# Solar Power System

DONPER®

DONPER TECHNOLOGY BRINGS YOU LOW-CARBON LIFE

Hubei Dongbei New Energy Co., Ltd.

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## COMPANY PROFILE

Huangshi Dongbei Mech-Electric Group(Donper Group) is one of the worldwide leading manufacture of mechanical and electrical products. There are about 8, 000 employees. Donper Group is dedicated to protect environment and natural resources. In 2002, Donper Group founded Huangshi Dongbei Mech-Electric Group Solar Energy Co. Ltd(Donper Solar). After years of development, Donper solar made progress on PV inverter and PV power generation system. With a strong team of experienced engineers, Donper solar can provide perfect PV solutions to worldwide customers. From PV system designing, manufacturing key components, complete system packaging, shipping pre-packed systems overseas to installation advisory and technical supporting, we understand our customers' needs and do all we can to meet their requirements.



## R&D STRENGTH

Donper solar has a R & D center with 400 professional designers and experienced technical personnel. Donper solar offers custom design products and service. Our products are in accordance with ISO9001 quality management system. To ensure customer satisfaction, every product is repeated reviewed from design and production.
Till now, Donper solar has 200 solar products, such as solar lights, PV power system, grid tie inverter, off grid inverter, solar charging controller, solar water heater, solar collector, hot water tank, etc. Our engineers group will be more than happy to provide technical support to achieve highest customer satisfaction.

## MANUFACTURING AND TESTING CAPABILITIES

Donper solar has advanced production lines for solar water heater and PV inverter. The annual output reached 30 thousands solar water heaters and 200MW PV inverters. To ensure the consistent product processing and products quality, we adopts domestic and foreign advanced automatic production equipments.

Achieving the highest quality in the manufacturing solar products is the main goal of our business. Applying the latest technology to our manufacturing and testing facilities. We have excellent trained engineers to check every step of manufacturing process, that ensures highest quality and reliability of products.

## 1 SUMMARIZE

Solar power system is used for the area where no electricity or lack of electricity. This product transfer the solar energy into electricity to provide users lifetime free clean power and supply daily demand of different families.

For different user groups, Donper developed 3 series of solar power system, which are "intelligent integrated system", "separated system" and "portable system".

Depends on powerful technical teams and several years of R&D experience in solar industry. The solar power system designed by Donper is reasonable and working stably. It not only can be used for the enterprise for saving energy and reducing consumption, but also can be used for outdoor operating office and outdoor monitoring system for power supplying.

## 2 FEATURES

**Appropriate configuration**

We will provide you a standard configuration scheme. They are designed based on a wide user database. So in this case, we believe that the system can meet the requirement of most users.

**Safe and reliable**

The system has a series of protection function: low-voltage, overload, short circuit, overheating. Ensure the system can working stably. And extend the lifetime of the system.

**Hommization operation interface**

Digital electronic screen. All the data you care about will be displayed clearly. More convenient and easy to operate.

**Fast installation accessories**

Without trouble about complicated wire tripping and tangle tape. The terminals and connectors can be fast connected to each joint, which has been special designed. You can connect them in 2 seconds after the system has been installed.

**Sufficient energy reserves**

The battery is used for store electricity. Long-term deep cycle and lack of timely recovery will reduce its service life. We designed a suitable circulation depth for each system. It not only ensure sufficient power reserves, but also extend the lifetime of the system.



## 3 INTELLIGENT INTEGRATED SYSTEM

### TECHNICAL DESCRIPTION

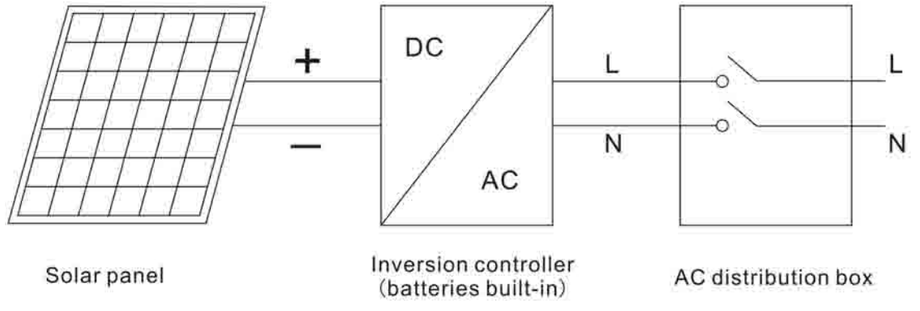
- Intelligent integrated system combining PV charge and discharge control, energy storage, DC-AC inversion and display function in the inversion contrller. The users only need to connect the output of solar panels to the designated terminals on the cabinet. Connect the battery according to voltage grade, then put them into the cabinet.
- All equipments installation and the connection must be in the state without electricity.
- Open the glass door after installation and connection is completed. The boot sequence:

