

# حاسبة استهلاك الطاقة

## Energy Demand

### General Data

<input type="text" value="-- select --"/>	Country
C° <input type="text"/>	Temperature
m <input type="text"/>	Altitude
kWh/m <sup>2</sup> /day <input type="text"/>	Solar daily irradiance

### Calculation Settings

n/a Vca	Local rated voltage
n/a Hz	Local frequency
<input type="checkbox"/>	?There is any 3-phase Consumer in the installation
<input type="checkbox"/>	The installation provides power to a hospital (very sensitive structure)

Working Hours	S	S	P	Quantity	Appliance/Device
	Avg	Max	(W		
Night Evening Afternoon Midday Morning	((VA	((VA			

- General •
- Generator •
- Battery •
- Solar •

### Estimation of Needs

### Energy Consumption per Day

n/a W a day	Total
n/a W a day (Low consumption devices (Class 1	
n/a W a day (High consumption devices (Class 2	
n/a Wh	Usefull energy / day
n/a Wh	Usefull energy / night

### Power Needed

n/a VA	Total
n/a VA (Low consumption devices (Class 1	
n/a VA (High consumption devices (Class 2	
n/a VA	Average power necessary

### Generator

#### Additional Information

Automatic selection	(Voltage specification (single-P / 3-P
	:Cable length between
10	the generator and switchgear
10	the grid and switchgear
10	the switchgear and the main electrical dashboard
	:Wire Gauge recommendation
n/a mm <sup>2</sup>	between generator and switchgear
n/a mm <sup>2</sup>	between grid and switchgear
n/a mm <sup>2</sup>	between switchgear to dashboard

#### Size Recommendations

n/a KVA (Size recommended (PRP

### Size Recommendations

n/a VA	(Power (ESP
n/a	Voltage type
n/a V	Rated voltage
n/a Hz	Rated frequency
n/a A	Output circuit-breaker size
n/a l/h	Estimated fuel consumption
n/a l/h	Estimated oil consumption
n/a l/250h	(oil change every 250h 1)

### Battery System

#### Additional Information

V	<input type="text" value="12"/>	Unit voltage
Ah	<input type="text" value="1000"/>	Unit capacity
%	<input type="text" value="50"/>	(Authorized discharge ratio (no less than 40%
h	<input type="text" value="4"/>	(Charge available time (minimum 4hours
	<input type="text" value="1"/>	Days of autonomy needed if no charge

#### Recommendation

n/a Wh	Energy to accumulate
n/a V	Voltage recommended
n/a units	Number of batteries needed with the specifications provided
n/a	Type of conection
n/a A	Circuit breaker ideal size
n/a A	Charger size at least

### Solar System

### Additional Information

n/a kWh/m <sup>2</sup> /day	Solar daily irradiance
n/a Wc	Usefull max power per day
n/a A	Regulator size
<input type="text" value="12"/>	(Solar panels unit voltage (recommendation: n/aV
Wc <input type="text"/>	Solar panels unit max power

### Recommendation

n/a	Minimum number of solar panels
n/a	Recommended number of solar panels
n/a	Solar charge controller: type of regulator
n/a V	Solar charge controller: rated voltage
n/a A	Solar charge controller: unit max current
n/a	Solar charge controller: quantity

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