# SOLARreMAX

# FOSSIL Fuel-Free HEAT & Energy SYSTEMS

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We offer a **carbon-free future**
with the world's most natural
**heating and ventilation** systems.

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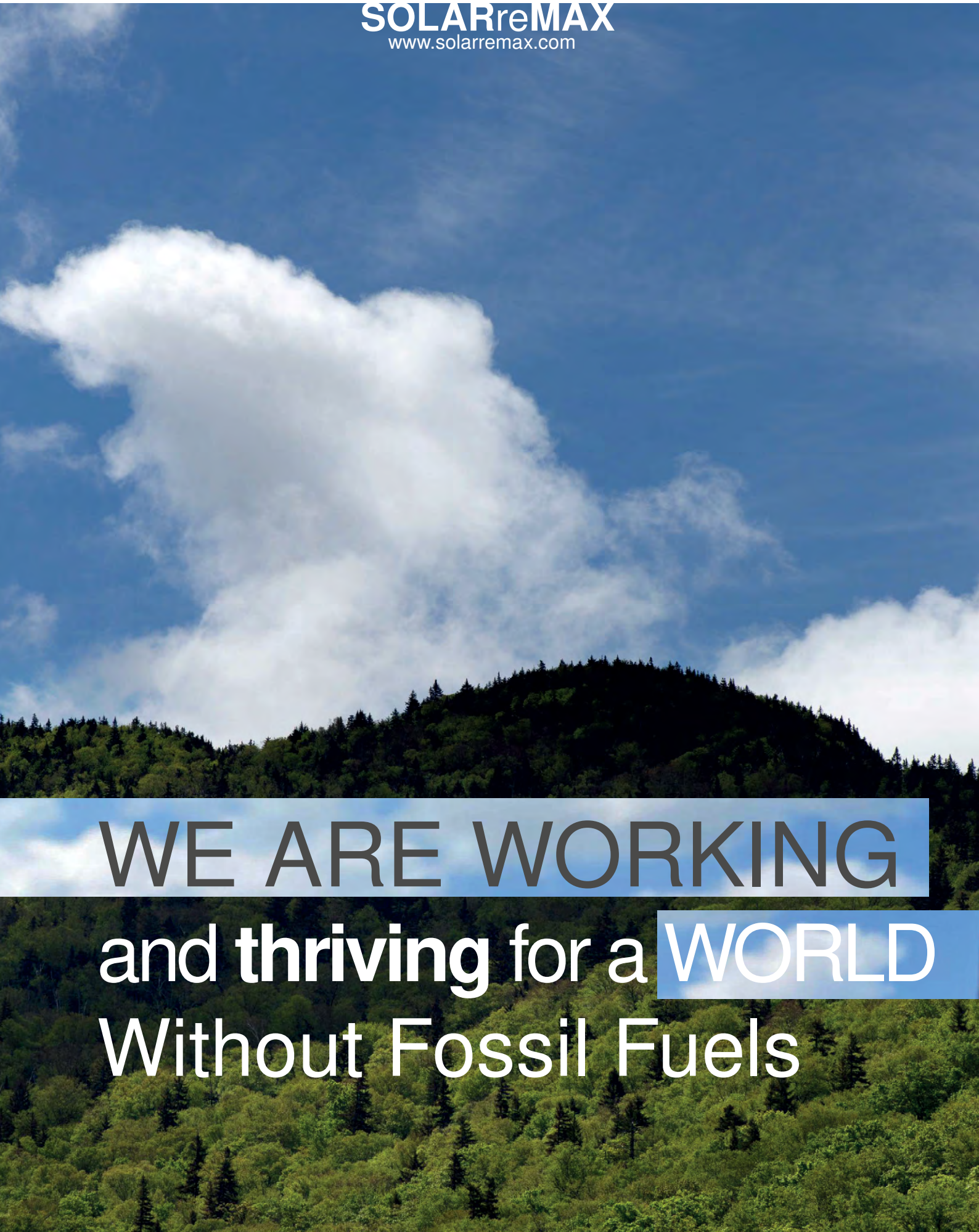

# WE ARE WORKING

## and **thriving** for a WORLD Without Fossil Fuels

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zero **waste**,
zero **carbon**.

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# OUR SYSTEMS

- **Solar Thermal Walls**
- **Hot Air Solar Collectors**
- **Solar Heat Pumps**
- **Solar Heat Recovery Unit**

**Our products are patented.**

We offer a **carbon-free future** with the world's most natural **heating and ventilation** systems.

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## USAGE AREAS OF SOLARreMAX HEAT PUMP

- Automotive
- Machinery and Manufacturing
- Food drying
- Housing
- Greenhouse
- Dyehouse
- Curing
- Workshop
- Ceramic
- Showroom
- Pumice Stone
- Hospitals
- Wood Drying
- Mining
- Food Processing
- Textile
- Pulp & Paper
- Chemical Facitiles and Plants
- Hangars
- Leather Drying
- Building
- Brick Manufaturing
- Otel
- Gym and fitness Saloons

**and hot air whereever you need it.**

**SOLARreMAX continues to expand its product range every day with innovative solutions and systems in the industry.**

**For a brighter, more livable world for future generations, the smartest and most sustainable choice is to harness the power of the sun — our only endless and renewable energy source.**

**SOLARreMAX is opening the door to the world of tomorrow with its innovative heating and ventilation solutions.**

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zero **carbon**.

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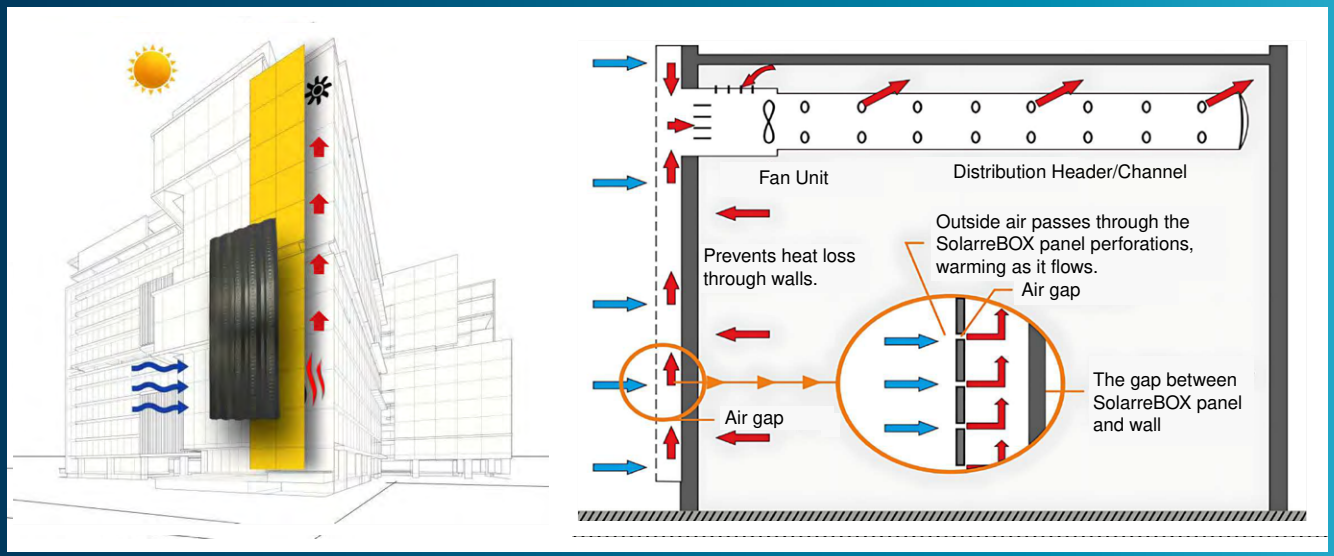
# How SOLARreWALL Systems Work – The Core Principles

