



CA-TIMS-201612V01



TIMS
Inverter Multi

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TIMS
Inverter Multi

TICA Inverter VRF System



TICA is a hi-tech enterprise specialized in R&D, manufacturing, sales and services of air-conditioning and refrigeration products. Established in 1991, it has developed into one of the top four Chinese air-conditioning brands, with factories in Nanjing, Tianjin and Guangzhou, and a network of over 70 sales and service filiales around the world.

TICA has invested up to RMB 600 million in the first phase to build the top notch central air-conditioning R&D and production base, credited as the state enterprise R&D center. Certified by CNAS, it serves as a national R&D public service platform.

TICA produces over 30 series of products, covering AHUs, VRFs, screw chillers and centrifugal chillers, diverse enough to meet various requirements with regards to comfort and manufacturing processing application.

TICA is a strong competitor in chillers and commercial air conditioning products. It is the largest producer of AHUs in China for five consecutive years and covers over 40% of the market share as the supplier to such industries as micro-electronics, surgery operation room equipment and biopharmaceuticals.

TICA has established a global strategic joint venture with United Technologies Corporation (UTC) whose businesses include the world's most advanced Pratt & Whitney Aircraft Engines, the largest air-conditioning company Carrier and the biggest elevator company Otis.

The giant UTC transfers such global cutting-edge core technologies as large centrifugal chillers, screw chillers, and ORC systems to TICA, thrusting TICA 20 years ahead of its Chinese counterparts in terms of centrifuge technology and 30 years ahead in cryogenic power generation technology. Meanwhile, TICA and UTC will integrate global resources to create a brand-new international market pattern.

Meanwhile, the company has also provided energy-saving air-conditioning system integration solutions to both domestic and foreign users like Zhongnanhai, the Great Hall of the People, Beijing Bird's Nest stadium, the Water Cube, the Wukesong Indoor Stadium, Petro China, Sinopec, State Grid, Nanjing Panda, Hangzhou Xiaoshan Airport, Hainan Airlines Group, Shangri-La Hotel, Manila Ocean Park, Abu Dhabi Al Muneera, SM City in Philippines and Unilever, etc.



Nanjing Headquarter



Tianjin Base















Guangzhou Base











DIRECTORY

PRODUCT LINEUP	5
OUTDOOR UNITS FEATURES	7
OUTDOOR UNITS SPECIFICATIONS	20
INDOOR UNITS	25
INTELLIGENT CONTROL	37
CLEANING TECHNOLOGY	43


Product Lineup-Outdoor

Model	TIMS080AX	TIMS100AX	TIMS120AX	TIMS140AX	TIMS160AX	TIMS180AX	TIMS200AX	TIMS220AX
 TIMS080AX	●							
 TIMS100AX		●						
 TIMS120AX			●					
 TIMS140AX				●				
 TIMS160AX					●			
 TIMS180AX						●		
 TIMS200AX							●	
 TIMS220AX								●
 TIMS240AX		●		●				
 TIMS260AX		●			●			
 TIMS280AX				●●				
 TIMS300AX				●	●			
TIMS320AX				●		●		
TIMS340AX				●			●	
TIMS360AX				●				●
TIMS380AX					●			●
TIMS400AX							●●	
TIMS420AX							●	●
TIMS440AX								●●
TIMS460AX				●	●●			
TIMS480AX					●●●			
TIMS500AX				●	●		●	
TIMS520AX				●	●			●
TIMS540AX					●●			●
TIMS560AX				●			●	●
TIMS580AX				●				●●
TIMS600AX					●			●●
TIMS620AX							●●	●
TIMS640AX							●	●●
TIMS660AX								●●●

Product Lineup-Indoor

Model	Type	Photo	Capacity(kW)																													
			2.2	2.5	2.8	3.2	3.6	4	4.5	5	5.6	6.3	7.1	8	9	10	11.2	12.5	14	16	19.5	25	25.5	28	41	45	52	56	62	79		
TMCF	Round Flow cassette				●		●			●	●	●	●	●	●	●	●	●	●													
TMCS	One way cassette				●		●			●		●																				
TMCD	Two way cassette				●		●			●		●						●	●	●	●	●	●	●								
TMDN-AC	Slim duct		●	●	●	●	●	●	●	●	●	●	●	●	●																	
TMDN-AB	Low ESP duct		●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	
TMDH-A	High ESP duct																															
TMVX	Ceiling & Floor				●		●				●		●		●		●		●		●		●		●		●		●		●	
TMVW	Wall-mounted				●		●	●			●	●	●																			
TMDH-AI	Big Capacity duct																															
TMDF	Fresh air processor																															

AHU Box

Model	Setting cooling capacity (HP)	Indoor unit capacity (kW)	Internal volume of heat exchanger (dm ³)	Reference air volume (m ³ /h)	Picture
TMDK280	8	20~25	3.6855~4.6069	3000	
	10	25~30	4.6069~5.5283	3700	
TMDK450	12	30~36	5.5283~6.6430	4500	
	14	36~40	6.6430~7.3711	5400	
	16	40~45	7.3711~8.2925	6000	

Basic Modules

TIMS-X Combination modules



Model	TIMS-AX	TIMS080AX	TIMS100AX	TIMS120AX	TIMS140AX	TIMS160AX	TIMS180AX	TIMS200AX	TIMS220AX	Power type	208-230V	380-415V
Capacity	HP	8	10	12	14	16	18	20	22	50Hz/3N	/	Available
	KW	28.1	35.2	42.2	49.2	56.3	63.3	70.3	77.4	60Hz/3N	/	Available
Compressor		DC	DC	DC	DC	DC	DC+DC	DC+DC	DC+DC			
Fan motor		DC	DC	DC	DC	DC	DC+DC	DC+DC	DC+DC			

TIMS-S Independent modules



Model	TIMS-AS	TIMS-S080AS	TIMS-S100AS	TIMS-S120AS	TIMS-S140AS	TIMS-S160AS	TIMS-S180AS	TIMS-S200AS	TIMS-S220AS	TIMS-S260AS	TIMS-S280AS	TIMS-S300AS	TIMS-S320AS	Power type	208-230V	380-415V
Capacity	HP	8	10	12	14	16	18	20	22	26	28	30	32	50Hz/3N	/	Available
	KW	28.1	35.2	42.2	49.2	56.3	63.3	70.3	77.4	91.4	98.5	105.5	112.5	60Hz/3N	/	Available
Compressor		DC	DC	DC	DC	DC	DC+DC	DC+DC	DC+DC	DC+DC	DC+DC	DC+DC	DC+DC			
Fan motor		DC	DC	DC	DC	DC	DC+DC	DC+DC	DC+DC	DC+DC	DC+DC	DC+DC	DC+DC			

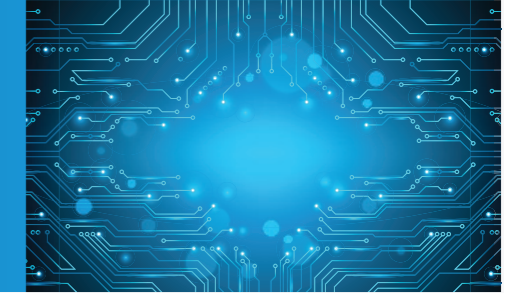
TIMS-X TIMS-S



- High efficiency 8
- High Reliability 11
- Convenient Application 16
- Widely Application Range 19
- ODU Specifications 20

High Efficiency

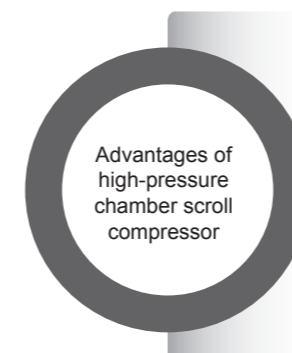
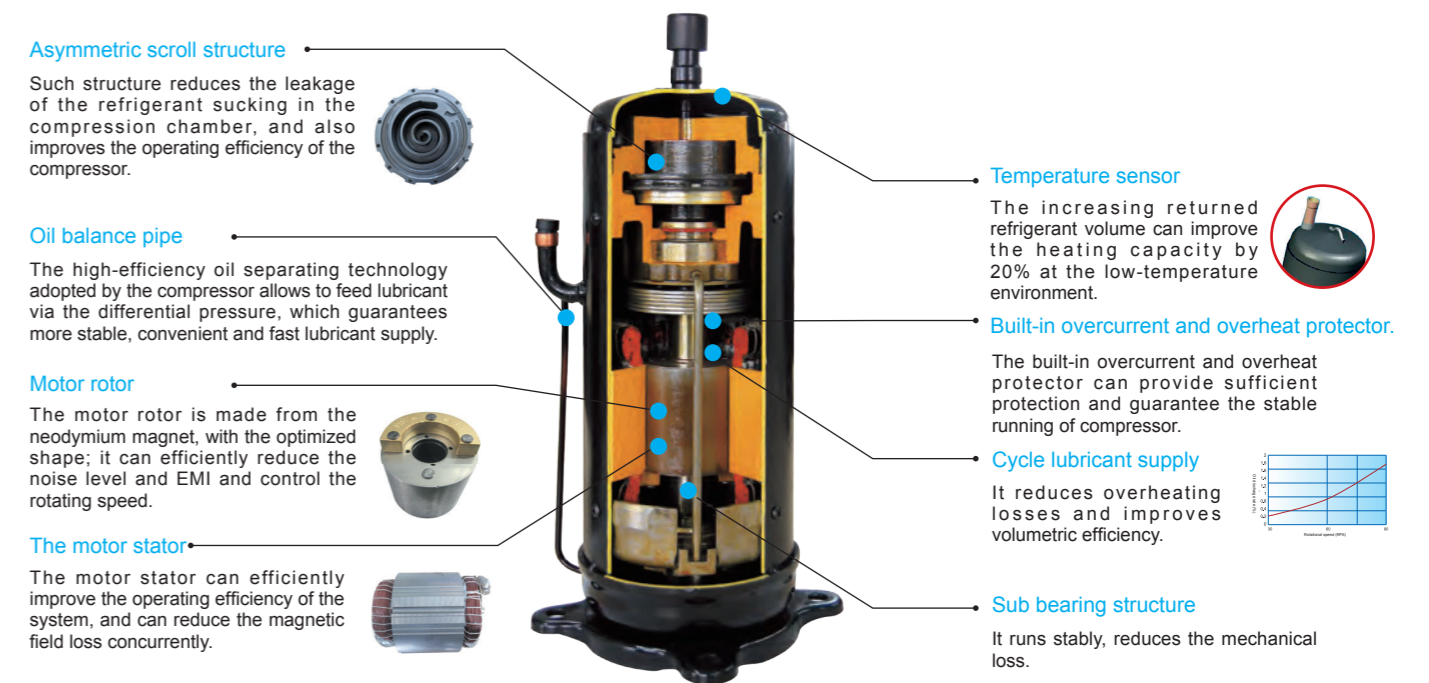
Catering to the global low-carbon trend, TICA launches a new product - TIMS DC Inverter Multi System central air-conditioning unit. It comes from multiple energy-saving technologies and is featured in the advanced energy-saving performance.



1. All DC Inverter Compressors

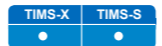


The TIMS adopts the high-efficiency DC inverter scroll compressor with high-pressure chamber, which adopts asymmetric scroll design and high-efficiency internal oil separator. By integrating with the enhanced vapor injection technique, the TIMS can realize the heating under low ambient temperature in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

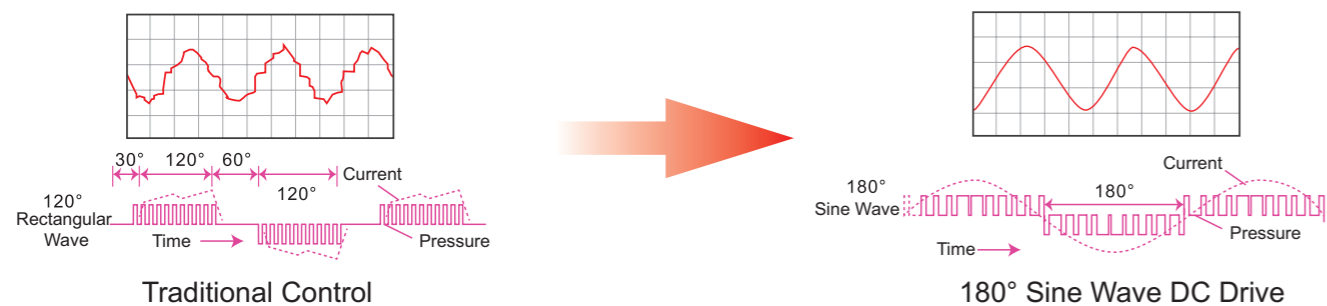


- ◆ The high-pressure chamber scroll compressor takes advantage of the inherent differential pressure to supply lubricant, and the lubricant supply is not affected by the rotational speed. Moreover it has long service life and good stability.
- ◆ The refrigerant goes into the scroll of the compressor directly, it has less suction gas superheat and high volumetric efficiency.
- ◆ The high-pressure chamber compressor uses its discharging gas to cool motor, which can not only guarantee the lubricant temperature when the motor runs at the low temperature, but also provide good control on low temperature.
- ◆ When TIMS operates in heating mode, the high compression ratio guarantees the high discharge pressure, improves supply air temperature and heating efficiency.
- ◆ The high-pressure chamber compressor has low noise and good noise reduction result.
- ◆ The new refrigerant cycle design makes the electric motor have the best cooling, lower the operating temperature, and further improves the motor efficiency.

