



# GOLDMAN

**NEW  
DESIGN**

## A Guide

to choosing air conditioning  
for your home and your lifestyle.



# GOLDMAN

Your conditions!



Since 2004, GOLDMAN pioneers in the US market, by designing and manufacturing innovative air conditioning and heat pump units. The company's primary competitive advantage is the use of its know-how expertise gained in the past, to build air conditioning systems of the future.

The key to GOLDMAN units' success is that they are specifically designed to enable the modern individual invent his own custom made living and working conditions. Regulating effectively the natural environment, GOLDMAN units can create silently the perfect indoor conditions; your conditions!





The manufacturing technology used in the production of **GOLDMAN** heat pump and air conditioning units ensures their reliable operation according to the highest energy-class standards, achieving maximum performance with minimum consumption rates, respecting the environment.

All **GOLDMAN** units carry  
a 3-year Warranty for the compressor  
and for all parts of the unit.

**GOLDMAN** units can be found all across Europe in  
a continuously growing selected network of  
air conditioning professionals!

Their excellent quality and operational efficiency  
has been awarded by the European Union with  
the highest standard certificates.

Furthermore, the use of the environmental friendly  
refrigerants (freon) do not contribute  
to the increase of the global warming environment.



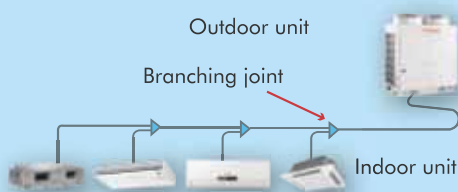
We recommend Heating & Cooling Equipment with the ENERGY STAR Logo the Symbol for Energy Efficiency.

## GRV Multi VRV System

- Powered by DC Inverter Technology
- Modular Outdoor Unit Design
- Max ODU capacity 180kW (4 x modules)
- 7 type of indoor units from 2.2 to 28kW
- Max Indoor unit connection: 64 units
- DC Inverter Compressor
- DC Inverter FanMotor Link Control.
- Precision Capacity Output Control Technology
- Excellent Refrigerant Balance Technology
- Original Created High Pressure Chamber Oil Balance
- Environment friendly R410A Refrigerant
- HyperHeating & IntelligentDefrostTechnology
- Superior Controllers & Software Support

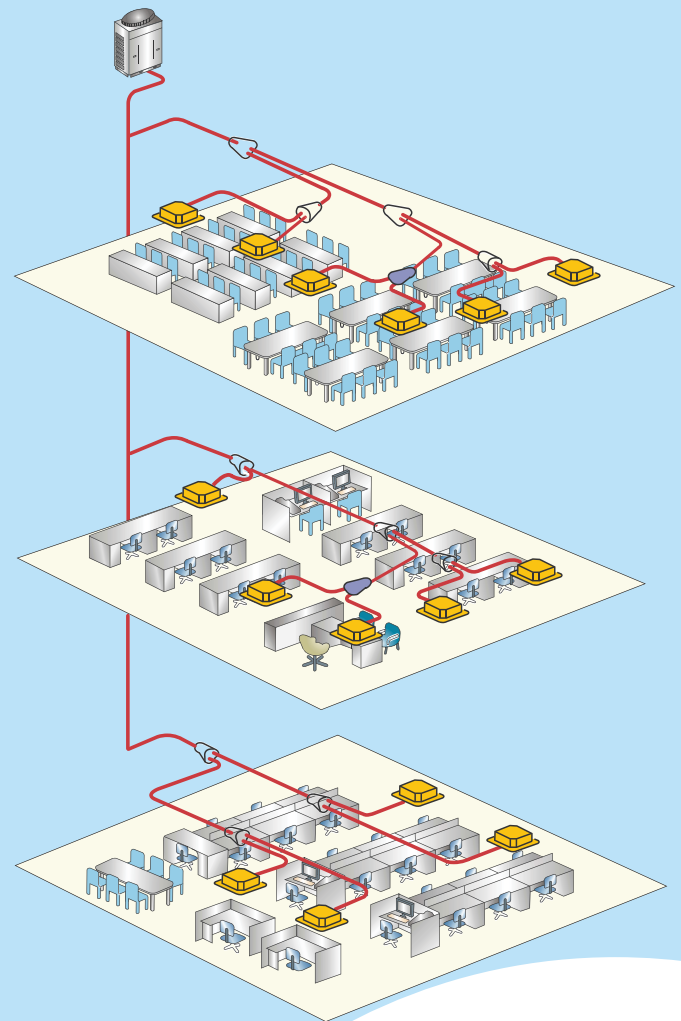
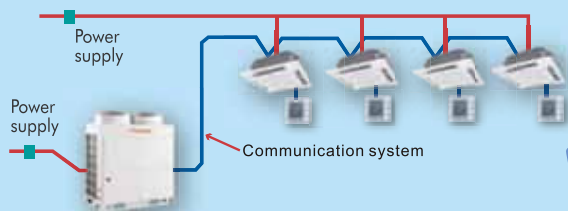
### Shortest Route Design by Free Branching

