



# **Healthy VRF**

## **VRF Development Process**









# **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 airconditioning 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









# Or

### **Factories**

### One for Every Factory



### Other Applications

### Meeting all expectations

Hospitals



Schools



### Airports



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		HP	3	4	4.5	5	6	6.5	7	8	9	10	12	14
	Independent TIMS-CSA	TIMSS enc.								•	•	•	•	•
	Modular TIMS-AXA	TIMSS enc. off								•		•	•	
Side discharge TIMS-CSREA Air cooled - Heat pump									•		•	•		
Top discharge TIMS-CSRYA		TIMSS enc. orill								•		•	•	
	Mini VRF- Classical TIMS-AHR(A)	A Contraction of the second se	•	•	•	•	•	•	•	•	•			
	Mini VRF-High fficiency TIMS-AHT(A)			•		•	•	•	•					
Air cooled - Cooling only	TIMS-CXC	4790 1770								•		•	•	

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	TIMSS TER CTC	•	•	•	•	•	•	•	•	•	•		
	Modular TIMS-AXA		•	•	•	•	•	•	•	•	•	•	•	•
Air cooled - Heat pump	Side discharge TIMS-CSREA													
	Top discharge TIMS-CSRYA	TIMSS GTCC CT	•											
	Mini VRF- Classical TIMS-AHR(A)	Fick of the second seco												
	Mini VRF-High fficiency TIMS-AHT(A)	Fick of Armer												
Air cooled - Cooling only	TIMS-CXC	47963 1271	•	•	•	•	•	•	•	•	•	•	•	

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.



### 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.





Screws / bolts / gaskets 500h of neutral salt mist

Fan motor Standard :300h of neutral salt mist Special: 500h of neutral salt mist



### 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
- Unique air injection noise reduction
- 5 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



### 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%.

- 9 Low noise priority mode
- 10 Three silent modes: Smart/Night/Forced Silent
- 11 Compressor jet loop noise reduction
- 180° sine wave control for quiet operation of compressor
- (13) 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.









### Auto Addressing

Outdoor units can distribute addresses to indoor units automatically. Remote and wired controllers can be used to guery 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	Φ 9.52	Φ 15.88	TBP4022TA	
168≤X<22.5	Φ 9.52	Ф 19.05	TBP4022TA	
22.5≤X<33.0	Φ 9.52	Ф 22.23	TBP4033TA	
33.0≤X<46.0	Φ 12.7	Ф 25.40	TBP4072TA	
46.0≤X<67.0	Φ 15.88	Φ 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	Φ 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	Φ 9.52	Φ 15.88	TBP4022TA		
16.8≤X<22.5	Φ 9.52	Ф 19.05	TBP4022TA		
22.5≤X<33.0	Φ 9.52	Φ 22.23	TBP4033TA		
33.0≤X<46.0	Ф 12.70	Φ 25.40	TBP4072TA		
46.0≤X<67.0	Ф 15.88	Φ 28.58	TBP4072TA		
67.0≤X<86.0	Ф 19.05	Ф 31.75	TBP4073TA		
X≥86.0	Ф 19.05	Φ 31.75	TBP4073TA		



Indoor Units VRF indoor units



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 )







(single compressor

14/16/18HP

(singl dual f		npressoi	ſ
TIMES	enca		

20/22HP



(dual compressors dual fans)







#### 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*

\*Check relevant technical documents or consult technicians.

Мос	lel		TIMS080AXA	TIMS100AXA	TIMS120AXA	TIMS140AXA	TIMS160AXA			
HF	)		8	10	12	14	16			
Combinat	ion type		-	-	-	-	-			
Power supply	,	/	380-415 / 3 / 50 (60Hz)							
	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 unit capacity							
Comprogene	Туре	1	DC Inverter							
Compressors	Quantity	/	1	1	1	1	1			
For motors	Туре	/			DC					
Fan motors	Quantity	/	1	1	1	1	1			
Airflow rate		m³/h		12000		139	980			
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	5.58			
Net weight		kg	225	225	225	290	290			
Gross weight		kg	240	240	240	305	305			
Refrigerant	Туре	/			R410A					
Reingerant	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	A	20.0	25.0	32.0	40.0	40.0			
* 3 Minimum line current	MCA	A	17.4	21.7	25.8	33.0	35.0			