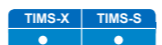
2. 180° Sine Wave Control Technology



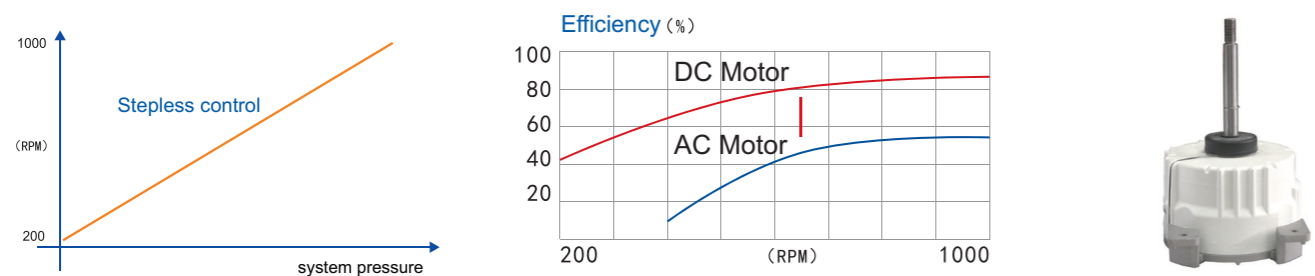
Non sensor control technology of permanent magnet synchronous motor makes output current of DC converter sine wave, which guarantee stability, reduce vibration prevent from electromagnetic interference to improve running efficiency



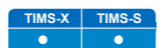
3. All DC Fan Motors



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.



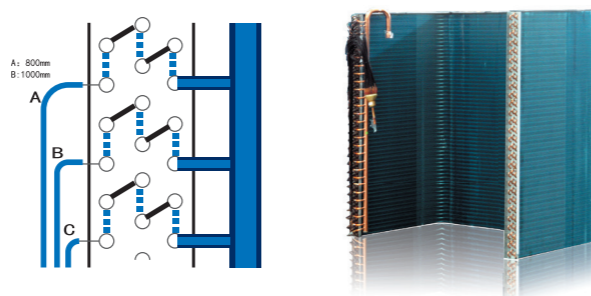
4. High Efficiency Heat Exchanger



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.

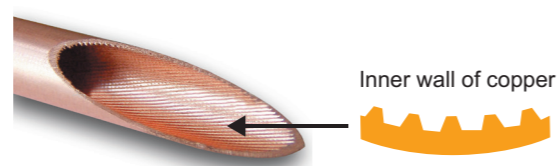
● Refrigerant circuit of TOD

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



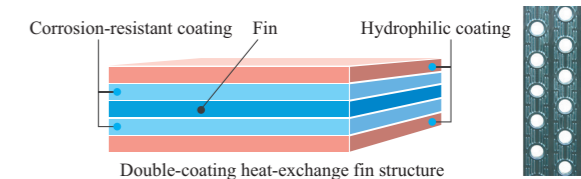
● Inner-grooved copper pipe

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.



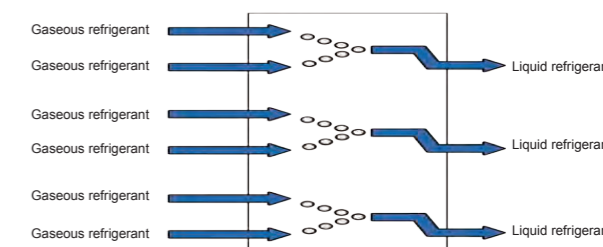
● Hydrophilic aluminum fin

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

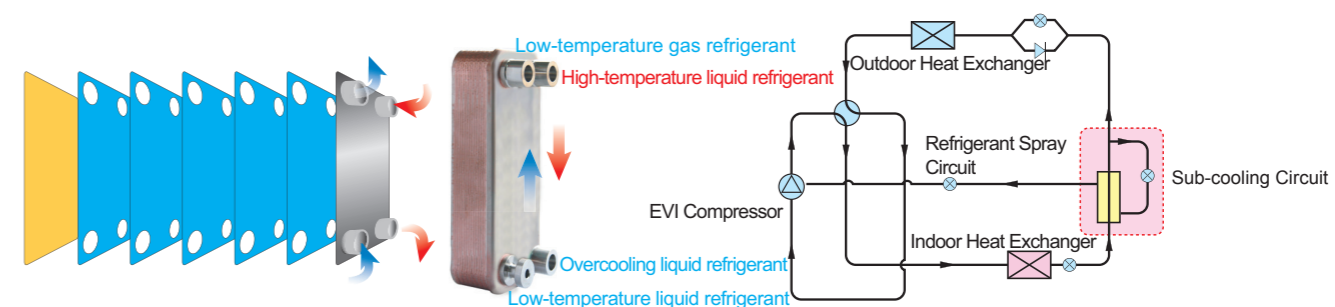
The specially designed 2-in-1 refrigerant loop can increase the liquid refrigerant volume and comprehensive heat exchange coefficient, making refrigerant heat exchange more sufficient and system more optimized.



5. Sub-cooling Design



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



6. 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.



7. Stereo Air Inlet Technology of Four Directions



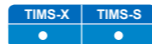
In comparison to air inlet through three sides, the stereo air inlet technology of four directions can maximize utilization of the heat exchange area of heat exchanger, increase the air speed range, make heat exchange more sufficient, and improve the operation efficiency.



High Reliability



1. Six-fold Oil Return Control Technology



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.

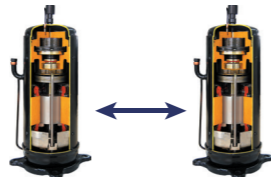
● Internal Oil Separation Technology of Compressor

After realizing lubrication in the compressor, only a little lubricating oil enters the system together with the exhausted air. This effectively prevents excessive refrigeration oil from staying in the refrigeration cycle pipeline, thus ensuring the oil amount required for normal operation of the compressor.



● Oil Separation Technology of Oil Balancing Pipe for Compressor

The oil balancing pipe for compressor is used to provide excessive lubricating oil in the oil pool to the compressor with insufficient oil in the oil pool in the module, ensuring the lubrication effect of all the compressors.



● Efficient Oil Separator

The centrifugal oil separator separates the oil discharged from the compressor rapidly with the separation efficiency of 99.9%, and transports the oil back to each compressor efficiently in time, ensuring the oil amount required by the compressor.



● Intelligent Oil Return Control Technology of Main Board

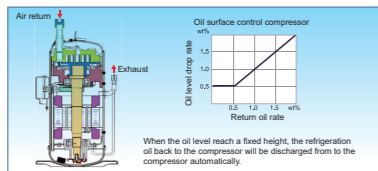
The main board sends an oil return instruction through the main chip according to the system operating time and status to implement automatic oil return of the system.



● ODU Oil Balancing Technology

The system can control and regulate the oil amount in the oil pools of different compressors between ODU's to balance oil return between all the modules.

The system automatically determines the proper oil discharge amount according to the oil amount of compressor, preventing oil leakage of the compressor and improving reliability. When the oil level reach a fixed height, the refrigeration oil back to the compressor will be discharged from to the compressor automatically.



● No Oil Balancing Pipe between ODU's

No oil balancing pipe is needed between ODU modules. This reduces pipeline leak points, improves the oil return stability and efficiency and makes installation convenient.

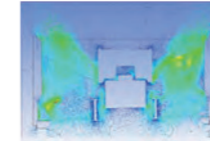


2. Ten Major Ultra Quiet Technologies

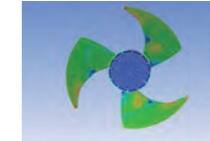


The TIMS series adopt the omni-directional noise reduction technology and spiral flow fan blade to ensure a smooth suction structure and reduce the air flow noise. Supplemented with the sound insulation design of compressor, the unit can realize ultra quiet operation and create a comfortable environment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



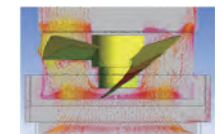
The fan blades with a larger diameter are adopted to yield a larger air volume at a lower speed and make noises lower.



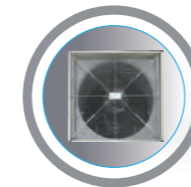
The fan motor support employs a non-resonant hanger structure to ensure stable operation performance of the motor and reduce the vibration noise.



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.



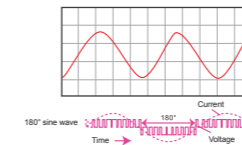
The air streamlined fan grille promotes more smooth discharge of vortex air flow and reduces the pressure loss.



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.

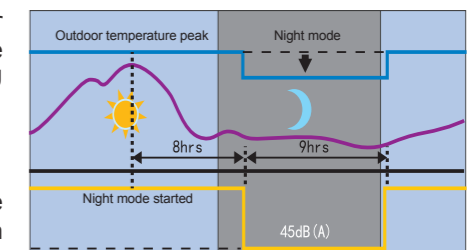


● Night Silent Mode

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.

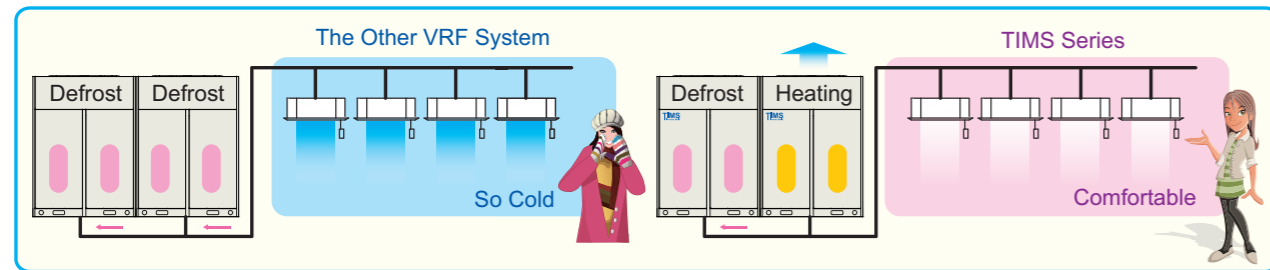


3. Efficient Heating and Smart Defrosting

TIMS-X TIMS-S

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

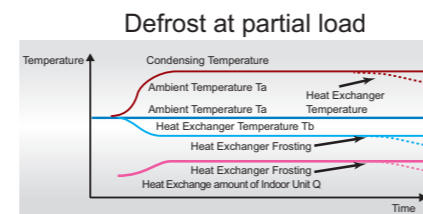
The unique TCC defrosting technology of TICA adopts the non-stop method. It is unnecessary to switch to the cooling mode when defrosting in winter, and less exhaust temperature fluctuation of IDU. There is no need to worry about the indoor instantaneous temperature reduction. The technology makes the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



● Smart defrosting technology

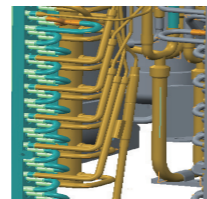
The smart defrosting technology allows to detect when to defrost according to every heating parameter, which can guarantee high heating capacity and energy efficiency ratio.

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.

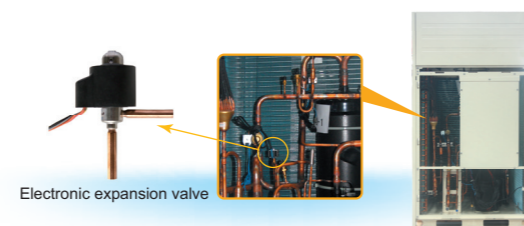


4. Automatic Detection and Regulation Technologies

TIMS-X TIMS-S

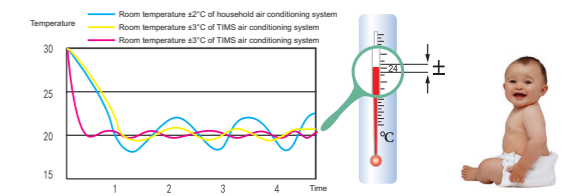
● Control Technology of Multiple Electronic Expansion Valves

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.

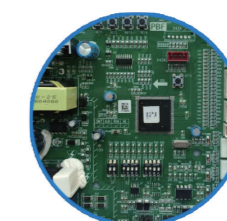


● Automatic Addressing

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.



5. Stable Operation Functions

TIMS-X TIMS-S

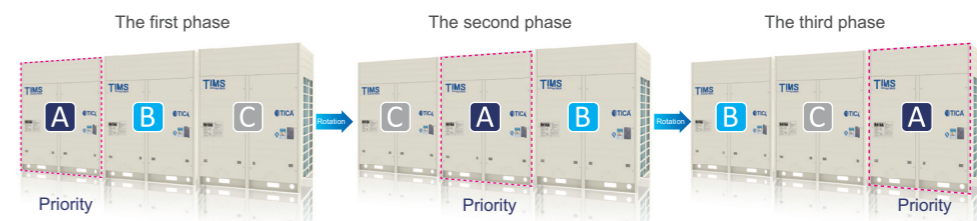
● Automatic Startup after Power Restoration

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, TIMS 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.



6. Multiple Protection Technologies

TIMS-X	TIMS-S
●	●

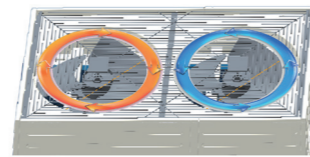
● Pipeline Exception Protection

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.

