

# TIMS INVERTER

## MULTI INVERTER V6 VRF SYSTEM



**SGS**

Testing Report as Per Kuwait Regulations

MEW/R-6/2018

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Applicant .....: NANJING TICA CLIMATE SOLUTIONS CO., LTD.  
No.6 HengYe Road,Economic Technological Development Zone. Nanjing,China

Attn. To.....: Chen Jie

Manufacturing location .....: Same as applicant

Test object / Model : VRF Air Conditioner  
Outdoor unit: TIMS080CXT  
Indoor unit: TMDN063AC

Test specifications / Test standard.....: ISO 15042:2017  
MEW/R-6/2018

Purpose of examination .....: Measured Power Rating at Indoor DB: 26.6 °C/WB: 19.4 °C; outdoor DB: 48 °C/WB: 26.9 °C according to client's requirements.

Test result: See the following pages


Hunter Lin  
Reviewer



Jarvan Deng  
Project Engineer



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Test item particulars: VRF Air Conditioner	
Model name:	Outdoor unit: TIMS080CXT Indoor unit: TMDN063AC
Brand:	
Rating:	Refer to rating label
Compressor model:	ANB52FZMMT
Refrigerant:	R410A
Mass of refrigerant:	8,0 kg
Test method:	Indoor air-enthalpy method
Ducted air conditioner:	Multi Split type
Testing:	
Date of receipt of test item :	2021-08-10
Date (s) of performance of tests :	2021-08-10 to 2021-09-16
<b>General remarks:</b>	
<p>"The application of this report shall be used for verification according to ISO 15042:2017 only"</p> <p>The test results presented in this report relate only to the object tested.</p> <p>This report shall not be reproduced, except in full, without the written approval of the Issuing testing laboratory.</p>	
<b>General product information:</b>	
<p>The appliances are outdoor unit of split-type air conditioner which assembled with one or more indoor units (multi-split system) intended for household use only, the refrigerant is R410A.</p>	



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Summary: Tests results according to client's requirements as described below:		
Test condition	Indoor DB: 26.6 °C/WB: 19.4 °C; outdoor DB: 48 °C/WB: 26.9 °C	
Tested Power Rating (kW/RT):	1.09	
Indoor air flow (m <sup>3</sup> /h)	3906	
Motor/Compressor:	Three phase	
Power factor:	0.97	
Test condition	Test voltage(V)	418 V
	Test frequency(Hz)	50 Hz
	Indoor test room temperature, dry/wet (°C)	32/13
	Outdoor test room temperature, dry/wet (°C)	52/31
The appliance continue to operate satisfactorily for 2 hours non stop without tripping or over heating .....		Yes
All thermostats (analog, digital) or sensors (individual or part of a BAS) shall not have a temperature setting of less than 20 °C		Yes



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Rating label:  
English version

TIMS VRF AIR CONDITIONING OUTDOOR UNIT	
Model	TIMS080CXT
Power supply	380V/3N/50Hz
Cooling capacity	25.2 kW
Heating capacity	27.0 kW
Cooling power input	5.50 kW
Heating power input	5.41 kW
Cooling current	12.0 A
Heating current	13.6 A
Max. power input	9.5 kW
Max. current	17.6 A
Max. discharge/suction pressure	4.2/2.2 MPa
APF	4.40 W/W
IPLV(C)	9.60 W/W
Sound pressure	57 dB(A)
Refrigerant charge volume	R410A/8.0 kg
Net weight	225 kg
Protection level	IP14
Factory number	Scan barcode
Production date	2021/06/15
NANJING TICA CLIMATE SOLUTIONS CO., LTD. MADE IN CHINA	

VRF AIR CONDITIONING DUCT INDOOR UNIT	
Model	TMDN063AC
Power Source	220V~50Hz
Cooling Capacity	6.3 kW
Heating Capacity	7.1 kW
Air Flow Volume	920 m <sup>3</sup> /h
External Static Pressure	10~30 Pa
Power Input	0.100 kW
Rated Current	0.455 A
Sound Pressure	36 dB(A)
Waterproof Grade	IPX0
Net Weight	28.0 kg
Serial Number	491114000210523051001
Date	2021/05/23
NANJING TICA CLIMATE SOLUTIONS CO., LTD. MADE IN CHINA	



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Table: Cooling capacity		P
Date	2021-08-10	
Test Institute	SGS-CSTC Standards Technical Services Co., Ltd. Anhui Branch (GAC No.ATL 0068)	
Test Location	1/F&2/F, West Building C12, Gongtuo Liheng Industrial Square, Fanhua Road, Economic & Technological Development Area, Hefei, 230601 Anhui, China	
Test Method	Indoor air-enthalpy method	
Observer(s)	Jarvan Deng	
Type designation	Model:	4 x Indoor unit TMDN063AC Outdoor: TIMS080CXT
	Rated voltage/Frequency	380 V; 3N; 50 Hz
Test condition	Test voltage(V)	400
	Test frequency(Hz)	50
	Indoor test room temperature, dry/wet (°C)	26.6 / 19.4
	Outdoor test room temperature, dry/wet (°C)	48 / 26.9
	Fan speed settings (Outdoor/Indoor)	High speed
	Barometric pressure(kPa)	100.78
Cooling power	Rated power input (kW)	—
	Effective power input* P <sub>E</sub> (kW)	6.195
Cooling capacity	Rated cooling capacity (Btu/h)	—
	Cooling capacity: * (Btu/h)	68318.476
Calculation table		
Items	Tested value	Verdict
Energy efficiency ratio: (EER) (Btu/h)/W	11.03	See below table
Power rating (kW/RT)	1.09	See below table
<p>Note: * These results are based on average value calculated on seven records, see annex 1. The tests were performed on three samples, the most unfavourable test data was recorded into the test report. This report includes Annex 2: 2 pages of Photo document.</p> <p>Maximum Allowable Power Rating according to the following table 2.3.1 and 3.3.1 of MEW/R-6/2018</p>		



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Table 2.3.1 Maximum Allowable Power Rating for Different Types of A/C Systems (kW/RT)

System Type	Capacity (RT)	PR <sub>T</sub> (kW/RT) <sup>(1)</sup>			
		1/1/2019	1/1/2020	1/1/2022	1/1/2024
<b>Implementation Date</b>		1/1/2019	1/1/2020	1/1/2022	1/1/2024
DX units without inverter compressor <sup>(2)</sup>	All	1.5	1.4	1.25	Start of Phase out
DX with inverter compressor <sup>(2)</sup>	All	1.5 (1.10)	1.4 (1.10)	1.25 (1.0)	1.20 (0.90)
Variable refrigerant flow (VRF) <sup>(2)</sup>	All	1.35 (1.05)	1.20 (0.90)	1.15 (0.85)	1.10 (0.83)
Air-cooled chilled water system <sup>(3)</sup>	All	1.60/2.00	1.40/1.80	1.20/1.60	0.85/1.25
Water-cooled chilled water system <sup>(3)</sup>	<250	0.85/1.40	0.80/1.35	0.75/1.3	0.70/1.25
	250-500	0.75/1.30	0.70/1.25	0.65/1.15	0.58/1.10
	>500	0.70/1.25	0.65/1.20	0.60/1.10	0.58/1.05

Table 3.3.1 Maximum Allowable Power Rating for Different Types of A/C Systems (kW/RT)

