

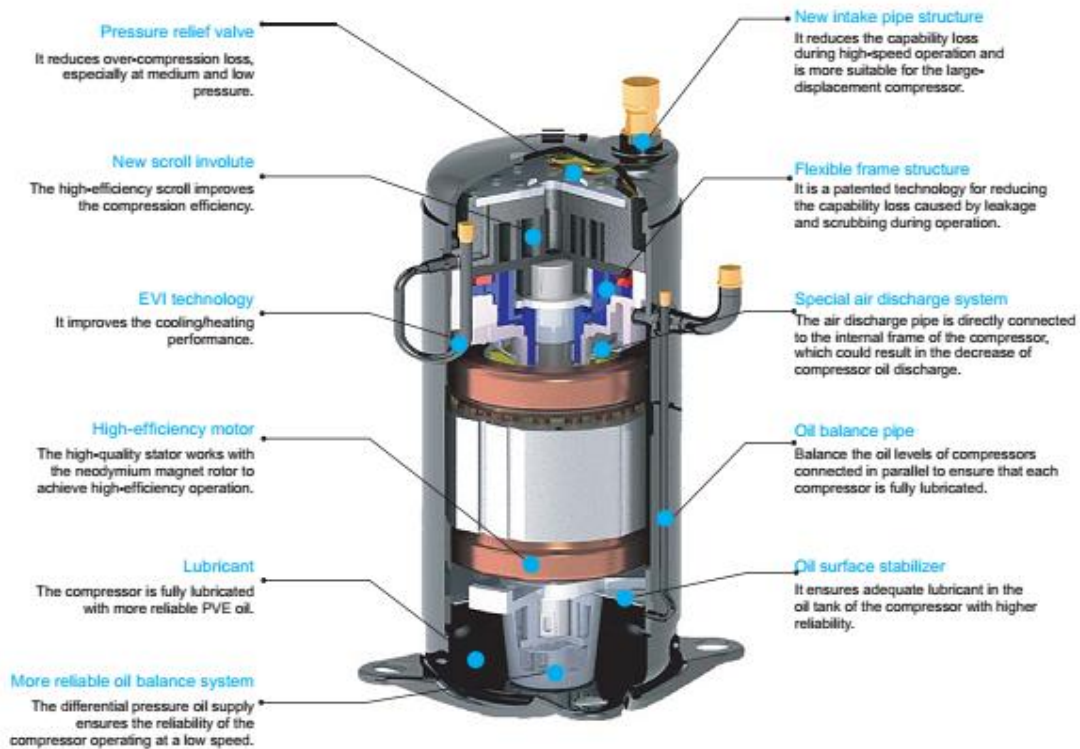
TIMS



High Efficiency

All DC Inverter Compressors

The TIMS adopts the high-efficiency DC inverter scroll compressor with high-pressure chamber, which adopts asymmetric scroll design and high-efficiency internal oil separator. By integrating with the enhanced vapor injection technique, the TIMS can realize the heating under low ambient temperature in winter, and save more energy. The kind of system can run more stably and reliably.



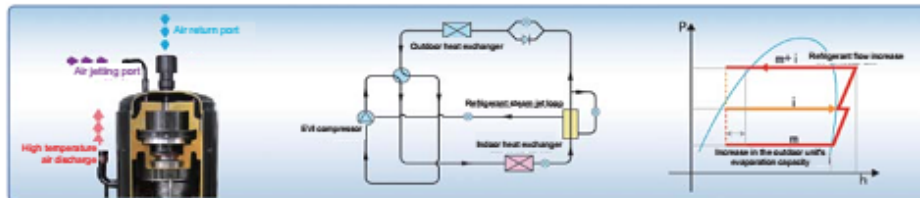
Stereo Air Inlet Technology of Four Directions

In comparison to air inlet through three sides, the stereo air inlet technology of four directions can maximize utilization of the heat exchange area of heat exchanger, increase the air speed range, make heat exchange more sufficient, and improve the operation efficiency.



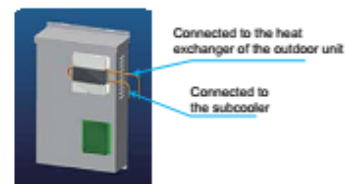
EVI technology

When the ambient temperature reaches the limit condition, the heat exchange capacity of the outdoor unit declines, and the air return volume of the compressor is reduced, accompanied by problems in compressor suction and discharge protection. The TICA TIMS VRF unit adopts the high efficiency EVI system and cooperates with TICA's new inverter control and refrigerant system. In the unit, refrigerant is added through the air jetting port to increase the displacement, so as to broaden the cooling and heating ranges of the unit, enhance the overall capacity by 20%, and achieve the cooling capability without attenuation at 40°C and the heating capacity without attenuation at -15°C. In addition, the added refrigerant is injected into the pressure chamber of compressor to reduce the compression ratio and power consumption of the compressor, and improve the COP value by 10%. The low-temperature gaseous refrigerant inhaled by the air jetting port effectively reduces the temperature for the compressor and ensures high efficiency as well as more stable and reliable operation of the compressor.



Refrigerant cooling technology

The inverter will produce a lot of heat. A high temperature may reduce the operating speed of the unit and affect system stability. In addition to the conventional air cooling technology, the TIMS also adopts the most advanced refrigerant cooling technology to use the condensed refrigerant (typically 30–55°C) to perform heat exchange with the drive (with a maximum temperature of 90°C). In this way, the drive temperature is greatly reduced, and the system runs more stably and reliably.



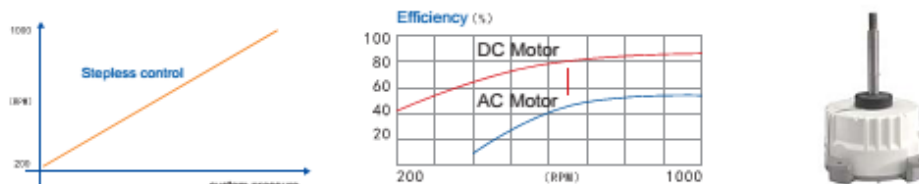
180° Sine Wave Control Technology

Non sensor control technology of permanent magnet synchronous motor makes output current of DC converter sine wave, which guarantee stability, reduce vibration prevent from electromagnetic interference to improve running efficiency



All DC Fan Motors

The new DC inverter fan motor allows to make the five-stage speed regulation and adjust the speed according to the change in the system operation, and finally guarantees the system runs under the best condition. By matching the air flow changes and variable refrigerant flow also the heat exchanging demand, the system operates in high efficiency and low operating noise.

