



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.

www.segu.it



Facilities dedicated to residential customers, exacting and prestigious, using the latest technology available

Every detail of the system is analyzed and implemented with extreme care to be in perfect harmony with the architectural structures.

we propose as the sole interlocutor for the execution of turnkey projects

WE CAN OFFER:

PLANNING:

Thermic outputs analysis
Microclimate analysis
Thermic stress analysis
Engineering
Thermic-hygrometric check of structure
Evaluation of the thermic-hygrometric comfort
Planning of thermotechnic plants
Planning of aerotechnics plants
Planning of electrical plants
Regulation with digital systems
Site management
Technical service
Testing with certified equipment

INTERNAL REALIZATIONS:

Air conditioning
Heating
Humidification
Dehumidification
Hydraulic distributions
Water treatment plants
Electrical and electronic systems
Sound proofing
Special settings
Remote management of facilities

EXTERNAL REALIZATIONS:

Irrigation of gardens and parks
Recovery of meteorological water
Water collection tanks and pressurization
Complete systems for traditional pools
Complete systems for whirlpools
Complete systems for garden whirlpool
Dehumidification plants for indoor pool
special fountains
Lighting equipments for pools
Spectacular lighting installations
Shock lighting installations (anti – intrusion)
Suction equipments for garages
Renewable energy installations (solar thermal, fotovoltaic)



**A series of connected plants for a single objective:
"LOW POWER CONSUMPTION"
(ENVIRONMENTALLY AND SECURITY)**

In civilian sector SEGU' Srl offers turnkey projects related to:

Analysis of home comfort of the users of the building using innovative techniques of moderate microclimate. Study low-energy buildings with innovative techniques to produce heat for space heating, cooling and domestic hot water for sanitary use. Installations for the recovery of heat and cooling with reuse of the same in the active energy cycle of the building (heat recovery)
Production of electricity from renewable sources

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.

AIR TREATMENT PLANTS - WATER - INNOVATIVE TECHNOLOGY



MULTIVALENT CHILLERS AND ADSORPTION CHILLERS

Chillers with auxiliary condensator: in traditional systems of production of chilled water, the chillers can be equipped with auxiliary condensators for the partial or total recovery of the heat condensation, the temperate water produced can be used for post-heating.

Multivalent Chillers: In buildings with high internal heat dissipation, but also with traditional areas, it is advisable to install "multivalent" cooling units, in this case the production of chilled water and temperate water is always simultaneously in order to "transfer" energy from one area to another in the building all year.

Absorption Groups: the absorption units produce cold based on condensation and evaporation. They have an evaporator and a cooling coil that expands the refrigerant to produce cooling. Unlike a mechanical compressor, using a heat source powered directly from a burner or indirectly using steam, hot water or heat residue (flue gas).



GEOHERMAL HEAT PUMP

The enthalpy is a form of energy that depends on temperature, normally at a certain depth of soil, temperature appears to be fairly constant throughout the year. This temperature depends on the type of soil, amount of rainfall and the geographical position, has average values between 12 °C and 15 °C.

Low enthalpy geothermal plants exploit this phenomenon for the production and disposal of heat energy. In summer the heat is removed from the building and transferred to the ground, in winter the opposite occurs. This is made possible due to heat pumps, machines capable of removing heat from a colder environment and transfer it to a warmer. The efficiency of these machines increases when decreases the thermal jump to be generate. One of the most interesting solutions is to coupled with floor heating plant working with discharge temperatures very close to room temperature.

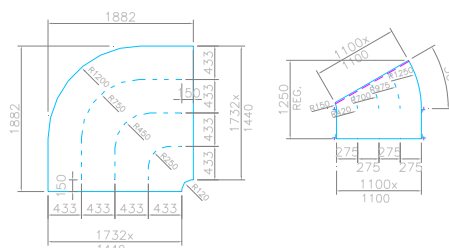
In summer the ground temperature is so near the delivery temperature, that is possible to bypass the heat pump and use a simple heat exchanger between the water of the plant and that which comes from geothermal probes. This method is called "free cooling". In this regime of operation we have low energy consumption compared to conventional air conditioners.



SOLAR THERMAL

The solar thermal (or solar collector) consists of a radiator in a position to absorb the heat of the sun and to transfer it to the tank water. The movement of water from the reservoir to the tap is achieved by natural circulation or forced. In the case of forced circulation, the solar panel incorporates a hydraulic pump with electrical power. In Italy we enjoy an average sunstroke of 1500 kWh/m2 every year. Assuming an average efficiency of thermal solar panels, 160,000 square meters of solar panels installed in any Italian region would save about 8 million cubic meters of methane.

