

# **TMW6+ECO** Series Intelligent VRF

Enhance Vapor Injection DC Inverter Air Conditioning System



Strong cooling  
and heating



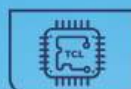
High efficiency  
energy saving



Stable reliable  
performance



Comfortable  
healthy environment



Intelligent  
operation control



Convenient installation  
Maintenance



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\* : Suitable for some models



# COMPANY PROFILE

## The Creative Life

TCL is the initials of The Creative Life, which means that creativity touches Life.



## Introduction Of TCL

TCL Corporation LTD, founded in 1981, is one of the largest consumer electronics conglomerates and operates on a global scale in China. At present, TCL has formed four industrial groups including multimedia, communication, China Star Optoelectronics Technology and TCL Home Appliances, and six business segments including System Science and Technology Business Headquarters, Tikeli Group, emerging Business Group, Investment Business Group, Hanlinhui Company and real estate. Its revenue exceeded 100 billion yuan for 5 consecutive years. The group's main industries establish R&D headquarters and 26 R & D institutions where in China, the United States, France, Singapore and other countries. It has nearly 22 manufacturing and processing bases in China, Poland, Mexico, Thailand, Vietnam and other countries.

TCL Corporation is committed to becoming a high-tech industrial group. In January 2004, TCL was listed in Shenzhen Stock Exchange (SZ000100). On April 16, 2019, the restructuring was officially completed. After the restructuring, TCL owns two listed companies: Hua Xian Optoelectronics (00334.HK) and Hanlinhui (835281). TCL Owns two listed companies: TCL Electronics (01070.HK) and Tonly Electronics Holdings Limited (01249.HK).

After nearly 40 years of development, TCL has become a leader in the internationalization process of Chinese enterprises by virtue of China's reform and opening-up and adhering to the enterprise spirit of dedication and innovation.

When COVID-19 broke out In January 2020, TCL immediately rushed to Hubei, donating cash, materials and Internet services that accumulative worth over 20 million yuan, and went to Leishenshan and other designated hospitals to install electrical equipment. In July, TCL Technology announced that it would become the final transferee of 100% equity of Tianjin Zhonghuan Group. TCL also carried out strategic layout in the three industrial sectors of semiconductor display, intelligent terminal, semiconductor and new energy. In August, TCL Technology announced the acquisition of 60 percent of Suzhou Samsung LCD Technology Co., LTD and 100 percent of Suzhou Samsung Display Co., LTD.

In 2021, TCL Corporation annual revenue was exceed 39.4 billion dollar, significant increase in net profit. In the same year TCL start up 'Xuri Plan' which invest more than 3.15 billion dollar to promote ecological leadership and help industrial upgrading.

In the future, TCL will establish a perfect insight system that is close to consumers and run through the overall process of corporate activities, forming the driving force of TCL brand with product force, marketing force and experience force as the core, improving the overall brand image to the direction of "young, fashionable and international", and further strengthening innovation and consumption experience.

## Introduction Of TCL CAC

GD TCL Intelligent Heating&Ventilating Equipment CO.,LTD. is a developmental company integrating R & D, manufacturing, sales and service of HVAC equipment. It has achieved the full coverage of unit type light commercial, small multi connected household central air conditioning, multi connected central air conditioning, air-cooled modular machine series, household dual supply series, air source heat pump hot air machine series, ultra-low temperature modular machine series, household air energy water heater series, commercial air energy hot water series and other products. It has 4 R & D departments and 20 laboratory groups. This year, TCL -HVAC's new base will be put into use. By then, the new and old bases will have 27 world-class production lines with an annual capacity of more than 2 million sets.

The test center of TCL -HVAC has been recognized by China National Accreditation Service for Conformity Assessment (CNAS), which lays a solid foundation for the improvement of independent R & D ability and laboratory management ability, as well as the establishment of a customer-centered, quality-oriented, product performance and product innovation improvement system.

With professional technology and service ability, and nearly 20 years of historical precipitation and market accumulation, TCL -HVAC has been fully verified in the market and gained a good reputation in the market.

TCL intelligent HVAC's future can be expected!





## POWERFUL COOLING AND HEATING

TMV6+ full DC Inverter VRF system, use international famous compressor, DC motor, high-precision EXV and so on, thanks to all these high-technology, TMV6+ has the best cooling and heating performance.



DC inverter  
compressor\*



Double C  
high efficiency condenser



DC inverter  
fan motor



High efficiency axial fan



36°C Three-stage  
supercooling technology\*



Air-cooled & refrigerant-cooled  
technology for main control board



Intelligent inverter technology

\* Note: Applicable to partial models





## 1.1 High-efficiency scroll DC inverter compressor with EVI\*

- Using new asymmetric scroll profile, reduce leakage loss, reduce ineffective suction overheating, more suitable for APF conditions, improving compressor efficiency.

### 1 Enhanced vapor injection technology

injecting part of the gaseous refrigerant into the compression chamber can greatly improve the low-temperature heating capacity and effectively reduce the exhaust temperature.

### 2 Axial flexible design

through the back pressure adjustment to achieve the axial floating of the moving disc, improve the overall reliability and performance of the compressor;

### 3 High-reliability two-stage oil supply

combined with centrifugal oil supply and differential pressure oil supply, to ensure the full lubrication of each friction under different speeds and different controls;

### 4 Asymmetric vortex line

select asymmetric line to effectively reduce overheating losses and leakage losses, and improve the efficiency of the unit;

### 5 High efficiency centralized coil motor

excellent groove design, to ensure the energy efficiency of each frequency;

### 6 exhaust anti-reverse design

exhaust valve adopts check valve to effectively prevent liquid compression and improve the reliability of working conditions with liquid;

### 7 Multi-stage pressure relief pump

dynamically adjust the intermediate pressure according to the operating conditions to prevent over-compression under low compression ratio and improve the operating efficiency of low load;

### 13 Foreign body prevention technology

oil pool filter, suction filter, enthalpy increase filter, all-round protection compressor, improve reliability.

### 12 low fuel discharge and reduction design

internal optimization of oil circuit circulation, local oil blocking design, to achieve low oil discharge rate;

### 11 Select the material of the high-strength pump body

combined with the product design and use range, the strongest material is QT400 to ensure the reliability of the monomer;

### 10 efficient oil film sealing design

hydrodynamic lubrication, oil film sealing of the compression chamber, effectively reduce friction, improve performance and reliability;

### 9 Large displacement combined with wide frequency range

speed range 14-160rps, displacement up to 96cc, strong power, expand the scope of usage.

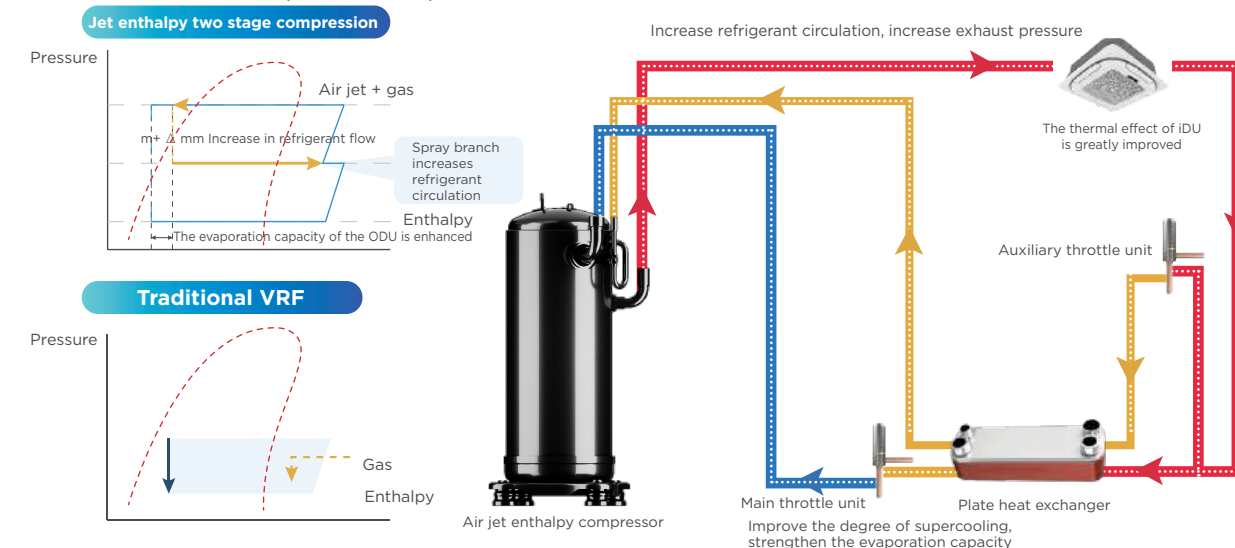
### 8 High reliability bearing design

all three bearings are PTFE coated plain bearings with low noise and vibration to ensure long-term reliability;



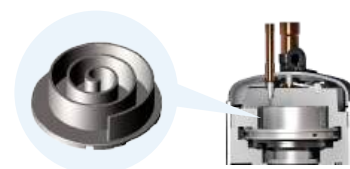
## >> Double enthalpy of cooling and heating \*

- Through the double enthalpy increasing technology of refrigeration and heating, 56 °C high temperature strong cooling and -30 °C low temperature strong heating are effectively realized. During refrigeration, when refrigerant enters indoor unit after long piping, the undercooling degree is low, and it is easy to produce refrigerant noise through the electronic expansion valve throttling. By opening the auxiliary valve and the plate to change the branch road, the refrigerant circulation quantity is increased, the system undercooling degree is improved, and the refrigerant flow sound is effectively suppressed. During heating, the outdoor environment temperature is lower, refrigerant low density, gas compressor suction side back to reduce, reduce the refrigerant circulation and heating performance. By spraying branch added gaseous refrigerant compressor middle pressure, thus increasing overall system refrigerant circulation, effectively improve the low temperature heating ability, realize stable run to 30 °C, 15 °C low temperature heat up 30%.



## >> Asymmetric vortices

- In view of the high pressure characteristics of R410A refrigerant, the compressor strengthens the bearing structure and adopts the design of asymmetric scroll disk, which has the following advantages over the symmetrical scroll disk:
  - ✓ Reduce refrigerant leakage and improve efficiency;
  - ✓ Two adjacent chambers have small pressure difference, small vibration and more mute;
  - ✓ Prevent over compression, prolong the service life of the compressor.



## >> Motor rotor with neodymium magnetic material

- Neodymium, an artificial permanent magnet, is one of the strongest magnetic materials to date. The magnetic force of neodymium magnet is 10 times that of common ferrite magnet. Under the same volume, the electromagnetic field intensity is stronger, the starting torque is larger, and the operation efficiency is higher.



## >> Large-displacement and ultra-wideband operation technology

- Displacement up to 96cc, far more than the ordinary compressor (displacement <96cc), the operation frequency of 14RPs-160rps, far more than the ordinary compressor 14rps-160rps, strong power, realizing fast refrigeration and heating.



\* Note: Applicable to some models



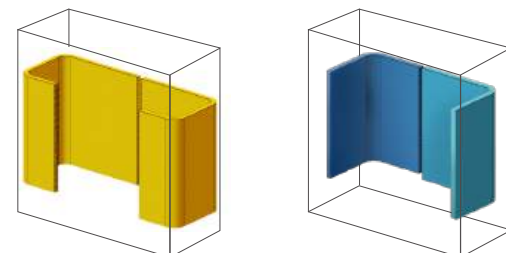


## 1.2 Double 'C' type heat exchanger

- Double C-type compact super-large area heat exchanger, makes the heat exchange area larger, reduces the pressure loss of the heat exchanger, improves the efficiency of heat exchanger, and has higher efficiency when running under heavy load.



Note: The heat exchanger structure and fan diameter are determined by the specific model.



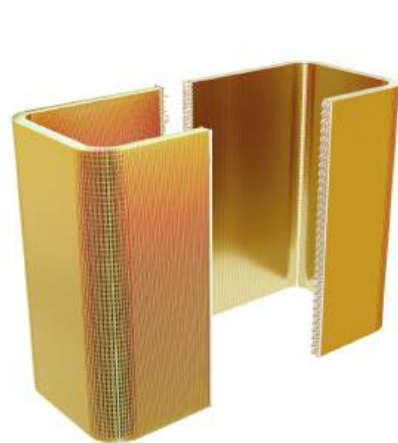
Double C Compact Large Area Heat Exchanger Ordinary Heat Exchanger

- The new structural design further improves the matching of system partial load and reduces the floor area of the whole machine.

**36HP occupies only 1.6055 m<sup>2</sup>, which is 21.4% less than the previous generation**



- Heat exchanger adopts the perfect combination of multi-coated hydrophilic aluminum foil heat exchange fins and high-efficiency internally threaded heat exchange copper tubes, which greatly improves the heat exchange efficiency and enhances the corrosion resistance and oxidation resistance of the heat exchanger.



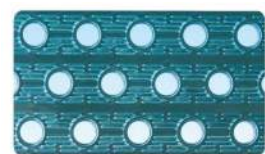
Φ7 Heat Exchange Copper Tube

Multiple rows of small-diameter heat exchange tubes, the tube spacing is smaller, and the number of copper tubes used in the same length is more, which effectively increases the heat exchange area of the heat exchanger and improves the heat exchange efficiency of the heat exchanger.



Internally threaded copper tubes

The inner surface of the internally threaded copper pipe is designed with a groove, which increases the contact area with the refrigerant, so that the heat exchange performance and thermal conductivity of the heat exchanger are better.



Hydrophilic aluminum fin

The condensed water will spread out quickly on the hydrophilic aluminum foil without condensing into water droplets, increasing the heat exchange area, speeding up the cooling and heating speed, and effectively avoiding the noise caused by the condensed water obstructing the air flow.

### Lubricating layer

Destroy the surface tension of water droplets, accelerate the downstream speed of condensed water or defrosting water, and improve the air conditioning capacity.

### Hydrophilic coating

Ensure that the air conditioner is not easy to form frost when heating.

### Corrosion resistant coating

Slow down the corrosion of corrosive gas to the heat exchanger.

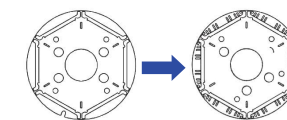
### fins

## 1.3 High voltage (concentrated coil) DC motor

- The outdoor unit fan motor adopts a high-voltage centralized winding DC motor, which has a more stable and reliable output, effectively reduces losses and improves operating efficiency.

### Concentrated coil motor

Reduced coil height, reduced copper loss, higher efficiency in low and medium speed zones, and higher APF energy efficiency.



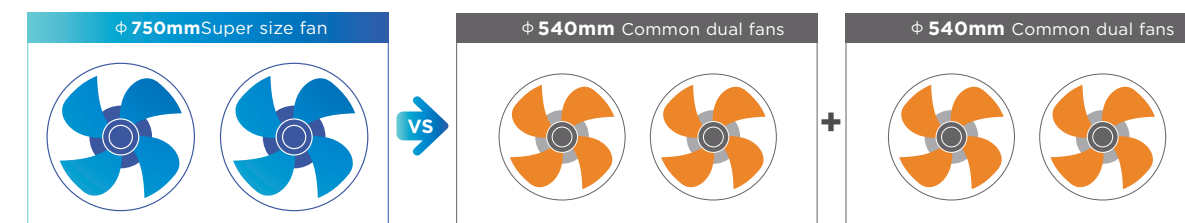
The original rotor The new rotor

Neodymium magneto rotor  
Improve motor efficiency  
And reduce motor noise

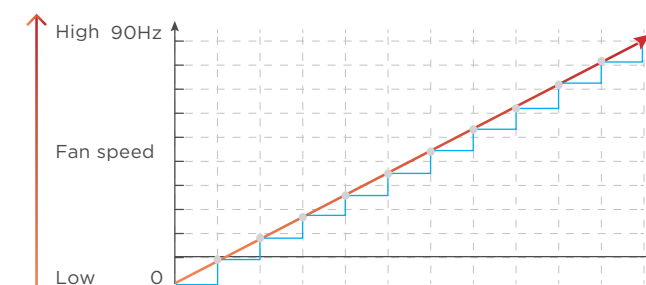


## 1.4 750mm Large size axial flow fan

- The outdoor unit fan adopts  $\phi 750\text{mm}$  super-size wind wheel, compared with ordinary air conditioner  $\phi 540\text{mm}$  dual fans, it has sufficient air volume, higher heat exchange efficiency and lower noise.



- The fan is steplessly adjusted according to environmental conditions and air-conditioning load conditions, and is matched with the compressor's stepless frequency conversion technology, so that the system runs more stable and reliable.



Stepless speed regulation Average speed

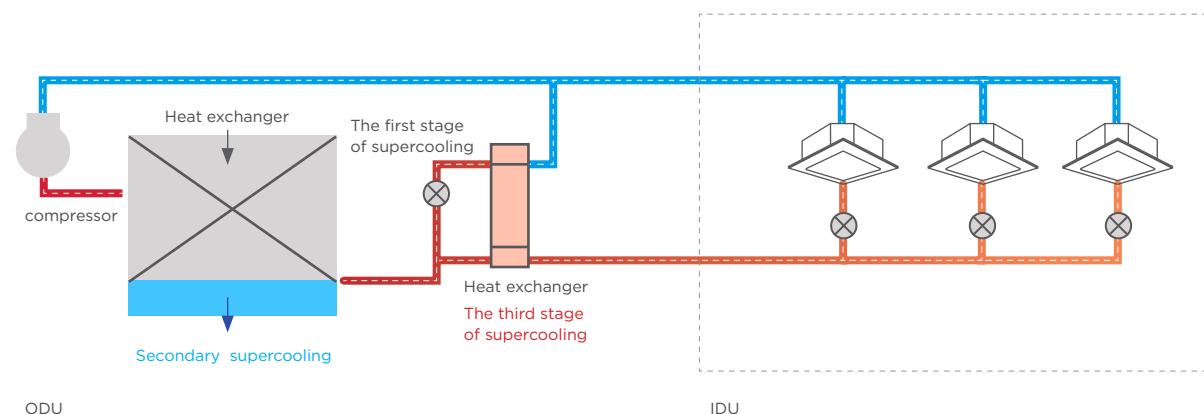
1. Accurately adjust the refrigerant pressure to improve the reliability of the unit;

2. The motor speed is adjusted quickly to better adapt to the rapid changes in air-conditioning load.

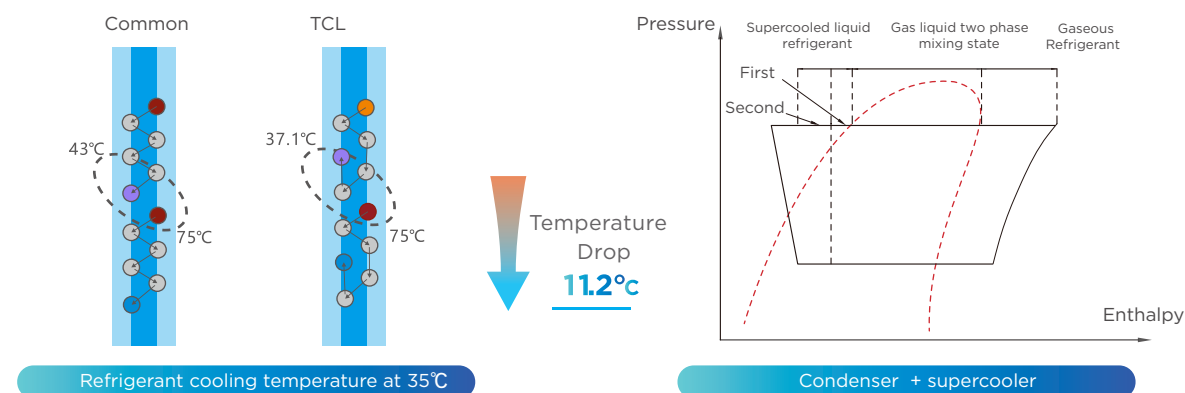


## 1.5 3-Stage sub-cooling technology to achieve 36°C sub-cooling

- Optimize the design of heat exchanger and flow path to improve heat exchange effect. The 3-stage sub-cooling cycle increases the refrigeration capacity of the unit mass refrigerant, reduces the flow resistance of the refrigerant in the pipe; the electronic expansion valve has more precise control and more stable operation.



- When the outdoor environment is 35°C, the outlet refrigerant of the heat exchanger is cooled to 37.1°C, and the primary and secondary supercooling can achieve degree of 11.2°C.

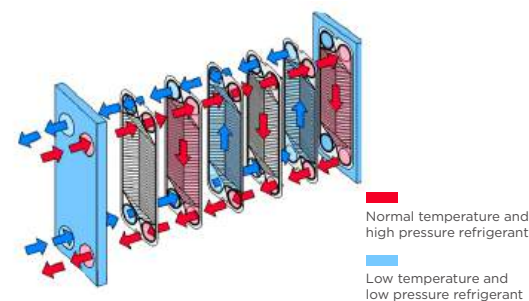


- The high-efficiency plate heat exchanger is selected as the secondary subcooler to further cool the refrigerant at 37.1°C to achieve subcooling at 36°C, further reducing the flow resistance of the refrigerant, which is conducive to improving the energy efficiency of the system and increasing the length of piping, while improving the cooling and heating effects and system reliability.

\* Note: Applicable to some models



Plate heat exchanger



Schematic diagram of plate heat exchanger circulation

## 1.6 Intelligent Inverter

- The unit uses multiple sets of high-precision, high-efficiency and high-reliability intelligent inverters to control the compressor and fan motors, making the control more flexible, efficient and intelligent.

