engesolarbox

RESIDENTIAL HEATING SYSTEM WITH SOLAR HEAT PUMP

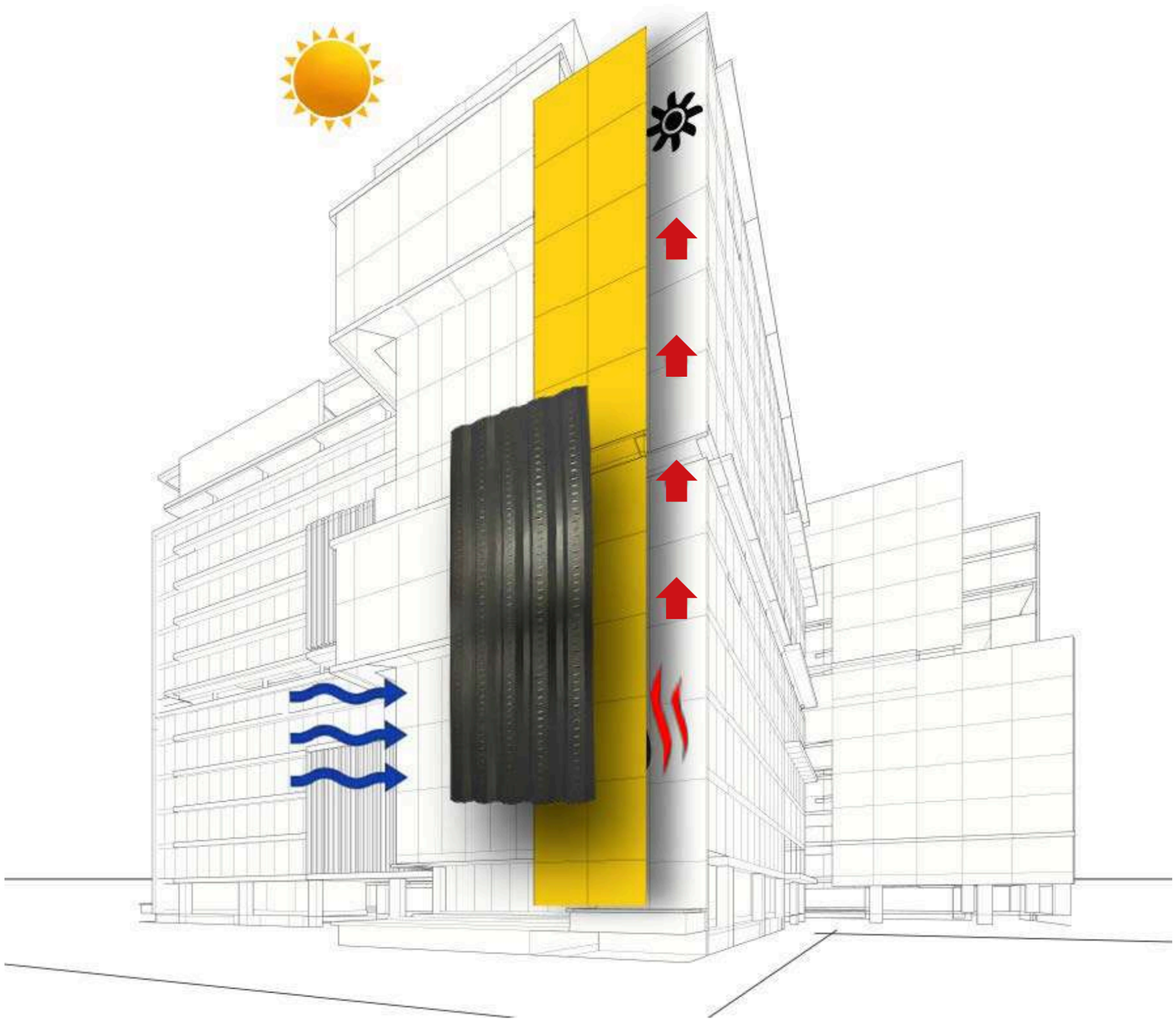
ZERO FUEL, ZERO WASTE, ZERO CARBON