Mod	el		TIMS180AXA	TIMS200AXAT	TIMS200AXA	TIMS220AXA	TIMS240AXA		
HF	)		18	20	20	22	24		
Combinati	on type		-	-	-	-	-		
Power supply		1		380-415 / 3 / 50 (60Hz)					
	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	1	4.1	4.1	4.0	3.9	4.2		
Connectable indoor unit	Total capacity	kW		50%-130% of outdoor unit capacity					
Compressors	Туре	1		DC Inverter					
Compressors	Quantity	1	1	1	2	2	2		
Fan motors	Туре	1			DC				
Fan motors	Quantity	1	1	2	2	2	2		
Airflow rate		m³/h	13980		25800				
Net dimensions (W*D*H)		mm	1240×860×1690		1500	×860×1690			
Packed dimensions (W*D*H)		mm	1300×920×1750		1560	×920×1750			
Sound pressure level		dB (A)	45~61	45	~62	62	62		
Pipe connections	Liquid pipe	mm	φ12.70		(	p15.88			
	Gas pipe	mm	φ28.58		(	p28.58			
Net weight		kg	290	345	380	380	380		
Gross weight		kg	305	360	395	395	395		
Refrigerant	Туре	1			R410A				
Keingerant	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	A	50.0	50.0	50.0	63.0	63.0		
* 3 Minimum line current	MCA	A	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 lping 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		TIMS260AXA	TIMS280AXA	TIMS300AXA	TIMS320AXA			
HP	)		26	28	30	32			
Combinati	on 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						
Comprogram	Туре	/	DC Inverter						
Compressors	Quantity	/	2	2	2	2			
	Туре	1		D	C				
Fan motors	Quantity	/	2	2	2	2			
Airflow rate		m³/h		27	000				
Net dimensions (W*D*H)		mm		1900×8	60×1690				
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				
Pipe connections	Gas pipe	mm		φ3´	1.75				
Net weight		kg	460	470	470	470			
Gross weight		kg	475	485	485	485			
Defrigerent	Туре	/		R4	10A				
Refrigerant	Factory charge	kg	18	22	22	22			
Operating temperature range	Cooling	°C		-5~5	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	A	66.0	68.0	70.1	72.0			

Mod	el		TIMS340AXA	TIMS340AXA	TIMS360AXA	TIMS380AXA				
HP	)		34	34	36	38				
Combinati	on type		-	18+16	18+18	18+20				
Power supply		1	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	1	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	1	4.1	4.1	4.1	4.1				
Connectable indoor unit	Total capacity	kW		capacity						
Compressors Type /			DC Inverter							
Compressors	Quantity	1	2	2	2	2				
Fan motors	Туре	1			DC					
Fairmotors	Quantity	1	2	2	2	3				
Airflow rate	-	m³/h	27000	13980 <sup>.</sup>	+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					
Fipe 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	Туре	1			R410A					
Reingerant	Factory charge	kg	23	12+12	12+12	12+16				
Operating tomperature range	Cooling				-5~56°C					
Operating temperature range	Heating	°C								
* 3 Maximum fuse current	MFA	A	90.0	90.0	100.0	100.0				
* 3 Minimum line current	MCA	A	74.1	74.1	78.2	82.6				

Notes:

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

Мос	lel		TIMS400AXA	TIMS420AXA	TIMS440AXA	TIMS460AXA			
HE	C		40	42	44	46			
Combinat	ion type		20+20	22+20 (AXA)	22+22	24+22			
Powers	supply		380-415 / 3 / 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	1	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	1	4.2	4.0	3.9	4.0			
Connectable indoor unit	Total capacity	kW		50%-130% of out	door unit capacity				
Comprogene	1	DC Inverter							
Compressors	Quantity	1	2	4	4	4			
Fan motors	Туре	1		D	C				
Fan motors	Quantity	1	4	4	4	4			
Airflow rate		m³/h		25800 <sup>.</sup>	+25800				
Net dimensions (W*D*H)		mm		(1500×86	0×1690)×2				
Packed dimensions (W*D*H)		mm		(1560×92	0×1750)×2				
Sound pressure level		dB (A)	48	~66	50-	-67			
Dina connections	Liquid pipe	mm		φ19	9.05				
Pipe connections	Gas pipe	mm		φ38	8.10				
Net weight		kg	345+345	380+380	380+380	380+380			
Gross weight		kg	360+360	395+395	395+395	395+395			
Defrigerent	Туре	1		R4	10A				
Refrigerant	Factory charge	kg		16 <sup>.</sup>	+16				
Operating, temperature range	Cooling	°C		-5~{	56°C				
Operating temperature range	Heating	°C	-30~26°C						
* 3 Maximum fuse current	MFA	A	100.0	113.0	126.0	126.0			
* 3 Minimum line current	MCA	A	87.0	91.0	95.0	100.2			

Мос	del		TIMS480AXA	TIMS500AXA	TIMS520AXA	
HI	C		48	50	52	
Combinat	tion 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	1	4.2	4.0	4.1	
Connectable indoor unit	Total capacity	kW	50	%-130% of outdoor unit capac	ity	
Comprogene	Туре	1	DC Inverter			
Compressors	Quantity	/	4	4	4	
an motors	Туре	1		DC		
Fairmotors	Quantity	1	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	
Fipe connections	Gas pipe	mm	φ38.10	φ41	.30	
Net weight		kg	380+380	380-	+470	
Gross weight		kg	395+395	395-	+485	
Refrigerant	Туре	/		R410A		
Reingerähl	Factory charge	kg	16+16	16-	+22	
Operating tomporature range	Cooling	°C		-5~56°C		
Operating temperature range	Heating	°C		-30~26°C		
* 3 Maximum fuse current	MFA	A	126.0	143.0	143.0	
* 3 Minimum line current	MCA	A	105.4	115.5	120.7	

