TRANE®

Integrated

TVR 5G DC INVERTER *Air Conditioning System*

a smart solution for every building

R410a 50Hz

Ingersoll Rand®

Contents

Contents

About Trane

Trane is all about air - cool air, warm air, clean air. As a world leader in air conditioning systems, services and solutions, we control the comfort of the air for people in homes and many of the world's largest and most famous commercial, industrial and institutional buildings. And we're applying Trane's expertise in environmental technology and energy conservation to make a difference in energy efficiency around the globe.

Our Products, Services, Brands and Reputation

We offer a broad range of energy-efficient heating, ventilation and air conditioning (HVAC) systems; dehumidifying and air cleaning products; service and parts support and advanced building controls. Our systems and services have leading positions in premium commercial, residential, institutional and industrial markets; a reputation for reliability, high quality and product innovation; and a powerful distribution network.

TVR DC INVERTER System




Presenting a new and excellent heating and cooling option from Trane - with legendary Trane benefits. Best- in-class energy efficiency. Truly customizable comfort. Available simultaneous heating and cooling throughout a building. All with small footprints and multiple installation options for a wide variety of building types.

These are just some of the benefits of Integrated TVR 5G system, our newest heating and cooling options that bring a new level of choice to our customers. TVR 5G can be perfect as stand-alone heating and cooling systems - or perfect as supplemental heating and cooling systems.

For a wide variety of customers, applications and building types, TVR 5G can be the solution you've been looking for to improve the comfort of your building - and improve the lives of the people in it. Large and small buildings. Old and new buildings. Schools and offices. TVR 5G can serve as a stand-alone or supplemental system for a wide variety of buildings and applications, offering comfort, efficiency and user control without compromise.

BEST OF ALL, ITS A TRANE !

System

The new Variable Refrigerant, TVR™ air conditioning concept is a modular HVAC system designed to provide the ideal climate in offices, retail establishments, hotels, luxury apartments, and villas. Furthermore, it is equally suited to new construction and retrofit projects. In the global arena, TVR™ systems have gained significant popularity with airco ditioning professionals and discerning end users who recognize its considerable benifits.

TVR™ can be installed as the main HVAC system in a facility or as a supplemental one that coordinates with an existing HVAC installation to meet different application requirements.
TVR™ (Trane Variable Refrigerant) technology systems combine one or more centralized DC Inverter, aircooled compressors and condensers connected to many indoor (fan coil) units throughout the building.

A single TVR™ system fully integrates all functions necessary for filtration, cooling/heating, and ventilation. The indoor climate quality can be improved when pretreated outside air is connected either directly to the indoor units or introduced as a separate system. The TVR™ system offers advantages throughout the lifecycle of the project; from design, installation, commissioning, operation and mainte - nance. The Independent Zone Control delivers energy savings for the end user by ensuring that the indoor units for unoccupied rooms remain off.

TVR Advantage

Energy Efficient:

The TVR™ system's automatic power consumption adjustment matches the cooling load perfectly to the changing needs of all the individual zones, thus realizing energy savings. The capacity is controlled intelligently and distributed evenly over the different zones without wasting energy.

Energy Management

The optional centralized control system of TVR™ already has all the power management data or information points of each individual zone. Adding the power measurement softwares allows the user to calculate the individual power consumption per zone, per floor or per building. The control software will require a Digital ammeter per condenser and the outdoor centralized controller.

Applications

systems offer compelling benefits along the entire value chain

Benefits for Designers

- Design Flexibility. A single condensing unit can be connected to many indoor units of varying capacity and configurations (i.e., Hi wall, Cassette, Convertible and Ducted Split).
- The relative light weight of the system reduces requirements for structural reinforcement of roofs. Because ductwork is used only for the ventilation system, it can be smaller than the ducting required in standard ducted systems, reducing building height and costs.
- TVR™ systems are ideally suited to buildings with diverse, multiple zones requiring individual control, such as office buildings, hospitals, or hotels.

Benefits for Installers

- TVR™ systems are easy to install; deployment and installation costs are significantly lower. The TVR™ systems are light and can easily fit into a standard elevator. Large commercial equipment by comparison are bulky and require specialist material handling equipment.
- Since the units are modular, large cooling capacities can be achieved by combining multiple units.
- Modularity of the design also enables stages, floor by floor or zone by zone installation, for example when a building is not fully occupied.
- Trane, with its range of standard TVR™ modules and sophisticated electronic controls aims to provide near plug-and-play commissioning.

Applications

Benefits for Owners

- Comfort : TVR™ Systems can be deployed over several zones, each with its individual set point control. Since TVR™ systems use DC Inverter compressors with wide capacity modulation, precise temperature control can be achieved.

- Energy Efficiency : Duct losses are virtually eliminated in a TVR™ system, which in a conventional ducted version can be as much as 10 to 20% of the total airflow. Furthermore, a TVR™ system can include one, two or three compressors, one of which is DC Inverter + Fixed or both inverters. These factors constitute to higher system operational efficiency.

- TVR™ systems typically have multiple compressor units. System redundancy is therefore improved, as is the ability of the system to provide cooling while any maintenance or repair work is being undertaken.

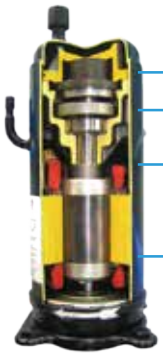
Benefits for Operators

- TVR™ systems involve lower maintenance costs compared to other systems.
- Since these are variations of DX systems, water treatment issues are avoided.
- Normal maintenance for a TVR™, similar to that of any DX system, consists mainly of cleaning and changing filters and cleaning outdoor coils.

Features -
DC Inverter System

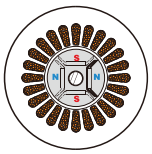
High efficiency DC Inverter compressor

Trane Air Conditioner achieves the industry's top class energy efficiency of cooling EER and heating COP by utilizing the Brushless Reluctance DC compressor control, improved performance heat exchanger by innovative design and numerous high performance key parts. High efficiency DC inverter compressor reduces power consumption by 25%.

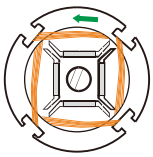


- New structure enhances mid-frequency performance
- Specially designed scroll profile for R410A
- More compact, weight reduced by 50%
- Advanced permanent magnet DC motor improves low-frequency band performance

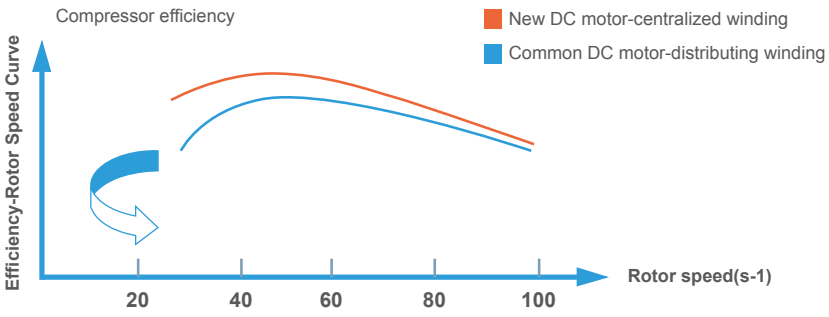
Powerful magnets provide high torque and efficiency and achieve 70% reduction in volume.



Centralizing winding

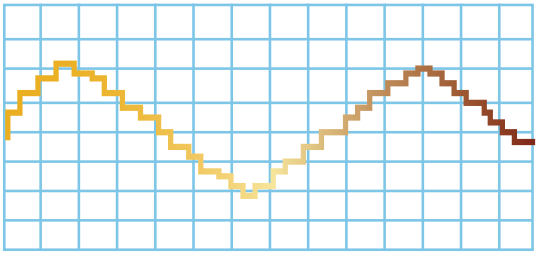


Distributing winding

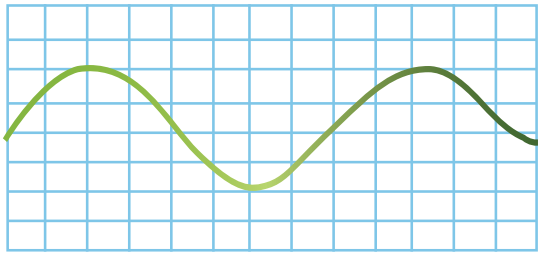


Smooth 180° sine wave DC Inverter

Adopting the 180° Sine Wave Inverter to smooth motor rotation greatly improves operating efficiency compared with traditional sawtooth wave.



Common Sawtooth Wave



180° Sine Wave DC Inverter

Features - Higher Reliability

Cycle duty operation

In one combination, any of the outdoor unit can run as the master unit and master unit can cycle in a period, to realize the equal lifespan among the outdoor units. As a result extend the system lifespan significantly.

Backup operation

In a multiple system, if one module is failed, other modules can be backup instead of the failed one for continuing operation.

Precise oil control technology

5 stage oil control technology ensures every outdoor unit & compressor's oil always keep in the safe level, completely solve the compressor oil lack problem.

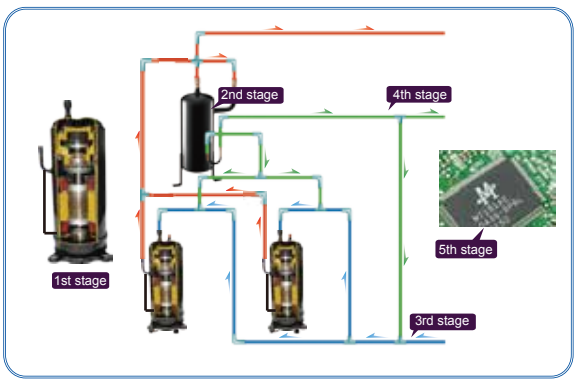
1st stage: compressor internal oil separate

2nd stage: high efficiency oil separator (separation efficiency up to 99%)

3rd stage: oil balance technology between compressors

4th stage: oil balance technology between modules

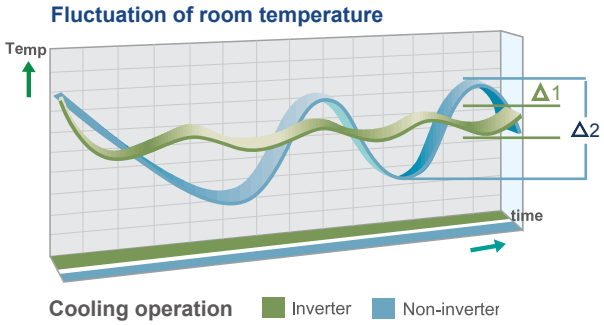
5th stage: intelligent system oil return program



Features - Enhanced Comfort

Quick warm-up & cool-down design

By utilizing the benefits of the inverter compressor, the system can reach full load quickly and shorten the warm-up and cool-down times to provide an immediate and comfortable air solution.
Less temperature fluctuation will create a better living environment.

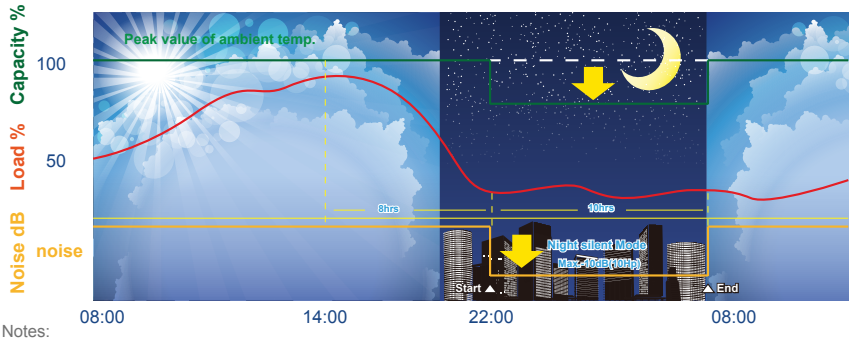


Night silent operation mode

High comfort outdoor unit's multi-choice of silent mode during the night.
Super silent operation mode can reduce sound level further, minimum 46.8dB (A).

Night silent operation will be activated X hours after the peak temperature during daytime, and it will go back to normal operation after Y hours.

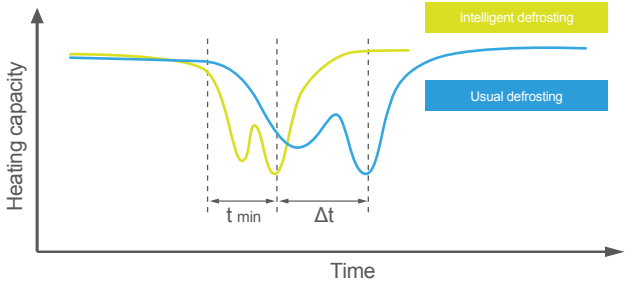
-Mode 1→X: 6 hours, Y: 10 hours
-Mode 2→X: 8 hours, Y: 10 hours
-Mode 3→X: 6 hours, Y: 12 hours
-Mode 4→X: 8 hours, Y: 8 hours



Notes:
This function can be activated by setting at site. Temperature(load) curve shown in the graph is just an example.

Intelligent defrosting technology

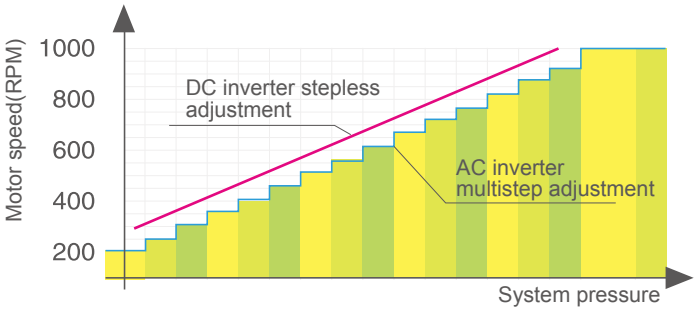
Intelligent defrosting program will judge the defrosting time according to the system real requirement, reduce the heating loss by unnecessary defrosting and make the indoor side more comfortable.
Defrosting time can be shortened to 4 min. due to the specialized defrosting valve.



Features -
Unique Fan Characteristics

DC Fan Motor

According to the running load and system pressure, the system controls the speed of DC fan to achieve the minimum energy consumption and best performance.

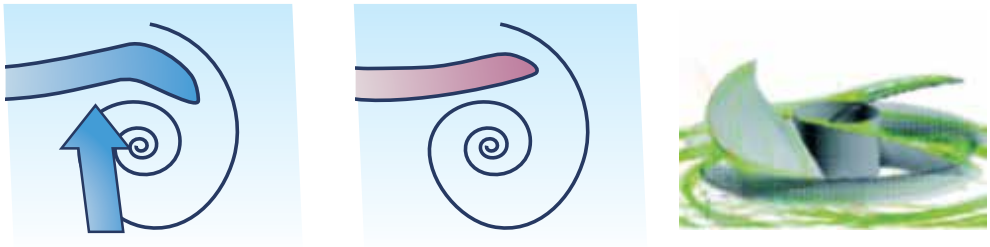


Fan grille

Optimized fan blade shape with new air outlet grille enhanced air flow volume which greatly improves fan performance and decreases noise.
Standard 0~20Pa, 20~40Pa to be customised.

New profile fan blade

A new blade with sharp edges and a slight curve increases the airflow rate and lowers vibration and airflow resistance.



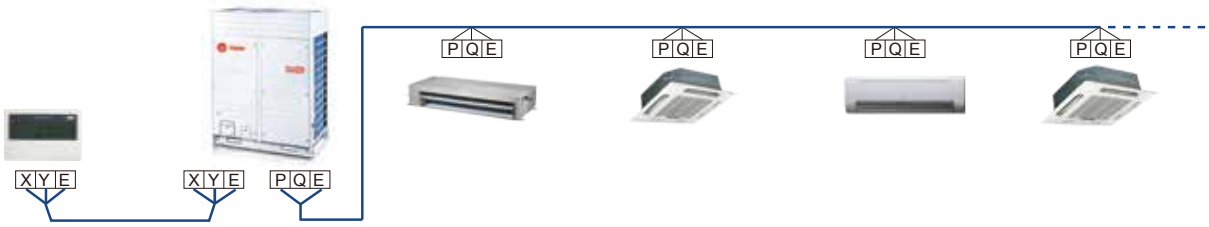
Multi solenoid valves control technology

Multi solenoid valves control technology in one system. All the solenoid valves equipped in the unit ensure temperature-control precisely, system running steadily and economicaly to provide a comfortable environment.

Features -
Easier Installation & Service

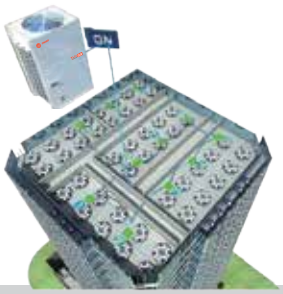
Simple signal line connection

Centralized controller (TCONTCCM03A/30A) can be connected from indoor side or outdoor side (XYE terminals) at will. Only one group of communication wire of PQE, achieved both of communication for indoor & outdoor unit. It's more convenient for communication wiring.

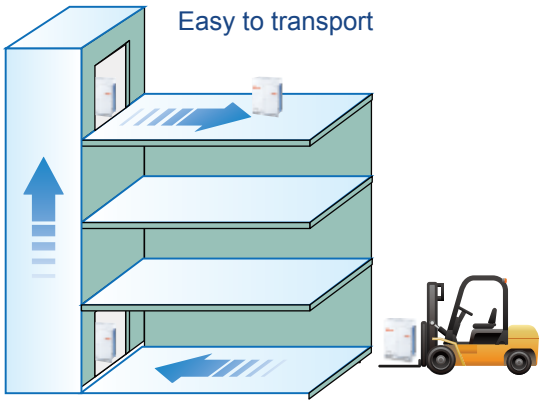


Auto addressing

Outdoor unit can distribute addresses for indoor unit automatically.
Wireless and wired controllers can query and modify each indoor unit's address.



Compact design for effective use of space



Compact size and light weight design minimizes the installation footprint, reduces the installation floor load, and is easier for transportation. For some projects the units can even be transported through the elevator or forklift, reduce access problem at the jobsite.

Features -
Easy Selection Software

Selection software

To meet consultants' and distributors' requirements, Trane has developed a new program for designing TVR systems. The software provides quick and convenient selectable options for users, supports multiple languages, and greatly improves the selection process.

Project

Contains project information such as project name, country, location, and detailed climate data to ensure the optimum system is selected.

Load calculation

Provides two calculation methods: (1)Directly put the room load, or; (2) Detailed parameters, including room area, estimated cooling/heating load index, heating capacity and cooling capacity.

A/C selection

There are 12 types and over 100 models of indoor units and all kinds of different power of outdoor units for choosing.

Piping drawing

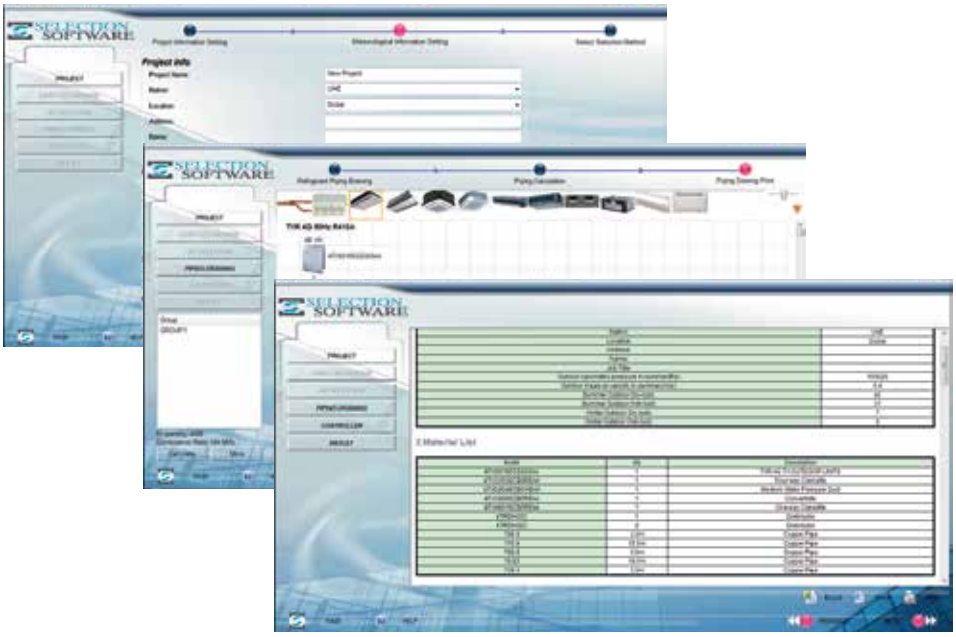
Displays the detailed layout of an A/C system and the parameters for piping and branch distributors.

Controller selection

Provides a selection of controllers for indoor units and outdoor units, including wireless and remote controllers for indoor units.

Report output

Outputs a comprehensive selection report as a Word or XL document.



Mini TVR 5G

Mini TVR5G with DC inverter compressor and DC fan motor delivers a highly efficient solution for small commercial buildings. Four to nine rooms require only one outdoor unit, and individual control is enabled in each room.

Mini TVR 5G - Features

Wide range of outdoor units

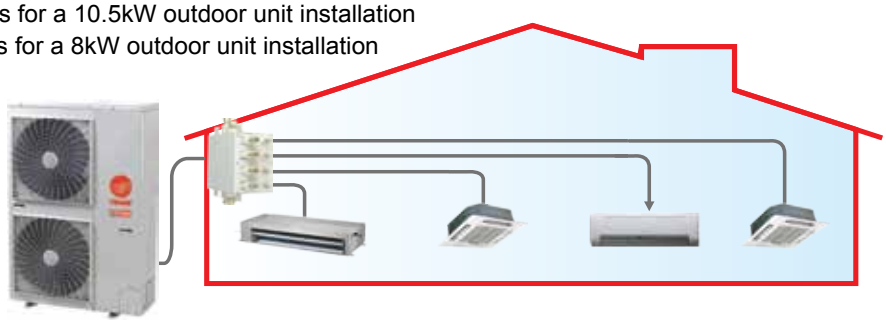
The outdoor units capacity range from 8kW to 18kW which is ideal for small offices, villas, apartment and shops, making it perfect for commercial and residential application.

8/10.5kW	12/14/16/18kW
	

Flexible indoor units connection

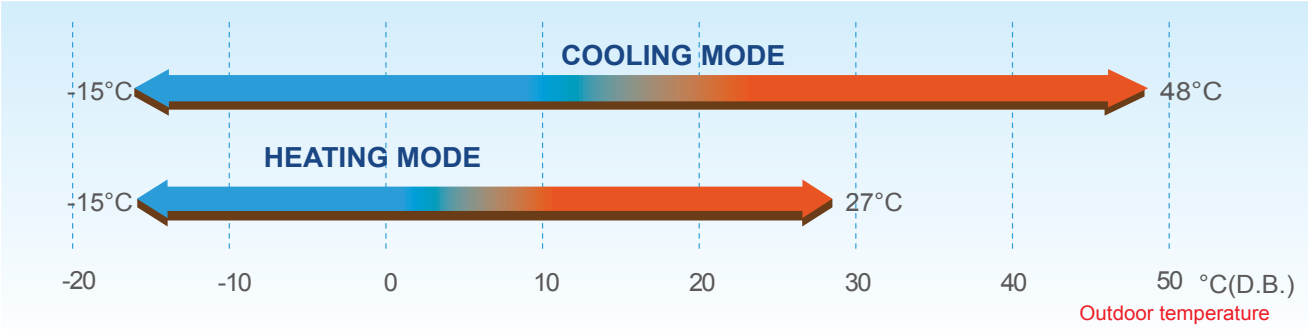
Mini TVR 5G with intelligent control gives you independent zoning control with maximum flexibility. A single outdoor unit supports up to nine indoor units, freeing up considerable space outside. Use your backyard more wisely with much more space available created by less number of outdoor units.

- Max. 9 indoor units for a 18kW outdoor unit installation
- Max. 7 indoor units for a 16kW outdoor unit installation
- Max. 6 indoor units for a 14kW outdoor unit installation
- Max. 6 indoor units for a 12kW outdoor unit installation
- Max. 5 indoor units for a 10.5kW outdoor unit installation
- Max. 4 indoor units for a 8kW outdoor unit installation



Wide operation temperature range

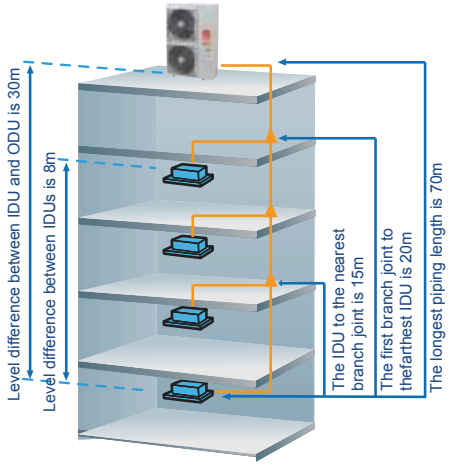
Mini TVR 5G system operates stably at extreme temperature range from minus 15°C to 43°C



Mini TVR 5G - Features

Flexible piping design

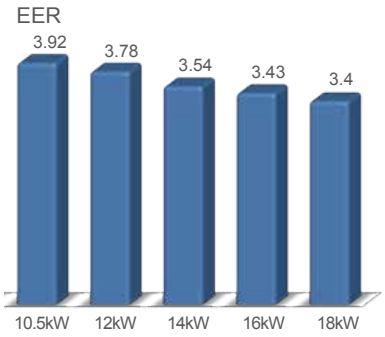
The Mini TVR 5G provides a total piping length possibility of 100m, a maximum height difference between outdoor and indoor units of 30m. The height difference between indoors unit can be up to 8m. These generous allowances facilitate an extensive array of system designs.

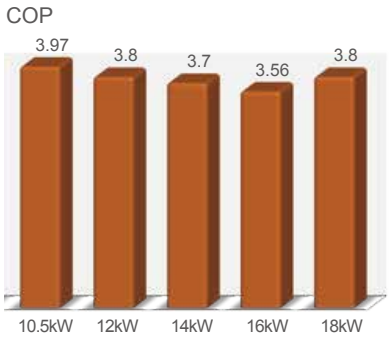


			Permitted value (m)	
			10.5kW	12/14/16/18kW
Piping length	Actual total piping length*1		100	100
	Longest piping	Actual length	45	60
		Equivalent length	50	70
	Equivalent piping length from the farthest IDU to the first indoor branch joint		20	20
Level difference	Level difference between indoor and outdoor units	Outdoor unit up	30	30
		Outdoor unit down	20	20
	Level difference between indoor units		8	8

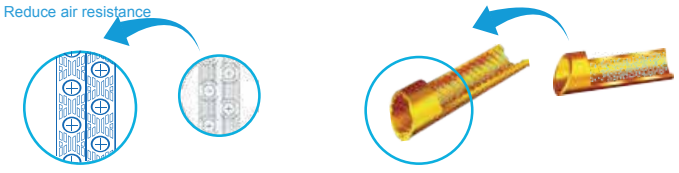
*1: Total pipe length is equal to all the liquid pipe or all the gas pipe length.

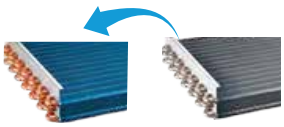
High COP and EER values





High performance heat exchanger

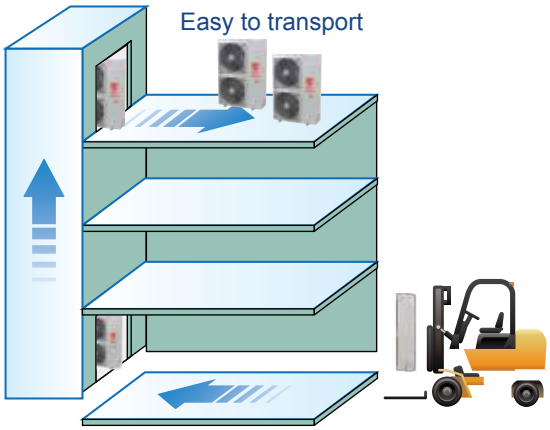




- The new designed window fins enlarge the heat-exchanging area , decrease the air resistance, save more power and enhance heat exchange performance.
- Hydrophilic film fins and inner-threaded copper pipes optimize heat exchange efficiency.
- The specially coated blue fins enhance durability and protect against corrosion from air, water and other corrosive agents, assures a longer coil service life.

Mini TVR 5G - Features

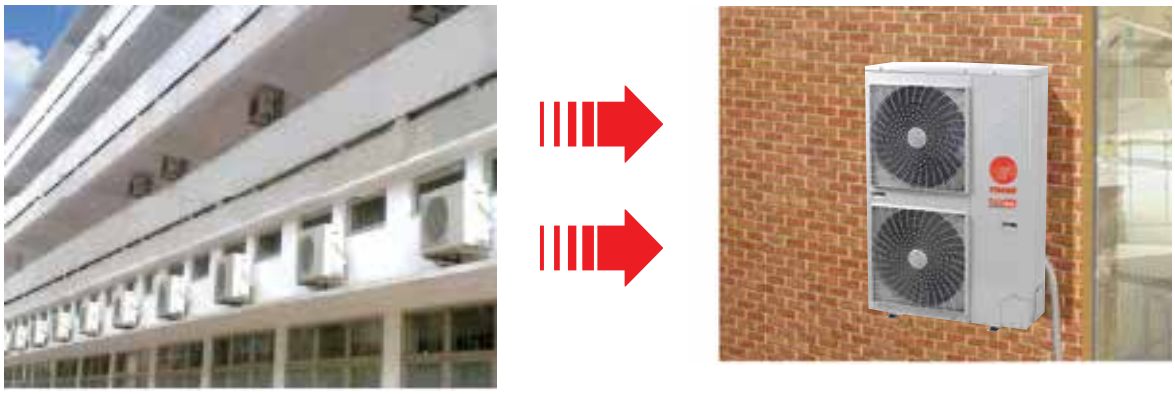
Easy installation



Easy installation: No special area is required for outdoor units.
Easy transportaion: All outdoor units can be transported by elevator, which greatly simplifies installation and reduces time and labor.
The Mini TVR 5G indoor and outdoor units are almost as easy to install as residential air conditioning systems, making them ideal for small offices and shops.

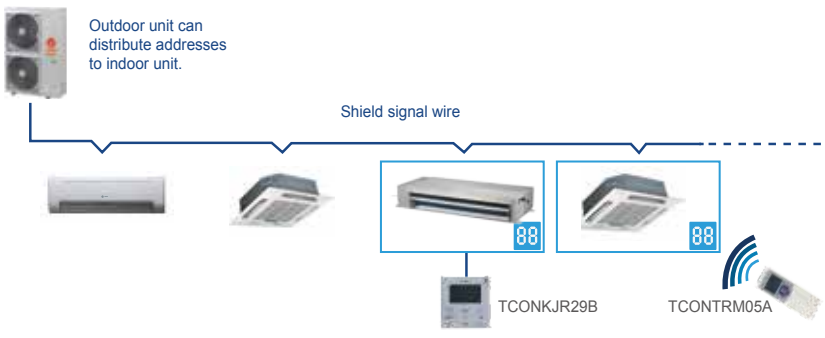
Space saving design

The Mini TVR 5G units are slimmer and more compact, resulting in significant savings in installation space. In some large residential and light commercial areas, such as villas, restaurants, usually it need more than one indoor unit, which in turn requires multiple outdoor units.
Trane's Mini TVR 5G system removes this problem, and retains buildings' original aesthetics.



Auto addressing

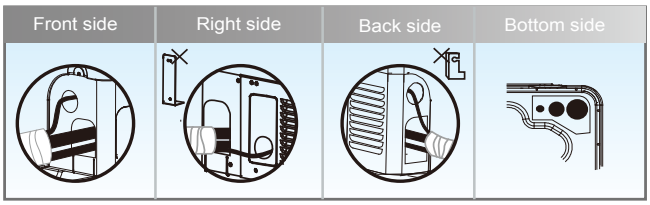
Addresses of indoor units can be set automatically by outdoor units.
Wireless controller can inquire and modify every indoor units address.

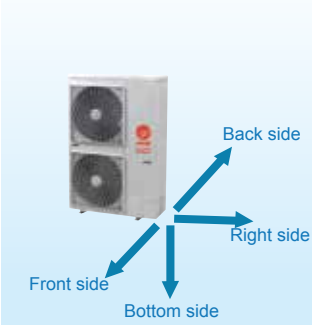


Mini TVR 5G - Features

More convenience in installation

A four-direction space is available for connecting pipes and wiring in various installation sites.





More convenient piping connector - branch box

Easier and safer installation thanks to a branch box that simplifies piping work and the adoption of screw connection. Both left and right pipe flare connectin from outdoor unit to branch box is reserved, which greatly simplifies field installation.

Two sets of pipe size converter are packed with branch box to transfer the pipe size from Φ 6.35mm to Φ 9.53mm and from Φ12.7mm to Φ15.9 mm.

■ Low noise

The branch pipe is linear expansion design regulates the flow of refrigerant and reduces the noise. By locating the branch box in the ceiling or outside ,noise generated by the branch box can be kept clear of living spaces, thus makes noise level to a minimum.

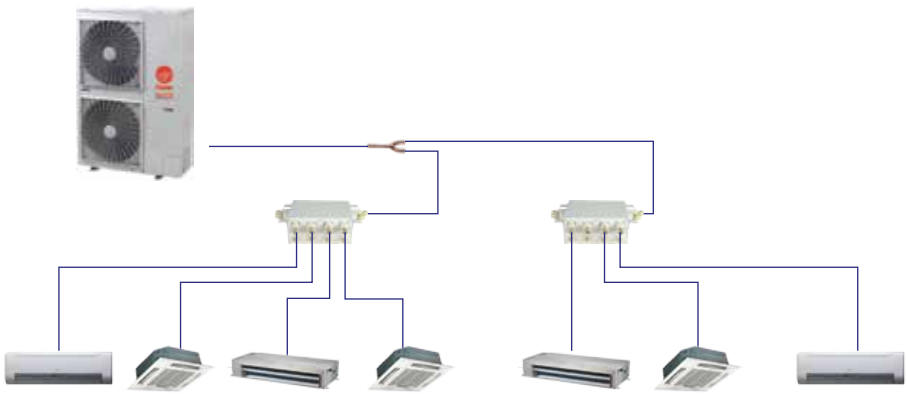
■ Brazing-free quick installation

All the piping leading to and from the branch box is connected using screw joints,which can be installed quickly and easily.

Indoor installation

■ The branch box can be installed in the ceiling rather than outside. Removing the side and bottom covers provides easy access for maintaining inner components such as circuit boards.

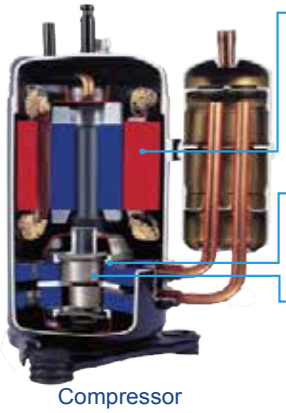
New piping connection design



Mini TVR 5G - Features

Full DC Inverter technology

At the heart of our system, there is a highly intelligent inverter driven compressor. This advanced technology enables the output of the outdoor unit to be modulated by the cooling or heating demands of the zone that it controls. This advanced system ensures precise temperature regulation and highly efficient energy usage, making a significant contribution to the unit,limiting the impact on the environment.



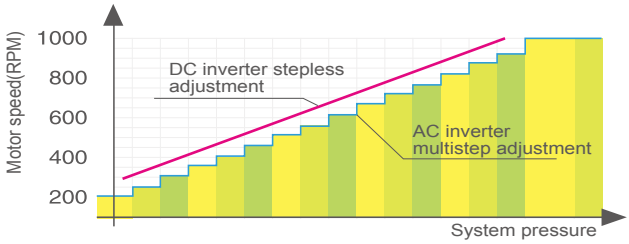
Compressor
(Twin Rotary) structure

Highly Efficient DC Motor:
- Creative motor core design
- High density neodymium magnet
- Concentrated type stator
-Wider operating frequency range

Better balance and Extremely Low Vibration:
- Twin eccentric cams
- 2 balance weights

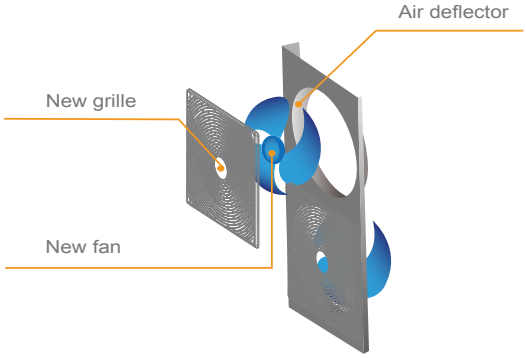
Highly Stable Moving Parts:
- Optimal material matching rollers and vanes
-Optimize compressor drive technology
- Highly robust bearings
-Compact structure

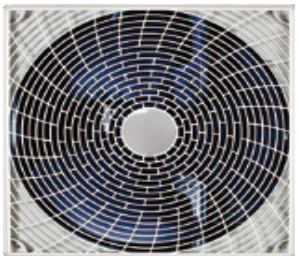
High efficiency DC fan motor saved power up to 50%.



Noise reducing design

Optimally designed fan shape and air discharge grille increases air volume and reduces running noise.





Newly Designed Fan Guard

Powerful Large Propeller

Mini TVR 5G - Outdoor Unit Specifications

Model			4TVV0028AB000AA	TVV0036AB000AA	4TVV0042AB000AA	4TVV0048AB000AA	4TVV0055AB000AA
Power supply		V/Ph/Hz	220-240/1/50				
Cooling	Capacity	kW	8	10.5	12.3	14	15.5
		RT	2.3	2.9	3.4	3.9	4.3
	Input	kW	2.05	2.68	3.25	3.95	4.52
	EER	kW/kW	3.90	3.92	3.78	3.54	3.43
Heating	Capacity	kW	9	11.5	13.2	15.4	17.0
		RT	2.6	3.2	3.7	4.3	4.8
	Input	kW	2.24	2.90	3.47	4.16	4.77
	COP	kW/kW	4.02	3.97	3.80	3.70	3.56
Connectable indoor unit	Total capacity	%	50-130	50-130	50-130	50-130	50-130
	Max. quantity		4	5	6	6	7
Sound pressure level		dB(A)	56	57	57	57	57
Pipe connections	Liquid pipe	mm	Φ9.53	Φ9.53	Φ9.53	Φ9.53	Φ9.53
	Gas pipe	mm	Φ15.9	Φ15.9	Φ15.9	Φ15.9	Φ19.1
Fan motor	Type		DC	DC	DC	DC	DC
	Quantity		1	1	2	2	2
	Air flow rate	m^3/h	5,500	5,500	6,000	6,000	6,000
	Motor output	W	170	170	85x2	85x2	85x2
Rotary compressor	Quantity		1	1	1	1	1
	Capacity	kW	7	7	10	10	14
	Crankcase heater	W	25	25	25	25	25
	Oil type		FV50S	FV50S	FV50S	FV50S	FV50S
	Oil charge	ml	670+200	670+200	870+630	870+630	1400+250
Refrigerant	Type		R410A	R410A	R410A	R410A	R410A
	Factory charging	kg	2.8	2.95	3.3	3.9	3.9
Design pressure (High/Low)		MPa	4.4/2.6	4.4/2.6	4.4/2.6	4.4/2.6	4.4/2.6
Net dimension (W×H×D)		mm	1,075×966×396		900×1,327×400		
Packing size (W×H×D)		mm	1,120×1,100×435		1,030×1,456×435		
Net weight		kg	62	74	95	95	100/102
Gross weight (220V/380V)		kg	67	81	106	106	111/113
Operating temperature range	Cooling	°C	-15~48				
	Heating	°C	-15~27				

Notes:
Capacities are based on the following conditions:
Cooling: Indoor temperature 27°C DB/19°C WB; Outdoor temperature 35°C DB/24°C WB.
Heating: Indoor temperature 20°C DB/15°C WB; Outdoor temperature 7°C DB/6°C WB.
Piping length: Interconnecting piping length is 5m, level difference is zero.
Sound values are measured in a semi-anechoic room, at a position 1m in front of the unit and 1m above the floor.
*: When the * is omit, the model stands for 220-240V/1ph/50Hz unit.
When the * is R, the model stands for 380-415V/3ph/50Hz unit.

