

COMPANY PROFILE

OUR COMPANY IS BUILT ON STRONG
VALUES: PASSION, INNOVATION, AND A
DEDICATION TO IMPROVING THE WELL-
BEING OF PEOPLE AND THE ENVIRONMENT.
THESE PRINCIPLES INSPIRE US EVERY DAY
TO DELIVER THE BEST POSSIBLE EXPERIENCE
TO OUR CUSTOMERS - BOTH NOW AND IN
THE FUTURE.

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ABOUT US

GSI: THE INTEGRATED ITALIAN SOLUTION FOR COMFORT, COST SAVINGS AND SUSTAINABILITY

GSI - Global System Integration, is an Italian company specializing in climate control and the production of thermal and electrical energy from renewable sources.

With a commitment to delivering tailored comfort solutions to our customers, GSI designs systems to suit diverse needs, ranging from small apartments to large commercial and multifunctional facilities.

GSI produces high-efficiency heat pumps and softwares dedicated to the monitoring, management and control of thermal power plants, ensuring optimized consumption and reduced emissions. GSI offers a comprehensive catalog of products to cover a wide spectrum of solutions for every system, including air and radiant room terminals, thermal storage tanks for the domestic water, air recovery, treatment and renewal units and, lastly, energy storage batteries.





INTEGRATED SYSTEMS FOR ENERGY AND NATURAL COMFORT

Renowned for its expertise in geothermal technology, GSI excels in creating energy-efficient solutions that actively support the ecological transition.

GSI is a key reference in the field of renewable energy, committed to improving the quality and well-being of the spaces we live in. The company emphasizes respect for the environment while providing innovative and high-quality solutions.

THE STORY

A GROUP OF PROFESSIONALS WHO
COMBINED THEIR EXPERIENCES
WITH A COMMON GOAL: DESIGNING
ENERGY-EFFICIENT SYSTEMS AND SOLUTIONS

2007

Founded in 2007 in Ponte di Piave (TV) and established as **Global System Integration**, the company began its journey specializing in thermal regulation and system supervision solutions. From the very start, it has operated across the entire Italian territory through a network of agencies and commercial partners.

2008

Between 2008 and 2010 GSI begins the **production of high-efficiency geothermal e aerothermal heat pumps** by introducing the AQUA and AURA product lines.

2011

In **2011** the **WebVisor system** has been introduced: the **new supervision and monitoring system** dedicated to the control of single and centralised residential systems.

2015

In **2015** GSI established the **GSI TEAMS**, - technical and commercial units specialized in designing professional systems which aim at maximizing energy savings and efficiency.

2017

In **2017** the **GSI POINTS were introduced** - technical and commercial structures dedicated to the residential market, providing tailored support for private customers.



2018

In **2018** GSI launched the **DUETTO range**, the heat pumps specifically designed for large-scale buildings like condominiums and hotels.



2019

In **2019** the new and very powerful **CLOUDBOX GSI supervision system** has been launched. This monitoring solution records and stores data on the GSI CLOUD, offering simple and secure access that allows users to control the system anytime and quickly analyze its performance.



2020

From **2020 al 2021** the company develops major partnerships and new solutions, with the aim of designing **increasingly efficient and environmentally sustainable power plants**. This will result in creating new technological communication systems and plant solutions.



2021

In **2021 GSI Research and Development** led to the creation of the first compact aggregate, **DOMINA**.



2022

In **2022**, GSI **introduced SETA**: a salt-based battery storage system designed to complement existing renewable energy solutions.



2023

In **2023** GSI expanded its reach to **international markets** by successfully installing geothermal and aerothermal heating systems for residential and commercial uses in Ireland, Greece, Switzerland, the Czech Republic, Denmark, and other countries.



TODAY

GSI inaugurates its new **A-Class energy-efficient headquarters** in Ponte di Piave, equipped with advanced photovoltaics, energy storage, and heat pump systems. This marks a pivotal step in the company's commitment to **renewable energy, CO2 neutrality, and sustainable innovation**.



THE MISSION

NATURAL, SUSTAINABLE AND
OPTIMIZED COMFORT.

Our mission is to **ensure maximum efficiency** in our climate control systems, by harnessing renewable energy sources such as earth, air, and sunlight.

Through our cutting-edge technology, we optimize sustainable natural comfort, achieving significant energy savings while promoting environmental well-being.

We are committed to improving the quality of life in our communities, offering precise, efficient, and user-friendly thermal regulation solutions—always with respect for both people and the environment.



THE VALUES

ENTHUSIASM, RESEARCH,
COMPARISON AND
METICULOUS ATTENTION TO
DETAIL

At GSI, we are driven by a shared enthusiasm for innovation and a strong commitment to **building a sustainable future**. The values of our team are shaped by a diverse group of professionals from various countries, cultures, and backgrounds. This **wealth** of different experiences and perspectives is a key strength, fueling our openness to dialogue and ensuring a customer-focused approach in everything we do.

