



**TVR 7G**  
DC INVERTER

Cooling UAE version  
8-90HP (Combinable series)  
8-30HP (Individual series)

TRANE  
TECHNOLOGIES



Trane – by Trane Technologies (NYSE: TT), a global climate innovator – creates comfortable, energy efficient indoor environments through a broad portfolio of heating, ventilating and air conditioning systems and controls, services, parts and supply. For more information, please visit [trane.com](http://trane.com) or [tranetechnologies.com](http://tranetechnologies.com).

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11/2023

## Benefits of TRANE VRF

### For End-users

Healthy Operation  
Cost Saving Operation  
Comfortable Environment

### For Building Owners

Energy Saving  
Management  
Reliable Operation  
Backup Solution

### For Consultants

Diversified Solutions  
Professional Tool and Support  
Design Flexibility

### For Construction Companies

Green Solutions  
Space Saving Design  
Intelligent Management



## Application Solutions

### Office Complexes

Enjoy comfort while working  
TRANE VRF provides solutions for office buildings of all sizes and its smart control solutions streamline the management of VRF. It offers a wide variety of indoor units that are suitable for all designs.



### Hotels & Shopping Malls

Increase your business, not your bills  
The high efficiency and reliability of TRANE VRF make it ideal for commercial applications. Intelligent control solutions like hotel key cards and touch screen controller make management easy.



### Residential Apartments

One for every home  
A compact size and high efficiency make TRANE VRF suitable for all residential homes.



### Hospitals/ Schools/ Airports

Meeting all expectations  
The innovative design and variety of indoor unit options make TRANE VRF suitable for all kinds of applications. The newly designed puro-air kit is perfect for modern hospitals.



# OUTDOOR UNITS

The 7G Series VRF uses a variety of algorithms and self-learning technology to monitor the operation of the equipment through operating parameters and timely maintenance, so that the equipment always runs in optimal condition throughout its life cycle.

## Outdoor Unit Lineup

HP	8/10/12/14/16	18/20/22/24/26/28/30
Single Unit		

HP	34-64	66-90
Combined Unit		



# INNOVATIVE TECHNOLOGIES

**TVRlink**

**S-BOX**

**SenseMesh**

**ARTC**

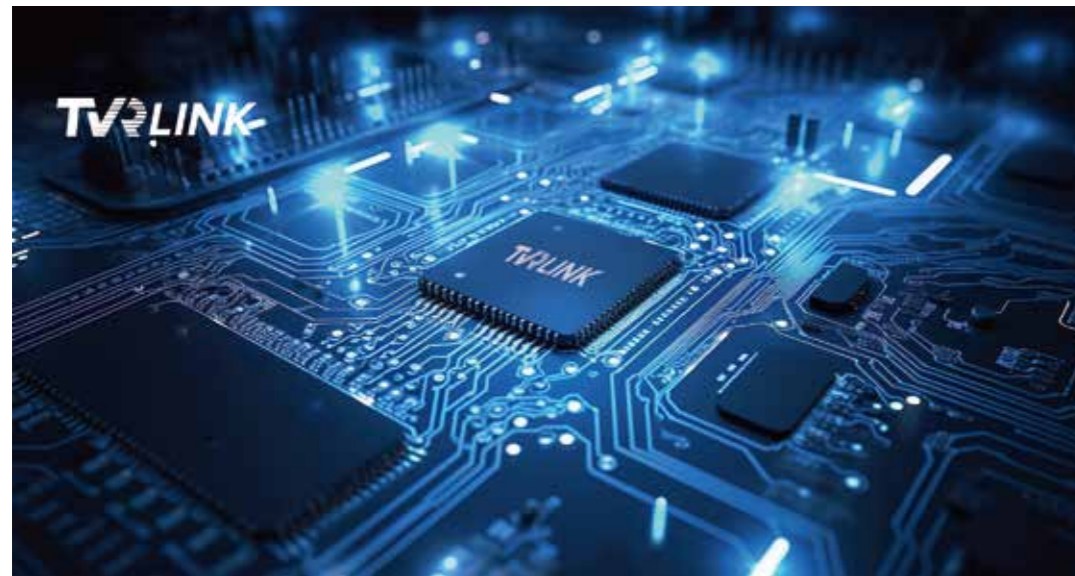
**Comfort +**

**Analyze +**



# TVRlink

TRANE original communication bus chip greatly simplifies installation and saves installation cost.



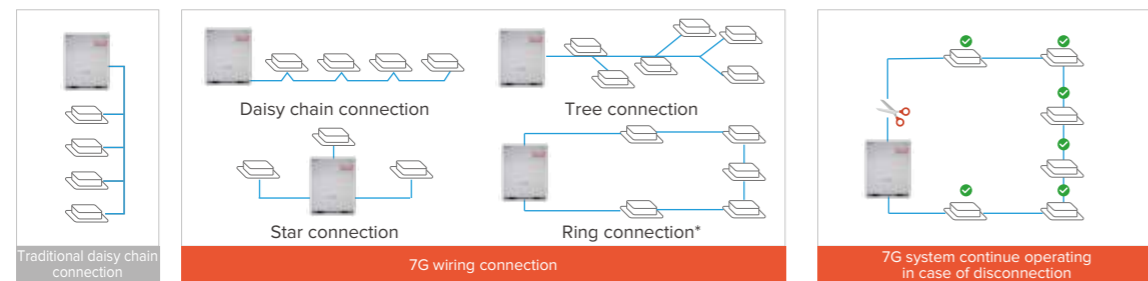
**Benefits**

- Flexible installation
- Low installation cost
- High reliability
- Stable operation

TVRlink communication technology supports any wiring pattern rather than just daisy chain connection, reducing installation costs and the possibility of an incorrect connection. It has stronger anti-interference ability, achieving a communication distance of up to 2000m.

## Arbitrary Topology Communication

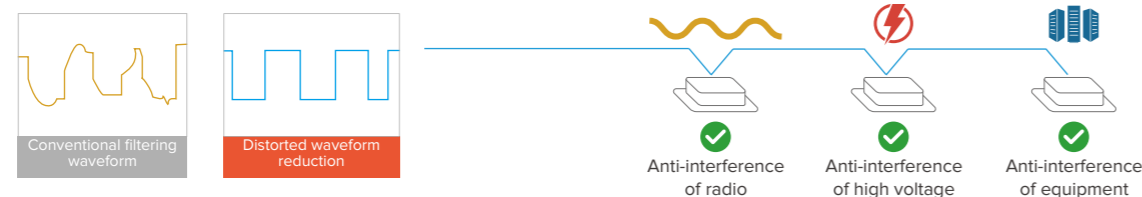
In addition to the traditional daisy chain connection, the communication wire supports tree connection, star connection, ring connection and so on. The wiring is flexible, which greatly reduces installation costs and has no possibility of wrong connection on site.



\*In ring connection, the communication wire must be connected polarized (M1 port to M1 port and M2 port to M2 port).

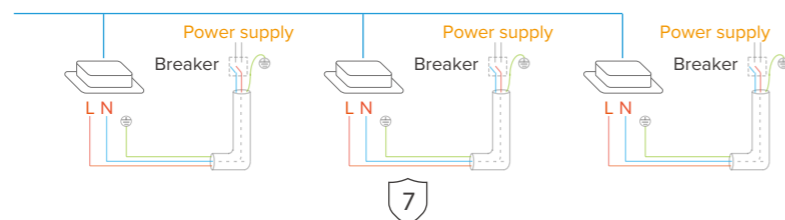
## Super Anti-interference Capability

Special waveform restoration technology enhances anti-interference performance for more stable communication.



