




# Chameleon

## SOLUTIONS LTD

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**CHAMELEON**  
.CO.KE




# CHAMELEON SOLUTIONS LTD

## ENERGISING INGENUITY

**SOLAR | HEATPUMPS | CUSTOM FABRICATION**

Over 25MW of Solar PV Power and solar pumping, 17,000 domestic solar heating systems, 128 commercial/Hotel heating systems, 3000 Heatpumps and counting...



**SALES**

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# What type of solar system do you need?

Increased versatility and design adaptability; **which** one is best for you?


## GRID TIE

 <p>Malls, Industries, offices, pack houses</p>	<p><b>FUNCTION</b></p> <ul style="list-style-type: none"> <li>Daytime power or generator subsidy to real-time power use</li> <li>This system doesn't offer storage/backup or night time usability</li> </ul>	<p><b>R.O.I</b></p> <p><b>KPLC:</b> Less than 4 years even with Financing interest</p> <p><b>GENERATOR:</b> Not a direct replacement</p>	<p><b>CONSIDERATIONS</b></p> <ul style="list-style-type: none"> <li>Roof space</li> <li>Weight tolerance</li> <li>kWh of power usage between 8am and 5pm</li> <li>Pattern of usage during the day</li> </ul>
		<p><b>COST</b></p> <p>Lowest Capital cost (No batteries)</p>	<p><b>KPLC REPLACEMENT</b></p> <p>No, must work with KPLC to reduce power bills during the day</p>

## HYBRID

 <p>Homes, Offices lodges, smaller loads</p>	<p><b>FUNCTION</b></p> <ul style="list-style-type: none"> <li>Subsidises or works in tandem with KPLC or generator during the day and/ or at night as set</li> <li>Offers battery storage for use in Back-up or, for certain loads to work all the time independent of grid power</li> </ul>	<p><b>R.O.I</b></p> <p><b>KPLC:</b> 6 to 8 years</p> <p><b>GENERATOR:</b> 1.5 to 4 years</p>	<p><b>CONSIDERATIONS</b></p> <ul style="list-style-type: none"> <li>Roof space</li> <li>kWh of usage during the day</li> <li>kWh of Back-up time required</li> <li>Peak kW usage of identified critical loads</li> </ul>
		<p><b>COST</b></p> <p>High Cost</p>	<p><b>KPLC REPLACEMENT</b></p> <p>Possibly</p>