**The solar-assisted heating panel, SOLARreWALL, absorbs sunlight and heats up. Specially designed perforations on the panel surface allow air in contact with the panel to circulate efficiently…**

**It provides savings of up to 80% in meeting heating and ventilation needs by integrating into HVAC systems, either with 100% fresh air or with a closed loop.**

**Thanks to the unique material structure of our panel systems, they also provide passive cooling during non-sunlight hours—helping to protect both facility safety and employee well-being when ambient temperatures become a concern.**



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# Comparison of SOLARreWALL & Conventional Systems

| DESCRIPTION | SOLARREBOX | Radiant Heater | Auxiliary System |
|---|---|---|---|
| Ambient Heating | Available | Available | Available |
| Ventilation | Available | None | None |
| Passive Cooling (During night) | Available | None | None |
| Installation Security Deposit | None | Available | Available |
| Energy Saving | Available | Low | None |
| Investment Cost | Medium | Medium | Low |
| Installation Cost | Low | Medium | Low |
| Heat Control | Available | Available | Available |
| Architectural Design | Available | None | None |
| Integration with Existing Systems | Available | None | None |
| Bureaucracy (Special Permits etc.) | None | Available | Available |
| Chimney Installation | None | Available | Available |
| Risk | None | Available | Available |
| Environment and Air Pollution | None | Available | Available |
| Greenhouse Effect and $CO_2$ emissions | None | Available | Available |
| Dependence on External Sources | None | Available | Available |
| Energy Efficiency and Saving | Available | None | None |
| Grant and Support Opportunity | Available | None | None |
| Boiler Room Need | None | Available | Available |
| Natural Gas Installation | None | Available | Available |
| Profit | High | Low | Low |

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## Areas of Use


Factory


Housing


Hen Coop


Drying Facility


Greenhouse


Showroom


Hangar


Gym

**“Delivers an eco-friendly, carbon-free, and high-quality lifestyle with the world’s most natural heating and ventilation systems.”**

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## SOLAR HEAT WALL PANELS

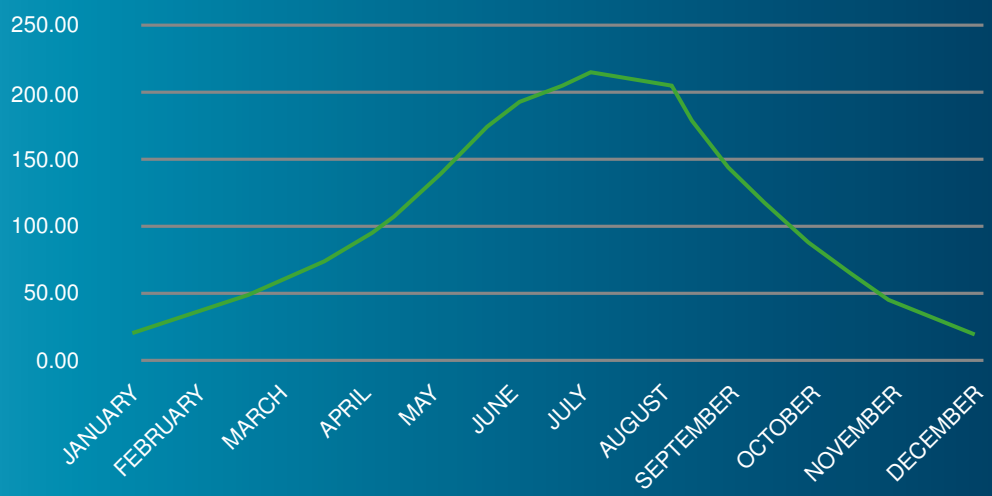
### 1 - SOLARreBOX (SreBOM)

HEATING AND VENTILATION MODULES WITH SOLAR ENERGY

The Omega series solar-assisted warm air panels offer exceptional efficiency paired with elegant design. Engineered to harness solar energy with maximum performance, they deliver superior comfort while significantly reducing energy consumption. By integrating advanced technology with environmental responsibility, Omega panels provide a sophisticated, sustainable heating solution for modern facilities.

| FEATURES | SreBOM |
|---|---|
| Energy Production | 680-1,050 W/m² |
| Air Permeability | 35-240 m³/h-m² |
| Temperature Difference | 46,4-104 °F |
| Average Temperature of Produced Air | 55,4-131 °F |
| Product Weight | 1.7 kg/m² |
| Absorption Rate | 0.94 |
| Material Lifespan | 10+Year |
| Corrosion Resistance | High |
| Contamination Resistance | High |

The amount of heat that one solarrebox module can produce according to the sunshine duration in Düzce city, TURKEY



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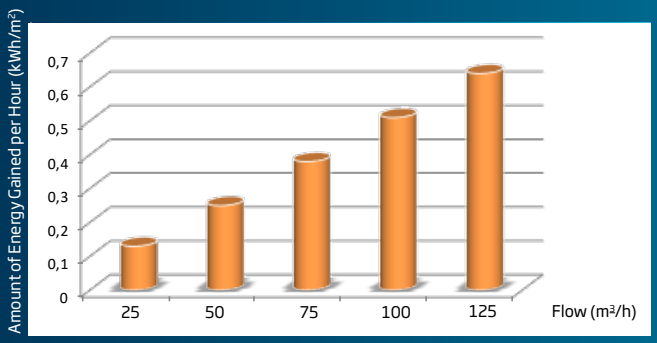
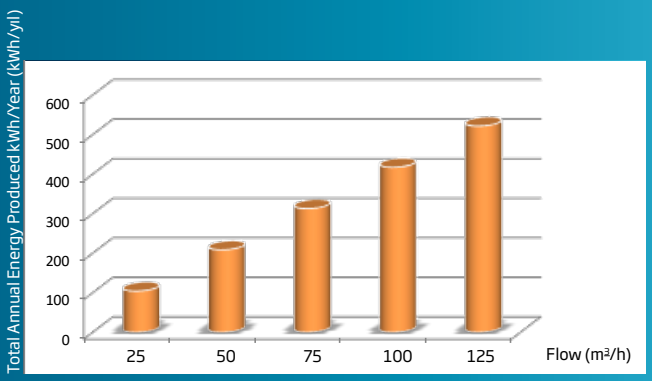
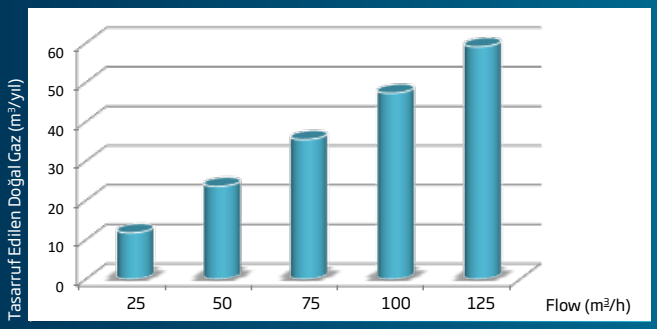
## Nationwide Thermal Energy Efficiency of 1 m² (10.7 sqft) SreBOM in Turkey

