

RPE



HEAT RECOVERY UNITS

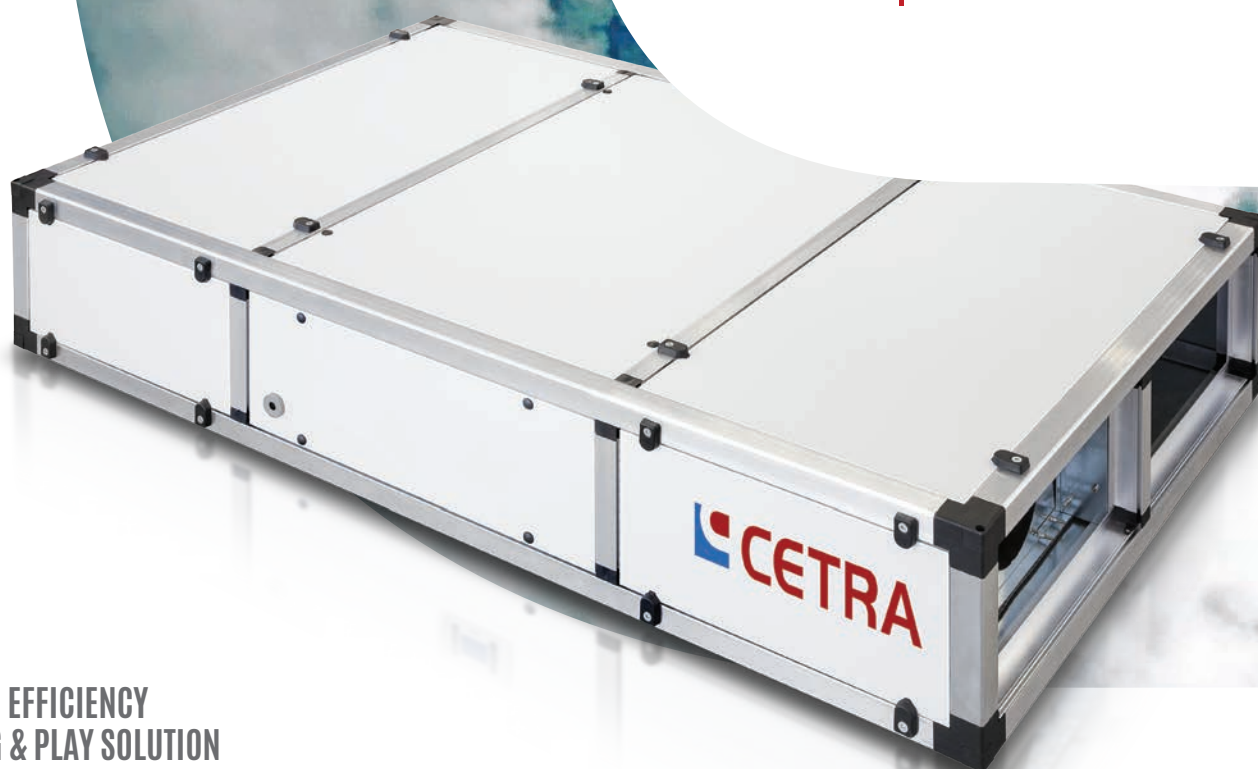
MECHANICAL VENTILATION UNIT WITH HEAT RECOVERY



RPE-S

RPE-X

VERY HIGH-
EFFICIENCY HEAT
RECOVERY UNIT



- HIGH EFFICIENCY
- PLUG & PLAY SOLUTION
- ADVANCED CONTROL
- EASE OF MAINTENANCE

Ventilation unit with heat recovery for vertical and horizontal indoor and outdoor installation.

 **CETRA**



RPE

CETRA'S 30 YEARS OF EXPERIENCE IN AIR TREATMENT HAS GIVEN RISE TO A NEW RANGE OF VERY HIGH-EFFICIENCY RPE HEAT RECOVERY UNITS.