## OFF-GRID - HYBRID

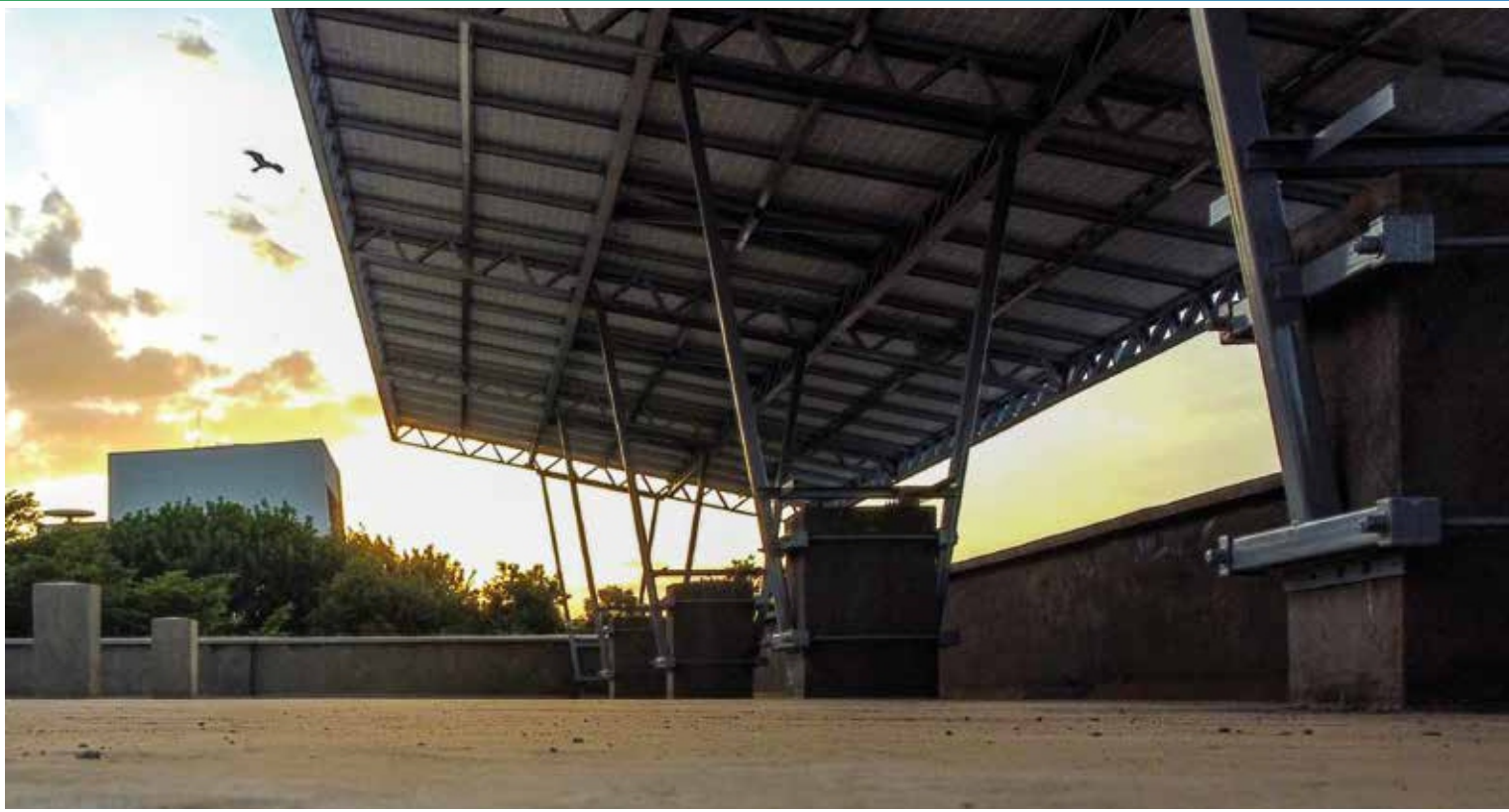
 <p>Where grid power is not available at all</p>	<p><b>FUNCTION</b></p> <ul style="list-style-type: none"> <li>Allows solar PV power to simultaneously charge the batteries and power the loads directly</li> <li>Solar is the primary power source with optional connection on to generator possible</li> </ul>	<p><b>R.O.I</b></p> <p><b>GENERATOR:</b> 2 to 7 years</p>	<p><b>CONSIDERATIONS</b></p> <ul style="list-style-type: none"> <li>Panel space</li> <li>Total Daily consumption of power</li> <li>Peak kW of all loads</li> </ul>
		<p><b>COST</b></p> <p>Highest Cost</p>	<p><b>KPLC REPLACEMENT</b></p> <p>Yes</p>

- Petrocity head office and 12 stations
- Several Shell stations
- Vintz Plastics Ltd
- Muthaiga Mall
- Shelters Home
- Uneeco Paper Products
- Msambweni Beach House
- Diamond Plaza
- Fayaz Bakeries
- Westend Mall kisumu
- Asilia Group Lodges,
- he River Camp
- 14 Tea Factories Highland and Gusii Tea Group
- AAA growers
- Elite seedlings
- BRITAM
- MP Shah Hospital
- OIPajeta house
- FairWay Hotel Uganda
- Pure Harvest Ltd
- Ashnil Lodges
- Akiyda
- Lerai camp
- Isinya chicks/eggs
- Valencia Cosmetics
- Chui Flower Farm
- ICPAK
- Kenya Civil Aviation Authority
- Bahari Dhow Diani
- Baobab Beach Hotel
- Kikoy Mall EPZ
- Elephant Bedroom
- Supa Loaf Bread; more than 30 plants
- Alu-Glass
- Entim camp
- Serena Msa
- Nyamachae Level 4 Hospital

### WHICH IS THE BEST ENERGY STORAGE FOR YOU?

ENERGY STORAGE	PICTURE	CYCLES	EXPECTED LIFESPAN	SPACE
SUPER CAPACITOR		25,000 +	35+ Years	Min
LITHIUM BATTERY		6,000-12,000	7-12 Years	Min
MAINTAINANCE FREE BATTERIES (GEL)		2,100	2-4 Years	Mid






We value Excellence in design and aesthetic for long term quality and to put a smile on your face everytime you look up.







 Various **Green financing options** available from reduced interest to power purchase agreements that give you positive cash flow from month 1!







