TRANE®

LET'S GO BEYOND™

TVR™ WIZ

All DC INVERTER

Ultimate VRF System

R410A, 50Hz

Ingersoll Rand

TVR™ WIZ Systems, a new leap in technology and innovation

A proven solution from a trusted advisor

Trane is proud to present their new line of variable refrigerant systems, TVR™ WIZ.

The new TVR™ WIZ expanded portfolio of outdoor units comprises the largest capacity range for variable refrigerant systems in the industry. The maximum capacity of the largest modular system is 840MBH, a new mark in this category.

TVR™ WIZ represents a leap in efficiency and innovation.This is accomplished through the use of an optimized fan design with a DC fan motor, an improved high performance heat exchanger, Brushless Reluctance DC inverter scroll compressors and intelligent defrost capability.

TVR™ WIZ can be applied as the main HVAC system in a building or as a supplemental system that coordinates with an existing HVAC installation to meet different application requirements.

The TVR™ WIZ is ideal for buildings that have different requirements for future tenants, for buildings requiring tenant by tenant installation, operation and billing. The compact size of the indoor units, the small footprint and modularity of outdoor units and the use of small refrigerant pipes to transport energy between outdoor and indoor units make this product the ideal solution for existing buildings.

Individual control

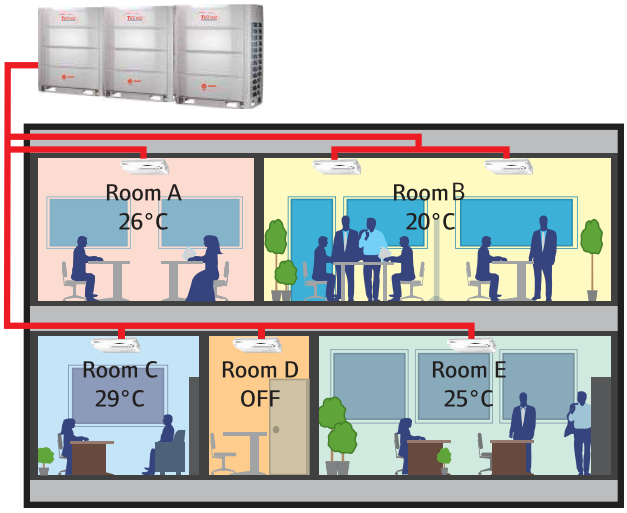
The use of individual LCD zone controllers, allows users to meet their individual comfort needs as the TVR™ WIZ system will control the refrigerant flow to each individual zone in order to meet the cooling or heating requirements.

TVR™ WIZ controls are factory integrated, and when combined with available remote temperature sensors, programmable controllers, centralized controller or integrated into a Building Management System (BMS) you will ensure the most efficient and reliable operation of an air conditioning system.

TVR™ WIZ is designed to maximize the comfort of the user by matching the cooling or heating load required in each zone with no overheating or under cooling, keeping the ambient temperature within 0.5°C from the established setpoint.

Indoor air quality

While cooling or heating, the TVR™ WIZ system also dehumidifies the indoor air and independently filters the air in each zone with no possibility of cross contamination between indendent zones.



TVR™ WIZ's individual independent control per zone

All functions necessary for filtration, cooling and heating, ventilation and dehumidification are fully integrated within the TVR™ WIZ system.

The indoor air quality can be improved when pretreated outside air is introduced into the building either through direct direct connection to the indoor units (4-way cassette units) or through our 100% fresh air concealed units.

The TVR™ WIZ system can handle the integration with external fresh air through different solutions.

Why TVR™ WIZ?

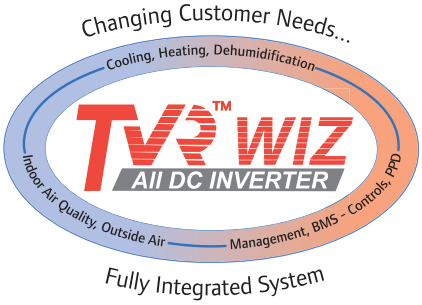
Energy Efficient System

The TVR™ WIZ 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 Efficiency (EER) increases at partial load when fewer indoor units require cooling/heating thus reducing the total power consumption. A TVR™ WIZ system does not run at full speed all the time and during a typical daily operation a TVR™ WIZ system will work for a majority of its time in the unloading zone with higher energy efficiency. During partial load the inverter compressor runs at reduced speed matching the required building load.

Energy Management

The optional centralized control system of the TVR™ WIZ system already has all the power management data or information points of each individual zone. Adding the power measurement software to the system allows the user to calculate the individual power consumption per zone, per floor or per building.



Flexible Design

The TVR™ WIZ System can be customized to the highest degree.The ability to use heat pump or heat recovery modular outdoor units and connect them together in series, offers the greatest design flexibility possible.

The optional high static pressure outdoor fan motor allows floor to floor installation of the outdoor units when this could be the optimal solution for a particular application.

The TVR™ WIZ system allows customization towards the future where zones can be easily added, replaced or removed depending on the changing needs of the end user.

DC Inverter Advantage

Energy Saving

The introduction of a high efficiency DC inverter scroll compressor driven by the most advanced control technology is designed to provide more precise operation and improved system efficiency.

The compressor speed is adapted to match the fluctuating cooling/heating load of the complete building while ensuring the appropriate individual variable supply of cooling/heating for each independent zone.

The control system uses PWM (Pulse Width Modulation) control that optimizes the efficiency once the setpoint temperature is reached, avoiding temperature fluctuation and thus reducing power consumption.

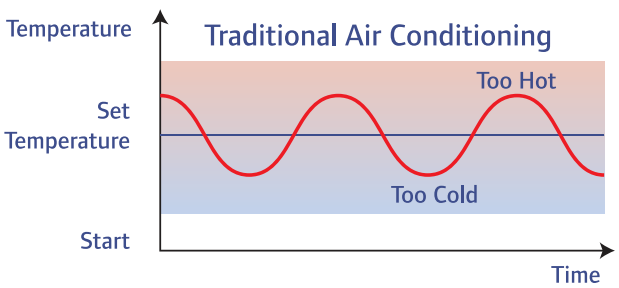
Accurate temperature control leading to Ideal comfort

Graph 1: Traditional air conditioners maintain the temperature by continually starting and stopping the compressor after reaching the temperature setpoints.

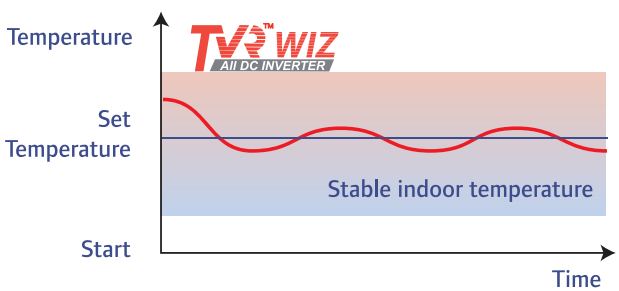
Traditional compressors require minimum time between starts and stops which leads to a wide fluctuation of indoor temperature.

Graph 2: With advanced digital variable refrigerant flow control technology, TVR™ WIZ system can accurately control the room temperature within a narrow temperature band thus avoiding wasting energy and creating the most comfortable environment. The setpoint will be stable at +/- 0.5° C.

Graph 1



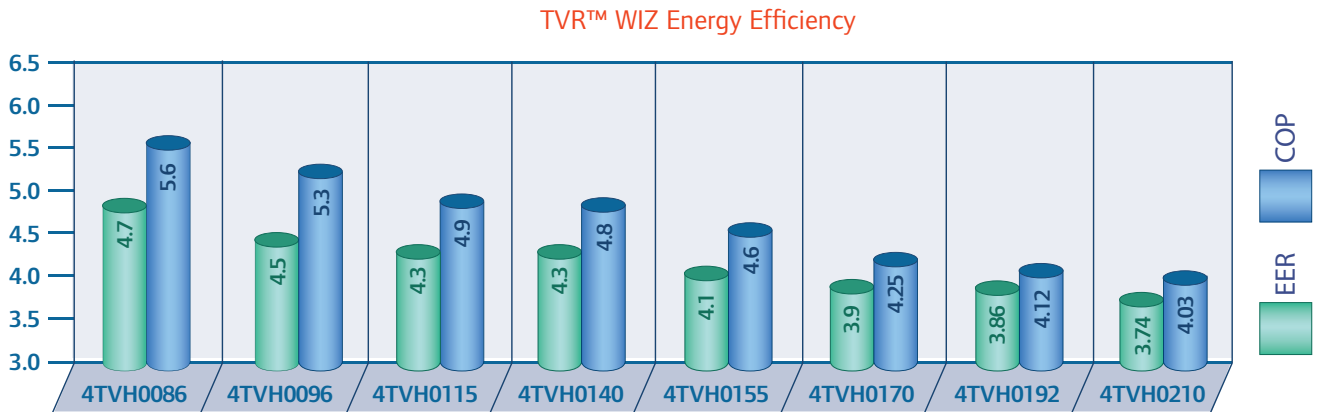
Graph 2



Longevity

DC Inverter scroll compressors do not start and stop all the time and thus will have a longer lifetime compared to standard compressors used in traditional systems.

The electronic control can adjust/optimize the compressor's operating conditions under extreme weather by changing the compressor speed during freezing winter or high summer outdoor temperatures. This greatly extends the lifetime operation of the compressor. The TVR™ WIZ system's auto diagnostic continually monitors the complete system and allows fast troubleshooting with the display of alarm codes on controllers or through the BMS interfaces.



DC Inverter scroll compressor technology advantages

- New structure-enhanced mid-frequency performance
- Especially designed scroll profile for R410A
- Advanced permanent magnet DC motor improves the low frequency band performance

The high efficiency R410A high pressure dome scroll compressor has a revolutionary asynchronous motor design using integrated permanent Neodymium magnets creating a magnetic field with extra reluctance torque which greatly increases the efficiencies in low and medium speeds.

Due to the magnetic field, the motor will place itself in the perfect position that will allow the compressor a soft start with the lowest amperage draw.

Environment - R410A refrigerant

The TVR™ WIZ system operates with the highly efficient R410A refrigerant with zero ozone layer depleting potential. R410A provides increased heat transfer and system performance; as a result it reduces the required amount of refrigerant, the size of required piping, and hence of general installation costs.

System Features

Self-Addressing of indoor units

- The outdoor unit will automatically distribute the addresses to indoor units without any manual settings (this function applies to vertical discharge heat pump units only).
- Wireless controller can modify every indoor unit's address.
- Max. 64 indoor units can be connected to one system and identified automatically.

Outdoor unit static pressure

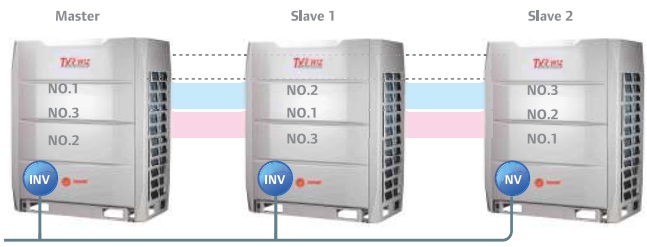
Optional adjustable high static outdoor fan motor is available for different applications. All units can be customized to reach 60Pa of external static pressure. The standard static pressure is 0-20Pa.

DC fan motor

The DC fan motor offers substantial improvements in operating efficiency compared to conventional AC motors, especially during low speed rotation.

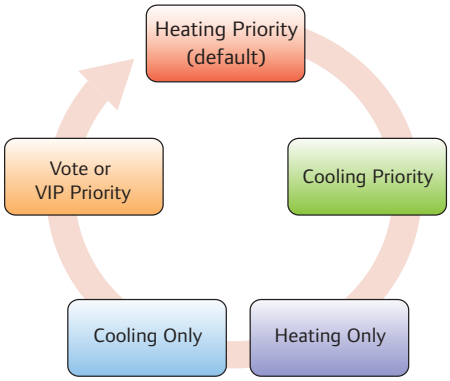
To achieve the minimum energy consumption and best performance, it controls the speed of DC fan according to the running load and system pressure.

This new DC fan motor also reduces noise level when working under certain part-load conditions



Auto-rotation of outdoor units

When more than one outdoor unit is installed within a modular system, the TVR™ WIZ system rotates the master unit automatically to ensure a longer life cycle of the complete system. This rotation takes place when the unit re-starts operation after it has reached a setpoint, after the oil return process, and after the defrost process (in heating operation).

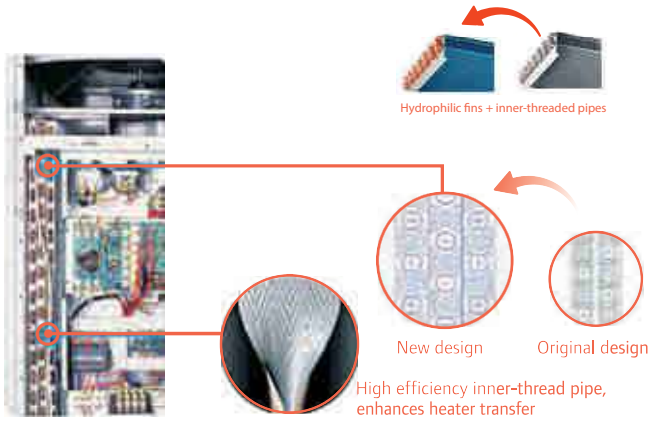


Priority Mode Selection

In order to reduce the potential for mode conflict and to satisfy priority needs, several types of mode selection are available.

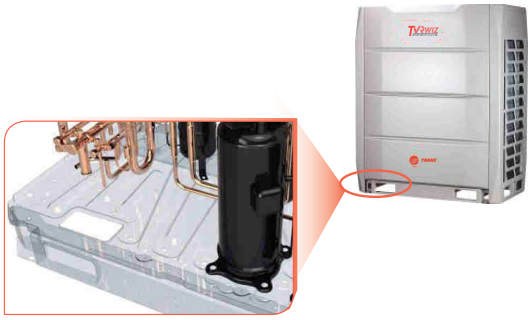
High Performance Heat Exchanger

The new TVR™ WIZ units have a high performance heat exchanger that allows better air flow and longer time of operation between defrost cycles.



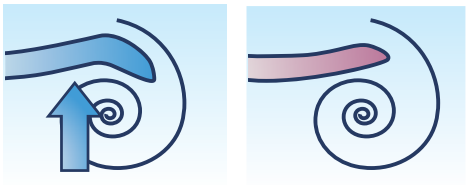
Installation Flexibility

The knock-out holes for refrigerant piping, as well as for power and communication cables, have been located in a variety of directions. The refrigerant piping and cables can be installed on the front, left, or right side of the unit. This flexible design allows for a more convenient installation.



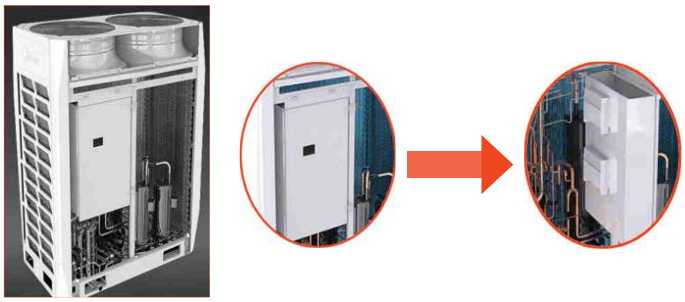
Fan blade with special profile

A blade with sharp edge and reduced curve increases the airflow rate and lowers vibration and airflow resistance.



Improved Serviceability

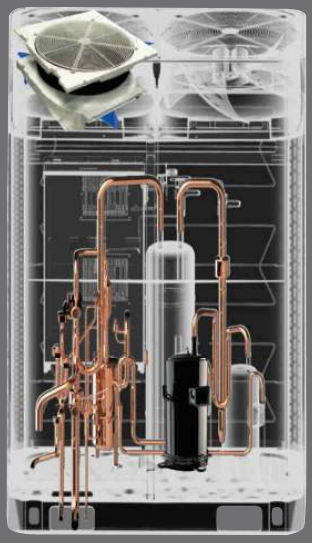
A new rotating control panel design allows for easier servicing of the outdoor unit. The control panel rotates up to 150° facilitating access for inspection and maintenance of the piping system. The previous models of TVR required dismounting of the control panel in order to access the unit internally. Today, this new design greatly reduces the service time. In addition, a small window has been incorporated into the panel, allowing a quick view of the system status.



Quiet Operation

The highly efficient all DC inverter compressors produce low sound levels especially when working at part load conditions. Together with a new fan grille design, a new fan blade shape, a thicker-wall cabinet (from 1mm to 1,2mm) and multiple noise reduction features, permits the TVR™ WIZ to achieve ultra low sound levels.