System Type	Capacity (RT)	PR <sub>T</sub> (kW/RT) <sup>(1)</sup>			
		1/1/2019	1/1/2020	1/1/2022	1/1/2024
<b>Implementation Date</b>		1/1/2019	1/1/2020	1/1/2022	1/1/2024
DX units without inverter compressor <sup>(2)</sup>	All	1.5	1.4	1.25	Start of Phase out
DX with inverter compressor <sup>(2)</sup>	All	1.5 (1.10)	1.4 (1.10)	1.25 (1.0)	1.20 (0.90)
Variable refrigerant flow (VRF) <sup>(2)(3)</sup>	All	1.35 (1.05)	1.20 (0.90)	1.15 (0.85)	1.10 (0.83)
Air-cooled chilled water system <sup>(3),(4)</sup>	All	1.60/2.00	1.40/1.80	1.20/1.60	0.85/1.25
Water-cooled chilled water system <sup>(3),(4)</sup>	<250	0.85/1.40	0.80/1.35	0.75/1.3	0.70/1.25
	250-500	0.75/1.30	0.70/1.25	0.65/1.15	0.58/1.10
	>500	0.70/1.25	0.65/1.20	0.60/1.10	0.58/1.05



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Annex 1: test data

Data	Unit	Test data/Time(min)							AVG.
		5 Min	10 Min	15 Min	20 Min	25 Min	30 Min	35 Min	
Indoor inlet DB	℃	26.89	26.89	26.89	26.89	26.89	26.89	26.89	26.89
Indoor inlet WB	℃	19.58	19.58	19.59	19.59	19.59	19.59	19.59	19.59
Indoor outlet DB	℃	14.7	14.7	14.71	14.72	14.73	14.73	14.74	14.72
Indoor outlet WB	℃	14.43	14.43	14.43	14.44	14.44	14.45	14.45	14.44
Outdoor inlet DB	℃	48.26	48.23	48.19	48.15	48.11	48.07	48.03	48.14
Outdoor inlet WB	℃	28.53	28.56	28.58	28.6	28.62	28.64	28.66	28.6
Voltage (Phase A)	V	220.37	220.36	220.39	220.39	220.37	220.39	220.41	220.38
Voltage (Phase B)	V	219.7	219.7	219.65	219.64	219.71	219.66	219.66	219.67
Voltage (Phase C)	V	219.93	219.93	219.94	219.94	219.92	219.94	219.94	219.94
Current (Phase A)	A	10.97	10.96	10.93	10.96	10.95	10.93	10.94	10.95
Current (Phase B)	A	11.4	11.39	11.41	11.4	11.39	11.4	11.4	11.4
Current (Phase C)	A	11.85	11.87	11.87	11.85	11.85	11.86	11.85	11.86
frequency	Hz	50	50	50	50	50	50	50	50
Power	kW	6.199	6.2	6.193	6.196	6.194	6.192	6.194	6.195
Air flow	m3/h	3905.8	3905.8	3905.8	3905.9	3906	3906	3906.2	3906
Capacity	kW	20.031	20.034	20.056	20.04	20.03	20.006	19.986	20.023
EER/COP	W/W	3.231	3.231	3.238	3.235	3.234	3.231	3.227	3.232
Latent heat	kW	3.764	3.778	3.809	3.805	3.804	3.791	3.779	3.789
Sensible heat	kW	16.267	16.256	16.247	16.235	16.226	16.215	16.207	16.234
Atmospheric pressure	kPa	100.78	100.78	100.78	100.78	100.78	100.78	100.78	100.78



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**Annex 2: Photos**

Details of: Indoor unit

View:

general

front

rear

right

left

top

bottom



Details of: Outdoor unit

View:

general

front

rear

right

left

top

bottom



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Details of: Compressor

View:

- general
- front
- rear
- right
- left
- top
- bottom



- End of Test Report -



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Applicant .....: NANJING TICA CLIMATE SOLUTIONS CO., LTD.  
No.6 HengYe Road,Economic Technological Development Zone. Nanjing,China

Attn. To.....: Chen Jie

Manufacturing location .....: Same as applicant

Test object / Model : VRF Air Conditioner  
Outdoor unit: TIMS100CXT  
Indoor unit: TMDN071AC

Test specifications / Test standard.....: ISO 15042:2017  
MEW/R-6/2018

Purpose of examination .....: Measured Power Rating at Indoor DB: 26.6 °C/WB: 19.4 °C; outdoor DB: 48 °C/WB: 26.9 °C according to client's requirements.

Test result: See the following pages

Hunter Lin  
Reviewer



Jarvan Deng  
Project Engineer



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Test item particulars: VRF Air Conditioner	
Model name:	Outdoor unit: TIMS100CXT Indoor unit: TMDN071AC
Brand:	
Rating:	Refer to rating label
Compressor model:	ANB52FZMMT
Refrigerant:	R410A
Mass of refrigerant:	8,0 kg
Test method:	Indoor air-enthalpy method
Ducted air conditioner:	Multi Split type
Testing:	
Date of receipt of test item :	2021-08-10
Date (s) of performance of tests :	2021-08-10 to 2021-09-16
<b>General remarks:</b>	
<p>"The application of this report shall be used for verification according to ISO 15042:2017 only"</p> <p>The test results presented in this report relate only to the object tested.</p> <p>This report shall not be reproduced, except in full, without the written approval of the Issuing testing laboratory.</p>	
<b>General product information:</b>	
<p>The appliances are outdoor unit of split-type air conditioner which assembled with one or more indoor units (multi-split system) intended for household use only, the refrigerant is R410A.</p>	



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<b>Summary:</b> Tests results according to client's requirements as described below:		
Test condition	Indoor DB: 26.6 °C/WB: 19.4 °C; outdoor DB: 48 °C/WB: 26.9 °C	
Tested Power Rating (kW/RT):	1.09	
Indoor air flow (m <sup>3</sup> /h)	3844	
Motor/Compressor:	Three phase	
Power factor:	0.97	
Test condition	Test voltage(V)	418 V
	Test frequency(Hz)	50 Hz
	Indoor test room temperature, dry/wet (°C)	32/13
	Outdoor test room temperature, dry/wet (°C)	52/31
The appliance continue to operate satisfactorily for 2 hours non stop without tripping or over heating .....		Yes
All thermostats (analog, digital) or sensors (individual or part of a BAS) shall not have a temperature setting of less than 20 °C		Yes



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Rating label:  
English version

 TIMS VRF AIR CONDITIONING OUTDOOR UNIT	
Model	TIMS100CXT
Power supply	380V/3N/50Hz
Cooling capacity	28.0 kW
Heating capacity	31.5 kW
Cooling power input	6.80 kW
Heating power input	6.6 kW
Cooling current	13.1 A
Heating current	13.9 A
Max. power input	10.2 kW
Max. current	18.6 A
Max. discharge/suction pressure	4.2/2.2 MPa
APF	4.35 W/W
IPLV(C)	9.50 W/W
Sound pressure	57 dB(A)
Refrigerant charge volume	R410A/8.0 kg
Net weight	225 kg
Protection level	IP14
Factory number	Scan barcode
Production date	2021/06/15
NANJING TICA CLIMATE SOLUTIONS CO., LTD. MADE IN CHINA	