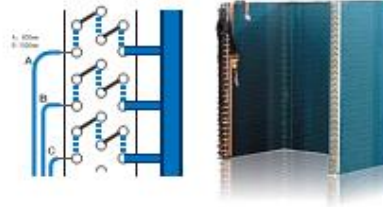


High Efficiency Heat Exchanger

The outdoor heat exchanger adopts the high-efficiency internal thread copper pipe with the diameter of 7.0 and the new aluminium fin; its integral molding technology guarantees the larger heat exchange area, improves the air flow distribution, reduces the airflow resistance, exchanges the heat more efficiently, and reduces the impact of the frosting on the heating capacity of the system.

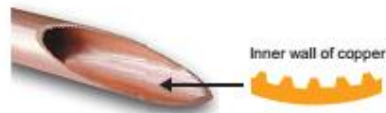
● Refrigerant circuit of TOD

The specially designed TOD circulation increase the liquid refrigerant volume, improves and optimizes the heat exchange efficiency of the refrigerant.



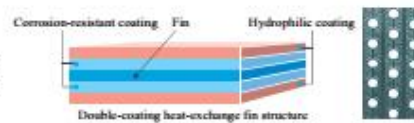
● Inner-grooved copper pipe

The groove of the premium & efficient inner-grooved copper is designed on its inner surface, which increase the contact area of the refrigerant and improves the heat transfer efficiency.



● Hydrophilic aluminum fin

The outdoor unit adopts the louver-type aluminum foil with the hydrophilic coating, which can efficiently prevent dirt accumulation, improve defrosting efficiency and enhance the heat exchange efficiency.



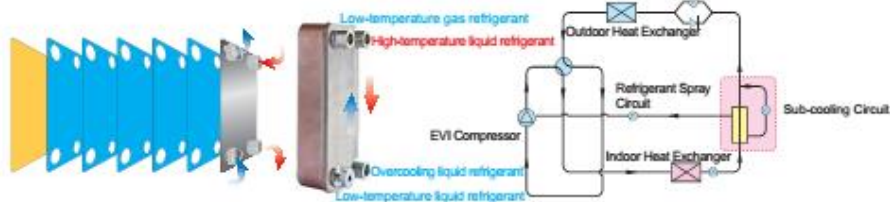
● 2-in-1 Refrigerant Loop

The specially designed 2-in-1 refrigerant loop can increase the liquid refrigerant volume and comprehensive heat exchange coefficient, making refrigerant heat exchange more sufficient and system more optimized.



Sub-cooling Design

The unique sub-cooling design enhances the cooling capacity, heating capacity, cooling efficiency ratio (EER) and heating efficiency ratio (COP).



Large Capacity Compressor Design

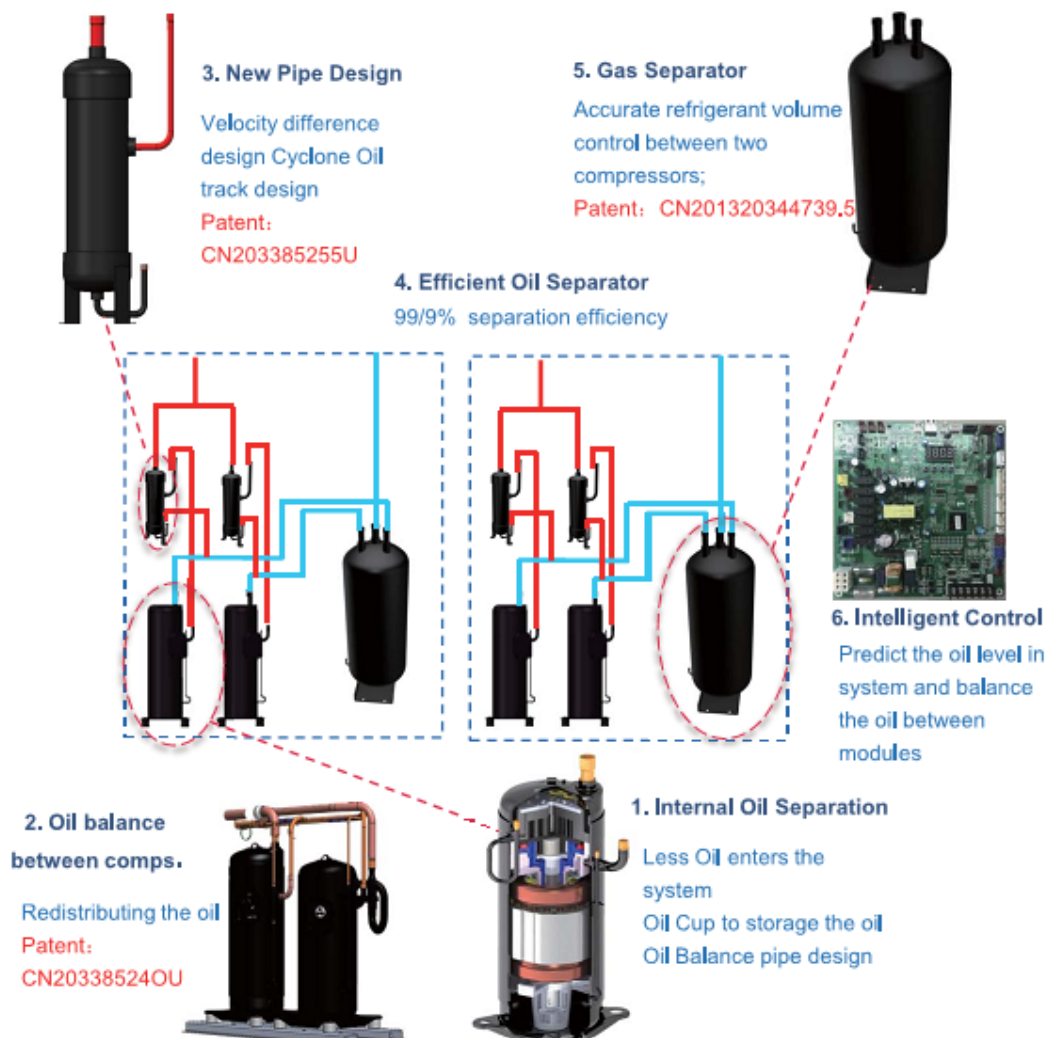
Less compressor configuration improves the system stability. The heating capacity is more powerful under low temperature, the exhaust volume and heating capacity are further improved for the large capacity compressor configuration under the equivalent frequency.



