



ange solarbox

F O S  
S I L  
FUEL-FREE  
HEAT &  
ENERGY  
SYSTEMS

ZERO FUEL, ZERO WASTE, ZERO CARBON

FRUIT, VEGETABLE AND PLANT  
DRYING SYSTEM WITH SOLAR  
HEAT PUMP

# DRYING SYSTEM WITH SOLAR HEAT PUMP

## TECHNICAL SPECIFICATIONS OF THE DRYING SYSTEM

Our Drying Systems with Enge Solar Heat Pump are smarter, healthier and more profitable than other drying methods. With this system, you can avoid the damages of fossil fuels and provide high savings by using an eco-friendly drying system.

Drying Systems with Enge Solar Heat Pump provide natural and hygienic drying by heating the indoor or 100% fresh air with solar energy.

This solution is not only economical but also extremely beneficial in terms of protecting nature. Drying System with Enge Solar Heat Pump combine high efficiency with clean energy, helping fruit, vegetable, and plant processing facilities cut energy costs while achieving eco-friendly drying.



DRYING SYSTEM WITH ENGESOLARBOX® SOLAR HEAT PUMP COMPARISON TABLE

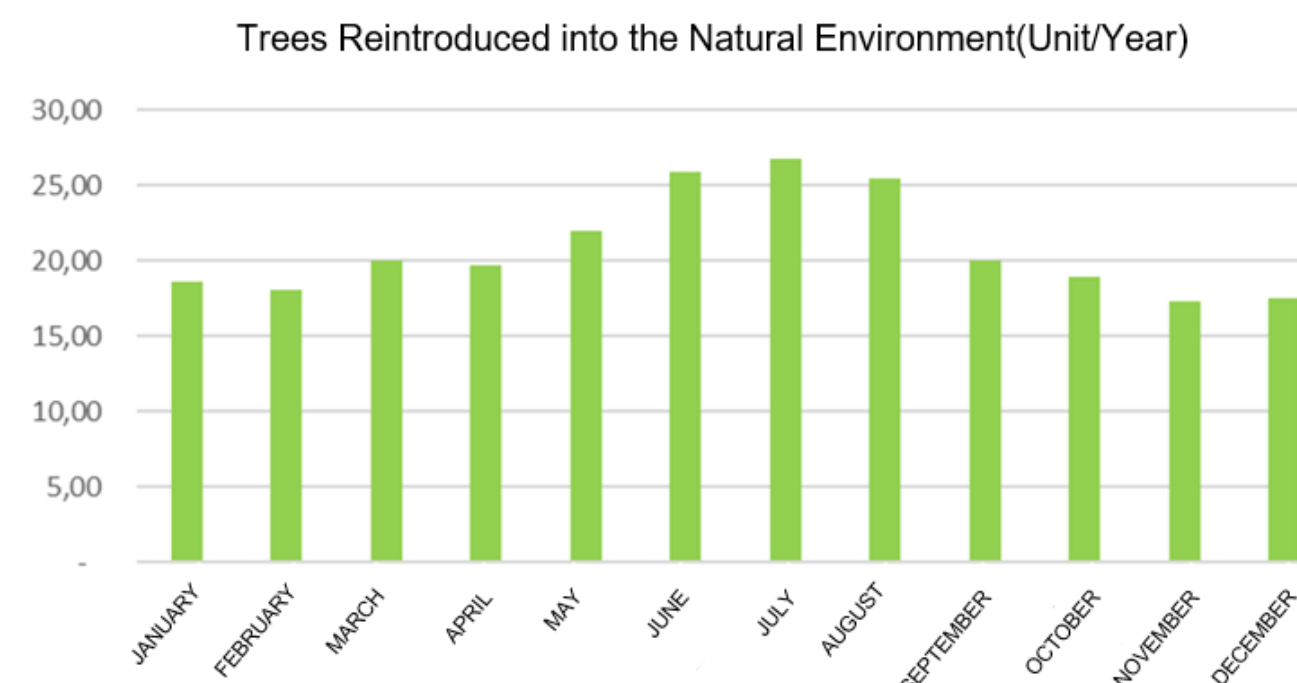
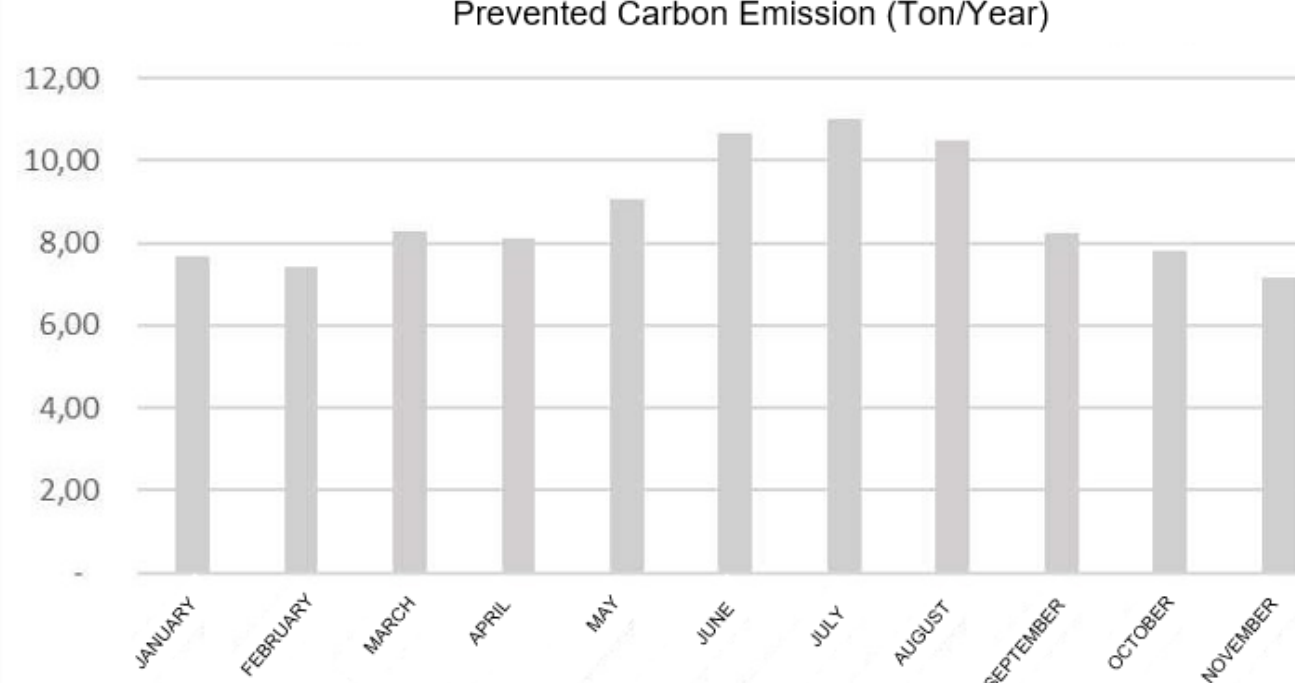
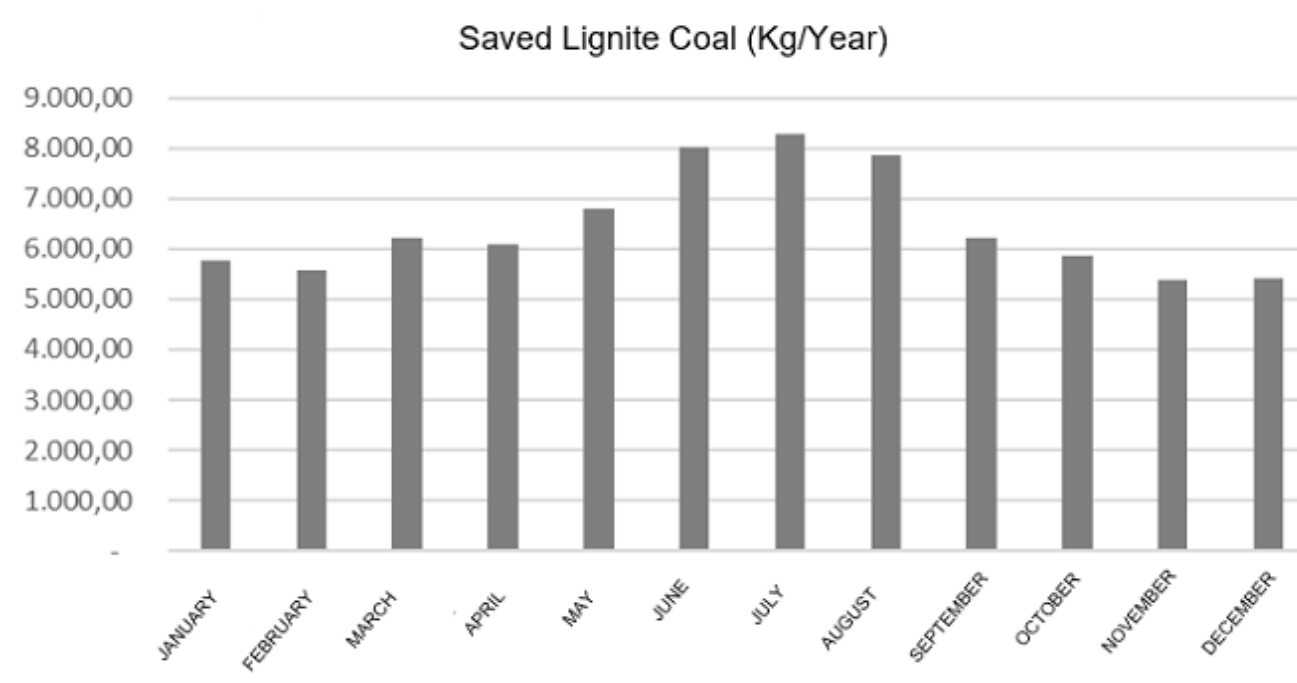