 VRF AIR CONDITIONING DUCT INDOOR UNIT	
Model	TMDN071AC
Power Source	220V~50Hz
Cooling Capacity	7.1 kW
Heating Capacity	8.0 kW
Air Flow Volume	1000 m <sup>3</sup> /h
External Static Pressure	10~30 Pa
Power Input	0.105 kW
Rated Current	0.477 A
Sound Pressure	37 dB(A)
Waterproof Grade	IPX0
Net Weight	28.0 kg
Serial Number	491114000210523051102
Date	2021/05/23
NANJING TICA CLIMATE SOLUTIONS CO., LTD. MADE IN CHINA	



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Table: Cooling capacity		P
Date	2021-08-11	
Test Institute	SGS-CSTC Standards Technical Services Co., Ltd. Anhui Branch (GAC No.ATL 0068)	
Test Location	1/F&2/F, West Building C12, Gongtuo Liheng Industrial Square, Fanhua Road, Economic & Technological Development Area, Hefei, 230601 Anhui, China	
Test Method	Indoor air-enthalpy method	
Observer(s)	Jarvan Deng	
Type designation	Model:	4 x Indoor unit TMDN071AC Outdoor: TIMS100CXT
	Rated voltage/Frequency	380 V; 3N; 50 Hz
Test condition	Test voltage(V)	400
	Test frequency(Hz)	50
	Indoor test room temperature, dry/wet (°C)	26.6 / 19.4
	Outdoor test room temperature, dry/wet (°C)	48 / 26.9
	Fan speed settings (Outdoor/Indoor)	High speed
	Barometric pressure(kPa)	100.78
Cooling power	Rated power input (kW)	—
	Effective power input* P <sub>E</sub> (kW)	7.187
Cooling capacity	Rated cooling capacity (Btu/h)	—
	Cooling capacity: * (Btu/h)	79066.276
Calculation table		
Items	Tested value	Verdict
Energy efficiency ratio: (EER) (Btu/h)/W	11.00	See below table
Power rating (kW/RT)	1.09	See below table
<p>Note: * These results are based on average value calculated on seven records, see annex 1. The tests were performed on three samples, the most unfavourable test data was recorded into the test report. This report includes Annex 2: 2 pages of Photo document</p> <p>Maximum Allowable Power Rating according to the following table 2.3.1 and 3.3.1 of MEW/R-6/2018</p>		



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Table 2.3.1 Maximum Allowable Power Rating for Different Types of A/C Systems (kW/RT)

System Type	Capacity (RT)	PR <sub>T</sub> (kW/RT) <sup>(1)</sup>			
		1/1/2019	1/1/2020	1/1/2022	1/1/2024
<b>Implementation Date</b>					
DX units without inverter compressor <sup>(2)</sup>	All	1.5	1.4	1.25	Start of Phase out
DX with inverter compressor <sup>(2)</sup>	All	1.5 (1.10)	1.4 (1.10)	1.25 (1.0)	1.20 (0.90)
Variable refrigerant flow (VRF) <sup>(2)</sup>	All	1.35 (1.05)	1.20 (0.90)	1.15 (0.85)	1.10 (0.83)
Air-cooled chilled water system <sup>(3)</sup>	All	1.60/2.00	1.40/1.80	1.20/1.60	0.85/1.25
Water-cooled chilled water system <sup>(3)</sup>	<250	0.85/1.40	0.80/1.35	0.75/1.3	0.70/1.25
	250-500	0.75/1.30	0.70/1.25	0.65/1.15	0.58/1.10
	>500	0.70/1.25	0.65/1.20	0.60/1.10	0.58/1.05

Table 3.3.1 Maximum Allowable Power Rating for Different Types of A/C Systems (kW/RT)

System Type	Capacity (RT)	PR <sub>T</sub> (kW/RT) <sup>(1)</sup>			
		1/1/2019	1/1/2020	1/1/2022	1/1/2024
<b>Implementation Date</b>					
DX units without inverter compressor <sup>(2)</sup>	All	1.5	1.4	1.25	Start of Phase out
DX with inverter compressor <sup>(2)</sup>	All	1.5 (1.10)	1.4 (1.10)	1.25 (1.0)	1.20 (0.90)
Variable refrigerant flow (VRF) <sup>(2)(3)</sup>	All	1.35 (1.05)	1.20 (0.90)	1.15 (0.85)	1.10 (0.83)
Air-cooled chilled water system <sup>(3),(4)</sup>	All	1.60/2.00	1.40/1.80	1.20/1.60	0.85/1.25
Water-cooled chilled water system <sup>(3),(4)</sup>	<250	0.85/1.40	0.80/1.35	0.75/1.3	0.70/1.25
	250-500	0.75/1.30	0.70/1.25	0.65/1.15	0.58/1.10
	>500	0.70/1.25	0.65/1.20	0.60/1.10	0.58/1.05



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Annex 1: test data

Data	Unit	Test data/Time(min)							AV G.
		5 Min	10 Min	15 Min	20 Min	25 Min	30 Min	35 Min	
Indoor inlet DB	℃	26.88	26.89	26.89	26.88	26.89	26.89	26.88	26.88
Indoor inlet WB	℃	19.58	19.59	19.59	19.59	19.59	19.59	19.59	19.59
Indoor outlet DB	℃	14.09	14.09	14.09	14.1	14.1	14.1	14.1	14.1
Indoor outlet WB	℃	13.46	13.46	13.46	13.46	13.46	13.46	13.46	13.46
Outdoor inlet DB	℃	47.88	47.88	47.88	47.89	47.89	47.89	47.9	47.89
Outdoor inlet WB	℃	28.88	28.89	28.89	28.9	28.91	28.92	28.92	28.9
Voltage (Phase A)	V	220.42	220.39	220.31	220.42	220.38	220.36	220.39	220.38
Voltage (Phase B)	V	219.62	219.61	219.7	219.58	219.58	219.71	219.63	219.64
Voltage (Phase C)	V	219.94	219.94	219.87	219.96	219.93	219.88	219.92	219.92
Current (Phase A)	A	12.94	12.91	12.95	12.93	12.94	12.97	12.92	12.94
Current (Phase B)	A	13.38	13.41	13.39	13.4	13.43	13.42	13.41	13.41
Current (Phase C)	A	13.88	13.82	13.84	13.86	13.81	13.8	13.84	13.84
frequency	Hz	50	50	50	50	50	50	50	50
Power	kW	7.201	7.177	7.187	7.193	7.18	7.187	7.184	7.187
Air flow	m3/h	3843.9	3844	3843.9	3844	3843.9	3843.4	3843.6	3843.8
Capacity	kW	23.148	23.177	23.176	23.177	23.177	23.175	23.178	23.173
EER/COP	W/W	3.215	3.229	3.225	3.222	3.228	3.225	3.226	3.224
Latent heat	kW	6.312	6.332	6.332	6.35	6.341	6.345	6.355	6.34
Sensible heat	kW	16.836	16.844	16.845	16.827	16.836	16.83	16.823	16.833
Atmospheric pressure	kPa	100.77	100.77	100.77	100.77	100.78	100.78	100.78	100.78



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**Annex 2: Photos**

Details of: Indoor unit

View:

- general
- front
- rear
- right
- left
- top
- bottom



Details of: Outdoor unit

View:

- general
- front
- rear
- right
- left
- top
- bottom



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Details of: Compressor

View:

general

front

rear

right

left

top

bottom



- End of Test Report -



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Applicant .....: NANJING TICA CLIMATE SOLUTIONS CO., LTD.  
No.6 HengYe Road,Economic Technological Development Zone. Nanjing,China

Attn. To.....: Chen Jie

Manufacturing location .....: Same as applicant

Test object / Model : VRF Air Conditioner  
Outdoor unit: TIMS120CXT  
Indoor unit: TMDN080AE

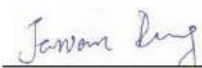
Test specifications / Test standard.....: ISO 15042:2017  
MEWR-6/2018

Purpose of examination .....: Measured Power Rating at Indoor DB: 26.6 °CWB: 19.4 °C; outdoor DB: 48 °CWB: 26.9 °C according to client's requirements.

