



GEMONT
TRADING Ltd



SYSTEM PRESENTATION



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THANKS TO OUR WORLDWIDE PATENTED TECHNOLOGY,
GLASS BECOMES A FACTOR THAT CAN SAVE UP TO 35% OF
RUNNING COSTS FOR HEATING AND COOLING HOMES AND
OTHER LIVING SPACES .

COMFORT AND SAFETY
HELPS KEEP THE ENVIRONMENT CLEAN
DECREASE OF INVESTMENTS
SIGNIFICANT ENERGY SAVINGS

VETROVENTILATO® WINDOWS. TOP OF THEIR CLASS.

Low consumption

VetroVentilato®
Windows

Triple
glazing

A

Double
glazing

B

Single
glazing

C

Other
windows

D

Other
windows

E

Other
windows

F

Other
windows

G

High consumption

• Average saving of over 35%
on cooling and heating costs.

• U-value $U_w 0,69 \text{ W} / \text{m}^2\text{K}$.

• g-value 0,19.

• The first ever dynamic window.
Worldwide patent.



CONSIGLIO NAZIONALE DELLE RICERCHE
ITC
Istituto per le Tecnologie della Costruzione

RAPPORTO TECNICO

N° 2005.12.09.0094
(NON DIVULGABILE)

CONTRATTO TRA ITC-CNR E VETRO VENTILATO s.r.l.

VALUTAZIONE DELLE PRESTAZIONI DI UN SISTEMA DI INVOLUCRO DINAMICO

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INTRODUCTION



VetroVentilato® was designed and developed so that buildings can benefit from a very significant reduction in their energy consumption.

First, it allows investors to significantly reduce the cost of constructing a new building for the following reasons:

- Considerably smaller heating and air conditioning systems.
- Cheaper power supplies.
- Reduced ventilation and air extraction.
- No unnecessary opening on buildings surface.
- Use of all available surfaces inside rooms.

Reduction of the installed equipment size and operating efficiency = Increase savings.
It is not only applicable to new buildings, but it can perfectly adapt to any type of existing building to ensure the same energy savings, after a specific study.

It also gives an exceptional user comfort, thanks to the following benefits:

- Permanent air recycling and great distribution of filtered air throughout all rooms.
- Elimination of condensation and icing phenomena.
- Thermal and acoustic insulation
- Total elimination of pollution problems.
- Removal of any obscuring blinds and mosquito nets.

Protected by a worldwide patent, VetroVentilato® is today the only solution that can give guarantees beyond the standards required by the most stringent regulations amongst countries of European Union and all other continents.

ASSEMBLY ADAPTABILITY



Vetroventilato® adapts to all types of joinery.

- **For new constructions, the windows are identical to those provided on the project's drawing.**
- **For existing buildings, the system is easily installed on all types of glazing and moreover it is now possible to design big glazed walls with a target of economy and comfort in total safety.**

PATENT

The economy, comfort and safety of VETROVENTILATO® are patented worldwide. The National Research Council said VetroVentilato® transforms a glass wall from a weak element of a building into a stronger one. Indeed, VetroVentilato® creates a thermal and acoustic buffer that isolates heat, cold and noise.

- Ability to have a K thermal factor of 0,3 K (higher than a wall).
- acoustic isolation (sound absorbing capacity from 44 db).
- the same thermal uniformity from windows and the room.
- better thermo acoustic insulation than imposed by the most stringent EU regulations.

VetroVentilato® performance were experimentally assessed against benchmarks glazing systems at the ITC-CNR (Institute for Construction Technology - National Research Council based in Milan), using the methodological approach of outdoor test cells and Energy Plus (dynamic energy simulation tool developed by the Department of Energy of the United States of America in cooperation with VETROVENTILATO®).

ADVANTAGES

The design of large glass facades significantly reduces thermal coefficients while VETROVENTILATO® allows architects and designers to express themselves freely.

COMPARISON DURING WINTERTIME



VetroVentilato® allows the reuse of solar radiation captured by windows for integrating the internal heating and comfortably use all peripheral areas.