Our continuous **focus on research, development of cutting-edge technologies** and a **customer-centric approach** are the core values that guide our work. With all our resources, we aim to **cultivate knowledge** through hands-on experience, empowering both our employees and partners to grow together through training and shared learning.





THE VISION

WE DEVELOP TECHNOLOGICAL
SOLUTIONS TO ENHANCE
ENERGY EFFICIENCY IN
BUILDINGS

Leveraging extensive expertise in the energy sector and with a focus on addressing the growing need for savings and environmental sustainability, GSI has expanded its services dedicated to optimizing the energy performance of buildings and systems. These specialized solutions are provided through GSI POINTS and GSI EXPERTS, our technical and commercial teams positioned throughout the territory.

Through the customer-oriented approach of GSI POINTS, we provide a comprehensive process that begins with a complete evaluation of energy consumption to detect inefficiencies and areas for improvement. This analysis allows us to define and prioritize interventions that optimize energy use and deliver tangible cost savings.

THE NEW FACILITY

GSI's new Italian headquarters in Ponte di Piave, Treviso, exemplifies our commitment to sustainability and innovation. The 3,500-square-meter facility is an A-Class energy-efficient building, designed with cutting-edge technology to meet high-performance standards while minimizing environmental impact. Powered by photovoltaics, salt energy storage systems, and advanced heat pumps, the building reduces our carbon footprint and supports our goal of CO2 neutrality.

Constructed with eco-friendly materials and sustainable components, the headquarters is designed to be self-sufficient in terms of energy needs, showcasing GSI's dedication to environmental responsibility. This modern facility not only enhances our operational capacity but also sets a benchmark for energy-efficient design, enabling us to deliver high-performance, low-impact heating and cooling solutions. With this state-of-the-art infrastructure, GSI continues to push forward in the development of renewable energy technologies and sustainable solutions for the future.



Our new headquarters is home to GSI's "Academy," where we provide specialized training and development programs to ensure our team and partners stay ahead in the latest technologies and industry trends. We also run an educational initiative for schools, focusing on software design, electrical systems, and engineering, aiming to inspire and equip the next generation of professionals in renewable energy and technology.

Additionally, the Academy ensures that GSI POINTS are regularly updated on our newest products, including solutions like Domina and Mevo. Through these efforts, GSI fosters a culture of continuous learning and collaboration both internally and in the energy and technology industries.

INTERNAL REFERENCES

The new headquarters, a tangible symbol of our commitment to environmental sustainability, is equipped with eco-friendly technologies. These include radiant climate control systems powered by geothermal heat pumps, a photovoltaic system, and an innovative salt-based battery storage solution, ensuring zero-impact comfort for both production spaces and offices..



GEOTHERMAL SYSTEM

A geothermal heat pump system has been installed for climate control, heating, cooling, and "natural cooling." The system is composed of vertical pipes placed in the ground adjacent to the building, ensuring efficient energy use for maintaining optimal temperatures throughout the year.



PHOTOVOLTAIC SYSTEM

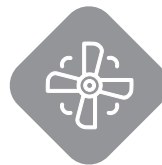
A photovoltaic system has been installed on the roof of the building. The system consists of photovoltaic modules that convert sunlight into electricity. The electricity produced by the system is used to power the building, further enhancing its sustainability and reducing its environmental impact.





RADIANT CEILING PANELS

Radiant ceiling panels have been installed in all office spaces within the building, while the production area features a radiant floor heating system. The ceiling radiant panel consists of a layer of insulating material paired with an aluminum sheet inside which the housing for the plastic pipes is made. Hot or cold water flowing in the pipes heats or cools the environment through radiation. For the underfloor radiant, a similar heat distribution method is employed, though it does not include the aluminum sheet used in the ceiling panels.



CONTROLLED MECHANICAL VENTILATION *(CMV)*

For the air conditioning of the office area, four all-in-one "Domina" units have been installed, providing climate control, domestic hot water, and controlled mechanical ventilation. Specialized sensors continuously monitor air quality, ensuring it remains fresh and clean throughout the day. Comfort is not just felt—it's visible.

THE GEOTHERMAL SYSTEMS, THE RADIANT PANELS, THE CMV AND THE PHOTOVOLTAIC SYSTEMS MAKE THE **NEW COMPANY HEADQUARTERS AN ECO-SUSTAINABLE BUILDING**, CAPABLE OF SELF-SUSTAINING ITS ENERGY NEEDS WHILE SIGNIFICANTLY REDUCING ITS ENVIRONMENTAL IMPACT.

AWARDS AND CERTIFICATIONS

THE QUALITY THAT CAN BE SEEN, BUT ABOVE ALL, THAT IS FELT.

To meet market challenges, GSI has achieved ISO 9001 quality certification from the certification body Kiwa, for the design and production of high-efficiency heat pumps, control and management systems.

This certification encompasses all company processes: from conceptualization to technical design, procurement, production, commercial offer management, order processing, and meticulous delivery. Additionally, it includes GSI staff training in both safety and technical or educational areas, following structured programs involving resources at all levels, with internal trainers and external experts conducting masterclasses.