Designed for spaces where fresh air exchange is required by regulations or simply to improve livability, RPE allows the recovery of up to 95% of the heat present in the expelled air.

The **RPE** range is suitable for installation in industrial and service sector spaces such as: cafes, offices, restaurants, meeting rooms, shops, school buildings, gyms, homes for the elderly, *low-energy buildings*, and in general facilities where it is important to ensure proper air ventilation and minimize energy consumption.

These needs are met by means of two separate versions: **RPE-S** and **RPE-X**, each of which is available in **9** different sizes, with flow rates ranging from **500 m³/h** to **6000 m³/h**, in both vertical and horizontal configuration (even on a false ceiling).

The RPE-S version allows maximum configurability of the internal components, accessories, and control system. From the basic configuration to the configuration with multiple accessories, it is suitable for a wide variety of applications.

The RPE-X version is characterized by the high thermomechanical performance of its structure, top-of-the-range components, and fire-retardant rock wool insulation, with an excellent soundproofing capacity.



STURDINESS



EFFICIENCY



VERSATILITY



**CUSTOMIZED
CONTROL**



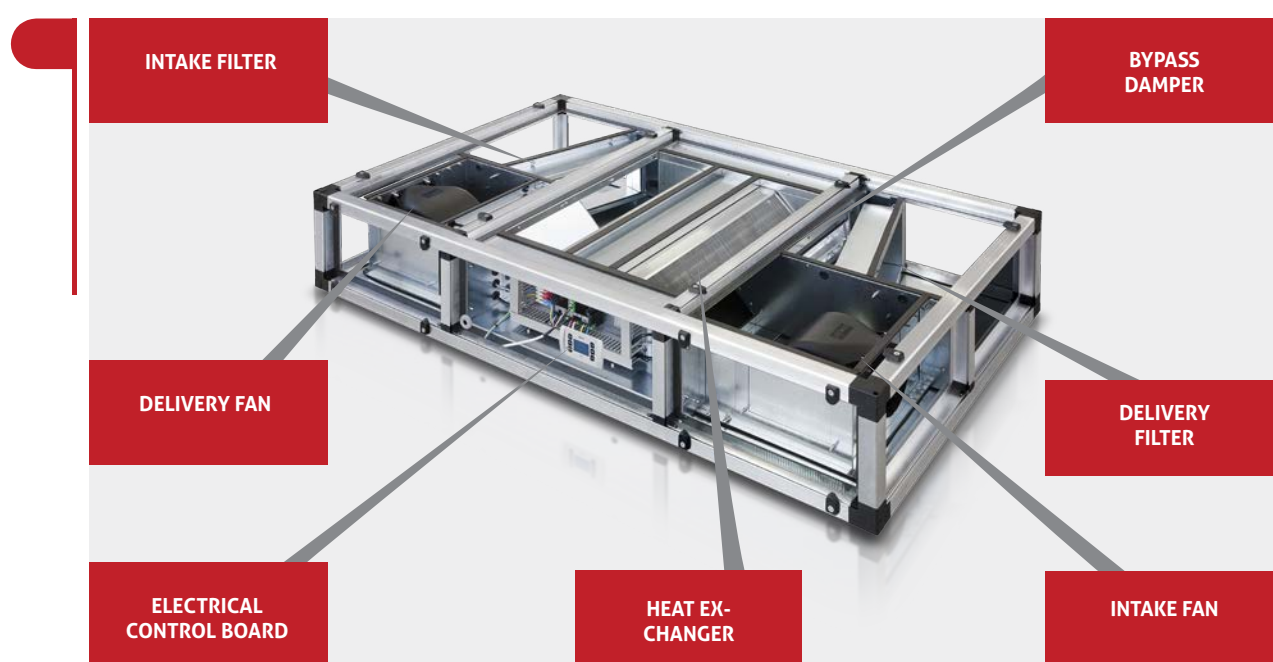
**EASY
MAINTENANCE**



**EXTRA
COMFORT**

RPE

CONTROLLED MECHANICAL VENTILATION WITH VERY HIGH-EFFICIENCY HEAT RECOVERY



STURDINESS

The heat recovery unit is supported by a solid structure made of 35mm aluminum profiles and a case made of 30mm thick double sandwich paneling. Fiberglass-reinforced nylon corners connect the profiles. The pre-calibrated electrical control panel and the bypass damper are incorporated internally.

