TICA®

TIMS
Inverter Multi

TICA Inverter VRF System

CA-TIMS-201810V02

About TICA

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 notchcentral 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 andmanufacturing 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 Vision

Strive to be the international leading integrated system and service provider in clean environment and utilization of thermal energy

TICA Mission

Persist to maximize the value for customers through innovative technology and provide clean environment in order to improve the quality of life

TICA VRF Unit Development History

2018 The TIMS-AXA strong heating modular full inverter VRF unit was put on the market.

2017 The TIMS-AS+ strong heating independent full inverter VRF unit was put on the market.

2016 The TIMS-X modular full inverter VRF unit was put on the market.

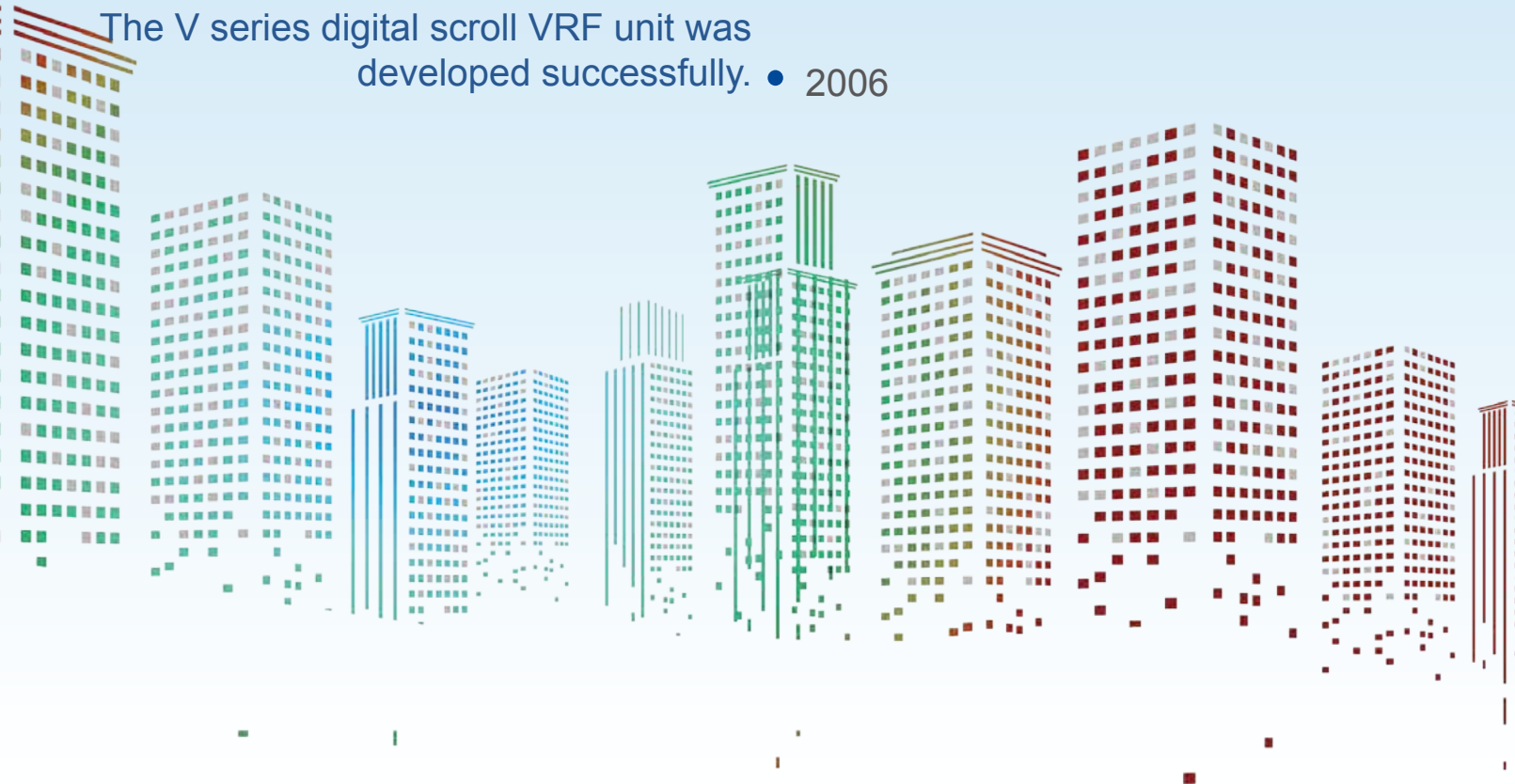
2015 The TIMS-S independent full inverter VRF unit was put on the market.

2014 The TIMS inverter VRF unit was put on the market.

2010 The TIMS inverter VRF unit developed by Japanese experts was introduced.

2007 The V6 series digital scroll VRF unit was unveiled.

2006 The V series digital scroll VRF unit was developed successfully.



TICA & UTC Global Strategic JV

On October 9, 2015, official signing of the legal JV Agreements with United Technologies Corporation (UTC)

UTC will provide TICA with advanced global leading core technologies, such as cryogenic power system (ORC), centrifugal and screw chiller, to enable TICA's centrifugal technology ahead of its peers for two decades and its ORC technology for three decades. Both parties will integrate the global networks to come up with a new market strength.

UTC Aerospace Systems

Pratt & Whitney

The largest supplier of HVAC and refrigeration equipment in the world

The largest supplier and service provider of elevator and escalator in the world

Company Profile

More than 70 branches

5 manufacturing bases
8 factories

Guangzhou Base

Construction area: 60,000 ㎡

Tianjin Base

Floor area: 40,000 ㎡
Construction area: 30,000 ㎡

Nanjing Headquarters

Floor area: 170,000 ㎡
Construction area: 90,000 ㎡

Chengdu Base

Construction area: 20,000 ㎡

Kuala Lumpur Factory

Floor Area:10,000 ㎡

Nanjing FUCA Automation Technology Co., Ltd.

Construction area: 10,000 ㎡

Honor and Awards

- Individual Product Champion Enterprise Accredited by NMII (Only one in manufacturing sector), with the champion product of air handling unit
- National Green Industry Building. No.001 in China (first one in China)
- First enterprise to achieve the HCFC Phase-out Project in China
- Vice Chairman Member of China Refrigeration and Air-conditioning Industry Association
- Chairman Member of Clean Room Technology Committee, CRAA

- National-Recognized Enterprise Technology Center (Jointly certified by the National Development and Reform Commission, Ministry of Science and Technology, Ministry of Finance, General Administration of Customs, and State Administration of Taxation)
- Enterprise Academician Workstation
- Postdoctoral Programme
- Awarded Nanjing Mayor Quality Prize in 2016
- Jiangsu Manufacturing Outstanding Contribution Award in March 2017 published on a government notice (Smart Manufacturing Enterprise)

First-class manufacturing facilities

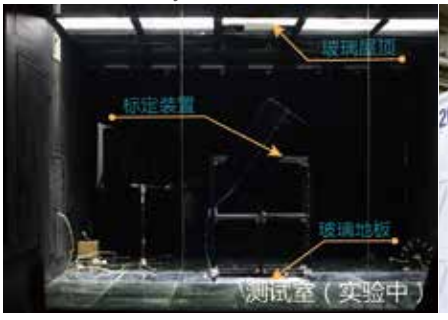
China’s most advanced VRF line based on Japanese technology
Japan Murata sheet metal fabrication center
Germany Wagner fully automatic spraying line
CombiCut plasma cutting machine;
Self-built central gas/liquid transport zone

Environmental Control Lab

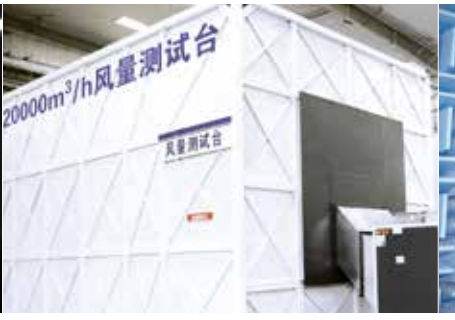
ISO class 1 ultra clean integrated environmental system

Integrated purification for operating room

Air purification analytical lab



Indoor air flow filed visualization and measurement system



The largest air volume test platform in the industry (120,000 m^3/h)

Noise Laboratory

Testing Benches for Central AC

2000RT Water-cooled Chiller Test Lab

350RT Air-cooled Chiller Test Lab

100Hp Long-running reliability lab (water)
150Hp Long-running reliability lab (fluorine)

Highway transportation simulation test platform

Enviroment simulation lab from -40℃ ~55℃ & snowfall simulation

Raining simulation lab

DIRECTORY

TIMS-AX/AS+

No oil balance pipe

Black box

.Single Compressor up to 22P

Full Dc

EVI compressor

Refrigerant+Air Cooling IPM

Non-stop Defrosting

Product Lineup-Outdoor

HP	8--12	14 --16	18 --22	24--44	46--66
Modular Inverter ODU	 TIMS-AX	 TIMS-AX	 TIMS-AX	 TIMS-AX	 TIMS-AX
	8--12	14--18	20--24	26--32	34--64
	 TIMS-AXA EVI Compressor	 TIMS-AXA EVI Compressor	 TIMS-AXA EVI Compressor	 TIMS-AXA EVI Compressor	 TIMS-AXA EVI Compressor
HP	8--12	14--18	20--24	26--32	
Independent Inverter ODU	 TIMS-AST EVI Compressor	 TIMS-AST EVI Compressor	 TIMS-AST/ASA	 TIMS-ASA	
KW	8--16	18--20			
Mini VRF	 TIMS-AHT EVI Copmressor	 TIMS-AHT/AHTA EVI Compressor			

AHU KIT

Model	Cooling capacity (HP)	Indoor unit capacity (kW)	Reference air volume (m^3/h)	Picture
TMDK280	8	20~25	3000	
	10	25~30	3700	
TMDK450	12	30~36	4500	
	14	36~40	5400	
	16	40~45	6000	
TMDK900	18	45~61	9000	
	26	61~73	10000	
	32	73~90	13000	

Basic Modules

TIMS-X
Combination modules



Model	TIMS-AX	TIMS080AX	TIMS100AX	TIMS120AX	TIMS140AX	TIMS160AX	TIMS180AX	TIMS200AX	TIMS220AX
Capacity	HP	8	10	12	14	16	18	20	22
	KW	25.0	28.0	33.5	40.0	45.0	50.0	56.0	61.5
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

Power type	208-230V	380-415V
50Hz/3N	/	Available
60Hz/3N	/	Available

TIMS-AXA
Combination modules




Model	TIMS-AXA	TIMS080AXA	TIMS100AXA	TIMS120AXA	TIMS140AXA	TIMS160AXA	TIMS180AXA	TIMS200AXA	TIMS220AXA	TIMS240AXA	TIMS260AXA	TIMS280AXA	TIMS300AXA	TIMS320AXA
Capacity	HP	8.00	10.00	12.00	14.00	16.00	18.00	20.00	22.00	24.00	26.00	28.00	30.00	32.00
	KW	25.00	28.00	33.50	40.00	45.00	50.00	56.00	61.50	67.00	73.00	78.50	85.00	90.00
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

Power type	208-230V	380-415V
50Hz/3N	/	Available
60Hz/3N	/	Available

TIMS-AS+
Independent modules




Model	TIMS-AS	TIMS080AST	TIMS100AST	TIMS120AST	TIMS140AST	TIMS160AST	TIMS180AST	TIMS200ASA	TIMS220ASA	TIMS240ASA	TIMS260ASA	TIMS280ASA	TIMS300ASA	TIMS320ASA
Capacity	HP	8	10	12	14	16	18	20	22	24	26	28	30	32
	KW	25	28	33.5	40	45	53	56	61.5	67	73	78.5	85	90
Compressor		DC	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+DC

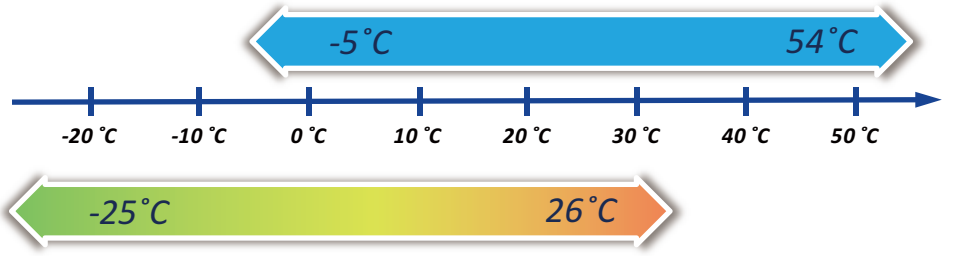
Power type	208-230V	380-415V
50Hz/3N	/	Available
60Hz/3N	/	Available