### Intelligent inverter

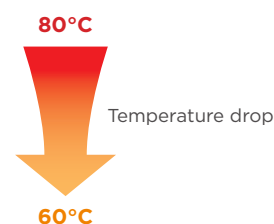
- 1) It can effectively reduce high-order harmonic components, motor vibration, torque fluctuation and noise;
- 2) It can ensure the smooth start of the compressor, reduce the starting current of the compressor, and reduce the impact on the power grid; increase the operating frequency range of the compressor;
- 3) Ultra-wide voltage operating range, stable operation within the three-phase 243V-460V voltage range;
- 4) It has multiple protection functions such as undervoltage, overvoltage, overcurrent, and overtemperature to ensure the efficient and reliable operation of the system.



## 1.7 Surrounding refrigerant cooling technology

- The outdoor unit's inverter module is cooled by refrigerant to ensure that the inverter module can be effectively cooled in a high-temperature environment, reduce the working temperature of the frequency conversion module, and improve the reliability and service life of the electronic control system. It also prevents poor heat dissipation under extreme conditions, such as due to the periodic stop of the fan.

### Electric control system



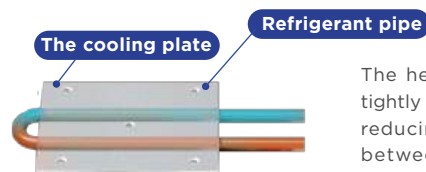
### Air cooling heat dissipation

Through the fan (fan) to strengthen the ventilation, strengthen the cooling effect, to maintain stable and reliable system operation.



### Refrigerant radiator

The wraparound refrigerant radiator can stably and efficiently take away the heat in the frequency conversion module of outdoor unit, improve the electrical reliability of the unit when working in high temperature environment, and ensure stable and safe operation.



The heat dissipation plate is fitted 360° tightly with the refrigerant tube, effectively reducing the contact thermal resistance between the copper tube and the heat dissipation plate, and the heat dissipation performance is superior.





# HIGH EFFICIENT ENERGY-SAVING AND ENVIRONMENTAL FRIENDLY

The global climate is facing severe challenges, in order to achieve the "dual carbon" goal, it has become an urgent issue for enterprises to control carbon emissions effectively, improve energy efficiency and reduce energy consumption. TCL CAC follows the product design concept of high efficiency, energy saving and low carbon, use high-quality components of efficient refrigeration and leading refrigerating technology, to achieve building air-conditioning systems Integrate the goal of green, reliable and efficient energy management.



ODU standby mode



"DISO" loop design



Stepless inverter technology



RoHS certification



High energy-efficient compressor



R410A refrigerant



Variable evaporating/condensing temperature adjustment technology





## 2.3 Authoritative attestation

- The TMV6+ series full inverter VRF units, through the compressor core frequency conversion technology upgrade, the overall optimization of the refrigeration system and the control system, makes the unit energy-saving performance even better, and has passed the national first-level energy efficiency standard certification.



## 2.4 DC inverter scroll compressor\*

- The DC variable frequency compressor adopts an asymmetric scroll structure to effectively reduce the leakage loss of refrigerant gas during suction and inside the compression chamber, to improve the efficiency and reliability of compressor operation.



### Optimized asymmetric vortex line

Using new type of asymmetric scroll profile can reduce leakage loss and ineffective suction overheating, which is more suitable for APF conditions and improves compressor efficiency.

### Concentrated winding motor

The coil height of the concentrated winding motor is reduced, the copper loss is less the efficiency is higher in the middle and low speed areas, and it is more suitable for APF conditions.

**\*Note: EVI compressor is optional**

### Suction directly

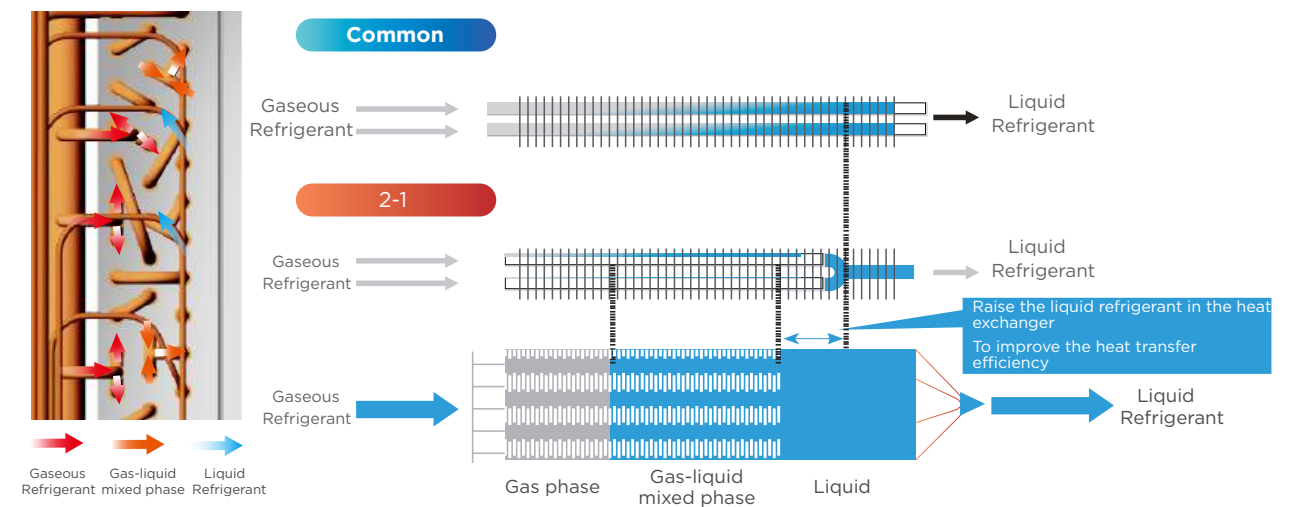
Small suction preheating, high volume efficiency

### Intermediate pressure servo mechanism

The intermediate pressure is dynamically adjusted according to the operating pressure to achieve axial flexibility, optimize the orbiting and fixed scroll teeth, and improve product performance.

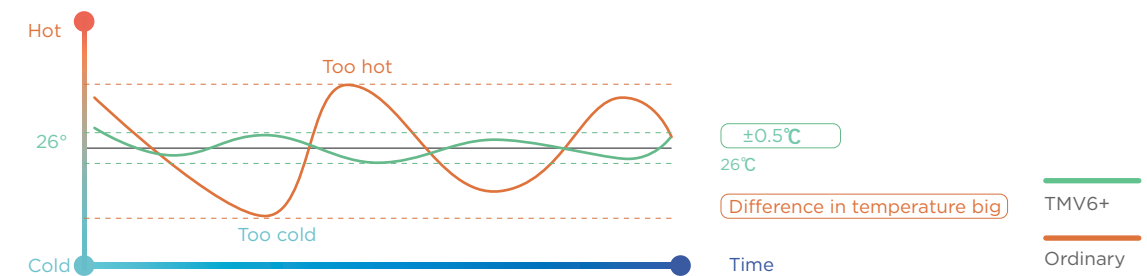
## 2.5 High efficiency "2-1" refrigerant flow

- Compared with gaseous refrigerant and liquid refrigerant, gas-liquid mixed phase refrigerant has higher heat exchange efficiency. This circuit can not only increase the amount of liquid refrigerant but also increase the flow rate of the refrigerant and increase the heat exchange efficiency.



## 2.6 Variable evaporating/condensing temperature regulation technology

- The self-adaptive adjustment of evaporating and condensing temperature can ensure that when the air conditioner is running, the refrigerant flow can be accurately controlled according to the demand, and the evaporating/condensing temperature can be automatically adjusted to reduce temperature fluctuation, to achieve the effect of energy saving and constant temperature.

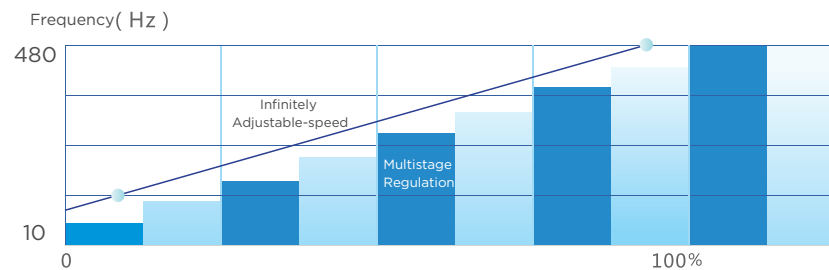




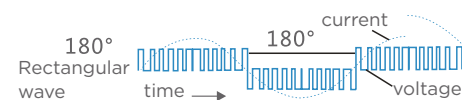
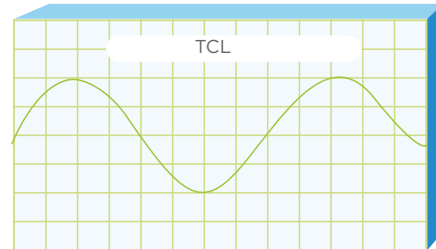
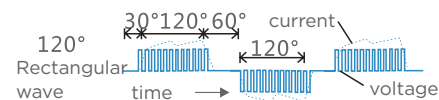
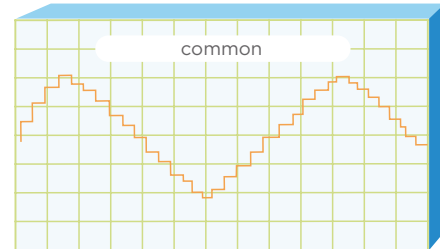
## 2.7 0 ~ 480Hz stepless frequency adjustment

- The operating speed of the DC inverter compressor can be adjusted continuously and freely according to the change of the system capacity. The accuracy is higher, the stepless frequency conversion is realized, and the sub-adaptive control technology is combined, and the capacity output is automatically adjusted according to the actual control load to ensure a higher level of accuracy. Smooth change curve to meet higher demands for comfort. TCL's TMV6+ can only use broadband compressors and powerful inverter control motherboards for multiple connections. The compressors operate at 0-480Hz broadband, which has more capacity and can better cope with various complex and harsh extreme conditions.

- The unit has industry-leading EER and Integrated Part Load Value IPLV (C)



- The compressor adopts 1280° sine wave vector drive technology, which can obtain an ideal smooth sine wave curve, so that the motor runs smoothly, the electric energy efficiency is higher, and the harsh sound is reduced.
- Vector control technology effectively suppresses high magnetic harmonic current and electromagnetic noise, and has passed the national EMC electromagnetic interference test



## 2.8 Four seasons energy-saving mode

- Select the automatic energy-saving mode, the system optimizes output according to changes in ambient temperature, realizes automatic control of energy-saving in all seasons, and improves the overall energy efficiency of the unit's all-season operation.



## 2.9 ODU standby mode

- When there is no need for cooling and heating indoors, the control system issues a command to cut off the power supply of the outdoor heating and power devices of the electric control module. The standby power of the outdoor unit is as low, which is low-consumption and energy-saving.



## 2.10 Multi-priority modes, VIP priority service

- The TMV6+ system can be set with a variety of operating modes, cooling only/heating only/cooling priority/heating priority/VIP priority/first opening priority to prevent mode conflict.



Response only  
coolong



Respond only  
heating



Cooling priority



Heating priority



VIP priority

## 2.11 R410A High-efficiency environmentally friendly refrigerant

- R410A is an HFC refrigerant that does not damage the ozone layer. Using R410A can increase the COP and protect the ozone layer. It is an efficient and environmental- friendly refrigerant.
- R410A is non-toxic and is a "non-flammable refrigerant".



## 2.12 RoHS Certification

- TMV6+ full inverter VRF unit is highly efficient and environmentally friendly. Seiko builds global quality and has passed EU RoHS certification.







## COMFORTABLE AND HEALTHY ENVIRONMENT

People's demand for a healthy air environment is constantly escalating. The improvement of air quality in buildings is more and more important. TCL intelligent VRF has been seeking technical innovation to provide people with a comfortable and clean, healthy air environment to build people's high-quality life.



Extreme fast  
cooling and heating



Constant  
temperature



Silent-mode



Comfortable  
soft wind



Fresh air



Auto restart  
function



Intelligent defrost  
technology





### 3.1 Constant temperature

- Multiple sensors detect the real time temperature of the system to make sure the indoor temperature fluctuation within  $\pm 0.5^{\circ}\text{C}$ .

#### Multi-electronic expansion valves

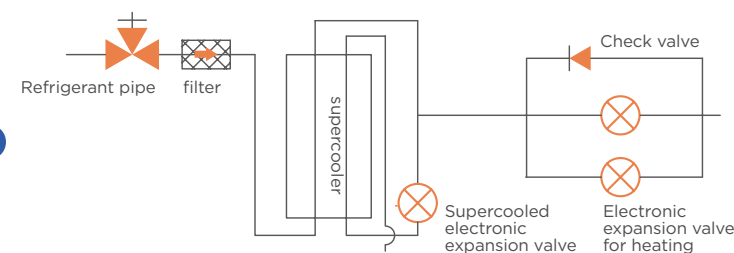
- The outdoor unit has multiple electronic expansion valves with a control accuracy up to 3000 level, which can adjust the refrigerant circulation and control the compressor overheat accurately to get a precise temperature control.



#### Electronic expansion valve

High control accuracy

**480** Level



#### High-precision temperature sensor

- Can detect accurate temperature with precision  $0.5^{\circ}\text{C}$



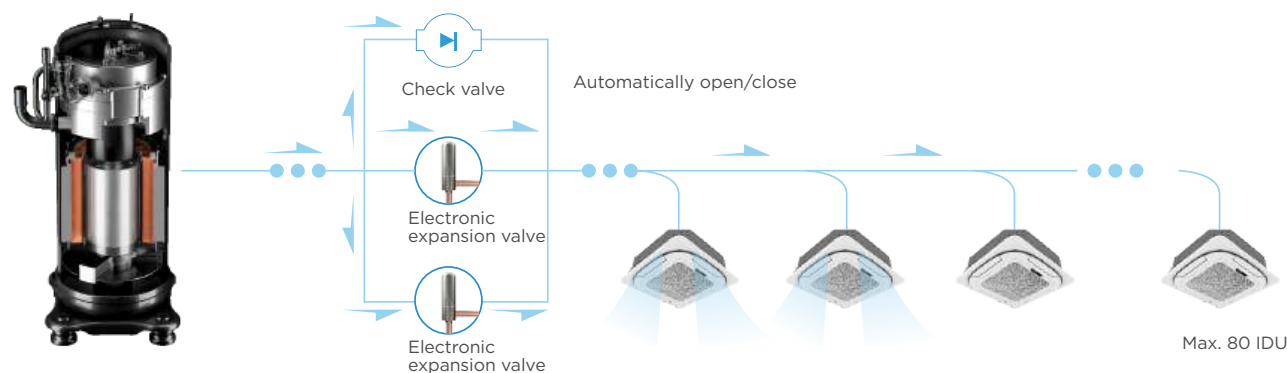
#### Dual pressure sensors

- High precision and sensitivity can detect the temperature fluctuation quickly and accurately.



#### Refrigerant liquid by-pass technology

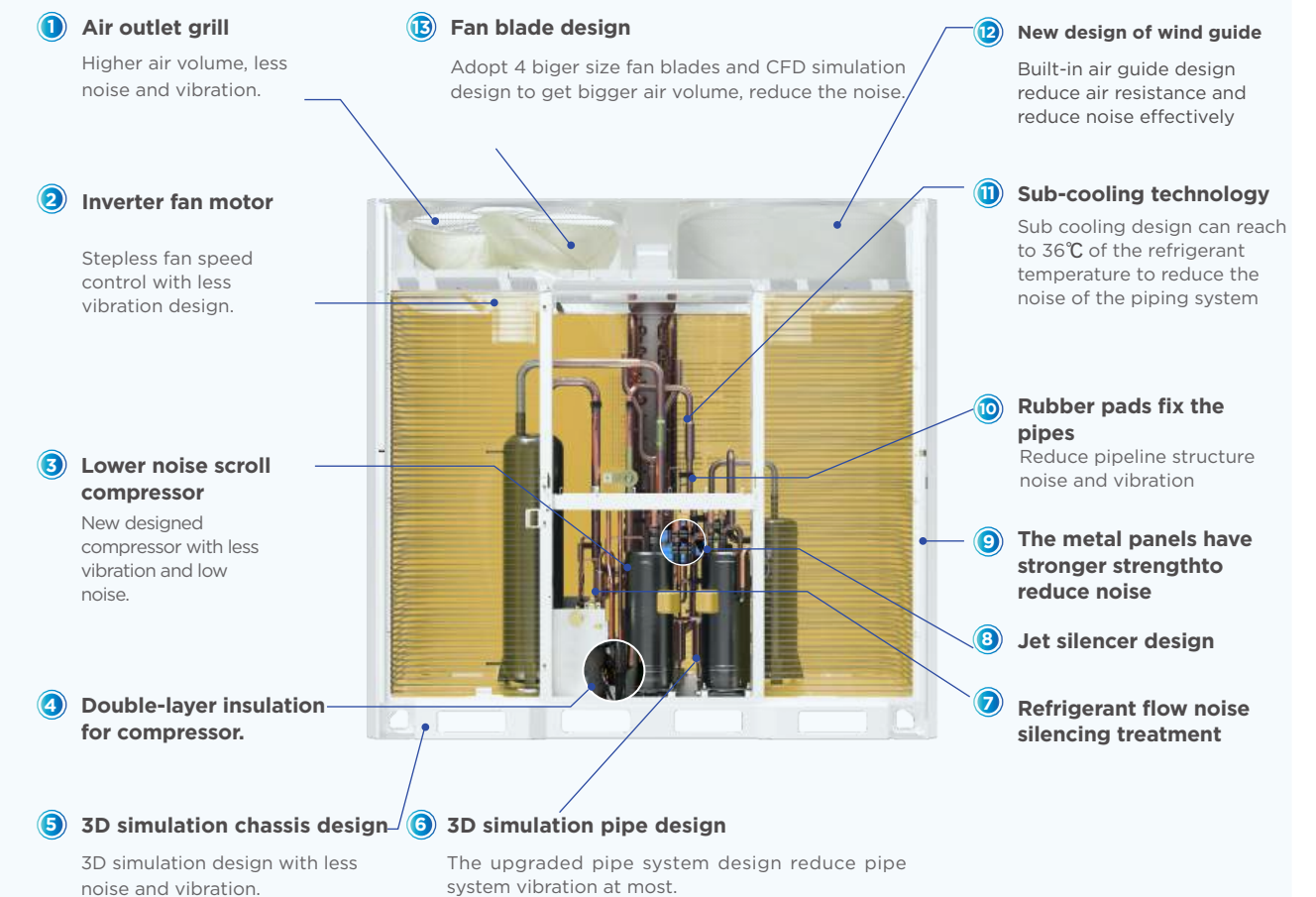
- This technology is mainly used to increase the refrigerant flow and improve the cooling effect when the indoor side refrigerant flow is insufficient.



### 3.2 Multiple silence technology

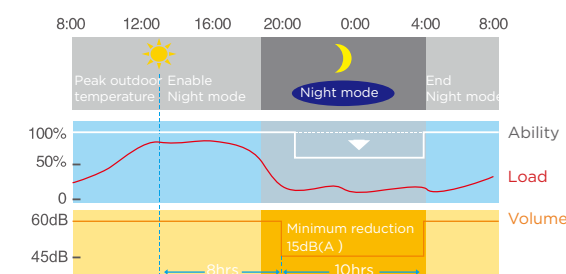
#### 13 items of silent improvements

The structure of each component is involved in optimized airflow analysis, which can not only operate with low noise, but also ensure the air volume and operation effect of the outdoor unit.



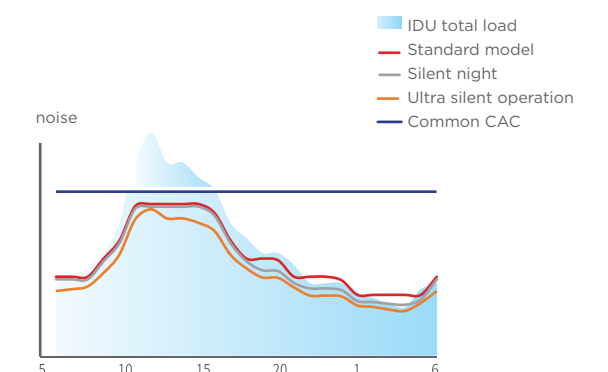
#### Night silent mode

- The ODU can automatically check the highest ambient temperature and record the time, then to start the silent operation mode after 8 hours, system returns to the normal mode after running for 10 hours. To make the ODU running noise to as low as 45dB(A).



#### Super silent mode

- In this mode, the running noise of the system will be reduced to be 40dB(A).







### 3.3 Fresh air solution

- TCL VRF can supply the multiple fresh air solutions such as fresh air processing units , ERV and air handing units etc.



### 3.4 Comfortable soft wind panel (optional)

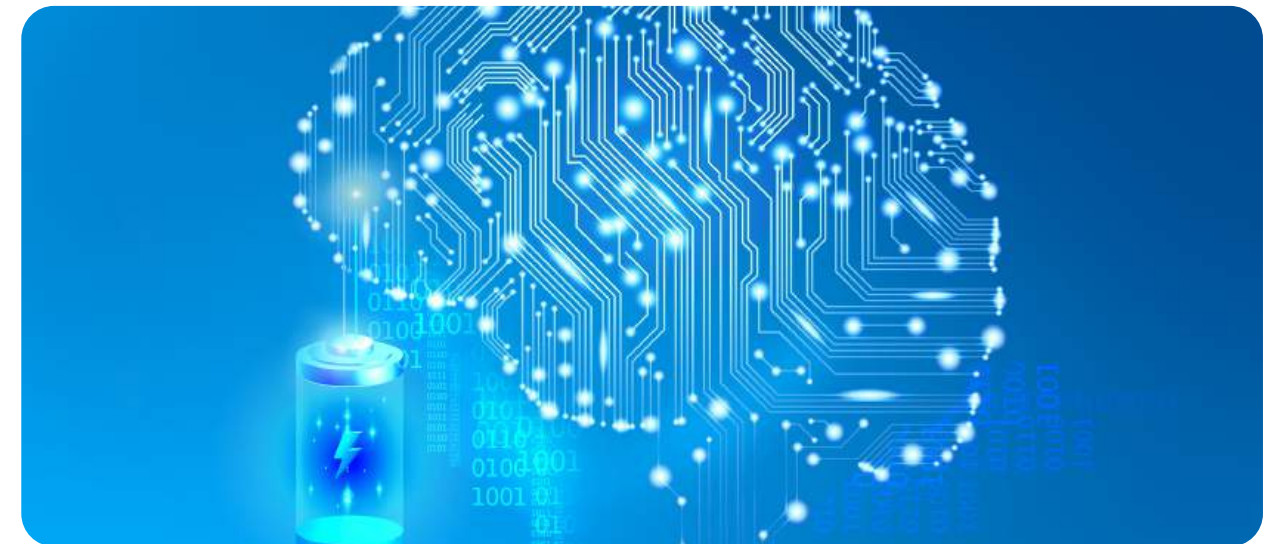
- The upgraded panels have a beautiful apperance and provide comfortable air supply .