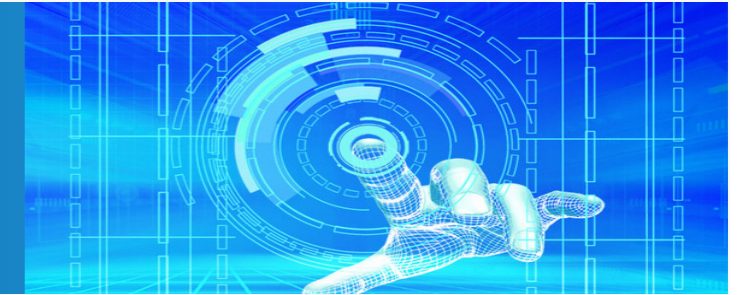
● Compressor Error Protection

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.

Convenient Application



1. All DC Inverter Compressors

TIMS-X	TIMS-S
●	●

● 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.

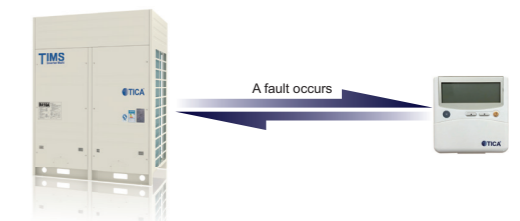


While for traditional central air conditioning systems, maintenance by designated person is a must.

TIMS intelligent control

● 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.



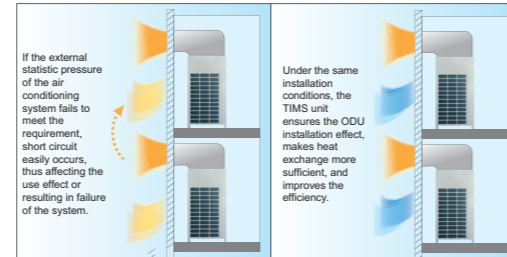
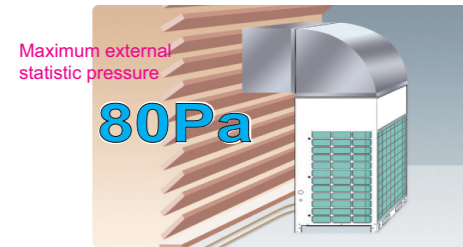
Trial Operation Technology of ODU

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.

Ultra-high External Static Pressure

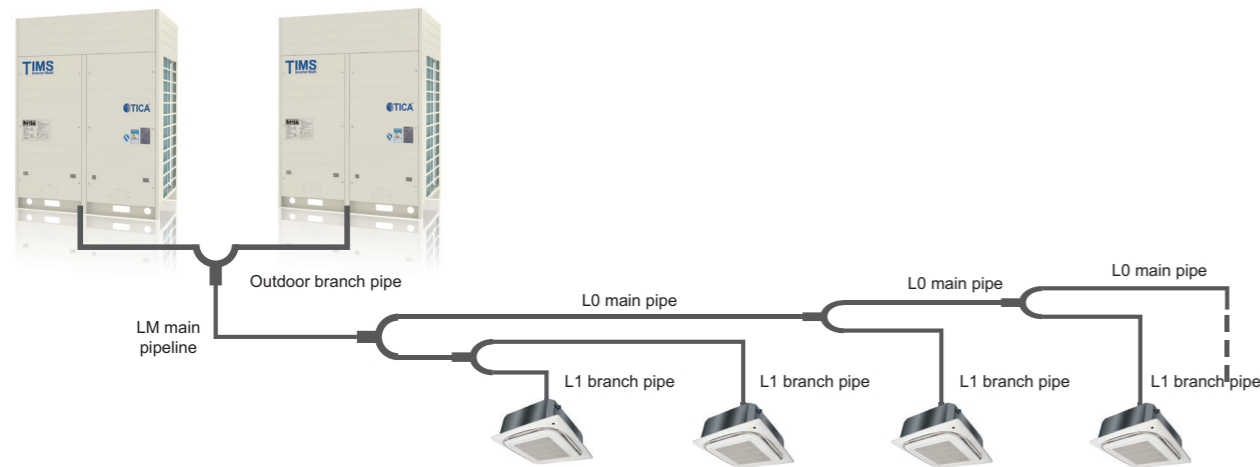
The system selects the blade with a higher air flow and the DC fan motor to realize a higher external static pressure on the precondition of avoiding noise change. The maximum external static pressure is 80 Pa.

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 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



Widely Application Range



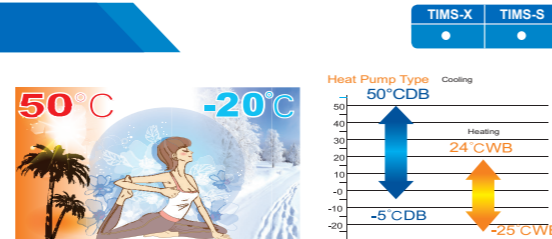
1. Widely Capacity Range

TICA TIMS-X series extensive capacity ranging from 8HP to 66HP, and TICA TIMS-S series, Non-Modular type VRF capacity ranging from 8HP to 32HP.



2. Widely Operating Range of Cooling and Heating

Through the strict system matching and test, the system has very powerful cooling and heating performance, even operates under -20°C during cold winter or 50°C in summer.



3. Overlong Pipe & High Drop Design

Maximum actual length of single pipe	200 m
Maximum equivalent length of single pipe	240 m
Maximum total equivalent pipe length	1000 m
Maximum drop of indoor/outdoor unit	110 m
Maximum drop of indoor unit	30 m
Maximum permitted length after first branch	40 m



* Pls consult the detailed technical documentation or other matters with the relative technicians.

ODU Specifications



TIMS-X

- Single Module: 8/10/12/14/16/18/20/22HP
- Combination Module: 24HP-66HP, 2-3 modules
- Full DC Inverter Technology
- Max. 1000m pipe length, Max. 110m height drop



Model		TIMS080AX	TIMS100AX	TIMS120AX	TIMS140AX	TIMS160AX	TIMS180AX	TIMS200AX	TIMS220AX	
Capacity	Combination model	-	-	-	-	-	-	-	-	
	Capacity range	HP	8	10	12	14	16	18	20	22
	Cooling	kW	25.0	28.0	33.5	40.0	45.0	50.0	56.0	61.5
Rated input	Heating	kW	27.0	31.5	37.5	45.0	50.0	56.0	63.0	69.0
	Power supply	V/N/Hz	380V/3N/50Hz/60Hz							
Rated current	EER	kW/kW	4.08	3.95	3.88	3.75	3.56	3.53	3.60	3.68
	COP	kW/kW	4.45	4.49	4.36	4.25	3.99	3.96	4.06	4.14
Rated current	Cooling	kW	6.12	7.09	8.63	10.67	12.64	14.16	15.56	16.71
	Heating	kW	6.07	7.02	8.60	10.58	12.60	14.12	15.52	16.65
Rated current	Cooling	A	12.5	13.4	16.4	19.6	24.1	30.5	35.2	40.0
	Heating	A	13.6	13.9	16.7	20.0	24.0	30.1	34.9	35.0
Refrigerant	Type	R410A								
	Charge volume	kg	8	10	12	16				
Compressor	Brand	Hitachi								
	Type	Scroll type								
	Quantity	1				1+1				
	Refrigerant oil charge volume	L	0.50		1.10		0.50		0.50	
Fan	Type	Axial flow								
	Quantity	1				1+1				
Fan motor	Insulation class	IP24								
	Drive Type	DC								
Connecting pipe	Airflow rate	m ³ /h	12000			13980		18780	20820	22020
	Liquid pipe	mm	φ12.7		φ12.7		φ12.7		φ15.88	
	Gas pipe	mm	φ22.23		φ25.4		φ28.58		φ28.58	
ESP	Connection method	Welding								
	Pa	0-80								
Sound pressure level	dB(A)	45-57			45-59		45-62		45-63	
Outline dimension	mm	930*860*1710			1240*860*1710		1500*860*1710		1500*860*1710	
Package dimension	mm	930*860*2000			1240*860*2000		1500*860*2000		1500*860*2000	
Net weight	kg	225	225	225	290	290	430	430	430	
Gross weight	kg	245	245	245	310	310	450	450	450	
Maximum drive IDU NO.	unit	14	16	19	22	23	31	33	34	
Max. equivalent connection pipe length	m	240	240	240	240	240	240	240	240	
	Working temp.	Cooling	°C							-5~50°C
	Heating	°C							-20~24°C	

Notes:

1. Cooling operating temperature range is from -5°C to 50°C, Heating operating temperature range is from -20°C to 24°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-X

- Single Module: 8/10/12/14/16/18/20/22HP
- Combination Module: 24HP-66HP, 2-3 modules
- Full DC Inverter Technology
- Max. 1000m pipe length, Max. 110m height drop



Model	TIMS240AX	TIMS260AX	TIMS280AX	TIMS300AX	TIMS320AX	TIMS340AX	TIMS360AX	TIMS380AX	TIMS400AX	TIMS420AX	TIMS440AX			
Combination model	10+14	10+16	14+14	14+16	16+16	14+20	14+22	16+22	20+20	20+22	22+22			
Capacity	Capacity range	HP	24	26	28	30	32	34	36	38	40	42	44	
	Cooling	kW	68.0	73.0	80.0	85.0	90.0	96.0	101.5	106.5	112.0	117.5	123.0	
	Heating	kW	76.5	81.5	90.0	95.0	100.0	108.0	114.0	119.0	126.0	132.0	138.0	
Power supply	V/N/Hz	380V/3N/50Hz/60Hz												
EER	kW/kW	3.83	3.70	3.75	3.65	3.56	3.66	3.71	3.63	3.60	3.64	3.68		
COP	kW/kW	4.35	4.15	4.25	4.10	3.97	4.14	4.19	4.07	4.06	4.10	4.14		
Rated input	Cooling	kW	17.76	19.73	21.34	23.31	25.28	26.23	27.38	29.35	31.12	32.27	33.42	
	Heating	kW	17.60	19.62	21.16	23.18	25.20	26.10	27.23	29.25	31.04	32.17	33.30	
Rated current	Cooling	A	33.00	37.50	39.20	43.70	48.20	54.80	59.60	31.04	70.40	75.20	80.00	
	Heating	A	3350	37.90	40.00	44.00	48.00	54.90	55.00	59.00	69.80	69.90	70.00	
Refrigerant	Type	R410A												
	Charge volume	kg	8+12		12+12			12+16			16+16			
Compressor	Brand	Hitachi												
	Type	Scroll type												
	Quantity	1+1			1+2			2+2						
	Refrigerant oil charge volume	L	0.5+1.10		1.10+1.10			1.10+0.50			0.50+0.50			
Fan	Type	Axial flow												
	Quantity	1+1			1+2			2+2						
Fan motor	Insulation class	IP24												
	Drive type	DC												
Airflow rate	m ³ /h	12030+13980		13990+13980			13930+20320			20820+20820			22020+22020	
Connecting pipe	Liquid pipe	φ19.05												
	Gas pipe	φ31.75			φ34.92			φ38.10						
	Connection method	Welding												
ESP	Pa	0-80												
Sound pressure level	dB(A)	48-59		48-60			48-66			50-67				
Outline dimension	mm	(930+1240)*860*1710		(1240+1240)*850*1710			(1240+1500)*860*1710			(1500+1500)*860*1710				
Package dimension	mm	(930+1240)*860*2000		(1240+1240)*860*2000			(1240+1500)*860*2000			(1500+1500)*860*2000				
Net weight	kg	225+290	225+290	290+290	290+290	290+290	290+430			430+430				
Gross weight	kg	245+310	245+310	310+310	310+310	310+310	310+450			450+450				
Maximum drive IDU NO.	unit	35	35	36	33	40	42	44	48	50	52			
Max. equivalent connection pipe length	m	240	240	240	240	240	240	240	240	240	240			
Working temp.	Cooling	-5~50°C												
	Heating	-20~24°C												

Notes:

1. Cooling operating temperature range is from -5°C to 50°C, Heating operating temperature range is from -20°C to 24°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-X

- Single Module: 8/10/12/14/16/18/20/22HP
- Combination Module: 24HP-66HP, 2-3 modules
- Full DC Inverter Technology
- Max. 1000m pipe length, Max. 110m height drop