High Reliability

Six type oil return control Tech

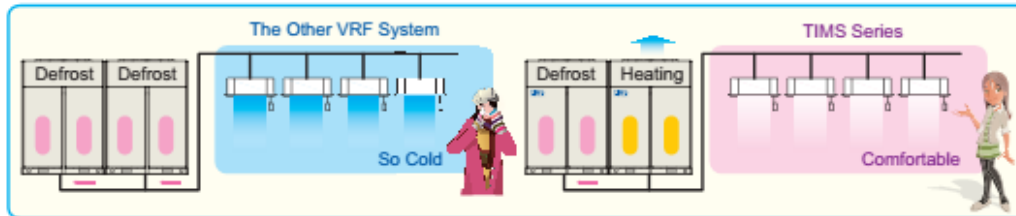
By virtue of the solid R&D strength, TICA central air conditioning system integrates the advanced VRF technology process of Japanese expert team, and the full series of VRF units adopt the six-level oil control technology to make operation more stable and reliable.



Efficient Heating and Smart Defrosting

● TCC (TICA Comfortable Control) defrosting technology (patent No.: CN201320402500.9/ CN201320344961.5)

The unique TCC defrosting technology of TICA adopts the non-stop method. It is unnecessary to switch to the cooling mode when defrosting in winter, and less exhaust temperature fluctuation of IDU. There is no need to worry about the indoor instantaneous temperature reduction. The technology makes the system performance more stable and noise lower.

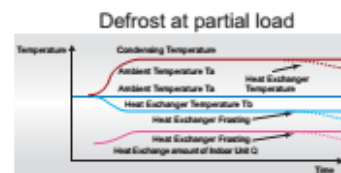


● Smart defrosting technology

The smart defrosting technology allows to detect when to defrost according to every heating parameter, which can guarantee high heating capacity and energy efficiency ratio.

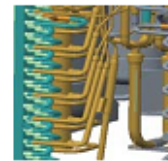
With the full load, the TIMS system will detect the defrosting time according to the heat transfer temperature difference of the outdoor unit.

With the partial load, the TIMS system will detect the defrosting time according to the heat exchange efficiency of the outdoor unit.



● Bottom Frosting Prevention Design during Heating

The system employs the unique bottom frosting prevention design during heating to ensure that the ice water mixture is completely exhausted from the unit bottom during heating defrosting in winter, and avoid decrease of the heating capacity caused by frosting at the unit bottom.



● Anti snow capacity

When it snows heavily in winter, the TIMS unit will give priority to start the outdoor fan motor before user starts the outdoor unit; such design prevents the unit from being covered by the snow. Once the unit works normally, the fan will run normally.



Automatic Detection and Regulation Technologies

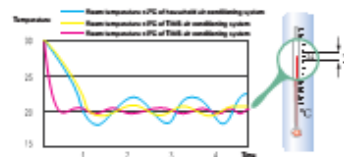
● Control Technology of Multiple Electronic Expansion Valves

A single ODU module is provided with multiple electronic expansion valves. Every electronic expansion valve can implement 480-step refrigerant flow regulation, control the refrigerant circulation quantity and meet the actual IDU requirement accurately, thus creating a more comfortable indoor environment.



● Small Room Temperature Fluctuation and High Precision

The DC inverter control technology is adopted to reach the set temperature rapidly when the unit starts, fine regulation is performed according to the load in the room, and the room temperature is controlled within $\pm 0.3^{\circ}\text{C}$ of the set temperature, fully meeting the customer's temperature requirement.



● Accurate Detection Technology of Refrigerant Pressure

The high/low pressure sensor is used to conduct real-time monitoring on the system refrigerant pressure, match the DC inverter module perfectly, and regulate the system refrigerant pressure to the optimal state, ensuring more stable operation of the unit.



● Automatic Addressing

The ODU main board automatically checks the IDU quantity and allocates addresses to IDUs without requiring manual code dialing, and installation is very convenient.



● SMT Surface Sealing Technology of Control Board

All the control boards adopt the SMT surface sealing technology, and sealing material is added to the control board surface to improve the anti-clutter interference performance of control board, prevent the control board from being affected by wind, sand and humid environment, and prolong the service life.



Stable Operation Functions

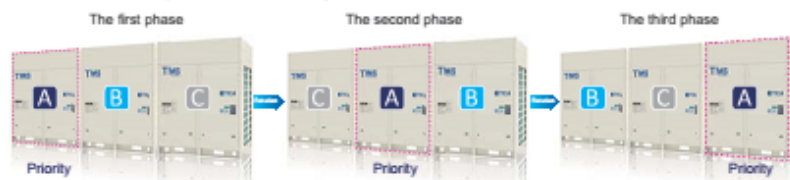
● Automatic Startup after Power Restoration

In case of an unexpected power failure, the system automatically stores the set memory. When power is restored, the system can restart automatically (manual startup can also be set), and the setting before the power failure will not be canceled but will continue to take effect. The program does not need to be reset, so service becomes more intelligent and considerate.



● Dual-rotation Operation Function

To ensure operation time balance between compressors and modules, TMS can implement cyclic operation of all the compressors and modules to average the operation time of each compressor and each module effectively, enhance durability of the entire unit or system, and prolong the service life.



● Three-backup Operation Function

For single-module ODU, If one compressor or motor malfunctions or is being maintained, other compressors and motors can be urgently put to use. For multi-module ODU, if one module is being maintained, the other modules can also be urgently put to use, without affecting usability.



Multiple Protection Technologies

● Pipeline Exception Protection

When detecting a pipeline exception (too much or too little refrigerant, etc.) through real-time monitoring, the system can start pipeline exception protection immediately to avoid further losses.



● Anti-Reverse-Rotation Protection

In case of reverse rotation of ODU fan, the system will stop the fan first upon air conditioner startup, and then make it rotate in the correct direction of rotation as programmed, preventing the fan blade from being damaged.