### 3.5 Intelligent auto-restart function

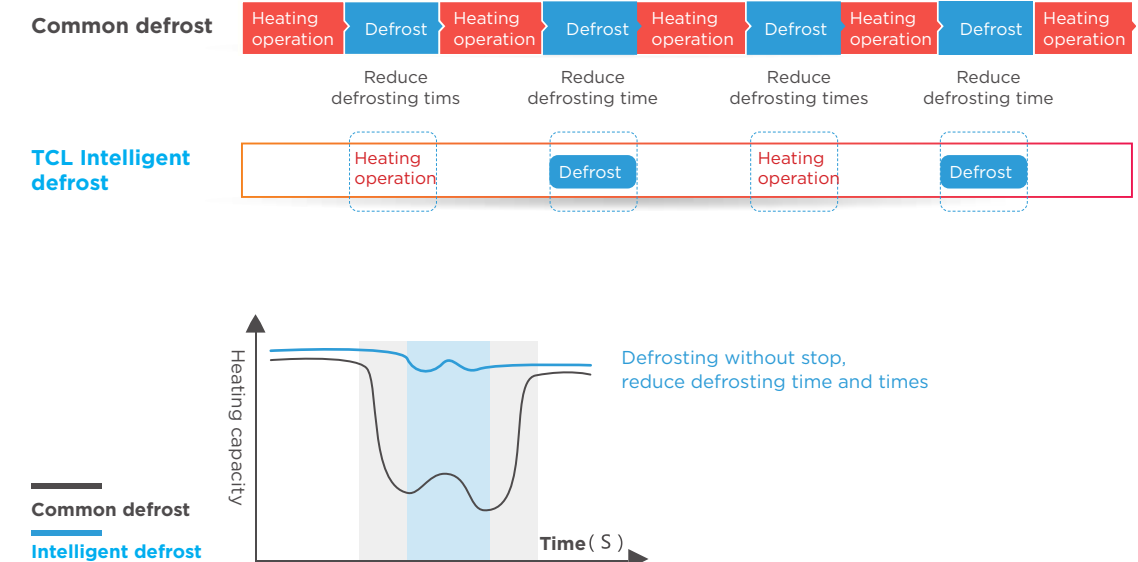
- When a sudden power failure occurs, system will automatically store the state of the machine before the power failure. When the machine is restarted, the system will automatically restart with the settings before the power failure (operation mode, set temperature, fan speed, etc).

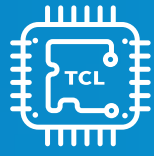
Note: This function can also start manually



### 3.6 Intelligent defrost technology


- The system can automatically decide the time to defrost according to the operation data and heating capacity.
- Under high humidity condition, the system will defrost in advance to keep the room comfortable.
- During defrosting, the system will close the indoor to avoid the cold air .








# INTELLIGENT - OPERATION AND MAINTENANCE CONTROL


TCL full DC inverter VRF systems can provide the intelligent operation and maintenance functions, which provides an efficient solution for the intelligent operation and maintenance of buildings, It ensures energy-saving and high-efficient operation and intelligent management.


- 

Non-polar CAN bus communication technology
- 

Multiple control solutions
- 

TCL remote intelligent service center
- 

TCL CAC management system
- 

BMS gateways
- 

AHU connection kit



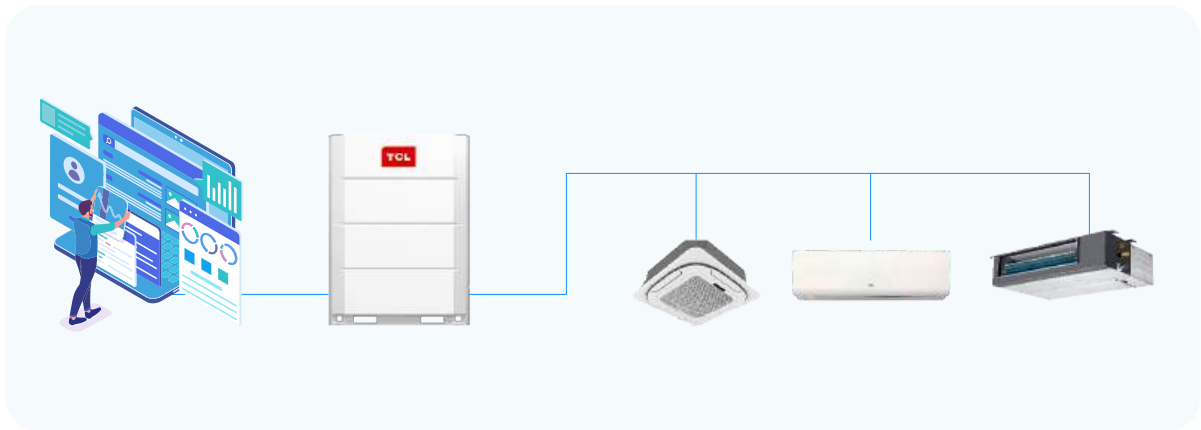




## 4.1 Intelligent Control

### Smart commissioning

- During installation, the system automatically detects the number of indoor and outdoor units, communication link status, and real-time feedback of installation abnormalities, making installation simple and easy.



### Intelligent detection

- When the equipment is running, the system record the best running status intelligently . And it will adjust the compressor frequency and the step of the EXV for next time automatically .



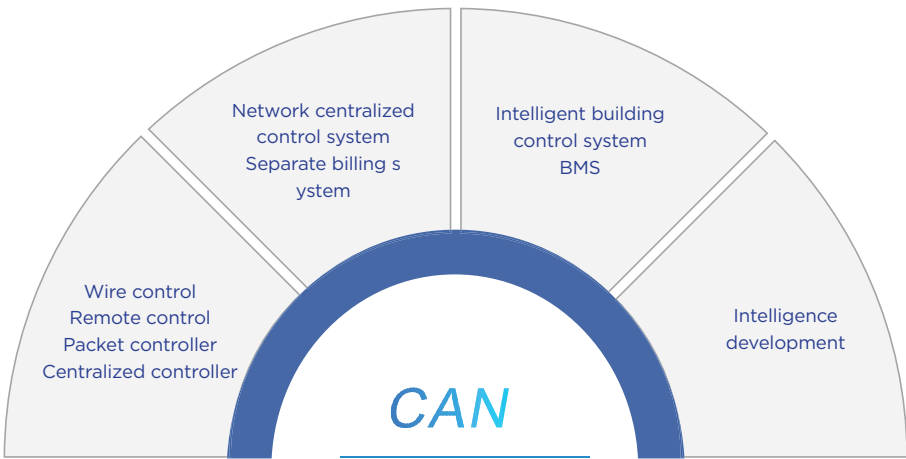
### Smart detection

- During system operation, data will be recorded , abnormalities will be automatically detected and raised.



## 4.2 Non-polar CAN bus communication technology

- TMV6+ adopts CAN bus communication technology, which is a communication technology applied in the field of automobile and military industry.



	TMV6 VRF(CAN communication)	Other similar products in the industry(RS 485 communication)
Reliability	High reliability and stable network	The reliability is unstable and easy to be paralyzed
Communication efficiency	Up to 100kbs	About 10kbs
Communication distance	About 2000m	About 1000m
Communication line polarity	No polarity, easy to debug	Polarities need to be distinguished for installation
Scalability	Easy to plug and play	To add new device, the software must be changed, and the scalability is poor



4.3 Multiple control solutions

TMV6+ provides a variety control solutions for customers to choose .



Remote Controller

- Cooling / dehumidification / fan / heating / automatic and other operation settings
- Temperature / fan speed setting
- Sleep/timer/swing/turbo and other functions



Wired Controller

- Cooling / dehumidification / fan / heating / automatic and other operation settings
- Temperature / fan speed setting
- Sleep/timer/swing/turbo and other function settings
- Monitoring function, big LCD screen displays the operation status of the unit
- Remote control signal available



Central Controller

- 7 inches and colorful screen display, beautiful appearance, touch screen, easy operation.
- A variety of combinations, single or multiple machines can be operated simultaneously.
- Up to 16 systems and 1280 indoor units can be connected, easy to set indoor units parameters.
- It also has the schedule setting and historical fault query function.

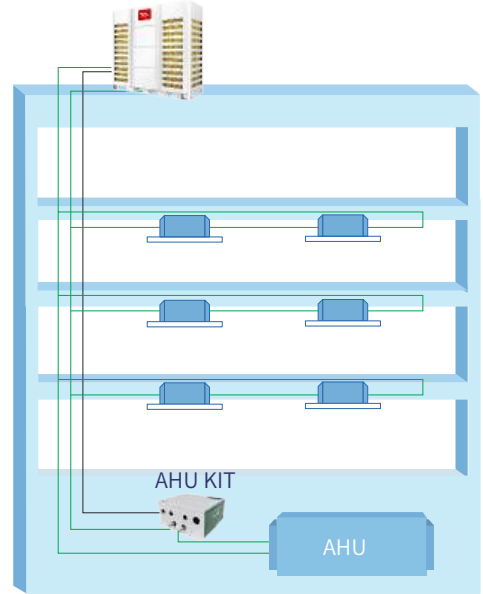


4.4 AHU Connection KIT

Solution to extend TCL VRF technology to third party Air Handling Units.

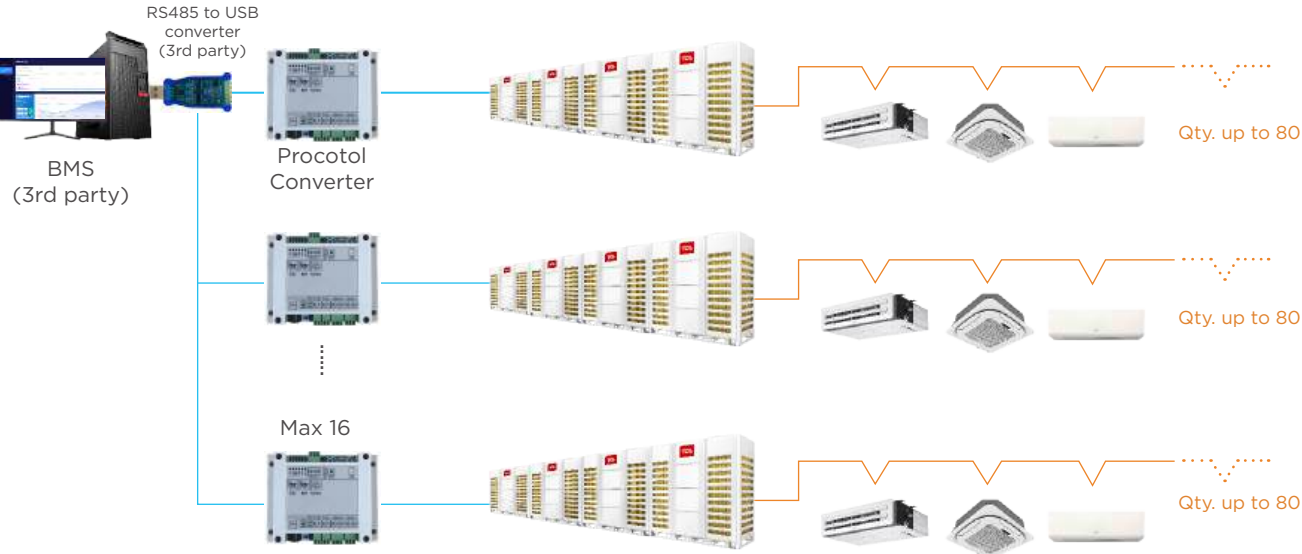
- ✓ Easy for connecting to third party AHU
- ✓ Setting capacity by DIP
- ✓ Remoter or wire controller can be chosen
- ✓ 3 steps fan motor speed, Low/Mid/High
- ✓ Error status: No error or error occurred

Communication wire  
Refrigerant pipe



Type	Model Name	Capacity	Pipe dimension	Combination				Description
				ODU	Motor	Pump	Warning signal	
Communication Kit	TMV-AK1	8-20Kw	Φ7.94	TMV6	✓	✓	✓	Room air supply by remote controller or wiring controller
	TMV-AK2	20-40Kw	Φ12.7		✓	✓	✓	
	TMV-AK2	40-65Kw	Φ15.88		✓	✓	✓	

4.6 BMS Gateways







# STABLE AND RELIABLE PERFORMANCE

TCL has always insisted on making high-quality products relying on advanced manufacturing equipments and deep technical accumulation. Excellent performance guarantees the stability operation.

TCL VRF can make sure stable and high-efficient operation facing the complex and changeable working conditions.



Inverter module cooling protection technology



Six levels oil return technology



High precision refrigerant control technology



- 30 ° C ~ 56 ° C  
Ultra wide operating temperature range



Pressure self-regulating technology



Triple backup function



Rotation function



Multiple protections





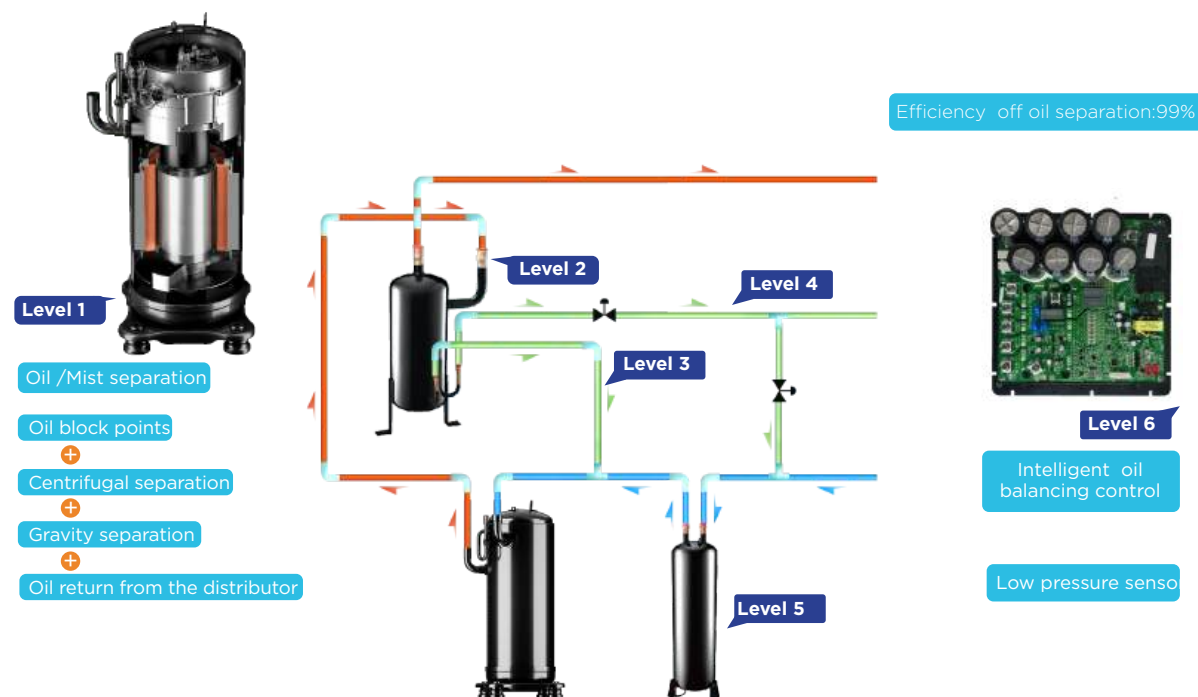
## 5.1 6- Stage oil return technology

- TMV6+ is at the leading position on the oil separate, oil return, oil balance and storage technology. The oil system equipped with precise 6 grade management to make sure compressor safety, stability and reliability.

### Multistage Oil Control Technology

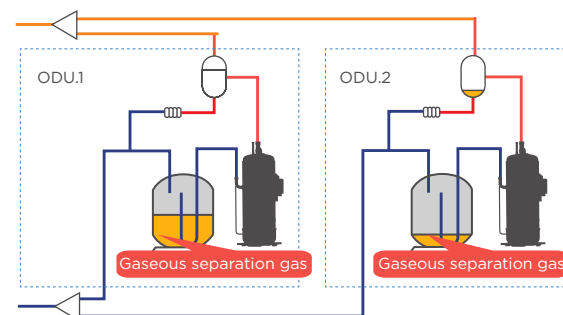
- The VRF system have sufficient and balanced oil in working condition to ensure safety and avoid potential oil shortages.

- Level 1: Compressor internal oil separate
- Level 2: Compressor external oil separate
- Level 3: High-efficiency centrifugal oil separator
- Level 4: Oil balance pipes between compressors to ensure compressors running normally
- Level 5: Automatic oil balance system improves the compressor reliability
- Level 6: Smart oil return program to ensure the oil return completely



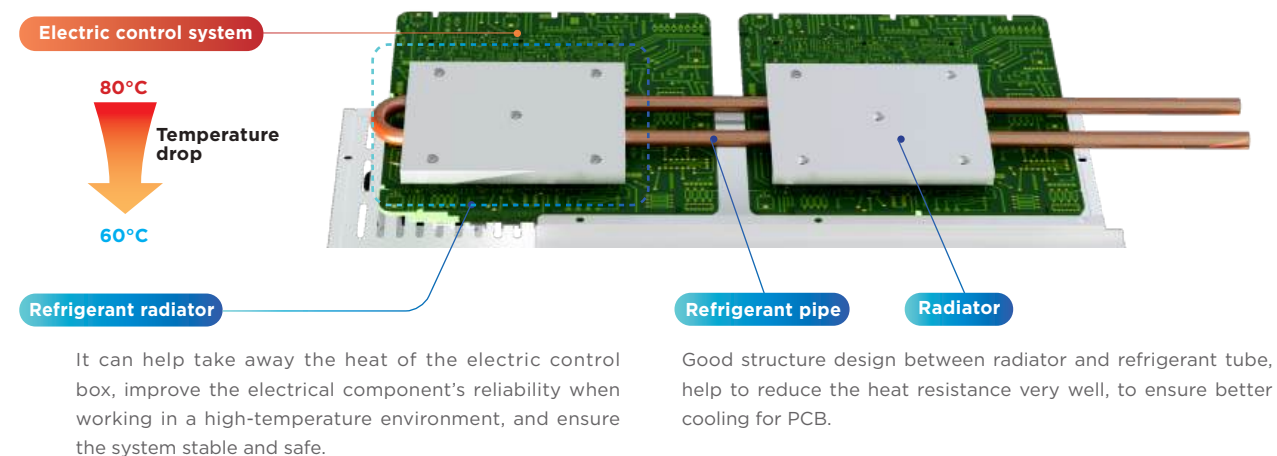
### Automatic oil balancing

- Oil balancing system improves compressor oil storage and reliability, which also ensures the unit in good performance in cooling / heating mode.



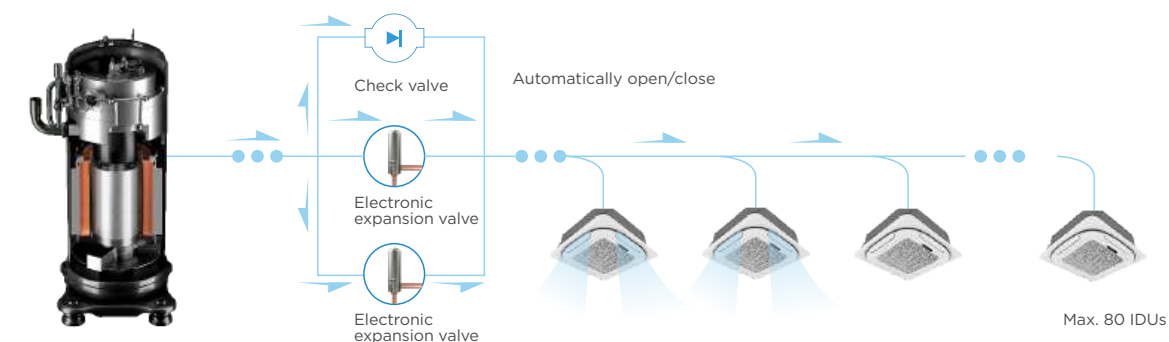
## 5.2 Inverter module cooling protection

- When the outdoor units are running, high temperature will decrease the compressor frequency, reduce the cooling capacity, and shorten the life time. Traditional air-cooled method can make high thermal conductivity and worse heat dissipation performance, but TCL module cooling technology can eliminate the heat of PCB, reduce the working temperature of inverter module and improve the PCB system reliability.

