

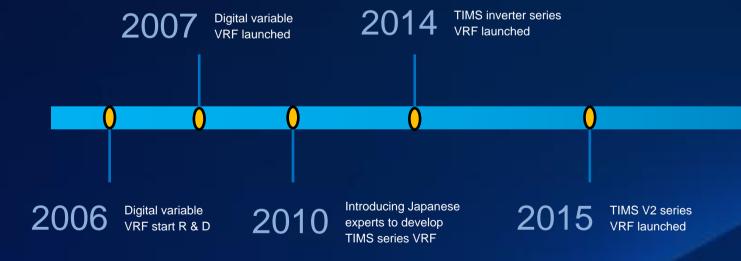


TIMS V6

**Healthy VRF** 

# **VRF Development Process**

# TIMS



2017 TIMS V4 independent EVI series VRF launched

2019 TIMS V6 independent EVI series VRF launched

TIMS V5 module EVI

series VRF launched

2020

The first 22HP single compressor VRF launched in China market



2018

2016

TIMS V3 module

series VRF

launched

Scientific Research Strength

TICA is the first Chinese central air conditioner brand to establish R&D institute in Japan

Engaged in advanced research on technologies of VRF, heat pump water heater, cryo-refrigeration, heat pump chiller, professional ACU, air purifier, etc.; utilizing talents in Japan to promote the development of Chinese central air-conditioning technology.



# Boasting industry-leading CNAS-certified Enthalpy Difference Labs

In accordance with GB, IEC, TUV and CSA standards, adhering to the principles of impartiality, independence and scientific standards as well as people-oriented.







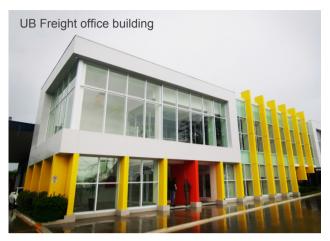


# **Application Solutions**

# **▶** Office Complexes

Enjoy comfort while working





# ► Hotels & Shopping Malls

Increase your business, not your bills

Hotels





Shopping malls





# Factories

# One for Every Factory





# Other Applications

# **Meeting all expectations**

Hospitals



## Schools



## Airports



# INDEX

Outdoor Uint	8
High Efficiency	10
High Reliability	10
Enhanced Comfort	13
Easy Installation And Service	14
Refrigerant Piping	16
TIMS V6 Series Heat Pump	17
Modular Full Inverter ODUs	19
Independent Full Inverter ODUs	25
TIMS Extra Series Heat Pump	26
Side Discharge VRF	28
Top Discharge VRF	29
VRF Mini Series Heat Pump	30
Mini VRF (High-efficiency series)	33
Mini VRF (Classic series)	34
TIMS Series Cooling Only	35
Cooling only VRF	37
Inoor Unit Lineup	40
AHU KIT	41
One-way Cassette	42
Two-way Cassette	44
Round Flow Cassette	46
Slim Duct	48
Medium Static Pressure Duct	50
High Static Pressure Duct	52
Wall Mounted	54
Celling & Floor	56
Full-Fresh Air Handling Unit	58
Fresh air Solutions	60
Heat Recovery Ventilator (HRV)	61
Standard Series Fresh Air Ventilators	62
High-End Series Fresh Air Ventilators	62
TIMS HYplus Healthy Unit	63
Hyplus Healthy Duct	64
Intelligent Control	67
Building Management System (BMS)	69
Intelligent Software	70
Branch Pipe	71



# Outdoor Uint Lineup

		3	4	4.5	5	6	6.5	7	8	9	10	12	14	
	Independent TIMS-CSA	TIMES 400.								•	•	•	•	•
Modular TIMS-AXA  Side discharge TIMS-CSREA  Air cooled - Heat pump  Top discharge TIMS-CSRYA  Mini VRF-Classical TIMS-AHR(A)	Modular TIMS-AXA	TIMSS								•		•	•	
	*TICA								•		•	•		
	Top discharge TIMS-CSRYA	TMSS 4000								•		•	•	•
	Classical	e Totale Alexen	•	•	•	•	•	•	•	•	•			
	Mini VRF-High efficiency TIMS-AHT(A)	e to And Administration of the Control of the Contr		•		•	•	•	•					
Air cooled - Cooling only	TIMS-CXC	4794								•		•	•	•

Single unit

Modular units

# **Outdoor Uint Lineup**

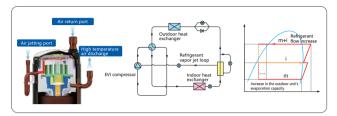
		НР	16	18	20	22	24	26	28	30	32	34	36-48	48-96
	Independent TIMS-CSA	TIMES COL	•	•	•	•	•	•	•	•	•	•		
TIMS-A	Modular TIMS-AXA	TIMES	•	•	•	•	•	•	•	•	•	•	•	•
	Side discharge TIMS-CSREA	₹TCA												
	Top discharge TIMS-CSRYA	TIMES	•											
	Mini VRF- Classical TIMS-AHR(A)	FIGAR												
	Mini VRF-High efficiency TIMS-AHT(A)	FIGAR.												
Air cooled - Cooling only	TIMS-CXC	1794 1725	•	•	•	•	•	•	•	•	•	•	•	

- Single unit
- Modular units

# **High Efficiency**

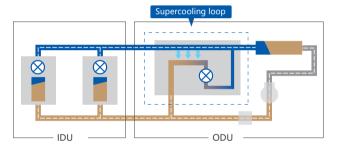
# High Efficiency Enhanced Vapor Injection(EVI)Compressor

The enhanced vapor injection DC inverter compressor increases refrigerant circulation and improves both cooling and heating capacity.



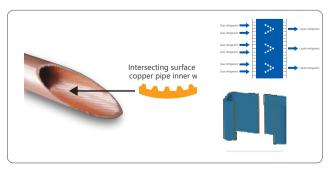
# ▶ Two Stage Subcooling

Plate Heat Exchanger as a secondary intercooler boosts up refrigerant subcooling, achieving 12°C stage-1 subcooling, and 20°C stage-2 subcooling. The total subcooling degree reaches 32°C.



# High Efficiency double C-Type Heat Exchanger

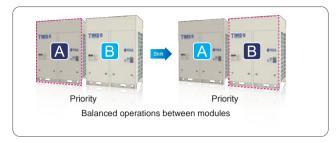
- High efficiency copper pipe with internal thread
- Corrugated fins with openings ,increasing heat exchanging area 15%.
- Specially designed TWO-TO-ONE refrigerant loop, decreasing refrigerant flow resistance.
- Double C type heat exchanger with 6 sides heat exchanging.

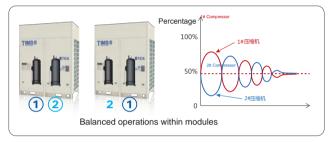


# **High Reliability**

# Duty Cycling

Duty cycling equalizes the running time of the outdoor units in a multiple-unit system and of the compressors in each unit, significantly extending compressor lifespan.





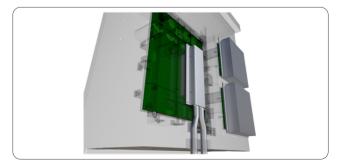
# 8-Stage Oil Return

Eight stages oil return technology ensure safe and reliable running of the system and achieve 99.99% oil return.

- Compressor internal oil separation and return technology
- · Staged oil storage
- Speed-difference cyclone-type centrifugal oil separation
- Equal-resistance gas-liquid separator
- No oil balance pipe
- Smart oil balance design
- Precise oil return control
- Dual-mode intelligent oil return control

# ▶ Micro-HEX technology

With the innovative Micro-HEX refrigerant-cooling scheme and the unique aluminum board heat dissipation technology, the temperature difference between the IPM module and the refrigerant (usually 30~55°C) can be reduced to less than 5°C, guaranteeing the stable and safe running of the control system.



# **Back-up Operation**

### • Compressor back-up

When one of the ODU compressors is faulty, the other compressor can start emergency operation.



#### • Fan back-up

When one of the ODU fans is faulty, the other fan can start emergency operation.



#### Unit back-up

For a modular unit, when one of the ODU is faulty, the other ODU can start emergency operation.



# **▶** Electrical Components Highly **Integrated Design**

Multiple electrical components are integrated into a single board, the integrated design can reduce the wiring connections greatly, making the electrical wiring more simple and reliable.



# Precise detection of refrigerant pressure

The high/low pressure sensor is used to monitor the system refrigerant pressure in real time and make sure that the pressure perfectly fit the DC inverter module, thus guaranteeing more stable operation of the unit.



# **Multiple Protection Function**

Multiple protection function, such as safe ground protection, voltage protection, temperature protection, current protection, pressure protection, compressor overload protection, motor overheat protection, etc., ensuring the system consistently safe and reliable operation.











Current









# **Auto Snow-blowing Function**

The innovatively designed auto snow-blowing function enables the outdoor unit to prevent the accumulation of snow by itself.



# **Dust-clean Function**

The innovatively designed dust-clean function enables the outdoor unit to prevent the dust by itself.



### Anti-corrosion Protection

 To meet the requirements in severe conditions with high humidity and high level of salt fog in places near seas and rivers, TICA ODU casing adopts thickened sheet metal and multiple advanced spraying techniques to effectively improve the corrosion resistance performance and extend the service life of the air conditioning unit.





# Wide Operation Range

### **Wide Capacity Range**

TICA VRF has an extensive capacity ranging from 3HP to 96HP, meeting all customer requirements from small to large buildings.

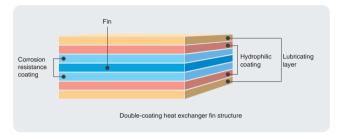


## Wide Temperature Range

With an ultra-wide operating range of the ODU (cooling: -5°C to +56°C; heating: -30°C to +26°C), the unit can flexibly respond to the changing outdoor temperature with enhanced stability and applicability.



• The corrosion-resistant layer can effectively slow down the corrosion of heat exchanger by corrosive gases. Thanks to the hydrophilic layer, frosting is less likely to happen during heating operation of the air conditioner, and the drainage during defrosting is more convenient. The lubricating layer can break the surface tension of water, speed up the dropping of condensing water or frostturned water.



 The IDU panel passed the anti-aging test. This ensures that, in everyday use, the panel does not age under strong UV, high temperature, or high humidity conditions.



#### Wide Range of Indoor Units

TICA provides 16 types and more 170 models of VRF indoor units to meet varied customer requirements in a wide range of locations including offices, shopping malls, hospitals and cinemas.



# **Enhanced Comfort**

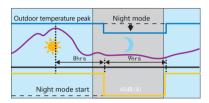
# Advanced Silent Technology

### • 16 professional noise reduction technologies

- 1 High-efficiency low-noise DC inverter compressor
- 2 Stepless brushless DC motor
- 3 Motor bracket with off-resonance framer
- 4 Unique air injection noise reduction
- Omni-directional acoustical enclosure
- 6 New guide ring
- 750mm large fan
- 8 Refrigerant flow noise reduction

#### 3 silent modes

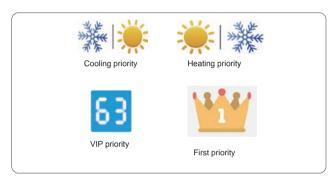
Night silent mode Forced silent mode Smart silent mode



- 9 Low noise priority mode
- 10 Three silent modes: Smart/Night/Forced Silent
- 11 Compressor jet loop noise reduction
- 12 180° sine wave control for quiet operation of compressor
- 3 3D simulation pipe vibration reduction
- 14 Streamlined air outlet grille
- 15 ODU casing anti-vibration design
- 16 Fan anti-vibration with CFD

# Multiple Priority Modes

Multiple priority modes settings, provide more freedom and convenience to match the customer needs.



# ► Intelligent Defrosting Technology

#### TCC defrosting

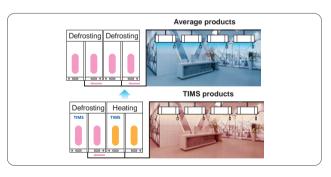
The innovative TCC defrosting technology of TICA adopts the non-stop method for defrosting. Modular units do not need to switch to the cooling mode for defrosting in winter. (patent No.: ZL 2013 2 0344961.5)

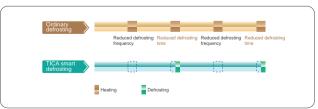
### • Smart defrosting/defrosting self-adapting

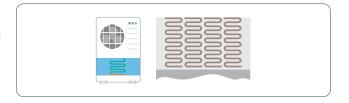
Temperature sensors and pressure sensors in the system can effectively reduce the times of defrosting, prolong the heating period, and improve the heating efficiency. The defrosting duration can be shortened to 3 to 5 minutes.

# Anti-frosting at the bottom

The ice water mixture at the bottom of unit can be completed removed during defrosting in heating mode in winter, so as to avoid impact on the heating capacity, improve the unit stability, and shorten the defrosting duration by 30%.



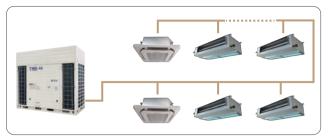




# **Easy Installation And Service**

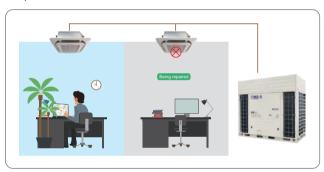
# Auto Addressing

Outdoor units can distribute addresses to indoor units automatically. Remote and wired controllers can be used to query or modify each indoor unit's address.



### Maintenance Fucntion

The maintenance function allows the shutdown of some indoor units without shutting down the whole VRF system. the maintenance function can be activated on site during maintenance period as the remaining indoor units continue to operate.



# ► Four-Way Piping Connection

A four-direction space is available for connecting pipes in various installation sites.



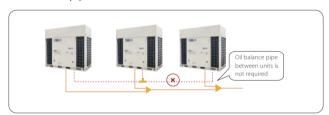
# Black Box Technology

The professional "black box" data saving device is provided to store data related to unit operation of up to ten years. In this way, data can be read conveniently during aftersales maintenance and debugging. Program upgrade can be intelligently completed by directly inputting the control program to the black box through relevant ports.



# Oil Balance Pipe Not Required

With the new oil management system, there is no need of oil balance pipe.



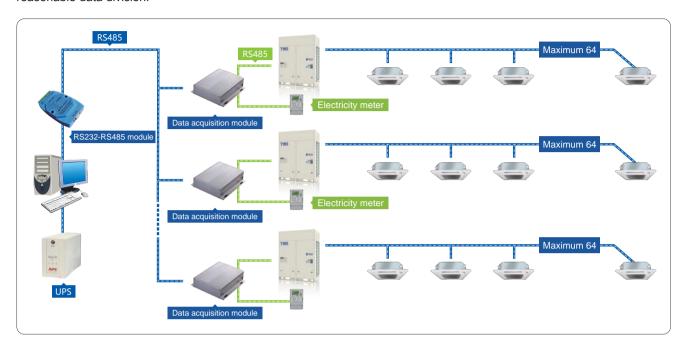
# ► High External Static Pressure

The static pressure of the outdoor unit can be up to 110Pa which facilitates installation of the unit on each floor of high-rise building or on balconies.



# ► Household-Based Charging System

For large apartments, hotels, multi-storey tenants, TICA can provide professional electricity billing system, according to the operation of indoor and outdoor machines, electronic valve opening and other information, to achieve scientific and reasonable data division.