Test result: See the following pages


  
Hunter Lin  
Reviewer



  
Jarvan Deng  
Project Engineer



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Test item particulars: VRF Air Conditioner	
Model name:	Outdoor unit: TIMS120CXT Indoor unit: TMDN080AE
Brand:	
Rating:	Refer to rating label
Compressor model:	ANB52FZMMT
Refrigerant:	R410A
Mass of refrigerant:	10,0 kg
Test method:	Indoor air-enthalpy method
Ducted air conditioner:	Multi Split type
Testing:	
Date of receipt of test item :	2021-08-10
Date (s) of performance of tests :	2021-08-10 to 2021-09-16
<b>General remarks:</b>	
<p>"The application of this report shall be used for verification according to ISO 15042:2017 only"</p> <p>The test results presented in this report relate only to the object tested.</p> <p>This report shall not be reproduced, except in full, without the written approval of the Issuing testing laboratory.</p>	
<b>General product information:</b>	
<p>The appliances are outdoor unit of split-type air conditioner which assembled with one or more indoor units (multi-split system) intended for household use only, the refrigerant is R410A.</p>	



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<b>Summary:</b> Tests results according to client's requirements as described below:		
Test condition	Indoor DB: 26.6 °C/WB: 19.4 °C; outdoor DB: 48 °C/WB: 26.9 °C	
Tested Power Rating (kW/RT):	1.08	
Indoor air flow (m <sup>3</sup> /h)	4864	
Motor/Compressor:	Three phase	
Power factor:	0.96	
Test condition	Test voltage(V)	418 V
	Test frequency(Hz)	50 Hz
	Indoor test room temperature, dry/wet (°C)	32/13
	Outdoor test room temperature, dry/wet (°C)	52/31
The appliance continue to operate satisfactorily for 2 hours non stop without tripping or over heating .....		Yes
All thermostats (analog, digital) or sensors (individual or part of a BAS) shall not have a temperature setting of less than 20 °C		Yes



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Rating label:  
English version

<p>TIMS VRF AIR CONDITIONING OUTDOOR UNIT</p>	
Model	TIMS120CXT
Power supply	380V/3N/50Hz
Cooling capacity	33.5 kW
Heating capacity	37.5 kW
Cooling power input	8.65 kW
Heating power input	8.30 kW
Cooling current	15.9 A
Heating current	16.7 A
Max. power input	14.8 kW
Max. current	28.4 A
Max. discharge/suction pressure	4.2/2.2 MPa
APF	4.30 W/W
IPLV(C)	9.40 W/W
Sound pressure	57 dB(A)
Refrigerant charge volume	R410A/10.0 kg
Net weight	225 kg
Protection level	IP14
Factory number	Scan barcode
Production date	2021/06/15
<p>NANJING TICA CLIMATE SOLUTIONS CO., LTD. MADE IN CHINA</p>	

<p>VRF AIR CONDITIONING DUCT INDOOR UNIT</p>	
Model	TMDN080AE
Power Source	220V~50Hz
Cooling Capacity	8.0 kW
Heating Capacity	9.0 kW
Air Flow Volume	1300 m <sup>3</sup> /h
External Static Pressure	50 Pa
Power Input	0.130 kW
Rated Current	1.074 A
Sound Pressure	40 dB(A)
Waterproof Grade	IPX0
Net Weight	34.5 kg
Serial Number	491114000210523051201
Date	2021/05/23
<p>NANJING TICA CLIMATE SOLUTIONS CO., LTD. MADE IN CHINA</p>	



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Table: Cooling capacity		P
Date	2021-08-12	
Test Institute	SGS-CSTC Standards Technical Services Co., Ltd. Anhui Branch (GAC No. ATL 0068)	
Test Location	1/F&2/F, West Building C12, Gongtuo Liheng Industrial Square, Fanhua Road, Economic & Technological Development Area, Hefei, 230601 Anhui, China	
Test Method	Indoor air-enthalpy method	
Observer(s)	Jarvan Deng	
Type designation	Model:	4 x Indoor unit TMDN080AE Outdoor: TIMS120CXT
	Rated voltage/Frequency	380 V; 3N; 50 Hz
Test condition	Test voltage (V)	400
	Test frequency (Hz)	50
	Indoor test room temperature, dry/wet (°C)	26.6 / 19.4
	Outdoor test room temperature, dry/wet (°C)	48 / 26.9
	Fan speed settings (Outdoor/Indoor)	High speed
	Barometric pressure(kPa)	100.77
Cooling power	Rated power input (kW)	—
	Effective power input* P <sub>E</sub> (kW)	8.288
Cooling capacity	Rated cooling capacity (Btu/h)	—
	Cooling capacity: * (Btu/h)	92383.312
Calculation table		
Items	Tested value	Verdict
Energy efficiency ratio: (EER) (Btu/h)/W	11.15	See below table
Power rating (kW/RT)	1.08	See below table
<p>Note: * These results are based on average value calculated on seven records, see annex 1. The tests were performed on three samples, the most unfavourable test data was recorded into the test report. This report includes Annex 2: 2 pages of Photo document.</p> <p>Maximum Allowable Power Rating according to the following table 2.3.1 and 3.3.1 of MEW/R-6/2018</p>		



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**Table 2.3.1 Maximum Allowable Power Rating for Different Types of A/C Systems (kW/RT)**

System Type	Capacity (RT)	PR <sub>T</sub> (kW/RT) <sup>(1)</sup>			
		1/1/2019	1/1/2020	1/1/2022	1/1/2024
<b>Implementation Date</b>					
DX units without inverter compressor <sup>(2)</sup>	All	1.5	1.4	1.25	Start of Phase out
DX with inverter compressor <sup>(2)</sup>	All	1.5 (1.10)	1.4 (1.10)	1.25 (1.0)	1.20 (0.90)
Variable refrigerant flow (VRF) <sup>(2)</sup>	All	1.35 (1.05)	1.20 (0.90)	1.15 (0.85)	1.10 (0.83)
Air-cooled chilled water system <sup>(3)</sup>	All	1.60/2.00	1.40/1.80	1.20/1.60	0.85/1.25
Water-cooled chilled water system <sup>(3)</sup>	<250	0.85/1.40	0.80/1.35	0.75/1.3	0.70/1.25
	250-500	0.75/1.30	0.70/1.25	0.65/1.15	0.58/1.10
	>500	0.70/1.25	0.65/1.20	0.60/1.10	0.58/1.05