AIR TREATMENT PLANTS - WATER - INNOVATIVE TECHNOLOGY



AIR TREATMENT

The air handling unit SEGU' , provide the conditions for replacement, ensuring the requirements of hygiene and ventilation now required in all environments frequented by humans.

Accompanied by automatic control systems, these machines are able to "talk" with other components to ensure both energy savings that adjusting to changes in load on the environment treaty, a characteristic of these machines is that they had a ventilation device for "passive houses" with heat exchanger (cross plates) with high-energy performance and various modular sections:

fan Section - intake air - mixing chamber - heat recovery (sensible or latent) - filtration section (standard or high efficiency) - heating coil section - post-heating coil section - humidification section- fan section of recovery and discharge air, to ensure an excellent level of comfort (microclimate).

HEATING AND RADIANT COOLING

The basic principle is the transmission of heat by radiation: during the winter, radiant ceiling panels emit heat by radiation that is transformed into heat at the touch of a body (person, surfaces, floors, appliances and machinery, ...).

All that comes from direct radiation, in turn becomes a source of heat, yielding heat for radiation or convection.

During the summer, the system works exactly the opposite: the panels absorb the heat emitted by radiation from all the warm bodies. This allows then to obtain a particularly homogeneous comfort, with a vertical profile of temperature very stable. Is important to include in this kind of plant, a renewal air section with heat recovery, to ensure a high degree of purity because the radiant system is devoid of ventilation systems. The air space between panel and structure in summer season, must be dehumidified because it reaches very easily the dew point with inevitable condensation.

AERAUIC DISTRIBUTIONS

SEGU' S.r.l. has a great knowledge of construction and installation of air ducts resulting from several plants already played in several commercial and private structures; in addition to the ducts, are supplied accessories such as grilles, nozzles etc .. of various shapes and types always related to technical and aesthetic demands of the customer.

The careful design of air flows, ensures optimum transport quietness, no vibrations and the possibility of special executions for crossing in architectural details. The ducts are constructed with different types of materials and thicknesses, that can embrace a variety of facilities for any technical and design application within the ceiling or exposed, making the system an integral part of the furniture.

The spreading is by air inlets and recovery grilles that, properly sized, creating uniformity of temperature in all areas served.



AIR TREATMENT PLANTS - WATER - INNOVATIVE TECHNOLOGY



PHOTOVOLTAIC

Photovoltaic systems produce electricity by converting solar radiation incident. This production is then based on an alternative energy source and does not involve the emission of polluting gases into the atmosphere during operation.

It is estimated (Sources LCA) that the total greenhouse gas produced in the construction of components, the installing and dismantling, are spared in about 8 years of operation (northern Italy). The average lifespan of a PV system is around 25 years. The clean energy produced by the plant is zero impact for the remaining 17 years. The flexibility of this type of equipment is very high and allows the implementation in very different contexts: from small households to large industries. Unlike fossil fuel, for renewable energy the price of energy produced by photovoltaic systems is fixed at the time of realization. In fact, once installed the system, energy supply will be provided free by the sun. Maintenance costs of photovoltaic systems are the lowest of all generating plants.



AUTOMATION SYSTEMS

Building automation is the "Integrated Management of Buildings", a solution composed of many subsystems and systems intelligently integrated. The variation of the parameters controlled by a specific subsystem, determines the control action, regulation, or command of equipment belonging to other systems.

For example, there can be some different sub-systems: heating and cooling systems, electrical power management and lighting, video surveillance, security, fire, media etc..

At a lower level we can speak of home automation, where the same services (obviously scaled) are provided to automate processes within and outside the units. In this case it is called smart homes.

To keep track of all the various subsystems in the plant must have a supervisory system and integrated control.

Our proposal involves the use of local systems of supervision and / or remote (via web) chosen according to the size of the plant, able to monitor and control every parameter of the regulators.



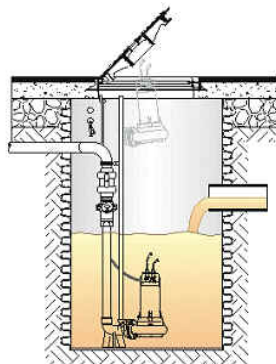
FIRE PEVENTION PLANTS

Fire extinguishers, smoke detectors, heat and gas, emergency exits, fire escapes and barrier accessories for air treatment systems are just some of the activities that SEGU' S.R.L. may provide for the safety of a building to use public and private (municipal building, hospital or a private residential villa).

SEGU' S.R.L. operating since 1989, deals with the design and implementation of fire prevention systems, for buildings or factories, with dry or wet systems, sprinklers, services, adaptation of regulatory systems, automatic fire extinguishing systems and electric or diesel pumps.