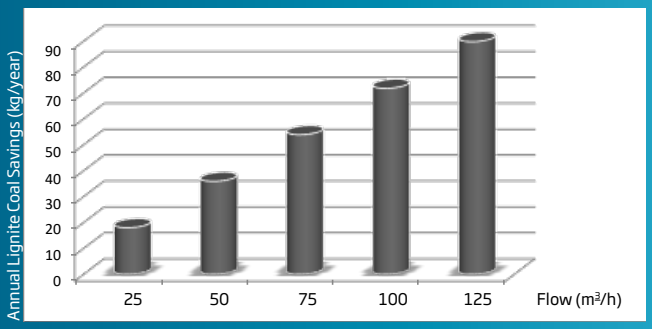
| Amount of Air Passing Through One SOLARreBOX Module m³/h-m² | Temperature Difference ΔT=°F | Amount of Energy Gained per Hour kWh/m² | Annual Total Sunlight Hours Hour/ Year | Total Annual Energy Produced kWh/Year | Annual Natural Gas Savings (m³/year) | Annual Lignite Coal Savings (kg/year) | Annual Carbon Emission Reductions (Tons) | Annual Number of Trees Saved (units/year) |
|---|---|---|---|---|---|---|---|---|
| 25 | 59 | 0.13 | 814.06 | 104.4 | 11.8 | 18.0 | 0.02 | 0.06 |
| 50 | 59 | 0.26 | 814.06 | 208.7 | 23.6 | 35.9 | 0.05 | 0.12 |
| 75 | 59 | 0.38 | 814.06 | 313.1 | 35.5 | 53.9 | 0.07 | 0.17 |
| 100 | 59 | 0.51 | 814.06 | 417.4 | 47.3 | 71.8 | 0.10 | 0.23 |
| 125 | 59 | 0.64 | 814.06 | 521.8 | 59.1 | 89.8 | 0.12 | 0.29 |

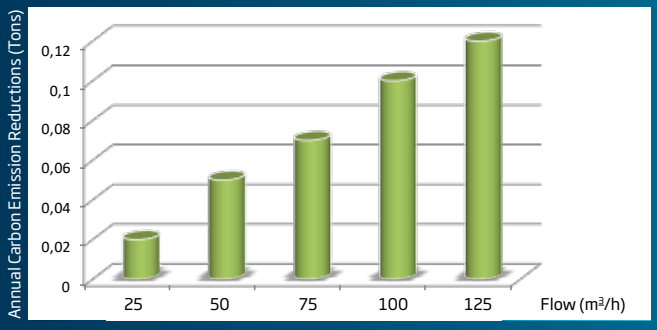
***Calculated based on the months of January, February, March, October, November, and December.**

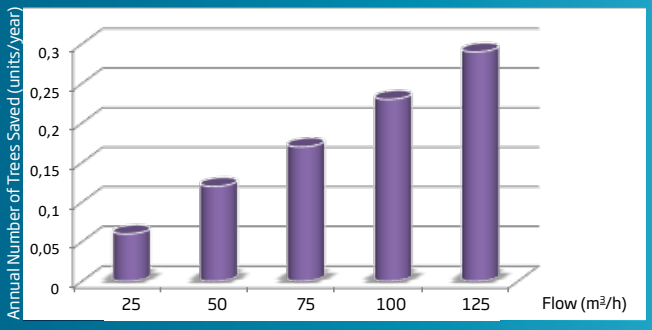
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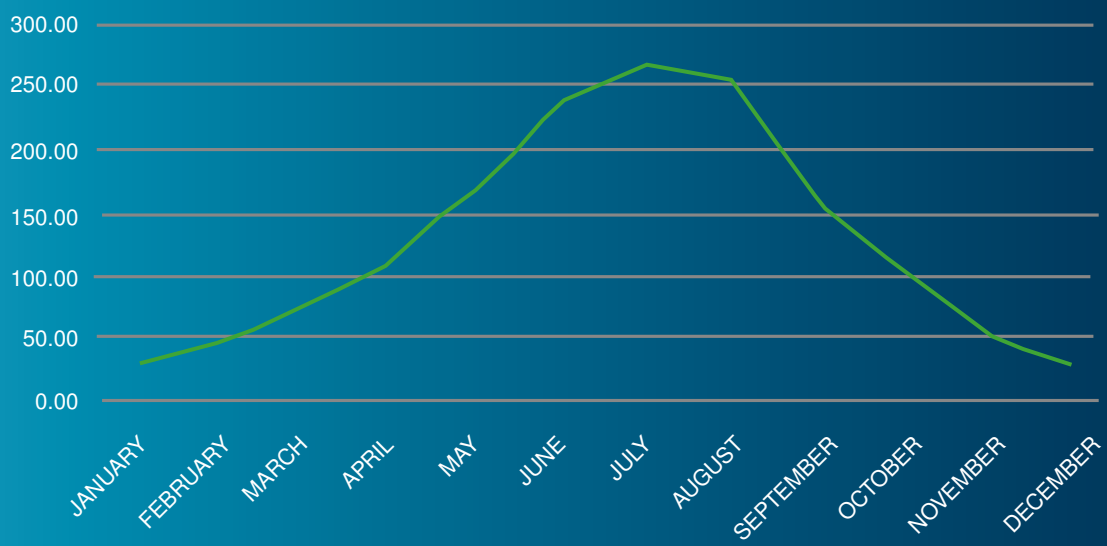
# SOLAR HEAT WALL PANELS

## 2 - SOLARreBOX SreBTM

HEATING AND VENTILATION MODULES WITH SOLAR ENERGY
Trapezoidal model solar energy supported thermal wall panels are known for their stylish trapezoidal shape and solar energy collection efficiency. These panels capture the sun's light in the best way possible and produce warm air. The trapezoidal model combines a modern and stylish design with environmentally friendly energy. It provides a solution that is aesthetically pleasing while supporting the comfortable heating of your building.