Combination of line and branching pipe connection makes the shortest design route possible, thereby saving on installation time and cost.



### Simple Wiring

Multiplex communication makes it possible to connect multiple indoor units to one outdoor unit with 2-core wire, thus simplifying the wiring operation.



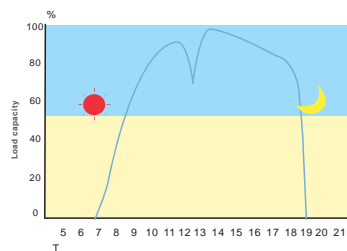
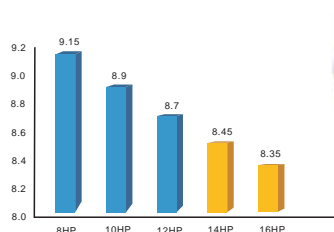
## High Efficient And Energy Saving

R410A



### 1. The Industry's Leading IPLV Value

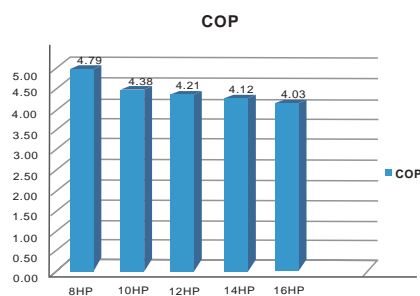
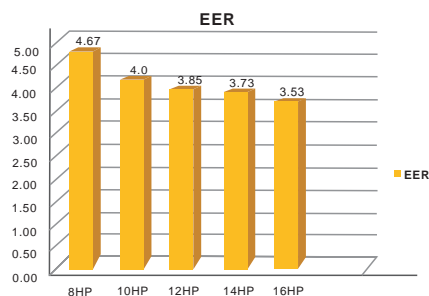
GRV achieves the industry's top class energy efficiency of cooling and heating by utilizing the advanced 180 °sine wave DC Inverter driving technology, dual compressors parallel technology, patented energy-saving operation technology and improved performance of heat exchanger.



Because the outdoor ambient temperature and indoor load is different at different times of day, most of time, the system works under part load. So it is better to assess the energy saving performance using IPLV.

$$\text{IPLV}(C) = 0.05\text{EER}(100\%) + 0.3\text{EER}(75\%) + 0.4\text{EER}(50\%) + 0.25\text{EER}(25\%).$$

### 2. Excellent In EER&COP



# ● High Efficiency DC Inverter Compressor

## 1. Direct suction

Small suction overheating, high efficiency.

## 2. High rigidity compression shell

Special high rigid materials, small vibration, mute effect is obvious, strong and durable.