Notes:

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

Мос	lel		TIMS540AXA	TIMS560AXA	TIMS580AXA	
HF	D		54	56	58	
Combinat	ion type		24+30	28+28	28+30	
Powers	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	1	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		
Compressor	Туре	1	DC Inverter			
Compressors	Quantity	1	4 4		4	
Fan motors	Туре	/		DC		
Fan motors	Quantity	1	4	4	4	
Airflow rate		m³/h	25800+27000 27000+27000			
Net dimensions (W*D*H)		mm	1500×860×1690+1900×860×1690 (1900×860×1690)×2			
Packed dimensions (W*D*H)		mm	1560×920×1750+1960×920×1750	(1960×920	)×1750)×2	
Sound pressure level		dB (A)	50~67	50~	-68	
Dine competitions	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	1		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	A	143.0	160.0	160.0	
* 3 Minimum line current	MCA	A	122.8	136.0	138.1	

Мос	lel		TIMS600AXA	TIMS620AXA	TIMS640AXA		
HF	)		60	62	64		
Combinat	ion type		30+30	30+30 30+32 32			
Power s	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	50	%-130% of outdoor unit capac	ity		
Туре			DC Inverter				
Compressors	Quantity	/	4	4	4		
an motors	Туре	/		DC			
Fairmotors	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	Туре	/		R410A			
Reingerant	Factory charge	kg	22+22	22+22	22+22		
Operating temperature range	Cooling	°C	-5~56°C				
	Heating	°C					
* 3 Maximum fuse current	MFA	A	160.0	160.0	160.0		
* 3 Minimum line current	MCA	A	140.2	142.1	144.0		

Notes:

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

Мос	del		TIMS660AXA	TIMS680AXA	TIMS700AXA	TIMS720AXA		
H	P		66	68	70	72		
Combinat	tion type		32+34	34+34	22+24+24	24+24+24		
Powers	supply		380-415 / 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	1	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	1	4.1	4.1	4.1	4.2		
Connectable indoor unit	Total capacity	kW		50%-130% of out	tdoor unit capacity			
Comprospere	/	DC Inverter						
Compressors	Quantity	/	4	4	6	6		
Fan motors	Туре	1		C	C			
Fairmotors	Quantity	/	4	4	6	6		
Airflow rate		m³/h	2700	00×2	2580	)0×3		
Net dimensions (W*D*H)		mm	(1900×860×1690)×2 (1500×860×1690)×3			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	,		
	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		
Defrigerent	Туре	1			10A			
Refrigerant	Factory charge	kg	22+23	23+23	16+16+16	16+16+16		
	Cooling	°Č		-5~:	56°C			
Operating temperature range	Heating	°C		-30~	26°C			
* 3 Maximum fuse current	MFA	A	170.0	180.0	189.0	189.0		
* 3 Minimum line current	MCA	A	146.1	148.2	152.9	158.1		

Mod	el		TIMS740AXA	TIMS760AXA	TIMS780AXA			
HF	)		74	76	78			
Combinat	ion type		24+24+26	24+26+26	26+26+26			
Power s	upply			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	0%-130% of outdoor unit capac	ity			
Compressorra Type /				DC Inverter				
Compressors Quantity		/	6	6	6			
Fan motors	Туре	/		DC				
Fait 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				
Fipe 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			
Refrigerant	Туре	/						
	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	A	206.0	223.0	240.0			
* 3 Minimum line current	MCA	A	171.4	184.7	198.0			

Notes:

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.
 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.
 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.
 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
Combinati	ion 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	lz)	
	Capacity	kW	224.5 231.0 236.0		236.0	242.0	248.5
*1 Cooling	Power input	kW	62.0	63.2	65.4	66.6	67.7
	EER	1	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	1	4.2	4.1	4.1	4.1	4.1
Connectable indoor unit	Total capacity	kW	50%-130% of outdoor unit capacity				
Comprogene	Туре	/	DC Inverter				
Compressors	Quantity	/	6	6	6	6	6
Fan motors	Туре	1			DC		
Fairmotors	Quantity	1	6	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		(	1960×920×1750)×	:3	
Sound pressure level		dB (A)			50~68		
Pipe connections	Liquid pipe	mm			φ25.4		
Fipe connections	Gas pipe	mm			φ50.8		
Net weight		kg		460+460+470		470+4	70+470
Gross weight		kg		475+475+485		485+48	35+485
Refrigerant	Туре	1			R410A		
Reingerant	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	A	240.0	240.0	240.0	240.0	240.0
* 3 Minimum line current	MCA	A	200.0	202.1	204.0	206.1	208.2