| FEATURES | SreBOM |
|---|---|
| Energy Production | 700-2,000 W/m² |
| Air Permeability | 35-315 m³/h-m² |
| Temperature Difference | 46,4-114,8 °F |
| Average Temperature of Produced Air | 55,4-149 °F |
| Product Weight | 1.7 kg/m² |
| Absorption Rate | 0.94 |
| Material Lifespan | 10+Year |
| Corrosion Resistance | High |
| Contamination Resistance | High |

The amount of heat that one SOLARreBOX (SreBTM) module can produce according to the sunshine duration in Düzce city,TURKEY



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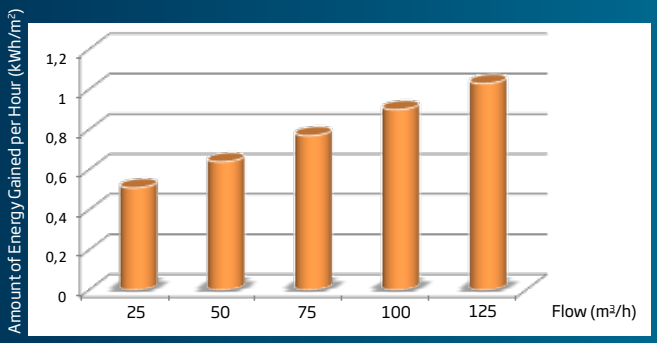
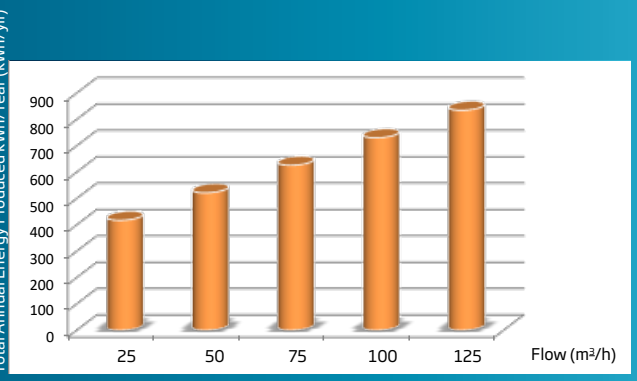
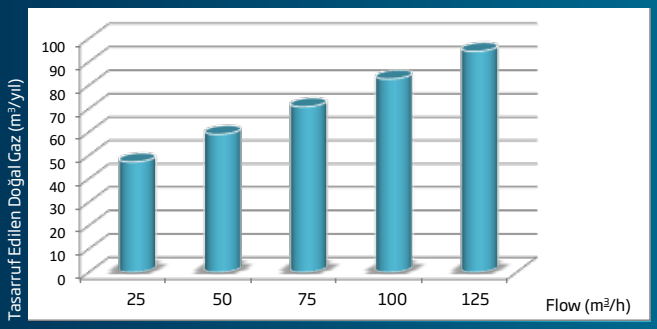
# Nationwide Thermal Energy Efficiency of 1 m² (10.7 sqft) SreBOM in Turkey

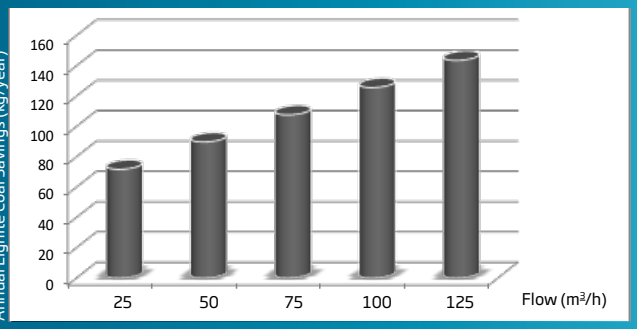
| Amount of Air Passing Through One SOLARreBOX Module m³/h-m² | Temperature Difference ΔT=°F | Amount of Energy Gained per Hour kWh/m² | Annual Total Sunlight Hours Hour/ Year | Total Annual Energy Produced kWh/Year | Annual Natural Gas Savings (m³/year) | Annual Lignite Coal Savings (kg/year) | Annual Carbon Emission Reductions (Tons) | Annual Number of Trees Saved (units/year) |
|---|---|---|---|---|---|---|---|---|
| 100 | 59 | 0.51 | 814.06 | 414.7 | 47.3 | 71.8 | 0.10 | 0.23 |
| 125 | 59 | 0.64 | 814.06 | 521.8 | 59.1 | 89.8 | 0.12 | 0.29 |
| 150 | 59 | 0.77 | 814.06 | 626.2 | 70.9 | 107.7 | 0.14 | 0.35 |
| 175 | 59 | 0.90 | 814.06 | 730.5 | 82.8 | 125.7 | 0.17 | 0.41 |
| 200 | 59 | 1.03 | 814.06 | 834.9 | 94.6 | 143.6 | 0.19 | 0.46 |

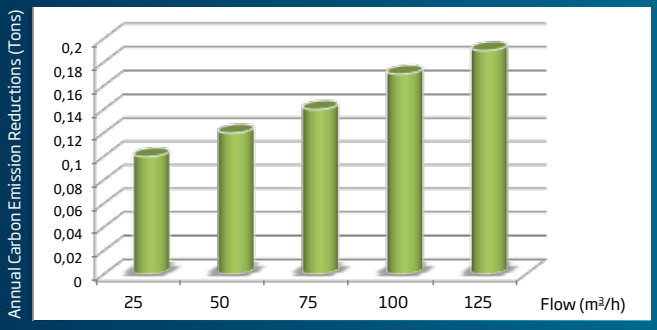
***Calculated based on the months of January, February, March, October, November, and December.**

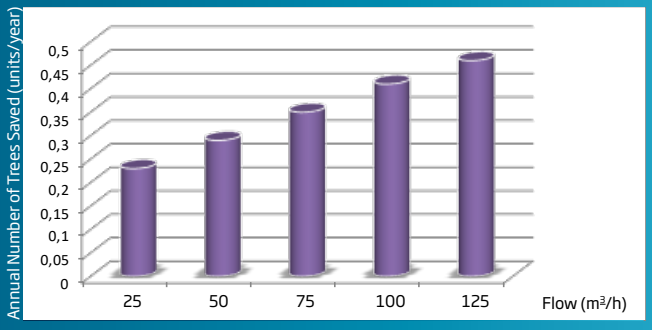
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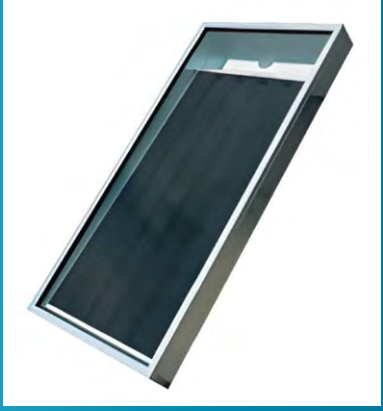
# SOLAR HOT AIR COLLECTORS

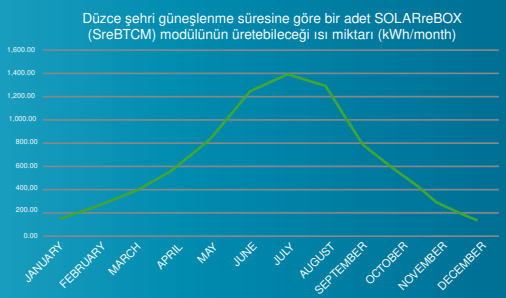
## 1 - SOLARreBOX SreBTCM

HEATING AND VENTILATION MODULES WITH SOLAR ENERGY

The Glass model solar-assisted warm air panels stand out with their transparent glass surface. These panels offer an elegant appearance while delivering high solar energy collection efficiency. Ideal for modern buildings, the transparent glass face visually showcases the solar energy collection process and adds a touch of sophistication to any structure.