Mini TVR 5G - Outdoor Unit Specifications

Model			4TVV0042AD000AA	4TVV0048AD000AA	4TVV0055AD000AA	4TVV0060AD000AA
Power supply		V/Ph/Hz	380-415/3/50			
Cooling	Capacity	kW	12.3	14	15.5	17.5
		RT	3.4	3.9	4.3	5.0
	Input	kW	3.25	3.95	4.52	5.30
	EER	kW/kW	3.78	3.54	3.43	3.40
Heating	Capacity	kW	13.2	15.4	17.0	19.0
		RT	3.7	4.3	4.8	5.4
	Input	kW	3.47	4.16	4.77	5.00
	COP	kW/kW	3.80	3.70	3.56	3.80
Connectable indoor unit	Total capacity	%	50-130	50-130	50-130	50-130
	Max. quantity		6	6	7	9
Sound pressure level		dB(A)	57	57	57	59
Pipe connections	Liquid pipe	mm	Φ9.53	Φ9.53	Φ9.53	Φ9.53
	Gas pipe	mm	Φ15.9	Φ15.9	Φ19.1	Φ19.1
Fan motor	Type		DC	DC	DC	DC
	Quantity		2	2	2	2
	Air flow rate	m^3/h	6,000	6,000	6,000	6,800
	Motor output	W	85x2	85x2	85x2	85x2
Rotary compressor	Quantity		1	1	1	1
	Capacity	kW	10	10	14	14
	Crankcase heater	W	25	25	25	25
	Oil type		FV50S	FV50S	FV50S	FV50S
	Oil charge	ml	870+630	870+630	1400+250	1400+250
Refrigerant	Type		R410A	R410A	R410A	R410A
	Factory charging	kg	3.3	3.9	3.9	4.5
Design pressure (High/Low)		MPa	4.4/2.6	4.4/2.6	4.4/2.6	4.4/2.6
Net dimension (W×H×D)		mm	900×1,327×400			
Packing size (W×H×D)		mm	1,030×1,456×435			
Net weight		kg	95	95	100/102	107
Gross weight (220V/380V)		kg	106	106	111/113	118
Operating temperature range	Cooling	°C	-15~48			
	Heating	°C	-15~27			

Notes:
Capacities are based on the following conditions:
Cooling: Indoor temperature 27°C DB/19°C WB; Outdoor temperature 35°C DB/24°C WB.
Heating: Indoor temperature 20°C DB/15°C WB; Outdoor temperature 7°C DB/6°C WB.
Piping length: Interconnecting piping length is 5m, level difference is zero.
Sound values are measured in a semi-anechoic room, at a position 1m in front of the unit and 1m above the floor.
*: When the * is omit, the model stands for 220-240V/1ph/50Hz unit.
When the * is R, the model stands for 380-415V/3ph/50Hz unit.

Mini TVR 5G - Outdoor Unit Specifications

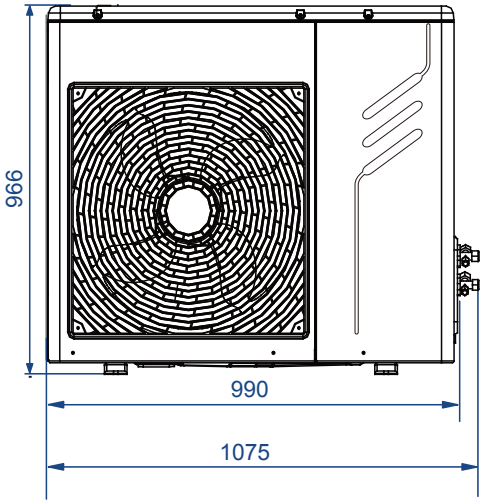
Model			4TVV0068AD000AA	4TVV0077AD000AA	4TVV0089AD000AA
Power supply		V/Ph/Hz	380-415/3/50		
Cooling	Capacity	kW	20.0	22.4	26.0
		RT	5.6	6.4	7.4
	Power input	kW	6.1	6.8	7.6
	EER	kW/kW	8.0	9.0	3.42
Heating	Capacity	kW	22.0	24.5	28.5
		RT	6.2	6.9	8.1
	Power input	kW	6.1	5.9	6.8
	COP	kW/kW	3.61	4.15	4.19
Connectable indoor unit	Total capacity	%	50-130	50-130	50-130
	Max. quantity		10	11	12
Sound pressure level		dB(A)	59		60
Pipe connections	Liquid pipe	mm	Φ9.53		
	Gas pipe	mm	Φ19.1		Φ22.2
Fan motor	Type		DC Motor		
	Quantity		2		
	Air flow rate	m^3/h	10,999	10,494	
	Motor output	W Up/Down	270/160	200/150	
	ESP	Pa	0~20 (default)		
		Pa	20~40 (customized)		
DC inverter compressor	Quantity		1		
	Capacity	kW	13.98	16.86	
	Crankcase heater	W	25		
	Oil type		FV50S		
	Oil charge	ml	1,400+1,300	1,700+1,500	
Refrigerant	Type		R410A	R410A	R410A
	Factory charging	kg	4.8	6.2	6.2
Design pressure (High Low)		MPa	4.4/2.6		
Net dimension (W×H×D)		mm	1,120 x 1,558 x 528		
Packing size (W×H×D)		mm	1,270 x 1,720 x 565		
Net weight		kg	137	146.5	147
Gross weight		kg	153	162.5	163
Operating temperature range	Cooling	°C	-15~48-		
	Heating	°C	-15~27		

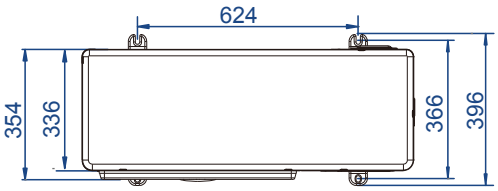
Notes:
Capacities are based on the following conditions:
Cooling: Indoor temperature 27°C DB/19°C WB; Outdoor temperature 35°C DB/24°C WB.
Heating: Indoor temperature 20 C DB/15°C WB; Outdoor temperature 7°C DB/6°C WB.
Piping length: Interconnecting piping length is 7.5m, level difference is zero.
Connection piping diameter is based on the condition that the total equivalent liquid length is less than 90m. When the total equivalent liquid length is more than 90m, please refer to technical manual to choose the connection piping diameter.
Sound values are measured in a semi-ânechoic room, at a position 1m in front of the unit and 1.3m above the floor.

Mini TVR 5G - Outdoor Unit Dimensions

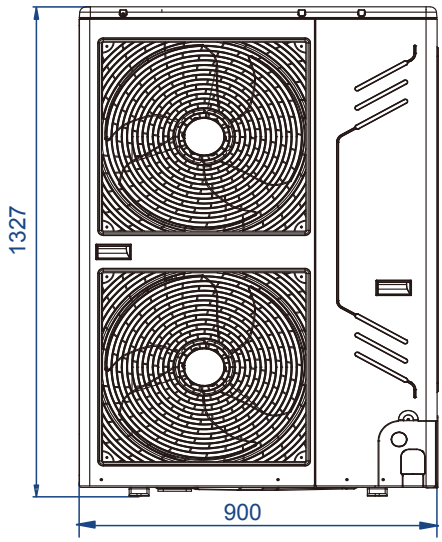
8/10.5kW

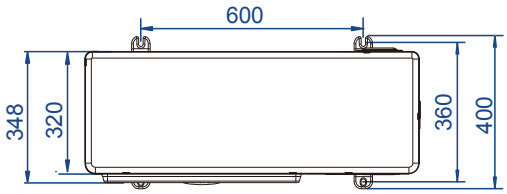
Unit: mm





12/14/16/18kW

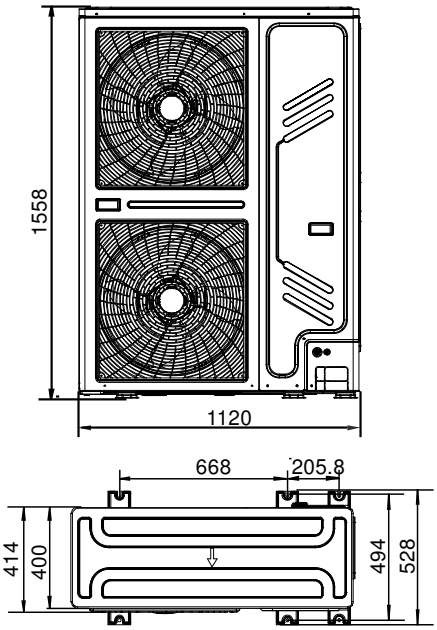




Mini TVR 5G - Outdoor Unit Dimensions

4TVV0068AD000AA 4TVV0077AD000AA 4TVV0089AD000AA

Unit: mm



TVR 5G(All Inverter)

TVR 5G (All Inverter) achieve world's largest capacity of 72HP with the industry's top class energy efficiency of cooling and heating. It supports a long piping length of 1000m and a longer level difference of 110m, making it perfect for big-sized and high-rise buildings for wide application.

TVR 5G(All Inverter) - Recommended Combination Table

Model	N° of Outdoor Units	N° of Compressors	Outdoor Unit Combination						Maximum N° of Connectable Indoor Units	Capacity (kW)	
			8HP	10HP	12HP	14HP	16HP	18HP*		Cooling	Heating
8HP	1	1	1						13	25.2	27
10HP	1	1		1					16	28	31.5
12HP	1	2			1				20	33.5	37.5
14HP	1	2				1			23	40	45
16HP	1	2					1		26	45	50
18HP	1	2						1	29	50	56
20HP	2	2		2					33	56	63
22HP	2	3		1	1				36	61.5	69
24HP	2	3		1		1			39	68	76.5
26HP	2	3		1			1		43	73	81.5
28HP	2	3		1				1	46	78	87.5
30HP	2	4				1	1		50	85	95
32HP	2	4				1		1	53	90	101
34HP	2	4					1	1	56	95	106
36HP	2	4						2	59	100	112
38HP	3	4		2				1	63	106	119
40HP	3	5		1		1	1		64	113	126.5
42HP	3	5				3			64	120	135
44HP	3	5		1			1	1	64	123	137.5
46HP	3	5		1				2	64	128	143.5
48HP	3	6				1	1	1	64	135	151
50HP	3	6				1		2	64	140	157
52HP	3	6					1	2	64	145	162
54HP	3	6						3	64	150	168
56HP	4	6		2				2	64	156	175
58HP	4	7		1		1	1	1	64	163	182.5
60HP	4	7		1		1		2	64	168	188.5
62HP	4	7		1			1	2	64	173	193.5
64HP	4	7		1				3	64	178	199.5
66HP	4	8				1	1	2	64	185	207
68HP	4	8				1		3	64	190	213
70HP	4	8					1	3	64	195	218
72HP	4	8						4	64	200	224

Notes:
Capacities are based on the following conditions:
Cooling: Indoor temperature 27°C DB/19°C WB; Outdoor temperature 35°C DB/24°C WB.
Heating: Indoor temperature 20°C DB/15°C WB; Outdoor temperature 7°C DB/6°C WB.
Piping length: Interconnecting piping length is 7.5m, level difference is zero.
The above combination models are factory-recommended models.
*18HP model can be customized.

TVR 5G(All Inverter) - Features

Wide range of outdoor units

The outdoor units capacity range from 8HP up to 72HP in 2HP increment. Maximum 64 indoor units with capacity up to 130% of total outdoor units can be connected in one refrigeration system.

8, 10HP

12, 14, 16HP

18HP

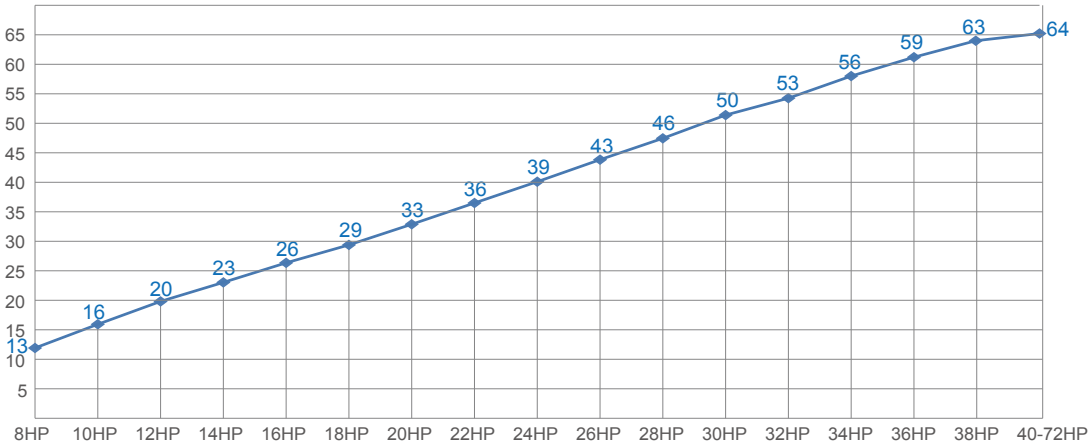
20, 22, 24, 26, 28, 30, 32, 34, 36HP

38, 40, 42, 44, 46, 48, 50, 52, 54HP

56, 58, 60, 62, 64, 66, 68, 70, 72HP

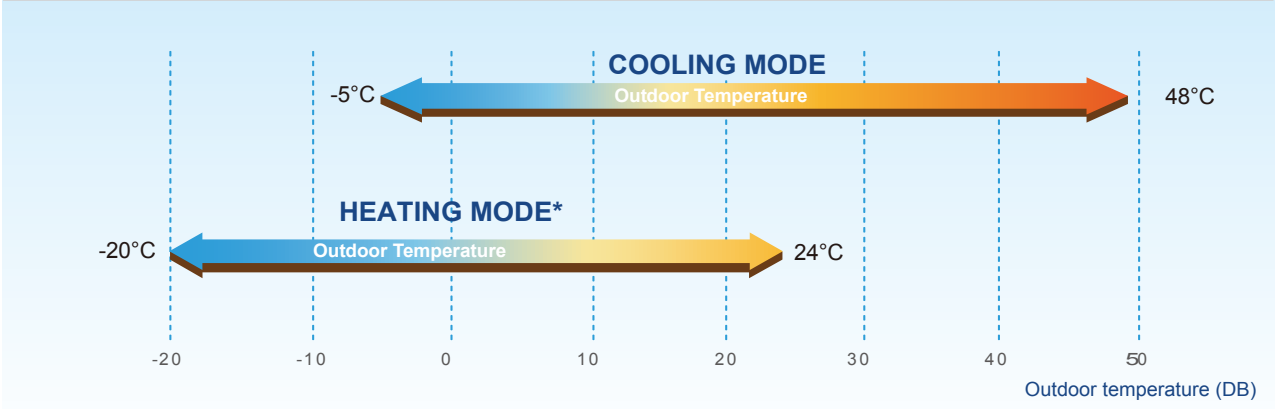
Large connectable indoor units quantity

The large quantity of connectable units is suitable for large buildings and projects.



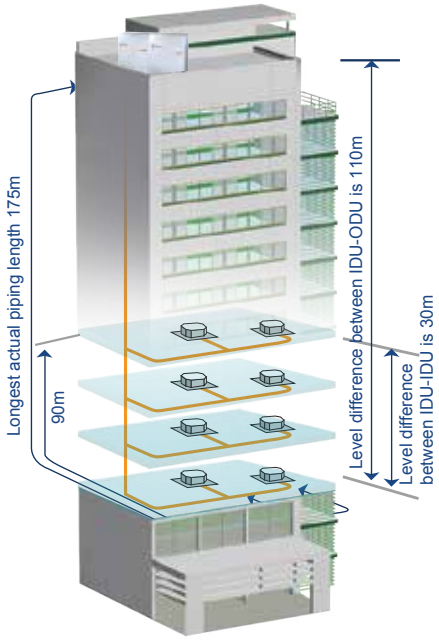
TVR 5G(All Inverter) - Features

Wide operation range



The TVR 5G (All Inverter) system operates stably at extreme temperatures ranging from -20°C to 48°C

Long piping length

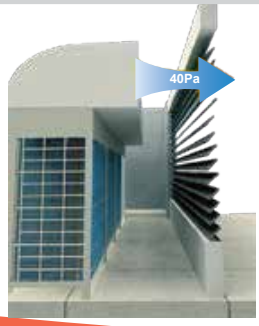


			Permitted value (m)
Piping length	Actual total piping length		1000*
	Longest piping	Actual length	175
		Equivalent length	200
	Equivalent piping length from the farthest IDU to the first indoor branch joint		40/90*
Level difference	Level difference between indoor and outdoor units	Outdoor unit up	70
		Outdoor unit down	110
	Level difference between indoor units		30

*Total pipe length is equal to two times — pipe length plus — pipe length.
*When the piping length from the farthest IDU to the first indoor branch joint is more than 40m, it needs to meet specific conditions according to the installation part of the technical manual to achieve 90m.

High external static pressure

A standard 0-20Pa external static pressure is equipped by default for all outdoor units. 20-40Pa can be customized for other modules.

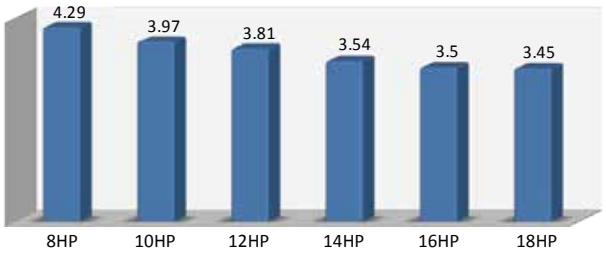


TVR 5G(All Inverter) - Features

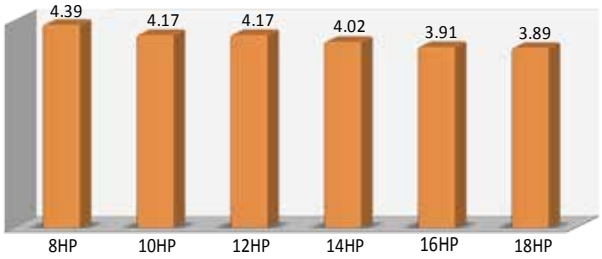
High COP/EER values

The cooling EER up to 4.29 and the heating COP up to 4.39 in the 8HP catagory.

EER



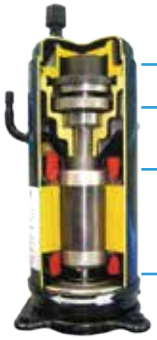
COP



All DC inverter technology

All DC inverter compressors make the capacity output better distributed.

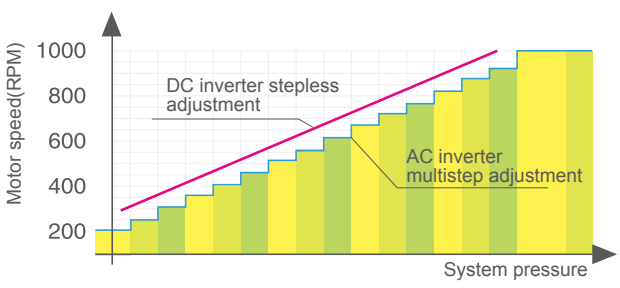
All DC Inverter Compressors



- New structure enhances mid-frequency performance
- Specially designed scroll profile for R410A
- More compact, weight reduced by 50%
- Advanced permanent magnet DC motor improves the low frequency band performance

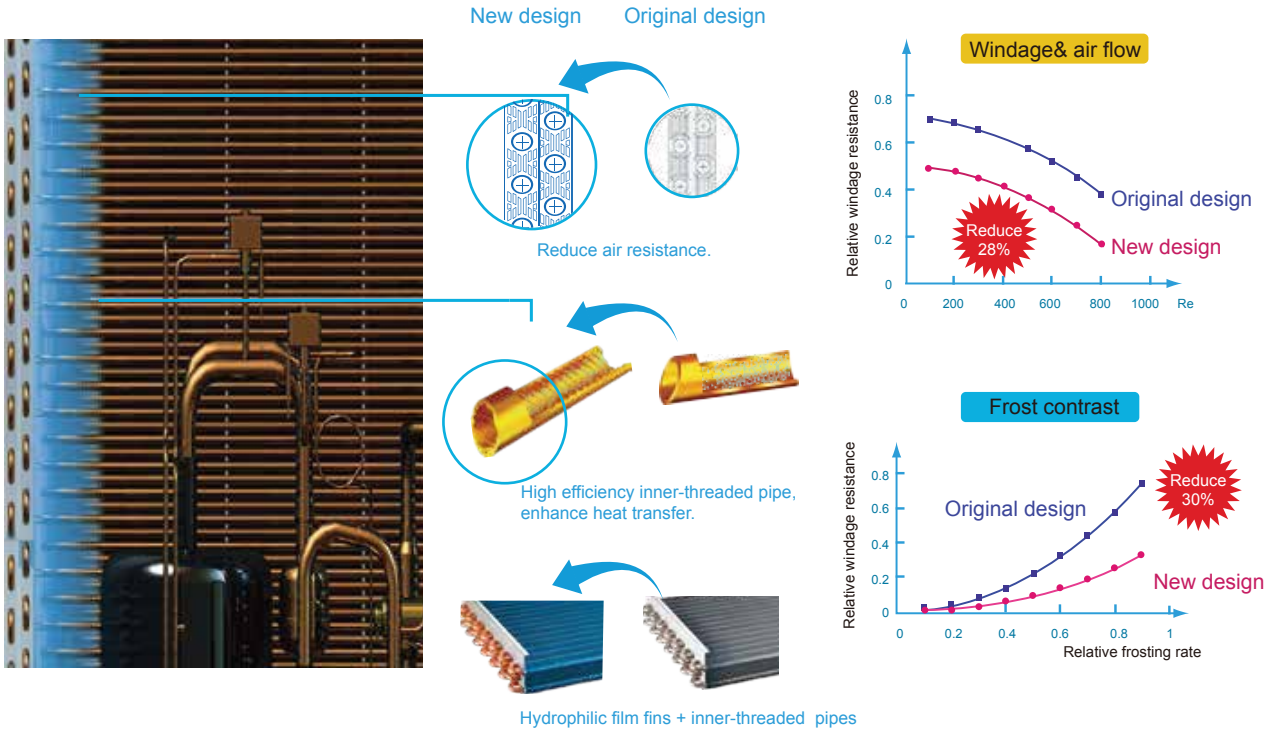
All DC Fan Motors

According to the running load and system pressure, the system controls the speed of DC fan to achieve the minimum energy consumption and best performance.

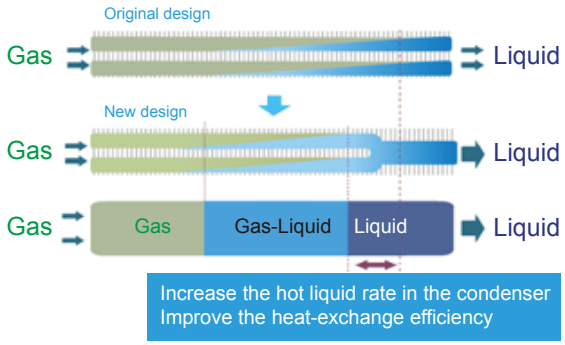


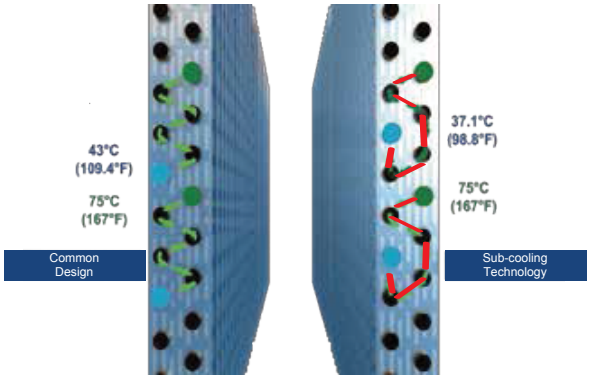
TVR 5G(All Inverter) - Features

High performance heat exchanger



- The new designed window fins enlarge the heat-exchanging area , decrease the air resistance, save more power and enhance heat exchange performance.
- Hydrophilic film fins and inner-threaded copper pipes optimize heat exchange efficiency.





- Innovative designed high efficiency heat exchanger, which can reach up to 12°C subcooling degree, reduces the system resistance and improves reliability.
- When the outdoor temperature is 35°C, the refrigerant can be cooled down to 37.1°C, thus achieving high heat-exchanging efficiency with only 2.1°C temperature difference.

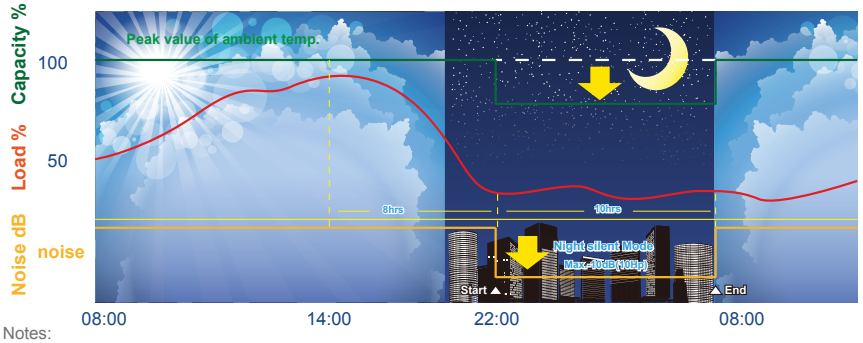
TVR 5G(All Inverter) - Features

Night silent operation mode

High comfort outdoor unit's multi-choice of silent mode during the night.
Super silent operation mode can reduce sound level further, minimum 45dB (A).

Night silent operation will be activated X hours after the peak temperature during daytime, and it will go back to normal operation after Y hours.

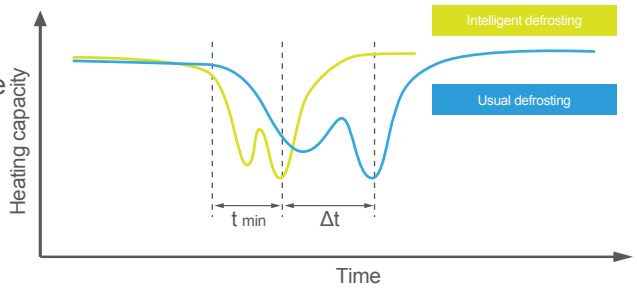
-Mode 1→X: 6 hours, Y: 10 hours
-Mode 2→X: 8 hours, Y: 10 hours
-Mode 3→X: 6 hours, Y: 12 hours
-Mode 4→X: 8 hours, Y: 8 hours



Notes:
This function can be activated by setting at site. Temperature(load) curve shown in the graph is just an example.

Intelligent defrosting technology

Intelligent defrosting program will judge the defrosting time according to the system real requirement, reduce the heating loss by unnecessary defrosting and make the indoor side more comfortable.
Defrosting time can be shortened to 4 min. due to the specialized defrosting valve.

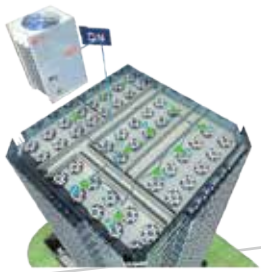


Simple signal line connection

Centralized controller (TCONTCCM03A or TCONTCCM30A) can be connected from indoor side or outdoor (XYE terminals) at will. Only one group of communication wire of PQE, achieved both of communication for side indoor & outdoor unit. It's more convenient for communication wiring.

Auto addressing

Outdoor unit can distribute addresses for indoor unit automatically.
Wireless and wired controllers can query and modify each indoor unit's address.



TVR 5G(All Inverter) - Outdoor Unit Specifications

Model			4TVV0086BD000AA	4TVV0096BD000AA	4TVV0115BD000AA
Power supply		V/Ph/Hz	380-415/3/50		
Cooling	Capacity	kW	25.2	28.0	33.5
		RT	7.2	8.0	9.5
	Power input	kW	5.88	7.05	8.79
	EER	kW/kW	4.29	3.97	3.81
Heating	Capacity	kW	27	31.5	37.5
		RT	7.7	9.0	10.7
	Power input	kW	6.15	7.55	8.99
	COP	kW/kW	4.39	4.17	4.17
Connectable indoor unit	Total capacity	%	50-130	50-130	50-130
	Max. quantity		13	16	20
Sound pressure level		dB(A)	57		59
Pipe connections	Liquid pipe	mm	Φ9.53		Φ12.7
	Gas pipe	mm	Φ22.2		Φ25.4
	Oil balance pipe	mm	Φ6		Φ6
Fan motor	Type		DC		DC
	Quantity		1		2
	Outdoor air flow	m^3/h	11,242		13,000
	Motor output	W	750		560+380
	ESP	Pa	0-20 (default)		0-20 (default)
		Pa	20-40 (customized)		20-40 (customized)
DC inverter compressor	Quantity		1		2
	Capacity	kW	31.59		31.59+11.80
	Crankcase heater	W	27.6×2		27.6×4
	Oil type		FVC68D		FVC68D
	Oil charge	ml	500		500+500
Refrigerant	Type		R410A		R410A
	Factory charging	kg	10		12
Design pressure (High/Low)		MPa	4.4/2.6		4.4/2.6
Net dimension (W×H×D)		mm	960×1,615×765		1,250×1,615×765
Packing size (W×H×D)		mm	1,025×1,790×830		1,305×1,790×820
Net/Gross weight		kg	212		288
Gross weight		kg	227		308
Operating temperature range	Cooling	°C	-5~48		
	Heating	°C	-20~24		

Notes:
Capacities are based on the following conditions:
Cooling: Indoor temperature 27°C DB/19°C WB; Outdoor temperature 35°C DB/24°C WB.
Heating: Indoor temperature 20°C DB/15°C WB; Outdoor temperature 7°C DB/6°C WB.
Piping length: Interconnecting piping length is 7.5m, level difference is zero.
Connection piping diameter is based on the condition that the total equivalent liquid length is less than 90m. When the total equivalent liquid length is more than 90m, please refer to technical manual to choose the connection piping diameter.
Sound values are measured in a semi-anechoic room, at a position 1m in front of the unit and 1.3m above the floor.

TVR 5G(All Inverter) - Outdoor Unit Specifications

Model			4TVV0140BD000AA	4TVV0155BD000AA	4TVV0182BD000AA
Power supply		V/Ph/Hz	380-415/3/50		
Cooling	Capacity	kW	40.0	45.0	50.0
		RT	11.4	12.8	14.2
	Power input	kW	11.30	13.25	14.79
	EER	kW/kW	3.54	3.50	3.45
Heating	Capacity	kW	45.0	50.0	56.0
		RT	12.8	14.2	15.9
	Power input	kW	11.19	12.79	14.40
	COP	kW/kW	4.02	3.91	3.89
Connectable indoor unit	Total capacity	%	50-130	50-130	50-130
	Max. quantity		23	26	29
Sound pressure level		dB(A)	61	62	62
Pipe connections	Liquid pipe	mm	Φ12.7	Φ12.7	Φ15.9
	Gas pipe	mm	Φ25.4	Φ28.6	Φ28.6
	Oil balance pipe	mm	Φ6	Φ6	Φ6
Fan motor	Type		DC		
	Quantity		2		
	Outdoor air flow	m^3/h	15,620		
	Motor output	W	560+380		
	ESP	Pa	0-20 (default)		
		Pa	20-40 (customized)		
DC inverter compressor	Quantity		2		
	Capacity	kW	31.59+11.80		
	Crankcase heater	W	27.6×4		
	Oil type		FVC68D		
	Oil charge	ml	500+500		
Refrigerant	Type		R410A		
	Factory charging	kg	15	15	17
Design pressure (High/Low)		MPa	4.4/2.6		
Net dimension (W×H×D)		mm	1,250×1,615×765		
Packing size (W×H×D)		mm	1,305×1,790×820		
Net/Gross weight		kg	288	288	310
Gross weight		kg	308	308	330
Operating temperature range	Cooling	°C	-5~48		
	Heating	°C	-20~24		

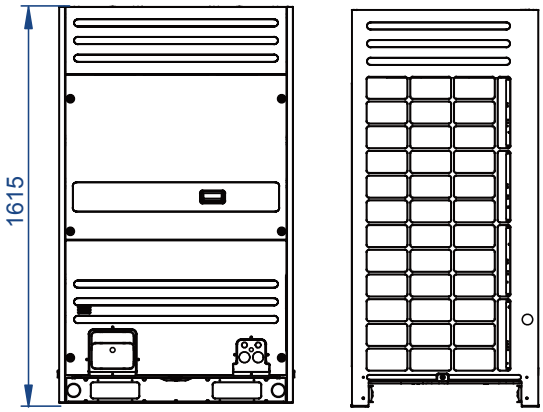
Notes: Capacities are based on the following conditions:
Cooling: Indoor temperature 27°C DB/19°C WB; Outdoor temperature 35°C DB/24°C WB.
Heating: Indoor temperature 20°C DB/15°C WB; Outdoor temperature 7°C DB/6°C WB. Piping length: Interconnecting piping length is 7.5m, level difference is zero.
Connection piping diameter is based on the condition that the total equivalent liquid length is less than 90m. When the total equivalent liquid length is more than 90m, please refer to technical manual to choose the connection piping diameter. Sound values are measured in a semi-anechoic room, at a position 1m in front of the unit and 1.3m above the floor. *18HP can be customized.

TVR 5G(All Inverter) - Outdoor Unit Dimensions

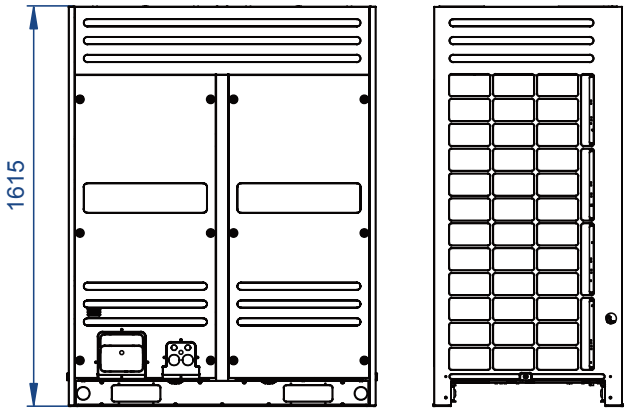
Dimension

Unit: mm

8/10 HP

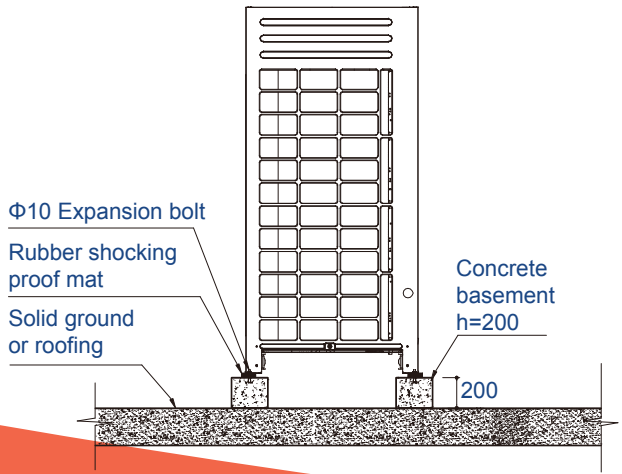


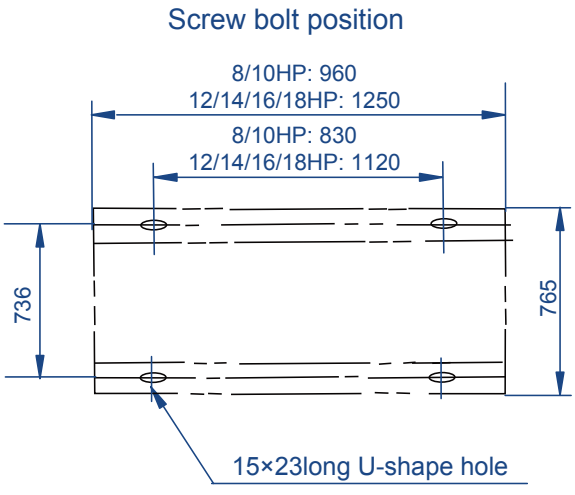
12/14/16 /18 HP



Installation dimension

Unit: mm

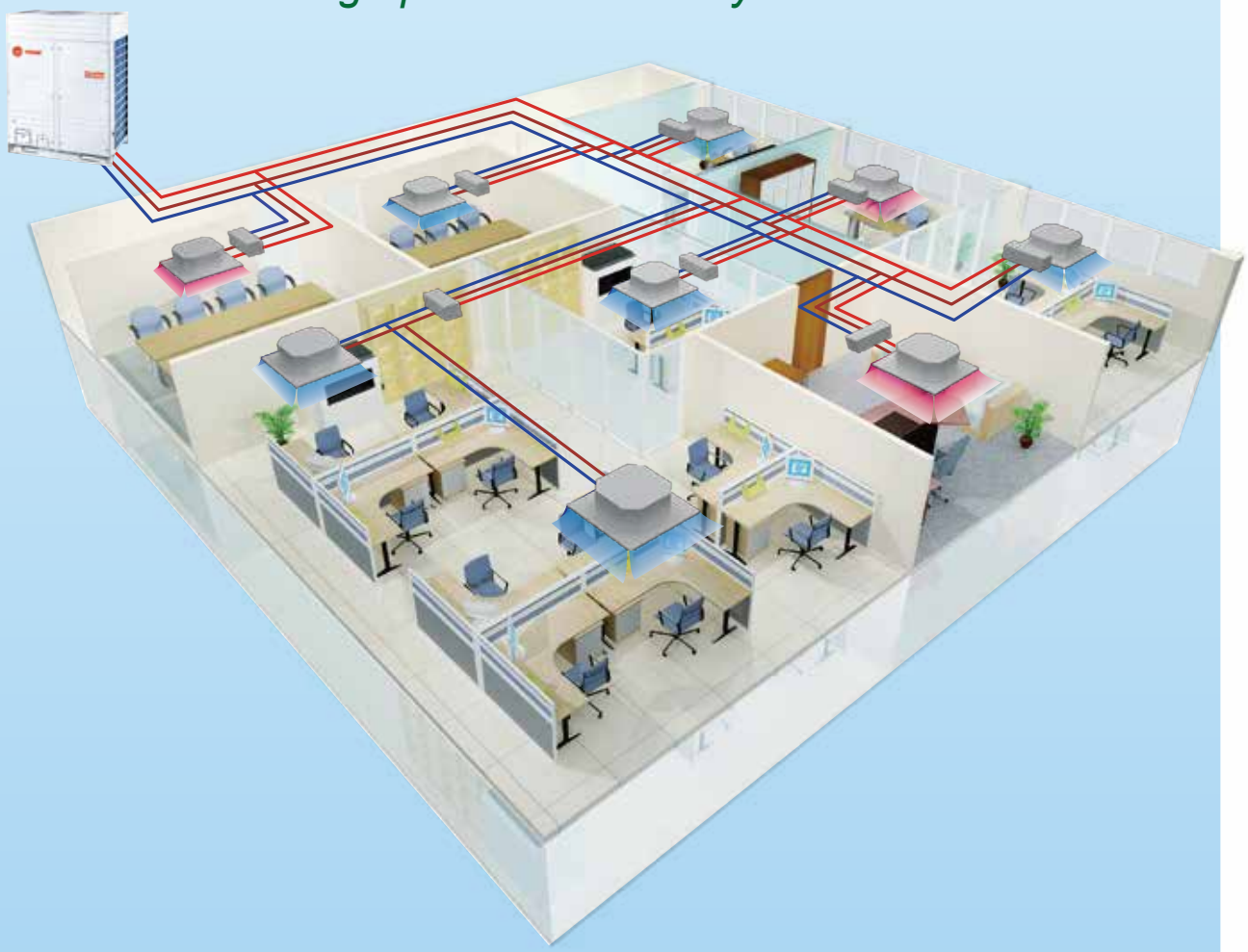




TVR 5G (Heat Recovery/3pipes)

The all DC inverter TVR 5G (Heat Recovery/3pipes) series, which can offers simultaneous cooling and heating operation in one system. The energy by-product from cooling or heating is transferred to where it is required by using the balanced heat exchanger function, which saves up to 50% in costs compared with a conventional heat pump system.