More precisely: regulatory adaptation - automatic shutdown systems - fire fighting systems for shopping malls or private buildings - maintenance of fire protection systems - self-priming centrifugal pumps - pressurization groups - electric and diesel pumps - fire pumps with diesel groups, complete the series of plants storage tanks to ensure the continuity of supply even in the absence of water, or water reservoirs to collect meteorological water to be used to forecast this task.

AIR TREATMENT PLANTS - WATER - INNOVATIVE TECHNOLOGY



RECOVERY OF METEOROLOGICAL WATER

The meteoric water may have 2 main uses: irrigation of the green areas (gardens and orchards) or re-use even for cassette toilet, washing machines, cleaning cars.

Plants differ in the mechanism of distribution. Where rainwater is intended solely to green areas is sufficient to install proper submersible pump and a fountain of irrigation.

In some towns have introduced a fee for disposal of stormwater, with some reductions or exemptions in cases of use and dispersal of rainwater. The re-use of water for sanitation purposes, will require a pumping unit.

It is possible to separate the first rain water (especially rich in sand, loam and mineral oils) from the next, introducing special filters and separation systems.

The use of rainwater for the operation of the cassette toilet, washing and irrigating can lead to reduced domestic consumption by about 50%.



DESALINATION

The technology of desalination is the extraction of salt dissolved by saltish sea water. There are several processes, the commercial technologies are based on filtering through membranes, increasingly subtle. Reverse osmosis is to exercise a strong pressure on a volume of salt water against a semipermeable membrane. The pressure pushes water molecules through the membrane, while the salt ions are filtered. These membranes, although very expensive, however, prove fragile and their duration should not exceed three years. They are also very sensitive to chemical and organic pollutants. These problems require workers to provide pre-treatment of water, thereby increasing the costs.

Only since it has been possible to conceive membranes more durable and less susceptible to pollutants, the cost per cubic meter has become interesting. And thus became possible to imagine the production of significant volumes of desalinated water.

Today 1% of drinking water in the world is produced by desalination and this proportion is increasing.



DRINKING AND STERILIZATION

Water intended for human consumption require increasingly a pre-treatment to remove some or most of the components suspended or dissolved.

The human body has a maximum permitted levels of pollutants, which can absorb without damage, beyond which can start a long-term damage that can lead to disease and changes in physiology. The main contaminants are microbial type, but in recent times has increased significantly the problem of chemical pollutants.

Our systems are designed to provide water fit for human consumption. The solutions that the company can take depend on the characteristics of water ; they range globally on all treatment technologies.

In the civil and industry sectors, SEGU' S.R.L. offers equipment able to cover all needs.

Primary water: softening plants, filtration systems, reverse osmosis plant, microfiltration systems.

Our solutions depend on the characteristics of water and they range globally on all treatment technologies.

AIR TREATMENT PLANTS - WATER - INNOVATIVE TECHNOLOGY



OUTDOOR AND INTERNAL SWIMMING POOL

SEGU' S.R.L. has worked for years in the design and construction of swimming pools of all types, shapes and sizes: ground pools and masonry, covered with mosaic or liner, for internal or external; with suppliers leader in this sector, ideal for the realization of a dream: a beautiful swimming pool to relax or play sports with friends.

We design pools of any kind and in any environment, providing all services, we deal with design construction and maintenance of swimming pools at 360 °, with treatment water plants and management of the thermal gradient necessary for the comfort of the user, using innovative energy-saving plants; for indoor pools, we complete the work with treatment technologies for the management of air temperature and humidity using a patented techniques of dehumidification



IRRIGATION

SEGU' S.r.l. offers design and installation of professional products that together provide optimal solutions for all your irrigation needs, therefore we are committed to designing advanced systems for irrigation and even better more accurate, efficient, reliable and economic.

Products for commercial and residential irrigation and professional sport fields, for residential or commercial applications, helping customers to create landscapes of great beauty with water saving and help professionals in the green to optimal care and maintenance. In agriculture, our plants contribute to the cultivation of fruit and vegetables using the most efficient technology with the use of management techniques and water saving. Innovative systems of irrigation in desert areas complete our range of technology .



LIGHTING AND VIDEO SURVEILLANCE SYSTEMS

With the design of our technicians " the garden environment" becomes a stage where plays of light create a new and unique visual effect. A wide range of products on the market today can create an incredible variety of environments, making it even more exciting and captivating the architecture of the building or the garden, landmark of our eyes. on wall, on floor, on picket, on pole, above the windows, on a trunk or a branch.

Precious dichroic filters create captivating atmosphere of great emotional impact. An incredibly wide range of light sources: dichroic low voltage, halogen, with a wide range of the beam, also the latest techniques specifically designed for LED sources will amaze you.

THE PLANNING AND REALIZATION OF AIR & WATER TREATMENT SYSTEMS



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