Mod	el		TIMS900AXA	TIMS920AXA	TIMS940AXA	TIMS960AXA		
HF	)		90	92	94	96		
Combinati	ion 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	1	DC Inverter						
Compressors	Quantity	/	6	6	6	6		
Fan motors	Туре	/		D	C			
Fairmotors	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					
Dine connections	Liquid pipe	mm		φ2	5.4			
Pipe connections	Gas pipe	mm		φ5	0.8			
Net weight		kg	470+470+470					
Gross weight		kg	485+485+485					
Defrine rest	Туре	1		R4	10A			
Refrigerant	Factory charge	kg		22+2	2+22			
Operating temperature range	Cooling	°C		-5~{	56°C			
Operating temperature range	Operating temperature range Heating		-30~26°C					
* 3 Maximum fuse current	MFA	A	240.0	240.0	240.0	240.0		
* 3 Minimum line current	MCA	A	210.3	212.2	214.1	216.0		

Notes:

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.
 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**

Model			TIMS080 CSA	TIMS100 CSA	TIMS120 CSA	TIMS140 CSA	TIMS160 CSA	TIMS180 CSA	TIMS200 CSA	TIMS220 CSA
H	5		8	10	12	14	16	18	20	22
Power Supp	bly	/				380-415 / 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 outdoor unit capacity						
0	Туре	/		DC Inverter						
Compressors	Quantity	/	1	1	1	1	1	1	1	1
For motors	Туре	/		•		D	С			
Fan 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			1500×860×1690	
Packed dimensions (W*D*H	)	mm	990×920×1750			1300×920×1750			1560×920×1750	
Sound pressure level		dB (A)	5	6	57	59	60	61	6	2
D. ()	Liquid pipe	mm		φ9.52		φ12.70			φ15	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
D () (	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	A	20.0	25.0	32.0	40.0	40.0	50.0	50.0	63
* 3 Minimum line current	MCA	A	17.4	21.7	25.8	33.0	35.0	39.1	43.5	47.5

Мос	lel		TIMS240 CSA	TIMS260 CSA	TIMS280 CSA	TIMS300 CSA	TIMS320 CSA	TIMS340 CSA	
HI	C		24	26	28	30	32	34	
Power Supp	bly	/		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 outdoor unit capacity						
Туре					DC Inve	erter			
Compressors	Quantity	/	2	2	2	2	2	2	
For motors	Туре	/			DC				
Fan motors	Quantity	/	2	2	2	2	2	2	
Airflow rate		m³/h	25800	25800 27000					
Net dimensions (W*D*H)		mm	1500×860×1690	1500×860×1690 1900×860×1690					
Packed dimensions (W*D*H	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			
Fipe 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	Туре	/			R410	A			
Keingerant	Factory charge	kg	16	18	22	22	22	23	
Operating temperature	emperature Cooling °C			-5~56°C					
range Heating					-30~26	°C			
* 3 Maximum fuse current	MFA	A	63.0	80.0	80.0	80.0	80.0	80.0	
* 3 Minimum line current	MCA	A	52.7	66.0	68.0	70.1	72.0	74.0	

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.



Indoor Units VRF indoor units



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 <u>buildings</u>

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, 25.2/28.5/33.5/40.0/45.0kW.



### 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

\* Check relevant technical document or consul technicians.



## Side Discharge VRF

М	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	1	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	/		
indoor unit	Max. quantity	/	14	16	19		
Compressors		/					
Quantity		/	1	1	1		
Fan matara	Туре	/		DC			
Fan motors	Quantity	1	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		
Pipe connections	Gas pipe	mm	φ2	2.2	φ25.40		
Net weight		kg	168	168	168		
Gross weight		kg	175	175	175		
Refrigerant	Туре	/		R410A			
nemgerant	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	A	25.2	25.8	26.5		

### Note:

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

## **Top Discharge VRF**

Me	odel		TIMS252CSRYA	TIMS285CSRYA	TIMS335CSRYA	TIMS400CSRYA	TIMS450CSRYA		
Power supp	bly	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%-130% of outdoor unit capacity						
indoor unit	Max. quantity	/	14	16	19	19	22		
0	Туре	/			Twin rotary				
Compressors	Quantity	/	1	1	1	1	1		
<b>F</b>	Туре	/			DC		·		
an motors	Quantity	/	1	1	1	1	1		
Airflow rate		m³/h		12000		139	980		
Net dimensions (W*D*H)		mm		930×860×1690	1240×860×1690				
Packed dimensions (W*D*	Ή)	mm	990×920×1750			1300×920×1750			
Sound pressure level		dB (A)	57	57	57	60	61		
Dine consections	Liquid pipe	mm		φ12.70		φ12.70			
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				

Note:

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



Indoor Units VRF indoor units



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	

### 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*

\* 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 capaci	Total capacity	kW	50%-130% of outdoor unit capacity							
indoor unit	Max. quantity	1	5	6	7	8	9	10		
0	Туре	1	DC inverter							
Compressors	Quantity	1	1	1	1	1	1	1		
Fan motors	Туре	1								
Fan motors	Quantity	1	1	1	1	1	2	2		
Airflow rate		m³/h	4800	6000	6000	6000	6600	6600		
Net dimensions (W*D*H)		mm		)×390×1260						
Packed dimensions (W*D*H)		mm	1040×450×900					)40×450×1320		
*3 Sound pressure level		dB (A)	50~54	50~55	52~55	53~56	59~62	59~62		
Pipe	Liquid pipe	mm		φ9.52						
connections	Gas pipe	mm		φ15		φ19.05				
Net weight		kg	85	85	85	85	120	115		
Gross weight		kg	95	96	96	96	131	126		
Refrigerant Type /			•	R410A						
Operating temperature range	Cooling	°C	-5~54°C							
	Heating	°C	-25~27°C							

Notes:

Notes:
 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.
 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.
 The second content of 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.
 Fuse or circuit breaker is selected based on MFA. Electrical wiring is selected based on MCA.

## Mini VRF Specification(Classic series)

М	odel		TIMS080 AHR	TIMS100 AHR	TIMS112 AHR	TIMS125 AHR	TIMS140 AHR	TIMS160 AHR	TIMS180 AHRA	TIMS200 AHRA	TIMS224 AHRA	
Power supply			220		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	1	3.2	3.4	3.7	3.5	3.4	3.1	3.3	3.0	3.1	
*2 Heating	Capacity	kW	9.0	11.5	12.5	13.5	16.0	17.0	20.0	22.4	25.0	
	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	1		DC inverter								
Compressors	Quantity	1	1	1	1	1	1	1		1	1	
Fan motors	Туре	/	DC									
Fan motors	Quantity	1	1	1	1	1	1	1	2	2	2	
Airflow rate		m³/h	3000	4800	5400	5400	6000	6000	7200	7200	7200	
Net dimensions (W*D*H) mm		mm	865×310×700	×310×700 980×390×850 980×390×1260							0	
Packed dimensions (W*D*H) mm			825×370×770	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	
Pipe Liquid pipe		mm	φ9.52									
connections	Gas pipe	mm			φ15.	88			φ19.05			
Net weight		kg	58 74 78 78		78	84	84	125				
Gross weight kg		kg	68	68         85         89         89         95         95         136								
Refrigerant	Туре	/		R410A								
Operating	Cooling	°C	-5~54°C									
range Heating			-25~27°C									

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.



Indoor Units VRF indoor units



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 

 High Efficiency Double C-Shape Heat Exchanger
 ESP up to 110Pa
 Two Stage Subcooling
 Six Stage Oil Return

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  $-5^{\circ}$ C to  $55^{\circ}$ C.



### Long Piping Capability

Max. height difference between IDU and ODU	ODUup : 110m			
Max. height difference between 100 and 000	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**

Ν	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		1					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	1	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	1					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	Ра						110				
Airflow rate		m³/h		12000		139	980		240	000		25980
Net dimension	is (W*D*H)	mm	93	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	0×920×175	50	1300×92	20×1750		(990×920	×1750)×2		(990×920×1750)+ (1300×920×1750)
Sound pressu	re level	dB (A)		57		60	61		5	9		62
Pipe connections	Liquid pipe	mm			φ1	2.7				φ15.88		φ19.05
connections	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	1						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**

Mo	del		TIMS280		TIMS320	TIMS340	TIMS360	TIMS380	TIMS400	TIMS420	TIMS440	TIMS460	TIMS480
WIC			CXC	CXC	CXC	CXC	CXC	CXC	CXC	CXC	CXC	CXC	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	380-415 / 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	0% of outdoo	r unit capacit	у	1		
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
	Туре	/						DC					
Fan motors	Quantity	/	2	2	2	3	3	w-130% of outdoor unit capacity         2       44       46       48       50       5         DC inverter       3       3       3       3       3       3       3         3       <			3	3	
T an motors	Max. ESP	Ра						110					
Airflow r	ate	m³/h		27960		360	000	399	960	41940	41940	41940	
Net dimen (W*D*ł		mm	(1240	)×860×169	90)×2	(930×860	×1690)×3	· ·	,		(1240×860		
Packed dime (W*D*H		mm	(1300	)×920×175	50)×2	(990×920	×1750)×3				(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 weig	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
	Туре	/						R410A					
Refrigerant	Factory charge	kg	24	24	24	26	27	32	33	36	36	36	36
Operating temperature range	Cooling	°C						-5~55°(	0				
*3 Maximum fuse current	MFA	A	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	А	66.0	68.0	70.0	73.0	77.4	87.7	91.8	99.0	101.0	103.0	105.0

Notes:
 The combination mode is recommended, and you can choose the combination mode freely.Maximum 3 modules can be combined.
 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.
 Fuse or circuit breaker is selected based on MFA. Electrical wiring is selected based on MCA.