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
TMCF	Round Flow cassette				●		●		●	●	●	●	●	●	●	●	●	●	●	●
TMCS	One way cassette				●		●		●		●		●							
TMCD	Two way cassette				●		●		●		●		●	●	●	●	●	●	●	
TMDN-AC	Slim duct		●	●	●	●	●	●	●	●	●	●	●							
TMDN-AB	Standard duct		●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
TMDH-AB	High ESP duct															●	●	●	●	
TMVX	Ceiling&Floor				●		●				●		●		●		●	●	●	
TMVW	Wall mounted				●			●	●		●	●	●							
Model	Type	Photo	Capacity(KW)																	
			19.5	25	25.5	28	41	45	52	56	62									
TMDH-AI	Big capacity duct		●		●		●		●		●									
TMDF	Fresh air processor			●		●		●		●										

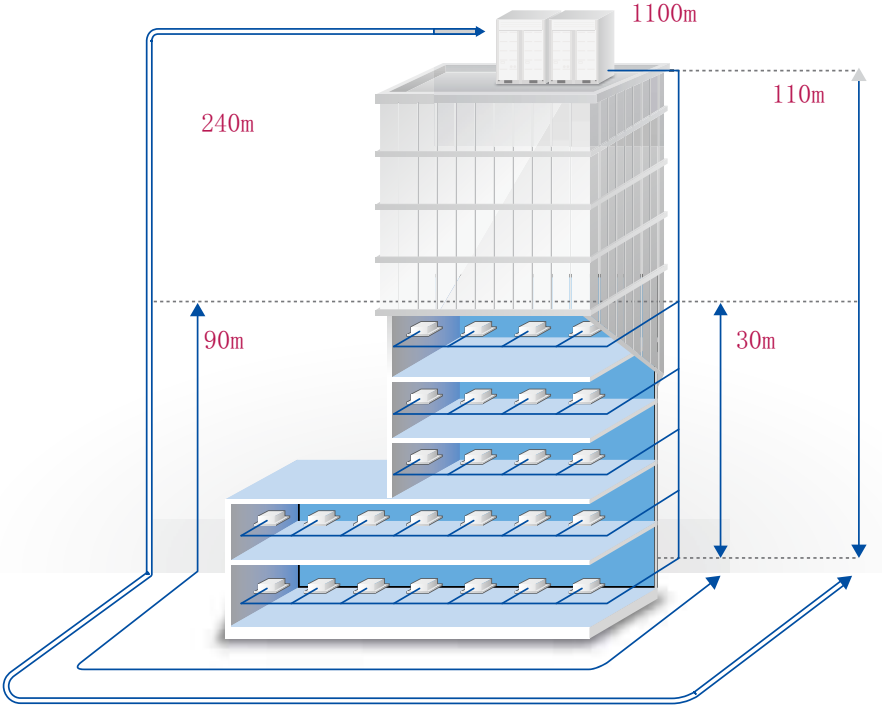
Widely Operating Range of Cooling and Heating

Through the strict system matching and test, the system has very powerful cooling and heating performance, even operates under -25°C during cold winter or 54°C in summer.



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 1100 m
Maximum drop of indoor/outdoor unit 110 m
Maximum drop of indoor unit 30 m
Maximum permitted length after first branch 90 m



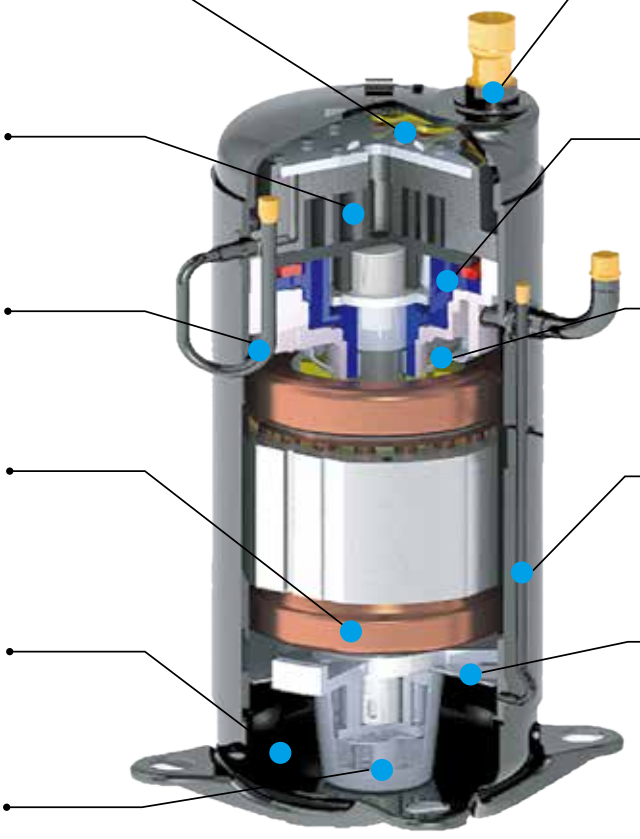
* Pls consult the detailed technical documentation or other matters with the relative technicists.

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.



Pressure relief valve
It reduces over-compression loss, especially at medium and low pressure.

New scroll involute
The high-efficiency scroll improves the compression efficiency.

EVI technology
It improves the cooling/heating performance.

High-efficiency motor
The high-quality stator works with the neodymium magnet rotor to achieve high-efficiency operation.

Lubricant
The compressor is fully lubricated with more reliable PVE oil.

More reliable oil balance system
The differential pressure oil supply ensures the reliability of the compressor operating at a low speed.

New intake pipe structure
It reduces the capability loss during high-speed operation and is more suitable for the large-displacement compressor.

Flexible frame structure
It is a patented technology for reducing the capability loss caused by leakage and scrubbing during operation.

Special air discharge system
The air discharge pipe is directly connected to the internal frame of the compressor, which could result in the decrease of compressor oil discharge.

Oil balance pipe
Balance the oil levels of compressors connected in parallel to ensure that each compressor is fully lubricated.

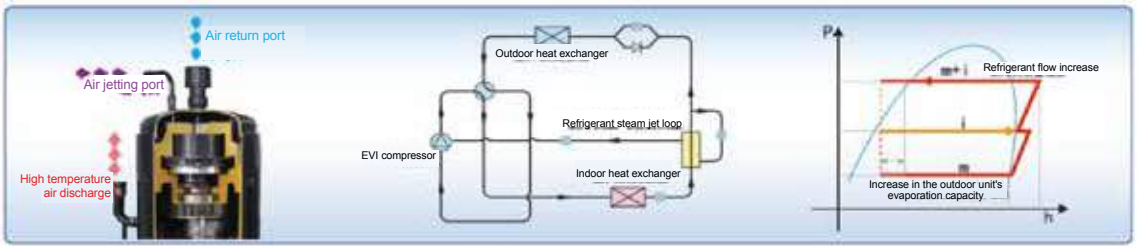
Oil surface stabilizer
It ensures adequate lubricant in the oil tank of the compressor with higher reliability.

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.

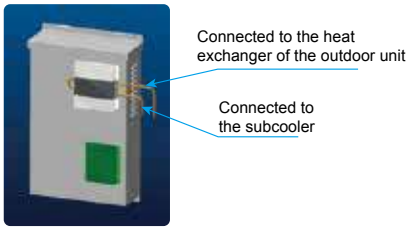
EVI technology

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.



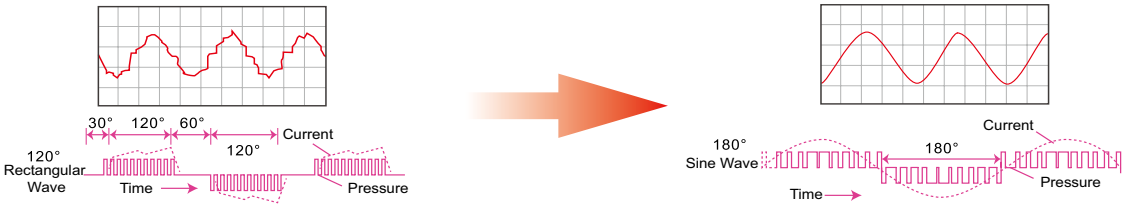
Refrigerant cooling technology

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

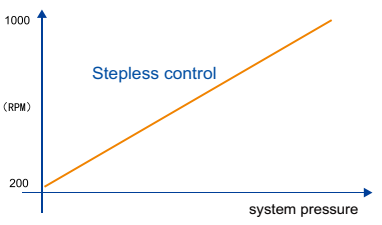


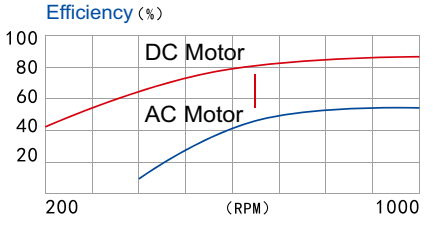
Traditional Control

180° Sine Wave DC Drive

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.



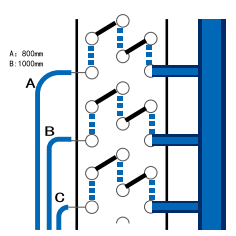


High Efficiency Heat Exchanger

The outdoor heat exchanger adopts the high-efficiency internal thread copper pipe with the diameter of 7.0 and the new aluminium fin; its integal 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.

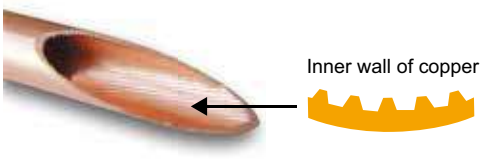
Refrigerant circuit of TOD

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



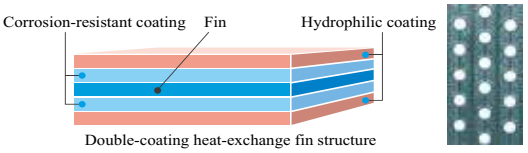
Inner-grooved copper pipe

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.



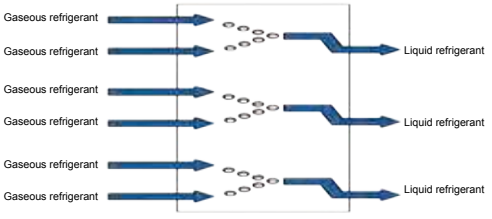
Hydrophilic aluminum fin

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.



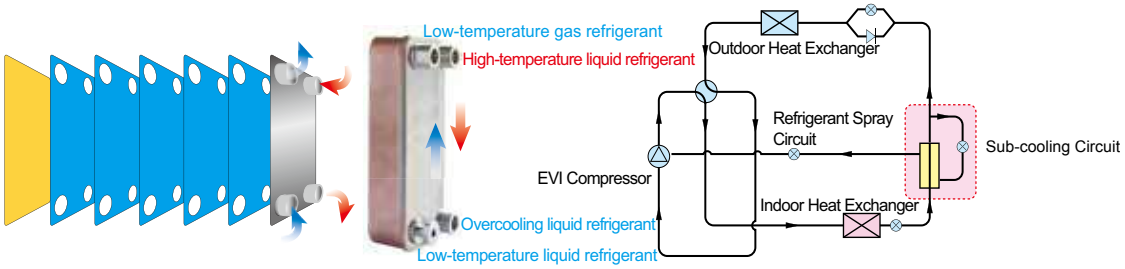
2-in-1 Refrigerant Loop

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.