Offers simultaneous cooling and heating operation in one system



TVR 5G (Heat Recovery/3pipes)
Recommended Combination Table

Model	Nº of Outdoor Units	Nº of Compressors	Outdoor Unit Combination					Maximum Nº of Connectable Indoor Units	Capacity (kW)	
			8HP	10HP	12HP	14HP	16HP		Cooling	Heating
8HP	1	1	1					13	25.2	27
10HP	1	1		1				16	28	31.5
12HP	1	1			1			20	33.5	37.5
14HP	1	2				1		23	40	45
16HP	1	2					1	26	45	50
18HP	2	2	1	1				29	53.2	58.5
20HP	2	2		2				33	56	63
22HP	2	2		1	1			36	61.5	69
24HP	2	3		1		1		39	68	76.5
26HP	2	3		1			1	43	73	81.5
28HP	2	4				2		46	80	90
30HP	2	4				1	1	50	85	95
32HP	2	4					2	53	90	100
34HP	3	4		2		1		56	96	108
36HP	3	4		2			1	59	101	113
38HP	3	4		1	1		1	63	106.5	119
40HP	3	5		1		1	1	64	113	126.5
42HP	3	6				3		64	120	135
44HP	3	6				2	1	64	125	140
46HP	3	6				1	2	64	130	145
48HP	3	6					3	64	135	150
50HP	4	6	1	1			2	64	143.2	158.5
52HP	4	6		2			2	64	146	163
54HP	4	6		1	1		2	64	151.5	169
56HP	4	7		1		1	2	64	158	176.5
58HP	4	8				3	1	64	165	185
60HP	4	8				2	2	64	170	190
62HP	4	8				1	3	64	175	195
64HP	4	8					4	64	180	200

Notes:
Capacities are based on the following conditions:
Cooling: Indoor temperature 27ºC DB/19ºC WB; Outdoor temperature 35ºC DB/24ºC WB.
Heating: Indoor temperature 20ºC DB/15ºC WB; Outdoor temperature 7ºC DB/6ºC WB.
Piping length: Interconnecting piping length is 7.5m, level difference is zero.
The above combination models are factory-recommended models.

TVR 5G (Heat Recovery/3pipes) Features

Wide range of outdoor units

The outdoor units' capacity range from 8HP up to 64HP in 2HP increment. Maximum 64 indoor units with capacity up to 130% of total outdoor units can be connected as one refrigeration system.

8, 10, 12, 14, 16HP

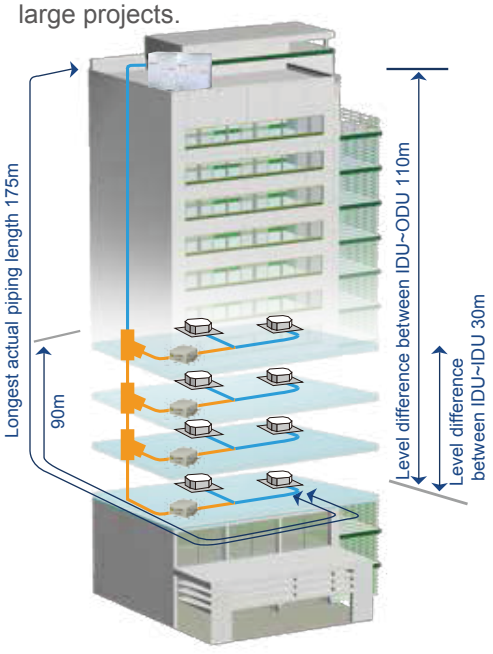
18-32HP

34-48HP

50-64HP

Long piping length

The solution supports an incredible piping length of 1,000m and level difference of 110m, making it perfect for large projects.

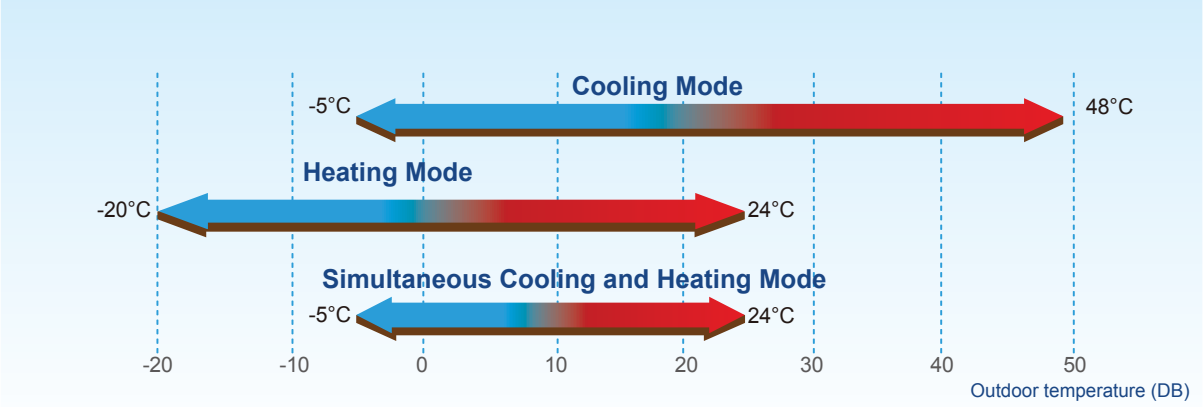


			Permitted value (m)
Piping length	Actual total piping length		1000*
	Longest piping	Actual length	175
		Equivalent length	200
	Equivalent piping length from the farthest IDU to the first indoor branch joint		40/90*
	Equivalent piping length from MS to its downstream indoor unit		40
Level difference	Level difference between indoor and outdoor units	Outdoor unit up	70
		Outdoor unit down	110
	Level difference between indoor units		30

*Total pipe length is equal to two times — pipe length plus — pipe length.
*When the piping length from the farthest IDU to the first indoor branch joint is more than 40m, it needs to meet specific conditions according to the installation part of the technical manual to achieve 90m.

TVR 5G (Heat Recovery/3pipes) Features

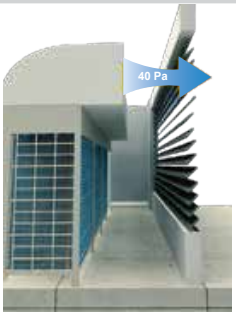
Wide operation temperature range



The TVR 5G (Heat Recovery/3Pipes) series system operates stably at extreme temperatures ranging from -20°C to 48°C

High external static pressure

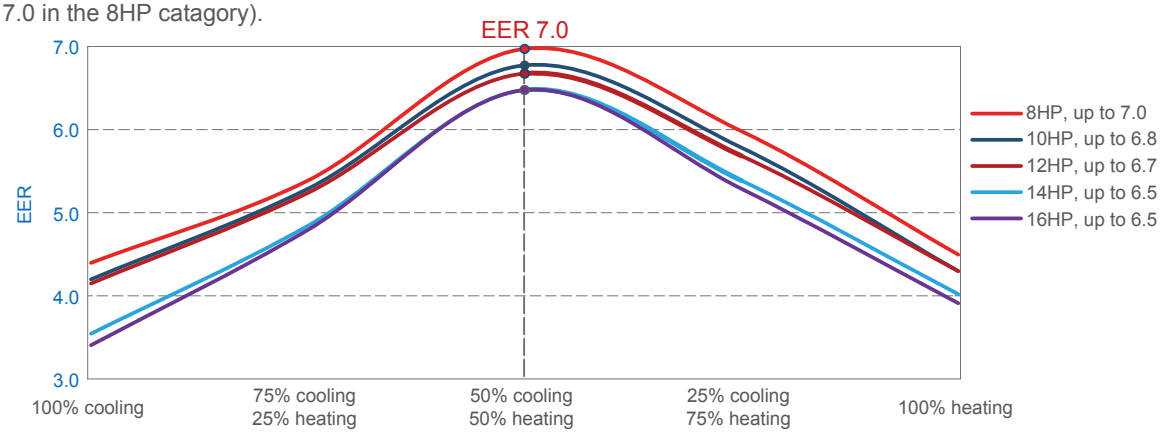
A standard 0-20Pa external static pressure is equipped by default for all outdoor units. 20-40Pa can be customized for other modules.



High Efficiency

High EER

Heat recovery is achieved by diverting exhaust heat from indoor units in cooling mode to areas requiring heating, maximising energy efficiency, reducing electricity costs and leading to high partload efficiencies (up to 7.0 in the 8HP catagory).



EER in simultaneous cooling and heating mode are based on the following condition:
Outdoor temperature 7°CDB/6°CWB, indoor temperature 27°CDB/19°CWB for cooling, indoor temperature 20°CDB for heating.

TVR 5G (Heat Recovery/3pipes) Features

All DC inverter technology

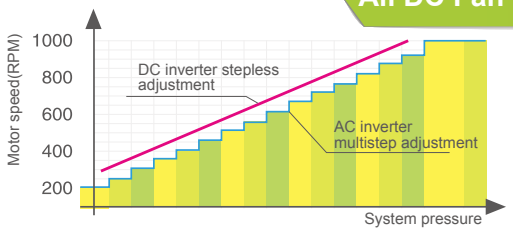
All DC inverter compressors make the capacity output better distributed.

All DC Inverter Compressors

- New structure enhances mid-frequency performance
- Specially designed scroll profile for R410A
- More compact, weight reduced by 50%
- Advanced permanent magnet DC motor improves the low frequency band performance

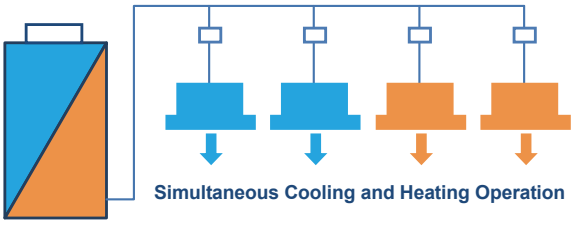
According to the running load and system pressure, the system controls the speed of DC fan to achieve the minimum energy consumption and best performance.

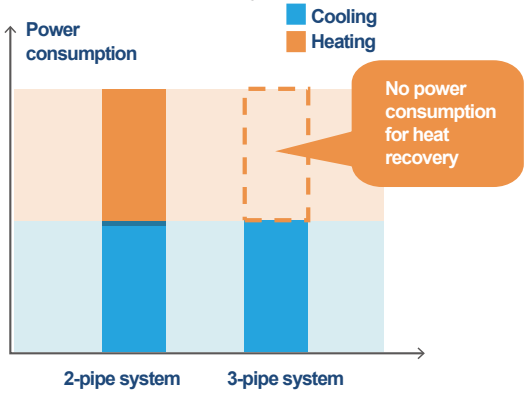
All DC Fan Motors



Heat recovery, more efficiency

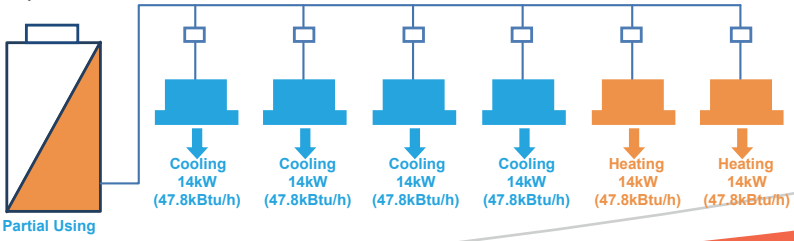
Simultaneous heating and cooling in different zones, more energy saving by heat recovery from one space to another which saves up to 50% in costs compared with a conventional heat pump system.





Heating capacity automatic adjustment

Two parts condenser individual design, the unit can distribute a part of evaporator to be as condensing area according to the heating load requirement to improve the utilization rate of the condenser.



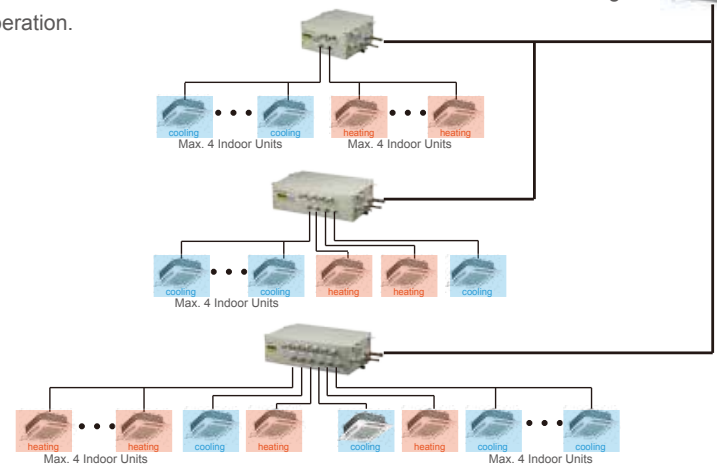
TVR 5G (Heat Recovery/3pipes Features

Cooling and heating simultaneous

Simultaneous cooling and heating achieved for new designed TMS (Mode Switch) equipment.

The outdoor unit individual controls the operation mode of each group indoor unit to achieve simultaneous heating and cooling in one system under the MS equipment which adopts solenoid valve to precise control refrigerant flow rate.

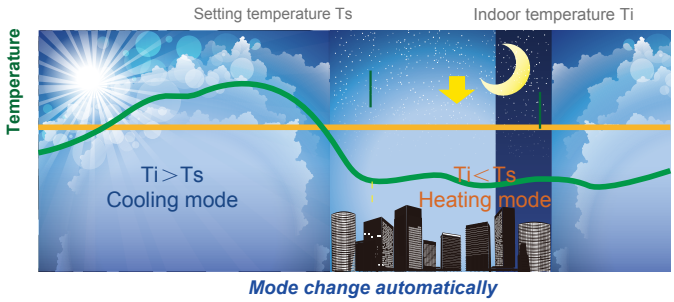
The indoor units connect to the same TMS can realize simultaneous cooling and heating operation.



Auto mode control

At the auto mode, the indoor unit can change the operation mode, to control the indoor side temperature at a constant temperature demanded.

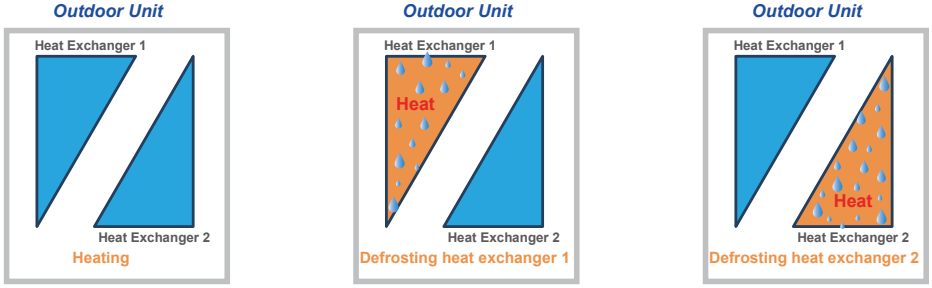
Unit change to cooling mode at daytime, when indoor temperature is higher than setting temperature, and change to heating mode at nighttime, when indoor temperature is lower than setting temp.



Mode change automatically

Continuous heating during defrost operation

Each heat exchanger is defrosted by using heat transferred from one heat exchanger to the other in the outdoor unit. Defrost has no impact on the indoor unit on heating mode.



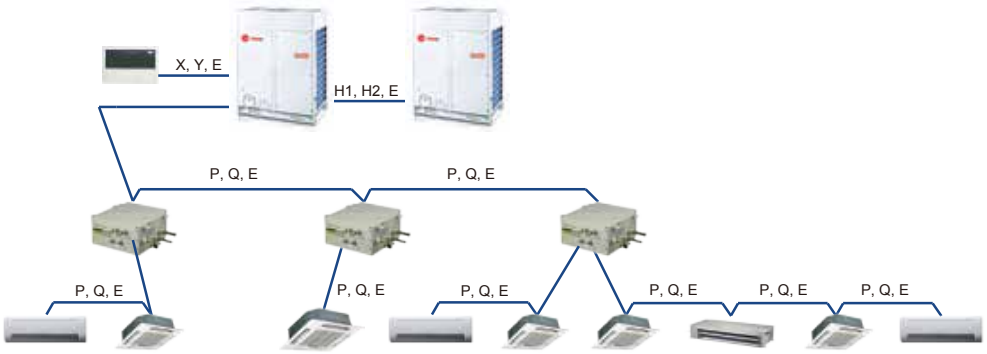
TVR 5G (Heat Recovery/3pipes) Features

Remote addressing

Addressing indoor units are able to be done just by pressing the button of the controller.
No need to set the address by the DIP switch one by one.
Wired controller and wireless controller can enquire and modify every indoor units address.

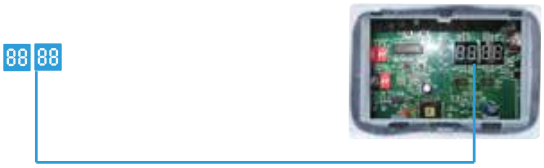
Simple communication wiring

Centralized controller (TCONTCCM03A) can connect from indoor side or outdoor side (XYE terminals) at will.
Only one group of communication wire of PQE, achieved both of communication for indoor & outdoor unit and network. It's more convenient for communication wiring.

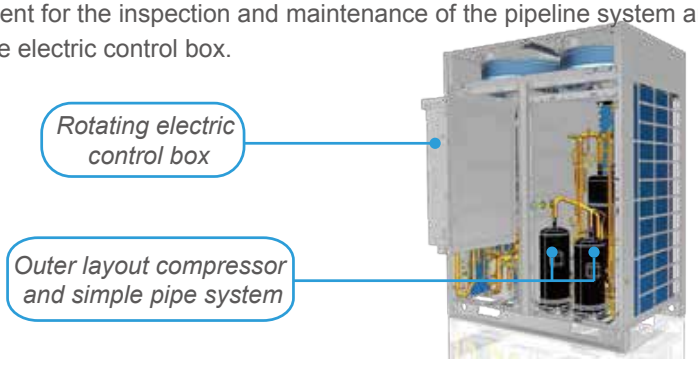


Professional structure design for easy maintainence

The check window reserved on electric control box provides a convenient spot checking and status enquiry.
With the 4 bits digital tube LED display, it is very convenient to show the data of the system, such as pressure, compressor frequency, error code, discharge temperature etc., which can make the maintenance, installation and commissioning easier.



Compressor is near the outside, and there is simple pipe system for convenient maintenance.
The newly designed rotating control box is so excellent that it can rotate in a wide angle.
It is convenient for the inspection and maintenance of the pipeline system and greatly reduced the time of dismount the electric control box.



TVR 5G (Heat Recovery/3pipes) Outdoor Unit Specifications

Model			4TVR0086BD000AA	4TVR0096BD000AA	4TVR0115BD000AA	4TVR0140BD000AA	4TVR0155BD000AA
Power supply		V/Ph/Hz	380-415/3/50				
Cooling	Capacity	kW	25.2	28.0	33.5	40.0	45.0
		RT	7.2	8.0	9.5	11.4	12.8
	Power input	kW	5.73	6.67	8.07	11.30	13.24
	EER	kW/kW	4.40	4.20	4.15	3.54	3.40
Heating	Capacity	kW	27.0	31.5	37.5	45.0	50.0
		RT	7.7	8.9	10.7	12.8	14.2
	Power input	kW	6.00	7.33	8.72	11.19	12.79
	COP	kW/kW	4.50	4.30	4.30	4.02	3.91
Connectable indoor unit	Total capacity	%	50-130	50-130	50-130	50-130	50-130
	Max. quantity		13	16	20	23	26
Sound pressure level		dB(A)	57	57	58	60	60
Pipe connections	Liquid pipe	mm	Φ9.53	Φ12.7	Φ12.7	Φ15.9	Φ15.9
	Low pressure gas pipe	mm	Φ22.2	Φ22.2	Φ25.4	Φ28.6	Φ28.6
	High pressure gas pipe	mm	Φ19.1	Φ19.1	Φ19.1	Φ22.2	Φ22.2
	High pressure gas balance pipe	mm	Φ19.1	Φ19.1	Φ19.1	Φ19.1	Φ19.1
	Oil balance pipe	mm	Φ6	Φ6	Φ6	Φ6	Φ6
Fan motor	Type		DC	DC	DC	DC	DC
	Quantity		2	2	2	2	2
	Air flow rate	m^3/h	12,000	12,000	13,000	15,000	15,000
	Motor output	W	420	420	420	750	750
	ESP	Pa	0-20 (default)			0-20 (default)	
		Pa	20-40 (customized)			20-40 (customized)	
DC inverter compressor	Quantity		1	1	1	2	2
	Capacity	kW	31.59	31.59	31.59	31.59+11.8	31.59+11.8
	Crankcase heater	W	30×2	30×2	30×2	30×4	30×4
	Oil type		FVC68D	FVC68D	FVC68D	FVC68D	FVC68D
	Oil charge	ml	500	500	500	500+500	500+500
Refrigerant	Type		R410A	R410A	R410A	R410A	R410A
	Factory charging	kg	10	10	10	13	13
Design pressure (High/Low)		MPa	4.4/2.6	4.4/2.6	4.4/2.6	4.4/2.6	4.4/2.6
Net dimension (W×H×D)		mm	1,250×1,615×765				
Packing size (W×H×D)		mm	1,305×1,790×820				
Net weight		kg	255	255	255	303	303
Gross weight		kg	273	273	273	322	322
Operating temperature range	Cooling	°C	-5~48				
	Heating	°C	-20~24				
	Simultaneous cooling and heating	°C	-5~24				

Notes:
Capacities are based on the following conditions:
Cooling: Indoor temperature 27°C DB/19°C WB; Outdoor temperature 35°C DB/24°C WB.
Heating: Indoor temperature 20°C DB/15°C WB; Outdoor temperature 7°C DB/6°C WB.
Piping length: Interconnecting piping length is 7.5m, level difference is zero.
Connection piping diameter is based on the condition that the total equivalent liquid length is less than 90m. When the total equivalent liquid length is more than 90m, please refer to technical manual to choose the connection piping diameter.
Sound values are measured in a semi-anechoic room, at a position 1m in front of the unit and 1.3m above the floor.

TVR 5G (Heat Recovery/3pipes)
TMS Specifications

TMS equipment which can be connected multiple indoor units

Model				TMSBOX01A	TMSBOX02A	TMSBOX04A	TMSBOX06A
Max. indoor unit groups				1	2	4	6
Max. number of each group indoor units				4	4	4	4
Max. number of all downstream indoor units				4×1=4	4×2=8	4×4=16	4×6=24
Max. capacity of each group indoor units			kW	16	16	16	16
Total capacity of all downstream indoor units			kW	≤16	≤28	≤45	≤45
Piping connections	Connect to outdoor unit	Liquid pipe	mm	Φ9.53	Φ12.7	Φ15.9	Φ15.9
		High pressure gas pipe	mm	Φ15.9	Φ19.1	Φ22.2	Φ22.2
		Low pressure gas pipe	mm	Φ19.1	Φ25.4	Φ31.8	Φ31.8
	Connect to indoor unit	Liquid pipe	mm	Φ9.53	Φ9.53	Φ9.53	Φ9.53
		Gas pipe	mm	Φ15.9	Φ15.9	Φ15.9	Φ15.9
Sound pressure level			dB(A)	33	33	33	40
Net dimension (W×H×D)			mm	630×225×600	630×225×600	960×225×600	960×225×600
Packing size (W×H×D)			mm	725×325×685	725×325×685	1055×325×685	1055×325×685
Net weight			kg	18	19.5	31	35
Gross weight			kg	25	27	40	44.5

TMS equipment which can be connected only one indoor unit

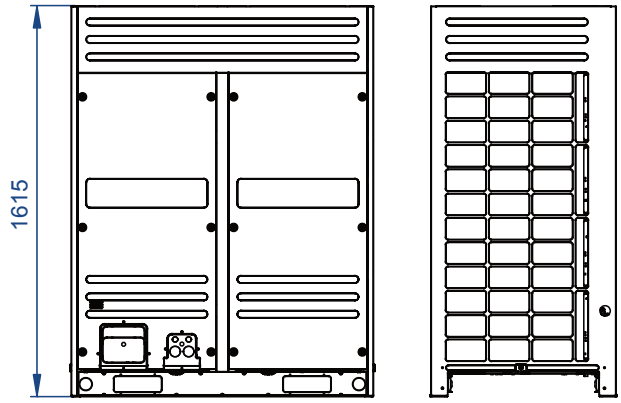
Model				TMSEBOX02A	TMSEBOX04A
Max. number of all downstream indoor units				1	1
Capacity of downstream indoor unit			kW	20~28	40~56
Piping connections	Connect to outdoor unit	Liquid pipe	mm	Φ12.7	Φ15.9
		High pressure gas pipe	mm	Φ19.1	Φ22.2
		Low pressure gas pipe	mm	Φ25.4	Φ31.8
	Connect to indoor unit	Liquid pipe	mm	Φ9.53	Φ9.53
		Gas pipe	mm	Φ15.9	Φ15.9
Sound pressure level			dB(A)	33	33
Net dimension (W×H×D)			mm	630×225×600	960×225×600
Packing size (W×H×D)			mm	725×325×685	1055×325×685
Net weight			kg	19.5	31
Gross weight			kg	27	40

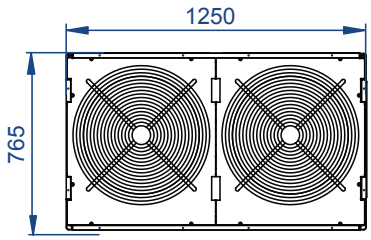
Note:
Sound values are measured in a semi-anechoic room, at a position 1m below the MS equipment in mode switch condition.
It is not recommended to install in the place where high noise performance is required.

TVR 5G (Heat Recovery/3pipes) Dimensions

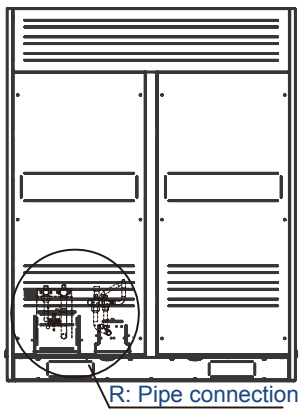
Dimension

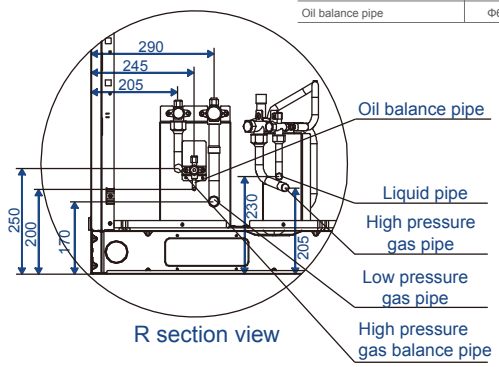
Unit: mm



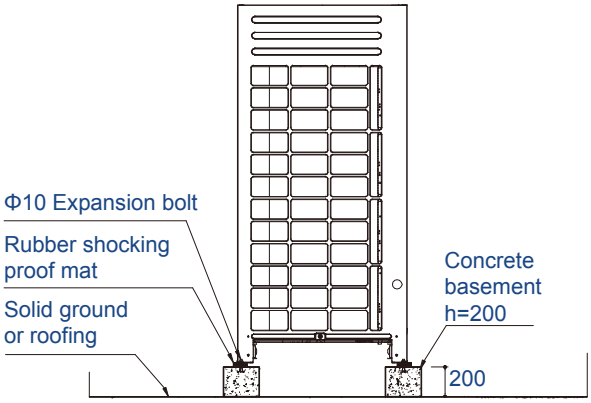


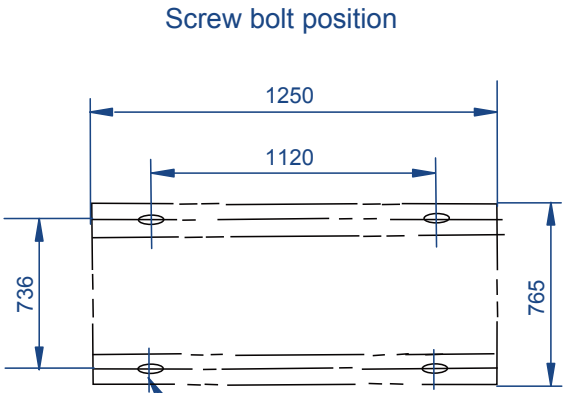
Piping \ HP	8/10	12	14/16
Liquid pipe	Φ12.7	Φ15.9	Φ15.9
Low pressure gas pipe	Φ22.2	Φ25.4	Φ28.6
High pressure gas pipe	Φ19.1	Φ19.1	Φ22.2
High pressure gas balance pipe	Φ19.1	Φ19.1	Φ19.1
Oil balance pipe	Φ6	Φ6	Φ6





Installation dimension





TVR 5G (Inverter+Fixed)

Developed to facilitate more flexible system design for big-sized and high-rise buildings TVR 5G product (Inverter+Fixed), which is designed to optimize the system and better satisfying the market. Offering a higher capacity up to 64HP by combining maximum four outdoor units, in 2HP as an increment.
Three types of units are included: Heat Pump Units, Corrosion Resistance Heat Pump Units and Cooling Only Units.

TVR 5G (Inverter+Fixed) - Recommended Combination Table

Model	Nº of Outdoor Units	Nº of Compressors	Outdoor Unit Combination					Maximum Nº of Connectable Indoor Units	Capacity (kW)	
			8HP	10HP	12HP	14HP	16HP		Cooling	Heating
8HP	1	2	1					17	25.2	27
10HP	1	2		1				21	28	31.5
12HP	1	2			1			26	33.5	37.5
14HP	1	3				1		30	40	45
16HP	1	3					1	34	45	50
18HP	2	4	1	1				39	53.2	58.5
20HP	2	4		2				43	56	63
22HP	2	4		1	1			47	61.5	69
24HP	2	5		1		1		52	68	76.5
26HP	2	5		1			1	56	73	81.5
28HP	2	6				2		60	80	90
30HP	2	6				1	1	64	85	95
32HP	2	6					2	64	90	100
34HP	3	7		2		1		64	96	108
36HP	3	7		2			1	64	101	113
38HP	3	7		1	1		1	64	106.5	119
40HP	3	8		1		1	1	64	113	126.5
42HP	3	9				3		64	120	135
44HP	3	9				2	1	64	125	140
46HP	3	9				1	2	64	130	145
48HP	3	9					3	64	135	150
50HP	4	10	1	1			2	64	143.2	158.5
52HP	4	10		2			2	64	146	163
54HP	4	10		1	1		2	64	151.5	169
56HP	4	11		1		1	2	64	158	176.5
58HP	4	12				3	1	64	165	185
60HP	4	12				2	2	64	170	190
62HP	4	12				1	3	64	175	195
64HP	4	12					4	64	180	200

Notes:
Capacities are based on the following conditions:
Cooling: Indoor temperature 27ºC DB/19ºC WB; Outdoor temperature 35ºC DB/24ºC WB.
Heating: Indoor temperature 20ºC DB/15ºC WB; Outdoor temperature 7ºC DB/6ºC WB.
Piping length: Interconnecting piping length is 7.5m, level difference is zero.
The above combination models are factory-recommended models.

TVR 5G (Inverter+Fixed) - Features

Wide range of outdoor units

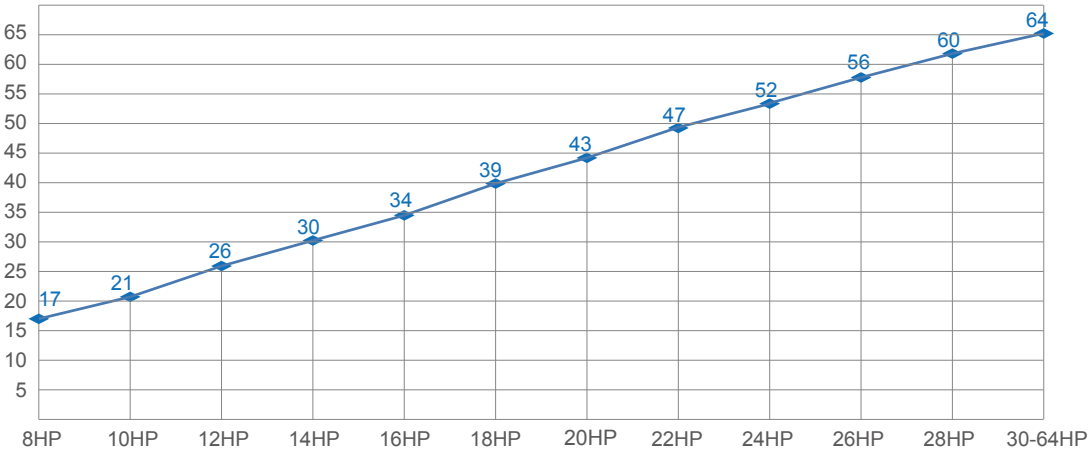
The outdoor units capacity range from 8HP up to 64HP in 2HP increment. Maximum 64 indoor units with capacity up to 130% of total outdoor units can be connected in one refrigeration system.

8, 10HP	12, 14, 16HP	18, 20, 22, 2 4, 26, 28, 30, 32HP
		

34, 36, 38, 40, 42, 44, 46, 48HP	50, 52, 54, 56, 58, 60, 62, 64HP
	

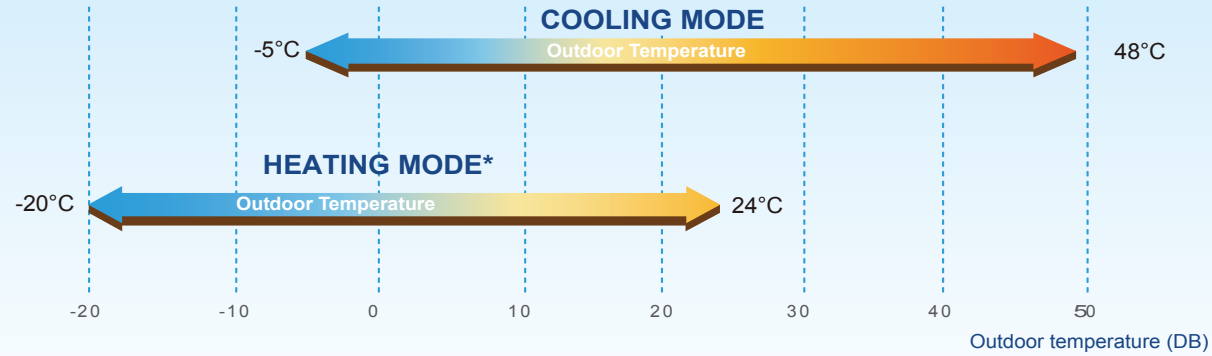
Large connectable indoor units quantity

The large quantity of connectable units is suitable for large buildings and projects.



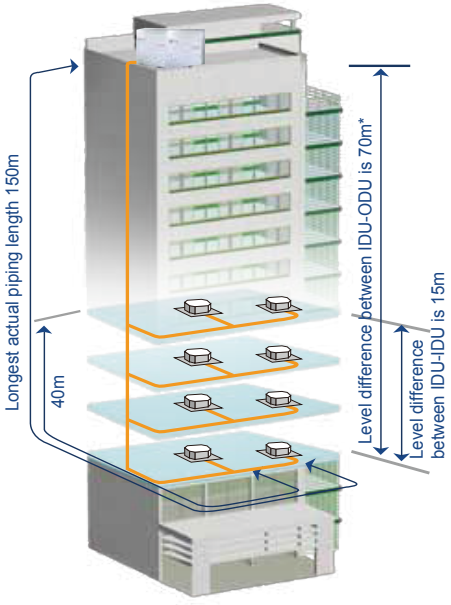
TVR 5G (Inverter+Fixed) - Features

Wide operation range



The inverter+Fixed series system operates stably at extreme temperatures ranging from -20°C to 48°C

Long piping length

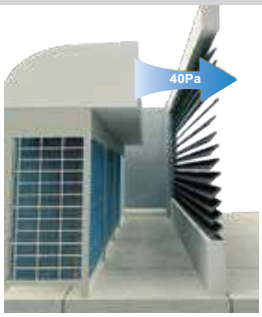


			Permitted value (m)
Piping length	Actual total piping length	≤30HP	350
		>30HP	500
	Longest piping	Actual length	150
		Equivalent length	175
	Equivalent piping length from the farthest IDU to the first indoor branch joint		40
Level difference	Level difference between indoor and outdoor units	Outdoor unit up	70*
		Outdoor unit down	70
	Level difference between indoor units		15

*Total piping length is equal to gas pipe or liquid pipe length.
*Level difference above 50m are not supported by default but are available on request for customized.

High external static pressure

A standard 0-20Pa external static pressure is equipped by default for all outdoor units. 20-40Pa can be customized for other modules.

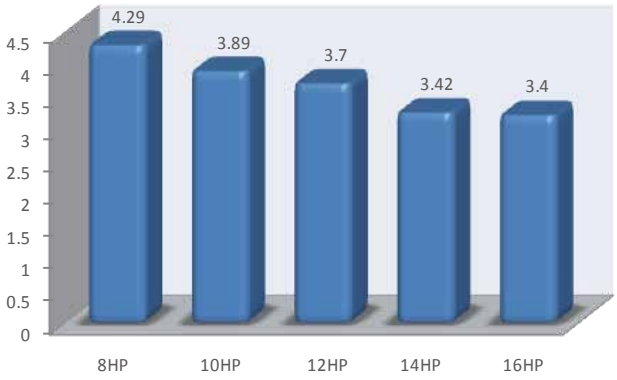


TVR 5G (Inverter+Fixed) - Features

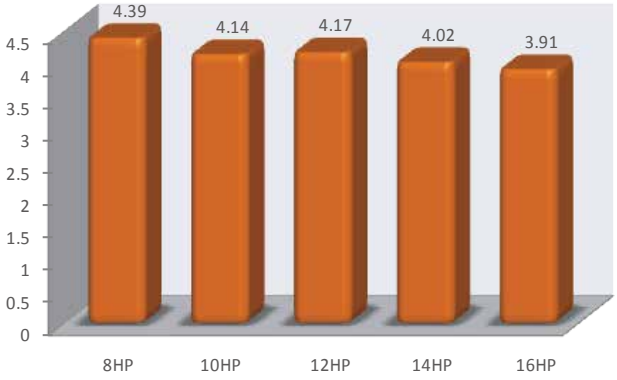
High COP/EER values

The cooling EER up to 4.29 and the heating COP up to 4.39 in the 8HP catagory.

EER

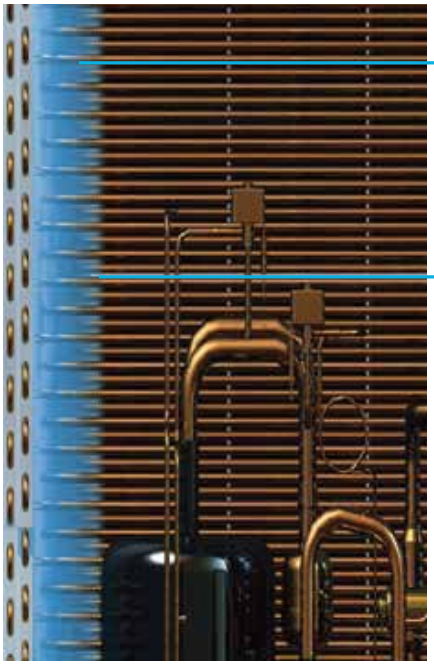


COP*

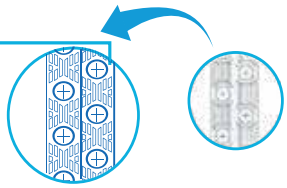


* System is without heating COP value

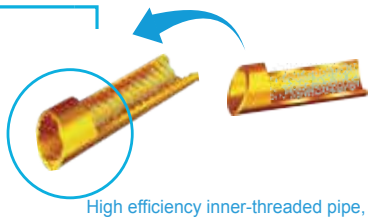
High performance heat exchanger



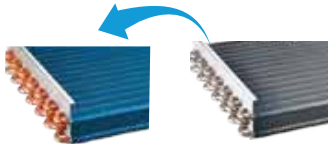
New design Original design



Reduce air resistance.