## 3. Oil separation structure for the internal

Through internal oil mist separation design and internal pipeline design, most lubricating oil flowing into compressor, and ensure the compressor efficiency

## 4. With throwing oil tubing for compressor

When the compressor oil level higher than the warning line, system through tubing eliminate redundant frozen oil, keep the oil balance between compressor.

## 5. HP chamber structure

The back wall shell and a large number of air cushion volume, reduce exhaust air flow noise.

## 6. Exclusive high-precision asymmetric vortex disk

Using asymmetric type vortex disk structure, compared with the symmetric structure, can reduce the compressor loss, improve the efficiency of suction.

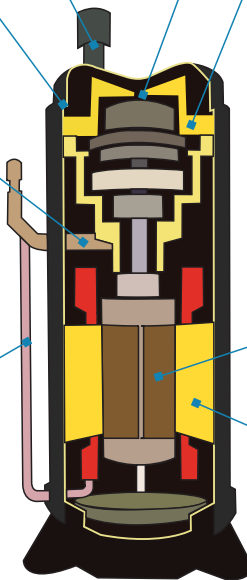


## 7. Concentrated winding

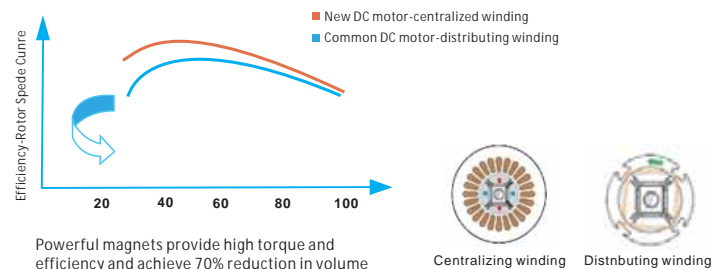
Magnetic efficiency is 12% higher than distributed winding.

## 8. Magnetic resistance DC motor

Use powerful rubidium magnet, inhibit rotary vibration, reduce the loss of magnetic field, and the efficiency increased by 25%.

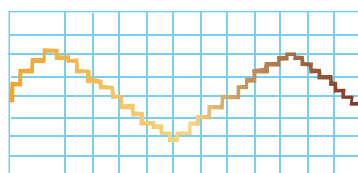


High-efficient permanent magnetic motors are installed, giving better performance than traditional DC inverter compressors.

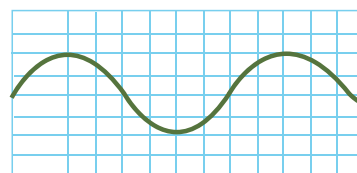


## 180° Sine Wave Control

It can satisfy various places's demands for different temperature and is able to save a great deal of electricity and provide users with utmost comfort at the same time.



Common sawtooth wave



180° Sine Wave DC inverter

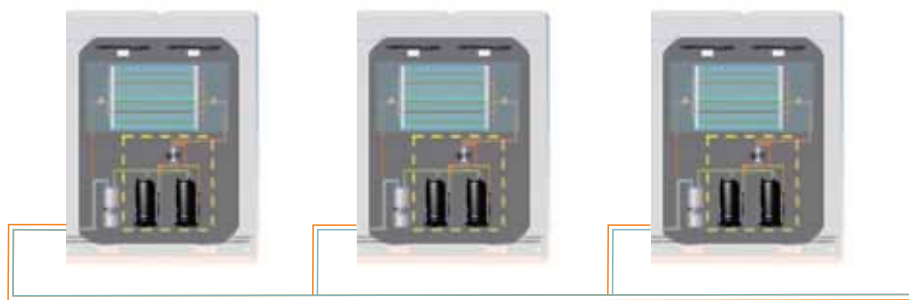
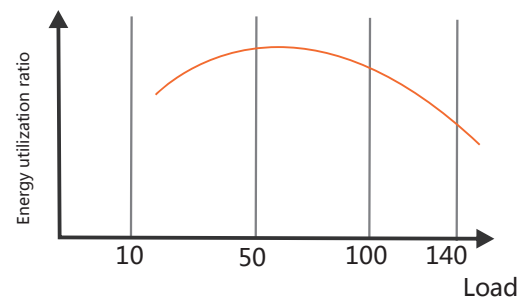
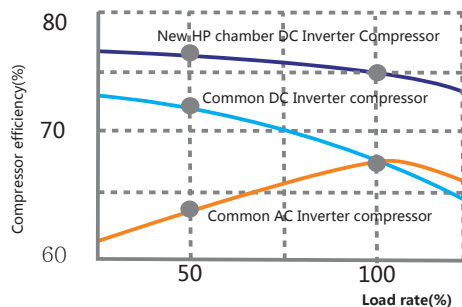
DC inverter compressor uses 180° sine wave vector control technique, make motor operate smoothly and efficiency increases significantly. It also can lower the noise level.