3. New Pipe Design

Velocity difference design Cyclone Oil track design

Patent：CN203385255U

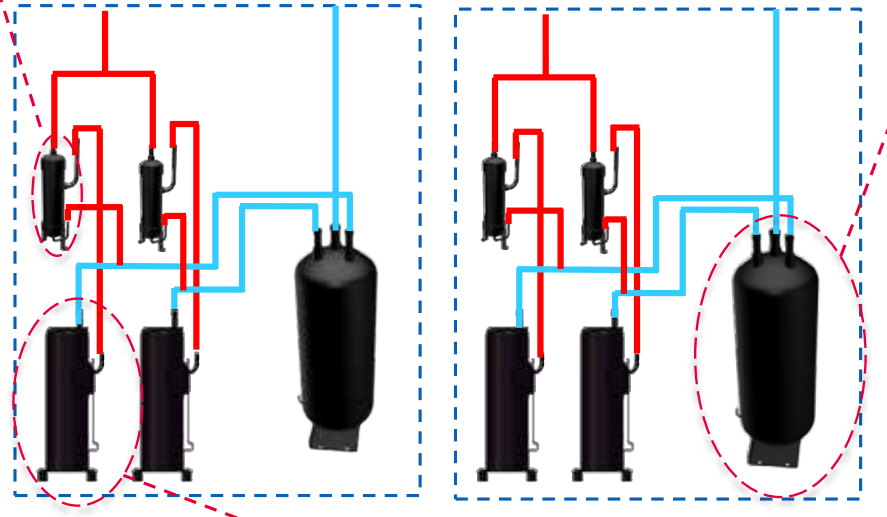
5. Gas Separator

Accurate refrigerant volume control between two compressors;

Patent：CN201320344739.5

4. Efficient Oil Separator

99/9% separation efficiency



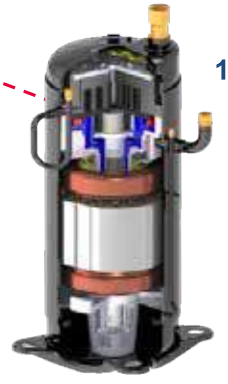
6. Intelligent Control

Predict the oil level in system and balance the oil between modules

2. Oil balance between comps.

Redistributing the oil

Patent：CN20338524OU



1. Internal Oil Separation

Less Oil enters the system

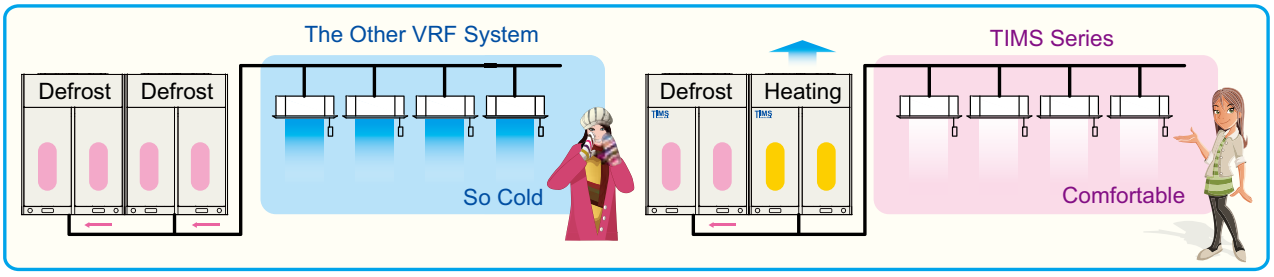
Oil Cup to storage the oil

Oil Balance pipe design

Efficient Heating and Smart Defrosing

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

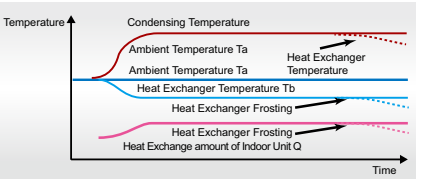
The unique TCC defrosting technology of TICA adopts the non-stop method. It is unnecessary to switch to the cooling mode when defrosting in winter, and less exhaust temperature fluctucation of IDU. There is no need to worry about the indoor instantaneous temperature reduction. The technology makes the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



Smart defrosting technology

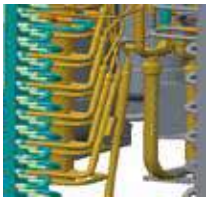
The smart defrosting technology allows to detect when to defrost according to every heating parameter, which can guarantee high heating capacity and energy efficiency ratio.
With the full load, the TIMS system will detect the defrosting time according to the heat transfer temperature difference of the outdoor unit.
With the partial load, the TIMS system will detect the defrosting time according to the heat exchange efficiency of the outdoor unit.

Defrost at partial load



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.



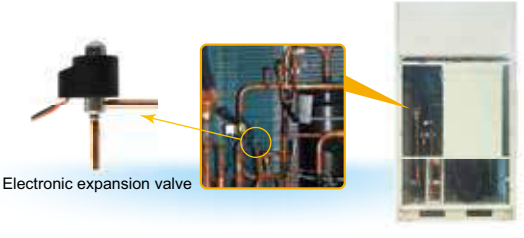
Anti snow capacity

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

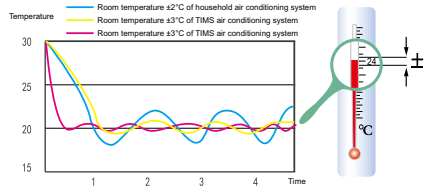
Control Technology of Multiple Electronic Expansion Valves

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 ±0.3°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.

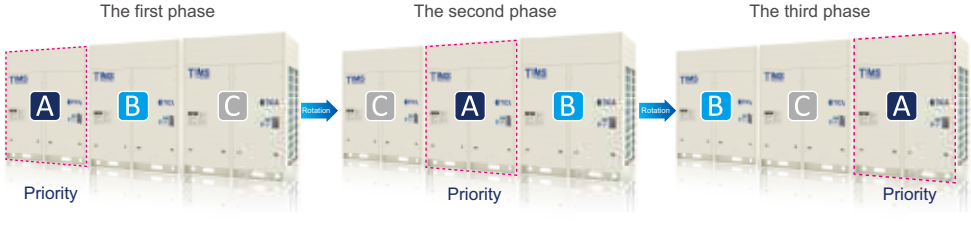
Stable Operation Functions

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, 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.

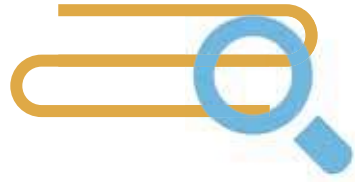
Backup operation function of compressor/motor

Module backup operation function

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.

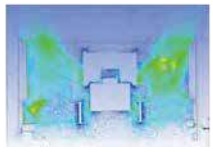
Inverter EMI Protection and Temperature Protection

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 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.

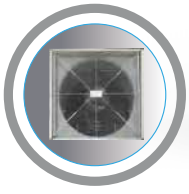


The fan blades with a larger diameter are adopted to yield a larger air volume at a lower speed and make noises lower.

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

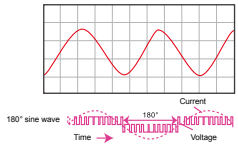
Vortex fan blade: The CAE auxiliary design and CFD air flow analysis technology are used to optimize the fan design, not only lowering the vibration, but also greatly reducing the pressure loss.

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.

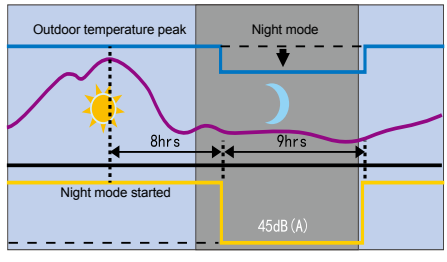
The compressor employs the 180° sine wave control technology to ensure smooth and stable operation, and abnormal noise during operation of the compressor can be suppressed effectively.



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.

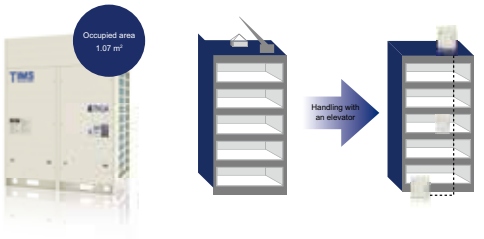
Smart silent mode

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

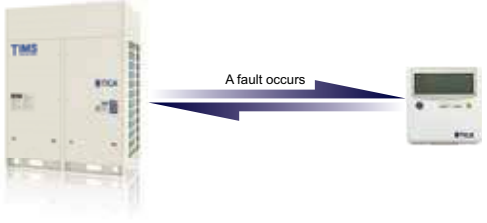
TIMS adopts intelligent control and requires no equipment room. Maintenance by designated person is not needed even during system operation, and control is more flexible.

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.



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

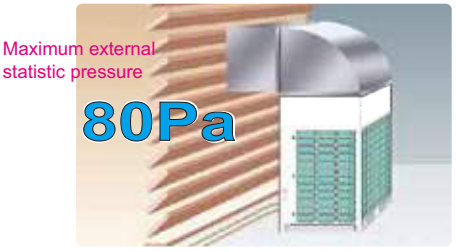
Non-polarized communication connection is realized between the IDU and the ODU to avoid wrong or opposite connection of wires, greatly simplifying installation process and expediting construction period.

Trial Operation Technology of ODU

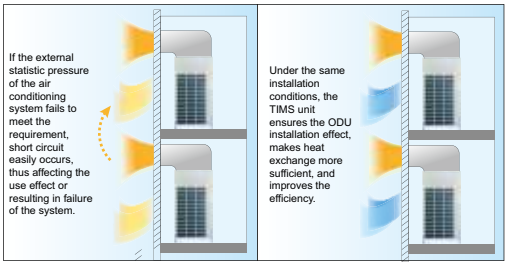
During commissioning, the button on the ODU main board can be pressed to implement the forced trial operation function of the unit, making commissioning easier.

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 statistic pressure on the precondition of avoiding noise change. The maximum external statistic pressure is 80 Pa.



Exhaust ducts can be installed by layer or in a centralized manner. The higher external statistic 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.

TIMS 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

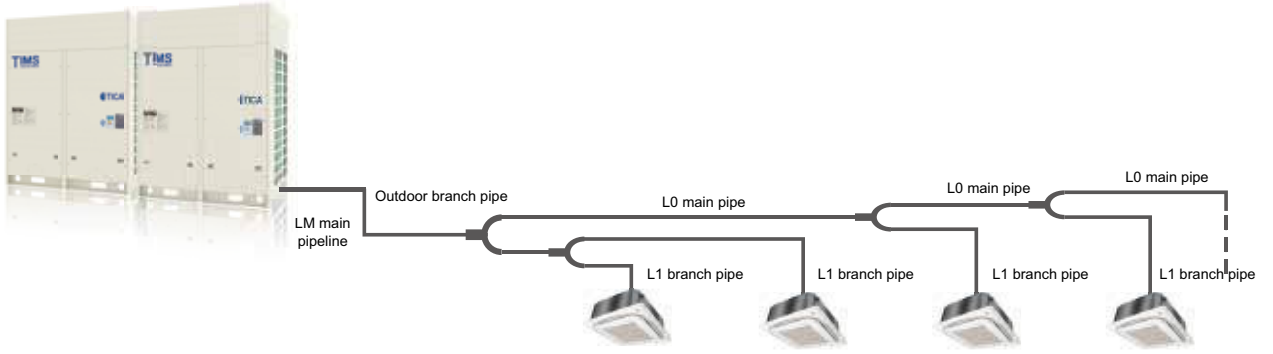
The capability output of different units is distributed as per different horse power and weight between modules to ensure that the compressor of each unit is adjusted with the unit within energy saving, efficient and stable frequency output scope

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 TIMS 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≤X<22.5	Φ9.52	Φ19.05	TBP4022TA
22.5≤X<33.0	Φ9.52	Φ22.23	TBP4033TA
33.0≤X<46.0	Φ12.70	Φ25.40	TBP4072TA
46.0≤X<67.0	Φ15.88	Φ28.58	TBP4072TA
67.0≤X<86.0	Φ19.05	Φ31.75	TBP4073TA
X≥86.0	Φ19.05	Φ34.92	TBP4073TA

Design for Main Pipes of TIMS 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≤X<22.5	Φ9.52	Φ19.05	TBP4022TA
22.5≤X<33.0	Φ9.52	Φ22.23	TBP4033TA
33.0≤X<46.0	Φ12.70	Φ25.40	TBP4072TA
46.0≤X<67.0	Φ15.88	Φ28.58	TBP4072TA
67.0≤X<86.0	Φ19.05	Φ31.75	TBP4073TA
86.0≤X<114.0	Φ19.05	Φ34.92	TBP4073TA
114.0≤X<140.0	Φ19.05	Φ38.10	TBP4073TA
X≥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	66HP	64

ODU Specifications

TIMS-AX

- 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
Combination model			-	-	-	-	-	-	-	-
Capacity	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
	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							
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 input	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							
Airflow rate		m^3/h	12000			13980		18780	20820	22020
Connecting pipe	Liquid pipe	mm	φ12.7		φ12.7	φ12.7		φ15.88		
	Gas pipe	mm	φ22.23		φ25.4	φ28.58		φ28.58		
	Connection method		Welding							
ESP		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	1020*950*1950			1300*950*1950		1585*950*1950		
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 actural 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-AX

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

Model			TIMS240AX	TIMS260AX	TIMS280AX	T1MS300AX	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	mm	φ19.05					φ19.05			φ19.05		
	Gas pipe	mm	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	–		–			–			–		
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	38	40	42	44	46	48	50	52
Max. equivalent connection pipe length		m	240	240	240	240	240	240	240	240	240	240	240
Working temp.	Coding	°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 actural 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-AX

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

Model			TIMS460AX	TIMS480AX	TIMS500AX	TIMS520AX	TIMS540AX	TIMS560AX	TIMS583AX	TIMS600AX	TIMS620AX	T1MS640AX	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/NHz	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										
Arflow 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	mm	φ19.05		φ19.05								
	Gas pipe	mm	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 dimenson		mm	–		–			–			–		
Net weight		kg	290+290+290		290+290+430			290+430+430			430+430+430		
Gross weight		kg	310+310+310		310+310+450			310+450+450			450+450+450		
Maximum drive IDU NO.		unit	54	56	58	60	62	64	64	64	64	64	64
Max. equivalent connection pipe length		m	240	240	240	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 actural 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-AST