This certification reflects the company's commitment to excellence. GSI is focused on continuous improvement and constant optimization of its organizational structure. Special attention is given to machine certification, with performance

tests conducted by independent laboratories to ensure high standards. Our offerings stand out for delivering safer, more reliable products with enhanced performance, ensuring competitiveness in our target markets. Technical support is our hallmark, fostering strong customer loyalty and earning the trust of our clientele.



BEST PERFORMER COMPANY 2023

In 2023, GSI has been proudly included among the "Magnificent 1,000" companies in the province of Treviso, earning the distinguished honor of being recognized as one of the **10 Best Performers**.





GSI POINT

Technical and commercial structures within their respective territories, capable of delivering turnkey solutions from design to the partial or complete implementation of thermal and/or photovoltaic systems.

These target the residential market serving private customers and providing the following services:

- Energy audit and efficiency improvement measures;
- Consulting, feasibility studies, and system design;
- Project management, inspection, and system testing;
- Energy certifications;
- Permits management, Tax benefits, White Certificates
- Turnkey installation of plumbing, heating, and electrical systems.

GSI EXPERT

Specialized commercial structures in the thermo-hydraulic and photovoltaic sectors, operating across extensive territories, ensuring not only the distribution of GSI products, but also continuous training for their installers and maintenance customers.

These carefully selected distributors are industry experts, providing a highly specialized service.



GSI SERVICE

Multi-brand technical support centers specialized in heat pump assistance. They provide the following services: system commissioning, thermal regulation setup, maintenance contracts, FGAS compliance services, equipment logbooks, and more.



GSI PRODUCTS AND SYSTEMS

- High-efficiency heat pump systems;
- Heat recovery using thermodynamic systems;
- Geothermal solutions;
- Energy metering and distribution systems;
- Air conditioning and air treatment systems;
- Climate control systems with surface and radiation heating technology;
- Programmable regulation and control systems;
- Monitoring and control systems.





HEAT PUMPS

THE CORE BUSINESS

Heat pumps are devices that use the thermal energy naturally present in the air, water, or soil to heat or cool residential spaces. Aerothermal, geothermal and hydrothermal energy - thermal energy stored in the environment - is 100% renewable energy.

GSI heat pumps are all high-efficiency systems designed to extract heat from one environment, raise its temperature, and transfer it to another. For example, during winter heating of a building, a heat pump operates by absorbing heat from the external environment and supplies it to the indoor spaces.

To accomplish this process—opposite to the natural flow of heat from a warmer body to a cooler one—heat pumps use a certain amount of electrical energy.

Due to their high efficiency, the consumed electricity is considerably lower than that of traditional heating systems enabling substantial savings on operational and maintenance costs for climate control systems. In addition, the use of heat pump systems eliminates the need for fossil fuels, reducing harmful CO2 emissions and lowering energy bills. GSI heat pumps are reversible, since these can also work for summer cooling of environments.

The GSI heat pump range is composed of three distinct types:

- **Geothermal heat pumps (WATER/WATER)**, which extract heat from the ground and transfer it indoors. These are available in two configurations: open-loop systems, which draw heat from groundwater; closed-loop systems, which use geothermal probes to extract heat from the subsurface. GS's Water-Water range includes the following products: **AQUA SLIM, AQUA TOWER, AQUA DUETTO and AQUA BLDC.**

- **Aerothermal heat pumps (AIR/WATER)**, which extract heat from the outdoor air and transfer it indoors. These differ by the used technology and the type of employed heat distribution system. The GSI Air - Water features the following products for the split (internal + external) units: **AURA SLIM, AURA TOWER, AURADue and AURA DUETTO**, while the single unit systems consists of: **AURA Monoblock, AURA MEVO and DOMINA.**

- **Aerothermal heat pumps (AIR/AIR)**, like BEETLE are designed to bridge the gap between sustainability and performance in modern working environments. Recognizing the connection between wellbeing and productivity, BEETLE provides advanced air-to-air climate control, creating comfortable and healthy conditions in industrial and commercial spaces. Combining energy efficiency, quiet operation, and seamless connectivity, it offers precise heating and cooling solutions while maintaining a strong focus on sustainability and innovative design.

