



# *TVR III* *DC inverter VRF system*

*25.2 - 180.0 kW*

*86,000 - 614,000 Btu/h*







# At Trane, we care about air – cool air, warm air, clean air.

As a world leader in air conditioning systems, services and solutions, we ensure superior air quality for a comfortable environment in homes, and many of the world's largest and most famous commercial, industrial and institutional buildings. We offer a broad range of energy-efficient heating, ventilation and air conditioning (HVAC) systems; dehumidifying and air cleaning products; service and parts support; advanced building controls and financing solutions. With Trane's expertise in environmental technology and energy conservation, we make a difference in energy efficiency around the globe.

Ingersoll Rand Trane Energy-saving Service (Shanghai) Co. Ltd set up to further promote EMC business in China and better serve Chinese customers

## Trane achievements on environment conservation

**1992** Received Strategic Ozone Protection Award from the Environmental Protection Agency (EPA) of the United States

**1993** Launched the most efficient and low-leakage EarthWise™ CenTraVac™ chiller of the industry

**1994** Outstanding Corporate Environmental Achievement awarded by US National Environmental Development Association

**1996** Received the Energy Efficiency and Renewable Energy Award from the US Department of Energy (DOE)

**1998** Received the Climate Protection Award from the US EPA

**2000** Received the Energy Star Gold Award from US EPA

**2005** Started cooperation with China's Ministry of Construction to promote Green Building development in China

395 models of Trane products received the 1st State Energy-saving Product Certification, accounting for more than 75% of all products certified

**2007** Joined the Clinton Climate Initiative (CCI) to help 40 world's largest cities to reduce greenhouse gas emissions and improve energy efficiency

**2009** Invited by the US DOE for the Energy Savings Performance Contracts (ESPC) Program to help the US federal government lowering cost, decreasing energy use and minimizing carbon footprints

**2010** Trane Taicang Factory was LEED Gold certified

**2011**

### Comprehensive product range

Trane's industry leadership is based on the comprehensive systems we design to address and cater to the specific needs of our customers' buildings, complete with sophisticated controls as well as chillers, and supported by Trane parts and services.

**Large commercial products**

- Centrifugal chillers
- Helical rotary chillers
- Airside units
- Fan coil units

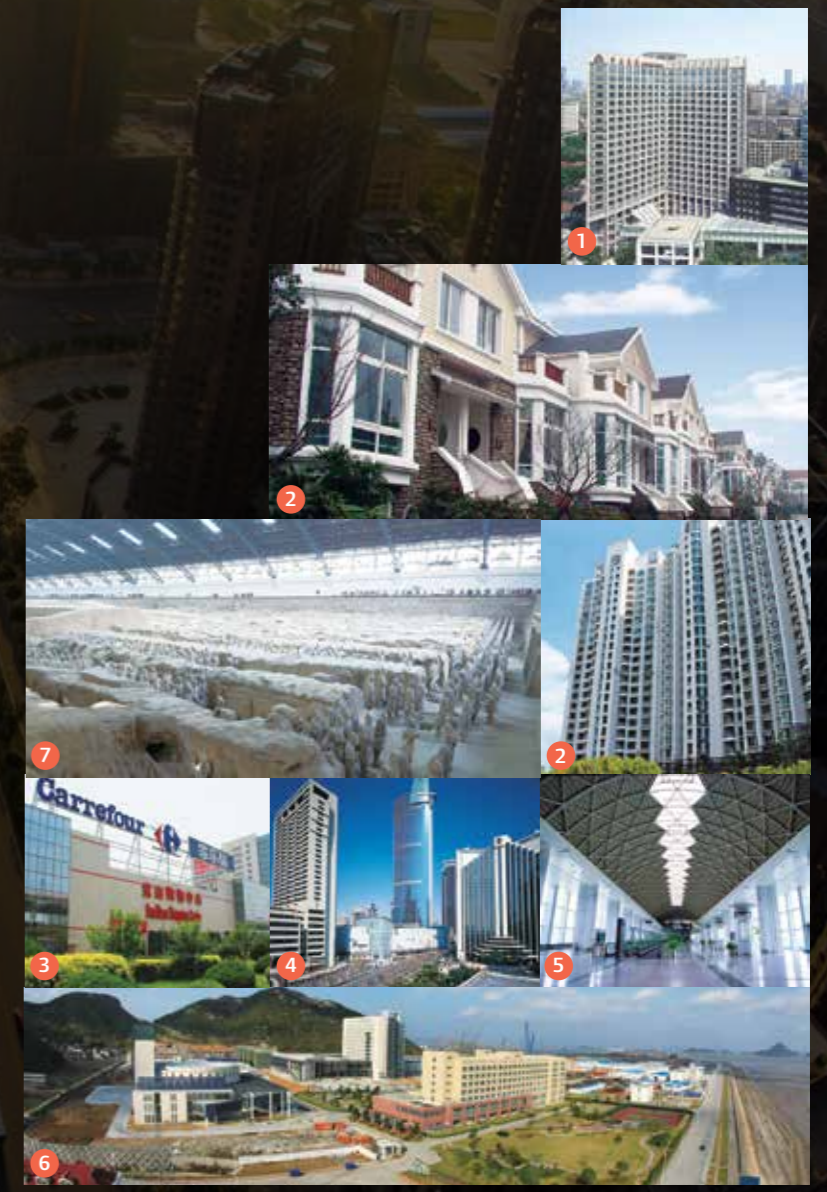
**Unitary products**

- VRF systems
- Mini-split systems
- Air-cooled chillers with heat pump options
- Water source heat pump systems
- Packaged units

**Building control systems**

- TracerSummit control software
- Building control unit
- Programmable control unit MP581

- Trane serves building owners and construction agents across different markets including:
- 1 Healthcare
  - 2 Residential
  - 3 Retail
  - 4 Commercial
  - 5 Transportation
  - 6 Industry
  - 7 Government and public area



Making buildings better for life





*High reliability*  
*Superior efficiency*  
*Absolute comfort*  
*Flexible design*  
*Intelligent control*

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As a leader in the air conditioning industry with a history spanning 100 years, Trane has always made the customer our number one priority. TVR is Trane's outstanding contribution to our customers' VRF product; two generations of experience and innovation, injected with new technology and strong vitality.



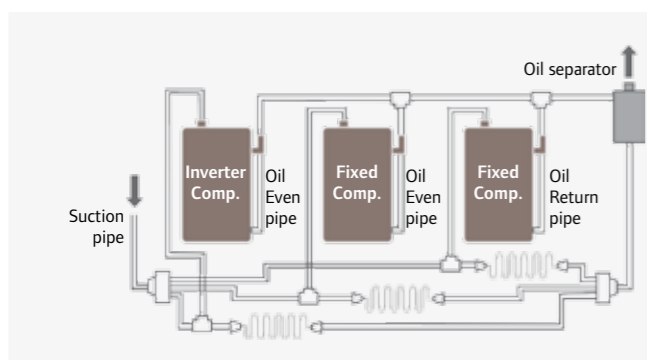
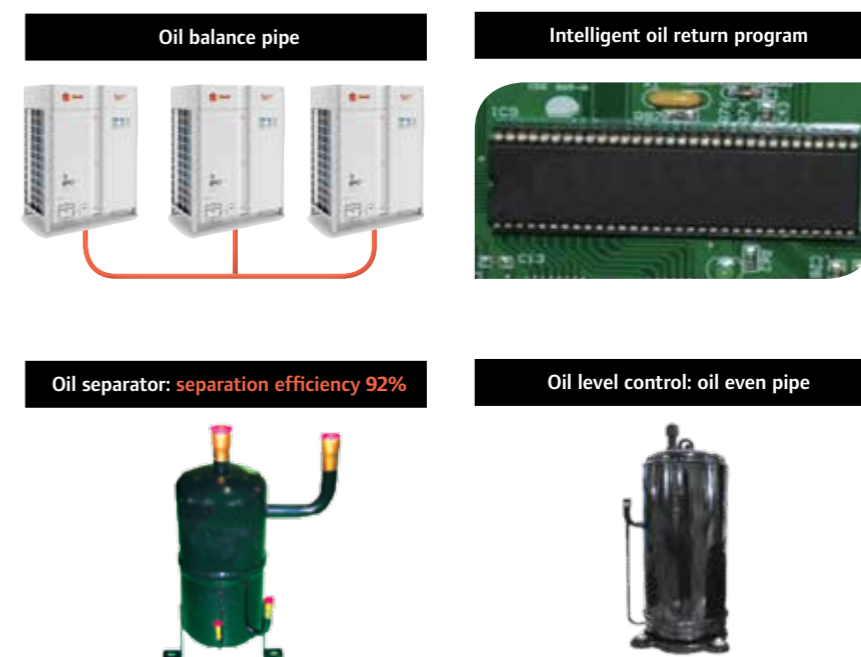
**High reliability:** Trane TVR III DC inverter VRF system delivers the industry's highest efficiency to keep your operating cost low, giving you the highest return on investment.