- New fan grille design
- DC fan motor
- Anti-vibration design of fan motor
- Soundproofing design of compressor
- High performance-Low noise compressor
- Anti-tremor type axial flow fan
- Three-dimensional simulation anti-vibration pipe design
- Resonance Avoidance Technology
- Anti-vibration design of the cabinet



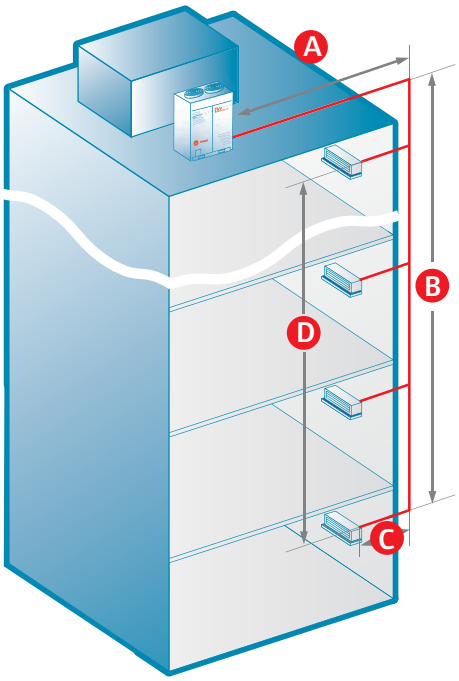
Flexibility & Reliability of TVR™ WIZ System

Piping Length Flexibilities

The unique concept of a pre-engineered system that arrives at the jobsite with a predefined piping layout per system and the necessary piping kits, allows for fast and correct installation of the system.

The actual piping length from the condensing unit to the indoor unit furthest away is 175m (200m equivalent) up to a total piping length of 1000m.

The height difference can be 90m equivalent for outdoor units being installed on the roof and 110m lift for outdoor units installed below or at ground level.



Maximum Actual piping length (A+B+C)	175m
Maximum height between indoor units (D)	30m
Maximum height between indoor units and outdoor units (B)	90m / 110m*
Total Actual pipe length	1000m

* when outdoor unit is below indoor units

Modular Design

Due to their compact modular design, the TVR™ WIZ outdoor units can be installed in rows and manifolded in series to a maximum of 840 MBH, allowing their connection to 64 indoor units thus providing a clean accessible installation. However, the 840 MBH outdoor units are capable of modulating to a minimum capacity of 16.8 MBH with only one inverter compressor running.

The load demand for the all inverter compressor units, is better matched through a smooth linear operation that allows them to perform with maximum precision. The establishment of an operating frequency range between 60-140Hz, guarantees the highest attainable efficiency. Their compact shape makes them transportable by elevator.

Back Up function

When a module fails, whether it is a slave unit or a master unit, the other modules can continue to work together as one system provided the gas/liquid valves of the broken down unit are closed.

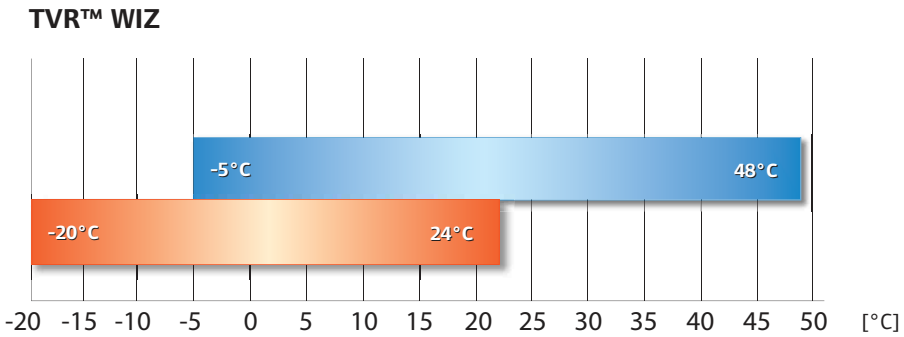
As the load increases the different condensing modules will work as a master slave system optimizing the performance and energy efficiency.

All inverter compressors

The TVR™ WIZ outdoor units utilize all inverter compressors which adds more flexibility and reliability to the system as compared to the combination of fixed and inverter compressor technology. The ability to perform at higher compressor speeds allows the system to reach longer piping distances (up to 175m) and more comfort zones (up to 1000m of total piping length). The automatic rotation function balances the running hours of all outdoor units' inverter compressors. This feature increases the overall lifespan of the inverter compressors, further increasing the system's reliability.

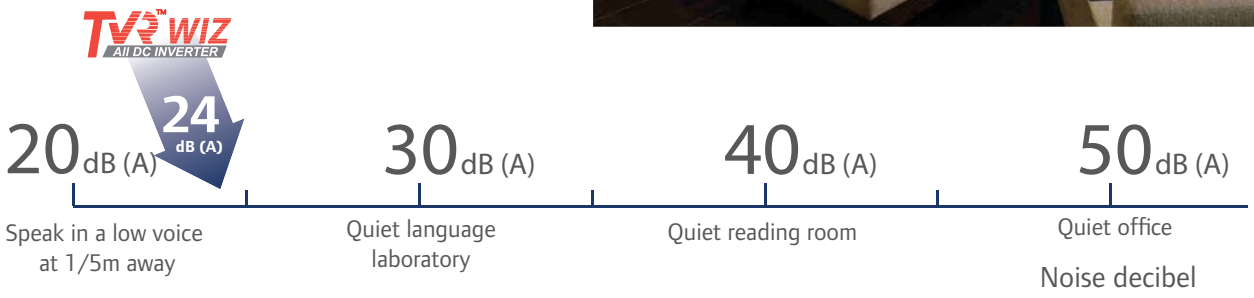
Operation Range

- The TVR™ WIZ can operate in a wide range of outdoor conditions. It can function from -5°C to 48°C in cooling mode and from -20°C to 24°C in heating mode.



Indoor Comfort Level

- The integration of DC inverter technology used in the condensing unit results in an industry leading low noise level, i.e., 58 dB(A) at 1m for a 86 MBH outdoor unit.
- The noise level of the indoor units is low due to the especially designed fans and heat exchanger designs.
- The variety of ducted indoor units allow for flexible design to meet any sound requirements per zone.



* applicable for low air volume operation of 4TVL0007 units.

Outdoor Units

TVR™ WIZ Modular Heat Pump Outdoor Units 50 Hz

- Choice of 3 ~ power supplies:
  50 Hz 380V-415V
- 8 different modules can work individually or in a master-slave configuration of up to 4 outdoor units
- Any outdoor unit module in a group can be the designated master or slave
- All TVR™ WIZ outdoor units have the same height and depth allowing for row installation
- Improved Linear Capacity Control with all inverter compressors
- Continuous cooling down to -5°C and heating down to -20°C
- No mechanical rooms needed; *fits* in elevator
- Outdoor units allow more indoor units to be connected at same capacities compared to fixed+inverter compressor models

Comfort

- Auto restart function no need for re-programming
- Low noise design
- Back up function

4TVH0086-115 4TVH00140-210

Service

- Easy maintenance with the self diagnostic function and test switch
- Flexible start up procedure and automated piping / wiring checks
- Self-addressing of indoor units
- Optional service software

Sound Pressure at 1m

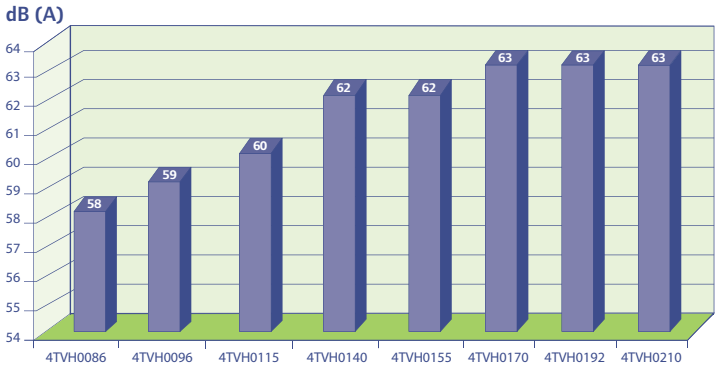


Table of Outdoor Unit Connections

Combined ODU	Cooling Capacity HP												
HP	8	10	12	14	16	18	20	22	24	26	28	30	32
MBH	86	96	115	140	155	170	192	210	229	249	266	287	305
4TVH0086ED	X												
4TVH0096ED		X								X	X	X	X
4TVH0115ED			X						XX				
4TVH0140ED				X									
4TVH0155ED					X					X			
4TVH0170ED						X					X		
4TVH0192ED							X					X	
4TVH0210ED								X					X
Max No. Indoor	13	16	20	23	26	29	33	36	39	43	46	50	53

Combined ODU	Cooling Capacity HP																												
HP	34	36	38	40	42	44	46	48	50	52	54	56	58	60	62	64	66	68	70	72	74	76	78	80	82	84	86	88
MBH	324	341	363	380	401	420	438	459	476	496	515	534	551	573	590	611	629	648	669	686	706	725	744	761	783	800	821	840
4TVH0086ED																												
4TVH0096ED								X	X	X	X								X	X	X	X						
4TVH0115ED	X						XX					X						XX					X					
4TVH0140ED																												
4TVH0155ED			X					X						X					X						X			
4TVH0170ED		XX		X					X						X					X				XX		X		
4TVH0192ED					X					X			XX			X					X						X	
4TVH0210ED	X		X	X	X	XX	X	X	X	X	XX	XX	X	XX	XX	XX	XXX	XX	XX	XX	XX	XXX	XXX	XX	XXX	XXX	XXX	XXXX
Max No. Indoor	56	59	63	64	64	64	64	64	64	64	64	64	64	64	64	64	64	64	64	64	64	64	64	64	64	64	64	64

* Factory recommended combinations achieve maximum capacity using the least number of outdoor units possible. Nevertheless, all outdoor unit combinations are possible up to four (4) outdoor units per module.

TVR™ WIZ (All DC Inverter) - Features

Wide range of outdoor units

The outdoor units capacity range from 8HP up to 88HP in 2HP increment. Maximum 64 indoor units with capacity up to 130% of total outdoor units can be connected in one refrigeration system.


8-12HP


14-22HP


24-44HP

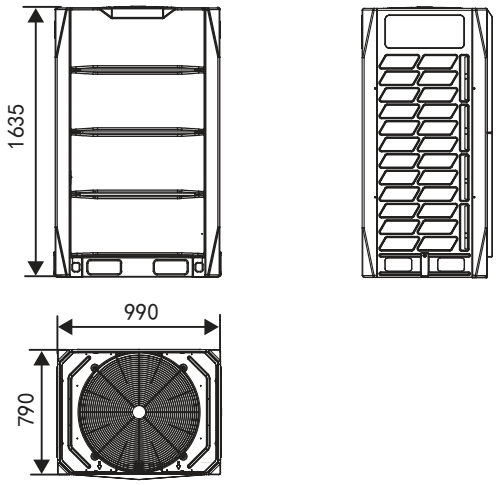

46-66HP


68-88HP

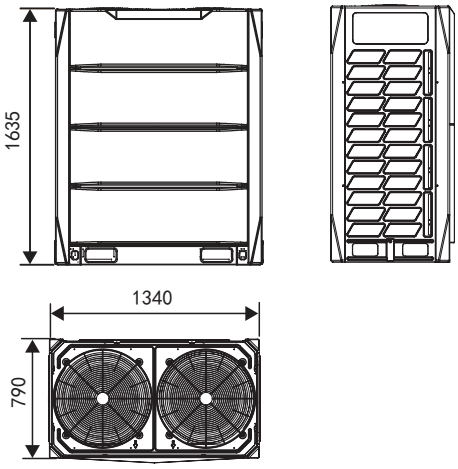
Outdoor Unit Dimensions

Dimension Unit: mm

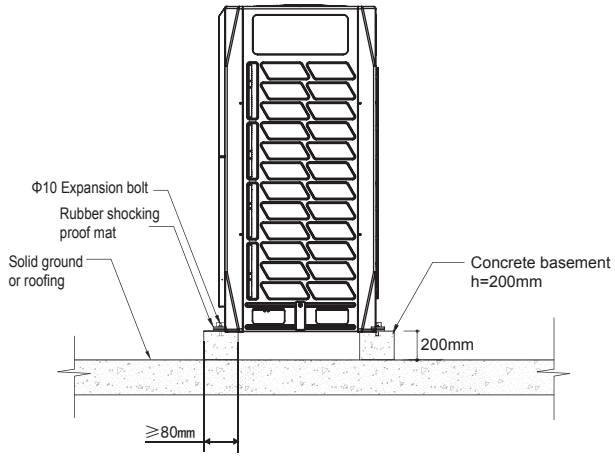
8~12 HP



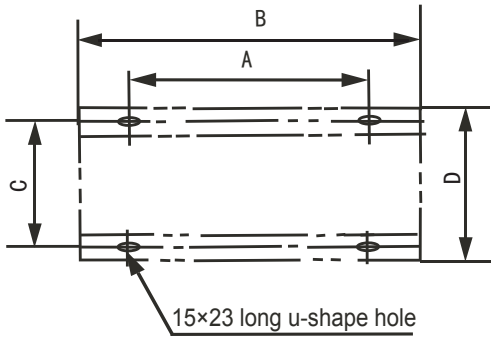
14~22 HP



Installation dimension Unit: mm



Screw bolt position



Model			4TVH0086ED000AA	4TVH0096ED000AA	4TVH0115ED000AA	4TVH0140ED000AA	4TVH0155ED000AA	4TVH0170ED000AA	4TVH0192ED000AA	4TVH0210ED000AA	4TVH0229ED000AA	4TVH0249ED000AA
Constituent Units											4TVH0115ED	4TVH0096ED
											4TVH0115ED	4TVH0155ED
Power supply		V-Ph-Hz	380~415V 3Ph~50Hz	380~415V 3Ph~50Hz	380~415V 3Ph~50Hz	380~415V 3Ph~50Hz	380~415V 3Ph~50Hz	380~415V 3Ph~50Hz	380~415V 3Ph~50Hz	380~415V 3Ph~50Hz	380~415V 3Ph~50Hz	380~415V 3Ph~50Hz
Cooling (*1)	Capacity	kW	25.2	28.0	33.5	40.0	45.0	50.0	56.0	61.5	67.0	73.0
		Btu/h	86,000	95,500	114,300	136,500	153,500	170,600	191,100	209,800	228,600	249,000
	Power input	kW	5.36	6.22	7.79	9.30	10.98	12.82	14.51	16.44	15.58	17.20
	EER	W/W	4.7	4.5	4.3	4.3	4.1	3.9	3.86	3.74	4.3	4.24
Heating (*1)	Capacity	kW	27.0	31.5	37.5	45.0	50.0	56.0	63.0	69.0	75.0	81.5
		Btu/h	92,100	107,500	128,000	153,500	170,600	191,100	214,900	235,400	256,000	278,100
	Power input	kW	4.82	5.94	7.65	9.38	10.87	13.18	15.29	17.12	15.31	16.81
	COP	W/W	5.60	5.30	4.90	4.80	4.60	4.25	4.12	4.03	4.90	4.85
Connectable	Maximum		13	16	20	23	26	29	33	36	39	43
Indoor unit	Cooling capacity range	kW	12.6 - 32.76	14 - 36.4	16.75 - 43.55	20 - 52	22.5 - 58.5	25 - 65	28 - 72.8	30.75 - 79.95	33.5 - 87.1	36.5 - 94.9
Compressor Configuration			Hermetically sealed scroll type									
RLA		A	7.2	8.7	9.8	7.1×2	7.8×2	10+6	10.9×2	11.7×2	9.8×2	8.7+7.8x2
Air flow		m³/h	12,000	12,000	12,000	14,000	14,000	16,000	16,000	16,000	24,000	26,000
		CFM	7,063	7,063	7,063	8,240	8,240	9,417	9,417	9,417	14,126	15,303
Sound level (2*)		dB (A)	58	59	60	62	62	63	63	63	64	65
Outdoor Unit Dimention	Body (HxWxD)	mm	1,635x990x790			1,635x1,340x790					(1,635x990x790) +(1,635x1,340x790)	
	Packing (HxWxD)	mm	1,805x1,055x855			1,805x1,405x855					(1,805x1,055x855) +(1,805x1,405x855)	
Net weight		kg	219		237	297		305	340		219+297	
Refrigerant Type and Charged Volumn		kg	R-410A (9)	R-410A (9)	R-410A (11)	R-410A (13)	R-410A (13)	R-410A (13)	R-410A (16)	R-410A (16)	R-410A (9+13)	
Refrigerant piping (*3)	Liquid side	mm	Φ12.7	Φ12.7	Φ15.9	Φ15.9	Φ15.9	Φ19.1	Φ19.1	Φ19.1	Φ19.1	
	Gas side	mm	Φ25.4	Φ25.4	Φ28.6	Φ31.8	Φ31.8	Φ31.8	Φ31.8	Φ31.8	Φ31.8	