INTEGRATED AMBIENT CONTROL SYSTEM

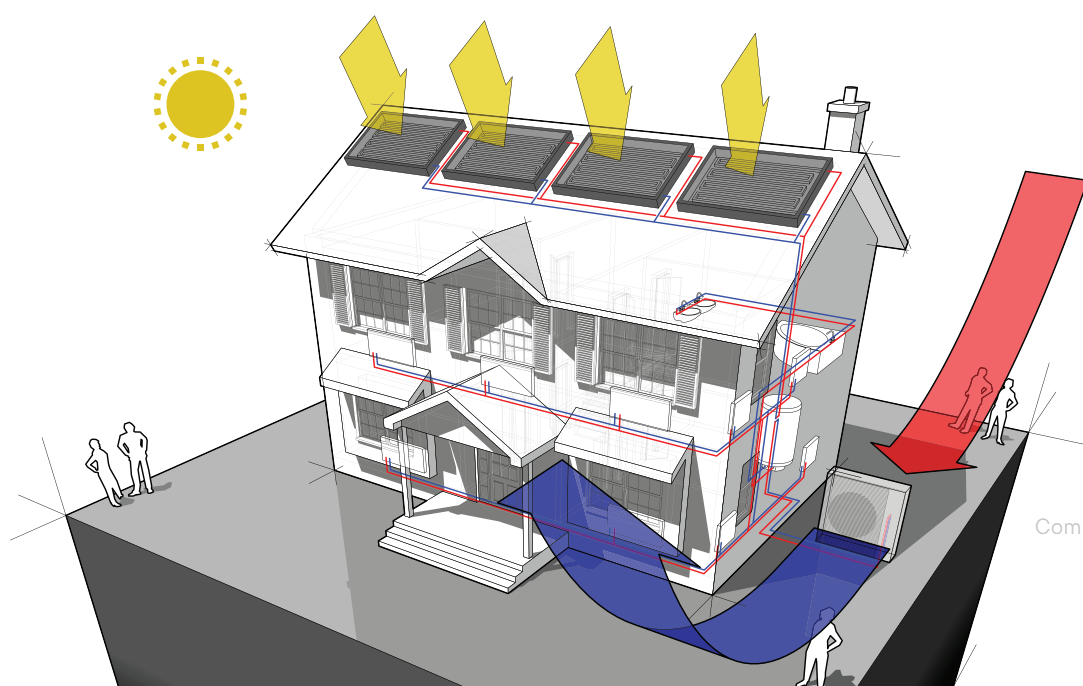
AN INNOVATIVE SOLUTION FOR
COMFORT, SAVINGS AND
COMMITMENT TO SUSTAINABILITY.

The integrated ambient control system is an innovative solution that offers numerous advantages in terms of energy savings, well-being and maximum comfort in all conditions. The system integrates all the environmental air conditioning systems present in the building, including:

- Air-to-water heat pumps, for heating and cooling;
- Solar thermal system, for integration with heating and domestic hot water;
- Photovoltaic systems for electricity generation;
- Controlled mechanical ventilation solutions for air exchange and heat recovery.
- The GSI system, managed by a single "WebVisor" platform which allows automatic control and regulation of all components.

The integrated ambient control system offers numerous advantages, including:

- Maximum comfort in all seasons, even in extreme climate conditions;
- Energy savings while respecting the environment;
- Comfort and well-being: the system is designed to ensure a healthy and comfortable indoor environment.
- Remote control of 100% of the parameters. The integrated ambient control system is therefore ideal for various construction solutions, from single-family homes, residential complexes, office buildings, industrial facilities, and hospitality structures such as nursing homes, hospitals, and hotels.



GEOHERMAL SOLUTIONS

HARNESSING THE
EARTH'S HEAT TO
CLIMATIZE SPACES.

With extensive experience gained from installing heat pump systems with geothermal heat exchange, GSI is able nowadays to design closed-loop geothermal fields, both with vertical and/or horizontal layout, tailored to the specific needs of each system, ensuring consistent efficiency over time. Through monitoring and control systems developed by GSI, the user and/or system operator can check the system's performance in real time and adjust the parameters accordingly to maintain maximum efficiency.

The arrangement of the geothermal space, whether vertical or horizontal piping layout, is entrusted to GSI's specialized drilling and excavation partners, ensuring the correct installation of the system.

CRAFTED WITH EXPERTISE

DESIGN, IMPLEMENTATION
AND MONITORING.

The success of the system depends on the quality of the chosen products, the expertise of the various operators involved, and the good coordination between them.

GSI has always enabled qualified technicians and end users to perform and monitor the installed systems. A high annual performance coefficient (Season COP) is an easily achievable result with a system designed and implemented by GSI.

A well-built system is always cost-effective.



WEB VISOR MANAGEMENT AND MONITORING SYSTEM

**GSI'S POWERED PLATFORM FOR
CONTROL AND OPTIMIZATION
FROM ANY DEVICE AND LOCATION.**

GSI offers its customers "Web Visor", a monitoring and supervision platform for the systems, designed and customized specifically for each type of application. The supervision system collects all relevant information from the heating, cooling, and dehumidification systems, such as operational status, set points, and alarms, allowing users at a glance to know the operation of any component of the system.



All the data collected by the various control devices spread accross the system are channelled into the supervision and monitoring system in which they are processed. Here, at the central point of the system, each user has access to a complete mapping of the system's status, aiding them to quickly and clearly recognize any issues or failures and evaluate the actual performance of the system. With GSI's Web Visor system it is possible to configure all the parameters that previously could only be set locally, have a detailed analysis of alarms and events, generate trends and reports.

The system can be accessed from any mobile device, allowing users to remotely monitor and manage the system from anywhere, reducing or even eliminating the need for on-site intervention.

