

# Features

## Green and Environmental Protection

The full series of unit adopts R410A eco-friendly refrigerant, which will not damage the ozonosphere; It utilizes renewable energy sources as the energy source, green and eco-friendly.

## Low Noise Design

The unit adopts low noise scroll compressor, sound insulation is conducted for the compressor with box; with multiple noise reduction treatment, the unit is operating quietly.



## Self-protection and Diagnosis Function

The unit adopts microcomputer to control the system, and has nearly ten protective measures, such as high pressure protection, low pressure protection, lacking fluorine protection, compressor overload protection, high temperature protection for compressor discharge, anti-freezing protection, high temperature protection for drive module, water flow switch protection, communication error, temperature sensor error protection, and so on, thus solving the hidden danger of operation error effectively and ensuring safe operation.



Water flow protection



Overload protection



Insufficient  
refrigerant protection



High pressure protection  
for compressor



Error protection  
for temperature sensor

## Intelligent Human-machine Interaction

- Liquid crystal touch screen with backlight display;
- Flat interface design, simple and convenient operation, read key parameter and operation status at real time, monitor the unit comprehensively and output alarm display;
- Timing control, the user can conduct intelligent timing setting to the air conditioning system according to the usage time and requirement;
- Password protection function to prevent misoperation;
- It can be shifted to the location which is easy for operation freely.



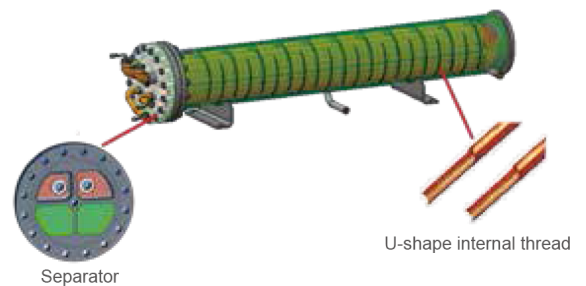
## World-famous Scroll Compressor

- Adopts the flexible scroll compressor, sealed vortex, small abrasion, good reliability and high energy efficiency ratio; stable operation and low noise;
- Multiple systems design: it will select the number of systems automatically according to the load, provides energy adjustment of several levels for energy-saving operation; in case malfunction happens to a specific system, the other systems will operate normally, which has greatly enhanced the reliability of unit operation;
- Balanced control of compressor: confirm the priority of compressor startup of shutdown according to the operation time of each compressor to prevent overuse of one single compressor, which would be effective to extend unit service life.



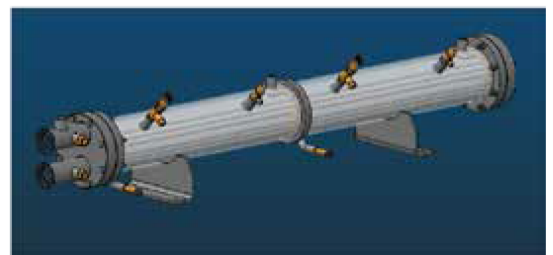
## Efficient Shell and Tube Evaporator

- Adopt liquid separation sharing technology to ensure that heat transfer capacity can be brought out evenly, increase evaporation temperature, enhance overall unit capacity and energy efficiency fully;
- Adopt U-shape internal thread efficient heat exchange tube to reduce secondary separating, thus intensifying heat exchange.
- The optimized design of water flow outside the pipe decreases the pressure loss of water in heat exchanger and reduces heat loss.



## Efficient Shell and Tube Condenser

- Adopt efficient heat exchange tube to improve fluid state of refrigerant side, enhance heat exchange area and enhance heat exchange efficiency.
- Adopt intermediate expanded connection technology to maximize the area of condenser pipe and enhance heat exchange efficiency.



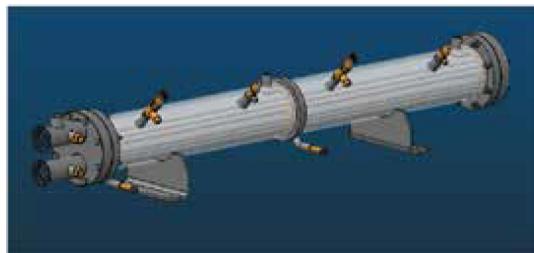
## Ultra-strong Applicability

Adopting the throttling adjustment structure of electronic control, it has the characteristic of overall adjustment and quick response, which can effectively adapt to the working condition of wide range; meanwhile, the system has taken several optimized measures to make the operation working condition close to the application limit gradually, which has expanded the applicable range of the unit to the greatest extent. Applicable temperature range for water source is 5~40℃.