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

Strong-heating independent outdoor unit

Model			TIMS080AST	TIMS100AST	TIMS120AST	TIMS140AST	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/N/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	5.78	6.94	8.7	10.9	12.8	14.4
	Heating	kW	5.41	6.6	8.3	10.38	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	—	Samsung	Samsung	Samsung	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	Insulation class	_	IP14	IP14	IP14	IP14	IP14	IP14
	Drive Type	—	DC	DC	DC	DC	DC	DC
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		
	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	290	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:

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 actural 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-ASA

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

Independent outdoor unit

Model			TIMS200ASA	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/N/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	17	18.6	21	21.9	23.8	26.1	27.7
	Heating	kW	15.8	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
Compressor	Brand	—	Mitsubishi	Mitsubishi	Mitsubishi	Mitsubishi	Mitsubishi	Mitsubishi	Mitsubishi
	Type	—	Inverter scroll	Inverter scroll	Inverter scroll	Inverter scroll	Inverter scroll	Inverter scroll	Inverter scroll
	Quantity	—	2	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	Insulation class	_	IP14	IP14	IP14	IP14	IP14	IP14	IP14
	Drive Type	—	DC	DC	DC	DC	DC	DC	DC
Airflow rate		m^3/h	25800			27000			
Connecting pipe	Liquid Pipe	mm	φ15.88			φ19.05	φ19.05		
	Gas Pipe	mm	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	430	430	430	460	488	488	488
Gross weight		kg	445	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	°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 actural 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			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
	Cooling	kW	27	31.5	37.5	45	50	56
Power supply		V/N/Hz	380V 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	4.00
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		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		
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	℃	- 5 ～ 54℃					
	Heating	℃	- 25 ～ 26℃					

Notes:

1. 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 actural 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
	Cooling	kW	63	69	75	81.5	87.5	95	100
Power supply		V/N/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)	48-64			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	℃	- 5 ～ 54℃						
	Heating	℃	- 25 ～ 26℃						

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 actural 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	TIMS380AXA	TIMS400AXA	TIMS420AXA	TIMS440AXA	TIMS460AXA	TIMS480AXA
Combination Model			18+16	18+18	20+18	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
	Cooling	kW	106	112	119	126	132	138	144	150
Power supply		V/N/Hz	380V 3N ～ 50Hz							
EER		kW/kW	3.49	3.47	3.38	3.29	3.30	3.24	3.24	3.19
COP		kW/kW	4.05	4.00	3.99	3.99	3.93	3.85	3.81	3.75
Rated input	Cooling	kW	27.20	28.80	31.40	34.00	35.60	38.00	39.60	42.00
	Heating	kW	26.20	28.00	29.80	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		m³/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）x860x1710		（1240+1500x860x1710	（1500+1500）x860x1710				
Package dimension		mm	(1300+1300)x950x1950		(1585+1300)x950x1950	(1585+1585)x950x1950				
Net weight		kg	290+290	290+290	430+290	430+430	430+430	430+430	430+430	430+430
Gross weight		kg	300+300	300+300	440+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	℃	- 5 ～ 54℃							
	Heating	℃	- 25 ～ 26℃							

Notes:

1. 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 actural 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

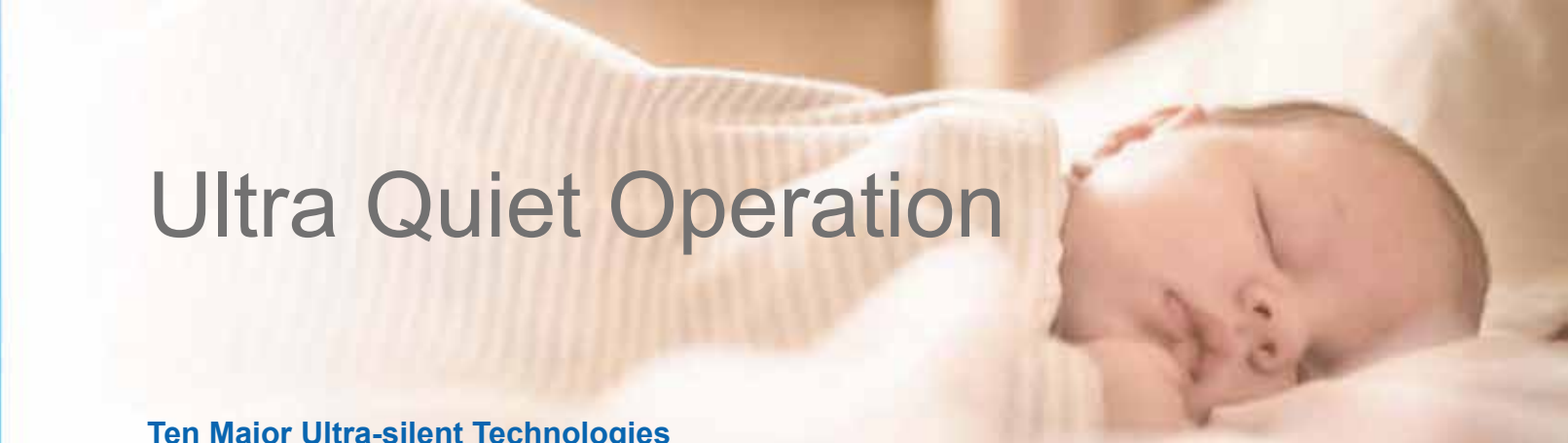
- Single Module: 8/10/12/14/16/18/20/22/24/26/28//30/32HP
- Combination Module: 34HP-64HP, 2 modules
- Full DC Inverter Technology
- Max. 1100m pipe length, Max. 110m height drop

Model			TIMS500AXA	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
	Cooling	kW	156.5	164	169	175	182.5	190	195	200
Power supply		V/N/Hz	380V 3N ～ 50Hz							
EER		kW/kW	3.30	3.28	3.27	3.30	3.28	3.26	3.26	3.25
COP		kW/kW	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）x860x1710			（1900+1900）x860x1710				
Package dimension		mm	(1585+1985)x950x1950			(1985+1985)x950x1950				
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	℃	－5～54℃							
	Heating	℃	－25～26℃							

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 actural 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.

MINI VRF

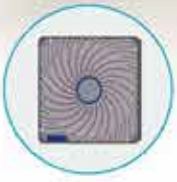


Ultra Quiet Operation

Ten Major Ultra-silent Technologies

The scroll heating series adopt the all-round noise-reducing technology and newly-designed fan blade to reduce the airflow noise through the smooth suction structure, and the compressor noise isolation technology to implement ultra-silent operation, creating a high-quality and comfortable environment.

Newly-designed fan air duct with the streamlined distribution of the air discharge grilles can reduce the wind resistance and noise.

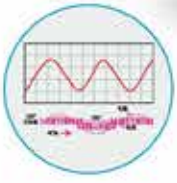


The PET (macromolecule acupuncture cotton), which is the kind of cotton specially used by high-speed railway to isolate noise, perfectly absorbs noises of all frequency bands.

CFD analogue simulation, together with the new fan blade, and the 4-blade axial flow design guarantee a better heat-exchanging performance and lower noise.

The DC brushless motor features stepless speed adjustment and more stable operation, achieving higher energy efficiency and reducing noises.

The 180° sine wave control technology applied to the compressor ensures the smooth and stable operation of compressor and effectively inhibits the abnormal noise during operation.



Advanced reactor can completely eliminate electromagnetic noise.

The compressor noise enclosure effectively avoids the proliferation of compressor noise.

Smart Night Silent Mode

The system adopts the delay judgment mode based on the outdoor ambient temperature peak. Meanwhile, it will automatically determine whether to enter the night silent mode according to the current ambient temperature and load size.
The minimum noise of silent operation can be as lower as 45 dB (A).

Forced Silent Mode

For supporting projects of high-rise buildings or sites with a stricter silent requirement, users can select the forced silent operation mode as required to reduce the operation noise of the unit and create a more quiet and comfortable environment.

Night Forced Silent Mode

For a higher requirements of quietness and higher requirements for silent mode at night, the night forced silent mode provides a more quiet environment under a variety of conditions.

Superior Technologies

Are you looking for a cozy room with less electricity used?

All DC Compliant Enhanced Vapor Injection Scroll Compressor

Three Core Technologies for Excellent Performance

Floating sealing ring technology
improves compressor's starting performance

Patented enhanced vapor injection (EVI)
technology

High-efficiency centralized stator winding
improves motor rated efficiency to > 95%

3.4 mm-thick casing design

Variable volume ratio scroll technology
substantially improves energy efficiency
of compressor with low pressure ratio

6-pole permanent magnet motor
Stable operation with 900–7200 RPM

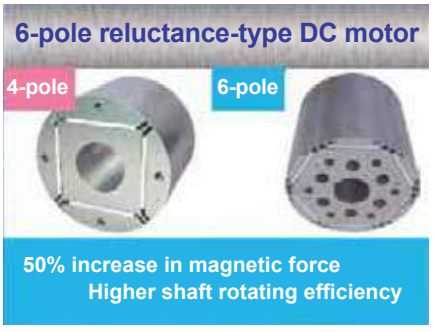
Oil duct
reduces oil circulation rate when compressor
is working at high speed

Volumetric oil pump
Oil pumped does not vary with oil level.

C — All DC Inverter Technology

The secret of high energy efficiency

All DC inverter compressor, the core source of power, is equipped with a 6-pole high-efficiency motor, and the enhancement of part load efficiency is tailored to better suit the operations of low ambient temperature heating units.

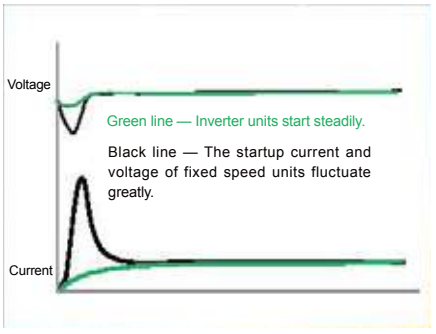


More applicable to regions with voltage fluctuation in power supply

The all DC inverter system starts flexibly, with the rotating speed of the compressor increasing steadily, the current rising slowly, and small impact on the power grid. Even under the condition of 160 V ultra-low voltage or 260 V ultra-high voltage, the system can still start and operate normally, and provide comfortable heating service.

VS

The fixed speed system starts the compressor instantly. The startup current of up to 6–7 times of the operating current may result in a sharp drop in power supply voltage, and lead to a failure of unit startup and the even more serious problems during peak periods.



No heating capability attenuation at -20°C
No cooling capability attenuation at 43°C

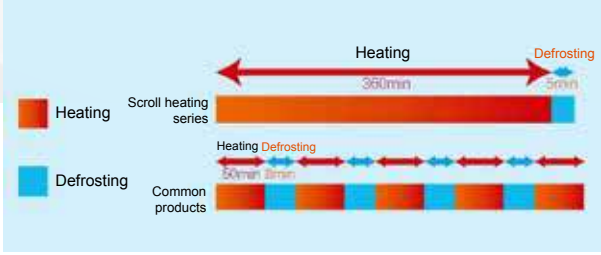
Enhanced Vapor Injection Technology — Strong Heating Capability Without Electric Auxiliary
Just like the difference between turbo supercharging and normal aspiration (2.0 T = 3.0 L)
The world's most advanced technology for heat pump system dealing with low-temperature heating
The whole series adopt the high-efficiency EVI system and the new variable-frequency control and refrigerant system of TICA, achieving excellent heating performance even at the ultra-low temperature of –30°C. The heating capability is increased by over 45% and won't subside at –20°C. In hot summer, the cooling capability won't decrease even at 43°C, assuring you a cool summer indoors.

Compact design

TICA scroll heating series of household central air conditioner feature a compact design with a single fan and three-layer high-efficiency and high-quality heat exchanger.
With a mini body, they can be easily installed in a small space such as a bay window, optimizing the spatial pattern and making your home more beautiful and fashionable.

Smart and Quick Defrosting

The patented smart vapor injection defrosting technology of TICA can increase the refrigerant circulation flow during defrosting, which will shorten the defrosting time, reduce the cold air felt by customers during defrosting, improve the defrosting efficiency, and cut down the power consumption.