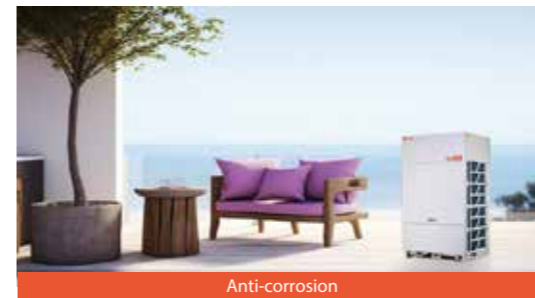
## Flexible Power Supply for Indoor Units

HyperLink's unique communication method allows the indoor units to be powered not only by a uniform power supply, but also by individual and zone power supplies, making it particularly suitable for each shop in a large complex building, which can independently power on and off its own indoor units.



# S-BOX

Fully sealed electric control box provides all-round protection for internal electronic components, greatly improving system RELIABILITY.



**Benefits**

- High reliability
- Stable operation

Fully sealed electronic components are isolated from the external environment to protect against corrosion, sand, humidity, snowstorms and other harsh conditions, and prevent small animals and insects from entering the chamber. This protects internal electronic devices and improves the overall environmental tolerance.

## All Microchannel Refrigerant Cooling

All electronic components including inverter module, filter module and power module are cooled by specially designed microchannel refrigerant to ensure that the electronic components work in the best temperature range.



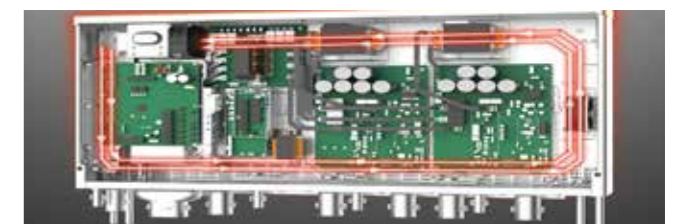
## Built-in Circulating Fan

The built-in circulating fan accelerates the air flow inside the chamber, and the heat exchange is more sufficient to ensure the consistent ambient temperature inside the chamber.



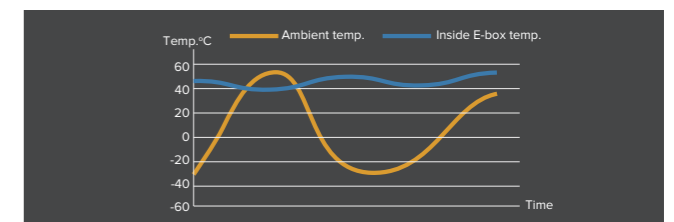
## PTC Heater

The unique PTC heater, with precise temperature control sensor, can still ensure that the temperature inside the chamber remains within the normal operating temperature range of electronic devices even in the low-temperature environment of -30°C.



## 5 High Precision Temperature Sensors

5 high precision temperature sensors are used to accurately monitor the operation state of electronic control under various conditions to ensure that the internal temperature of the chamber is always kept within a stable range.



# SenseMesh

The status of the refrigerant can be determined throughout the process, ensuring high RELIABILITY and COMFORT.



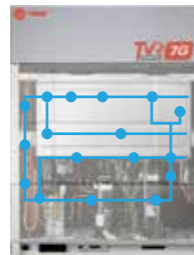
**Benefits**

- High reliability
- Stable operation
- Enhanced comfort

Up to 17 sensors are distributed throughout the refrigerant system, and the status of the refrigerant can be determined throughout the process, ensuring stable operation. At the same time, combined with the digital twin technology of the refrigerant system, a virtual sensor can be created in the event of a physical sensor failure, so that the system does not shut down in the event of a sensor failure, ensuring comfort.

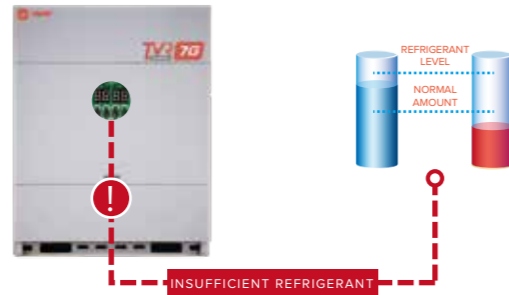
## Complete Sensors

The 7G Series VRF features the industry's most comprehensive range of 17 condition sensors with built-in data models for compressors, heat exchangers, throttling components and more. By analyzing sensor data in real time, it can sense the status of the refrigerant anywhere in the system.



## Refrigerant Amount Diagnosis

Thanks to the complete sensors, the refrigerant running state is clearly visible, so as to accurately diagnose the amount of refrigerant.



## Virtual Sensor Backup

In the event of a sensor failure, other sensors can automatically simulate a virtual backup sensor, so that the VRF system can continue to operate without stopping.



# ARTC

ARTC is the abbreviation of TRANE Evaporating Temperature Alteration. Further upgraded ARTC technology to maximize ENERGY SAVING.



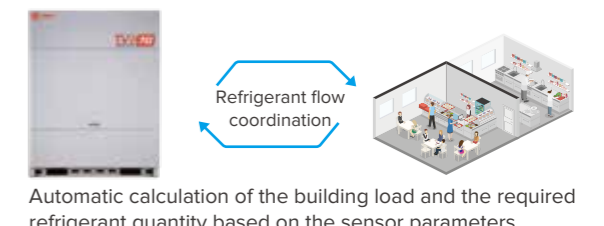
**Benefits**

- Energy saving
- Enhanced comfort
- Fast cooling/heating

Built-in professional operation and maintenance algorithm, so that the annual operation energy efficiency of each set of systems is increased by more than 28%.

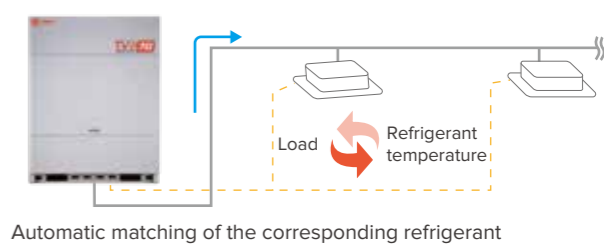
**Variable Refrigerant Flow**

**STEP 1: Architectural space feature recognition**  
The indoor unit automatically recognizes the size of the building space and the effectiveness of the insulation according to the rate of temperature drop.



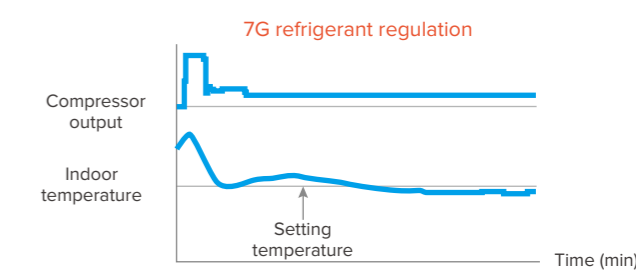
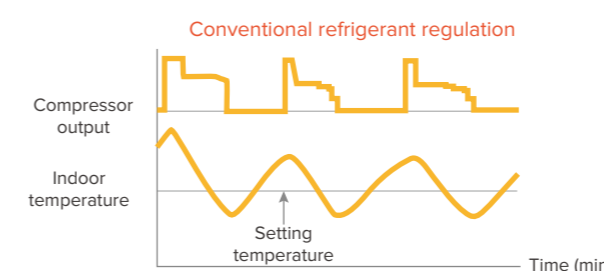
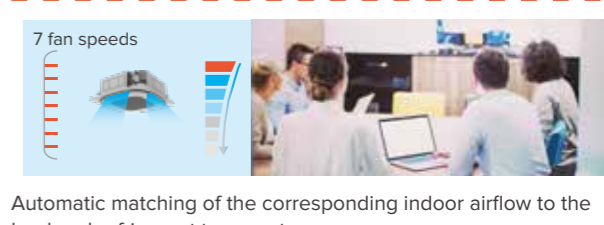
**Variable Refrigerant Temperature**

**STEP 2: System refrigerant temperature determination**  
The system automatically matches the evaporating temperature (in cooling) or condensing temperature (in heating) to the room load to maximize comfort and energy efficiency.