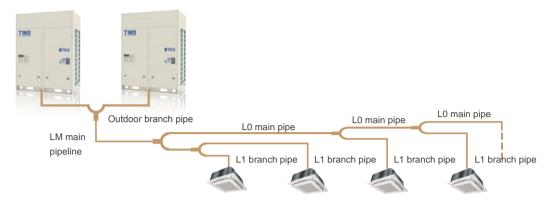
# ► Intelligent Interlocking For Hotels

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.



# **Simple Design Of Refrigerant Piping**

ODU main pipe and IDU branch pipe are selected based on the specifications table. When longer pipes are required, refer to the installation manual.



# ► Main pipeline design for modular series

Total Capacity (kW) of Downstream IDUs	Liquid Pipe Specifications (mm)	Gas Pipe Specifications (mm)	Branch pipe selection
X<16.8	Ф 9.52	Ф 15.88	TBP4022TA
168≤X<22.5	Ф 9.52	Ф 19.05	TBP4022TA
22.5≤X<33.0	Ф 9.52	Ф 22.23	TBP4033TA
33.0≤X<46.0	Ф 12.7	Ф 25.40	TBP4072TA
46.0≤X<67.0	Ф 15.88	Ф 28.58	TBP4072TA
67.0≤X<86.0	Ф 19.05	Ф 31.75	TBP4073TA
86.0≤X<114.0	Ф 19.05	Ф 34.92	TBP4073TA
114.0≤X<140.0	Ф 19.05	Ф 38.10	TBP4073TA
X≥140.0	Ф 19.05	Ф 41.30	TBP4073TA

# ► Main pipeline design for independent series

Total Capacity (kW) of Downstream IDUs	Liquid pipe specifications (mm)	Air pipe specifications (mm)	Branch pipe selection	
X<16.8	Ф 9.52	Ф 15.88	TBP4022TA	
16.8≤X<22.5	Ф 9.52	Ф 19.05	TBP4022TA	
22.5≤X<33.0	Ф 9.52	Ф 22.23	TBP4033TA	
33.0≤X<46.0	Ф 12.70	Ф 25.40	TBP4072TA	
46.0≤X<67.0	Ф 15.88	Ф 28.58	TBP4072TA	
67.0≤X<86.0	Ф 19.05	Ф 31.75	TBP4073TA	
X≥86.0	Ф 19.05	Ф 31.75	TBP4073TA	





Fresh Air Processing Unit 100% fresh air supply



Ventilation Heat recovery ventilator (HRV)



AHU Connection Kit
Connect to TICA DX AHU



Control Systems
Smart control systems



# TIMS V6 Series Heat Pump

Optimized design for small to large buildings

- Enhanced Vapor Injection (EVI) Compressor
- ► High Efficiency Double C-Shape Heat Exchanger
- ESP up to 110Pa
- Two Stage Subcooling
- ► Eight Stage Oil Return
- ► Multi Silent Technologies
- Duty Cycling
- Auto Addressing
- Backup Operation
- Multi Protection
- Anti-Corrosion
- Micro-HEX Technology
- ► TCC defrost with non-stop
- Auto Snow-blowing Function
- Dust-clean Function
- Precise detection of refrigerant pressure
- ► Black Box Technology
- ► BMS
- ► Household-based charging system
  - Intelligent Interlocking for Hotels

# **▶** Wide Capacity Range

Starting at 8HP, capacity increases in 2HP increments up to 96HP.

8/10/12HP (single compressor single fan )



14/16/18HP (single compressor single fan )



20/22HP (single compressor dual fans)



24/26/28/30/32/34HP (dual compressors dual fans)



16-64HP

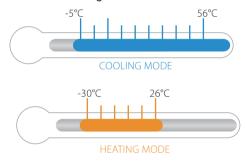


24-96HP



# Wide Operating Temperature Range

TIMS V6 VRF can operate stably in a wide ambient temperature range: from -5°C to 56°C in cooling mode and from -30°C to 26°C in heating mode.



# ▶ Long Piping Capability



Piping length	Capabllity (m)
Maximum actual single piping length	200 m
Maximum equivalent single piping length	240 m
Maximum piping (total)	1100 m
Maximum height difference of IDU and ODU	110 m
Maximum height difference of IDUs	30 m
Maximum allowed length pipe after the first branch pipe	90 m*

<sup>\*</sup>Check relevant technical documents or consult technicians.

Mod	lel		TIMS080AXA	TIMS100AXA	TIMS120AXA	TIMS140AXA	TIMS160AXA	
HF	)		8	10	12	14	16	
Combinat	ion type		-	-	-	-	-	
Power supply /				38	0-415 / 3 / 50 (60	)Hz)		
	Capacity	kW	25.2	28.0	33.5	40.0	45.0	
*1 Cooling	Power input	kW	5.5	6.8	8.7	10.3	12.2	
	EER	/	4.6	4.1	3.9	3.9	3.7	
	Capacity	kW	27.0	31.5	37.5	45.0	50.0	
*2 Heating	Power input	kW	5.4	6.6	8.3	10.3	12.2	
	COP	/	5.0	4.8	4.5	4.4	4.1	
Connectable indoor unit	Total capacity	kW		50%-130	% of outdoor un	it capacity		
Compressors	Type	/	DC Inverter					
Compressors	Quantity	/	1	1	1	1	1	
Fan motors	Type	/	DC					
Fan motors	Quantity	/	1	1	1	1	1	
Airflow rate		m³/h	12000 13980					
Net dimensions (W*D*H)		mm	9	30×860×1690	1240×860×1690			
Packed dimensions (W*D*H)		mm	9	90×920×1750		1300×92	20×1750	
Sound pressure level		dB (A)	45 ~ 5	56	45 ~ 57	45 ~ 59	45~60	
Pipe connections	Liquid pipe	mm	φ9.5	2	φ12.70	φ12	2.70	
Fipe connections	Gas pipe	mm	φ22.2	23	φ25.40	φ28	3.58	
Net weight		kg	225	225	225	290	290	
Gross weight		kg	240	240	240	305	305	
Refrigerant	Type	/			R410A			
	Factory charge	kg	8	8	10	12	12	
Operating temperature range	Cooling	°C			-5~56°C			
Operating temperature range	Heating	°C	-30~26°C					
* 3 Maximum fuse current	MFA	А	20.0	25.0	32.0	40.0	40.0	
* 3 Minimum line current	MCA	А	17.4	21.7	25.8	33.0	35.0	

Mod	el		TIMS180AXA	TIMS200AXAT	TIMS200AXA	TIMS220AXA	TIMS240AXA		
HP	)		18	20	20	22	24		
Combinati	on type		-	-	-	-	-		
Power supply		/		38	0-415 / 3 / 50 (60	OHz)			
	Capacity	kW	50.0	56.0	56.0	61.5	68.0		
*1 Cooling	Power input	kW	13.9	15.8	17.0	18.2	19.0		
	EER	/	3.6	3.6	3.3	3.4	3.6		
	Capacity	kW	56.0	63.0	63.0	69.0	75.0		
*2 Heating	Power input	kW	13.7	15.5	15.7	17.6	18.0		
	COP	/	4.1	4.1	4.0	3.9	4.2		
Connectable indoor unit Total capacity kW				50%-130	% of outdoor un	it capacity			
Compressors	Type	/			DC Inverter				
Compressors	Quantity	/	1	1	2	2	2		
Fan motors	Type	/	DC						
Fall Illotors	Quantity	/	1	2	2	2	2		
Airflow rate		m³/h	13980 25800						
Net dimensions (W*D*H)		mm	1240×860×1690	240×860×1690 1500×860×1690					
Packed dimensions (W*D*H)		mm	1300×920×1750		1560	×920×1750			
Sound pressure level		dB (A)	45~61	45 <sup>-</sup>	-62	62	62		
Pipe connections	Liquid pipe	mm	φ12.70			p15.88			
Fipe confidections	Gas pipe	mm	φ28.58			p28.58			
Net weight		kg	290	345	380	380	380		
Gross weight		kg	305	360	395	395	395		
Refrigerant	Type	/			R410A				
Kemgerant	Factory charge	kg	12	16	16	16	16		
Operating temperature range	Cooling	°C		-	-5~56°C				
——————————————————————————————————————	Heating	°C			-30~26°C				
* 3 Maximum fuse current	MFA	А	50.0	50.0	50.0	63.0	63.0		
* 3 Minimum line current	MCA	А	39.1	43.5	43.5	47.5	52.7		

- Notes:
  1. The nominal cooling capacity is measured under the following conditions: indoor temperature of 27.0 °C DB/19.0 °C WB; outdoor temperature of 35.0 °C
- DB; equivalent refrigerant piping length 10m with zero level difference.

  2. The nominal heating capacity is measured under the following conditions: indoor temperature of 20.0 °C DB; outdoor temperature of 7.0 °C DB/6.0 °C WB; equivalent refrigerant piping length 10m with zero level difference.

  3. Fuse or circuit breaker is selected based on MFA. Electrical wiring is selected based on MCA.

Mod	lel		TIMS260AXA	TIMS280AXA	TIMS300AXA	TIMS320AXA		
HF	)		26	28	30	32		
Combinati	ion type		-	-	-	-		
Power supply				380-415 / 3	/ 50 (60Hz)			
	Capacity	kW	73.0	78.5	85.0	90.0		
*1 Cooling	Power input	kW	20.1	21.8	23.0	25.2		
	EER	/	3.6	3.6	3.7	3.6		
	Capacity	kW	81.5	87.5	95.0	100.0		
*2 Heating	Power input	kW	19.4	21.3	23.5	24.9		
	COP	/	4.2	4.1	4.0	4.0		
Connectable indoor unit	Total capacity	kW	50%-130% of outdoor unit capacity					
Compressors	Type	/		DC Inverter				
Compressors	Quantity	/	2	2	2	2		
Fan motors	Type	/	DC					
	Quantity	/	2	2	2	2		
Airflow rate		m³/h		27	000			
Net dimensions (W*D*H)		mm	1900×860×1690					
Packed dimensions (W*D*H)		mm		1960×9	20×1750			
Sound pressure level		dB (A)	49~64 49~65					
Pipe connections	Liquid pipe	mm		φ19	9.05			
Fipe connections	Gas pipe	mm		φ3	1.75			
Net weight		kg	460	470	470	470		
Gross weight		kg	475	485	485	485		
Refrigerant	Type	/		R4	10A			
Reingerant	Factory charge	kg	18	22	22	22		
Operating temperature range	Cooling	°C		-5~	56°C			
Operating temperature range	Heating	°C	-30~26°C					
* 3 Maximum fuse current	MFA	А	80.0	80.0	80.0	80.0		
* 3 Minimum line current	MCA	А	66.0	68.0	70.1	72.0		

Mod	el		TIMS340AXA	TIMS340AXA	TIMS360AXA	TIMS380AXA				
HF	)		34	34	36	38				
Combinati	ion type		-	18+16	18+18	18+20				
Power supply	Power supply			380-415 / 3 / 50 (60Hz)						
	Capacity	kW	95.0	95.0	100.0	106.0				
*1 Cooling	Power input	kW	25.8	25.8	27.8	29.7				
	EER	/	3.7	3.7	3.6	3.6				
	Capacity	kW	106.0	106.0	112.0	119.0				
*2 Heating	Power input	kW	25.6	25.6	27.4	29.2				
	COP	/	4.1	4.1	4.1	4.1				
Connectable indoor unit	Connectable indoor unit Total capacity kW 50%-130% of outdoor					capacity				
Compressors	/			DC Inverter						
Compressors	Quantity	/	2	2	2	2				
Fan motors	Type	/		DC						
ran motors	Quantity	/	2	2	2	3				
Airflow rate		m³/h	27000	13980-	+13980	13980+25800				
Net dimensions (W*D*H)		mm	1900×860×1690	(1240×86	0×1690)×2	1240×860×1690+1500×860×1690				
Packed dimensions (W*D*H)		mm	1960×920×1750	(1300×92	0×1750)×2	1300×920×1750+1560×920×1750				
Sound pressure level		dB (A)	49~	-65	48~66					
Pipe connections	Liquid pipe	mm			φ19.05					
ripe connections	Gas pipe	mm			φ34.92					
Net weight		kg	475	290+290	290+290	290+345				
Gross weight		kg	490	305+305	305+305	305+360				
Refrigerant	Type	/			R410A					
Reiligerant	Factory charge	kg	23	12+12	12+12	12+16				
Operating temperature range	Cooling	°C		•	-5~56°C					
Operating temperature range	Heating	°C	-30~26°C							
* 3 Maximum fuse current	MFA	А	90.0	90.0	100.0	100.0				
* 3 Minimum line current	MCA	A	74.1	74.1	78.2	82.6				

#### Notes:

- Notes:

  1. The nominal cooling capacity is measured under the following conditions: indoor temperature of 27.0 °C DB/19.0 °C WB; outdoor temperature of 35.0 °C DB; equivalent refrigerant piping length 10m with zero level difference.

  2. The nominal heating capacity is measured under the following conditions: indoor temperature of 20.0 °C DB; outdoor temperature of 7.0 °C DB/6.0 °C WB; equivalent refrigerant piping length 10m with zero level difference.

  3. Fuse or circuit breaker is selected based on MFA. Electrical wiring is selected based on MCA.

Mod	lel		TIMS400AXA	TIMS420AXA	TIMS440AXA	TIMS460AXA		
HF	)		40	42	44	46		
Combinati	ion type		20+20	22+20 (AXA)	22+22	24+22		
Power s	supply			380-415 / 3	5 / 50 (60Hz)			
	Capacity	kW	112.0	117.5	123.0	129.5		
*1 Cooling	Power input	kW	31.5	35.2	36.4	37.2		
	EER	/	3.6	3.3	3.4	3.5		
	Capacity	kW	126.0	132.0	138.0	144.0		
*2 Heating	Power input	kW	30.0	33.4	35.2	35.6		
	COP	/	4.2	4.0	3.9	4.0		
Connectable indoor unit	Total capacity	kW	50%-130% of outdoor unit capacity					
C	/		DC Inverter					
Compressors	Quantity	/	2	4	4	4		
Fan motors	Type	/			C			
	Quantity	/	4	4	4	4		
Airflow rate		m³/h		25800	+25800			
Net dimensions (W*D*H)		mm	(1500×860×1690)×2					
Packed dimensions (W*D*H)		mm		(1560×92	0×1750)×2			
Sound pressure level		dB (A)	48~66 50~67					
Dina annuations	Liquid pipe	mm		φ19	9.05			
Pipe connections	Gas pipe	mm		φ38	3.10			
Net weight		kg	345+345	380+380	380+380	380+380		
Gross weight		kg	360+360	395+395	395+395	395+395		
Deficement	Туре	/		R4	10A			
Refrigerant	Factory charge	kg		16	+16			
Operating townspoture	Cooling	°C		-5~!	56°C			
Operating temperature range	Heating	°C	-30~26°C					
* 3 Maximum fuse current	MFA	А	100.0	113.0	126.0	126.0		
* 3 Minimum line current	MCA	Α	87.0 91.0 95.0 10					

Mod	lel		TIMS480AXA	TIMS500AXA	TIMS520AXA			
HF	)		48	50	52			
Combinat	ion type		24+24	22+28	24+28			
Powers	supply		380-415 / 3 / 50 (60Hz)					
	Capacity	kW	136.0	140.0	146.5			
*1 Cooling	Power input	kW	38.0	40.0	40.8			
	EER	/	3.6	3.5	3.6			
	Capacity	kW	150.0	156.5	162.5			
*2 Heating	Power input	kW	36.0	38.9	39.3			
	COP	/	4.2	4.0	4.1			
Connectable indoor unit Total capacity kW			50	0%-130% of outdoor unit capac	ity			
Compressors	Type	/		DC Inverter				
Compressors	Quantity	/	4	4	4			
Fan motors	Type	/						
ran motors	Quantity	/	4	4	4			
Airflow rate		m³/h	25800+25800	25800-	+27000			
Net dimensions (W*D*H)		mm	(1500×860×1690)×2 1500×860×1690+1900×860×1690					
Packed dimensions (W*D*H)		mm	(1560×920×1750)×2	1560×920×1750-	+1960×920×1750			
Sound pressure level		dB (A)		50~67				
Pipe connections	Liquid pipe	mm	φ19.05	φ22	2.23			
ripe connections	Gas pipe	mm	φ38.10	φ41	1.30			
Net weight		kg	380+380	380-	+470			
Gross weight		kg	395+395	395-	+485			
Refrigerant	Type	/		R410A				
Reingerani	Factory charge	kg	16+16	16-	+22			
Operating temperature range	Cooling	°C		-5~56°C	<u> </u>			
Operating temperature range	Heating	°C		-30~26°C				
* 3 Maximum fuse current	MFA	А	126.0	143.0	143.0			
* 3 Minimum line current	MCA	А	105.4	115.5	120.7			

#### Notes:

- Notes:

  1. The nominal cooling capacity is measured under the following conditions: indoor temperature of 27.0 °C DB/19.0 °C WB; outdoor temperature of 35.0 °C DB; equivalent refrigerant piping length 10m with zero level difference.