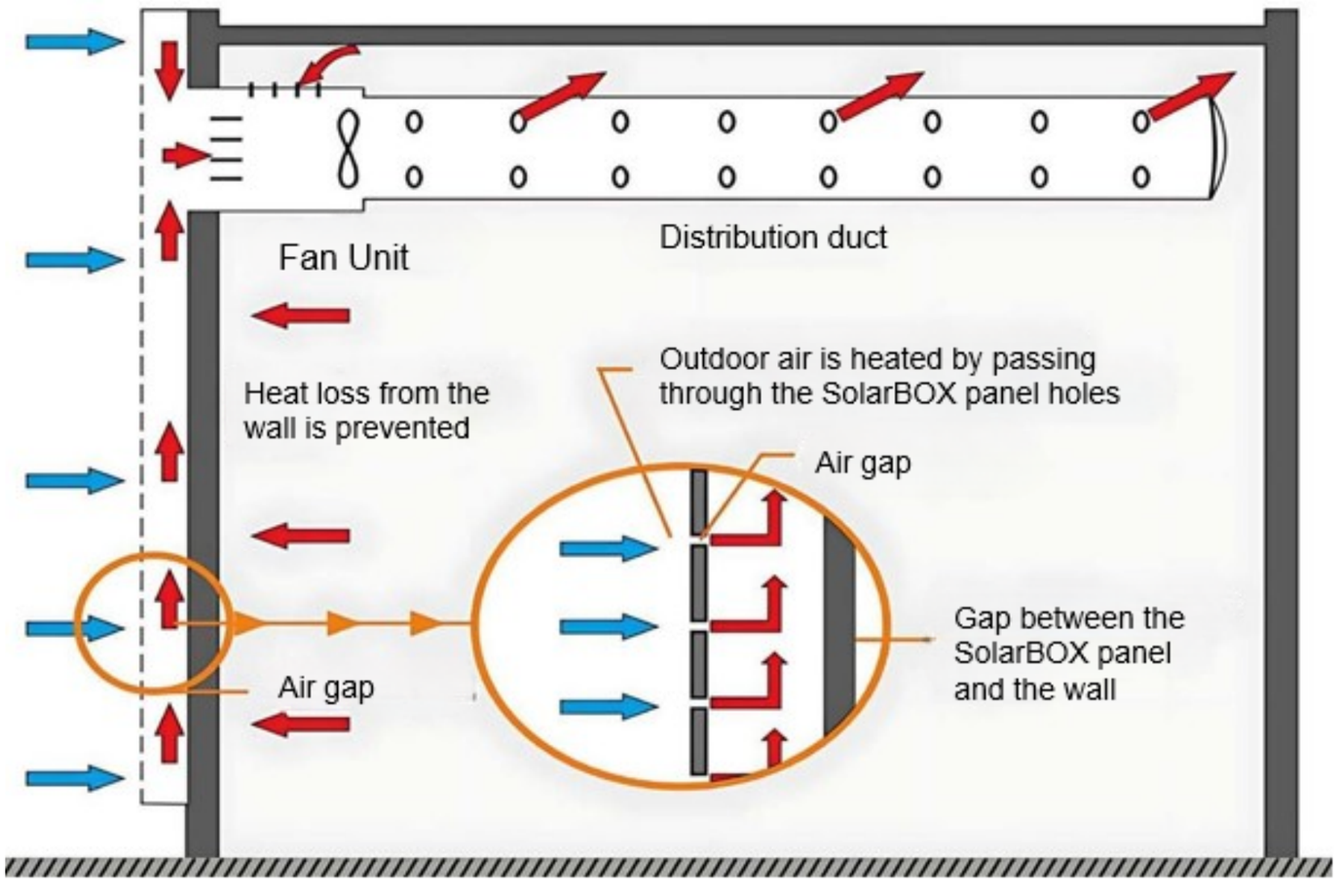
FOSSIL FUEL-FREE HEAT & ENERGY SYSTEMS

BASIC OPERATING PRINCIPLE OF ENGESOLARBOX® SYSTEMS

HOW DOES ENGESOLARBOX® WORK?