# Coleman

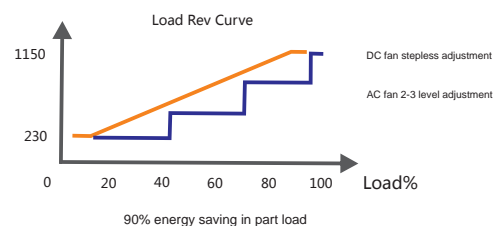
## ● High-efficient Inverter Control Technology

The unit have the higher capacity in partial load according to controlling the operation number of the compressor and adjusting the EXV opening of the condenser side, making the compressor always maintain the highest efficiency running state.



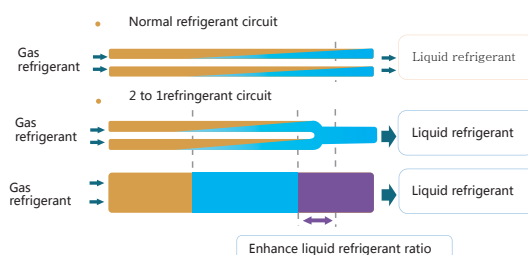
## ● DC Brushless Fan Motor

DC brushless motor adjusts the fan speed according to the system pressure, enhance the efficiency by 45%. The super aero fan provides a larger air volume and higher static pressure, and at the same time produces a lower noise level.

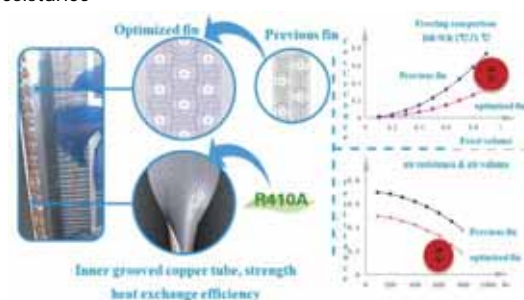


## ● High Efficient Heat Exchanger

Optimized 2 to 1 refrigerant circuit design, increase the heat exchanging efficiency and enhance the ratio of liquid which flow to the evaporator.



Optimized fin design, reduces the water resistance and wind resistance

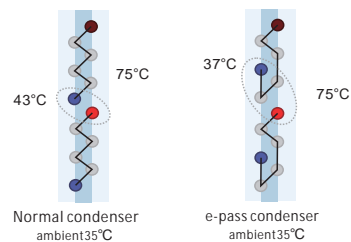




## ● Sub-cooling Technology For 3 Level

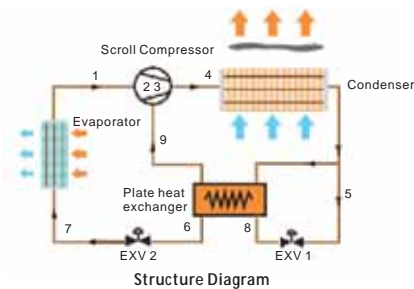
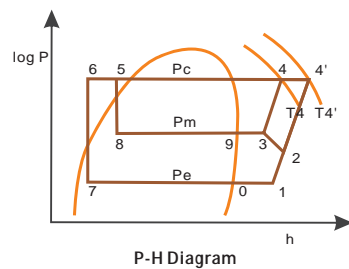
To optimize the design of the condenser.