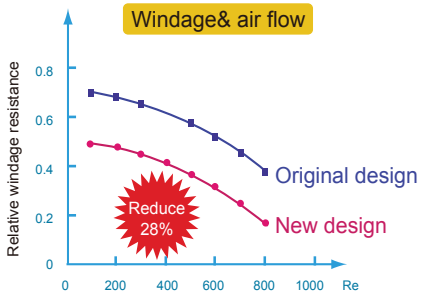


High efficiency inner-threaded pipe, enhance heat transfer.

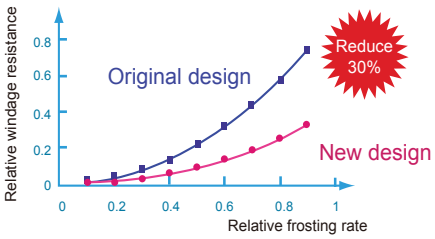


Hydrophilic film fins + inner-threaded pipes

Windage& air flow



Frost contrast



- The new designed window fins enlarge the heat-exchanging area , decrease the air resistance, save more power and enhance heat exchange performance.
- Hydrophilic film fins and inner-threaded copper pipes optimize heat exchange efficiency.

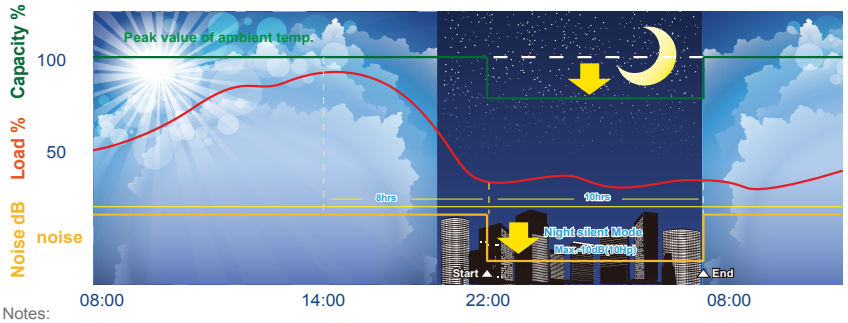
TVR 5G (Inverter+Fixed) - Features

Night silent operation mode

High comfort outdoor unit's multi-choice of silent mode during the night.
Super silent operation mode can reduce sound level further, minimum 46.8dB (A).

Night silent operation will be activated X hours after the peak temperature during daytime, and it will go back to normal operation after Y hours.

-Mode 1→X: 6 hours, Y: 10 hours
-Mode 2→X: 8 hours, Y: 10 hours
-Mode 3→X: 6 hours, Y: 12 hours
-Mode 4→X: 8 hours, Y: 8 hours

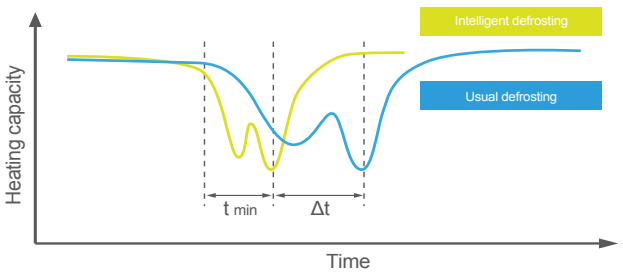


Notes:
This function can be activated by setting at site. Temperature(load) curve shown in the graph is just an example.

Intelligent defrosting technology*

Intelligent defrosting program will judge the defrosting time according to the system real requirement, reduce the heating loss by unnecessary defrosting and make the indoor side more comfortable.
Defrosting time can be shortened to 4 min. due to the specialized defrosting valve.

*System is without this function.



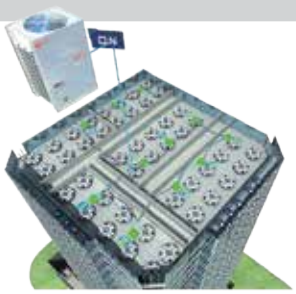
Easier Installation and Service

Simple signal line connection

Centralized controller (TCONTCCM03A or TCONTCCM30A) can be connected from indoor side or outdoor side indoor (XYE terminals) at will. Only one group of communication wire of PQE, achieved both of communication for & outdoor unit. It's more convenient for communication wiring.

Auto addressing

Outdoor unit can distribute addresses for indoor unit automatically.
Wireless and wired controllers can query and modify each indoor unit's address.



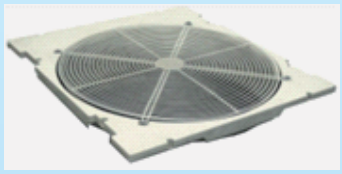
TVR 5G (Inverter+Fixed) - Outdoor Unit Specifications

Model			4TVV0086AD000AA	4TVV0096AD000AA	4TVV0115AD000AA	4TVV0140AD000AA	4TVV0155AD000AA
Power supply		V/Ph/Hz	380-415/3/50				
Cooling	Capacity	kW	25.2	28	33.5	40	45
		RT	7.2	8	9.5	11.4	12.8
	Input	kW	5.87	7.2	9.05	12.31	14.02
	EER	kW/kW	4.29	3.89	3.7	3.42	3.40
Heating	Capacity	kW	27	31.5	37.5	45	50
		RT	7.7	8.9	10.7	12.8	14.2
	Input	kW	6.15	7.61	8.99	11.19	12.79
	COP	kW/kW	4.39	4.14	4.17	4.02	3.91
Connectable indoor unit	Total capacity	%	50-130	50-130	50-130	50-130	50-130
	Max. quantity		17	21	26	30	34
Sound pressure level		dB(A)	57	57	58	60	60
Pipe connections	Liquid pipe	mm	Φ12.7	Φ12.7	Φ12.7	Φ15.9	Φ15.9
	Gas pipe	mm	Φ22.2	Φ25.4	Φ28.6	Φ28.6	Φ28.6
	Oil balance pipe	mm	Φ6	Φ6	Φ6	Φ6	Φ6
Fan motor	Type		DC	DC	DC	DC	DC
	Quantity		1	1	2	2	2
	Air flow rate	m^3/h	11,700	11,700	15,600	15,600	15,600
	Motor output	W	420	420	360×2	360×2	360×2
	ESP	Pa	0-20 (default)		0-20 (default)	0-20 (default)	
		Pa	20-40 (customized)		20-40 (customized)	20-40 (customized)	
DC inverter compressor	Quantity		1	1	1	1	1
	Capacity	kW	11.8	11.8	11.8	11.8	11.8
	Crankcase heater	W	27.6×2	27.6×2	27.6×2	27.6×2	27.6×2
	Oil type		FVC68D	FVC68D	FVC68D	FVC68D	FVC68D
	Oil charge	ml	500	500	500	500	500
Fixed scroll compressor	Quantity		1	1	1	2	2
	Capacity	kW	15.39	17.1	17.1	15.39×2	17.1×2
	Crankcase heater	W	27.6	27.6	27.6	27.6×2	27.6×2
	Oil type		FVC68D	FVC68D	FVC68D	FVC68D	FVC68D
	Oil charge	ml	500	500	500	500×2	500×2
Refrigerant	Type		R410A	R410A	R410A	R410A	R410A
	Factory charging	kg	10	10	12	15	15
Design pressure (High/Low)		MPa	4.4/2.6	4.4/2.6	4.4/2.6	4.4/2.6	4.4/2.6
Net dimension (W×H×D)		mm	960×1,615×765		1,250×1,615×765		
Packing size (W×H×D)		mm	1,025×1,790×830		1,305×1,790×820		
Net weight		kg	245	245	275	325	325
Gross weight		kg	260	260	295	345	345
Operating temperature range	Cooling	°C	-5~48				
	Heating	°C	-20~24				

Notes: Capacities are based on the following conditions:
Cooling: Indoor temperature 27°C DB/19°C WB; Outdoor temperature 35°C DB/24°C WB.
Heating: Indoor temperature 20°C DB/15°C WB; Outdoor temperature 7°C DB/6°C WB.
Piping length: Interconnecting piping length is 7.5m, level difference is zero.
Connection piping diameter is based on the condition that the total equivalent liquid length is less than 90m. When the total equivalent liquid length is more than 90m, please refer to technical manual to choose the connection piping diameter.
Sound values are measured in a semi-anechoic room, at a position 1m in front of the unit and 1.3m above the floor.

TVR 5G (Inverter+Fixed) Corrosion Resistance Unit

The unit adopts special anti-corrosion treatment on the heat exchanger, electronic parts and other components of the unit, which is about 5 times as anti-salt effective as the normal ones, it makes the unit more suitable for the project nearby the sea.



The plastic planting grille protects against salt.
All panel parts are corrosion resistant to protect against brine.

Corrosion resistant heat-exchange fins are suitable for seaside areas and areas exposed to acidic substances.

All screws are anti-rust.

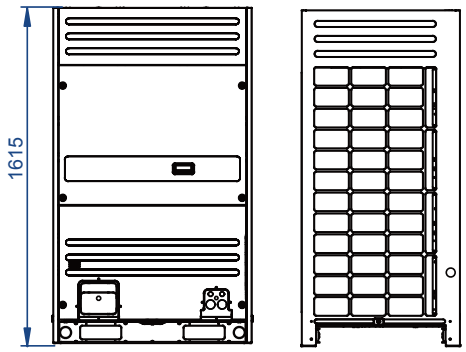
All PCB parts in the unit are coated with double-sided moisture proof paint. The outer side of the control box metal cover is spray-painted.

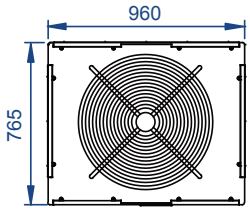
TVR 5G (Inverter+Fixed) Outdoor Unit Dimensions

Dimension

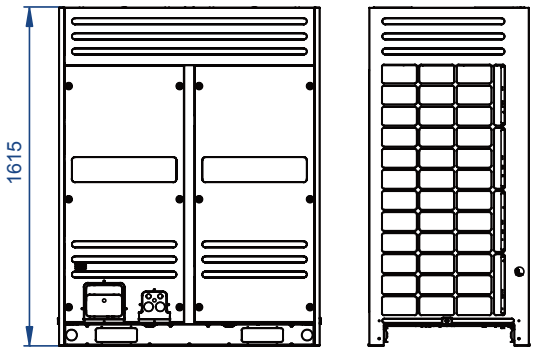
Unit: mm

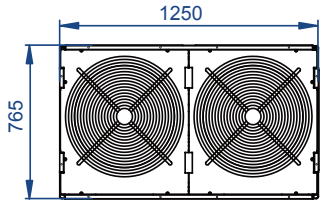
8/10HP

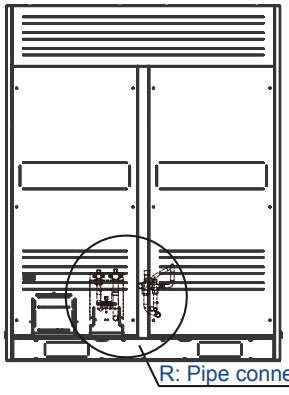


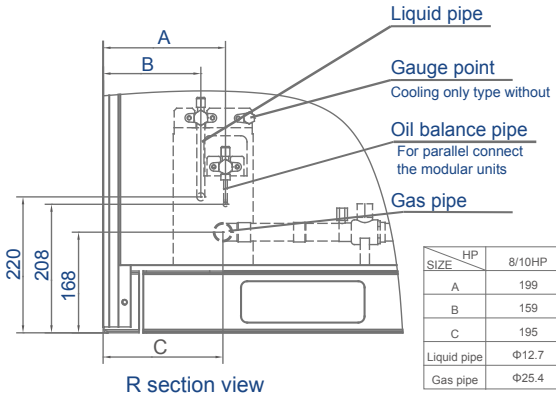


12/14/16HP





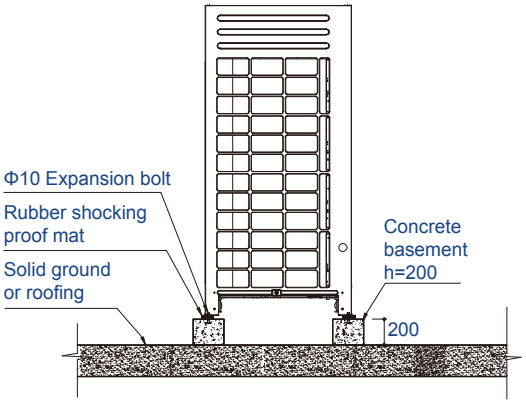


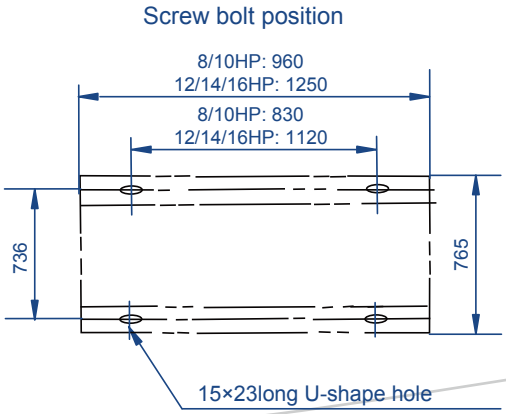


R section view

SIZE \ HP	8/10HP	12/14/16HP
A	199	169
B	159	209
C	195	169
Liquid pipe	Φ12.7	Φ15.9
Gas pipe	Φ25.4	Φ31.8

Installation dimension





TVR 5G (All Inverter-T3/High Ambient)

The outdoor units' capacity range is from 8HP up to 72HP in 2HP increment. Maximum 64 indoor units with the capacity up to 130% of total outdoor units can be connected in one refrigeration system. With all DC inverter compressors and all DC fan motors, the efficiency is improved greatly. Together with lots of latest technologies, it supports an incredible piping length of 1000m and longer level difference of 110m, making it perfect for big-sized and high-rise buildings for wide application.

TVR 5G (All Inverter-T3/High Ambient)-Features

Wide range of outdoor units

The outdoor units capacity range from 8HP up to 72HP in 2HP increment. Maximum 64 indoor units with capacity up to 130% of total outdoor units can be connected in one refrigeration system.

8, 10HP

12, 14, 16HP

18HP

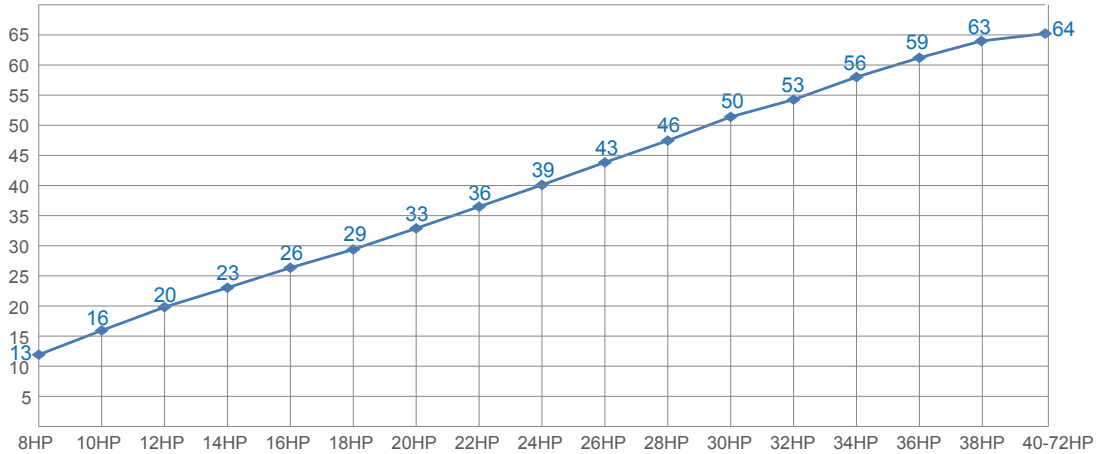
20, 22, 24, 26, 28, 30, 32, 34, 36HP

38, 40, 42, 44, 46, 48, 50, 52, 54HP

56, 58, 60, 62, 64, 66, 68, 70, 72HP

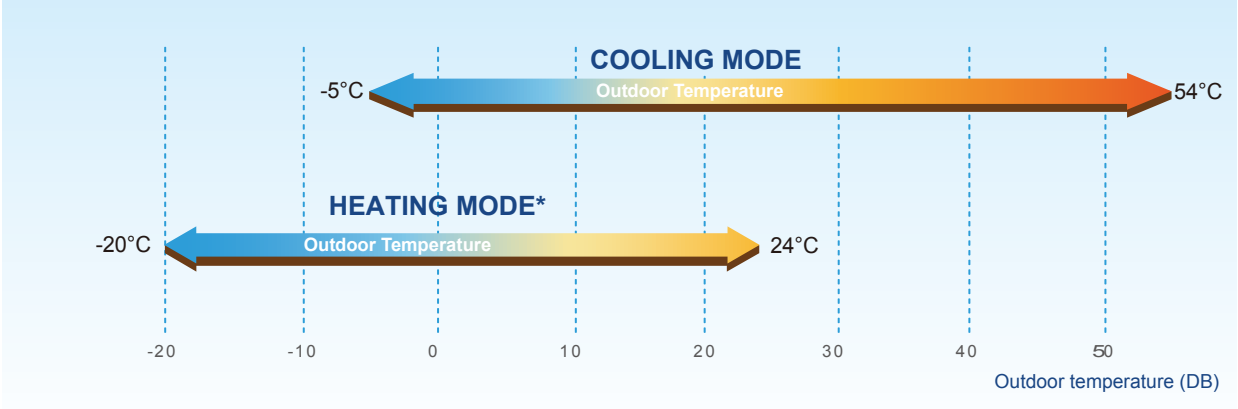
Large connectable indoor units quantity

The large quantity of connectable units is suitable for large buildings and projects.



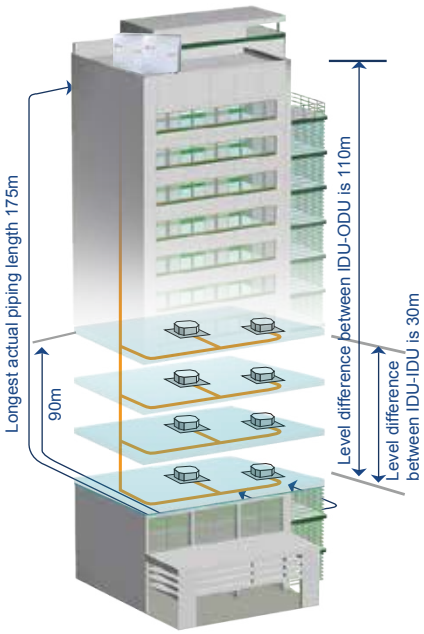
TVR 5G (All Inverter-T3/High Ambient)-Features

Wide operation range



The TVR 5G (All Inverter) system operates stably at extreme temperatures ranging from -20°C to 54°C

Long piping length

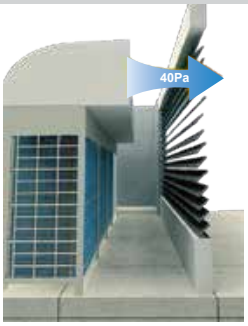


			Permitted value (m)
Piping length	Actual total piping length		1000*
	Longest piping	Actual length	175
		Equivalent length	200
	Equivalent piping length from the farthest IDU to the first indoor branch joint		40/90*
Level difference	Level difference between indoor and outdoor units	Outdoor unit up	70
		Outdoor unit down	110
	Level difference between indoor units		30

*Total pipe length is equal to two times — pipe length plus — pipe length.
*When the piping length from the farthest IDU to the first indoor branch joint is more than 40m, it needs to meet specific conditions according to the installation part of the technical manual to achieve 90m.

High external static pressure

A standard 0-20Pa external static pressure is equipped by default for all outdoor units. 20-40Pa can be customized for other modules.



TVR 5G (All Inverter-T3/High Ambient)-Outdoor Units Specifications

Model			4TVVT086BD000AA	4TVVT096BD000AA	4TVVT115BD000AA	4TVVT140BD000AA	4TVVT155BD000AA	4TVVT182BD000AA
Power supply		V/Ph/Hz	380-415/3/50					
Cooling(*1)	Capacity*	kW	25.2	28.0	33.5	40.0	45.0	50.0
	Capacity**	kW	23.6	26.3	30.7	37.6	41.2	45.8
	Input*	kW	5.88	7.05	8.79	11.30	12.85	14.49
	Input**	kW	6.37	7.64	11.25	12.24	16.46	18.55
	EER*	kW/kW	4.29	3.97	3.81	3.54	3.50	3.45
	EER**	kW/kW	3.72	3.45	2.73	3.07	2.51	2.47
Heating(2*)	Capacity*	kW	27.0	31.5	37.5	45.0	50.0	56.0
	Input*	kW	6.15	7.55	8.99	11.19	12.79	14.40
	COP*	kW/kW	4.39	4.17	4.17	4.02	3.91	3.89
Connectable indoor unit	Total capacity	%	50~130					
	Max. quantity		13	16	20	23	26	29
Sound pressure level		dB(A)	57	57	59	61	62	62
Pipe connections	Liquid pipe	mm	Φ12.7	Φ12.7	Φ15.9	Φ15.9	Φ15.9	Φ19.1
	Gas pipe	mm	Φ25.4	Φ25.4	Φ31.8	Φ31.8	Φ31.8	Φ31.8
	Oil balance pipe	mm	Φ6.4	Φ6.4	Φ6.4	Φ6.4	Φ6.4	Φ6.4
Fan motor	Type		DC	DC	DC	DC	DC	DC
	Quantity		1	1	2	2	2	2
	Air flow rate	m^3/h	11,242	11,242	15,620	15,620	15,620	15,770
	Motor output	W	454	454	232x2	383x2	383x2	560x2
	ESP	Pa	0~20 (default)					
		Pa	20~40 (optional)					
DC inverter compressor	Quantity		1	1	1+1	1+1	1+1	1+1
	Capacity	kW	31.59	31.59	31.59+11.8	31.59+11.8	31.59+11.8	31.59 +31.59
	Crankcase heater	W	27.6×2	27.6×2	27.6×2x2	27.6×2	27.6×2	27.6x2
	Oil type		FVC68D	FVC68D	FVC68D+FVC68D	FVC68D+FVC68D	FVC68D+FVC68D	FVC68D+FVC68D
	Oil charge	ml	500	500	500+500	500+500	500+500	500+500
Refrigerant	Type		R410a	R410a	R410a	R410a	R410a	R410a
	Factory charging	kg	10	10	12	15	15	16
Design pressure (High/Low)		MPa	4.4/2.6	4.4/2.6	4.4/2.6	4.4/2.6	4.4/2.6	4.4/2.6
Net dimension (W×H×D)		mm	960×1,615×765		1,250×1,615×765			
Packing size (W×H×D)		mm	1,025×1,790×830		1,305×1,790×820			
Net weight		kg	212	212	288	288	288	310
Gross weight		kg	220	220	300	308	308	330
Operating temperature range	Cooling	°C	-5~54					
	Heating	°C	-20~24					

Notes:

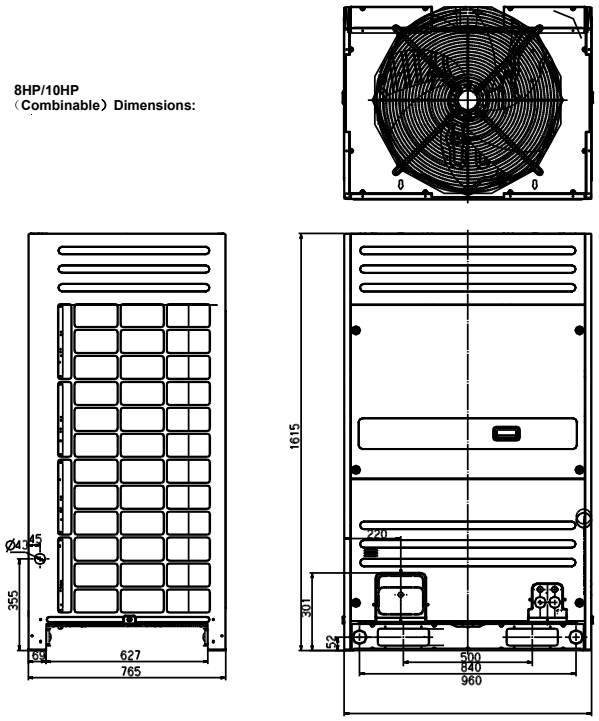
1. Cooling*: Indoor temperature 27°C(80.6°F) DB/19°C(66.2°F) WB; Outdoor temperature 35°C(95°F) DB/24°C(75.2°F) WB
   Cooling**: Indoor temperature 29°C(84.2°F) DB/19°C(66.2°F) WB; Outdoor temperature 46°C(114.8°F) DB/24°C(75.2°F) WB
   , equivalent pipe length: 5m, drop length: 0m.
2. Heating: indoor temperature: 20°CDB (68°F), 15°CWB (59°F) outdoor temperature: 7°CDB (44.6°F) equivalent pipe length: 5m drop length: 0m.
3. Sound level: Anechoic chamber conversion value, measured at a point 1 m in front of the unit at a height of 1.5 m. During actual operation, these values are normally somewhat higher as a result of ambient conditions.
4. The farthest equivalent pipe length should be equal to or shorter than 40m, but it can be up to 90m if meet the required conditions following part 4 installation sections.
5. The above data may be changed without notice for future improvement on quality and performance.

TVR 5G (All Inverter-T3/High Ambient) Outdoor Unit Dimensions

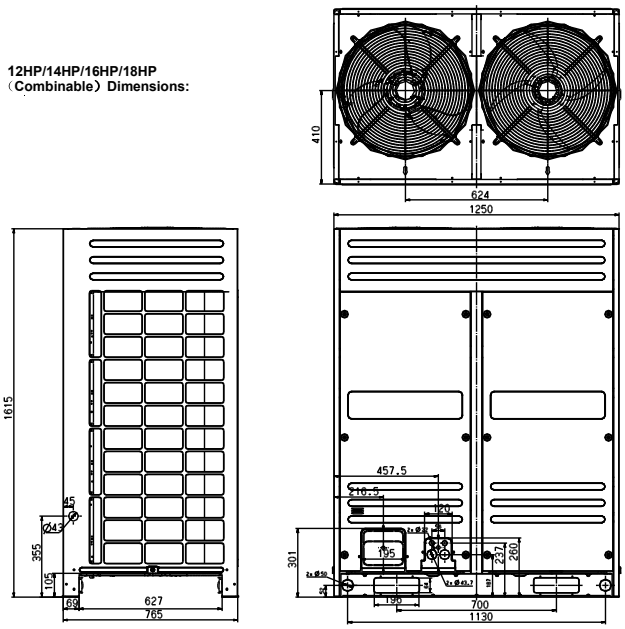
Dimension

Unit: mm

8HP/10HP
（Combinable）Dimensions:

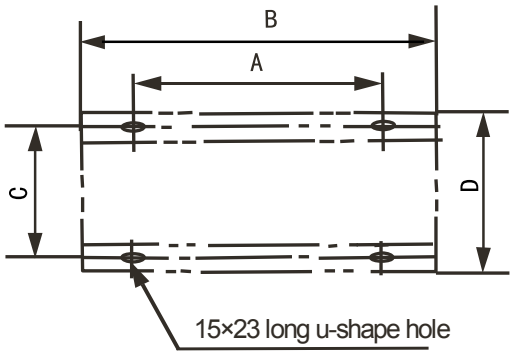


12HP/14HP/16HP/18HP
（Combinable）Dimensions:



Installation dimension

Position of foot screw bolt (Unit: mm)



	For 8,10HP	For 12,14,16,18HP
A	830	1120
B	960	1250
C	736	736
D	765	765

Nomenclature - Outdoor Unit

4	T	V	V	0	0	8	6	B	D	0	0	0	A	A
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15

Digit #1 = Refrigerant

4	=	R-410a

Digit #2 = Brand Name

T	=	Trane

Digit #3 = System Type

V	=	Variable Refrigerant Flow

Digit #4 = Functional Type Outdoor Unit

V	=	Heat Pump, Inverter
R	=	Heat Recovery / 3 Pipes, Inverter

Digit #5 = Special Application

0	=	Standard Ambient
T	=	High Ambient Model

Digit #6,7,8 = Norminal Capacity (Btu/h x 1000)

086	=	86000Btu/h

Digit #9 = Major Development Sequence

A	=	Inverter + Fixed
B	=	All Inverters

Digit #10 = Electric Power Supply Characteristics

B	=	220-240/50/1
D	=	380-415/50/3

Digit #11 = Coil Fin Protection

0	=	Blue Fin
C	=	Corrosion Resistant

Digit # 12,13 = Reserved for Future Use

0	=	Not currently used

Digit #14 = Minor Design Sequence

A	=	Design Sequence

Digit #15 = Device Digit

A	=	Service Design Sequence

Nomenclature - Indoor Unit

4	T	V	D	0	0	2	4	C	B	0	W	E	A	A
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15

Digit #1 = Refrigerant

4	=	R-410a

Digit #2 = Brand Name

T	=	Trane

Digit #3 = System Type

V	=	Variable Refrigerant Flow

Digit #4 = Configuration Type

A	=	1-Way Cassette
B	=	4-Way Compact Cassette (650mm x 650mm)
C	=	4-Way Standard Cassette (950mm x 950mm)
E	=	2-Way Cassette
F	=	Fresh Air Duct Type
L	=	Low Static Pressure DuctType
D	=	Medium Static Pressure Duct Type
H	=	High Static Pressure Duct Type
G	=	Cosole Floor Mount
X	=	Convertible Floor / Ceiling Mount
W	=	High Wall Type Mount

Digit #5 = Reserved for Future Use

0	=	Not currently used

Digit #6,7,8 = Norminal Capacity (Btu/h x 1000)

024	=	24000Btu/h

Digit #9 = Major Development Sequence

C	=	Third Development Sequence

Digit # 10 = Electric Power Supply Characteristics

B	=	220-240/50/1
D	=	380-415/50/3

Digit #11 = Type of function

0	=	Standard Cooling / HP
H	=	Auxiliary Electric Heater

Digit #12 = Controls

W	=	Wired Controls
R	=	Wireless Controls

Digit #13 = Special Features

0	=	None
E	=	Integrated EXV

Digit #14 = Minor Design Sequence

A	=	Design Sequence
B	=	Design Sequence

Digit #15 = Device Digit

A	=	Service Design Sequence

Indoor Units Offering Summary

TVR™ Indoor Units																			
Indoor Unit capacity in Kw	2.2	2.8	3.6	4.5	5.6	7.1	8.0	9.0	10	11.2	12.5	14	16	20	25	28	40	45	56
Indoor unit capacity in Btu/hr	7,500	9,500	12,300	15,000	19,000	24,000	27,000	31,000	34,1000	38,000	42,000	48,000	55,000	75,000	85,300	95,500	140,000	155,000	190,000
Low Static Pressure Duct	x	x	x	x	x														
Medium Static Pressure Duct	x	x	x	x	x	x	x	x		x		x							
High Static Pressure Duct						x	x	x		x		x	x	x	x	x	x	x	x
Full fresh air Duct											x	x		x	x	x			
One-way Cassette		x	x	x	x														
Two-way Cassette	x	x	x	x	x	x													
New Compact cassette 360°	x	x	x	x															
Four-way Cassette standard		x	x	x	x	x	x	x	x	x		x							
High Wall (A-series)	x	x	x	x	x														
High Wall (B-series)	x	x	x	x	x														
High Wall (R-series)						x	x	x											
Convertible			x	x	x	x	x	x		x		x	x						
Console	x	x	x	x															

Power supply of all the indoor units is 1 phase, 220-240V, 50Hz

Description Summary - Indoor Units Range

Model number	TYPE OF UNITS	BTU/H	Capacity (kW)	
4TVL0007CB0WEAA	New Ducted -Low Static Pressure	7 500	2.2	
4TVL0009CB0WEAA	New Ducted -Low Static Pressure	9 500	2.8	
4TVL00012CB0WEAA	New Ducted -Low Static Pressure	12 500	3.6	
4TVL00015CB0WEAA	New Ducted -Low Static Pressure	15 000	4.5	
4TVL00019CB0WEAA	New Ducted -Low Static Pressure	19 000	5.6	
4TVD0007CB0WEAA	Ducted -Medium Static Pressure	7 500	2.2	
4TVD0009CB0WEAA	Ducted -Medium Static Pressure	9 500	2.8	
4TVD0012CB0WEAA	Ducted -Medium Static Pressure	12 300	3.6	
4TVD0015CB0WEAA	Ducted -Medium Static Pressure	15 000	4.5	
4TVD0019CB0WEAA	Ducted -Medium Static Pressure	19 000	5.6	
4TVD0024CB0WEAA	Ducted -Medium Static Pressure	24 300	7.1	
4TVD0027CB0WEAA	Ducted -Medium Static Pressure	24 700	8.0	
4TVD0031CB0WEAA	Ducted -Medium Static Pressure	31 000	9.0	
4TVD0038CB0WEAA	Ducted -Medium Static Pressure	38 000	11.2	
4TVD0048CB0WEAA	Ducted -Medium Static Pressure	48 000	14.0	
4TVH0024CB0WEAA	Ducted -High Static Pressure	24 200	7.1	
4TVH0027CB0WEAA	Ducted -High Static Pressure	27 300	8.0	
4TVH0030CB0WEAA	Ducted -High Static Pressure	30 700	9.1	
4TVH0038CB0WEAA	Ducted -High Static Pressure	38 200	11.2	
4TVH0048CB0WEAA	Ducted -High Static Pressure	48 000	14.0	
4TVH0055CB0WEAA	Ducted -High Static Pressure	55 000	16.0	
4TVH0075CB0WEAA	Ducted -High Static Pressure	75 000	20.0	
4TVH0085CB0WEAA	Ducted -High Static Pressure	85 300	25.0	
4TVH0096CB0WEAA	Ducted -High Static Pressure	95 500	28.0	
4TVH0140CB0WEAA	Ducted -High Static Pressure	140 000	40.0	
4TVH0155CB0WEAA	Ducted -High Static Pressure	155 000	45.0	
4TVH0190CB0WEAA	Ducted -High Static Pressure	190 000	56.0	
4TVF0042CB0WEAA	Ducted -Full Fresh Air	42 000	12.5	
4TVF0048CB0WEAA	Ducted -Full Fresh Air	48 000	14.0	
4TVF0075CB0WEAA	Ducted -Full Fresh Air	75 000	20.0	
4TVF0085CB0WEAA	Ducted -Full Fresh Air	85 300	25.2	
4TVF0096CB0WEAA	Ducted -Full Fresh Air	95 500	28.0	
4TVA0009CB0REAA	1-Way-Cassette	9 500	2.8	
4TVA0012CB0REAA	1-Way-Cassette	12 200	3.6	
4TVA0015CB0REAA	1-Way-Cassette	15 300	4.5	
4TVA0019CB0REAA	1-Way-Cassette	19 000	5.6	

Description Summary - Indoor Units Range

Model number	TYPE OF UNITS	BTU/H	Capacity (kW)	
4TVE0007CB0REAA	2-Way-Cassette	7 500	2.2	
4TVE0009CB0REAA	2-Way-Cassette	9 500	2.8	
4TVE0012CB0REAA	2-Way-Cassette	12 200	3.6	
4TVE0015CB0REAA	2-Way-Cassette	15 300	4.5	
4TVE0018CB0REAA	2-Way-Cassette	18 900	5.6	
4TVE0024CB0REAA	2-Way-Cassette	24 200	7.1	
4TVB0007CB0REAA	4 Way-Cassette Compact 360°	7 500	2.2	
4TVB0009CB0REAA	4 Way-Cassette Compact 360°	9 550	2.8	
4TVB0012CB0REAA	4 Way-Cassette Compact 360°	12 300	3.6	
4TVB0015CB0REAA	4 Way-Cassette Compact 360°	15 300	4.5	
4TVC0009CB0REAA	4 Way-Cassette Standard	9 500	2.8	
4TVC0012CB0REAA	4 Way-Cassette Standard	12 200	3,6	
4TVC0015CB0REAA	4 Way-Cassette Standard	15 300	4,5	
4TVC0018CB0REAA	4 Way-Cassette Standard	18 900	5,6	
4TVC0024CB0REAA	4 Way-Cassette Standard	24 200	7.1	
4TVC0027CB0REAA	4 Way-Cassette Standard	27 300	8.0	
4TVC0030CB0REAA	4 Way-Cassette Standard	30 700	9.0	
4TVC0034CB0REAA	4 Way-Cassette Standard	34 100	10.0	
4TVC0038CB0REAA	4 Way-Cassette Standard	38 200	11.2	
4TVC0048CB0REAA	4 Way-Cassette Standard	48 000	14.0	
4TVW0007CB0REBA	Hi Wall S series	7 500	2.2	
4TVW0009CB0REBA	Hi Wall S series	9 500	2.8	
4TVW0012CB0REBA	Hi Wall S series	12 300	3.6	
4TVW0015CB0REBA	Hi Wall S series	15 400	4.5	
4TVW0018CB0REBA	Hi Wall S series	19 000	5.6	
4TVW0007CBHREBA	Hi Wall S series with Electric Heat	7 500	2.2	
4TVW0009CBHREBA	Hi Wall S series with Electric Heat	9 500	2.8	
4TVW0012CBHREBA	Hi Wall S series with Electric Heat	12 300	3.6	
4TVW0015CBHREBA	Hi Wall S series with Electric Heat	15 400	4.5	
4TVW0018CBHREBA	Hi Wall S series with Electric Heat	19 000	5.6	
4TVW0007CB0REAA	Hi Wall C series	7 500	2.2	
4TVW0009CB0REAA	Hi Wall C series	9 600	2.8	
4TVW0012CB0REAA	Hi Wall C series	12 300	3.6	
4TVW0015CB0REAA	Hi Wall C series	15 500	4.5	
4TVW0018CB0REAA	Hi Wall C series	19 000	5.6	

Description Summary - Indoor Units Range

Model number	TYPE OF UNITS	BTU/H	Capacity (kW)	
4TVW0007CBHREAA	Hi Wall C series with Electric Heat	7 500	2.2	
4TVW0009CBHREAA	Hi Wall C series with Electric Heat	9 600	2.8	
4TVW0012CBHREAA	Hi Wall C series with Electric Heat	12 300	3.6	
4TVW0015CBHREAA	Hi Wall C series with Electric Heat	15 500	4.5	
4TVW0018CB0REAA	Hi Wall C series with Electric Heat	19 000	5.6	
4TVW0024CB0REAA	Hi Wall R series	24 200	8.0	
4TVW0027CB0REAA	Hi Wall R series	27 300	9.0	
4TVW0031CB0REAA	Hi Wall R series	31 800	10.0	
4TVX0012CB0REAA	Convertible	12 200	3.6	
4TVX0015CB0REAA	Convertible	15 300	4.5	
4TVX0018CB0REAA	Convertible	19 100	5.6	
4TVX0024CB0REAA	Convertible	24 200	7.1	
4TVX0027CB0REAA	Convertible	27 300	8.0	
4TVX0030CB0REAA	Convertible	30 700	9.0	
4TVX0038CB0REAA	Convertible	38 200	11.2	
4TVX0048CB0REAA	Convertible	48 000	14.0	
4TVX0055CB0REAA	Convertible	54 600	16.00	
4TVG0007CB0REAA	Console	7 500	2.2	
4TVG0009CB0REAA	Console	9 500	2.8	
4TVG0012CB0REAA	Console	12 300	3.6	
4TVG0015CB0REAA	Console	15 300	4.5	

TVR 5G (Inverter + Fixed)
Combination of Outdoor Units

Model Number Outdoor Unit	Model Number Outdoor Unit	Capacity Btu / Hr	Capacity HP	Capacity kW	Maximum Indoor Units Combination
4TVV0086AD000AA	4TVV0086AD000AA × 1	86000	8	25	17
4TVV0096AD000AA	4TVV0096AD000AA × 1	96000	10	28	21
4TVV0115AD000AA	4TVV0115AD000AA × 1	115000	12	34	26
4TVV0140AD000AA	4TVV0140AD000AA × 1	140000	14	40	30
4TVV0155AD000AA	4TVV0155AD000AA × 1	155000	16	45	34
4TVV0182AD000AA	4TVV0086AD000AA + 4TVV0096AD000AA	182000	18	53	39
4TVV0192AD000AA	4TVV0096AD000AA + 4TVV0096AD000AA	192000	20	56	43
4TVV0211AD000AA	4TVV0096AD000AA + 4TVV0115AD000AA	211000	22	62	47
4TVV0236AD000AA	4TVV0096AD000AA + 4TVV0140AD000AA	236000	24	68	52
4TVV0251AD000AA	4TVV0096AD000AA + 4TVV0155AD000AA	251000	26	73	56
4TVV0270AD000AA	4TVV0140AD000AA × 2	270000	28	80	60
4TVV0295AD000AA	4TVV0140AD000AA + 4TVV0155AD000AA	295000	30	85	64
4TVV0310AD000AA	4TVV0155AD000AA × 2	310000	32	90	64
4TVV0332AD000AA	4TVV0096AD000AA × 2 + 4TVV0140AD000AA	332000	34	96	64
4TVV0347AD000AA	4TVV0096AD000AA × 2 + 4TVV0155AD000AA	347000	36	101	64
4TVV0366AD000AA	4TVV0096AD000AA + 4TVV0115AD000AA + 4TVV0155AD000AA	366000	38	107	64
4TVV0391AD000AA	4TVV0096AD000AA + 4TVV0140AD000AA + 4TVV0155AD000AA	391000	40	113	64
4TVV0406AD000AA	4TVV0140AD000AA × 3	406000	42	120	64
4TVV0425AD000AA	4TVV0140AD000AA × 2 + 4TVV0155AD000AA	425000	44	125	64
4TVV0450AD000AA	4TVV0140AD000AA + 4TVV0155AD000AA × 2	450000	46	130	64
4TVV0465AD000AA	4TVV0155AD000AA × 3	465000	48	135	64
4TVV0492AD000AA	4TVV0086AD000AA + 4TVV0096AD000AA + 4TVV0155AD000AA × 2	492000	50	143	64
4TVV0502AD000AA	4TVV0096AD000AA × 2 + 4TVV0155AD000AA × 2	502000	52	146	64
4TVV0521AD000AA	4TVV0096AD000AA + 4TVV0115AD000AA + 4TVV0155AD000AA × 2	521000	54	152	64
4TVV0546AD000AA	4TVV0096AD000AA + 4TVV0140AD000AA + 4TVV0155AD000AA × 2	546000	56	158	64
4TVV0561AD000AA	4TVV0140AD000AA × 3 + 4TVV0155AD000AA	561000	58	165	64
4TVV0580AD000AA	4TVV0140AD000AA × 2 + 4TVV0155AD000AA × 2	580000	60	170	64
4TVV0605AD000AA	4TVV0140AD000AA + 4TVV0155AD000AA × 3	605000	62	175	64
4TVV0620AD000AA	4TVV0155AD000AA × 4	620000	64	180	64

Note:
The system enables the connection of indoor units with a total capacity within 50% to 130% of that of the corresponding outdoor unit, but when this capacity ratio exceeds 100% then the actual capacity of each indoor unit will decrease compared to rated capacity when all the units operate simultaneously.

