

# Solar Air Conditioner



**ACDC HYBRID**



DC Inverter



WIFI control

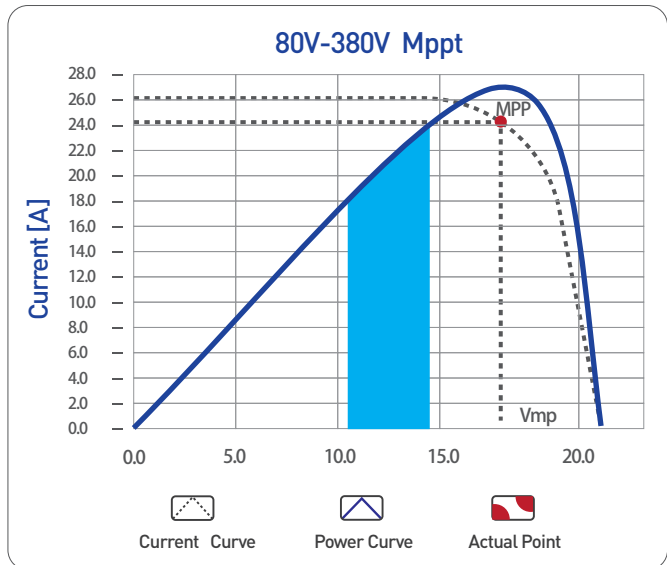


Hybrid Solar

# Solar AC technology

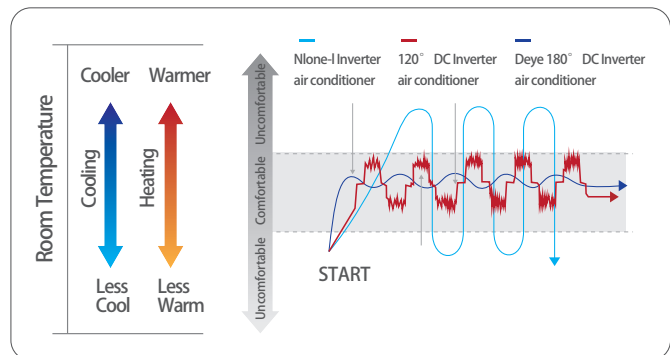
## Build in Solar MPPT

-  Intelligent control for detection and adjustment
-  Efficiency: 99.9%
-  DC to DC 0 convert lose
-  10+ years life design



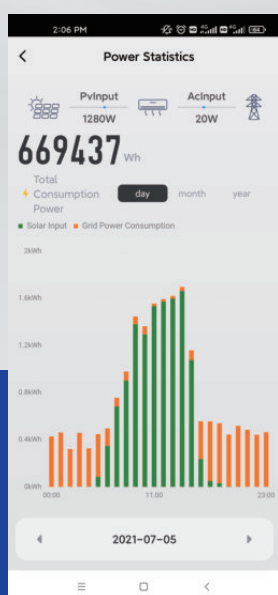
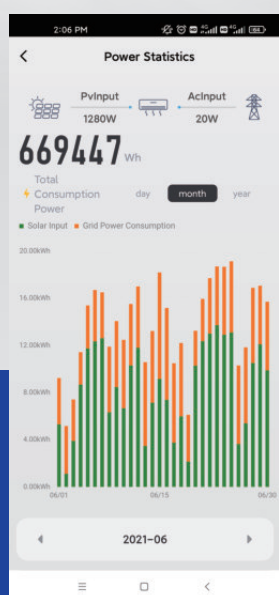
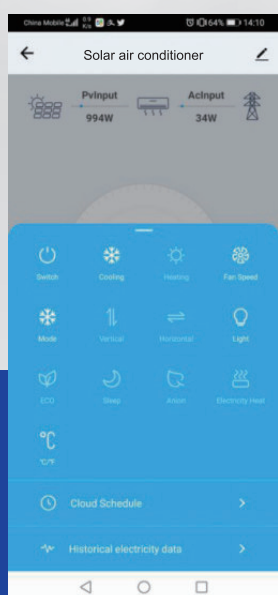
## SVPWM technology

-  180° sine wave controller technology
-  Compressor ran below 0.1Hz
-  Operate during 50% voltage drop