**SOLAR HOT AIR COLLECTORS**
SOLARreBOX SreBTCM completely converts solar energy into useful heat energy. With this product, heating and ventilation are provided by solar energy.
These products can meet the heating and ventilation needs of buildings in winter without using fossil fuels thanks to their ability to collect solar energy.
The desired temperature in heated spaces is automatically controlled by a thermostat, turning the system on and off as needed. Depending on climate conditions, it produces heat on sunny days without any fossil fuel, while also meeting your ventilation needs.
It provides excellent energy savings, requires minimal maintenance and service, and improves indoor air quality by protecting spaces from moisture and mold.






| FEATURES | SreBOM |
|---|---|
| Thermal Energy Production | 2.5/4.75 kWh/Ad. |
| Air Permeability | 120-160 $m^3/h$ |
| Passive Temperature Difference | 64,4-145,4 $^0F$ |
| Passive Air Generation Temperature | 208,4 $^0F$ |
| Active Temperature Difference | 50-118,4 $^0F$ |
| Maximum Blowing Temperature | 154,4 $^0F$ |
| Product Weight | 48 kg/qua |
| Absorption Rate | 0.94 |
| Material Life | 10+year |
| Corrosion Resistance | High |
| Contamination Resistance | High |
| Dimensions (Width*Length) | 2.300x1.000 mm |
| Gross Thermal Area | 2 $m^2$ |
| Temperature Control | Termostat |
| Heatable Area | 15-55 $m^2$ |
| Hot Air Outlet (dia.) | 200 mm |

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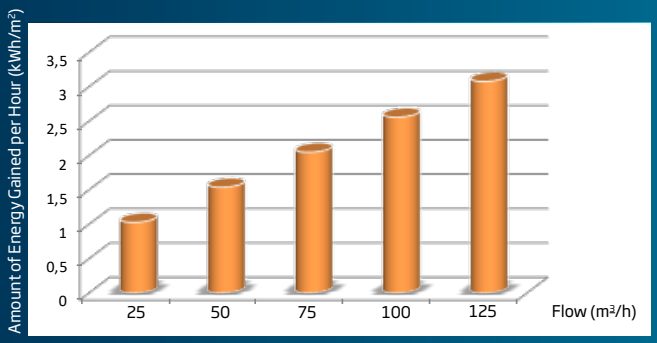
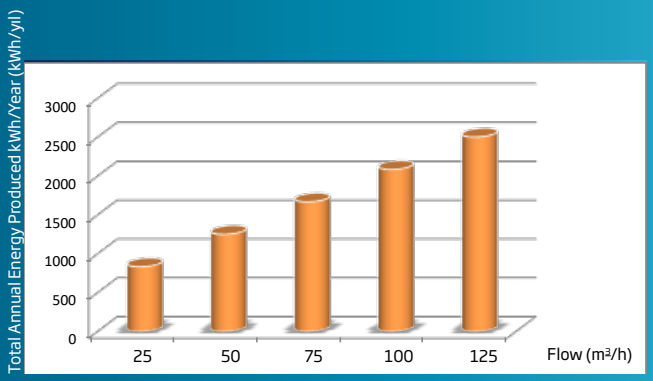
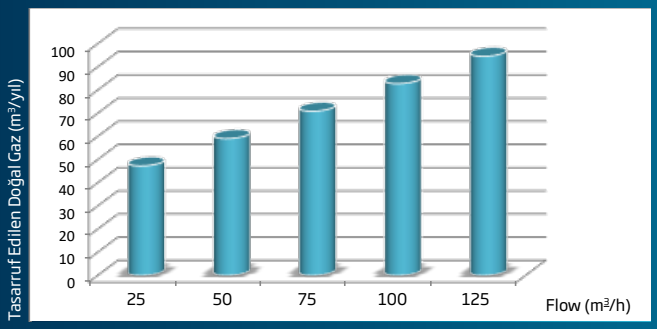
# NATİONWİDE THERMAL ENERGY EFFİCİENCY OF A SİNGLE SOLAR WARM AIR COLLECTOR (SRETCM2000)

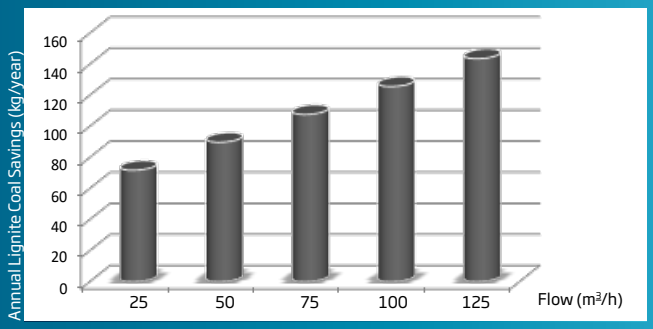
| Amount of Air Passing Through One SOLARreBOX Module m³/h-m² | Temperature Difference ΔT=°F | Amount of Energy Gained per Hour kWh/m² | Annual Total Sunlight Hours Hour/ Year | Total Annual Energy Produced kWh/Year | Annual Natural Gas Savings (m³/year) | Annual Lignite Coal Savings (kg/year) | Annual Carbon Emission Reductions (Tons) | Annual Number of Trees Saved (units/year) |
|---|---|---|---|---|---|---|---|---|
| 200 | 59 | 1.03 | 814.06 | 834.9 | 94.6 | 143.6 | 0.19 | 0.46 |
| 300 | 59 | 1.54 | 814.06 | 1,252.3 | 141.9 | 215.4 | 0.29 | 0.70 |
| 400 | 59 | 2.05 | 814.06 | 1,669.8 | 189.2 | 287.2 | 0.38 | 0.93 |
| 500 | 59 | 2.56 | 814.06 | 2,087.2 | 236.5 | 359.0 | 0.48 | 1.16 |
| 600 | 59 | 3.08 | 814.06 | 2,504.7 | 283.8 | 430.8 | 0.57 | 1.39 |