The ENGESOLARBOX®, Solar-Assisted Thermal Wall absorbs sunlight to generate heat, and air in contact with the panel surface circulates through specially designed holes on the panel. Whether integrated into HVAC systems with 100% fresh air or in a closed-loop setup, it can save up to 80% in heating and ventilation energy consumption. Thanks to its material structure, our products have a passive cooling feature in hot weather when there is no sun.





BENEFITS AND EFFECTS OF SOLAR HEAT PUMP SYSTEMS IN RESIDENCES

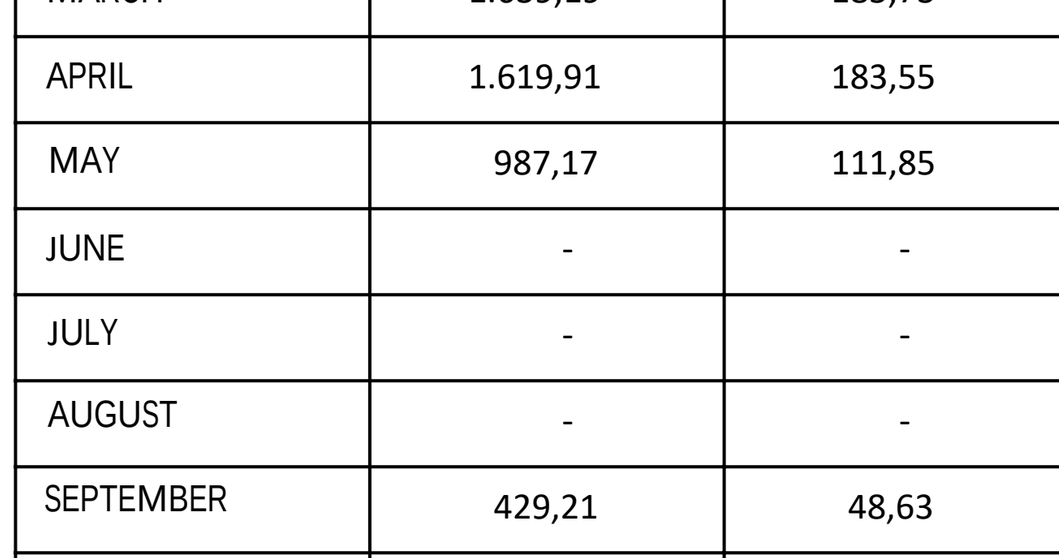
- ENGESOLARBOX® Solar Heat Pump systems completely convert solar energy into useful heat energy.
- Depending on the climate, it generates heat on sunny days without any fossil fuels and meets your ventilation needs.
- In ENGESOLARBOX® Solar Heat Pump systems, heating and ventilation can be performed simultaneously. Therefore, no need for external ventilation.