This leads to significant cost savings for operations. Immediate recognition of anomalies is essential for controlling and protecting the system. For this reason, GSI goal is to ensure constant monitoring to guarantee and safeguard the correct functioning of the system.

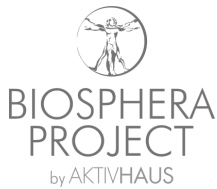




GSI MAIN PARTNERS



1. GSI AND THE BIOSPHERA PROJECT



On October 10, 2018, BIOSPHERA was officially presented in Milan. This Project was created to develop buildings that promote well-being by regenerating both the mind and body of their inhabitants. **BIOSPHERA is the name of the mobile, energy-independent living units** developed with the support of researchers, professionals, universities, and companies, adopting the most advanced and innovative technologies currently available. The Biosphera module allows to:

1. **Test and monitor** the energy efficiency along with the construction, air and environmental quality of advanced housing modules;
2. **Showcase and explain** the most advanced construction technologies through a European roadshow;
3. **Develop together with the designated institutions** a new constructive protocol focused on well-being;
4. **Reduce the environmental impact** of the construction processes of housing building modules also through the story of those who live and live it;
5. **Implement the technologies tested** in Biosphera into buildings for various uses: residential, hospitality, office spaces, hospitals, and more.

biospheraproject.com



2. GSI AND THE PARTNERSHIP WITH FZ SONICK



At GSI, we believe that smart technologies are the key to unlocking the potential of renewable energy. Our commitment is to provide more efficient and reliable thermal energy systems to actively support and contribute to the energy transition process. This marked the beginning of our collaboration with FZ SONICK, a global leader in safe to use "energy storage" solutions, without any risk of fire or explosion, environmentally friendly and fully recyclable at the end of their operational life. From this partnership, SETA was born – GSI's innovative energy storage system with a salt-based battery, designed to be paired with renewable energy generation systems, such as photovoltaic systems. Investing in green energy means investing in our future.

fzsonick.com

3. GSI AND THE PARTNERSHIP WITH BTICINO



We develop strategic collaborations with companies in the sector that, like us, stand out for creating efficient and comfortable solutions focused on energy saving. For BTICINO and GSI, Home Automation, Smart Homes, and Building Automation play a key role in this process.

The command and control interfaces provided by BTICINO integrate seamlessly with the regulation system offered by GSI, allowing a complete and synergistic management of the systems. This targeted collaboration results in an integrated offer that meets market demands and promotes advanced solutions for energy consumption management and optimization, contributing to the sustainability and efficiency of residential and working environments.