**Core oil control technology for system safety and reliability**

In the multi-modular combination system, it is difficult to maintain the oil balance between each compressor in different modules. This could easily lead to compressor oil shortage and breakage.

TVR III has an intelligent oil return program and is equipped with an oil balance pipe between each modular in one system. This auto oil return program monitors the running time and state of system to ensure reliable oil return and reduce the risk of compressor breakage.



**High efficiency oil balance and oil return technology**

With smart oil level control technique, when the oil level of one compressor is too high, the excess lubricating oil can be collected into an oil separator through the oil even pipe to equalize oil level of each compressor.

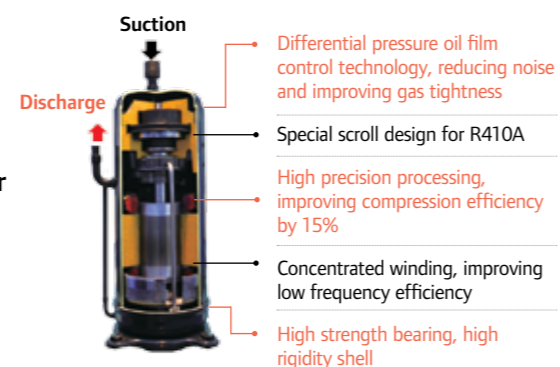
**Multiple protection function ensures that system operation becomes more stable**

- **Real-time monitoring and automatic adjustment of operating status:**  
The important operating parameters of the compressor discharge temperature, high and low pressure, running current would be monitored real-time by the control system, it will automatically adjust or initiate protective measures to ensure the system is safe and effective to operate.
- **Back-up operation:**  
When a single module compressor failure occurs or one module in one system requires maintenance, the system can continue stand-alone operations to guarantee uninterrupted indoor air conditioning effect, until the failure is rectified or maintenance is completed.
- **Balance compressor operation time to improve system stability:**  
The outdoor unit always gives priority to start the module with least total running time to balance running hours of different modules and ensure reliability of the whole system.

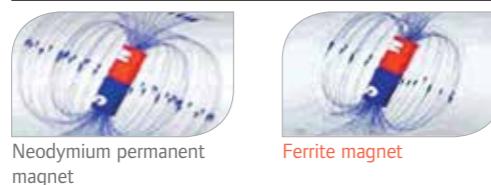


**High efficiency DC inverter compressor**

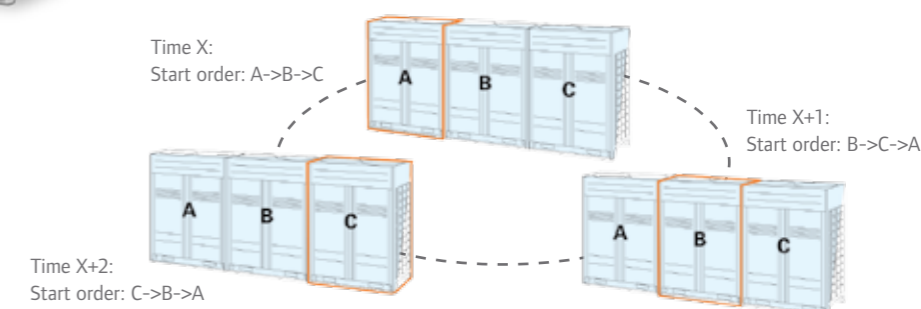
- High precision scroll compressor
- High reliability, wide rotation speed range
- High strength bearing, high rigidity shell



**Neodymium permanent magnet rotor:** powerful magnetic force, large force moment and high efficiency



**Concentrated winding:** magnetic efficiency is 12% higher than distributed winding

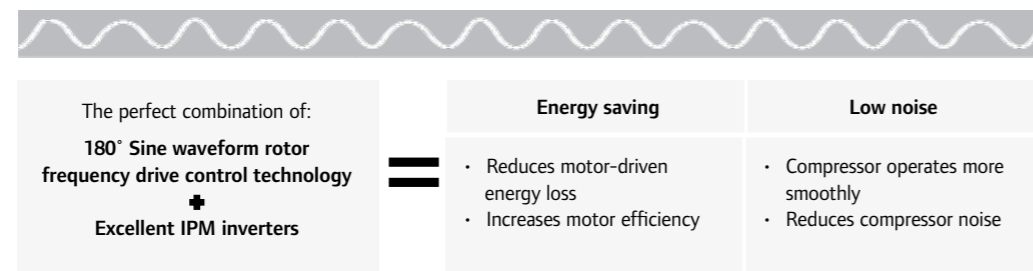


**Superior efficiency:** Trane provide products such as TVR III to help our customers reduce their energy usage and greenhouse gas emissions, and therefore helps minimize the impact on climate change.

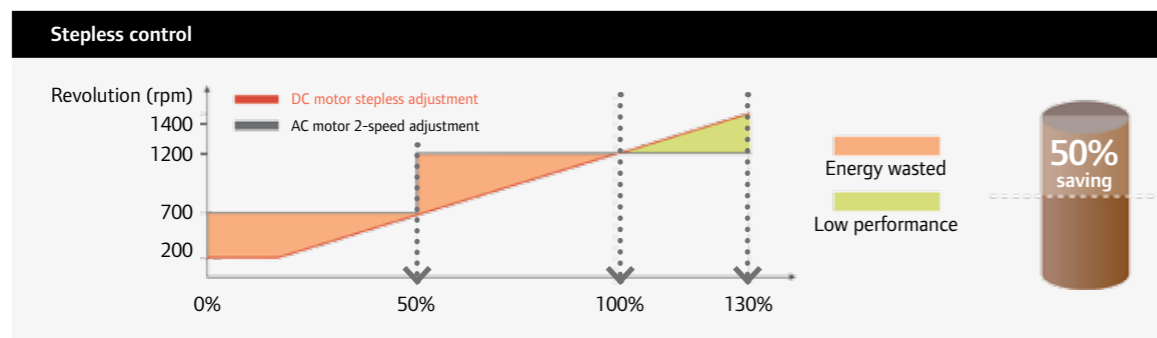


**Advanced DC inverter technology, IPLV value far exceeds the industry standards**

- 180-degree Sine wave DC inverter technology makes the compressor run more smoothly, is quieter and more efficient.

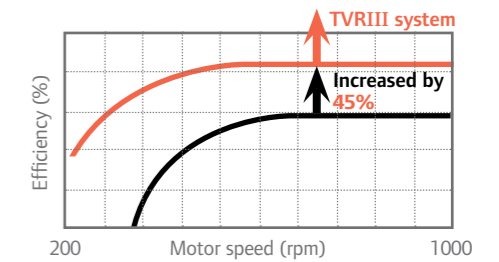


- Achieve stepless control: compressor speed is adjusted according to the load change steplessly and with precision. Energy-saving effect is significantly more pronounced.