Model	TIMS460AX	TIMS480AX	TIMS500AX	TIMS520AX	TIMS540AX	TIMS560AX	TIMS583AX	TIMS60DAX	TIMS620AX	TIMS640AX	TIMS660AX						
Combination model	14+16+16	16+16+16	14+16+20	14+16+22	16+16+22	14+20+22	14+22+22	16+22+22	20+20+22	20+22+22	22+22+22						
Capacity	Capacity range	HP	46	48	50	52	54	56	58	60	62	64	66				
	Cooling	kW	130.0	135.0	141.0	146.5	151.5	157.5	163.0	168.0	173.5	179.0	184.5				
	Heating	kW	145.0	150.0	158.0	164.0	169.0	177.0	183.0	183.0	195.0	201.0	207.0				
Power supply	V/N/Hz	380V/3N/50Hz/60Hz															
EER	kW/kW	3.62	3.56	3.63	3.66	3.61	3.67	3.70	3.65	3.63	3.65	3.68					
COP	kW/kW	4.05	3.96	4.08	4.12	4.04	4.14	4.17	3.99	4.09	4.12	4.14					
Rated input	Cooling	kW	35.95	37.92	38.87	40.02	41.99	42.94	44.09	46.06	47.83	48.98	50.13				
	Heating	kW	35.78	37.80	38.70	39.83	41.85	42.75	43.88	45.90	47.69	48.82	49.95				
Rated current	Cooling	A	67.80	72.30	78.90	83.70	88.20	94.83	99.60	104.10	110.40	115.20	120.03				
	Heating	A	68.00	72.00	78.90	79.00	83.00	89.90	90.00	94.03	104.80	104.90	105.03				
Refrigerant	Type	R410A															
	Charge volume	kg	12+12+12		12+12+16			12+16+16			16+16+16						
Compressor	Brand	Hitachi															
	Type	Scroll type															
	Quantity	1+1+1			1+1+2			1+2+2			2+2+2						
	Refrigerant oil charge volume	L	1.10+1.10+1.10		1.10+1.10+0.50			1.10+0.50+0.50			0.50+0.50+0.50						
Fan	Type	Axial flow															
	Quantity	1+1+1			1+1+2			1+2+2			2+2+2						
Fan motor	Insulation class	IP24															
	Drive type	DC															
Airflow rate	m ³ /h	13980+13980+13980		13980+13980+20820			13993+22020+22020			13993+22020+22020		20820+20820+22020		20820+22020+22020		22020+22020+22020	
Connecting pipe	Liquid pipe	φ19.05															
	Gas pipe	φ38.10			φ41.30												
	Connection method	Welding															
ESP	Pa	0-80															
Sound pressure level	dB(A)	50-63		50-66			50-67			50-68			50-69				
Outline dimension	mm	(1240+1240+1240)*860*1710		(1240+1240+1500)*860*1710			(1240+1500+1500)*860*1710			(1500+1500+1500)*860*1710							
Package dimension	mm	(1240+1240+1240)*860*2000		(1240+1240+1500)*860*2000			(1240+1500+1500)*860*2000			(1500+1500+1500)*860*2000							
Net weight	kg	290+290+290		290+290+430			290+430+430			430+430+430							
Gross weight	kg	290+290+290		310+310+450			310+450+450			450+450+450							
Maximum drive IDU NO.	unit	54	56	58	60	62	64	64	64	64	64						
Max. equivalent connection pipe length	m	240	240	240	240	240	240	240	240	240	240						
Working temp.	Cooling	-5~50°C															
	Heating	-20~24°C															

Notes:

1. Cooling operating temperature range is from -5°C to 50°C, Heating operating temperature range is from -20°C to 24°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-S

- Single Module: 8/10/12/14/16/18/20/22HP
- Combination Module: 24HP-66HP, 2-3 modules
- Full DC Inverter Technology
- Max. 1000m pipe length, Max. 110m height drop



Model			TIMS080AS	TIMS100AS	TIMS120AS	TIMS140AS	TIMS160AS
Capacity	Capacity range	HP	8	10	12	14	16
	Cooling	kW	25.0	28.0	33.5	40.0	45.0
	Heating	kW	27.0	31.5	37.5	45.0	50.0
Power supply		V/N/Hz	380V/3N~50Hz				
EER		Kw/kW	4.05	3.93	3.86	3.74	3.54
COP		Kw/kW	4.41	4.45	4.35	4.23	3.94
Rated input	Cooling	kW	6.17	7.13	8.68	10.70	12.71
	Heating	kW	6.12	7.08	8.62	10.65	12.66
Rated current	Cooling	A	12.50	13.40	16.40	19.60	24.10
	Heating	A	13.60	13.90	16.70	20.00	24.00
Refrigerant	Type		R410A				
	Charge volume	kg	8	8	10	12	12
Compressor	Brand	-	Hitachi				
	Type	-	Scroll type				
	Quantity	-	1				
	Refrigerant oil charge volume	L	0.50			1.10	
Fan	Type		Axial flow				
	Quantity		1				
	Air flow	m ³ /h	12000			13980	
Fan motor	Insulation class	-	IP24				
	Drive type	-	DC				
Air flow rate		m ³ /h					
Connecting pipe	Liquid pipe	mm	φ12.7		φ12.70	φ12.70	
	Gas pipe	mm	φ22.23		φ25.4	φ28.58	
	Connection method		Welding				
ESP		Pa	0-80Pa				
Sound pressure level		dB (A)	45-57			45-59	
Outline dimension		mm	930X860X1710			1240X860X1710	
Package dimension		mm					
Net weight		kg	220	220	220	285	285
Gross weight		kg	225	225	225	290	290
Maxmum drive IDU NO.		unit	14	16	19	22	23
Max. equivalent connection pipe length		m	240	240	240	240	240
Working temp.	Cooling	°C	-5~50°C				
	Heating	°C	-20~24°C				

Notes:

1. Cooling operating temperature range is from -5°C to 50°C, Heating operating temperature range is from -20°C to 24°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-S

- Single Module: 8/10/12/14/16/18/20/22HP
- Combination Module: 24HP-66HP, 2-3 modules
- Full DC Inverter Technology
- Max. 1000m pipe length, Max. 110m height drop



Model			TIMS180AS	TIMS200AS	TIMS220AS	TIMS240AS	TIMS260AS	TIMS280AS	TIMS300AS	TIMS320AS	
Capacity	Capacity range	HP	18	20	22	24	26	28	30	32	
	Cooling	kW	53.0	56.0	61.5	67.0	73.0	78.5	85.0	90.0	
	Heating	kW	58.5	63.0	69.0	75.0	81.5	87.5	95.0	100.0	
Power supply		V/N/Hz	380V/3N~50Hz								
EER		Kw/kW	3.71	3.65	3.68	3.58	3.98	3.78	3.73	3.64	
COP		Kw/kW	4.13	4.13	4.10	3.96	4.46	4.23	4.18	4.06	
Rated input	Cooling	kW	14.26	15.34	16.70	18.71	18.34	20.76	22.79	24.73	
	Heating	kW	14.18	15.25	16.83	18.93	18.28	20.70	22.71	24.65	
Rated current	Cooling	A	30.50	35.20	40.00	33.00	37.20	39.20	43.70	48.20	
	Heating	A	30.10	34.90	35.00	33.90	37.90	40.00	44.00	48.00	
Refrigerant	Type		R410A								
	Charge volume	kg	16	16	16	16	18	22	22	22	
Compressor	Brand	-	Hitachi								
	Type	-	Scroll type								
	Quantity	-	1								
	Refrigerant oil charge volume	L	0.50				1.10+1.10				
Fan	Type		Axial flow								
	Quantity		1+1								
	Air flow	m ³ /h	25800				27000				
Fan motor	Insulation class	-	IP24								
	Drive type	-	DC								
Air flow rate		m ³ /h									
Connecting pipe	Liquid pipe	mm	φ15.88				φ19.05				
	Gas pipe	mm	φ28.58				φ31.75				
	Connection method		Welding								
ESP		Pa	0-80Pa				0-80Pa				
Sound pressure level		dB (A)	48 ~ 59				48 ~ 60			48 ~ 62	
Outline dimension		mm	1500×860×1710						1900×860×1710		
Package dimension		mm									
Net weight		kg	425	425	425	425	425	495	495	495	
Gross weight		kg	430	430	430	430	430	500	500	500	
Maxmum drive IDU NO.		unit	31	33	34	35	35	36	38	40	
Max. equivalent connection pipe length		m	240	240	240	240	240	240	240	240	
Working temp.	Cooling	°C	-5~50°C								
	Heating	°C	-20~24°C								

Notes:

1. Cooling operating temperature range is from -5°C to 50°C, Heating operating temperature range is from -20°C to 24°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
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IDU UNITS

- Four-way cassette 26
- Two-way cassette 28
- One-way cassette 29
- Ceiling & Floor 30
- Wall mounted 31
- Standard duct 32
- Slim duct 33
- High ESP duct 34
- Big capacity duct 35
- Fresh air Processor 36



Optional			
Wireless	Wired	Wired	Centralized

● Accessories

Plenum box	Air filter	EXV	Drain pump	AC motor	DC Motor
/	Standard	Standard (built-in)	Standard	Standard	/

● 360° air outlet, no blind spot



● Compact design, only 230mm height

Has slim body with 230mm height, it is specially suitable for low suspended ceiling rooms.



● Built-in drain pump, drain height can be 1200mm

Built-in with long life drainage pump, Pumping head is 1200mm, flexible for drainage pipe design.



Model		TMCF028AB	TMCF036AB	TMCF045AB	TMCF050AB	TMCF056AB	TMCF063AB	TMCF071AB	TMCF080AB	TMCF090AB	TMCF100AB	TMCF112AB	TMCF125AB	TMCF140AB	TMCF160AB	
Capacity	Cooling	kW	2.8	3.6	4.5	5.0	5.6	6.3	7.1	8.0	9.0	10.0	11.2	12.5	14.0	16.0
	Heating	kW	3.2	4.0	5.0	5.6	6.3	7.1	8.0	9.0	10.0	11.2	12.5	14.0	16.0	18.0
Power supply	V/Ph/Hz	220V/1Ph/50Hz	220V/1Ph/50Hz	220V/1Ph/50Hz	220V/1Ph/50Hz	220V/1Ph/50Hz	220V/1Ph/50Hz	220V/1Ph/50Hz	220V/1Ph/50Hz	220V/1Ph/50Hz	220V/1Ph/50Hz	220V/1Ph/50Hz	220V/1Ph/50Hz	220V/1Ph/50Hz	220V/1Ph/50Hz	220V/1Ph/50Hz
Power input	W	55	55	70	70	75	75	90	90	150	150	150	190	190	210	
Air flow volume (H/M/L)	m³/h	750/660/540	810/690/540	900/720/600	900/720/600	960/780/660	960/780/660	1020/900/690	1200/1080/870	1500/1260/900	1620/1260/900	1700/1360/1080	1800/1500/1200	1800/1500/1200	2100/1800/1500	
Sound pressure level (H/M/L)	dB(A)	32/30/25	32/30/25	36/33/31	36/33/31	36/33/31	36/33/31	39/36/33	39/36/33	42/39/35	42/39/35	42/39/35	44/40/35	44/40/35	44/40/36	
Fan	Type	—	Axial	Axial	Axial	Axial	Axial	Axial	Axial	Axial	Axial	Axial	Axial	Axial	Axial	
Fan motor	Speed (H/M/L/SL)	rpm	490±30/ 400±35/ 340±35/ 300±40	490±30/ 400±35/ 340±35/ 300±40	580±30/ 490±35/ 410±35/ 360±40	580±30/ 490±35/ 410±35/ 360±40	580±30/ 490±35/ 410±35/ 360±40	580±30/ 490±35/ 410±35/ 360±40	670±30/ 600±35/ 500±35/ 400±40	670±30/ 600±35/ 500±35/ 400±40	590±30/ 500±35/ 425±35/ 350±40	590±30/ 500±35/ 425±35/ 350±40	630±30/ 590±35/ 480±35/ 420±40	630±30/ 590±35/ 480±35/ 420±40	630±30/ 590±35/ 480±35/ 420±40	
	Power output	W	26	26	30	30	30	30	37	37	50	50	65	65	65	
	Insulation class	—	B	B	B	B	B	B	B	B	B	B	B	B	B	
Connecting pipe	Liquid pipe	mm	φ6.35	φ6.35	φ6.35	φ6.35	φ6.35	φ6.35	φ9.52	φ9.52	φ9.52	φ9.52	φ9.52	φ9.52	φ9.52	
	Gas pipe	mm	φ12.7	φ12.7	φ12.7	φ12.7	φ12.7	φ12.7	φ15.88	φ15.88	φ15.88	φ15.88	φ15.88	φ15.88	φ15.88	
	Connection method	—	Flared	Flared	Flared	Flared	Flared	Flared	Flared	Flared	Flared	Flared	Flared	Flared	Flared	
Drain pipe	External diameter	mm	DN25	DN25	DN25	DN25	DN25	DN25	DN25	DN25	DN25	DN25	DN25	DN25	DN25	
Outline dimension (body)	mm	840*840*230	840*840*230	840*840*230	840*840*230	840*840*230	840*840*230	840*840*230	840*840*230	840*840*300	840*840*300	840*840*300	840*840*300	840*840*300	840*840*300	
Outline dimension (panel)	mm	950*950*50	950*950*50	950*950*50	950*950*50	950*950*50	950*950*50	950*950*50	950*950*50	950*950*50	950*950*50	950*950*50	950*950*50	950*950*50	950*950*50	
Package dimension (body)	mm	930*930*300	930*930*300	930*930*300	930*930*300	930*930*300	930*930*300	930*930*300	930*930*300	930*930*370	930*930*370	930*930*370	930*930*370	930*930*370	930*930*370	
Package dimension (panel)	mm	1020*1020*90	1020*1020*90	1020*1020*90	1020*1020*90	1020*1020*90	1020*1020*90	1020*1020*90	1020*1020*90	1020*1020*90	1020*1020*90	1020*1020*90	1020*1020*90	1020*1020*90	1020*1020*90	
Net weight	Body	kg	22.5	22.5	24.5	24.5	24.5	24.5	24.5	29.5	29.5	29.5	29.5	32	32	
	Panel	kg	6	6	6	6	6	6	6	6	6	6	6	6	6	
Gross weight	Body	kg	24.5	24.5	26.5	26.5	26.5	26.5	26.5	31.5	31.5	31.5	31.5	34	34	
	Panel	kg	7.5	7.5	7.5	7.5	7.5	7.5	7.5	7.5	7.5	7.5	7.5	7.5	7.5	

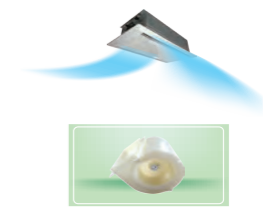
Notes:
 1. Power supply: 220V/1PH for 50Hz
 2. The cooling condition: indoor side 27°C (80.6°F) DB, 19°C (60°F) WB outdoor side 35°C (95°F) DB
 3. The heating condition: indoor side 20°C (68°F) DB, 15°C (44.6°F) WB outdoor side 7°C (42.8°F) DB
 4. Sound level: measured at point 1m in front of the unit at a height of 1.3m. During actual operation, these values are normally somewhat higher as a result of ambient conditions.
 5. The above data may be changed without notice for future improvement on quality and performance.