Model			4TVH0266ED000AA	4TVH0287ED000AA	4TVH0305ED000AA	4TVH0324ED000AA	4TVH0341ED000AA	4TVH0363ED000AA	4TVH0380ED000AA	4TVH0401ED000AA	4TVH0420ED000AA	4TVH0438ED000AA
Constituent Units			4TVH0096ED	4TVH0096ED	4TVH0096ED	4TVH0115ED	4TVH0170ED	4TVH0155ED	4TVH0170ED	4TVH0192ED	4TVH0210ED	4TVH0115ED
			4TVH0170ED	4TVH0192ED	4TVH0210ED	4TVH0210ED	4TVH0170ED	4TVH0210ED	4TVH0210ED	4TVH01210ED	4TVH0210ED	4TVH0115ED
												4TVH0210ED
Power supply		V-Ph-Hz	380~415V 3Ph~50Hz	380~415V 3Ph~50Hz	380~415V 3Ph~50Hz	380~415V 3Ph~50Hz	380~415V 3Ph~50Hz	380~415V 3Ph~50Hz	380~415V 3Ph~50Hz	380~415V 3Ph~50Hz	380~415V 3Ph~50Hz	380~415V 3Ph~50Hz
Cooling (*1)	Capacity	kW	78.0	84.0	89.5	95.0	100.0	106.5	111.5	117.5	123.0	128.5
		Btu/h	266,100	286,600	305,300	324,100	341,200	363,300	380,400	400,900	419,600	438,400
	Power input	kW	19.04	20.73	22.67	24.23	25.64	27.42	29.26	30.95	32.89	32.03
	EER	W/W	4.1	4.05	3.95	3.92	3.90	3.88	3.81	3.80	3.74	4.01
Heating (*1)	Capacity	kW	87.5	94.5	100.5	106.5	112.0	119.0	125.0	132.0	138.0	144.0
		Btu/h	298,600	322,400	342,900	363,400	382,200	406,000	426,500	450,300	470,800	91,400
	Power input	kW	19.12	21.23	23.06	24.77	26.35	27.99	30.30	32.41	34.24	32.43
	COP	W/W	4.58	4.45	4.36	4.30	4.25	4.25	4.13	4.07	4.03	4.44
Connectable	Maximum		46	50	53	56	59	63	64	64	64	64
Indoor unit	Cooling capacity range	kW	39 - 101.4	42 - 109.2	44.75 - 116.35	47.5 - 123.5	50 - 130	53.25 - 138.45	55.75 - 144.95	58.75-152.75	61.5-159.9	64.25-167.05
Compressor Configuration												
RLA		A	8.7+10+6	8.7+10.9×2	8.7+11.7×2	9.8+11.7×2	(10+6)×2	7.8×2+11.7×2	10+6+11.7×2	10.9×2+11.7×2	11.7x4	9.8x2+11.7x2
Air flow		m³/h	28,000	28,000	28,000	28,000	32,000	30,000	32,000	32,000	30,000	32,000
		CFM	16,480	16,480	16,480	16,480	18,834	17,657	18,834	18,834	18,834	23,543
Sound level (2*)		dB (A)	65	65	65	65	66	66	66	66	66	66
Outdoor Unit Dimention	Body (HxWxD)	mm	(1,635x990x790)+(1,635x1,340x790)				(1,635x1,340x790) x 2					(1,635x990x790) x 2 + (1,635x1,340x790)
	Packing (HxWxD)	mm	(1,805x1,055x855) + (1,805x1,405x855)				(1,805x1,405x855) x 2					(1,805x1,055x855) x 2 + (1,805x1,405x855)
Net weight		kg	219 + 305	219 + 340	219 + 340	237 + 340	305 x 2	297 + 340	305 + 340	340 x 2		237x2+340
Refrigerant Type and Charged Volumn		kg	R-410A (9+13)	R-410A (9+16)	R-410A (9+16)	R-410A (9+16)	R-410A (11+16)	R-410A (13 x 2)	R-410A (13+16)	R-410A (16 x 2)		R-410A (11x2+16)
Refrigerant piping (*3)				Φ19.1	Φ19.1	Φ19.1	Φ19.1	Φ19.1	Φ19.1	Φ19.1	Φ19.1	Φ19.1
	Gas side	mm	Φ31.8	Φ31.8	Φ31.8	Φ31.8	Φ38.1	Φ38.1	Φ38.1	Φ38.1	Φ38.1	Φ38.1

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.

Model			4TVH0459ED000AA	4TVH0476ED000AA	4TVH0496ED000AA	4TVH0515ED000AA	4TVH0534ED000AA	4TVH0551ED000AA	4TVH0573ED000AA	4TVH0590ED000AA	4TVH0611ED000AA	4TVH0629ED000AA	4TVH0648ED000AA
Constituent Units			4TVH0096ED	4TVH0096ED	4TVH0096ED	4TVH0096ED	4TVH0115ED	4TVH0170ED	4TVH0155ED	4TVH0170ED	4TVH0192ED	4TVH0210ED	4TVH0115ED
			4TVH0155ED	4TVH0170ED	4TVH0192ED	4TVH0210ED	4TVH0210ED	4TVH0170ED	4TVH0210ED	4TVH0210ED	4TVH0210ED	4TVH0210ED	4TVH0115ED
			4TVH0210ED	4TVH0210ED	4TVH0210ED	4TVH0210ED	4TVH0210ED	4TVH0210ED	4TVH0210ED	4TVH0210ED	4TVH0210ED	4TVH0210ED	4TVH0210ED
													4TVH0210ED
Power supply		V-Ph-Hz	380-415V 3Ph-50Hz	380-415V 3Ph-50Hz	380-415V 3Ph-50Hz	380-415V 3Ph-50Hz	380-415V 3Ph-50Hz	380-415V 3Ph-50Hz	380-415V 3Ph-50Hz	380-415V 3Ph-50Hz	380-415V 3Ph-50Hz	380-415V 3Ph-50Hz	380-415V 3Ph-50Hz
Cooling (*1)	Capacity	kW	134.5	139.5	145.5	151.0	156.5	161.5	168.0	173.0	179.0	184.5	190.0
		Btu/h	458,800	475,900	496,400	515,100	533,900	551,000	573,100	590,200	610,700	629,400	648,200
	Power input	kW	33.64	35.49	37.17	39.11	40.68	42.08	43.86	45.71	47.40	49.33	48.47
	EER	W/W	4.00	3.93	3.91	3.86	3.85	3.84	3.83	3.78	3.78	3.74	3.92
Heating (*1)	Capacity	kW	150.5	156.5	163.5	169.5	175.5	181.0	188.0	194.0	201.0	207.0	213.0
		Btu/h	513,500	534,000	557,800	578,300	598,800	617,600	641,400	661,900	685,700	706,200	726,800
	Power input	kW	33.93	36.24	38.36	40.19	41.90	43.47	45.11	47.42	49.53	51.36	46.13
	COP	W/W	4.44	4.32	4.26	4.22	4.19	4.16	4.17	4.09	4.06	4.03	4.62
Connectable	Maximum		64	64	64	64	64	64	64	64	64	64	64
Indoor unit	Cooling capacity range	kW	67.25 - 174.85	69.75 - 181.35	72.75 - 189.15	75.5 - 196.3	78.25 - 203.45	80.75 - 209.95	84 - 218.4	86.5 - 224.9	89.5 - 232.7	92.25 - 239.85	95 - 247
Compressor Configuration													
RLA		A	8.7+7.8×2+11.7×2	8.7+10+6+11.7×2	8.7+10.9×2+11.7×2	8.7+11.7×4	9.8+11.7×4	(10+6)×2+11.7×2	7.8×2+11.7×4	10+6+11.7×4	10.9×2+11.7×4	11.7×6	9.8×2+11.7×4
Air flow		m³/h	42,000	44,000	44,000	44,000	44,000	48,000	46,000	48,000	48,000	48,000	56,000
		CFM	24,720	25,897	25,897	25,897	25,897	28,252	27,075	28,252	28,252	28,252	32,960
Sound level (2*)		dB (A)	67	67	67	67	67	68	68	68	68	68	68
Outdoor Unit Dimention	Body (HxWxD)	mm	(1,635x990x790) + (1,635x1,340x790) x 2			(1,635x990x790) + (1,635x1,340x790) x 2		(1,635x1,340x790) x 3					(1,635x990x790) x 2 + (1,635x1,340x790) x 2
	Packing (HxWxD)	mm	(1,805x1,055x855) + (1,805x1,405x855) x 2			(1,805x1,055x855) + (1,805x1,405x855) x 2		(1,805x1,405x855) x 3					(1,805x1,055x855) x 2 + (1,805x1,405x855) x 2
Net weight		kg	219 + 297 + 340	219 + 305 + 340	219 + 340x2	219 + 340x2	237 + 340x2	305x2 + 340	297 + 340x2	305 + 340x2	340 x 3	340 x 3	237x2 + 340x2
Refrigerant Type and Charged Volumn		kg	R-410A (9+13+16)	R-410A (9+13+16)	R-410A (9+16x2)	R-410A (9+16x2)	R-410A (11+16x2)	R-410A (13x2+16)	R-410A (13+16x2)	R-410A (13+16x2)	R-410A (16x3)	R-410A (16x3)	R-410A (11x2+16x2)
Refrigerant piping (*3)	Liquid side	mm	Φ19.1	Φ19.1	Φ22.2	Φ22.2	Φ22.2	Φ22.2	Φ22.2	Φ22.2	Φ22.2	Φ22.2	Φ25.4
	Gas side	mm	Φ38.1	Φ38.1	Φ41.3	Φ41.3	Φ41.3	Φ41.3	Φ41.3	Φ41.3	Φ41.3	Φ41.3	Φ44.5

Model			4TVH0669ED000AA	4TVH0686ED000AA	4TVH0706ED000AA	4TVH0725ED000AA	4TVH0744ED000AA	4TVH0761ED000AA	4TVH0783ED000AA	4TVH0800ED000AA	4TVH0821ED000AA	4TVH0840ED000AA
Constituent Units			4TVH0096ED	4TVH0096ED	4TVH0096ED	4TVH0096ED	4TVH0115ED	4TVH0170ED	4TVH0155ED	4TVH0170ED	4TVH0192ED	4TVH0210ED
			4TVH0155ED	4TVH0170ED	4TVH0192ED	4TVH0210ED	4TVH0210ED	4TVH0170ED	4TVH0210ED	4TVH0210ED	4TVH0210ED	4TVH0210ED
			4TVH0210ED	4TVH0210ED	4TVH0210ED	4TVH0210ED	4TVH0210ED	4TVH0210ED	4TVH0210ED	4TVH0210ED	4TVH0210ED	4TVH0210ED
			4TVH0210ED	4TVH0210ED	4TVH0210ED	4TVH0210ED	4TVH0210ED	4TVH0210ED	4TVH0210ED	4TVH0210ED	4TVH0210ED	4TVH0210ED
Power supply		V-Ph-Hz	380-415V 3Ph-50Hz	380-415V 3Ph-50Hz	380-415V 3Ph-50Hz	380-415V 3Ph-50Hz	380-415V 3Ph-50Hz	380-415V 3Ph-50Hz	380-415V 3Ph-50Hz	380-415V 3Ph-50Hz	380-415V 3Ph-50Hz	380-415V 3Ph-50Hz
Cooling (*1)	Capacity	kW	196.0	201.0	207.0	212.5	218.0	223.0	229.5	234.5	240.5	246.0
		Btu/h	668,600	685,700	706,200	724,900	743,700	760,800	782,900	800,000	820,500	839,200
	Power input	kW	50.09	51.93	53.62	55.55	57.12	58.53	60.31	62.15	63.84	65.78
	EER	W/W	3.91	3.87	3.86	3.83	3.82	3.81	3.81	3.77	3.77	3.74
Heating (*1)	Capacity	kW	219.5	225.5	232.5	238.5	244.5	250.0	257.0	263.0	270.0	276.0
		Btu/h	748,900	769,400	793,200	813,700	834,200	853,000	876,800	897,300	921,100	941,600
	Power input	kW	51.06	53.36	55.48	57.31	59.02	60.60	62.23	64.54	66.66	68.49
	COP	W/W	4.30	4.23	4.19	4.16	4.14	4.13	4.13	4.07	4.05	4.03
Connectable	Maximum		64	64	64	64	64	64	64	64	64	64
Indoor unit	Cooling capacity range	kW	98 - 254.8	100.5 - 261.3	103.5 - 269.1	106.25 - 276.25	109 - 283.4	111.5 - 289.9	114.75 - 298.35	117.25 - 304.85	120.25 - 312.65	123 - 319.8
Compressor Configuration												
RLA		A	8.7+7.8×2+11.7×4	8.7+10+6+11.7×4	8.7+10.9×2+11.7×4	8.7+11.7×6	9.8+11.7×6	(10+6)×2+11.7×4	7.8×2+11.7×6	10+6+11.7×6	10.9×2+11.7×6	11.7×8
Air flow		m³/h	58,000	60,000	60,000	60,000	60,000	64,000	62,000	64,000	64,000	64,000
		CFM	34,138	35,315	35,315	35,315	35,315	37,669	36,492	37,669	37,669	37,669
Sound level (2*)		dB (A)	69	69	69	69	69	70	70	70	70	70
Outdoor Unit Dimention	Body (HxWxD)	mm	(1,635x990x790) + (1,635x1,340x790) x 3					(1,635x1,340x790) x 4				
	Packing (HxWxD)	mm	(1,805x1,055x855) + (1,805x1,405x855) x 3					(1,805x1,405x855) x 4				
Net weight		kg	219 + 297 + 340x2	219 + 305 + 340x2	219 + 340x3	219 + 340x3	237 + 340x3	305x2 + 340x2	297 + 340x3	305 + 340x3	340 x 4	340 x 4
Refrigerant Type and Charged Volumn		kg	R-410A (9+13+16x2)	R-410A (9+13+16x2)	R-410A (9+16x3)	R-410A (9+16x3)	R-410A (11+16x3)	R-410A (13x2+16x2)	R-410A (13+16x3)	R-410A (13+16x3)	R-410A (16x4)	R-410A (16x4)
Refrigerant piping (*3)	Liquid side	mm	Φ25.4	Φ25.4	Φ25.4	Φ25.4	Φ25.4	Φ25.4	Φ25.4	Φ25.4	Φ25.4	Φ25.4
	Gas side	mm	Φ44.5	Φ44.5	Φ44.5	Φ44.5	Φ44.5	Φ44.5	Φ44.5	Φ44.5	Φ44.5	Φ44.5

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.

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

Type	Model (capacity MBH)	6	7	9	12	15	18	24	27	30	34	38	42	48	54	68	85	95	135	155	190
One-way cassette																					
Two-way cassette																					
Modern four-way cassette																					
																					
Four-way cassette (Cozy Series)																					
Low Static Pressure Concealed Unit																					
Medium Static Pressure Concealed																					
High Static Pressure Duct Concealed Duct																					
Convertible																					
High-Wall Unit M Series																					
Fresh Air processing unit																					

Indoor Units Lineup

● High-Wall Unit

High-Wall Unit M Series


Auto Restart


Cleanable Panel


Follow Me


Auto Addressing


Anti-Cold Air Function

LED Display


Economic operation

Panel with LED display

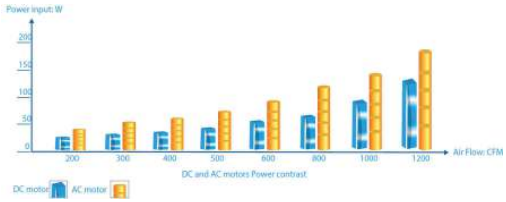
The front panel and display panel have different colors for choose: white and brown for big panel, blue and brown for small panel.

Flexible installation

Multi-refrigerant outlet pipe method: left\right\rear, more flexible for installation.

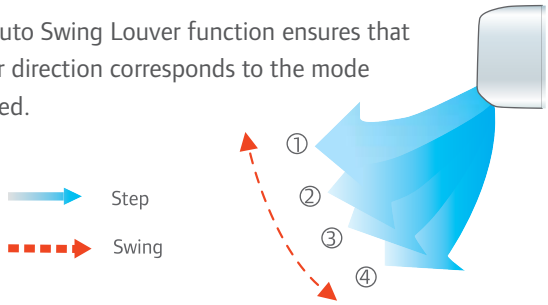
High effciency DC fan motor

The power consumption of DC driven VRF indoor units can be reduced up to 30% in comparison to corresponding AC type.



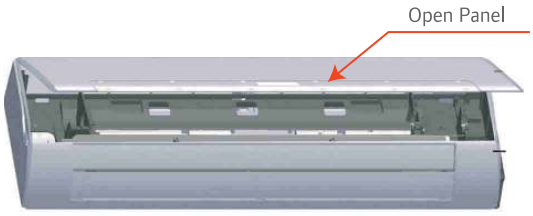
Auto swing louver

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.



Quiet operation

Adoption of the 2000 stages element positioning mechanical expension value, ensures precise flow control, as well as lower modulation noise when EXV operating.