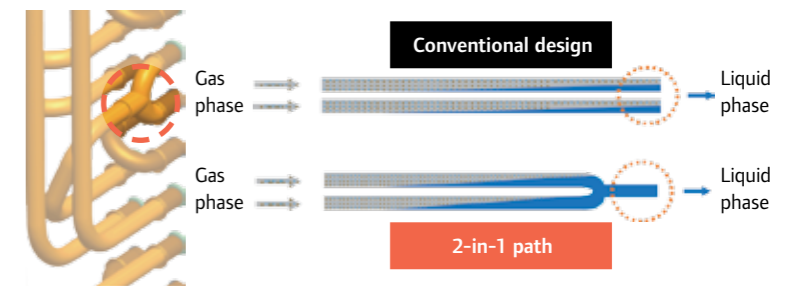
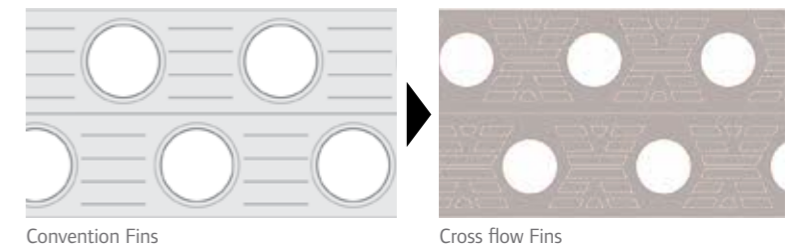
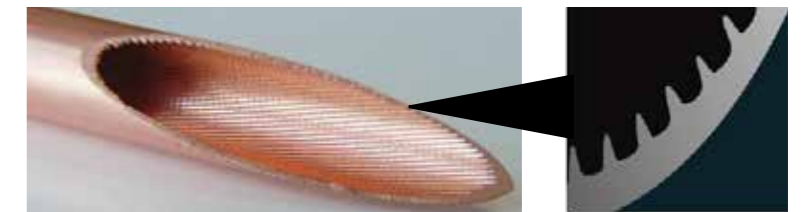
**High efficiency DC motor**

- Low noise and high efficiency because of high-density wire winding engineering.
- Brushless with built-in sensor.



**Heat exchanger efficiency; the same capacity now requires less power**

- High efficiency copper tube: CCT (Continuous Cooling Transformation) inner-grooved copper tube has high thermometric conductivity that breaks the refrigerant flow boundary layer to enhance refrigerant disturbance to increase heat exchanging efficiency.
- High efficiency Fin for heat exchange: Has low air resistance and high heat transfer coefficient, frosting is improved, frost on the heat exchanger will be well-distributed, easy for defrosting.
- 2-in-1 refrigerant flow path design: Liquid refrigerant volume proportion in the condenser outlet is highly increased, allowing the indoor unit to produce more heat (or cool air).



**Dual electronic expansion valve design - refrigerant flow control is more accurate and reliable**

- The outdoor unit is equipped with up to 960 steps dual electronic expansion valve, rendering the refrigerant flow adjustment to be even more precise.
- The liquid side is controlled by a solenoid valve bypass design to control compressor superheat and provide effective protection of the compressor, to maximize its efficiency, as well as ensure safe and reliable operation.



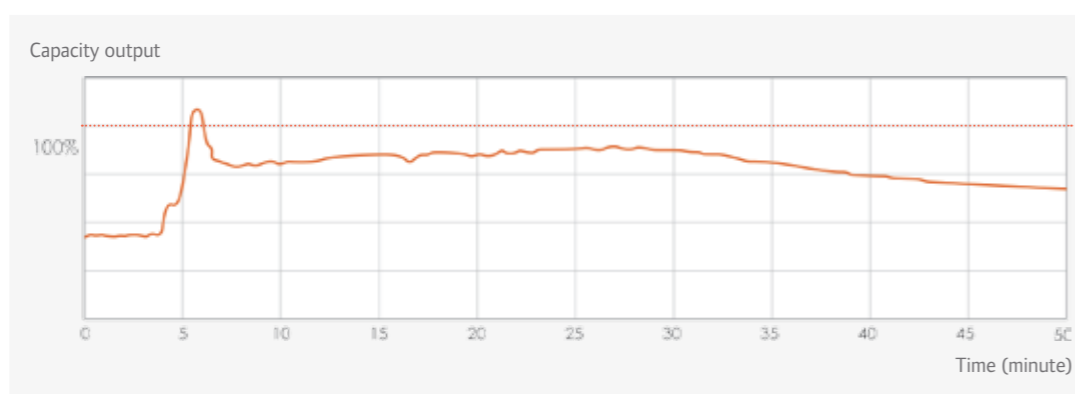


**Absolute comfort:** massive research and development has gone into the design of our products to deliver maximum ease-of-use and enjoyable indoor environments to end-users - because we care.



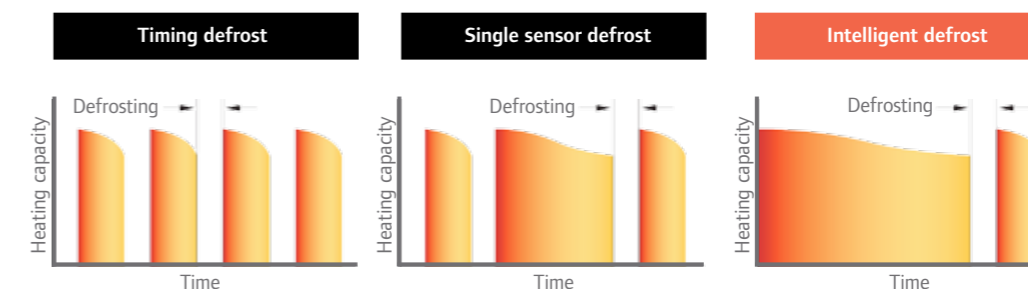
**Combination of fixed and inverter compressors to achieve a faster cooling and heating effect**

- Each outdoor module has an inverter and a fixed compressor.
- The inverter compressor can be realized from a soft start to the high-frequency operation, thus avoiding the impact on the grid, and to achieve a high connection rate of the indoor units.
- The fixed compressor has the unique advantage to rapidly attain 100% output, takes shorter time to achieve the air conditioning effect and offers a more powerful heating effect in winter.



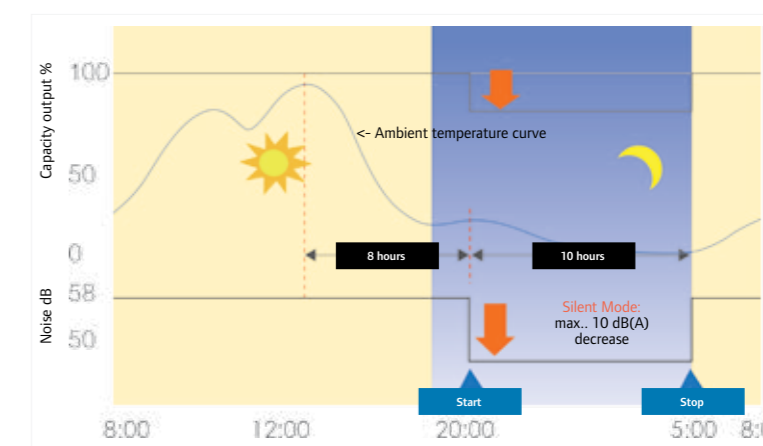
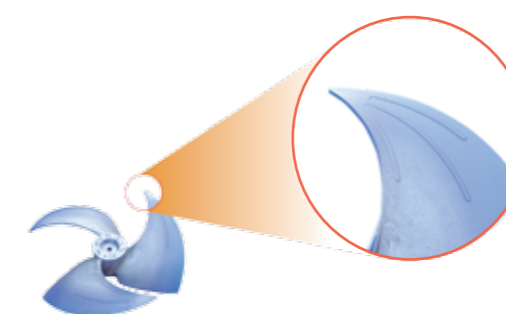
**Intelligent defrosting program**

- Intelligent defrost control computes the integrated environmental temperature, the rate of change of the evaporating pressure and temperature and heating operation time to determine before defrosting.
- Effectively extends the running time of heating and avoids frequent and ineffective defrosting.