**Table 3.3.1 Maximum Allowable Power Rating for Different Types of A/C Systems (kW/RT)**

System Type	Capacity (RT)	PR <sub>T</sub> (kW/RT) <sup>(1)</sup>			
		1/1/2019	1/1/2020	1/1/2022	1/1/2024
<b>Implementation Date</b>					
DX units without inverter compressor <sup>(2)</sup>	All	1.5	1.4	1.25	Start of Phase out
DX with inverter compressor <sup>(2)</sup>	All	1.5 (1.10)	1.4 (1.10)	1.25 (1.0)	1.20 (0.90)
Variable refrigerant flow (VRF) <sup>(2)(3)</sup>	All	1.35 (1.05)	1.20 (0.90)	1.15 (0.85)	1.10 (0.83)
Air-cooled chilled water system <sup>(3), (4)</sup>	All	1.60/2.00	1.40/1.80	1.20/1.60	0.85/1.25
Water-cooled chilled water system <sup>(3), (4)</sup>	<250	0.85/1.40	0.80/1.35	0.75/1.3	0.70/1.25
	250-500	0.75/1.30	0.70/1.25	0.65/1.15	0.58/1.10
	>500	0.70/1.25	0.65/1.20	0.60/1.10	0.58/1.05



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Annex 1: test data

Data	Unit	Test data/Time(min)							AV G.
		5 Min	10 Min	15 Min	20 Min	25 Min	30 Min	35 Min	
Indoor inlet DB	℃	26.88	26.88	26.88	26.88	26.88	26.88	26.88	26.88
Indoor inlet WB	℃	19.59	19.59	19.59	19.59	19.59	19.59	19.59	19.59
Indoor outlet DB	℃	14.72	14.72	14.72	14.72	14.72	14.72	14.72	14.72
Indoor outlet WB	℃	13.96	13.96	13.96	13.96	13.96	13.97	13.97	13.96
Outdoor inlet DB	℃	47.93	47.93	47.93	47.93	47.93	47.93	47.93	47.93
Outdoor inlet WB	℃	29.03	29.03	29.04	29.04	29.04	29.05	29.05	29.04
Voltage (Phase A)	V	220.28	220.33	220.23	220.27	220.32	220.22	220.23	220.26
Voltage (Phase B)	V	219.47	219.44	219.56	219.53	219.41	219.53	219.52	219.5
Voltage (Phase C)	V	219.85	219.91	219.79	219.82	219.87	219.78	219.8	219.83
Current (Phase A)	A	14.99	15.06	15.03	15.07	15.06	15.05	15.06	15.05
Current (Phase B)	A	15.46	15.47	15.46	15.47	15.49	15.45	15.45	15.46
Current (Phase C)	A	15.81	15.76	15.76	15.76	15.78	15.77	15.78	15.78
frequency	Hz	50	50	50	50	50	50	50	50
Power	kW	8.285	8.294	8.28	8.287	8.291	8.283	8.29	8.288
Air flow	m3/h	4863.8	4863.6	4863.8	4863.8	4863.8	4863.8	4863.8	4863.8
Capacity	kW	27.095	27.095	27.095	27.073	27.095	27.051	27.051	27.076
EER/COP	W/W	3.27	3.267	3.272	3.267	3.268	3.266	3.263	3.267
Latent heat	kW	6.89	6.889	6.89	6.868	6.89	6.846	6.846	6.871
Sensible heat	kW	20.205	20.205	20.205	20.205	20.205	20.205	20.205	20.205
Atmospheric pressure	kPa	100.77	100.78	100.77	100.77	100.77	100.77	100.77	100.77



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**Annex 2: Photos**

Details of: Indoor unit

View:

- general
- front
- rear
- right
- left
- top
- bottom



Details of: Outdoor unit

View:

- general
- front
- rear
- right
- left
- top
- bottom



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Details of: Compressor

View:

general

front

rear

right

left

top

bottom



- End of Test Report -



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Applicant .....: NANJING TICA CLIMATE SOLUTIONS CO., LTD.  
No.6 HengYe Road,Economic Technological Development Zone. Nanjing,China

Attn. To.....: Chen Jie

Manufacturing location .....: Same as applicant

Test object / Model : VRF Air Conditioner  
Outdoor unit: TIMS140CXT  
Indoor unit: TMDN100AE

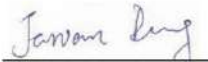
Test specifications / Test standard.....: ISO 15042:2017  
MEWR-6/2018

Purpose of examination .....: Measured Power Rating at Indoor DB: 26.6 °CWB: 19.4 °C; outdoor DB: 48 °CWB: 26.9 °C according to client's requirements.

Test result: See the following pages

  
Hunter Lin  
Reviewer



  
Jarvan Deng  
Project Engineer



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Test item particulars: VRF Air Conditioner	
Model name:	Outdoor unit: TIMS140CXT Indoor unit: TMDN100AE
Brand:	
Rating:	Refer to rating label
Compressor model:	ANB66FZDMT
Refrigerant:	R410A
Mass of refrigerant:	12,0 kg
Test method:	Indoor air-enthalpy method
Ducted air conditioner:	Multi Split type
Testing:	
Date of receipt of test item :	2021-08-10
Date (s) of performance of tests :	2021-08-10 to 2021-09-16
<b>General remarks:</b>	
<p>"The application of this report shall be used for verification according to ISO 15042:2017 only"</p> <p>The test results presented in this report relate only to the object tested.</p> <p>This report shall not be reproduced, except in full, without the written approval of the Issuing testing laboratory.</p>	
<b>General product information:</b>	
<p>The appliances are outdoor unit of split-type air conditioner which assembled with one or more indoor units (multi-split system) intended for household use only, the refrigerant is R410A.</p>	



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<b>Summary:</b> Tests results according to client's requirements as described below:		
Test condition	Indoor DB: 26.6 °C/WB: 19.4 °C; outdoor DB: 48 °C/WB: 26.9 °C	
Tested Power Rating (kW/RT):	1.06	
Indoor air flow (m <sup>3</sup> /h)	5879.8	
Motor/Compressor:	Three phase	
Power factor:	0.95	
Test condition	Test voltage(V)	418 V
	Test frequency(Hz)	50 Hz
	Indoor test room temperature, dry/wet (°C)	32/13
	Outdoor test room temperature, dry/wet (°C)	52/31
The appliance continue to operate satisfactorily for 2 hours non stop without tripping or over heating .....		Yes
All thermostats (analog, digital) or sensors (individual or part of a BAS) shall not have a temperature setting of less than 20 °C		Yes



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Rating label:  
English version

<b>TICA</b>	
TIMS VRF AIR CONDITIONING OUTDOOR UNIT	
Model	TIMS140CXT
Power supply	380V/3N/50Hz
Cooling capacity	40.0 kW
Heating capacity	45.0 kW
Cooling power input	10.30 kW
Heating power input	10.28 kW
Cooling current	18.8A
Heating current	20.0 A
Max. power input	17.8 kW
Max. current	35.2 A
Max. discharge/suction pressure	4.2/2.2 MPa
APF	4.30 W/W
IPLV(C)	9.20 W/W
Sound pressure	60 dB(A)
Refrigerant charge volume	R410A/12.0 kg
Net weight	290 kg
Protection level	IP14
Factory number	Scan barcode
Production date	2021/07/28
NANJING TICA CLIMATE SOLUTIONS CO., LTD. MADE IN CHINA	

<b>TICA</b>	
VRF AIR CONDITIONING DUCT INDOOR UNIT	
Model	TMDN100AE
Power Source	220V~50Hz
Cooling Capacity	10.0 kW
Heating Capacity	11.2 kW
Air Flow Volume	1600 m <sup>3</sup> /h
External Static Pressure	50 Pa
Power Input	0.160 kW
Rated Current	1.322 A
Sound Pressure	43 dB(A)
Waterproof Grade	IPX0
Net Weight	37.0 kg
Serial Number	491114000210626051203
Date	2021/06/26
NANJING TICA CLIMATE SOLUTIONS CO., LTD.	