VetroVentilato®



Internal glass temperature : **18°C**

- Excellent thermal equilibrium.
- Installations size reduced.
- Extreme energy savings.
- Excellent thermal and acoustic comfort on the perimeter, so no need to keep workstations at a certain minimum distance from windows.
- Excellent daylighting.
- Elimination of all types of condensation or ice on the inner pane.

Other glazing



Internal glass temperature : **0°C**

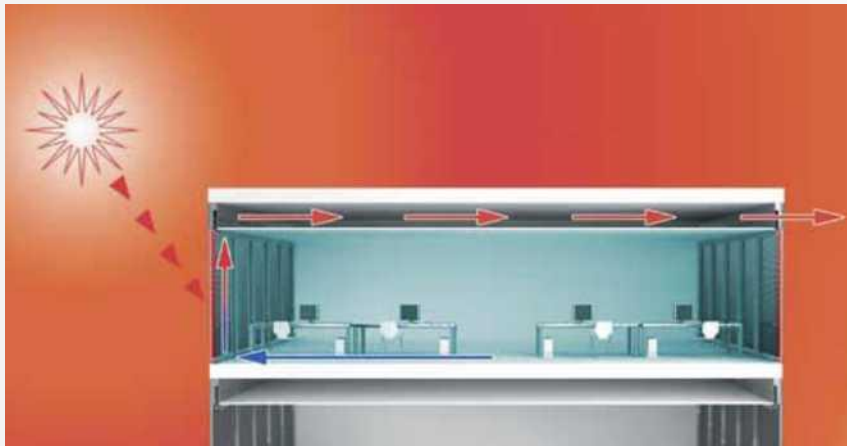
- Discomfort of living spaces close to the perimeter because of cold radiation and air currents.
- Distance required to work near the window: minimum 1.5 m.
- Very high thermal asymmetries.
- Oversized conditioning installations.
- High operating costs.
- Lack of natural light because of darkened windows and curtains.
- Formation of condensation on the inside glass.

COMPARISON DURING SUMMERTIME



VetroVentilato® keeps heat away from the windows bringing benefit to the indoor temperature. All peripheral areas can be used comfortably.

VetroVentilato®



Internal glass temperature: 25° C

- Excellent thermal equilibrium.
- Smaller equipment.
- Extreme energy savings.
- Absence of the hot zone close to the glass and need to keep large working distance compared to the bay window.
- No need to install and clean, no expensive curtains inside and sunshades on the outside.
- Lighting with natural light.

Other glazing



Internal glass temperature: 80°C

- Discomfort of areas on the perimeter and thermal imbalance created by the high radiation and cold air currents generated by air conditioners.
- Distance required to work near the window: minimum 1.5 m.
- Air-conditioning systems oversized.
- High energy consumption.
- Lack of natural light because of the darkened windows and blinds.

ENERGY SAVING

VETROVENTILATO® WINDOWS. UNBEATABLE ENERGY SAVINGS.

IN SUMMER.

Energy required
to cool.*

With VetroVentilato®
Windows

49.328 MJ

With other
windows

180.326 MJ

Higher costs with
other windows

more than 260%



IN WINTER.

Energy required
to heat.*

With VetroVentilato®
Windows

157.673 MJ

With other
windows

179.795 MJ

Higher costs with
other windows

more than 14%



TEST DEVELOPED BY CNR (Council of National Researches – Milan)



VETROVENTILATO® IS SO MUCH MORE THAN JUST GLAZING. IT IS A SYSTEM OFFERING COMFORT, SAVINGS AND ADDED VALUE.

VetroVentilato® allows you to use the hot air which collects in its cavities to increase the comfort level in the indoor environment. Thanks to external temperature sensors, the hot air is conveyed inside in the winter and expelled outside in the summer. And you can say goodbye to curtains with VetroVentilato® because it has a built-in blind. So you no longer have to worry about allergens, finding the space for the curtains and washing them.

This revolutionary system also allows you to air the room without having to open the glazing. Keeping the dust, noise, heat and cold out.

The VetroVentilato® system gives added value to any building and will increase its value considerably over the years.