M6 filter (ePM₁₀ 80 %) during intake and F7 filter (ePM₁ 50 %) during delivery.

The panels may be requested to be made of galvanized steel, pre-painted steel, or AISI 304

The heat exchanger can be provided with anticorrosive epoxy paint for the most difficult working conditions. Designed for post-heating and internal antifreeze.

EASY MAINTENANCE

All the infill panels of the heat recovery unit are removable for routine and extraordinary maintenance operations. In particular, it is possible to inspect the unit from below, which is advantageous in the case of false ceiling applications where the reduced spaces may not guarantee easy side access to the fans, filters, and heat recovery unit. In the case of floor installation, access will also be possible from the top.

RPE

EFFICIENCY

The heart of the unit is a **"counterflow" aluminum plate heat exchanger** with certified **Eurovent** performance. Operation in counterflow mode keeps the temperature gradient between the delivery and intake air flows uniform, thereby maximizing the exchange efficiency, which exceeds 90%. The bypass function of the heat exchanger makes it possible to operate in free-cooling and free-heating modes, when the ambient conditions are favorable.



Two fans with a directly coupled motor allow air ventilation. Speed modulation is always guaranteed: by means of a device with potentiometer or by means of an electronically controlled BLDC motor. This makes it possible to maintain a high operating efficiency even under partial loads (for example, in situations of low crowding), thus reducing system consumption and energy expenditure.

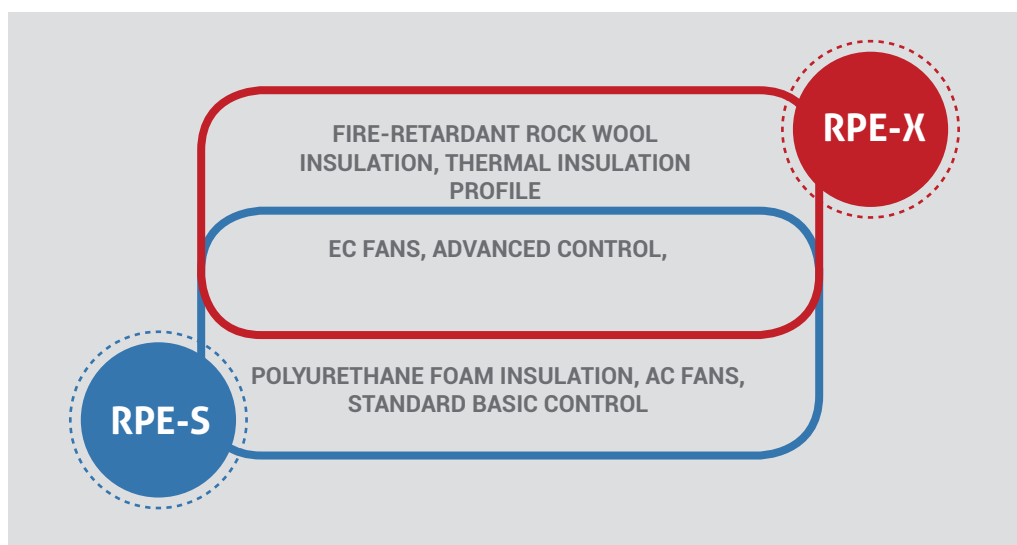
The unit complies with the minimum efficiency limits and the construction constraints imposed by European Directive 1253/2014.



