

RAPORT EFICIENTA SOLARA

SOLAR VID HT 45-300

SELECTIVE SYSTEM VID 300 + LUNA HT 1.450

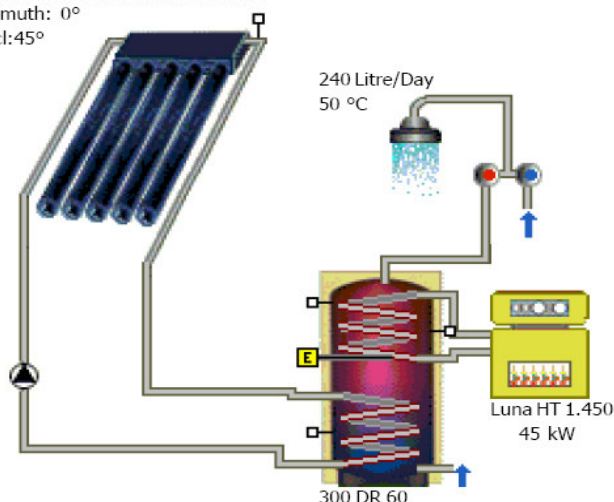
SOLAR VID 30 + PREMIUM HT 45-300

1 x AR30

Total Gross Surface Area: 4.24 m²

Azimuth: 0°

Incl: 45°



System Components

Collector Loop

Manufacturer:	Baxi
Type:	AR30
Number:	1.00
Total Gross Surface Area:	4.24 m ²
Total Active Solar Surface Area:	3.02 m ²
Tilt Angle:	45 °
Azimuth:	0 °

Bivalent (Twin Coil) DHW Tank incl. Heating Element (6 kW)

Manufacturer:	Baxi
Type:	300 DR 60
Volume:	300 l

Auxiliary Heating

Manufacturer:	Baxi
Type:	Luna HT 1.450
Nominal Output:	45 kW

Basic Data

Climate File

Location:	Bucuresti
Climate Data Record:	BUCHAREST
Total Annual Global Radiation:	1412.52 kWh
Latitude:	44.5 °
Longitude:	-26.22 °

Domestic Hot Water

Average Daily Consumption:	240 l
Desired Temperature:	50 °C
Load Profile:	Detached House (evening max)
Cold Water Temperature:	February: 8 °C / August: 12 °C

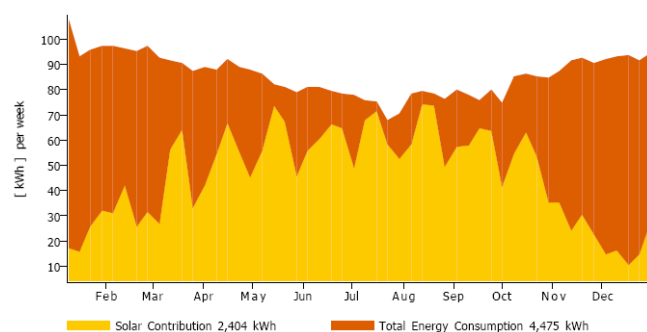
Results of Annual Simulation

Installed Collector Power:	2.97 kW	
Installed Gross Solar Surface Area:	4.24 m ²	
Collector Surface Area Irradiation:	4.68 MWh	1,550.02 kWh/m ²
Energy Produced by Collectors:	2,742.83 kWh	908.22 kWh/m ²
Energy Produced by Collector Loop:	2,403.52 kWh	795.87 kWh/m ²

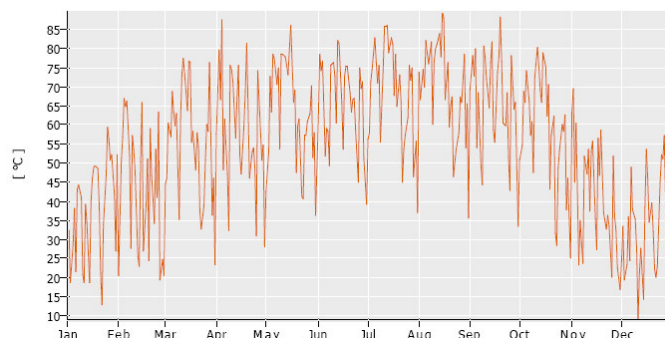
DHW Heating Energy Supply:	4.08 MWh
Solar Contribution to DHW:	2403.52 kWh
Energy from Auxiliary Heating:	2071.68 kWh

Natural Gas (H) Savings:	287.9 m ³
CO2 Emissions Avoided:	609.12 kg
DHW Solar Fraction:	53.7 %
Fractional Energy Saving (EN 12976):	55.4 %
System Efficiency:	51.3 %

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.