● Thunder Stroke Protection

The ODU is designed with a thunder stroke protection module, greatly reinforcing the anti-interference and thunder stroke protection functions of the unit and making the system operation safer.



● IDU Maintenance Power-down Function

When an IDU needs to be stopped for maintenance, it can be powered down separately, without affecting operation of the entire system.

● Emergency Shutdown Function

In case of an emergency, the ODU can be shut down immediately and forcedly, to avoid causing harms and losses.

● Power Phase Sequence Protection and Grounding Protection Function

The unit is equipped with a power supply protector. In case of any exception such as phase sequence error or phase loss, the controller will record the power supply failure and report an alarm for shutdown.

● Power High/Low Voltage and Current Protection Function

The ODU can identify the power supply signal directly. In case of inadequate power supply (insufficient or too much), the ODU will send an instruction to the IDU to prohibit startup, thus effectively protecting the system safety.

● Compressor and Motor Overheat Protection

Multiple temperature sensors are installed to efficiently prevent scroll plate wear, carbonization metamorphism of oil, and motor damage due to reasons such as overheat of the compressor or motor.

● Compressor Error Protection

The function includes compressor suction and exhaust temperature protection, compressor high/low pressure protection, compressor oil return protection, compression ratio protection, compressor oil temperature protection, pressure difference protection, compressor overload and over-current protection, compressor anti-liquid hammer protection, etc.

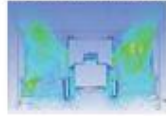
● Inverter EMI Protection and Temperature Protection

The system adopts the inverter of upgraded control accuracy, which can suppress harmonic current well and features high degree of EMI protection. When the system detects overheat of the inverter, it can start the inverter temperature protection function to prevent damage to the inverter.

All-dimensional ultra-silent technologies

The TMS series adopt the omni-directional noise reduction technology and spiral flow fan blade to ensure a smooth suction structure and reduce the air flow noise. Supplemented with the sound insulation design of compressor, the unit can realize ultra quiet operation and create a comfortable environment of high quality.

The professional streamlined duct based on the fluid mechanics design helps to reduce the duct tremor generated due to the air flow resistance and has been awarded the title of patent technology.



The fan blades with a larger diameter are adopted to yield a larger air volume at a lower speed and make noises lower.



The fan motor support employs a non-resonant hanger structure to ensure stable operation performance of the motor and reduce the vibration noise.



Vortex fan blade: The CAE auxiliary design and CFD air flow analysis technology are used to optimize the fan design, not only lowering the vibration, but also greatly reducing the pressure loss.



The air streamlined fan grille promotes more smooth discharge of vortex air flow and reduces the pressure loss.



The brushless DC motor is adopted to implement stepless speed regulation and more stable operation, reducing noises as ensuring energy conservation and high efficiency.



The compressor employs the 180° sine wave control technology to ensure smooth and stable operation, and abnormal noise during operation of the compressor can be suppressed effectively.



The noise enclosure design for the compressor avoids diffusion of compressor noises effectively.



● Night Silent Mode

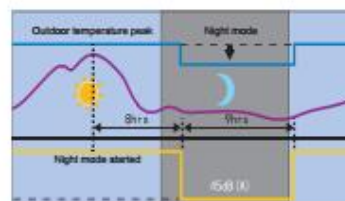
The system adopts the delay judgment mode based on the outdoor ambient temperature peak. Meanwhile, it will automatically judge whether to start the night silent operation mode according to the ODU ambient temperature and the current load size.

● Forced Silent Mode

For the site with a higher silent requirement, the user can select the forced silent operation mode as actually needed to reduce the operation noise of the unit and create a more quiet and comfortable environment.

● Smart silent mode

After smart silent mode is selected, the unit may monitor duty ratio real time and system running state, and automatically enter silent mode to minimize unit running noise, ensuring passenger comfort.



Convenient Application

● Compact, Easy to Transport and Handle

The modular combination requires less floor space, even the largest module occupies only an area of 1.07 m², and seamless assembling between modules promotes further space savings.



● 360° Outlet Pipe Connection

During construction, the refrigerant pipe can be connected to the unit front, left or right freely, reducing the construction cost and construction difficulty and facilitating engineering design and installation.



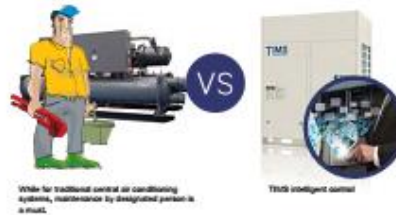
● Stable and Worry-free Operation

The system can control the air conditioner of each room respectively. Once an IDU fails, the other IDUs of the system are not affected and can keep operating properly.



● Easy and Convenient Maintenance

TIMS adopts intelligent control and requires no equipment room. Maintenance by designated person is not needed even during system operation, and control is more flexible.



● Automated Diagnosis and Self Repair of Faults

The unique automatic fault diagnosis function can be used to get the fault information easily and realize self repair of some faults, enhancing the operation stability and reliability.



● Auto refrigerant judgment and smart charging and recycling

The system may monitor the refrigerant operation in the pipeline real time, automatically decide on the refrigerant quantity necessary for the system and make real-time adjustment based on pressure change and actual operation. In case of insufficient refrigerant in the system or during maintenance, the refrigerant can be conveniently and automatically charged or recycled to the ODU.

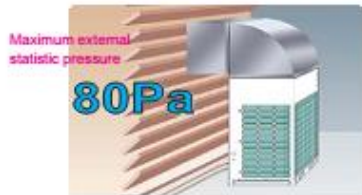


● **Non-polarized communication**

Non-polarized communication connection is realized between the IDU and the ODU to avoid wrong or opposite connection of wires, greatly simplifying installation process and expediting construction period.

● **Ultra-high External Static Pressure**

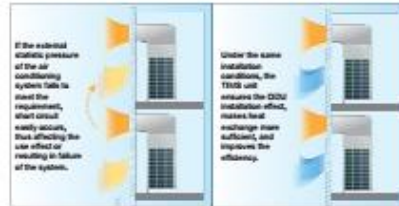
The system selects the blade with a higher air flow and the DC fan motor to realize a higher external static pressure on the precondition of avoiding noise change. The maximum external static pressure is 80 Pa.