RPE

VERSATILITY AND FLEXIBILITY

In addition to the air ventilation, filtration and heat recovery functions, a wide range of accessories and configurations makes it possible to adapt the RPE range to various system solutions and ambient conditions.



ACCESSORIES:

- Chilled/hot water or direct expansion external coil
- Internal antifreeze heating element, water coil or post-heating internal heating element
- Air vents, circular flanges, foot kits, air intake dampers, antifreeze system *alpha-cycle* with three dampers and 32 different configurations for the direction of flows and position of the flanges
- Valves with ON/OFF or modulating actuator; bypass damper ON/OFF actuator
- Delivery F9 filter (ePM₁ 80 %); external activated charcoal filter, external Jonix air sanitizing module
- Probe for constant delivery temperature control; CO₂/VOC probe for indoor air quality control; pressure transducer for constant air flow rate or pressure control

RPE

CUSTOMIZED CONTROL

The electrical power board built into the structure can be equipped with two different control systems. The result is a range of versatile heat recovery units, capable of responding to an extremely diverse range of system and application requirements.

BASIC TED CONTROL



The basic TED control is the adjustment standard. It is supplied as standard in the RPE-S version and allows simple and economical control of the ventilation unit. The advanced EVO control allows advanced

ADVANCED EVO CONTROL

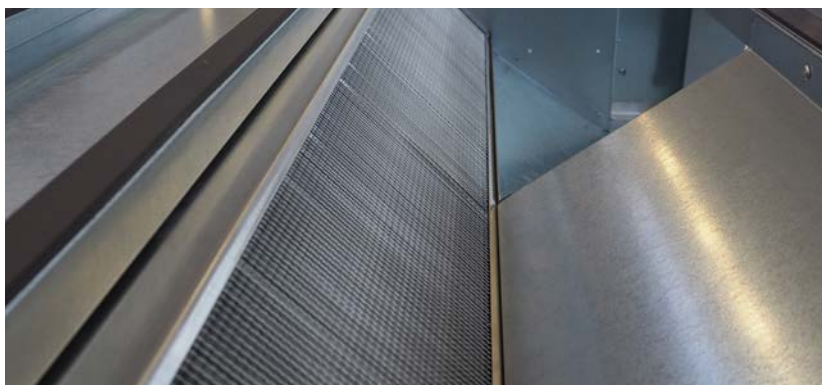


management of ventilation unit operation and accessory settings. It is supplied as standard in the RPE-X version.

- Both manual and automatic fan speed modulation (simultaneous)
- It controls up to two ON/OFF valves, or alternatively it allows an external motor-condenser call signal to be managed.
- Manual setting of the internal temperature set-point

- The control logics implemented in Cetra software are aimed at optimizing room comfort and energy consumption
- Control at fixed delivery temperature; control of CO₂/VOC environment; room dehumidification function, management of the Jonix sanitizing module. Constant air flow rate or pressure control
- Delivery and intake ventilation will always be independent, which is essential for applications in over- / under-pressure environments.
- Control of modulating valves, multi-step heating elements, free-cooling, and antifreeze systems
- Modbus communication and monitoring systems interface

The adjustment software is all developed in-house, *ad hoc*, for controlled mechanical ventilation applications. Both controls are for remote installation, and act as room temperature probes. On request they can be installed on board the unit.