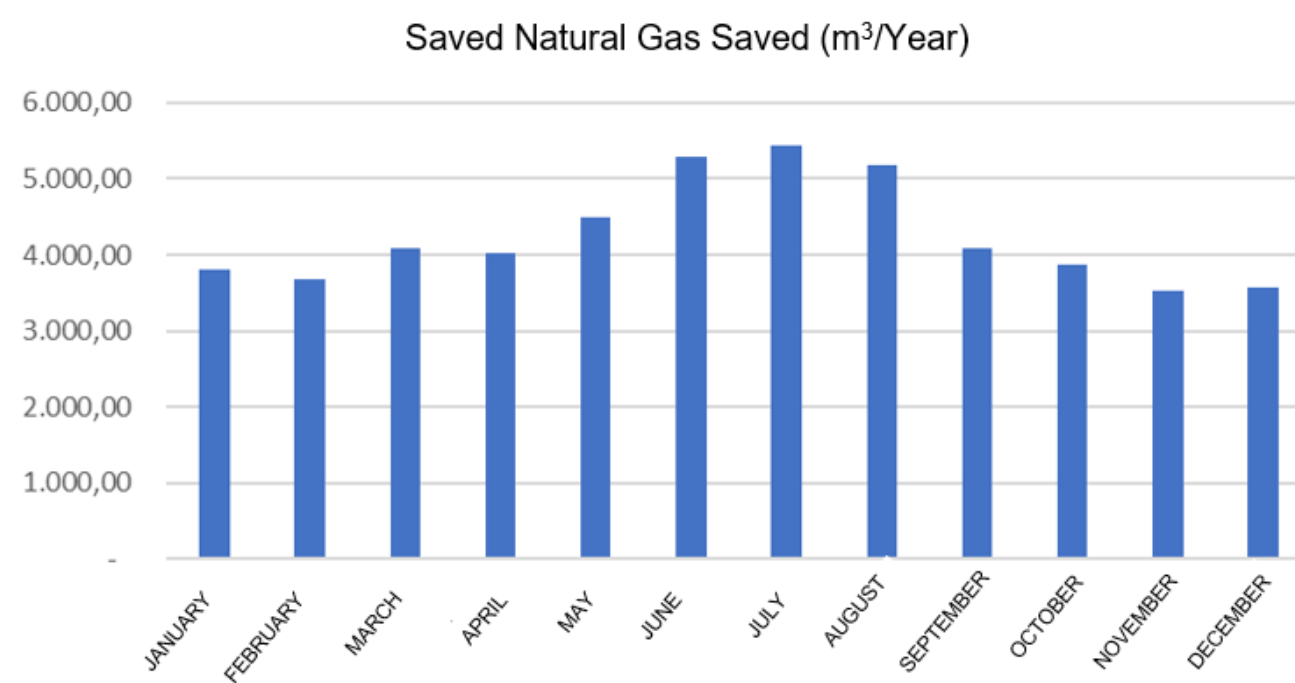
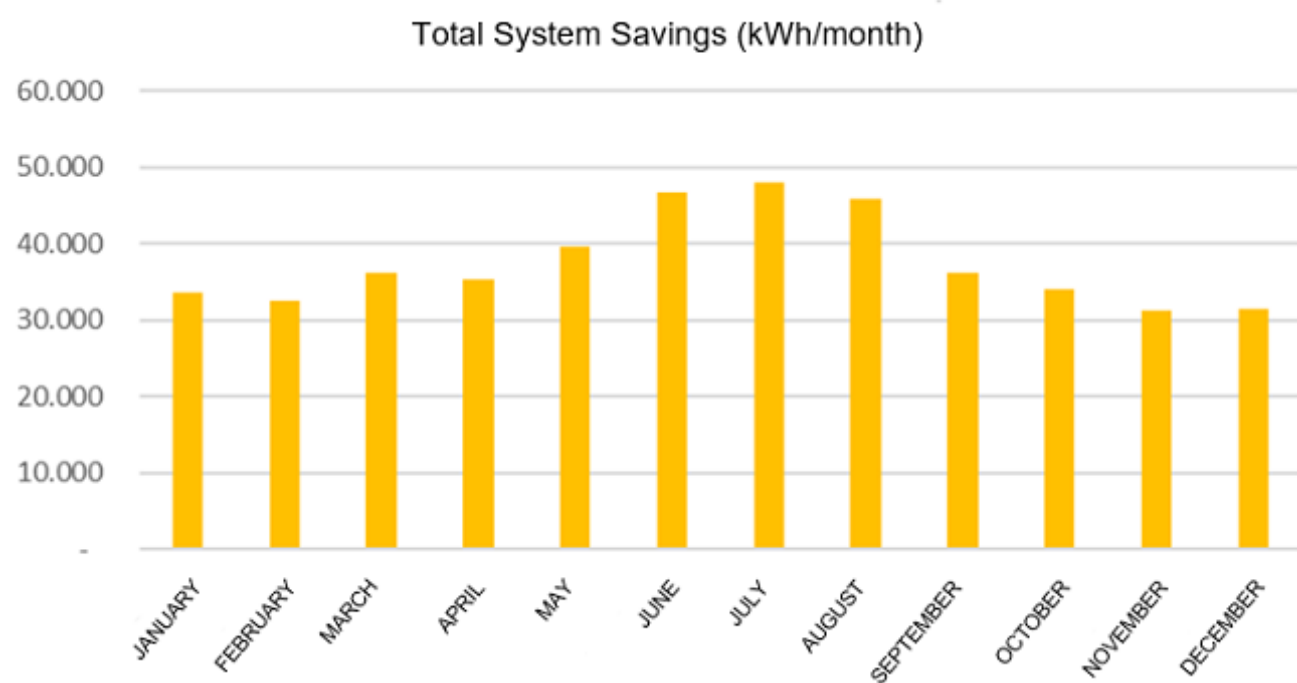
No	Technical Specification	Drying with Solar Heat Pump	Heat Pump Drying
1	Fresh Product Capacity	300-1500 kg/day	500-750 kg/day
2	Solar Energy Support	Yes	N/A
3	Heating Capacity	5-90 kWh	25 kWh
4	100% Fresh Air Usage	Yes	N/A
5	Mixed Air Usage	Yes	N/A
6	Closed Air Cycle	Yes	Yes
7	Waste Energy Recovery	Yes	N/A
8	Dust and Particle Filter	Yes	N/A
9	Average Power Consumption on Sunny Days (Daytime)	0 kWh	7.5 kWh
10	Average Active Power Consumption	12- 20 kWh	7.5 kWh
11	Total Fan Motor Power (with Inverter)	0.5 - 8 kWh	17.5 kWh
12	Energy to be Consumed in 1 Day	480 kWh	600 kWh
13	Max. Air Blowing Temperature	80 °C	65 °C
14	Average Dehumidification Amount	8%-14%	30-50 lt/h
15	Air Flow	1000-15000 m <sup>3</sup> /h	35000 m <sup>3</sup> /h
16	Cabinet Dryer Width x Length x Height	3.300 x 7.700 x 3.000 mm	2.820 x 6.000 x 2.200 mm
17	Drying Area	25 m <sup>2</sup>	16.92 m <sup>2</sup>
18	Drying Volume	75 m <sup>3</sup>	37.22 m <sup>3</sup>
19	Gas and Water Circulating in the System	N/A	Yes
20	Gas Leak Risk	N/A	Yes
21	Fire and Explosion Risk	N/A	Yes
22	Maintenance Cost	Low	High