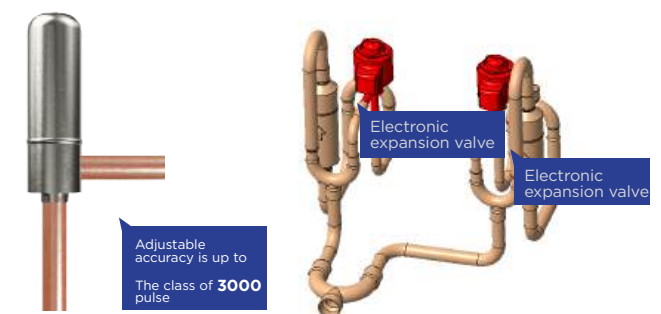


## 5.3 High precision refrigerant control function

- The upgraded technology allows the system to manage the volume of refrigerant, and also reduce the refrigerant in entire system and increase efficiency.
- Liquid bypass control technology use multi-electronic expansion valve, it can adjust the refrigerant flow and control the overheating degree of the compressor, ensure the compressor to be highly efficient, safety and reliable.



- Dual electronic expansion valve used for outdoor unit, adjust accuracy can reach 3000 pulses, can adjust the refrigerant flow for the whole system.
- Silent electronic expansion valve used for indoor unit, precisely control refrigerant flow, improve the comfort and reliability.

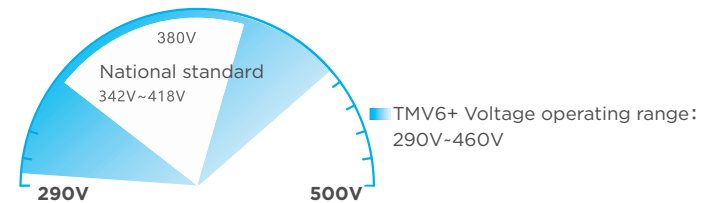


\* Note: General adjustment is 480 level, can be customized to 3000 level adjustment



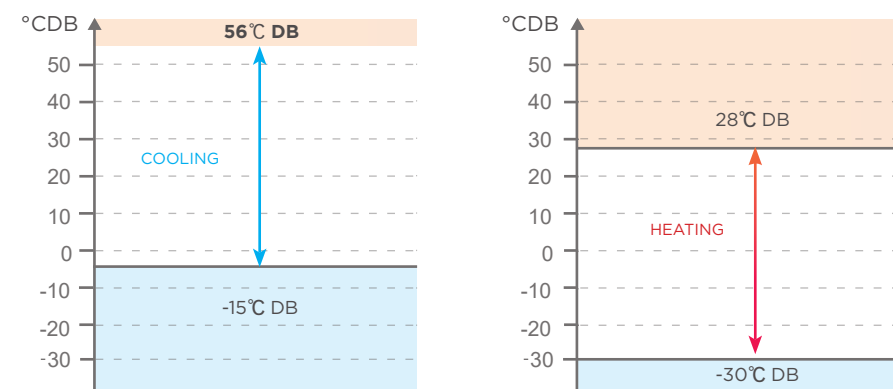
## 5.4 Wide voltage range

- The unit can operate in the range of voltage 290V-460V (International standard voltage 380V±10%), satisfy all kinds of voltage conditions.



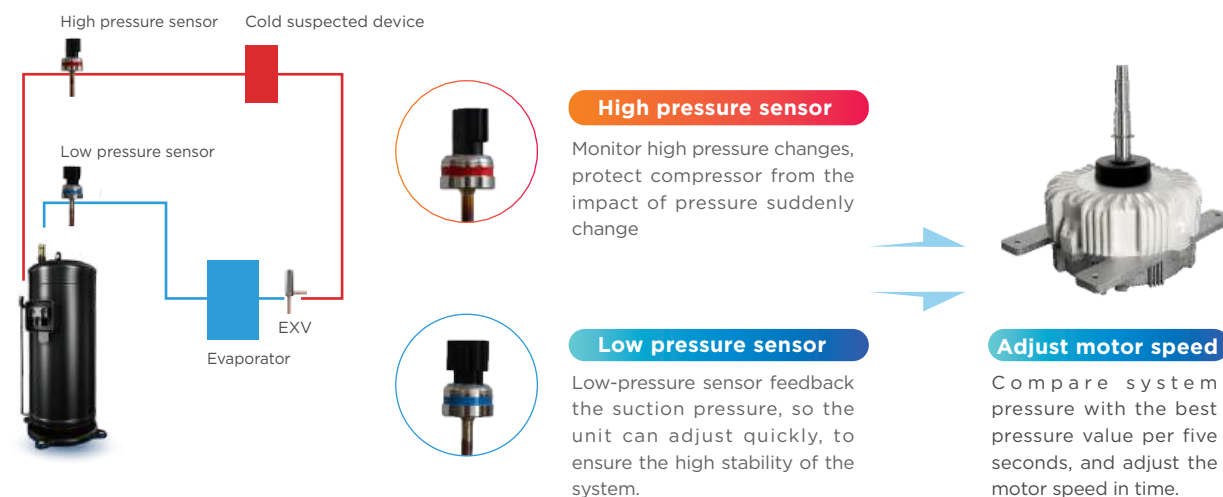
## 5.5 Wide operation temperature range -30°C ~56°C

- Wide operation range, cooling: -15°C ~56°C, heating: -30°C ~28°C.



## 5.6 Pressure self-adjustment technology

- Pressure sensor is used to check system pressure, and adjust compressor operation frequency, fan speed, electronic expansion valve, to ensure the system with the best performance



## 5.7 Triple back-up operation technology

### Compressor backup operation

- In units with two compressors, if one compressor fails, the other compressor can run on its own, to ensure the air conditioning system can work stably.



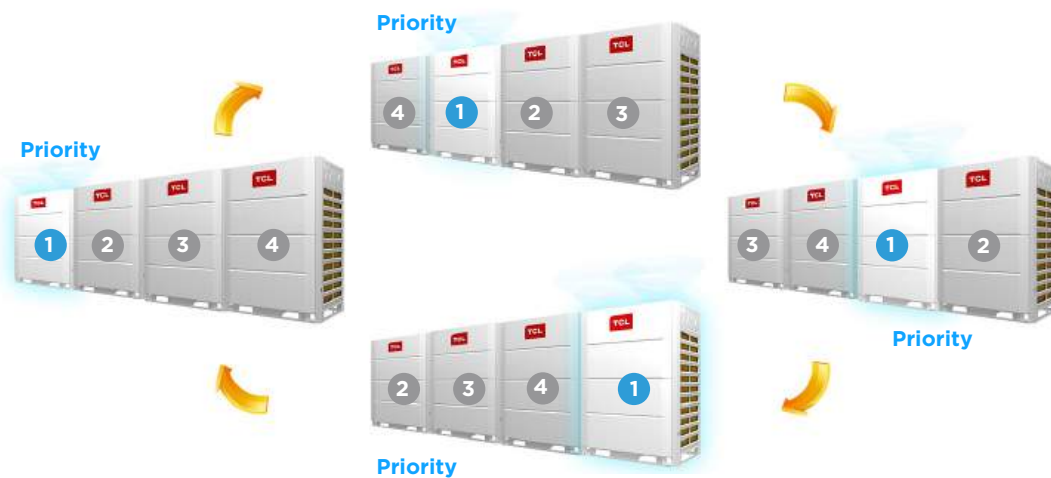
### ODU backup operation

- In a multi-unit system, if one outdoor unit fails, the other modules provide backup so that the system can continue operating.



## 5.8 Rotation operation technology

- If the system is connected to multiple modules, in order to ensure the balance of compressor operation, the automatic control of the microprocessor on the host can realize the automatic rotation operation function between the modules, effectively extend the service life of the unit.



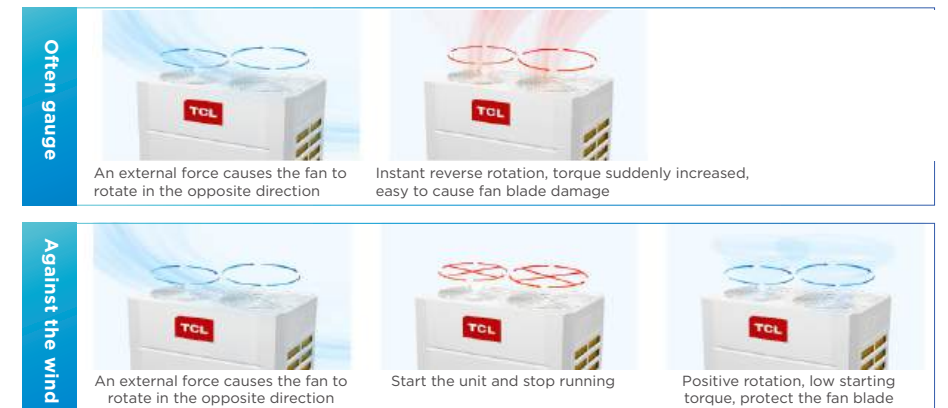
## 5.9 Multiple protection functions

- Multiple protection functions to ensure the safe operation of the system.



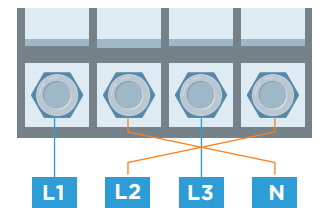
## Anti-adversity function

- The external force blows the outdoor unit fan to rotate in reverse. At this time, start and stop the rotation of the fan, and then restart the fan motor in a forward rotation according to the normal procedure, so as not to damage the fan blades due to excessive starting current.



## Phase sequence protection

- When the power cord of the outdoor unit is connected incorrectly, the circuit will start self-protection to avoid impact and damage to the main control board, inverter module and compressor. Ensure the normal operation of the air conditioner, without accidental electrical damage, fire, etc.



## Low voltage recognition function

- Automatically recognize the working voltage, when the voltage is too low, give an early warning in time, and control the power consumption and capacity output of the multi-line system through the corresponding limit frequency.

## Lightning protection

- The outdoor unit has a built-in anti-seismic module, which has anti-seismic and anti-interference functions to ensure the safe and stable operation of the system in bad weather.



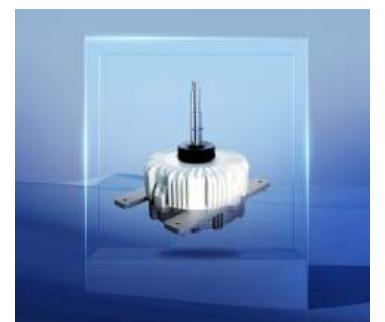
## Compressor overload protection

- When the compressor casing or motor temperature is too high, the circuit will automatically cut off to prevent the compressor from overloading and cause electrical damage, fire, etc.



## Motor overheating protection

- When the current exceeds the set value, the temperature will rise, and the motor will be cut off in time during overcurrent operation to protect the motor from burning due to overload.



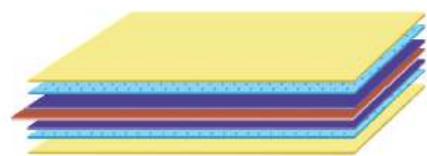




## 5.10 Anticorrosion design

### Hydrophilic aluminum fin

- It adopts anti-corrosion and anti-oxidation hydrophilic aluminum foil heat exchange fins, which have multiple protections of lubricating coating, hydrophilic coating and corrosion-resistant coating.



■ Lubrication layer ■ Hydrophilic coating ■ Corrosion resistant coating

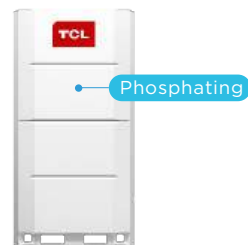
### Special corrosion-resistant coil

- Use special anti-corrosion coils. The base layer of ordinary galvanized sheet is increased with electrophoretic layer to achieve anti-corrosion effect. The coil fixing screws are stainless steel screws.



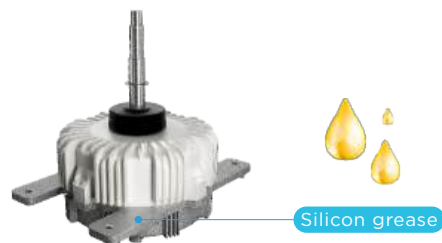
### Thick sheet metal design

- The surface of the sheet metal parts is phosphated and coated with special anti-corrosion materials. It improves the salt spray resistance and heat and humidity resistance, and greatly improves the anti-corrosion ability of the sheet metal.



### Motor protection upgrade

- Improve the protection level of the motor. The motor shaft is made of stainless steel. During the installation process, the motor shaft, nuts, gaskets and exposed motor shaft are coated with anti-rust grease, and the motor body screws and top cover screws are coated with silicone grease.



### Electric control anti-corrosion

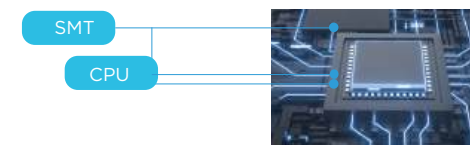
- The main board is equipped with moisture-proof glue, the sheet metal surface of the electric control box is treated with anti-corrosion spray, and the top of the metal casing fan capacitor is sprayed with anti-corrosion paint separately.

### Pressure vessel

- It adopts surface phosphating treatment with good anti-corrosion performance.

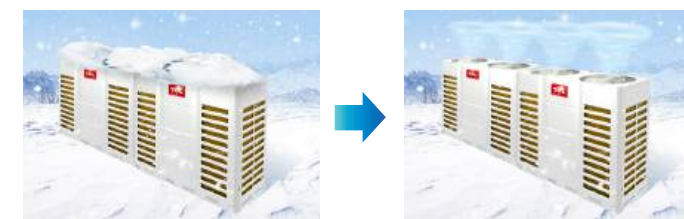
## 5.11 Electronic control board SMT placement technology

- The electronic control main board adopts SMT patch sealing technology to improve the anti-clutter interference, to ensure that the main board is not affected by wind, sand, high temperature and high humidity, and to make the main control board longer.



## 5.12 Anti-snow function

- In the snowy weather conditions in winter, in order to prevent the snow from adversely affecting the top of the outdoor unit fan, you can turn on anti-snow mode, the fan starts running to clear the snow to ensure the normal operation of the unit.



## 5.13 High-altitude adaptive technology \*

- In high-altitude areas where the air is thin, the unit is prone to insufficient capacity. The TMV6+ outdoor unit can automatically recognize the altitude position. When the altitude is too high and the capacity is insufficient, the high altitude adaptive mode will be activated for automatic compensation, which will greatly increase the fan speed and increase the air volume.

\*Optional WIFI module required

## 5.14 Fault self-check

- TMV6+ series DC inverter intelligent multi-connected central air-conditioners are equipped with electronic control fault self-diagnosis function, which can accurately locate the faulty parts and display the fault code when a fault occurs, thus improving the maintenance efficiency.







## CONVENIENT INSTALLATION AND MAINTENANCE

For different application scenarios, different installation environments should be taken into consideration. The TMV6+ takes every detail into consideration, in the product appearance design and function, which greatly improves the convenience of installation, speeds up the installation speed, and also improves the convenience of maintenance.



15 basic modules, satisfy all kind of requirement



Big-capacity module design, easy installation and space saving



Super long refrigerant pipeline design, flexible structure



Auto-refrigerant detecting and autocharging function



130Pa The highest static pressure for outdoor unit



Convenient for the transportation, installation and commissioning



Auto-addressing function



ODU without oil balance pipe, compact design



Emergency power-off function for indoor unit maintenance



Commissioning software

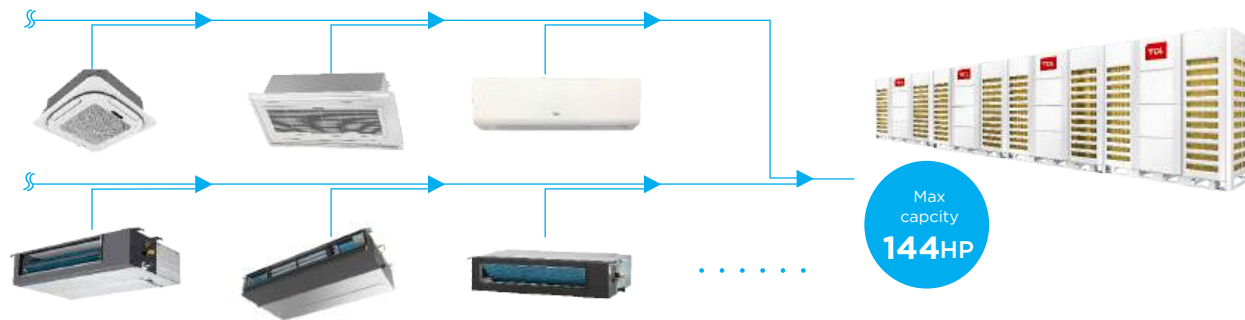






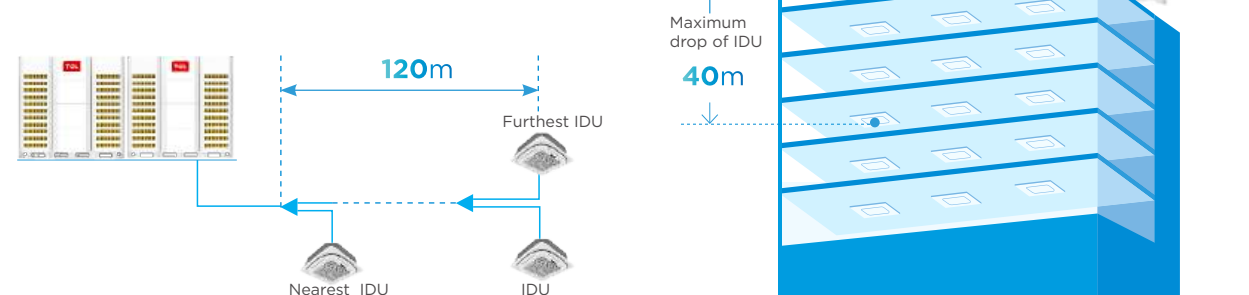
## 6.1 Intelligent multi-connection, easy to cope with the spatial layout

- In order to meet the needs of different building types for air conditioning equipment, 15 basic outdoor unit modules are provided. The modules of 8-36HP can be combined freely, and the maximum combination can reach 128HP. There are 9 categories of indoor units, with more than 100 models to choose. The maximum internal unit capacity is 56kW. Outdoor units and indoor units can be freely matched and multi-connected. A system can connect up to 80 indoor units to meet the needs of different buildings.



## 6.2 1100m Super long piping design

- The industry-leading piping lenTMV6+h, with a total length of 1100m, makes floor design more flexible.
- The max distance between the IDU and the ODU (the higher ODU) is 100m. The max distance between the IDU and the ODU (the lower ODU) is 110m.
- The maximum distance between indoor units is 40m.
- The maximum actual single pipe length is 220m. The maximum equivalent single tube length is 240m.
- The equivalent length from first indoor distributor to last indoor unit is 120m.

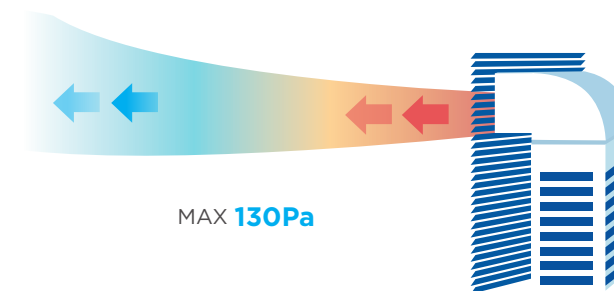


## 6.3 Single system can connect 80 IDUs

- TMV6+ adopts the international advanced CAN bus communication technology, and one system can connect up to 80 indoor units, ensure stable and reliable in operation, realizes a large-capacity configuration of a single system, and is more flexible in engineering applications.

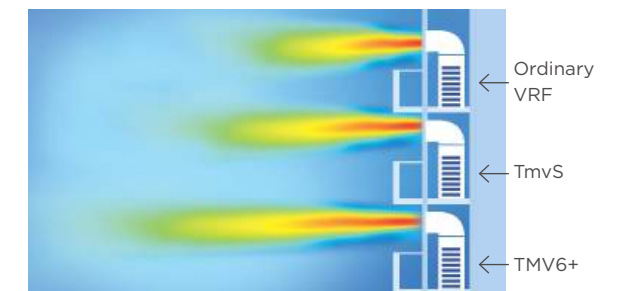
## 6.4 130Pa external static pressure

- The system achieves a higher external static pressure, up to 130Pa\* blades through the joint action of new fan blades and fans with larger air volume. Inverter fan motor. 85Pa) to ensure the layered or concentrated heat dissipation effect of the outdoor unit.



Better heat dissipation, better refrigeration effect

\* Note: 130Pa static pressure needs to be customized



VRF static pressure contrast diagram

## 6.5 Automatic refrigerant judgment and charging

### Automatic refrigerant judgment

- According to the operating status of the system, it will ensure real-time monitor of the amount of refrigerant, intelligent judgment, stable operation of the system.



Refrigerant automatic judgment



## 6.6 Compact design and convenient transport

- The outdoor unit module has only 4 basic structures with the same height, which simplifies the design process and improves the flexibility of the system.
- Elevator transportation is convenient, no need large equipment such as hoisting, which effectively simplifies the transportation work and saves construction time and manpower.



## 6.7 One-button commissioning function

- You can choose to perform a one-button trial running on the outdoor unit side, or perform a one-button trial running on any indoor unit side to achieve cooling and heating trial operation, no need turning on the indoor units one by one, facilitating on-site commissioning and improving the quality of project site construction.

## 6.8 Non-polarity communication connection

- CAN bus communication mode is applied between indoor and outdoor unit, no need to distinguish between positive and negative poles, and the installation is simpler and more efficient.