More smooth airflow with less turbulence. Owing to the multiple-blade fan and the air guide design, the airflow is geting smooth and more comfortable.

M Series

Model			4MVW0007CB000AA	4MVW0009CB000AA	4MVW0012CB000AA	4MVW0015CB000AA
Power supply			220-240V, 50Hz, 1-Phase			
Cooling capacity		kW	2.2	2.8	3.6	4.5
		Btu/h	7,500	9,600	12,300	15,400
Power input	Cooling	W	8	9	19	19
Rated current	Cooling	A	0.27	0.31	0.43	0.44
Airflow rate (H/M/L)		m³/h	422/393/356	417/370/316	656/573/488	594/507/424
		CFM	248/231/210	245/218/186	386/337/287	350/298/250
Sound level		dB (A)	31/30/29	31/30/29	33/32/30	35/33/31
Refrigerant		Type	R410A			
		Control method	EXV			
Net dimension (HxWxD)		mm	280x835x203	280x835x203	315x990x223	315x990x223
Packing dimension (HxWxD)		mm	385x935x320	385x935x320	420x1,085x335	420x1,085x335
Net weight		kg	8.4	9.5	11.4	12.8
Gross weight		kg	12.1	13.1	15.5	16.9
Piping connecting	L (flare)	mm	ø6.35	ø6.35	ø6.35	ø6.35
	G (flare)	mm	ø12.7	ø12.7	ø12.7	ø12.7
	Drain piping	mm	ODø16.5	ODø16.5	ODø16.5	ODø16.5
Standard Controller		-	TMUCR001B			

Model			4MVW0018CB000AA	4MVW0024CB000AA	4MVW0027CB000AA	4MVW0030CB000AA
Power supply			220-240V, 50Hz, 1-phase			
Cooling capacity		kW	5.6	7.1	8	9
		Btu/h	19,100	24,200	27,300	30,700
Power input	Cooling	W	27	49	53	82
Rated current	Cooling	A	0.58	0.6	0.6	0.78
Airflow rate (H/M/L)		m³/h	747/648/547	1,195/1,005/809	1,195/1,005/809	1,421/1,067/867
		CFM	440/381/322	703/592/476	703/592/476	836/628/510
Sound level		dB (A)	38/36/34	44/39/36	44/39/36	48/43/38
Refrigerant		Type	R410A			
		Control method	EXV			
Net dimension (HxWxD)		mm	315x990x223	343x1,194x262	343x1,194x262	343x1,194x262
Packing dimension (HxWxD)		mm	420x1,085x335	375x1,290x460	375x1,290x460	375x1,290x460
Net weight		kg	12.8	17	17	17
Gross weight		kg	16.9	22.4	22.4	22.4
Piping connecting	L (flare)	mm	ø9.53	ø9.53	ø9.53	ø9.53
	G (flare)	mm	ø15.9	ø15.9	ø15.9	ø15.9
	Drain piping	mm	ODø16.5	ODø16.5	ODø16.5	ODø16.5
Standard Controller		-	TMUCR001B			

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

Convertible Unit

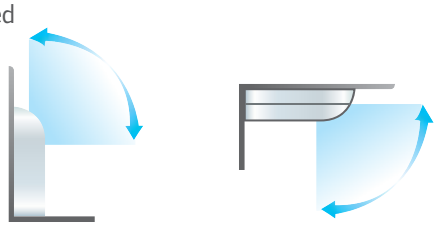
Auto Restart | Cleanable Panel | Follow Me | Auto Addressing | Anti-Cold Air Function | LED Display | Economic operation | Fresh Air | Built-in Drain Pump

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

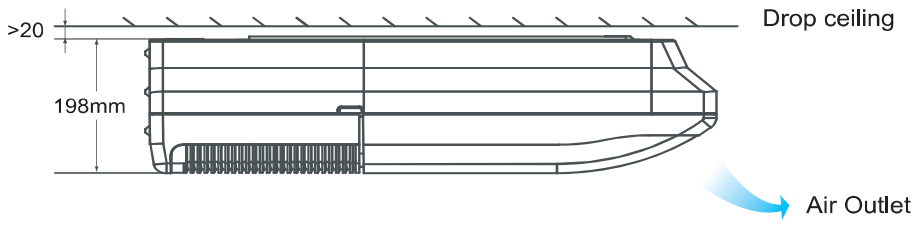
Convenient installation

- 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.



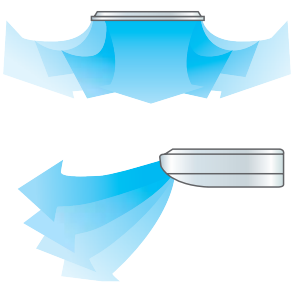
The unit can be installed either horizontally on the ceiling or vertically against the wall.

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.

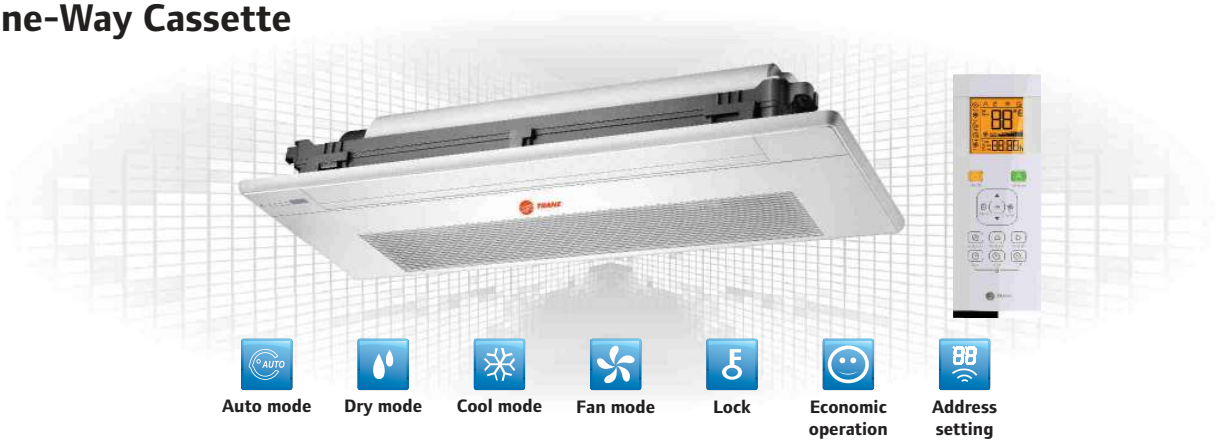
Model			4MVX0012AB000AA	4MVX0015AB000AA	4MVX0018AB000AA	4MVX0024AB000AA	4MVX0027AB000AA
Power supply			220-240V, 50Hz, 1-phase				
Cooling capacity		kW	3.6	4.5	5.6	7.1	8
		Btu/h	12,300	15,400	19,100	24,200	27,300
Power input	Cooling	W	49	120	122	125	130
Rated current	Cooling	A	0.55	0.55	0.55	0.57	0.6
Airflow rate (H/M/L)		m³/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 (HxWxD)		mm	660x990x203	660x990x203	660x990x203	660x990x203	1,280x990x203
Packing dimension (HxWxD)		mm	744x1,089x296	744x1,089x296	744x1,089x296	744x1,089x296	744x1,379x296
Net weight		kg	26	28	28	28	34.5
Gross weight		kg	32	34	34	34	41
Piping connecting	L (flare)	mm	ø6.35	ø6.35	ø9.53	ø9.53	ø9.53
	G (flare)	mm	ø12.7	ø12.7	ø15.9	ø15.9	ø15.9
	Drain piping	mm	ODø16	ODø16	ODø16	ODø16	ODø16
Standard Controller		-	TMUCR001B				

Model			4MVX0030AB000AA	4MVX0038AB000AA	4MVX0048AB000AA	4MVX0054AB000AA
Power supply			220-240V, 50Hz, 1-phase			
Cooling capacity		kW	9	11.2	14	16
		Btu/h	30,700	38,200	47,800	54,600
Power input	Cooling	W	130	182	182	300
Rated curent	Cooling	A	0.6	0.83	0.83	1.41
Airflow rate (H/M/L)		m³/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 (HxWxD)		mm	1,280x990x203	680x1,670x244	680x1,670x244	680x1,670x285
Packing dimension (HxWxD)		mm	744x1,379x296	760x1,764x329	760x1,764x329	760x1,775x372
Net weight		kg	34.5	54	54	57.5
Gross weight		kg	41	59	59	63.5
Piping connecting	L (flare)	mm	ø9.53	ø9.53	ø9.53	ø9.53
	G (flare)	mm	ø15.9	ø15.9	ø15.9	ø15.9
	Drain piping	mm	ODø16	ODø16	ODø16	ODø16
Standard Controller		-	TMUCR001B			

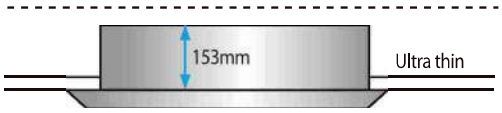
Notes:
1. Nominal cooling capacities are based on the following conditions: return air temp.: 27°CDB, 19°CWB, and outdoor temp.:35°CDB, equivalent ref. piping: 8m (horizontal)
2. Nominal heating capacities are based on the following conditions: return air temp.: 20°CDB, outdoor temp.: 7°CDB, 6°CWB, and 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

One-Way Cassette



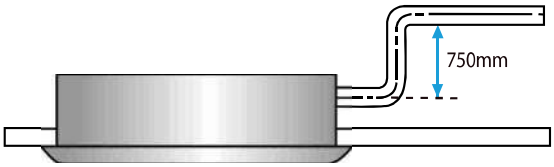
Min. 153mm Thickness

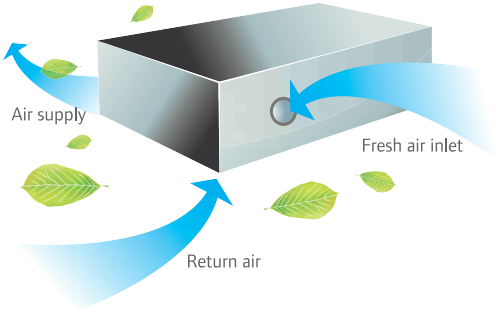


Compact design, ultra slim body with a minimum thickness of 153mm for models 12,300 Btu, especially suitable for narrow ceiling, such as in lobbies and small meeting rooms.

High-lift Pump

Standard built-in drain pump with 750mm pumphead.





Fresh Air, Improved Air Quality

Reserved fresh air intake port for high quality air creates a comfortable and healthy environment (for models 45-71).

Model			4MVA0009AB000AA	4MVA0012AB000AA	4MVA0015AB000AA	4MVA0018AB000AA	4MVA0024AB000AA
Power supply			220-240V, 50Hz, 1-phase				
Cooling capacity		kW	2.8	3.6	4.5	5.6	7.1
		Btu/h	9,600	12,300	15,400	19,100	24,200
Power input	Cooling	W	41	41	48	48	60
Rated current	Cooling	A	0.4	0.4	0.4	0.4	0.5
Airflow rate (H/M/L)		m^3/h	573/456/315	573/456/315	693/600/476	792/688/549	933/749/592
		CFM	337/268/185	337/268/185	408/353/280	446/405/323	549/441/348
Sound level		dB (A)	39/37/34	40/38/34	41/39/35	42/40/36	44/41/37
Refrigerant		Type	R410A				
		Control method	EXV				
Unit Dimension	Net (HxWxD)	mm	153x1,054x423	153x1,054x423	189x1,275x450	189x1,275x450	189x1,275x450
	Gross (HxWxD)	mm	245x1,155x490	245x1,155x490	295x1,370x505	295x1,370x505	295x1,370x505
	Net / Gross	kg	13/165	13/16.5	18.5/22.8	18,8/28.1	19.5/23.8
Panel Dimension	Net (HxWxD)	mm	25x1,180x465	25x1,180x465	25x1,350x505	25x1,350x505	25x1,350x505
	Gross (HxWxD)	mm	107x1,232x517	107x1,232x517	95x1,410x560	95x1,410x560	95x1,410x560
	Net / Gross	kg	3.5/5.2	3.5/5.2	4/5.4	4/5.4	4/5.4
Piping connecting	L (flare)	mm	ø6.35	ø6.35	ø6.35	ø9.53	ø9.53
	G (flare)	mm	ø12.7	ø12.7	ø12.7	ø15.9	ø15.9
	Drain piping	mm	ODø25	ODø25	ODø25	ODø	ODø16
Drain pump	Pumphead	mm	750	750	750	750	750
Standard Controller		-	TMUCR001B				

Notes:

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

Indoor Units Lineup

Two-Way Cassette

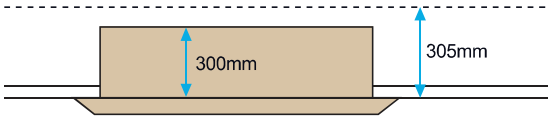
Auto Restart | Cleanable Panel | Follow Me | Auto Addressing | Anti-Cold Air Function | LED Display | Economic operation | Fresh Air | Super High Air Flow

Quiet operation

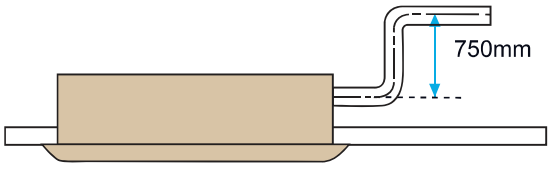
Optimized airflow duct with low resistance greatly reduces noise, minimum down to 24 dB(A).

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.

Model			4MVE0007AB000AA	4MVE0009AB000AA	4MVE0012AB000AA
Power supply			220-240V, 50Hz, 1-phase		
Cooling capacity		kW	2.2	2.8	3.6
		Btu/h	7,500	9,600	12,300
Power input	Cooling	W	57	57	60
Rated current	Cooling	A	0.35	0.45	0.45
Airflow rate (H/M/L)		m³/h	654/530/410	654/530/410	725/591/458
		CFM	385/312/241	385/312/241	427/348/270
Sound level		dB (A)	33/29/24	36/32/29	36/32/29
Refrigerant		Type	R410A		
		Control method	EXV		
Unit Dimension	Net (HxWxD)	mm	300x1,172x592	300x1,172x592	300x1,172x592
	Gross (HxWxD)	mm	400x1,355x675	400x1,355x675	400x1,355x675
	Net / Gross	kg	34/42.5	34/42.5	34/42.5
Panel Dimension	Net (HxWxD)	mm	90x1,430x680	90x1,430x680	90x1,430x680
	Gross (HxWxD)	mm	130x1,525x765	130x1,525x765	130x1,525x765
	Net / Gross	kg	10.5/15	10.5/15	10.5/15
Piping connecting	L (flare)	mm	ø6.35	ø6.35	ø9.53
	G (flare)	mm	ø12.7	ø12.7	ø12.7
	Drain piping	mm	IDø25, ODø32	IDø25, ODø32	IDø25, ODø32
Drain pump	Pumphead	mm	750	750	750
Standard Controller		-	TMUCR001B		

Model			4MVE0015AB000AA	4MVE0018AB000AA	4MVE0024AB000AA
Power supply			220-240V, 50Hz, 1-phase		
Cooling capacity		kW	4.5	5.6	7.1
		Btu/h	15,400	19,100	24,200
Power input	Cooling	W	92	108	154
Rated current	Cooling	A	0.55	0.55	0.75
Airflow rate (H/M/L)		m³/h	850/670/550	980/800/670	1,200/1,000/770
		CFM	500/394/324	577/471/394	706/589/453
Sound level		dB (A)	39/35/30	39/35/30	44/40/34
Refrigerant		Type	R410A		
		Control method	EXV		
Unit Dimension	Net (HxWxD)	mm	300x1,172x592	300x1,172x592	300x1,172x592
	Gross (HxWxD)	mm	400x1,355x675	400x1,355x675	400x1,355x675
	Net / Gross	kg	36.5/45	36.5/45	36.5/45
Panel Dimension	Net (HxWxD)	mm	90x1,430x680	90x1,430x680	90x1,430x680
	Gross (HxWxD)	mm	130x1,525x765	130x1,525x765	130x1,525x765
	Net / Gross	kg	10.5/15	10.5/15	10.5/15
Piping connecting	L (flare)	mm	ø9.53	ø9.53	ø9.53
	G (flare)	mm	ø12.7	ø15.9	ø15.9
	Drain piping	mm	IDø25, ODø32	IDø25, ODø32	IDø25, ODø32
Drain pump	Pumphead	mm	750	750	750
Standard Controller		-	ATMUCR001B		

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.