  1）Battery

  2）AC output

  3）Solar panels

**Structure map**



## 3.1 MODEL NO.: DTH-100A

| RECOMMENDED LOADING SCHEDULE | | | | | |
|---|---|---|---|---|---|
| **Appliances** | **Rated power(W)** | **Quantity** | **Total power(W)** | **Work time(h)** | **Daily consumption(Wh)** |
| Light (living room) | 15 | 1 | 15 | 4 | 60 |
| Light (hall) | 5 | 1 | 5 | 1 | 5 |
| Light (bedroom) | 11 | 3 | 33 | 2 | 66 |
| Light (kitchen) | 11 | 2 | 22 | 1.5 | 33 |
| Light (dining room) | 11 | 2 | 22 | 1 | 22 |
| Light (toilet) | 5 | 2 | 10 | 0.5 | 5 |
| Total | | | 107 | | 191 |

| SYSTEM CONFIGURATION | | | | | |
|---|---|---|---|---|---|
| **Item** | **Specification** | **Quantity** | **Technical parameter** | **Packing dimension (mm)** | **Weight (kg)** |
| Solar panel | 100Wp | 1 | Peak power 100Wp,<br>Working voltage 17.5V,<br>Working current 5.72A, | 1300*650*80 | 10 |
| Brackets | Sloping roof | 1 | Steely,<br>Hot galvanizing coating | 895*100*100 | 5 |
| Inversion controller | DKN12200-N | 1 | Working voltage 24V,<br>Output voltage 220V,<br>Maximum carrying capacity 1.0A | 500*600*900 | 45 |
| Battery | LCPC70-12 | 1 | Rated capacity 70Ah,<br>Provide electricity for 3 rainy days | 359*269*327 | 28 |

| TECHNICAL PARAMETER | | |
|---|---|---|
| **Item** | **Technical parameter** | **Remarks** |
| Daily peak generated energy | 0.36KWh (4 h valid sunshine) | 1000W/m2 irradiation |
| System working voltage | DC12V | |
| Output voltage | Ac220±5%,<br>Pure sine wave | |
| System efficiency | ⩾85% | |
| Rated loading | Rated loading power 200W(pure resistance),<br>Daily power consumption⩽0.2KWh | Please decrease the loading when it is anti-resistance |
| Continuous rainy days | 3 days | Please check recommended loading schedule |
| Ambient | Altitude⩽ 4000,<br>humidity <93%,<br>no condensation,<br>-20~50℃ | |



## 3.2 MODEL NO.: DTH-200A

| RECOMMENDED LOADING SCHEDULE | | | | | |
|---|---|---|---|---|---|
| **Appliances** | **Rated power(W)** | **Quantity** | **Total power(W)** | **Work time(h)** | **Daily consumption(Wh)** |
| Light (living room) | 15 | 1 | 15 | 4 | 60 |
| Light (hall) | 5 | 1 | 5 | 1 | 5 |
| Light (bedroom) | 11 | 2 | 22 | 2 | 44 |
| Light (kitchen) | 11 | 1 | 11 | 1.5 | 16.5 |
| Light (dining room) | 11 | 1 | 11 | 1 | 11 |
| Light (toilet) | 5 | 1 | 5 | 0.5 | 2.5 |
| LCD TV | 80 | 1 | 80 | 3 | 240 |
| Total | | | 149 | | 379 |

| SYSTEM CONFIGURATION | | | | | |
|---|---|---|---|---|---|
| **Item** | **Specification** | **Quantity** | **Technical parameter** | **Packing dimension (mm)** | **Weight (kg)** |
| Solar panel | 100Wp | 1 | Peak power 100Wp,<br>Working voltage 17.5V,<br>Working current 5.72A, | 1300*650*80 | 10 |
| Brackets | Sloping roof | 1 | Steely,<br>Hot galvanizing coating | 895*100*100 | 5 |
| Inversion controller | DKN12200-N | 1 | Working voltage 24V,<br>Output voltage 220V,<br>Maximum carrying capacity 1.0A | 500*600*900 | 45 |
| Battery | LCPC70-12 | 1 | Rated capacity 70Ah,<br>Provide electricity for 3 rainy days | 359*269*327 | 28 |

| TECHNICAL PARAMETER | | |
|---|---|---|
| **Item** | **Technical parameter** | **Remarks** |
| Daily peak generated energy | 0.71KWh (4 h valid sunshine) | 1000W/m2 irradiation |
| System working voltage | DC24V | |
| Output voltage | Ac220±5%,<br>Pure sine wave | |
| System efficiency | ⩾85% | |
| Rated loading | Rated loading power500W(pure resistance),<br>Daily power consumption⩽0.4KWh | Please decrease the loading when it is anti-resistance |
| Continuous rainy days | 3 days | Please check recommended loading schedule |
| Ambient | Altitude⩽ 4000,<br>humidity <93%,<br>no condensation,<br>-20~50℃ | |

## 3.3 MODEL NO.: DTH-300A

| RECOMMENDED LOADING SCHEDULE | | | | | |
|---|---|---|---|---|---|
| **Appliances** | **Rated power(W)** | **Quantity** | **Total power(W)** | **Work time(h)** | **Daily consumption(Wh)** |
| Light (living room) | 15 | 1 | 15 | 4 | 60 |
| Light (hall) | 5 | 1 | 5 | 1 | 5 |
| Light (bedroom) | 11 | 2 | 22 | 2 | 44 |
| Light (kitchen) | 11 | 1 | 11 | 1.5 | 16.5 |
| Light (dining room) | 11 | 1 | 11 | 1 | 11 |
| Light (toilet) | 5 | 1 | 5 | 0.5 | 2.5 |
| LCD TV | 80 | 1 | 80 | 3 | 240 |
| Laptop | 75 | 1 | 75 | 2 | 150 |
| Total | | | 224 | | 529 |