**Variable Indoor Airflow**

**STEP 3: Adaptive indoor airflow and refrigerant flow**  
Each indoor unit automatically adjusts the corresponding indoor airflow and refrigerant flow according to the evaporating/condensing temperature, enabling precise temperature control.






# Comfort +

Further upgraded ZEN AIR technology to maximize COMFORT.



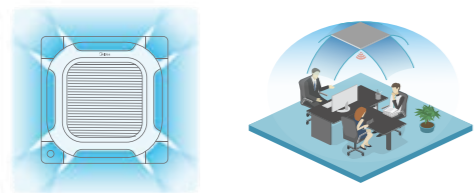
Benefits

-  Quiet
-  Enhanced comfort
-  Healthy

0.5° C temperature adjustment, 7 fan speeds selection, sleep mode, silent mode, windless technology, high efficiency filter, a variety of sterilization devices and other advanced technologies used in 7G Series VRF are dedicated to creating a quiet, comfortable and healthy indoor environment.

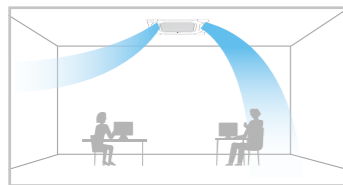
## 360° Airflow

New design, round air flow path ensures uniform air flow and temperature distribution.



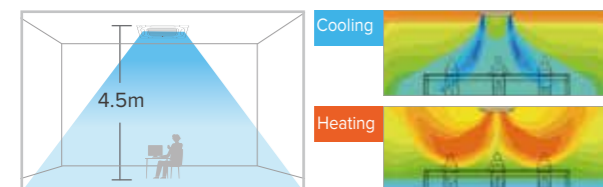
## Individual Louver Control

The Individual louver control can control the motors separately, making it possible to control all four louvers independently.



## Long Distance Air Delivery\*

The Four-way Cassette has an additional 50Pa of static pressure for long airflow delivery and can be used in spaces of up to 4.5m in floor height.



\*This function is available as a customization option.

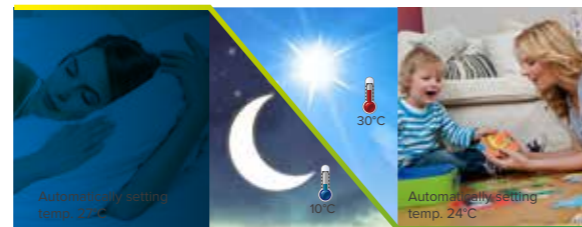
## 7 Fan Speeds

7 indoor fan speed options to meet the needs of different indoor conditions.



## Sleep Mode


The smart sleep mode provides a comfortable sleep period and a refreshing wake up time.




\*Temperature on left is for reference.

## Innovative Puro-air Kit

Protectors of health and safety

 From Germany - OSRAM quality UV light source

 Ozone -Free UV leakage-Free

\*The indoor unit needs to be customized in order to use the Puro-air Kit.



# Analyze +

Further upgraded DOCTOR M technology to maximize EASY SERVICE.



Benefits

-  Easy maintenance
-  Fast maintenance
-  Low maintenance cost

Based on a cloud-based platform of big data and artificial intelligence, the 7G Series VRF can monitor the operation status of each unit in real time, predict system faults in advance and provide data analysis for system maintenance. The intelligent Bluetooth module and special Bluetooth after-sales kit can further simplify maintenance and improve maintenance efficiency.

## Intelligent Maintenance Tool

With the intelligent Bluetooth module or special Bluetooth after-sales kit, the data of the outdoor unit can be directly read and written on your smart phone without connecting a PC or opening the cabinet.



## Real-time Monitoring of Operating Parameters

The 7G Series VRF synchronizes and stores all the unit parameters to the cloud through the data cloud gateway, including the running status, locking status, dirty blocking rate, all spot inspection parameters and so on. Users can query real-time and historical parameters on computers, tablets and mobile phones at any time.



\*The data cloud gateway needs to be purchased separately.

## Cloud-based Big Data Analytics

TRANE 7G Series VRF transmits the system operation data to the cloud in real time through the data cloud gateway, and timely reminds the system of abnormal conditions through big data analysis, helping users to proactively avoid the risk of failure that has not yet occurred and minimize hidden problems.

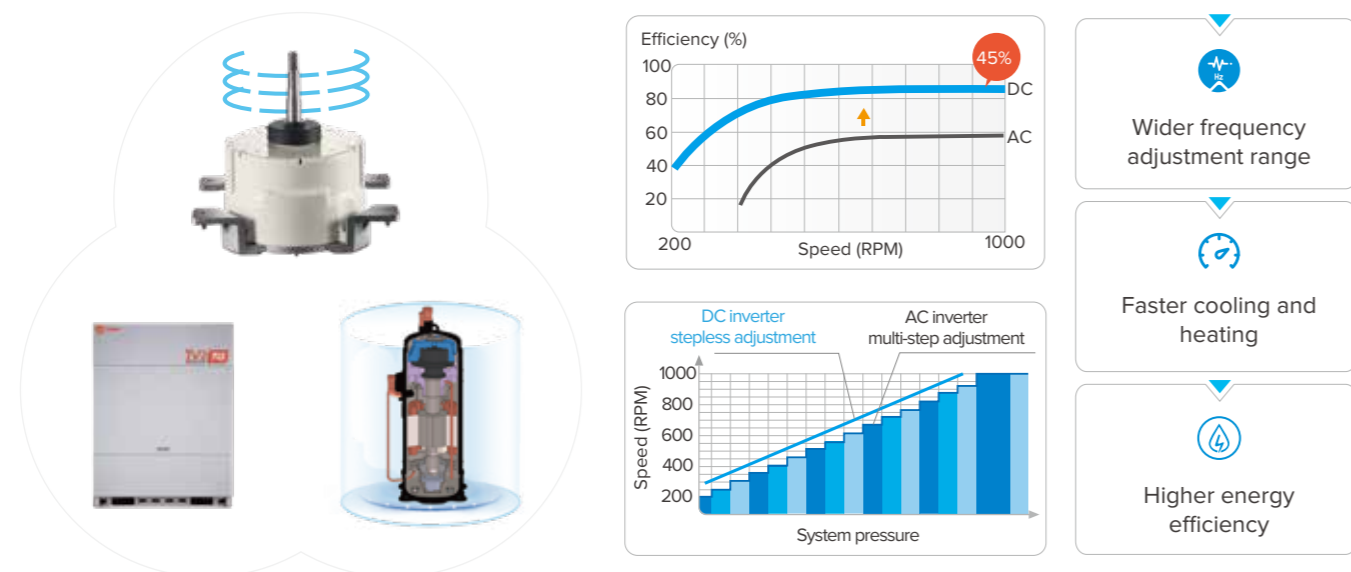


# High Efficiency

## Full DC Inverter Technology

Full DC Inverter for Outdoor Components

The 7G Series VRF uses full DC inverter compressor and fan motor to achieve high precision stepless speed adjustment according to system operation, and ensures that the system is always in optimum condition, operating more efficiently, more consistently and with less noise.