# THERMAL ENERGY EFFICIENCY OF DRYING SYSTEM WITH SOLAR HEAT PUMP

## SOLAR HEAT PUMP SYSTEM EFFICIENCY

The table below has been prepared based on a flow rate of 8,000 m<sup>3</sup>/h. An operating temperature of 50 °C was taken as a reference.




ACROSS TÜRKİYE	Total System Savings (kWh/month)	Saved Natural Gas (m <sup>3</sup> /Year)	Saved Lignite Coal (kg/Year)	Prevented Carbon Emission (kg/Year)	Trees Reintroduced into the Natural Environment (Unit/Year)
JANUARY	33.558,24	3.802,38	5.772,02	7,68	18,64
FEBRUARY	32.450,77	3.676,90	5.581,53	7,43	18,02
MARCH	36.126,21	4.093,35	6.213,71	8,27	20,07
APRIL	35.398,08	4.010,85	6.088,47	8,10	19,66
MAY	39.607,89	4.487,85	6.812,56	9,07	22,00
JUNE	46.653,26	5.286,14	8.024,36	10,68	25,91
JULY	48.101,67	5.450,26	8.273,49	11,01	26,72
AUGUST	45.788,85	5.188,20	7.875,68	10,48	25,43
SEPTEMBER	36.109,44	4.091,45	6.210,82	8,26	20,06
OCTOBER	34.096,28	3.863,35	5.864,56	7,80	18,94
NOVEMBER	31.207,35	3.536,01	5.367,66	7,14	17,33
DECEMBER	31.468,19	3.565,57	5.412,53	7,20	17,48
TOTAL	450.566,23	51.052,30	77.497,39	103,13	250,26



