

## RAPORT EFICIENTA SOLARA

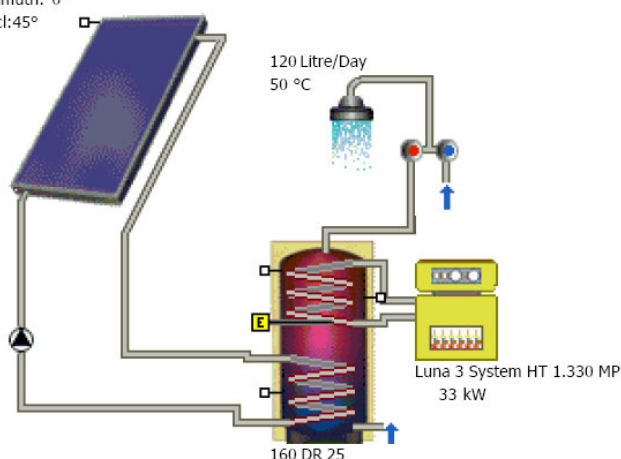
### ***SELECTIVE SYSTEM PLUS 160 + LUNA 3 SYSTEM 1.330MP SOLAR PLUS SP1 + PREMIUM HT 33-160***

1 x SB25

Total Gross Surface Area: 2.52 m<sup>2</sup>

Azimuth: 0°

Incl:45°



#### System Components

##### Collector Loop

|                                  |                      |
|----------------------------------|----------------------|
| Manufacturer:                    | Baxi                 |
| Type:                            | SB25                 |
| Number:                          | 1.00                 |
| Total Gross Surface Area:        | 2.516 m <sup>2</sup> |
| Total Active Solar Surface Area: | 2.31 m <sup>2</sup>  |
| 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 System HT 1.330 MP |
| Nominal Output: | 33 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 |

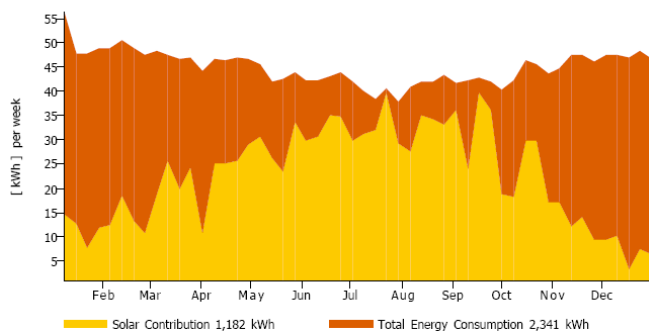
#### Results of Annual Simulation

|                                     |                      |                             |
|-------------------------------------|----------------------|-----------------------------|
| Installed Collector Power:          | 1.76 kW              |                             |
| Installed Gross Solar Surface Area: | 2.516 m <sup>2</sup> |                             |
| Collector Surface Area Irradiation: | 3.33 MWh             | 1,440.12 kWh/m <sup>2</sup> |
| Energy Produced by Collectors:      | 1,515.20 kWh         | 655.93 kWh/m <sup>2</sup>   |
| Energy Produced by Collector Loop:  | 1,181.96 kWh         | 511.67 kWh/m <sup>2</sup>   |

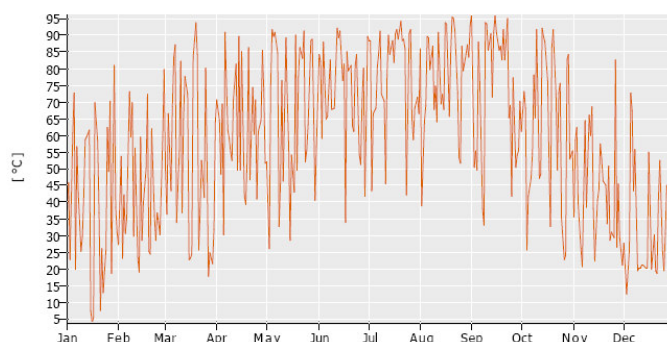
|                                |             |
|--------------------------------|-------------|
| DHW Heating Energy Supply:     | 2039.96 kWh |
| Solar Contribution to DHW:     | 1181.96 kWh |
| Energy from Auxiliary Heating: | 1159.38 kWh |

|                                       |                      |
|---------------------------------------|----------------------|
| Natural Gas (H) Savings:              | 141.2 m <sup>3</sup> |
| CO2 Emissions Avoided:                | 298.62 kg            |
| DHW Solar Fraction:                   | 50.5 %               |
| Fractional Energy Savings (EN 12976): | 52.5 %               |
| System Efficiency:                    | 35.5 %               |

#### 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.