## Solar AC advantage

| ITEM                          | Hybrid Solar AC | Conventional Inverter |
|-------------------------------|-----------------|-----------------------|
| AC Power supply(220V 50/60HZ) | Y               | Y                     |
| DC Power supply(80VDC-380VDC) | Y               | N                     |
| AC+DC Mix Power               | Y               | N                     |
| No electricity works          | Y               | N                     |
| App smart control             | Y               | Depends               |
| App smart power meter         | Y               | N                     |
| Soft power start              | Y               | N                     |
| Average Energy saving         | 60-100%         | 20%                   |



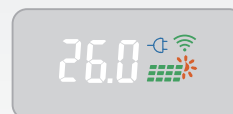
## Key components



Brushless DC fan motor



Twin Rotary DC Compressor



Intelligent Grid Indicator

## WiFi Smart Control



Designed for end-user



Monitor unit make energy saving visible



Easy setting



Convenient & long range remote control



# Technical Specifications

## Tropical Applicable



| Items                           |                                 |         | Unit  | 9000BTU               | 12000BTU              | 18000BTU              | 24000BTU              |
|---------------------------------|---------------------------------|---------|-------|-----------------------|-----------------------|-----------------------|-----------------------|
| Mode                            |                                 |         | /     | JBL-AC-9K-HYB-R410    | JBL-AC-12K-HYB-R410   | JBL-AC-18K-HYB-R410   | JBL-AC-24K-HYB-R410   |
| Power supply                    | Power AC                        | Ph-V-Hz |       | 208V-240V/50-60HZ     | 208V-240V/50-60HZ     | 208V-240V/50-60HZ     | 208V-240V/50-60HZ     |
|                                 | Power DC, PV, series connection | Voc     |       | 80-380V               | 80-380V               | 80-380V               | 150-380V              |
|                                 |                                 | Isc     |       | <=14A                 | <=14A                 | <=14A                 | <= 20A                |
| Rated Cooling                   | Capacity(T1)                    | W       |       | 2700(800-3400)        | 3500(800-3800)        | 5010(1200-6150)       | 7000(1800-7500)       |
|                                 |                                 | BTU     |       | 9000(2700-11600)      | 12000(2700-13000)     | 17000 (4100-20900)    | 24000 (6100-25600)    |
|                                 | Power input(T1)                 | W       |       | 680(150-1030)         | 1050(150-1330)        | 1350(220-2060)        | 2100(300-2600)        |
|                                 | Capacity(T3)                    | W       |       | 2350                  | 2850                  | 4290                  | 5130                  |
|                                 |                                 | BTU     |       | 8000                  | 9700                  | 14700                 | 17500                 |
| Rated Heating                   | Power input(T3)                 | W       |       | 890                   | 1100                  | 1630                  | 1940                  |
|                                 | Capacity                        | W       |       | 3100(900-3900)        | 3900(900-4200)        | 5150(1200-5300)       | 7000(1800-7300)       |
|                                 |                                 | BTU     |       | 10600(3070-13300)     | 13300(3070-14300)     | (4100-18000)17500     | 24000(6100-24900)     |
|                                 | Power input                     | W       |       | 730(150-1150)         | 1080(150-1300)        | 1260(220-1450)        | 2030(300-2150)        |
| T1 EER (W/W)/ (BTU/W)           |                                 |         | /     | 3.95/13.20            | 3.35/11.40            | 3.71/12.59            | 3.33/11.43            |
| T3 EER (W/W)/ (BTU/W)           |                                 |         | /     | 2.65/8.95             | /                     | 2.65/9.00             | 2.65/9.00             |
| COP (W/W)/ (BTU/W)              |                                 |         | /     | 4.25/14.50            | 3.60/12.30            | 4.08/13.89            | 3.45/11.82            |
| Max Power Input                 |                                 |         | W     | 1400                  | 1700                  | 2500                  | 3500                  |
| Dehumidification capacity       |                                 |         | L/h   | 1                     | 1.3                   | 1.7                   | 2.5                   |
| Compressor                      | Model                           | /       |       | KSK103D33UEZ3         | KSK103D33UEZ3         | WHP05600AUKQA8JT6     | 5RD198ZAD21           |
|                                 | Type                            | /       |       | ROTARY                | ROTARY                | 2xROTARY              | 2xROTARY              |