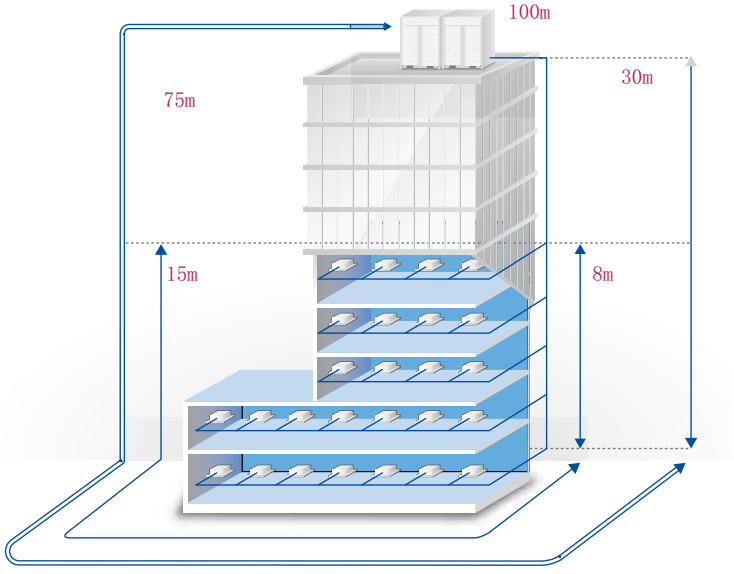


Oil Return When Heating Without Stopping the Unit

Traditional units have to be turned off to achieve oil return, while TICA scroll heating series of household VRF units can implement heating without switching the direction of the refrigerant flow. This series adopt the modes of on-demand oil return and high/low frequency switchover oil return to prevent wild fluctuation of indoor temperature, and provide user with more comfortable experience.

Maximum actual length of single pipe	50m
Maximum equivalent length of single pipe	75 m
Maximum total equivalent pipe length	100m
Maximum drop of indoor/ outdoor unit	30 m
Maximum drop of indoor unit	8 m
Maximum permitted length after first branch	15 m

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



Smart Home

Technology-driven intelligence for smarter life, be a real air conditioning messenger.

Mini VRF specification

Model			TIMS100AHT	TIMS125AHT	TIMS140AHT	TIMS160AHT	TIMS180AHT	TIMS180AHTA
Power Supply			220V~50Hz					380V~50Hz
Capacity	Cooling/Heating	kW	10.0/12.5	12.5/14.0	14.0/16.0	16.0/18.0	18.0/20.0	18.0/20.0
power consumption	Cooling/Heating	kW	2.9/3.0	3.1/3.2	3.8/4.1	4.7/4.5	5.4/5.3	5.4/5.3
EER		kW/kW	3.45	4.03	3.68	3.40	3.33	3.33
COP		kW/kW	4.17	4.38	3.90	4	3.77	3.77
Rated input	Cooling	kW	2.9	3.1	3.8	4.7	5.4	5.4
	Heating	kW	3.0	3.2	4.1	4.5	5.3	5.3
Rated current	Cooling	A	18	20	26	32	32	12
	Heating	A	16	18	24	28	28	11
Refrigerant	Type		R410A					
	Charge volume	kg	2.5	2.5	3.0	3.0	40	4.0
Compressor	Brand	-	EMERSON	EMERSON	EMERSON	EMERSON	EMERSON	EMERSON
	Type	-	Scroll					
	Quantity	-	1	1	1	1	1	1
	Refrigerant oil charge volume	L	1.183	1.183	1.183	1.183	1.183	1.183
Fan	Type	-	Axial					
	Quantity	-	1				2	2
Airflow rate		m³/h	6000				6600	6600
Connecting pipe	Liquid/Gas	mm	9.52/15.88				9.52/19.05	9.52/19.05
Sound pressure level		dB(A)	50-54	50-55	52-55	53-56	57-59	57-59
Outline dimension		mm	W980*D390*H840				W980*D390*H1260	
Package dimension		mm	W1036*D482*H865				W1036*D482*H1285	
Weight	Net weight	kg	95				115	115
	Gross weight	kg	98				120	120
Indoor unit connecting	Capacity ratio	%	50-130					
	Maximum drive IDU.No.	unit	6	6	7	8	9	9
Equivalent connection pipe length	Max.total equivalent pipe length	m	100					
	Max.equivalent connection pipe length	m	75					
	Max.drop of indoor/outdoor unit	m	30 (indoor above 20m)					
	Max.drop of indoor unit	m	10					
Working temp. (°C)	Cooling	°C	-5-50					
	Heating	°C	-30-24					

IDU UNITS

Round Flow cassette

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

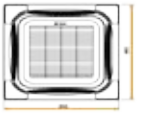
Has slim body with 230mm height,it is specially suitable for low suspended ceiling rooms.

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.

Streamlined panels in uniform size, elegant and generous

Newly designed streamlined panel, stylish and elegant.

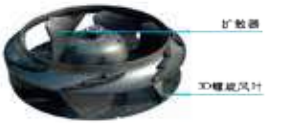


Air flow from ceiling to ground

The air supply is not limited by the floor height. The cold air can reach the ground in a room of up to 3.5 m high to achieve optimum air conditioning performance.

Ultra Quiet Operation

The use of aerospace technology on 3D spiral fan blades with optimized air duct design reduces internal resistance of the unit and achieves ultra-quiet operation, creating a comfortable and pleasant environment.



Unique PM2.5 and formaldehyde purification solution

PM2.5 and formaldehyde filters are optional to provide super-clean indoor environment.

Model			TMCF028AB	TMCF036AB	TMCF045AB	TMCF050AB	TMCF056AB	TMCF063AB	TMCF071AB
Capacity	Cooling	kW	2.8	3.6	4.5	5.0	5.6	6.3	7.1
	Heating	kW	3.2	4.0	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
Power input		W	55	55	70	70	75	75	90
Air flow volume (H/M/L)		m^3/h	750/660/540	810/690/540	900/720/600	900/720/600	960/780/660	960/780/660	1020/900/690
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
Fan	Type	—	Axial	Axial	Axial	Axial	Axial	Axial	Axial
Fan motor	Power output	W	26	26	30	30	30	30	37
	Insulation class	—	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
	Gas pipe	mm	φ12.7	φ12.7	φ12.7	φ12.7	φ12.7	φ12.7	φ15.88
	Connection method		Flared	Flared	Flared	Flared	Flared	Flared	Flared
Drain pipe	External diameter	mm	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
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
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
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
Net weight	Body	kg	22.5	22.5	24.5	24.5	24.5	24.5	24.5
	Panel	kg	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
	Panel	kg	7.5	7.5	7.5	7.5	7.5	7.5	7.5

Model			TMCF080AB	TMCF090AB	TMCF100AB	TMCF112AB	TMCF125AB	TMCF140AB	TMCF160AB
Capacity	Cooling	kW	8.0	9.0	10.0	11.2	12.5	14.0	16.0
	Heating	kW	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
Power input		W	90	150	150	150	190	190	210
Air flow volume (H/M/L)		m^3/h	1200/1080/870	1500/1200/900	1620/1260/1020	1700/1360/1080	1800/1500/1200	1800/1500/1200	2100/1800/1500
Sound pressure level (H/M/L)		dB(A)	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
Fan motor	Power output	W	37	50	50	65	65	65	65
	Insulation class	—	B	B	B	B	B	B	B
Connecting pipe	Liquid pipe	mm	φ9.52	φ9.52	φ9.52	φ9.52	φ9.52	φ9.52	φ9.52
	Gas pipe	mm	φ15.88	φ15.88	φ15.88	φ15.88	φ15.88	φ15.88	φ15.88
	Connection method		Flared	Flared	Flared	Flared	Flared	Flared	Flared
Drain pipe	External diameter	mm	DN25	DN25	DN25	DN25	DN25	DN25	DN25
Outline dimension (body)		mm	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
Package dimension (body)		mm	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
Net weight	Body	kg	24.5	29.5	29.5	29.5	29.5	32	32
	Panel	kg	6	6	6	6	6	6	6
Gross weight	Body	kg	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

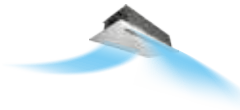
Notes:
1. Power supply: 220V/1PH for 50Hz
2. The cooling condition: indoor side 27°C (80.6°F) DB, 19°C (60°F) WB outdoor side 35°C (95°F) DB
3. The heating condition: indoor side 20°C (68°F) DB, 15°C (44.6°F) WB outdoor side 7°C (42.8°F) DB
4. Sound level: measured at point 1m in front of the unit at a height of 1.3m. During actural 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.

Two-way cassette

Accessories

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

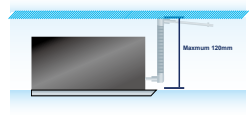
Special design for corridor or nallow and long room



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)		m^3/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	Centrifugalw	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	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	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	φ15.88
	Connection method		Flared	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	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 (set)		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:

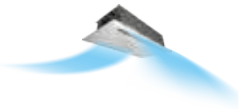
1. Power supply: 220V/1PH for 50Hz
2. The cooling condition: indoor side 27°C (80.6°F) DB, 19°C (60°F) WB outdoor side 35°C (95°F) DB
3. The heating condition: indoor side 20°C (68°F) DB, 15°C (44.6°F) WB outdoor side 7°C (42.8°F) DB
4. Sound level: measured at point 1m in front of the unit at a height of 1.3m. During actural 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.

One-way cassette

Accessories

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

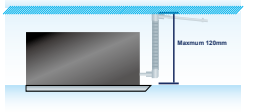
Special design for corridor or nallow and long room



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)		m^3/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	Centrifugalw	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	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	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	φ15.88
	Connection method		Flared	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	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 (set)		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 actural 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.

Ceiling & Floor

Accessories

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

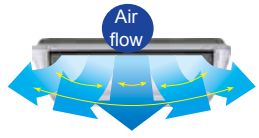
Flexible installation,on the floor or on the ceiling

Automatic horizontal and vertical air flow

One sided access hole,easy for maintenance

Low noise and low energy consumptionv

Unequally spaced oblique angle large diameter through-flow fan is used to ensure strong air supply, lower fan speed and lower energy consumption



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)		m^3/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 actural 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.

Wall mounted

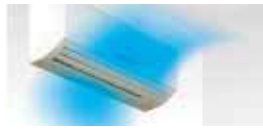
Accessories

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

Low noise design

Streamlined design with elegant appearance

The unit has elegant profile and various interiors. The newly designed louver can help with better air-flow diffusion of the conditioner, uniformly distributing air into the whole space in a comfortable way.

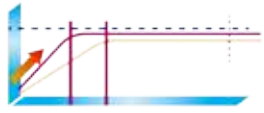


Air supply with wide air flow achieving more significant effect

The unique two-layered auto swing providing wider air supply range to optimize air flow compared to conventional units.

Fast heating providing a warm and comfortable environment

Optimized interior structure greatly increasing the temperature at air outlet to reach set temperature ASAP and realize fast heating.



Ultra-silent operation leading a quiet life

Brand-new highly efficient noise reduction motor built with the latest technology minimizing the noise of IDU; air duct designed with good sound insulation ensuring silent and smooth air supply.

Model			TMVW028AB	TMVW036AB	TMVW040AB	TMVW056AB	TMVW063AB	TMVW071AB
Capacity	Cooling	kW	2.8	3.6	4.0	5.6	6.3	7.1
	Heating	kW	3.0	4.3	4.5	6.0	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	65	65	70	70	82	82
Air flow volume(H/M/L)		m^3/h	800/700/600	800/700/600	850/750/650	850/750/650	1200/950/860	1200/950/860
Sound pressure level(H/M/L)		dB(A)	40/36/32	40/36/32	45/41/35	45/41/35	48/45/38	48/45/38
Fan Fan motor	Type	-	Cross-flow fan	Cross-flow fan	Cross-flow fan	Cross-flow fan	Cross-flow fan	Cross-flow fan
	Quantity	-	1	1	1	1	1	1
	Speed (H/M/L)	rpm	1100/1000/900	1100/1000/900	1100/1000/900	1100/1000/900	1100/1000/900	1100/1000/900
	Power Input	W	30	30	30	30	50	50
	Insulation class	-	B	B	B	B	B	B
Connecting pipe	Liquid Pipe	mm	φ6.35	φ6.35	φ6.35	φ6.35	φ6.35	φ6.35
	Gas Pipe	mm	φ12.70	φ12.70	φ12.70	φ12.70	φ15.88	φ15.88
	Connection method		Flared	Flared	Flared	Flared	Flared	Flared
Drain pipe	External dia.	mm	DN20	DN20	DN20	DN20	DN20	DN20
Outline dimension		mm	970x315x235	970x315x235	970x315x235	970x315x235	1100x330x235	1100x330x235
Package dimension		mm	1010x370x300	1010x370x300	1010x370x300	1010x370x300	1140x385x300	1140x385x300
Net Weight		kg	13.5	13.5	14.5	14.5	16	16
Gross weight		kg	17.5	17.5	18.5	18.5	20	20

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 actural 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.