Accessories

Plenum box	Air filter	EXV	Drain pump	AC motor	DC Motor
/	Standard	Standard(built-in)	Standard	Standard	/

Special design for corridor or narrow and long room



Available for room with 3.5m floor height



Built-in drain pump, drain height can be 1200mm

Built-in with long life drainage pump, Pumping head is 1200mm, flexible for drainage pipe design.



Model		TMCD028A	TMCD036A	TMCD045A	TMCD056A	TMCD071A	TMCD080A	TMCD090A	TMCD100A	TMCD112A	TMCD125A	TMCD140A	
Capacity	Cooling	kW	2.8	3.6	4.5	5.6	7.1	8.0	9.0	10.0	11.2	12.5	14.0
	Heating	kW	3.2	4.0	5.0	6.3	8.0	9.0	10.0	11.2	12.5	14.0	16.0
Power supply	V/Ph/Hz	220V/1Ph/50Hz	220V/1Ph/50Hz	220V/1Ph/50Hz	220V/1Ph/50Hz	220V/1Ph/50Hz	220V/1Ph/50Hz	220V/1Ph/50Hz	220V/1Ph/50Hz	220V/1Ph/50Hz	220V/1Ph/50Hz	220V/1Ph/50Hz	
Power input	W	60	62	68	85	94	98	129	135	175	185	268	
Air flow volume (H/M/L)	m³/h	500/426/376	616/523/462	773/657/580	900/765/657	1165/990/873	1300/1120/980	1450/1310/1160	1600/1450/1280	1725/1550/1280	1980/1680/1500	1980/1680/1500	
Sound pressure level (H/M/L)	dB(A)	37/31/25	39/36/32	43/37/31	45/41/39	47/43/40	49/45/42	45/42/38	46/43/40	50/48/43	53/50/46	53/50/46	
Fan	Type	—	Centrifugal	Centrifugal	Centrifugal	Centrifugal	Centrifugal	Centrifugal	Centrifugal	Centrifugal	Centrifugal	Centrifugal	
Fan motor	Power output	W	10	12	16	25	30	30	20*2	25*2	30*2	45*2	45*2
	Insulation class	—	B	B	B	B	B	B	B	B	B	B	
Connecting pipe	Liquid pipe	mm	φ6.35	φ6.35	φ6.35	φ6.35	φ9.52	φ9.52	φ9.52	φ9.52	φ9.52	φ9.52	
	Gas pipe	mm	φ12.70	φ12.70	φ12.70	φ12.70	φ15.88	φ15.88	φ15.88	φ15.88	φ15.88	φ15.88	
	Connection method	—	Flared	Flared	Flared	Flared	Flared	Flared	Flared	Flared	Flared	Flared	
Drain pipe	External diameter	mm	DN20	DN20	DN20	DN20	DN20	DN20	DN20	DN20	DN20	DN20	
Outline dimension (body)	mm	840*520*315	840*520*315	960*520*315	960*520*315	1200*520*315	1200*520*315	1680*520*315	1680*520*315	1680*520*315	1680*520*315	1680*520*315	
Outline dimension (panel)	mm	1083*630*33	1083*630*33	1203*630*33	1203*630*33	1443*630*33	1443*630*33	1923*630*33	1923*630*33	1923*630*33	1923*630*33	1923*630*33	
Package dimension (body)	mm	1145*685*395	1145*685*395	1265*685*395	1265*685*395	1505*685*395	1505*685*395	1983*685*395	1983*685*395	1983*685*395	1983*685*395	1983*685*395	
Net weight	kg	32	32	37	37	40	40	45	45	47	47	47	
Gross weight	kg	35	35	40	40	43	43	48	48	50	50	50	

Notes:
 1. Power supply: 220V/1PH for 50Hz
 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.
 5. The above data may be changed without notice for future improvement on quality and performance.



Optional			
Wireless	Wired	Wired	Centralized

● Accessories

Plenum box	Air filter	EXV	Drain pump	AC motor	DC Motor
/	Standard	Standard (External)	Standard	Standard	/

● Horizontal and vertical air flow



● Built-in drain pump, drain height can be 1200mm

Built-in with long life drainage pump, Pumping head is 1200mm, flexible for drainage pipe design.



● Compact design, unit height only 250mm

Model		TMCS028A	TMCS036A	TMCS045A	TMCS056A	TMCS071A
Capacity	Cooling	kW 2.8	3.6	4.5	5.6	7.1
	Heating	kW 3.2	4.0	5.0	6.3	8.0
Power supply		V/Ph/Hz 220V/1Ph/50Hz	220V/1Ph/50Hz	220V/1Ph/50Hz	220V/1Ph/50Hz	220V/1Ph/50Hz
Power input		W 40	40	45	45	50
Air flow volume (H/M/L)		m³/h 510/410/310	600/480/360	720/570/450	910/830/700	1000/850/750
Sound pressure level (H/M/L)		dB(A) 36/34/30	38/28/26	42/39/35	45/41/39	47/43/40
Fan		Type Centrifugal	Centrifugal	Centrifugal	Centrifugal	Centrifugal
Fan motor	Power output	W 10	18	25	30	30
	Insulation class	B	B	B	B	B
Connecting pipe	Liquid pipe	mm φ6.35	φ6.35	φ6.35	φ6.35	φ9.52
	Gas pipe	mm φ12.70	φ12.70	φ12.70	φ12.70	φ15.88
	Connection method	Flared	Flared	Flared	Flared	Flared
Drain pipe		External diameter mm DN20	DN20	DN20	DN20	DN20
Outline dimension (body)		mm 870*460*250	870*460*250	870*460*250	1180*495*290	1180*495*290
Outline dimension (panel)		mm 1070*520*33	1070*520*33	1070*520*33	1380*550*33	1380*550*33
Package dimension (body)		mm 1135*625*355	1135*625*355	1135*625*355	1445*655*395	1445*655*395
Net weight		kg 25	27	27	39	39
Gross weight		kg 27.5	29.5	29.5	42	42

Notes:

1. Power supply: 220V/1PH for 50Hz
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.
5. The above data may be changed without notice for future improvement on quality and performance.



Optional			
Wireless	Wired	Wired	Centralized

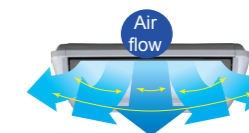
● Accessories

Plenum box	Air filter	EXV	Drain pump	AC motor	DC Motor
/	/	Standard (External)	Standard	Standard	/

● Flexible installation, on the floor or on the ceiling



● Automatic horizontal and vertical air flow





● One sided access hole, easy for maintenance

Model		TMVX028A	TMVX036A	TMVX056A	TMVX071A	TMVX090A	TMVX112A	TMVX125A	TMVX140A
Capacity	Cooling	kW 2.8	3.6	5.6	7.1	9.0	11.2	12.5	14.0
	Heating	kW 3.2	4.0	6.3	8.0	10.0	12.5	14.0	16.0
Power supply		V/Ph/Hz 220V/1Ph/50Hz	220V/1Ph/50Hz	220V/1Ph/50Hz	220V/1Ph/50Hz	220V/1Ph/50Hz	220V/1Ph/50Hz	220V/1Ph/50Hz	220V/1Ph/50Hz
Power input		W 48	62	85	120	156	210	240	240
Air flow volume (H/M/L)		m³/h 450/360/280	600/480/370	820/700/570	1100/980/850	1470/1280/1060	1800/1550/1250	2000/1680/1350	2000/1680/1350
Sound pressure level (H/M/L)		dB(A) 42/39/36	43/40/38	45/42/40	47/44/41	49/46/42	50/47/44	51/48/45	51/48/45
Fan		Type Centrifugal	Centrifugal	Centrifugal	Centrifugal	Centrifugal	Centrifugal	Centrifugal	Centrifugal
Fan motor	Power output	W 35	35	35	60	60	80	80	120
	Insulation class	B	B	B	B	B	B	B	B
Connecting pipe	Liquid pipe	mm φ6.35	φ6.35	φ6.35	φ9.52	φ9.52	φ9.52	φ9.52	φ9.52
	Gas pipe	mm φ12.70	φ12.70	φ12.70	φ15.88	φ15.88	φ15.88	φ15.88	φ15.88
	Connection method	Flared	Flared	Flared	Flared	Flared	Flared	Flared	Flared
Drain pipe		External diameter mm φ25	φ25	φ25	φ25	φ25	φ25	φ25	φ25
Outline dimension		mm 905*673*243	905*673*243	905*673*243	1288*673*243	1288*673*243	1672*673*243	1672*673*243	1672*673*243
Package dimension		mm 1000*756*383	1000*756*383	1000*756*383	1383*756*383	1383*756*383	1767*756*383	1767*756*383	1767*756*383
Net weight		kg 28	28	30	40	40	45	45	45
Gross weight		kg 31	31	33	43	43	48	48	48

Notes:

1. Power supply: 220V/1PH for 50Hz
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.
5. The above data may be changed without notice for future improvement on quality and performance.



Optional			
Wireless	Wired	Wired	Centralized
	/	/	



Optional			
Wireless	Wired	Wired	Centralized
			

Accessories

Plenum box	Air filter	EXV	Drain pump	AC motor	DC Motor
/	Standard	Standard (External)	/	Standard	/

Simple design, easy as optional

Wired controller as optional

Model		TMVW028A	TMVW036A	TMVW040A	TMVW056A	TMVW063A	TMVW071A	
Capacity	Cooling	kW	2.8	3.6	4.0	5.6	6.3	7.1
	Heating	kW	3.2	4.0	4.5	6.3	7.1	8.0
Power supply		V/Ph/Hz	220V/1Ph/50Hz	220V/1Ph/50Hz	220V/1Ph/50Hz	220V/1Ph/50Hz	220V/1Ph/50Hz	220V/1Ph/50Hz
Power input		W	30	35	35	42	42	65
Air flow volume (H/M/L)		m ³ /h	450/410/380	500/460/425	500/460/425	800/750/710	800/750/710	1000/950/910
Sound pressure level (H/M/L)		dB(A)	38/35/27	38/35/27	40/36/29	45/41/31	45/41/31	48/45/39
Fan	Type	—	Tubular	Tubular	Tubular	Tubular	Tubular	Tubular
	Power output	W	13	13	13	30	30	30
Fan motor	Insulation class	—	B	B	B	B	B	B
	Power output	W	13	13	13	30	30	30
Connecting pipe	Liquid pipe	mm	φ6.35	φ6.35	φ6.35	φ6.35	φ6.35	φ9.52
	Gas pipe	mm	φ12.70	φ12.70	φ12.70	φ12.70	φ12.70	φ15.88
	Connection method		Flared	Flared	Flared	Flared	Flared	Flared
Drain pipe	External diameter	mm	φ16	φ16	φ16	φ16	φ16	φ16
Outline dimension		mm	790*270*185	795*285*215	795*285*215	990*330*230	990*330*230	1090*330*255
Package dimension		mm	860*320*230	865*335*260	865*335*260	1060*380*275	1060*380*275	1160*380*300
Net weight		kg	11.2	11.2	11.2	14.5	14.5	16.5
Gross weight		kg	14.8	14.8	14.8	18.5	18.5	20.5

- Notes:
- Power supply: 220V/1PH for 50Hz
 - 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.
 - The above data may be changed without notice for future improvement on quality and performance.

Accessories

Plenum box	Air filter	EXV	Drain pump	AC motor	DC Motor
Standard	/	Standard (built-in)	Optional	Standard	/

Simple design, short body, easy to install

Built-in drain pump, drain height can be 1200mm

Built-in with long life drainage pump, Pumping head is 1200mm, flexible for drainage pipe design.



Model		TMDN071AB	TMDN080AB	TMDN090AB	TMDN100AB	TMDN112AB	TMDN125AB	TMDN140AB	TMDN160AB	
Capacity	Cooling	kW	8.0	8.0	9.0	10.0	11.2	12.5	14.0	16.0
	Heating	kW	7.1	9.0	10.0	11.2	12.5	14.0	16.0	18.0
Power supply		V/Ph/Hz	220V/1Ph/50Hz	220V/1Ph/50Hz	220V/1Ph/50Hz	220V/1Ph/50Hz	220V/1Ph/50Hz	220V/1Ph/50Hz	220V/1Ph/50Hz	220V/1Ph/50Hz
Power input		W	144	170	230	303				
Air flow volume (H/M/L)		m ³ /h	1100/1000/900	1300/1150/950	1600/1400/1200	2000/1700/1400				
ESP		Pa	30(15/30/70)			50(15/30/70)				
Sound pressure level (H/M/L)		dB(A)	40/37/33		42/39/35		44/41/39			
Fan	Type	—	Centrifugal							
	Power output	W	80	35+55	35+80	60+125	60+125	60+125	60+125	60+125
Fan motor	Insulation class	—	B	B	B	B	B	B	B	B
	Power output	W	80	35+55	35+80	60+125	60+125	60+125	60+125	60+125
Connecting pipe	Gas pipe	mm	φ15.88							
	Liquid pipe	mm	φ9.52							
	Connection method		Flared							
Drain pipe	External diameter	mm	DN25							
	Outline dimension	mm	1350*515*250				1350*557*292			
Package dimension		mm	1550*600*280				1550*640*320			
Net weight		kg	38	43		48				
Gross weight		kg	45	50		56				

- Notes:
- Power supply: 220V/1PH for 50Hz
 - 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.
 - The above data may be changed without notice for future improvement on quality and performance.



