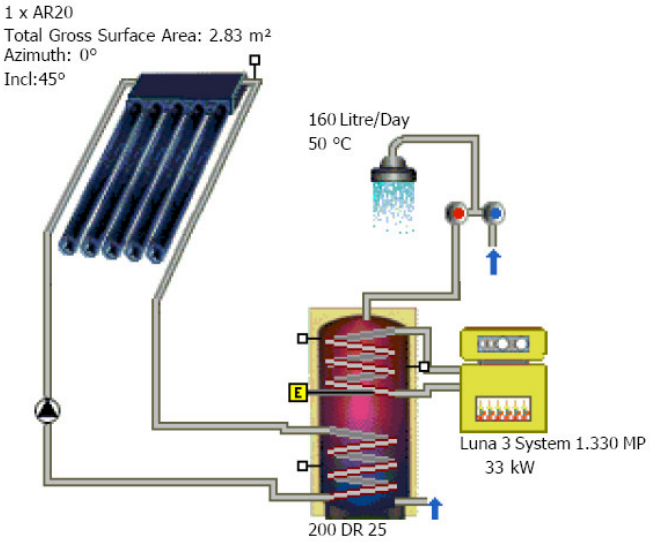
ALTENERGY SOLUTIONS SRL
Str. Ion Rusu Sirianu, Nr. 2A
Ploiesti, 100406, Jud. Prahova, ROMANIA
Telefon/Fax: +40 244 518761
Mobil: +40 721 217383; +40 742 010519
E-mail: office@altenergy.ro
Web: www.altenergy.ro

RAPORT EFICIENTA SOLARA

SOLAR VID HT 33-200
SELECTIVE SYSTEM VID 200 + LUNA 3 SYSTEM HT 1.330 MP
SOLAR VID 20 + PREMIUM HT 33-200



System Components

Collector Loop

Manufacturer:	Baxi
Type:	AR20
Number:	1.00
Total Gross Surface Area:	2.83 m²
Total Active Solar Surface Area:	2 m²
Tilt Angle:	45 °
Azimuth:	0 °

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

Manufacturer:	Baxi
Type:	200 DR 25
Volume:	200 l

Auxiliary Heating

Manufacturer:	Baxi
Type:	Luna 3 System 1.330 MP
Nominal Output:	33 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

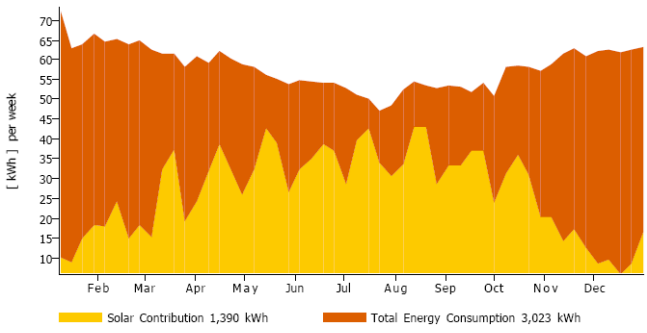
Average Daily Consumption:	160 l
Desired Temperature:	50 °C
Load Profile:	Detached House (evening max)
Cold Water Temperature:	February:8 °C / August:12 °C

Results of Annual Simulation

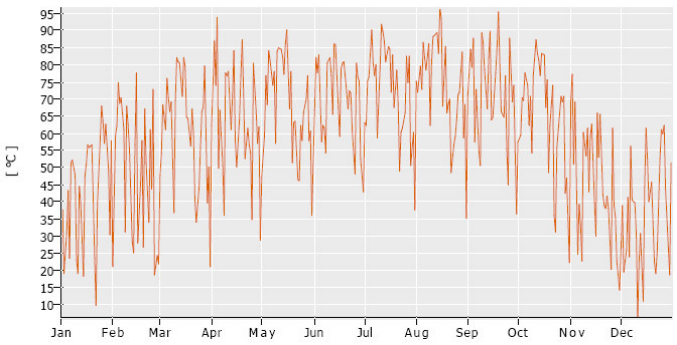
Installed Collector Power:	1.98 kW	
Installed Gross Solar Surface Area:	2.83 m²	
Collector Surface Area Irradiation:	3,100.03 kWh	1,550.02 kWh/m²
Energy Produced by Collectors:	1,757.84 kWh	878.92 kWh/m²
Energy Produced by Collector Loop:	1,389.59 kWh	694.80 kWh/m²
DHW Heating Energy Supply:	2719.95 kWh	
Solar Contribution to DHW:	1389.59 kWh	
Energy from Auxiliary Heating:	1633.7 kWh	

Natural Gas (H) Savings:	**166.7 m³**
CO2 Emissions Avoided:	**352.58 kg**
DHW Solar Fraction:	**46.0 %**
Fractional Energy Saving (EN 12976):	**48.6 %**
System Efficiency:	**44.8 %**

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.