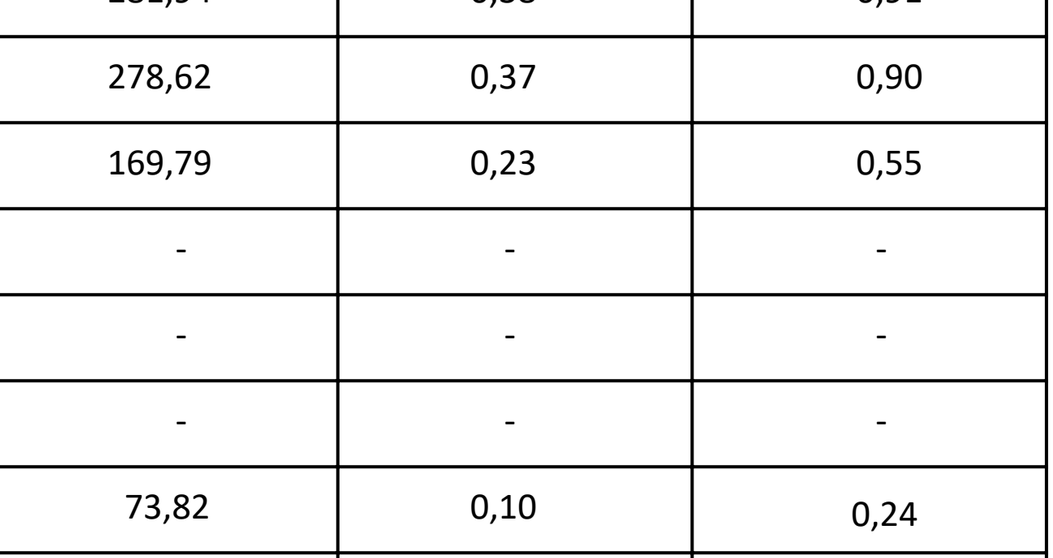
- While the system is working, it reduces the humidity of the clean air it takes from the outside and expels the dirty and humid air inside. Thus, it balances the air and humidity of the environment.
- With the ENGESOLARBOX® Solar Heat Pump system, there is no need for the axial fans on the walls to work. It provides natural ventilation.
- It saves both electricity and fuel.
- It reduces carbon emissions and eliminates the factors that cause global warming.