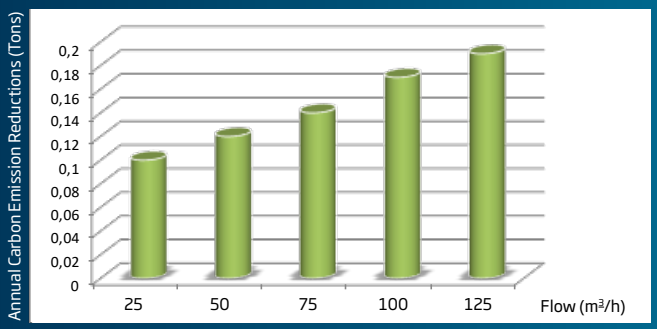
***Calculated based on the months of January, February, March, October, November and December.**

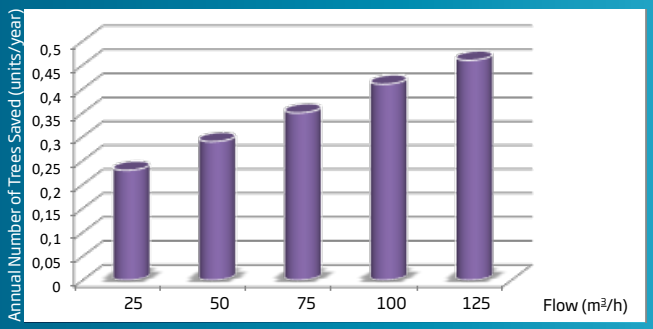
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## SOLAR HEAT RECOVERY UNIT

### SWITCH TO FOSSIL-FUEL-FREE AND ECO-FRIENDLY HEATING SYSTEMS

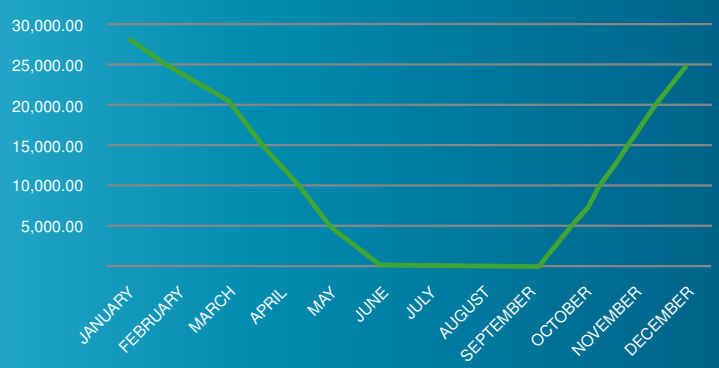
SOLARreBOX systems achieve a maximum efficiency of approximately 60–80% in heating applications, depending on the space and location. Their greatest advantage is the ability to deliver a wide range of high-performance airflow rates. Custom R&D production can be tailored to meet specific needs. This device simultaneously addresses both heating and ventilation requirements.

Reference values used in calculations:
- Operating temperature: 68°F (20°C)
- Airflow rate: 10,000 m/h (cubic meters per hour)

Climate data based on nationwide Turkey averages

| FEATURES | SIGK |
|---|---|
| Air low | 1,000-10,000 m³/h |
| Total Fan Power | 1-8 kWh |
| Maximum Sound Level | 78 dBA |
| Heating Source | Available |
| Heating Power | 1.5 - 90 kWh |
| Dust Filter | Available |
| Frequency Inverter | Available |
| Energy Recovery | Available |
| 100% Fresh Air | Available |
| Proportional Operation | Available |
| Mixed Air | Available |

SOLAR HEAT RECOVERY AND HEATING UNIT (kWH/MONTH)




## SOLAR HEAT RECOVERY AND HEATING UNIT EFFICIENCY RATE

# 80%

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## SOLAR HEAT PUMP

| No | Specification | Specification |
|---|---|---|
| 1 | Solar Energy Support | Available |
| 2 | Heating Capacity | 2-90 kWh |
| 3 | 100% Fresh Air Intake | Available |
| 4 | Use of Mixed Air | Available |
| 5 | Closed Cycle Air | Available |
| 6 | Waste Heat Recovery | Available |
| 7 | Dust Filter | Available |
| 8 | Average Power Gained on Sunny Days (Daytime) | 0 kW |
| 9 | Active Average Power Gained (Night) | 1-20 kWh |

### Make the Move to Fossil-Free, Environmentally Friendly Heating Solutions

- The Solar Heat Pump is a heating and ventilation system that integrates solar warm air collectors with a solar heat recovery unit
- Minimize Fossil Fuel Consumption on Sunny Days: Thanks to solar warm air collectors, fossil fuel use is minimized on sunny days. When sunlight is unavailable, the solar heat recovery unit activates, ensuring further fossil fuel savings.
- High Efficiency of Solar Heat Pump Systems: Depending on usage and location, solar heat pump systems operate with up to 95% efficiency in heating applications.
- Adjustable Fresh and Mixed Air Ratios: Fresh air and mixed air ratios can be adjusted as needed.
- Energy Recovery from Warm Exhaust Air: The system recovers heat from warm exhaust air, increasing overall energy efficiency.
- Homogeneous Ventilation and Heating: The system ensures even ventilation, resulting in uniform heating and air distribution throughout the space.
- Healthy Indoor Air Quality: The World Health Organization (WHO) recommends a maximum indoor $CO_2$ level of 1000 ppm. Exposure above this can cause health issues. Our systems significantly reduce CO2 levels by providing effective ventilation, creating a healthier indoor environment.

### Comparison Chart

| No | SolarreMAX Heat Pump | Conventional Heat Pump |
|---|---|---|
| Heating Capacity | 2-90 kWh | 6-75 kWh |
| Ambient Heating | 59-158 °F | 59-131 °F |
| Energy Saving | 95% | 40% |
| Use of Solar Energy | Available | None |
| Energy Source | Sun+Air | Air, Water, Soil |
| Energy Consumption | Low | Medium |
| Ambient Ventilation | Available | None |
| Ambient Cooling | Passive Cooling (Night) | Available |
| Passive Cooling (Night) | Available | None |
| Dehumidification of Ambient Air | Available | None |
| Investment Cost | Low | High |
| Service Need | None | Available |
| Maintenance Cost | None | Available |
| Circulating Gas, Water, Circulating Fluid in the System | None | Available |
| Gas Leak Risk | None | Available |
| Fire and Explosion Risk | None | Available |
| Fossil Fuel (Electricity) | Low | High |
| Carbon Emission | None | Available |
| Environmental Impact | None | Available |
| Indoor Air Quality | Available | None |

## TOTAL SYSTEM EFFICIENCY

# 95%

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with the world's most natural
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# APPLICATION METHODS OF SOLAR HEAT PUMP SYSTEM

### 1. Field Installation

Ideal for large, open spaces. Solar warm air collectors and solar heat recovery units are fixed to the ground, optimizing space usage. Preferred for large commercial buildings, industrial facilities, and homes with spacious gardens. Field systems deliver maximum energy efficiency on sunny days, heating and ventilating large areas evenly while saving energy.