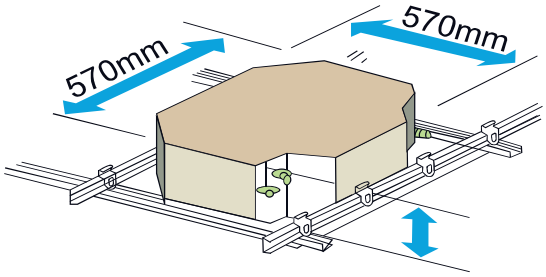
Indoor Units Lineup

Modern Four-Way Cassette

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

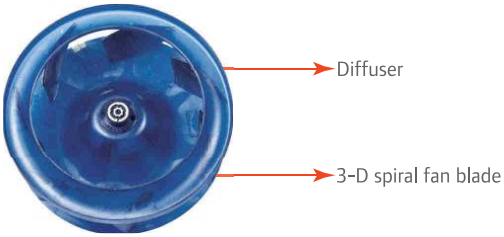


360°Airflow outlet

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

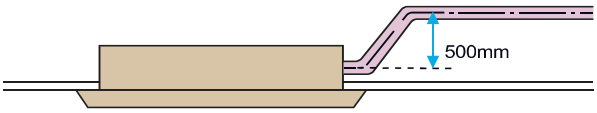
Quiet operation, gentle air supply

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



Lift pump

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



Model			4MVB0007AB000AA	4MVB0009AB000AA	4MVB0012AB000AA	4MVB0015AB000AA
Power supply			220-240V, 50Hz, 1-phase			
Cooling capacity		kW	2.2	2.8	3.6	4.5
		Btu/h	7,500	9,600	12,300	15,400
Power input	Cooling	W	51	52	58	58
Rated current	Cooling	A	0.175	0.175	0.21	0.21
Airflow rate (H/M/L)		m³/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			
Unit Dimension	Net (HxWxD)	mm	265x630x575	265x630x575	265x630x575	265x630x575
	Gross (HxWxD)	mm	285x675x675	285x675x675	285x675x675	285x675x675
	Net / Gross	kg	17.5/22	17.5/22	19/23.5	19/23.5
Panel Dimension	Net (HxWxD)	mm	50x647x647	50x647x647	50x647x647	50x647x647
	Gross (HxWxD)	mm	113x705x705	113x705x705	113x705x705	113x705x705
	Net / Gross	kg	3/5	3/5	3/5	3/5
Piping connecting	L (flare)	mm	ø6.35	ø6.35	ø6.35	ø6.35
	G (flare)	mm	ø12.7	ø12.7	ø12.7	ø12.7
	Drain piping	mm	IDø20, ODø25	IDø20, ODø25	IDø20, ODø25	IDø20, ODø25
Drain pump	Pumphead	mm	500	500	500	500
Standard Controller		-	TMUCR001B			

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

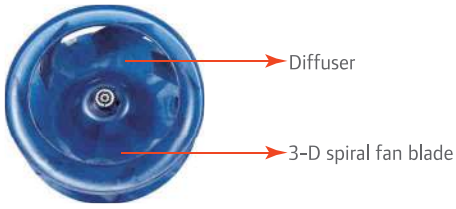
Four-Way Cassette

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

LED Display | Economic operation | Fresh Air | Built-in Drain Pump | 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-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.

Easy troubleshooting

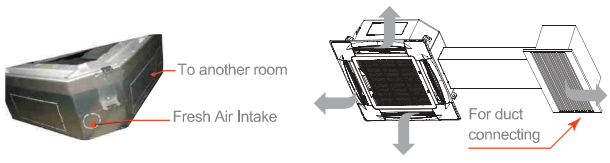
By adding digital tube on the display board, Error Codes can be displayed directly for troubleshooting.

Reserved multi-function ports

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.

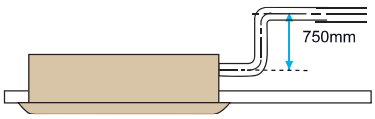
360°Airflow outlet

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



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			4MVC0018AB000AA	4MVC0024AB000AA	4MVC0027AB000AA	4MVC0030AB000AA
Power supply			220-240V, 50Hz, 1-phase			
Cooling capacity		kW	5.6	7.1	8	9
		Btu/h	19,100	24,200	27,300	30,700
Power input	Cooling	W	75	82	97	160
Rated current	Cooling	A	0.4	0.5	0.5	0.7
Airflow rate (H/M/L)		m³/h	864/755/658	1,157/955/749	1,236/973/729	1,540/1,300/1,120
		CFM	508/444/387	680/562/440	727/572/429	906/765/659
Sound level		dB (A)	42/38/35	45/42/39	45/42/39	48/45/43
Refrigerant		Type	R410A			
		Control method	EXV			
Unit Dimension	Net (HxWxD)	mm	230x840x840	230x840x840	230x840x840	300x840x840
	Gross (HxWxD)	mm	247x955x955	247x955x955	247x955x955	317x955x955
	Net / Gross	kg	26/30	26/30	26/30	32/37
Panel Dimension	Net (HxWxD)	mm	46x950x950	46x950x950	46x950x950	46x950x950
	Gross (HxWxD)	mm	60x1,000x1,000	60x1,000x1,000	60x1,000x1,000	60x1,000x1,000
	Net / Gross	kg	6/8	6/8	6/8	6/8
Piping connecting	L (flare)	mm	ø9.35	ø9.35	ø9.35	ø9.35
	G (flare)	mm	ø15.9	ø15.9	ø15.9	ø15.9
	Drain piping	mm	IDø28.5, ODø32	IDø28.5, ODø32	IDø28.5, ODø32	IDø28.5, ODø32
Drain pump	Pumphead	mm	750	750	750	750
Standard Controller		-	TMUCR001B			

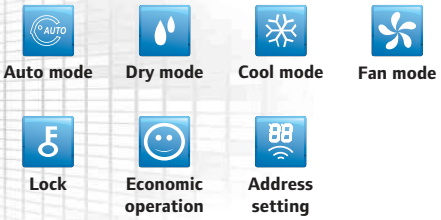
Model			4MVC0034AB000AA	4MVC0038AB000AA	4MVC0048AB000AA
Power supply			220-240V, 50Hz, 1-phase		
Cooling capacity		kW	10	11.2	14
		Btu/h	34,100	38,200	47,800
Power input	Cooling	W	160	160	170
Rated current	Cooling	A	0.7	0.7	0.8
Airflow rate (H/M/L)		m³/h	1,540/1,300/1,120	1,540/1,300/1,120	1,800/1,500/1,280
		CFM	906/765/659	906/765/659	1,059/883/753
Sound level		dB (A)	48/45/43	48/45/43	50/47/44
Refrigerant		Type	R410A		
		Control method	EXV		
Unit Dimension	Net (HxWxD)	mm	300x840x840	300x840x840	300x840x840
	Gross (HxWxD)	mm	317x955x955	317x955x955	317x955x955
	Net / Gross	kg	32/37	32/37	32/37
Panel Dimension	Net (HxWxD)	mm	46x950x950	46x950x950	46x950x950
	Gross (HxWxD)	mm	60x1,000x1,000	60x1,000x1,000	60x1,000x1,000
	Net / Gross	kg	6/8	6/8	6/8
Piping connecting	L (flare)	mm	ø9.35	ø9.35	ø9.35
	G (flare)	mm	ø15.9	ø15.9	ø15.9
	Drain piping	mm	IDø28.5, ODø32	IDø28.5, ODø32	IDø28.5, ODø32
Drain pump	Pumphead	mm	750	750	750
Standard Controller		-	TMUCR001B		

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 (Cozy Series)



- *Regardless of difference in capacity, all indoor units feature the same panel size and design, in consideration or harmonized interior decoration.*

- *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.

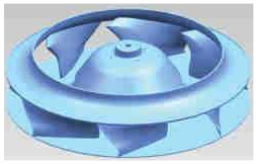
- *Ultra-thin machine body to easy installation and maintenance*

  9,500~27,200 Btu models in 230mm height and 30,700~47,700 Btu models in 300mm height which can be installed in narrow false ceilings.

- *Low operating sound*

  The new designed wind wheel, ring and the built-in throttling part make the noise reduced greatly.

The former wind wheel



Optimized wind wheel

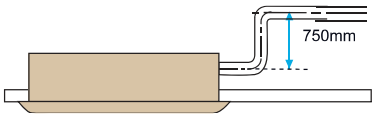
- *Easier installation and maintenance*

  a. The optimized wiring connection and the application of pluggable terminal block make the installation and maintenance easier.

  b. Built-in electronic throttle components make the installation easier.

- *Fresh air makes life healthier and more comfortable.*

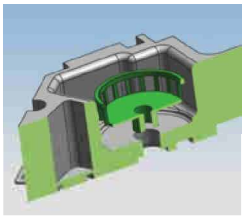
- *Provided with high lift 750mm drain water pump.*



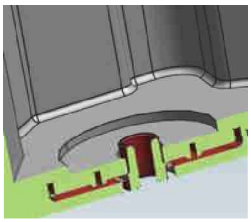
- *More reliability*

  a. The vacuum forming mould thickness of drainage pan is increased from 0.45 mm to 0.8 mm. Further improve quality and reliability.

  b. The connection of drainage pan adopts foaming technology which can further improve the connection tightness.



The former connection



The new connection

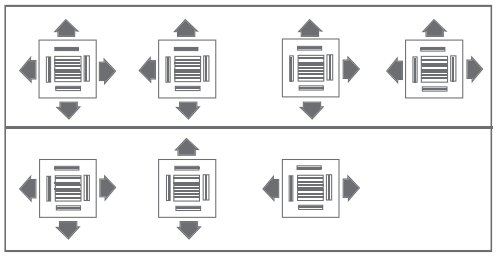
  c. Capacitance is isolated by sheet metal box making more safety and higher reliability.

  d. Adopt the new water level switch .The floater is on the water surface which can avoid impurity plugging.

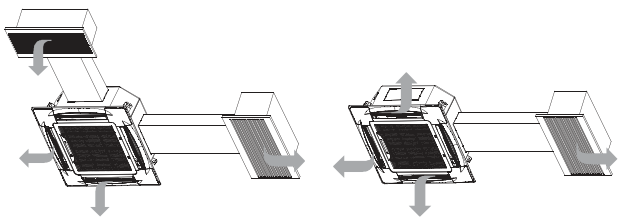
  e. The strong and weak electricity wires are separated in electronic control box making the interference decreased greatly.

- *Flexible air distribution type*

  a. 7 discharge patterns in 2 to 4 directions can be selected to suit the requirements of installation site or the shape of the room.



  b. Duct connection is possible



Model			4MVC0009BB000AA	4MVC0012BB000AA	4MVC0015BB000AA	4MVC0018BB000AA	4MVC0024BB000AA
Power supply			220-240V, 50Hz, 1-phase				
Cooling capacity		kW	2.8	3.6	4.5	5.6	7.1
		Btu/h	9,600	12,300	15,400	19,100	24,200
Power input	Cooling	W	80	80	88	88	88
Rated current	Cooling	A	0.37	0.37	0.43	0.43	0.43
Airflow rate (H/M/L)		m³/h	764/638/554	764/638/554	905/740/651	905/740/651	950/767/663
		CFM	450/376/326	450/376/326	533/436/383	533/436/383	559/451/390
Sound level		dB (A)	32/31/30	32/31/30	36/34/33	36/34/33	38/36/35
Refrigerant		Type	R-410A				
		Control method	EXV				
Unit Dimension	Net (HxWxD)	mm	230x840x840	230x840x840	230x840x840	230x840x840	230x840x840
	Gross (HxWxD)	mm	260x955x955	260x955x955	260x955x955	260x955x955	260x955x955
	Net / Gross	kg	21.5/26.7	21.5/26.7	23.7/28.9	23.7/28.9	23.7/28.9
Panel Dimension	Net (HxWxD)	mm	54.5x950x950	54.5x950x950	54.5x950x950	54.5x950x950	54.5x950x950
	Gross (HxWxD)	mm	90x1,035x1,035	90x1,035x1,035	90x1,035x1,035	90x1,035x1,035	90x1,035x1,035
	Net / Gross	kg	6/9	6/9	6/9	6/9	6/9
Piping connecting	L (flare)	mm	ø6.35	ø6.35	ø6.35	ø9.53	ø9.53
	G (flare)	mm	ø12.7	ø12.7	ø12.7	ø15.9	ø15.9
	Drain piping	mm	ø32	ø32	ø32	ø32	ø32
Drain pump	Pumphead	mm	750	750	750	750	750
Standard Controller		-	TMUCR001B				

Model			4MVC0027BB000AA	4MVC0030BB000AA	4MVC0034BB000AA	4MVC0038BB000AA	4MVC0048BB000AA
Power supply			220-240V, 50Hz, 1-phase				
Cooling capacity		kW	8.0	9.0	10.0	11.2	14.0
		Btu/h	27,300	30,700	34,100	38,200	47,800
Power input	Cooling	W	110	140	165	165	176
Rated current	Cooling	A	0.53	0.69	0.80	0.80	0.86
Airflow rate (H/M/L)		m³/h	1,200/1,021/789	1,332/1,129/908	1,651/1,304/1,127	1,651/1,304/1,127	1,658/1,335/1,130
		CFM	706/601/464	784/665/534	972/768/663	972/768/663	976/786/665
Sound level		dB (A)	42/39/37	43/39/38	45/42/40	45/42/40	46/41/39
Refrigerant		Type	R-410A				
		Control method	EXV				
Unit Dimension	Net (HxWxD)	mm	230x840x840	300x840x840	300x840x840	300x840x840	300x840x840
	Gross (HxWxD)	mm	260x955x955	330x955x955	330x955x955	330x955x955	330x955x955
	Net / Gross	kg	23.7/28.9	28.7/34.1	28.7/34.1	28.7/34.1	30.9/36.3
Panel Dimension	Net (HxWxD)	mm	54.5x950x950	54.5x950x950	54.5x950x950	54.5x950x950	54.5x950x950
	Gross (HxWxD)	mm	90x1,035x1,035	90x1,035x1,035	90x1,035x1,035	90x1,035x1,035	90x1,035x1,035
	Net / Gross	kg	6/9	6/9	6/9	6/9	6/9
Piping connecting	L (flare)	mm	ø9.53	ø9.53	ø9.53	ø9.53	ø9.53
	G (flare)	mm	ø15.9	ø15.9	ø15.9	ø15.9	ø15.9
	Drain piping	mm	ø32	ø32	ø32	ø32	ø32
Drain pump	Pumphead	mm	750	750	750	750	750
Standard Controller		-	TMUCR001B				

Notes:
1. Capacities are based on the following conditions:
2. Cooling: Indoor temperature 27°C DB / 19°C WB; Outdoor temperature 35°C DB / 24°C WB.
3. Heating: Indoor temperature 20°C DB / 15°C WB; Outdoor temperature 7°C DB / 6°C WB.
4. Piping length: Interconnecting piping length is 7.5m, level difference is 0m.
5. Sound values are measured in a semi-anechoic room, at a position 1.4m downward from the unit center

Indoor Units Lineup

Low Static Pressure Concealed Unit

Auto Restart Function

Auto Addressing

Independent Dehumidification

Auto Defrosting

Follow Me

Anti-cold Air Function

Timer

Wired Controller

Low Sound Level

Utilizes the centrifugal type blower, provides a minimum noise level of 24dB (A), an excellent choice for hotels and other sound-sensitive locations.

V Shape Evaporator

V shape evaporator design enhances heat exchanging efficiency by around 22%.

Easy Installation and Maintenance

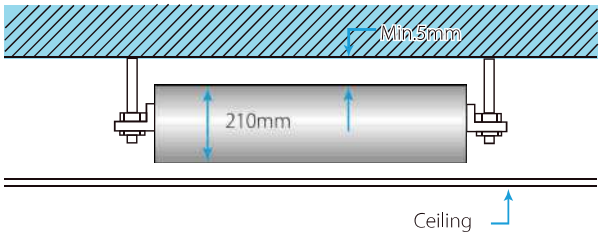
The EXV is fixed inside the indoor unit.

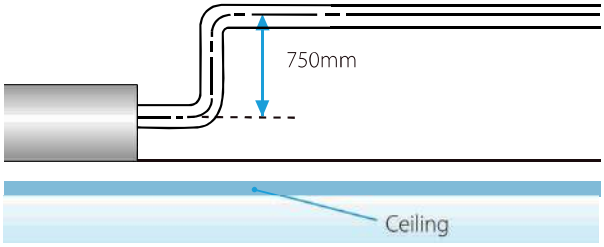
Compact Design

Drain pump with a 750mm pumphead is an optional accessory.

Compact Design

Uniformed height of 210mm, compact design for easy locate where ceiling space is limited.
Entire body adopts fireproof plastic material, the minimum weight is 14kg.