  2. The nominal heating capacity is measured under the following conditions: indoor temperature of 20.0 °C DB; outdoor temperature of 7.0 °C DB/6.0 °C WB; equivalent refrigerant piping length 10m with zero level difference.

  3. Fuse or circuit breaker is selected based on MFA. Electrical wiring is selected based on MCA.

Mod	lel		TIMS540AXA	TIMS560AXA	TIMS580AXA		
HF			54	56	58		
Combinat	ion type		24+30	28+28	28+30		
Power s	supply		380-415 / 3 / 50 (60Hz)				
	Capacity	kW	153.0	157.0	163.5		
*1 Cooling	Power input	kW	42.0	43.6	44.8		
	EER	/	3.6	3.6	3.7		
	Capacity	kW	170.0	175.0	182.5		
*2 Heating	Power input	kW	41.5	42.6	44.8		
	COP	/	4.1	4.1	4.1		
Connectable indoor unit	Total capacity	kW	50%-130%	of outdoor unit capacity			
Campragaza	Type	/	DC Inverter				
Compressors	Quantity	/	4	4	4		
Fan motors	Туре	/		DC			
ran motors	Quantity	/	4	4	4		
Airflow rate		m³/h	25800+27000	27000-	+27000		
Net dimensions (W*D*H)		mm	1500×860×1690+1900×860×1690	(1900×86	0×1690)×2		
Packed dimensions (W*D*H)		mm	1560×920×1750+1960×920×1750	(1960×92	0×1750)×2		
Sound pressure level		dB (A)	50~67	50-	~68		
D'accessories and	Liquid pipe	mm		φ22.23			
Pipe connections	Gas pipe	mm		φ41.30			
Net weight	•	kg	380+470	470+470	470+470		
Gross weight		kg	395+485	485+485	485+485		
Defrigerent	Туре	/		R410A			
Refrigerant	Factory charge	kg	16+22	22+22	22+22		
Operating temperature re	Cooling	°C		-5~56°C			
Operating temperature range	Heating	°C	-30~26°C				
* 3 Maximum fuse current	MFA	А	143.0	160.0	160.0		
	MCA	Α	143.0 160.0 160.0 122.8 136.0 138.1				

Mod	lel		TIMS600AXA	TIMS620AXA	TIMS640AXA		
HF	)		60	62	64		
Combinat	ion type		30+30	30+32	32+32		
Powers	supply		380-415 / 3 / 50 (60Hz)				
	Capacity	kW	170.0	175.0	180.0		
*1 Cooling	Power input	kW	45.9	48.2	50.4		
	EER	/	3.7	3.6	3.6		
	Capacity	kW	190.0	195.0	200.0		
*2 Heating	Power input	kW	47.0	48.4	49.8		
	COP	/	4.0	4.0	4.0		
Connectable indoor unit	Total capacity	kW	5	0%-130% of outdoor unit capac	ity		
Туре			DC Inverter				
Compressors	Quantity	/	4	4	4		
Fan anatana	Type	/		DC			
Fan motors	Quantity	/	4	4	4		
Airflow rate		m³/h	27000+27000				
Net dimensions (W*D*H)		mm	(1900×860×1690)×2				
Packed dimensions (W*D*H)		mm	(1960×920×1750)×2				
Sound pressure level		dB (A)	50~68				
Pipe connections	Liquid pipe	mm		φ22.23			
Pipe connections	Gas pipe	mm		φ41.30			
Net weight		kg	470+470	470+470	470+470		
Gross weight		kg	485+485	485+485	485+485		
Refrigerant	Type	/		R410A			
Reingerani	Factory charge	kg	22+22	22+22	22+22		
Cooling		°C		-5~56°C			
Operating temperature range	Heating	°C		-30~26°C			
* 3 Maximum fuse current	MFA	Α	160.0	160.0	160.0		
* 3 Minimum line current	MCA	А	140.2	142.1	144.0		

- 1. The nominal cooling capacity is measured under the following conditions: indoor temperature of 27.0 °C DB/19.0 °C WB; outdoor temperature of 35.0 °C DB; equivalent refrigerant piping length 10m with zero level difference.
- 2. The nominal heating capacity is measured under the following conditions: indoor temperature of 20.0 °C DB; outdoor temperature of 7.0 °C DB/6.0 °C WB; equivalent refrigerant piping length 10m with zero level difference.
- 3. Fuse or circuit breaker is selected based on MFA. Electrical wiring is selected based on MCA.

Mod	el		TIMS660AXA	TIMS680AXA	TIMS700AXA	TIMS720AXA	
HF	)		66	68	70	72	
Combinat	ion type		32+34	34+34	22+24+24	24+24+24	
Power s	upply			380-415 / 3	3 / 50 (60Hz)		
	Capacity	kW	185.0	190.0	197.5	204.0	
*1 Cooling	Power input	kW	51.0	51.5	56.2	57.0	
	EER	/	3.6	3.7	3.5	3.6	
	Capacity	kW	206.0	212.0	219.0	225.0	
*2 Heating	Power input	kW	50.5	51.2	53.6	54.0	
	COP	/	4.1	4.1	4.1	4.2	
Connectable indoor unit	Total capacity	kW	50%-130% of outdoor unit capacity				
Compressors	Type	/ DC Inverter					
Compressors	Quantity	/	4	4	6	6	
Fan motors	Type	/		C	C		
Fair illotors	Quantity	/	4	4	6	6	
Airflow rate		m³/h	2700	00×2	2580	00×3	
Net dimensions (W*D*H)		mm	(1900×86	0×1690)×2	(1500×86	0×1690)×3	
Packed dimensions (W*D*H)		mm	(1960×92	0×1750)×2	(1560×92	0×1750)×3	
Sound pressure level		dB (A)		50	~68		
D	Liquid pipe	mm		φ2:	2.23		
Pipe connections	Gas pipe	mm	φ4	1.3	φ4	4.5	
Net weight		kg	470+475	475+475	380	)×3	
Gross weight		kg	485+490	490+490	395	5×3	
Defricement	Type	/		R4	10A		
Refrigerant	Factory charge	kg	22+23	23+23	16+16+16	16+16+16	
Operating temperature range	Cooling	°C		-5~	56°C		
Operating temperature range	Heating	°C	-30~26°C				
* 3 Maximum fuse current	MFA	А	170.0	180.0	189.0	189.0	
* 3 Minimum line current	MCA	А	146.1	148.2	152.9	158.1	

Mod	del		TIMS740AXA	TIMS760AXA	TIMS780AXA		
HI	<b>D</b>		74	76	78		
Combina	tion type		24+24+26	24+26+26	26+26+26		
Power	supply		380-415 / 3 / 50 (60Hz)				
	Capacity	kW	209.0	214.0	219.0		
*1 Cooling	Power input	kW	58.1	59.2	60.4		
	EER	/	3.6	3.6	3.6		
	Capacity	kW	231.5	238.0	244.5		
*2 Heating	Power input	kW	55.4	56.8	58.3		
	COP	/	4.2	4.2	4.2		
Connectable indoor unit	Total capacity	kW	50	%-130% of outdoor unit capac	ity		
Compressors	Туре	/		DC Inverter			
Compressors	Quantity	/	6	6	6		
Fan motors	Туре	/	DC				
ran motors	Quantity	/	6	6	6		
Airflow rate		m³/h	25800×2+27000	25800+27000×2	27000×3		
Net dimensions (W*D*H)		mm	(1500×860×1690)×2+ 1900×860×1690	1500×860×1690+ (1900×860×1690)×2	(1900×860×1690)×3		
Packed dimensions (W*D*H)		mm	(1560×920×1750)×2+ 1960×920×1750	1560×920×1750+ (1960×920×1750)×2	(1960×920×1750)×3		
Sound pressure level		dB (A)		50~68			
Pipe connections	Liquid pipe	mm		φ22.23			
Pipe connections	Gas pipe	mm		φ44.5			
Net weight		kg	380×2+460	380+460×2	460×3		
Gross weight		kg	395×2+475	395+475×2	475×3		
Defrigerent	Туре	/					
Refrigerant	Factory charge	kg	16+16+18	16+18+18	18+18+18		
Operating temperature range	Cooling	°C		-5~56°C			
Operating temperature range	Heating	°C		-30~26°C			
* 3 Maximum fuse current	MFA	Α	206.0	223.0	240.0		
* 3 Minimum line current	MCA	А	171.4	184.7	198.0		

- 1. The nominal cooling capacity is measured under the following conditions: indoor temperature of 27.0 °C DB/19.0 °C WB; outdoor temperature of 35.0 °C DB; equivalent refrigerant piping length 10m with zero level difference.

  2. The nominal heating capacity is measured under the following conditions: indoor temperature of 20.0 °C DB; outdoor temperature of 7.0 °C DB/6.0 °C WB; equivalent refrigerant piping length 10m with zero level difference.

  3. Fuse or circuit breaker is selected based on MFA. Electrical wiring is selected based on MCA.

Mod	el		TIMS800AXA	TIMS820AXA	TIMS840AXA	TIMS860AXA	TIMS880AXA
HF	)		80	82	84	86	88
Combinat	on type		26+26+28	26+26+30	26+26+32	28+28+30	28+30+30
Power s	upply			38	0-415 / 3 / 50 (60H	Hz)	
	Capacity	kW	224.5	231.0	236.0	242.0	248.5
*1 Cooling	Power input	kW	62.0	63.2	65.4	66.6	67.7
	EER	/	3.6	3.7	3.6	3.6	3.7
	Capacity	kW	250.5	258.0	263.0	270.0	277.5
*2 Heating	Power input	kW	59.0	62.3	63.7	66.1	68.3
	COP	/	4.2	4.1	4.1	4.1	4.1
Connectable indoor unit	Total capacity	kW		50%-130	0% of outdoor unit	capacity	
Compressors	Type	/			DC Inverter		
Compressors	Quantity	/	6	6	6	6	6
Fan motors	Type	/	DC				
1 all filotors	Quantity	/	6	6	6	6	6
Airflow rate		m³/h			27000×3		
Net dimensions (W*D*H)		mm		(	(1900×860×1690)	<b>&lt;</b> 3	
Packed dimensions (W*D*H)		mm		(	1960×920×1750)×	:3	
Sound pressure level		dB (A)			50~68		
Pipe connections	Liquid pipe	mm			φ25.4		
ripe connections	Gas pipe	mm			φ50.8		
Net weight		kg		460+460+470		470+47	70+470
Gross weight		kg		475+475+485		485+48	85+485
Refrigerant	Type	/			R410A		
Kenigerant	Factory charge	kg		18+18+22		22+2	2+22
Operating temperature range	Cooling	°C			-5~56°C		
Operating temperature range	Heating	°C	-30~26°C				
* 3 Maximum fuse current	MFA	А	240.0	240.0	240.0	240.0	240.0
* 3 Minimum line current	MCA	А	200.0	202.1	204.0	206.1	208.2

Mod	el		TIMS900AXA	TIMS920AXA	TIMS940AXA	TIMS960AXA		
HF	)		90	92	94	96		
Combinati	on type		30+30+30	30+30+32	30+32+32	32+32+32		
Power s	upply			380-415 / 3	/ 50 (60Hz)			
	Capacity	kW	255.0 260.0		265.0	270.0		
*1 Cooling	Power input	kW	68.9	71.1	73.4	75.6		
	EER	/	3.7	3.7	3.6	3.6		
	Capacity	kW	285.0	290.0	295.0	300.0		
*2 Heating	Power input	kW	70.5	71.9	73.3	74.7		
	COP	/	4.0	4.0	4.0	4.0		
Connectable indoor unit	Total capacity	kW		50%-130% of out	door unit capacity			
Compressors	Type	/		DC Ir	verter			
Compressors	Quantity	/	6	6	6	6		
Fan motors	Type	/		DC				
Fall Illotors	Quantity	/	6	6	6	6		
Airflow rate		m³/h	27000×3					
Net dimensions (W*D*H)		mm	(1900×860×1690)×3					
Packed dimensions (W*D*H)		mm		(1960×92	0×1750)×3			
Sound pressure level		dB (A)		50	~68			
Pipe connections	Liquid pipe	mm	φ25.4					
Pipe connections	Gas pipe	mm		φ5	0.8			
Net weight		kg		470+4	70+470			
Gross weight		kg		485+4	85+485			
Defricement	Type	/		R4	10A			
Refrigerant	Factory charge	kg		22+2	22+22			
Operating temperature range	Cooling	°C		-5~!	56°C			
Operating temperature range Heating		°C	-30~26°C					
* 3 Maximum fuse current	MFA	А	240.0	240.0	240.0	240.0		
* 3 Minimum line current	MCA	А	210.3	212.2	214.1	216.0		

- 1. The nominal cooling capacity is measured under the following conditions: indoor temperature of 27.0 °C DB/19.0 °C WB; outdoor temperature of 35.0 °C DB; equivalent refrigerant piping length 10m with zero level difference.

  2. The nominal heating capacity is measured under the following conditions: indoor temperature of 20.0 °C DB; outdoor temperature of 7.0 °C DB/6.0 °C WB;
- equivalent refrigerant piping length 10m with zero level difference.