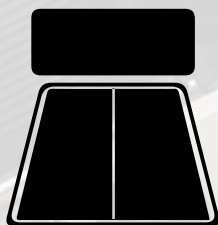


- Radisson Blu Hotel
- Purple Haze
- Hyatt Hotel
- Niharika Apartments
- Oceans 7 Serviced Apartments
- White Rhino Hotel
- MP Shah Hospital
- BAT Headquarters
- Treetop Apartments
- Pullman Hotels
- 8 Serena Hotels
- Best Western Hotel
- Corniche Apartments
- Oceanic Towers
- Tamarind Hotel
- Lions Eye Hospital
- Kika Lodge
- Bahari Dhow
- English Point Marina
- Nova Apartments
- Solitaire Apartments
- Chigwell Phenom Park; 6 Phases
- Acacia Hotel
- Kingfisher Hotel
- BRITAM Serviced Apartments
- Josh Heights
- Msambweni Beach House
- 4 Hilton Hotels
- 3 Sheraton Hotels
- Mulberry Apartments
- City Blue Hotel
- Concord Hotel
- Baobab Beach Hotel
- Premier Hospital
- PETROCity (12 Stations)
- AAA Growers





CALORIFIER,  
PANELS, FRAME



FULL SYSTEMS INCLUDING:  
CONNECTION KIT  
INCLUDING SAFETY VALVE



Brass 3/4 nipple-3pcs  
Reducing nipple brass 3/4 x1/2  
Brass male panel plugs 3/4  
Brass panel plugs female3/4

SR609C DIGITAL  
CONTROLLER



Over 17,000 thermosiphon  
systems and 5,500,000  
litres of centralised systems  
installed in East Africa since  
2012







## ELECTRIC VEHICLE (EV) CHARGING: Domestic/Commercial , Free/Payable



- ✔ Solar
- ✔ Electric
- ✔ Plug & Play
- ✔ Prepay for commercial
- ✔ Custom Solutions



## SOLAR LIGHTS



### WHY QUALITY IS IMPORTANT?

- ✔ Poor Quality lasts shorter times, creates more waste
- ✔ Planning to standards becomes difficult
- ✔ More quantities bought after realisation of dimness leading to higher costs and more waste
- ✔ Encourages low quality dumping in the country
- ✔ Unfair/discriminative sales become a norm mainly to developing countries
- ✔ It starts with smaller items then becomes a norm to sell sub par items to specific regions for larger items
- ✔ Like for Like works out more expensive per unit of light as compared to quality brands.

## SOLAR PUMPS: A different model to suit any design with panels in any design from basic to car sheds to floating structures.



### EXTREMELY LOW OPERATING COST

It minimizes the dependence on electricity or diesel, once installed, there is no recurring cost of electricity or fuel.



### COMPARATIVELY LOW MAINTENANCE

The pump has fewer moving parts than other water pumps so the chances of deterioration are very few



### SIMPLE AND HIGHLY

There is a reduced dependence on electricity and fuel, issues like power cuts, low voltage and single-phase problems do not affect the functionality of solar water pumps at all



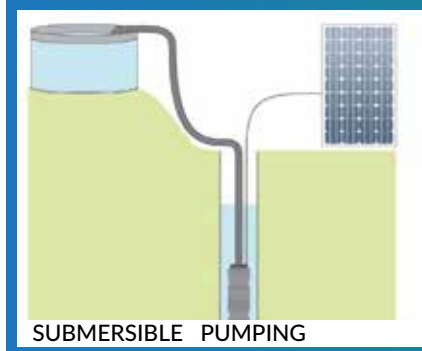
### ECO-FRIENDLY

These solar water pumps are powered by the renewable source of energy, they do not release any harmful substances that can cause serious issues like Global warming.

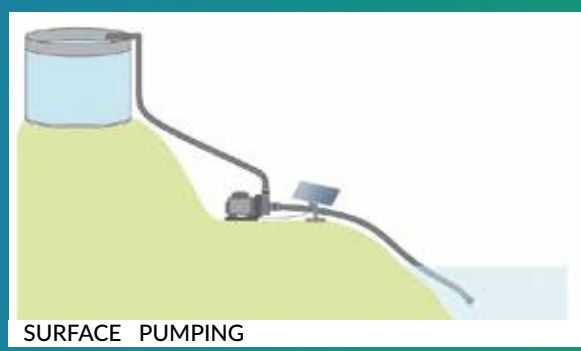


### ECONOMICALLY BENEFICIAL

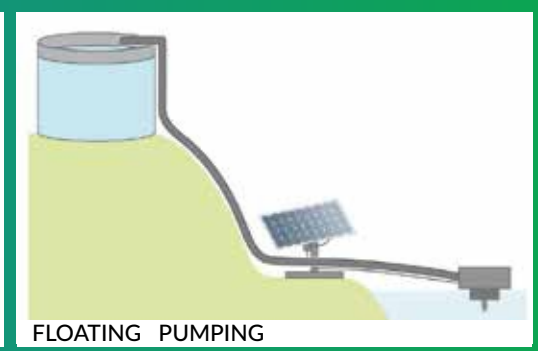
Apart from using the system for water irrigation, it can be an alternative source of income.