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Table: Cooling capacity		P
Date	2021-08-13	
Test Institute	SGS-CSTC Standards Technical Services Co., Ltd. Anhui Branch (GAC No. ATL 0068)	
Test Location	1/F&2/F, West Building C12, Gongtuo Liheng Industrial Square, Fanhua Road, Economic & Technological Development Area, Hefei, 230601 Anhui, China	
Test Method	Indoor air-enthalpy method	
Observer(s)	Jarvan Deng	
Type designation	Model:	4 x Indoor unit TMDN100AE Outdoor: TIMS140CXT
	Rated voltage/Frequency	380 V; 3N; 50 Hz
Test condition	Test voltage (V)	400
	Test frequency (Hz)	50
	Indoor test room temperature, dry/wet (°C)	26.6 / 19.4
	Outdoor test room temperature, dry/wet (°C)	48 / 26.9
	Fan speed settings (Outdoor/Indoor)	High speed
	Barometric pressure(kPa)	100.52
Cooling power	Rated power input (kW)	—
	Effective power input* P <sub>E</sub> (kW)	10.139
Cooling capacity	Rated cooling capacity (Btu/h)	—
	Cooling capacity: * (Btu/h)	114339.532
Calculation table		
Items	Tested value	Verdict
Energy efficiency ratio: (EER) (Btu/h)/W	11.28	See below table
Power rating (kW/RT)	1.06	See below table
<p>Note: * These results are based on average value calculated on seven records, see annex 1. The tests were performed on three samples, the most unfavourable test data was recorded into the test report. This report includes Annex 2: 2 pages of Photo document.</p> <p>Maximum Allowable Power Rating according to the following table 2.3.1 and 3.3.1 of MEW/R-6/2018</p>		



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**Table 2.3.1 Maximum Allowable Power Rating for Different Types of A/C Systems (kW/RT)**

System Type	Capacity (RT)	PR <sub>T</sub> (kW/RT) <sup>(1)</sup>			
		1/1/2019	1/1/2020	1/1/2022	1/1/2024
Implementation Date					
DX units without inverter compressor <sup>(2)</sup>	All	1.5	1.4	1.25	Start of Phase out
DX with inverter compressor <sup>(2)</sup>	All	1.5 (1.10)	1.4 (1.10)	1.25 (1.0)	1.20 (0.90)
Variable refrigerant flow (VRF) <sup>(2)</sup>	All	1.35 (1.05)	1.20 (0.90)	1.15 (0.85)	1.10 (0.83)
Air-cooled chilled water system <sup>(3)</sup>	All	1.60/2.00	1.40/1.80	1.20/1.60	0.85/1.25
Water-cooled chilled water system <sup>(3)</sup>	<250	0.85/1.40	0.80/1.35	0.75/1.3	0.70/1.25
	250-500	0.75/1.30	0.70/1.25	0.65/1.15	0.58/1.10
	>500	0.70/1.25	0.65/1.20	0.60/1.10	0.58/1.05

**Table 3.3.1 Maximum Allowable Power Rating for Different Types of A/C Systems (kW/RT)**

System Type	Capacity (RT)	PR <sub>T</sub> (kW/RT) <sup>(1)</sup>			
		1/1/2019	1/1/2020	1/1/2022	1/1/2024
Implementation Date					
DX units without inverter compressor <sup>(2)</sup>	All	1.5	1.4	1.25	Start of Phase out
DX with inverter compressor <sup>(2)</sup>	All	1.5 (1.10)	1.4 (1.10)	1.25 (1.0)	1.20 (0.90)
Variable refrigerant flow (VRF) <sup>(2)(3)</sup>	All	1.35 (1.05)	1.20 (0.90)	1.15 (0.85)	1.10 (0.83)
Air-cooled chilled water system <sup>(3), (4)</sup>	All	1.60/2.00	1.40/1.80	1.20/1.60	0.85/1.25
Water-cooled chilled water system <sup>(3), (4)</sup>	<250	0.85/1.40	0.80/1.35	0.75/1.3	0.70/1.25
	250-500	0.75/1.30	0.70/1.25	0.65/1.15	0.58/1.10
	>500	0.70/1.25	0.65/1.20	0.60/1.10	0.58/1.05



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Annex 1: test data

Data	Unit	Test data/Time(min)							AV G.
		5 Min	10 Min	15 Min	20 Min	25 Min	30 Min	35 Min	
Indoor inlet DB	℃	26.68	26.67	26.67	26.68	26.69	26.69	26.7	26.68
Indoor inlet WB	℃	19.56	19.56	19.56	19.58	19.6	19.58	19.58	19.57
Indoor outlet DB	℃	14.53	14.53	14.53	14.53	14.55	14.55	14.55	14.54
Indoor outlet WB	℃	13.79	13.79	13.79	13.8	13.82	13.81	13.81	13.8
Outdoor inlet DB	℃	48.1	48.09	48.09	48.08	48.08	48.07	48.07	48.08
Outdoor inlet WB	℃	31.61	31.6	31.6	31.6	31.59	31.59	31.59	31.6
Voltage (Phase A)	V	219.72	219.72	219.69	219.69	219.69	219.69	219.67	219.69
Voltage (Phase B)	V	219.11	219.09	219.09	219.07	219.07	219.07	219.06	219.08
Voltage (Phase C)	V	220.08	220.08	220.07	220.06	220.06	220.06	220.05	220.06
Current (Phase A)	A	14.25	14.23	14.23	14.24	14.25	14.18	14.21	14.23
Current (Phase B)	A	14.55	14.5	14.52	14.47	14.49	14.5	14.45	14.49
Current (Phase C)	A	16.22	16.3	16.29	16.36	16.28	16.27	16.29	16.29
frequency	Hz	50	50	50	50	50	50	50	50
Power	kW	10.151	10.148	10.15	10.152	10.143	10.126	10.115	10.139
Air flow	m3/h	5853.9	5852.9	5871.3	5907.9	5905.4	5860.4	5898.8	5879.8
Capacity	kW	33.328	33.31	33.436	33.721	33.728	33.41	33.608	33.511
EER/COP	W/W	3.283	3.283	3.294	3.322	3.325	3.299	3.322	3.305
Latent heat	kW	9.074	9.064	9.113	9.243	9.273	9.138	9.168	9.154
Sensible heat	kW	24.254	24.246	24.322	24.478	24.455	24.272	24.44	24.357
Atmospheric pressure	kPa	100.52	100.52	100.52	100.52	100.52	100.52	100.52	100.52



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**Annex 2: Photos**

Details of: Indoor unit

View:

- general
- front
- rear
- right
- left
- top
- bottom



Details of: Outdoor unit

View:

- general
- front
- rear
- right
- left
- top
- bottom



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Details of: Compressor

View:

general

front

rear

right

left

top

bottom



- End of Test Report -



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Applicant .....: NANJING TICA CLIMATE SOLUTIONS CO., LTD.  
No.6 HengYe Road,Economic Technological Development Zone. Nanjing,China

Attn. To.....: Chen Jie

Manufacturing location .....: Same as applicant

Test object / Model : VRF Air Conditioner  
Outdoor unit: TIMS160CXT  
Indoor unit: TMDN112AE

Test specifications / Test standard.....: ISO 15042:2017  
MEWR-6/2018

Purpose of examination .....: Measured Power Rating at Indoor DB: 26.6 °CWB: 19.4 °C; outdoor DB: 48 °CWB: 26.9 °C according to client's requirements.