  3. Fuse or circuit breaker is selected based on MFA. Electrical wiring is selected based on MCA.

# **Independent Full Inverter ODUs**

Мос	del		TIMS080 CSA	TIMS100 CSA	TIMS120 CSA	TIMS140 CSA	TIMS160 CSA	TIMS180 CSA	TIMS200 CSA	TIMS220 CSA
HI	>		8	10	12	14	16	18	20	22
Power Supp	oly	/				380-415 / 3	3 / 50(60Hz)			
	Capacity	kW	25.2	28.5	33.5	40.0	45.0	50.4	56	61.5
*1 Cooling	Power input	kW	5.5	6.8	8.6	10.3	12.1	13.6	15.77	17.87
	EER	/	4.6	4.2	3.9	3.9	3.7	3.7	3.6	3.4
	Capacity	kW	27.0	31.5	37.5	45.0	50.0	56.0	63	69
*2 Heating	Power input	kW	5.4	6.6	8.3	10.3	12.2	13.7	15.5	17.3
	COP	/	5.0	4.8	4.5	4.4	4.1	4.1	4.1	4.0
Connectable indoor unit	Total capacity	kW			50%	-130% of out	door unit cap	acity		
Communication	Туре	/	DC Inverter							
Compressors	Quantity	/	1	1	1	1	1	1	1	1
Fan motors	Туре	/		DC						
ran motors	Quantity	/	1	1	1	1	1	1	2	2
Airflow rate		m³/h		12000			13980		258	300
Net dimensions (W*D*H)		mm	930×860×1690 1240×860×1690			1500×8	60×1690			
Packed dimensions (W*D*H	)	mm	990×920×1750 1300×920×1			300×920×175	50 1560×920×1750			
Sound pressure level		dB (A)	5	6	57	59	60	61	6	2
Dina connections	Liquid pipe	mm		φ9.52			φ12.70		φ1	5.88
Pipe connections	Gas pipe	mm	φ22	2.23	φ25.40		φ28.58		φ28	3.58
Net weight		kg	225	225	225	290	290	290	345	350
Gross weight		kg	240	240	240	305	305	305	360	365
Defriesment	Туре	/				R4	10A			
Refrigerant	Factory charge	kg	8	8	10	12	12	12	16	16
Operating temperature	Cooling	°C				-5~	56°C			
range	Heating	°C				-30~	·26°C			
* 3 Maximum fuse current	MFA	А	20.0	25.0	32.0	40.0	40.0	50.0	50.0	63
* 3 Minimum line current	MCA	А	17.4	21.7	25.8	33.0	35.0	39.1	43.5	47.5

Mod	del		TIMS240 CSA	TIMS260 CSA	TIMS280 CSA	TIMS300 CSA	TIMS320 CSA	TIMS340 CSA	
HF	<b>D</b>		24	26	28	30	32	34	
Power Supp	oly	/			380-415 / 3 /	50(60Hz)			
	Capacity	kW	68.0	73.0	78.5	85.0	90.0	95.0	
*1 Cooling	Power input	kW	19.0	20.1	21.8	23.0	25.2	25.8	
	EER	/	3.6	3.6	3.6	3.7	3.6	3.7	
	Capacity	kW	75.0	81.5	87.5	95.0	100.0	106.0	
*2 Heating	Power input	kW	18.0	19.4	21.3	23.5	24.9	25.6	
	COP	/	4.2	4.2	4.1	4.0	4.0	4.1	
Connectable indoor unit	Total capacity	kW		50	%-130% of outdo	or unit capacity			
Compressors	Туре	/			DC Inve	erter			
Compressors	Quantity	/	2	2	2	2	2	2	
Fan motors	Type	/			DC				
Fair illotois	Quantity	/	2	2	2	2	2	2	
Airflow rate		m³/h	25800			27000			
Net dimensions (W*D*H)		mm	1500×860×1690			1900×860×1690			
Packed dimensions (W*D*F	H)	mm	1560×920×1750			1960×920×1750			
Sound pressure level		dB (A)	45~64	49	~65		49~65		
Pipe connections	Liquid pipe	mm	φ15.88			φ19.05			
ripe connections	Gas pipe	mm	φ28.58		φ31	1.75		φ34.92	
Net weight		kg	380	460	470	470	470	475	
Gross weight		kg	395	475	485	485	485	490	
Refrigerant	Type	/			R410	A			
Kenigerani	Factory charge	kg	16	18	22	22	22 22 23		
Operating temperature	Cooling	°C			-5~56				
range	Heating	°C		-30~26°C					
* 3 Maximum fuse current	MFA	А	63.0	80.0	80.0	80.0	80.0	80.0	
* 3 Minimum line current	MCA	Α	52.7	66.0	68.0	70.1	72.0	74.0	

- 1. The nominal cooling capacity is measured under the following conditions: indoor temperature of 27.0 °C DB/19.0 °C WB; outdoor temperature of 35.0 °C DB; equivalent refrigerant piping length 10m with zero level difference.

  2. The nominal heating capacity is measured under the following conditions: indoor temperature of 20.0 °C DB; outdoor temperature of 7.0 °C DB/6.0 °C WB;
- equivalent refrigerant piping length 10m with zero level difference.

  3. Fuse or circuit breaker is selected based on MFA. Electrical wiring is selected based on MCA.





Fresh Air Processing Unit 100% fresh air supply



Ventilation Heat recovery ventilator (HRV)



AHU Connection Kit
Connect to TICA DX AHU



Control Systems
Smart control systems



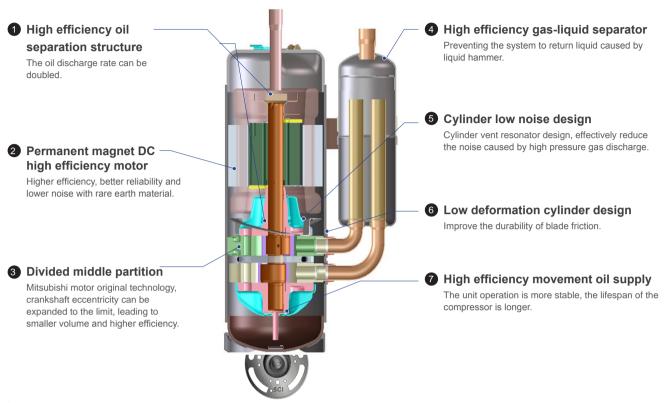
# TIMS Extra Series Heat Pump

Optimized design for middle-sized buildings

- Side-discharge and Top-discharge Options
- Twin rotary DC inverter compressor
- ► ESP up to 110Pa (Top-discharge units only)
- ► Two Stage Subcooling
- Six Stage Oil Return
- Multi Silent Technologies
- ► Auto Addressing
- Multi Protection
- ► Anti-Corrosion
- ▶ Micro-HEX Technology
- ➤ Dust-clean Function
- Precise detection of refrigerant pressure
- ► Black Box Technology
- ► BMS
- Household-based charging system
- ► Intelligent Interlocking for Hotels(Top-discharge units only)

# ▶ DC inverter compressor

All series units adopt Mitsubishi twin rotary compressor with many Mitsubishi patented technologies.



# Wide Capacity Range

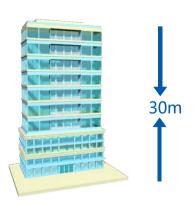
TIMS Extra has two options, side-discharge and top-discharge. For side-discharge type, it has three models, 25.2/28.5/33.5kW. For top-discharge type, it has five models, 25.2/28.5/33.5kW.

Side discharge type	Top discharge type				
25.2/28.5/33.5kW	25.2/28.5/33.5kW	40.0/45.0kW			
\$TEA	TIMES	TIMSS CITICAL OF THE STATE OF T			

# **▶** Long Piping Capability

Maximum piping (total)	1100m
Maximum equivalenFsingle piping length	240m
Maximum height difference of IDU and ODU	110m
Maximum height difference of IDUs	30m

<sup>\*</sup> Check relevant technical document or consul technicians.



# **Side Discharge VRF**

Mo	odel		TIMS252CSREA	TIMS285CSREA	TIMS335CSREA
Power supp	ly	V/N/Hz		380-415/3/50 (60)	
	Capacity	kW	25.2	28.0	33.5
*1 Cooling	Power input	kW	7.1	8.1	10.4
	EER	/	3.6	3.5	3.2
	Capacity	kW	27.0	31.5	37.5
*2 Heating	Power input	kW	6.8	8.4	10.1
	COP	/	4.0	3.8	3.7
Connectable	Total capacity	kW		50%-130% of outdoor unit capacity	у
indoor unit	Max. quantity	/	14	16	19
Compressors	Туре	/		Twin rotary	
Compressors	Quantity	/	1	1	1
Fan motors	Туре	/			
Fair motors	Quantity	/	2	2	2
Airflow rate		m³/h		11300	
Net dimensions (W*D*H)		mm		1100×464×1550	
Packed dimensions (W*D*	H)	mm		1175×582×1666	
Sound pressure level		dB (A)	58	59	60
Pipe connections	Liquid pipe	mm	φ1	2.7	φ12.70
ripe connections	Gas pipe	mm	φ2	2.2	φ25.40
Net weight		kg	168	168	168
Gross weight		kg	175	175	175
Refrigerant	Type	/		R410A	
Kemgerani	Factory charge	kg	7	7	8
Operating temperature	Cooling	°C		-5~54°C	
range	Heating	°C		-23~26°C	
*3 Maximum fuse current	MFA	А	32.0	32.0	32.0
*3 Minimum line current	MCA	А	25.2	25.8	26.5

- 1. The nominal cooling capacity is measured under the following conditions: indoor temperature of 27.0°C DB/ 19.0°C WB; outdoor temperature of 35°C DB.

  2. The nominal heating capacity is measured under the following conditions: indoor temperature of 20.0°C DB; outdoor temperature of 7°C DB./ 6.0°C WB.

  3. Fuse or circuit breaker is selected based on MFA. Electrical wiring is selected based on MCA.

# **Top Discharge VRF**

Mo	odel		TIMS252CSRYA	TIMS285CSRYA	TIMS335CSRYA	TIMS400CSRYA	TIMS450CSRYA		
Power supp	ly	V/N/Hz		380-415/3/50 (60)					
	Capacity	kW	25.2	28.0	33.5	40.0	45.0		
*1 Cooling	Power input	kW	5.6	6.9	8.7	10.4	12.3		
	EER	/	4.5	4.1	3.9	3.9	3.7		
	Capacity	kW	27.0	31.5	37.5	45.0	50.0		
*2 Heating	Power input	kW	5.6	6.7	8.4	10.4	12.2		
	COP	/	4.8	4.7	4.5	4.4	4.1		
Connectable	Total capacity	kW		50%-13	30% of outdoor unit o	apacity			
indoor unit	Max. quantity	/	14	16	19	19	22		
Compressors	Туре	/			Twin rotary				
Compressors	Quantity	/	1	1	1	1	1		
F	Туре	/			DC				
Fan motors	Quantity	/	1	1	1	1	1		
Airflow rate		m³/h		12000		139	980		
Net dimensions (W*D*H)		mm		930×860×1690		1240×86	60×1690		
Packed dimensions (W*D*	H)	mm		990×920×1750		1300×92	20×1750		
Sound pressure level		dB (A)	57	57	57	60	61		
D'	Liquid pipe	mm		φ12.70		φ12	2.70		
Pipe connections	Gas pipe	mm		φ25.40		φ28	3.58		
Net weight		kg		204		26	69		
Gross weight		kg		212		27	77		
Defricement	Туре	/			R410A				
Refrigerant	Factory charge	kg	8	8	8	12	12		
Operating temperature	Cooling	°C			-5~54°C				
range	Heating	°C			-23~26°C				
*3 Maximum fuse current	MFA	А			32.0				
*3 Minimum line current	MCA	А			27.5				

- 1. The nominal cooling capacity is measured under the following conditions: indoor temperature of 27.0°C DB/ 19.0°C WB; outdoor temperature of 35°C DB.

  2. The nominal heating capacity is measured under the following conditions: indoor temperature of 20.0°C DB; outdoor temperature of 7°C DB./ 6.0°C WB.

  3. Fuse or circuit breaker is selected based on MFA. Electrical wiring is selected based on MCA.





Ventilation
Heat recovery ventilator (HRV)



Control Systems
Smart control systems



AHU Connection Kit
Connect to TICA DX AHU





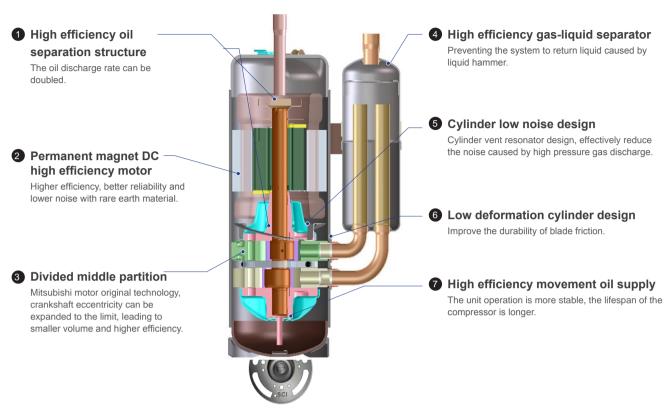
# VRF Mini Series Heat Pump

# Optimized design for small buildings

- ► Two Options: Classic and high efficiency
- ► Capacity Up to 22.4kw
- ► Connectable Indoor Units Quantity up to 11
- ▶ Micro-HEX technology
- ► Oil return without shutdown
- Intelligent defrosting technology
- Advanced silence technology
- Compact, easy installation

# ▶ DC inverter compressor

All series units adopt Mitsubishi twin rotary compressor with many Mitsubishi patented technologies.



# Wide Capacity Range

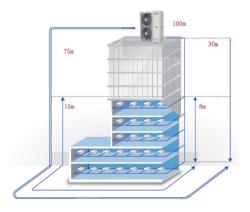
TIMS Extra has two options, classic type and high efficiency type. Forclassic type, capacity ranges from 8kW-22.4kW. For high efficiency type, capacity ranges from 10kW-18kW.

	Classic type	High efficiency type			
8kW	10-16kW	18-22.4kW	10-16kW	18kW	
		OTICARII ANIMARI		STICARII Alexanii	

# **▶** Long Piping Capability

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

<sup>\*</sup> Pls consult the detailed technical documentation or other matters with the relative technicists.



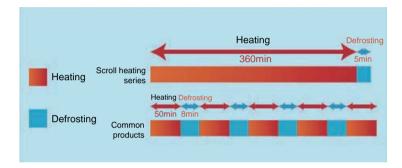
# Compact design

Compact design with three-side heat exchanger, can be easily installed in a small space such as a bay window.



# Intelligent Defrosting

The patented defrosting technology of TICA can increase the refrigerant circulation flow during defrosting, which will shorten the defrosting time and cut down the power consumption.



# **▶** Oil Return On Heating Operation Without Shutdown

TICA adopt 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.