| SYSTEM CONFIGURATION | | | | | |
|---|---|---|---|---|---|
| **Item** | **Specification** | **Quantity** | **Technical parameter** | **Packing dimension (mm)** | **Weight (kg)** |
| Solar panel | 150Wp | 2 | Peak power 150Wp,<br>Working voltage 35.2V,<br>Working current 4.26A, | 1680*908*120 | 35 |
| Brackets | Sloping roof | 1 | Steely,<br>Hot galvanizing coating | 895*100*100 | 5 |
| Inversion controller | DKN24500-N | 1 | Working voltage 24V,<br>Output voltage 220V,<br>Maximum carrying capacity 2.3A | 500*600*900 | 45 |
| Battery | LCPC100-12 | 2 | Rated capacity 100Ah,<br>Provide electricity for 3 rainy days | 507*274*338 | 37 |

| TECHNICAL PARAMETER | | |
|---|---|---|
| **Item** | **Technical parameter** | **Remarks** |
| Daily peak generated energy | 1.1KWh (4 h valid sunshine) | 1000W/m2 irradiation |
| System working voltage | DC24V | |
| Output voltage | Ac220±5%,<br>Pure sine wave | |
| System efficiency | ⩾85% | |
| Rated loading | Rated loading power 500W(pure resistance),<br>Daily power consumption⩽0.53KWh | Please decrease the loading when it is anti-resistance |
| Continuous rainy days | 3 days | Please check recommended loading schedule |
| Ambient | Altitude⩽ 4000,<br>humidity <93%,<br>no condensation,<br>-20~50℃ | |



## 3.4 MODEL NO.: DTH-400A

| RECOMMENDED LOADING SCHEDULE | | | | | |
|---|---|---|---|---|---|
| **Appliances** | **Rated power(W)** | **Quantity** | **Total power(W)** | **Work time(h)** | **Daily consumption(Wh)** |
| Light (living room) | 15 | 2 | 30 | 4 | 120 |
| Light (hall) | 5 | 1 | 5 | 1 | 5 |
| Light (bedroom) | 11 | 3 | 33 | 2 | 66 |
| Light (kitchen) | 11 | 2 | 22 | 1.5 | 33 |
| Light (dining room) | 11 | 2 | 22 | 1 | 33 |
| Light (toilet) | 5 | 2 | 10 | 0.5 | 5 |
| LCD TV | 100 | 1 | 100 | 3 | 300 |
| Laptop | 75 | 1 | 75 | 2 | 150 |
| Total | | | 297 | | 712 |

| SYSTEM CONFIGURATION | | | | | |
|---|---|---|---|---|---|
| **Item** | **Specification** | **Quantity** | **Technical parameter** | **Packing dimension (mm)** | **Weight (kg)** |
| Solar panel | 190Wp | 2 | Peak power 190Wp,<br>Working voltage 35.6V,<br>Working current 5.34A, | 1680*908*120 | 35 |
| Brackets | Sloping roof | 1 | Steely,<br>Hot galvanizing coating | 895*100*100 | 5 |
| Inversion controller | DKN241000-N | 1 | Working voltage 24V,<br>Output voltage 220V,<br>Maximum carrying capacity 4.5A | 600*800*1200 | 78 |
| Battery | LCPC150-12 | 2 | Rated capacity 150Ah,<br>Provide electricity for 3 rainy days | 430*309*344 | 54 |

| TECHNICAL PARAMETER | | |
|---|---|---|
| **Item** | **Technical parameter** | **Remarks** |
| Daily peak generated energy | 1.35KWh (4 h valid sunshine) | 1000W/m2 irradiation |
| System working voltage | DC24V | |
| Output voltage | Ac220±5%,<br>Pure sine wave | |
| System efficiency | ⩾85% | |
| Rated loading | Rated loading power 1000W(pure resistance),<br>Daily power consumption⩽0.71KWh | Please decrease the loading when it is anti-resistance |
| Continuous rainy days | 3 days | Please check recommended loading schedule |
| Ambient | Altitude⩽ 4000,<br>humidity <93%,<br>no condensation,<br>-20~50℃ | |

## 3.5 MODEL NO.: DTH-500A

| RECOMMENDED LOADING SCHEDULE | | | | | |
|---|---|---|---|---|---|
| **Appliances** | **Rated power(W)** | **Quantity** | **Total power(W)** | **Work time(h)** | **Daily consumption(Wh)** |
| Light (living room) | 15 | 2 | 30 | 4 | 120 |
| Light (hall) | 5 | 1 | 5 | 1 | 5 |
| Light (bedroom) | 11 | 3 | 33 | 2 | 66 |
| Light (kitchen) | 11 | 2 | 22 | 1.5 | 33 |
| Light (dining room) | 11 | 2 | 22 | 1 | 22 |
| Light (toilet) | 5 | 2 | 10 | 0.5 | 5 |
| LCD TV 1 | 100 | 1 | 100 | 3 | 300 |
| LCD TV 2 | 80 | 1 | 80 | 3 | 240 |
| Laptop | 75 | 1 | 75 | 2 | 150 |
| Total | | | 377 | | 941 |

| SYSTEM CONFIGURATION | | | | | |
|---|---|---|---|---|---|
| **Item** | **Specification** | **Quantity** | **Technical parameter** | **Packing dimension (mm)** | **Weight (kg)** |
| Solar panel | 165Wp | 3 | Peak power 165Wp,<br>Working voltage 35.3V,<br>Working current 4.68A, | 1680*908*155 | 38 |
| Brackets | Sloping roof | 1 | Steely,<br>Hot galvanizing coating | 1340*100*100 | 15 |
| Inversion controller | DKN241000-N | 1 | Working voltage 24V,<br>Output voltage 220V,<br>Maximum carrying capacity 4.5A | 600*800*1200 | 78 |
| Battery | LCPC200-12 | 2 | Rated capacity 200Ah,<br>Provide electricity for 3 rainy days | 622*340*344 | 62 |

| TECHNICAL PARAMETER | | |
|---|---|---|
| **Item** | **Technical parameter** | **Remarks** |
| Daily peak generated energy | 1.8KWh (4 h valid sunshine) | 1000W/m2 irradiation |
| System working voltage | DC24V | |
| Output voltage | Ac220±5%,<br>Pure sine wave | |
| System efficiency | ⩾85% | |
| Rated loading | Rated loading power1000W(pure resistance),<br>Daily power consumption⩽0.94KWh | Please decrease the loading when it is anti-resistance |
| Continuous rainy days | 3 days | Please check recommended loading schedule |
| Ambient | Altitude⩽ 4000,<br>humidity <93%,<br>no condensation,<br>-20~50℃ | |