Standard duct

Accessories

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

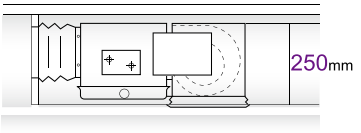
Simple design,short body,easy to install

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.

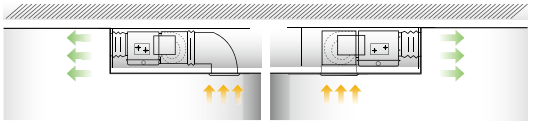
Simple design,short body,easy to install

Ultra-thin body with the thickness of only 250 mm installed in a concealed way to lift the height of the suspended ceiling, especially suitable for ceilings with narrow height of suspended ceilings



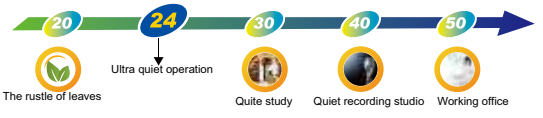
Flexible air return ways

Flexible and diversified insulation designs providing options for back air return or lower air return based on the suspended ceilings at the site to perfectly coordinate with the interior decorations



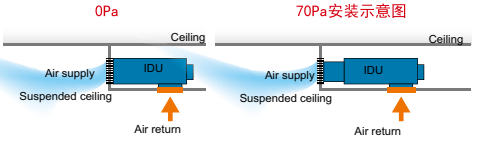
Ultra quiet operation

The fan motor of delicate and compact design equipped with brand-new propeller housing with vibration absorption function delivering operating noise as low as 24dB(A) to satisfy rigorous noise requirements at different sites



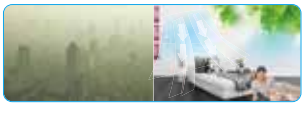
Wider range of static pressure and stronger air supply

The static pressure has three steps with the highest up to 70 Pa capable of direct delivery or connection with air duct. The flexible selection can create comfortable space



Ultra Quiet Operation

The use of aerospace technology on 3D spiral fan blades with optimized air duct design reduces internal resistance of the unit and achieves ultra-quiet operation, creating a comfortable and pleasant environment.



Model			TMDN022AB	TMDN025AB	TMDN028AB	TMDN032AB	TMDN036AB	TMDN040AB	TMDN045AB	TMDN050AB	TMDN056AB
Capacity	Cooling	kW	2.2	2.5	2.8	3.2	3.6	4.0	4.5	5.0	5.6
	Heating	kW	2.5	2.8	3.2	3.6	4.0	4.5	5.0	5.6	6.3
Power supply		V/Ph/Hz	220V/1Ph/50Hz								
Power Input		W	60			80			95		
Air flow volume(H/M/L)		m3/h	540/450/350			700/600/500			900/800/700		
ESP		Pa	15(0/30/50)								
Sound pressure level(H/M/L)		dB(A)	32/28/24			34/31/28			36/33/30		37/34/31
Fan	Type	—	Centrifugal								
Fan motor	Power Output	W	25	25	25	40	40	40	50	50	55
	Insulation class	—	B	B	B	B	B	B	B	B	B
Connecting pipe	Gas Pipe	mm	φ12.70	φ12.70	φ12.70	φ12.70	φ12.70	φ12.70	φ12.70	φ12.70	φ12.70
	Liquid Pipe	mm	φ6.35	φ6.35	φ6.35	φ6.35	φ6.35	φ6.35	φ6.35	φ6.35	φ6.35
	Connection method		Flared	Flared	Flared	Flared	Flared	Flared	Flared	Flared	Flared
Drain pipe	External diameter	mm	DN25	DN25	DN25	DN25	DN25	DN25	DN25	DN25	DN25
Outline dimension		mm	880*515*250						1050*515*250		
Package dimension		mm	1080*600*280						1250*600*280		
Net Weight		kg	28						31		33
Gross weight		kg	34						37		39

Model			TMDN063AB	TMDN071AB	TMDN080AB	TMDN090AB	TMDN100AB	TMDN112AB	TMDN125AB	TMDN140AB	TMDN160AB
Capacity	Cooling	kW	6.3	7.1	8.0	9.0	10.0	11.2	12.5	14.0	16.0
	Heating	kW	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								
Power Input		W	95	144	170	230	303				
Air flow volume(H/M/L)		m3/h	900/800/700	1100/1000/900	1300/1150/950	1600/1400/1200	2000/1700/1400				
ESP		Pa	15(0/30/50)	30(15/50/70)			50(15/30/70)				
Sound pressure level(H/M/L)		dB(A)	37/34/31	40/37/33		42/39/35	44/41/39				
Fan	Type	—	Centrifugal								
Fan motor	Power Output	W	55	80	35+55	35+80	60+125				
	Insulation class	—	B	B	B	B	B	B	B	B	B
Connecting pipe	Gas Pipe	mm	φ12.70	φ15.88							
	Liquid Pipe	mm	φ6.53	φ9.52							
	Connection method		Flared								
Drain pipe	External diameter	mm	DN25								
Outline dimension		mm	1050*515*250	1350*515*250			1350*557*292				
Package dimension		mm	1250*600/280	1550*600*280			1550*640*320				
Net Weight		kg	33	38	43	43	48	48	48	48	48
Gross weight		kg	39	45	50	50	56	56	56	56	56

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 actural 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.

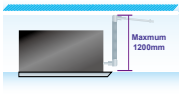
Slim duct

Accessories

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

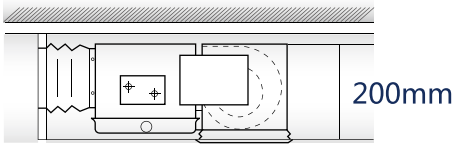
Built-in drain pump,drain height can be 1200mm

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



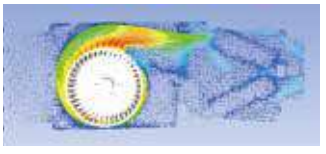
Delicate design and compact body

Designed with 200 mm thickness, the body is lighter and the installation space required is smaller, making it suitable for more small space



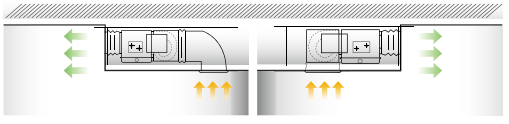
Ultra-silent design leading a quiet life

Use the brand-new CFD optimized duct and simulated fan blades to ensure softer air supply, and the auxiliary streamlined embedded foam drain pan lowers noise of eddy current to 23 dB, equal to the normal human breathing sound, bringing you a naturally quiet home.



Flexible air return

The air return plenum as standard configuration may change air return mode based on the actual circumstances at the site to enable more flexible air return.



Unique PM2.5 and formaldehyde purification solution

PM2.5 and formaldehyde filters are optional to provide super-clean indoor environment.

Model			TMDN022AC	TMDN025AC	TMDN028AC	TMDN032AC	TMDN036AC	TMDN040AC
Capacity	Cooling	kW	2.2	2.5	2.8	3.2	3.6	4.0
	Heating	kW	2.5	2.8	3.2	3.6	4.0	4.5
Power supply		V/Ph/Hz	220V/1Ph/50Hz					
Power Input		W	54			55		
Air flow volume(H/M/L)		m3/h	500/370/310			560/430/360		
ESP		Pa	10(30)					
Sound pressure level(H/M/L)		dB(A)	33/28/23			33/28/24		
Fan	Type	—	Centrifugal					
Fan motor	Power Output	W	26	26	26	26	26	26
	Insulation class	—	B	B	B	B	B	B
Connecting pipe	Gas Pipe	mm	φ6.35					
	Liquid Pipe	mm	φ9.52			φ12.7		
	Connection method		Flared					
Drain pipe	External diameter	mm	φ25					
Outline dimension		mm	700*450*200					
Package dimension		mm	931*543*255					
Net Weight		kg	17.5					
Gross weight		kg	20.5					

Model			TMDN045AC	TMDN050AC	TMDN056AC	TMDN063AC	TMDN071AC
Capacity	Cooling	kW	4.5	5.0	5.6	6.3	7.1
	Heating	kW	5.0	5.6	6.3	7.1	8.0
Power supply		V/Ph/Hz	220V/1Ph/50Hz				
Power Input		W	77			100	105
Air flow volume(H/M/L)		m3/h	750/620/550			920/710/590	1000/800/680
ESP		Pa	10(30)				
Sound pressure level(H/M/L)		dB(A)	35/30/28			36/32/28	37/32/29
Fan	Type	—	Centrifugal				
Fan motor	Power Output	W	40			60	
	Insulation class	—	B	B	B	B	B
Connecting pipe	Gas Pipe	mm	φ6.35			φ9.52	
	Liquid Pipe	mm	φ12.7			φ15.88	
	Connection method		Flared				
Drain pipe	External diameter	mm	φ25				
Outline dimension		mm	920*450*200				
Package dimension		mm	1151*543*255				
Net Weight		kg	20.5				
Gross weight		kg	21				

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 actural 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.

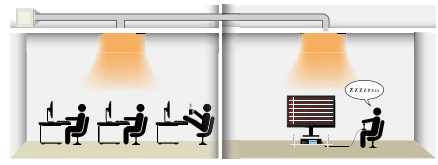
High ESP duct

Accessories

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

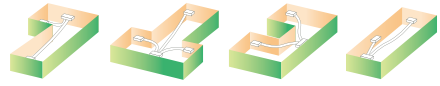
High static pressure enabling far air supply

The external static pressure reaches 100 pa, making it possible to connect long air duct to realize long distance air supply, especially suitable for scenarios needing air supply by long air ducts.



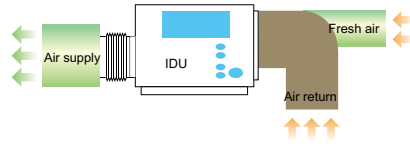
Various air supply modes suitable for different room types

Choosing different air supply modes as per room structure, one IDU of air conditioner can meet the diversified space requirements.



Intake fresh air to improve air quality

Small amount of outdoor fresh air can be introduced through the air duct to ensure the quality of room air.



Industry-leading with low noise operation

Brand-new noise reduction technology effectively reducing noises of the unit to provide quiet and pleasant environment.

Model			TMDH100AB	TMDH112AB	TMDH125AB	TMDH140AB
Capacity	Cooling	kW	10.0	11.2	12.5	14.0
	Heating	kW	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		W	400	420	500	550
Air flow volume (H/M/L)		m^3/h	1800/1450/1050	2000/1600/1300	2250/1800/1450	2700/2150/1750
ESP		Pa	50(100)	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
Fan	Type	–	Centrifugal	Centrifugal	Centrifugal	Centrifugal
	Quantity	–	2	2	2	2
Fan motor	Power output	W	200	200	250	250
	Insulation class	–	B	B	B	B
Connecting pipe	Liquid pipe	mm	φ9.52	φ9.52	φ9.52	φ9.52
	Gas pipe	mm	φ15.88	φ15.88	φ15.88	φ15.88
	Connection method		Flared	Flared	Flared	Flared
Drain pipe	External diameter	mm	Φ25	Φ25	Φ25	Φ25
Outline dimension		mm	1200*750*390	1200*750*390	1200*750*390	1200*750*390
Package dimension		mm	1270*820*430	1270*820*430	1270*820*430	1270*820*430
Net weight		kg	62	62	62	62
Gross weight		kg	65	65	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 actural 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.

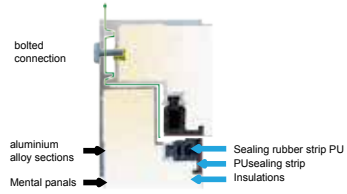
Big capacity duct

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%

TICA obtained the patent for its first invention - labyrinth structure air handling unit in 1998. Since then, opening up a new chapter for AHU in China. TICA's high-capacity duct type IDU is designed with this patent. The junction part of the unit uses aluminum profile with a concave groove and a convex groove and is secured with bolts and nuts to form a labyrinth sealing structure, achieving the air leakage rate as low as 0.029% - only 1/66 of the air leakage rate allowed in the national standard and realizing lower operating costs.



300Pa high static pressure,suitable for large space

TICA's high-capacity duct IDU has the static pressure up to 300 Pa, making it possible to connect extra long air duct to realize long distance air supply as high as reaching the suspended space, suitable for high reaching space at individual building below 20,000 square meters and partial high reaching space.

Robust double-wall design eliminating cold bridge condensate

All the metal parts in the cabinet of AHU are isolated from outside metal parts using polyurethane foam and specially designed sealing strips, avoiding the thermal insulation strips attached inside the common product to prevent condensation,eliminating water dripping at the cold bridge and lowering the noise of the unit.