**The outdoor unit uses low-noise technology with night time silent mode for a quieter interior environment**

- Low-noise fan blade:
  - Anti-vibration forward fan blade.
  - Special design for the tips to reduce the air vibration and disturbance.
- Silent mode, night time noise control: Particularly suitable for villas and high-end apartments, this technology automatically achieves reduction of the fan and compressor speed by a maximum of 10 dB(A). It allows users to achieve maximum comfortable and avoid disturbing the neighbors.



**Super-cooling flow path design**

Separates the refrigerant inlet and outlet to increase the degree of super-cooling. This reduces the effect of high temperature inlet gas refrigerant to low temperature outlet liquid refrigerant, and therefore increases system efficiency.



**Flexible design:** Trane is your choice partner because we understand your needs. TVR III offers a wide range of indoor and outdoor unit capacities that meet any building and interior designs.



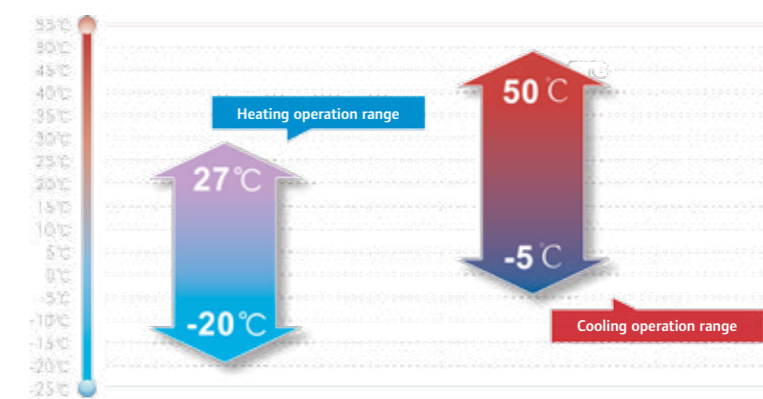
#### 4 units combination, capacity up to 64HP

- With each outdoor unit at 8-16HP as a basic module, the system can achieve a maximum of 4 module combination, making the system more widely applicable to different occasions.
- The outdoor units' capacity range from 8HP up to 64HP. With longest pipe length between indoor and outdoor units reaching 200m, maximum 60 indoor units with capacity up to 130% of total outdoor units can be connected as one system, making it more widely applicable to different building types. The comprehensive indoor unit line-up meets different indoor space and comfort needs.



#### Wide outdoor operation range

- Cooling operating temperature is up to 50°C, suitable for tropical region.
- Heating operation temperature is down to -20°C, to produce heat in cold winter.

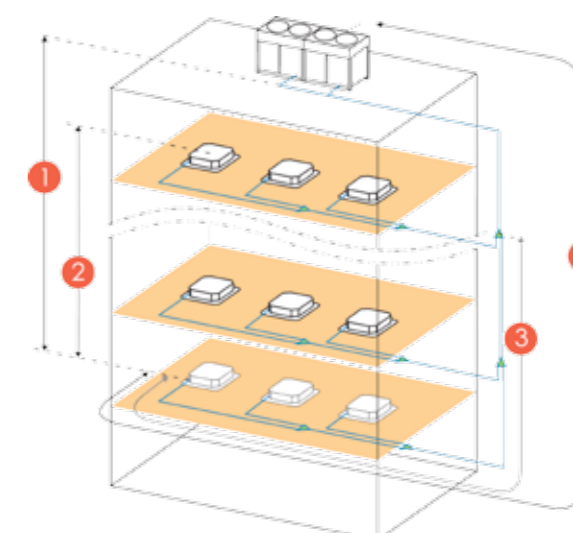


#### Pipe length and height difference

1. Height difference between outdoor and indoor unit is up to 70m\*.
2. Height difference between indoor units is 15m.
3. Length from first indoor distributor to last indoor unit is 65m.
4. The longest pipe length is 200m.

\* Note:

1. When outdoor unit is below indoor units, the maximum vertical length from indoor unit to outdoor units is 70m.
2. When outdoor unit is above indoor units, the maximum vertical length from indoor unit to outdoor units is 50m.



#### Easy installation

- Flexibility of installation. Choose from left, right, front or under refrigerant pipe connection, design and installation for more flexibility and convenience.
- Thanks to the DC fan motor, external static pressure of the outdoor fan is adjustable up to maximum 85Pa, therefore the air flow won't be affected by the blinds or orifice plates in front of the outdoor unit.





**Intelligent control:** each day you have the ability to make the choice to take control of your life or to let it control you. Trane puts the control in you - wherever you may be.

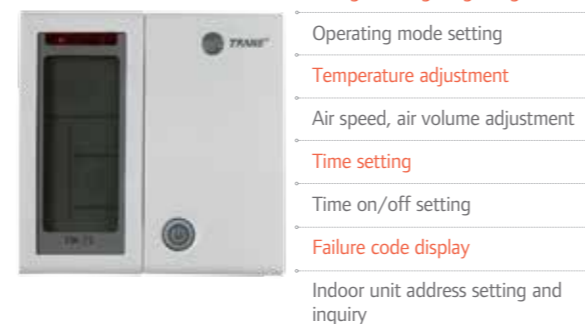


**Wireless/wired remote controller**

- With bidirectional communication, indoor unit's operating parameters (error code, temperature, address) can be inquired and displayed on the wired controller.
- Compact design.



Wireless remote controller



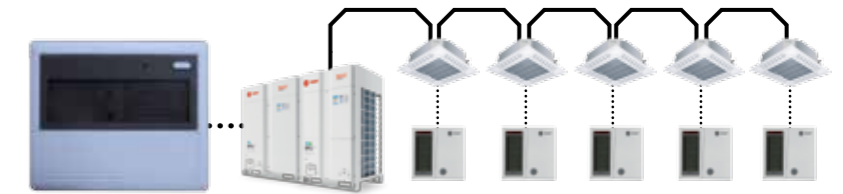
Wired remote controller

User friendly LCD screen and background lighting design

- Operating mode setting
- Temperature adjustment
- Air speed, air volume adjustment
- Time setting
- Time on/off setting
- Failure code display
- Indoor unit address setting and inquiry

**Central remote controller**

- One controller can control a maximum of 64 indoor units.
- Central control for all indoor units and individual control for each indoor unit.