TVR 5G (All Inverter)
Combination of Outdoor Units

Model Number Outdoor Unit	Module Combination	Capacity			Maximum indoor Units Combination
		Btu/h	HP	kW	
4TVV0086BD000AA	4TVV0086BD000AA	86,000	8	25	13
4TVV0096BD000AA	4TVV0096BD000AA	95,500	10	28	16
4TVV0115BD000AA	4TVV0115BD000AA	114,300	12	34	20
4TVV0140BD000AA	4TVV0140BD000AA	136,500	14	40	23
4TVV0155BD000AA	4TVV0155BD000AA	153,500	16	45	26
4TVV0182BD000AA	4TVV0182BD000AA	170,600	18	50	29
4TVV0192BD000AA	4TVV0096BD000AA*2	191,100	20	56	33
4TVV0211BD000AA	4TVV0096BD000AA+4TVV0115BD000AA	209,800	22	62	36
4TVV0236BD000AA	4TVV0096BD000AA+4TVV0140BD000AA	232,000	24	68	39
4TVV0251BD000AA	4TVV0096BD000AA+4TVV0155BD000AA	249,100	26	73	43
4TVV0278BD000AA	4TVV0096BD000AA+4TVV0182BD000AA	266,100	28	78	46
4TVV0295BD000AA	4TVV0140BD000AA+4TVV0155BD000AA	290,000	30	85	50
4TVV0322BD000AA	4TVV0140BD000AA+4TVV0182BD000AA	307,100	32	90	53
4TVV0337BD000AA	4TVV0155BD000AA+4TVV0182BD000AA	327,600	34	95	56
4TVV0364BD000AA	4TVV0182BD000AA*2	341,200	36	100	59
4TVV0374BD000AA	4TVV0096BD000AA*2+4TVV0182BD000AA	363,400	38	106	63
4TVV0391BD000AA	4TVV0096BD000AA+4TVV0140BD000AA+4TVV0155BD000AA	385,600	40	113	64
4TVV0406BD000AA	4TVV0096BD000AA+4TVV0155BD000AA*2	402,600	42	118	64
4TVV0433BD000AA	4TVV0096BD000AA+4TVV0155BD000AA+4TVV0182BD000AA	419,700	44	123	64
4TVV0460BD000AA	4TVV0096BD000AA+4TVV0182BD000AA*2	443,600	46	130	64
4TVV0477BD000AA	4TVV0140BD000AA+4TVV0155BD000AA+4TVV0182BD000AA	460,600	48	135	64
4TVV0504BD000AA	4TVV0140BD000AA+4TVV0182BD000AA*2	477,700	50	140	64
4TVV0519BD000AA	4TVV0155BD000AA+4TVV0182BD000AA*2	494,700	52	145	64
4TVV0546BD000AA	4TVV0182BD000AA*3	511,800	54	150	64
4TVV0556BD000AA	4TVV0096BD000AA*2+4TVV0182BD000AA*2	532,300	56	156	64
4TVV0573BD000AA	4TVV0096BD000AA+4TVV0140BD000AA+4TVV0155BD000AA+4TVV0182BD000AA	556,200	58	163	64
4TVV0600BD000AA	4TVV0096BD000AA+4TVV0140BD000AA+4TVV0182BD000AA*2	573,200	60	168	64
4TVV0615BD000AA	4TVV0096BD000AA+4TVV0155BD000AA+4TVV0182BD000AA*2	590,300	62	173	64
4TVV0642BD000AA	4TVV0096BD000AA+4TVV0182BD000AA*3	607,300	64	178	64
4TVV0659BD000AA	4TVV0140BD000AA+4TVV0155BD000AA+4TVV0182BD000AA*2	631,200	66	185	64
4TVV0686BD000AA	4TVV0140BD000AA+4TVV0182BD000AA*3	648,300	68	190	64
4TVV0701BD000AA	4TVV0155BD000AA+4TVV0182BD000AA*3	665,300	70	195	64
4TVV0728BD000AA	4TVV0182BD000AA*4	682,400	72	200	64

Note:
The system enables the connection of indoor units with a total capacity within 50% to 130% of that of the corresponding outdoor unit, but when this capacity ratio exceeds 100% then the actual capacity of each indoor unit will decrease compared to rated capacity when all the units operate simultaneously.

TVR 5G (Heat Recovery/3 pipes) Combination of Outdoor Units

Model Number Outdoor Unit	Module Combination	Capacity			Maximum indoor Units Combination
		Btu/h	HP	kW	
4TVR0086BD000AA	4TVR0086BD000AA×1	86,000	8	25.20	13
4TVR0096BD000AA	4TVR0096BD000AA×1	96,000	10	28.00	16
4TVR0115BD000AA	4TVR0115BD000AA×1	115,000	12	33.50	20
4TVR0140BD000AA	4TVR0140BD000AA×1	140,000	14	40.00	23
4TVR0155BD000AA	4TVR0155BD000AA×1	155,000	16	45.00	26
4TVR0182BD000AA	4TVR0086BD000AA+4TVR0096BD000AA	182,000	18	53.20	29
4TVR0192BD000AA	4TVR0096BD000AA+4TVR0096BD000AA	192,000	20	56.00	33
4TVR0211BD000AA	4TVR0096BD000AA+4TVR0115BD000AA	211,000	22	61.50	36
4TVR0236BD000AA	4TVR0096BD000AA+4TVR0140BD000AA	236,000	24	68.00	39
4TVR0251BD000AA	4TVR0096BD000AA+4TVR0155BD000AA	251,000	26	73.00	43
4TVR0270BD000AA	4TVR0140BD000AA×2	270,000	28	80.00	46
4TVR0295BD000AA	4TVR0140BD000AA+4TVR0155BD000AA	295,000	30	85.00	50
4TVR0310BD000AA	4TVR0155BD000AA×2	310,000	32	90.00	53
4TVR0332BD000AA	4TVR0096BD000AA×2+4TVR0140BD000AA	332,000	34	96.00	56
4TVR0347BD000AA	4TVR0096BD000AA×2+4TVR0155BD000AA	347,000	36	101.00	59
4TVR0366BD000AA	4TVR0096BD000AA+4TVR0115BD000AA+4TVR0155BD000AA	366,000	38	106.50	63
4TVR0391BD000AA	4TVR0096BD000AA+4TVR0140BD000AA+4TVR0155BD000AA	391,000	40	113.00	64
4TVR0406BD000AA	4TVR0140BD000AA×3	406,000	42	120.00	64
4TVR0425BD000AA	4TVR0140BD000AA×2+4TVR0155BD000AA	425,000	44	125.00	64
4TVR0450BD000AA	4TVR0140BD000AA+4TVR0155BD000AA×2	450,000	46	130.00	64
4TVR0465BD000AA	4TVR0155BD000AA×3	465,000	48	135.00	64
4TVR0492BD000AA	4TVR0086BD000AA+4TVR0096BD000AA+4TVR0155BD000AA×2	492,000	50	143.20	64
4TVR0502BD000AA	4TVR0096BD000AA×2+4TVR0155BD000AA×2	502,000	52	146.00	64
4TVR0521BD000AA	4TVR0096BD000AA+4TVR0115BD000AA+4TVR0155BD000AA×2	521,000	54	151.50	64
4TVR0546BD000AA	4TVR0096BD000AA+4TVR0140BD000AA+4TVR0155BD000AA×2	546,000	56	158.00	64
4TVR0561BD000AA	4TVR0140BD000AA×3+4TVR0155BD000AA	561,000	58	165.00	64
4TVR0580BD000AA	4TVR0140BD000AA×2+4TVR0155BD000AA×2	580,000	60	170.00	64
4TVR0605BD000AA	4TVR0140BD000AA+4TVR0155BD000AA×3	605,000	62	175.00	64
4TVR0620BD000AA	4TVR0155BD000AA×4	620,000	64	180.00	64

Note:
The system enables the connection of indoor units with a total capacity within 50% to 130% of that of the corresponding outdoor unit, but when this capacity ratio exceeds 100% then the actual capacity of each indoor unit will decrease compared to rated capacity when all the units operate simultaneously.

TVR 5G (All Inverter + T3/High Ambient) Combination of Outdoor Units

Model Number Outdoor Unit	Module Combination	Capacity			Maximum indoor Units Combination
		Btu/h	HP	kW	
4TVVT086BD000AA	4TVVT086BD000AA	86,000	8	25	13
4TVVT096BD000AA	4TVVT096BD000AA	95,500	10	28	16
4TVVT115BD000AA	4TVVT115BD000AA	114,300	12	34	20
4TVVT140BD000AA	4TVVT140BD000AA	136,500	14	40	23
4TVVT155BD000AA	4TVVT155BD000AA	153,500	16	45	26
4TVVT182BD000AA	4TVVT182BD000AA	170,600	18	50	29
4TVVT192BD000AA	4TVVT096BD000AA*2	191,100	20	56	33
4TVVT211BD000AA	4TVVT096BD000AA+4TVVT115BD000AA	209,800	22	62	36
4TVVT236BD000AA	4TVVT096BD000AA+4TVVT140BD000AA	232,000	24	68	39
4TVVT251BD000AA	4TVVT096BD000AA+4TVVT155BD000AA	249,100	26	73	43
4TVVT278BD000AA	4TVVT096BD000AA+4TVVT182BD000AA	266,100	28	78	46
4TVVT295BD000AA	4TVVT140BD000AA+4TVVT155BD000AA	290,000	30	85	50
4TVVT322BD000AA	4TVVT140BD000AA+4TVVT182BD000AA	307,100	32	90	53
4TVVT337BD000AA	4TVVT155BD000AA+4TVVT182BD000AA	327,600	34	95	56
4TVVT364BD000AA	4TVVT182BD000AA*2	341,200	36	100	59
4TVVT374BD000AA	4TVVT096BD000AA*2+4TVVT182BD000AA	363,400	38	106	63
4TVVT391BD000AA	4TVVT096BD000AA+4TVVT140BD000AA+4TVVT155BD000AA	385,600	40	113	64
4TVVT406BD000AA	4TVVT096BD000AA+4TVVT155BD000AA*2	402,600	42	118	64
4TVVT433BD000AA	4TVVT096BD000AA+4TVVT155BD000AA+4TVVT182BD000AA	419,700	44	123	64
4TVVT460BD000AA	4TVVT096BD000AA+4TVVT182BD000AA*2	443,600	46	130	64
4TVVT477BD000AA	4TVVT140BD000AA+4TVVT155BD000AA+4TVVT182BD000AA	460,600	48	135	64
4TVVT504BD000AA	4TVVT140BD000AA+4TVVT182BD000AA*2	477,700	50	140	64
4TVVT519BD000AA	4TVVT155BD000AA+4TVVT182BD000AA*2	494,700	52	145	64
4TVVT546BD000AA	4TVVT182BD000AA*3	511,800	54	150	64
4TVVT556BD000AA	4TVVT096BD000AA*2+4TVVT182BD000AA*2	532,300	56	156	64
4TVVT573BD000AA	4TVVT096BD000AA+4TVVT140BD000AA+4TVVT155BD000AA+4TVVT182BD000AA	556,200	58	163	64
4TVVT600BD000AA	4TVVT096BD000AA+4TVVT140BD000AA+4TVVT182BD000AA*2	573,200	60	168	64
4TVVT615BD000AA	4TVVT096BD000AA+4TVVT155BD000AA+4TVVT182BD000AA*2	590,300	62	173	64
4TVVT642BD000AA	4TVVT096BD000AA+4TVVT182BD000AA*3	607,300	64	178	64
4TVVT659BD000AA	4TVVT140BD000AA+4TVVT155BD000AA+4TVVT182BD000AA*2	631,200	66	185	64
4TVVT686BD000AA	4TVVT140BD000AA+4TVVT182BD000AA*3	648,300	68	190	64
4TVVT701BD000AA	4TVVT155BD000AA+4TVVT182BD000AA*3	665,300	70	195	64
4TVVT728BD000AA	4TVVT182BD000AA*4	682,400	72	200	64

Note:
The system enables the connection of indoor units with a total capacity within 50% to 130% of that of the corresponding outdoor unit, but when this capacity ratio exceeds 100% then the actual capacity of each indoor unit will decrease compared to rated capacity when all the units operate simultaneously.

Indoor Units Lineup

- Wall-mounted S Type
- Wall-mounted C Type
- Wall-mounted R Type
- Ceiling & Floor Type
- Console
- One-way Cassette
- Two-way Cassette
- Four-way Cassette
- Compact Four-way Cassette
- Low Static Pressure Unit
- Medium Static Pressure Unit (A5 Type)
- High Static Pressure Unit
- Fresh Air-processing Unit

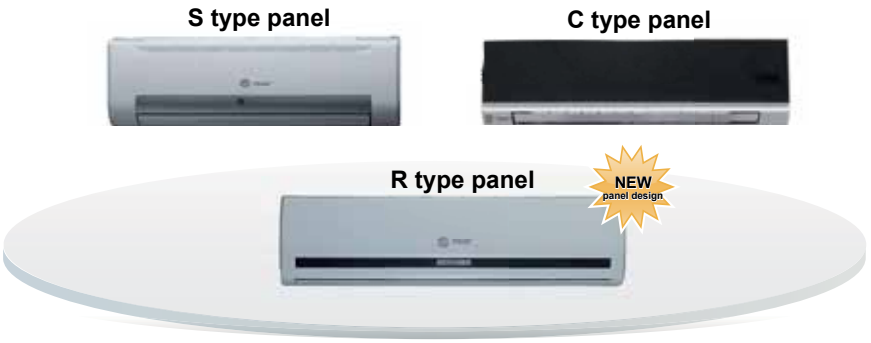
Type	Model (capacity MBH)	7	9	12	15	18	24	27
One-way cassette			●	●	●	●		
Two-way cassette		●	●	●	●	●	●	
Compact four-way cassette		●	●	●	●			
Four-way cassette			●	●	●	●	●	●
Low Static Pressure Duct		●	●	●	●	●		
Concealed Duct Unit(A5 Type)		●	●	●	●	●	●	●
High Static Pressure Duct							●	●
Ceiling & Floor Type				●	●	●	●	●
Wall-mounted S Type		●	●	●	●	●		
Wall-mounted C Type		●	●	●	●	●		
Wall-mounted R Type							●	●
Console		●	●	●	●			
Fresh Air processing unit								
								

12 types and over 100 models are available to meet varied customer requirements.


30
34
38
42
48
55
68
85
95
140
155
190

Indoor Units Lineup

Wall Mounted



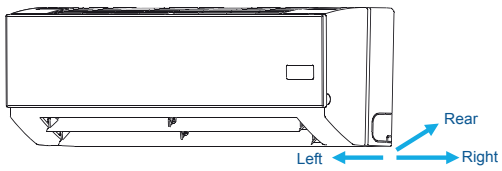
- Auto Restart
- Auto Addressing
- Cleanable Panel
- Anti-Cold Air Function
- Follow Me
- LED Display

Panel with LED display

The front panel and display panel have different colors for choose: white and brown for big panel, blue and brown for small panel.

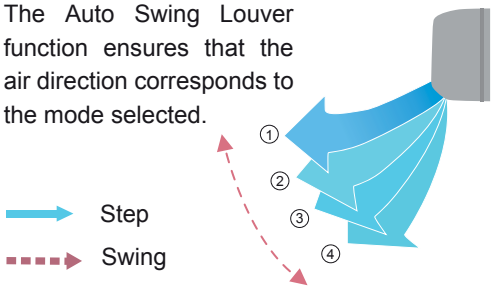
Convenient installation

- Multi-refrigerant outlet pipe method: left\right\rear, more flexible for installation.
- The EXV is built-in the indoor unit, compact size, Longer the connection pipe;gas pipe: 468mm; liquid pipe: 550mm, more flexible for installation
- Adopts new type fixing plate, is easy to install and stable.



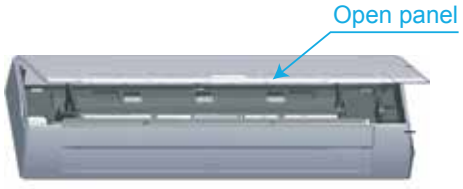
Auto swing louver

The Auto Swing Louver function ensures that the air direction corresponds to the mode selected.



Easy maintenance

The front panel can be removed for easy maintenance access.



Optimal comfort through better flow control and quiet operations

The mechanical expansion valve offers 2,000-stage element positions to ensure precise flow control and less modulation noise when the EXV is operating for a quiet and comfortable environment. Three air flow speeds: low, medium and high; double air guides. Smoother airflow and less turbulence is ensured by the multi-blade fan and the air guide design.

S type panel

Model			4TVW0007CB0REBA	4TVW0009CB0REBA	4TVW0012CB0REBA	4TVW0015CB0REBA	4TVW0018CB0REBA
Power supply			1-phase, 220-240V, 50Hz				
Cooling capacity		kW	2.2	2.8	3.6	4.5	5.6
		kcal/h	1,900	2,400	3,100	3,900	4,800
		Btu/h	7,500	9,500	12,200	15,300	19,100
Heating capacity		kW	2.4	3.2	4	5	6.3
		kcal/h	2,100	2,700	3,400	4,300	5,400
		Btu/h	8,200	10,900	13,600	17,000	21,500
Power input	Cooling	W	28	28	28	45	45
	Heating		28	28	28	45	45
Rated current	Cooling	A	0.14	0.14	0.14	0.2	0.2
	Heating		0.14	0.14	0.14	0.2	0.2
Airflow rate(H/M/L)		m^3/h	525/480/430	525/480/430	590/520/480	860/755/630	925/860/755
		CFM	309/283/253	309/283/253	309/283/253	506/444/371	544/506/444
Sound level		dB(A)	35/32/29	35/32/29	35/32/29	40/38/34	40/38/34
Refrigerant		Type	R410A				
		Control method	EXV				
Net dimension(W×H×D)		mm	915×290×230	915×290×230	915 ×290×230	1,072×315×230	1,072×315×230
Packing dimension(W×H×D)		mm	1,020×390×315	1,020×390×315	1,020×390×315	1,180×415×315	1,180×415×315
Net weight		kg	13	13	13	15.1	15.1
Gross weight		kg	16.5	16.5	16.5	18.8	18.8
Piping connections	L(flare)	mm	Φ6.35	Φ6.35	Φ6.35	Φ6.35	Φ9.52
	G(flare)	mm	Φ12.7	Φ12.7	Φ12.7	Φ12.7	Φ15.9
	Drain piping	mm	ODΦ16.5	ODΦ16.5	ODΦ16.5	ODΦ16.5	ODΦ16.5
Standard Controller		-	Wireless remote controller TCONTRM05A				

Model			4TVW0007CBHREBA	4TVW0009CBHREBA	4TVW0012CBHREBA	4TVW0015CBHREBA	4TVW0018CBHREBA
Power supply			1-phase, 220-240V, 50Hz				
Cooling capacity		kW	2.2	2.8	3.6	4.5	5.6
		kcal/h	1,900	2,400	3,100	3,900	4,800
		Btu/h	7,500	9,500	12,200	15,300	19,100
Heating capacity		kW	2.4+0.75	3.2+0.75	4+0.75	5+0.9	6.3+0.9
		kcal/h	2,100+600	2,700+600	3,400+600	4,300+800	5,400+800
		Btu/h	8,200+2,600	10,900+2,600	13,600+2,600	17,000+3,100	21,500+3,100
Power input	Cooling	W	28	28	28	45	45
	Heating		28	28	28	45	45
Rated current	Cooling	A	0.14	0.14	0.14	0.2	0.2
	Heating		0.14+3.38	0.14+3.38	0.14+3.38	0.20+4.05	0.20+4.05
Airflow rate(H/M/L)		m^3/h	525/480/430	525/480/430	590/520/480	860/755/630	925/860/755
		CFM	309/283/253	309/283/253	347/306/283	506/444/371	544/506/444
Sound level		dB(A)	35/32/29	35/32/29	35/32/29	40/38/34	40/38/34
Refrigerant		Type	R410A				
		Control method	EXV				
Net dimension(W×H×D)		mm	915×290×230	915×290×230	915 ×290×230	1,072×315×230	1,072×315×230
Packing dimension(W×H×D)		mm	1,020×390×315	1,020×390×315	1,020×390×315	1,180×415×315	1,180×415×315
Net weight		kg	13	13	13	15.1	15.1
Gross weight		kg	16.5	16.5	16.5	18.8	18.8
Piping connections	L(flare)	mm	Φ6.35	Φ6.35	Φ6.35	Φ6.35	Φ9.52
	G(flare)	mm	Φ12.7	Φ12.7	Φ12.7	Φ12.7	Φ15.9
	Drain piping	mm	ODΦ16.5	ODΦ16.5	ODΦ16.5	ODΦ16.5	ODΦ16.5
Standard Controller		-	Wireless remote controller TCONTRM05A				

Notes:

1. Nominal cooling capacities are based on the following conditions: return air temp.: 27°CDB, 19°CWB, and outdoor temp.:35°CDB, equivalent ref. piping: 8m (horizontal)
2. Nominal heating capacities are based on the following conditions: return air temp.: 20°CDB, outdoor temp.: 7°CDB, 6°CWB, and equivalent ref. Piping: 8m (horizontal)
3. Sound level is measured 1m below the air outlet horizontally and vertically.

Specifications are subject to change without prior notice for product improvement.

C type panel

Model			4TVW0007CB0REAA	4TVW0009CB0REAA	4TVW0012CB0REAA	4TVW0015CB0REAA	4TVW0018CB0REAA
Power supply			1-phase, 220-240V, 50Hz				
Cooling capacity		kW	2.2	2.8	3.6	4.5	5.6
		kcal/h	1,900	2,400	3,100	3,900	4,800
		Btu/h	7,500	9,500	12,300	15,400	19,100
Heating capacity		kW	2.4	3.2	4	5	6.3
		kcal/h	2,200	2,700	3,400	4,300	5,400
		Btu/h	8,900	10,900	13,600	17,000	21,500
Power input	Cooling	W	28	28	28	45	45
	Heating		28	28	28	45	45
Rated current	Cooling	A	0.14	0.14	0.14	0.2	0.2
	Heating		0.14	0.14	0.14	0.2	0.2
Airflow rate(H/M/L)		m^3/h	525/480/430	525/480/430	525/480/430	860/755/630	925/860/755
		CFM	309/283/253	309/283/253	309/283/253	506/444/371	544/506/444
Sound level		dB(A)	35/32/29	35/32/29	35/32/29	40/38/34	40/38/34
Refrigerant		Type	R410A				
		Control method	EXV				
Net dimension(W×H×D)		mm	915×290×210	915×290×210	915×290×210	1,070×315×210	1,070×315×210
Packing dimension(W×H×D)		mm	1,020×385×300	1,020×385×300	1,020×385×300	1,165×395×285	1,165×395×285
Net weight		kg	12	12	12	16	16
Gross weight		kg	16	16	16	19	19
Piping connections	L(flare)	mm	Φ6.35	Φ6.35	Φ6.35	Φ6.35	Φ9.53
	G(flare)	mm	Φ12.7	Φ12.7	Φ12.7	Φ12.7	Φ15.9
	Drain piping	mm	ODΦ16.5	ODΦ16.5	ODΦ16.5	ODΦ16.5	ODΦ16.5
Standard Controller		-	Wireless remote controller TCONTRM05A				

Model			4TVW0007CBHREAA	4TVW0009CBHREAA	4TVW0012CBHREAA	4TVW0015CBHREAA	4TVW0018CBHREAA
Power supply			1-phase, 220-240V, 50Hz				
Cooling capacity		kW	2.2	2.8	3.6	4.5	5.6
		kcal/h	1,900	2,400	3,100	3,900	4,800
		Btu/h	7,500	9,500	12,300	15,400	19,100
Heating capacity		kW	2.4+0.75	3.2+0.75	4+0.75	5+0.9	6.3+0.9
		kcal/h	2,200+600	2,700+600	3,400+600	4,300+800	5,400+800
		Btu/h	8,900+2,500	10,900+2,500	13,600+2,500	17,000+3,100	21,500+3,100
Power input	Cooling	W	28	28	28	45	45
	Heating		28	28	28	45	45
Rated current	Cooling	A	0.14	0.14	0.14	0.2	0.2
	Heating		0.14+3.38	0.14+3.38	0.14+3.38	0.2+4.05	0.2+4.25
Airflow rate(H/M/L)		m^3/h	525/480/430	525/480/430	525/480/430	860/755/630	925/860/755
		CFM	309/283/253	309/283/253	309/283/253	506/444/371	544/506/444
Sound level		dB(A)	35/32/29	35/32/29	35/32/29	40/38/34	40/38/34
Refrigerant		Type	R410A				
		Control method	EXV				
Net dimension(W×H×D)		mm	915×290×210	915×290×210	915×290×210	1,070×315×210	1,070×315×210
Packing dimension(W×H×D)		mm	1,020×385×300	1,020×385×300	1,020×385×300	1,165×395×285	1,165×395×285
Net weight		kg	12	12	12	16	16
Gross weight		kg	16	16	16	19	19
Piping connections	L(flare)	mm	Φ6.35	Φ6.35	Φ6.35	Φ6.35	Φ9.53
	G(flare)	mm	Φ12.7	Φ12.7	Φ12.7	Φ12.7	Φ15.9
	Drain piping	mm	ODΦ16.5	ODΦ16.5	ODΦ16.5	ODΦ16.5	ODΦ16.5
Standard Controller		-	Wireless remote controller TCONTRM05A				

Notes:

1. Nominal cooling capacities are based on the following conditions: return air temp.: 27°CDB, 19°CWB, and outdoor temp.:35°CDB, equivalent ref. piping: 8m (horizontal)
2. Nominal heating capacities are based on the following conditions: return air temp.: 20°CDB, outdoor temp.: 7°CDB, 6°CWB, and equivalent ref. Piping: 8m (horizontal)
3. Sound level is measured 1m below the air outlet horizontally and vertically.

* Specifications are subject to change without prior notice for product improvement.

R type panel

Model			4TVW0024CB0REAA	4TVW0027CB0REAA	4TVW0031CB0REAA
Power supply			1-phase, 220-240V, 50Hz		
Cooling capacity		kW	7.1	8	9
		kcal/h	6,100	6,800	7,700
		Btu/h	24,200	27,300	30,700
Heating capacity		kW	8	9	10
		kcal/h	6,800	7,700	8,600
		Btu/h	27,300	30,700	34,100
Power input	Cooling	W	79	95	95
	Heating		79	95	95
Rated current	Cooling	A	0.33	0.39	0.39
	Heating		0.33	0.39	0.39
Airflow rate(H/M/L)		m^3/h	1,190/880/680	1,320/840/640	1,320/840/640
		CFM	700/518/400	776/494/376	776/494/376
Sound level		dB(A)	45/42/39	47/43/41	47/43/41
Refrigerant		Type	R410A		
		Control method	EXV		
Net dimension(W×H×D)		mm	1,250x325x230	1,250x325x230	1,250x325x230
Packing dimension(W×H×D)		mm	1,345x335x430	1,345x335x430	1,345x335x430
Net weight		kg	19.9	19.9	19.9
Gross weight		kg	25	25	25
Piping connections	L(flare)	mm	Φ9.53	Φ9.53	Φ9.53
	G(flare)	mm	Φ15.9	Φ15.9	Φ15.9
	Drain piping	mm	OD Φ16.5	OD Φ16.5	OD Φ16.5
Standard Controller		-	Wireless remote controller TCONTRM05A		

Notes:

1. Nominal cooling capacities are based on the following conditions: return air temp.: 27°CDB, 19°CWB, and outdoor temp.:35°CDB, equivalent ref. piping: 8m (horizontal)
2. Nominal heating capacities are based on the following conditions: return air temp.: 20°CDB, outdoor temp.: 7°CDB, 6°CWB, and equivalent ref. Piping: 8m (horizontal)
3. Sound level is measured 1m below the air outlet horizontally and vertically.

* Specifications are subject to change without prior notice for product improvement.

Indoor Units Lineup

Ceiling & floor

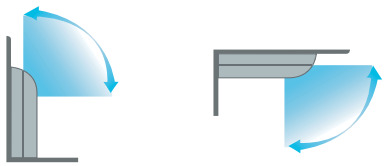
- Auto Restart
- Fresh Air
- Auto Addressing
- Cleanable Panel
- Follow Me
- Anti-Cold Air Function
- Built-in Drain Pump
- LED Display

Panel with LED display

The front panel and display panel have different colors for choose: white and brown for big panel, blue and brown for small panel. Other colors are available if required.

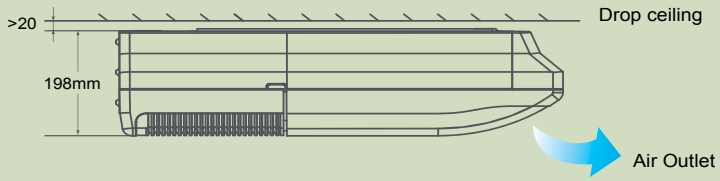
Convenient installation

- The unit even can be easily installed at the corner of a narrow ceilings.
- It is especially useful when central installation is impossible due to features such as lights.



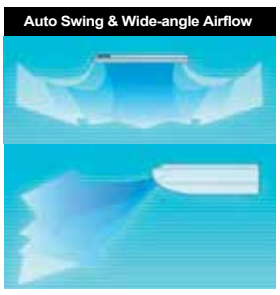
The unit can be installed either horizontally on the ceiling or vertically against the wall.

Quiet and comfortable environment



- The slim and sleek design starting at just 30kg enables quick, easy and neat installation.
- Low noise operations; minimum 36 dB(A)

Auto swing and wide angle air flow



1. Auto horizontal and auto vertical swing functions for more even and comfortable airflow.
2. Three air flow speeds: low, medium and high; double air guides.
3. Adopt electronic expansion valve, ensure precise flow control, lower modulation noise when EXV operating.
4. Smoother airflow and less turbulence due to the multi-blade fan and the air guide design.

Model			4TVX0012CB0REAA	4TVX0015CB0REAA	4TVX0018CB0REAA	4TVX0024CB0REAA	4TVX0027CB0REAA
Power supply			1-phase, 220-240V, 50Hz				
Cooling capacity		kW	3.6	4.5	5.6	7.1	8
		kcal/h	3,100	3,800	4,800	6,100	6,800
		Btu/h	12,200	15,300	19,100	24,200	27,300
Heating capacity		kW	4	5	6.3	8	9
		kcal/h	3,400	4300	5,400	6,800	7,700
		Btu/h	13,600	17,000	21,500	27,300	30,700
Power input	Cooling	W	49	120	122	125	130
	Heating		49	120	122	125	130
Rated current	Cooling	A	0.55	0.55	0.55	0.57	0.6
	Heating		0.55	0.55	0.55	0.57	0.6
Airflow rate(H/M/L)		m^3/h	650/570/500	800/600/500	800/600/500	800/600/500	1,200/900/700
		CFM	383/335/294	471/353/294	471/353/294	471/353/294	706/530/412
Sound level		dB(A)	40/38/36	43/41/38	43/41/38	43/41/38	45/43/40
Refrigerant		Type	R410A				
		Control method	EXV				
Net dimension(W×H×D)		mm	990x660x206	990x660x206	990x660x206	990x660x206	1,280x660x206
Packing dimension(W×H×D)		mm	1,089x744x296	1,089x744x296	1,089x744x296	1,089x744x296	1,379x744x296
Net weight		kg	26	28	28	28	34.5
Gross weight		kg	32	34	34	34	41
Piping connections	L(flare)	mm	Φ6.35	Φ6.35	Φ9.53	Φ9.53	Φ9.53
	G(flare)	mm	Φ12.7	Φ12.7	Φ15.9	Φ15.9	Φ15.9
	Drain piping	mm	OD Φ16	OD Φ16	OD Φ16	OD Φ16	ODΦ16
Standard Controller		-	Wireless remote controller TCONTRM05A				

Model			4TVX0030CB0REAA	4TVX0038CB0REAA	4TVX0048CB0REAA	4TVX0055CB0REAA
Power supply			1-phase, 220-240V, 50Hz			
Cooling capacity		kW	9	11.2	14	16
		kcal/h	7,700	9,600	12,000	13,757
		Btu/h	30,700	38,200	47,800	54,600
Heating capacity		kW	10	12.5	15.5	18
		kcal/h	8,600	11,000	13,000	15,477
		Btu/h	34,100	42,600	52,900	61,400
Power input	Cooling	W	130	182	182	300
	Heating		130	182	182	300
Rated current	Cooling	A	0.6	0.83	0.83	1.41
	Heating		0.6	0.83	0.83	1.41
Airflow rate(H/M/L)		m^3/h	1,200/900/700	1,980/1,860/1,730	1,980/1,860/1,730	1,980/1,860/1,730
		CFM	706/530/412	1,165/1,095/1,018	1,165/1,095/1,018	1,165/1,095/1,018
Sound level		dB(A)	45/43/40	47/45/42	47/45/42	47/45/42
Refrigerant		Type	R410A			
		Control method	EXV			
Net dimension(W×H×D)		mm	1,280x660x206	1,670x680x244	1,670x680x244	1,670x680x285
Packing dimension(W×H×D)		mm	1,379x744x296	1,764x760x329	1,764x760x329	1,775x760x372
Net weight		kg	34.5	54	54	57.5
Gross weight		kg	41	59	59	63.5
Piping connections	L(flare)	mm	Φ9.53	Φ9.53	Φ9.53	Φ9.53
	G(flare)	mm	Φ15.9	Φ15.9	Φ15.9	Φ15.9
	Drain piping	mm	ODΦ16	ODΦ16	ODΦ16	ODΦ16
Standard Controller		-	Wireless remote controller TCONTRM05A			

Notes:

1. Nominal cooling capacities are based on the following conditions: return air temp.: 27°CDB, 19°CWB, and outdoor temp.:35°CDB, equivalent ref. piping: 8m (horizontal)
2. Nominal heating capacities are based on the following conditions: return air temp.: 20°CDB, outdoor temp.: 7°CDB, 6°CWB, and equivalent ref. Piping: 8m (horizontal)
3. Floor standing :Sound level is measured 1m from air-outlet in horizontal distance, 1m above the floor in vertical distance.
   Ceiling mounted:Sound level is measured 1m from air-outlet in horizontal distance,1m from air-outlet in vertical distance.

* Specifications are subject to change without prior notice for product improvement.

Indoor Units Lineup

Console

- Auto Restart
- Cleanable Panel
- Auto Addressing
- Anti-Cold Air Function
- Follow Me
- LED Display

Compact size and stylish

- The elegant and thin unit body complements the existing decor and saves space.
- The EXV is installed inside of the indoor unit for added compactness.

Flexible installation

- Can be installed on the floor or lower wall
- As a floor standing type, it can be semi or fully accessed without losing capacity.

High Comfort

- Flexible air blow: vertical auto swing and wide angle louvers ensure that warm air reaches every corner of the room and increases the air flow coverage.
- Indoor unit adopts DC motor with five fan speeds to meet different requirements.
- Applies a mechanical expansion valve which offers 2,000-stage element positions to ensure precise flow control and lower modulation noise when the EXV is operating.

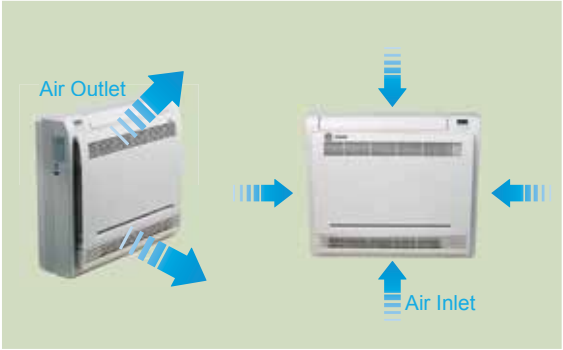
Powerful mode can be selected for rapid cooling or heating

High efficiency filter

- Built in Formaldehyde nemesis filter
- Active-carbon and biological anti-virus filter are optional.

Two air outlets and four air inlets

Four directions of air inlet;
two options of air outlet: Up and Down; or Up only.



Bottom, top, and right/left side, for better ventilation.

Low-noise design

Five-speed indoor unit; low noise; low power consumption.

Low noise operation, lowest to 26dB(A)

Model			4TVG0007CB0REAA	4TVG0009CB0REAA	4TVG0012CB0REAA	4TVG0015CB0REAA
Power supply			1-phase, 220-240V, 50Hz			
Cooling capacity		kW	2.2	2.8	3.6	4.5
		kcal/h	1,900	2,400	3,100	3,900
		Btu/h	7,500	9,500	12,200	15,300
Heating capacity		kW	2.6	3.2	4.0	5.0
		kcal/h	2,200	2,700	3,400	4,300
		Btu/h	8,900	10,900	13,600	17,000
Power input	Cooling	W	20	25	25	45
	Heating		20	25	25	45
Rated current	Cooling	A	0.09	0.11	0.11	0.2
	Heating		0.09	0.11	0.11	0.2
Airflow rate(H/M/L)		m^3/h	430/345/229	510/430/229	510/430/229	660/512/400
		CFM	253/203/135	300/253/135	300/253/135	388/300/235
Sound level		dB(A)	38/32/26	39/33/27	39/33/27	42/39/36
Refrigerant		Type	R410A			
		Control method	EXV			
Net dimension(W×H×D)		mm	700×600×210	700×600×210	700×600×210	700×600×210
Packing dimension(W×H×D)		mm	810×710×305	810×710×305	810×710×305	810×710×305
Net weight		kg	14	15	15	15
Gross weight		kg	19	20	20	20
Piping connections	L(flare)	mm	Φ6.35	Φ6.35	Φ6.35	Φ6.35
	G(flare)	mm	Φ12.7	Φ12.7	Φ12.7	Φ12.7
	Drain piping	-	OD Φ16	OD Φ16	OD Φ16	OD Φ16
Standard Controller			Wireless remote controller TCONTRM05A			

Notes:

1. Nominal cooling capacities are based on the following conditions: return air temp.: 27°CDB, 19°CWB, and outdoor temp.:35°CDB, equivalent ref. piping: 8m (horizontal)
2. Nominal heating capacities are based on the following conditions: return air temp.: 20°CDB, outdoor temp.: 7°CDB, 6°CWB, and equivalent ref. Piping: 8m (horizontal)
3. Sound level is measured 1m from the air out-let in horizontal distance and 1m above the floor in vertical distance.
4. Specifications are subject to change without prior notice for product improvement.