|                                 | Brand                           | /       |       | GMCC                  | GMCC                  | HIGHLY                | Panasonic             |
|                                 | Capacity                        | W       |       | 3255                  | 3255                  | 4285                  | 5780                  |
|                                 | Thermal protector               | /       |       | NO                    | NO                    | NO                    | NO                    |
|                                 | Thermal protector position      | /       |       | /                     | /                     | INTERNAL              | INTERNAL              |
|                                 | Capacitor                       | uF      |       | /                     | /                     | NO                    | NO                    |
|                                 | Refrigerant oil/oil charge      | ml      |       | ESTER OIL VG74 / 280  | ESTER OIL VG74 / 280  | α68HES-H / 480        | FV50S/600             |
| Indoor fan motor                | Model                           | /       |       | ZWR15-Q52             | ZWR15-Q52             | ZWR45-C51             | ZWR45-C51             |
|                                 | Output                          | W       |       | 15                    | 15                    | 45                    | 45                    |
|                                 | Brand                           | /       |       | KAIBANG               | KAIBANG               | KAIBANG               | KAIBANG               |
|                                 | Capacitor                       | uF      |       |                       |                       | --                    |                       |
|                                 | Speed(Turbo/Hi/Mi/Lo)           | r/min   |       | 1300/1200/1000/850    | 1300/1200/1000/850    | 1150/1050/950/850     | 1350/1200/1050/900    |
| Indoor coil                     | a.Number of rows                | /       |       | 2                     | 2                     | 2                     | 2                     |
|                                 | b.Tube pitch(a)x row pitch(b)   | mm      |       | 21x13.37              | 21x13.37              | 21x13.37              | 21x13.37              |
|                                 | c.Fin spacing                   | mm      |       | 1.3                   | 1.3                   | 1.3                   | 1.3                   |
|                                 | d.Fin type (code)               | /       |       | Hydrophilic aluminium | Hydrophilic aluminium | Hydrophilic aluminium | Hydrophilic aluminium |
|                                 | e.Tube outside dia and type     | mm      |       | Φ7, innergroove tube  | Φ7, innergroove tube  | Φ7, innergroove tube  | Φ7, innergroove tube  |
|                                 | f.Coil length x height x width  | mm      |       | 650×345×26.74         | 650×345×26.74         | 880x380x26.74         | 880x380x26.74         |
|                                 | g.Number of circuits            | /       |       | 2                     | 2                     | 5                     | 5                     |
| Indoor air flow(Turbo/Hi/Mi/Lo) |                                 |         | m3/h  | 650/600/470/370       | 650/600/470/370       | 980/850/750/640       | 1100/1000/850/680     |
| Indoor noise level (Turbo)      |                                 |         | (dB(A | ≤42.5                 | ≤42.5                 | ≤46                   | ≤50                   |
| Indoor unit                     | Dimension(W×H×D)                | mm      |       | 840×205×295           | 840×205×295           | 1080×330×237          | 1080×330×237          |
|                                 | Packing (W×H×D)                 | mm      |       | 920×290×360           | 920×290×360           | 1140×300×382          | 1140×300×382          |
|                                 | Net weight/ Gross weight        | kg      |       | 9.5/11.8              | 9.5/11.8              | 15.0/17.5             | 15.0/17.5             |
| Outdoor fan motor               | Model                           | /       |       | BLDC ZWR35-A51        | BLDC ZWR35-A51        | BLDC ZWR55W-A51       | BLDC ZWB278L56A       |
|                                 | Brand                           | /       |       | KAIBANG               | KAIBANG               | KAIBANG               | WOLONG                |
|                                 | Input                           | W       |       | 40                    | 40                    | 55                    | 75                    |
|                                 | Capacitor                       | uF      |       | NO                    | NO                    | NO                    | NO                    |
|                                 | Speed                           | r/min   |       | 800                   | 850                   | 880                   | 850                   |