## 3.6 MODEL NO.: DTH-600A

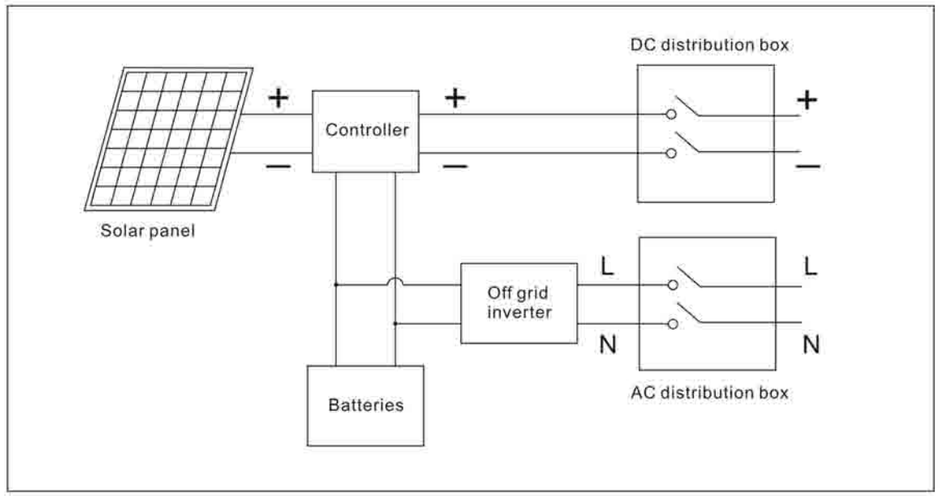
| RECOMMENDED LOADING SCHEDULE | | | | | |
|---|---|---|---|---|---|
| **Appliances** | **Rated power(W)** | **Quantity** | **Total power(W)** | **Work time(h)** | **Daily consumption(Wh)** |
| Light (living room) | 15 | 1 | 15 | 4 | 60 |
| Light (hall) | 5 | 1 | 5 | 1 | 5 |
| Light (bedroom) | 11 | 2 | 22 | 2 | 44 |
| Light (kitchen) | 11 | 1 | 11 | 1.5 | 16.5 |
| Light (dining room) | 11 | 1 | 11 | 1 | 11 |
| Light (toilet) | 5 | 1 | 5 | 0.5 | 2.5 |
| LCD TV | 80 | 1 | 80 | 3 | 240 |
| Laptop | 75 | 1 | 75 | 2 | 150 |
| Fridge | 150 | 1 | 150 | 24 | 600 |
| Total | | | 374 | | 1129 |

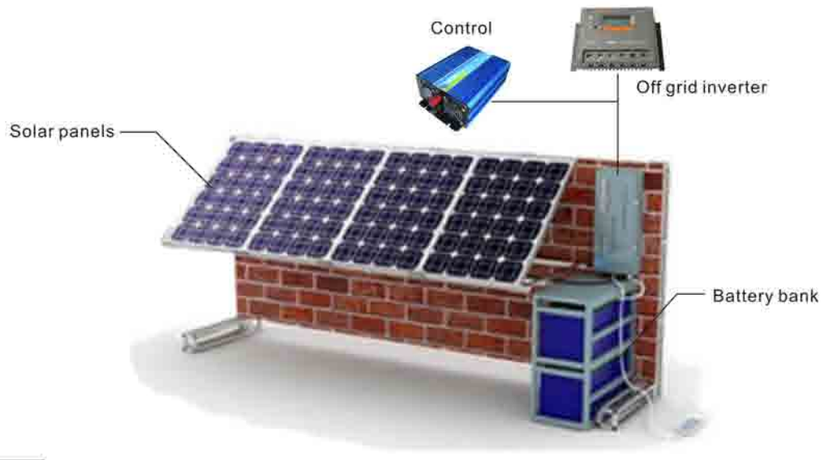
| SYSTEM CONFIGURATION | | | | | |
|---|---|---|---|---|---|
| **Item** | **Specification** | **Quantity** | **Technical parameter** | **Packing dimension (mm)** | **Weight (kg)** |
| Solar panel | 150Wp | 4 | Peak power 150Wp,<br>Working voltage 35.2V,<br>Working current 4.26A, | 1680*908*190 | 65 |
| Brackets | Sloping roof | 1 | Steely,<br>Hot galvanizing coating | 895*200*100 | 20 |
| Inversion controller | DKN241000-N | 1 | Working voltage 24V,<br>Output voltage 220V,<br>Maximum carrying capacity 4.5A | 600*800*1200 | 78 |
| Battery | LCPC250-12 | 2 | Rated capacity 250Ah,<br>Provide electricity for 3 rainy days | 622*340*365 | 71 |

| TECHNICAL PARAMETER | | |
|---|---|---|
| **Item** | **Technical parameter** | **Remarks** |
| Daily peak generated energy | 2.14KWh (4 h valid sunshine) | 1000W/m2 irradiation |
| System working voltage | DC24V | |
| Output voltage | Ac220±5%,<br>Pure sine wave | |
| System efficiency | ⩾85% | |
| Rated loading | Rated loading power 1000W(pure resistance),<br>Daily power consumption⩽1.1KWh | Please decrease the loading when it is anti-resistance |
| Continuous rainy days | 3 days | Please check recommended loading schedule |
| Ambient | Altitude⩽ 4000,<br>humidity <93%,<br>no condensation,<br>-20~50℃ | |