● **Trial Operation Technology of ODU**

During commissioning, the button on the ODU main board can be pressed to implement the forced trial operation function of the unit, making commissioning easier.

Exhaust ducts can be installed by layer or in a centralized manner. The higher external static pressure realizes long distance air supply, prevents short circuit of the loop effectively, and ensures good ventilation effect.



● **Easy Refrigerant Pipe Design and Selection**

The installation of the ODU modules does not distinguish between main module and sub-module, realizing smart installation.



TMS uses branch pipe in installation to simplify system installation. One system only has one set of refrigerant pipelines, unlike a conventional central air conditioning unit, which needs various accessories. The copper pipes are much smaller than that of water pipes to save installation space.



● **Smart and accurate system capability distribution**

The capability output of different units is distributed as per different horse power and weight between modules to ensure that the compressor of each unit is adjusted with the unit within energy saving, efficient and stable frequency output scope



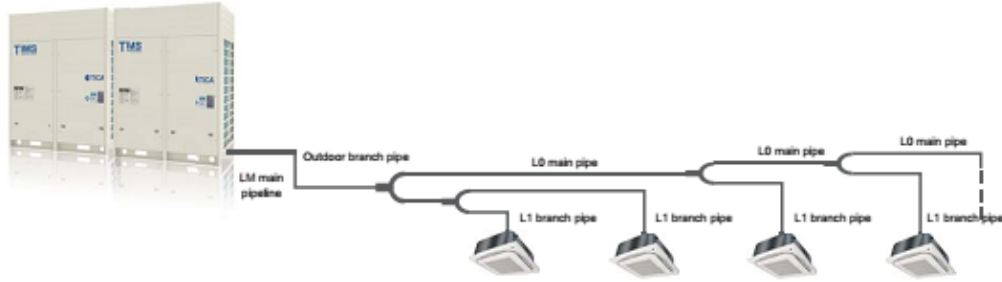
● **Energy saving mode**

When the unit works with partial load, the user may enable energy saving mode based on actual use demand to adjust the operation frequency of the compressor and the fan motor to improve the system's energy efficiency and save operation costs for users.



● Easy Refrigerant Pipe Design and Selection

The models of ODU main pipes and IDU branch pipes should be selected according to the parameter table. For the ultra-long pipeline, refer to the installation manual.



● Design of TMS Independent Main Pipe

Total capacity (kW) of downstream IDUs	Liquid pipe size (mm)	Gas pipe size (mm)	Branch joint
$X < 16.8$	Φ9.52	Φ15.88	TBP4022TA
$16.8 \leq X < 22.5$	Φ9.52	Φ19.05	TBP4022TA
$22.5 \leq X < 33.0$	Φ9.52	Φ22.23	TBP4033TA
$33.0 \leq X < 46.0$	Φ12.70	Φ25.40	TBP4072TA
$46.0 \leq X < 67.0$	Φ15.88	Φ28.58	TBP4072TA
$67.0 \leq X < 86.0$	Φ19.05	Φ31.75	TBP4073TA
$X \geq 86.0$	Φ19.05	Φ34.92	TBP4073TA

● Design for Main Pipes of TMS Modular unit Series

Total capacity (kW) of downstream IDUs	Liquid pipe size (mm)	Gas pipe size (mm)	Branch joint
$X < 16.8$	Φ9.52	Φ15.88	TBP4022TA
$16.8 \leq X < 22.5$	Φ9.52	Φ19.05	TBP4022TA
$22.5 \leq X < 33.0$	Φ9.52	Φ22.23	TBP4033TA
$33.0 \leq X < 46.0$	Φ12.70	Φ25.40	TBP4072TA
$46.0 \leq X < 67.0$	Φ15.88	Φ28.58	TBP4072TA
$67.0 \leq X < 86.0$	Φ19.05	Φ31.75	TBP4073TA
$86.0 \leq X < 114.0$	Φ19.05	Φ34.92	TBP4073TA
$114.0 \leq X < 140.0$	Φ19.05	Φ38.10	TBP4073TA
$X \geq 140.0$	Φ19.05	Φ41.30	TBP4073TA

● Number of single-system IDUs connected

ODU capacity (HP)	Number of IDUs connected	ODU capacity (HP)	Number of IDUs connected	ODU capacity (HP)	Number of IDUs connected
8HP	14	28HP	36	48HP	56
10HP	16	30HP	38	50HP	58
12HP	19	32HP	40	52HP	60
14HP	22	34HP	42	54HP	62
16HP	23	36HP	44	56HP	64
18HP	31	38HP	46	58HP	64
20HP	33	40HP	48	60HP	64
22HP	34	42HP	50	62HP	64
24HP	35	44HP	52	64HP	64
26HP	35	46HP	54		

TIMS-AST/BST

- Full DC Inverter Technology
- Max. 1000m pipe length, Max. 110m height drop



Strong-heating independent outdoor unit

Model			TIMS080BST	TIMS100BST	TIMS120BST	TIMS140BST	TIMS160AST	TIMS180AST	
Capacity	Capacity Range	HP	8	10	12	14	16	18	
	Cooling	kW	25	28	33.5	40	45	50	
	Heating	kW	27	31.5	37.5	45	50	56	
Power supply		V/Hz	380-415V 3N-50Hz						
EER		kW/kW	4.33	4.03	3.85	3.67	3.52	3.47	
COP		kW/kW	4.99	4.77	4.52	4.34	4.10	4	
Rated input	Cooling	kW	5.80	6.94	8.7	10.80	12.8	14.4	
	Heating	kW	5.41	6.6	8.3	10.28	12.2	14	
Rated current	Cooling	A	12.5	13.4	16.4	19.6	24.1	33.5	
	Heating	A	13.6	13.9	16.7	20	24	31	
Refrigerant	Type		R410A						
	Charge volume	kg	8	8	10	12	12	12	
Compressor	Brand	—	Mitsubishi	Mitsubishi	Mitsubishi	Mitsubishi	Mitsubishi	Mitsubishi	
	Type	—	Inverter scroll	Inverter scroll	Inverter scroll	Inverter scroll	Inverter scroll	Inverter scroll	
	Quantity	—	1	1	1	1	1	1	
	Refrigerant oil charge Volume	L	1.1	1.1	1.1	2.3	2.3	2.3	
Fan	Type	—	Axial flow fan	Axial flow fan	Axial flow fan	Axial flow fan	Axial flow fan	Axial flow fan	
	Quantity	—	1	1	1	1	1	1	
Fan Motor	Quantity	—	1	1	1	1	1	1	
	Drive Type	—	DC	DC	DC	DC	DC	DC	
Airflow rate		m ³ /h	12000				13980		
Connecting pipe	Liquid Pipe	mm	φ9.52		φ12.70	φ12.70			
	Gas Pipe	mm	φ22.23		φ25.40	φ28.58			
	Connection method			Brazing	Brazing	Brazing	Brazing	Brazing	Brazing
ESP		Pa	0 Pa (maximum: 80 Pa)						
Sound pressure level		dB(A)	57	57	57	64	64	64	
Outline dimension		mm	930x860x1710				1240x860x1710		
Package dimension		mm	1020*950*1950				1330*950*1950		
Net weight		kg	225	225	225	285	290	290	
Gross weight		kg	235	235	235	300	300	300	
Maximum drive IDU NO.		unit	14	16	19	22	23	24	
Max. equivalent connection pipe length		m	1000	1000	1000	1000	1000	1000	
Working temp.	Cooling	°C	- 5~50°C						
	Heating	°C	- 20~24°C						