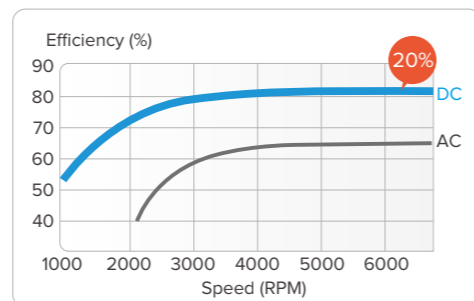
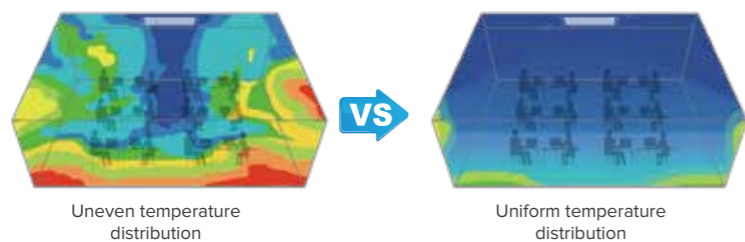


Full DC Inverter for Indoor Components

All power devices such as indoor fan motor, drain pump and electric control board are fully DC, which increases electrical efficiency by 20% and results in more accurate temperature control, a more constant indoor temperature and higher energy efficiency.

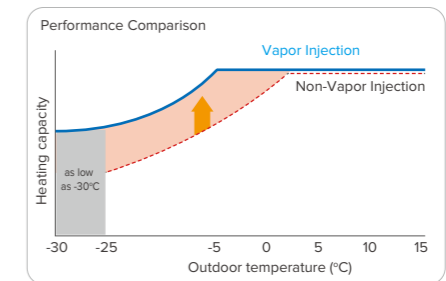
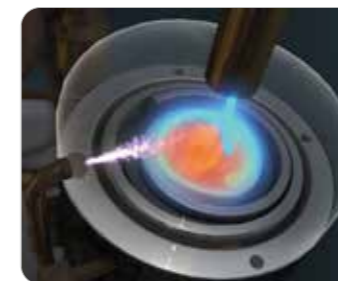


**20%**  
Efficiency improvements



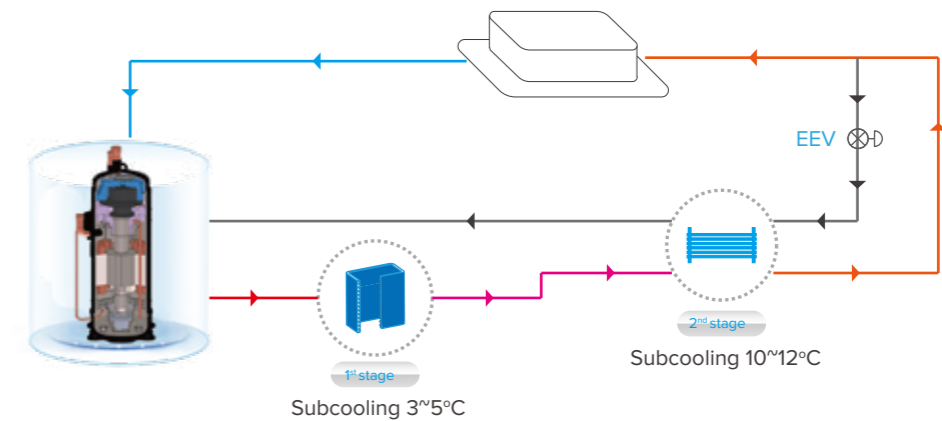
## Enhanced Vapor Injection (EVI) Compressor

The enhanced vapor injection DC inverter compressor increases refrigerant circulation and improves both cooling and heating capacity.



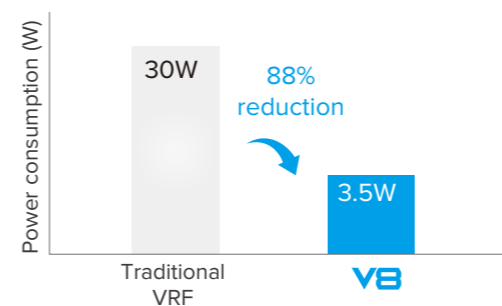
## Advanced Subcooling Technology

The 7G Series VRF uses a micro-channel heat exchanger to further cool the refrigerant and the refrigerant system can achieve 15°C refrigerant subcooling, which can further improve the refrigerant heat transfer efficiency while reducing the sound of refrigerant flow.



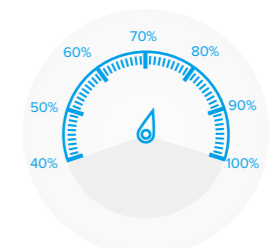
## Low Standby Power Consumption

Compared to the standby power consumption of traditional VRF of about 30W, the 7G Series VRF uses optimized control scheme to further reduce standby power consumption to as low as 3.5W.



## 60-step Energy Management

For projects with temporary electricity supply restrictions, the outdoor unit supports 60-step energy management which can be set to output 40-100% capacity in 1% increments. It prevents tripping during conditions of restricted electricity supply and allows the system to continue to operate.







# High Reliability

## Quadruple Backup

In two fans, two compressors and multiple units, one can run in backup for another. Additionally, the 7G series VRF generates a corresponding virtual sensor for each physical sensor by means of a digital algorithm, which serves as a backup for each other, ensuring no shutdown in the event of a fault, and further guaranteeing comfort.

### 1 Unit Backup

In a multi-unit system, the different units act as a backup to each other, ensuring that the system can continue to operate if one unit fails.



Intelligent load-bearing between units during normal operation

### 2 Fan Backup

In unit with two fans, the two fans act as a backup to each other, ensuring that the system can continue to operate if one fan fails.



In normal operation, each fan runs on demand



Continue operating in case of failure of one unit



Automatic backup operation of another fan in case of failure of one fan

### 3 Compressor Backup

In unit with two compressors, the two compressors act as a backup to each other, ensuring that the system can continue to operate if one compressor fails.



Intelligent load-bearing between compressors during normal operation



Continue operating in case of failure of one compressor

### 4 Sensor Backup

Through digital algorithms, each physical sensor generates a corresponding virtual sensor that acts as a backup to each other, ensuring that the failure of one sensor does not affect the normal operation of the system.



Automatic backup operation of the corresponding virtual sensor in case of failure of one physical sensor

## Double Duty Cycling

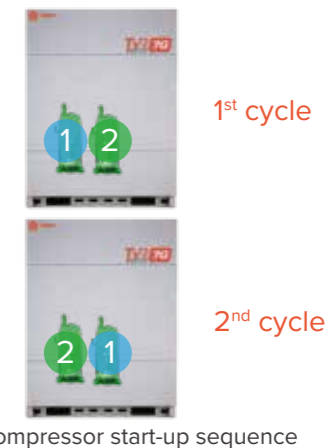
### 1 Unit Duty Cycling

In a multi-unit system, duty cycling equalizes the running time of each outdoor unit, significantly extending unit lifespan.



