Aislu bring dc inverter technology in RV air conditioner, with temperature zone controls, provide user most efficiency air conditioner; All DC system, and comfort automatic sensing, make superior quiet running. Impress on Merlin Suit.

- Vector DC inverter technology integrated in Merlin suit
- Aislu DC inverter horizontal compressor installed
- Temperature exquisite sensing regulate working frequency
- All DC deluxe system use with solar system or battery power source
- Little Touch interface
- Low profile 200mm height roof top unit suit for all RV, Caravan or Yacht
**DC inverter horizontal compressor**

A normal RV air conditioner always used a constant-speed rotary compressor, the single phase motor inside of compressor cause the starting current of air conditioner rise very high, it could be 3 - 5 times to the rated current, and always meet generator over-load problems.

Constant-speed air conditioner cannot change compressor speed, once air conditioner power on, its output is constant cooling even you feel too cool already. Or the air conditioner will continual stop and start, waste energy source. And make room temperature blow hot and cool.

Aislu adopts dc inverter horizontal compressor for Merlin Suit™ RV air conditioner. The DC inverter horizontal compressor composed by BLDC motor, high frequency rotary vane, makes compressor allow running from 0Hz upto 120Hz (0rpm - 7200rpm). And with Aislu MK10423 professional dc inverter driver, Compressor running with 180degree sine wave dc current, the variable speed compressor running fix from room temperature, outdoor temperature and user setup temperature sensing. Compressor variable speed makes air conditioner also variable output cooling(or heating in heat pump type air conditioner) that too keep room temperature always keep on comfortable temperature level.
Vector DC inverter controls

Fabric of dc inverter control:

- Rectifier circuit
- Input current sampled circuit
- DC Voltage sampled circuit
- Output current sampled circuit
- MCU
- Compressor drive circuit
- PFC
- Display
- Communicate to outdoor unit

Solar connect workability

- PV String
- Merlin Suit A/C
- Battery string
- Aislu MPPT charge controller
- Power Supply Terminal
Above little touch interface is only for reference purpose only, the touch button and LED display may different in different sales markets, please consult to local distributor or sales offices.
**Specification**

**Numbering**

<table>
<thead>
<tr>
<th>MSD</th>
<th>090</th>
<th>V</th>
<th>H</th>
<th>1</th>
<th>U</th>
<th>R</th>
</tr>
</thead>
</table>
| **MSD:** Merlin Suit DC inverter  
RV air conditioner | **090:** Rated cooling capacity mark:  
090: 9000Btu/H  
120: 12000Btu/H  
135: 13500Btu/H  
150: 15000Btu/H | **V:** Unit working type:  
S: constant-speed type  
V: DC inverter type | **H:** Refrigerant  
F: R22  
A: R410A  
G: R134A  
H: R407C  
P: R290  
G: R134A  
H: R407C  
P: R290  
G: R134A | **1:** Unit type  
1: Heat pump (Cool + Heat by compressor)  
2: Cool only  
3: Cool only + Electrical heat | **U:** Power supply  
U: 220-240VAC/50Hz International voltage  
J: 115VAC/60Hz North American voltage  
K: 208-230VAC/60Hz  
M: DC300V solar voltage  
Q: DC48V battery voltage | **R:** Controller type  
R: Remote panel + Ceiling little touch controller  
B: Ceiling little touch controller only  
T: Wall mounted thermostat |
## General specification

<table>
<thead>
<tr>
<th>Model number</th>
<th>MSD090VH1UR</th>
<th>MSD120VH1UR</th>
<th>MSD135VH1UR</th>
<th>MSD150VH1UR</th>
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</thead>
<tbody>
<tr>
<td>Type</td>
<td>DC Inverter RV air conditioner, heat pump type, roof top installation</td>
<td>DC Inverter RV air conditioner, heat pump type, roof top installation</td>
<td>DC Inverter RV air conditioner, heat pump type, roof top installation</td>
<td>DC Inverter RV air conditioner, heat pump type, roof top installation</td>
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<tr>
<td>Rated cooling capacity</td>
<td>9000Btu(2600W)</td>
<td>12000Btu(3200W)</td>
<td>13500Btu(4000W)</td>
<td>15000Btu(4500W)</td>
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<td>Rated input power</td>
<td>810W</td>
<td>1028W</td>
<td>1379W</td>
<td>1415W</td>
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<td>Refrigerant</td>
<td>R407C</td>
<td>R407C</td>
<td>R407C</td>
<td>R407C</td>
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<tr>
<td>Compressor</td>
<td>BLDC horizontal</td>
<td>BLDC horizontal</td>
<td>BLDC horizontal</td>
<td>BLDC horizontal</td>
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<td>Noise level</td>
<td>47dBA</td>
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<td>Expansion device</td>
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<td>Capillary</td>
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<tr>
<td>Test standard</td>
<td>EN14511</td>
<td>En14511</td>
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<td>Power source</td>
<td>220-240VAC/50Hz</td>
<td>220-240VAC/50Hz</td>
<td>220-240VAC/50Hz</td>
<td>220-240VAC/50Hz</td>
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<tr>
<td>Roof unit dim.</td>
<td>1020x700x200mm</td>
<td>1020x700x200mm</td>
<td>1020x700x200mm</td>
<td>1020x600x220mm</td>
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<tr>
<td>Gross weight</td>
<td>45kg</td>
<td>45kg</td>
<td>52kg</td>
<td>61kg</td>
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<tr>
<td>Approvals</td>
<td>CE</td>
<td>CE</td>
<td>CE</td>
<td>CE</td>
</tr>
</tbody>
</table>

This table listed model numbers are in 220-240VAC/50Hz international voltage.  
Due to meet with the safe standards or approvals commands, the Merlin Suit™ rv air conditioner may use 60Hz fan motor inside of air conditioner.  
The units listed performance data are executed under China GB standards/IEC standards, and tested with enthalpy method.  
Please get reference from or enquiry to our local distributor, technical support or our export business department for all detailed technical questions, requirements.