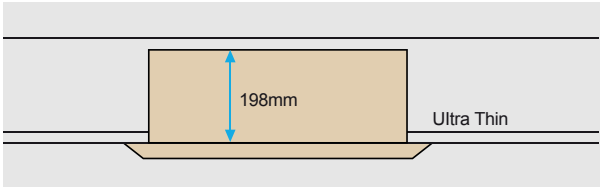
Indoor Units Lineup

One way cassette

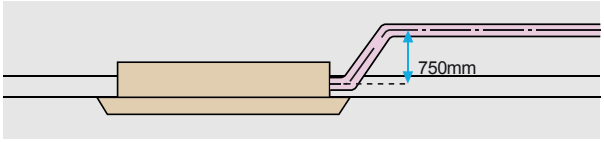
- Auto Restart
- Fresh Air
- Auto Addressing
- Cleanable Panel
- Follow Me
- Anti-Cold Air Function
- LED Display
- Super High Air Flow

Only 198mm thick

Compact design, ultra slim body with a minimum thickness of 198mm, especially suitable for narrow ceilings, such as in lobbies and small meeting rooms.

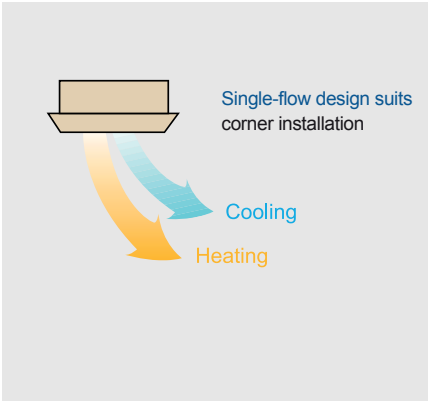


Standard built-in drain pump with 750mm pump head.



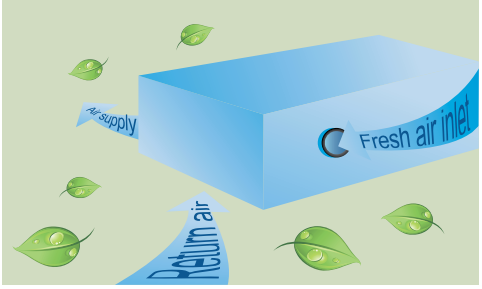
Auto swing

Auto swing mechanism guarantees even airflow distribution and a better room temperature balance.

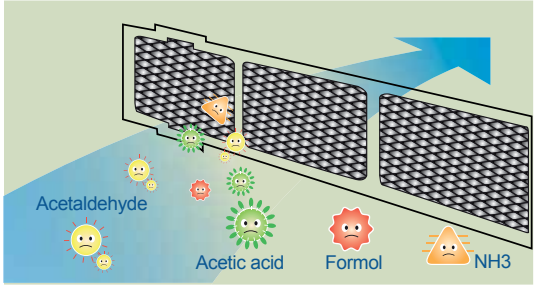


Fresh air, improved air quality

Reserved fresh air intake port for high quality air creates a comfortable and healthy environment.



Special enzyme sterilization and filtering technologies filter bacteria, smog, and pollen. Provide a clean, healthy and natural air supply.



Model			4TVA0009CB0REAA	4TVA0012CB0REAA	4TVA0015CB0REAA	4TVA0019CB0REAA
Power supply			1-phase, 220-240V, 50Hz			
Cooling capacity		kW	2.8	3.6	4.5	5.6
		kcal/h	2,400	3,100	3,800	4,800
		Btu/h	9,500	12,200	15,300	19,100
Heating capacity		kW	3.2	4.0	5.0	6.3
		kcal/h	2,700	3,400	4,300	5,400
		Btu/h	10,900	13,600	17,000	21,500
Power input	Cooling	W	53	53	86	86
	Heating		53	53	86	86
Rated current	Cooling	A	0.4	0.4	0.4	0.4
	Heating		0.4	0.4	0.4	0.4
Airflow rate(H/M/L)		m^3/h	500/450/410	500/450/410	890/800/750	919/850/760
		CFM	294/265/241	294/265/241	524/470/441	541/500/412
Sound level		dB(A)	36/34/30	36/34/30	41/38/35	41/38/35
Refrigerant		Type	R410A			
		Control method	EXV			
Body	Net dim.(WxHxD)	mm	850×235×400	850×235×400	1,200×198×655	1,200×198×655
	Gross dim.(WxHxD)		1,080×320×460	1,080×320×460	1,380×265×775	1,380×265×775
	Net/gross	kg	23/27	23/27	31/38	31/38
Panel	Net dim.(WxHxD)	mm	1,050×18×470	1,050×18x470	1,420×10×755	1,420×10×755
	Gross dim.(WxHxD)		1,100×40×520	1,100×40×520	1,470×50×805	1,470×50×805
	Net/gross	kg	4/6	4/6	9/11	9/11
Piping connections	L(flare)	mm	Φ6.35	Φ6.35	Φ6.35	Φ9.53
	G(flare)	mm	Φ12.7	Φ12.7	Φ12.7	Φ15.9
	Drain piping	mm	ODΦ16	ODΦ16	ODΦ16	ODΦ16
Pump head		mm	750	750	750	750
Standard Controller		-	Wireless remote controller TCONTRM05A			

Notes:
1. Nominal cooling capacities are based on the following conditions: return air temp. : 27°CDB,19°cwb,outdoor temp.:35°CDB, equivalent ref. Piping: 8m(horizontal)
2. Nominal heating capacities are based on the following conditions: return air temp.: 20°CDB,outdoor temp.: 7°CDB, 6°CWB,equivalent ref. Piping: 8m(horizontal)
3. Sound level is measured at 1m below the unit.

Indoor Units Lineup

Two way cassette

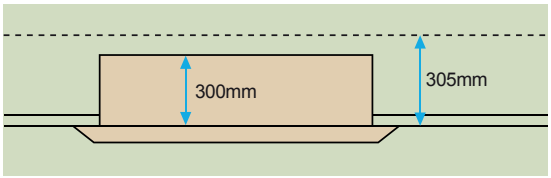
- Auto Restart
- Fresh Air
- Auto Addressing
- Cleanable Panel
- Follow Me
- Anti-Cold Air Function
- LED Display
- Super High Air Flow

Quiet operation

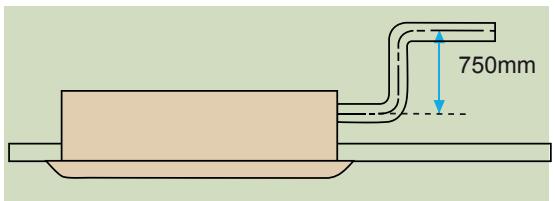
Optimized airflow duct with low resistance greatly reduces noise, minimum down to 24 dB(A).

Stylish design and slim body

Thanks to the stylish appearance and slim body, the unit suits any room's decor and ambience. At only 300 mm high, the unit requires only a small suspended ceiling space. Installation has no height limitations, which makes overall design features much more flexible.



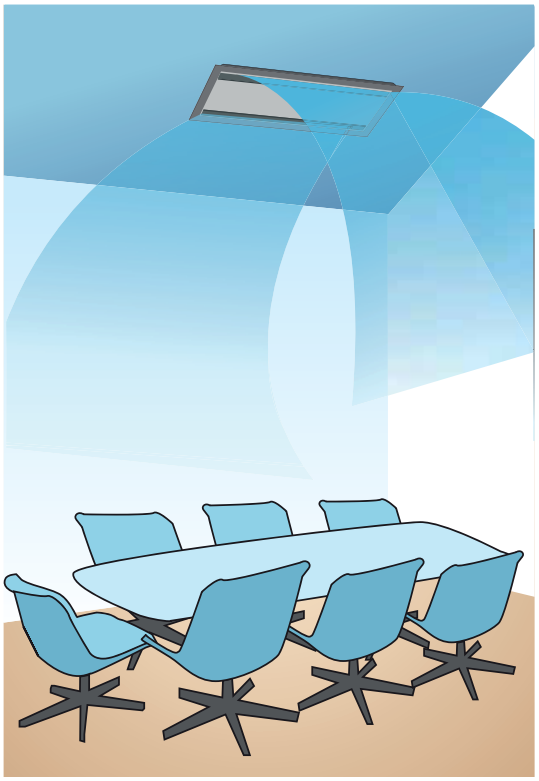
Standard built-in drain pump with 750mm pumphead (higher pumphead can be customized).



Flat-type suction grille design greatly simplifies maintenance work.

High airflow

High airflow for high ceiling application guarantees comfort in large space. It makes every person in the room get even distribution of airflow and temperature.



Indoor Units Lineup

Model			4TVE0007CB0REAA	4TVE0009CB0REAA	4TVE0012CB0REAA	4TVE0015CB0REAA	4TVE0018CB0REAA	4TVE0024CB0REAA
Power supply			1-phase, 220-240V, 50Hz					
Cooling capacity		kW	2.2	2.8	3.6	4.5	5.6	7.1
		kcal/h	1,900	2,400	3,100	3,800	4,800	6,100
		Btu/h	7,500	9,500	12,200	15,300	19,100	24,200
Heating capacity		kW	2.6	3.2	4.0	5.0	6.3	8.0
		kcal/h	2,200	2,700	3,400	4,300	5,400	6,800
		Btu/h	8,900	10,900	13,600	17,000	21,500	27,300
Power input	Cooling	W	57	57	60	92	108	154
	Heating		57	57	60	92	108	154
Rated current	Cooling	A	0.35	0.45	0.45	0.55	0.55	0.75
	Heating		0.35	0.45	0.45	0.55	0.55	0.75
Airflow rate(H/M/L)		m^3/h	654/530/410	654/530/410	725/591/458	850/670/550	980/800/670	1,200/1,000/770
		CFM	385/312/241	385/312/241	427/348/270	500/394/324	577/471/394	706/589/453
Sound level		dB(A)	33/29/24	36/32/29	36/32/29	39/35/30	39/35/30	44/40/34
Refrigerant		Type	R410A					
		Control method	EXV					
Body	Net dim.(WxHxD)	mm	1,172×300×592	1,172×300×592	1,172×300×592	1,172×300×592	1,172×300×592	1,172×300×592
	Gross dim.(WxHxD)		1,355×400×675	1,355×400×675	1,355×400×675	1,355×400×675	1,355×400×675	1,355×400×675
	Net/gross	kg	34/42.5	34/42.5	34/42.5	36.5/45	36.5/45	36.5/45
Panel	Net dim.(WxHxD)	mm	1,430×90×680	1,430×90×680	1,430×90×680	1,430×90×680	1,430×90×680	1,430×90×680
	Gross dim.(WxHxD)		1,525×130×765	1,525×130×765	1,525×130×765	1,525×130×765	1,525×130×765	1,525×130×765
	Net/gross	kg	10.5/15	10.5/15	10.5/15	10.5/15	10.5/15	10.5/15
Piping connections	L(flare)	mm	Φ6.35	Φ6.35	Φ6.35	Φ6.35	Φ9.53	Φ9.53
	G(flare)	mm	Φ12.7	Φ12.7	Φ12.7	Φ12.7	Φ15.9	Φ15.9
	Drain piping	mm	ID Φ25, OD Φ32	ID Φ25, OD Φ32	ID Φ25, OD Φ32	ID Φ25, OD Φ32	ID Φ25, OD Φ32	ID Φ25, OD Φ32
Pump head		mm	750	750	750	750	750	750
Standard Controller		-	Wireless remote controller TCONTRM05A					

Notes:

1. Nominal cooling capacities are based on the following conditions: return air temp. : 27°CDB,19°CWB,outdoor temp.:35°CDB, equivalent ref. Piping: 8m(horizontal)
2. Nominal heating capacities are based on the following conditions: return air temp.: 20°CDB,outdoor temp.: 7°CDB, 6°CWB,equivalent ref. Piping: 8m(horizontal)
3. Sound level is measured at 1.4m below the unit.

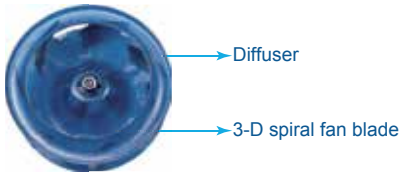
Indoor Units Lineup

Four way cassette

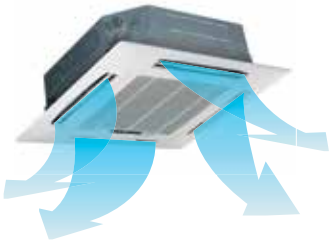
- Auto Restart
- Fresh Air
- Auto Addressing
- Cleanable Panel
- Follow Me
- Anti-Cold Air Function
- Built-in Drain Pump
- LED Display
- Super High Air Flow

Quiet operation, gentle air supply

- Streamline plate ensures quiet operation.
- Advanced 3-D spiral fan design reduces air Resistance and operation noise.



Four-stage fan speed



Easy troubleshooting

By adding digital tube on the display board, Error Codes can be displayed directly for troubleshooting.

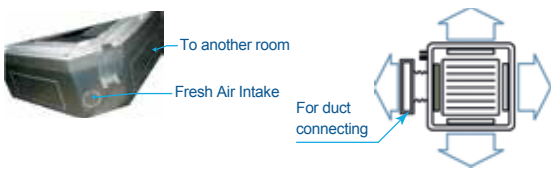
Four-way uniform air flow

Four air discharge ports provide strong air flow circulation to cool or heat every corner of a room and evenly distribute temperature. High airflow mode can maximize the conditioning effect in rooms that are over 3m high.

360°Airflow outlet

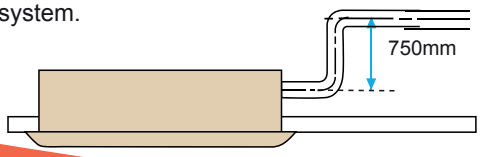
360° air outlet provides strong air flow circulation to cool or heat every corner of a room and evenly distribute temperature.

Reserved multi-function ports

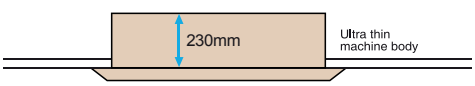


High lift pump

Drain pump can take condenser water up to 750mm, which simplifies installation of the drain piping system.



Ultra-thin machine body (minimum height 230mm) simplifies installation and maintenance.



Model			4TVC0009CB0REAA	4TVC0012CB0REAA	4TVC0015CB0REAA	4TVC0018CB0REAA	4TVC0024CB0REAA
Power supply			1-phase, 220-240V, 50Hz				
Cooling capacity		kW	2.8	3.6	4.5	5.6	7.1
		kcal/h	2,400	3,100	3,800	4,800	6,100
		Btu/h	9,500	12,200	15,300	19,100	24,200
Heating capacity		kW	3.2	4.0	5.0	6.3	8.0
		kcal/h	2,700	3,400	4,300	5,400	6,800
		Btu/h	10,900	13,600	17,000	21,500	27,300
Power input	Cooling	W	80	80	75	75	82
	Heating		80	80	75	75	82
Rated current	Cooling	A	0.4	0.4	0.4	0.4	0.5
	Heating		0.4	0.4	0.4	0.4	0.5
Airflow rate(H/M/L)		m^3/h	847/766/640	847/766/640	864/755/658	864/755/658	1,157/955/749
		CFM	498/450/376	498/450/376	508/444/387	508/444/387	680/562/440
Sound level		dB(A)	42/38/35	42/38/35	42/38/35	42/38/35	45/42/39
Refrigerant		Type	R410A				
		Control method	EXV				
Body	Net dim.(WxHxD)	mm	840x230x840	840x230x840	840x230x840	840x230x840	840x230x840
	Gross dim.(WxHxD)		955X247X955	955X247X955	955X247X955	955X247X955	955X247X955
	Net/gross	kg	24/28	24/28	26/30	26/30	26/30
Panel	Net dim.(WxHxD)	mm	950x46x950	950x46x950	950x46x950	950x46x950	950x46x950
	Gross dim.(WxHxD)		1,000x60x1,000	1,000x60x1,000	1,000x60x1,000	1,000x60x1,000	1,000x60x1,000
	Net/gross	kg	6/8	6/8	6/8	6/8	6/8
Piping connections	L(flare)	mm	Φ6.35	Φ6.35	Φ6.35	Φ9.53	Φ9.53
	G(flare)	mm	Φ12.7	Φ12.7	Φ12.7	Φ15.9	Φ15.9
	Drain piping	mm	IDΦ28.5 ODΦ32	IDΦ28.5 ODΦ32	IDΦ28.5 ODΦ32	IDΦ28.5 ODΦ32	IDΦ28.5 ODΦ32
Drain pump pumphead		mm	750	750	750	750	750
Standard Controller		-	Wireless remote controller TCONTRM05A				

Model			4TVC0027CB0REAA	4TVC0030CB0REAA	4TVC0034CB0REAA	4TVC0038CB0REAA	4TVC0048CB0REAA
Power supply			1-phase, 220-240V, 50Hz				
Cooling capacity		kW	8.0	9.0	10.0	11.2	14.0
		kcal/h	6,800	7,700	8,600	9,600	12,000
		Btu/h	27,300	30,700	34,100	38,200	47,800
Heating capacity		kW	9.0	10.0	11.0	12.5	15.0
		kcal/h	7,700	8,600	9,400	10,700	12,900
		Btu/h	30,700	34,100	37,500	42,600	51,200
Power input	Cooling	W	97	160	160	160	170
	Heating		97	160	160	160	170
Rated current	Cooling	A	0.5	0.7	0.7	0.7	0.8
	Heating		0.5	0.7	0.7	0.7	0.8
Airflow rate(H/M/L)		m^3/h	1,236/973/729	1,540/1,300/1,120	1,540/1,300/1,120	1,540/1,300/1,120	1,800/1,500/1,280
		CFM	727/572/429	906/765/659	906/765/659	906/765/659	1059/883/753
Sound level		dB(A)	45/42/39	48/45/43	48/45/43	48/45/43	50/47/44
Refrigerant		Type	R410A				
		Control method	EXV				
Body	Net dim.(WxHxD)	mm	840x230x840	840x300x840	840x300x840	840x300x840	840x300x840
	Gross dim.(WxHxD)		955X247X955	955X317X955	955X317X955	955X317X955	955X317X955
	Net/gross	kg	26/30	32/37	32/37	32/37	32/37
Panel	Net dim.(WxHxD)	mm	950x46x950	950x46x950	950x46x950	950x46x950	950x46x950
	Gross dim.(WxHxD)		1,000x60x1,000	1,000x60x1,000	1,000x60x1,000	1,000x60x1,000	1,000x60x1,000
	Net/gross	kg	6/8	6/8	6/8	6/8	6/8
Piping connections	L(flare)	mm	Φ9.53	Φ9.53	Φ9.53	Φ9.53	Φ9.53
	G(flare)	mm	Φ15.9	Φ15.9	Φ15.9	Φ15.9	Φ15.9
	Drain piping	mm	IDΦ28.5 ODΦ32	IDΦ28.5 ODΦ32	IDΦ28.5 ODΦ32	IDΦ28.5 ODΦ32	IDΦ28.5 ODΦ32
Pump head		mm	750	750	750	750	750
Standard Controller		-	Wireless remote controller TCONTRM05A				

Notes:

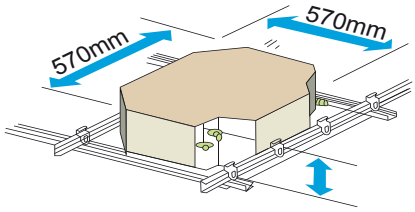
1. Nominal cooling capacities are based on the following conditions: return air temp. : 27°CDB,19°CWB,outdoor temp.:35°CDB, equivalent ref. Piping: 8m(horizontal)
2. Nominal heating capacities are based on the following conditions: return air temp.: 20°CDB,outdoor temp.: 7°CDB, 6°CWB,equivalent ref. Piping: 8m(horizontal)
3. Sound level is measured at 1.4m below the unit.

Indoor Units Lineup

Compact four way cassette

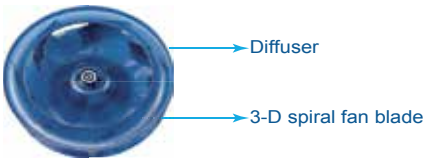
- Auto Restart
- Fresh Air
- Auto Addressing
- Cleanable Panel
- Follow Me
- Anti-Cold Air Function
- Built-in Drain Pump
- LED Display
- Super High Air Flow

Compact design, easy installation and maintenance



Extremely compact casing suits any room's decor and requires little space for installation on a low ceiling. Due to the compact body and light weight, all models can be installed without a hoist.

Quiet operation, gentle air supply



Streamline plate ensures quiet operation
Advanced 3-D spiral fan design reduces air resistance and operation noise.

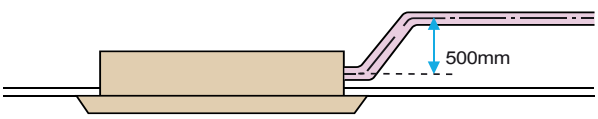
Four-way uniform airflow

Four air discharge ports provide strong air flow circulation to cool or heat every corner of a room and evenly distribute temperature. High airflow mode can maximize the conditioning effect in rooms that are over 3m high.

360°Airflow outlet

360° air outlet provides strong air flow circulation to cool or heat every corner of a room and evenly distribute temperature.

Lift pump



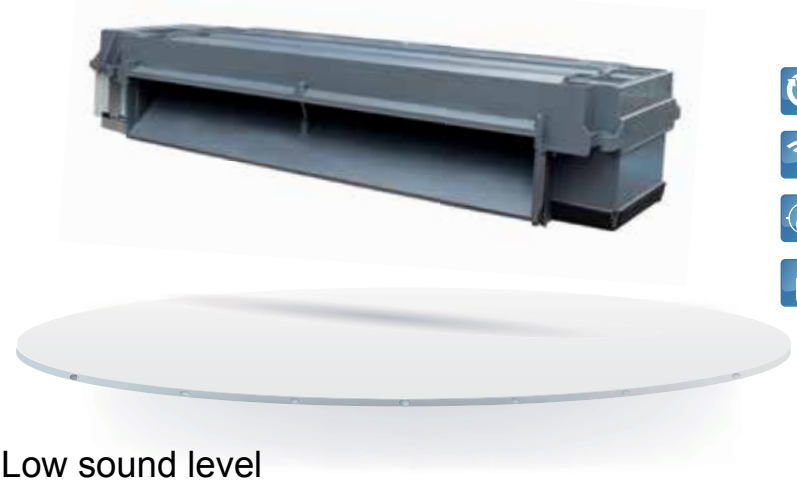
Drain pump with a 500mm pumphead is fitted as standard; maximum 600mm pumphead is available.

Model			4TVB0007CB0REAA	4TVB0009CB0REAA	4TVB0012CB0REAA	4TVB0015CB0REAA
Power supply			1-phase, 220-240V, 50Hz			
Cooling capacity		kW	2.2	2.8	3.6	4.5
		kcal/h	1,900	2,400	3,100	3,800
		Btu/h	7,500	9,500	12,200	15,300
Heating capacity		kW	2.4	3.2	4.0	5.0
		kcal/h	2,000	2,700	3,400	4,300
		Btu/h	8,900	10,900	13,600	17,000
Power input	Cooling	W	51	52	58	58
	Heating		43	44	50	51
Rated current	Cooling	A	0.175	0.175	0.21	0.21
	Heating		0.175	0.175	0.21	0.21
Airflow rate(H/M/L)		m^3/h	522/414/313	520/415/320	610/521/409	610/521/409
		CFM	307/244/184	306/200/188	359/306/241	359/306/241
Sound level		dB(A)	35.8/33.4/23.4	35.8/33.4/23.4	41.5/35.6/28.8	41.5/35.6/28.8
Refrigerant		Type	R410A			
		Control method	EXV			
Body	Net dim.(WxHxD)	mm	570×260×570	570×260×570	570×260×570	570×260×570
	Gross dim.(WxHxD)		675×285×675	675×285×675	675×285×675	675×285×675
	Net/gross	kg	17.5/22	17.5/22	19/23.5	19/23.5
Panel	Net dim.(WxHxD)	mm	647×50×647	647×50×647	647×50×647	647×50×647
	Gross dim.(WxHxD)		705×113×705	705×113×705	705×113×705	705×113×705
	Net/gross	kg	3/5	3/5	3/5	3/5
Piping connections	L(flare)	mm	Φ6.35	Φ6.35	Φ6.35	Φ6.35
	G(flare)	mm	Φ12.7	Φ12.7	Φ12.7	Φ12.7
	Drain piping	mm	ID Φ20 ODΦ25	ID Φ20 ODΦ25	ID Φ20 ODΦ25	ID Φ20 ODΦ25
Pump head		mm	500	500	500	500
Standard Controller		-	Wireless remote controller TCONTRM05A			

Notes:
1. Nominal cooling capacities are based on the following conditions: return air temp. : 27°CDB,19°CWB,outdoor temp.:35°CDB, equivalent ref. Piping: 8m(horizontal)
2. Nominal heating capacities are based on the following conditions: return air temp.: 20°CDB,outdoor temp.: 7°CDB, 6°CWB,equivalent ref. Piping: 8m(horizontal)
3. Sound level is measured at 1.4m below the unit.

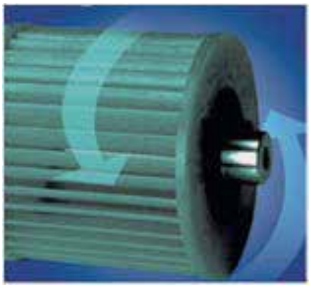
Indoor Units Lineup

Low Static Pressure Unit



- Auto Restart
- Fresh Air
- Auto Addressing
- Cleanable Panel
- Follow Me
- Anti-Cold Air Function
- Wired Controller
- Super High Air Flow

Low sound level



Utilizes the cross blow fan, provides a minimum noise level of 21dB (A), an excellent choice for hotels and other sound-sensitive places.

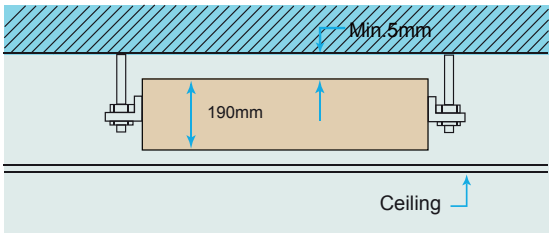
More smooth airflow with less turbulence

Thanks to the multiple-blade fan rotor and the air guide design, airflow is smoother and more comfortable.

Convenient installation

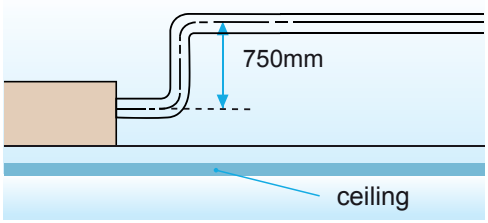
The EXV is fixed beside the indoor unit. Chamber is included as standard equipment.

Compact design



Uniform 190mm in height, compact design for easy locate where space ceiling is limited,
The whole body adopts fireproof plastic material, the minimum weight is 11.5kg.

Options



A drain pump with 750mm pumphead is an optional accessory.

Model			4TVL0007CB0WEAA	4TVL0009CB0WEAA	4TVL0012CB0WEAA	4TVL0015CB0WEAA	4TVL0019CB0WEAA
Power Supply			220～240V-1Ph-50Hz				
Capacity	Cooling	kW	2.2	2.8	3.6	4.5	5.6
		kcal/h	1,891	2,407	3,095	3,869	4,815
		Btu/h	7,500	9,500	12,200	15,300	19,100
	Heating	kW	2.6	3.2	4.0	5.0	6.3
		kcal/h	2,235	2,751	3,439	4,299	5,416
		Btu/h	8,900	10,900	13,600	17,000	21,500
Power (Cooling)	Input	W	40	40	40	40	56
	Rated Current	A	0.17	0.17	0.17	0.17	0.24
Power (Heating)	Input	W	40	40	40	40	56
	Rated Current	A	0.17	0.17	0.17	0.24	0.24
Indoor air flow (H/M/L)		m^3/h	446/323/250	527/359/267	527/359/267	767/634/512	767/634/512
		CFM	263/190/147	310/211/157	310/211/157	451/373/301	451/373/301
ESP (external static pressure)		Pa	5	5	5	5	5
Sound Pressure (Hi/Mid/Lo)		dB(A)	34/29/21	36/34/30	36/34/30	37/35/31	37/35/31
Refrigerant	Type		R410A				
	Control Method		EXV				
Net dimension	W×H×D	mm	850×190×405	850×190×405	850×190×405	1,030×190×430	1,030×190×430
Packing dimension	W×H×D	mm	903×277×445	903×277×445	903×277×445	1,084×277×472	1,084×277×472
Net/Gross Weight		kg	11.5/14.5	11.5/14.5	11.5/14.5	14 /17.5	14/17.5
Piping Connections	Liquid (Flare)	mm	Φ6.35	Φ6.35	Φ6.35	Φ9.53	Φ9.53
	Gas (Flare)	mm	Φ12.7	Φ12.7	Φ12.7	Φ15.9	Φ15.9
	Drain piping	mm	IDΦ15 ODΦ20	IDΦ15 ODΦ20	IDΦ15 ODΦ20	IDΦ15 ODΦ20	IDΦ15 ODΦ20
Pump head		mm	750				
Standard Controller		-	Wired controller TCONTKJR29BKE (6 meters connection wire)				

Notes:

1. Nominal cooling capacities are based on the following conditions: return air temp.: 27°CDB, 19°CWB, and outdoor temp.:35°CDB, equivalent ref. piping: 8m (horizontal)
2. Nominal heating capacities are based on the following conditions: return air temp.: 20°CDB, outdoor temp.: 7°CDB, 6°CWB, and equivalent ref. Piping: 8m (horizontal)
3. Sound level is measured at 1.4m below the air outlet.

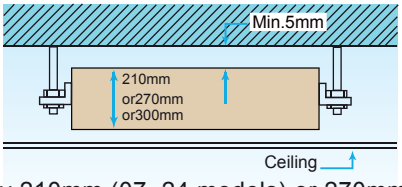
⁎ External static pressure is based on high speed indoor air flow.

Indoor Units Lineup

Medium Static Pressure Unit (A5 Size)

- Auto Restart
- Fresh Air
- Follow Me
- Anti-Cold Air Function
- Built-in Drain Pump
- Wired Controller
- Auto Addressing
- Cleanable Panel
- Connectable To Duct
- Super High Air Flow

Compact size



Only 210mm (07~24 models) or 270mm (27 to 38 models) or 300mm (48 model) in height.

External static pressure

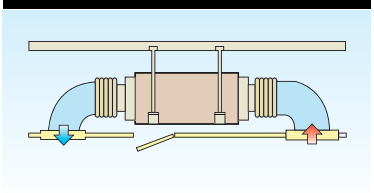
Four speed fan motor (Super high speed is optional)

Change the wiring connection from 'SH' to 'Hi' to change the ESP.

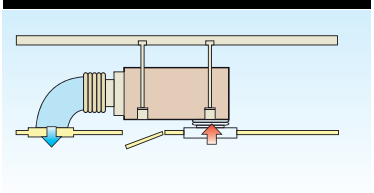
Convenient installation

The EXV is fixed inside of the indoor unit.
Standard filter is housed in an aluminum frame, which is removable from the bottom in the downward direction.
Suction chamber is included as standard equipment.
Fresh air hole, air inlet/outlet flange are standard for easy duct connection.
A rear air inlet is standard and an inlet at the bottom is optional. Both use the same connectable duct.

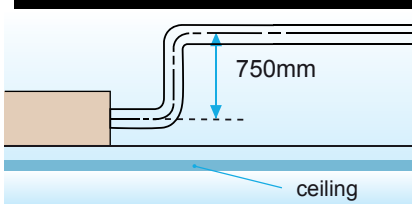
Air intake from back



Air intake from below



drain pump as standard



Flexible control and easy maintenance

Standard wired remote controller TCONTKJR12B.
The electrical control box can be removed 1m away from the unit for easy maintenance access. Customers need to request this service in advance for this option.
Standard functional ports are included such as Remote On/Off Dry contact switch and Alarm signal output (220V).

Model			4TVD0007CB0WEAA	4TVD0009CB0WEAA	4TVD0012CB0WEAA	4TVD0015CB0WEAA	4TVD0019CB0WEAA
Power Supply			220 ~ 240V-1Ph-50Hz				
Capacity	Cooling	kW	2.2	2.8	3.6	4.5	5.6
		kcal/h	1,891	2,407	3,095	3,869	4,815
		Btu/h	7,500	9,500	12,200	15,300	19,100
	Heating	kW	2.6	3.2	4	5	6.3
		kcal/h	2,235	2,751	3,439	4,299	5,416
		Btu/h	8,900	10,900	13,600	17,000	21,500
Power (Cooling)	Input	W	59	57	61	92	92
	Rated Current	A	0.28	0.28	0.28	0.5	0.5
Power (Heating)	Input	W	59	57	61	92	92
	Rated Current	A	0.28	0.28	0.28	0.5	0.5
Indoor air flow (SH)/ H/M/L		m^3/h	570/530/410/320	570/530/410/320	570/530/410/320	958/850/667/583	958/850/667/583
		CFM	335/312/241/188	335/312/241/188	335/312/241/188	563/500/392/343	563/500/392/343
ESP (external static pressure)		Pa	10(10~30)	10(10~30)	10(10~30)	10(10~30)	10(10~30)
Sound Pressure (Hi/Mid/Lo)		dB(A)	36/35/32	37/35/32	39/38/36	41/38.9/36	41/38.9/36
Refrigerant	Type		R410A				
	Control Method		EXV				
Net dimension	W×H×D	mm	700x210x450	700x210x450	700x210x450	920X210X570	920X210X570
Packing dimension	W×H×D	mm	870x285x525	870x285x525	870x285x525	1,135X290X655	1,135X290X655
Net/Gross Weight		kg	17.5/20	17.5/20	17.5/20	27/32	27/32
Piping Connections	Liquid (Flare)	mm	Φ6.35	Φ6.35	Φ6.35	Φ6.35	Φ9.53
	Gas (Flare)	mm	Φ12.7	Φ12.7	Φ12.7	Φ12.7	Φ16
	Drain piping	mm	ID Φ25 OD Φ32	ID Φ25 OD Φ32	ID Φ25 OD Φ32	ID Φ25 OD Φ32	ID Φ25 OD Φ32
Pump head		mm	700				
Standard Controller		-	Wired controller TCONTKJR29BKE (6 meters connection wire)				

Model			4TVD0024CB0WEAA	4TVD0027CB0WEAA	4TVD0031CB0WEAA	4TVD0038CB0WEAA	4TVD0048CB0WEAA
Power Supply			220 ~ 240V-1Ph-50Hz				
Capacity	Cooling	kW	7.1	8	9	11.2	14
		kcal/h	6,105	6,879	7,739	9,630	12,037
		btu/h	24,200	27,300	30,700	38,200	47,800
	Heating	kW	8	9	10	12.5	15.5
		kcal/h	6,879	7,739	8,598	10,748	13,327
		Btu/h	27,300	30,700	34,100	42,600	52,900
Power (Cooling)	Input	W	125	198	200	313	274
	Rated Current	A	0.7	1	1	1.8	1.55
Power (Heating)	Input	W	125	198	200	313	274
	Rated Current	A	0.7	1	1	1.8	1.55
Indoor air flow (SH)/ H/M/L		m^3/h	1,207/1,050/905/821	1,400/1,226/1,018/861	1,400/1,226/1,018/861	1,752/1,750/1,552/1,389	2,138/1,918/1,539/1,250
		CFM	710/618/532/483	917/795/687/608	917/795/687/608	1,031/1,030/913/818	1,258/1,129/906/736
ESP (external static pressure)		Pa	10(10~30)	20(10~50)	20(10~50)	40(10~80)	40(10~100)
Sound Pressure (Hi/Mid/Lo)		dB(A)	42/40/35	45.4/39.8/37	45.4/39.8/37	48.0 /41.9/38	47.7/43.2/39.0
Refrigerant	Type		R410A				
	Control Method		EXV				
Net dimension	W×H×D	mm	1140X210X635	1,140X270X710	1,140X270X710	1,140X270X710	1,200X300X800
Packing dimension	W×H×D	mm	1,135X290X655	1,355X350X795	1,355X350X795	1,355X350X795	1,385X375X920
Net/Gross Weight		kg	31.8/35.8	38/46.5	40/48	40/48	49/58
Piping Connections	Liquid (Flare)	mm	Φ9.53	Φ9.53	Φ9.53	Φ9.53	Φ9.53
	Gas (Flare)	mm	Φ15.9	Φ15.9	Φ15.9	Φ15.9	Φ15.9
	Drain piping	mm	ID Φ25 OD Φ32	ID Φ25 OD Φ32	ID Φ25 OD Φ32	ID Φ25 OD Φ32	ID Φ25 OD Φ32
Pump head		mm	700				
Standard Controller		-	Wired controller TCONTKJR29BKE (6 meters connection wire)				

Notes:

1. Nominal cooling capacities are based on the following conditions: return air temp.: 27°CDB, 19°CWB, and outdoor temp.:35°CDB, equivalent ref. piping: 8m (horizontal)
2. Nominal heating capacities are based on the following conditions: return air temp.: 20°CDB, outdoor temp.: 7°CDB, 6°CWB, and equivalent ref. Piping: 8m (horizontal)
3. Sound level is measured at 1.4m below the air out-let.

* External static pressure is based on high speed indoor air flow.
* Specifications are subject to change without prior notice for product improvement.

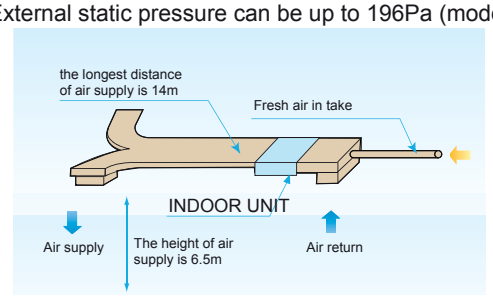
Indoor Units Lineup

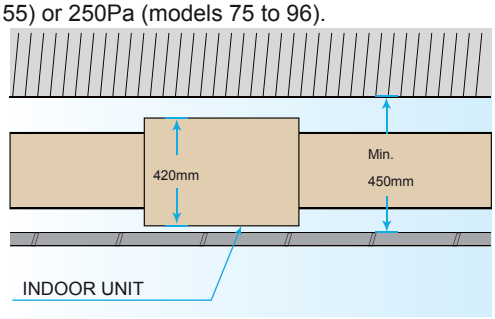
High Static Pressure Unit

- Auto Restart
- Fresh Air
- Auto Addressing
- Cleanable Panel
- Follow Me
- Anti-Cold Air Function
- Wired Controller
- Connectable To Duct

Flexible duct design

Four speed fan motor (super high speed as an option for models 24-55)
External static pressure can be up to 196Pa (models 24 to 55) or 250Pa (models 75 to 96).





The maximum distance for air supply is about 14m at height of 6.5m.
With a 420mm (models 24 to 55) thick body, the minimum distance required above the ceiling is 450mm.

Greater flexibility with the four-speed fan

Exchange the wiring connections for ‘MH’ and ‘Me’ (models 24 to 55).