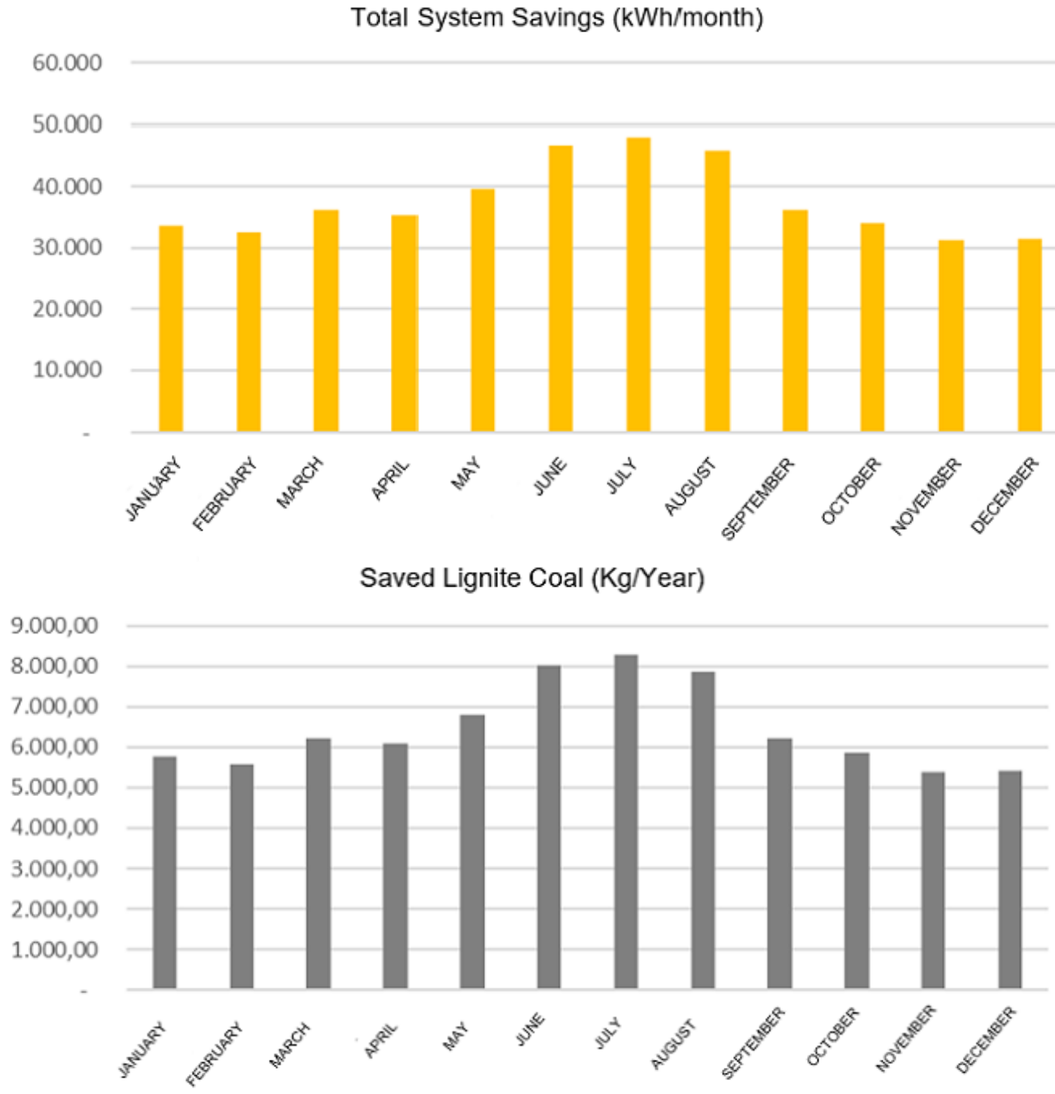
ENERGY EFFICIENCY OF RESIDENTIAL HEATING SYSTEM WITH SOLAR HEAT PUMP

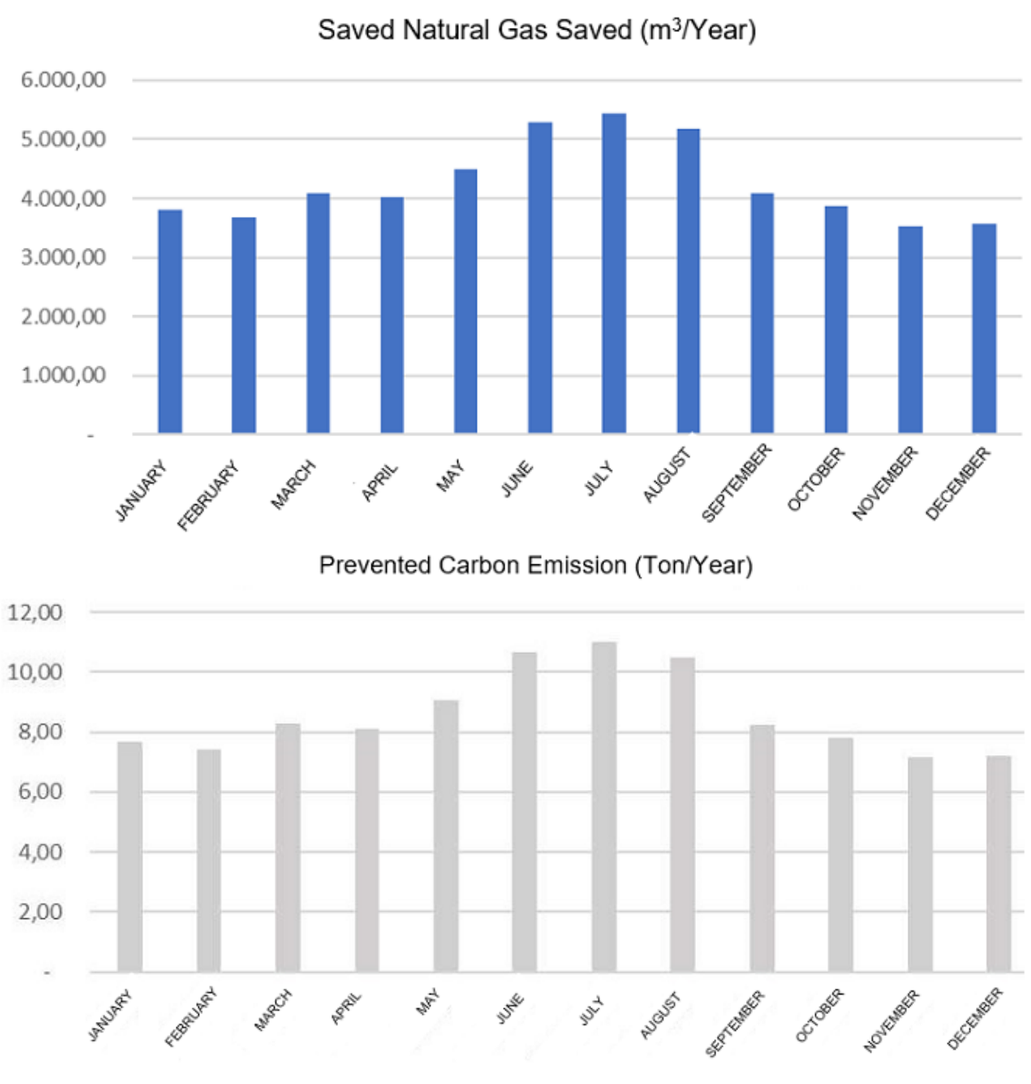
SOLAR HEAT PUMP SYSTEM EFFICIENCY
The table below has been prepared for a residence with an area of 150 m². The calculations were based on the general climate data for Türkiye.