SUBMERSIBLE PUMPING

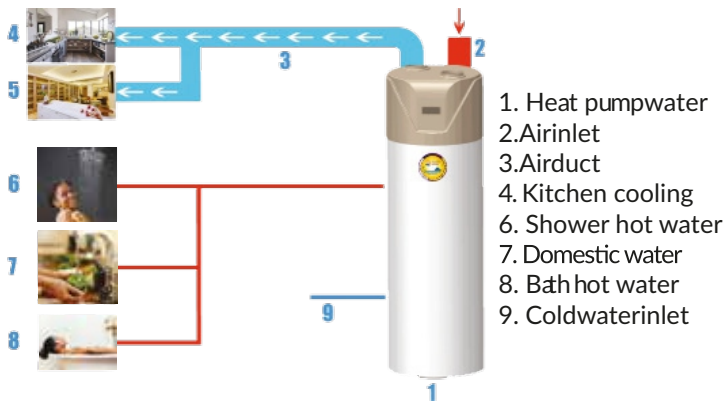


SURFACE PUMPING



FLOATING PUMPING

### ALL-IN-ONE SERIES HEATPUMP Features



#### Features

- ✔ Up to 70°C hot water temperature.
- ✔ Enamel inner tank for maximum life span and safe water.
- ✔ Automatic defrost.
- ✔ Highest environmental friendly ratings.
- ✔ All safety precaution inbuilt.
- ✔ BMS communication enabled.

### EXTERNAL MINI HEATPUMP

( Domestic/small commercial)

Air source heat pump takes advantage of a little electric power to make the compressor work, puts high-pressure working medium to expansion tank for expansion and to evaporate or to make it gaseous. In this process the medium absorbs a lot of heat from the air, then the compressor makes it high-pressured and high-heated liquid. This liquid goes through a condenser and transfers the heat to the water. In this way water is heated.

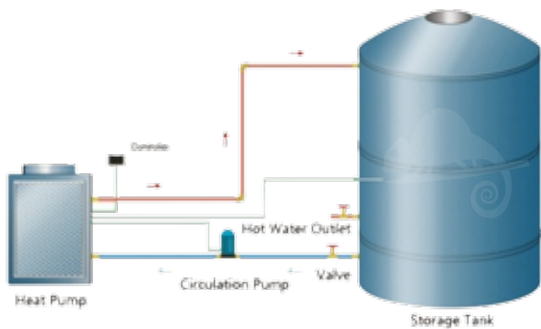


#### Features

- ✔ Larger evaporation for maximum efficiency.
- ✔ Water pressure reaches 0.6Mpa-0.9Mpa.
- ✔ Compact plug and play.

Type	Circulation heating/Domestic
Heating Capacity	3.5kw~8.7kw
COP	≥6.8
Rated water temp.	55°C
Running ambient temp.	- ~43°C
Compressor	Rotary
Refrigerant	R410a
Power supply	220~/50/1

### COMMERCIAL HEAT PUMP Features



#### Features

- ✔ Higher water temperature output upto 60°C.
- ✔ Adopt tube in tube heat ex-change and circulating heating method to realize higher COP.
- ✔ Automatic defrost .
- ✔ High pressure protection function.
- ✔ BMS communication enabled.



### COMMERCIAL SWIMMING POOL HEATPUMP Features



#### Features

- ✔ Titanium tube heat exchanger for maximum life span even with chlorinated water.
- ✔ Automatic defrost.
- ✔ Compact plug and play.
- ✔ Pool covers available on request.
- ✔ Solar water heating and solar PV intergration possible.

Type	Swimming/Circulation Heating
Heating capacity	3.5kw~39kw
COP	≥4.5
Rated water temp.	30°C
Running ambient temp.	-7~43°C
Compressor	Scroll/Rotary
Refrigerant	R410a
Power supply	220-240~/50/1380415~/50/3
Certification	CE





- Treetop Apartments
- Hilton CBD
- Hilton Ngong Road
- JIT Hotel
- Donyo Park
- Bill Apartments
- Purple Haze
- Entim Hotels
- Serena Hotels
- Elegant Properties
- Mivida
- Singita Grumeti, Tanzania
- Greystone Apartments
- BRITAM serviced apartments
- Amber Hotel
- Dusit Hotel
- Mara Ishani
- Lions Eye Hospital
- MpShah Hospital
- Taarifa Suites
- Smash Gym (Sarit Centre)
- Langham Court Apartments
- Andbeyond Kichwa tembo
- And over 100 residences

- Ashnil Lodges
- Asilia Group, Base Camp Group
- Atua Group Lodges
- BAT











**\*All pictures used are from our own projects.**