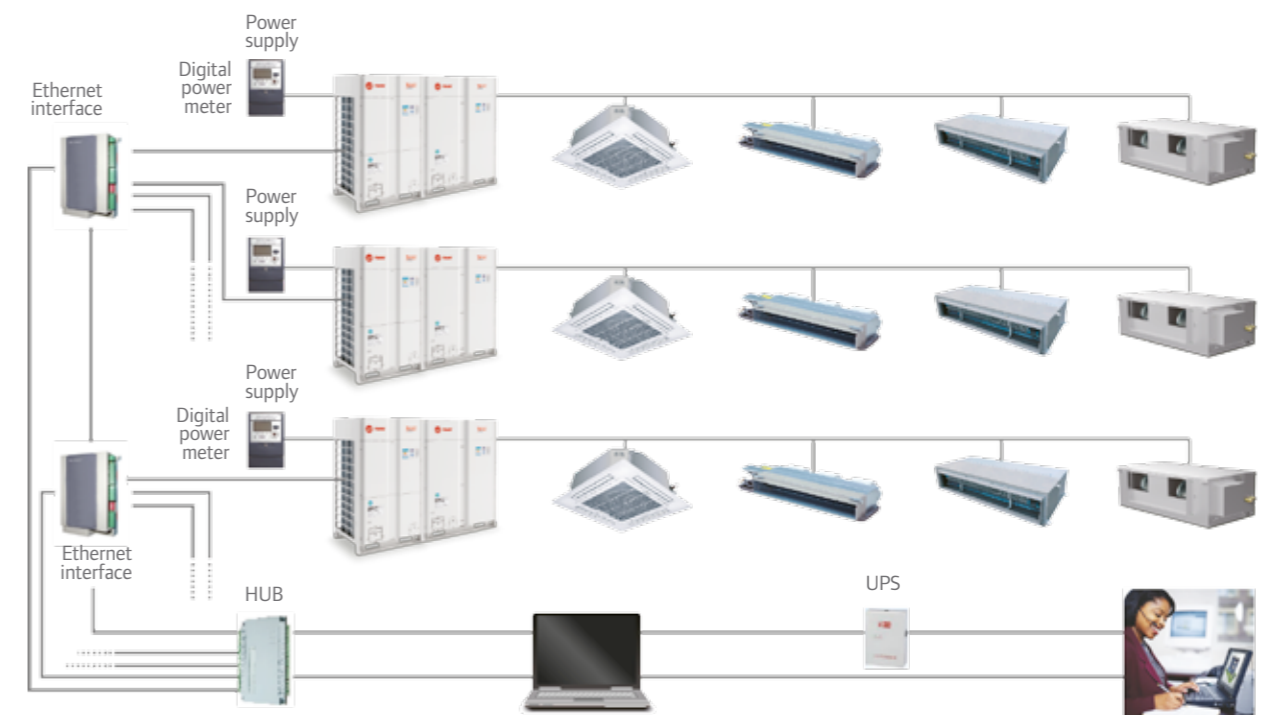


**Its user-friendly features include:**

- Monitor status
- A unified control interface
- System operation mode lock-up
- Failure code display
- Centralized or separate adjustment of temperature, air speed and operation mode

**PC control system**

- TVRIII PC control management system, via an Ethernet interface to link multiple refrigerant system for communication and management by PC terminal.
- Operator can monitor and control the entire building's air conditioning operation.



**Its user-friendly features include:**

- Individual/central control
- Error detection
- Zone control
- Monitor status
- System log
- Floor visual navigation
- Schedule management
- Permission settings
- Windows XP & Windows 7
- Power distribution
- Operation record
- and many more





**Advanced outdoor unit design: high reliability, comfort and energy saving from the improved heat transfer of the system by using top VRF technologies and efficient components.**

**Brushless DC motor**

- High efficiency
- Low noise

**180° Sine wave control**

- High precision rotor speed control

**Stepless control**

- On-demand output
- High efficiency
- Energy saving

**CCT inner-grooved tube**

- Excellent heat-exchanging efficiency

**DC inverter compressor**

- High pressure type
- Asymmetric scroll design
- Neodymium permanent magnet rotor

**2-in-1 refrigerant flow path**

- Increase the liquid refrigerant volume proportion

**Super-cooling design**

- Enhance the super-cool of refrigerant to increase system's efficiency

**Cross flow Fins**

- Reduce air resistance
- Frosting improved

**Outdoor unit line-up and combination**

Capacity (HP)	Model name	Module combination				
		8	10	12	14	16
8	TMR080ADA	●				
10	TMR100ADA		●			
12	TMR120ADA			●		
14	TMR140ADA				●	
16	TMR160ADA					●
18	TMR180ADA	●	●			
20	TMR200ADA		●●			
22	TMR220ADA		●	●		
24	TMR240ADA		●		●	
26	TMR260ADA		●			●
28	TMR280ADA			●		●
30	TMR300ADA				●	●
32	TMR320ADA					●●
34	TMR340ADA		●●		●	
36	TMR360ADA		●●			●
38	TMR380ADA		●	●		●
40	TMR400ADA		●		●	●
42	TMR420ADA		●			●●
44	TMR440ADA			●		●●
46	TMR460ADA				●	●●
48	TMR480ADA					●●●
50	TMR500ADA	●	●			●●
52	TMR520ADA		●●			●●
54	TMR540ADA		●	●		●●
56	TMR560ADA		●		●	●●
58	TMR580ADA		●			●●●
60	TMR600ADA			●		●●●
62	TMR620ADA				●	●●●
64	TMR640ADA					●●●●

**High efficiency DC motor**

- High efficiency DC fan motor is from international brand Panasonic
- Low noise and high efficiency because of high-density wire winding engineering
- Brushless with built-in sensor



**CCT inner-grooved tube**

- CCT (Continuous Cooling Transformation) inner-grooved copper tube has high thermometric conductivity. Its inner-grooved fins break the refrigerant flow boundary layer to enhance refrigerant disturbance to increase heat-exchanging efficiency



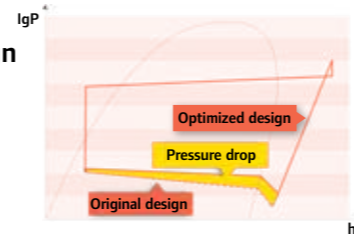
**Cross flow Fins**

- Has low air resistance and great heat transfer coefficient
- Frosting is improved, frost on the heat-exchanger will be well-distributed, easy for defrosting



**New refrigerant pipeline design**

- New refrigerant pipeline design optimization helps reduce the piping pressure drop by 5% and increase EER and COP
- EER and COP increase because of evaporating temperature increase and compressor work decrease





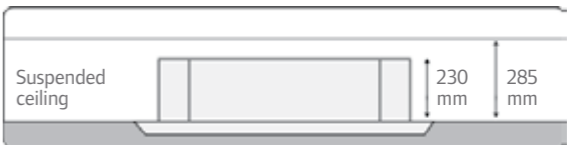
**Extensive indoor unit line-up:** when we say TVR III has it all, we mean it. Offering 6 types of indoor units and 41 models at different capacities, virtually any ceiling height, indoor space and comfort needs will be met.



**MWC 4-way cassette unit**



- Air flow is soft and smooth, air can be delivered to every corner.
- With a slim body with 230mm height, it is specially suitable for low suspended ceiling room.
- Built-in with low noise long life drainage pump, pumping head is 700mm.



**Indoor unit line-up**

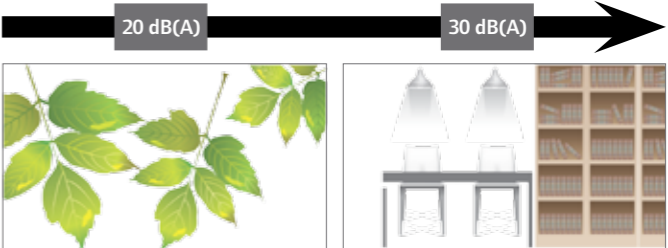
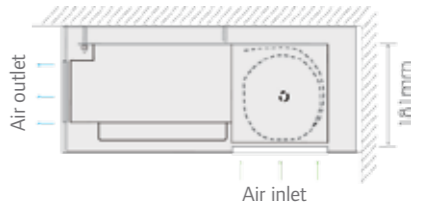
Type	Cooling capacity (kW)	2.2	2.8	3.2	3.6	4.5	5.1	5.6	7.1	8.0	9.0	10.0	11.2	12.0	12.5	14.0	15.0
4-way cassette			•		•	•		•	•	•	•	•	•		•	•	
Slim duct		•	•	•	•	•		•	•								
Standard duct										•	•	•	•	•			•
High ESP duct											•	•	•	•	•		•
High wall		•	•		•	•	•		•								
Floor/ceiling						•		•	•	•			•				



**MWD slim duct unit**



- Comes in a slim body with 181mm height, it is specially suitable for low suspended ceiling rooms.
- Strong air flow, low noise centrifugal fan blade with special air tunnel system, and the unique shock absorption measures, keeps this series' ducted units' running noise at a low 29 dB(A).
- Same height and depth, easy for design and installation, when more units are installed in the same room, they will fit the design decoration perfectly.