# Mini VRF Specification(High-efficiency series)

Model			TIMS100AHT	TIMS125AHT	TIMS140AHT	TIMS160AHT	TIMS180AHT	TIMS180AHTA		
Power supply /			380-415 / 3 / 50(60)							
*1 Cooling	Capacity	kW	10.0	12.5	14.0	16.0	18.0	18.0		
	Power input	kW	2.9	3.1	3.8	4.7	5.4	5.4		
	EER	/	3.4	4.0	3.7	3.4	3.3	3.3		
	Capacity	kW	12.5	14.0	16.0	18.0	20.0	20.0		
*2 Heating	Power input	kW	3.0	3.2	4.1	4.5	5.3	5.3		
	COP	/	4.2	4.4	3.9	4.0	3.8	3.8		
Connectable Total capacity		kW	50%-130% of outdoor unit capacity							
indoor unit	Max. quantity	/	5	6	7	8	9	10		
Compressors	Туре	/	DC inverter							
Compressors	Quantity	/	1	1	1	1	1	1		
Fan matara	Туре	/	DC							
Fan motors	Quantity	/	1	1	1	1	2	2		
Airflow rate		m³/h	4800	6000	6000	6000	6600	6600		
Net dimensions	(W*D*H)	mm		980×39	980×390×1260					
Packed dimensions (W*D*H) mm		mm	1040×450×900				1040×450×1320			
*3 Sound press	3 Sound pressure level dB (A)		50~54	50~55	52~55	53~56	59~62	59~62		
Pipe Liquid pipe connections Gas pipe		mm	φ9.52					φ9.52		
		mm		φ15	φ19.05					
Net weight		kg	85	85	85	85	120	115		
Gross weight		kg	95	96	96	96	131	126		
Refrigerant	Туре	/	R410A							
Operating	Cooling	°C	-5~54°C							
temperature range	Heating	°C	-25~27°C							

#### Notes:

Notes:

1. The nominal cooling capacity is measured under the following conditions: indoor temperature of 27.0 °C DB/19.0 °C WB; outdoor temperature of 35.0 °C DB; equivalent refrigerant piping length 10m with zero level difference.

2. The nominal heating capacity is measured under the following conditions: indoor temperature of 20.0 °C DB; outdoor temperature of 7.0 °C DB/6.0 °C WB; equivalent refrigerant piping length 10m with zero level difference.

3. Fuse or circuit breaker is selected based on MFA. Electrical wiring is selected based on MCA.

# Mini VRF Specification(Classic series)

Model		TIMS080 AHR	TIMS100 AHR	TIMS112 AHR	TIMS125 AHR	TIMS140 AHR	TIMS160 AHR	TIMS180 AHRA	TIMS200 AHRA	TIMS224 AHRA		
Power supply			220-240/1/50(60)						380-415/3/50(60)			
*1 Cooling	Capacity	kW	8.0	10.0	11.2	12.5	14.0	15.0	18.0	20.0	22.4	
	Power input	kW	2.5	2.9	3.0	3.6	4.1	5.1	5.4	6.6	7.2	
	EER	/	3.2	3.4	3.7	3.5	3.4	3.1	3.3	3.0	3.1	
	Capacity	kW	9.0	11.5	12.5	13.5	16.0	17.0	20.0	22.4	25.0	
*2 Heating	Power input	kW	2.4	3.0	3.1	3.5	4.0	4.9	5.3	6.0	6.7	
	COP	/	3.8	3.8	4.0	3.9	4.0	3.5	3.8	3.7	3.7	
Connectable indoor unit	Total capacity	kW		50%-130% of outdoor unit capacity								
0	Туре	/		DC inverter								
Compressors	Quantity	/	1	1	1	1	1	1		1	1	
Fan motors	Туре	/	DC									
ran motors	Quantity	/	1	1	1	1	1	1	2	2	2	
Airflow rate	Airflow rate m³/h		3000	4800	5400	5400	6000	6000	7200	7200	7200	
Net dimensions	(W*D*H)	mm	865×310×700	980×390×850						980×390×1260		
Packed dimensi (W*D*H)	ons	mm	925×370×770	370×770 1040×450×910					1040×450×1320			
*3 Sound press	ure level	dB (A)	50~53	50~54	50~55	50~55	52~56	53~56	56~59	56~59	56~59	
i ipe   pipe		mm	φ9.52									
connections  Gas pipe mm			φ15.88						φ19.05			
Net weight kg		58	74	78	78	84	84	125				
Gross weight kg		68	68 85 89 89 95 95 136									
Refrigerant	Туре	/		R410A								
Operating	Cooling	°C		-5~54°C								
temperature range	Heating	°C	-25~27°C									

<sup>1.</sup> The nominal cooling capacity is measured under the following conditions: indoor temperature of 27.0 °C DB/19.0 °C WB; outdoor temperature of 35.0 °C DB; equivalent refrigerant piping length 10m with zero level difference.

<sup>2.</sup> The nominal heating capacity is measured under the following conditions: indoor temperature of 20.0 °C DB; outdoor temperature of 7.0 °C DB/6.0 °C WB; equivalent refrigerant piping length 10m with zero level difference.

3. Fuse or circuit breaker is selected based on MFA. Electrical wiring is selected based on MCA.





Fresh Air Processing Unit 100% fresh air supply



Ventilation

Heat recovery ventilator (HRV)



AHU Connection Kit
Connect to TICA DX AHU



Control Systems
Smart control systems



# TIMS Series Cooling Only

Optimized design for small to large buildings

Optimized design High Efficiency Double C-Shape Heat Exchanger

ESP up to 110Pa

Two Stage Subcooling

Six Stage Oil Return

Multi Silent Technologies

Duty Cycling

Auto Addressing

Backup Operation

Multi Protection

Anti-Corrosion

Micro-HEX Technology

Dust-clean Function

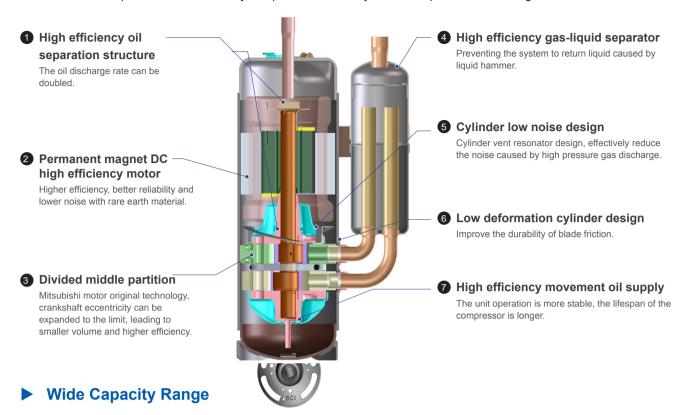
Precise detection of refrigerant pressure

Black Box Technology

Combine freely

# **▶** DC inverter compressor

All series units adopt Mitsubishi twin rotary compressor with many Mitsubishi patented technologies.



For single unit, the capacity is up to 16HP. For combined units, maximum three 16HP units can be combined with capacity up to 48HP.



# Combine freely

TICA cooling only series units can be combined 3 modules freely without any limitation.

# **▶** Wide Operating Temperature Range

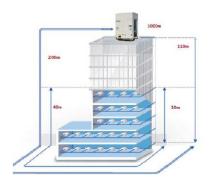
TICA cooling only VRF units can operate stably in a wide ambient temperature range: from -5°C to 55°C.



# Long Piping Capability

Max. height difference between IDU and ODU	ODUup: 110m
Max. Height difference between 1DO and ODO	ODU down: 90m
Max. height difference between IDU and IDU	30m
Max. allowed length pipe after the first branch	40m(90m)
Max. equivalent single piping length	200m
Max. total piping length	1000m

Note: Check relevant technical documents or consult technicians.



# **Cooling only VRF**

N	lodel		TIMS080 CXC	TIMS100 CXC	TIMS120 CXC	TIMS140 CXC	TIMS160 CXC	TIMS180 CXC	TIMS200 CXC	TIMS220 CXC	TIMS 240CXC	TIMS 260CXC
*1 Combinatio	n		-	-	-	-	-	10+8	12+8	12+10	12+12	14+12
Power supply		/					380-4	15 / 3 / 50(6	0)			
	Capacity	kW	25.2	28.0	33.5	40.0	45.0	53.2	56.0	61.5	67.0	73.0
*2 Cooling	Power input	kW	5.6	6.9	8.8	10.6	12.5	12.5	13.8	15.7	17.6	19.4
	EER	/	4.5	4.1	3.8	3.8	3.6	4.3	4.1	3.9	3.8	3.8
Connectable	Total capacity	kW				50	)%-130% of	outdoor uni	t capacity			
indoor unit	Max. quantity	/	14	16	19	19	22	31	33	34	34	36
Compressors	Туре	/					D	C inverter				
Compressors	Quantity	/	1	1	1	1	1	2	2	2	2	2
	Туре	/						DC				
Fan motors	Quantity	/	1	1	1	1	1	2	2	2	2	2
	Max.ESP	Pa						110				
Airflow rate		m³/h		12000		139	980		240	000		25980
Net dimension	s (W*D*H)	mm	9;	30×860×169	90	1240×86	60×1690		(930×860	×1690)×2		(930×860×1690)+ (1240×860×1690)
Packed dimen (W*D*H)	sions	mm	99	90×920×175	50	1300×92	20×1750		(990×920	×1750)×2		(990×920×1750)+ (1300×920×1750)
Sound pressu	e level	dB (A)		57		60	61		5	9		62
Pipe connections	Liquid pipe	mm			φ1	2.7				φ15.88		φ19.05
CONTRECTIONS	Gas pipe	mm		φ25.4				φ2	8.6			φ31.75
Net weight		kg	220	220	220	290	290	440	440	440	440	510
Gross weight		kg	235	235	235	305	305	455	455	455	455	525
	Туре	/						R410A				
Refrigerant	Factory charge	kg	8	8	9	12	12	16	20	17	18	21
Operating temperature range	Cooling	°C						-5~55°C				
*3 Maximum fuse current	MFA	А	20.0	25.0	32.0	40.0	40.0	45.0	52.0	57.0	64.0	72.0
*3 Minimum line current	MCA	А	17.4	21.7	25.8	33.0	35.0	39.1	43.2	47.5	51.6	58.8

Notes:

1. The combination mode is recommended, and you can choose the combination mode freely. Maximum 3 modules can be combined.

2. The nominal cooling capacity is measured under the following conditions: indoor temperature of 27.0 °C DB/19.0 °C WB; outdoor temperature of 35.0 °C DB; equivalent refrigerant piping length 10m with zero level difference.

3. Fuse or circuit breaker is selected based on MFA. Electrical wiring is selected based on MCA.

# **Cooling only VRF**

Мо	del		TIMS280 CXC	TIMS300 CXC	TIMS320 CXC	TIMS340 CXC	TIMS360 CXC	TIMS380 CXC	TIMS400 CXC	TIMS420 CXC	TIMS440 CXC	TIMS460 CXC	TIMS480 CXC
*1 Combin	ation		14+14	14+16	16+16	12+12+10	12+12+12	14+14+10	14+14+12	14+14+14	16+14+14	16+16+14	16+16+16
Power su	pply	/					3	880-415 / 3 /	50(60)				
	Capacity	kW	80.0	85.0	90.0	95.0	100.5	108.0	113.5	120.0	125.0	130.0	135.0
*2 Cooling	Power input	kW	21.1	23.0	24.9	24.5	26.4	28.0	33.7	31.7	33.6	35.5	37.4
	EER	/	3.8	3.7	3.6	3.9	3.8	3.9	3.4	3.8	3.7	3.7	3.6
Connectable	Total capacity	kW					50%-130	)% of outdoo	r unit capacit	у			
indoor unit	Max. quantity	/	38	40	40	42	42	44	46	48	50	52	52
Compressors	Туре	/						DC invert	er				
Compressors	Quantity	/	2	2	2	3	3	3	3	3	3	3	3
	Type	/						DC					
Fan motors	Quantity	/	2	2	2	3	3	3	3	3	3	3	3
	Max. ESP	Ра						110					
Airflow r	ate	m³/h		27960		360	000	399	960	41940	41940	41940	41940
Net dimen (W*D*I		mm	(1240	0×860×169	90)×2	(930×860	×1690)×3	`	0×1690)+ 0×1690)×2		(1240×860	×1690)×3	
Packed dime		mm	(1300	)×920×175	50)×2	(990×920	×1750)×3		0×1750)+ 0×1750)×2		(1300×920	×1750)×3	
*3 Sound pres	sure level	dB (A)	62	63	63	60	60	63	63	63	64	64	64
Pipe	Liquid pipe	mm						φ19.05					
connections	Gas pipe	mm		φ31.75			φ34.92				φ38.1		
Net wei	ght	kg	580	580	580	660	660	780	780	870	870	870	870
Gross we	eight	kg	595	595	595	675	675	795	795	885	885	885	885
	Type	/						R410A					
Refrigerant	Factory charge	kg	24	24	24	26	27	32	33	36	36	36	36
Operating temperature range	Cooling	°C						-5~55°(					
*3 Maximum fuse current	MFA	А	80.0	80.0	80.0	89.0	96.0	105.0	112.0	120.0	120.0	120.0	120.0
*3 Minimum line current	MCA	Α	66.0	68.0	70.0	73.0	77.4	87.7	91.8	99.0	101.0	103.0	105.0

<sup>1.</sup> The combination mode is recommended, and you can choose the combination mode freely. Maximum 3 modules can be combined.

2. The nominal cooling capacity is measured under the following conditions: indoor temperature of 27.0 °C DB/19.0 °C WB; outdoor temperature of 35.0 °C DB; equivalent refrigerant piping length 10m with zero level difference.

3. Fuse or circuit breaker is selected based on MFA. Electrical wiring is selected based on MCA.



# **Inoor Unit Lineup**

ı	κW	1.5	2.2	2.5	2.8	3.2	3.6	4.0	4.5	5.0	5.6	6.3	7.1	8.0	9.0	10.0
One-way Cassette					•		•		•		•		•			
Two-way Cassette					•		•		•		•		•	•		
Round Flow Cassette					•		•		•	•	•	•	•	•	•	•
Compact Round Flow Cassette		•	•		•		•		•	•						
Slim Duct			•	•	•	•	•	•	•	•	•	•	•			
Medium Static Pressure Duct			•	•	•	•	•	•	•	•	•	•	•	•	•	•
High Static Pressure Duct																•
Wall Mounted					•		•	•			•					
Ceiling & Floor					•		•				•		•		•	
Full Fresh Air Handling Unit																

AC motorDC motor

# **Inoor Unit Lineup**

ı	κW	11.2	12.5	14.0	16.0	20.0	25.0	28.0	33.5	40.0	45.0	50.0	56.0	61.5
One-way Cassette														
Two-way Cassette														
Round Flow Cassette		•	•	•	•									
Compact Round Flow Cassette														
Slim Duct														
Medium Static Pressure Duct		•	•	•	•									
High Static Pressure Duct		•	•	•		•	•		•	•	•	•	•	•
Wall Mounted	1													
Ceiling & Floor		•	•	•										
Full Fresh Air Handling Unit				•			•	•			•		•	

AC motorDC motor

# **AHU KIT**

Model	Cooling capacity (HP)	Indoor unit capacity (kW)	Reference air volume (m'/h)	Picture
TMDK280	8	20~25	3000	
TWDK200	10	25~30	3700	
	12	25~30	4500	
TMDK450	14	36~40	5400	And the second
	16	40~45	6000	
	18	45~61	9000	
TMDK900	26	61~73	10000	1 1
	32	73~90	13000	

# **One-way Cassette**

#### COMFORT

#### **Quiet Operation**

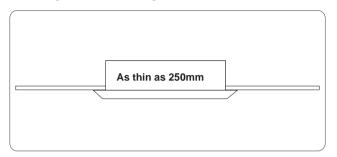
The compact turbo fan adopts axial air intaking. Small blades ensure even air supply and substantially reduce noise for a quiet and comfort environment.



#### **▶ EASY INSTALLATION**

#### **Easy Installation**

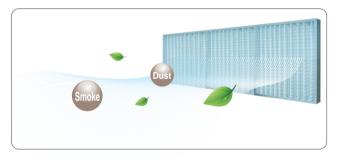
Body thickness of 250 mm installed in a concealed way to lift the height of the suspended ceiling, especially suitable for ceilings with narrow height.