11.2°C sub-cooling by optimized refrigerant circuit and "Inverse fin type" window fin design.

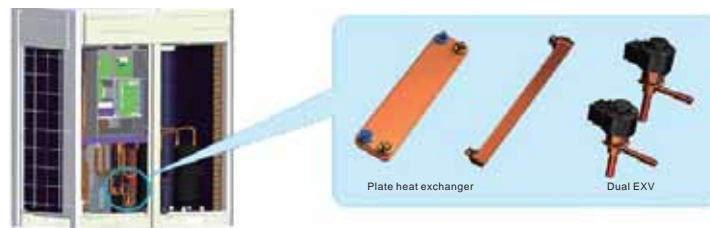


Inverse fin type" window fin design

4.5°C sub-cooling by special plate heat exchanger further reduce the refrigerant temperature flowing into the indoor unit.



1.1°C sub-cooling by dual EXV with a special effective s plate heat exchanger.



## Comfortable And Healthy Environment

### ● 1. Wide Operation Range

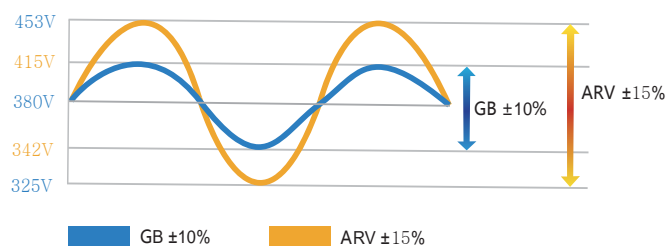
The unit could operate perfectly between 52°C in hot summer and -15°C in cold winter making you feel like spring all year around, advanced system design and strict system matching and test. (cooling in -15°C)





## 2. Wide Voltage Design

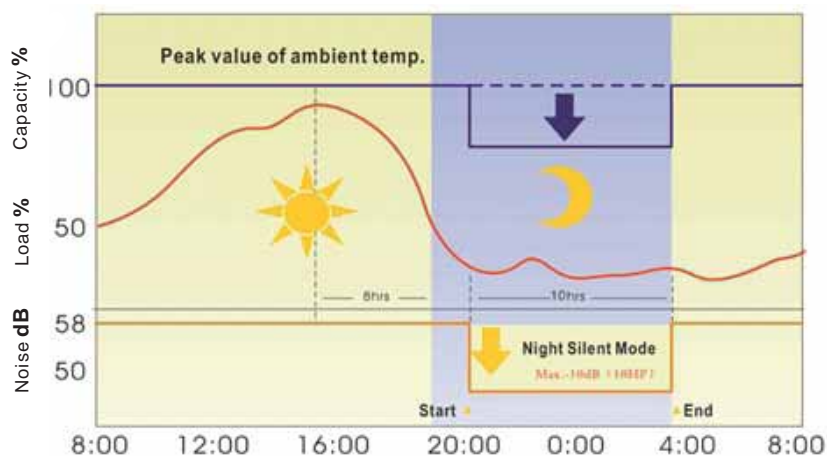
In country with unstable voltage, GRV can also run stable.