## 4 SEPARATED SYSTEM

**Structure map**




**Technical Description**

- Separate solar power system includes solar panels, controller, off grid inverter and battery bank.
- Please connect them exactly as above picture.
- Please insure the power is cut off when you install the system.
- The system components connection order:
  1)Battery bank ---controller
  2)Battery bank ---off grid inverter
  3)Solar panels ---controller



## 4.1 MODEL NO.: DTH-100

| RECOMMENDED LOADING SCHEDULE | | | | | |
|---|---|---|---|---|---|
| **Appliances** | **Rated power(W)** | **Quantity** | **Total power(W)** | **Work time(h)** | **Daily consumption(Wh)** |
| Light (living room) | 15 | 1 | 15 | 4 | 60 |
| Light (hall) | 5 | 1 | 5 | 1 | 5 |
| Light (bedroom) | 11 | 3 | 33 | 2 | 66 |
| Light (kitchen) | 11 | 2 | 22 | 1.5 | 33 |
| Light (dining room) | 11 | 2 | 22 | 1 | 22 |
| Light (toilet) | 5 | 2 | 10 | 0.5 | 5 |
| Total | | | 107 | | 191 |

| SYSTEM CONFIGURATION | | | | | |
|---|---|---|---|---|---|
| **Item** | **Specification** | **Quantity** | **Technical parameter** | **Packing dimension (mm)** | **Weight (kg)** |
| Solar panel | 100Wp | 1 | Peak power 100Wp,<br>Working voltage 17.5V,<br>Working current 5.72A. | 1300*650*80 | 10 |
| Brackets | Sloping roof | 1 | Steely,<br>Hot galvanizing coating | 895*100*100 | 5 |
| controller | VS1024-N | 1 | Working voltage 12V,<br>Rated input DC current 10A. | 170*100*50 | 0.2 |
| Inversion | 150W | 1 | Input current 12VDC,<br>rated power 150W,<br>output voltage 220V | 340*220*170 | 1.1 |
| Battery | LCPC70-12 | 1 | Rated capacity 70Ah,<br>Provide electricity for 3 rainy days | 359*269*327 | 28 |

| TECHNICAL PARAMETER | | |
|---|---|---|
| **Item** | **Technical parameter** | **Remarks** |
| Daily peak generated energy | 0.36KWh (4 h valid sunshine) | 1000W/m² irradiation |
| System working voltage | DC12V | |
| Output voltage | Ac220±5%,<br>Pure sine wave | |
| System efficiency | ⩾85% | |
| Rated loading | Rated loading power is 150W(pure resistance),<br>Daily power consumption⩽0.2KWh | Please decrease the loading when it is anti-resistance |
| Continuous rainy days | 3 days | Please check recommended loading schedule |
| Ambient | Altitude⩽ 4000,<br>humidity <93%,<br>no condensation,<br>-20~50℃ | |

## 4.2 MODEL NO.: DTH-200

| RECOMMENDED LOADING SCHEDULE | | | | | |
|---|---|---|---|---|---|
| **Appliances** | **Rated power(W)** | **Quantity** | **Total power(W)** | **Work time(h)** | **Daily consumption(Wh)** |
| Light (living room) | 15 | 1 | 15 | 4 | 60 |
| Light (hall) | 5 | 1 | 5 | 1 | 5 |
| Light (bedroom) | 11 | 2 | 22 | 2 | 44 |
| Light (kitchen) | 11 | 1 | 11 | 1.5 | 16.5 |
| Light (dining room) | 11 | 1 | 11 | 1 | 11 |
| Light (toilet) | 5 | 1 | 5 | 0.5 | 2.5 |
| LCD TV | 80 | 1 | 80 | 3 | 240 |
| Total | | | 149 | | 379 |

| SYSTEM CONFIGURATION | | | | | |
|---|---|---|---|---|---|
| **Item** | **Specification** | **Quantity** | **Technical parameter** | **Packing dimension (mm)** | **Weight (kg)** |
| Solar panel | 100Wp | 2 | Peak power 100Wp,<br>Working voltage 17.5V,<br>Working current 5.72A. | 1300*650*80 | 10 |
| Brackets | Sloping roof | 1 | Steely,<br>Hot galvanizing coating | 895*100*100 | 5 |
| controller | VS1024-N | 1 | Working voltage 12V,<br>Rated input DC current 10A. | 170*100*50 | 0.2 |
| Inversion | 300W | 1 | Input current 24VDC,<br>rated power 300W,<br>output voltage 220V | 345*222*170 | 1.1 |
| Battery | LCPC70-12 | 2 | Rated capacity 70Ah,<br>Provide electricity for 3 rainy days | 359*269*327 | 28 |

| TECHNICAL PARAMETER | | |
|---|---|---|
| **Item** | **Technical parameter** | **Remarks** |
| Daily peak generated energy | 0.71KWh (4 h valid sunshine) | 1000W/m² irradiation |
| System working voltage | DC24V | |
| Output voltage | Ac220±5%,<br>Pure sine wave | |
| System efficiency | ⩾85% | |
| Rated loading | Rated loading power is 300W(pure resistance),<br>Daily power consumption⩽0.4KWh | Please decrease the loading when it is anti-resistance |
| Continuous rainy days | 3 days | Please check recommended loading schedule |
| Ambient | Altitude⩽ 4000,<br>humidity <93%,<br>no condensation,<br>-20~50℃ | |