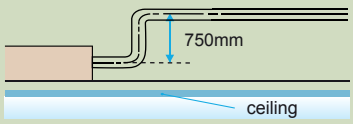
Convenient installation

The EXV is fixed inside the indoor unit (models 24-55), requires no extra connection.
Standard filter is housed in an aluminum frame, which is removable from the bottom in the downward direction.
Flange for air in/outlet duct connection is standard.

Flexible control and convenient for maintenance

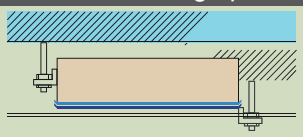
Wired remote controller TCONTKJR10B/TCONTKJR12B is as standard, and wireless remote controller R05 is as an option. The display board is connected to the E-box in factory, easier troubleshooting by LED display.
Easy access filters both at the rear & bottom
Standard functional port such as remote on/off dry contact.

Option:



Drain pump with 750mm pumphead is optional (models 24 to 55)

Double-skin drainage pan



Double-skin drainage pan provide double protection for ceilings (models 24 to 55 and models 75 to 96)

Model			4TVH0024CB0WEAA	4TVH0027CB0WEAA	4TVH0030CB0WEAA	4TVH0038CB0WEAA	4TVH0048CB0WEAA	4TVH0055CB0WEAA
Power Supply			220～240V-1Ph-50Hz					
Capacity	Cooling	kW	7.1	8	9	11.2	14	16
		kcal/h	6,105	6,879	7,739	9,630	12,037	13,757
		Btu/h	24,200	27,300	30,700	38,200	47,800	54,600
	Heating	kW	8	9	10	12.5	16	18
		kcal/h	6,879	7,739	8,598	10,748	13,757	15,477
		Btu/h	27,300	30,700	34,100	42,600	54,600	61,400
Power (Cooling)	Input	W	263	263	423	524	627	832
	Rated Current	A	1.1	1.1	1.8	2.3	2.7	3.6
Power (Heating)	Input	W	263	263	423	524	627	832
	Rated Current	A	1.1	1.1	1.8	2.3	2.7	3.6
Indoor air flow (H/M/L)		m^3/h	1,400/1,330/1,210	1,400/1,330/1,210	1,940/1,830/1,515	2,115/1,940/1,520	3,000/2,615/2,230	3,620/3,060/2,740
		CFM	824/783/712	824/783/712	1142/1077/892	1,245/1,142/895	1,766/1,539/1313	2,131/1,801/1,613
ESP (external static pressure)		Pa	40(30~ 196)	40(30~ 196)	40(30~ 196)	50(30~ 196)	50(30~ 196)	50(30~ 196)
Sound Pressure (Hi/Mid/Lo)		dB(A)	48/46/44	48/46/44.5	52/49/47	52/49/47	53/50/48	54/52/50
Refrigerant	Type		R410A					
	Control Method		EXV					
Net dimension	W×H×D	mm	952×420×690	952×420×690	952×420×690	952×420×690	1,200×400×600	1,200×400×600
Packing dimension	W×H×D	mm	1,102×450×768	1,102×450×768	1,102×450×768	1,102×450×768	1,430×450×768	1,430×450×768
Net/Gross Weight		kg	45/50	45/50	46.5/52.4	50.6/56	68/70	70/77.5
Piping Connections	Liquid (Flare)	mm	Φ9.52	Φ9.53	Φ9.53	Φ9.53	Φ9.53	Φ9.53
	Gas (Flare)	mm	Φ15.9	Φ15.9	Φ15.9	Φ15.9	Φ15.9	Φ15.9
	Drain piping	mm	IDΦ25 ODΦ32	IDΦ25 ODΦ32	IDΦ25 ODΦ32	IDΦ25 ODΦ32	IDΦ25 ODΦ32	IDΦ25 ODΦ32
Pump head		mm	750					
Standard Controller		-	Wired controller TCONTKJR29BKE (6m wire is standard)					

Model			4TVH0075CB0WEAA	4TVH0085CB0WEAA	4TVH0096CB0WEAA	4TVH0140CB0WEAA	4TVH0155CB0WEAA	4TVH0190CB0WEAA
Power Supply			220～240V-1Ph-50Hz			220～240V-1Ph-50Hz		
Capacity	Cooling	kW	20	25	28	40	45	56
		kcal/h	17,197	21,496	24,075	34,394	38,693	48,152
		Btu/h	68,200	85,300	95 500	136,500	153,500	191,100
	Heating	kW	22.5	26	31.5	45	50	63
		kcal/h	19,346	22,355	27,084	38,693	42,939	54,171
		Btu/h	76,800	88,700	107 500			
Power (Cooling)	Input	W	1516	1516	1516	2700	2700	3400
	Rated Current	A	6.6	6.6	6.6	12.5	12.5	15.5
Power (Heating)	Input	W	1516	1516	1516	2700	2700	3400
	Rated Current	A	6.6	6.6	6.6	12.5	12.5	15.5
Indoor air flow (H/M/L)		m^3/h	4,665/4,320/3,625	4,665/4,320/3,625	4,665/4,320/3,625	7,490/6,120/5,050	7,490/6,120/5,050	9,625/8,050/6,630
		CFM	2,746/2,543/2,134	2,746/2,543/2,134	2,746/2,543/2,134	4,408/3,602/2,972	4,408/3,602/2,972	5,665/4,738/3,902
ESP (external static pressure)		Pa	140(50~250)	140(50~250)	160(50~250)	196(50~250)	196(50~250)	196(50~250)
Sound Pressure (Hi/Mid/Lo)		dB(A)	59/55/52	59/55/52	59/55/52	61/59/56	61/59/56	63/60/57
Refrigerant	Type		R410A					
	Control Method		EXV					
Net dimension	W×H×D	mm	1356×470×763	1356×470×763	1356×470×763	1970×668×858.5	1970×668×858.5	1970×668×858.5
Packing dimension	W×H×D	mm	1,509×522×964	1,509×522×964	509×522×964	2095×800×964	2095×800×964	2095×800×964
Net/Gross Weight		kg	115/129	115/129	115/129	232/245	232/245	232/245
Piping Connections	Liquid (Flare)	mm	Φ9.53×2	Φ9.53×2	Φ9.53×2	Φ12.7	Φ12.7	Φ15.9
	Gas (Flare)	mm	Φ15.9×2	Φ15.9×2	Φ15.9×2	Φ28.6×2	Φ28.6×2	Φ28.6×2
	Drain piping	mm	IDΦ25 ODΦ32	IDΦ25 ODΦ32	IDΦ25 ODΦ32	IDΦ25 ODΦ32	IDΦ25 ODΦ32	IDΦ25 ODΦ32
Pump head		mm	750					
Standard Controller		-	Wired controller TCONTKJR29BKE (6m wire is standard)					

Notes:

1. Nominal cooling capacities are based on the following conditions: return air temp.: 27°CDB, 19°CWB, and outdoor temp.:35°CDB, equivalent ref. piping: 8m (horizontal)
2. Nominal heating capacities are based on the following conditions: return air temp.: 20°CDB, outdoor temp.: 7°CDB, 6°CWB, and equivalent ref. Piping: 8m (horizontal)
3. Sound level is measured at 1.4m below the air out-let.

* External static pressure is based on high speed indoor air flow.
* Specifications are subject to change without prior notice for product improvement.

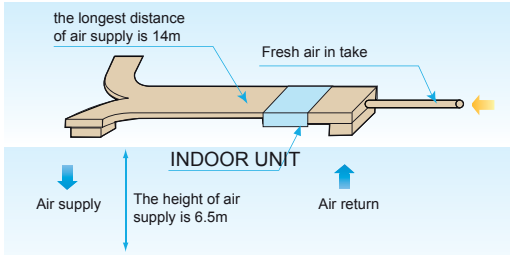
Indoor Units Lineup

Fresh Air Processing Unit

Healthy and comfortable

Fresh air is imported, provides a healthy and comfortable living environment.

100% Fresh air processing unit

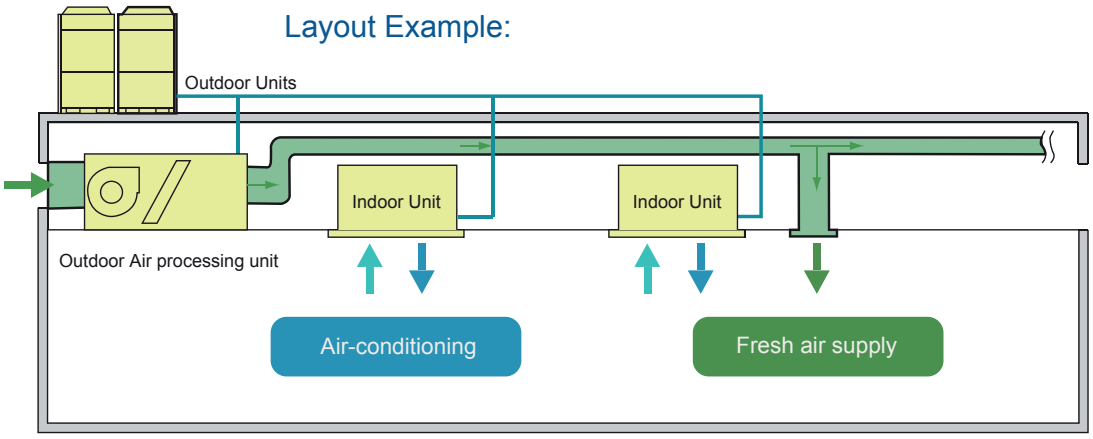


Both fresh air filtration and heating/cooling can be achieved in a single system.
Indoor units and fresh air processing unit can be connected to the same refrigerant system, increase design flexibility and greatly reduce total system costs.

High external static pressure

External static pressure can be up to 220Pa(models 42 to 48) and 260Pa(models 75 to 96) for more flexible duct applications. The maximum distance of air supply is about 14m and the maximum height of air supply is about 6.5m.

Innovative air supply technology for excellent room temperature control



Model			4TVF0042CB0WEAA	4TVF0048CB0WEAA	4TVF0075CB0WEAA	4TVF0085CB0WEAA	4TVF0096CB0WEAA
Power Supply			1-phase, 220-240V, 50Hz				
Capacity	Cooling	kW	12.5	14	20	25	28
		kcal/h	10,766	12,057	17,225	21,531	24,115
		Btu/h	42,600	47,800	68,200	85,300	95,500
	Heating	kW	10.5	12	18	20	22
		kcal/h	9,043	10,335	15,502	17,225	18,947
		Btu/h	35,800	41,000	61,400	68,200	75,000
Power (Cooling)	Input	W	461	461	1063	1,063	1063
	Rated Current	A	2.3	2.3	5.3	5.3	5.3
Power (Heating)	Input	W	461	461	1063	1,063	1,063
	Rated Current	A	2.3	2.3	5.3	5.3	5.3
Air flow (H/M/L)		m^3/h	1,700/1,350/1,050	1,700/1,350/1,050	3,150/2,650/2,300	3,300/2,850/2,500	3,300/2,850/2,500
		CFM	1,000/795/618	1,000/795/618	1,854/1,560/1,354	1,942/1,677/1,471	1,942/1,677/1,471
ESP (external static pressure)		Pa	50(30~220)	50(30~220)	140(50~260)	140(50~260)	140(50~260)
Sound Pressure (Hi/Mid/Lo)		dB(A)	54/52/50	54/52/50	54/53/51	55/54/52	55/54/52
Refrigerant	Type		R410A				
	Control Method		EXV				
Net dimension	W×H×D	mm	1,200×400×600	1,200×400×600	1,425×500×928	1,425×500×928	1,425×500×928
Packing dimension	W×H×D	mm	1,436×450×768	1,436×450×768	1,509×550×990	1,509×550×990	1,509×550×990
Net/Gross Weight		kg	69.5/76	69.5/76	115/125	115/125	115/125
Piping Connections	Liquid (Flare)	mm	Φ9.53	Φ9.53	Φ9.53	Φ9.53	Φ9.53
	Gas (Flare)	mm	Φ15.9	Φ15.9	Φ15.9	Φ15.9	Φ15.9
	Drain piping	mm	OD Φ25	OD Φ25	OD Φ32	OD Φ32	OD Φ32
Pump head		mm	750		-	-	-
Standard Controller		-	Wired controller TCONTKJR29BKE (6m wire is standard)				

Notes:

1 . Nominal cooling capacities are based on the following conditions: outdoor air temp.: 33ºC DB, 24ºC WB, equivalent ref. piping: 8m (horizontal)

2. Nominal heating capacities are based on the following conditions: outdoor air temp.: 0°CDB, -1°CWB, equivalent ref. Piping: 8m (horizontal)

3. Sound level is measured 1.4m from the air out-let.

* external static pressure are based on high speed indoor air flow.

* Specifications are subject to change without prior notice for product improvement.

Connection Conditions:

The following restrictions must be observed in order to maintain the indoor units connected to the same system.

* When outdoor-air processing units are connected, the total connection capacity must be within 50% to 100% of that of the outdoor units.

* When outdoor-air processing units and standard indoor units are connected, the total connection capacity of the outdoor-air processing units must not exceed 30% of that of the outdoor units.

* Outdoor-air processing units can be used without indoor units.

ERV - Energy Recovery Ventilator

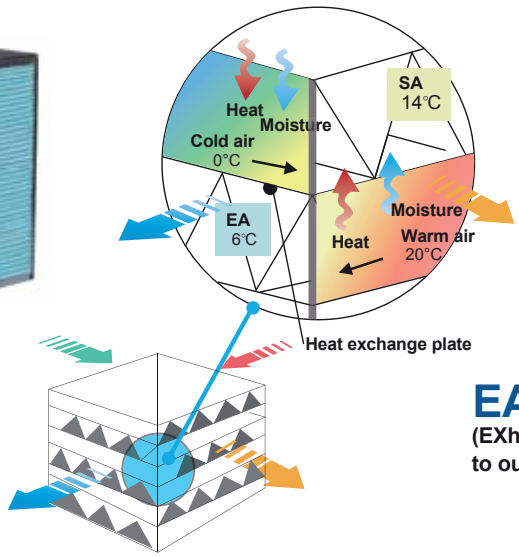
Larger air supply rate
enhanced heat exchange efficiency
enhanced energy saving

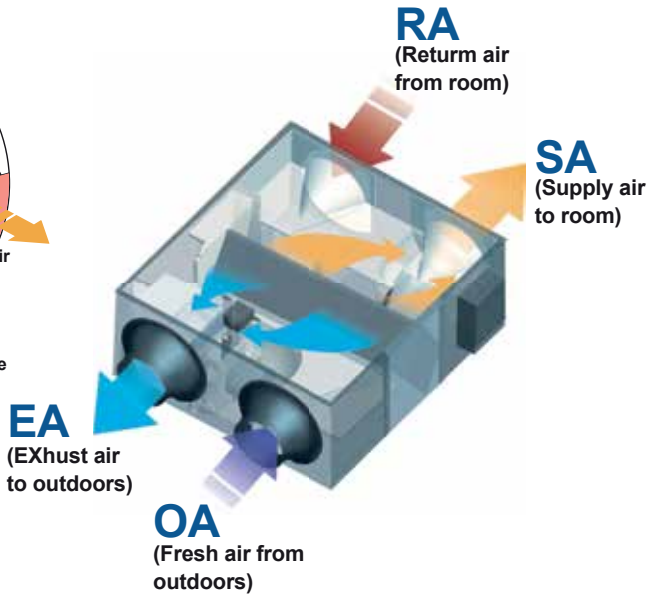
The heat recovery ventilator (ERV) can reclaim the energy energy lost through ventilation and reduce room temperature fluctuations caused by the ventilation process. By utilizing the latest technologies and techniques, Trane ERV guarantees outstanding performance. The heat exchange core is made of chemically treated paper that optimally controls temperature and humidity in a given room. Temperature exchange efficiency exceeds 65%, and enthalpy exchange efficiency ranges from 50 to 65%.

Model Names

TERV0120AB0AA TERV0300AB0AA
TERV0175AB0AA TERV0470AB0AA
TERV0235AB0AA TERV0600AB0AA

TERV0900AC0AA TERV1200AC0AA





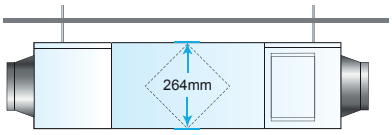
ERV - Energy Recovery Ventilator

Low noise

Sound proof material is used to guarantee quiet operation.

Compact design, flexible installation and easy maintenance

With a height of just 264mm and a weight of 23kg, the unit can be easily installed in a limited space.



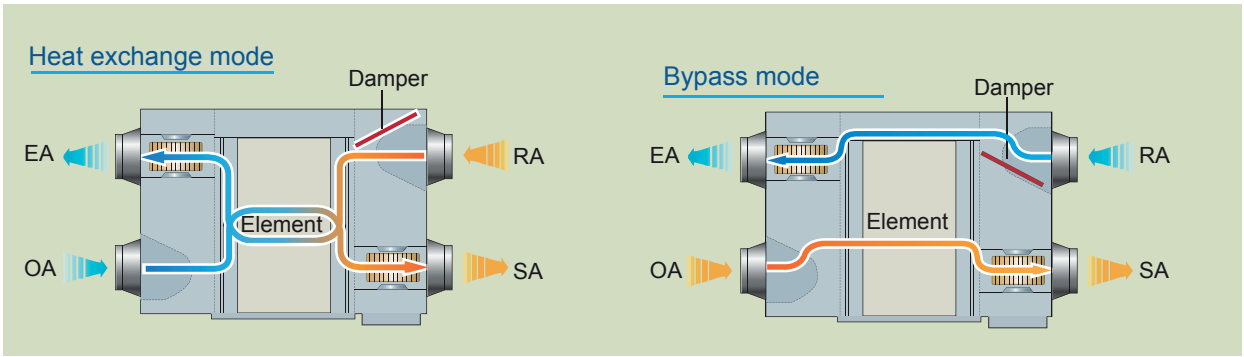
Multiple modes for different scenarios

Heat exchange mode

When the airflow generated by fans travels across the heat exchange core, the temperature difference between the two channels of the core causes natural thermal transmission. On summer days, hot outdoor air is cooled by the indoor exhaust air; in winter, cold outdoor air is heated by the indoor exhaust air.The energy contained in the exhaust air can be reclaimed to improve energy efficiency.

Bypass mode

In mild climates where the temperature and humidity difference between indoors and outdoors is small, the unit works as conventional ventilation fan. Both the supply fan and exhaust fan work at the same speed (auto/low/medium/high).



ERV - Energy Recovery Ventilator

Air supply mode

It is one kind of bypass mode with air supply fan speed higher than exhaust fan speed. It can be used in mild climate area where large amount fresh air is needed.

Exhaust air mode

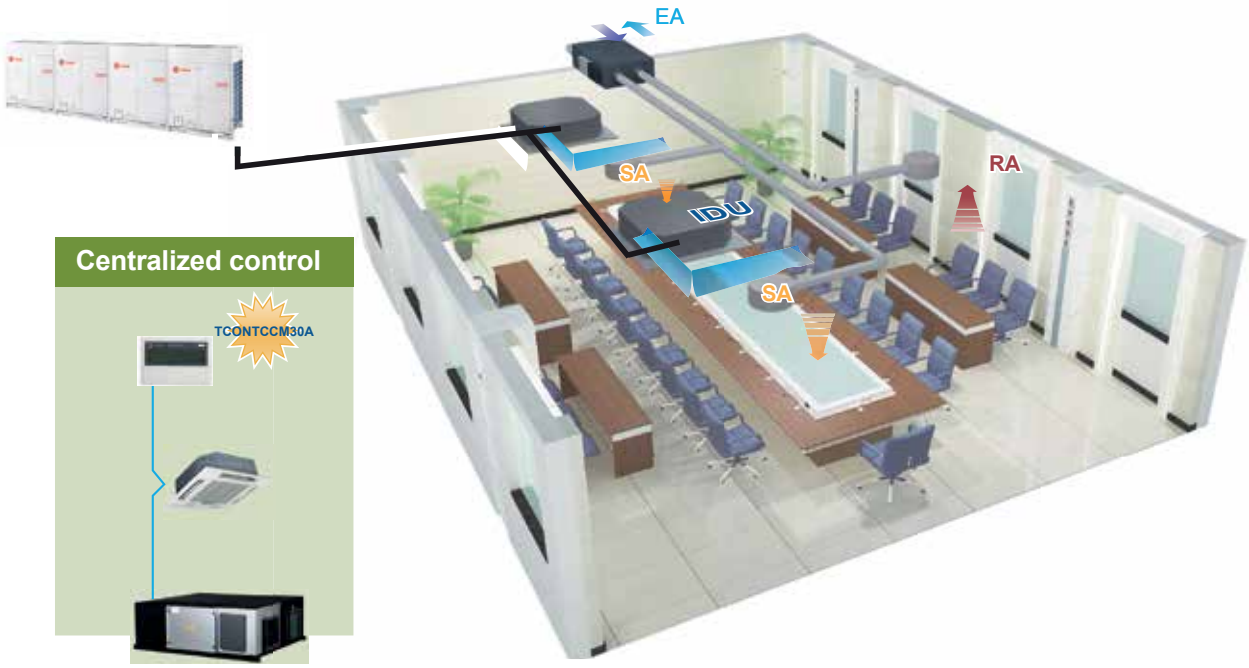
It is also one kind of bypass mode with exhaust fan speed higher than air supply fan speed. It can be used in mild climate area where large amount exhaust air needs to be expelled.

Auto mode

The controller chooses heat exchange mode or bypass mode according to the temperature difference between outdoor and indoor temperature. Both the two fans work at low speed.

Flexible control

Interlocking control with other indoor units via controller is possible



Specifications

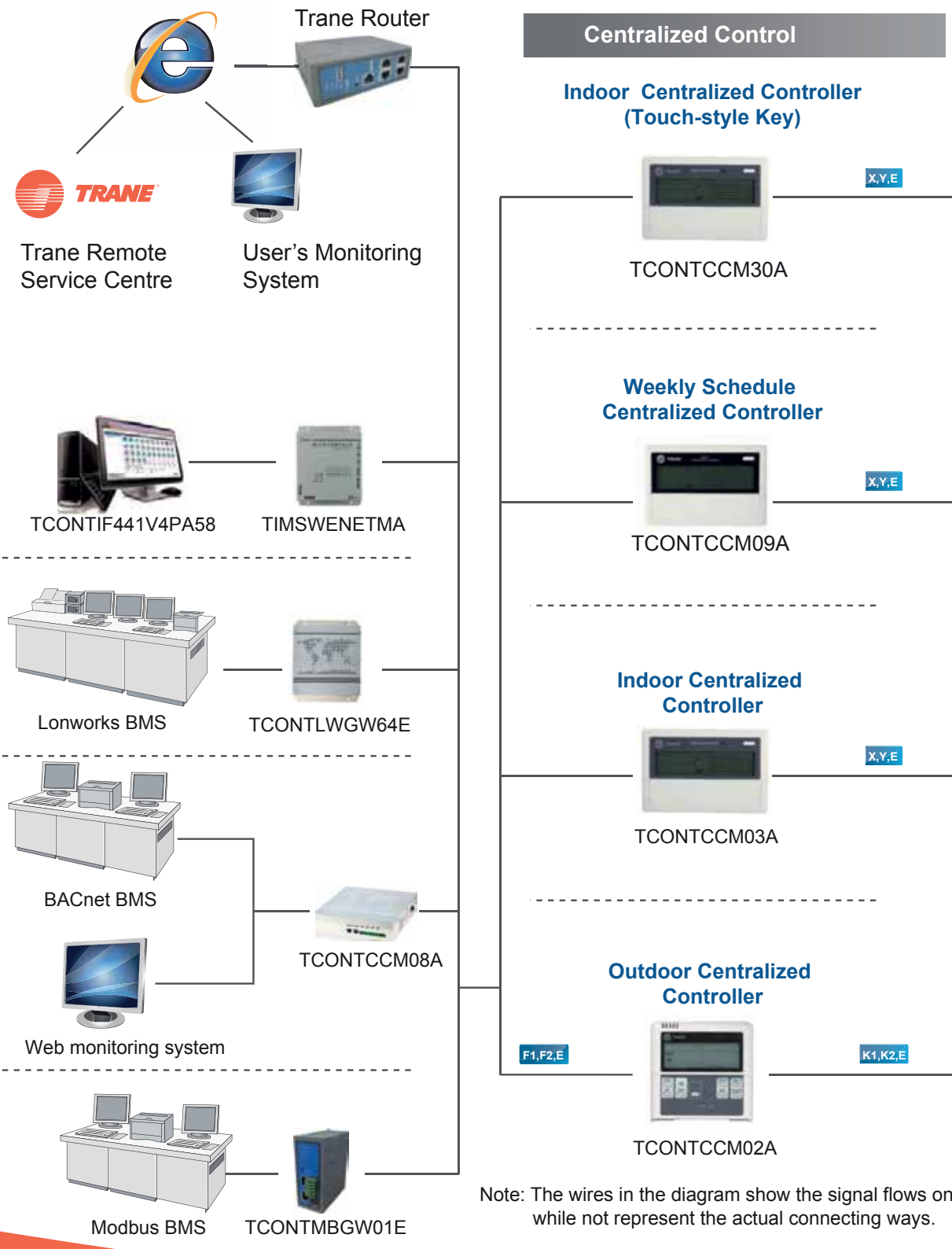
Model				TERV0120AB0AA	TERV0175AB0AA	TERV0235AB0AA	TERV0300AB0AA
Power Supply			V/ph/Hz	220-240/1/50			
Temp. Exchange Efficiency (%) [50Hz]			%	65	65	65	65
				65	65	65	65
				70	70	70	70
Enthalpy Exchange Efficiency (%) [50Hz]	For Cooling	High	%	50	50	50	50
		Medium		50	50	50	50
		Low		55	55	55	55
	For Heating	High		55	55	60	60
		Medium		55	55	60	60
		Low		60	60	65	65
Sound Level	Heat Exchange Mode	High	dB(A)	27	30	32	35
		Medium		26	29	31	34
		Low		20	23	25	28
	Bypass Mode	High		28	31	33	36
		Medium		27	30	32	35
		Low		22	25	27	30
Dimensions(W×D×H)			mm	866×655×264	944×722×270	944×927×270	10,38×1,026×270
Machine Weight			kg	23	26	31	41
Casing			-	Galvanized steel plate			
Heat Exchange System			-	Air to air cross flow total heat (Sensible heat + latent heat) exchange			
Heat Exchange Element Material			-	Specially processed nonflammable paper			
Fan	Type		-	Centrifugal fan			
	Airflow Rate [50Hz]	High	m^3/h	200	300	400	500
		Medium		200	300	400	500
		Low		150	225	300	375
	ESP (Pa) [50Hz]	High	Pa	75	75	80	80
		Medium		58	60	65	68
		Low		35	40	43	45
	Motor Output		W	20	40	80	120
Duct diameter			Φ/mm	144	144	144	194
Operation ambient condition			-	'-7°C-43°C (DB), 80%RH or less			

Specifications

Model				TERV0470AB0AA	TERV0600AB0AA	TERV0900AC0AA	TERV1200AC0AA
Power Supply			V/ph/Hz	220-240/1/50		380/3/50	
Temp. Exchange Efficiency (%) [50Hz]			%	65	65	65	65
				65	65	/	/
				70	70	/	/
Enthalpy Exchange Efficiency (%) [50Hz]	For Cooling	High	%	50	50	50	50
		Medium		50	50	/	/
		Low		55	55	/	/
	For Heating	High		60	60	60	60
		Medium		60	60	/	/
		Low		65	65	/	/
Sound Level	Heat Exchange Mode	High	dB(A)	39	40	51	53
		Medium		38	39	/	/
		Low		32	33	/	/
	Bypass Mode	High		40	41	52	54
		Medium		39	40	/	/
		Low		34	35	/	/
Dimensions(W×D×H)			mm	1,286×1,006×388	1,286×1,256×388	1,600×1,270×540	1,650×1,470×540
Machine Weight			kg	62	79	163	182
Casing			-	Galvanized steel plate			
Heat Exchange System			-	Air to air cross flow total heat (Sensible heat + latent heat) exchange			
Heat Exchange Element Material			-	Specially processed nonflammable paper			
Fan	Type		-	Centrifugal fan			
	Airflow Rate [50Hz]	High	m^3/h	800	1,000	1,500	2,000
		Medium		800	1,000	/	/
		Low		600	750	/	/
	ESP (Pa) [50Hz]	High	Pa	100	100	160	170
		Medium		82	85	/	/
		Low		54	58	/	/
	Motor Output		W	360	360	450	450
Duct diameter			Φ/mm	242	242	346×326	346×326
Operation ambient condition			-	'-7°C-43°C (DB), 80%RH or less			

Note:
1. Three speeds (low/med/high) are available for ERV models 200 to 1000; one speed is available for HRV models 1500 to 2000.
2. The sound level is measured at 1.4m below the body center in an anechoic chamber.
3. The airflow rate can transmit between low and high modes.
4. The temperature exchange efficiency is the mean value between cooling and heating
5. Efficiency is measured under the following conditions:
* Cooling Condition: Air Exhaust Temp. 27°C DB,19.5°CWB., Fresh Air Temp. 35°C DB,28°CWB
* Heating Condition: Air Exhaust Temp. 21°C DB,13°CWB., Fresh Air Temp. 5°C DB,2°CWB

Control Systems - Network Control



Note: The wires in the diagram show the signal flows only, while not represent the actual connecting ways.

Control Systems - Network Control

Individual control

Wired controller

TCONTKJR10B
TCONT10BDPC
TCONTKJR12B
TCONTKJR120B
TCONTKJR86C
TCONTKJR90AE
TCONTKJR90A1E
TCONTKJR90BME
TCONTKRJ29BKE

Remote controller

TCONTR51CE
TCONTRM05A

Accessories

Card-key Interface TCONTNAM05A

TCONTNAM05A

Card-key

TCONTKJR10B

Infared Sensor TCONTNAM09A

Infrared control box

Infrared sensor module

TCONTKJR10B

Outdoor units

Comparison of Controllers

Item		Remote controller		Wired Controller			Centralized Controller		
		TCONT RM05A	TCONT R51CE	TCONT KJR10B TCONT KJR12B	TCONT KJR90AE	TCONT KRJ29BKE	TCONT CCM03A TCONT CCM30A	TCONT CCM09A	TCONT KJR90BME
		removable		1	1	1	64	64/16	16
A/C control function	On/Off	●	●	●	●	●	●	●	●
	Operation mode setting	●	●	●	●	●	●	●	●
	Fan speed setting	●	●	●	●	●	●	●	-
	Room temp. setting	●	●	●	●	●	●	●	-
	Vertical swing	●	●	-	-	-	-	-	-
	Horizontal swing	●	●	●	●	●	●	●	-
	Air direction	●	-	-	-	-	-	-	-
	Economic mode	●	●	●	-	-	-	-	-
	Group setting	-	-	-	-	-	●	●	●
	Keyboard lock	●	●	●	-	●	●	●	-
	Mode lock	-	-	-	-	-	●	●	-
	Remote signal receiving	-	-	-	-	●	-	-	-
	26℃ shortcut setting	-	-	-	-	-	-	-	-
	Silent mode	-	-	-	-	●	-	-	-
Display	Backlight	●	●	●/-	-	●	●	●	●
	Current time	●	-	●/-	●	-	-	●	-
	RC prohibition	-	-	-	-	-	●	●	-
	Address	-	-	-	-	-	●	●	-
	Error code	-	-	-	-	-	●	●	-
Timer	Period	-	-	-	-	-	-	Week	-
	On/Off per day	-	-	-	-	-	-	4	-
	On/Off per week	-	-	-	-	-	-	28	-
	On/Off timer	●	●	●	●	●	●	●	-
Control	FOLLOW ME	-	-	-/●	-	●	-	-	-
	Emergent stop	-	-	-	-	-	●	-	-
	Emergent start	-	-	-	-	-	●	-	-
	Address setting	●	-	-	-	●	-	-	-
	BMS access	-	-	-	-	-	●	-	-
	Control via internet	-	-	-	-	-	●	-	-
	Air filter cleaning reminding	-	-	●/-	-	●	●/-	-	-
	10℃ heat function	-	-	-	-	-	-	-	-

●: Available controller functions

- : Not available controller functions

Control Systems - Wireless Remote Controller

Functions

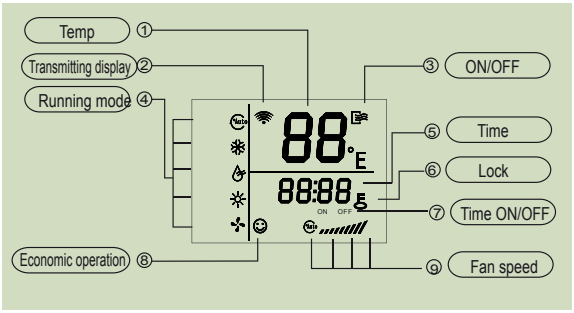
TCONTRM05A **TCONTR51CE**

Portable device

The wireless remote controller is a portable control device that enables users to control the A/C anywhere within a distance of 11m.

Simplified user interface

Users can synchronize the air conditioners' parameters with the display panel on the wireless remote controller to precisely control a room's environment.

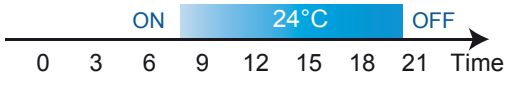


Background light

The background light allows users to operate the device in a dark room. The device lights up when a button is pressed, and turns off when a given operation is completed.

Built-in timer

The built-in daily timer offers the convenience of automatically starting and stopping the system at set times.



The indoor unit is set to work in automode from 8:00 to 20:00

Setting addresses

Besides the machine's auto addressing function, users can set the indoor unit's address on the wireless remote controller.

Specifications

Model	TCONTRM05A	TCONTR51CE
Dimensions (H×W×D)(mm)	150×65×20	140×60×15
Power (V)	1.5V(LR03/AAA)×2	

Control Systems - Wired Controller

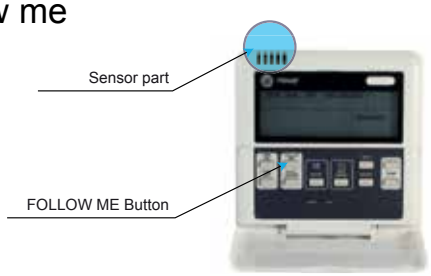
TCONTKJR10B
TCONT10BDPC

TCONTKJR12B

TCONTKJR29BKE
TCONTKJR120B
TCONTKJR86C

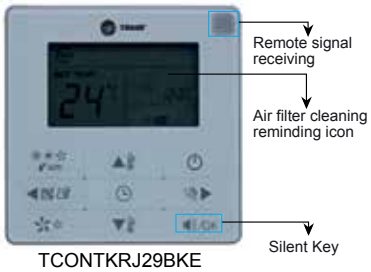
Functions

Follow me



With the FOLLOW ME function, the wired controller can detect the air temperature at the user's altitude instead that of the ceiling or floor. This helps making the room environment comfortable and the temperature accurate.

*The follow me function is available for TCONTKJR12B/TCONTKRJ29BKE model.



TCONTKRJ29BKE
(Touch-style key)

Remote signal receiving function

TCONTKRJ29BKE provides a signal receiver for wireless remote controller. The signal is then sent to the indoor unit.

Silent mode

Under the cooling, heating and auto mode,when operate the Silent mode, it can reduce the running noise through setting the fan speed to low. This will help you bring a quieter environment.

Air filter cleaning reminding

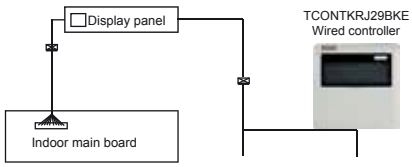
The air filter cleaning reminder function provided by TCONTKJR10B/ TCONTKRJ29BKE reminds users via the wired controller when the filter of an indoor unit needs cleaning.

Locking wired controller

The locking function can be used to prevent other people from using the controller.

Easy connection

The wired controller conveniently connects to the indoor unit's display panel via a connecting wire.



Specifications

	TCONTKJR10B TCONT10BDPC	TCONTKJR12B	
Dimensions (H×W×D)(mm)	120×120×15	120×120×15	
Power (V)	DC 5V		

Control Systems - Wired Controller

TCONTKJR90AE

Functions

Features

- General function
- Small and easy to install
- Suitable for all types of indoor units
- Can be stored in a mounting cabinet

TCONTKJR90AE

Built-in timer

The built-in daily timer offers the convenience of automatically starting and stopping the system at set times.

Specifications

Model	TCONTKJR90AE
Dimensions (H×W×D)(mm)	90×86×13
Power (V)	DC 5V

Control Systems - Centralized Controller

Indoor Centralized Controller

TCONTCCM03A

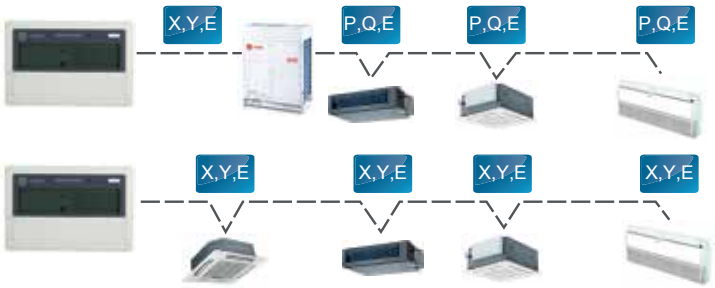
TCONTCCM30A

Functions

Centralized control

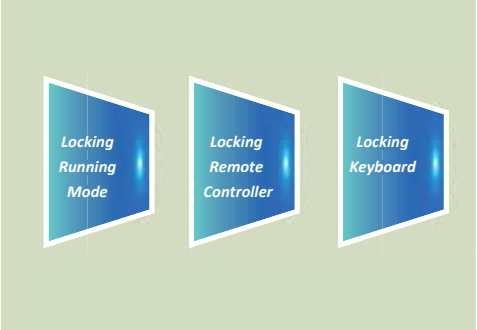
The centralized controller is a multifunctional device that can control up to 64 indoor units within a maximum connection length of 1,200m.

The device connects to the master outdoor units of Trane's newly designed products to simplify and centralize the wiring configuration. The two connection modes are as follows:



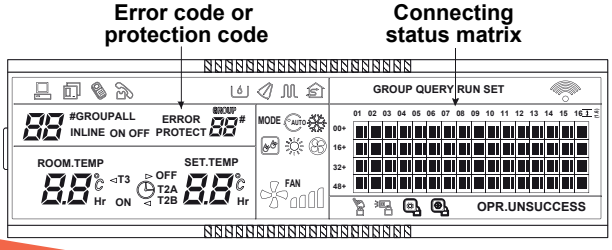
Three lock modes

Centralized controller provides a superior way to manage the indoor units. Users are able to make their own choice from locking the wireless controller, locking the running mode or lock the centralized controller's keyboard as they wish.



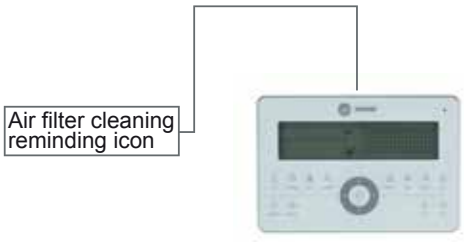
Indoor unit working status display

The centralized controller displays indoor units' working status and error codes so users can easily identify faults via checking the error codes table in the user's manual before contacting a service engineer.



Air filter cleaning reminding function

The air filter cleaning reminder function is only available on the touch-key central controller TCONTCCM30A. The "FL" icon indicates that the air filter in a given indoor unit needs cleaning.



TCONTCCM30A

Control Systems - Centralized Controller

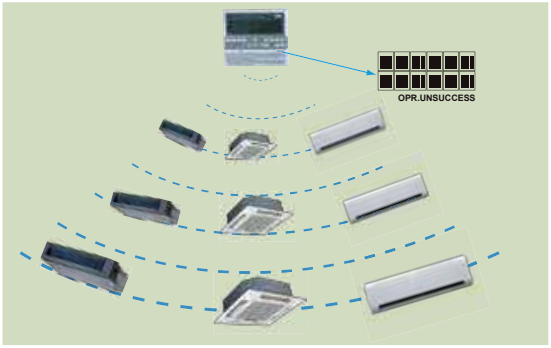
Functions

Stylish design

CCM's stylish design suits high-end environments. The keyboard lock function is used to prevent operational mistakes.