## 3. Silence Operation

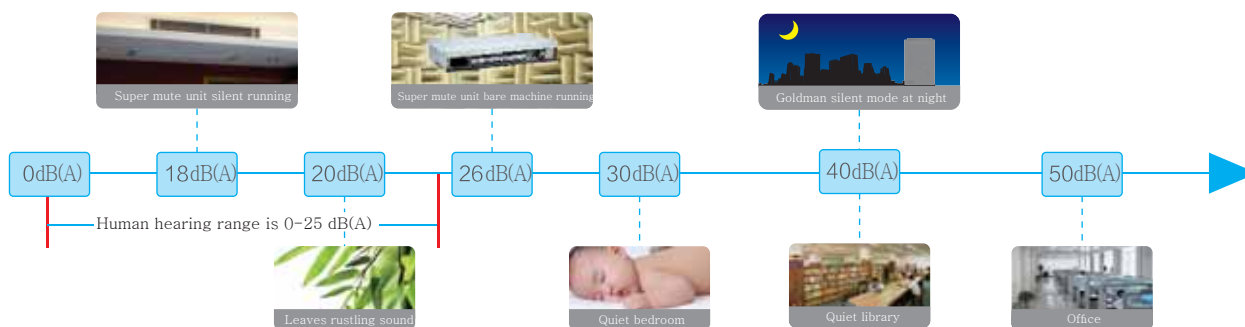
### Outdoor unit quiet mode

By using optimized fan blades and the CFD(Computational Fluid Dynamics) technology, the product is equipped with the night low-noise operation function. Provide more quiet operation during the night. Minimum operation noise only 45 dB(A).



### Indoor unit quiet mode

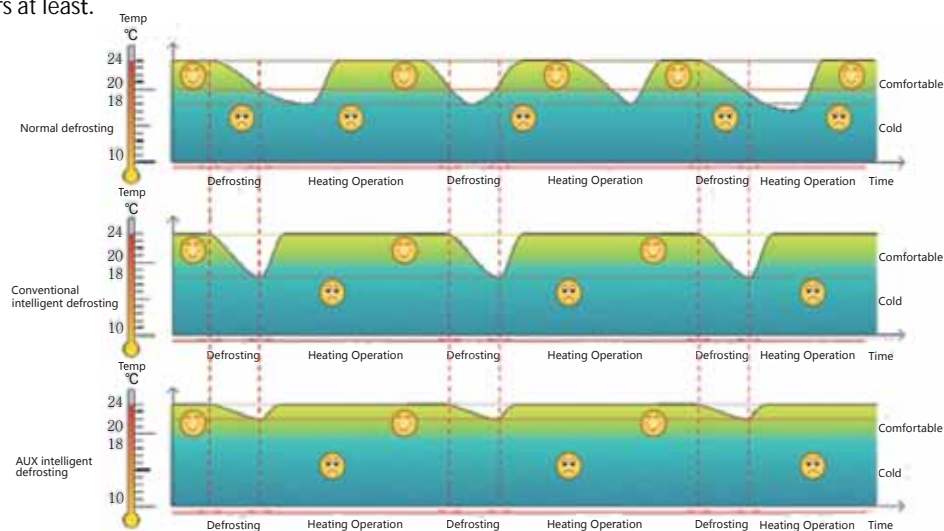
Innovative centrifugal fan for large diameter and a new design of the spiral duct system equipped with high-quality motor at the same time, making the air supply more quietly and smoothly. The lowest noise is 20 db(A).



#### ● 4. Intelligent Defrosting

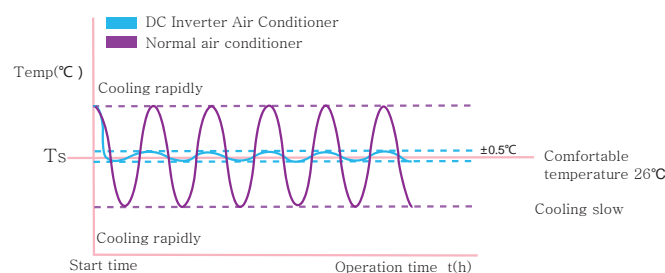
Goldman intelligent defrosting technique extends the heating operation and decrease the frequency of defrosting. Result in stable room temperature, offer comfort life.

Base on the main unit and at the end of the EXV control the output, fast bolt in liquid refrigerant system, unit operation is more stable; Through the dry run, defrosting exhaust temperature higher, more complete, more conventional. The defrosting time less 3 min than others at least.