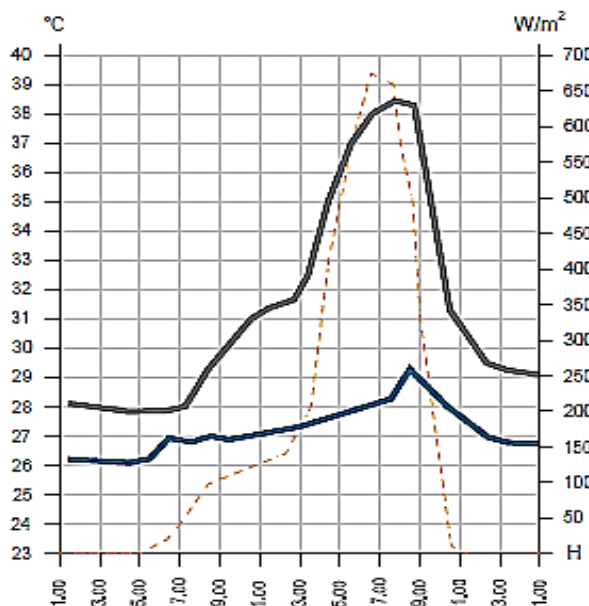
Advantages.

- The heat which has collected in the cavities may be conveyed into the room (in winter).
- No more condensate on the panes.
- Healthier environment.
- The heat which has collected in the cavities may be expelled outside before it enters (in summer).
- No need for sun blinds and curtains and no more need to worry about allergens.
- The clear glass lets in natural light.
- The room can be aired without having to open the glazing.
- Considerable rise in the value of the property.

SUMMER TEMPERATURES.

Surface temperature of glass.

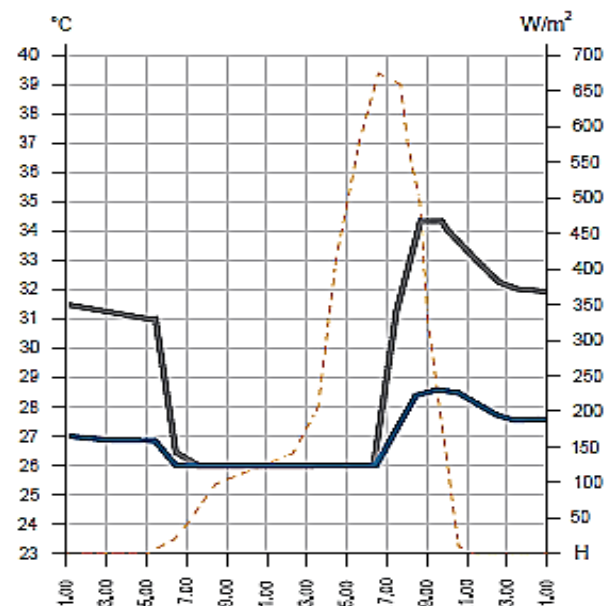
■ VetroVentilato®
■ Traditional windows
■ Irradiance



GREAT ENERGY SAVINGS WITH VETROVENTILATO®.

Internal room temperature.

■ VetroVentilato®
■ Traditional windows
■ Irradiance



Energy requirement needed to COOL.

	VetroVentilato®	Traditional windows	Higher costs with other glazing systems
Milan	49.328 MJ	180.326 MJ	+265%
Paris	13.382 MJ	90.177 MJ	+573%
Seville	104.868 MJ	275.565 MJ	+162%
Abu Dhabi	456.035 MJ	825.145 MJ	+81%



DISTRIBUTION WORLDWIDE

GEMONT TRADING Ltd. is the VETROVENTILATO® worldwide distributor.

To further develop the marketing of its concept worldwide, Vetroventilato® entrusted to Gémont Trading Ltd (which followed the development and the evolution of patent process through the years) the task to develop their foreign markets.

Besides all the advantages offered by Vetroventilato® for the construction of new buildings and the renovation of existing ones, it should not be forgotten the amount of new jobs that can locally be generated for the implementation and installation of the system.

Every company with a background in the construction field, in particular manufacturers of wood joinery, aluminum and PVC, air conditioning technicians and other installers can easily learn the system installation process with a brief training.

Vetroventilato® provides to all distributors, installers and engineers, assistance in training, project studies and other general assistance.

GEMONT TRADING Ltd.