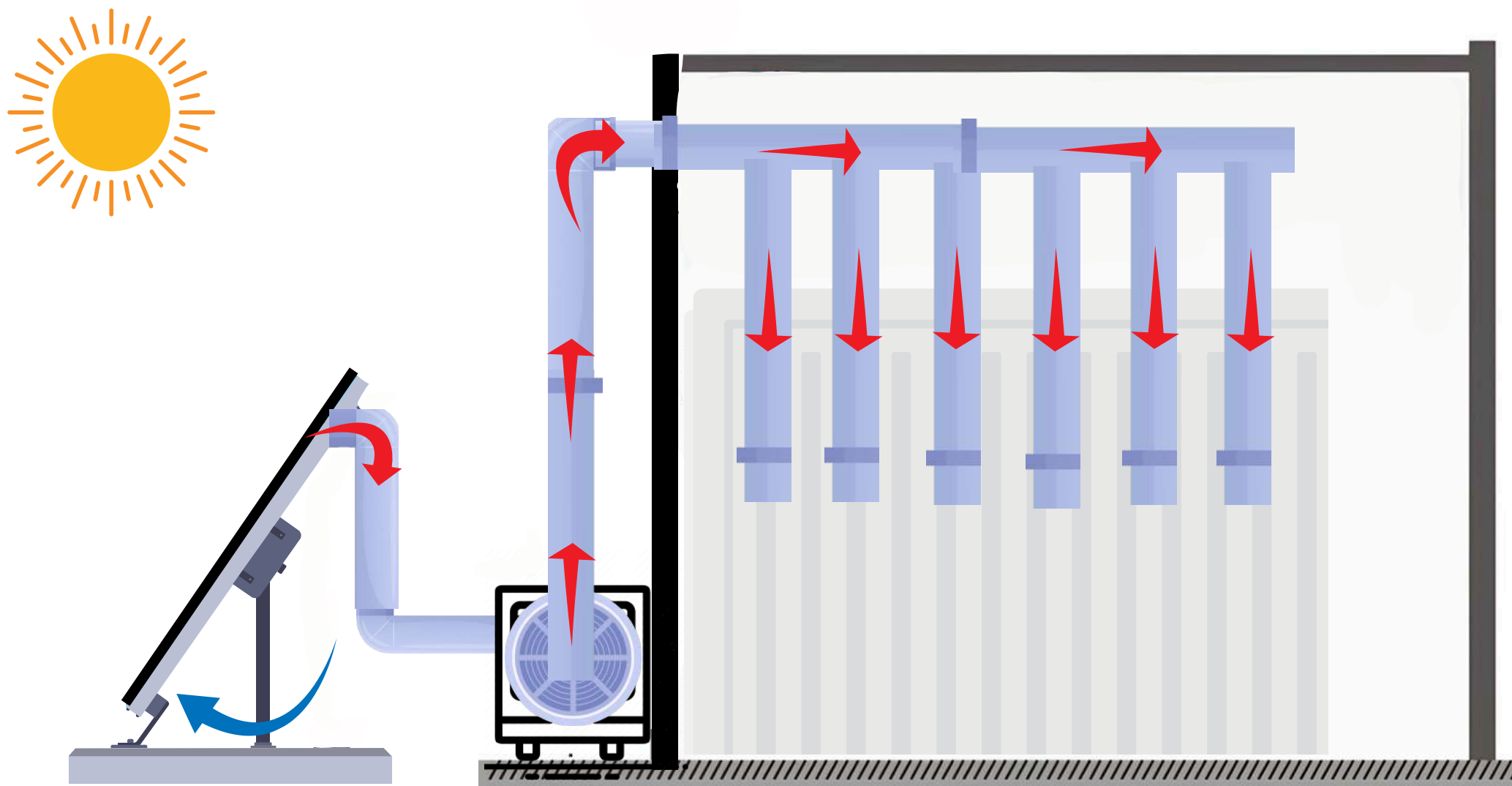
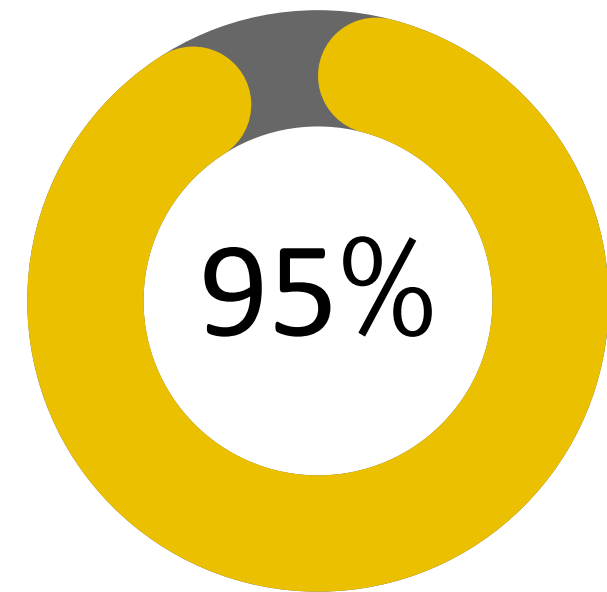
# BENEFITS OF DRYING SYSTEM WITH SOLAR HEAT PUMP