Model			4MVL0006BB000AA	4MVL0007BB000AA	4MVL0009BB000AA
Power supply			220-240V, 50Hz, 1-phase		
Cooling capacity		kW	1.8	2.2	2.8
		Btu/h	6,100	7,500	9,600
Power input	Cooling	W	40	40	40
Rated current	Cooling	A	0.17	0.17	0.17
Airflow rate (H/M/L)		m³/h	446/323/250	446/323/250	527/359/267
		CFM	263/190/147	263/190/147	310/211/157
ESP (external static pressure)		Pa	5	5	5
Sound level		dB (A)	33/27/21	34/29/21	36/34/30
Refrigerant		Type	R410A		
		Control method	EXV		
Net Dimension (HxWxD)		mm	190x850x405	190x850x405	190x850x405
Gross Dimension (HxWxD)		mm	277x903x445	277x903x445	277x903x445
Net / Gross Weight		kg	11.5/14.7	11.5/14.7	11.5/14.7
Piping connecting	L (flare)	mm	ø6.35	ø6.35	ø6.35
	G (flare)	mm	ø12.7	ø12.7	ø12.7
	Drain piping	mm	IDø15, ODø20	IDø15, ODø20	IDø15, ODø20
Drain pump	Pumphead	mm	750	750	750
Standard Controller		-	TMUCR001B		

Model			4MVL0012BB000AA	4MVL0015BB000AA	4MVL0018BB000AA
Power supply			220-240V, 50Hz, 1-phase		
Cooling capacity		kW	3.6	4.5	5.6
		Btu/h	12,300	15,400	19,100
Power input	Cooling	W	40	40	56
Rated current	Cooling	A	0.17	0.17	0.24
Airflow rate (H/M/L)		m³/h	527/359/267	767/634/512	767/634/512
		CFM	310/211/157	451/373/301	451/373/301
ESP (external static pressure)		Pa	5	5	5
Sound level		dB (A)	36/34/30	37/35/31	37/35/31
Refrigerant		Type	R410A		
		Control method	EXV		
Net Dimension (HxWxD)		mm	190x850x405	190x1,030x430	190x1,030x430
Gross Dimension (HxWxD)		mm	277x903x445	277x1,084x472	277x1,084x472
Net / Gross Weight		kg	11.5/14.7	14/17.5	14/17.5
Piping connecting	L (flare)	mm	ø6.35	ø9.53	ø9.53
	G (flare)	mm	ø12.7	ø15.9	ø15.9
	Drain piping	mm	IDø15, ODø20	IDø15, ODø20	IDø15, ODø20
Drain pump	Pumphead	mm	750	750	750
Standard Controller		-	TMUCR001B		

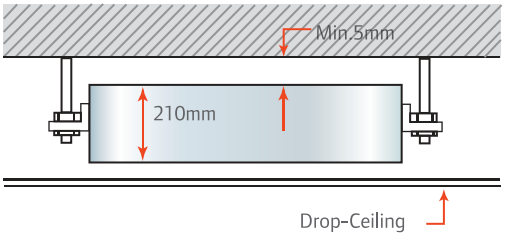
Note :
1. Nominal cooling capacities are based on the following conditions: return air temp. : 27 °C DB, 19 °C DB, outdoor temp.: 35 °C DB, equivalent ref. Piping: 8m (horizontal)
2. Nominal heating capacities are based on the follwing conditions: return air temp.: 20 °C DB, ourdoor temp.: 7 °C DB, 6 °C DB, equivalent ref. Piping: 8m (horizontal)
3. Sound level is measured 1.4m below the air outlet
* External static pressure are based on high speed indoor air flow
* Specifications are subject to change without prior notice for product improvement

Indoor Units Lineup

Medium Static Concealed Unit

Compact size

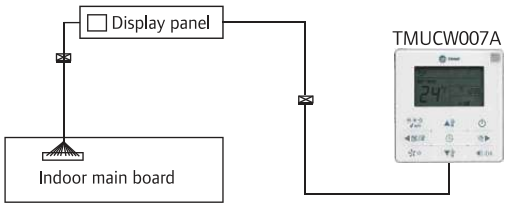
Only 210mm (7,500~19,100 Btu models)



TMUCW007A

Easy Connection

Wired controller conveniently connects to display panel of the indoor units with the apprpriative connecting wire.



External static pressure

Four speed fan motor (Super high speed is optional)

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

Flexible control and easy maintenance

Standard wired remote controller TMUCW002A .

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).

Convenient installation

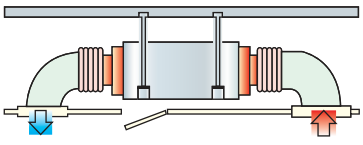
The EXV is fixed inside of the indoor unit.

Standard filter is housed in an aluminum frame, which is removable from the bottom in the downward direction.

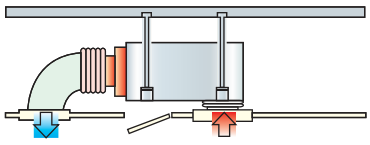
Suction chamber is included as standard equipment.

Fresh air hole, air inlet/outlet flange are standard for easy duct connection.

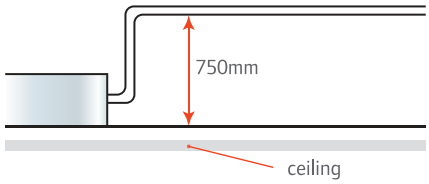
A rear air inlet is standard and an inlet at the bottom is optional. Both use the same connectable duct.



Air Intake from Back



Air Intake from Below



Drain pump is fitted as standard, accessory with 750mm pumphead.

Model			4MVD0007AB000AA	4MVD0009AB000AA	4MVD0012AB000AA	4MVD0015AB000AA	4MVD0018AB000AA
Power supply			220-240V, 50Hz, 1-phase				
Cooling capacity		kW	2.2	2.8	3.6	4.5	5.6
		Btu/h	7,500	9,600	12,300	15,400	19,100
Power (Cooling)	Input	W	59	57	61	92	92
	Rated current	A	0.28	0.28	0.28	0.5	0.5
Indoor airflow (SH)/ (H/M/L)		m³/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 (HxWxD)		mm	210x700x450	210x700x450	210x700x450	210x700x450	210x700x450
Packing Dimension (HxWxD)		mm	285x870x525	285x870x525	285x870x525	290x1,135x655	290x1,135x655
Net / Gross Weight		kg	17.5/20	17.5/20	17.5/20	27/32	27/32
Piping connecting	L (flare)	mm	ø6.35	ø6.35	ø6.35	ø6.35	ø9.53
	G (flare)	mm	ø12.7	ø12.7	ø12.7	ø12.7	ø16
	Drain piping	mm	IDø25, ODø32	IDø25, ODø32	IDø25, ODø32	IDø25, ODø32	IDø25, ODø32
Drain pump	Pump head	mm	700	700	700	700	700
Standard Controller		-	TMUCR001B				

Model			4MVD0024AB000AA	4MVD0027AB000AA	4MVD0030AB000AA	4MVD0038AB000AA	4MVD0048AB000AA
Power supply			220-240V, 50Hz, 1-phase				
Cooling capacity		kW	7.1	8	9	11.2	14
		Btu/h	24,200	27,300	30,700	38,200	47,800
Power (Cooling)	Input	W	125	198	200	313	274
	Rated current	A	0.7	1	1	2	2
Indoor airflow (SH)/ (H/M/L)		m³/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
Refrigerant		Type	R410A				
		Control method	EXV				
Net Dimension (HxWxD)		mm	270x1,140x635	270x1,140x710	270x1,140x710	270x1,140x710	300x1,200x800
Packing Dimension (HxWxD)		mm	290x1,135x655	350x1,355x795	350x1,355x795	350x1,355x795	375x1,385x920
Net / Gross Weight		kg	31.8/35.8	38/46.5	40/48	40/48	49/58
Piping connecting	L (flare)	mm	ø9.53	ø9.53x2	ø9.53x2	ø9.53x2	ø9.53x2
	G (flare)	mm	ø15.9	ø15.9	ø15.9	ø15.9	ø15.9
	Drain piping	mm	IDø25, ODø32	IDø25, ODø32	IDø25, ODø32	IDø25, ODø32	IDø25, ODø32
Drain pump	Pump head	mm	700	700	700	700	700
Standard Controller		-	TMUCR001B				

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

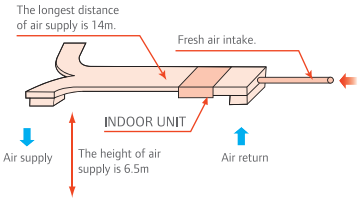
High Static Pressure Concealed Unit

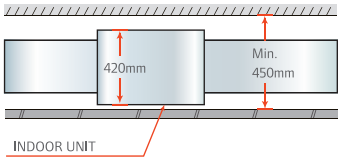
- Auto Restart
- Auto Addressing
- Follow Me
- Wired Controller
- Fresh Air
- Cleanable Panel
- Anti-Cold Air Function
- Connectable To Duct

Flexible duct design

Four speed fan motor super high speed as an option for models (24,200-54,600 Btu)
The maximum distance for air supply is about 14m at height of 6.5m.
With a 420mm (models 24,200 to 54,600 Btu) thick body, the minimum distance required above the ceiling is 450mm.

TMUCW007A





Greater flexibility with the four-speed fan

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

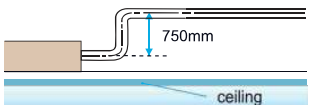
Convenient installation

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

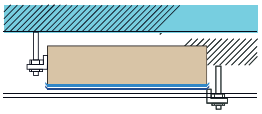
Wired remote controller is as standard, and wireless remote controller is as an option.
The display board is connected to the E-box in factory, easier troubleshooting by LED display.
Easy access filters both at the rear & bottom.
Standard functional port such as remote on/off dry contact.

Option:



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

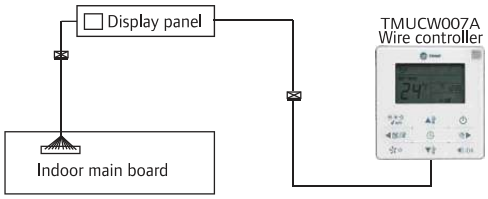
Double-skin drainage pan



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

Easy Connection

Wired controller conveniently connects to display panel of the indoor units with the apprpriative connecting wire.



Follow Me

With the Follow Me function, the wired controller can detect the air temperature at the user's altitude instead that of the ceilling or the floor, thus creating more comfortable environment and precise temperature control.

Model			4MVH0024AB000AA	4MVH0027AB000AA	4MVH0030AB000AA	4MVH0038AB000AA	4MVH0048AB000AA	4MVH0054AB000AA
Power supply			220-240V, 50Hz, 1-phase					
Cooling Capacity		kW	7.1	8	9	11.2	14	16
		Btu/h	24,200	27,300	30,700	38,200	47,800	54,600
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
Indoor airflow (SH)/ (H/M/L)		m³/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	1124/1077/892	1245/1142/895	1766/1539/1313	2131/1801/1613
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 (HxWxD)		mm	420x952x690	420x952x690	420x952x690	420x952x690	400x1,200x600	400x1,200x600
Packing Dimension (HxWxD)		mm	450x1,120x768	450x1,120x768	450x1,120x768	450x1,120x768	450x1,430x768	450x1,430x768
Net / Gross Weight		kg	45/50	45/50	46.5/52.4	50.6/56	68/70	70/77.5
Piping connecting	L (flare)	mm	ø9.52	ø9.53	ø9.53	ø9.53	ø9.53	ø9.53
	G (flare)	mm	ø15.9	ø15.9	ø15.9	ø15.9	ø15.9	ø15.9
	Drain piping	mm	IDø25, ODø32	IDø25, ODø32	IDø25, ODø32	IDø25, ODø32	IDø25, ODø32	IDø25, ODø32
Drain pump	Pump head	mm	750	750	750	750	750	750
Standard Controller		-	TMUCR001B			TMUCW002A		

Model			4MVH0068AB000AA	4MVH0085AB000AA	4MVH0095AB000AA	4MVH0135AB000AA	4MVH0155AB000AA	4MVH0190AB000AA
Power supply			220-240V, 50Hz, 1-phase					
Cooling Capacity		kW	20	25	28	40	45	56
		Btu/h	68,200	85,300	95,500	136,500	153,500	191,100
Power (Cooling)	Input	W	1,516	1,516	1,516	2,700	2,700	3,400
	Rated current	A	6.6	6.6	6.6	12.5	12.5	15.5
Indoor airflow (SH)/ (H/M/L)		m³/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	2746/2543/2134	2746/2543/2134	2746/2543/2134	4408/3602/2972	4408/3602/2972	5665/4738/3902
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 (HxWxD)		mm	470x1,356x763	470x1,356x763	470x1,356x763	668x1,970x858.5	668x1,970x858.5	668x1,970x858.5
Packing Dimension (HxWxD)		mm	522x1,590x964	522x1,590x964	522x509x964	800x2,095x964	800x2,095x964	800x2,095x964
Net / Gross Weight		kg	115/129	115/129	115/129	232/245	232/245	232/245
Piping connecting	L (flare)	mm	ø9.53x2	ø9.53x2	ø9.53x2	ø12.7	ø12.7	ø15.9
	G (flare)	mm	ø15.9x2	ø15.9x2	ø15.9x2	ø28.6x2	ø28.6x2	ø28.6x2
	Drain piping	mm	IDø25, ODø32	IDø25, ODø32	IDø25, ODø32	IDø25, ODø32	IDø25, ODø32	IDø25, ODø32
Drain pump	Pump head	mm	750	750	750	750	750	750
Standard Controller		-	TMUCW002A					

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

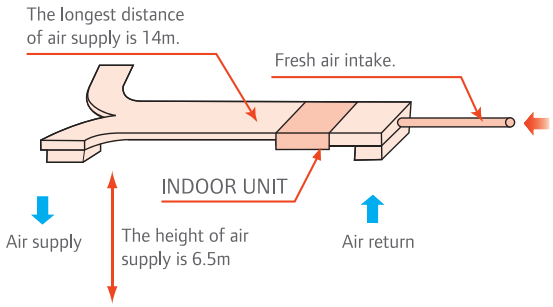
Healthy and comfortable

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.



Follow Me

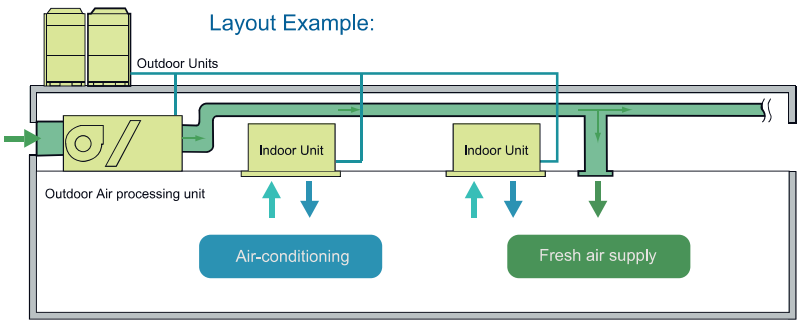
With the Follow Me function, the wired controller can detect the air temperature at the user's altitude instead that of the ceilling or the floor, thus creating more comfortable environment and precise temperature control.