bticino.it

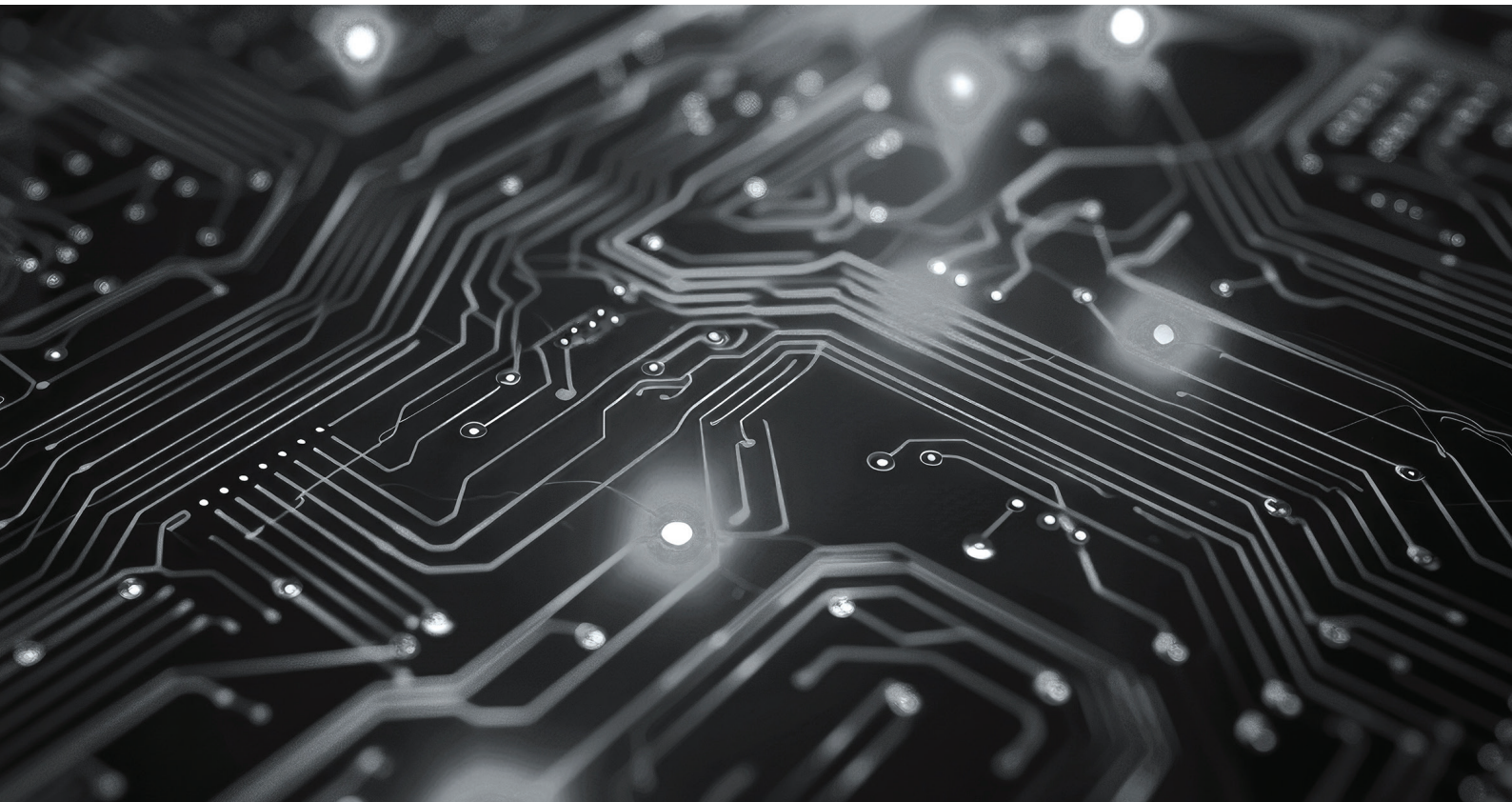


4. GSI AND THE PARTNERSHIP WITH YOUUS



A company with strong expertise in the fields of information technology, electronics and system engineering has developed a dedicated business area focused on smart home solutions, network systems, web technologies, and online communication. From the single electrical outlet to complex buildings and technological systems, the company operates using the most widely adopted market-standard protocols. The partnership with GSI and the company YOUUS began from the development of a communication and data exchange platform, with a user interface. This platform enables seamless connectivity between GSI's climate control systems and BTicino's facility management systems.

youus.it





REFERENCES AND COMPLETED PROJECTS

We specialize in the design, production, installation and maintenance of high-efficiency heat pumps. For over 15 years we have been operating in the residential, tourism and operational sectors, carrying out high quality solutions and guaranteeing a complete and reliable service.



RESIDENTIAL SECTOR

We have developed advanced environmental control systems for apartments, villas, residential complexes, and large housing developments, transforming them into reliable and comfortable living spaces.



RESIDENTIAL COMPLEX

Garda Lake

PROJECT AND CHALLENGE

The entire project consists of 5 residential blocks for a total of 45 apartments, as well as 7 independent villas. Each block is equipped with its own thermal power plant, as are the villas, ensuring maximum operational independence for the structures.

SOLUTION

Both the villas and the residential blocks are equipped with 12 reversible Magis geothermal heat pumps, capable of producing domestic hot water simultaneously with heating and cooling. To complement the system in the residential blocks, a series of solar thermal panels was installed, ideal for producing hot water during times of the year when the heat pump units are not required. Each unit features an autonomous remote-readable hot/cold consumption metering system, enabling residents to monitor their energy use at any time, from anywhere. Thermal Power 267,8 kW (BO/W35).



PRIVATE VILLA

Corfu Island - Greece

PROJECT AND CHALLENGE

GSI was tasked with upgrading the climate control system of a villa in Nissaki, located on the scenic Corfu island.

The villa, which descends from the hill to the sea, originally had a mixed climate system: radiant heating for the winter in a small part of the house, powered by a hydraulic heat pump, along with direct expansion split units for summer cooling. GSI supplied and installed an AURA monoblock inverter heat pump, complemented by hydronic fan coils in each room.

SOLUTION

The existing radiant system is highly effective, delivering optimal heating performance, while ensuring an ample supply of domestic hot water through the Magis system and hydronic fan coils. Thermal Power 22 kW (A7/W35).

RESIDENTIAL SECTOR



PRIVATE VILLA

Province of Perugia

PROJECT AND CHALLENGE

A newly built private villa on three levels, with a guesthouse and an outdoor swimming pool.

SOLUTION

Comfort, maximum energy efficiency and minimum costs were achieved through the installation of a Magis series geothermal heat pump, which meets the thermal needs of both the main villa and the guesthouse. Through the partnership with BTicino, a world leader in home automation, all the controls of the living spaces, heating system, and GSI heat pump were intuitively integrated into the home's automation network. The combined expertise of BTicino and GSI enabled the development of a system that completely exceeded all expectations.

Thermal Power 14.8 kW (BO/W35).



PRIVATE HOUSE

Pantelleria Island (TP)

PROJECT AND CHALLENGE

Surrounded by a clear sea and volcanic sand beaches, Pantelleria is an island renowned for its unique architecture, the Dammusi—traditional volcanic stone dwellings with a square shape. The proposed solution for seasonal climate control of the rooms, following its complete renovation, features a Magis geothermal heat pump with a horizontal probe field located in the garden adjacent to the house, serving as the thermal source. Innovation and design are seamlessly integrated with the historical character of the building.