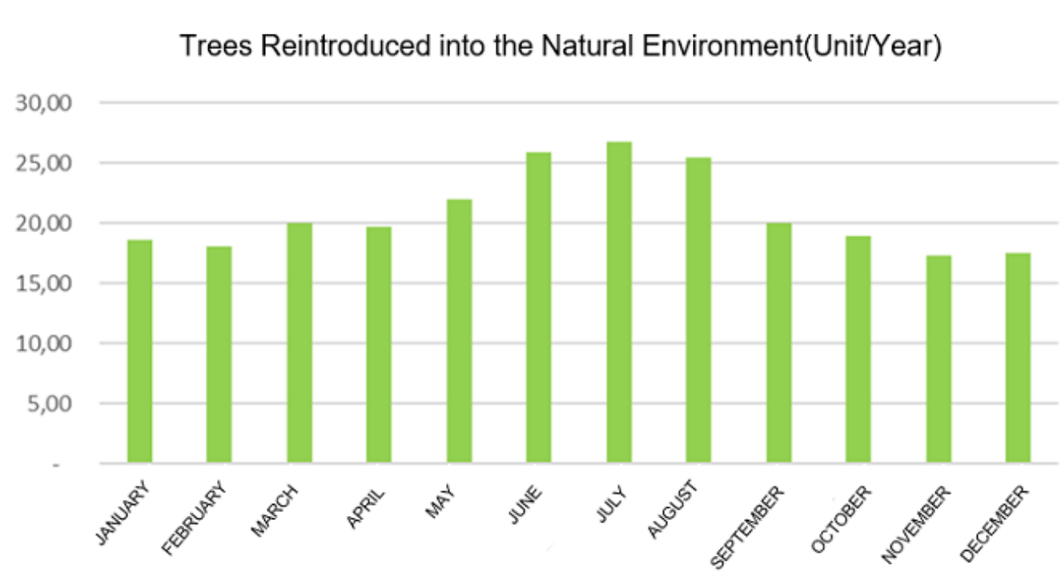
ACROSS TÜRKİYE	Total System Savings (kWh/month)	Saved Natural Gas (m³/Year)	Saved Lignite Coal (kg/Year)	Prevented Carbon Emission (Ton/Year)	Trees Reintroduced into the Natural Environment (Unit/Year)
JANUARY	1.086,74	123,14	186,92	0,25	0,60
FEBRUARY	1.301,35	147,45	223,83	0,30	0,72
MARCH	1.639,19	185,73	281,94	0,38	0,91
APRIL	1.619,91	183,55	278,62	0,37	0,90
MAY	987,17	111,85	169,79	0,23	0,55
JUNE	-	-	-	-	-
JULY	-	-	-	-	-
AUGUST	-	-	-	-	-
SEPTEMBER	429,21	48,63	73,82	0,10	0,24
OCTOBER	1.201,78	136,17	206,71	0,28	0,67
NOVEMBER	1.191,79	135,04	204,99	0,27	0,66
DECEMBER	917,10	103,91	157,74	0,21	0,51
TOTAL	10.374,22	1.175,47	1.784,37	2,37	5,76