High external static pressure

External static pressure can be up to 220Pa(models 42,600 to 47,800 Btu) and 260Pa(models 85,000 to 95,500 Btu) 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			4MVF0042AB000AA	4MVF0048AB000AA	4MVF0068AB000AA	4MVF0085AB000AA	4MVF0095AB000AA
Power supply			220-240V, 50Hz, 1-phase				
Cooling Capacity		kW	12.5	14	20	25	28
		Btu/h	42,600	47,800	68,200	85,300	95,500
Power (Cooling)	Input	W	461	461	1,063	1,063	1,063
	Rated current	A	2.3	2.3	5.3	5.3	5.3
Indoor airflow (SH)/ (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	1,845/1,560/1,354	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 (HxWxD)		mm	400x1,200x600	400x1,200x600	500x1,425x928	500x1,425x928	500x1,425x928
Packing Dimension (HxWxD)		mm	450x1,436x768	450x1,436x768	550x1,509x990	550x1,509x990	550x1,509x990
Net / Gross Weight		kg	65.5/76	69.5/76	115/125	115/125	115/125
Piping connecting	L (flare)	mm	ø9.53	ø9.53	ø9.53	ø9.53	ø9.53
	G (flare)	mm	ø15.9	ø15.9	ø15.9	ø15.9	ø15.9
	Drain piping	mm	IDø25	IDø25	ODø32	ODø32	ODø32
Drain pump	Pump head	mm	750		-	-	-
Standard Controller		-	TMUCW002A				

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

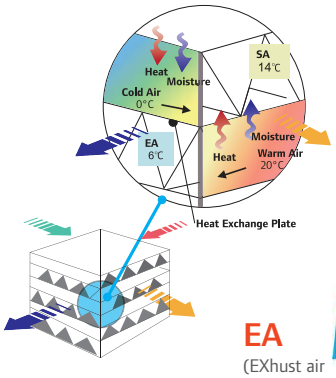
Larger air supply rate
enhanced heat exchange efficiency
enhanced energy saving

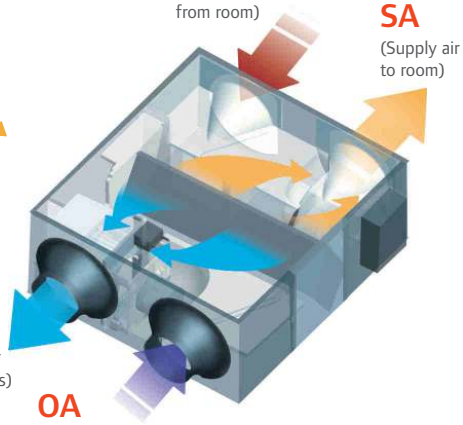
The heat recovery ventilator (ERV) can reclaim the energy energy lost through ventilation and reduce room temperature fluctuations caused by the ventilation process. By utilizing the latest technologies and techniques, Trane ERV guarantees outstanding performance. The heat exchange core is made of chemically 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

TERV0120AB000AA TERV0180AB000AA
TERV0235AB000AA TERV0300AB000AA
TERV0470AB000AA TERV0600AB000AA

TERV0900AD000AA TERV1200AD000AA



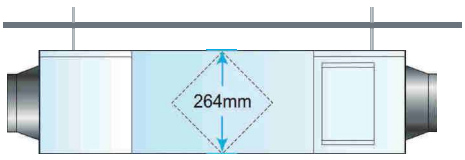


Low noise

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

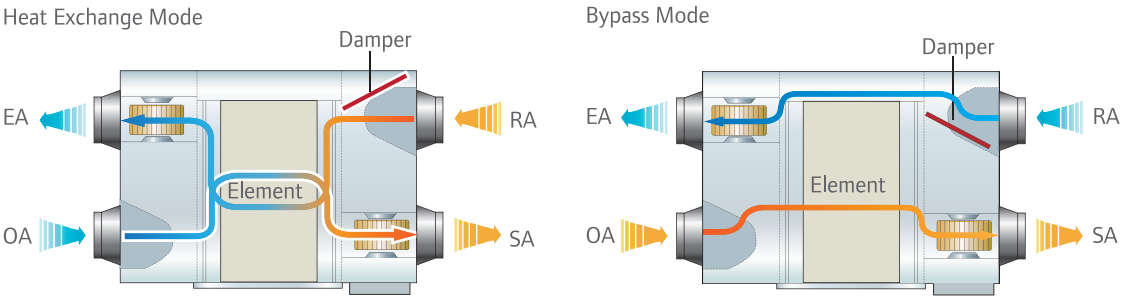
Heat exchange mode

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 conditions.The energy contained in the exhaust air can be reclaimed to improve energy efficiency.

ERV - Energy Recovery Ventilator

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).



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

Centralized control

indoor centralize controller

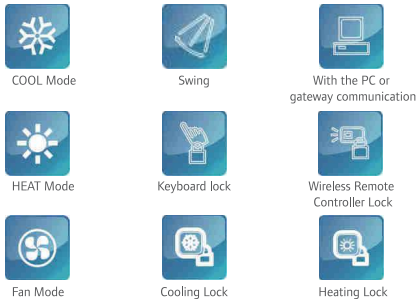
Model				TERV0120AB000AA	TERV0180AB000AA	TERV0235AB000AA	TERV0300AB000AA
Power supply				220-240 V, 50 Hz, 1 Phase			
Temp. Exchange Efficiency (%) 50Hz			%	65	65	65	65
				65	65	65	65
				70	70	70	70
Enthalpy Exchange Efficiency 50 Hz	For Cooling		High	50	50	50	50
			Medium	50	50	50	50
			Low	55	55	55	55
	For Heating		High	27	30	32	35
			Medium	55	55	60	60
			Low	60	60	65	65
Sound Level	Heat Exchange Mode		High	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 (HxWxD)			mm	655/866/264	722/944/270	722/944/270	1,026x1,038x270
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 Meterial			-	Specially processed nonflammable paper			
Fan	Type		-	Centrifugal fan			
	Airflow Rate (50Hz)	High	m³/h	200	300	400	500
		Medium		200	300	400	500
		Low		150	225	300	375
	ESP (Pa) (50 Hz)	High		75	75	80	80
		Medium	Pa	58	60	65	68
		Low		35	40	43	45
	Motor Output		W	20	40	80	120
Duct diameter			ø/mm	144	144	144	194
Operation ambient condition			-	'-7°C-43°C (DB), 80%RH or less			

Model				TERV0470AB000AA	TERV0600AB000AA	TERV0900AD000AA	TERV0900AD000AA
Power supply				220-240 V, 50 Hz, 1 Phase		380 V, 50 Hz, 3 Phase	
Temp. Exchange Efficiency (%) 50Hz			%	65	65	65	65
				65	65	/	/
				70	70	/	/
Enthalpy Exchange Efficiency 50 Hz	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	39	40	51	53
			Medium	38	39	/	/
			Low	32	33	/	/
	Bypass Mode		High	40	41	52	54
			Medium	39	40	/	/
			Low	34	35	/	/
Dimensions (HxWxD)			mm	1,006x1,286x388	1,006x1,286x388	1,270x1,600x540	1,270x1,600x540
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 Meterial			-	Specially processed nonflammable paper			
Fan	Type		-	Centrifugal fan			
	Airflow Rate (50Hz)	High	m³/h	800	1,000	1,500	2,000
		Medium		800	1000	/	/
		Low		600	750	/	/
	ESP (Pa) (50 Hz)	High		100	100	160	170
		Medium	Pa	82	85	/	/
		Low		54	58	/	/
	Motor Output		W	360	360	450	450
Duct diameter			ø/mm	242	242	346x326	346x326
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

Indoor Centralized Controller

TMCCW008A

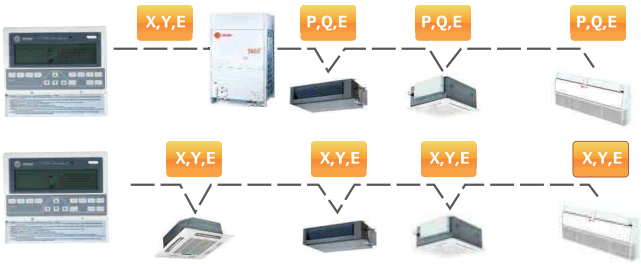


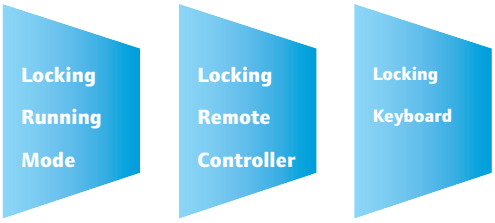
Functions

Centralized controller

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:



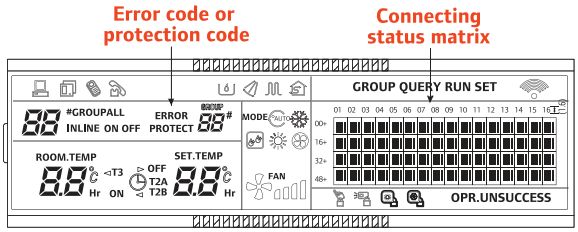


Three lock modes

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 TMCCW008A. The "FL" icon indicates that the air filter in a given indoor unit needs cleaning.

TMCCW008A

Control Systems - Centralized Controller

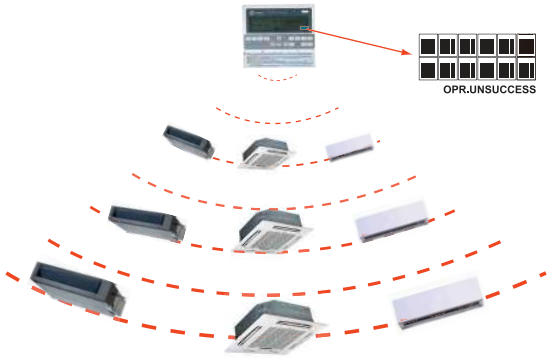
Functions

Stylish design

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

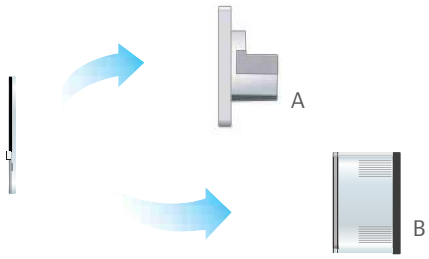
Single/unified control

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.

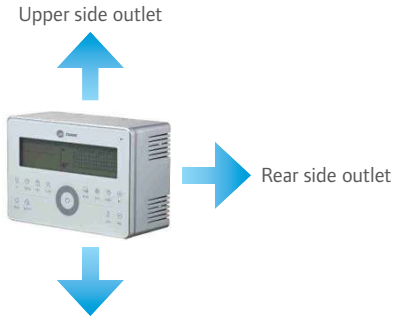


Easy installation

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 TMCCW008A and TMCCW001A 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.

Indoor CCM

Specifications

Model	TMCCW001A	TMCCW008A
Dimensions (H×W×D)(mm)	179×119×74	180×122×78 and 180×122×68
Power (V)	198-242V(50/60Hz)	

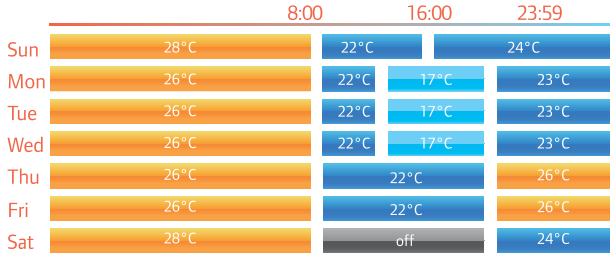
Weekly schedule centralized

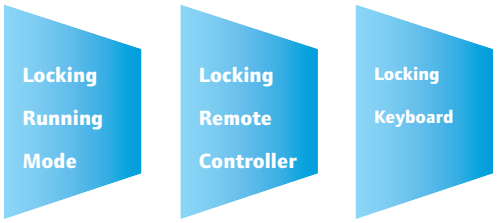
TMCCW002A

Functions

Weekly schedule

TMCCW002A 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.



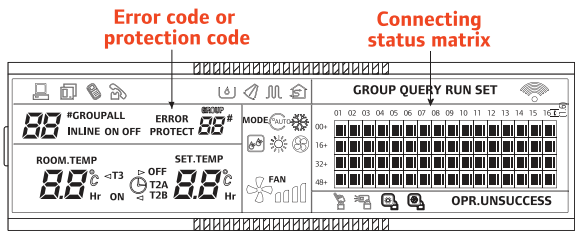


Three lock modes

Centralized controller TMCCW002A 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 TMCCW002A

Indoor unit working status display

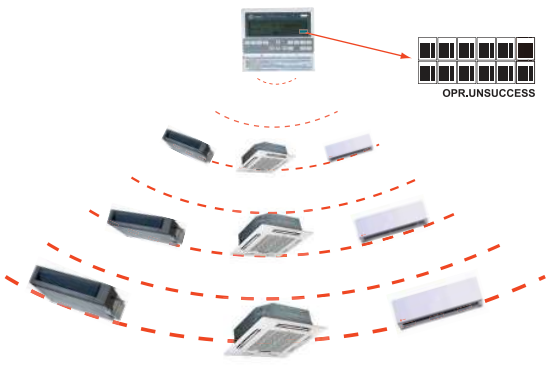
The centralized controller displays indoor units' working status and error codes so users can easily identify faults via checking the error codes table in the user's manual before contacting a service engineer.



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.



Specifications

Model	TMCCW002A
Dimensions (H×W×D)(mm)	179×119×74
Power (V)	198-242V(50/60Hz)

Control Systems - Centralized Controller

Touch Screen Centralized

TCONTCCM180A (6.2 Inch)

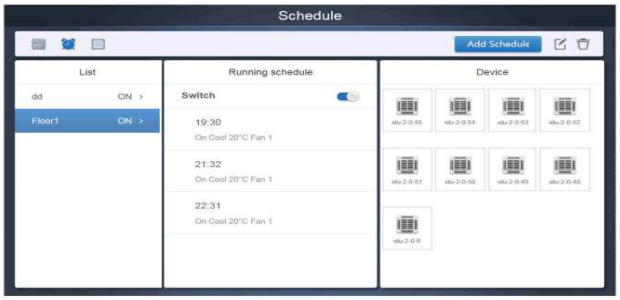
TCONTCCM270A (10.1 Inch)

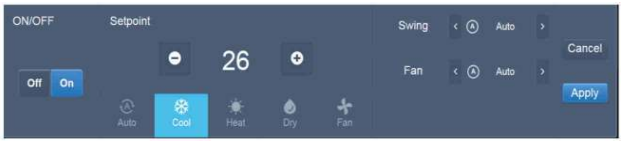
Features

- Colorful touch screen and vivid display make operation more convinient and simple for 6.2 , 10.1 Inch display.
- Support up to 64 indoor units and 8 refrigerant systems in each port, Touch screen 6.2" with 1 port and 10.1" with 6 ports connection.
- Schedule management: multiple daily or weekly schedule can be set.
- Control on/off mode ,fan speed and setting temperature range of indoor units by individual or grouping.
- One USB port can be used to output running status (Available for 10.1 inch)
- A desktop or Laptop PC can be used for browser-based access via a LAN connection (Available for 10.1 inch)

Indoor unit grouping status display

Touch screen centralized controller displays indoor units working status and error with easily identify





Schedule management

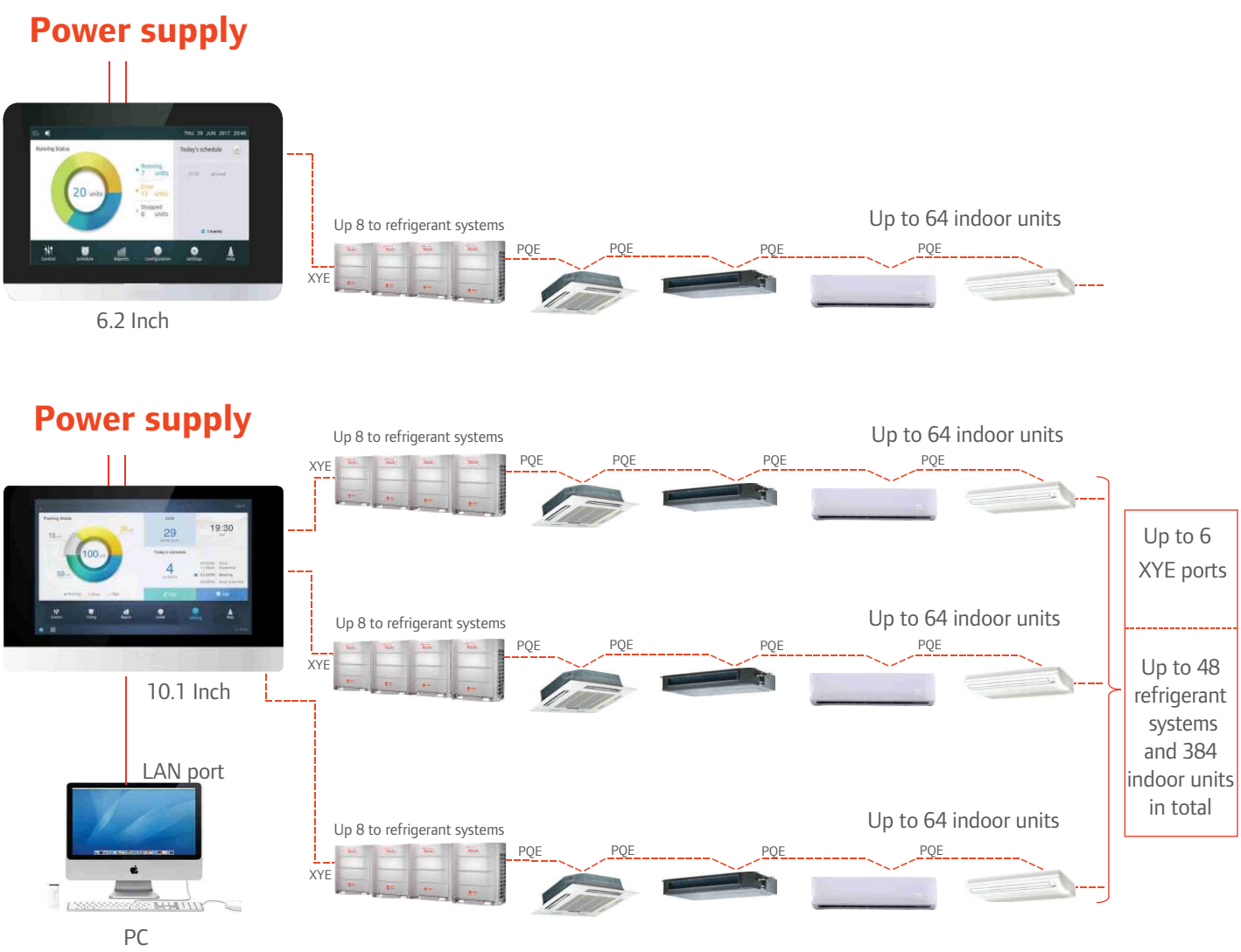
Touch screen centralized controller can be controlled indoor unit fuction by individual or group