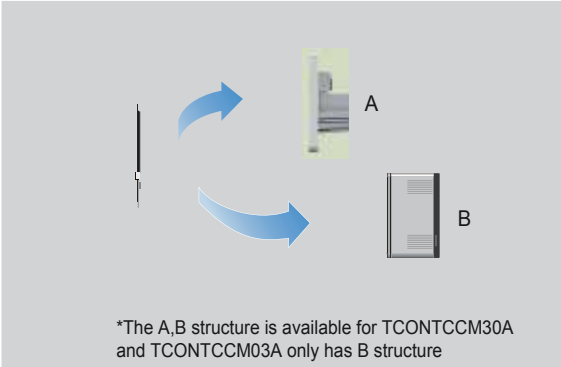
Single/unified control

The control object can be either a single unit or all units, which vastly simplifies the control process. Operation signal feedback ensures that all units are working in the correct mode.

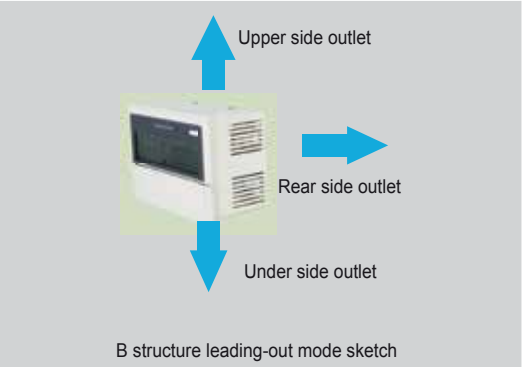


Easy installation

Centralized controller offers two different appearances to mostly suit the installation. The A structure must be embedded into the wall and the B structure doesn't need. Both of them are easy to operate.



*The A,B structure is available for TCONTCCM30A and TCONTCCM03A only has B structure



B structure leading-out mode sketch

Access to network monitoring

The centralized controller is able to bridge up to 64 indoor units on the network monitoring and building management systems.

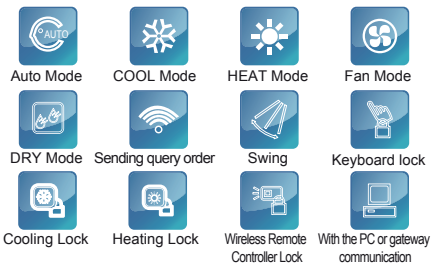
Specifications

Model	TCONTCCM03A	TCONTCCM30A
Dimensions (H*W*D)(mm)	179×119×74	180×122×78 and 180×122×68
Power (V)	198-242V(50/60Hz)	

Control Systems - Centralized Controller

Weekly schedule centralized

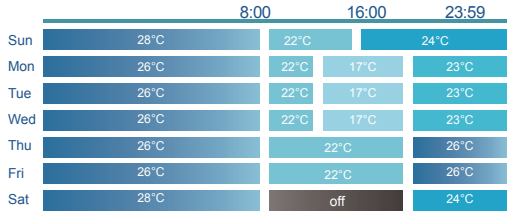
TCONTCCM09A



Functions

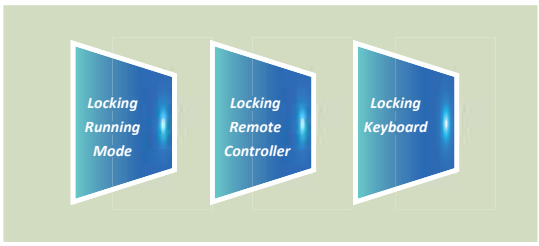
Weekly schedule

TCONTCCM09A can include up to 64 indoor units in the weekly schedule. Users can set up to 4 periods per day, and select the desired running mode and room temperature. The operating object can be a single indoor unit or all the indoor units.



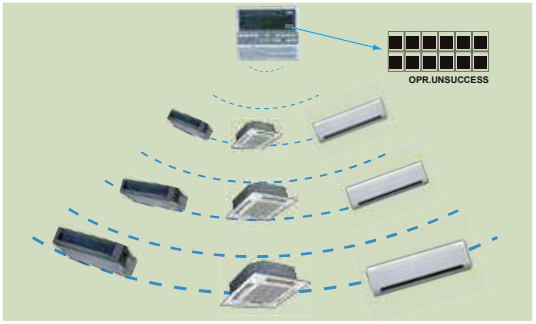
Three lock modes

Centralized controller TCONTCCM09A provides a superior way to manage the indoor units. Users are able to make their own choice from locking the wireless controller, locking the running mode or lock the TCONTCCM09A'



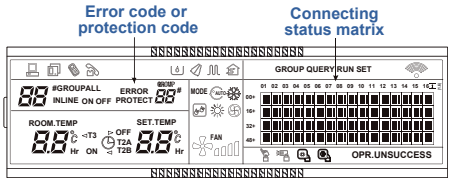
Single/unified control mode

The control object can be either a single unit or all units, which vastly simplifies the control process. Operation signal feedback ensures that all units are working in the correct mode.



Indoor unit working status display

TCONTCCM09A displays indoor units' working status and error codes so users can easily identify faults via checking the error codes table in the user's manual before contacting a service engineer.



Specifications

	TCONTCCM09A
Dimensions (H*W*D)(mm)	179×119×74
Power (V)	198-242V(50/60Hz)

Control Systems - Centralized Controller

Unified On/Off Controller

Unified controller design with graceful appearance and explicit panel.

TCONTKJR90BME

Functions

Unified control

TCONTKJR90BME offers on/off and heating/cooling functionality for indoor units based on preset temperatures to ensure easy management.

Centralized control

KJR-90B can be used to centrally control up to 16 indoor units.

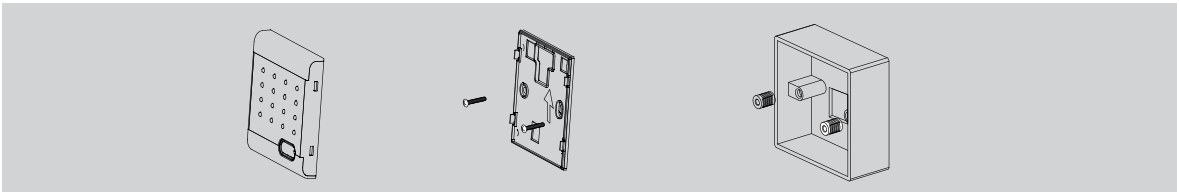
Light indicator

The LEDs on TCONTKJR90BME indicate the indoor units' running status for easy fault detection. The lights switch off automatically to save energy once a given operation is complete. The indicators are as follows:

Light	Blue	Red	Flash
Single On/Off key	Cooling/Fan	Heating	IDU Error
Unified On/Off key			EEPROM Error

Easy installation

TCONTKJR90BME can be easily mounted on the built-in cabinet:



Specifications

Model	TCONTKJR90BME
Dimensions (H*W*D)(mm)	90×86×8
Power (V)	DC 5V

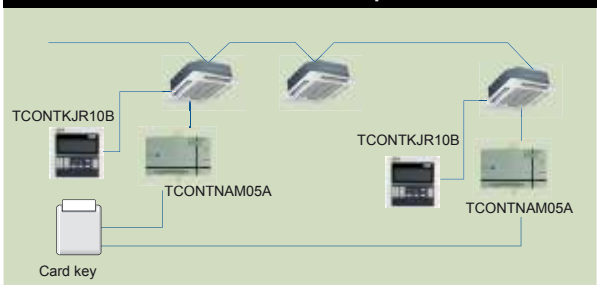
Control Systems - Accessories

Hotel card key interface module

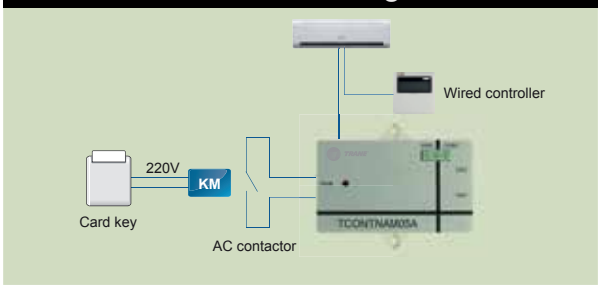
Cooperate with the wired controller to automate control.
Eliminates the need for high voltage power, making the device safe and steady.
Includes a build-in auto-restart function.

TCONTNAM05A

Installation example



Electrical wiring



Wired controller is necessary in this card-key system.

■ Specifications

Model	TCONTNAM05A
Dimensions (H*W*D)(mm)	86×72.8×15.5
Power (V)	DC 5V

Digital Power Meter

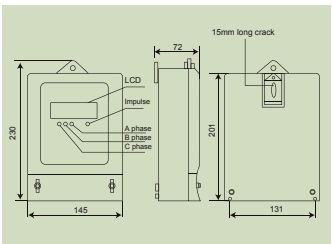
Calculates power consumption.
Does not need adjusting after long-term use.
Corresponds one outdoor unit to one digital power meter.

TCONTDTS636

Low power consumption

The digital power meter consumes minimal energy.
Voltage circuit: less than 2W/10VA
Current circuit: less than 2.5VA

Indications and installation



The digital power meter is tested after manufacture so it can be immediately deployment and used on-site. The LED indicators and installation schematic are shown in the figure on the left.

■ Specifications

Model	TCONTDTS636
Dimensions (H*W*D)(mm)	230×145×72
Power (V)	200V-500V(50/60Hz)

Control Systems - Accessories

Outdoor centralized controller

TCONTCCM02A

HEAT lock

COOL lock

With the outdoor units communication

With the PC or gateway communication

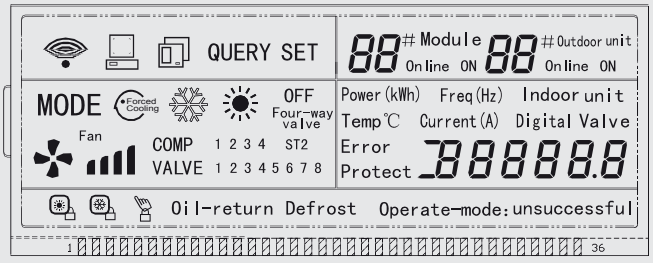
Forced Cooling

Low

Middle

High

Functions



Graph 2 LCD Screen

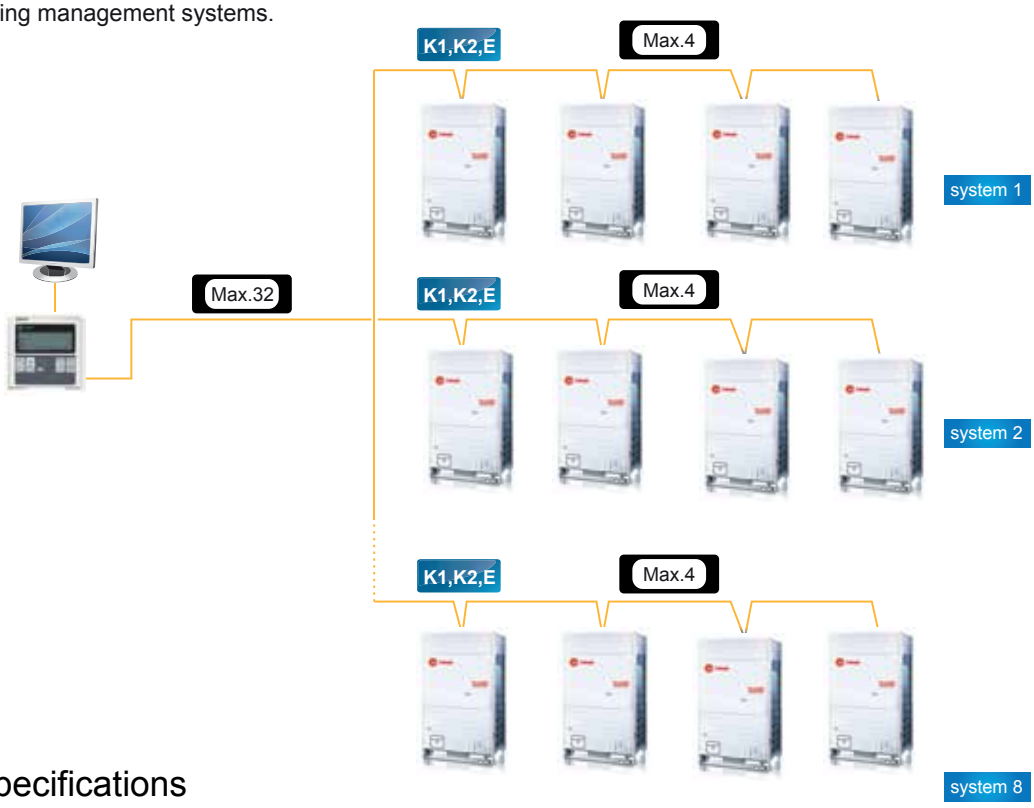
ODU parameters display

TCONTCCM02A enables users to easily check outdoor units' running status, including frequency, temperature, current, pressure, protection codes and error codes.

Control Systems - Accessories

Access to network monitoring

TCONTCCM02A can connect up to 8 refrigerant systems and 32 outdoor units to the network monitoring and building management systems.



■ Specifications

Model	TCONTCCM02A
Dimensions(H×W×D)(mm)	120×120×15
Power (V)	198-242V(50/60Hz)

Remote alarm controller

TCONTKJR32BE

Functions

Simple design

TCONTKJR32BE is specially designed for engineering applications. It does not display the ODU's working parameters, but it can connect to the alarm device when ODU is working abnormally, the RUN light will flash.

■ Specifications

Model	TCONTKJR32BE
Dimensions (H*W*D)(mm)	150×85×70
Power (V)	198-242V(50/60Hz)

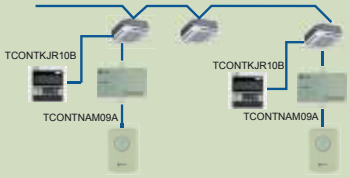
Control Systems - Accessories

Infra-red sensor controller

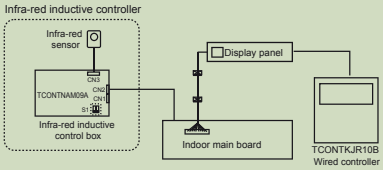
TCONTNAM09A

Automatically adjust the room environment.
Automatically extend the shutting down time, avoiding frequent ON/OFF.
Graceful appearance accommodates itself to different buildings.

Installation example



Electrical wiring



■ Specifications

Model	TCONTNAM09A
Dimensions(H×W×D)(mm)	Senor part: 46×30×25.6, Control box: 86×72.8×15.5
Power	Powered from display panel. Extra power unnecessary.

ERV wired controller

TCONTKJR27B

Functions

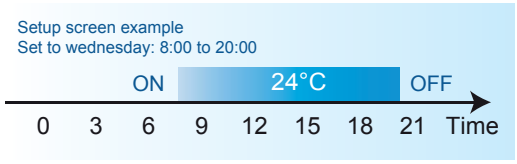
ERV controller

TCONTKJR27B is individually designed for ERV—Energy Recovery Ventilator. The ERV can work in the following modes: exhaust, air supply, bypass, heat exchange, and auto.

AUTO->HEAT EXCHANGE->
EXHAUST->BYPASS->AIR SUPPLY

Built-in timer

Built-in daily timer offers the convenience of automatically starting and stopping the ERV at the set times.



■ Specifications

Model	TCONTKJR27B
Dimensions(H×W×D)(mm)	120×120×15
Power (V)	198-242V(50/60Hz)

Control Systems - Accessories

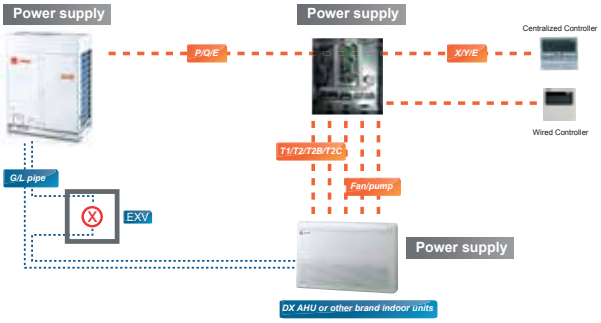
Control Box

TVR™ 4G functions inside.
Match the new outdoor units.

TAYKITAHUKZ01
TAYKITAHUKZ02
TAYKITAHUKZ03

Introduction

TAYKITAHUKZ01/TAYKITAHUKZ02/TAYKITAHUKZ03 is an independent control box that can connect a AHU to TVR system to realize centralized control with TVR system. Control box wiring is as follows:



■ Specifications

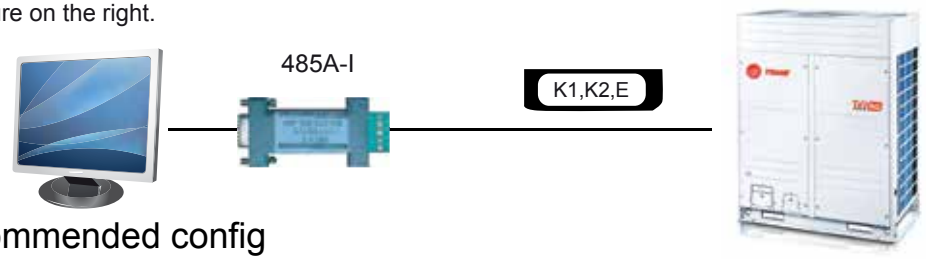
Model	TAYKITAHUKZ01/TAYKITAHUKZ02/TAYKITAHUKZ03
Dimensions(H×W×D)(mm)	335×375×150
Power (V)	220-240V~ 50Hz 208-230V~ 60Hz

Trane outdoor unit diagnosis software TCONTWPMCACE

Display the outdoor units' real-time running conditions.
Automatically outputs running status charts.

Wiring diagram

The diagnostic software applies to K1, K2, E of the outdoor units. The corresponding wiring diagram is shown in the figure on the right.



■ Recommended config

Operating system	WIN XP SP4/WIN 7
CPU	Pentium 4 2G or above
HDD	30G free space
Interface port	RS-232 terminal

Building Management System (BMS)

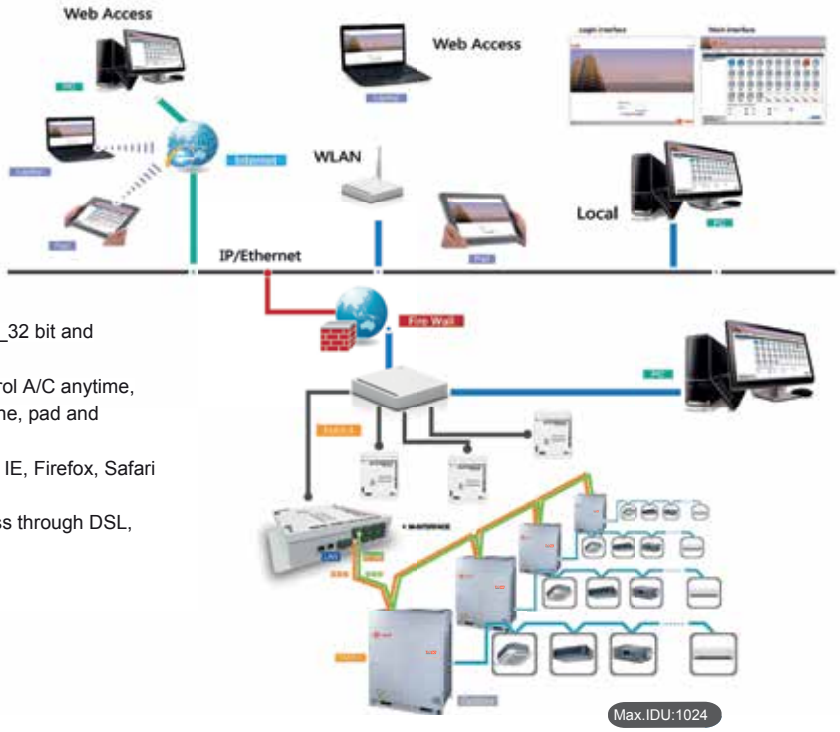
TIMSWENETMA
TCONTIF441V4PA58

Functions

TIMSWENETMA/TCONTIF441V4PA5, designed specifically to control TVR systems, is based on a centralized format and dedicated to the complete control and monitoring of all the system's functions. It can be used as a flexible multi-purpose system and applied to a variety of needs, according to the scale, purpose and control method of each building.

- Up to 4 TIMSWENETMA, 64 refrigerant systems, 1,024 indoor units, and 256 outdoor units can be controlled by one PC.
- Web Access
- User friendly operation
- Central building monitoring and control
- Lock control (individual controllers)
- Set temperature limit
- Proportional power distribution
- Annual schedule control
- Low-load operation indicate
- Generate operational history reports (daily, weekly, monthly)
- Fault display & Warning message
- Filter replacement reminder
- Emergency stop and Alarm signal output

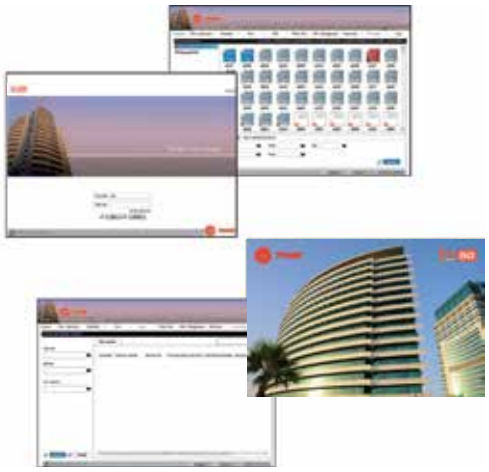
Network Control Application



- Can run on Window 7_32 bit and Window XP_32 bit.
- Can monitor and control A/C anytime, anywhere by PC, phone, pad and notebook computer.
- Support WEB access: IE, Firefox, Safari and Chrome.
- Enables remote access through DSL, VPNs and so on.

Building Management System (BMS)

Various Managements



Simple Operation and Management

Click & Operate, a user-friendly interface allows even non-experts to perform the building management system easily.

Data Management

Operational information of individual indoor units are monitored, allowing for distribution of power consumption at outdoor units.
Stores operation data on multiple systems and displays it in graphical format for visual management.
Uses TIM software to generate tenant reports and help building owners bill for energy use.

Electricity Charge Distribution(Patented)

Provides information on proportional electrical power distribution to optimize electricity consumption management.
Uses software to calculate electric power proportional distribution, output and save electricity consumption data for each indoor unit (or group) which is connected to the intelligent manager.
Applies the patented Trane Calculation Method to calculate consumption rates according to capacity demand which is based on various parameters: setting temperature, room temperature, running mode, rated HP, public areas, unused rooms, and nighttime use; outputs this information on a charge calculation sheet to evenly divide power consumption charges among tenants.

Hightlights

Web Access function

With the web access function, a PC, laptop computer or a smart phone can be used as a remote controller.

Visual Navigation

Clicking the jump button will display a list of all available screens. Clicking the back button will return to the previous screen.

Energy Saving Management

Based on a predetermined schedule, the Intelligent Manager executes capacity control and intermittent operations on all air conditioning units to maintain a high comfort index.

Data Backup

The Trane-interface will automatically back up data on the installed SD card (2GB) in case system failure occurs, such as: power failure or system dam. TIM software also stores the previous 3 months' operational data on the HDD.

Schedule Control

Automatically performs facility start/stop control, switches the operating mode, sets temperatures and enables/disables the remote control according to the present time schedule. 4 sections and 20 actions per day for each single unit or group.

Multiple Lauguages

Provides eight language settings:

English	French	Italian
Russian	German	Spanish
Simple Chinese	Traditional Chinese	

Warning Message

The system can receive error messages from air conditioning units in more than one buildings or structures via public phone lines.
*Requires the Trane "SMS Modem" to send automatic warning messages to designated phone numbers.

Electricity Charge Distribution

Electricity charges can be easily divided when billing users for air conditioning power charges; for example, for tenants in a commercial building, offices in a rented building, or rooms in a hotel.

Building Management System (BMS)

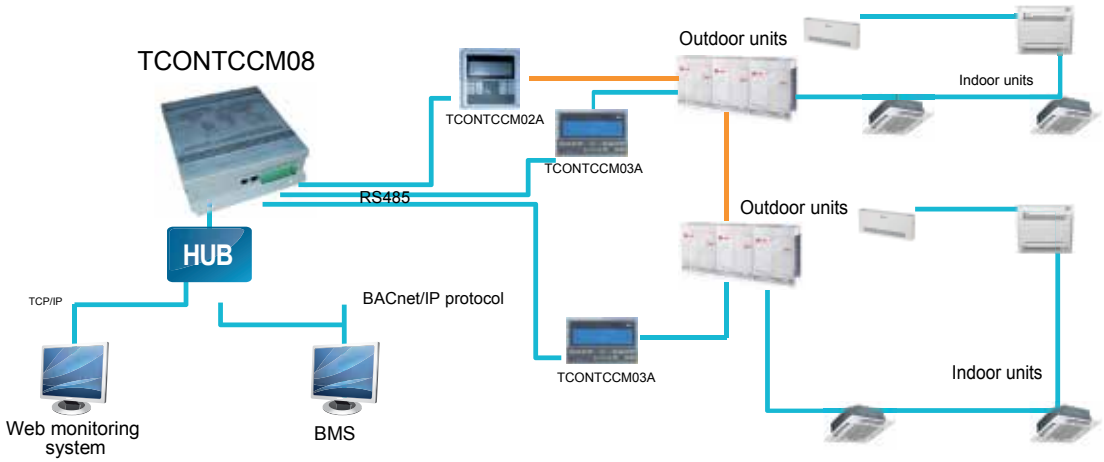
BACnet® BMS Gateway

Contains 4 groups of RS-485 communication ports and be able to connect up to 256 indoor units or 128 outdoor units to the BMS. Be free to connect to the BMS or not.

TCONTCCM08A

Network example

One TCONTCCM08A gateway can connect MAX.4 TCONTCCM02A or TCONTCCM03A,and each 485 port only can connect one TCONTCCM02A or one TCONTCCM03A.



Monitoring units online

TCONTCCM08A allows users to track units' operational status and change their running parameters on Internet Explorer for maximum control convenience

Wide compatibility

TCONTCCM08A has a wonderful adaptability to the BMS

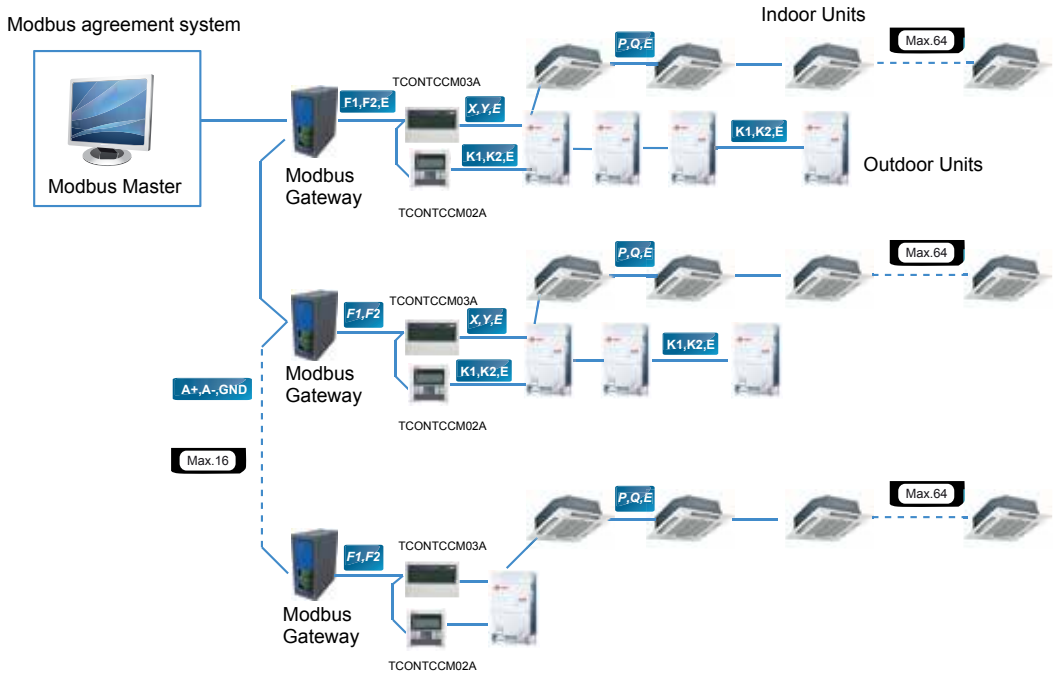
	Company	BMS software	Brand
1	SIMENS	APOGEE	
2	TRANE	Tracer Summit	
3	Honeywell	Alerton	
4	Schneider	Andover	
5	Johnson	METASYS	

Building Management System (BMS)

Modbus BMS Gateway

Supports Modbus protocol networks
Bridges the Trane central A/C system and the BMS
Establishes a Modbus network comprising up to 1,024 indoor units and 64 outdoor units
Transfers data in RTU mode
Provides a wide voltage range: 12-48V DC

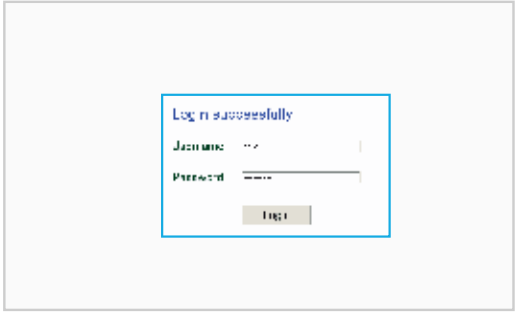
Network example



One Modbus gateway can bridge one refrigerant system with a PC or the Modbus master.

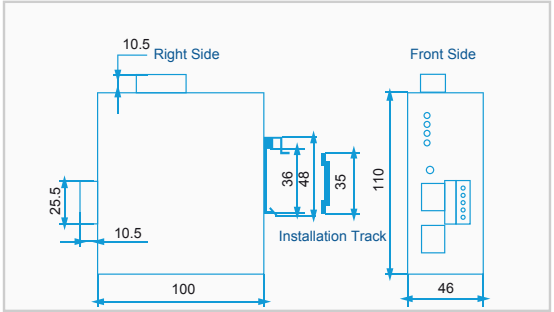
Config A/C System via Web

When the Modbus network is set, users can conveniently configure their A/C network system over the Internet using different TCP/IP browsers.



Dimensions

The Modbus Gateway is designed with a small size. It's equipped a installation track for the easy on-site installation.



Building Management System (BMS)

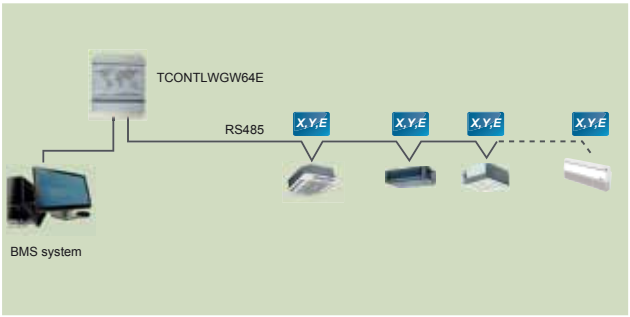
LonGW64® BMS Gateway

The new Lonworks gateway has been compliance with LonMark protocol.
It can connect up to 64 indoor units to the BMS.
It realize non-polarity communication,and also the application can be download online.

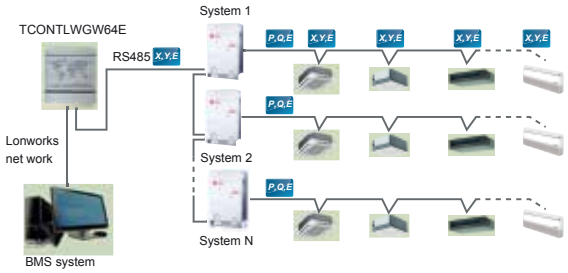
TCONTLWGW64E

Network example

(1) Connection method 1: Suitable for all of air conditioner systems and connect max.64 indoor units.



(2) Connection method 2: Only suitable for TVR system and connect max.64 indoor units.



■ Specifications

Model	TCONTLWGW64E
Dimensions (H*W*D)(mm)	31.9×25.1×6.1
Power (V)	177~265V AC(50Hz/60Hz)

Piping Accessories

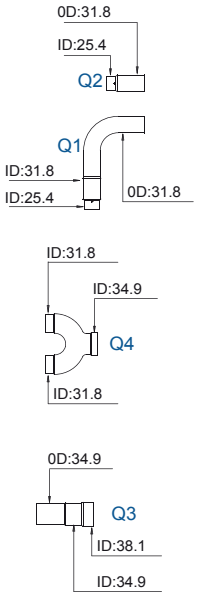
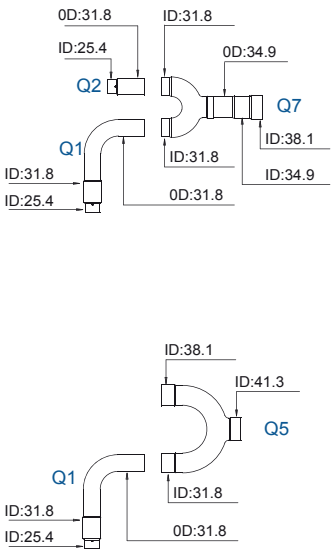
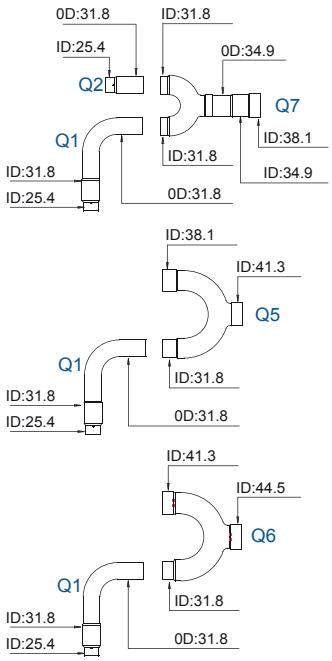
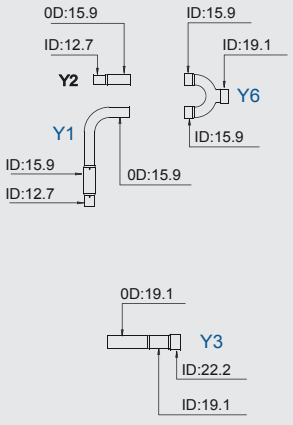
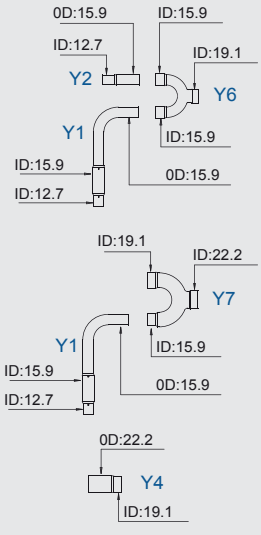
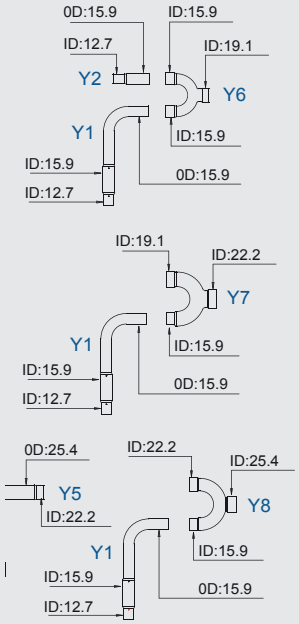
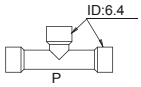
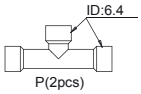
Outdoor / Indoor Branch Specification

Model	Features	Model name	Packing Size (mm)/ Gross Weight (kg)	Description
Branch joint for 410A outdoor unit		4TODK02C	455×55×185 / 1.4	For two outdoor units connection
		4TODK03C	465×85×265 / 2.7	For three outdoor units connection
		4TODK04C	465×115×255 / 4	For four outdoor units connection
Branch joint for R410A indoor unit		4TRDK01C	255×50×90 / 0.48	A*<16.6kW
		4TRDK02C	280×50×95 / 0.6	16.6≤A*<33kW
		4TRDK03C	310×70×125 / 0.87	33kW≤A*<66kW
		4TRDK04C	350×70×170 / 1.3	66kW≤A*<92kW
		4TRDK05C	365×110×205 / 1.6	92kW≤A*

A*:The total capacity of indoor units following this branch joint

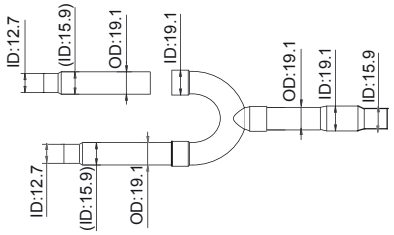
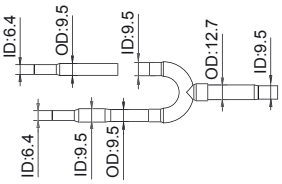
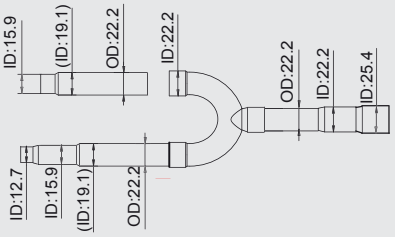
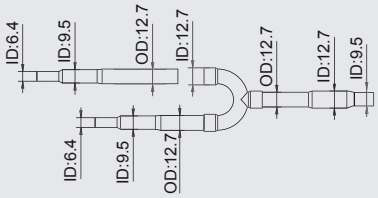
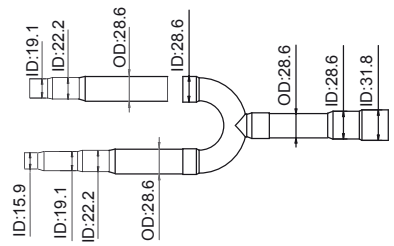
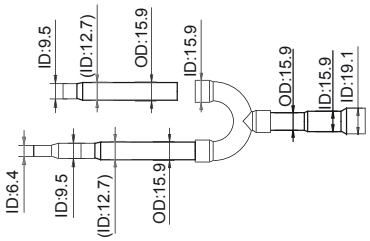
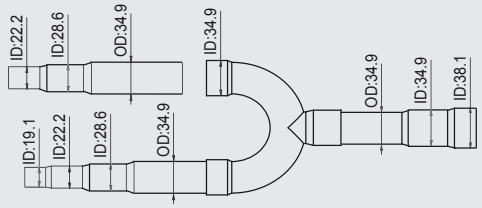
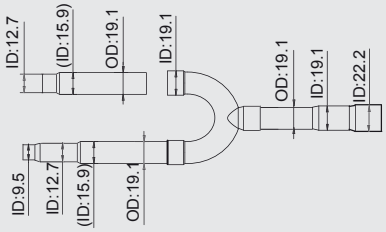
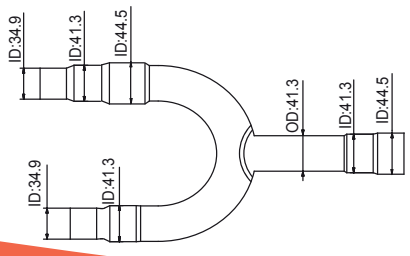
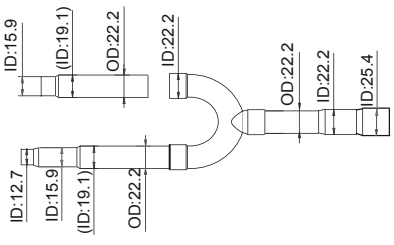
Piping Accessories

Outdoor branch drawing

Outdoor branch	4TODK02C	4TODK03C	4TODK04C
Gas side			
Liquid side			
Oil balance pipe			

Piping Accessories

Indoor Branch Drawing

Name	Gas side joints	Liquid Side Joints
4TRDK01C		
4TRDK02C		
4TRDK03C		
4TRDK04C		
4TRDK05C		

Notes

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TRANE®

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