Optional			
Wireless	Wired	Wired	Centralized

● Accessories

Plenum box	Air filter	EXV	Drain pump	AC motor	DC Motor
Standard	/	Standard (built-in)	Optional	Standard	/

● Compact design, only 200mm height

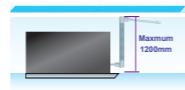
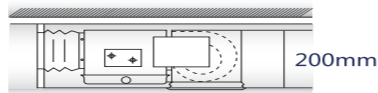
● Low noise, minimum 23dB(A)

● Built-in drain pump, drain height can be 1200mm

Built-in with long life drainage pump, Pumping head is 1200mm, flexible for drainage pipe design.

● Left and right drain pipe options

● Flexible air return



Model		TMDN 022AC	TMDN 025AC	TMDN 028AC	TMDN 032AC	TMDN 036AC	TMDN 040AC	TMDN 045AC	TMDN 050AC	TMDN 056AC	TMDN 063AC	TMDN 071AC
Capacity	Cooling	2.2	2.5	2.8	3.2	3.6	4.0	4.5	5.0	5.6	6.3	7.1
	Heating	2.5	2.8	3.2	3.6	4.0	4.5	5.0	5.6	6.3	7.1	8.0
Power supply	V/Ph/Hz	220V/1Ph/50Hz	220V/1Ph/50Hz	220V/1Ph/50Hz	220V/1Ph/50Hz	220V/1Ph/50Hz	220V/1Ph/50Hz	220V/1Ph/50Hz	220V/1Ph/50Hz	220V/1Ph/50Hz	220V/1Ph/50Hz	220V/1Ph/50Hz
	Power input	54	54	54	55	55	55	77	77	77	100	105
Air flow volume (H/M/L)	m³/h	500/370/310	500/370/310	500/370/310	560/430/360	560/430/360	560/430/360	750/620/550	750/620/550	750/620/550	920/710/590	1000/800/680
	ESP	Pa	10(30)	10(30)	10(30)	10(30)	10(30)	10(30)	10(30)	10(30)	10(30)	10(30)
Sound pressure level (H/M/L)	dB(A)	33/28/23	33/28/23	33/28/23	33/28/24	33/28/24	33/28/24	35/30/28	35/30/28	35/30/28	36/32/28	37/32/29
	Type	Centrifugal	Centrifugal	Centrifugal	Centrifugal	Centrifugal	Centrifugal	Centrifugal	Centrifugal	Centrifugal	Centrifugal	Centrifugal
Fan motor	Speed (H/M/L/SL)	1180/1050/820/760	1180/1050/820/760	1180/1050/820/760	1220/1080/880/810	1220/1080/880/810	1220/1080/880/810	1250/1010/810/720	1250/1010/810/720	1250/1010/810/720	1300/1030/850/720	1320/1150/1000/880
	Power output	26	26	26	26	26	26	40	40	40	60	60
	Insulation class	B	B	B	B	B	B	B	B	B	B	B
Connecting pipe	Liquid pipe	φ6.35	φ6.35	φ6.35	φ6.35	φ6.35	φ6.35	φ6.35	φ6.35	φ6.35	φ6.35	φ9.52
	Gas pipe	φ9.52	φ9.52	φ9.52	φ12.7	φ12.7	φ12.7	φ12.7	φ12.7	φ12.7	φ12.7	φ15.88
	Connection method	Flared	Flared	Flared	Flared	Flared	Flared	Flared	Flared	Flared	Flared	Flared
Drain pipe	External diameter	φ25	φ25	φ25	φ25	φ25	φ25	φ25	φ25	φ25	φ25	φ25
	Outline dimension	700*450*200	700*450*200	700*450*200	700*450*200	700*450*200	700*450*200	920*450*200	920*450*200	920*450*200	1140*450*200	1140*450*200
Package dimension	mm	700*450*200	700*450*200	700*450*200	700*450*200	700*450*200	700*450*200	920*450*200	920*450*200	920*450*200	1140*450*200	1140*450*200
	Net weight	17.5	17.5	17.5	17.5	17.5	17.5	21.5	21.5	21.5	28	28
	Gross weight	17.5	17.5	17.5	17.5	17.5	17.5	21.5	21.5	21.5	28	28

Notes:
 1. Power supply: 220V/1PH for 50Hz
 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.
 5. The above data may be changed without notice for future improvement on quality and performance.

Optional			
Wireless	Wired	Wired	Centralized

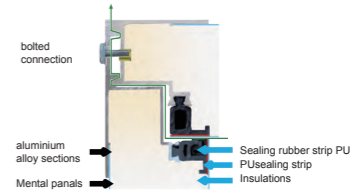
● Accessories

Plenum box	Air filter	EXV	Drain pump	AC motor	DC Motor
Standard	Standard	Standard (External)	/	Standard	/

● Labyrinth patent design, air leakage rate lower to 0.029%

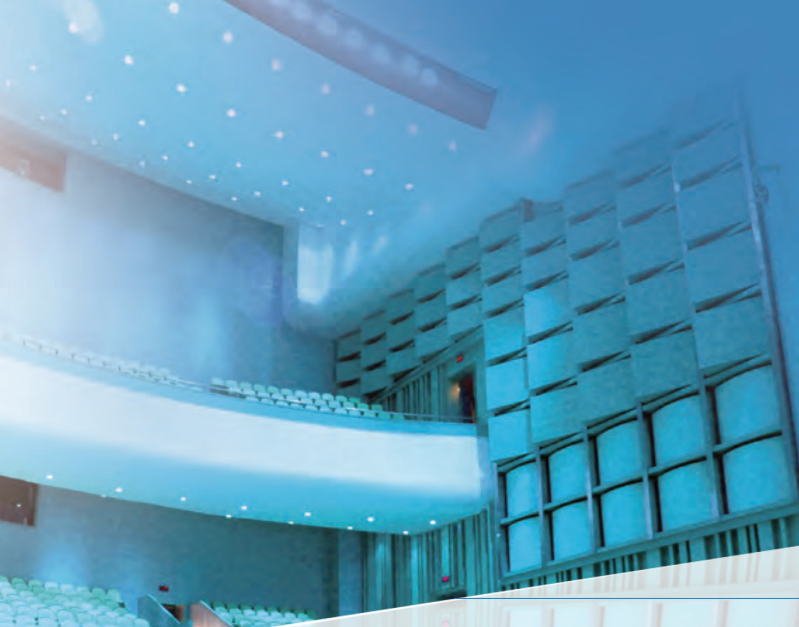
● 300Pa high static pressure, suitable for large space

● Purification section as optional



Model		TMDH100A	TMDH112A	TMDH125A	TMDH140A
Capacity	Cooling	10.0	11.2	12.5	14.0
	Heating	11.2	12.5	14.0	16.0
Power supply	V/Ph/Hz	220V/1Ph/50Hz	220V/1Ph/50Hz	220V/1Ph/50Hz	220V/1Ph/50Hz
	Power input	400	420	500	550
Air flow volume (H/M/L)	m³/h	1800/1450/1050	2000/1600/1300	2250/1800/1450	2700/2150/1750
	ESP	Pa	50(100)	50(100)	50(100)
Sound pressure level (H/M/L)	dB(A)	49/46/42	49/46/42	51/47/43	51/47/43
	Type	Centrifugal	Centrifugal	Centrifugal	Centrifugal
Fan motor	Power output	200	200	250	250
	Insulation class	B	B	B	B
	Liquid pipe	φ9.52	φ9.52	φ9.52	φ9.52
Connecting pipe	Gas pipe	φ15.88	φ15.88	φ15.88	φ15.88
	Connection method	Flared	Flared	Flared	Flared
Drain pipe	External diameter	φ25	φ25	φ25	φ25
	Outline dimension	1200*750*400	1200*750*400	1200*750*400	1200*750*400
Package dimension	mm	1270*765*400	1270*765*400	1270*765*400	1270*765*400
	Net weight	57	57	60	60
	Gross weight	62	62	65	65

Notes:
 1. Power supply: 220V/1PH for 50Hz
 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.
 5. The above data may be changed without notice for future improvement on quality and performance.



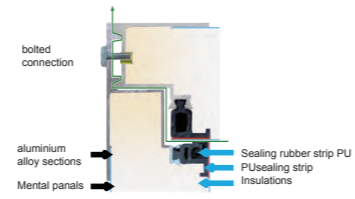
Optional			
Wireless	Wired	Wired	Centralized

Optional			
Wireless	Wired	Wired	Centralized

● Accessories

Plenum box	Air filter	EXV	Drain pump	AC motor	DC Motor
/	Standard	Standard (built-in)	/	TMDH195/255AI	TMDH410-790AI

- Labyrinth patent design, air leakage rate lower to 0.029%
- 300Pa high static pressure, suitable for large space
- Purification section as optional



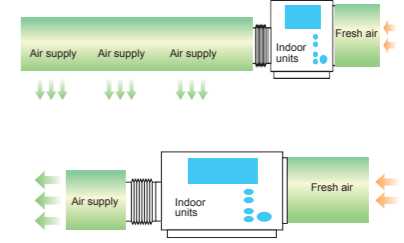
Model		TMDH195AI	TMDH255AI	TMDH410AI	TMDH520AI	TMDH620AI	TMDH790AI	
Capacity	Cooling	kW	19.5	25.5	41.0	52.0	62.0	79.0
	Heating	kW	20.4	28.5	41.5	55.0	68.0	83.0
Power supply	V/Ph/Hz	380V/3N/50Hz	380V/3N/50Hz	380V/3N/50Hz	380V/3N/50Hz	380V/3N/50Hz	380V/3N/50Hz	
Power input	W	1320	1320	2640	2640	4480	4480	
Air flow volume	m³/h	4300	4800	7500	9000	11000	13000	
ESP	Pa	200	200	250	250	300	300	
Sound pressure level	dB(A)	54	54	55	57	60	60	
Fan	Type	—	Centrifugal	Centrifugal	Centrifugal	Centrifugal	Centrifugal	
Fan motor	Insulation class	—	B	B	B	B	B	
Connecting pipe	Liquid pipe	mm	φ12.7	φ12.7	φ15.88	φ15.88	φ19.05	φ19.05
	Gas pipe	mm	φ22.23	φ22.23	φ28.60	φ28.60	φ31.80	φ31.80
	Connection method		Welding	Welding	Welding	Welding	Welding	Welding
Drain pipe	External diameter	mm	DN32	DN32	DN32	DN32	DN32	DN32
Outline dimension	mm	1451*1204*608		1951*1604*808		2293*1604*1008		
Package dimension	mm	1451*1204*608		1951*1604*808		2293*1604*1008		
Net weight	kg	150		275		335		
Gross weight	kg	152		277		339		

Notes:
 1. Power supply: 220V/1PH for 50Hz
 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.
 5. The above data may be changed without notice for future improvement on quality and performance.

● Accessories

Plenum box	Air filter	EXV	Drain pump	AC motor	DC Motor
/	Standard	Standard (External)	/	Standard	/

- 300Pa high static pressure, suitable for large space
- Flexible air outlet
- Automatic fresh air introduction, improve room air quality



Model		TMDF 175A-022	TMDF 210A-020	TMDF 250A-015	TMDF 250A-020	TMDF 250A-030	TMDF 300A-020	TMDF 400A-020	TMDF 400A-030	TMDF 500A-0200	TMDF 500A-030	TMDF 600A-020	TMDF 600A-030	
Capacity	Cooling	kW	25.0	28.0	28.0	28.0	28.0	45.0	45.0	56.0	56.0	56.0	56.0	
	Heating	kW	14.0	17.4	17.4	17.4	17.4	17.4	28.0	28.0	35.0	35.0	35.0	
Power supply	V/Ph/Hz	220V/1Ph/50Hz	220V/1Ph/50Hz	380V/3N/50Hz	380V/3N/50Hz	380V/3N/50Hz	380V/3N/50Hz	380V/3N/50Hz	380V/3N/50Hz	380V/3N/50Hz	380V/3N/50Hz	380V/3N/50Hz	380V/3N/50Hz	
Power input	W	630	700	480	560	790	750	880	1290	1000	1400	1350	1700	
Air flow volume	m³/h	1750	2100	2500	2500	2500	3000	4000	4000	5000	5000	6000	6000	
ESP	Pa	220	200	150	200	300	200	200	300	200	300	200	300	
Sound pressure level	dB(A)	49	49	52	55	58	56	59	62	62	65	62	65	
Fan	Type	—	Centrifugal	Centrifugal	Centrifugal	Centrifugal	Centrifugal	Centrifugal	Centrifugal	Centrifugal	Centrifugal	Centrifugal	Centrifugal	
Fan motor	Power input	W	630	700	480	560	790	750	880	1290	1000	1400	1350	1700
	Insulation class	—	B	B	B	B	B	B	B	B	B	B	B	
Connecting pipe	Liquid pipe	mm	φ12.70	φ12.70	φ12.70	φ12.70	φ12.70	φ12.70	φ12.70	φ15.88	φ15.88	φ15.88	φ15.88	
	Gas pipe	mm	φ22.23	φ22.23	φ22.23	φ22.23	φ22.23	φ22.23	φ28.58	φ28.58	φ28.58	φ28.58	φ28.58	
	Connection method		Welding	Welding	Welding	Welding	Welding	Welding	Welding	Welding	Welding	Welding	Welding	
Drain pipe	External diameter	mm	DN25	DN25	DN25	DN25	DN25	DN25	DN25	DN25	DN25	DN25	DN25	
Outline dimension	mm	1300*820*500	1300*820*500	1300*820*500	1300*820*500	1300*820*500	1300*820*500	1650*850*665	1650*850*665	2000*850*665	2000*850*665	2000*850*665	2000*850*665	
Package dimension	mm	1360*830*510	1360*830*510	1360*830*510	1360*830*510	1360*830*510	1360*830*510	1767.5*946*848	1767.5*946*848	2117.5*946*848	2117.5*946*848	2117.5*946*848	2117.5*946*848	
Net weight	kg	75	75	75	75	75	75	140	140	165	165	165	165	
Gross weight	kg	80	80	80	80	80	80	160	160	185	185	185	185	