## 4.3 MODEL NO.: DTH-300

| RECOMMENDED LOADING SCHEDULE | | | | | |
|---|---|---|---|---|---|
| **Appliances** | **Rated power(W)** | **Quantity** | **Total power(W)** | **Work time(h)** | **Daily consumption(Wh)** |
| Light (living room) | 15 | 1 | 15 | 4 | 60 |
| Light (hall) | 5 | 1 | 5 | 1 | 5 |
| Light (bedroom) | 11 | 2 | 22 | 2 | 44 |
| Light (kitchen) | 11 | 1 | 11 | 1.5 | 16.5 |
| Light (dining room) | 11 | 1 | 11 | 1 | 11 |
| Light (toilet) | 5 | 1 | 5 | 0.5 | 2.5 |
| LCD TV | 80 | 1 | 80 | 3 | 240 |
| Laptop | 75 | 1 | 75 | 2 | 150 |
| Total | | | 224 | | 529 |

| SYSTEM CONFIGURATION | | | | | |
|---|---|---|---|---|---|
| **Item** | **Specification** | **Quantity** | **Technical parameter** | **Packing dimension (mm)** | **Weight (kg)** |
| Solar panel | 150Wp | 2 | Peak power 150Wp,<br>Working voltage 35.2V,<br>Working current 4.26A. | 1680*908*120 | 35 |
| Brackets | Sloping roof | 1 | Steely,<br>Hot galvanizing coating | 895*100*100 | 5 |
| controller | VS2024-N | 1 | Working voltage 24V,<br>Rated input DC current 20A. | 170*110*60 | 0.4 |
| Inversion | 500W | 1 | Input current 24VDC,<br>rated power 500W,<br>output voltage 220V | 400*340*250 | 3.1 |
| Battery | LCPC100-12 | 2 | Rated capacity 100Ah,<br>Provide electricity for 3 rainy days | 507*274*338 | 37 |

| TECHNICAL PARAMETER | | |
|---|---|---|
| **Item** | **Technical parameter** | **Remarks** |
| Daily peak generated energy | 1.11KWh (4 h valid sunshine) | Under 1000W/m² irradiation |
| System working voltage | DC24V | |
| Output voltage | Ac220±5%,<br>Pure sine wave | |
| System efficiency | ⩾85% | |
| Rated loading | Rated loading power is 500W(pure resistance),<br>Daily power consumption⩽0.53KWh | Please decrease the loading when it is anti-resistance |
| Continuous rainy days | 3 days | Please check recommended loading schedule |
| Ambient | Altitude⩽ 4000,<br>humidity <93%,<br>no condensation,<br>-20~50℃ | |

## 4.4 MODEL NO.: DTH-400

| RECOMMENDED LOADING SCHEDULE | | | | | |
|---|---|---|---|---|---|
| **Appliances** | **Rated power(W)** | **Quantity** | **Total power(W)** | **Work time(h)** | **Daily consumption(Wh)** |
| Light (living room) | 15 | 2 | 30 | 4 | 120 |
| Light (hall) | 5 | 1 | 5 | 1 | 5 |
| Light (bedroom) | 11 | 3 | 33 | 2 | 66 |
| Light (kitchen) | 11 | 2 | 22 | 1.5 | 33 |
| Light (dining room) | 11 | 2 | 22 | 1 | 22 |
| Light (toilet) | 5 | 2 | 10 | 0.5 | 5 |
| LCD TV | 100 | 1 | 100 | 3 | 300 |
| Laptop | 75 | 1 | 75 | 2 | 150 |
| Total | | | 297 | | 712 |

| SYSTEM CONFIGURATION | | | | | |
|---|---|---|---|---|---|
| **Item** | **Specification** | **Quantity** | **Technical parameter** | **Packing dimension (mm)** | **Weight (kg)** |
| Solar panel | 190Wp | 2 | Peak power 190Wp,<br>Working voltage 35.6V,<br>Working current 5.34A. | 1680*908*120 | 35 |
| Brackets | Sloping roof | 1 | Steely,<br>Hot galvanizing coating | 895*100*100 | 5 |
| controller | VS2024-N | 1 | Working voltage 24V,<br>Rated input DC current 20A. | 170*110*60 | 0.4 |
| Inversion | 600W | 1 | Input current 24VDC,<br>rated power 600W,<br>output voltage 220V | 407*333*245 | 3.1 |
| Battery | LCPC150-12 | 2 | Rated capacity 150Ah,<br>Provide electricity for 3 rainy days | 430*309*344 | 54 |

| TECHNICAL PARAMETER | | |
|---|---|---|
| **Item** | **Technical parameter** | **Remarks** |
| Daily peak generated energy | 1.35KWh (4 h valid sunshine) | Under 1000W/m² irradiation |
| System working voltage | DC24V | |
| Output voltage | Ac220±5%,<br>Pure sine wave | |
| System efficiency | ⩾85% | |
| Rated loading | Rated loading power is 600W(pure resistance),<br>Daily power consumption⩽0.71KWh | Please decrease the loading when it is anti-resistance |
| Continuous rainy days | 3 days | Please check recommended loading schedule |
| Ambient | Altitude⩽ 4000,<br>humidity <93%,<br>no condensation,<br>-20~50℃ | |