# Technical Specifications

## Tropical Applicable



| Items                                    |                                | Unit  | 9000BTU               | 12000BTU              | 18000BTU              | 24000BTU              |
|------------------------------------------|--------------------------------|-------|-----------------------|-----------------------|-----------------------|-----------------------|
| Mode                                     |                                | /     | JBL-AC-9K-HYB-R410    | JBL-AC-12K-HYB-R410   | JBL-AC-18K-HYB-R410   | JBL-AC-24K-HYB-R410   |
| Outdoor coil                             | a.Number of rows               | /     | 1                     | 1                     | 2                     | 2                     |
|                                          | b.Tube pitch(a)x row pitch(b)  | mm    | 21×22                 | 21×22                 | 21×22                 | 21×22                 |
|                                          | c.Fin spacing                  | mm    | 1.5                   | 1.5                   | 1.5                   | 1.3                   |
|                                          | d.Fin type (code)              | /     | Hydrophilic aluminium | Hydrophilic aluminium | Hydrophilic aluminium | Hydrophilic aluminium |
|                                          | e.Tube outside dia. and type   | mm    | Φ7,innergroove tube   | Φ7,innergroove tube   | Φ7,innergroove tube   | Φ7,innergroove tube   |
|                                          | f.Coil length x height x width | mm    | 865x504x22 (24)       | 865x504x22 (24)       | 865x504x44 (24)       | 855x660x44 (30)       |
|                                          | g.Number of circuits           | /     | 2                     | 2                     | 4                     | 5                     |
| Outdoor air flow                         |                                | m3/h  | 2000                  | 2200                  | 2200                  | 3300                  |
| Outdoor noise level                      |                                | dB(A) | ≤51                   | ≤52                   | ≤55                   | ≤58                   |
| Outdoor unit                             | (Dimension(W×H×D)              | mm    | 802×564×323           | 802×564×323           | 802×564×323           | 900×700×337           |
|                                          | (Packing (W×H×D)               | mm    | 910×622×405           | 910×622×405           | 910×622×405           | 1006×755×418          |
|                                          | Net/Gross weight               | kg    | 30.0/34.0             | 30.0/34.0             | 35.5/40.0             | 46.0/51.0             |
| Refrigerant type and charge volume       |                                | g     | R410A(850)            | R410A(850)            | R410a(1300)           | R410a(1600)           |
| (Max Design pressure (Discharge/Suction) |                                | MPa   | 4.3/1.5               | 4.3/1.5               | 4.3/1.5               | 4.3/1.5               |
| Refrigerant piping                       | (Gas side/Liquid side (inch)   | inch  | 3/8 1/4               | 3/8 1/4               | 3/8 1/4               | 3/8 1/4               |
|                                          | Max. refrigerant pipe length   | m     | 15                    | 15                    | 20                    | 25                    |
|                                          | Max. difference in level       | m     | 8                     | 8                     | 10                    | 10                    |
| Drain pipe size                          |                                | mm    | 16                    | 16                    | 16                    | 16                    |
| Refrigerant pipinglength                 |                                | m     | 3                     | 3                     | 4                     | 4                     |
| Connection wiring                        |                                | m     | 4                     | 4                     | 5                     | 5                     |
| Expansion valve type                     |                                | /     | capillary             | capillary             | DPF Q01 16C 112       | TS118C55              |
| Expansion valve type Brand               |                                | /     | 2.5*1.5*1000mm        | 2.5*1.5*1000mm        | SANHUA                | SANHUA                |
| Operation temp                           |                                | °C    | ℃16~℃32               | ℃16~℃32               | ℃16~℃32               | ℃16~℃32               |
| Ambient temp (cooling/heating)           |                                | °C    | 16-55/-7-31           | 16-55/-7-31           | 16-55/-7-31           | 16-55/-7-31           |
| Application area                         |                                | m2    | 8-15                  | 12-20                 | 20-30                 | 30-40                 |



### 100% Eco

Up to 100% Saving in day time



### Grid AC Power Limiter

Limit AC power from 0-300W



### Savings

No Inverter battery, or Charger controller needed



### Wide Operating Temperature

Temperature Range between -10 to +60°C



### Max Efficiency

DC-driven



### Auto Balance

AC/DC auto balance