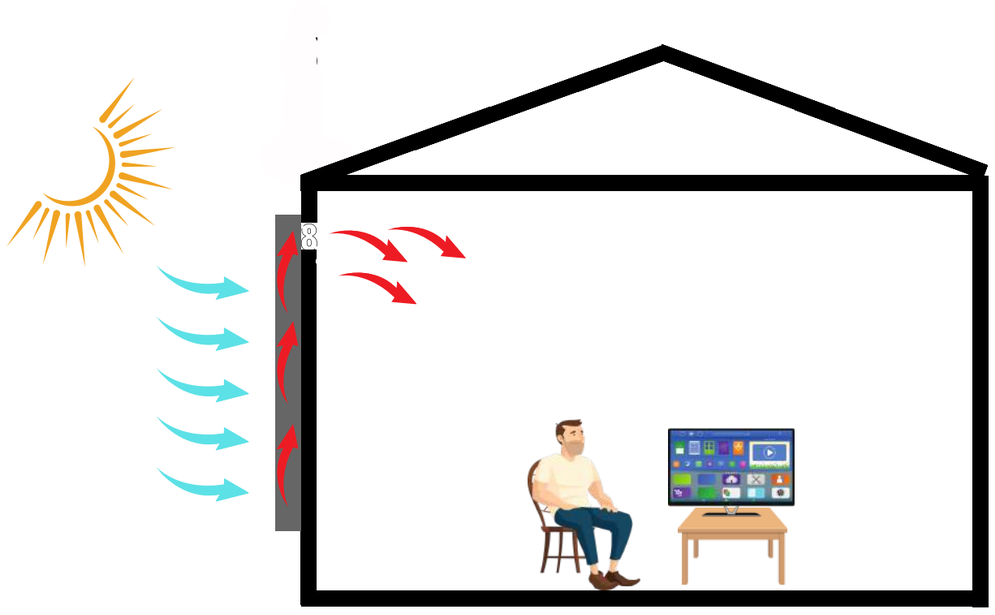
BENEFITS OF RESIDENTIAL HEATING SYSTEM WITH SOLAR HEAT PUMP

No	Technical Specification	Enge SolarBox
1	Solar Energy Support	Yes
2	Heating Capacity	0.5-5 Kwh
3	100% Fresh Air Usage	Yes
4	Mixed Air Usage	Yes
5	Closed Air Cycle	Yes
6	Waste Heat Recovery	Yes
7	Dust and Particle Filter	Yes
8	Average Power Consumption on Sunny Days (Daytime)	0 kW
9	Average Active Power Consumption (Night)	0.5-3 Kwh