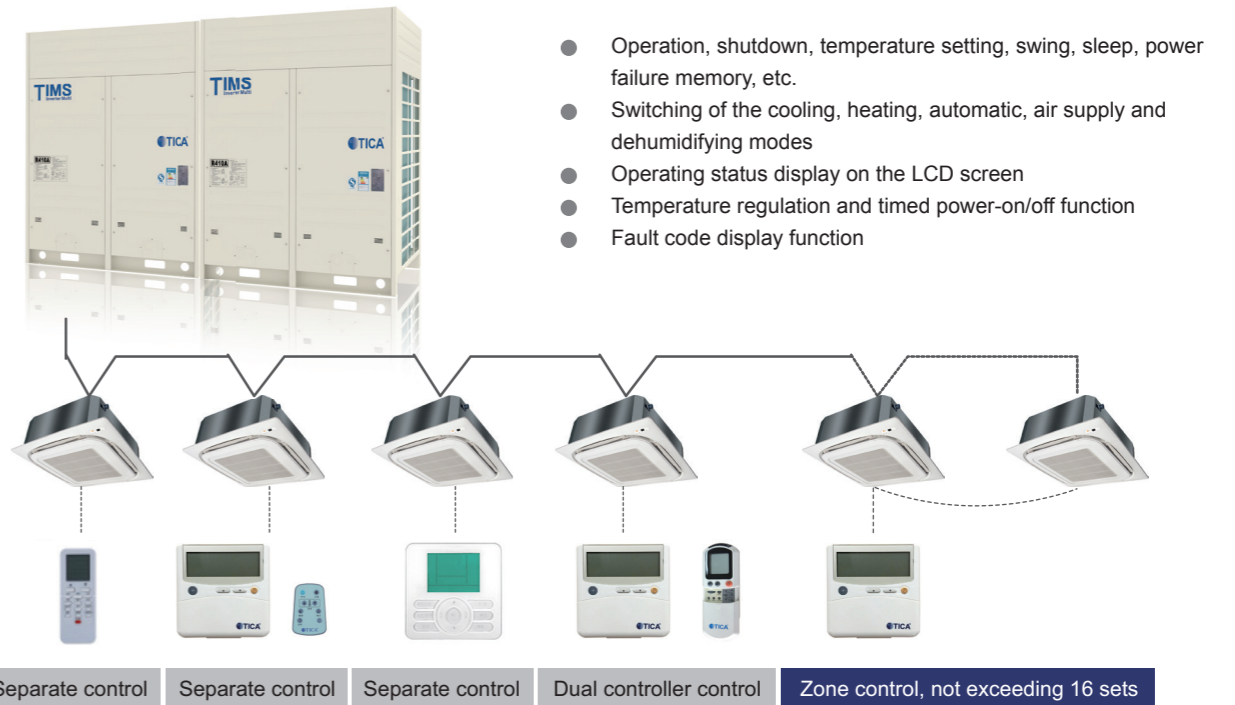
Notes:
 1. Power supply: 220V/1PH for 50Hz
 2. The cooling condition: indoor side 27°C (80.6°F) DB, 19°C (60°F) WB outdoor side 35°C (95°F) DB
 3. The heating condition: indoor side 20°C (68°F) DB, 15°C (44.6°F) WB outdoor side 7°C (42.8°F) DB
 4. Sound level: measured at point 1m in front of the unit at a height of 1.3m. During actual operation, these values are normally somewhat higher as a result of ambient conditions.
 5. The above data may be changed without notice for future improvement on quality and performance.
















INTELLIGENT CONTROL

- Independent Control 38
- Centralized Control 39
- Implementing Intelligent Control 39
- Household-based Charging 40
- Building Automation (BMS) System 41

Independent Control



IDU type	Model	Appearance			
Four-way cassette	TMCF		Optional	Optional	Optional
One-way cassette	TMCS		Optional	Optional	Optional
Two-way cassette	TMCD		Optional	Optional	Optional
Slim Low ESP duct	TMDN		Optional	Optional	Optional
Standard duct	TMDN		Optional	Optional	Optional
High ESP duct	TMDH		Optional	Optional	Optional
Big capacity duct	TMDH		Optional	Optional	Optional
Fresh air handling unit	TMDF		Optional	Optional	Optional
Floor ceiling	TMVX		Optional	Optional	Optional
Wall mounted	TMVW		Optional		

Centralized Control

Remote centralized controller

- Able to implement centralized control or separate control on 64 IDUs in 8 systems
- Mode locking and single unit query/all control functions
- Setting operation start and end time of air conditioner
- Fault indication, uniform control interface and humanized operation interface
- Mode switching
- Supporting the longest control signal line of 1000 m
- Operating status monitoring function
- Fault code display function



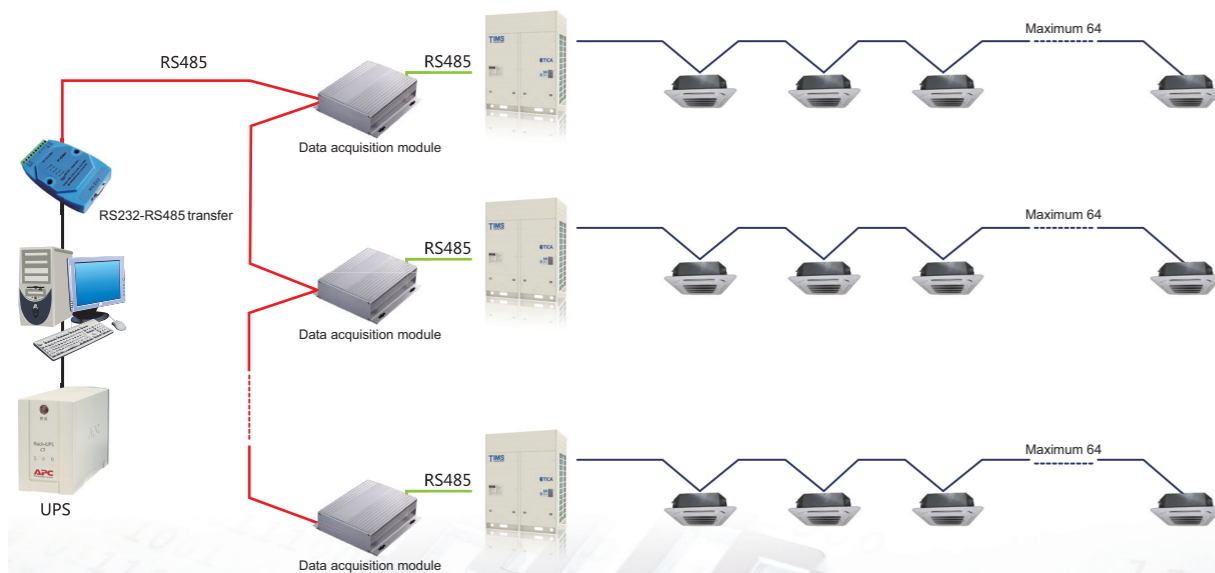
Centralized control

Implementing Intelligent Control

Intelligent Management System

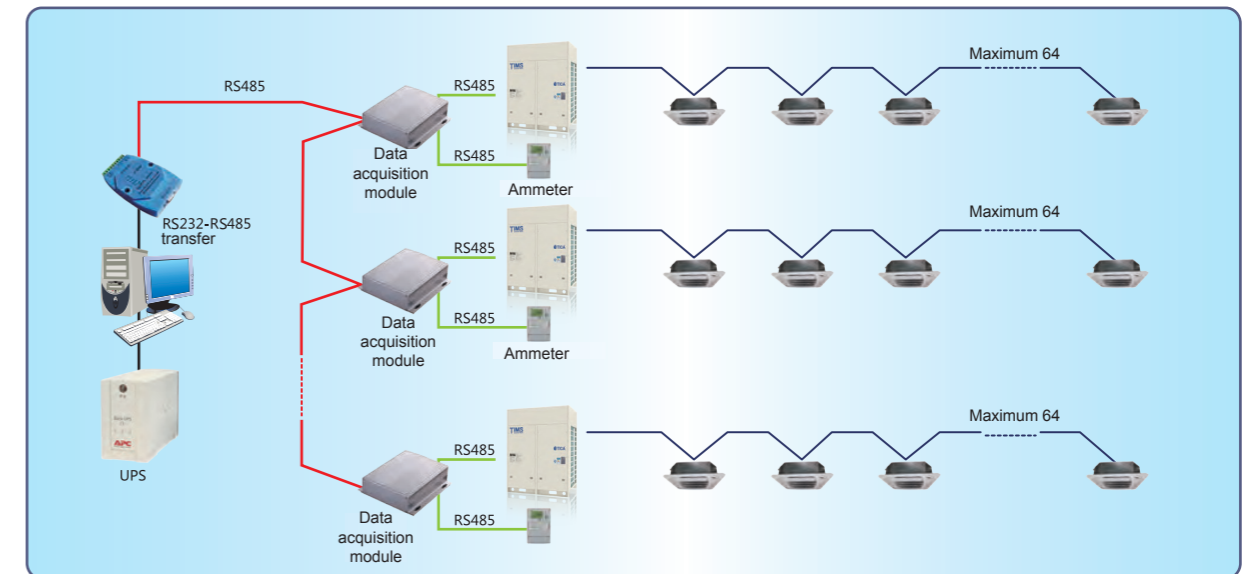
The IDUs are connected to a computer so that full automatic control can be implemented on the system through the computer. The control function is powerful, and operations are simple and clear. One set of intelligent management system can connect to 32 sets of systems and 2048 IDUs at most, and realize large scale centralized control.

- Free grouping and zone management
- Perfect schedule management function
- Historical data record
- Schedule control function of week/month/year
- Single-unit or centralized operation, shutdown, temperature setting, mode switching, etc.
- The air conditioning systems of multiple buildings can be controlled in a centralized manner at the same place
- Permission setting
- Temperature control, time switch
- Fault code display function
- Interlock control
- Remote management



Household-based Charging

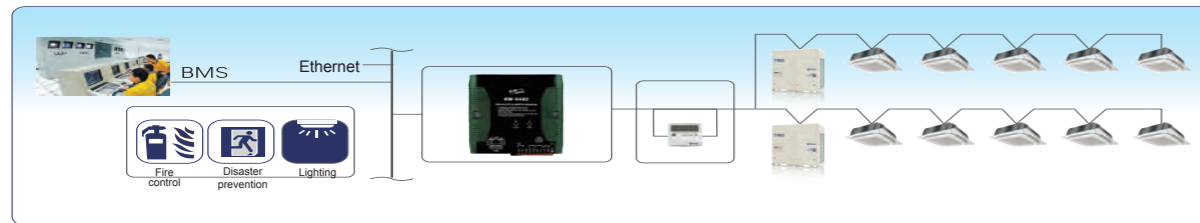
- The household-based charging software provides the complete unit monitoring and control functions and can realize all-dimensional dynamic monitoring on the ODU operating status.
- Network control is realized for a maximum of 2048 IDUs, and the control signal of the data acquisition module can reach the maximum distance of 1200 m.
- The cooling system topology map can be set and displayed visually.
- The market-tested electricity fee distribution algorithm implements convenient electricity fee distribution management, and detailed historical data forms can be generated.
- Users, electricity prices and groups can be set so that the user can realize flexible management on household-based charging of VRF units.
- System energy saving settings:
 - ① Operating status monitoring function
 - ② Fault code display function



Building Automation (BMS) System

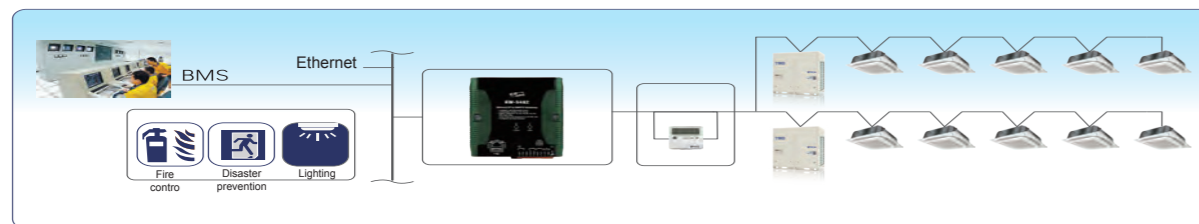
TIMS adopts multiple automatic control systems to access the building automation system easily, and full automatic control of the system is realized through the computer. The control function is powerful, and operations are simple and clear.