### 2 Compressor Duty Cycling

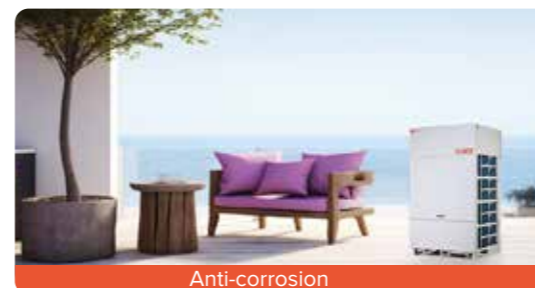
In units with two compressors, duty cycling equalizes the running time of each compressor, significantly extending compressor lifespan.



Note: The duty cycling sequence shown in the figure is only a schematic reference. The actual duty cycling sequence is not a fixed sequence. Please refer to the technical manual for specific rotation rules.

## ShieldBox

IP55 fully enclosed electric control box provides all-round protection for internal electronic components, greatly improving system reliability.



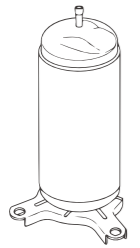
## SuperSense

7G Series VRF uses up to 19 sensors for each outdoor unit and 4 sensors for each indoor unit. The operating status of the system refrigerant is clearly visible, which can achieve intelligent analysis of operation parameters, intelligent error diagnosis and forecasting, and visualized energy saving.

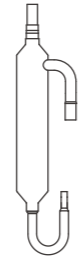


## Precise Oil Control

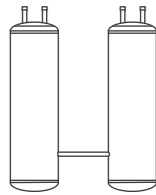
Four stages of oil control technology ensure all outdoor compressor oil is always kept at a safe level, eliminating any compressor oil shortage problems.



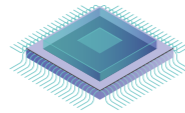
**1** Compressor internal oil separation.



**2** High-efficiency centrifugal oil separator (with separation efficiency of up to 99%) ensures that oil is separated from the discharge gas and returned to the compressors in a timely fashion.



**3** Oil balance pipes between gas-liquid separator ensure even oil distribution to keep compressors running normally.



**4** The automatic oil return program determines the oil return through the running time and the oil discharge amount, enabling precise oil return.

## Auto Snow-blowing Function

The innovatively designed auto snow-blowing function enables the outdoor unit to prevent the accumulation of snow by itself.



Blowing away snow

## Auto Dust-clean Function

The innovatively designed dust-clean function enables the outdoor unit to prevent the dust by itself.



Self-cleaning



# Enhanced Comfort

## Advanced Silent Technology

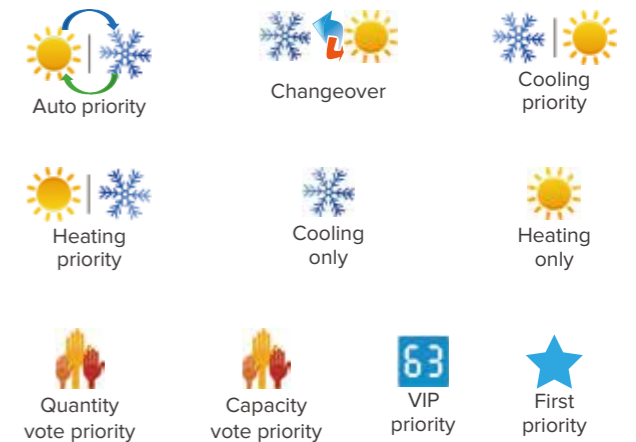
15-step silent mode plus night silent mode provide more freedom and convenience to match the customer needs.



15 silent options

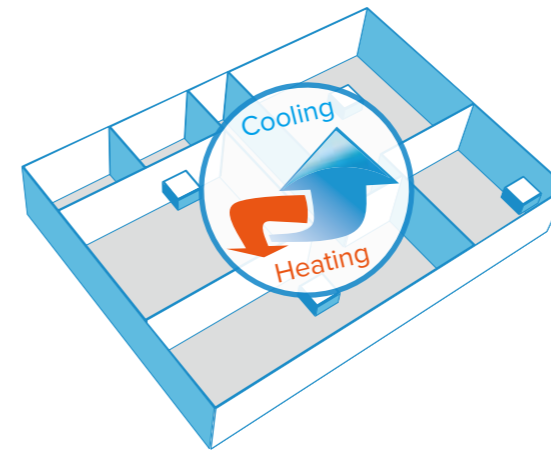
## 10 Priority Modes

10 priority mode options provide more freedom and convenience to match the customer needs.



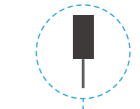
## Auto Cooling-heating Changeover

Automatically selects cooling or heating mode to achieve the set temperature.



## Additional Ambient Temperature Sensor\*

The 7G Series VRF can be equipped with an additional external ambient temperature sensor to determine whether the system is operating in cooling or heating in auto priority mode. For some installations, the ambient temperature sensor fixed on the unit cannot detect the true ambient temperature, resulting in the system operating in an inappropriate mode and affecting indoor comfort. The external ambient temperature sensor can detect the true outdoor ambient temperature, and correctly judge whether the system is running in cooling or heating mode, ensuring indoor comfort.



Additional Ambient Temperature Sensor

\*This function is available as a customization option.



### Wide Capacity Range

The capacity of 7G Series VRF is from 8HP to 90HP, perfectly suited for small to large buildings.

Single unit



8HP/10HP/12HP/14HP/16HP

Single unit



18HP/20HP/22HP/24HP/26HP/28HP/30HP

Combined unit



34-64HP

Combined unit



66-90HP

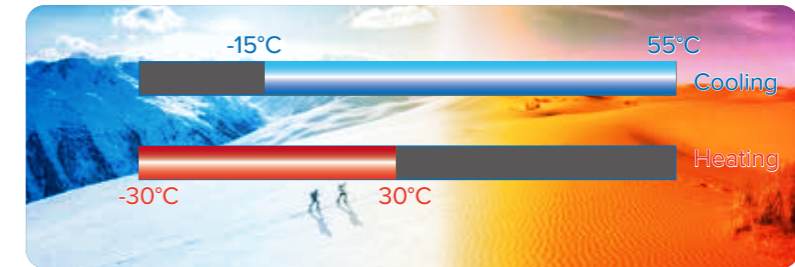
### Wide Range of Indoor Units

The 7G Series VRF offers 12 types of over 100 models of indoor units to meet different scenarios of applications such as offices, shopping malls, hotels, airports, schools, hospitals, etc.



### Wide Operation Range

Thanks to the EVI compressor and refrigerant cooling technology, the 7G Series VRF can operate at temperatures as low as -30°C for heating and up to 55°C for cooling.