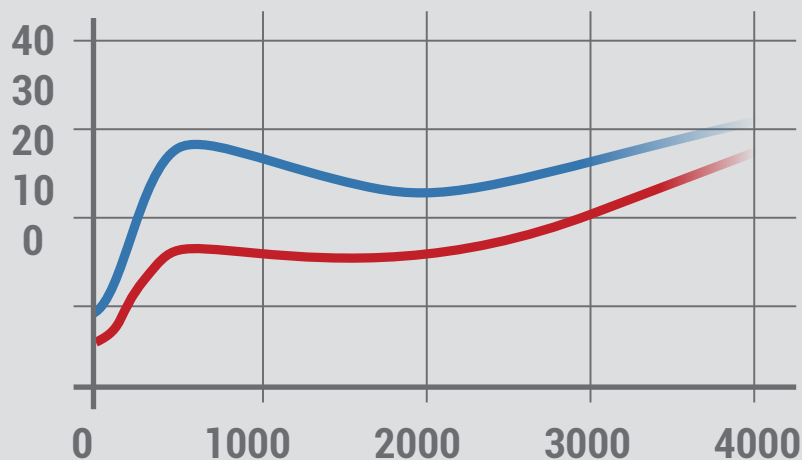


RPE-X

EXTRA COMFORT

The **RPX series** is built with rock wool fill and a thermal insulation profile. The rock wool insulation guarantees the highest degree of reaction to fire (fire retardant) and excellent sound insulation.

Attenuation factor R_w - [dB]



ROCK WOOL

POLYURETHANE



LOW NOISE

The human ear can perceive sounds in a range of frequencies from 20 Hz to 20,000 Hz. However, maximum hearing sensitivity is between 1500 and 3000 Hz. In this range the rock wool guarantees a high attenuation factor of the noise generated by the ventilation sections.

This solution is suitable for all applications where a higher degree of room comfort is desired: indoor applications, false ceilings, or rooms where low noise emission is required.



FIRE RETARDANT

The degree of reaction to fire is how combustible a material is. The reaction class of products and construction elements is defined by European Standard UNI EN 13501-1, which classifies rock wool as class A1, i.e., as a non-combustible product.



REDUCTION OF HEAT LOSS

The thermal insulation profile's function is to reduce heat loss through the aluminum profile. The thermal insulation profile lowers the risk of condensation, in all conditions where the profile's surface temperature falls below the indoor air dew-point temperature (internal condensation). According to the same principle the risk of condensation external to the profile is reduced.

An example is false ceiling applications, where the latter is not heated or where the specific humidity of the extract air is high (changing rooms, gyms).

The reduced possibility of internal condensation mitigates the growth of bacteria and mold, ensuring a higher degree of hygiene of the product. The rounded internal section, which is standard for the entire RPE range, also improves cleaning operations.





NOMINAL TECHNICAL DATA AND DIMENSIONS

RPE-S VERSION

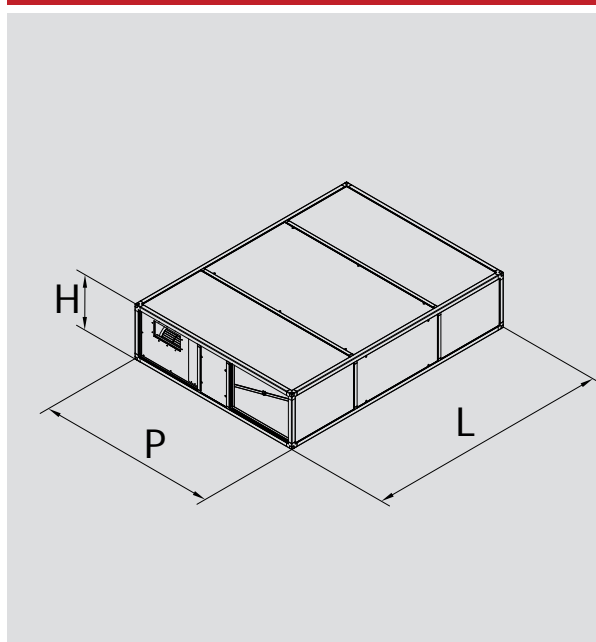
Configuration		O		O + V				V		
Size		55	110	175	220	255	320	410	500	600
Rated air flow	m ³ /h	550	1000	1750	2200	2550	3200	4000	5000	6000
FANS - AC										
Δps max	Pa	180	150	130	100	200	150	370	300	200
FANS - EC										
Δps max	Pa	250	300	400	250	400	250	400	300	500
HEAT EXCHANGER										
Winter operation (-10 °C, 90% / 20 °C, 50%)										
Efficiency	%	90.5	91.3	93.1	93.1	95.2	94.7	94.4	95	95.4
Power recovered	kW	4.02	8.24	14.55	18.28	21.47	26.78	33.35	41.72	50.18
T delivery	°C	17.1	17.4	17.9	17.9	18.6	18.4	18.3	18.5	18.6
Efficiency (1253: 2014)	%	79.1	82.2	83.5	83.4	85.3	84.4	83.9	84	84.3
Summer operation (35 °C, 50% / 26 °C, 60%)										
Efficiency	%	74.5	76.8	77.3	78	78	78.9	78.4	78.5	78.8
Power recovered	kW	1.24	2.49	4.34	5.5	6.38	8.02	9.95	12.38	14.91
T delivery	°C	28.3	28.1	28	28	27.8	27.9	27.9	28	28