# Inoor Unit Lineup

ŀ	W	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

I	kW	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														
Ceiling & Floor		•	•	•										
Full Fresh Air Handling Unit				•			•	•			•		•	

AC motor
 DC motor

# **AHU KIT**

Model	Cooling capacity (HP)	Indoor unit capacity (kW)	Reference air volume (m'/h)	Picture
TMDK280	8	20~25	3000	
TMDR200	10	25~30	3700	
	12	25~30	4500	
TMDK450	14	36~40	5400	An owner of the second
	16	40~45	6000	
	18	45~61	9000	
TMDK900	26	61~73	10000	
	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.



# ► 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.



# ► 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.



### ► 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.



# 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		1180×4	495x290		
Panel dimensions (WXDxH)	mm		1070x520x33		1380>	550x33		
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 φ6.35							
Connecting pipe Dimensions	Gas pipe		φ,		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.



### ► 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.



### ► 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.



# ► Two-way cassette

Мо	del (TMCD-XX-A)		028	036	045	056	071	080	
Nominal c	ooling capacity	kW	2.8	3.6	4.5	5.6	7.1	8.0	
Nominal h	eating capacity	kW	3.2	4.0	5.0	6.3	8.0	9.0	
Pow	er supply	V/N/Hz			220	/1/50			
	Motor type				AC r	notor			
Nominal	input power	w	60	62	68	85	94	98	
Dimensio	Dimensions (WxDxH) Panel dimensions (WXDxH)			20x315	970x52	20x315	1210x5	20x315	
Panel dimer	Panel dimensions (WXDxH)			30x33	1416x	630x33			
	Panel color								
A	ir flow	m'/h	500	616	773	900	1165	1300	
Sound p	ressure level	dB(A)	37	39	43	45	47	49	
٧	Veight	kg	32	32	37	37	40	40	
	Liquid pipe		φ6.35 φ9.52						
Connecting pipe size	Gas pipe	mm		φ1	2.70		φ1	5.88	
	Condensate drain pipe		DN20						

# **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.

Diffuser	
3D spiral fan blade	

# ► 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	Dimensions (WxDxH) mm				840x840x230 840x840x300											
Panel dim	Panel dimensions (WXDxH) mm			950x950x50												
	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	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												
Connecting pipe Dimensions	Gas pipe	mm			φ12.	.70						φ15.8	8			
2	Condensate drain pipe	mm							C	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
Po	wer supply	V/N/Hz							22	0/1/50						
	Motor type								AC	motor						
Nomin	al input power	w	36	36	45	45	45	45	73	73	67	67	88	88	88	130
Dimens	Dimensions (WxDxH) mm			840x840x230 840x840x300												
Panel dim	Panel dimensions (WXDxH) mm			950x950x50												
	Panel color		Milky white													
	Air flow	m³/h	810	810 810 960 960 960 960 1020 1200 1500 1500 1800 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												
Connecting pipe Dimensions	Gas pipe	mm	φ12.70 φ15.88						8							
	Condensate drain pipe mr			n DN25												

# Compact Round Flow Cassette

	TMCF-XX-AC         Nominal cooling capacity         Nominal heating capacity         Power supply         Motor type         Nominal input power         Dimensions (WxDxH)         Panel dimensions (WXDxH)         Panel color         Air flow		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	590x590x260											
Panel dimer	· · · · · · · · · · · · · · · · · · ·			680x680x30										
	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	Weight		16/20 16/20 16/20 18/22 18/22 18/2											
	Liquid pipe		φ6.35											
Connecting pipe size	Gas pipe	mm	nm φ12.70											
	Condensate drain pipe	mm			DN	125								

# 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	lodel (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
Pc	wer 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	Dimensions (WxDxH)				700x45	0x200			92	0x450x20	0	1140x4	150x200
	Air flow		500	500	500	560	560	560	750	750	750	920	1000
Esp	(adjustable)	Ра						10	(30)				
Sound	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		φ6.35						φ6.3	5			φ9.52
Connecting pipe Dimensions			φ9.52 φ12.70						φ15.88				
	Condensate drain pipe		DN25										

# **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	0	1140x4	50x200
	Air flow	m³/h	500	500	500	560	560	560	750	750	750	920	1000
Esp	(adjustable)	Pa						10	(30)				
Sound	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						DI	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.



### 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.



### 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.



# ► HEALTH

#### Health

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



#### 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)).



### **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						A	C motor				
Nomi	nal input power	w	35	35	35	40	40	40	45	45	45	60
Dimer	nsions (WxDxH)	mm			920x45	0x200				1140x45	0x200	
	Air flow	m³/h	450	450	450	500	500	500	650	650	650	920
Standard	d ESP (adjustable)	Ра					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	mm						φ6.35				
Connecting pipe Dimensions	Gas pipe	mm		·			(	ф12.70				
	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					AC 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)	Ра	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	mm				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

