION MEMBRANES ANTI-EXPLOSION ATEX VERSION

The construction of filters, in areas with explosive atmospheres must be accompanied by special membranes (explosion-proof doors) with a break point set at a pressure lower than bearable by the buildings to be protected, and with a suitable surface of vent, calculated on the characteristics of dust or gas to be treated.

The ATEX version filters will be accompanied by special breaking certificated panels

and all the accessories such as cleaning system, fans, and any mechanical systems will be ATEX certified

In the design phase we will perform a detailed analysis with the customer to identify the correct KST parameter of powders treated.

I N D U S T R I A L R E F R I G E R A T I O N

- ⇒ Air-cooled refrigeration and water-cooled refrigeration
- ⇒ Special chillers (energy-saving) FREE-COOLING



COMPLETE OFFER

Water chillers air cooled for indoor installations.

Water chillers water cooled for outdoor installations.

Water chillers water cooled for indoor installations.

Water chillers air cooled for outdoor installations.

Drying groups and cooling air
Special machines (on specific request) for fluid and air temperatures of up -30°C.



EXCLUSIVE FREE COOLING SYSTEM

Free-cooling chillers are designed to produce 50-percent free cooling at ambient temperatures approximately 10°F below design chilled-water temperatures or 100-percent free cooling at approximately 20°F below chilled-water supply temperatures.

With a free-cooling chiller, a mechanical-refrigeration plant is not required to operate amid the lowest winter temperatures, avoiding low refrigerant head pressure and startup problems.

Reducing the total number of operating hours and eliminating the most difficult operating conditions extends compressor life.

The free-cooling coils are located in front of the condenser coils, permitting the largest possible free-cooling-coil face area with low airflow resistance.

This is important to minimizing required fan power. The chillers' programmable logic controller (PLC) continuously monitors outside ambient, return chilled-glycol, and design chilled-glycol-supply temperature. Once the ambient temperature is low enough to provide useful free cooling, the PLC automatically directs return glycol through the economizer coils, before it enters the evaporator.



GREAT ENERGY SAVING!

As the free-cooling effect increases, the refrigeration compressors unload sequentially until they no longer are required, at which point they remain in standby mode, and full cooling capacity is provided by condenser-fan power alone.

Variable-frequency-drive control of the fans allows precise control of head pressure, while the chiller provides full or partial mechanical cooling. When full free cooling is available and the compressors are stopped, the maintains control of glycol temperature, maximizing energy savings at very low ambient temperatures, when less airflow is required to achieve 100-percent free cooling. All other aspects of mechanical and free-cooling operation, including three-way-glycol-valve operation and safety controls and alarms, are controlled by the PLC.

"free-cooling" is a type of chillers equipped with a system to obtain free cooling using outdoor air as a coolant.

it is indicated for extruders, where even in winter there is the need for water cooling process.

These chillers agree to achieve significant energy savings when installed in northern and temperate climate areas.

The wide range of accessories available, allowing great speed and ease of installation.

DETECTION SYSTEMS AND VENTILATION FOR EXPLOSIVE ATMOSPHERES

- ⇒ Ventilation of areas at risk of explosion
- ⇒ Detecting explosive atmospheres



EQUIPMENT FOR EXPLOSIVE ATMOSPHERES

The creation of a ventilation system for areas with explosive atmospheres or potentially explosive follows these stages :

classification of areas (Directives 99/92/EC and ATEX 94/9/EC)

Identifying of the best aeraulic plant in relation to the area identified.

Installation of certified equipment in accordance with the rules and complying with the explosive risk areas identified.

The plants also have some special features: absence of potential triggers of explosive mixtures (antistatic materials, electrical installations intrinsically safe, fans and motors ATEX certified)



DETECTION EXPLOSIVE ATMOSPHERE

Our system includes sensors to monitor the levels of explosive mixtures and a central microprocessor for the management of remote units.

Inputs and outputs are fully addressable by the program, to obtain maximum flexibility in configuring the system.

The remote units communicate with the central unit via a serial data transmission line.

The gas sensors are used to detect the presence of flammable - explosive (values % LIE) or for detection of deficiency or excess of oxygen.

The layout of the sensors is uniform and is capable of sending relevant clean contacts to the ventilation system and the control framework provided.



TECHNICAL ADVICE AND Ex ATEX CLASSIFICATION

SEGU' S.r.l. can assist the customer in the classification of risk areas according to Directive 99/92/EC ATEX, until the completion of the document (protection against explosions) carried out by qualified technicians.

SEGU' S.r.l. can support the customer in all these activities, allowing it to prepare the necessary facilities to work safely and in accordance with new standards.

SPECIAL AIR TREATMENT PLANTS

- ⇒ Strong dehumidification for industrial production
- ⇒ Precision air conditioning
- ⇒ Cleanrooms for the pharmaceutical



STRONG AIR DEHUMIDIFICATION

Our dehumidification plants, are made by industrial dehumidifiers composed of a compact unit, using technology with desiccant rotor adsorption, the applications of these systems are many and range from department stores, cold rooms, ice rinks, glass production rooms, sports halls, chemical, pharmaceutical to the most various industrial manufacturing processes.

These systems include heat internal recovery, by specific devices to a significant energy savings, they are available with regeneration moisture absorbed section, by electric battery, steam battery, or via burners,utilizing methane gas as fuel.

The facilities are all equipped with process control PLC, on request remote control. Our systems allow for low maintenance and a high degree of dehumidification with precise control of relative humidity and temperature.



AIR-CONDITIONING (PRECISION)

Plants able to obtain climatic conditions with an accuracy of $\pm 1\text{ }^{\circ}\text{C}$ + \ - 5% RH.

These systems are designed for continuous operation for many years, are composed of compact units, safe and reliable for the control in cooling - heating - humidification and dehumidification.

Used as refrigerants, R407C, R410A or R134a and are managed by a microprocessor that controls either all elements of the system, the process, with simple interface in the daily management.

Eco-friendly refrigeration - Long-term reliability - Wide configurability - Full accessibility - evolved design - Efficient Energy Performance - Total connectivity.

Ideal for server rooms and laboratories; are possible testing and certification of conditions of temperature and humidity.



CLEANROOM AND FACILITIES

SEGU' S.r.l. manufactures systems for sterile environments in pharmaceutical, electronics, medical and food with control process for working conditions with highly and effectively filtered air (HEPA99.99% @ 0.3m).

All systems are designed with plant layout to minimize the sources of particulates in the air flow, and with a flow rate that remove most particles generated during the process.

Structures using modular panels, they have special features like the speed of installation and the characteristic ease of cleaning.

The panels are made with a perimeter frame on which two sheets of laminate are applied in different materials depending on the processing cycle of internal reviews.

SEGU' S.r.l. through its engineers can also manage, in collaboration with those responsible for quality assurance and quality control, monitoring of clean-room, with regular attendance and test compliance with the clean-room particle analysis, microbiological and critical parameters such as temperature, pressure, relative humidity.

THE PLANNING AND REALIZATION OF AIR & WATER TREATMENT SYSTEMS



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