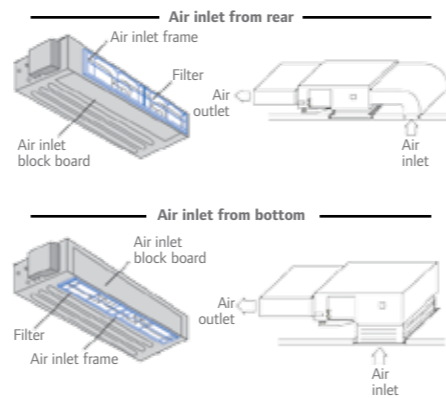
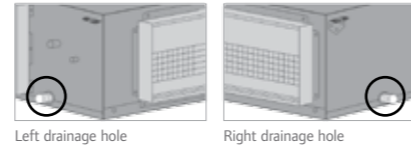






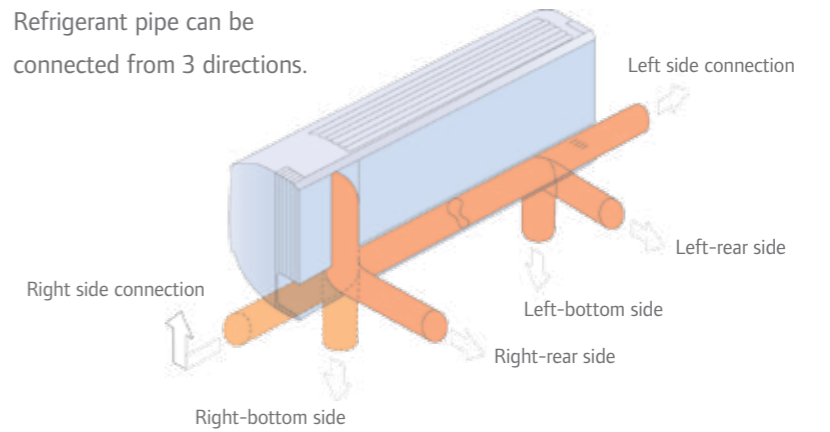
### MWD standard static pressure duct unit

- 30 or 50Pa ESP can be flexibly selected to take both sound level and air distribution effect into consideration to fit different installation conditions.
- Reserved drainage pipe outlet holes on left side and right side allows installer to choose the outlet holes on site as per actual conditions, flexible for drainage pipe installation.
- Using multiple noise reduction technology, including the design of high efficiency low noise motor, aviation fan wheel, low vibration wheel casing, unique design, high quality insulation materials in the inner wall configuration enables the units to run in a low-noise condition.
- Air return from rear or bottom is easy to change on site and convenient for installation.



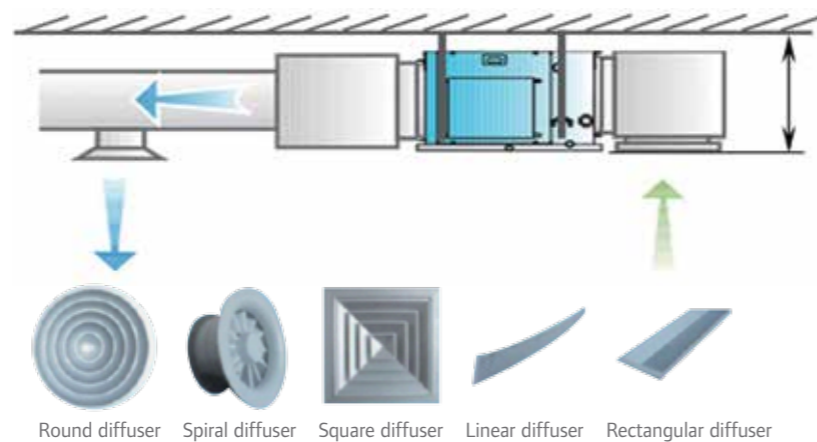
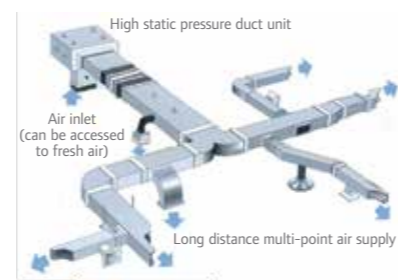
### MWW high-wall unit

- Cross flow fan - in cooling mode, cold air is blown from a horizontal direction; in heating mode, warm air is blown from the vertical direction.
- 65° wide-angle air supply.
- Refrigerant pipe can be connected from 3 directions.



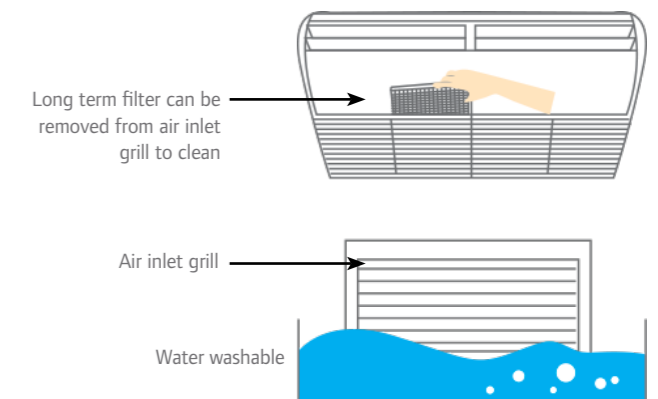
### MWD high static pressure duct unit

- High air flow with high static pressure, easy for large rooms duct design, suitable for different shape of room.
- Slim body with 370mm height saves suspended ceiling space.



### MWX floor/ceiling unit

- Suspended installation saves valuable floor space.
- Configured with low noise, high performance fans that provide high air flow and long distance air supply.
- Three dimensional and wide-angle air supply easily supplied air to every corner.
- Suitable supply air angle in different mode.
- Refrigerant pipe can be connected from 3 directions.





## Performance data (outdoor unit)

Model name		TMR080ADA	TMR100ADA	TMR120ADA	TMR140ADA	TMR160ADA
Single model		TMR080ADA	TMR100ADA	TMR120ADA	TMR140ADA	TMR160ADA
Cooling capacity	kW	25.2	28.0	33.5	40.0	45.0
Heating capacity	kW	27.4	31.5	37.5	45.0	50.0
Cooling rated input	kW	8.6	9.4	10.0	15.7	16.5
Heating rated input	kW	8.0	8.5	9.8	13.5	14.5
Power supply	380V/3Ph/50Hz					
Compressor type	Hermetically sealed scroll type					
Fan type	Axial fan					
Fan motor type	DC inverter					
Fan air flow	CMH	12000		15000		
Refrigerant type	R410A					
Refrigerant charge	kg	10		12	15	
Oil type	FVC-68D					
Dimensions	W	mm		970		
	D	mm		796		
	H	mm		1620		
Net weight	kg	230		260	310	
Sound level	dB(A)	58/45 (silent night mode)			60/46 (silent night mode)	
Connecting pipe - liquid	mm	φ12.7 (threaded connection)			φ15.9 (threaded connection)	
Connecting pipe - gas	mm	φ22.2 (welded connection)	φ25.4 (welded connection)		φ28.6 (welded connection)	