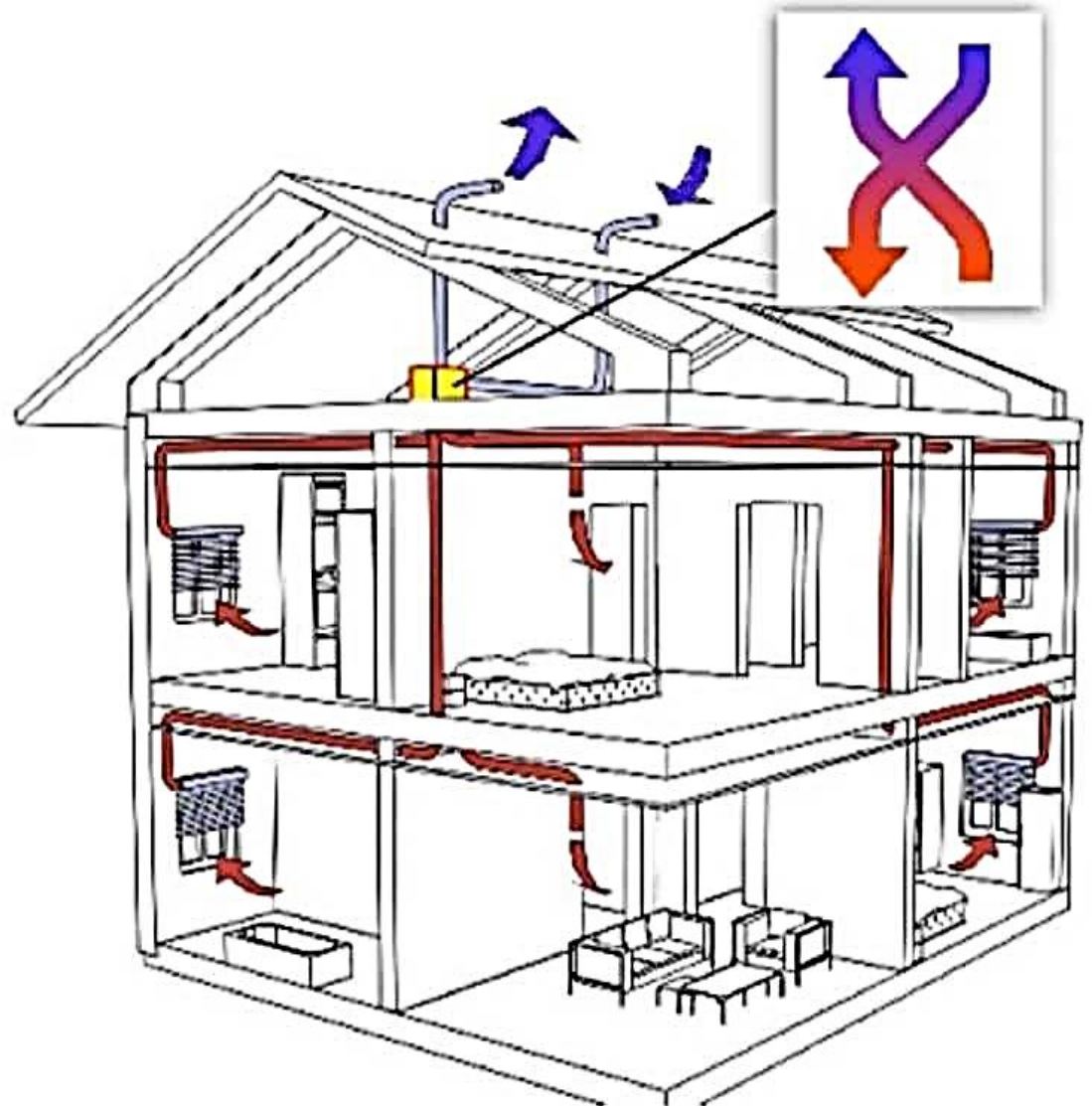


INSTALLATION IN ROME

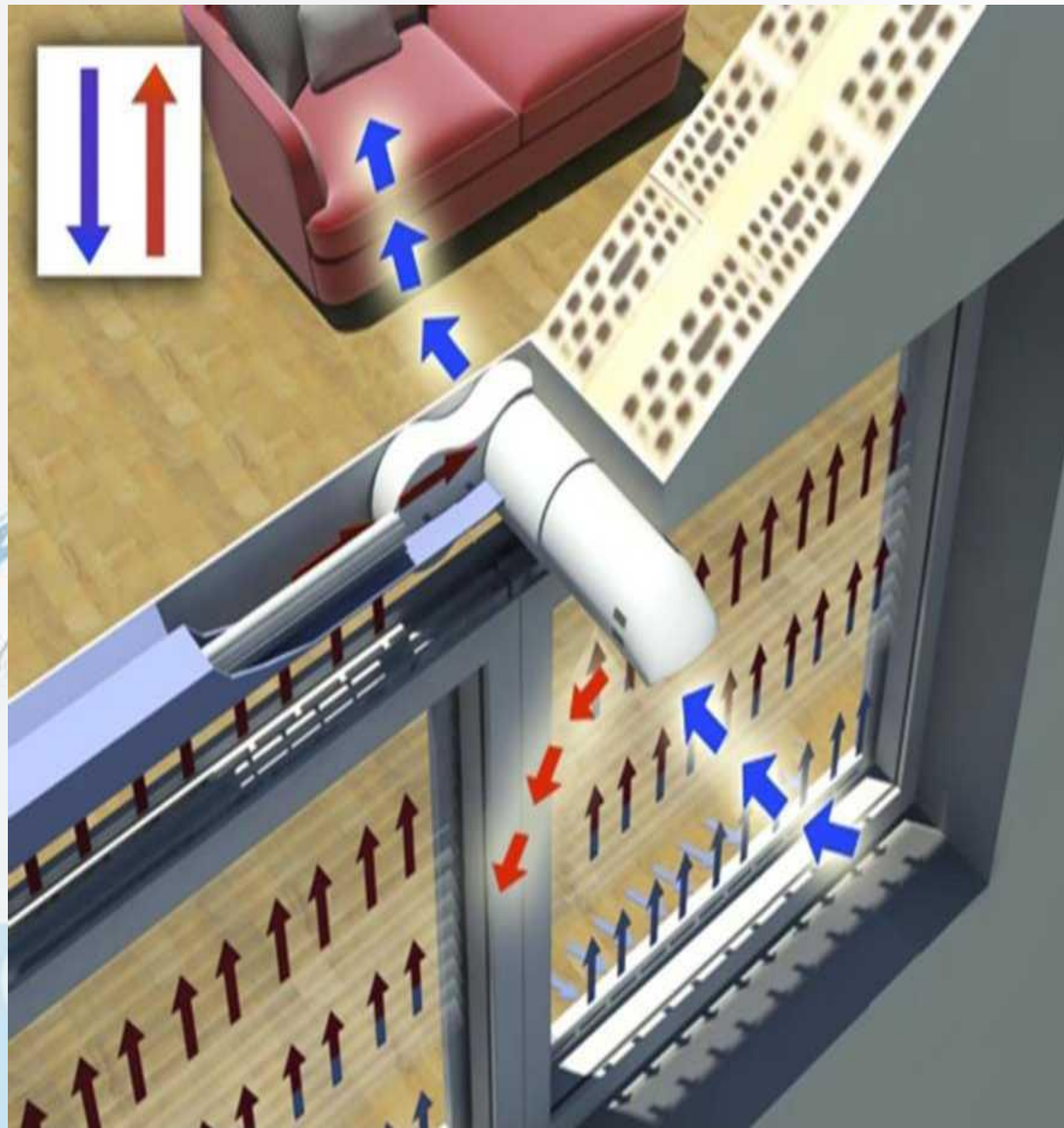


UNICREDIT Bank building

INSTALLATION IN EXISTING BUILDINGS



DETACHED AUTONOMOUS COOLING SYSTEM (DETAIL)



DETACHED AUTONOMOUS COOLING SYSTEMS



CENTRAL COOLING



DETACHED AUTONOMOUS HEATING SYSTEMS



CENTRAL HEATING SOLUTION FOR WINTERTIME



ANNUAL POWER CONSUMPTION (kWh) PER CAPITA



THE WORLD BANK
IBRD • IDA

Working for a World Free



Electric power consumption (kWh per capita)

Electric power consumption measures the production of power plants and combined heat and power plants less transmission, distribution, and transformation losses and own use by heat and power plants.