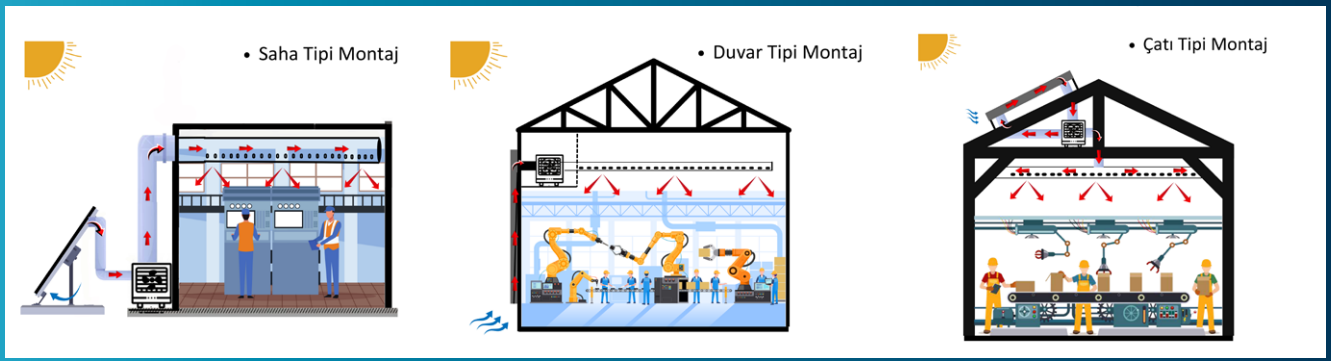
### 2.Wall-Mounted Installation

Suitable for buildings with limited space. These systems are integrated into building walls, saving space and providing an aesthetic solution. Wall-mounted systems effectively handle both heating and ventilation, reduce indoor $CO_2$ levels, and improve occupant health.

### 3.Roof Mounted Installation

Installed on building rooftops, ideal for urban buildings with limited outdoor space. This installation collects solar energy efficiently from the roof. Solar warm air collectors provide high efficiency on sunny days, while the solar heat recovery unit activates during low sunlight to save energy. Roof-mounted systems evenly heat indoor air, significantly reduce $CO_2$ levels, and supply clean air.

All three installation types operate with up to 95% efficiency based on usage conditions, minimizing fossil fuel consumption and maximizing energy savings.



Zero **fuel**,
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zero **carbon**.

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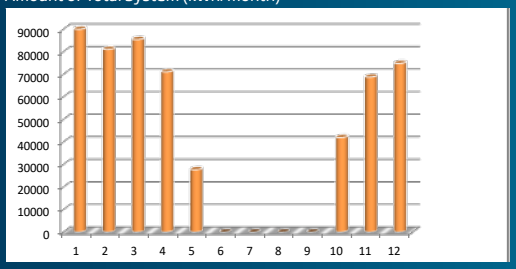
# SOLARreMAX HEAT PUMP ENERGY EFFICIENCY

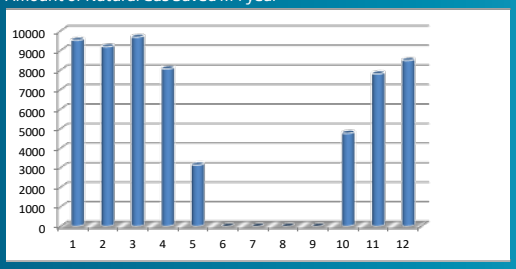
Reference Data: Calculations are based on a factory area of 2,500 m² ( 26910 sqft) with a height of 10 m (33 ft) and Turkey's general climate data. An operating temperature of °C 20 (68°F) is assumed.

| Nationwide Turkey Data | Total System Savings (kWh/month) | Natural Gas Saved, ($m^3$/year) | Lignite Coal Saved, kg/ year | Carbon Emissions Prevented, Tons/year | Number of Trees Preserved Annually |
|---|---|---|---|---|---|
| JANUARY | 83,989.26 | 9,516.57 | 14,446.15 | 19.22 | 46.65 |
| FEBRUARY | 81,055.83 | 9,184.19 | 13,941.60 | 18.55 | 45.02 |
| MARCH | 85,401.23 | 9,676.56 | 14,689.01 | 19.55 | 47.43 |
| APRIL | 71,072.79 | 8,053.04 | 12,224.52 | 16.27 | 39.48 |
| MAY | 27,659.93 | 3,134.06 | 4,757.51 | 6.33 | 15.36 |
| JUNE | - | - | - | - | - |
| JULY | - | - | - | - | - |
| AUGUST | - | - | - | - | - |
| SEPTEMBER | - | - | - | - | - |
| OCTOBER | 41,966.79 | 4,755.13 | 7,218.29 | 9.61 | 23.31 |
| NOVEMBER | 68,783.46 | 7,793.65 | 11,830.76 | 15.74 | 38.20 |
| DECEMBER | 74,840.24 | 8,479.92 | 12,872.52 | 17.13 | 41.57 |
| TOTAL | 534,769.54 | 60,593.12 | 91,980.36 | 122.40 | 297.03 |

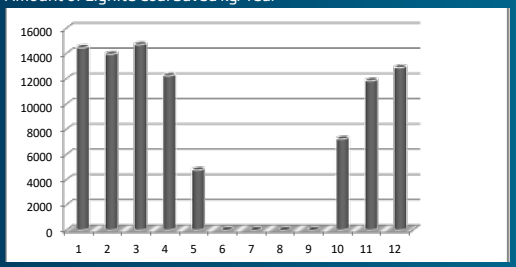
Amount of Total System (kWh/month)



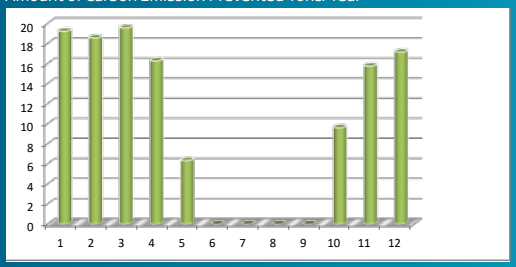

Amount of Natural Gas Saved $m^3$/year



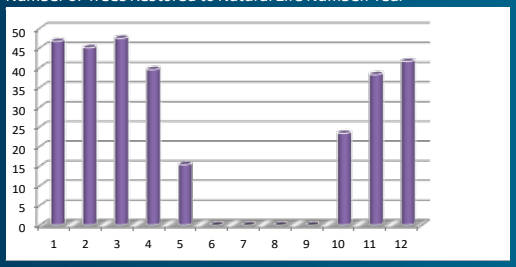

Amount of Lignite Coal Saved kg/Year




Amount of Carbon Emission Prevented Tons/Year




Number of Trees Restored to Natural Life Number/Year




The table below was created by taking the factory area as 2,500 m² and the height as 10 m as reference. The calculations were made according to the climate data of TURKEY.