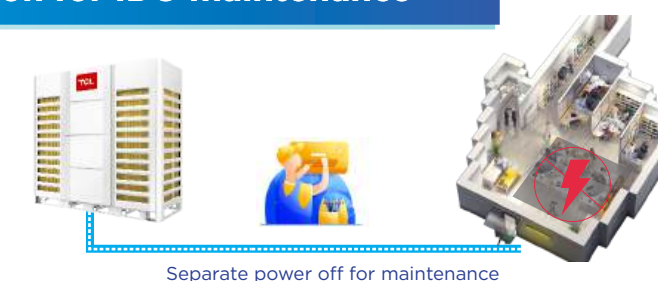
## 6.9 360°pipe connection design

- The units can connect the pipes in multiple directions freely, such as the front side, the left side, and the right side, to make the installation more convenient.



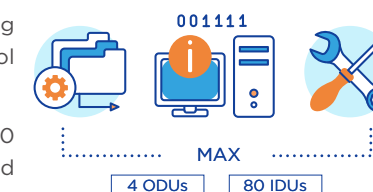
## 6.10 Emergency power-off function for IDU maintenance

- If an indoor unit needs to be powered off for maintenance due to failure, in order not to affect the operation of the entire system, the indoor unit can be powered off separately for maintenance, and other indoor units in the system can operate normally.



## 6.11 Commissioning software

- The commissioning software is specially developed for TCL air-conditioning system, which can carry out real-time status monitoring and loading control of the air-conditioning system.
- It can monitor the real-time operation parameters of 4 outdoor units and 80 indoor units in parallel system; And the operating parameters can be showed in Curve; It contains the function of saving the original data of operation, which is convenient for the R & D Engineers to remotely analyze the cause of failure; It also contains the forced load control function of the equipment, which is convenient for loading maintenance verification on the project site.



## 6.12 Auto-addressing function

- The system can realize the automatic allocation of indoor unit address. There is no need to dial code during commissioning, which avoids the trouble of manual setting one by one. It is more intelligent and convenient.







ODU lineup



8 to 16 HP



18 to 24 HP



26to 32 HP



34 to 36 HP

Notes: 1. Specifications are based on the following conditions:  
2. Cooling: Indoor temperature 27℃ DB/19℃ WB, and outdoor temperature 35℃ DB/24℃ WB.  
3. Heating: Indoor temperature 20℃ DB/15℃ WB, and outdoor temperature 7℃ DB/6℃ WB.  
4. Equivalent piping lenTMV6+h:5m; Level difference:0m; Voltage:230V.  
5. Sound Level: Indoor unit sound pressure level, measured at a point 1.5m downward from the unit center.  
6. Outdoor unit sound pressure level, measured at a point 1.0m in front of the unit.  
7. Optional simple wired controller; Universal remote controller; auto-restart(optional); Timer: only one circle.  
8. Due to ongoing product development, specifications are subject to change without notice.

ODU parameters(8-36HP)

Capacity			8HP	10HP	12HP	14HP	16HP	18HP	20HP	22HP	24HP	26HP	28HP	30HP	32HP	34HP	36HP
Model: TMV-VED+***W/AS-D(EC)			252	280	335	400	450	504	560	615	680	730	785	850	900	950	1010
Capacity	Cooling	kW	25.2	28.0	33.5	40.0	45.0	50.4	56.0	61.5	68.5	73.0	78.5	85.0	90.0	95.2	101.0
	Heating	kW	27.0	31.5	37.5	45.0	50.0	56.5	63.0	69.0	75.0	81.5	87.5	95.0	100.0	106.0	112.0
Power	Cooling	kW	5.27	6.44	8.09	9.76	11.25	13.06	15.14	17.67	20.03	20.28	21.93	24.15	26.71	28.94	32.48
	Heating	kW	4.89	5.83	7.08	9.09	10.75	13.29	15.33	16.91	19.23	19.88	21.60	24.68	26.88	28.96	32.84
Current	Cooling	A	8.41	10.27	12.91	15.56	17.94	20.82	24.14	28.19	31.94	32.34	34.97	38.51	42.59	46.15	51.80
	Heating	A	7.80	9.30	11.28	14.50	17.15	21.20	24.45	26.97	30.67	31.70	34.46	39.35	42.87	46.19	52.38
Outdoor unit power supply			380V 3N~/50Hz														
Air volume		m <sup>3</sup> /h	11000	11000	11500	13500	14000	15500	19000	19000	20000	26000	26000	27000	27000	29000	29000
Dimension(L×W×H)		mm	925×845×1780					1340×845×1780				1760×845×1780				1900×845×1780	
Weight	( Net )	kg	215	215	215	230	230	270	315	315	320	380	380	420	420	455	455
Refrigerant	Type	/	R410A														
	Amount	kg	9	9	9	9	9	12	14	14	16	18	18	25	25	28	28
Pipe size	Gas	mm	φ19.1	φ22.2	φ25.4	φ25.4	φ28.6	φ28.6	φ28.6	φ28.6	φ28.6	φ31.8	φ31.8	φ34.9	φ34.9	φ38.1	φ38.1
	Liquid	mm	φ9.52	φ9.52	φ12.7	φ12.7	φ12.7	φ15.9	φ15.9	φ15.9	φ15.9	φ19.1	φ19.1	φ19.1	φ19.1	φ19.1	φ19.1
Noise		dB(A)	56	57	58	59	60	61	61	62	63	63	64	65	65	66	66
Max Current		A	20	22	24	29	33	38	42	46	53	56	59	59	61	70	73

Notes: 1. Specifications are based on the following conditions:  
2. Cooling: Indoor temperature 27℃ DB/19℃ WB, and outdoor temperature 35℃ DB/24℃ WB.  
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7. Optional simple wired controller; Universal remote controller; auto-restart(optional); Timer: only one circle.  
8. Due to ongoing product development, specifications are subject to change without notice.



# Mini VRF

## Full DC Inverter MINI VRF Unit



Powerful



High Efficiency



Comfortable



Stable







## 7.2 Strong Power, Stable Operation

### High efficiency full DC inverter and twin rotary compressor

- TCL Mini VRF use full DC inverter twin rotary compressor, which has high- efficiency both for full load condition and partial load condition, also leads to low noise, stable and reliable operation.



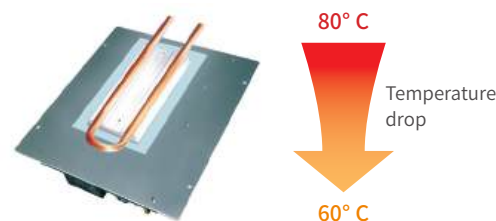
### High efficiency DC fan motor

- The stepless regulation of the fan motor can meet the actual requirement of the capacity output, efficiency of motor is increased up to be 45%, higher efficiency in low speed.



### Electrical control box refrigerant cooling technology

- The refrigerant cooling technology can cool the PCBs in high ambient temperature condition, which improves the reliability, efficiency and lifespan of the MINI VRF units.



### Wide operation temperature range

- The Mini VRF can operate under -20°C to ensure the heating demand, operate up to 54°C to make sure the cooling capacity output with high efficiency and stability.

## 7.3 Energy Saving And Environmental Friendly

### R410A High-efficiency and environmentally friendly refrigerant

- R410A is an HFC refrigerant which does not damage the ozone layer. It is an energy efficient and environmentally friendly refrigerant.
- R410A is non-toxic and is a "non-flammable refrigerant". The composition structure of R410A is not easy to change and very stable.



### RoHS Certification

- The TCL mini VRF unit meets the RoHS environmental certification, which is environmental friendly.



## 7.4 Beautiful Appearance, Upgraded Structure Design

### Simple and elegant appearance

#### The top panel

No screw design to get high-quality structure and improve the strength, more beautiful

#### The front panel

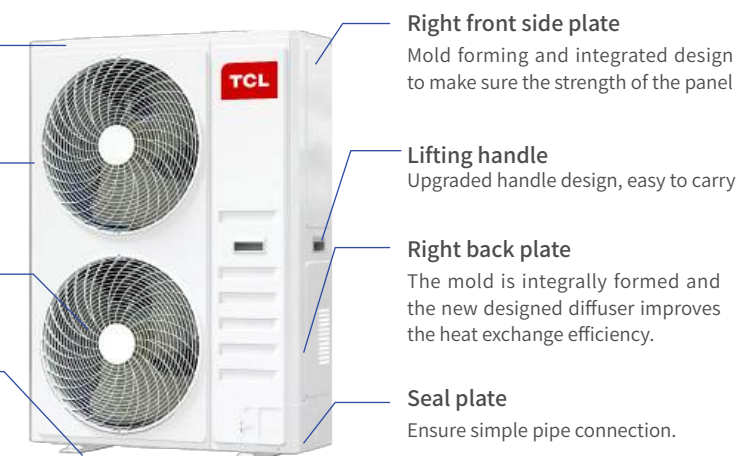
Double 528mm wind wheel, larger air volume and lower noise.

#### Grille

Grille adopts DOE simulation design, air volume increased more than 7%

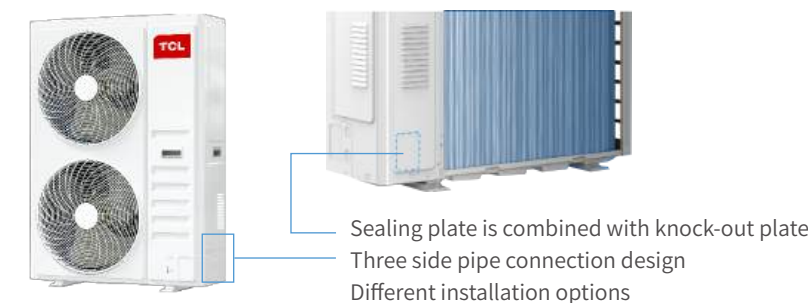
#### Footing

High strength foundation with rust - proof, corrosion - proof, more stable and reliable.



### Three side direction pipe connection

- The front, side and back of the unit are designed with knock-out holes, copper pipes can be connected from various directions, which is more convenient to do the installation.





7.5 Mini VRF Parameters



10 -12kW



14 -16kW

Model:TMV-Vd(**)W/N1-D(E)			80	100	120	140	160
Cooling capacity	Capacity	Btu/h	27000	34000	41000	50000	55000
	Capacity	kW	8.0	10.0	12.0	14.5	16.0
	Input	kW	2.55	2.75	3.05	4.10	4.80
	Current	A	11.6	12.5	13.9	18.6	21.8
	EER	W/W	3.14	3.64	3.93	3.54	3.33
Heating capacity	Capacity	Btu/h	34000	42000	48000	54000	61000
	Capacity	kW	10.0	12.0	14.0	16.0	18.0
	Input	kW	2.85	3.05	3.35	3.80	4.70
	Current	A	13.0	13.9	15.3	17.3	21.4
	COP	W/W	3.51	3.93	4.18	4.21	3.83
Outdoor noise level (sound power levle)		dB(A)	54	55	56	56	56
Refrigerant type/Quantity	Type		R410A				
	Charged volume	kg	2.3	2.3	2.3	3.7	3.7
Design pressure		MPa	4.3/1.5				
Power supply			220-240V ~ 50/60Hz				
Voltage Range		V	198-264V				
Max. Power		kW	6.2	6.2	6.2	7.26	7.26
Max. Current		A	28.2	28.2	28.2	33.0	33.0
Fan	Qty.		1	1	1	1	1
	Air volume	m³/h	4300	4300	4300	5300	5300
Connecting Pipe	Liquid	mm	3/8"	3/8"	3/8"	3/8"	3/8"
	Gas	mm	5/8"	5/8"	5/8"	5/8"	5/8"
Max. height drop (high head)		m	20(20)	20(20)	20(20)	30(30)	30(30)
Max. length of connecting indoor unit		m	50	50	50	70	70
Max. length of connecting pipe		m	35	35	35	35	35
Net dimensions (W x H x D)	Outdoor	mm	910×803×359	910×803×359	910×803×359	1010×850×410	1010×850×410
Net weight	Outdoor	kg	52	52	52	75	75
Packingdimensions (W x H x D)	Outdoor	mm	1022×835×480	1022×835×480	1022×835×480	1145×970×535	1145×970×535
Gross weight	Outdoor	kg	55	55	55	87	87
Cooling operating range	Outdoor side	℃	-5-55				
	Indoor side	℃	16-32				
Heating operating range	Outdoor side	℃	-20-24				
	Indoor side	℃	15-31				

Notes:

1. Specifications are based on the following conditions:  
2. Cooling: Indoor temperature 27°C DB/19°C WB,and outdoor temperature 35°C DB/24°C WB.  
3. Heating: Indoor temperature 20°C DB/15°C WB,and outdoor temperature 7°C DB/6°C WB.  
4. Equivalent piping length:5m; Level difference:0m; Voltage:230V.

5. Sound Level: Indoor unit sound pressure level,measured at a point 1.5m downward from the unit center.  
6. Outdoor unit sound pressure level,measured at a point 1.0m in front of the unit.  
7. Optional simple wired controller; Universal remote controller; auto-restart(optional); Timer:only one circle.  
8. Due to ongoing product development, specifications are subject to change without notice.



12-18 KW



22.4-28 KW

Model:TMV-Vd(**)W/N1-C(E)			120	140	160	180	224	252	280
Cooling capacity	Capacity	Btu/h(kW)	41000(12.0)	48000(14.0)	54500(16.0)	61500(18.0)	76000(22.4)	86000(25.2)	96000(28.0)
	Input	kW	3.00	3.60	4.350	5.25	7.20	8.25	9.10
	Current	A	13.6	16.4	20.8	24.2	11.5	13.2	14.6
	EER	W/W	4.00	3.89	3.68	3.43	3.11	3.05	3.08
Heating capacity	Capacity	Btu/h(kW)	48000(14.0)	54500(16.0)	61500(18.0)	68000(20.0)	84000(24.5)	92000(27.0)	105000(30.0)
	Input	kW	3.30	4.00	4.65	5.20	7.10	8.00	8.50
	Current	A	15	18.2	21.1	23.6	11.3	12.8	13.6
	COP	W/W	4.24	4.00	3.87	3.85	3.45	3.38	3.62
Outdoor noise level (sound power levle)		dB(A)	52	53	54	55	58	59	61
Refrigerant type/ Quantity	Type		R410A						
	Charged volume	kg	4	4	4.3	5.6	6.5	6.5	8.5
Design pressure		MPa	4.3/1.5	4.3/1.5	4.3/1.5	4.3/1.5	4.3/1.5	4.3/1.5	4.3/1.5
Power supply			220-240V-/50/60Hz				380V-3N/50Hz/60Hz		
Voltage Range		V	198-264V				340-460		
Max. Power		kW	6.0	6.0	6.9	7.2	11.0	11.5	12.0
Max. Current		A	27.8	27.8	31.4	33	17.6	18.5	19.2
Connecting Pipe	Liquid	Inches	3/8"	3/8"	3/8"	3/8"	3/8"	3/8"	3/8"
	Gas	Inches	3/4"	3/4"	3/4"	3/4"	7/8"(22.2)	7/8"(22.2)	7/8"(22.2)
Max. height drop		m	30(20)	30(20)	30(20)	30(20)	30(20)	30(20)	30(20)
Max. length of connecting pipe		m	120	120	120	120	120	120	120
Net dimensions	Outdoor (W x H x D)	mm	950×1330×340				1120×1560×400		
Net weight	Outdoor	kg	91	91	94	99	130	130	140
Packing dimensions	Outdoor (W x H x D)	mm	1080×1480×430				1250×1721×560		
Gross weight	Outdoor	kg	102	102	105	110	145	145	163

Notes:

1. Specifications are based on the following conditions:  
2. Cooling: Indoor temperature 27°C DB/19°C WB,and outdoor temperature 35°C DB/24°C WB.  
3. Heating: Indoor temperature 20°C DB/15°C WB,and outdoor temperature 7°C DB/6°C WB.  
4. Equivalent piping length:5m; Level difference:0m; Voltage:230V.

5. Sound Level: Indoor unit sound pressure level,measured at a point 1.5m downward from the unit center.  
6. Outdoor unit sound pressure level,measured at a point 1.0m in front of the unit.  
7. Optional simple wired controller; Universal remote controller; auto-restart(optional); Timer:only one circle.  
8. Due to ongoing product development, specifications are subject to change without notice.







## VRF systems, various combinations

In response to the different needs of building types for air-conditioning equipment, TCL provides four basic outdoor unit modules, which can be freely combined in 2HP increments, and the maximum combination can reach 144HP, which can meet the high level design capacity differentiation, installation and transportation requirements of large and medium-sized air-conditioning projects .

Recommended combination table

HP	Combination	Connected Indoor Unit Qty	HP	Combination	Connected Indoor Unit Qty	HP	Combination	Connected Indoor Unit Qty
8	8	13	54	26+28	80	100	32+32+36	80
10	10	16	56	28+28	80	102	30+36+36	80
12	12	19	58	26+32	80	104	32+36+36	80
14	14	23	60	28+32	80	106	34+36+36	80
16	16	26	62	30+32	80	108	36+36+36	80
18	18	29	64	32+32	80	110	26+28+28+28	80
20	20	33	66	30+36	80	112	28+28+28+28	80
22	22	36	68	32+36	80	114	26+28+28+32	80
24	24	39	70	34+36	80	116	28+28+28+32	80
26	26	43	72	36+36	80	118	26+28+32+32	80
28	28	46	74	22+24+28	80	120	28+28+32+32	80
30	30	50	76	24+24+28	80	122	26+32+32+32	80
32	32	53	78	22+28+28	80	124	28+32+32+32	80
34	16+18	56	80	24+28+28	80	126	30+32+32+32	80
36	18+18	59	82	26+28+28	80	128	32+32+32+32	80
38	16+22	63	84	28+28+28	80	130	30+32+32+36	80
40	18+22	66	86	26+28+32	80	132	32+32+32+36	80
42	20+22	69	88	28+28+32	80	134	30+32+36+36	80
44	22+24	72	90	26+32+32	80	136	32+32+36+36	80
46	22+24	75	92	28+32+32	80	138	30+36+36+36	80
48	24+24	78	94	30+32+32	80	140	32+36+36+36	80
50	22+28	80	96	32+32+32	80	142	34+36+36+36	80
52	24+28	80	98	30+32+36	80	144	36+36+36+36	80

## IDU lineup

Series	Type	Model	Capacity range(x100w)																									
			9	10	18	22	28	32	36	45	50	56	63	71	80	90	100	112	125	140	160	220	224	280	335	450	560	
 360° air outlet cassette	Cooling & Heating	TMV-V(**) Q8/NIDY(E)					●		●	●	●	●	●	●	●	●	●	●	●	●								
 DC inverter duct	Cooling & Heating	TMV-V(**) F5/NIDY(E)			●	●	●	●	●	●	●	●	●	●	●	●	●	●	●									
 High static pressure	Cooling & Heating	TMV-V(**) F1/NIY(E)											●					●	●	●		●	●	●				
 Wall-mounted	Cooling & Heating	TMV-V(**) G/NIDY-B(E)	●	●		●	●			●	●	●		●	●	●												
 Celilling & Floor	Cooling & Heating	TMV-V(**) ZD/NIY(E)								●	●	●	●	●	●	●	●	●	●									
 One-way cassette	Cooling & Heating	TMV-V(**) Q1/NIY(E)			●	●	●		●	●	●	●																
 Two-way cassette	Cooling & Heating	TMV6-V(**) Q2/NIY(E)				●	●		●	●	●	●	●	●														
 360° compact cassette	Cooling & Heating	TMV-V(**) Q4R/ NID1Y(E)			●	●	●	●	●	●	●	●	●															
 Fresh air duct	Cooling & Heating	TMV-V(**) F1/ XFNIY(E)																●		●		●	●					



## 360° Air outlet cassette



### Recommended places

Office, restaurant, supermarket, shopping mall, lobby, etc

## Technical characteristics



### New panel design

Adopt the new design of "porcelain white" color, beautiful and generous, so that the indoor machine panel and the ceiling color more easily integrated, more noble, surround type air supply panel, air supply more comfortable.



### Large Air Outlet Volume

Through the new DC inverter fan motor, achieve 2100m<sup>3</sup>/h air outlet volume, and improve the air Exchange efficiency by 30%



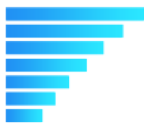
### 50Pa Static Pressure Adjustment

Build-in 4 gear static pressure, 0-50Pa can be adjusted, to achieve the 4m long air outlet distance



### 7-level Fan Speed Volume

Thin fuselage, the installation space required is small, the unit can be easily installed in a fairly narrow ceiling.



### Standard condensate pump, easy to install

Equipped with advanced high-lift condensate drainage pump, the maximum head up to 1200mm, easy to install drainpipes.



### 360° wide-angle air supply

Comfortable air supply does not leave dead corner, every corner can enjoy cool; Uniform air supply, reduce the temperature difference, keep the indoor temperature comfortable; Air supply is no longer directed single, keep air circulation, air more fresh and healthy.



### Clean sterilization, healthy life

Standard health filter screen, effectively remove large particles in the air, optional silver ion purification module, adsorption of formaldehyde and odor, eliminate germs.



### DC inverter fan motor technology

Adoption DC inverter motor technology, to improve the running efficiency by 15% and reduce the operation noise (min 31dB)



### Ultra low noise

Using the advanced technology of three-dimensional spiral blade design, can reduce the air resistance, realize the machine low noise operation, "quiet" enjoy a comfortable life.



### Standard float switch, timely warning

Standard float switch, when the condensate pump is faulty or the drainpipe is blocked, timely warning, prevent the water tray inside the machine overflow.