Notes:

- Cooling operating temperature range is from -5°C to 50°C, Heating operating temperature range is from -20°C to 24°C.
- The cooling condition: indoor side 27°C (80.6°F) DB, 19°C (60°F) WB outdoor side 35°C (95°F) DB
- The heating condition: indoor side 20°C (68°F) DB, 15°C (44.8°F) WB outdoor side 7°C (42.8°F) DB
- Sound level measured at point 1m in front of the unit at a height of 1.3m. During actual operation, these values are normally somewhat higher as a result of ambient conditions and lower as a result of ambient conditions when under ultra-quiet operation
- Choosing fuse or breaker according to MFA and electrical wiring according to MCA.
- The above data may be changed without notice for future improvement on quality and performance.

TIMS-ASA

- Full DC Inverter Technology
- Max. 1000m pipe length, Max. 110m height drop



Independent outdoor unit

Model			TIMS200AST	TIMS220ASA	TIMS240ASA	TIMS260ASA	TIMS280ASA	TIMS300ASA	TIMS320ASA
Capacity	Capacity Range	HP	20	22	24	26	28	30	32
	Cooling	kW	56	61.5	67	73	78.5	85	90
	Heating	kW	63	69	75	81.5	87.5	95	100
Power supply		V/Hz	380-415V 3N-50Hz						
EER		kW/kW	3.29	3.31	3.19	3.33	3.30	3.26	3.25
COP		kW/kW	3.99	3.88	3.75	4.03	3.98	3.86	3.83
Rated input	Cooling	kW	16.80	18.6	21	21.9	23.8	26.1	27.7
	Heating	kW	15.60	17.8	20	20.2	22	24.6	26.1
Rated current	Cooling	A	35.20	40.00	41.50	44.56	48.33	52.23	55.26
	Heating	A	34.90	35.00	36.20	40.15	46.24	49.24	53.44
Refrigerant		Type	R410A						
Charge volume		kg	16	16	16	20	22	22	22
Brand		—	Mitsubishi	Mitsubishi	Mitsubishi	Mitsubishi	Mitsubishi	Mitsubishi	Mitsubishi
Type		—	Inverter scroll	Inverter scroll	Inverter scroll	Inverter scroll	Inverter scroll	Inverter scroll	Inverter scroll
Quantity		—	1	2	2	2	2	2	2
Refrigerant oil charge Volume		L	2.30	2.30	2.30	2.30	2.30	2.30	2.30
Fan		Type	Axial flow fan	Axial flow fan	Axial flow fan	Axial flow fan	Axial flow fan	Axial flow fan	Axial flow fan
Quantity		—	2	2	2	2	2	2	2
Fan Motor		Quantity	—	2	2	2	2	2	2
Drive Type		—	DC	DC	DC	DC	DC	DC	DC
Airflow rate		m ³ /h	25800			27000			
Connecting pipe		Liquid Pipe	φ15.88			φ19.05	φ19.05		
		Gas Pipe	φ28.58			φ28.58	φ31.75		
Connection method		—	Brazing	Brazing	Brazing	Brazing	Brazing	Brazing	Brazing
ESP		Pa	0 Pa (maximum: 80 Pa)						
Sound pressure level		dB(A)	64	64	64	65	65	65	65
Outline dimension		mm	1500x860x1710			1500x860x1710			
Package dimension		mm	1585*950*1950			1585*950*1950			
Net weight		kg	390	430	430	460	488	488	488
Gross weight		kg	405	445	445	475	503	503	503
Maximum drive IDU NO.		unit	33	34	35	35	36	38	40
Max. equivalent connection pipe length		m	1000	1000	1000	1000	1000	1000	1000
Working temp.		Cooling	-5~50°C						
		Heating	-20~24°C						

Notes:

- Cooling operating temperature range is from -5°C to 50°C, Heating operating temperature range is from -20°C to 24°C.
- The cooling condition: indoor side 27°C (80.6°F) DB, 19°C (60°F) WB outdoor side 35°C (95°F) DB
- The heating condition: indoor side 20°C (68°F) DB, 15°C (44.6°F) WB outdoor side 7°C (42.8°F) DB
- Sound level: measured at point 1m in front of the unit at a height of 1.3m. During actual operation, these values are normally somewhat higher as a result of ambient conditions and lower as a result of ambient conditions when under ultra-silent operation
- Choosing fuse or breaker according to MFA and electrical wiring according to MCA.
- The above data may be changed without notice for future improvement on quality and performance.