RPE-X VERSION

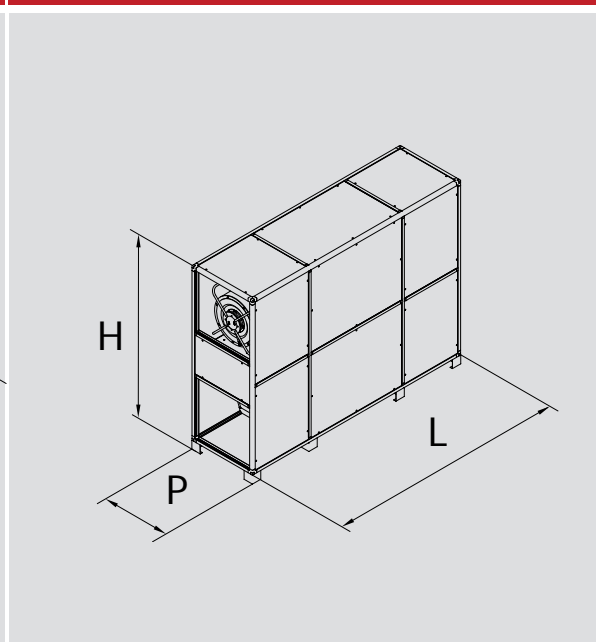
Configuration		O		O + V				V		
Size		55	110	175	220	255	320	410	500	600
Rated air flow	m ³ /h	550	1000	1750	2200	2550	3200	4000	5000	6000
FANS - EC										
Δps max	Pa	250	300	400	250	400	250	400	300	500
HEAT EXCHANGER										
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HORIZONTAL



VERTICAL



HORIZONTAL

SIZE	55	110	175	220	255	320	410	500	600
H	295	360	520	520	660	660	-	-	-
P	965	1260	1705	1705	2000	2000	-	-	-
L	1585	2000	2300	2300	2600	2600	-	-	-

VERTICAL

SIZE	55	110	175	220	255	320	410	500	600
P	-	-	520	520	660	660	800	800	950
H	-	-	1805	1805	2100	2100	2100	2100	2100
L	-	-	2300	2300	2600	2600	2750	2750	2900



CETRA

As with all the other companies in the Galletti Group, Cetra has always maintained its strategic processes in-house: Research and Development, Design, and Production are managed entirely within the company; this guarantees continuous growth of expertise and allows it to offer the market a great deal of flexibility. In this sense, the innovative sheet metal working center of Salvagnini, a world leader in its sector, with which the Galletti Group has had an important partnership for years, is of great importance. The sheet metal working center represents something unique in the HRVAC sector: it is a cutting-edge production unit consisting of a system that integrates an automatic warehouse, a robot for

bending small parts, a punching center, and a bending center.

This next-generation integrated system is a prime example of what the concept of "verticalization" means for Cetra and for the entire Galletti Group - a prerogative that makes it possible to better respond to the increasingly pressing needs of the market for highly customized products.