LonWorks system



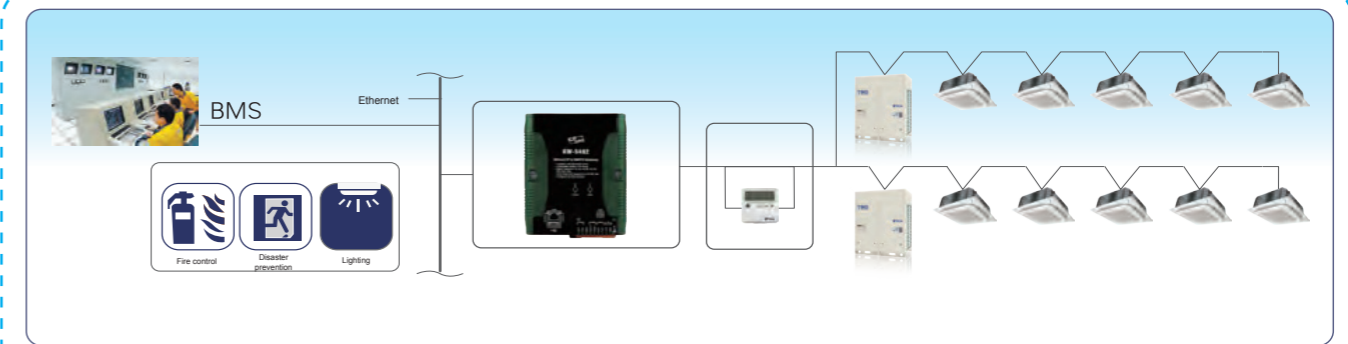
- Connecting to a maximum of 1024 IDUs and 16 sets of ODUs
- Powering on/off the air conditioner, controlling operation, and monitoring the operating status
- Monitoring the IDU fault code
- Monitoring and setting the IDU temperature
- Monitoring and switching the operating mode
- Setting remote controller permissions
- Free grouping and zone management
- Perfect schedule management function
- Historical data recordn
- Schedule control function of week/month/year
- Single-unit or centralized operation, shutdown, temperature setting, mode switching, etc.
- Interlock control (fire alarm, door lock, fault, etc.)

BACnet system



- Connecting to a maximum of 1024 IDUs and 16 sets of ODUs
- Powering on/off the air conditioner, controlling operation, and monitoring the operating status
- Monitoring the IDU fault code
- Monitoring and setting the IDU temperature
- Monitoring and switching the operating mode
- Setting remote controller permissions
- Service monitoring
- Automatic unit operation according to settings
- Shielding function of the user's air conditioner controller
- Free grouping and zone management
- Perfect schedule management function
- Historical data record
- Schedule control function of week/month/year
- Single-unit or centralized operation, shutdown, temperature setting, mode switching, etc.
- Interlock control (fire alarm, door lock, fault, etc.)

ModBus system



- Connecting to a maximum of 1024 IDUs and 16 sets of ODUs
- Powering on/off the air conditioner, controlling operation, and monitoring the operating status
- Monitoring the IDU fault code
- Monitoring and setting the IDU temperature
- Monitoring and switching the operating mode
- Setting remote controller permissions
- Service monitoring
- Automatic unit operation according to settings
- Shielding function of the user's air conditioner controller
- Free grouping and zone management
- Perfect schedule management function
- Historical data record
- Schedule control function of week/month/year
- Single-unit or centralized operation, shutdown, temperature setting, mode switching, etc.
- Interlock control (fire alarm, door lock, fault, etc.)

● Intelligent Interlock for Hotels

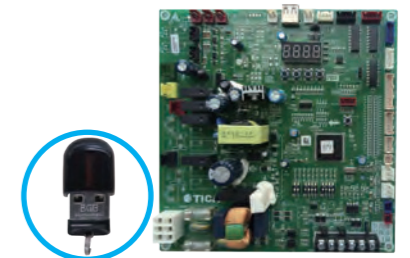
The specially designed seamless connection interface for hotel door card can be selected in the application scenarios such as hotels. When the door card is inserted, the IDU can be controlled freely; when the door card is removed, the IDU is turned off automatically after a delay, making hotel management convenient and saving power.



● Intelligent Diagnosis/Debugging/Upgrade Function ("Black Box")

The "Black Box" data saving device is provided so that the data related to unit operation can be read conveniently during after-sales maintenance and debugging, greatly enhancing the convenience of maintenance and debugging.

When the system program needs to be upgraded, save the IDU and ODU control program in a USB drive, and insert the USB drive into the reserved USB interface of the main board. Then, the system control program can be upgraded through simple and intelligent button operations.



TICA VRF Unit Cleaning Technology



"Fresh and clean" series return air purifiers

Return Air Purifiers

● Characteristics:

- High-grade fashionable appearance design and first-class surface process and texture.
- Installation and maintenance are convenient. TICA provides six types of standard dimensions, meeting your different decoration requirements.
- The air flow range is wide, from 340 m³/h to 2400 m³/h, meeting the requirements of different occasions.
- Wide application scope: The purifiers can be used together with fan coils, VRF units, and commercial IDUs.
- Low wind resistance: The minimum resistance of air return unit is 8 Pa, and the IDU air return is not affected as clean air is produced.

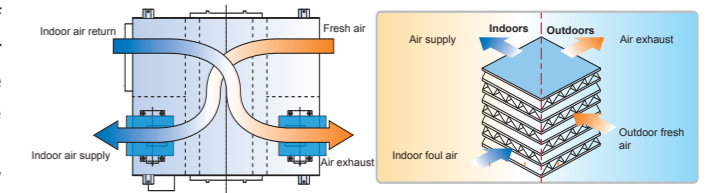
● Specification of Return Air Purifiers

Model	TRP070BPF	TRP090BPF	TRP100BPF	TRP110BPF	TRP160BPF	TRP220BPF
Rated Air Volume	540	900	1000	1100	1300	1700
Air Volume Range	340-700	700-900	340-1000	900-1100	950-1700	1300-2400
Outline dimension	386*276*54	1046*276*54	548*548*54	1246*276*54	1396*276*54	1546*276*54

Fresh Air Ventilator

● Fresh Air Ventilator

The fresh air ventilator is a fresh air product of recovering exhaust heat energy and reusing it for air supply. The fresh air and exhausted air flow through the heat exchanger crosswise and implement temperature and humidity exchange in the fresh air ventilator. In this way, the fresh air recovers the majority of energy from the air exhausted from the air conditioner, saving energy and reducing consumption.



● Fresh Air Ventilators of Standard Series

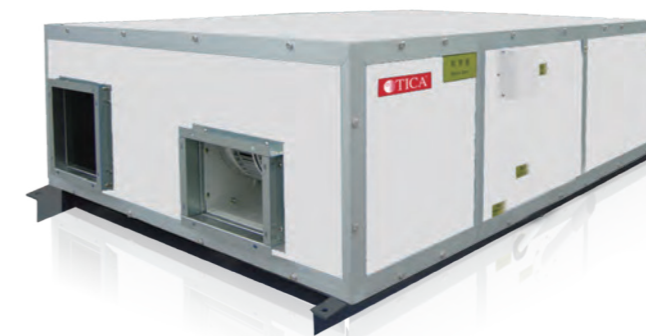
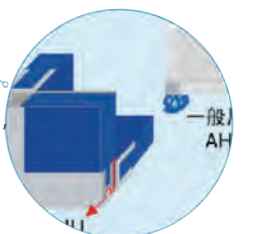


Patent structure with a low air leakage rate

The joints of cabinet adopt aluminum profiles with concave and convex grooves, which form a labyrinth-type patent sealing structure together with fastening bolts and nuts, reducing the air leakage rate to 0.029% and ensuring lower operation cost.

Eradicating cold bridge and rust

All the metals in the cabinet are isolated from external metals using polyurethane foam and specially designed sealing strips, avoiding the thermal insulation strip that must be stuck for ordinary products to prevent condensation, putting to an end to the water dripping problem of cold bridge, and also reducing the unit noise.



The built-in full heat core heat exchanger achieves higher heat exchange efficiency, the maximum temperature efficiency of 70%, and the maximum enthalpy efficiency of 60%.

High efficiency and energy conservation

The direct drive fan is adopted and does not need to be maintained. Only the filter screen needs to be cleaned regularly.

Safe and reliable



Model	Air volume (m ³ /h)	ESP (Pa)		Cooling (%)		Heating (%)		Motor input power(kW)		Noise dB(A)	Rated voltage (V)
		Air supply	Air exhaust	Temperature recovery efficiency	Enthalpy recovery efficiency	Temperature recovery efficiency	Enthalpy recovery efficiency	Air supply	Air exhaust		
TFD010FC	1000	90	90	61	52	72	60	0.20	0.20	53	220V - 50Hz
TFD015FC	1500	110	110	59	51	71	59	0.30	0.30	53	220V - 50Hz
TFD020FC	2000	120	120	61	53	73	61	0.45	0.45	55	220V - 50Hz
TFD025FC	2500	110	110	58	50	70	58	0.55	0.55	56	380V 3N - 50Hz
TFD030FC	3000	100	100	59	51	71	59	0.55	0.55	58	380V 3N - 50Hz
TFD040FC	4000	110	110	57	50	69	58	1.00	1.00	59	380V 3N - 50Hz
TFD050FH	5000	100	100	57	50	69	58	1.50	1.50	62	380V 3N - 50Hz
TFD060FH	6000	100	100	59	51	71	59	0.55x2	0.55x2	62	380V 3N - 50Hz
TFD080FH	8000	110	110	57	50	69	58	1.00x2	1.00x2	63	380V 3N - 50Hz
TFD105FH	10500	100	100	57	50	69	58	1.50x2	1.50x2	66	380V 3N - 50Hz

Fresh Air Ventilators of Small Silent Series

● Characteristics:



The air flow range is 150 m³/h~800 m³/h, applicable to sites such as homes, conference rooms, labs, offices, equipment rooms, restaurants, and gyms. The installation is convenient. The machine is installed in the ceiling, without occupying the indoor effective space or affecting the interior decoration effect. The machine can also be turned upside down for installation to improve flexibility. The noise is lower. The international popular structure design, non-metallic material and the accurate and consistent mold production ensure the perfect silent effect. More complete functions are implemented, including bidirectional ventilation, air purification, energy recovery, and bypass system.

Model	Fresh air volume (m ³ /h)	ESP(Pa)	Enthalpy recovery efficiency (%)		Temperature recovery efficiency (%)	Sound pressure level dB(A)	Rated voltage (V)	Current (A)	Power input (W)	Net weight (kg)
			Cooling	Heating						
TRD015	150/200/200	60/70/75	60/55/55	63/59/59	75/70/70	31.5	220	0.5	105	23
TRD020	150/200/200	60/70/75	60/55/55	63/59/59	75/70/70	31.5	220	0.5	105	23
TRD030	250/300/300	75/82/85	62/57/57	65/61/61	73/68/68	34.5	220	0.6	117	25
TRD040	350/400/400	80/85/88	62/57/57	65/60/60	74/69/69	37.5	220	0.7	150	31
TRD060	500/600/600	89/92/97	63/59/59	67/61/61	76/70/70	39.0	220	1.0	200	36
TRD080	700/800/800	92/96/100	57/55/55	63/57/57	74/68/68	41	220	1.7	355	60

Fresh Air Ventilators of Medium-sized High-end Series

● Characteristics:



The air flow range is 1000 m³/h~6000 m³/h, applicable to sites such as homes, conference rooms, labs, offices, equipment rooms, restaurants, and gyms. The installation is convenient. The machine is installed in the ceiling, without occupying the indoor effective space. More complete functions are implemented, including bidirectional ventilation, air purification, and energy recovery. The sheet metal structure is designed, with thermal insulation cotton stuck inside.

Model	Fresh air volume (m ³ /h)	ESP (Pa)	Enthalpy recovery efficiency (%)		Temperature recovery efficiency (%)		Sound pressure level dB(A)	Power input (W)	Current (A)	Rated voltage (V)	Net weight (kg)	Outline dimension (mm)
			Cooling	Heating	Cooling	Heating						
TRD100	850/1000/1000	85/95/120	53/51/51	71/67/67	75/70/70	85/82/82	42/44/45	490/520/550	2.2/2.4/2.7	220	100	1264*1214*388
TRD150	1400/1500/1500	95/110/160	53/51/51	63/62/62	75/70/70	78/77/77	47/50/51	750/860/920	3.5/3.9/4.2	220	143	270*1214*476
TRD200	1400/1700/2000	70/80/105	53/51/51	67/64/61	73/68/68	81/77/75	46/48/52	930/1050/1310	4.5/5.0/6.3	220	175	270*1240*476
TRD250	1600/2000/2500	70/80/100	56/54/51	70/65/62	74/69/69	86/81/80	45/50/53	1000/1410/1630	5.0/6.4/7.6	220	185	270*1240*600
TRD300	1800/2500/3000	70/85/150	68/61/58	79/74/71	76/70/70	88/85/82	45/45/52	1010/1460/1900	4.7/6.8/8.7	220	198	270*1872*660
TRD400	*/*/4000	*/*/125	*/*/51	0/0/65	74/68/68	*/*/78	*/*/58	*/*/1940	*/*/5.3	220	290	430*2022*660
TRD500	*/*/5000	*/*/95	*/*/57	*/*/71	76/70/70	*/*/82	*/*/59	*/*/2790	*/*/7.3	220	360	430*1842*860
TRD600	*/*/6000	*/*/120	*/*/58	*/*/70	74/68/68	*/*/84	*/*/60	*/*/3280	*/*/7.8	220	390	430*2172*860

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