

RAPORT EFICIENTA SOLARA

SOLAR HT 28-160

SELECTIVE SYSTEM 160 + LUNA 3 COMFORT HT 1.280

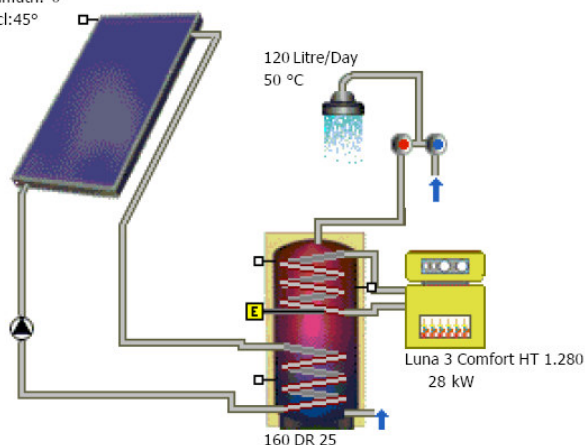
SOLAR SP1 + PREMIUM HT 28-160

1 x SB21

Total Gross Surface Area: 2.03 m²

Azimuth: 0°

Incl: 45°



System Components

Collector Loop

Manufacturer:	Baxi
Type:	SB21
Number:	1.00
Total Gross Surface Area:	2.025 m ²
Total Active Solar Surface Area:	1.84 m ²
Tilt Angle:	45 °
Azimuth:	0 °

Bivalent (Twin Coil) DHW Tank incl. Heating Element (2.5 kW)

Manufacturer:	Baxi
Type:	160 DR 25
Volume:	160 l

Auxiliary Heating

Manufacturer:	Baxi
Type:	Luna 3 Comfort HT 1.280
Nominal Output:	28 kW

Basic Data

Climate File

Location:	Bucuresti
Climate Data Record:	"Bucuresti"
Total Annual Global Radiation:	1324.32 kWh
Latitude:	44.5 °
Longitude:	-26.22 °

Domestic Hot Water

Average Daily Consumption:	120 l
Desired Temperature:	50 °C
Load Profile:	Detached House (evening max)
Cold Water Temperature:	February: 8 °C / August: 12 °C

Results of Annual Simulation

Installed Collector Power:	1.42 kW	
Installed Gross Solar Surface Area:	2.025 m ²	
Collector Surface Area Irradiation:	2,649.82 kWh	1,440.12 kWh/m ²
Energy Produced by Collectors:	1,183.64 kWh	643.28 kWh/m ²
Energy Produced by Collector Loop:	890.85 kWh	484.16 kWh/m ²

DHW Heating Energy Supply:	2039.96 kWh
Solar Contribution to DHW:	890.85 kWh
Energy from Auxiliary Heating:	1409.78 kWh

Natural Gas (H) Savings:

CO2 Emissions Avoided: **106.7 m³**

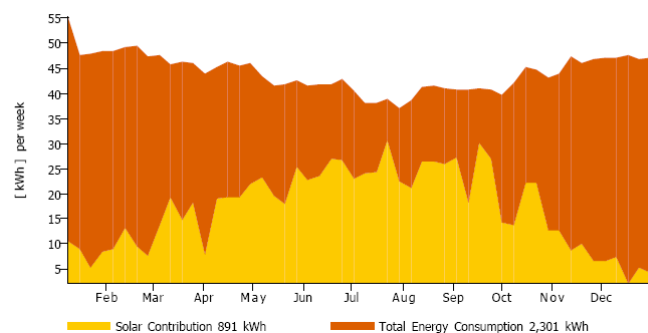
DHW Solar Fraction: **225.70 kg**

Fractional Energy Savings (EN 12976): **38.7 %**

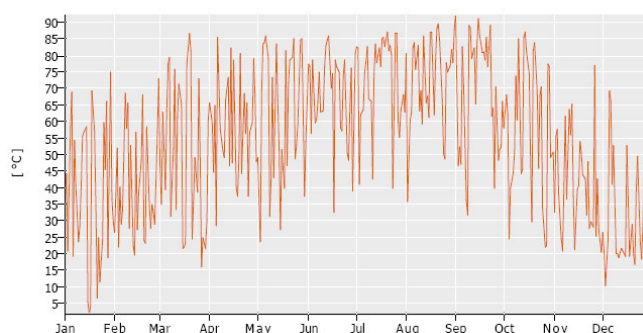
System Efficiency: **42.2 %**

System Efficiency: **33.6 %**

Solar Energy Consumption as Percentage of Total Consumption



Daily Maximum Collector Temperature



Aceste calcule au fost efectuate cu ajutorul programului T-SOL Pro 4.5 - software de simulare pentru sisteme termice de încălzire ce folosesc energia solara. Rezultatele sunt determinate in baza unui model matematic de calcul. Randamentul real se poate abate de la aceste valori, datorita fluctuatilor climatice, modului de exploatare sau altori factori externi. Schema de mai sus nu reprezinta si nu poate înlocui un proiect tehnic de executie al sistemului solar.