Control Systems - Centralized Controller

• Touch Screen Centralized

Wiring Flexibility

Touch screen centralized controller can be connected to the master outdoor unit directly



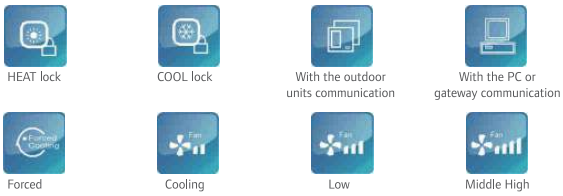
Specifications

Model	TCONTCCM180A	TCONTCCM270A
Dimensions (H×W×D)(mm)	123×182×34	183×270x27
Power (V)	12V DC	24V AC

Control Systems - Accessories

Outdoor centralized controller

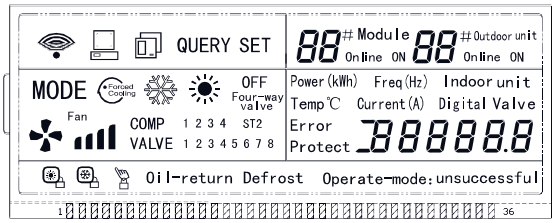
TOCCW001A



Functions

ODU parameters display

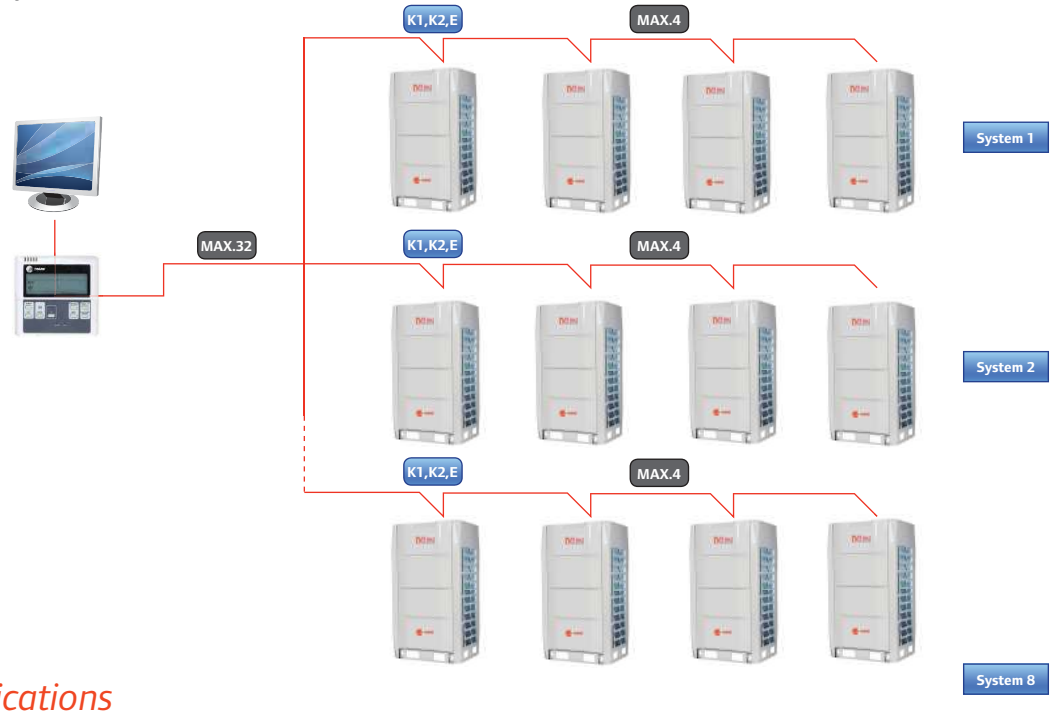
TOCCW001A enables users to easily check outdoor units' running status, including frequency, temperature, current, pressure, protection codes and error codes.



Graph 2 LCD Screen

Access to network monitoring Outdoor centralized controller

TOCCW001A can connect up to 8 refrigerant systems and 32 outdoor units to the network monitoring and building management systems.



Specifications

Model	TOCCW001A
Dimensions (H×W×D)(mm)	120×120×15
Power (V)	198-242V(50/60Hz)

Control Systems - Accessories

ERV wired controller

Functions

ERV controller

TMUHW001A 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->

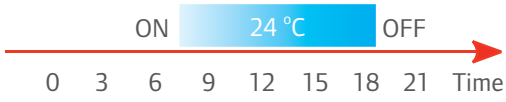
EXHAUST->BYPASS->AIR SUPPLY

TMUHW 001A

Built-in timer

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

Setup screen example
Set to wednesday: 8:00 to 20:00



Specifications

Model	TMUHW001A
Dimensions (H×W×D)(mm)	120×120×15
Power (V)	198-242V(50/60Hz)

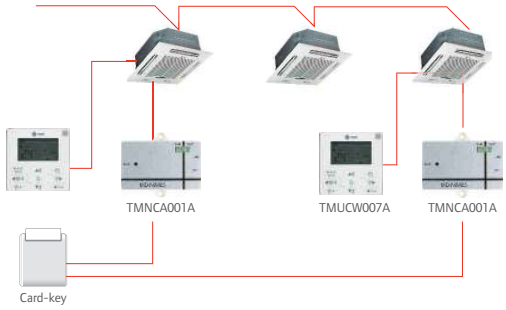
Hotel card key interface module

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.

Specifications

Model	TMNCA001A
Dimensions (H×W×D)(mm)	86×72.8×15.5
Power (V)	DC 5V

Installation example



Wired controller is necessary in this card-key system.

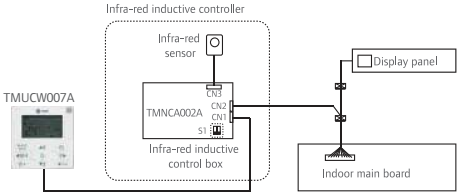
BMS Room temperature management module

TMNCA002A

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

Installation sketch

Electrical wiring



Building Management System (IMM)

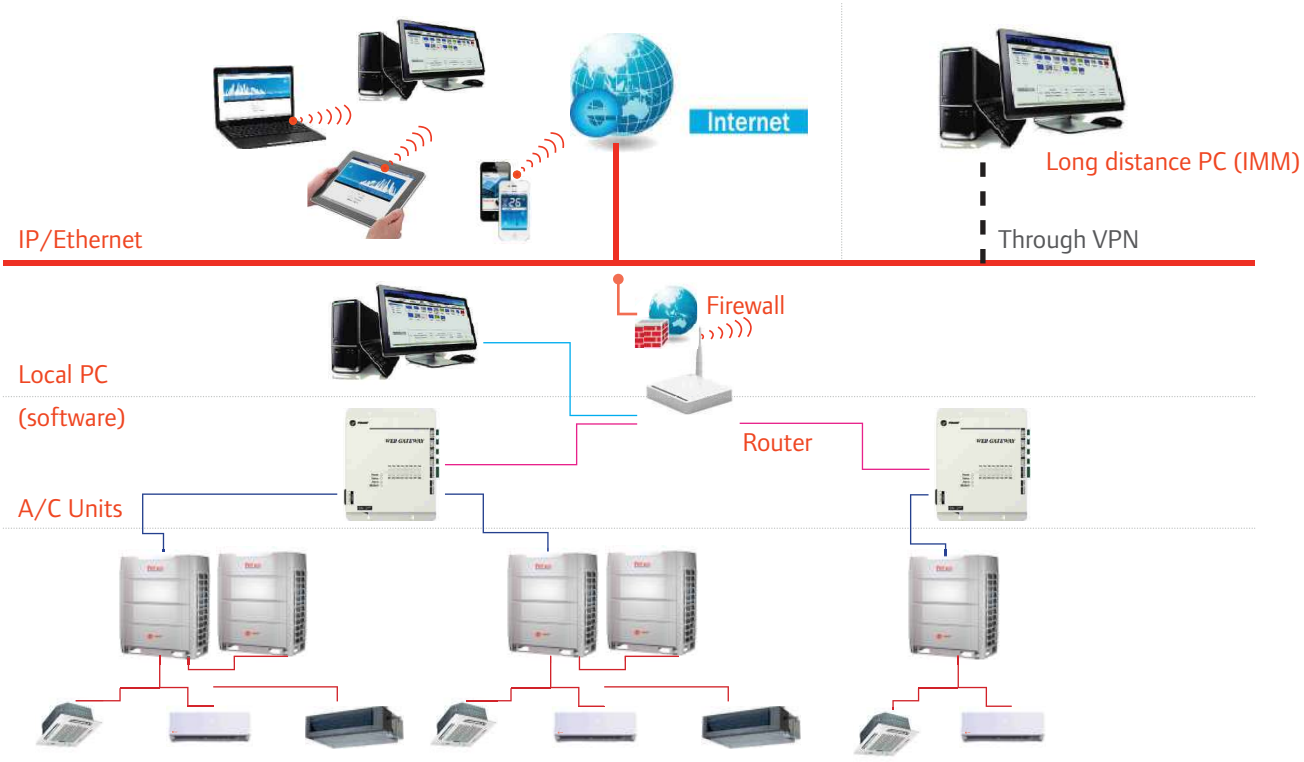
- **TSNSA002A**
- **TSNCA003A**

Functions

TSNSA002A/TSNCA003A, 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.

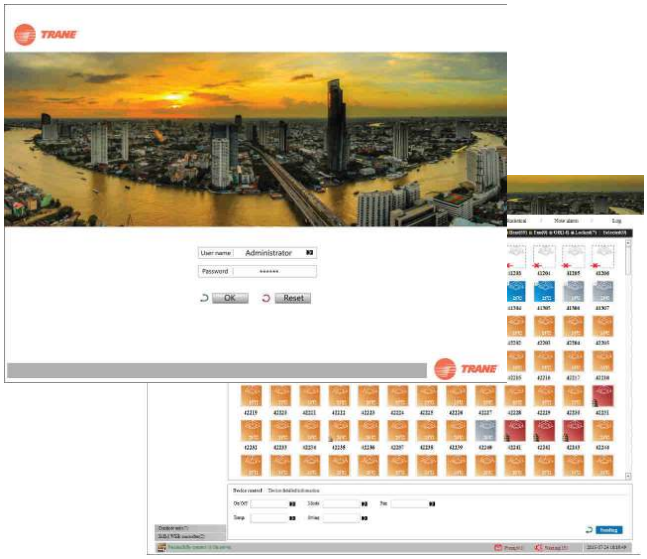
- Up to 4 TSNCA003A, 64 refrigerant systems, 1,024 indoor units, and 256 outdoor units can be controlled by one PC.
- Web Access
- User friendly operation
- Central building monitoring and control
- Lock control (individual controllers)
- Set temperature limit
- Proportional power distribution
- Annual 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



Building Management System (IMM)

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 night-time use; outputs this information on a charge calculation sheet to evenly divide power consumption charges among tenants.

Highlights

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

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.

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.

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.

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

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.

Multiple Lauguages
Provides eight language settings

English	French	Italian
Russian	German	Spanish
Simple Chinese	Traditional Chinese	

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.

BMS Accessories

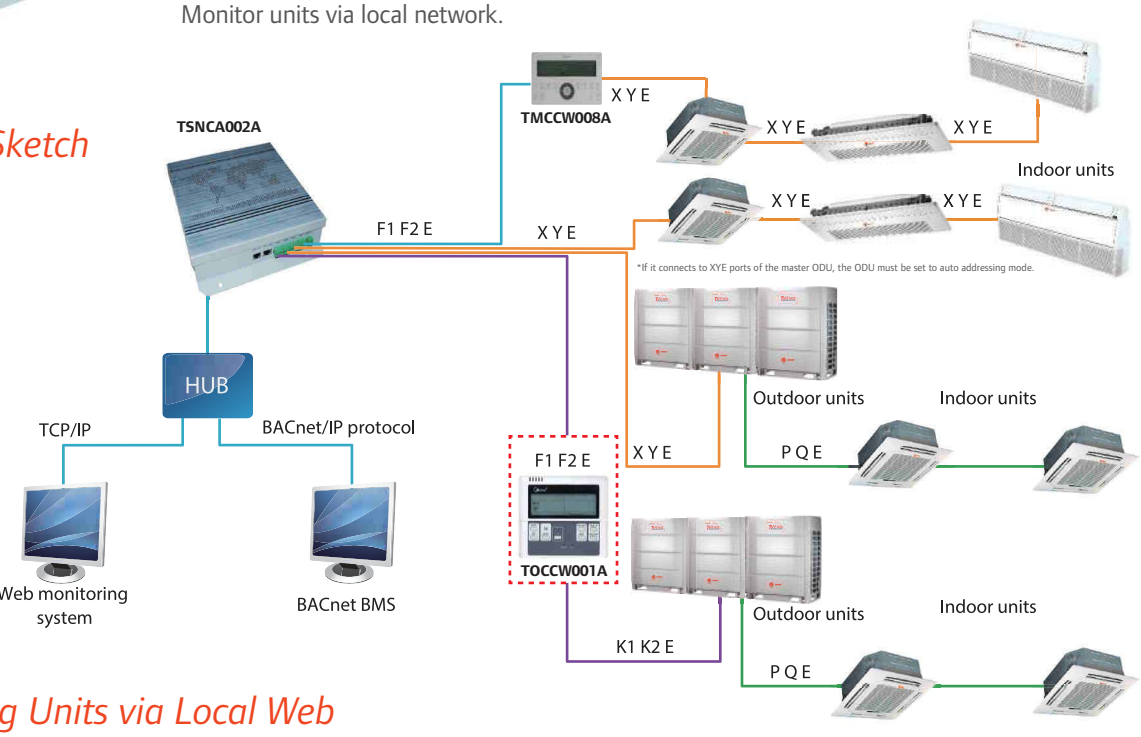
BMS Lonworks Gateway (TSNCA001B)

Enables centralized control of up to 1024 indoor units and 512 outdoor units to the LonWorks BMS.
Easily connectable to the BMS system.
Ideal module for scattered units in large projects.

BMS BACnet Gateway (TSNCA002A)

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
Freely connectable to the BMS or not.
Compatible with TSNSA001A.
Monitor units via local network.

Network Sketch



Monitoring Units via Local Web

TSNCA002A allows users explore the units via local network, simply using the Internet Explorer or other web browser. In addition, users not only can check the units running conditions, but also change the running parameter, which is quite convenient for users to control.

Wide Compatibility

TSNCA002A has a wonderful adaptability to the BMS.

Company	BMS software	Brand
TRANE	Tracer Summit	TRANE
SIEMENS	APOGEE	APOGEE
Honeywell	Alerton	ALERTON
Schneider	Andover	AndoverControls
Johnson	METASYS	METASYS

BMS Accessories

Digital Power Meter

TSNEA002A

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

Low power consumption

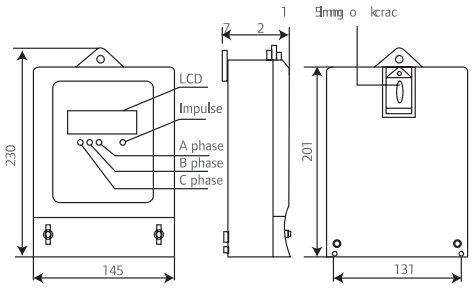
The digital power meter consumes minimal energy.
Voltage circuit: less than 2W/10VA
Current circuit: less than 2.5VA

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.

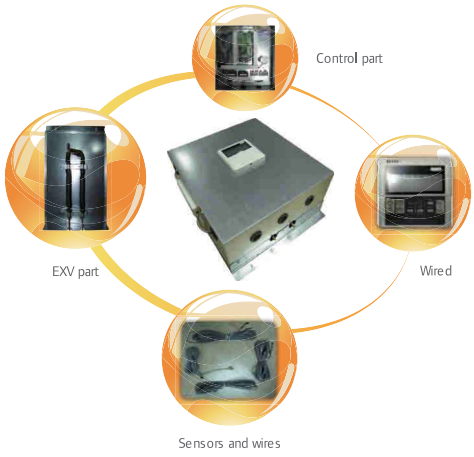
Specifications

Model	TSNEA002A
Dimensions (H×W×D)(mm)	230×145×72
Power (V)	200V-500V(50/60Hz)



DX AHU Connection Kit (TMUCA001A/TMUCA002A/ TMUCA003A)

Inclusive of control part, EXV part, temperature sensors and wired controller.
Easy interface to apply to different DX AHU, such as CLCP or else.
Applicable for DX AHU connecting to TVR™ IV out door units.



Outdoor Unit Failure Alarm (TOUCA001A)

When the system have a malfunction, it will out put alarm strong power.

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