Model name		TMR180ADA	TMR200ADA	TMR220ADA	TMR240ADA	TMR260ADA
Combined models		TMR080ADA + TMR100ADA	TMR100ADA + TMR100ADA	TMR100ADA + TMR120ADA	TMR100ADA + TMR140ADA	TMR100ADA + TMR160ADA
Cooling capacity	kW	53.2	56.0	61.5	68.0	73.0
Heating capacity	kW	58.9	63.0	69.0	76.5	81.5
Cooling rated input	kW	18.0	18.8	19.4	25.1	25.9
Heating rated input	kW	16.5	17.0	18.3	22.0	23.0
Power supply	380V/3Ph/50Hz					
Compressor type	Hermetically sealed scroll type					
Fan type	Axial fan					
Fan motor type	DC inverter					
Fan air flow	CMH	12000 x 2		12000 + 15000		
Refrigerant type	R410A					
Refrigerant charge	kg	10 + 10		10 + 12	10 + 15	
Oil type	FVC-68D					
Dimensions	W	mm		970 + 970		
	D	mm		796		
	H	mm		1620		
Net weight	kg	230 + 230		230 + 260	230 + 310	

Model name		TMR280ADA	TMR300ADA	TMR320ADA	TMR340ADA	TMR360ADA
Combined models		TMR120ADA + TMR160ADA	TMR140ADA + TMR160ADA	TMR160ADA + TMR160ADA	TMR100ADA + TMR100ADA + TMR140ADA	TMR100ADA + TMR100ADA + TMR160ADA
Cooling capacity	kW	78.5	85.0	90.0	96.0	101.0
Heating capacity	kW	87.5	95.0	100.0	108.0	113.0
Cooling rated input	kW	26.5	32.2	33.0	34.5	35.3
Heating rated input	kW	24.3	28.0	29.0	30.5	31.5
Power supply	380V/3Ph/50Hz					
Compressor type	Hermetically sealed scroll type					
Fan type	Axial fan					
Fan motor type	DC inverter					
Fan air flow	CMH	15000 x 2		12000x2 + 15000		
Refrigerant type	R410A					
Refrigerant charge	kg	12 + 15	15 + 15		10 + 10 + 15	
Oil type	FVC-68D					
Dimensions	W	mm		1260 + 1260		970x2 + 1260
	D	mm		796		
	H	mm		1620		
Net weight	kg	260 + 310		310 + 310	230 + 230 + 310	

Model name		TMR380ADA	TMR400ADA	TMR420ADA	TMR440ADA	TMR460ADA
Combined models		TMR100ADA + TMR120ADA + TMR160ADA	TMR100ADA + TMR140ADA + TMR160ADA	TMR100ADA + TMR160ADA + TMR160ADA	TMR120ADA + TMR160ADA + TMR160ADA	TMR140ADA + TMR160ADA + TMR160ADA
Cooling capacity	kW	106.5	113.0	118.0	123.5	130.0
Heating capacity	kW	119.0	126.5	131.5	137.5	145.0
Cooling rated input	kW	35.9	41.6	42.4	43.0	48.7
Heating rated input	kW	32.8	36.5	37.5	38.8	42.5
Power supply	380V/3Ph/50Hz					
Compressor type	Hermetically sealed scroll type					
Fan type	Axial fan					
Fan motor type	DC inverter					
Fan air flow	CMH	12000 + 15000x2			15000 x 3	
Refrigerant type	R410A					
Refrigerant charge	kg	10 + 12 + 15		10 + 15 + 15		12 + 15 + 15
Oil type	FVC-68D					
Dimensions	W	mm		974 + 1260x2		1260 x 3
	D	mm		796		
	H	mm		1620		
Net weight	kg	230 + 260 + 310		230 + 310 + 310		230 + 310 + 310

Model name		TMR480ADA	TMR500ADA	TMR520ADA	TMR540ADA	TMR560ADA
Combined models		TMR160ADA + TMR160ADA + TMR160ADA	TMR080ADA + TMR100ADA + TMR160ADA + TMR160ADA	TMR100ADA + TMR160ADA + TMR160ADA + TMR160ADA	TMR100ADA + TMR120ADA + TMR160ADA + TMR160ADA	TMR100ADA + TMR140ADA + TMR160ADA + TMR160ADA
Cooling capacity	kW	135.0	143.2	146.0	151.5	158.0
Heating capacity	kW	150.0	158.9	163.0	169.0	176.5
Cooling rated input	kW	49.5	51.0	51.8	52.4	58.1
Heating rated input	kW	43.5	45.5	46.0	47.3	51.0
Power supply	380V/3Ph/50Hz					
Compressor type	Hermetically sealed scroll type					
Fan type	Axial fan					
Fan motor type	DC inverter					
Fan air flow	CMH	15000 x 3	12000x2 + 15000x2		12000 + 15000x3	
Refrigerant type	R410A					
Refrigerant charge	kg	15 + 15 + 15	10 + 10 + 15 + 15		10 + 12 + 15 + 15	10 + 15 + 15 + 15
Oil type	FVC-68D					
Dimensions	W	mm		1260 x 3		974 + 1260x3
	D	mm		796		
	H	mm		1620		
Net weight	kg	310 + 310 + 310		230 + 230 + 310 + 310		230 + 260 + 310 + 310

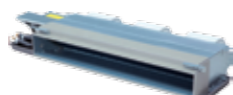
Model name		TMR580ADA	TMR600ADA	TMR620ADA	TMR640ADA	
Combined models		TMR100ADA + TMR160ADA + TMR160ADA + TMR160ADA	TMR120ADA + TMR160ADA + TMR160ADA + TMR160ADA	TMR140ADA + TMR160ADA + TMR160ADA + TMR160ADA	TMR160ADA + TMR160ADA + TMR160ADA + TMR160ADA	
Cooling capacity	kW	163.0	168.5	175.0	180.0	
Heating capacity	kW	181.5	187.5	195.0	200.0	
Cooling rated input	kW	58.9	59.5	65.2	66.0	
Heating rated input	kW	52.0	53.3	57.0	58.0	
Power supply	380V/3Ph/50Hz					
Compressor type	Hermetically sealed scroll type					
Fan type	Axial fan					
Fan motor type	DC inverter					
Fan air flow	CMH	15000 x 2		12000x2 + 15000		
Refrigerant type	R410A					
Refrigerant charge	kg	10 + 15 + 15 + 15		12 + 15 + 15 + 15		
Oil type	FVC-68D					
Dimensions	W	mm		974 + 1260x3		
	D	mm		1260 x 4		
	H	mm		796		
Net weight	kg	230 + 310 + 310 + 310		260 + 310 + 310 + 310		

Note: 1. The cooling conditions: indoor side 27°C (80.6°F) DB, 19°C (66°F) WB, outdoor side 35°C (95°F) DB;  
2. The heating conditions: indoor side 20°C (68°F) DB, 15°C (44.6°F) WB, outdoor side 7°C (42.8°F) DB;  
3. The above data may be changed without notice for future improvement on quality and performance.



## Performance data (indoor unit)

### MWD slim duct unit



Model	MWD022AML	MWD028AML	MWD032AML	MWD036AML	MWD045AML	MWD056AML	MWD071AML	
Cooling capacity	kW	2.2	2.8	3.2	3.6	4.5	5.6	7.1
Heating capacity	kW	2.5	3.2	3.5	4.0	5.0	6.3	8.0
Rated input	W	45		65	75		105	
Power supply		220V/1Ph/50Hz						
Fan air flow	CMH	450		550	780		1100	
Fan ESP	Pa				0 ~ 20			
Refrigerant type					R410A			
Dimensions	W mm		925			1205		1530
	D mm				510			
	H mm				181			
Net weight	kg	17		17.5		21		26
Sound level - L/M/H	dB(A)	29/33/36		30/34/37		32/36/40		35/39/42
Connecting pipe - liquid	mm	φ6.35				φ6.35		φ9.52
Connecting pipe - gas	mm	φ9.52				φ12.7		φ15.88
Connecting pipe - drain	mm				DN20			

- Note:
- Cooling test condition: indoor side 27°C DB, 19°C WB, outdoor side 35°C DB;
  - The heating condition: indoor side 20°C DB, 15°C WB, outdoor side 7°C DB;
  - The above data may be changed without notice for future improvement on quality and performance;
  - MWD slim duct unit is equipped with wired remote controller as standard and wireless remote controller as an option.