## 4.5 MODEL NO.: DTH-500

| RECOMMENDED LOADING SCHEDULE | | | | | |
|---|---|---|---|---|---|
| **Appliances** | **Rated power(W)** | **Quantity** | **Total power(W)** | **Work time(h)** | **Daily consumption(Wh)** |
| Light (living room) | 15 | 2 | 30 | 4 | 120 |
| Light (hall) | 5 | 1 | 5 | 1 | 5 |
| Light (bedroom) | 11 | 3 | 33 | 2 | 66 |
| Light (kitchen) | 11 | 2 | 22 | 1.5 | 33 |
| Light (dining room) | 11 | 2 | 22 | 1 | 33 |
| Light (toilet) | 5 | 2 | 10 | 0.5 | 5 |
| LCD TV 1 | 100 | 1 | 100 | 3 | 300 |
| LCD TV 2 | 80 | 1 | 80 | 3 | 240 |
| Laptop | 75 | 1 | 75 | 2 | 150 |
| Total | | | 377 | | 941 |

| SYSTEM CONFIGURATION | | | | | |
|---|---|---|---|---|---|
| **Item** | **Specification** | **Quantity** | **Technical parameter** | **Packing dimension (mm)** | **Weight (kg)** |
| Solar panel | 165Wp | 3 | Peak power 165Wp,<br>Working voltage 35.3V,<br>Working current 4.68A. | 1680*908*155 | 38 |
| Brackets | Sloping roof | 1 | Steely,<br>Hot galvanizing coating | 1340*100*100 | 15 |
| controller | VS2024-N | 1 | Working voltage 24V,<br>Rated input DC current 20A. | 170*110*60 | 0.4 |
| Inversion | 800W | 1 | Input current 24VDC,<br>rated power 800W,<br>output voltage 220V | 407*333*245 | 3.3 |
| Battery | LCPC200-12 | 2 | Rated capacity 200Ah,<br>Provide electricity for 3 rainy days | 622*340*344 | 62 |

| TECHNICAL PARAMETER | | |
|---|---|---|
| **Item** | **Technical parameter** | **Remarks** |
| Daily peak generated energy | 1.8KWh (4 h valid sunshine) | Under 1000W/m² irradiation |
| System working voltage | DC24V | |
| Output voltage | Ac220±5%,<br>Pure sine wave | |
| System efficiency | ⩾85% | |
| Rated loading | Rated loading power is 800W(pure resistance),<br>Daily power consumption⩽0.94KWh | Please decrease the loading when it is anti-resistance |
| Continuous rainy days | 3 days | Please check recommended loading schedule |
| Ambient | Altitude⩽ 4000,<br>humidity <93%,<br>no condensation,<br>-20~50℃ | |

## 4.6 MODEL NO.: DTH-600

| RECOMMENDED LOADING SCHEDULE | | | | | |
|---|---|---|---|---|---|
| **Appliances** | **Rated power(W)** | **Quantity** | **Total power(W)** | **Work time(h)** | **Daily consumption(Wh)** |
| Light (living room) | 15 | 1 | 15 | 4 | 60 |
| Light (hall) | 5 | 1 | 5 | 1 | 5 |
| Light (bedroom) | 11 | 2 | 22 | 2 | 44 |
| Light (kitchen) | 11 | 1 | 11 | 1.5 | 16.5 |
| Light (dining room) | 11 | 1 | 11 | 1 | 11 |
| Light (toilet) | 5 | 1 | 5 | 0.5 | 2.5 |
| LCD TV | 80 | 1 | 80 | 3 | 240 |
| Laptop | 75 | 1 | 75 | 2 | 150 |
| Fridge | 150 | | 150 | 24 | 600 |
| Total | | | 374 | | 1129 |

| SYSTEM CONFIGURATION | | | | | |
|---|---|---|---|---|---|
| **Item** | **Specification** | **Quantity** | **Technical parameter** | **Packing dimension (mm)** | **Weight (kg)** |
| Solar panel | 150Wp | 4 | Peak power 150Wp,<br>Working voltage 35.2V,<br>Working current 4.26A. | 1680*908*190 | 65 |
| Brackets | Sloping roof | 1 | Steely,<br>Hot galvanizing coating | 895*200*100 | 20 |
| controller | VS3024-N | 1 | Working voltage 24V,<br>Rated input DC current 30A. | 210*110*70 | 0.7 |
| Inversion | 1000W | 1 | Input current 24VDC,<br>rated power 100W,<br>output voltage 220V | 467*333*240 | 3.85 |
| Battery | LCPC250-12 | 2 | Rated capacity 250Ah,<br>Provide electricity for 3 rainy days | 622*340*365 | 71 |

| TECHNICAL PARAMETER | | |
|---|---|---|
| **Item** | **Technical parameter** | **Remarks** |
| Daily peak generated energy | 2.14KWh (4 h valid sunshine) | Under 1000W/m² irradiation |
| System working voltage | DC24V | |
| Output voltage | Ac220±5%,<br>Pure sine wave | |
| System efficiency | ⩾85% | |
| Rated loading | Rated loading power is 1000W(pure resistance),<br>Daily power consumption⩽1.1KWh | Please decrease the loading when it is anti-resistance |
| Continuous rainy days | 3 days | Please check recommended loading schedule |
| Ambient | Altitude⩽ 4000,<br>humidity <93%,<br>no condensation,<br>-20~50℃ | |



## 5 PORTABLE SYSTEM

Donper DTH-40 solar power system is an independent system, with 12VDC working voltage, and various AC voltage. It provides electricity for family use. This product is available for remote area without state grid, such as islands, mountains, and deserts etc.