#### ▶ HEALTH

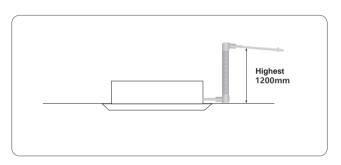
#### **Exclusive Sterilizing Filter**

The unique sterilizing filter can effectively filter smog and dust from air, to provide users with fresh air all the time.



#### **High-lift Drain Pump**

Built-in with a fully-automatic drain pump. Pumping head is up to 1200mm, flexible for drainage pipe design.



#### AIR FLOW

#### Wide air supply outlet

Fan deflector may provide wide range air supply of 10-65°, creating cozy living environment indoors and comfortable feeling of wide angle.



# ▶ One-way cassette

Model (TMCS-XX-A	.)	028	036	045	056	071
One-way cassette	kW	2.8	3.6	4.5	5.6	7.1
Nominal heating capacity	kW	3.2	4.0	5.0	6.3	8.0
Power supply	V/N/Hz			220/1/50		
Motor type				AC motor		
Nominal input power	w	40	40	45	45	50
Dimensions (WxDxH)	mm		870x460x250		1180x4	495x290
Panel dimensions (WXDxH)	mm		1070x520x33		1380x	x550x33
Panel color				Milky white		
Air flow	m³/h	510	600	720	910	1000
Sound pressure level	dB(A)	36	38	42	45	47
Weight	kg	25	27	27	39	39
	Liquid pipe		φ	6.35		φ9.52
Connecting pipe Dimensions	Gas pipe		φ	12.70		φ15.88
	Condensate drain pipe			DN20		

# **Two-way Cassette**

#### COMFORT

#### **Quiet Operation**

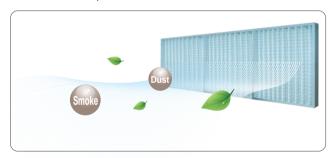
The compact turbo fan adopts axial air intaking. Small blades ensure even air supply and substantially reduce noise for a quiet and comfort environment.



#### ▶ HEALTH

#### **Exclusive Sterilizing Filter**

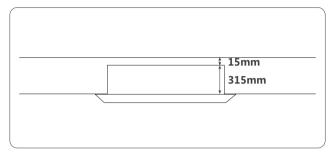
The unique sterilizing filter can effectively filter smog and dust from air, to provide users with fresh air all the time.



#### **▶ EASY INSTALLATION**

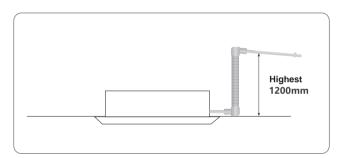
#### **Easy Installation**

Body thickness of 250 mm installed in a concealed way to lift the height of the suspended ceiling, especially suitable for ceilings with narrow height.



#### **High-lift Drain Pump**

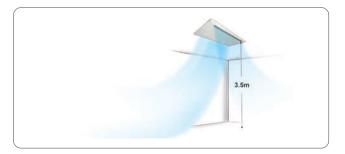
Built-in with a fully-automatic drain pump. Pumping head is up to 1200mm, flexible for drainage pipe design.



#### **▶** AIR FLOW

#### Wide air supply outlet

Fan deflector may provide wide range air supply of 10-65°, creating cozy living environment indoors and comfortable feeling of wide angle.



# ► Two-way cassette

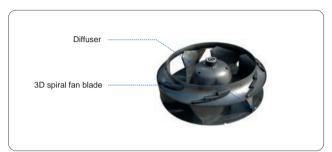
Mo	del (TMCD-XX-A)		028	036	045	056	071	080
Nominal co	poling capacity	kW	2.8	3.6	4.5	5.6	7.1	8.0
Nominal he	eating capacity	kW	3.2	4.0	5.0	6.3	8.0	9.0
Powe	er supply	V/N/Hz			220	/1/50		
	Motor type	l			AC	motor		
Nominal	input power	w	60	62	68	85	94	98
Dimensio	ons (WxDxH)	mm	970x52	20x315	970x52	20x315	1210x5	520x315
Panel dimer	nsions (WXDxH)	mm	1176x6	630x33	1176x6	630x33	1416x	630x33
	Panel color				Milky	white		
A	ir flow	m'/h	500	616	773	900	1165	1300
Sound p	ressure level	dB(A)	37	39	43	45	47	49
W	/eight	kg	32	32	37	37	40	40
	Liquid pipe	mm	nm φ6.35					.52
Connecting pipe size	Gas pipe	mm		φ1	2.70		φ1	5.88
	Condensate drain pipe	mm			Dì	N20		

### **Round Flow Cassette**

#### COMFORT

#### **Quiet Operation**

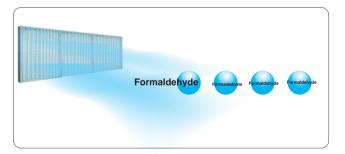
The use of aerospace technology on 3D spiral fan blades with optimized air duct design reduces internal resistance of the unit and achieves ultra-quiet operation, creating a comfortable and pleasant environment.



#### ▶ HEALTH

#### Health

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



#### AIR FLOW

#### 360° Air Flow

360° air flow design features more reasonable airflow distribution and more uniform temperature in the entire room for improved comfort.



#### **High Ceiling Installation**

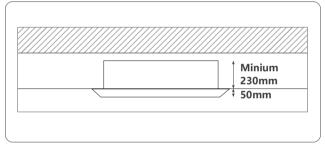
The air supply is not limited by the floor height. The cold air can reach the ground in a room of up to 3.5 m high to achieve optimum air conditioning performance.



#### **EASY INSTALLATION**

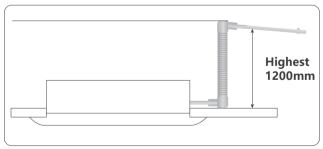
#### **Compact Size**

The height of models 28 to 80 are just 230mm whilst models 90 to 160 are 300mm, making the round flow cassette idea for standard ceilings.



#### **High-lift Drain Pump**

Built-in with a fully-automatic drain pump. Pumping head is up to 1200mm, flexible for drainage pipe design.



### ► Round flow cassette

Me	odel (TMCF-XX-AB)		028	038	046	060	068	063	071	080	090	100	112	126	140	160
Nominal	heating capacity	kW	2.8	3.6	4.5	5.0	5.6	6.3	7.1	8.0	9.0	10.0	11.2	12.5	14.0	16.0
Nominal	heating capacity	kW	3.2	4.0	5.0	5.6	6.3	7.1	8.0	9.0	10.0	11.2	12.5	14.0	16.0	18.0
Por	wer supply	V/N/Hz							22	0/1/50						
	Motor type								AC	motor						
Nomin	al input power	w	55	55	70	70	75	75	90	90	150	150	150	190	190	210
Dimens	sions (WxDxH)	mm				840x8	340x23	80				3	340x84	0x300		
Panel dime	ensions (WXDxH)	mm							950x	950x50						
	Panel color								Milk	y white						
	Air flow	m³/h	750	810	900	900	960	960	1020	1200	1500	1620	1700	1800	1800	2100
Sound	pressure level	dB(A)	3	2		36	6		3	9		42		4	4	44
	Weight	kg	22.5	22.5	24.5	24.5	24.5	24.5	24.5	24.5	29.5	29.5	29.5	29.5	32	32
	Liquid pipe	mm			φ6.	35						φ9.52	2			
Connecting pipe Dimensions	Gas pipe	mm			φ12	.70						φ15.8	8			
	Condensate drain pipe	mm							D	N25						

### **▶** DC round flow cassette

Мо	del (TMCF-XX-ABB)		028	038	046	060	068	063	071	080	090	100	112	126	140	160
Nominal	heating capacity	kW	2.8	3.6	4.5	5.0	5.6	6.3	7.1	8.0	9.0	10.0	11.2	12.5	14.0	16.0
Nominal	heating capacity	kW	3.2	4.0	5.0	5.6	6.3	7.1	8.0	9.0	10.0	11.2	12.5	14.0	16.0	18.0
Por	wer supply	V/N/Hz							220	0/1/50						
	Motor type								DC	motor						
Nomin	al input power	w	36	36	45	45	45	45	73	73	67	67	88	88	88	130
Dimens	sions (WxDxH)	mm				840x8	340x23	80				8	340x84	0x300		
Panel dim	ensions (WXDxH)	mm							950x	950x50						
	Panel color								Milk	y white						
	Air flow	m³/h	810	810	960	960	960	960	1020	1200	1500	1500	1800	1800	1800	2100
Sound	pressure level	dB(A)	3	2		36	3		3	9		42		4	4	44
	Weight	kg	22.5	22.5	24.5	24.5	24.5	24.5	24.5	24.5	29.5	29.5	29.5	29.5	32	32
	Liquid pipe	mm			φ6.	35						φ9.52	2			
Connecting pipe Dimensions	Gas pipe	mm			φ12	.70						φ15.8	8			
	Condensate drain pipe	mm							D	N25						

# **▶** Compact Round Flow Cassette

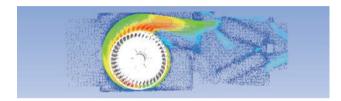
	TMCF-XX-AC		015	022	028	036	045	050
Nominal co	ooling capacity	kW	1.5	2.2	2.8	3.6	4.5	5.0
Nominal he	eating capacity	kW	2.2	2.5	3.2	4.0	5.0	5.6
Powe	er supply	V/N/Hz			220	/1/50		
	Motor type				AC r	notor		
Nominal	input power	w	0.05	0.05	0.05	0.075	0.075	0.075
Dimensio	ons (WxDxH)	mm			590x5	90x260		
Panel dimer	nsions (WXDxH)	mm			680x6	880x30		
	Panel color				Milky	white		
A	ir flow	m'/h	500	500	500	680	680	680
Sound p	ressure level	dB(A)	36	36	36	42	42	42
V	/eight	kg	16/20	16/20	16/20	18/22	18/22	18/22
	Liquid pipe	mm			φ6	.35	680     680     68       42     42     42       18/22     18/22     18/3	
Connecting pipe size	Gas pipe	mm			φ12	2.70		
	Condensate drain pipe	mm			DN	N25		

### **Slim Duct**

#### **▶** COMFORT

#### **Quiet Operation**

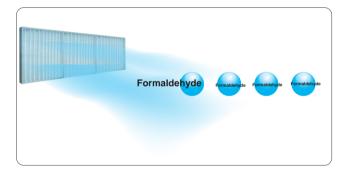
Use the brand-new CFD optimized duct and simulated fan blades to ensure softer air supply, and the auxiliary streamlined embedded foam wiring drain pan lowers noise of eddy current to 23 dB, equal to the normal human breathing sound.



#### **►** HEALTH

#### Health

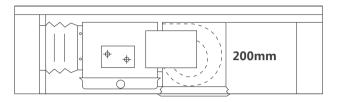
PM2.5, formaldehyde and antibacterial filters are to provide super-clean indoor environment.



#### **EASY INSTALLATION**

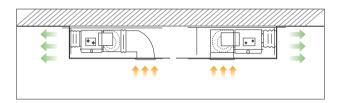
#### **Compact Size**

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



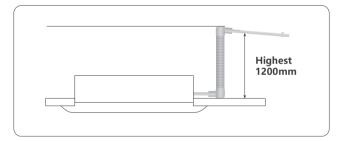
#### Diversified air return mode

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.



#### **High-lift Drain Pump**

Built-in with a fully-automatic drain pump. Pumping head is up to 1200mm, flexible for drainage pipe design.



# ► Slim duct

N	Model (TMDN-XX-AC)		022	025	028	032	036	040	045	050	056	063	071
Nominal	heating capacity	kW	2.2	2.5	2.8	3.2	3.6	4.0	4.5	5.0	5.6	6.3	7.1
Nominal	heating capacity	kW	2.5	2.8	3.2	3.6	4.0	4.5	5.0	5.6	6.3	7.1	8.0
Po	ower supply	V/N/Hz						220	/1/50	,			
	Motor type							AC	motor				
Nomir	nal input power	w	54	54	54	55	55	55	77	77	77	100	106
Dimen	sions (WxDxH)	mm			700x45	0x200	920x450x200 1140x450x						
	Air flow	m³/h	500	500	500	560	560	560	750	750	1000		
Esp	(adjustable)	Pa						10	(30)				
Sound	l pressure level	dB(A)		33			33			35		36	37
	Weight	kg	17.5	17.5	17.5	17.5	17.5	17.5	21.5	21.5	21.5	28	28
	Liquid pipe							φ9.52					
Connecting pipe Dimensions	Gas pipe	mm		φ9.52					φ12.7	70			φ15.88
	Condensate drain pipe	mm						DI	N25				

### **▶** DC slim duct

M	odel (TMDN-XX-ACB)		022	025	028	032	036	040	045	050	056	063	071
Nominal	heating capacity	kW	2.2	2.5	2.8	3.2	3.6	4.0	4.5	5.0	5.6	6.3	7.1
Nominal	heating capacity	kW	2.5	2.8	3.2	3.6	4.0	4.5	5.0	5.6	6.3	7.1	8.0
Po	ower supply	V/N/Hz						220	)/1/50				,
	Motor type							DC	motor				
Nomir	nal input power	w	40	40	40	45	45	50	50	50	50	60	60
Dimen	sions (WxDxH)	mm			700x45	0x200			92	0x450x20	00	1140x4	450x200
	Air flow	m³/h	500	500	500	560	560	560	750	750	750	920	1000
Esp	(adjustable)	Pa						10	(30)				
Sound	I pressure level	dB(A)		33			33			35		36	37
	Weight	kg	17.5	17.5	17.5	17.5	17.5	17.5	21.5	21.5	21.5	28	28
	Liquid pipe	mm		φ6.35				'	φ6.3	5	'		φ9.52
Connecting pipe Dimensions	Gas pipe	mm		φ9.52					φ12.7	0			φ15.88
	Condensate drain pipe	mm						D	N25				

# **Medium static pressure duct**

#### COMFORT

#### **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 33dB(A) to satisfy rigorous noise requirements at different sites.



#### ▶ HEALTH

#### Health

Can be equipped with HYplus TP04/05/06 purification module as optional.(Changeable ESP type only)



#### AIR FLOW

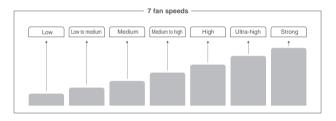
#### **Brushless DC motor**

Brushless DC motor free of excitation loss and carbon brush loss, with the energy efficiency 30% higher than AC motor.



#### Seven fan speeds, up to 100Pa static pressure

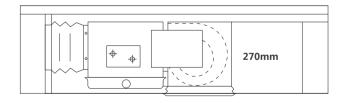
Multiple noise reduction measures and seven fan speeds can achieve low-noise operation for a quieter environment(as low as 33dB (A)).



#### EASY INSTALLATION

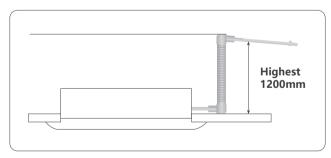
#### **Compact Size**

Thickness of only 270mm installed in a concealed way to lift the height of the suspended ceiling, especially suitable for ceilings with narrow height of suspended ceilings.



