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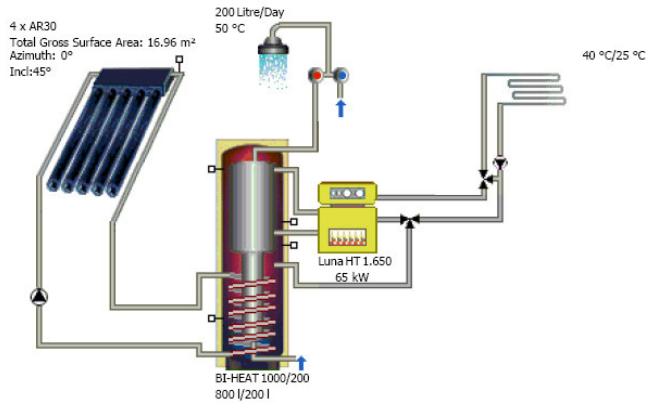
RAPORT EFICIENTA SOLARA

SOLAR VID BI-HEAT HT 65-1000/200
SELECTIVE SYSTEM VID BI-HEAT 1000/200 + LUNA HT 1.650
SOLAR VID 120 + BI-HEAT 1000/200 + LUNA HT 1.650



System Components

Collector Loop

Manufacturer:	Baxi
Type:	AR30
Number:	4.00
Total Gross Surface Area:	16.96 m²
Total Active Solar Surface Area:	12.08 m²
Tilt Angle:	45 °
Azimuth:	0 °

Combination Tank (Tank)

Manufacturer:	BAXI
Type:	BI-HEAT 1000/200
Volume:	1000 l

Auxiliary Heating

Manufacturer:	Baxi
Type:	Luna HT 1.650
Nominal Output:	65 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:	200 l
Desired Temperature:	50 °C
Load Profile:	Detached House (evening max)
Cold Water Temperature:	February:8 °C / August:12 °C

Space Heating

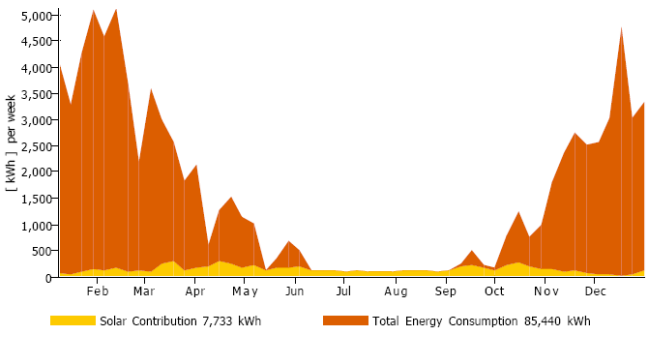
Standard Building Heat Flow Requirement:	45 kW
Standard External Temperature:	-18.65 °C
Design Temperatures :	40 °C/25 °C

Results of Annual Simulation

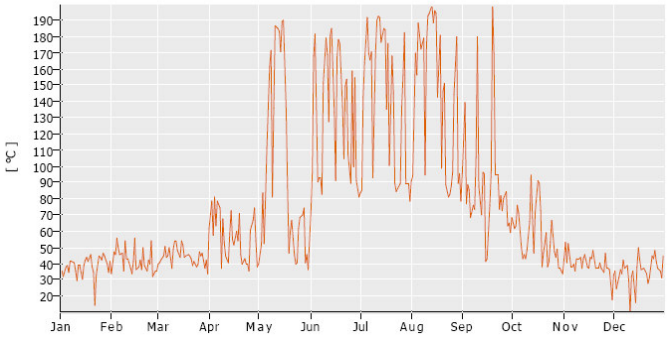
Installed Collector Power:	11.87 kW	
Installed Gross Solar Surface Area:	16.96 m²	
Collector Surface Area Irradiation:	18.72 MWh	1,550.02 kWh/m²
Energy Produced by Collectors:	8.68 MWh	718.85 kWh/m²
Energy Produced by Collector Loop:	7.73 MWh	640.19 kWh/m²
DHW Heating Energy Supply:	3.4 MWh	
Space Heating Energy Supply:	80.2 MWh	
Solar Contribution to DHW:	3.42 MWh	
Solar Contribution to Heating:	4.32 MWh	
Energy from Auxiliary Heating:	77.71 MWh	

Natural Gas (H) Savings:	**884.6 m³**
CO2 Emissions Avoided:	**1,871.44 kg**
DHW Solar Fraction:	**65.2 %**
Total Solar Fraction:	**9.1 %**
Fractional Energy Saving (EN 12976):	**7.6 %**
System Efficiency:	**41.3 %**

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 încalzire ce folosesc energia solara. Rezultatele sunt determinate in baza unui model matematic de calcul. Randamentul real se poate abate de la aceste valori, datorita fluctuatiilor 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.