TIMS-AXA

- Single Module: 8/10/12/14/16/18/20/22/24/26/28//30/32HP
- Combination Module: 34HP-64HP, 2 modules
- Full DC Inverter Technology
- Max. 1100m pipe length, Max. 110m height drop



Model			TIMS080AXA	TIMS100AXA	TIMS120AXA	TIMS140AXA	TIMS160AXA	TIMS180AXA
Combination Model			-	-	-	-	-	-
Capacity	Capacity Range	HP	8	10	12	14	16	18
	Cooling	kW	25	28	33.5	40	45	50
	Heating	kW	27	31.5	37.5	45	50	56
Power supply		V/Hz	380V 3N ~ 50Hz					
EER		kW/kW	4.33	4.03	3.85	3.67	3.52	3.47
ODP		kW/kW	4.99	4.77	4.52	4.34	4.10	4.00
Rated input	Cooling	kW	5.78	6.94	8.70	10.90	12.80	14.40
	Heating	kW	5.41	6.60	8.30	10.38	12.20	14.00
Rated current	Cooling	A	12.50	13.40	16.40	23.90	28.30	30.50
	Heating	A	13.60	13.90	16.70	20.90	24.90	26.50
Refrigerant	Type		R410A					
	Charge volume	kg	8	8	10	12	12	12
Compressor	Type	-	Inverter scroll					
	Quantity	-	1	1	1	1	1	1
Fan Motor	Quantity	-	1	1	1	1	1	1
	Drive Type	-	DC inverter					
Airflow rate		m³/h	12000			13980		
Connecting pipe	Liquid Pipe	mm	φ9.52		φ12.70		φ12.70	
	Gas Pipe	mm	φ22.23		φ25.40		φ28.58	
Sound pressure level		dB(A)	45-57			45-64		
Outline dimension		mm	930x860x1710			1240x860x1710		
Package dimension		mm	1020x950x1950			1300x950x1950		
Net weight		kg	225	225	225	290	290	290
Gross weight		kg	235	235	235	300	300	300
Maximum drive IDU NO.		unit	14	16	19	22	23	31
Working temp.	Cooling	°C	- 5 ~ 54°C					
	Heating	°C	- 25 ~ 26°C					

Notes:

1. Cooling operating temperature range is from -5°C to 54°C, Heating operating temperature range is from -25°C to 26°C.
2. The cooling condition: indoor side 27°C (80.6°F) DB, 19°C (60°F) WB outdoor side 35°C (95°F) DB
3. The heating condition: indoor side 20°C (68°F) DB, 15°C (44.6°F) WB outdoor side 7°C (42.8°F) DB
4. Sound level: measured at point 1m in front of the unit at a height of 1.3m. During actual operation, these values are normally somewhat higher as a result of ambient conditions and lower as a result of ambient conditions when under ultra-silent operation
5. Choosing fuse or breaker according to MFA and electrical wiring according to MCA.
6. The above data may be changed without notice for future improvement on quality and performance.

TIMS-AXA

- Single Module: 8/10/12/14/16/18/20/22/24/26/28//30/32HP
- Combination Module: 34HP-64HP, 2 modules
- Full DC Inverter Technology
- Max. 1100m pipe length, Max. 110m height drop



Model			TIMS200AXA	TIMS220AXA	TIMS240AXA	TIMS260AXA	TIMS280AXA	TIMS300AXA	TIMS320AXA	
Combination Model			-	-	-	-	-	-	-	
Capacity	Capacity Range	HP	20	22	24	26	28	30	32	
	Cooling	kW	56	61.5	67	73	78.5	85	90	
	Heating	kW	63	69	75	81.5	87.5	95	100	
Power supply		V/Hz	380V 3N ~ 50Hz							
EER		kW/kW	3.29	3.31	3.19	3.34	3.30	3.26	3.25	
COP		kW/kW	3.99	3.88	3.75	4.04	3.99	3.87	3.83	
Rated input	Cooling	kW	17.00	18.60	21.00	21.85	23.78	26.05	27.65	
	Heating	kW	15.80	17.80	20.00	20.15	21.92	24.55	26.08	
Rated current	Cooling	A	35.20	40.00	41.50	45.00	48.33	52.23	55.26	
	Heating	A	34.90	35.00	36.20	41.50	46.24	49.24	53.44	
Refrigerant	Type		R410A							
	Charge volume	kg	16	16	16	18	22	22	22	
Compressor	Type	-	Inverter scroll							
	Quantity	-	2	2	2	2	2	2	2	
Fan Motor	Quantity	-	2	2	2	2	2	2	2	
	Drive Type	-	DC inverter							
Airflow rate		m ³ /h	25800				27000			
Connecting pipe	Liquid Pipe	mm	φ15.88				φ19.05			
	Gas Pipe	mm	φ28.58				φ31.75			
Sound pressure level		dB(A)	48-54				49-56			
Outline dimension		mm	1500x860x1710				1900x860x1710			
Package dimension		mm	1585x950x1950				1985x950x1950			
Net weight		kg	430	430	430	450	488	488	488	
Gross weight		kg	440	440	440	460	498	498	498	
Maximum drive IDU NO.		unit	33	34	35	35	36	38	40	
Working temp.	Cooling	°C	- 5 ~ 54°C							
	Heating	°C	- 25 ~ 26°C							

Notes:

1. Cooling operating temperature range is from -5°C to 54°C, Heating operating temperature range is from -25°C to 26°C.
2. The cooling condition: indoor side 27°C (80.6°F) DB, 19°C (60°F) WB outdoor side 35°C (95°F) DB
3. The heating condition: indoor side 20°C (68°F) DB, 15°C (44.6°F) WB outdoor side 7°C (42.8°F) DB
4. Sound level: measured at point 1m in front of the unit at a height of 1.3m. During actual operation, these values are normally somewhat higher as a result of ambient conditions, and lower as a result of ambient conditions when under ultra-silent operation
5. Choosing fuse or breaker according to MFA and electrical wiring according to MCA.
6. The above data may be changed without notice for future improvement on quality and performance.