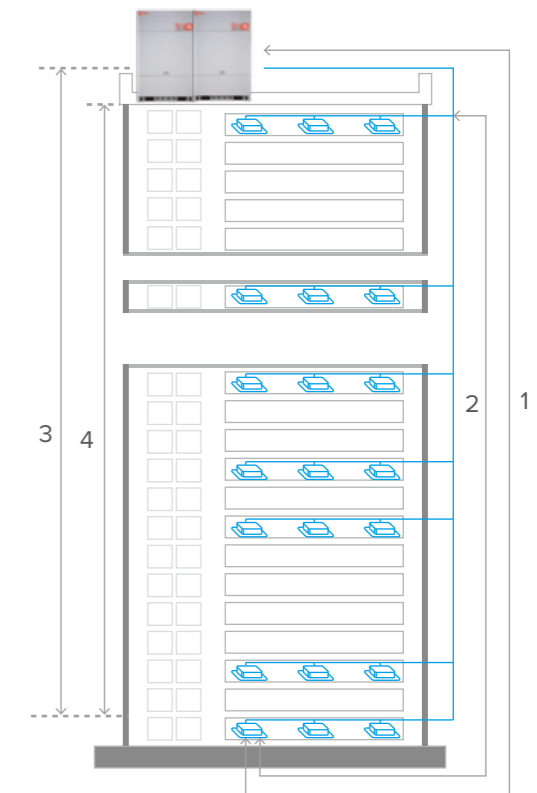


### Long Piping Capability

The total piping length of the 7G system can be up to 1100m, the level difference between indoor and outdoor units can be up to 110m and the level difference between indoor units can be up to 40m, making the 7G Series VRF perfectly suitable for all buildings.

- Total piping length: **1100m**
- 1 Longest piping length - actual (equivalent): **220(260)m**
- 2 Longest piping length after first branch: **40/120\*m**
- 3 Level difference between IDUs and ODU - ODU above (below): **110(110)m**
- 4 Level difference between IDUs: **40m**

\*The longest length after first branch is 40m as standard but can be extended to up to 120m under certain conditions. Please contact your local dealer for further information.

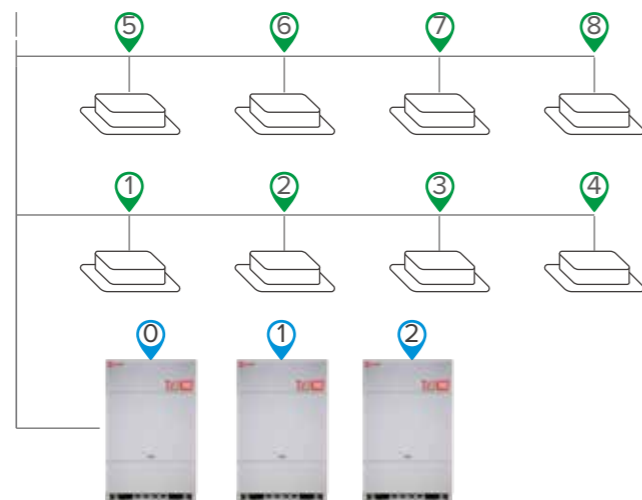




# Easy Installation and Service

## Auto Addressing

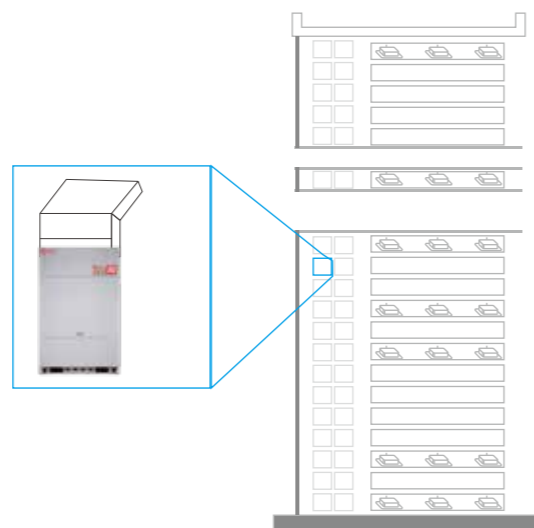
Addresses for all indoor units and combined outdoor units can be assigned automatically by the 7G system, further simplifying installation.



## External Static Pressure up to 120Pa\*

The static pressure of the outdoor unit can be up to 120Pa which facilitates installation of the unit on each floor of high-rise building or on balconies.

\*External static pressure above 20Pa is available as a customization option.



## Automatic Refrigerant Charging\*

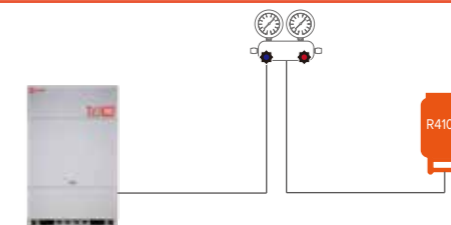
Compared to manual refrigerant charging, automatic refrigerant charging greatly simplifies the process, making installation and maintenance easier and more efficient.

### Manual refrigerant charging

- 1 • Calculate additional refrigerant quantity
- 2 • Connect refrigerant tank to the outdoor unit & start filling process
- 3 • Observe the weight scale to check the refrigerant charge
- 4 • Close the shut-off valve manually & finish filling process

### Automatic refrigerant charging

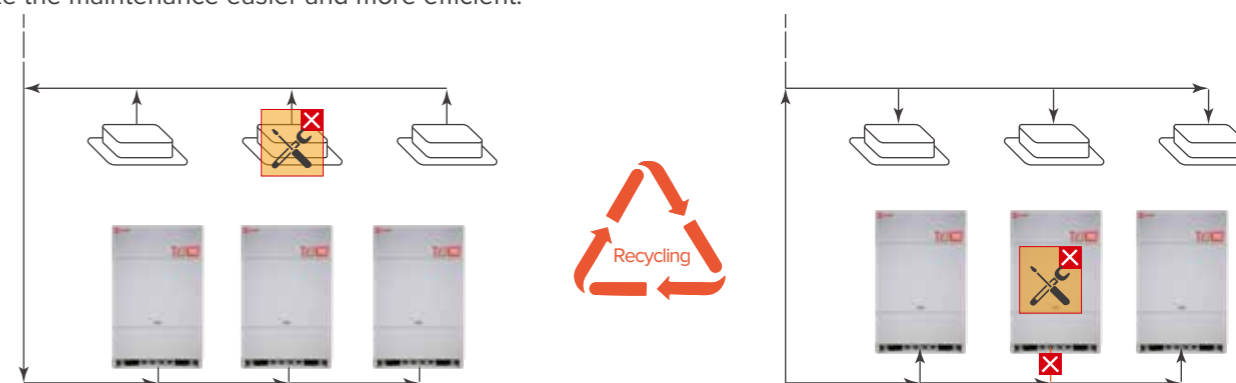
- 1 • Connect refrigerant tank to the outdoor unit & activate automatic charging function
- 2 • Close the shut-off valve automatically & finish filling process



\*This function is available as a customization option.

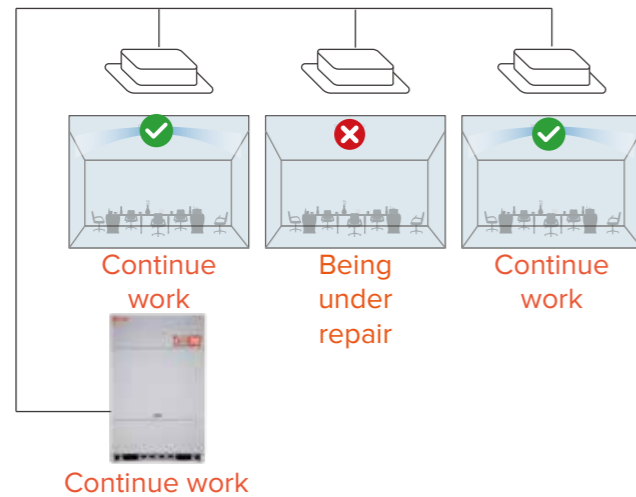
## Automatic Refrigerant Recycling

When an indoor unit fails, the refrigerant can be recycled into the outdoor units. When part of the outdoor unit fails, the refrigerant can be recycled into the indoor units and the normal outdoor unit. Two types of refrigerant recycling make the maintenance easier and more efficient.