International Energy Agency (IEA Statistics © OECD/IEA, <http://www.iea.org/stats/index.asp>), Energy Statistics and Balances of Non-OECD Countries and Energy Statistics of OECD Countries.

Catalog Sources World Development Indicators

Macedonia, FYR	3,370	3,521	3,881	
Madagascar				
Malawi				
Malaysia	3,934	4,136	4,246	
Maldives				
Mali				
Malta	4,434	4,171	4,689	
Marshall Islands				
Mauritania				
Mauritius				
Mexico	1,870	1,916	2,092	
Micronesia, Fed. Sts.				
Moldova	1,741	1,723	1,470	
Monaco				
Mongolia	1,431	1,555	1,577	
Montenegro	5,002	5,414	5,747	
Morocco	763	783	826	

REFERENCE





CONSUMPTION OF COOLING SYSTEMS

ENERGY CONSUMPTION AND COSTS ASSOCIATED WITH THE AVERAGE USE OF AIR CONDITIONING

A split air conditioner installed in the bedrooms of a Maltese household consumes an average of 2200 kWh/year.

Air Conditioning tops the electricity consumption of a house.

When you buy an air conditioner, do not forget that its cost includes the cost paid to use the equipment itself (electricity bill), which must be added to the purchase price of the equipment.

In warm climates or temperate climates such as in Malta, we can assume that air conditioners consume about 57% of the total electricity used in the residential sector and 48% in the public sector. Those figures give us an average of 52.5 %.

From the environmental point of view, the energy consumption of the air conditioner generates 1.7 tons of CO₂/year, not including the emissions of greenhouse gas related to the use of refrigerants which are necessary for the operation of air conditioning equipment. In terms of impact on the environment, this is equal to travel 11,000 km by car.

ENVIRONMENT

VETROVENTILATO = 35% ENERGY SAVINGS

NO CO₂ AND GREENHOUSE GAS EMISSION

TODAY



VETROVENTILATO® is the developer of a unique system in energy economy.

The main goal of years of wide researches and developments has been to minimize system's complexity while maximizing its performance in order to achieve optimum results. Many years of research, testing and control were necessary. Those who use its concept can benefit not only from a drastic reduction of their own power consumption but at the same time help decreasing with enormous proportions the CO₂ emissions released in the atmosphere by the majority of the power plants and the greenhouse gas emissions due to the use of refrigerants that are necessary for the operation of air conditioning equipment.