Thermal Power 11,4 kW (BO/W35).



SOLUTION

The existing radiant heating system is perfectly tailored to meet the property's heating requirements, delivering optimal performance. The Magis system further enhances the setup by ensuring a reliable supply of domestic hot water, while the hydronic fan coils provide efficient and uniform climate control throughout all living areas.

Thermal Power 22 kW (A7/W35).



PRIVATE HOUSE

Provincia di Perugia

PROJECT AND CHALLENGE

This multi-level building is adorned with exposed stone on its exterior walls and certain designated areas inside the building, creating a distinctive architectural style. The thermal system, composed of a single Magis type heat pump, ensures the production of domestic hot water, air conditioning and heating of the building.

SOLUTION

The Magis heat pumps, equipped with advanced heat recovery technology, allow for the production of domestic hot water at no additional energy cost. Additionally, by integrating a dedicated external heat exchanger, the heat pump efficiently fulfills the thermal needs of the property's pool heating system as well.

Thermal Power 22,9 kW (BO/W35)



OPERATIONAL SECTOR

We developed high-efficiency systems that have significantly reduced operating costs, allowed proper preservation of raw materials and created a healthy and comfortable environment.



CLIMBING GYM

Province of Mantua

PROJECT AND CHALLENGE

Designed with a strong emphasis on eco-compatibility and energy efficiency, the "My Wall" center is among the Class A-rated buildings. This achievement was made possible through advanced thermal insulation of the exterior walls, thermally insulated windows, and the exclusive use of renewable energy sources such as photovoltaic systems and geothermal heat pumps.

SOLUTION

The installation features a custom-designed system comprising two reversible Magis units utilizing a geothermal source. The entire climate control of the building is air-conditioned by means of fancoils managed by room thermostats and by an air treatment unit connected to the web interface that also oversees the central heating system. This supervision system ensures optimal control via any network-connected device. Thermal Power 149,6 kW (BO/W35).



LARGE-SCALE OFFICE BUILDINGS

Killorglin - Ireland

PROJECT AND CHALLENGE

Commissioned by a financial services company, the project involved retrofitting the heating plant of a large office building. The original diesel-powered heating system has been replaced with an Aura Duetto heat pump system.

SOLUTION

The Aura Duetto system is an innovative solution that combines the performance of an air-to-water heat pump with the efficiency of an electric heat generator. This integration delivers high energy efficiency and significant consumption reductions, providing both economic and environmental benefits.

Additionally, the system was seamlessly integrated with the existing BMS (Building Management System), enabling centralized control of the entire plant.

Thermal Power 90kW (A7/W35).





WINERY

Province of Siena

PROJECT AND CHALLENGE

Nestled in the rolling Tuscan hills and surrounded by valleys of olive groves and vineyards, this winery benefits from its unique geographic location and soil composition. These elements contribute to the production of wines with exceptional aroma, character, and elegance. The horizontally placed geothermal probe system was designed to preserve the natural landscape and maintain the soil's inherent properties

SOLUTION

The installation was tailored to prevent the interruption of the grape must fermentation before completion. This was achieved through the insertion of temperature probes into the fermentation tanks, continuously monitored for optimal control. The reversible heat pump, capable of producing domestic hot water simultaneously with its other operations, ensures the proper vinification process. Additionally, the system was sized to meet the heating and cooling demands of the adjacent building. Heating is delivered through underfloor radiant systems, while cooling is handled by traditional air-based systems with hydronic fan coils.

Thermal Power 26,2 kW (BO/W35).



AGRICULTURAL COMPANY

Province of Venice

PROJECT AND CHALLENGE

The farm is located in the beautiful and sunny Venetian plain where the favorable climate allows for the cultivation of various plant species.

SOLUTION

The Magis reversible heat pump, with a geothermal source, is used for the climate control and heating of the greenhouse facilities. The system was designed to also meet the thermal needs of the adjacent residential building.

Thermal Power 34,1 kW (BO/W35).



OPERATIONAL SECTOR



PUBLIC CANTEEN

Province of Pordenone

PROJECT AND CHALLENGE

Renovated and expanded according to the most advanced criteria of design, innovation and sustainability, the public canteen for the local industrial area meets the thermal and cooling needs of the building through renewable energy sources.

SOLUTION

A single Magis reversible heat pump with a geothermal source and multiple compressors was installed, considering its function and the significant thermal and cooling demands of the building. This system is designed to operate efficiently at partial loads, adjusting to the actual usage conditions. The system is complemented by an air treatment unit and ceiling-mounted radiant heating, ensuring optimal comfort throughout the building, regardless of load conditions and throughout the whole year.

Thermal Power 98,9 kW (BO/W35)



LARGE OFFICE BUILDING

Province of Cuneo

PROJECT AND CHALLENGE

Installation made of two Duetto units. The building, with a total area of 4,500 sqm, includes office spaces and warehouses.