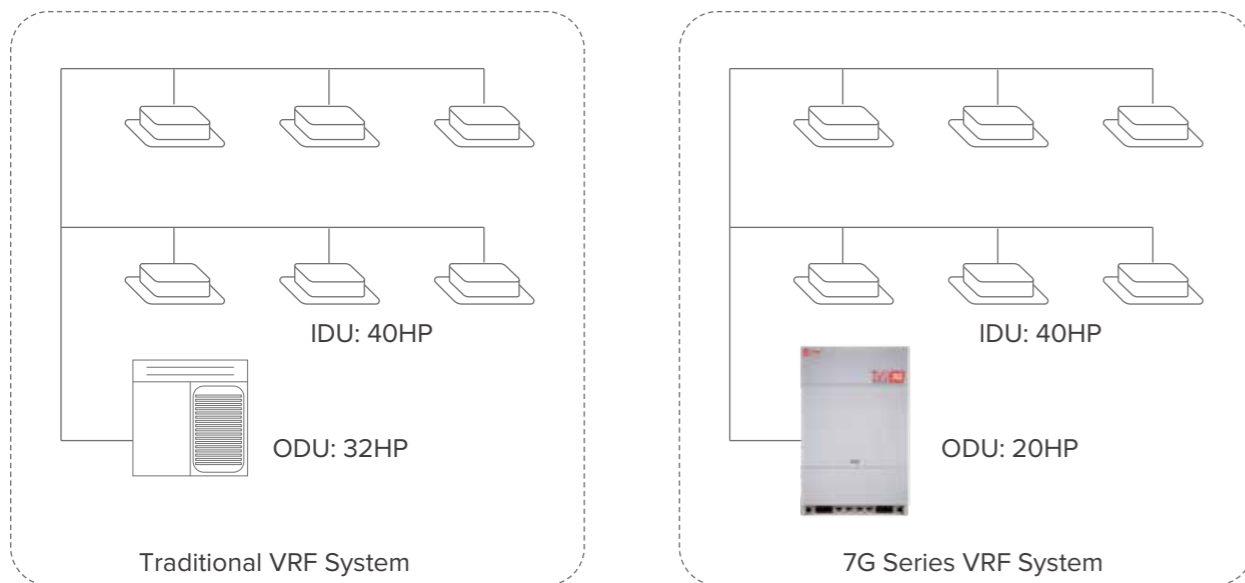
## Maintenance Mode

The maintenance mode allows the shutdown of some indoor units without shutting down the whole VRF system, and it can be activated on site during maintenance period as the remaining indoor units continue to operate.



## Wide Combination Ratio\*

Compared to traditional VRF with combination ratio of 50-130%, the 7G Series VRF can be extended to 50-200%, and the wider combination ratio allows for more flexible system configuration. The larger combination ratio can be applied to long-term part-load operation scenarios, allowing for further reduction in installation costs.



\*Combination ratio over 130% is available as a customization option.

## Easy Software Program Upgrade

In addition to upgrading the program of outdoor and indoor units through USB and burner, the new product can also remotely upgrade all the programs of indoor and outdoor units through data cloud gateway, making system upgrades very convenient and ensuring that the system program is always up to date.

\*The data cloud gateway is still under development and needs to be purchased separately.

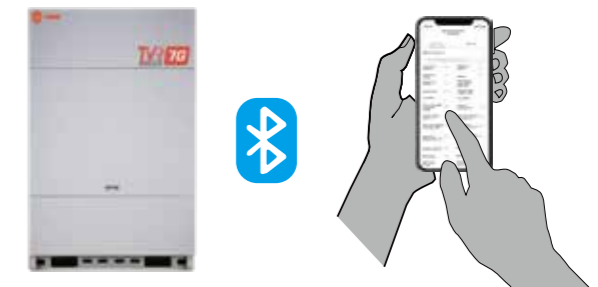


## Smart Commissioning/Maintenance Tool

With the newly developed smart tool (Bluetooth module and special Bluetooth after-sales kit), system settings, operating parameter queries, trial runs and programme upgrades are all possible without opening the cabinet.

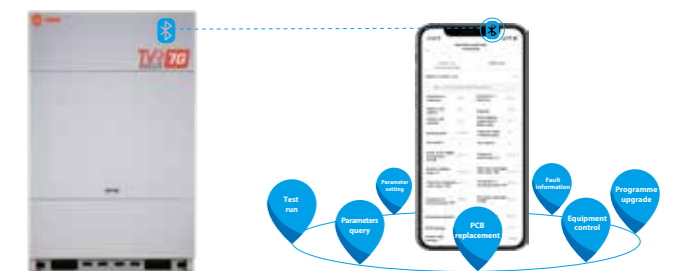
Useful in the following situations:

- Installation
- Service maintenance



Main functions:

- Fault information storage
- Operating parameters query
- Start commissioning test run
- System parameter setting
- Quick after-sales PCB replacement
- Equipment control
- Indoor and outdoor units programme upgrade



# SPECIFICATIONS



HP			8	10	12
Model name			4TVVT086DD07CAG	4TVVT096DD07CAG	4TVVT115DD07CAG
Power supply		V/N/Hz	380-415/3/50(60)	380-415/3/50(60)	380-415/3/50(60)
Cooling (T1) <sup>1</sup>	Capacity	kW	25.2	27.9	33.6
		Btu/h	86000	95000	115000
	Power input	kW	5375	6250	8270
	EER	kW/kW	16.00	15.20	13.90
Cooling (T3) <sup>1</sup>	Capacity	kW	22.2	24.6	28.2
		Btu/h	76000	84000	96000
	Power input	W	6875	7700	9365
EER	Btu/(W.h)	11.05	10.90	10.25	
CSPF (T3)		Btu/(W.h)	21.00	21.10	21.50
Heating <sup>2</sup>	Capacity	kW	25.2	27.9	33.6
		Btu/h	86000	95000	115000
	Power input	kW	4.60	5.20	6.60
	COP	kW/kW	5.48	5.37	5.09
Connected indoor unit	Total capacity		50-130% of ODU capacity	50-130% of ODU capacity	50-130% of ODU capacity
	Maximum quantity		13	16	19
Compressors	Type		DC inverter	DC inverter	DC inverter
	Quantity		1	1	1
Fan motors	Type		DC	DC	DC
	Quantity		1	1	1
	Static pressure	Pa	0-20 (standard) 20-120 (customized)	0-20 (standard) 20-120 (customized)	0-20 (standard) 20-120 (customized)
	Airflow rate	m <sup>3</sup> /h	12600	12600	13500
Refrigerant	Type		R410A	R410A	R410A
	Factory charge	kg	7	7	7
Pipe connections <sup>3</sup>	Liquid pipe	mm	Φ12.7	Φ12.7	Φ12.7
	Gas pipe	mm	Φ25.4	Φ25.4	Φ25.4
Sound pressure level <sup>4</sup>		dB(A)	58	58	61
Net dimensions (W×H×D)		mm	940×1760×825	940×1760×825	940×1760×825
Packed dimensions (W×H×D)		mm	1010×1945×890	1010×1945×890	1010×1945×890
Net weight		kg	195	195	195
Gross weight		kg	213	213	213
Ambient temp. operation range	Cooling	°C (DB)	-15 to 55	-15 to 55	-15 to 55
	Heating	°C (DB)	30 to 30	-30 to 30	-30 to 30