TOMORROW

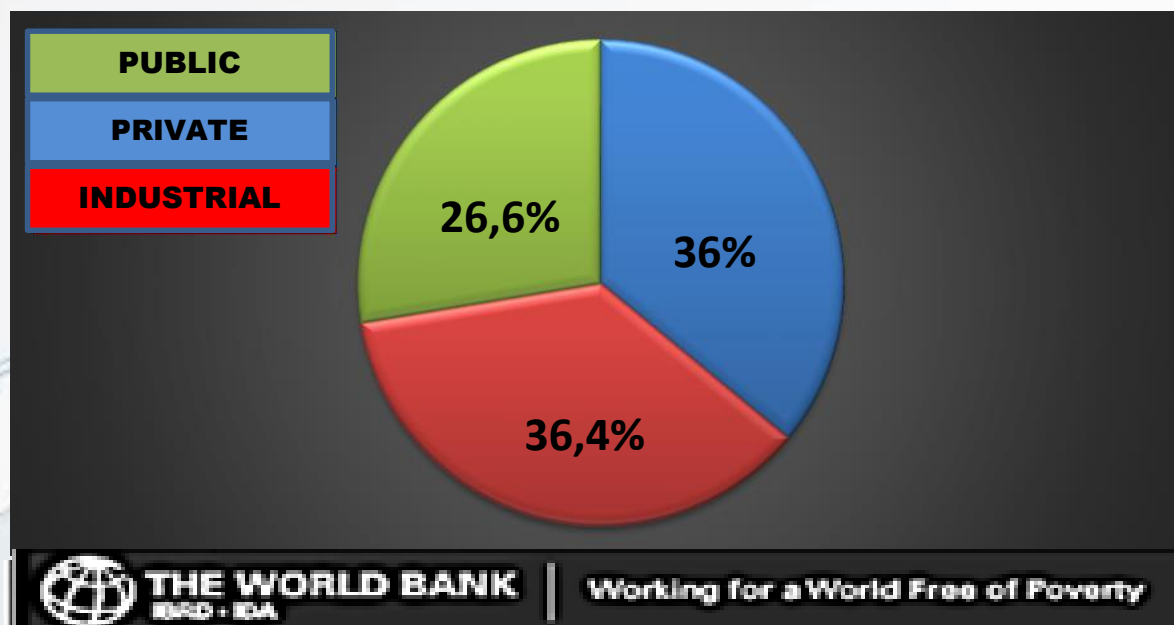


Save our energy and protect our planet

PLANNED ENERGY SAVING IN RESIDENTIAL SECTOR



According to statistics from the World Bank, the annual electricity consumption per capita in Malta is 4875 KWh, giving a total consumption of about 2 billions kWh per year, highlighted as shown in the table below.



ESTIMATION

Residential power consumption is 36% of the total energy consumed per year in the country, giving about 720 million kWh.

The energy required to operate the country's cooling and heating equipment (depending on the climate of the year) is an average of 52.5%. That means 378 million kWh.

By installing our Vetroventilato® concept, a saving of 45% would be feasible and this would result in a drop in consumption of about 170.100 millions kWh per year.

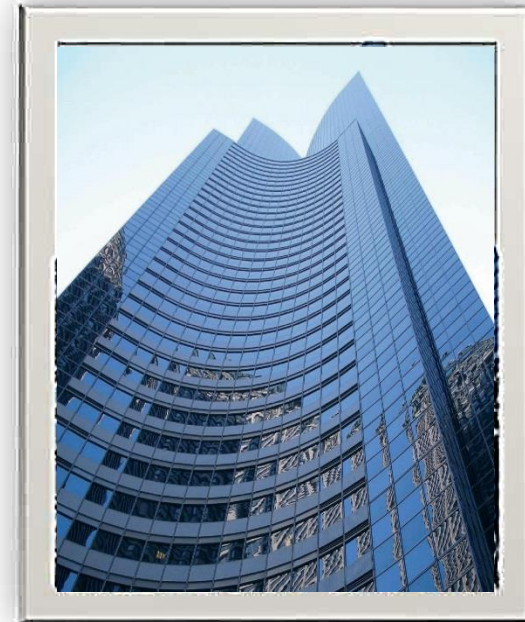
POSSIBLE SCOPE

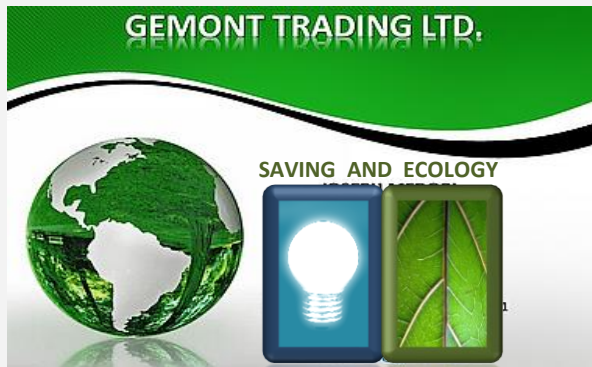
All major designers today are focused on projects where glass surfaces predominate.

Our system is based on a principle whose performances are optimized based on glass surfaces.

The more glass is on a building, the more VETROVENTILATO® system becomes effective in ensuring very large energy savings to heat or cool the living spaces.

The VETROVENTILATO® system applies to all types of windows, curtain walls, single, double or triple glazed windows and larger commercial windows.





VETROVENTILATO® WINDOWS. TOP OF THEIR CLASS.

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High consumption

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CONCLUSION

Applying this strategy in the same way on the public sector (government, corporate offices, hotels, shops, hospitals, schools and other institutions), the saving of electricity consumption may reach important results and thus would reduce considerably the exploitation of existing power plants and would reduce the construction of new power plants structures.

Finally, we can say that according to estimates drawn up by the most important international institutions, the VETROVENTILATO® concept is placed at the top of the new commercial strategies in energy savings, allowing at the same time a strongly reduction of problems caused by emissions of CO₂ released into the atmosphere.



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