			т	MDH-XX-/	AB			•	TMDH-XX-B	I	
	Model		100	112	125	140	TMDH200 BI-010	TMDH200 BI-020	TMDH250 BI-010	TMDH250 BI-020	TMDH335 BI-010
Nominal coc	ling capacity	kW	10	11.2	12.5	14	20	20	25	25	33.5
Nominal hea	ting capacity	kW	11.2	12.5	14	16	22.4	22.4	27	27	37.5
Power	supply	V/N/Hz		220/1/50					380/3/50		
1	Motor type						AC motor				
Nominal ir	nput power	W	400	420	500	550		1100			2200
Dimension	s (W×D×H)	mm	12	200×750×3	390			906×1410	×590		1006×1860×800
Air	flow	m³/h	1800	2000	2250	2700	4000	4000	4000	4000	7000
E	SP	Ра	5	50 (100/20	0)		100	200	100	200	100
Sound pre	ssure level	dB (A)	49		5	51		54			55
We	ight	kg		62			100	100	100	100	200
	Liquid pipe	mm (in)		φ9.52				φ12.70	0		φ15.88
Connection	Gas pipe	mm (in)		φ15.88				φ22.23	3		φ28.58
pipe size	Condensate drain pipe	mm		DN25					DN32		-

						TMDH	-XX-BI			
	Model		TMDH335 BI-018	TMDH335 BI-025	TMDH400 BI-010	TMDH400 BI-018	TMDH400 BI-025	TMDH450 BI-010	TMDH450 BI-018	TMDH450 BI-025
Nominal coo	ling capacity	kW	33.5	33.5	40	40	40	45	45	45
Nominal hea	ting capacity	kW	37.5	37.5	45	45	45	50	50	50
Power	supply	V/N/Hz				380/	/3/50			
	Notor type					AC r	notor			
Nominal ir	nput power	W			2200				3000	
Dimension	s (W×D×H)	mm				1006×18	860×800			
Air	flow	m³/h	7000	7000	7000	7000	7000	9000	9000	9000
E	SP	Ра	180	250	100	180	250	100	180	250
Sound pre	ssure level	dB (A)		<u> </u>	55				57	
We	ight	kg	200	200	200	200	200	200	200	200
	Liquid pipe	mm (in)				φ15	5.88			
Connection	Gas pipe	mm (in)				φ28	3.58			
pipe size	Condensate drain pipe	mm				DN	132			

Note: Optional\* means different models of different ESP can be selected. For example: TMDH200BI-010 means ESP is 100Pa, TMDH200BI-020 means ESP is 200Pa, TMDH400BI-018 means ESP is 180Pa and so on.

## ► High static pressure duct

						TMDH-XX-BI			
	Model		TMDH500 BI-010	TMDH500 BI-018	TMDH500 BI-025	TMDH560 BI-020	TMDH560 BI-030	TMDH615 BI-020	TMDH615 BI-030
Nominal coc	ling capacity	kW	50	50	50	56	56	61.5	61.5
Nominal hea	ting capacity	kW	56	56	56	63	63	69	69
Power	supply	V/N/Hz				380/3/50			
	Notor type					AC motor			
Nominal ir	nput power	W				3000			
Dimension	s (W×D×H)	mm		1006×1860×800			1006×23	360×840	
Air	flow	m³/h	9000	9000	9000	10000	10000	10000	10000
E	SP	Pa	100	180	250	200	300	200	300
Sound pre	ssure level	dB (A)		57			5	9	
We	ight	kg	200	200	200	260	260	260	260
	Liquid pipe	mm (in)		φ15.88			φ19	0.05	
Connection	Gas pipe	mm (in)		φ28.58			<b>φ</b> 31	.75	
pipe size	Condensate drain pipe	mm				DN32			

Note: Optional\* means different models of different ESP can be selected. For example: TMDH200BI-010 means ESP is 100Pa, TMDH200BI-020 means ESP is 200Pa, TMDH400BI-018 means ESP is 180Pa and so on.

# 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 heating	g capacity	kW	2.8	3.6	4.0	5.6
Nominal heating	g capacity	kW	3.0	4.3	4.5	6.0
Power su	pply	V/N/Hz		220	0/1/50	
I	Notor type			AC	motor	
Nominal inpu	t power	w	65	65	70	70
Dimensions (	WxDxH)	mm		803x209x287		913x209x287
Air flow	v	m³/h	600	600	600	750
Sound pressu	ure level	dB(A)		40		45
Weigh	t	kg	12	12	12	13
	Liquid pipe	mm		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 guality.



### **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

I	Iodel (TMVX-XX-A)		028	036	056	071	090	112	125	140
Nomina	al heating capacity	kW	2.8	3.6	5.6	7.1	9.0	11.2	12.5	14.0
Nomina	al heating capacity	kW	3.6	5.6	7.1	9.0	11.2	12.5	14.0	16.0
Р	ower supply	V/N/Hz				2	20/1/50			
Nom	inal input power	w	48 62 85 120 150					210	240	
Dime	nsions (WxDxH)	mm		905x6	73x243		1288	x673x243	1672x6	73x243
	Air flow	m³/h	450	600	820	1100	1470	1800	2000	2000
Soun	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	mm		φ6.35				φ9.52		
Connecting pipe Dimensions	Gas pipe	mm		φ12.70				φ15.88	5.88	
	Condensate drain pipe	mm				×	DN25		43 1672x673x2 00 2000 2 0 51 5 45 45 9 p9.52	

# 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 heatir	ig 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 heatir	ig 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	/xDxH)	mm	1200x750x390			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)	Ра	200	220	200	150	200	300	200	200	300	200	300	200	300
Sound pressur	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	8.58		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.