SOLUTION

The two Duetto units have been installed to ensure efficient climate control using groundwater as a resource for both heating and cooling, reducing energy consumption and CO2 emissions. The system is equipped with controlled ventilation, ensuring a constant air exchange and maintaining an optimal level of comfort.

The use of renewable energy and the system's efficiency contribute to reducing operational costs.

Thermal power 198 kW (BO/W35)

TOURISM SECTOR

Nel settore turistico abbiamo realizzato numerosi lavori di successo, contribuendo a migliorare l'efficienza energetica e il comfort di numerose strutture ricettive, frutto di esperienza e di competenza.



HISTORIC CASTLE

Province of Perugia

PROJECT AND CHALLENGE

Built in the 10th century, this castle is a historic residence with an exclusive wellness center, which stands on top of a hill and overlooks the surrounding valley. Modern, sustainable and efficient system choices are in harmony with the historical contexts in which they are located.

SOLUTION

The thermal plant consists of a geothermal heat pump, providing domestic hot water via the Magis system, which ensures maximum comfort throughout the year while meeting acoustic requirements. The primary air treatment system, designed for air exchange and dehumidification of the spa area, guarantees ideal comfort with full autonomy and maximum efficiency. These systems are perfectly integrated into the building's advanced architectural design, ensuring optimal functionality and performance across the entire structure.

Thermal Power 52.3 kW (B0/W35)



HISTORIC CASTLE

Province of Pordenone

PROJECT AND CHALLENGE

Located in the northeastern Alps, this majestic neogothic castle, with touches of liberty style and medieval/renaissance influences, was originally built as a private villa in the late 1800s. Following a suggestion from King Umberto the first of Savoy, the villa was transformed into a castle by its owner.

SOLUTION

For the climate control of this system, GSI designed a sophisticated solution to meet the unique needs of the various spaces. In the main areas, such as the conference room, exhibition hall, and restaurant, a dedicated temperature and humidity control system was installed. Individual climate control units were also provided in the guest rooms. All systems are integrated with the central heating system, which independently controls the pumps and valves to ensure optimal comfort and energy efficiency throughout the entire building.

TOURISM SECTOR



PRESTIGIOUS HOTEL

Province of Perugia

PROJECT AND CHALLENGE

Situated in the picturesque region of Umbria, in the province of Perugia, this hotel is surrounded by some of Italy's most captivating historic towns. As part of an international hotel chain, it is equipped with cutting-edge facilities that provide top-tier services to ensure a superior experience for all guests.

SOLUTION

The HVAC system incorporates two high-temperature Air-to-Water heat pumps, which efficiently provide both heating and cooling while also generating domestic hot water through the addition of a third heat exchanger. The remote evaporating-condensing units, equipped with helical fans, are installed on the building's roof, offering optimal efficiency with minimal noise emissions.
Thermal Power 124,4kW (A7/W35)



AGRITOURISM

Province of Terni

PROJECT AND CHALLENGE

Located in a charming Umbrian village, this agriturismo facility was created by transforming an old stone farmhouse into a cozy retreat, complete with guest rooms, a bar, and a restaurant. Set in a peaceful natural setting, it offers the perfect environment for relaxation and tranquility.

SOLUTION

Heating and cooling are provided by a multi-purpose geothermal heat pump, designed to meet the thermal demands of both the agriturismo facility and the adjacent private residence. The heat pump, installed in the new building, integrates with the existing wood-burning boiler system in the private home, creating a seamless and efficient heating solution for both properties.
Thermal Power 35.3 kW (B0/W35)



CHALET

Aosta Valley

PROJECT AND CHALLENGE

This large chalet, covering approximately 180 square meters across three floors, is located above the town of Chamois (AO), at an altitude of over 2,000 meters. Known for its car-free status, the village can only be accessed on foot, by skis, or occasionally by off-road vehicle for construction material transportation.

SOLUTION

Due to landscape preservation restrictions, the installation of photovoltaic panels was not possible. To meet the heating and hot water demands, a GSI AQUA SLIM 115 geothermal heat pump with a capacity of 15kW was installed, along with three pairs of 100-meter geothermal probes. The heating system consists of ceiling-mounted radiant panels, while the hot water storage is supported by a 500-liter tank with a solar coil, powered by two south-facing, 60° inclined vacuum tube solar panels installed outside the building in the garden area.

Thermal Power 15kW (B0/W35)



GSI EVENTS IN ITALY AND ABROAD



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In collaboration with MCE, Europe's leading trade fair for HVAC products.



BIOSPHERA PROJECT by AKTIVHAUS

GSI also takes part in the itinerant tour showcasing the Biosphera Genesis and Equilibrium modules. These modules are designed as demonstrative examples of the most advanced technologies in biophilic design and sustainable architecture.

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COMO CASACLIMA FAIR

Exhibition held at the Villa Erba Conference Center in Cernobbio (CO), dedicated to bioarchitecture and energy-efficient design.











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