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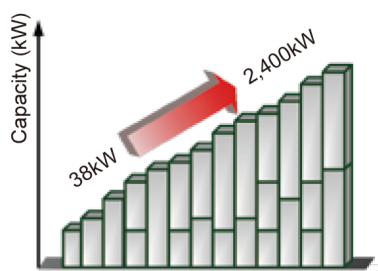
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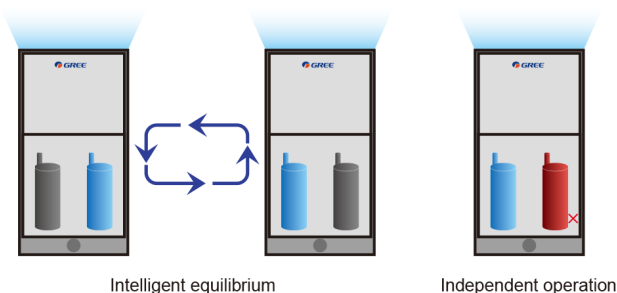
## Master and Subsidiary Module Design

- Each unit can be used separately or with any units of different cooling capacity, 16 sets can be operated at most, the cooling capacity range is 38~2,400kW, which can be applied to all kinds of occasions.
- Any one of the connected units with wired controller can be the master module, and communicate with other units to coordinate the whole system to work according to demand, avoiding the trouble of suspension operation of the whole system due to the damage of the fixed master module. This is one of Gree's patented technologies.
- Installation space of the unit is small, modular installation can be carried out by taking advantage of the narrow space.



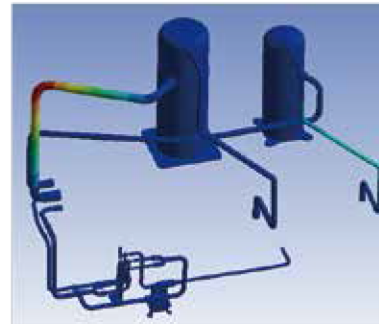
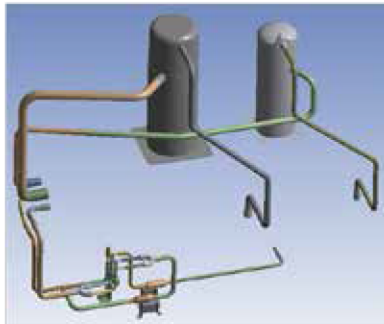
## Reliable Operation of Dual Compressor Systems

- Adopt modular design structure, and the compressor will be started by levels to decrease the impact of startup current to the power grid.
- Balance operation time of compressor intelligently according to compressor operation condition, enhancing the overall service life of the unit.
- The dual compressor systems can operate individually without affecting each other. If the compressor of either unit is faulted, it will not affect unit normal operation; likewise, if either unit is in overhaul and maintenance, operation of the other unit will not be affected.



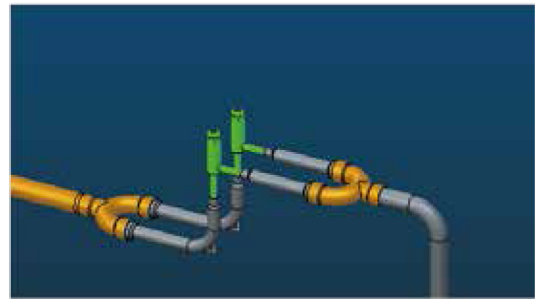
## Optimal Pipeline Design

Based on the finite element algorithm and combined several simulation method with experiment test, it optimizes the structure of the key components and related sub-assy, ensuring a reliable structure for unit operation and transportation process.



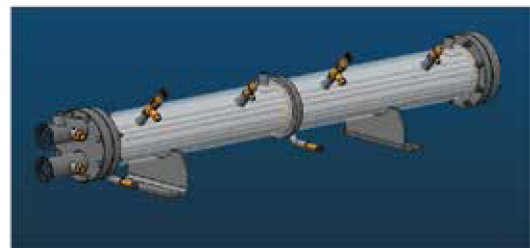
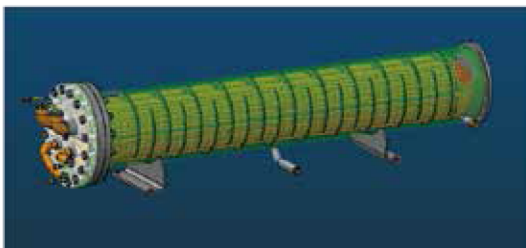
## Dual Electronic Expansion Valves Control Technology

Unit throttling of large cooling capacity adopts dual electronic expansion valves for parallel connection control, which is adaptive to the operation range of the formation of cold and heat source (buried pipe, water source and ground water), the exclusive throttling patented technology has enhanced the operation control precision of the whole system.



## Convenient Maintenance for Heat Exchanger

The evaporator and condenser adopt shell and tube heat exchanger, which is convenient for cleaning.



## Portable Body Design

- The outer casing can meet the outdoor installation requirement, machine room is needless to lower investment;
- Rubber washer is set on the base, fork shipment is available and the size is small for convenient transportation;
- Lifting hole is set in the base for lifting.



## Long-distance Intelligent Service

Provide long-distance intelligent service to realize early warning for error, operation diagnosis, data statistics and analysis and so on, enabling the air conditioner to function under optimal status and reducing the maintenance charges.



Gree long-distance intelligent service center



## Optional Hydraulic Power Module

Hydraulic power is optional for the full series of unit, which is of great convenience to the client.