Purification section as optional

Model			TMDH195AI	TMDH255AI	TMDH410AI	TMDH520AI	TMDH620AI
Capacity	Cooling	kW	19.5	25.5	41.0	52.0	62.0
	Heating	kW	20.4	28.5	41.5	55.0	68.0
Power supply		V/Ph/Hz	220V/1Ph/50Hz	220V/1Ph/50Hz	380V/3N/50Hz	380V/3N/50Hz	380V/3N/50Hz
Power input		W	1320	1320	2640	2640	4480
Air flow volume		m^3/h	4300	4800	7500	9000	11000
ESP		Pa	200	200	250	250	300
Sound pressure level		dB(A)	54	54	55	57	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
	Gas pipe	mm	φ22.23	φ22.23	φ28.60	φ28.60	φ31.80
	Connection method		Welding	Welding	Welding	Welding	Welding
Drain pipe	External diameter	mm	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		325
Gross weight		kg	152		277		327

Notes:

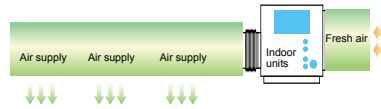
1. Power supply: 220V/1PH for 50Hz
2. The cooling condition: indoor side 27°C (80.6°F) DB, 19°C (60°F) WB outdoor side 35°C (95°F) DB
3. The heating condition: indoor side 20°C (68°F) DB, 15°C (44.6°F) WB outdoor side 7°C (42.8°F) DB
4. Sound level: measured at point 1m in front of the unit at a height of 1.3m. During actural 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.

Fresh air Processor

Accessories

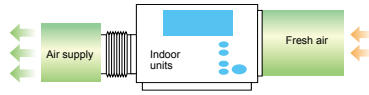
Plenum box	Air filter	EXV	Drain pump	AC motor	DC Motor
/	Standard	Standard (buit-in)	/	Standard	/

300Pa high static pressure,suitable for large space



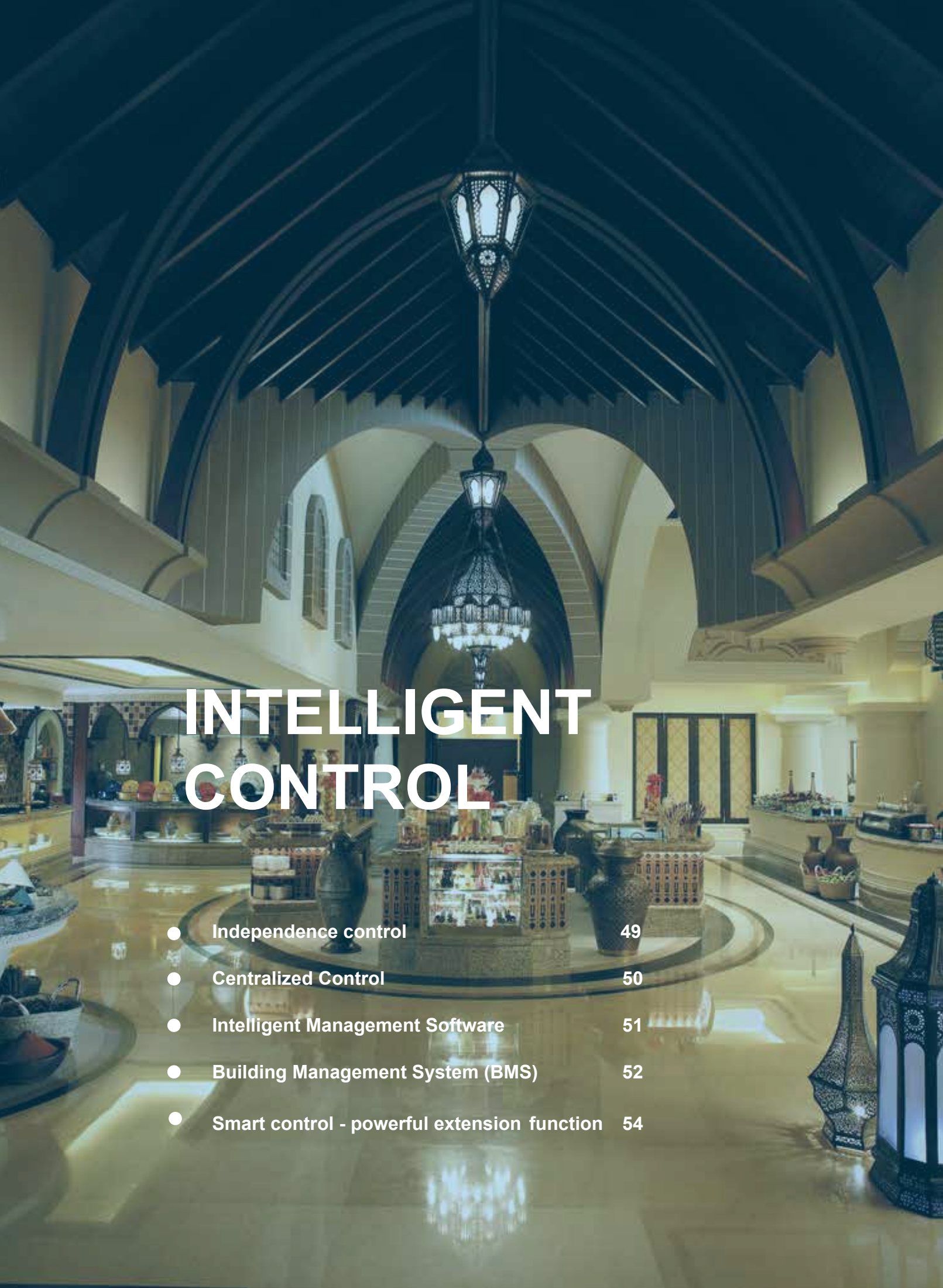
Flexible air outlet

Automatic fresh air introduction,inprove 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-020	TMDF 500A-030	TMDF 600A-020	TMDF 600A-030
Capacity	Cooling	kW	25.0	28.0	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	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		m^3/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	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	B
Connecting pipe	Liquid pipe	mm	φ12.70	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	φ28.58
	Connection method		Welding	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	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 actural 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

IDU	Model	Picture	Controller					
			Wireless Controller	Signal Receiver	Wired Controller		Zone Controller	Centralized Controller
			TMC311B	TSA-R01	TMC315D	TMC312E	TMC309B	TMC308B
								
Round Flow cassette	TMCF		●	/	●	●	●	●
Two-way cassette	TMCD		●	/	●	●	●	●
One-way cassette	TMCS		●	/	●	●	●	●
Ceiling Floor	TMVX		●	/	●	●	●	●
Wall mounted	TMVW		●	/	/	/	/	●
Slim duct	TMDN-AC		●	●	●	●	●	●
Standard duct	TMDN-AB		●	●	●	●	●	●
High ESP duct	TMDH-AB		●	●	●	●	●	●
Big capacity duct	TMDH-AI		●	●	●	●	●	●
Fresh air Processor	TMDF		●	●	●	●	●	●

Note: ○ Means Standard, ● Means Optional

Intellgent Control

Independence Control

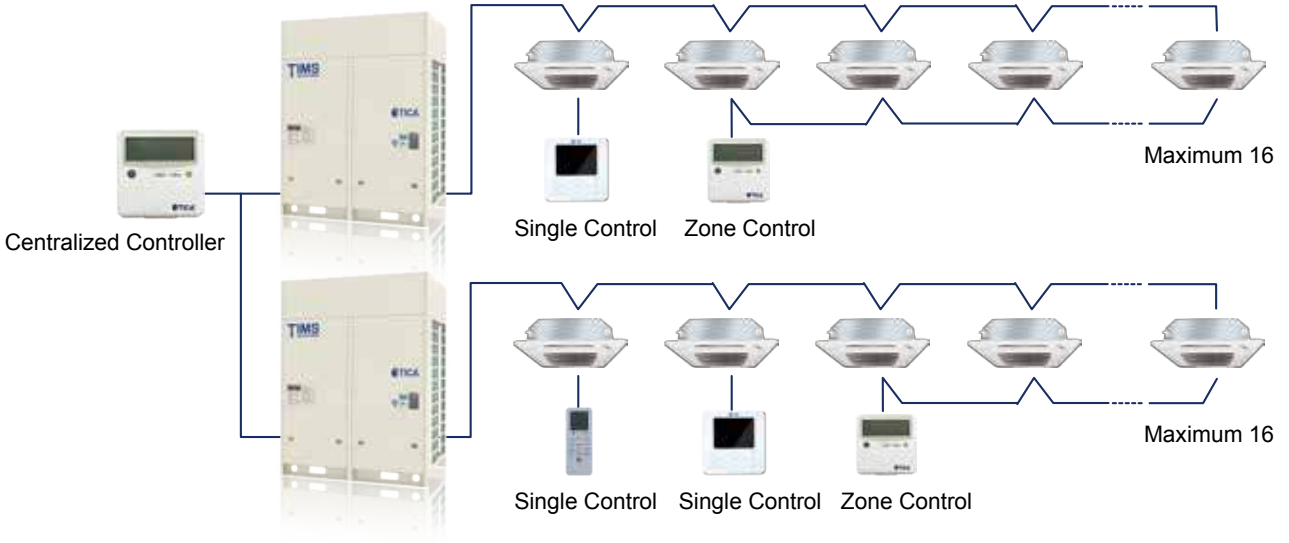
- Optional contact keys look attractive and simply operation
- Run, stop, temperature setting, swing, sleep, and power failure memory etc.
- Switching among cooling/heating/auto/fan/dehumidification modesfailure memory etc.
- LCD screen showing operating condition
- Temperature setting, timed power-on/-off
- Error codes display
- Filter cleaning reminde
- Back-light display facilitating operation at night

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



Intelligent Management Software

Intelligent Management Software

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

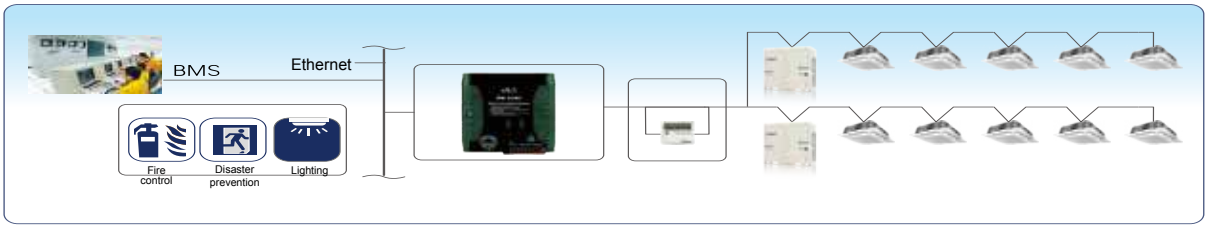
Electricity Charge Distribution Software

- Electricity Charge Distribution 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 Management System (BMS)

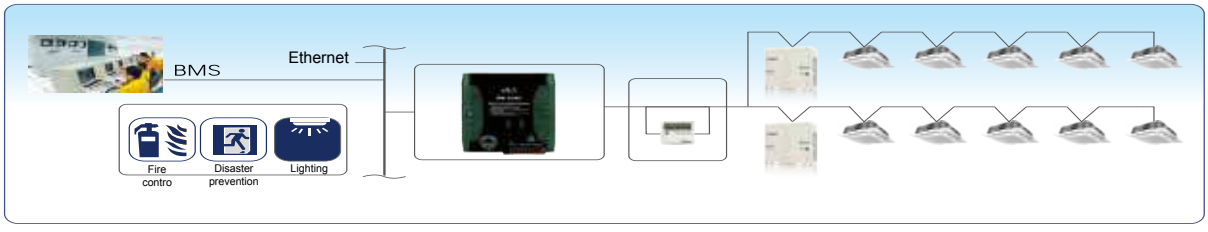
TIMS adopts multiple automatic control systems to access the building automation system easily, and full automatic control of the system is realized through the computer. The control function is powerful, and operations are simple and clear.