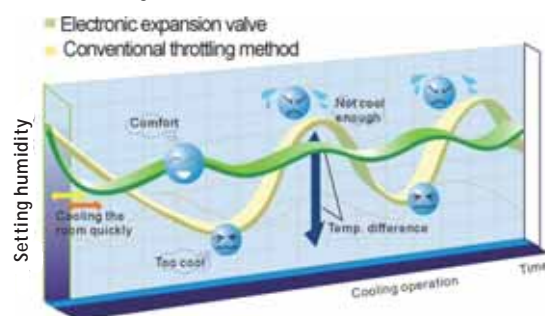


#### ● 5. Precise Temperature Control

Goldman composite temperature control technology, through the indoor/outdoor operation condition detection, adjust outdoor power output, optimize the indoor air distribution, achieve the high precision adjustment of 0.5 °C.

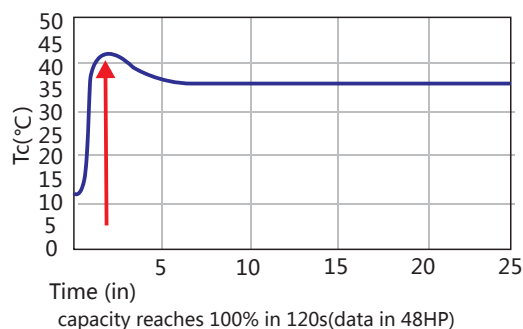
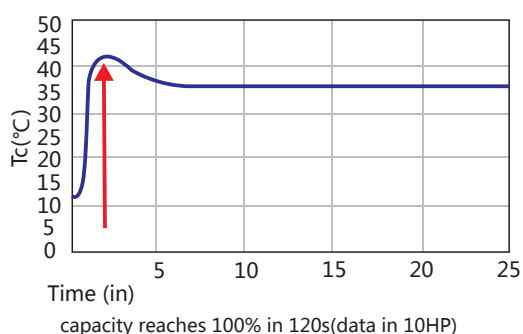


The unit uses PI calculation principle to calculate the percentage of indoor capacity demand according to indoor temperature fluctuations, to perform real-time control to the compressor operating frequency and through the double EXV adjustment, precision up to level 1000, accurately control the refrigerant flow, assure indoor comfort.



## 6. Fast Cooling/Heating Technology

Start unit in soft start way, reduce the impact to power grid, using frequency conversion compressor overload operation characteristics at the same time, will set the ability to adjust rapidly to the load demand point, instant refrigeration/heat effect, bring great user experience.



## 7. Humanization Design

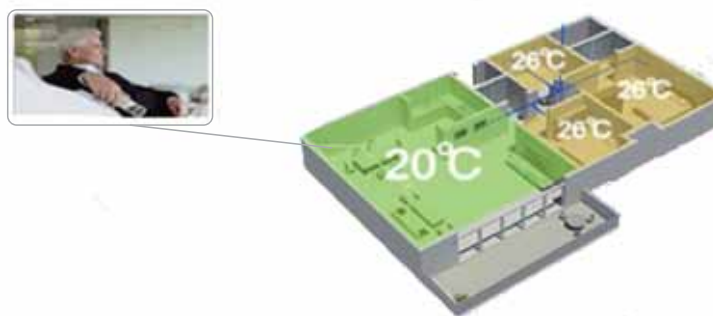
### Economic locking function

Special design economic locking function, through outdoor PCB switch setting. If work in economic lock, AC lowest work cooling temperature will keep in 26°C and highest heating temperature keep 20°C.

Save energy and keep provide comfortable.

### VIP function

Special VIP control function, the VIP room will decide the whole system operation mode, prior to other mode or economic locking function, ensure the priority of the important room.



### Auto Restart Function

The AC can automatically memorize the operation setting when power is cut off accidentally. It can return to previous setting when power resumes.

Recover the former operation state when power is restored, no need restart the unit manually.