Among the panel processing systems, note should be taken of the presence of the semiautomatic foaming press with closed mold injection, for GWP 0 polyurethane foaming, at the Altedo site. Process temperatures are guaranteed by an innovative geothermal heat pump system (made completely in

house by the Galletti Group), which also serves all the users of the production plant.

By making use of the ground as an energy reservoir, the heating plant keeps the press plates hot and cools the reagent mixture, as well as providing chilled water, hot water, and DHW to facilities and offices.

The constant temperature of the ground throughout the year guarantees the high seasonal energy efficiency of the plant.

To be able to offer the market a high degree of flexibility, in addition to the need to be able to offer highly *customized* products, another key aspect is that of being able to integrate its products into increasingly complex systems: in this sense



it is of great strategic importance to be able to completely manage the adjustment portion of its units.

This is why, in addition to the sheet metal working center, the foaming unit, and bending press, Cetra can count on another very important element: the internal development of adjustment hardware and software.

To this end, Cetra has an in-house team of people who are completely dedicated to the development of adjustment software, able to implement solutions tailored to the specific needs of its customers.

The production process is completed by a highly specialized production department dedicated to

the wiring, programming, and testing of the control system of the air handling units and the units for controlled mechanical ventilation.

GALLETTI GROUP

GROWING TOGETHER. THE INTUITION OF A GROUP OF MANAGERS WAS THE DRIVING FORCE FOR THE ESTABLISHMENT OF THE GALLETTI GROUP

The growth of the Galletti company and the evolution of the market paved the way for six other large Italian companies to join the group, with the ability to offer a complete package of products and services.

Thus was established the Galletti Group. Each company has a well-defined identity with specific competences that it makes available to the Group in order to be able to present itself as a single partner in the HRVAC sector. The willingness to keep strategic processes inside the company is the key to success of the Galletti Group, which has been able to maintain constant growth over the past few years due to its considerable investments.



GALLETTI

A key company in the comfort air conditioning sector and leader in the production of hydronic indoor units, chillers, and heat pumps.



HIREF

Innovation and flexibility are the watchwords of this company that offers technological solutions in the sector of air conditioning for high power density environments.



CETRA

Historical brand of the sector - today Cetra is the company of the Group that covers the air handling market for the residential and service sectors.



ENEREN

Thanks to a team of integrated competences, Eneren provides complete turnkey packages in terms of services and products in the fields of geothermal energy, photovoltaic solar energy, and biomass.



HIDEW

The extensive expertise developed in the dehumidification sector has allowed the company to offer a wide range of dehumidifiers that can be combined with residential radiant systems, industrial dehumidifiers, and swimming pools.



TECNO REFRIGERATION

Tecno Refrigeration's specializations include commercial refrigeration and air conditioning for the shipbuilding and railway sectors.



GH SERVICE

GH Service offers maintenance services, assistance, and after-sales support for the products of all the companies belonging to the Galletti Group.

GALLETTI GROUP

A NEW APPROACH TO THE MARKET



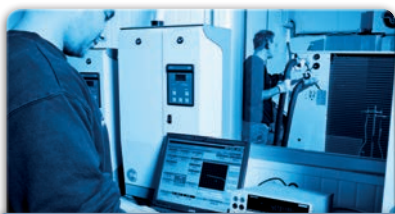
A SINGLE PARTNER OFFERING DIVERSIFIED COMPETENCES

The Galletti Group is the brainchild of a small pool of successful managers from the air conditioning industry. Today it is made up of seven different companies which have specific competences in their respective target sectors and operate in close synergism so that they can present themselves as a single partner.

KEEPING KEY PROCESSES INSIDE THE GROUP

From the very beginning in 1906, the year that Galletti S.p.A. was founded, the history of the Group has been characterized by its firm determination to capitalize on the skills necessary for the development of high-quality and high-performance products.

The Galletti Group's great strength in all these years was to keep in-house the strategic processes that are the pillars of every new solution.



RESEARCH AND DEVELOPMENT



DEVELOPMENT



PRODUCTION



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