## 360° Air outlet cassette

## Specification

Model:TMV-V(**)Q8/N1DY(E)			28	36	45	50	56	63	71
Capacity	Cooling capacity	kW	2.8	3.6	4.5	5.0	5.6	6.3	7.1
	Heating capacity	kW	3.2	4.0	5.0	5.6	6.3	7.1	8.0
Power	Cooling power	kW	0.020	0.020	0.025	0.025	0.025	0.035	0.035
	Heating power	kW							
Power supply			220V - 1N 50Hz						
Current	Cooling current	A	0.09	0.09	0.11	0.11	0.11	0.16	0.16
	Heating current	A							
Fan	air volume	m³/h	800	800	900	900	900	1100	1100
External static pressure		Pa	0	0	0	0	0	0	0
Connecting pipe diameter	Noise	dB(A)	31	31	33	33	33	35	37
	gas pipe	mm	12.7					15.88	
	liquid tube	mm	6.35					9.52	
	Connection mode	/	Threaded connection						
Net dimension(L×W×H)		mm	840×840×245						
Weight	Net weight	kg	21.5	21.5	21.5	21.5	21.5	22.0	22.0
Panel	Panel size	mm	950×950×50						
	Net weight	kg	6						
Panel	Unit (W×H×D)	mm	950×45×950						
	Packing (W×H×D)	mm	1055×90×1055						
	Net/Gross	kg	6/9						
Drainage pipe diameter			DN32						
Electric control mode			Remote Controller & Wired controller						

Model:TMV-V(**)Q8/N1DY(E)			80	90	100	112	125	140	160
Capacity	Cooling capacity	kW	8.0	9.0	10.0	11.2	12.5	14.0	16.0
	Heating capacity	kW	9.0	10.0	11.2	12.5	14.0	16.0	18.0
Power	Cooling power	kW	0.040	0.060	0.060	0.060	0.070	0.085	0.132
	Heating power	kW							
Power supply									
Current	Cooling current	A	0.18	0.27	0.27	0.27	0.32	0.39	0.60
	Heating current	A							
Fan	air volume	m³/h	1300	1500	1600	1600	1800	1800	2100
External static pressure		Pa	0	0	0	0	0	0	0
Noise		dB(A)	38	39	40	41	43	43	47
Connecting pipe diameter	gas pipe	mm	15.88						
	liquid tube	mm	9.52						
	Connection mode	/	Threaded connection						
Net dimension(L×W×H)		mm	840×840×245			840×840×290			
Weight	Net weight	kg	22	22.5	25	25	25	27.5	27.5
Panel	Panel size	mm	950×950×50						
	Net weight	kg	6						
Panel	Unit (W×H×D)	mm	950×45×950						
	Packing (W×H×D)	mm	1055×90×1055						
	Net/Gross	kg	6/9						
Drainage pipe diameter			DN32						
Electric control mode			Wired controller						

### Notes:

1. Specifications are based on the following conditions:
2. Cooling: Indoor temperature 27°C DB/19°C WB, and outdoor temperature 35°C DB/24°C WB.
3. Heating: Indoor temperature 20°C DB/15°C WB, and outdoor temperature 7°C DB/6°C WB.
4. Equivalent piping length: 5m; Level difference: 0m; Voltage: 230V.
5. Sound Level: Indoor unit sound pressure level, measured at a point 1.5m downward from the unit center.
6. Outdoor unit sound pressure level, measured at a point 1.0m in front of the unit.
7. Optional simple wired controller; Universal remote controller; auto-restart(optional); Timer: only one circle.
8. Due to ongoing product development, specifications are subject to change without notice.





## High static pressure Duct



### Recommended places

Workshop, hotel, restaurant, shopping mall, ballroom, bar and other large space places

### Technical characteristics



#### Healthy new wind, forest breathing

Easy introduction of outdoor fresh air heating refrigeration and indoor air exchange, keep indoor air fresh, bring you comfortable fresh air.



#### Ultra-thin body design, fashion and beautiful

The minimum thickness of the fuselage is only 380mm, which does not occupy indoor space.



#### Ultra-high static pressure design to meet various space requirements

Maximum static pressure 300Pa, can be long distance multi-point air supply, fully meet the air conditioning needs of different Spaces.



#### Clean sterilization, healthy life

Built-in coarse filter, PP filter screen, optional silver ion purification module, effectively remove large particles in the air, absorb formaldehyde and odor, eliminate germs.



#### Various forms of air outlets,matching with decoration

The indoor unit adopts a hidden installation mode, which can be equipped with appropriate air outlets to perfectly combine the air conditioning.



### Specification

Model:TMV-V(**)FI/NIY(E)			71	112	140	220	280	450	560
Control type			Remote Controller & Wired controller						
Static pressure	Standard	Pa	100	100	130	200			
	Range		50 ~ 130			100-300			
Cooling capacity	Capacity	kW	7.1	11.2	14.0	22.0	28.0	45.0	56.0
	Input	kW	0.28	0.42		1.75		2.25	
	Current	A	1.4	2		8.85		11.36	
Heating capacity	Capacity	kW	8.0	12.5	16.0	25.0	31.0	50.0	61.0
	Input	kW	0.28	0.42		1.75		2.25	
	Current	A	1.4	2		8.85		11.36	
Indoor noise level at cooling High/Med/Low			50/47/44	53/50/47		55/53/51		61/59/57	
Refrigerant type/Quantity		Type	R410A						
Design pressure		MPa	4.5						
Power supply			220-240V~/50Hz/						
Outlet size of indoor airflow		mm	430×220	850×220		1025×300		1470×330	
Returning vent size of indoor airflow		mm	710×310	1100×310		1240×460		1645×638	
Indoor air circulation		L/S	350	561	639	1250	1250	2083	2083
		m³/h	1260	2020	2300	4500	4500	7500	7500
Indoor fan type			Centrifugal fan						
Connecting Pipe	Liquid	Inches	3/8"			1/2"		1/2"	
	Gas	Inches	5/8"			7/8"		9/8"	
Drainage Pipe		mm	25(ID20,OD25)						
Net dimensions(W x H x D)		mm	850×380×590	1200×380×590		1366×758×470		1770×758×650	
Net weight		kg	49	58		120		220	
Packing dimensions (W x H x D)		mm	1060×425×695	1410×435×695		1620×975×700		2035×975×920	
Gross weight		kg	55	64		145		245	

Notes: 1. Specifications are based on the following conditions:

2. Cooling: Indoor temperature 27°C DB/19°C WB, and outdoor temperature 35°C DB/24°C WB.

3. Heating: Indoor temperature 20°C DB/15°C WB, and outdoor temperature 7°C DB/6°C WB.

4. Equivalent piping length:5m; Level difference:0m; Voltage:230V.

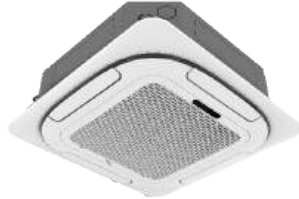
5. Sound Level: Indoor unit sound pressure level, measured at a point 1.5m downward from the unit center.

6. Outdoor unit sound pressure level, measured at a point 1.0m in front of the unit.

7. Optional simple wired controller; Universal remote controller; auto-restart(optional); Timer:only one circle.

8. Due to ongoing product development, specifications are subject to change without notice.

## 360° compact cassette



### Recommended places

Office, restaurant, supermarket, shopping mall, lobby, etc

### Technical characteristics



#### Ultra low noise

Using the advanced technology of three-dimensional spiral blade design, can reduce the air resistance, realize the machine low noise operation, "quiet" enjoy a comfortable life.



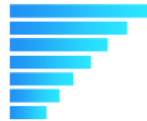
#### Clean sterilization, healthy life

Standard health filter screen, effectively remove large particles in the air, optional silver ion purification module, adsorption of formaldehyde and odor, eliminate germs.



#### 7-level Fan Speed Volume

Thin fuselage, the installation space required is small, the unit can be easily installed in a fairly narrow ceiling.



#### DC inverter fan motor technology

Adoption DC inverter motor technology, to improve the running efficiency by 15% and reduce the operation noise (min 25dB)



### Specification

Indoor Model: TMV-V**Q4R/NID1Y(E)			18	22	25	28	32	36	40	45	50	56
IDU Power Supply		V-,Hz,Ph	220-240V-~/50Hz									
Capacity	Cooling	Btu/h	6,000	7,500	9,000	10,000	11,000	12,000	14,000	15,000	17,000	19,000
		KW	1.8	2.2	2.5	2.8	3.2	3.6	4	4.5	5	5.6
	Heating	Btu/h	7,500	9,000	10,000	11,000	12,000	14,000	15,000	17,000	19,000	21,000
		KW	2.2	2.5	2.8	3.2	3.6	4	4.5	5	5.6	6.3
Electric Data (T1)	Rated Cooling Power Input	KW	0.014	0.014	0.014	0.014	0.016	0.016	0.022	0.022	0.044	0.05
	Rated Heating Power Input	KW										
	Rated Cooling Current	A	0.06	0.06	0.06	0.06	0.07	0.07	0.1	0.1	0.2	0.23
	Rated Heating Current	A										
Indoor Unit	Indoor Air Flow(Hi/Mi/Lo)	m³/h	520/390/260				560/410/280		620/460/300		750/560/310	800/590/330
	Indoor sound pressure(Hi/Mi/Lo)	dB(A)	30/28/25				31/29/25		35/30/26		43/32/26	45/34/27
	Net Dimension(W*D*H)	mm	570*570*245									
	Packing Dimension(W*D*H)	mm	718*657*301									
	Net Weight	Kg	14.5	14.5	14.5	14.5	14.5	14.5	14.5	14.5	15	15
	Gross Weight	Kg	17	17	17	17	17	17	17	17	17.5	17.5
Panel	Net Dimension (W*D*H)	mm	650*650*57									
	Packing Dimension (W*D*H)	mm	734*734*95									
	Net weight	Kg	2									
	Gross weight	Kg	4.25									
Refrigerant Pipe	Gas Side	mm/in	12.7(1/2)									
	Liquid Side	mm/in	6.35(1/4)									
Operation Temperature Range		°C	16-32									
Qty/per 20'& 40'&40HQ (Only For Reference)		Set	168/378/432									

Notes:

1. Specifications are based on the following conditions:

2. Cooling: Indoor temperature 27°C DB/19°C WB, and outdoor temperature 35°C DB/ 24°C WB.

3. Heating: Indoor temperature 20°C DB/15°C WB, and outdoor temperature 7°C DB/ 6°C WB.

4. Equivalent piping length:5m; Level difference:0m; Voltage:230V.

5. Sound Level: Indoor unit sound pressure level, measured at a point 1.5m downward from the unit center.

6. Outdoor unit sound pressure level, measured at a point 1.0m in front of the unit.

7. Optional simple wired controller; Universal remote controller; auto-restart(optional); Timer:only one circle.

8. Due to ongoing product development, specifications are subject to change without notice.



### DC Series Slim Duct



#### Recommended places

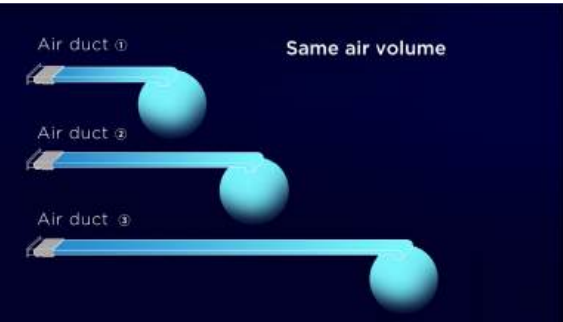
Office, conference room, hotel room, restaurant, living room, etc

### Technical characteristics



#### Constant air volume

Fan motor automatically adjusts speed according to real-time wind resistance. To provide stable air volume to rooms.



#### Ultra-thin body design, fashion and beautiful

The minimum height of the body is only 200mm, saving space. The drain pump can lift the condensing water up to 1200mm.



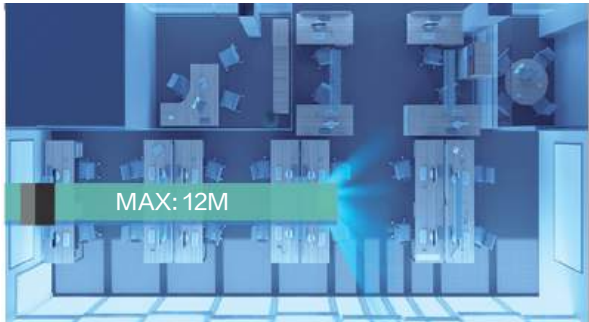
#### Health filter (optional)

The duct can be equipped with silver ion and activated carbon health filter.



#### High ESP

ESP up to 80Pa supports longer air duct and fits with more installation scenario.



#### Dc seven speed wind speed Energy-saving silent operation

DC motor, 7-speed air volume, energy-saving and silent operation. The lowest noise is 20 d B(A).



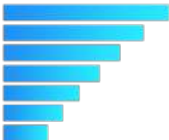
#### Standard float switch, timely warning

Standard float switch, when the condensate pump is faulty or the drainpipe is blocked, timely warning, prevent the water tray inside the machine overflow.



#### 7-level Fan Speed Volume

Thin fuselage, the installation space required is small, the unit can be easily installed in a fairly narrow ceiling.



### DC Series Slim Duct

### Specification

Model:TMV-V(**)F5/NIDY(E)			18	22	28	32	36	45	50	56
Capacity	Cooling capacity	kW	1.8	2.2	2.8	3.2	3.6	4.5	5.0	5.6
	Heating capacity	kW	2.2	2.5	3.2	3.6	4.0	5.0	5.6	6.3
Power	Cooling power	kW	0.02			0.03		0.05		
	Heating power	kW								
Power supply			220V 1N-50Hz							
Current	Cooling current	A	0.09			0.14		0.23		
	Heating current	A								
Fan	air volume	m³/h	500			550		850		
External static pressure		Pa	20(0 ~ 50)							
Noise H/M/L		dB(A)	30/26/20						34/29/24	
Net dimension (L×W×H)	Net dimensions	mm	700×450×200						920×450×200	
	Size of return air inlet	mm	570×172						790×172	
	Air outlet size	mm	510×140						730×140	
Net weight		kg	15.5						18.0	
Connecting pipe diameter	gas pipe	mm	9.52			12.70		12.70		
	liquid tube	mm	6.35							
	Connection mode	/	Threaded connection							
Drainage pipe diameter		mm	DN25							
Electric control mode		/	Remote Controller & Wired controller							

Model:TMV-V(**)F5/NIDY(E)			63	71	80	90	100	112	125	140
Capacity	Cooling capacity	kW	6.3	7.1	8.0	9.0	10.0	11.2	12.5	14.0
	Heating capacity	kW	7.1	8.0	9.0	10.0	11.2	12.5	14.0	16.0
Power	Cooling power	W	54	54	54	180	180	180	250	250
	Heating power	W								
Power supply			220V 1N-50Hz							
Current	Cooling current	A	0.25	0.25	0.25	0.90	0.90	0.90	1.20	1.20
	Heating current	A								
Fan	air volume	m³/h	1100			1800			2000	
External static pressure		Pa	20(0 ~ 80)			60(30 ~ 80)	60(30 ~ 80)	60(30 ~ 80)	60(30 ~ 80)	60(30 ~ 80)
Noise H/M/L		dB(A)	37/31/27			43/37/33			44/41/37	
Net dimension (L×W×H)	Net dimensions	mm	1100×450×200			1400×700×250				
	Size of return air inlet	mm	1004×165			1365×220				
	Air outlet size	mm	930×140			1365×175				
Net weight		kg	22.5			36			38	
Connecting pipe diameter	gas pipe	mm	15.88							
	liquid tube	mm	9.52							
	Connection mode	/	Threaded connection							
Drainage pipe diameter		mm	DN25							
Electric control mode		/	Remote Controller & Wired controller							

#### Notes:

- Specifications are based on the following conditions:
- Cooling: Indoor temperature 27°C DB/19°C WB, and outdoor temperature 35°C DB/ 24°C WB.
- Heating: Indoor temperature 20°C DB/15°C WB, and outdoor temperature 7°C DB/ 6°C WB.
- Equivalent piping length:5m; Level difference:0m; Voltage:230V.

- Sound Level: Indoor unit sound pressure level,measured at a point 1.5m downward from the unit center.
- Outdoor unit sound pressure level,measured at a point 1.0m in front of the unit.
- Optional simple wired controller; Universal remote controller; auto-restart(optional); Timer:only one circle.
- Due to ongoing product development, specifications are subject to change without notice.





## Wall mounted



### Recommended places

Living room, study, reference room, negotiation room and other places

### Technical characteristics



#### Ultra-low silent operation

Adopt large-diameter blade, high-quality plastic-encapsulated motor, and the noise is as low as 27dB(A).



#### Ultra-thin body design, smart and beautiful

The minimum thickness of the unit is only 380mm, which makes installation more convenient.



#### Easy maintenance

The horizontal baffle of the unit is easy to remove for easy cleaning and maintenance.



#### Long-lasting filter design

The long-term filter design makes the air more healthy, reduces the difficulty of maintenance.



#### Wide-angle air supply, more comfortable

The upper and lower wind guide vanes make the airflow comfortable.



### Specification

Indoor Model:TMV-V**G/N1DY-B(E)			/	22	28	36	45	50	56	71	80	90	100	
IDU Power Supply			V-,Hz,Ph	220-240V~ /50Hz										
Capacity	Cooling	Btu/h	7,500	10,000	12,000	15,000	17,000	19,000	24,000	27,000	30,000	34,000		
		KW	2.2	2.8	3.6	4.5	5.0	5.6	7.1	8.0	9.0	10.0		
	Heating	Btu/h	9,000	11,000	14,000	17,000	19,000	21,000	27,000	30,000	34,000	41,000		
		KW	2.5	3.2	4.0	5.0	5.6	6.3	8.0	9.0	10.0	12.0		
Electric Data (TI)	Rated Cooling Power Input		KW	0.04	0.04	0.04	0.045	0.045	0.055	0.055	0.055	0.09	0.09	
	Rated Heating Power Input		KW											
	Rated Cooling Current		A	0.19	0.19	0.19	0.2	0.2	0.25	0.25	0.25	0.4	0.4	
	Rated Heating Current		A											
Indoor Unit	Indoor Air Flow(Hi/Mi/Lo)		m³/h	550/450/330			650/550/360		800/700/500			1500/1200/800		
	Indoor sound pressure(S/M/Mute)		dB(A)	37/29/22			39/31/27		45/38/34			47/41/36		
	Net Dimension(W*D*H)		mm	910×206×294						1010×220×315			1186×258×360	
	Packing Dimension(W*D*H)		mm	977×276×367						1094×300×386			1260×328×430	
	Net Weight		Kg	9.5						12			16.5	
	Gross Weight		Kg	12						14.5			21	
Refrigerant Pipe	Gas Side		mm/in	12.7(1/2)						15.88(5/8)			15.88(5/8)	
	Liquid Side		mm/in	6.35(1/4)						9.52(3/8)			9.52(3/8)	
Operation Temperature Range			°C	16-32										
Wired/Remote Controller			/	Wired Controller										
Qty'per 20'& 40'&40HQ (Only For Reference)			Set	665						480			372	

#### Notes:

- Specifications are based on the following conditions:
- Cooling: Indoor temperature 27°C DB/19°C WB, and outdoor temperature 35°C DB/ 24°C WB.
- Heating: Indoor temperature 20°C DB/15°C WB, and outdoor temperature 7°C DB/ 6°C WB.
- Equivalent piping length:5m; Level difference:0m; Voltage:230V.
- Sound Level: Indoor unit sound pressure level,measured at a point 1.5m downward from the unit center.
- Outdoor unit sound pressure level,measured at a point 1.0m in front of the unit.
- Optional simple wired controller; Universal remote controller; auto-restart(optional); Timer:only one circle.
- Due to ongoing product development, specifications are subject to change without notice.

## Ceiling & floor



### Recommended places

Living room, study, reference room, negotiation room and other places

### Technical characteristics



#### Ultra-thin Design

Compact design which fits for various room styles.



#### Wide Range of Air Flow

The air supply angle is from 0 to 110°, making the indoor temperature more uniform and more comfortable.



#### Dual Direction of Drainage

Condensing water can be drained both from left and right side.



#### Detachable Plastic Blowers

Universal design ned parts and assemblies applied,which is easy for maintenance.



#### Flexible Installation

Two ways of installation available, ceiling suspended and floor standing.



#### Wire Control ( optional )

Wire control is available,especially for hotel rooms, offices,etc.

### Specification

Model:TMV-V(**)ZD/N1Y(E)			45	50	56	63	71	80	90	100	112	125	140
Cooling capacity	Capacity	Btu/h(kW)	15000 (4.5)	17000 (5.0)	19000 (5.6)	21000 (6.3)	24000 (7.1)	27000 (8.0)	30000 (9.0)	34000 (10.0)	38000 (11.2)	42000 (12.5)	48000 (14.0)
	Input	kW	0.102			0.149			0.158		0.235		
Heating capacity	Capacity	Btu/h(kW)	17000 (5.0)	19000 (5.6)	21000 (6.3)	24000 (7.1)	27000 (8.0)	30000 (9.0)	34000 (10.0)	38000 (11.2)	42000 (12.5)	48000 (14.0)	55000 (16.0)
	Input	kW	0.102			0.149			0.158		0.235		
Noise	H/M/L	dB(A)	44/42/38			46/44/40			50/48/44		52/50/46		
Design pressure		MPa	4.1										
Power supply			220-240V~/50Hz/										
Indoor air circulation (Cooling/Heating)		L/S	267			333			444		556		
		m³/h	960			1200			1600		2000		
Connecting	Liquid	Inches	1/4"			3/8"			3/8"		3/8"		
Pipe	Gas	Inches	1/2"			5/8"			5/8"		5/8"		
Drainage Pipe		mm	25(ID20,OD25)										
Net dimensions	W x H x D	mm	1055×675×235						1275×675×235		1635×675×235		
Net weight		kg	24			25			29		38		
Packing dimensions	W x H x D	mm	1131×753×313						1351×753×313		1711×753×313		
Gross weight		kg	27			28			35		46		
Loading Capacity			1.5HP	1.8HP	2.0HP	2.2HP	2.5HP	3.0HP	3.2HP	3.6HP	4.0HP	4.5HP	5.0HP
Controller			Wired controller										

#### Notes:

- Specifications are based on the following conditions:
- Cooling: Indoor temperature 27°C DB/19°C WB, and outdoor temperature 35°C DB/ 24°C WB.
- Heating: Indoor temperature 20°C DB/15°C WB, and outdoor temperature 7°C DB/ 6°C WB.
- Equivalent piping length:5m; Level difference:0m; Voltage:230V.
- Sound Level: Indoor unit sound pressure level,measured at a point 1.5m downward from the unit center.
- Outdoor unit sound pressure level,measured at a point 1.0m in front of the unit.
- Optional simple wired controller; Universal remote controller; auto-restart(optional); Timer:only one circle.
- Due to ongoing product development, specifications are subject to change without notice.