TIMS-AXA

- Single Module: 8/10/12/14/16/18/20/22/24/26/28/30/32HP
- Combination Module: 34HP-64HP, 2 modules
- Full DC Inverter Technology
- Max. 1100m pipe length, Max. 110m height drop



Model			TIMS340AXA	TIMS360AXA	TIMS380AXT	TIMS400AXA	TIMS420AXA	TIMS440AXA	TIMS460AXA	TIMS480AXA
Combination Model			18+16	18+18	18+20 (AXT)	20+20	22+20	24+20	24+22	24+24
Capacity	Capacity Range	HP	34	36	38	40	42	44	46	48
	Cooling	kW	95	100	106	112	117.5	123	128.5	134
	Heating	kW	106	112	119	126	132	138	144	150
Power supply		V/Hz	380V 3N ~ 50Hz							
EER		kWKW	3.49	3.47	3.38	3.29	3.30	3.24	3.24	3.19
COP		kWKW	4.05	4.00	3.99	3.99	3.93	3.85	3.81	3.75
Rated input	Cooling	kW	27.20	28.80	31.20	34.00	35.60	38.00	39.60	42.00
	Heating	kW	26.20	28.00	29.60	31.60	33.60	35.80	37.80	40.00
Rated current	Cooling	A	58.80	61.00	65.70	70.40	75.20	76.70	81.50	83.00
	Heating	A	51.40	53.00	61.40	69.80	69.90	71.10	72.40	72.40
Refrigerant	Type		R410A							
	Charge volume	kg	12+12	12+12	12+16	16+16	16+16	16+16	16+16	16+16
Compressor	Type		Inverter scroll							
	Quantity		1+1	1+1	2+1	2+2	2+2	2+2	2+2	2+2
Fan Motor	Quantity		1+1	1+1	2+1	2+2	2+2	2+2	2+2	2+2
	Drive Type		DC inverter							
Airflow rate		m ³ /h	13980+13980		13980+25800		25800+25800			
Connecting pipe	Liquid Pipe	mm	φ19.05				φ19.05			
	Gas Pipe	mm	φ34.92				φ38.10			
Sound pressure level		dB(A)	48-66				50-67			
Outline dimension		mm	(1240+1240)×860×1710		(1240+1500)×860×1710		(1500+1500)×860×1710			
Package dimension		mm	(1300+1300)×950×1950		(1585+1300)×950×1950		(1585+1585)×950×1950			
Net weight		kg	290+290	290+290	390+290	430+430	430+430	430+430	430+430	430+430
Gross weight		kg	300+300	300+300	400+300	440+440	440+440	440+440	440+440	440+440
Maximum drive IDU NO.		unit	42	44	46	48	50	52	54	56
Working temp.	Cooling	°C	- 5 ~ 54°C							
	Heating	°C	- 25 ~ 26°C							

Notes:

1. Cooling operating temperature range is from -5°C to 54°C, Heating operating temperature range is from -25°C to 26°C.
2. The cooling condition(indoor side 27°C (80.6°F) DB,19°C (60°F) WB outdoor side 35°C (95°F) DB
3. The heating condition(indoor side 20°C (68°F) DB,15°C (44.6°F) WB outdoor side 7°C (42.8°F) DB
4. Sound level:measured at point 1m in front of the unit at a height of 1.3m. During actual operation, these values are normally somewhat higher as a result of ambient conditions,and lower as a result of ambient conditions when under ultra-silent operation
5. Choosing fuse or breaker according to MFA and electrical wiring according to MCA.
6. The above data may be changed without notice for future improvement on quality and performance.

TIMS-AXA

- Single Module: 8/10/12/14/16/18/20/22/24/26/28//30/32HP
- Combination Module: 34HP-64HP, 2 modules
- Full DC Inverter Technology
- Max. 1100m pipe length, Max. 110m height drop



Model			TIMS508AXA	TIMS520AXA	TIMS540AXA	TIMS560AXA	TIMS580AXA	TIMS600AXA	TIMS620AXA	TIMS640AXA
Combination Model			28+22	30+22	32+22	28+28	30+28	30+30	32+30	32+32
Capacity	Capacity Range	HP	50	52	54	56	58	60	62	64
	Cooling	kW	140	146.5	151.5	157	163.5	170	175	180
	Heating	kW	156.5	164	169	175	182.5	190	195	200
Power supply		V/Hz	380V 3N ~ 50Hz							
EER		kWKW	3.30	3.28	3.27	3.30	3.28	3.26	3.26	3.25
COP		kWKW	3.94	3.87	3.85	4.00	3.92	3.87	3.85	3.83
Rated input	Cooling	kW	42.40	44.70	46.30	47.60	49.80	52.10	53.70	55.30
	Heating	kW	39.70	42.40	43.90	43.80	46.50	49.10	50.60	52.20
Rated current	Cooling	A	88.33	92.23	95.26	96.66	100.56	104.46	107.49	110.52
	Heating	A	81.24	84.24	88.44	92.48	95.48	98.48	102.68	106.88
Refrigerant	Type		R410A							
	Charge volume	kg	16+22	16+22	16+22	22+22	22+22	22+22	22+22	22+22
Compressor	Type	—	Inverter scroll							
	Quantity	—	2+2	2+2	2+2	2+2	2+2	2+2	2+2	2+2
Fan Motor	Quantity		2+2	2+2	2+2	2+2	2+2	2+2	2+2	2+2
	Drive Type	—	DC inverter							
Airflow rate		m³/h	25800+27000				27000+27000			
Connecting pipe	Liquid Pipe	mm	φ19.05							
	Gas Pipe	mm	φ41.30							
Sound pressure level		dB(A)	50-67				50-68			
Outline dimension		mm	(1500+1900)×850×1710				(1900+1900)×850×1710			
Package dimension		mm	(1585+1985)×950×1950				(1985+1985)×950×1950			
Net weight		kg	488+430	488+430	488+430	488+488	488+488	488+488	488+488	488+488
Gross weight		kg	498+440	498+440	498+440	498+498	498+498	498+498	498+498	498+498
Maximum drive IDU NO.		unit	58	60	62	64	64	64	64	64
Working temp.	Cooling	°C	- 5 ~ 54°C							
	Heating	°C	- 25 ~ 26°C							

Notes:

1. Cooling operating temperature range is from -5°C to 54°C, Heating operating temperature range is from -25°C to 26°C.
2. The cooling condition: indoor side 27°C (80.6°F) DB, 19°C (66°F) WB outdoor side 35°C (95°F) DB
3. The heating condition: indoor side 20°C (68°F) DB, 15°C (44.5°F) WB outdoor side 7°C (42.8°F) DB
4. Sound level: measured at point 1m in front of the unit at a height of 1.3m. During actual operation, these values are normally somewhat higher as a result of ambient conditions and lower as a result of ambient conditions when under ultra-silent operation
5. Choosing fuse or breaker according to MFA and electrical wiring according to MCA.
6. The above data may be changed without notice for future improvement on quality and performance.