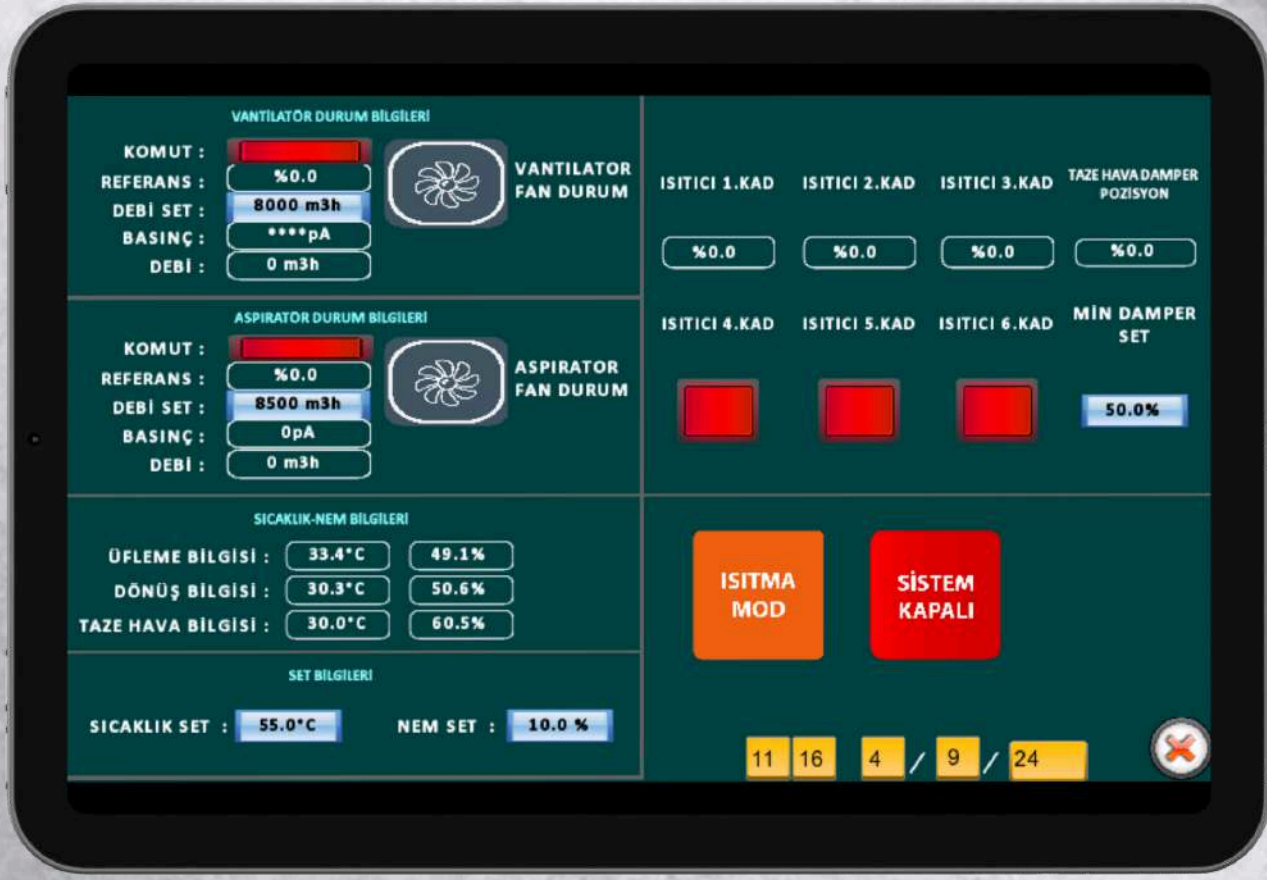


The table below has been prepared based on a flow rate of 8,000 m<sup>3</sup>/h. The calculations were based on the general climate data for Türkiye.

 Total System Savings	<b>€ 17.768</b>
 Trees Saved Per Year	<b>250 Units</b>
 Prevented CO <sub>2</sub> Emissions Per Year	<b>103 Tons</b>

Total System Efficiency





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.

# enge solarbox

FOS  
SİL  
FUEL-FREE  
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SYSTEMS

ENGE ENERJİ ISITMA SOĞUTMA HAVALANDIRMA  
SOLAR TEKNOLOJİLERİ SAN. TİC. LTD. ŞTİ.

[www.engeenergy.com](http://www.engeenergy.com)