#### **High-lift Drain Pump**

Built-in with a fully-automatic drain pump. Pumping head is up to 1200mm, flexible for drainage pipe design.



# ► Medium static pressure duct

	Model (TMDN-AEB)		022	025	028	032	036	040	045	050	056	063
Nomina	I heating capacity	kW	2.2	2.5	2.8	3.2	3.6	4.0	4.5	5.0	5.6	6.3
Nomina	I heating capacity	kW	2.5	2.8	3.2	3.6	4.0	4.5	5.0	5.6	6.3	7.1
Po	ower supply	V/N/Hz					2	20/1/50				
	Motor type						D	C motor	r			
Nomi	nal input power	w	35	35	35	40	40	40	45	45	45	60
Dimer	nsions (WxDxH)	mm			920x45	0x200				1140x45	50x200	
	Air flow	m³/h	450	450	450	500	500	500	650	650	650	920
Standard	l ESP (adjustable)	Pa					30(0	)/10/30/	50)			
Sound	d pressure level	dB(A)	33	33	33	33	33	33	35	35	35	37
	Weight	kg	21.5	21.5	21.5	21.5	21.5	21.5	26.5	26.5	26.5	28
	Liquid pipe							φ6.35				
Connecting pipe Dimensions	Gas pipe	mm						φ12.70				
	Condensate drain pipe	mm						DN25				

# ► Changeable ESP Duct

Mod	el (TMDN-XX-AE)		071	080	090	100	112	125	140	160
Nominal co	ooling capacity	kW	7.1	8.0	9.0	10.0	11.2	12.5	14.0	16.0
Nominal he	eating capacity	kW	8	9.0	10.0	11.2	12.5	14.0	16.0	18.0
Powe	er supply	V/N/Hz				220/	1/50			
	Motor type					DC r	notor			
Nominal	input power	w	110	130	130	160	160	160	200	200
Dimensio	ons (WxDxH)	mm				1200x6	80x270	'		
Ai	r flow	m³/h	1000	1300	1300	1600	1600	1600	2000	2000
Standard E	SP (adjustable)	Pa	50 (30-100)							
Sound pr	essure level	dB(A)	37	40	40	43	43	43	43	43
W	/eight	kg	34.5	34.5	34.5	37	37	37	38	38
	Liquid pipe					φ9	.25			
Connecting pipe size	Gas pipe	mm				φ15	5.88			
	Condensate drain pipe	mm				DN	125			

# **High static pressure duct**

#### ▶ COMFORT

#### **Quiet Operation**

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



#### AIR FLOW

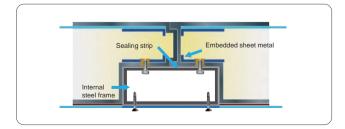
#### Ultra-high static pressure design

The external static pressure reaches 200-300Pa, 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.



#### High-end double-wall design

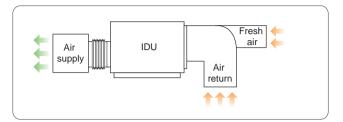
All the metal parts in the cabinet are isolated from outside metal parts, using polyurethane foam and specially designed sealing strips, avoiding the thermal insulation strips attached inside the common product to prevent condensation. Cold bridge and dripping are resolved, and the system noise is lower.



#### ▶ HEALTH

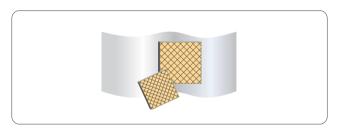
#### Intake fresh air to improve air quality

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



#### Customized air purification program as optional

Customized air purification program, the antibacterial filtering layer including photocatalyst and activated carbon can effectively remove odors, dust, smoke, and formaldehyde, benzene and other hazardous substances in decorative materials to create a comfort room with fresh air.



#### EASY INSTALLATION

#### Various air supply modes

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



#### Hidden installation and elegant appearance

The IDU and duct are in the ceiling and can fit into the interior decoration perfectly. Specifications

# ► High static pressure duct

				TMDH-	XX-AB					TMDH	-XX-BI			
	Model		100	112	125	140	200	250	335	400	450	500	560	615
Nominal coo	ling capacity	kW	10.0	11.2	12.5	14.0	20	25	33.5	40	45	50	56	61.5
Nominal hea	ting capacity	kW	11.2	12.5	14.0	16.0	22.4	27	37.5	45	50	56	63	69
Power	supply	V/N/Hz		220/	1/50					380/	/3/50			
	Motor type							AC n	notor					
Nominal in	Nominal input power W			420	500	550	11	00	22	00		30	00	
Dimension	Dimensions (W×D×H) mm			1200×7	50×390		906×14	10×590		1006×18	360×800		1006×23	360×840
Air	flow	m³/h	1800	2000	2250	2700	4000	4000	7000	7000	9000	9000	10000	10000
ES	SP	Pa		50 (10	0/200)		20	00		25	50		30	00
Sound pre	ssure level	dB(A)	4	9	5	1	5	4	5	5	5	7	5	9
We	ight	kg		6	2		100	100	200	200	200	200	260	260
	Liquid pipe	3				φ1:	2.7		φ15	5.88		φ19	0.05	
Connection	Gas pipe	mm		φ15	5.88		φ22	2.23		φ2	8.6		φ3	1.8
pipe size	Condensate drain pipe	mm		DN	125					DN	132			

# **Wall Mounted**

#### **▶** COMFORT

**Quiet Operation** 

Brand-new highly efficient noise reduction motor built with the latest technology minimizing the noise of IDU.



### ► HEALTH

Wide air flow

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



#### **EASY MAINTENANCE**

Removable air return panel

The removable air return outlet panel facilitates the cleaning of filter and panel.



### **▶** Wall-mounted

Model	(TMVW-XX-ACB)		028	036	040	056
Nominal heatin	g capacity	kW	2.8	3.6	4.0	5.6
Nominal heatin	g capacity	kW	3.0	4.3	4.5	6.0
Power su	pply	V/N/Hz		220	0/1/50	
	Motor type			DC	motor	
Nominal inpu	t power	w	65	65	70	70
Dimensions (	WxDxH)	mm		803x209x287		913x209x287
Air flov	v	m³/h	600	600	600	750
Sound pressu	ure level	dB(A)		40		45
Weigh	t	kg	12	12	12	13
	Liquid pipe			φ6.35		φ9.52
Connecting pipe Dimensions	Gas pipe	mm		φ9.52		φ15.88
	Condensate drain pipe	mm		D	N20	

# **Celling & Floor**

#### COMFORT

#### **Quiet Operation**

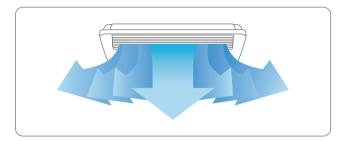
Unequally spaced oblique angle large diameter through flow fan is used to ensure strong air supply, lower fan speed and lower energy consumption.



#### AIR FLOW

#### Wide air flow

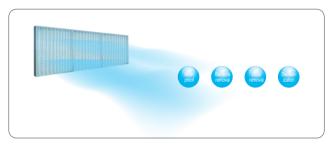
Auto wide-range air supply guaranteed gentle, natural, and even air flow. Various air supply modes are available. Anti-cold wind design ensures more comfortable air supply in winter.



#### **►** HEALTH

#### Health

An efficient filter device is equipped to completely filter dust, smoke and other small particles in the air, effectively preventing bacteria breeding and thoroughly improving the air quality.



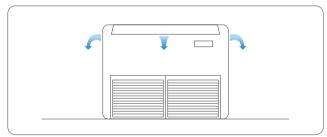
#### **EASY MAINTENANCE**

#### Removable air return panel

The removable air return outlet panel facilitates the cleaning of filter and panel.

#### Single-side maintenance

All maintenance work and the removal of fan and motor can be implemented through the access hole on the side.



# ► Ceiling & Floor

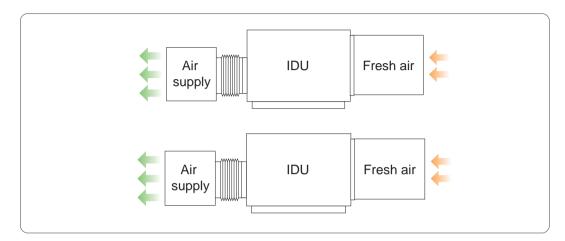
N	lodel (TMVX-XX-A)		028	036	056	071	090	112	125	140
Nomina	I heating capacity	kW	2.8	3.6	5.6	7.1	9.0	11.2	12.5	14.0
Nomina	I heating capacity	kW	3.6	5.6	7.1	9.0	11.2	12.5	14.0	16.0
Po	ower supply	V/N/Hz				2	220/1/50			
Nomi	nal input power	w	48	62	85	120	156	210	240	240
Dimer	Dimensions (WxDxH)				73x243		1288	x673x243	1672x6	73x243
	Air flow	m³/h	450	600	820	1100	1470	1800	2000	2000
Sound	d pressure level	dB(A)	42	43	45	47	49	50	51	51
	Weight	kg	28	28	30	40	40	45	45	45
	Liquid pipe			φ6.35				φ9.52		
Connecting pipe Dimensions	Gas pipe	mm		φ12.70				φ15.88	3	
	Condensate drain pipe	mm					DN25			

# Full-fresh air handling unit

#### ▶ HEALTH

#### Intake fresh air

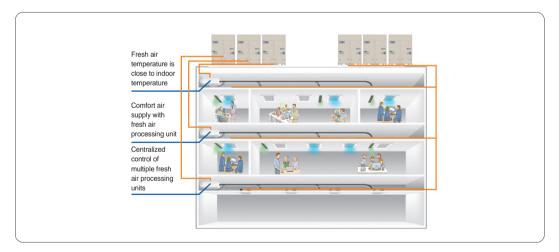
Intake fresh air to make the outdoor air close to room temperature through the indoor heat exchanger and the powerful heating/cooling capacity, so as to meet various requirements.



#### **▶** AIR FLOW

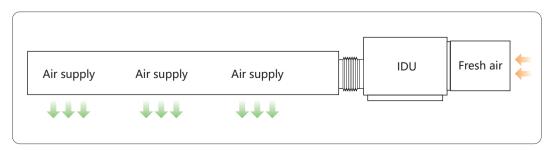
#### Multi-split unit for multi-point air supply

Air outlets can be flexibly configured to meet the requirements for multi-point air supply.



#### 300Pa ultra-high static pressure

All fresh air handling unit has the static pressure up to 300 Pa, making it possible to connect extra-long air duct to realize long distance air supply and bring fresh and clean air to indoor places.



# ► Full-fresh air handling unit

Mode	el (TMDF-XX)		120A-020	175A- 022	120A- 020	250A- 015	250A- 020	250A- 030	300A- 020	400A- 020	400A- 030	500A- 020	500A- 030	600A- 020	600A- 030
Nominal heati	ng capacity	kW	14.0	25.0	28.0	28.0	28.0	28.0	28.0	45.0	45.0	56.0	56.0	56.0	56.0
Nominal heati	ng capacity	kW	10.0	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/N/Hz	22	0/50						380/	/3/50				
Motor type								AC	motor						
Nominal input	power	w	330	630	700	480	560	790	750	880	1290	1000	1400	1350	1700
Dimensions (V	Dimensions (WxDxH) mm					1300x8	20x500			1650x8	50x665		2006x8	50x665	
Air flow		m³/h	1200	1750	2100	2500	2500	2500	3000	4000	4000	5000	5000	6000	6000
Esp (adjustabl	e)	Pa	200	220	200	150	200	300	200	200	300	200	300	200	300
Sound pressu	e level	dB(A)	49	49	49	52	55	58	56	59	62	62	65	62	65
Weight		kg	60	75	75	75	75	75	75	140	140	165	165	165	165
	Liquid pipe	mm	φ9.52			φ12	2.70			φ12	2.70		φ15	5.88	
Connecting pipe	Gas pipe	mm	φ15.88			φ22	2.23			φ28	3.58		φ28	3.58	
Dimensions	Condensate drain pipe	mm						D	N25	,					



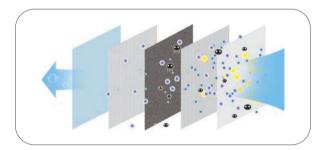
# **Heat Recovery Ventilator (HRV)**



#### Multiple haze removal

#### Must-have for haze removal

- Filtering offers layers of protection.
- The maximum PM2.5 removal rate is 95%.



### ► Highly efficient energy recovery

#### Efficient heat exchange core

- The heat recovery core is formed by cross-laminating and rotating the single-sided corrugated, parallel paper sheets by 90°, with two mutually vertical and non-interfering channels. The fresh air and return air are able to exchange heat and humidity without being mixed when passing the two channels.
- With the latest technology of Japan, the parallel paper is even and tight, and boasts a heat recovery rate of 80%.

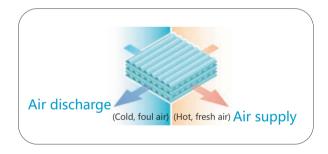


### ► Omni-directional air replacement

#### Fresh air enjoyed without opening the window

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





### Specifications

Model (TRV-XX)		015	025	035	050
Power supply	V/N/Hz		220	)/1/5	
Power Input	W	105	135	276	365/380
Current	A	0.5	0.6	1.25	1.7/1.76
Air flow rate	m³/h	150	250	350	500
Purification efficiency	%	95	95	95	95
ESP	Pa	80	80	80	50/100
Heat exchange efficiency (heating/cooling)	%	85/67	82/63	80/62	73/61
Enthalpy exchange efficiency (heating/cooling)	%	75/55	72/52	68/51	64/50
Sound pressure level	dB(A)	32	34	39	43
Net Weight	kg	24	24	27	53

#### Standard series fresh air ventilators



#### Patent structure and low air leakage rate

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 patented 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.

### ► High efficiency and energy saving

The full core heat exchanger achieves high heat exchange efficiency, temperature efficiency as high as 70% and enthalpy efficiency as high as 60%.

#### ► Elimination of cold bridge and rust

All the metal parts in the cabinet of TICA's high-capacity duct IDU 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. Cold bridge and dripping are resolved, and the system noise is lower.

#### ► Safe and reliable

The direct driven fan does not require maintenance. Only the filter needs to be cleaned regularly.

### Specification

	Model (TFD-XX)		010FC	015FC	020FC	025FC	030FC	040FC	050FH	060FH	080FH	105FH
Air flow		m³/h	1000	1500	2000	2500	3000	4000	5000	6000	8000	10500
ESP	Air supply	Pa	90	110	120	110	100	110	100	100	110	100
LOF	Air discharge	Pa	90	110	120	110	100	110	100	100	110	100
Cooling	Temperature recovery efficiency	%	61	59	61	58	59	57	57	59	57	57
Cooling	Enthalpy recovery rate	%	52	51	53	50	51	50	50	51	50	50
Heating	Temperature recovery efficiency	%	72	71	73	70	71	69	69	71	69	69
пеаші	Enthalpy recovery rate	%	60	59	61	58	59	58	58	59	58	58
Motor power	Air supply	kW	0.2	0.3	0.45	0.55	0.55	1	1.5	0.55X2	1.00X2	1.50X2
Motor power	Air discharge	kW	0.2	0.3	0.45	0.55	0.55	1	1.5	0.55X2	1.00X2	1.50X2
Sound pressur	re level	dB(A)	53	53	55	56	58	59	62	62	63	66
Power supply		V/N/Hz		220/1/50					380/3/5	0		

# High-end series fresh air ventilators

### Wide application

Wide air flow range: 1000m3/h~6000m3/h

Model models: Two-way ventilation and energy recovery

Apply to occasions such as residences, meeting rooms, labs, offices,

equipment rooms, restaurants and gyms.