### FEATURES

- Real-time display, LCD displayer;
- Low DC voltage output, safe and reliable;
- All-in-one machine, small and compact;
- Easy to install, free maintenance;
- Protections: overload, short circuit, reverse connection, under voltage, over voltage protections.

### TECHNICAL PARAMETER

| **Model** | **DTH-40** |
|---|---|
| Solar modules(Wp) | 40 |
| Battery (V/Ah) | 12/38 |
| Rated input voltage(VDC) | 12 |
| Input voltage range(VDC) | 10.8~17.5 |
| Max open circuit voltage (V) | 30 |
| Insulation strength(VAC) | 1500, 1 min |
| Working ambient temperature(℃) | -10~+50 |
| Storage ambient temperature(℃) | -20~+70 |
| Ambient humidity | 93%, no-condensing |
| Altitude(m) | ⩽4000 |

## 6 SYSTEM COMPONENTS

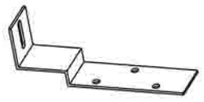
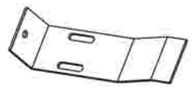
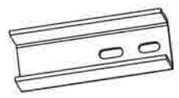
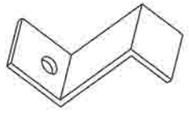
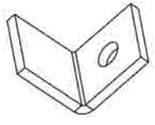
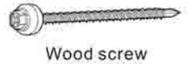
| Solar Modules | Charge Controller |
|---|---|
|  |  |
| • 25 years warranty on power output;<br>• 5 years warranty on materials and workmanship;<br>• 10 years 90%power , 25 years 80% power;<br>• Average plus power;<br>• International safety, quality, and performance certification;<br>• 48-hours quick response;<br>• Long-term reliability;<br>• Design according to your demand. Technical and marketing support. | • 32 bit high-powered processor;<br>• 12 bit high-precision sampling;<br>• Perfect EMC design;<br>• Automatic recognition for system voltage, day/night;<br>• Charge mode: PWM, prolonging batteries service life ;<br>• Electronic switch, no mechanical switch;<br>• LCD display with only 4 keys;<br>• Various loads control modes;<br>• Temperature consumption, self-correcting charge/discharge data;<br>• Over-heat, over-charge, over-discharge, overload, reverse connection and short-circuit protections. |

| Off Grid Inverter | Inversion controller (all-in-one) |
|---|---|
|  |  |
| • Intelligent control technique, dual CPU-microcomputer, more reliable<br>• Pure sine wave;<br>• Perfect protections: overload, overheat, short-circuit, under-voltage, over-voltage ;<br>• Compact and light;<br>• Intelligent radiator fan;<br>• Low noise, high efficiency. | • Inverter and controller all-in-one machine;<br>• Special microcomputer control;<br>• Main circuit: IIPM /IGBT/MOSFET;<br>• Pure sine wave output;<br>• Great transient response;<br>• Small waveform distortion;<br>• High efficiency;<br>• Steady output voltage;<br>• Protection: over-voltage, under-voltage, reverse connection, overloads, short-circuit, over-heat. |





| Battery | Connector |
|---|---|
|  |  |
| • Colloid battery, material imported from Germany;<br>• 8 years service life;<br>• Capsule safe valve, aging-resistant and high-precision exhaust pressure;<br>• CW-M-109 sealant, strong stickiness, super anti-corrosion;<br>• Silver-lead alloy grid, great mechanical strength, anti-corrosion;<br>• Super thin fiber glass, high-purity, low internal resistance, high porosity;<br>• Excellent micro thermal performance;<br>• Special sealing structure (electrode mast). | • Mc4 connector, specially for PV products;<br>• IP6 protection level;<br>• Auto-lock design;<br>• Easy to install. |

| Solar modules brackets (for sloping roof) | | |
|---|---|---|
|  <br>Embed fixed block |  <br>Adjustment sheet |  <br>Fixed beam |
|  <br>Lock block |  <br>Located block |  <br>Hexagonal head bolt<br>  <br>Wood screw |
| • Anti-corrosion,<br>• Available for various sloping roof,<br>• Easy to install,<br>• Perfect integration of nature and buildings. | | |

## 7 PROJECT CASES

**Project add**: Luoqiao Chenxin industry zone
**Project scale**: 15kw off-grid PV power station
**Building time**: 2010.03
**Project description**:U-steel bracket was choosed ,cosidering the floor is made of floor brick,the installed capacity is 15kwp,which is used for building light of industry zone.

**Project description:**12kw PV power station&solar street lamp project established in Aibo Daye industry zone





**Project description:**50KW PV power station established in Huangshi light industry&casting company.

**Project add**: Huangshi Seeking Nature Hotel
**Project scale**: 35 street lights (solar-wind complementary)
**Building time**: Dec. 2007
**Project description**: all permanent, high efficiency, solar-wind complementary.

## PROJECT CASES

**Project description**:Dalian lvshun square Solar yard lamp project

DONPER®

**Hubei Dongbei New Energy Co., Ltd**

Add: No. 5 Wuhuang Road, Tieshan, Huangshi,
Hubei, China.
Tel: +86 714 5429669 Fax: +86 714 5419559
E-mail:dbnewenergy@donper.com
Http://newenergy.donper.com