## One-way Cassette



### Recommended places

Living room, dining room, office, lobby, etc

### Technical characteristics



#### High-lift Drain Pump

The drain pump with a 700mm lifting head which is as standard, simplifying installation of the drain pipes.



#### Standard float switch, real-time monitor water level

Equipped with float switch, which will automatically monitor the water level and send alarm when malfunction of drain pump or stuck of drain pipe occurs.



#### Wide-angle air flow

Adopting new type of swing motor, which largely increases the angle of air flow.



#### High ceiling design

Reserves a super high fan speed for high ceiling installation, unit can provide powerful cooling and heating under a more than 3 meters floor height.



#### Slim body

Super slim body with 235mm thickness, less installation area required, capable to match multiple decoration styles.



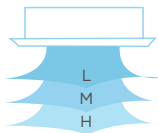
#### Suitable for corner installation, comfortable air flow

Well-designed shape, suitable for corner installation, make sure the air flow and temperature distribution well.



#### Three level fan speeds

High,Mid,Low three fan speed options, can meet the needs of different indoor condition.



### IDU parameters

Model:TMV-V(**)Q1/N1Y			18	22	28	36	45	50	56
Cooling capacity	Capacity	Btu/h(kW)	6000(1.8)	7500(2.2)	10000(2.8)	12000(3.6)	15000(4.5)	17000(5.0)	19000(5.6)
	Input	kW	0.05			0.06	0.07		
	Current	A	0.24			0.28	0.31		
Heating capacity	Capacity	Btu/h(kW)	7500(2.2)	9000(2.5)	11000(3.2)	14000(4.0)	17000(5.0)	19000(5.6)	21000(6.3)
	Input	kW	0.05			0.06	0.07		
	Current	A	0.24			0.28	0.31		
Indoor noise level at cooling (sound pressure level)	High	dB(A)	39			40	42		
	Med.	dB(A)	34				36		
	Low	dB(A)	31				33		
Refrigerant type/Quantity	Type	R410A							
Design pressure		MPa	4.5						
Power supply			220-240V-/50Hz						
Indoor air circulation(Cooling/Heating)		L/S	142			189	222		
		m³/h	510			680	800		
Connecting Pipe	Liquid	Inches	1/4"						
	Gas	Inches	3/8"						
Drainage Pipe		mm	25(ID25,OD32)						
Net dimensions (W x H x D)		Indoor	mm						
Net weight		Indoor	kg						
Gross weight		Indoor	kg						

#### Notes:

- Specifications are based on the following conditions:
- Cooling: Indoor temperature 27°C DB/19°C WB, and outdoor temperature 35°C DB/ 24°C WB.
- Heating: Indoor temperature 20°C DB/15°C WB, and outdoor temperature 7°C DB/ 6°C WB.
- Equivalent piping length:5m; Level difference:0m; Voltage:230V.
- Sound Level: Indoor unit sound pressure level,measured at a point 1.5m downward from the unit center.
- Outdoor unit sound pressure level,measured at a point 1.0m in front of the unit.
- Optional simple wired controller; Universal remote controller; auto-restart(optional); Timer:only one circle.
- Due to ongoing product development, specifications are subject to change without notice.

## Two-way Cassette



### Recommended places

Sitting room, study, dining room, small meeting room, etc

### Technical characteristics



#### High-lift Drain Pump

A drain pump with a 700mm raise height is fitted as standard, simplifying installation of the drain piping.



#### Standard float switch, water level monitor

Equipped with float switch, which will automatically send alarm when malfunction of drain pump or stuck of drain pipe occur.



#### Three - speed adjustment

New winding motor, with scroll fan technology, wider air volume regulation, quieter operation, unique intimate wind gear design. High, medium and low three speed adjustment, strong refrigeration and heating, to create a quiet and comfortable temperature.



#### Ultra-thin body, lightweight design

Ultra-thin body (290mm), requires less installation space, even in the narrow low ceiling, still can be easily installed, more flexible collocation decoration style.



#### Super wide Angle air supply

Panel swing motor system adopts high-precision stepper motor, panel up and down risk control system is more intelligent, to achieve ultra-wide Angle and large range of air supply.



#### Quiet design, quiet and comfortable

Centrifugal wind wheel, axial air inlet, through rotation to form a certain wind pressure, small blade area, large number, uniform air, noise greatly reduced, for you to create a quiet and comfortable environment.



#### High ceiling design, direct air flow to the ground

High ceiling design, suitable for ceiling height up to 3m space.

### IDU parameters

Model:TMV-V(**)Q2/N1Y			22	28	36	45	50	56	63	71
Cooling capacity	Capacity	Btu/h(W)	7500(2200)	10000(2800)	12000(3600)	15000(4500)	17000(5000)	19000(5600)	21000(6300)	24000(7100)
	Input	W	64			70			110	
	Current	A	0.27			0.31			0.49	
Heating capacity	Capacity	Btu/h(W)	9000(2500)	11000(3200)	14000(4000)	17000(5000)	19000(5600)	21000(6300)	24000(7100)	27000(8000)
	Input	W	64			70			110	
	Current	A	0.27			0.31			0.49	
Indoor noise level at cooling Low×Med×High		dB(A)	32×35×40	33×36×42	35×38×43				36×39×46	
Refrigerant type/ Quantity	Type	R410A								
Design pressure		MPa	4.5							
Power supply			220-240V-/50Hz							
Indoor air circulation (Cooling/Heating)		L/S	161		189		236		378	
		m³/h	580		680		850		1360	
Connecting Pipe	Liquid	Inches	1/4"						3/8"	
	Gas	Inches	1/2"						5/8"	
Drainage Pipe		mm	25(ID25,OD32)							
Net dimensions (W x H x D)	Indoor	mm	1140×575×290							
Net weight	Indoor	kg	32		33				34	
Gross weight	Indoor	kg	38		39				40	

#### Notes: 1. Specifications are based on the following conditions:

- Cooling: Indoor temperature 27°C DB/19°C WB, and outdoor temperature 35°C DB/24°C WB.
- Heating: Indoor temperature 20°C DB/15°C WB, and outdoor temperature 7°C DB/6°C WB.
- Equivalent piping len:TMV6+h:5m; Level difference:0m; Voltage:230V.
- Sound Level: Indoor unit sound pressure level,measured at a point 1.5m downward from the unit center.
- Outdoor unit sound pressure level,measured at a point 1.0m in front of the unit.
- Optional simple wired controller; Universal remote controller; auto-restart(optional); Timer:only one circle.
- Due to ongoing product development, specifications are subject to change without notice.





Fresh Air Processing Unit



Recommended places

Cinemas, hotels, lobbies, dance halls, bars and other places

Technical characteristics



Healthy Fresh Air

Through the fresh air unit, the outdoor healthy air can be introduced into the room to keep the indoor healthy.



Ultra-high static pressure design

The maximum static pressure is 300pa, which can meet long-distance air supply and different space requirements.



Control Smart and Lower Cost

The fresh air unit can be controlled independently or connected to the same outdoor unit system with the AC indoor unit, reducing costs and installation space.



Simplify air exhaust system

Simplified air supply and exhaust system, stable and reliable.

Note: The sum of the capacity of the processing unit and the indoors should be 50%-100% of the ODU capacity, and the capacity of the fresh air units does not exceed 30%.

Specification

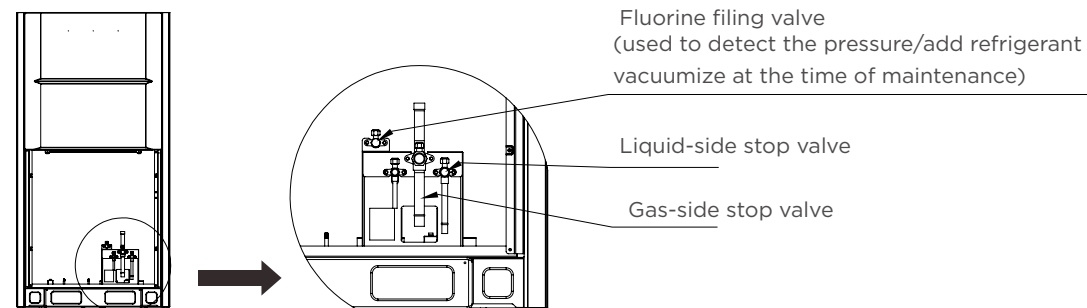
Model:TMV-V(**)F1/XFN1Y(E)			140	224	280	450	560
Static pressure	Standard	Pa	196	200	200	300	300
	Capacity	Btu/h(kW)	48000(14.0)	75000(22.4)	95500(28.0)	153000(45.0)	191000(56.0)
Cooling capacity	Input	kW	0.42	1.1	1.1	1.55	2.25
	Capacity	Btu/h(kW)	34000(10.0)	54000(16.0)	68000(20.0)	95500(28.0)	133000(39.0)
Heating capacity	Input	kW	0.42	1.1	1.1	1.55	2.25
	Noise	H/M/L dB(A)	45	53	53	56	60
Design pressure		MPa	4.1				
Power supply			220-240V-/50Hz/60Hz				
Indoor air circulation (Cooling/Heating)	L/S		569	833	1111	1667	
	m³/h		2050	3000	4000	6000	
Connecting Pipe	Liquid	Inches	3/8"	1/2"	1/2"	1/2"	
	Gas	Inches	5/8"	1"	9/8"	9/8"	
Drainage Pipe		mm	25(ID20,OD25)				
Net dimensions	W x H x D	mm	1200×380×590	1366×470×758	1770×650×758		
Net weight		kg	58	120	220		
Packing dimensions	W x H x D	mm	1410×435×695	1620×930×975	2035×1170×975		
Gross weight		kg	60	145	245		
Loading Capacity			5HP	8HP	10HP	15HP	20HP
Controller			Remote Controller & Wired controller				

Notes: 1. Specifications are based on the following conditions:  
2. Cooling: Indoor temperature 27°C DB/19°C WB, and outdoor temperature 35°C DB/24°C WB.  
3. Heating: Indoor temperature 20°C DB/15°C WB, and outdoor temperature 7°C DB/6°C WB.  
4. Equivalent piping length: 5m; Level difference: 0m; Voltage: 230V.  
5. Sound Level: Indoor unit sound pressure level, measured at a point 1.5m downward from the unit center.  
6. Outdoor unit sound pressure level, measured at a point 1.0m in front of the unit.  
7. Optional simple wired controller; Universal remote controller; auto-restart (optional); Timer: only one circle.  
8. Due to ongoing product development, specifications are subject to change without notice.



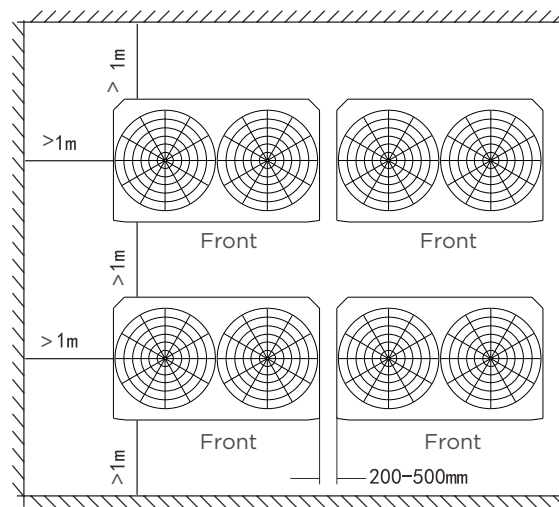


## Location of refrigerant pipes

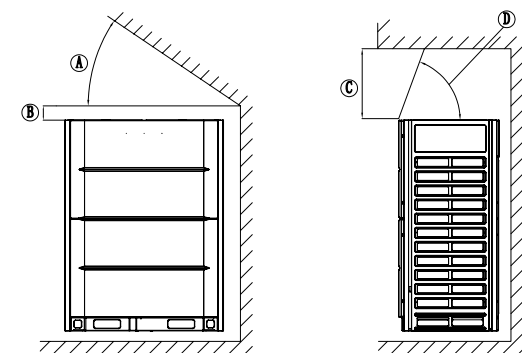


## Installation space for ODU

- The space shown in the figure needs to be reserved for the installation of the ODU, and the power supply equipment should be installed separately.



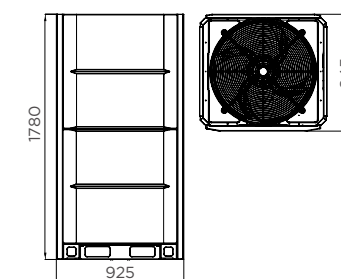
- To ensure the heat dissipation of the outdoor unit, there should be no obstacles above the outdoor unit. If it cannot be avoided, a deflector should be installed.



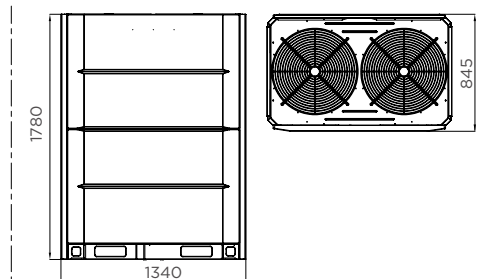
- A More than 45°
- B More than 300mm
- C More than 1000mm
- D Guide plate

- If there are stacks around the outdoor unit, the height should be less than 800mm from the top of the outdoor unit. If it is less than the size, a mechanical exhaust device must be installed.

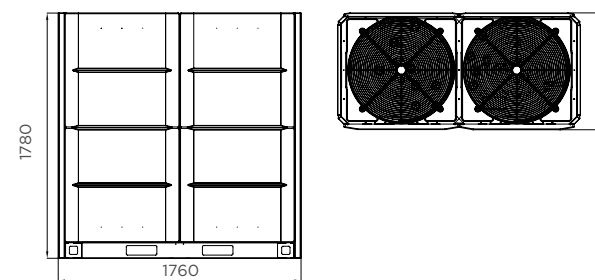
## Dimension of ODU



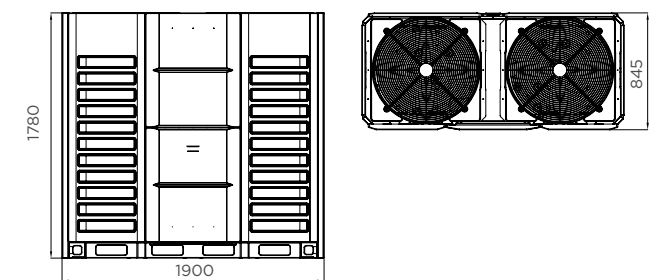
TMV-VED+252(280/335)W/AS-D(EC)



TMV-VED+400(400/450/504/560/615/680)W/AS-D(EC)



TMV-VED+730/900 W/AS-D(EC)



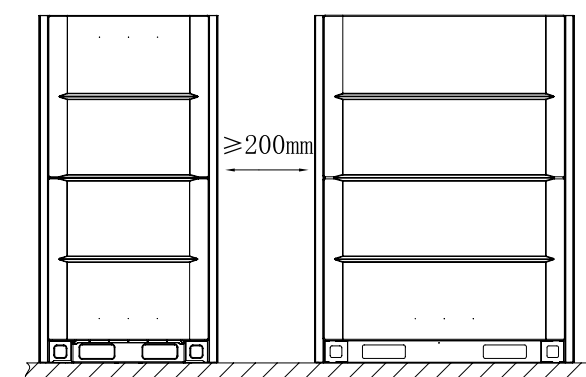
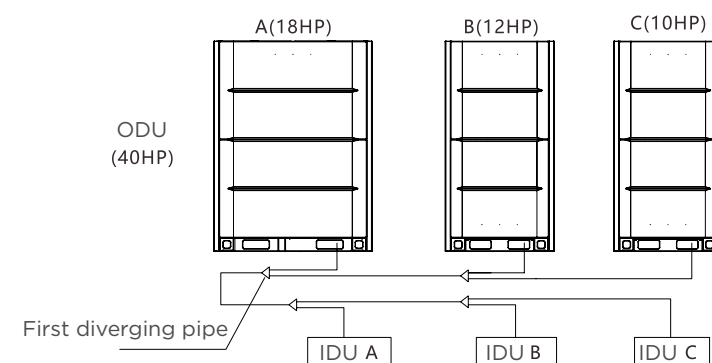
TMV6-VED+950/1010W/AS-D(EC)

## Requirements for ODU installation

- A shock absorber or shock pad should be installed between the unit and the foundation.
- The unit and the foundation should be released tightly, otherwise there will be a lot of noise and vibration.
- The outdoor unit must be grounded reliably.
- It is forbidden to open the valves of the liquid pipe, gas pipe and oil balance pipe of the unit before commission.
- The installation should ensure that there is enough space for maintenance.

## Arrangement sequence of ODU

- When a system has more than two outdoor units, it is necessary to install the units as the followings:  
The outdoor units are arranged in descending order (for example, in the right picture, ODU capacity A ≥ ODU capacity B ≥ ODU capacity C) and the ODU A should install at the branch pipe.



Model	A	B
TMV-VED+252(280/335)W/AS-D(EC)	724	725
TMV-VED+400(400/450/504/560/615/680)W/AS-D(EC)	1141	725
TMV-VED+730/900 W/AS-D(EC)	1561	725
TMV6-VED+950/1010W/AS-D(EC)	1700	725



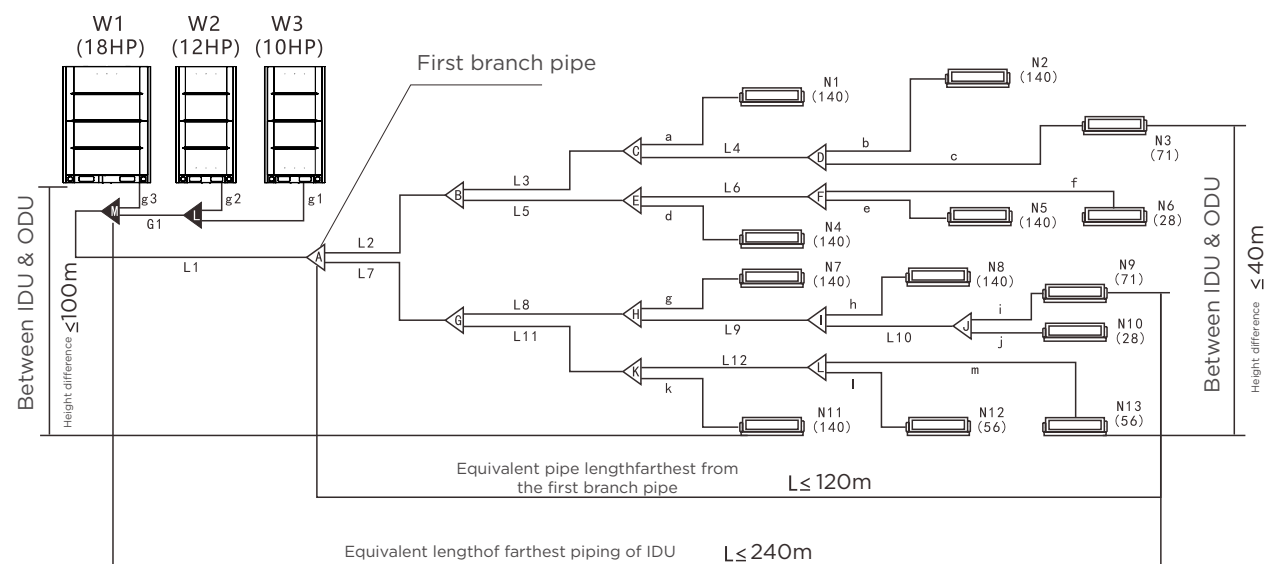


## Design of refrigerant piping

## Refrigerant pipe length and height

			Admissible value	Pipes
Length of supporting pipe	Total length of Refrigerant pipes (Total extended length)		1100m	$L1+(L2+L3+L4+L5+L6+L7+L8+L9+L10+L11+L12) \times 2 + a + b + c + d + e + f + g + h + i + j + k + l + m$
	Length of the farthest supporting pipe (L)	True length	220m	$L1+L7+L8+L9+L10+i$
		Equivalent length	240m	
	Length of the supporting pipe furthest from the first branch pipe (L)*		120m	$L7+L8+L9+L10+i$
Height	Height difference between indoor and outdoor units (H)	ODU up	100m	
		ODU down	110m	
	Height between indoor units (h)		40m	

\* Note: Refer to relevant technical documents or consult technical person

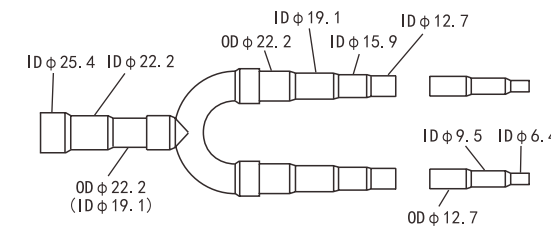


## Branch pipe specifications

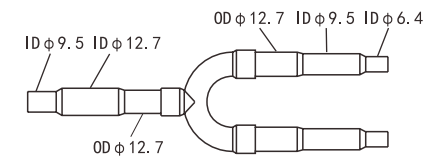
Assembly	Include parts	Assembly	Include parts
BY01 Branch pipe parts	G01, L01	BY05 Branch pipe parts	G04, L03
BY02 Branch pipe parts	G02, L01	BY06 Branch pipe parts	L01, L01
BY03 Branch pipe parts	G02, L02	BY07 Branch pipe parts	L01, L02
BY04 Branch pipe parts	G03, L02	BY08 Branch pipe parts	G05, G02