# ► High reliability ► Eas

Structural design: The product is designed with a sheet metal structure, with insulation cotton attached inside.

### Easy installation

Convenient installation: The machine is positioned in the ceiling and does not occupy the indoor effective space.



Model (TRD	-XX)		100	150	200	250	300	400	500	600
Fresh air flow		m³/h	1000	1500	2000	2500	3000	4000	5000	6000
ESP		Pa	120	160	105	100	150	125	95	120
Enthalpy recovery rate	Cooling	%	51	51	51	51	58	51	57	58
Entrialpy recovery rate	Heating	%	67	62	61	62	71	65	71	70
Temperature recovery efficiency	Cooling	%	67	61	61	64	64	67	67	67
remperature recovery emiciency	Heating	%	82	77	75	80	82	78	82	84
Sound pressure level		dB(A)	45	51	52	53	52	58	59	60
Input power of the entire unit		W	550	920	1310	1630	1900	1940	2790	3280
Current of the entire unit A			2.7	4.2	6.3	7.6	8.7	5.3	7.3	7.8
Power supply	V/N/Hz			220/1/50				380/3/50		
Net Weight Kg			100	143	175	185	198	290	360	390



# **TIMS HYplus Healthy VRF**

# Quadruple Filtration

- Physical intercept
- Chemical aldehyde removal
- Silver ion bacteriostasis
- UVC disinfection



# **Healthy Air Is On the Way**

### **▶** Basic Benefits of Healthy Air

Reduce Illness
Alleviate Allergies
Pet-Friendly
Sleep Better

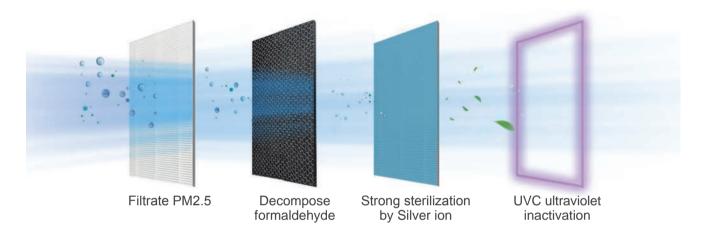




Maintain Wellness

Protect Your Home

### Quadruple Filtration



### Creating healthy life

Use chemical formaldehyde removal filters and the efficiency is up to 95% in a 30 m³ lab module.

#### ► Return to safe envirnoment

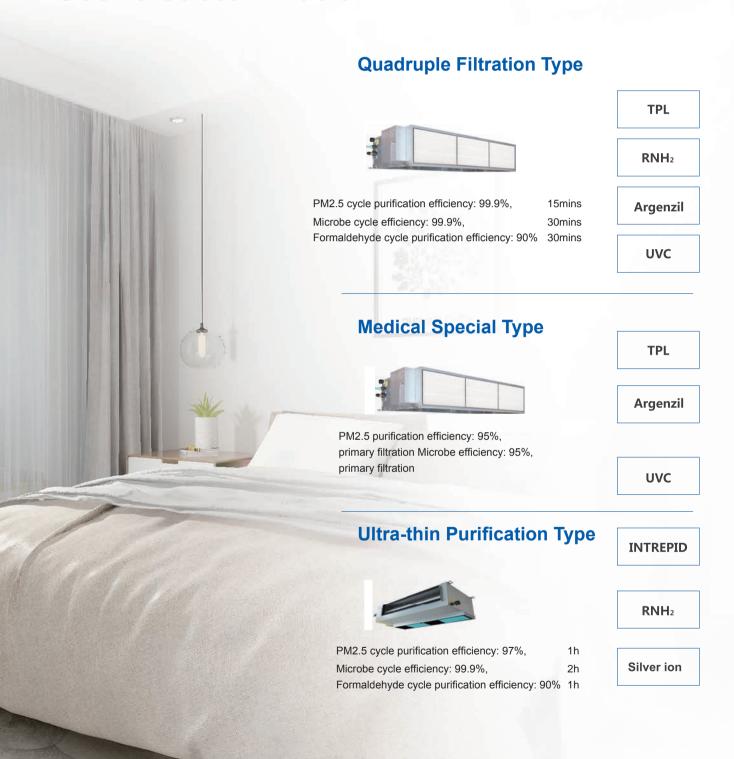
Use Argenzil and UVC to sterilize and inactivate.

The sterilization efficiency of Ag+ is 60000 times that of alcohol.

UVC light can denature and dissociate protein.

The primary purification efficiency of microbe is up to 90%.

# Scene customization



# **▶** Purify Module Matching Table

Type	Model										Сара	acity	(kW)						
Туре	wodei	2.2	2.5	2.8	3.2	3.6	4.0	4.5	5.0	5.6	6.3	7.1	8.0	9.0	10.0	11.2	12.5	14.0	16.0
Hyplus-Ultra-thin Purification Type (TP03)	TMDP	•	•	•	•	•	•	•	•	•	•	•							
Hyplus-Medical Special Type (TP04)	TMDP											•	•	•	•	•	•	customize	customize
Hyplus-Microelectrostatic Type (TP05)*	TMDP											•	•	•					
Hyplus-Quadruple Filtration Type (TP06)	TMDP	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•

Note: "\*" is not available now.

### ► Hyplus IDU Specifications

				1				1			I	1	
M	lodel (TMDP-ACBNNN)		022	025	028	032	036	040	045	050	056	063	071
Nomi	nal heating capacity	kW	2.2	2.5	2.8	3.2	3.6	4.0	4.5	5.0	5.6	6.3	7.1
Nomi	nal heating capacity	kW	2.5	2.8	3.2	3.6	4.0	4.5	5.0	5.6	6.3	7.1	8.0
	Power supply	-					2	220V~50H	Z				
No	minal input power	W	40	40	40	45	45	50	50	50	50	60	60
Dim	nensions (WxDxH)	mm		70	0X450X2	00			920X4	50X200		1140X4	50X200
	High		500	500	500	560	560	750	750	750	750	920	1000
Air flow	Mid	m³/h	370	370	370	430	430	620	620	620	620	710	800
	Low		310	310	310	360	360	550	550	550	550	590	680
E	Esp (adjustable)	Pa						10 (30)					
Sound pres	ssure level(High/Mid/Low)	dB(A)		33/28/23		33/2	8/24		35/3	0/28		36/32/28	37/32/29
	Weight	kg	17.5	17.5	17.5	17.5	17.5	21.5	21.5	21.5	21.5	28	28
Connecting	Liquid pipe	mm		φ6.35					φ9	.52			
pipe	Gas pipe	mm		φ9.52					φ1	2.7			
Dimensions	Condensate drain pipe	mm						DN25					

Model(1	MDP-AEBNN	N)	022	025	028	032	036	040	045	050	056	063
Nominal hea	ating capacity	kW	2.2	2.5	2.8	3.2	3.6	4	4.5	5	5.6	6.3
Nominal hea	ating capacity	kW	2.5	2.8	3.2	3.6	4	4.5	5	5.6	6.3	7.1
Power	supply	-					220V	~50Hz				
Nominal in	nput power	W	0.035	0.035	0.035	0.04	0.045	0.045	0.045	0.06		
Dimension	is (WxDxH)	mm			920×45	50×200				1140×4	50×200	
Air flov	w(High)	m <sup>3</sup> /h	450	450	450	500	500	500	650	650	650	920
ESP (ad	ljustable)	Pa					10 (0	~30)				
Sound pre	essure level	dB(A)	33/28/23	33/28/23	33/28/23	33/28/24	33/28/24	33/28/24	35/30/28	35/30/28	35/30/28	37/32/29
We	eight	kg	21.5	21.5	21.5	21.5	21.5	21.5	26.5	26.5	26.5	28
	Liquid pipe	mm	φ6.35									
Connecton	Gas pipe	mm					φ1	2.7				
pipe size	Condensate drain pipe	mm					DN	125				

Model(TMDP-AEBNNN)			071	080	090	100	112	125	140	160
Nominal heating capacity		kW	7.1	8.0	9.0	10.0	11.2	12.5	14	16
Nominal heating capacity		kW	8.0	9.0	10.0	11.2	12.5	14.0	16.0	18.0
Power supply		-	220V~50Hz							
Nominal input power		W	100	130	130	160	160	160	200	200
Dimensions (WxDxH)		mm	1200X680X270							
Air flow(High)		m3/h	1000	1300	1300	1600	1600	1600	2000	2000
ESP (adjustable)		Pa	10 (0-50)							
Sound pressure level		dB(A)	37/32/29	40/36/33	40/36/33	43/37/33	43/37/33	43/37/33	43/35/27	43/35/27
Weight		kg	34.5	34.5	34.5	37	37	37	38	38
Connection pipe size	Liquid pipe	mm	φ9.52							
	Gas pipe	mm	φ15.88							
	Condensate drain pipe	mm	DN25							

Note: 1. TICA Hyplus IDU is compatible with TIMS all series outdoor units 2. The sound pressure level and static pressure value are the data after the purification module is installed.



# **Intelligent Control**

Provide you with convenient services



#### Wireless Remote Controller

Mode Setting: Cool/Heat/Dry/Fan/Auto

Scheduled power-on/off
Temperature setting

Fan speed setting: High/Medium/Low/Auto

Eco/Quiet/Sleep functions

Vertical swing/Horizontal swing



TMC311

#### Wired Remote Controllers

86×86mm panel, LED

Error reporting

ON/OFF, swing, memory function, etc.

Cool/Heat/Auto/Fan/Dry modes

Temperature setting, timer power-on/-off

Touch keys

Filter cleaning reminder

Background light



TMC315/TE300

#### Central Controllers

8-inch colored touchscreen

Supports centralized control of a maximum of 64 IDUs in 8 systems

Setting, management and monitoring (set temperature, air flow) of IDU

Accessible to IDU/ODU network

Schedul control by week/month/year

Unified management of IDU groups

Statistics of changes in running statuses of all devices in a certain time period.

Fault display, parameter status query, device query, and permission management

Display of indoor environmental indicators (IDU needs to be equipped with sensor nodes)





**OCPAD** 

# **Building Management System (BMS)**

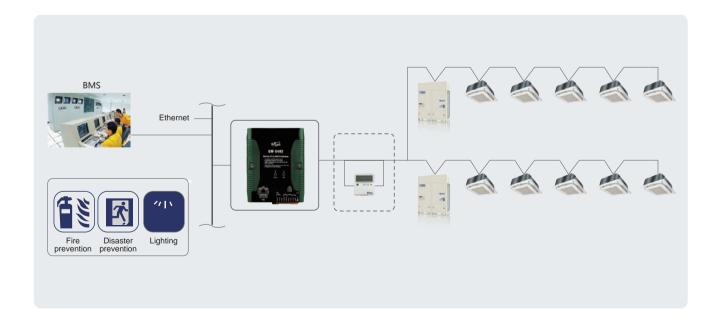
- TIMS adopts multiple BMSs to access to the BAS for comprehensively auto control.
- TICA BMS supports access via ModBus. Up to 1024 IDUs and 16 ODUs can be connected.



#### Basic control functions

- AC on/off, operation, and monitoring the operation status
- 2 Monitoring the IDU error code
- 3 Monitoring and setting the IDU temperature
- 4 Monitoring and switching the operating mode
- 5 Remote controller lock function
- 6 Service monitoring
- 7 Auto running

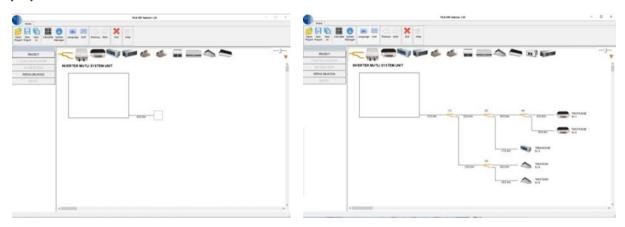
- 8 Mode lock function, user can lock the running mode of indoor unit
- 9 Free management by group
- 10 Complete schedule management
- 11 Historical data records
- Schedule control by week/month/year
- Centralized control function
- 14 Interlock control (fire alarm, door lock, fault, etc.)



### **Intelligent software**

#### Selection software

TICA dedicated to provide the best HVAC engineering support and solutions focused on effectively designed, built, supervised and maintained throughout the lifecycle, providing our customers a faster, easier, and a more accurate way in everyday duties.

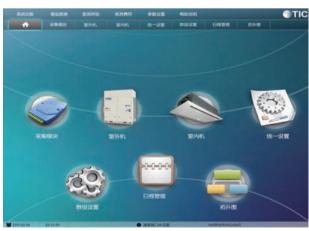


### **▶** Management software

The IDUs are connected to a computer by the data acquisition module, so that full centralized control can be implemented on this management software. The control function is very powerful, and operations are simple and clear. One set of software supports up to 32 systems and 2048 IDUs for large-scale centralized control. The control signal of data acquisition module can reach up to 1200 m.

- Free management by group
- · Complete schedule management
- · Historical data records
- Schedule control by week/month/year
- · Centralized control function
- · Centralized control over air conditioning systems in multiple buildings at the same place
- Permission setting
- Temperature setting, timer power-on/-off
- Error reporting
- Interlocking control
- Remote management





# **Branch Pipe**

Medel	Annogrange	Dimension					
Model	Appearance	Gas side joints	Liquid side joints				
TBP4022TA		ID15.88 OD15.88 ID12.7 ID19.05 ID15.88 OD15.88 ID12.7 ID22.23	ID9.52 OD9.52 ID6.35  ID9.52 ID6.35  ID9.52 ID6.35				
TBP4033TA		ID22.23 OD22.23 ID19.05 ID15.88 ID22.23 OD22.23 ID19.05 ID15.88 ID22.23 OD22.23 ID19.05 ID15.88 264	ID12.7 ID9.52 ID6.35  ID12.7 ID9.52 ID6.35  ID12.7 ID9.52 ID6.35				
TBP4072TA		ID28.58   ID25.4   ID22.23   ID28.58   ID28.58	ID15.88 OD15.88 ID12.7  ID22.23 ID19.05 ID15.88 OD15.88 35 30 35  ID15.88 DD15.88 ID12.7  300				
TBP4073TA	h h	ID38.1 OD38.1 40 35 30 Q ID31.75 298	ID15.88 OD15.88 ID12.7  ID22.23 ID19.05 ID15.88 OD15.88 35 30 35  ID15.88 OD15.88 ID12.7  300				
TBP4090TA		23 OD28.6 35 35 35 9 P P P P P P P P P P P P P P P P P P	ID15.88 OD15.88 ID12.7 ID22.23 ID19.05 OD15.88 35 30 35 ID15.88 OD15.88 ID12.7				
TBP4135TA		23 OD28.6 35 35 35 9 9 ID28.6 ID25.4 ID22.2	ID19.05 ID22.23 D15.88 OD15.88				
		ID38.1 OD38.1 40 35 30 9 9 ID38.1 ID34.9 ID31.75	ID22.2 OD22.2 ID19.05 ID15.88  ID22.2 OD22.2 35 30 35 66 8				















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Note: Due to constant improvement and innovation of TICA's products, the product models, specifications and parameters contained in this document are subject to change without prior notice.