HP			14	16	18
Model name			4TVVT140DD07CAG	4TVVT155DD07CAG	4TVVT172DD07CAG
Power supply		V/N/Hz	380-415/3/50(60)	380-415/3/50(60)	380-415/3/50(60)
Cooling (T1) <sup>1</sup>	Capacity	kW	40.0	45.0	50.0
		Btu/h	137000	154000	170000
	Power input	kW	10110	11938	12925
	EER	kW/kW	13.55	12.90	13.15
Cooling (T3) <sup>1</sup>	Capacity	kW	33.6	37	42
		Btu/h	115000	127000	142000
	Power input	W	10695	12390	13920
EER	Btu/(W.h)	10.75	10.25	10.20	
CSPF (T3)		Btu/(W.h)	20.50	20.5	20.0
Heating <sup>2</sup>	Capacity	kW	40.0	45.0	50.0
		Btu/h	137000	154000	170000
	Power input	kW	8.50	9.80	10.60
	COP	kW/kW	4.71	4.59	4.72
Connected indoor unit	Total capacity		50-130% of ODU capacity	50-130% of ODU capacity	50-130% of ODU capacity
	Maximum quantity		23	26	29
Compressors	Type		DC inverter	DC inverter	DC inverter
	Quantity		1	1	1
Fan motors	Type		DC	DC	DC
	Quantity		1	1	2
	Static pressure	Pa	0-20 (standard) 20-120 (customized)	0-20 (standard) 20-120 (customized)	0-20 (standard) 20-120 (customized)
	Airflow rate	m <sup>3</sup> /h	15600	15600	22000
Refrigerant	Type		R410A	R410A	R410A
	Factory charge	kg	8	8	9.3
Pipe connections <sup>3</sup>	Liquid pipe	mm	Φ15.9	Φ15.9	Φ15.9
	Gas pipe	mm	Φ28.6	Φ28.6	Φ28.6
Sound pressure level <sup>4</sup>		dB(A)	63	65	65
Net dimensions (W×H×D)		mm	940×1760×825	940×1760×825	1340×1760×825
Packed dimensions (W×H×D)		mm	1010×1945×890	1010×1945×890	1410×1945×890
Net weight		kg	218	218	277
Gross weight		kg	236	236	297
Ambient temp. operation range	Cooling	°C (DB)	-15 to 55	-15 to 55	-15 to 55
	Heating	°C (DB)	-30 to 30	-30 to 30	-30 to 30

HP			20	22	24
Model name			4TVVT192DD07CAG	4TVVT211DD07CAG	4TVVT228DD07CAG
Power supply		V/N/Hz	380-415/3/50(60)	380-415/3/50(60)	380-415/3/50(60)
Cooling (T1) <sup>1</sup>	Capacity	kW	56.0	61.5	67.0
		Btu/h	190000	210000	228000
	Power input	kW	15900	15970	18535
	EER	kW/kW	11.95	13.15	12.30
Cooling (T3) <sup>1</sup>	Capacity	kW	44	46	52
		Btu/h	150000	156000	178000
	Power input	W	14780	16000	18635
EER	Btu/(W.h)	10.15	9.75	9.55	
CSPF (T3)		Btu/(W.h)	19.6	19.8	19.0
Heating <sup>2</sup>	Capacity	kW	56.0	61.5	67.0
		Btu/h	190000	210000	228000
	Power input	kW	12.70	15.00	14.90
	COP	kW/kW	4.41	4.1	4.5
Connected indoor unit	Total capacity		50-130% of ODU capacity	50-130% of ODU capacity	50-130% of ODU capacity
	Maximum quantity		33	36	39
Compressors	Type		DC inverter	DC inverter	DC inverter
	Quantity		1	1	1
Fan motors	Type		DC	DC	DC
	Quantity		2	2	2
	Static pressure	Pa	0-20 (standard) 20-120 (customized)	0-20 (standard) 20-120 (customized)	0-20 (standard) 20-120 (customized)
	Airflow rate	m <sup>3</sup> /h	22000	21500	21500
Refrigerant	Type		R410A	R410A	R410A
	Factory charge	kg	9.3	12	12
Pipe connections <sup>3</sup>	Liquid pipe	mm	Φ15.9	Φ15.9	Φ15.9
	Gas pipe	mm	Φ28.6	Φ28.6	Φ28.6
Sound pressure level <sup>4</sup>		dB(A)	66	66	67
Net dimensions (W×H×D)		mm	1340×1760×825	1340×1760×825	1340×1760×825
Packed dimensions (W×H×D)		mm	1410×1945×890	1410×1945×890	1410×1945×890
Net weight		kg	277	297	297
Gross weight		kg	297	317	317
Ambient temp. operation range	Cooling	°C (DB)	-15 to 55	-15 to 55	-15 to 55
	Heating	°C (DB)	-30 to 30	-30 to 30	-30 to 30

HP			26	28	30
Model name			4TVVT251DD07CAG	4TVVT270DD07CAG	4TVVT288DD07CAG
Power supply		V/N/Hz	380-415/3/50(60)	380-415/3/50(60)	380-415/3/50(60)
Cooling (T1) <sup>1</sup>	Capacity	kW	73.0	78.5	85.0
		Btu/h	250000	268000	290000
	Power input	kW	22220	23100	25325
	EER	kW/kW	11.25	11.60	11.45
Cooling (T3) <sup>1</sup>	Capacity	kW	57	61.0	62.5
		Btu/h	194000	208000	214000
	Power input	W	21800	22730	23645
EER	Btu/(W.h)	8.90	9.15	9.05	
CSPF (T3)		Btu/(W.h)	18.9	19.50	19.25
Heating <sup>2</sup>	Capacity	kW	73.0	78.5	85.0
		Btu/h	250000	268000	290000
	Power input	kW	17.60	20.70	23.00
	COP	kW/kW	4.15	3.79	3.70
Connected indoor unit	Total capacity		50-130% of ODU capacity	50-130% of ODU capacity	50-130% of ODU capacity
	Maximum quantity		43	46	50
Compressors	Type		DC inverter	DC inverter	DC inverter
	Quantity		2	2	2
Fan motors	Type		DC	DC	DC
	Quantity		2	2	2
	Static pressure	Pa	0-20 (standard) 20-120 (customized)	0-20 (standard) 20-120 (customized)	0-20 (standard) 20-120 (customized)
	Airflow rate	m <sup>3</sup> /h	29000	28000	28000
Refrigerant	Type		R410A	R410A	R410A
	Factory charge	kg	19	21	21
Pipe connections <sup>3</sup>	Liquid pipe	mm	Φ22.2	Φ22.2	Φ22.2
	Gas pipe	mm	Φ31.8	Φ34.9	Φ34.9
Sound pressure level <sup>4</sup>		dB(A)	68	68	68
Net dimensions (W×H×D)		mm	1880×1760×825	1880×1760×825	1880×1760×825
Packed dimensions (W×H×D)		mm	1935×1945×890	1935×1945×890	1935×1945×890
Net weight		kg	380	419	419
Gross weight		kg	405	444	444
Ambient temp. operation range	Cooling	°C (DB)	-15 to 55	-15 to 55	-15 to 55
	Heating	°C (DB)	-30 to 30	-30 to 30	-30 to 30