## Branch pipe specifications

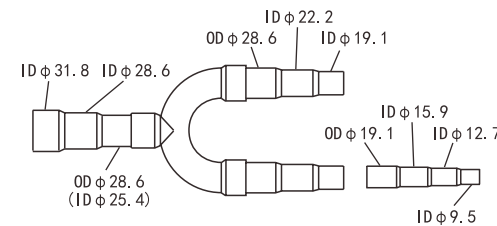
G01:  $(\phi 25.4 - \phi 19.1) - 2 \times (\phi 22.2 - \phi 6.4)$



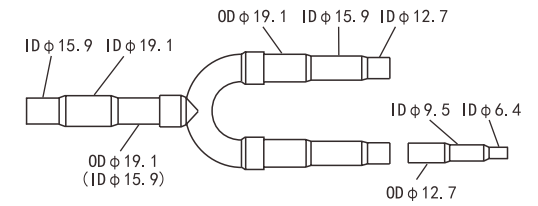
L01:  $(\phi 9.5 - \phi 12.7) - 2 \times (\phi 12.7 - \phi 6.4)$



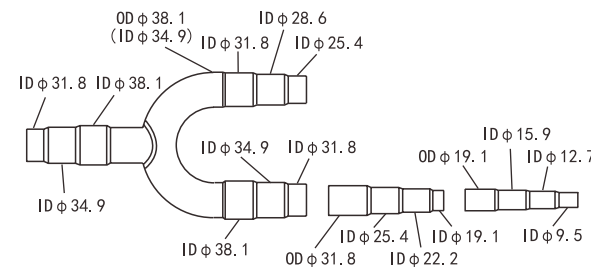
G02:  $(\phi 31.8 - \phi 25.4) - (\phi 28.6 - \phi 19.1) + (\phi 28.6 - \phi 9.5)$



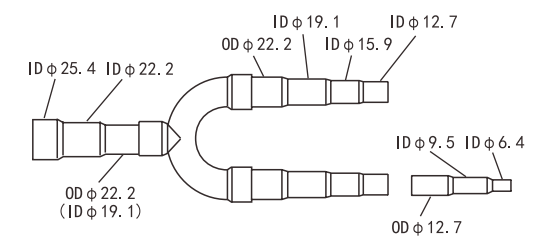
L02:  $(\phi 15.9 - \phi 19.1) - (\phi 19.1 - \phi 12.7) + (\phi 19.1 - \phi 6.4)$



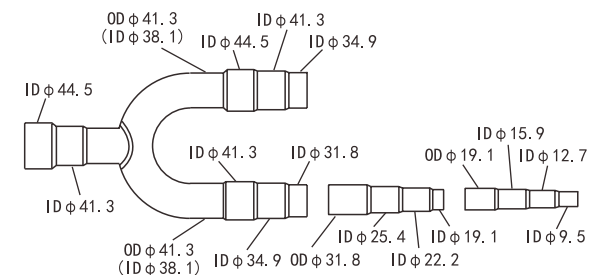
G03:  $(\phi 31.8 - \phi 38.1) - (\phi 34.9 - \phi 25.4) + (\phi 38.1 - \phi 9.5)$



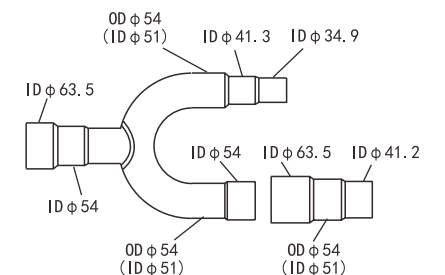
L03:  $(\phi 19.1 - \phi 25.4) - (\phi 22.2 - \phi 12.7) + (\phi 22.2 - \phi 6.4)$



G04:  $(\phi 41.3 - \phi 44.5) - (\phi 44.5 - \phi 34.9) + (\phi 41.3 - \phi 9.5)$



G05:  $(\phi 54 - \phi 63.5) - (\phi 41.3 - \phi 34.9) + (\phi 63.5 - \phi 41.3)$

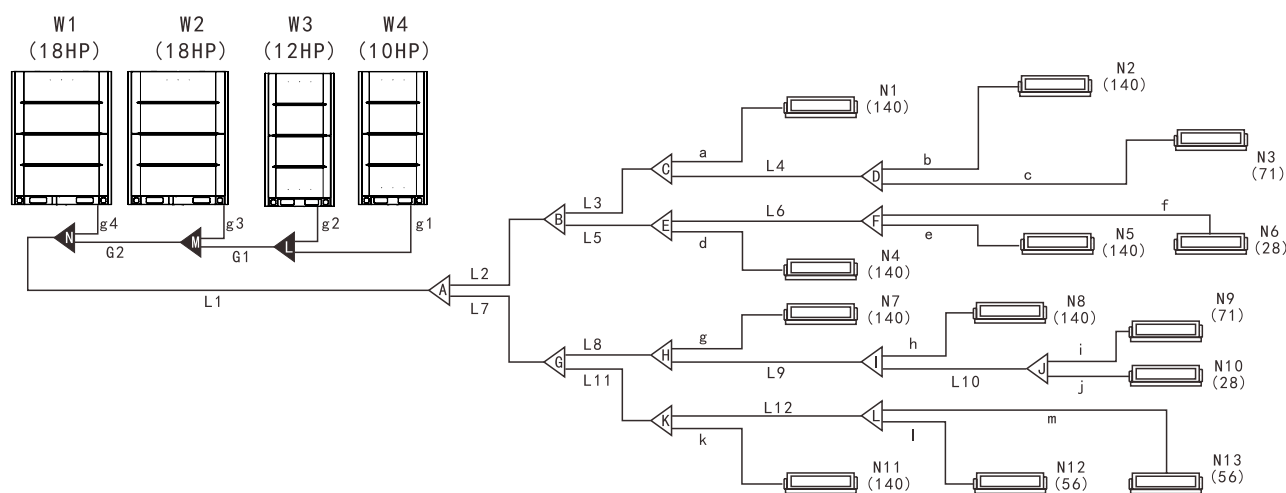




## Piping classification

## ● Allowable length and height difference of refrigerant piping

Name of supporting pipe	Connection position of supporting pipe	Assembly
Main pipe	Pipe between the outdoor unit and the first branch	L1
Main pipe of indoor unit	Pipe behind the first indoor branch which do not connect to indoor unit	L2,L3,L4,... L12
Slave pipe of indoor unit	Pipes between the branch and indoor unit	a,b, c, d,... m
Indoor unit branch assembly	Pipes to the master pipe and slave pipes	A, B, C,D,E,F,G,H, I,J,K,L
Outdoor unit branch assembly	Pipes to the outdoor unit and main pipe	L,Mg
Outdoor unit connecting pipe	Pipe between outdoor and outdoor branch	1,g2, g3, g4, G1, G2



## ● Pipe dimension of indoor unit(NO.: a,b,c,d,... m)

Indoor Unit Model	Gas side	Liquid side
Capacity: 12800-2200W	φ9.52 ( flared nut )	φ6.35 ( flared nut )
Capacity: 2800-5600W	φ12.7 ( flared nut )	φ6.35 ( flared nut )
Capacity: 6300-14000W	φ15.9 ( flared nut )	φ9.52 ( flared nut )

## ● IDU main piping and branch pipe assembly(Number: L2,L3,L4...L12,A,B,C...L)

Capacity of downstream Indoor unit A(×100w)	Dimension of Master pipe (Gas/Liquid)	Applicable brance pipe (Gas/Liquid)	A(×100w)	Dimension of master pipe (Gas/Liquid)	Applicable brance pipe (Gas/Liquid)
A < 63	φ12.7/φ6.35	BY06(L01/L01)	63 ≤ A < 168	φ15.9/φ9.52	BY07(L02/L01)
168 ≤ A < 224	φ19.1/φ9.5	BY07(L02/L01)	224 ≤ A < 330	φ22.2/φ12.7	BY01(G01/L01)
330 ≤ A < 470	φ25.4/φ12.7	BY01(G01/L01)	470 ≤ A < 710	φ28.6/φ15.9	BY03(G02/L02)
710 ≤ A < 1040	φ31.8/φ19.1	BY03(G02/L02)	1040 ≤ A < 1540	φ38.1/φ19.1	BY04(G03/L02)
1540 ≤ A < 12800	φ41.2/φ22.2	BY05(G04/L02)	12800 ≤ A < 2500	φ44.5/φ25.4	BY05(G04/L03)
2500 ≤ A	φ54.0/φ28.6	BY08(G05/G02)			

## Diameter of outer connecting pipe

## ● ODU stop valve port diameter(Number: g1,g2,g3,g4)

Model	Gas	Liquid
TMV6 <sup>+</sup> -Vd+252(280/335/400)W/AS-D(EC)	φ25.4 ( welding )	φ12.7 ( welding )
TMV6 <sup>+</sup> -Vd+450(504/560/615/680)W/AS-D(EC)	φ28.6 ( welding )	φ15.8 ( welding )
TMV6 <sup>+</sup> -Vd+730(785/850/900/)W/AS-D(EC)	φ31.8 ( welding )	φ19.1 ( welding )
TMV6 <sup>+</sup> -Vd+950(1000)W/AS-D(EC)	φ34.9 ( welding )	φ19.1 ( welding )

## ● ODU Main pipe and branch pipes

Capacity of Outdoor unit	Main equivalent length of all piping less than 90m		Main equivalent pipe length more than 90m	
	Gas pipe/Liquid pipe	First branch of indoor unit (Gas side/Liquid side)	Gas pipe/Liquid pipe	First branch of indoor unit (Gas side/Liquid side)
8 ~ 12HP	φ25.4/φ12.7	BY01 Prats (G01/L01)	φ28.6/φ12.7	BY02 Prats (G02/L01)
14 ~ 16HP	φ28.6/φ12.7	BY02 Prats (G02/L01)	φ28.6/φ15.9	BY03 Prats (G02/L02)
18 ~ 24HP	φ28.6/φ15.9	BY03 Prats (G02/L02)	φ31.8/φ19.1	BY03 Prats (G02/L02)
26 ~ 32HP	φ31.8/φ19.1	BY03 Prats (G02/L02)	φ34.9/φ19.1	BY04 Prats (G03/L02)
34 ~ 36HP	φ34.9/φ19.1	BY04 Prats (G03/L02)	φ38.1/φ22.2	BY04 Prats (G03/L02)
38 ~ 42HP	φ34.9/φ19.1	BY04 Prats (G03/L02)	φ38.1/φ22.2	BY04 Prats (G03/L02)
44 ~ 48HP	φ38.1/φ19.1	BY04 Prats (G03/L02)	φ41.2/φ22.2	BY05 Prats (G04/L03)
50 ~ 54HP	φ38.1/φ19.1	BY04 Prats (G03/L02)	φ41.2/φ22.2	BY05 Prats (G04/L03)
56 ~ 66HP	φ41.2/φ22.2	BY05 Prats (G04/L03)	φ44.5/φ22.2	BY05 Prats (G04/L03)
68 ~ 72HP	φ41.2/φ22.2	BY05 Prats (G04/L03)	φ44.5/φ25.4	BY05 Prats (G04/L03)
74 ~ 84HP	φ44.5/φ22.2	BY05 Prats (G04/L03)	φ50.8/φ25.4	BY08 Prats (G05/G02)
86 ~ 96HP	φ50.8/φ25.4	BY08 Prats (G05/G02)	φ54.0/φ28.6	BY08 Prats (G05/G02)
98 ~ 108HP	φ54.0/φ28.6	BY08 Prats (G05/G02)	φ63.0/φ28.6	BY08 Prats (G05/G02)

Remark:

- Please select the main pipe diameter of the outdoor unit follow the above table. If the main pipe is larger , choose the main pipe according to larger one.
- If the system is more than 108HP, please consult technical personnel.





## Electrical system and installation

### Electrical wiring precautions

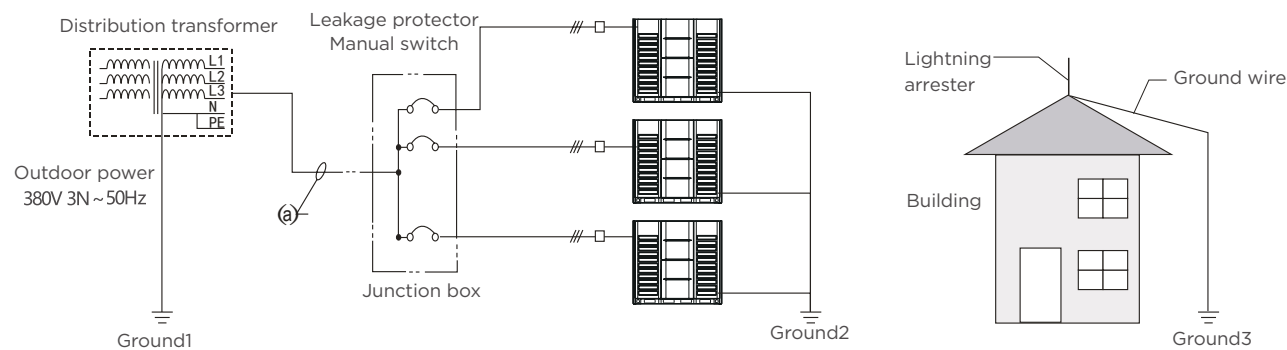
- Please design the dedicated power supply for IDU and ODU separately.
- The power supply should be equipped with a leakage protector and a manual switch.
- The power supply, leakage protector and manual switch of the IDU connected to the same ODU are required to be universal. (Please use the same circuit for the IDU power supply of the same system. And it must be turned on and off at the same time, otherwise it will seriously affect the service life of the system, and unpredictable situations may occur. )
- Please integrate the IDU and ODU connection wiring system and refrigerant piping system into the same system.
- In order to reduce interference, it is recommended to use two-core shielded cables for the signal cables of the IDU and ODU. Please do not use multi-core cables without shielding.
- During installation, the communication line and the power line must not be intertwined, and must be routed separately, and the minimum distance should be greater than 20CM, otherwise the communication of the unit may be abnormal.
- Power wiring must be entrusted to professional electricians.

### ODU power wiring

Model	Power supply	Minimum wire diameter current (A)	Copper core PVC insulated wire BVV(mm <sup>2</sup> )	Copper core XLPE insulated wire YJV(mm <sup>2</sup> )	Manual switch (A) capacity	Leakage protector
TMV-VED+252W/AS-D(EC)	380V 3N ~ 50Hz	19.5	4.0X5	4.0X5	32	< 100mA 0.1sec
TMV-VED+280W/AS-D(EC)	380V 3N ~ 50Hz	21.6	4.0X5	4.0X5	32	
TMV-VED+335W/AS-D(EC)	380V 3N ~ 50Hz	24.9	6.0X5	4.0X5	32	
TMV-VED+400W/AS-D(EC)	380V 3N ~ 50Hz	26.5	6.0X5	4.0X5	32	
TMV-VED+450W/AS-D(EC)	380V 3N ~ 50Hz	32.2	10.0X5	6.0X5	40	
TMV-VED+500W/AS-D(EC)	380V 3N ~ 50Hz	34.0	10.0X5	6.0X5	40	
TMV-VED+560W/AS-D(EC)	380V 3N ~ 50Hz	41.8	16.0X5	10.0X5	50	
TMV-VED+615W/AS-D(EC)	380V 3N ~ 50Hz	42.9	16.0X5	10.0X5	50	
TMV-VED+680W/AS-D(EC)	380V 3N ~ 50Hz	45.5	16.0X5	10.0X5	50	
TMV-VED+730W/AS-D(EC)	380V 3N ~ 50Hz	46.0	16.0X5	10.0X5	50	
TMV-VED+785W/AS-D(EC)	380V 3N ~ 50Hz	48.0	16.0X5	10.0X5	50	
TMV-VED+850W/AS-D(EC)	380V 3N ~ 50Hz	56.8	25.0X3+16.0X2	16.0X5	63	
TMV-VED+900W/AS-D(EC)	380V 3N ~ 50Hz	57.0	25.0X3+16.0X2	16.0X5	63	
TMV-VED+950W/AS-D(EC)	380V 3N ~ 50Hz	63.8	25.0X3+16.0X2	16.0X5	80	
TMV-VED+1010W/AS-D(EC)	380V 3N ~ 50Hz	64.0	25.0X3+16.0X2	16.0X5	80	

Remark :1.The wire diameter and continuous lengthin the table are applicable to a maximum distance of 20 meters. If the power wiring exceeds 20 meters and the voltage drop exceeds the range of 2%, please choose a wire diameter with a larger cross-sectional area.  
2.The selection of the power cord is based on the ambient temperature of 40°C.  
3.The wire current carrying capacity in the attached table is only for the user's reference. The actual interception capacity of the wire varies depending on the type and lengthof the cable, the way of pipe penetration, and the actual laying environment, and the correction factor is different.

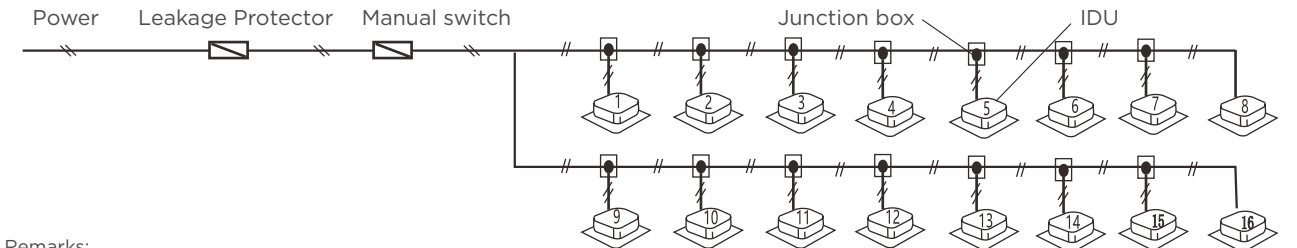
### ODU power connection



### IDU power wiring

Model	Power supply	Minimum wire diameter(mm <sup>2</sup> )			Manual switch		Leakage protector
		Dimensions (Continuous Length)	Dimensions (Continuous Length)	Ground wire	Capacity	Fuse	
All IDU Model	220V -1N 50Hz	2.5 (30m)	4.0 (50m)	φ1.6mm	30	15	20A、30mA < 0.1sec

Remarks: The wiring diameter and continuous lengthin the table indicate that the voltage drop is within 2%. When the continuous wiring lengthexceeds the value in the table, please follow the relevant regulations to select the wire diameter.



Remarks:

1. Please use the refrigerant piping system, the indoor unit-indoor unit room, and the indoor unit-outdoor unit connection signal line as the same system.
2. All the internal units in the same system must be powered in a unified manner, and some internal units cannot be cut off, otherwise the unit will fail.
3. When the power cable and the signal cable are parallel, please put the wires into their respective wire ducts, and leave a suitable distance between the wires. (Distance between power cables: 300mm below 10A, 500mm below 50A)
4. When multiple outdoor units are connected in parallel, the main outdoor unit must be set. (Refer to the settings of the DIP switch)

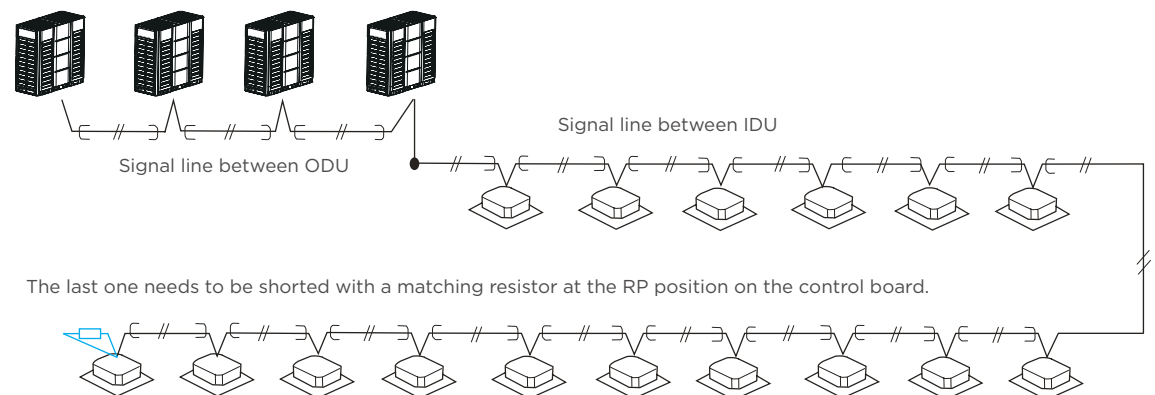
### Control system and installation

- Signal lines must be shielded. Using other wires may cause signal interference and cause malfunction.
- The shielding nets of all shielded wires are connected to each other and finally connected to the sheet metal ground at one point.
- It is forbidden to bundle signal wires, refrigerant pipes, power wires, etc. together. When the power line and the signal line are laid in parallel, they should be kept at a distance of more than 300mm to prevent the signal source from being disturbed.
- Signal lines cannot form a closed loop.
- The signal line has no polarity, and there is no need to distinguish it when wiring.v

### IDU and ODU signal line wiring

- Please use two-core shielded wire (  $\geq 0.75\text{mm}^2$  ) for the signal cable of indoor and outdoor units, without polarity. The signal cable of indoor and outdoor units should be connected as far as possible from the end of the outdoor unit.

ODU(Host) ODU(Slave1) ODU(Slave2)ODU(Slave3)





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