Test result: See the following pages

Hunter Lin  
Reviewer



Jarvan Deng  
Project Engineer



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Test item particulars: VRF Air Conditioner	
Model name:	Outdoor unit: TIMS160CXT Indoor unit: TMDN112AE
Brand:	
Rating:	Refer to rating label
Compressor model:	ANB78FZDMT
Refrigerant:	R410A
Mass of refrigerant:	12,0 kg
Test method:	Indoor air-enthalpy method
Ducted air conditioner:	Multi Split type
Testing:	
Date of receipt of test item :	2021-08-10
Date (s) of performance of tests :	2021-08-10 to 2021-09-16
<b>General remarks:</b>	
<p>"The application of this report shall be used for verification according to ISO 15042:2017 only"</p> <p>The test results presented in this report relate only to the object tested.</p> <p>This report shall not be reproduced, except in full, without the written approval of the Issuing testing laboratory.</p>	
<b>General product information:</b>	
<p>The appliances are outdoor unit of split-type air conditioner which assembled with one or more indoor units (multi-split system) intended for household use only, the refrigerant is R410A.</p>	



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<b>Summary:</b> Tests results according to client's requirements as described below:		
Test condition	Indoor DB: 26.6 °C/WB: 19.4 °C; outdoor DB: 48 °C/WB: 26.9 °C	
Tested Power Rating (kW/RT):	1.04	
Indoor air flow (m <sup>3</sup> /h)	5919	
Motor/Compressor:	Three phase	
Power factor:	0.95	
Test condition	Test voltage(V)	418 V
	Test frequency(Hz)	50 Hz
	Indoor test room temperature, dry/wet (°C)	32/13
	Outdoor test room temperature, dry/wet (°C)	52/31
The appliance continue to operate satisfactorily for 2 hours non stop without tripping or over heating .....		Yes
All thermostats (analog, digital) or sensors (individual or part of a BAS) shall not have a temperature setting of less than 20 °C		Yes



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Rating label:  
English version

TIMS VRF AIR CONDITIONING OUTDOOR UNIT	
Model	TIMS 160CXT
Power supply	380V/3N/50Hz
Cooling capacity	45.0 kW
Heating capacity	50.0 kW
Cooling power input	12.20 kW
Heating power input	12.15 kW
Cooling current	23.8A
Heating current	23.9 A
Max. power input	24.5 kW
Max. current	40.2 A
Max. discharge/suction pressure	4.2/2.2 MPa
APF	4.25 W/W
IPLV(C)	9.15 W/W
Sound pressure	61 dB(A)
Refrigerant charge volume	R410A/12.0 kg
Net weight	290 kg
Protection level	IP14
Factory number	Scan barcode
Production date	2021/07/28
NANJING TICA CLIMATE SOLUTIONS CO., LTD. MADE IN CHINA	

VRF AIR CONDITIONING DUCT INDOOR UNIT	
Model	TMDN112AE
Power Source	220V~50Hz
Cooling Capacity	11.2 kW
Heating Capacity	12.5 kW
Air Flow Volume	1600 m <sup>3</sup> /h
External Static Pressure	50 Pa
Power Input	0.160 kW
Rated Current	1.322 A
Sound Pressure	43 dB(A)
Waterproof Grade	IPX0
Net Weight	37.0 kg
Serial Number	491114000210627051101
Date	2021/06/27
NANJING TICA CLIMATE SOLUTIONS CO., LTD.	



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Table: Cooling capacity		P
Date	2021-08-13	
Test Institute	SGS-CSTC Standards Technical Services Co., Ltd. Anhui Branch (GAC No. ATL 0068)	
Test Location	1/F&2/F, West Building C12, Gongtuo Liheng Industrial Square, Fanhua Road, Economic & Technological Development Area, Hefei, 230601 Anhui, China	
Test Method	Indoor air-enthalpy method	
Observer(s)	Jarvan Deng	
Type designation	Model:	4 x Indoor unit TMDN112AE Outdoor: TIMS160CXT
	Rated voltage/Frequency	380 V; 3N; 50 Hz
Test condition	Test voltage (V)	400
	Test frequency (Hz)	50
	Indoor test room temperature, dry/wet (°C)	26.6 / 19.4
	Outdoor test room temperature, dry/wet (°C)	48 / 26.9
	Fan speed settings (Outdoor/Indoor)	High speed
	Barometric pressure(kPa)	100.61
Cooling power	Rated power input (kW)	—
	Effective power input* P <sub>E</sub> (kW)	11.077
Cooling capacity	Rated cooling capacity (Btu/h)	—
	Cooling capacity: * (Btu/h)	128311.672
Calculation table		
Items	Tested value	Verdict
Energy efficiency ratio: (EER) (Btu/h)/W	11.58	See below table
Power rating (kW/RT)	1.04	See below table
<p>Note: * These results are based on average value calculated on seven records, see annex 1. The tests were performed on three samples, the most unfavourable test data was recorded into the test report. This report includes Annex 2: 2 pages of Photo document.</p> <p>Maximum Allowable Power Rating according to the following table 2.3.1 and 3.3.1 of MEW/R-6/2018</p>		



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Table 2.3.1 Maximum Allowable Power Rating for Different Types of A/C Systems (kW/RT)

System Type	Capacity (RT)	PR <sub>T</sub> (kW/RT) <sup>(1)</sup>			
		1/1/2019	1/1/2020	1/1/2022	1/1/2024
Implementation Date					
DX units without inverter compressor <sup>(2)</sup>	All	1.5	1.4	1.25	Start of Phase out
DX with inverter compressor <sup>(2)</sup>	All	1.5 (1.10)	1.4 (1.10)	1.25 (1.0)	1.20 (0.90)
Variable refrigerant flow (VRF) <sup>(2)</sup>	All	1.35 (1.05)	1.20 (0.90)	1.15 (0.85)	1.10 (0.83)
Air-cooled chilled water system <sup>(3)</sup>	All	1.60/2.00	1.40/1.80	1.20/1.60	0.85/1.25
Water-cooled chilled water system <sup>(3)</sup>	<250	0.85/1.40	0.80/1.35	0.75/1.3	0.70/1.25
	250–500	0.75/1.30	0.70/1.25	0.65/1.15	0.58/1.10
	>500	0.70/1.25	0.65/1.20	0.60/1.10	0.58/1.05

Table 3.3.1 Maximum Allowable Power Rating for Different Types of A/C Systems (kW/RT)