### MWD standard static pressure duct unit



Model	MWD071AMS	MWD080AMS	MWD090AMS	MWD100AMS	MWD120AMS	MWD150AMS	
Cooling capacity	kW	7.1	8.0	9.0	10.0	12.0	15.0
Heating capacity	kW	8.0	9.0	10.0	11.0	13.0	17.0
Rated input	W	180				340	
Power supply		220V/1Ph/50Hz					
Fan air flow	CMH	1220		1850		2000	
Fan ESP	Pa			0 ~ 30 or 0 ~ 50			
Refrigerant type				R410A			
Dimensions	W mm	1209				1445	
	D mm			680			304
	H mm			260			221
Net weight	kg	33			44		16
Sound level - L/M/H	dB(A)	36/38/41		38/40/43		40/42/44	44/46/48
Connecting pipe - liquid	mm	φ9.52				φ9.52	φ9.52
Connecting pipe - gas	mm	φ15.88				φ19.05	φ15.88
Connecting pipe - drain	mm				DN20		

- Note:
- Cooling test condition: indoor side 27°C DB, 19°C WB, outdoor side 35°C DB;
  - The heating condition: indoor side 20°C DB, 15°C WB, outdoor side 7°C DB;
  - The above data may be changed without notice for future improvement on quality and performance;
  - MWD standard static pressure duct unit is equipped with wired remote controller as standard and wireless remote controller as an option.

### MWD high static pressure duct unit



Model	MWD071AMH	MWD080AMH	MWD090AMH	MWD100AMH	MWD120AMH	MWD150AMH	
Cooling capacity	kW	7.1	8.0	9.0	10.0	12.0	15.0
Heating capacity	kW	8.0	9.0	10.0	11.0	13.0	17.0
Rated input	W	340				450	
Power supply		220V/1Ph/50Hz					
Fan air flow	CMH	1550			2000	2300	
Fan ESP	Pa			120			
Refrigerant type				R410A			
Dimensions	W mm		1445			1195	
	D mm		680			625	
	H mm		260			370	
Net weight	kg	47			49		
Sound level - L/M/H	dB(A)		40/42/43			44 ~ 52	
Connecting pipe - liquid	mm		φ9.52			φ9.52	
Connecting pipe - gas	mm		φ15.88			φ19.05	
Connecting pipe - drain	mm				DN20		

- Note:
- Cooling test condition: indoor side 27°C DB, 19°C WB, outdoor side 35°C DB;
  - The heating condition: indoor side 20°C DB, 15°C WB, outdoor side 7°C DB;
  - The above data may be changed without notice for future improvement on quality and performance;
  - MWD high static pressure duct unit is equipped with wired remote controller as standard and wireless remote controller as an option.

### MWX floor/ceiling unit



Model	MWX045AMN	MWX056AMN	MWX071AMN	MWX080AMN	MWX112AMN	
Cooling capacity	kW	4.5	5.6	7.1	8.0	11.2
Heating capacity	kW	5.0	6.3	8.0	9.0	12.5
Rated input	W	60		150		260
Power supply		220V/1Ph/50Hz				
Fan air flow	CMH	950		1300		2300
Refrigerant type			R410A			
Dimensions	W mm		1245			1670
	D mm			680		
	H mm			240		
Net weight	kg	36				48
Sound level	dB(A)	37 ~ 46		39 ~ 48		45 ~ 52
Connecting pipe - liquid	mm	φ6.35			φ9.52	
Connecting pipe - gas	mm	φ12.7		φ15.88		φ19.05
Connecting pipe - drain	mm			DN25		

- Note:
- Cooling test condition: indoor side 27°C DB, 19°C WB, outdoor side 35°C DB;
  - The heating condition: indoor side 20°C DB, 15°C WB, outdoor side 7°C DB;
  - The above data may be changed without notice for future improvement on quality and performance;
  - MWX floor/ceiling unit is equipped with wireless remote controller as standard and wired remote controller as an option.

### MWW high wall unit



Model	MWW022AMN	MWW028AMN	MWW036AMN	MWW045AMN	MWW051AMN	MWW071AMN	
Cooling capacity	kW	2.2	2.8	3.6	4.5	5.1	7.1
Heating capacity	kW	2.5	3.2	4.0	5.0	5.6	8.0
Rated input	W	55		58		60	
Power supply		220V/1Ph/50Hz					
Fan air flow	CMH	540		600	780		1000
Refrigerant type				R410A			
Dimensions	W mm		900			1080	
	D mm		282			304	
	H mm		205			221	
Net weight	kg	12				16	
Sound level - L/M/H	dB(A)	32/34/36			37/39/42		44/46/48
Connecting pipe - liquid	mm			φ6.35			φ9.52
Connecting pipe - gas	mm	φ9.52			φ12.7		φ15.88
Connecting pipe - drain	mm				DN20		

- Note:
- Cooling test condition: indoor side 27°C DB, 19°C WB, outdoor side 35°C DB;
  - The heating condition: indoor side 20°C DB, 15°C WB, outdoor side 7°C DB;
  - The above data may be changed without notice for future improvement on quality and performance;
  - MWW high wall unit is equipped with wireless remote controller as standard and wired remote controller as an option.





## Performance data (indoor unit)

### MWC 4-way cassette unit



Remote controller (standard) Wired controller (option)

Model	MWC028AMN	MWC036AMN	MWC045AMN	MWC056AMN	MWC071AMN	MWC080AMN	
Cooling capacity	kW	2.8	3.6	4.5	5.6	8.0	
Heating capacity	kW	3.2	4.0	5.0	6.3	9.0	
Rated input	W	65				154	
Power supply		220V/1Ph/50Hz					
Fan air flow	CMH	850				1150	
Refrigerant type		R410A					
Unit dimensions	W	893					
	D	840					
	H	230					
Unit net weight	kg	26				28	
	W	950					
Panel dimensions	D	950					
	H	50					
	kg	5					
Sound level - L/M/H	dB(A)	35/36/38				36/38/39	
Connecting pipe - liquid	mm	φ6.35				φ9.52	
Connecting pipe - gas	mm	φ12.7				φ15.88	
Connecting pipe - drain	mm	DN25					

Model	MWC090AMN	MWC100AMN	MWC112AMN	MWC125AMN	MWC140AMN	
Cooling capacity	kW	9.0	10.0	11.2	12.5	14.0
Heating capacity	kW	10.0	11.0	12.25	14.0	15.0
Rated input	W	170				
Power supply		220V/1Ph/50Hz				
Fan air flow	CMH	1800				
Refrigerant type		R410A				
Unit dimensions	W	893				
	D	840				
	H	285				
Unit net weight	kg	32				
	W	950				
Panel dimensions	D	950				
	H	50				
	kg	5				
Sound level - L/M/H	dB(A)	37/39/41				
Connecting pipe - liquid	mm	φ9.52				
Connecting pipe - gas	mm	φ19.05				
Connecting pipe - drain	mm	DN25				

- Note:
- Cooling test condition: indoor side 27°C DB, 19°C WB, outdoor side 35°C DB;
  - Heating test condition: indoor side 20°C DB, 15°C WB, outdoor side 7°C DB;
  - The above data may be changed without notice for future improvement on quality and performance;
  - MWC 4-way cassette unit is equipped with wireless remote controller as standard and wired remote controller as an option.

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