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
ESP	Air discharge	Pa	90	110	120	110	100	110	100	100	110	100
Qualiza	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
Heating	Enthalpy recovery rate	%	60	59	61	58	59	58	58	59	58	58
N4-4	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: 1000m<sup>3</sup>/h~6000m<sup>3</sup>/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

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
Enthelpy receivery rate	Cooling	%	51	51	51	51	58	51	57	58
Enthalpy 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 eniciency	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

# **TIMS HYplus Healthy VRF**

# **Quadruple Filtration**

- ⊘ Physical intercept
- 🙏 Chemical aldehyde removal
- 🔅 Silver ion bacteriostasis
- ॐ UVC disinfection



# Healthy Air Is On the Way

### Basic Benefits of Healthy Air

Reduce Illness Alleviate Allergies Pet-Friendly Sleep Better (G)





Protect Your Home

### Quadruple Filtration



### Creating healthy life

Use chemical formaldehyde removal filters and the efficiency is up to 95% in a 30 m<sup>3</sup> lab module.

### Return to safe environment

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

# TPL RNH<sub>2</sub> PM2.5 cycle purification efficiency: 99.9%, 15mins Argenzil Microbe cycle efficiency: 99.9%, 30mins Formaldehyde cycle purification efficiency: 90% 30mins UVC **Medical Special Type** TPL Argenzil PM2.5 purification efficiency: 95%, primary filtration Microbe efficiency: 95%, primary filtration UVC **Ultra-thin Purification Type** INTREPID RNH<sub>2</sub> PM2.5 cycle purification efficiency: 97%, 1h Silver ion Microbe cycle efficiency: 99.9%, 2h Formaldehyde cycle purification efficiency: 90% 1h

# **Quadruple Filtration Type**

# Purify Module Matching Table

Time	Model	Capacity(kW)																	
Туре		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	٠	•	•	•	٠	•	٠	٠	٠	•	٠							
Hyplus-Medical Special Type (TP04)	TMDP											٠	٠	٠	•	٠	•	customize	customize
Hyplus-Microelectrostatic Type (TP05)*	TMDP											٠	•	٠					
Hyplus-Quadruple Filtration Type (TP06)	TMDP	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•

Note: "\*" is not available now.

#### Hyplus IDU Specifications

М	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	-	220V~50Hz													
No	Nominal input power			40	40	45	45	50	50	50	50	60	60			
Dim	nensions (WxDxH)	mm		70	0X450X2	00		920X450X200				1140X450X200				
	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	35/30/28				36/32/28	37/32/29			
	Weight		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		φ12.7										
Dimensions	Condensate drain pipe	mm				DN25										

Model(1	Model(TMDP-AEBNNN)			025	028	032	036	040	045	050	056	063			
Nominal hea	Nominal heating capacity		2.2	2.5	2.8	3.2	3.6	4	4.5	5	5.6	6.3			
Nominal hea	Nominal heating capacity		2.5	2.8	3.2	3.6	4	4.5	5	5.6	6.3	7.1			
Power	supply	-	220V~50Hz												
Nominal input power		W	0.035	0.035	0.035	0.04	0.04	0.04	0.045	0.045	0.045	0.06			
Dimensior	is (WxDxH)	mm		920×450×200 1140×450×200											
Air flow	Air flow(High)		450	450	450	500	500	500	650	650	650	920			
ESP (ac	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	Weight		21.5	21.5	21.5	21.5	21.5	21.5	26.5	26.5	26.5	28			
	Liquid pipe	mm	φ6.35												
Connecbon pipe size	Gas pipe	mm	φ12.7												
	Condensate drain pipe	mm		DN25											

Model(T	Model(TMDP-AEBNNN)			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		kW	8.0	9.0	10.0	11.2	12.5	14.0	16.0	18.0				
Power supply -						220V-	~50Hz							
Nominal in	nput power	W	100	130	130	160	160	160	200	200				
Dimensior	ns (WxDxH)	mm	1200X680X270											
Air flov	Air flow(High)		1000	1300	1300	1600	1600	1600	2000	2000				
ESP (ac	ljustable)	Pa	10 (0-50)											
Sound pre	Sound pressure level		37/32/29	40/36/33	40/36/33	43/37/33	43/37/33	43/37/33	43/35/27	43/35/27				
We	Weight		34.5	34.5	34.5	37	37	37	38	38				
	Liquid pipe	mm	φ9.52											
Connecbon pipe size	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

### 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)



TMC315/TE300





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
- 1 Historical data records
- 12 Schedule control by week/month/year
- 13 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**







Follow the Account of TICA to see more solutions

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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.