**Total System Gain** : 21,207 Euro/Year
**Number of Trees Preserved Annually** : 297 Qua.
**Annual $CO_2$ Emissions Prevented** : 122 tons

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# PROJECT INFORMATION

**Heating and Ventilation of Installation Building with SOLAR Heat Wall Panels, Golcuk, Kocaeli city, TURKEY**

**SOLARreBOX, Trapezoidal Module-SreBTM**
Project Area **2,624 m²**
Project Air Flow Rate **477,568 m³/h**
Annual Number of Trees Saved **1,366 Qua.**
Annual Carbon Emission Reductions **561.518 tons**

Up to Application Area
- **Ranked 1st in Turkey**
- **Ranked 2nd in Europea**
- **Ranked 3rd in the World**

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# PROJECT INFORMATION

**Heating and ventilation of the manufacturing department with SOLAR Thermal Wall, Duzce city, TURKEY**

**SOLARreBOX, Trapezoidal Module-SreBTM**
Project Surface Area **120 m²**
Project Air Flow Rate **24,000 m³/h**
Annual Number of Trees Saved **62 Qua.**
Annual Carbon Emission Reductions **25.23 tons**

## SARSILMAZ SİLAH SANAYİ

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# PROJECT INFORMATION

**Heating and Ventilation of Packaging Facility with SOLAR Heat Wall Panels, Düzce, Turkey**

**SOLARreBOX, Trapezoidal Module-SreBTM**
Project Surface Area **48 m²**
Project Air Flow Rate **9.600 m³/h**
Annually Earned Trees **25 Qua.**
Annual $CO_2$ Emission Prevented **10 tons**

## TURNA AHŞAP

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# PROJE BİLGİLERİ

**Natural Fruit and Vegetable Drying Facility with SOLAR Heat Pump System, Düzce, Turkey**

**SOLARreBOX, Trapezoidal Glass Module-SreBTCM**
Project Surface Area **36 m²**
Project Air Flow Rate **5,000-10,000 m³/h**
Annual Number of Trees Saved **127 Adet**

Temperature **104-149 °F**
Amount of Product
to be Dried **1,000 kg/day (fresh product)**
Annual Carbon Emission
Reductions **52 tons**

# NEZUK

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# PROJECT INFORMATION

**SOLARreBOX, Trapezoidal Glass Module-SreBTCM**
Project Surface Area **4 m²**
Project Air Flow Rate **600-1,250 m³/h**
Annual Number of Trees Saved **16 Qua.**
Annual Carbon Emission Reductions **6.5 tons**

# İBN-İ SİNA ANADOLU LİSESİ

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# SYSTEM AT YOUR FINGERTIPS

**The advanced tracking system analyzes your profits.
You can optimize your energy consumption, monitor system performance
and adjust settings according to your needs.**

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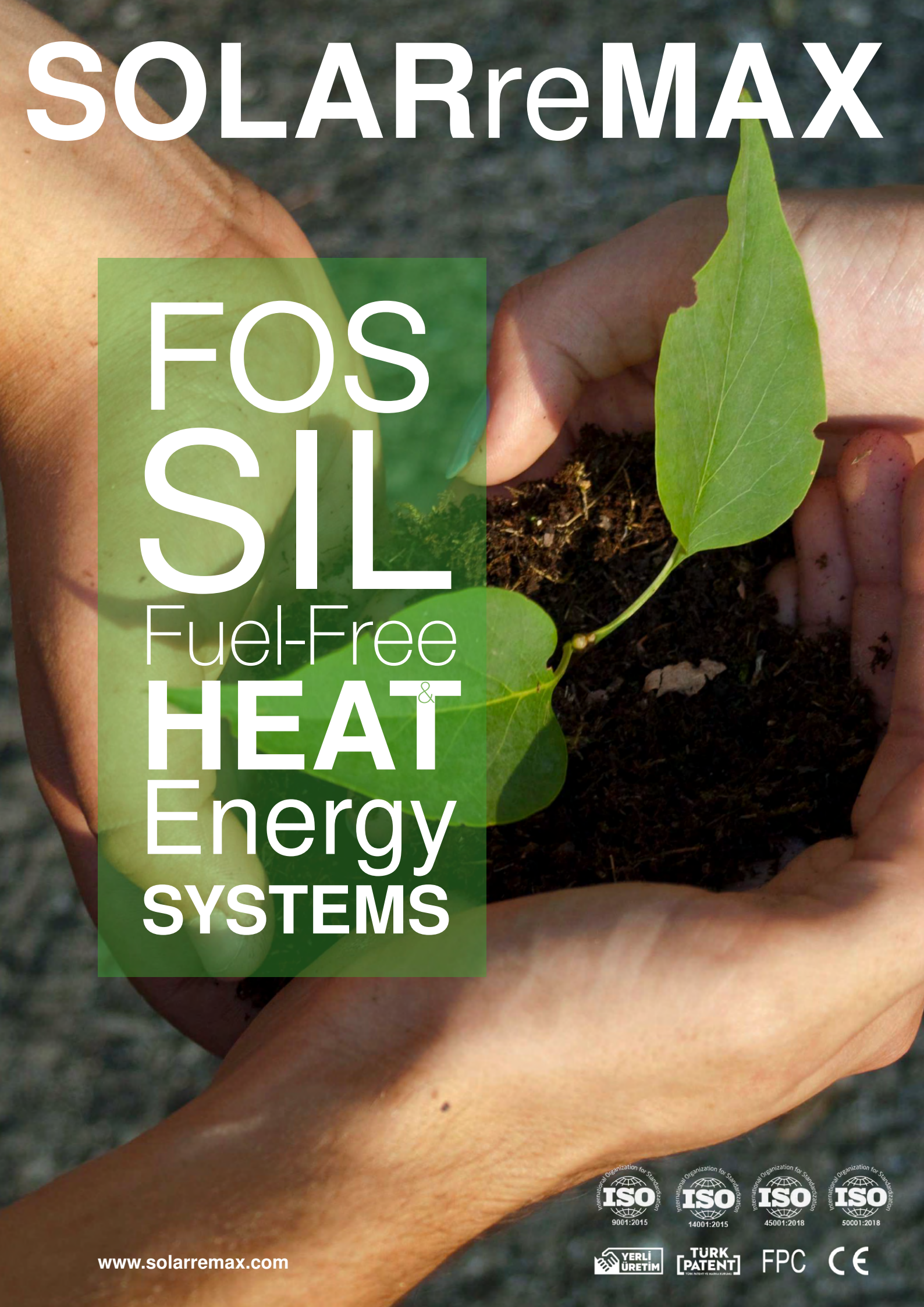

# FOSSIL
## Fuel-Free HEAT & Energy SYSTEMS

ISO 9001:2015 · ISO 14001:2015 · ISO 45001:2018 · ISO 50001:2018

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