LonWorks system



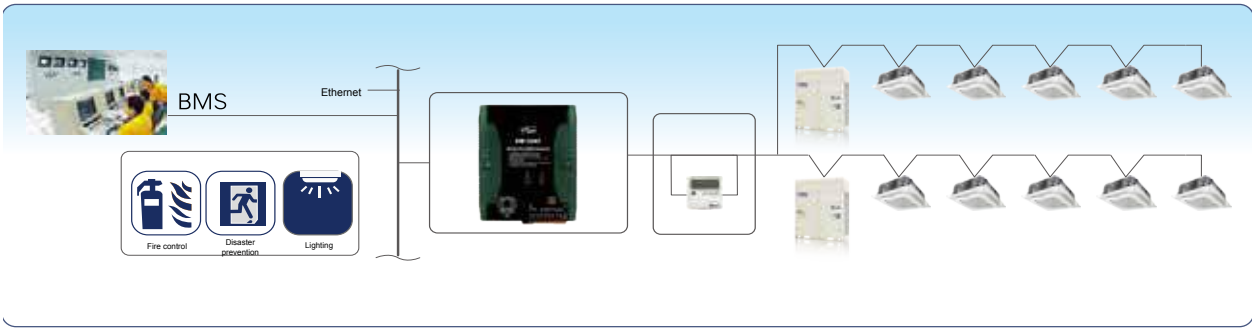
- Connecting to a maximum of 1024 IDUs and 16 sets of ODUs
- Powering on/off the air conditioner, controlling operation, and monitoring the operating status
- Monitoring the IDU fault code
- Monitoring and setting the IDU temperature
- Monitoring and switching the operating mode
- Setting remote controller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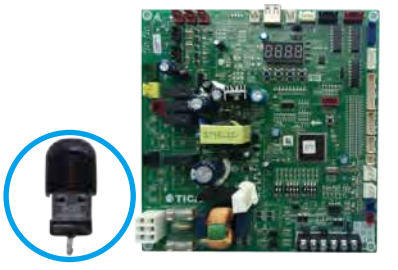
- Perfect schedule management function
- Historical data record
- Schedule control function of week/month/year
- Single-unit or centralized operation, shutdown, temperature setting, mode switching, etc.
- Interlock control (fire alarm, door lock, fault, etc.)

Intelligent 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 pogrom 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.



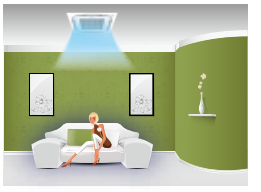
Smart control - powerful extension function

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.

Auto infrared induction

As specifically required, sensitive infrared induction technology may be provided to sense the dynamics in the room and automatically adjust the on/off of the unit, saving valued resources for users.

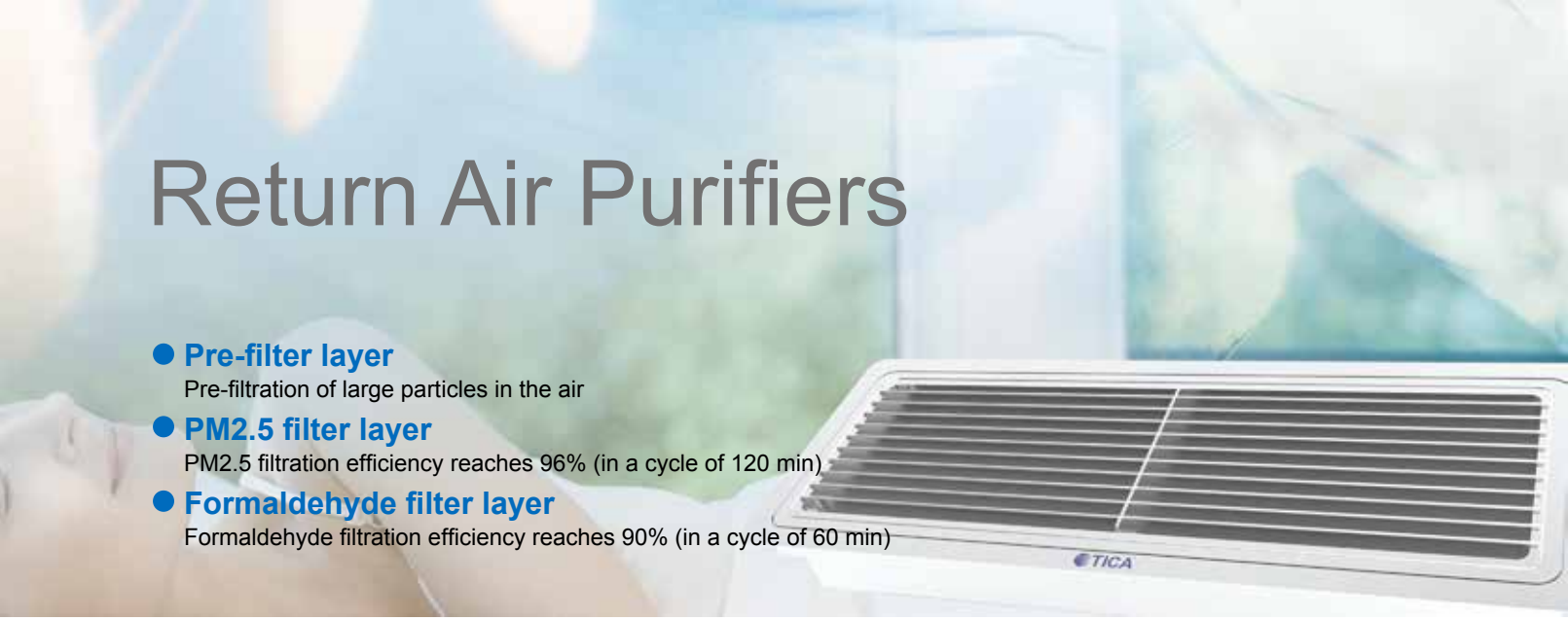


Remote control from tablet

In order to meet the demand for remote control, the user can easily carry out remote control of the unit through respective commands sent to the unit by LAN or INTERNET communication facilities cooperating with ODU communication.

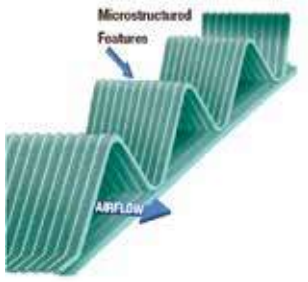
TICA VRF UNIT CLEANING TECHNOLOGY

Return Air Purifiers



- **Pre-filter layer**
  Pre-filtration of large particles in the air
- **PM2.5 filter layer**
  PM2.5 filtration efficiency reaches 96% (in a cycle of 120 min)
- **Formaldehyde filter layer**
  Formaldehyde filtration efficiency reaches 90% (in a cycle of 60 min)

PM2.5 filter layer



- Low resistance: 5 Pa&1m/s, open passage
- Efficiency: The unique electrostatic technology can hold static electricity on the filter material for up to 10 years
- Self-supporting structure, no frame is needed
- 100% synthetic fiber, resistant to moisture and general chemicals
- Environmentally friendly and fungus resistant

Formaldehyde filter layer

- The surface of cellular carrier is uniformly laid with trapping agents to allow quick reaction with aldehyde group
- Aldehydes materials can be removed through chemical reactions to eliminate the possibility of second release due to excessive absorption or heating

Oil fume filter layer

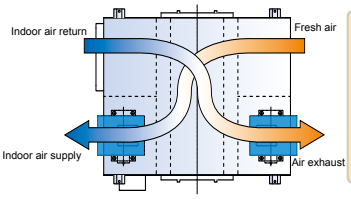
- Resistance ≤ 10 Pa
- Professional anti-fungal and anti-bacterial performance, with antibacterial rate ≥ 90% and anti-fungal class: 0
- Heat & flame resistance with flame retardant grade: UL94HB
- Durable for up to 1,250 hours

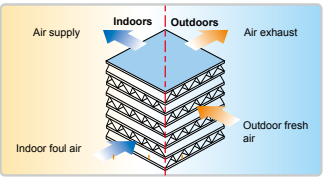
Model	TRP070BPF(K)	TRP090BPF	TRP110BPF	TRP160BPF	TRP220BPF
Material	Al				
Color	White				
Rated Air Volume	540	900	1100	1300	1700
Air Volume Range	340-700	700-900	900-1100	950-1700	1300-2400
Windward fan speed range	0.72-1.49	1.16-1.49	1.23-1.51	1.15-2.06	1.41-2.60
Wind resistance	8.1-23.0	13.0-23.0	15.0-24.0	13.0-39.0	21.0-45.0
Outline dimension	836*276*54	1046*276*54	1246*276*54	1396*276*54	1546*276*54
Connection pipe installation dimensions	786*226	996*226	1196*226	1346*226	1496*226
PM2.5 cyclic efficiency	≥96%				
Formaldehyde cyclic efficiency	≥90%				
Weight	2.8	3.3	3.7	4.0	4.3

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.





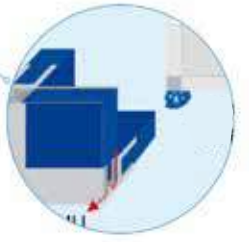
Fresh Air Ventilators of Standard Series

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 Medium-sized High-end Series

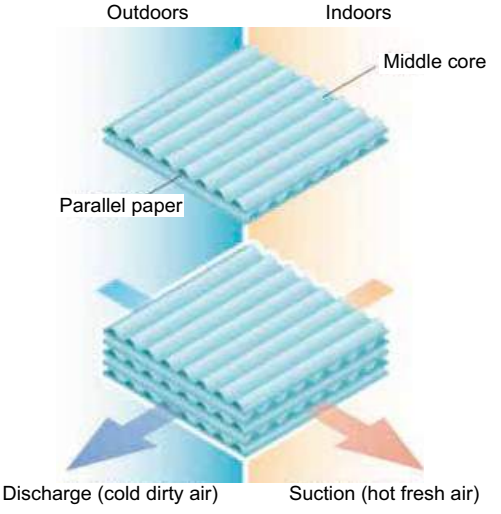
Characteristics:

The air flow range is 1000 m^3/h~6000 m^3/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

Heat exchange principle

The heat recovery core, which is the key part of fresh air ventilator, is formed by cross-laminating single-sided corrugated paper sheets. During laminating, the edge of each single-sided corrugated paper sheet at the corrugated groove direction is rotated by 90° to form two vertical channels with the functional parallel paper in the middle, and fresh air and return air exchange heat and humidity through the functional parallel paper.



Exchange concept graph in cooling mode

Purifying heat recovery fresh air handling unit

Multiple haze removal, healthy home

Must-have for haze removal

More layers of filtering bring more health protection. PM2.5 removal rate of up to 95%.

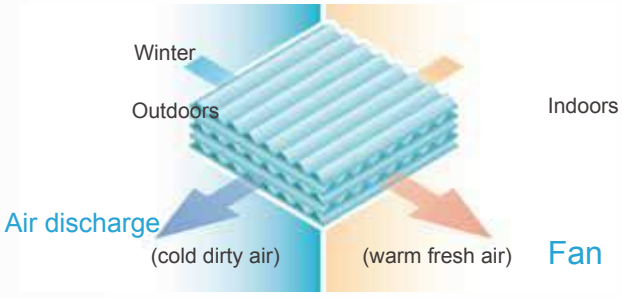
All-round air replacement

Enjoy fresh air without having windows open

The unit is ceiling-mounted in places not that noise-sentimental. With all air ports put indoors, it can ensure that air is supplied and discharged evenly and smoothly.

Efficient energy recovery

Efficient heat exchanger core



- The heat recovery core is formed by cross-laminating and rotating single-sided corrugated paper sheets by 90°. Such core has two vertical paths which leave each other in peace. In this way, the fresh air and return air could go separate ways and heat and humidity can be exchanged.
- Equipped with Japan's latest technology, the parallel paper for such core is uniform in texture and without pores, and shows heat recovery efficiency of 80%.

Parameters of purifying heat recovery fresh air handling unit

Model	TRV015	TRV025	TRV035	TRV050	TRV080
Power supply	220V~50Hz				
Input power W	105	135	276	365/380	550/570
Current A	0.5	0.6	1.25	1.7/1.76	2.5/2.62
Air flow m^3/h	150	250	350	500	800
Purification efficiency	95%	95%	95%	95%	95%
External static pressure (Pa)	80	80	80	50/100	50/100
Heat exchange efficiency (heating/cooling) %	85/67	82/63	80/62	73/61	71/62
Enthalpy exchange efficiency (heating/cooling) %	75/55	72/52	68/51	64/50	65/50
Noise (dB(A))	32	34	39	43	45
Net weight (kg)	24	24	27	53	60

Prestigious Projects in Overseas Market

Sold to more than 50 countries and regions, including Russia, Peru, Chile, Singapore, Georgia, Malaysia, Philippines, Turkey, UAE, etc

Asan Government
Center in Baku AZ

SM Shopping Mall,
Dasmarinas, Philippines

BIOCAD Biopharmaceutical factory in Russia

Asan Government
Center inSumqayit AZ

The Heritage Building, Ministry of Education,
Malaysia

CitiDoctor in Ukraine

Hotel Uzbekistan, Tashkent, Uzbekistan

Shangri La Casino, Tbilisi, Georgia

Abu Dhabi Al Raha Beach hotel

Hard Rock Hotel, Penang, Malaysia

Singapore s IMM Mall

Zamin Bio Health,
the unique insulin factory in Central Asia, Uzbekistan

NANJING TICA CLIMATE SOLUTIONS CO., LTD
Add: No.6 Hengye Road, Development Zone, Nanjing, China
Post: 210046
Tel: +86 25 85508261
E-mail: global@ticachina.com
Website: www.ticachina.com