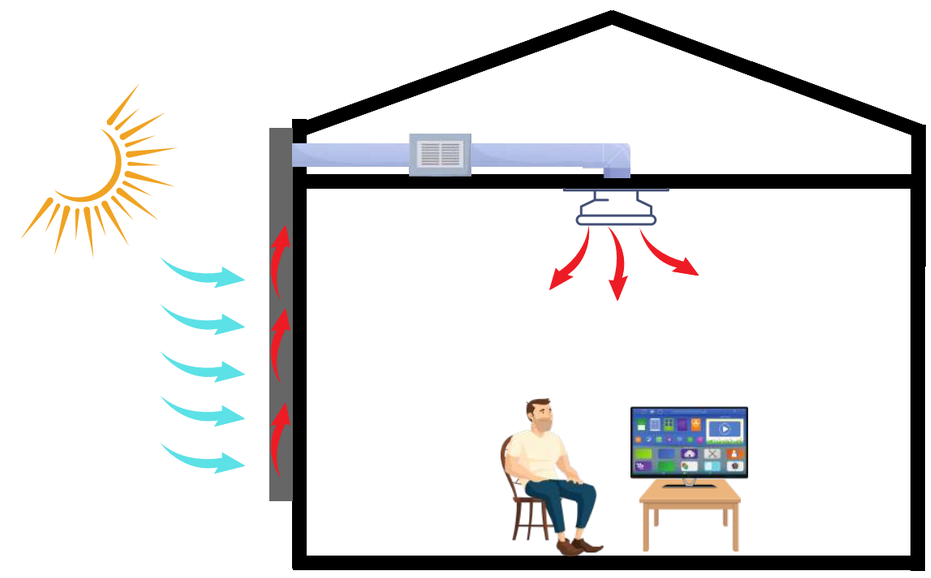
The table below has been prepared for a residence with an area of 150 m².
The calculations were based on the general climate data for Türkiye.

Total System Savings	**€ 410/Year**
Trees Saved Per Year	**6 Units**
Prevented CO_2 Emissions Per Year	**2 Tons**

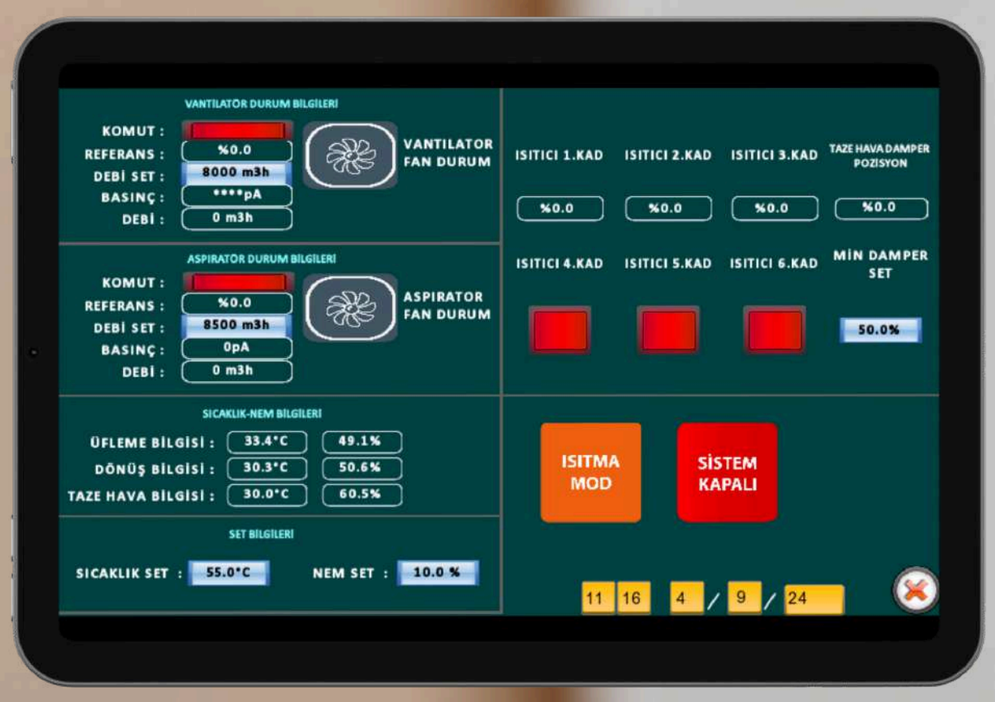
Residential Heating and
Ventilation System with Axial Fan



Residential Heating and Ventilation
System with Heat Recovery



The ENGESOLARBOX® tracking and monitoring system provides users with access via both web and mobile devices. This allows you to optimize energy consumption, monitor system performance,and adjust settings according to your needs.



ENGESOLARBOX®'s advanced tracking system allows you to monitor how much profit you are making.

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SOLAR TEKNOLOJİLERİ SAN. TİC. LTD.ŞTİ.

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