System Type	Capacity (RT)	PR <sub>T</sub> (kW/RT) <sup>(1)</sup>			
		1/1/2019	1/1/2020	1/1/2022	1/1/2024
Implementation Date					
DX units without inverter compressor <sup>(2)</sup>	All	1.5	1.4	1.25	Start of Phase out
DX with inverter compressor <sup>(2)</sup>	All	1.5 (1.10)	1.4 (1.10)	1.25 (1.0)	1.20 (0.90)
Variable refrigerant flow (VRF) <sup>(2) (3)</sup>	All	1.35 (1.05)	1.20 (0.90)	1.15 (0.85)	1.10 (0.83)
Air-cooled chilled water system <sup>(3), (4)</sup>	All	1.60/2.00	1.40/1.80	1.20/1.60	0.85/1.25
Water-cooled chilled water system <sup>(3), (4)</sup>	<250	0.85/1.40	0.80/1.35	0.75/1.3	0.70/1.25
	250–500	0.75/1.30	0.70/1.25	0.65/1.15	0.58/1.10
	>500	0.70/1.25	0.65/1.20	0.60/1.10	0.58/1.05



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Annex 1: test data

Data	Unit	Test data/Time(min)							AV G.
		5 Min	10 Min	15 Min	20 Min	25 Min	30 Min	35 Min	
Indoor inlet DB	℃	26.59	26.59	26.58	26.58	26.58	26.57	26.57	26.58
Indoor inlet WB	℃	19.39	19.39	19.39	19.39	19.39	19.39	19.39	19.39
Indoor outlet DB	℃	13.64	13.64	13.64	13.64	13.63	13.63	13.63	13.63
Indoor outlet WB	℃	12.85	12.85	12.85	12.86	12.85	12.84	12.85	12.85
Outdoor inlet DB	℃	48.01	48	48	48	48.01	48	47.99	48
Outdoor inlet WB	℃	30.64	30.64	30.64	30.64	30.65	30.64	30.65	30.64
Voltage (Phase A)	V	219.92	219.95	219.93	219.95	219.96	219.98	219.96	219.95
Voltage (Phase B)	V	218.95	218.94	218.94	218.95	218.96	219.02	219	218.97
Voltage (Phase C)	V	220.32	220.32	220.32	220.33	220.35	220.36	220.35	220.34
Current (Phase A)	A	14.29	14.31	14.34	14.32	14.29	14.4	14.37	14.34
Current (Phase B)	A	18.61	18.67	18.74	18.69	18.61	18.6	18.67	18.66
Current (Phase C)	A	16.9	16.93	17	16.98	16.98	16.9	17	16.96
frequency	Hz	50	50	50	50	50	50	50	50
Power	kW	11.026	11.06	11.109	11.088	11.039	11.077	11.109	11.077
Air flow	m3/h	5902.2	5920.4	5930.4	5924.9	5917.1	5911.1	5921.5	5918.6
Capacity	kW	37.493	37.618	37.69	37.612	37.602	37.603	37.617	37.606
EER/COP	W/W	3.401	3.401	3.393	3.392	3.406	3.395	3.386	3.395
Latent heat	kW	11.311	11.357	11.402	11.352	11.362	11.393	11.371	11.365
Sensible heat	kW	26.182	26.261	26.288	26.26	26.24	26.21	26.246	26.242
Atmospheric pressure	kPa	100.62	100.61	100.61	100.61	100.61	100.61	100.61	100.61



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**Annex 2: Photos**

Details of: Indoor unit

View:

- general
- front
- rear
- right
- left
- top
- bottom



Details of: Outdoor unit

View:

- general
- front
- rear
- right
- left
- top
- bottom



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Details of: Compressor

View:

general

front

rear

right

left

top

bottom



- End of Test Report -



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Applicant .....: NANJING TICA CLIMATE SOLUTIONS CO., LTD.  
No.6 HengYe Road,Economic Technological Development Zone. Nanjing,China

Attn. To.....: Chen Jie

Manufacturing location .....: Same as applicant

Test object / Model : VRF Air Conditioner  
Outdoor unit: TIMS180CXT  
Indoor unit: TMDN125AE

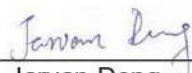
Test specifications / Test standard.....: ISO 15042:2017  
MEWR-6/2018

Purpose of examination .....: Measured Power Rating at Indoor DB: 26.6 °CWB: 19.4 °C; outdoor DB: 48 °CWB: 26.9 °C according to client's requirements.

Test result: See the following pages

  
Hunter Lin  
Reviewer



  
Jarvan Deng  
Project Engineer



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Test item particulars: VRF Air Conditioner	
Model name:	Outdoor unit: TIMS180CXT Indoor unit: TMDN125AE
Brand:	
Rating:	Refer to rating label
Compressor model:	ANB78FZDMT
Refrigerant:	R410A
Mass of refrigerant:	12,0 kg
Test method:	Indoor air-enthalpy method
Ducted air conditioner:	Multi Split type
Testing:	
Date of receipt of test item :	2021-08-10
Date (s) of performance of tests :	2021-08-10 to 2021-09-16
<b>General remarks:</b>	
<p>"The application of this report shall be used for verification according to ISO 15042:2017 only"</p> <p>The test results presented in this report relate only to the object tested.</p> <p>This report shall not be reproduced, except in full, without the written approval of the Issuing testing laboratory.</p>	
<b>General product information:</b>	
<p>The appliances are outdoor unit of split-type air conditioner which assembled with one or more indoor units (multi-split system) intended for household use only, the refrigerant is R410A.</p>	



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<b>Summary:</b> Tests results according to client's requirements as described below:		
Test condition	Indoor DB: 26.6 °C/WB: 19.4 °C; outdoor DB: 48 °C/WB: 26.9 °C	
Tested Power Rating (kW/RT):	1.07	
Indoor air flow (m <sup>3</sup> /h)	5856	
Motor/Compressor:	Three phase	
Power factor:	0.96	
Test condition	Test voltage(V)	418 V
	Test frequency(Hz)	50 Hz
	Indoor test room temperature, dry/wet (°C)	32/13
	Outdoor test room temperature, dry/wet (°C)	52/31
The appliance continue to operate satisfactorily for 2 hours non stop without tripping or over heating .....		Yes
All thermostats (analog, digital) or sensors (individual or part of a BAS) shall not have a temperature setting of less than 20 °C		Yes



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Rating label:  
English version

 TIMS VRF AIR CONDITIONING OUTDOOR UNIT	
Model	TIMS180CXT
Power supply	380V/3N/50Hz
Cooling capacity	50.0 kW
Heating capacity	56.0 kW
Cooling power input	13.90 kW
Heating power input	13.70 kW
Cooling current	33.0A
Heating current	30.9 A
Max. power input	26.5 kW
Max. current	48.1 A
Max. discharge/suction pressure	4.2/2.2 MPa
APF	4.20 W/W
IPLV(C)	9.05 W/W
Sound pressure	62 dB(A)
Refrigerant charge volume	R410A/12.0 kg
Net weight	290 kg
Protection level	IP14
Factory number	Scan barcode
Production date	2021/07/25
NANJING TICA CLIMATE SOLUTIONS CO., LTD. MADE IN CHINA	

 VRF AIR CONDITIONING DUCT INDOOR UNIT	
Model	TMDN125AE
Power Source	220V~50Hz
Cooling Capacity	12.5 kW
Heating Capacity	14.0 kW
Air Flow Volume	1600 m <sup>3</sup> /h
External Static Pressure	50 Pa
Power Input	0.160 kW
Rated Current	1.322 A
Sound Pressure	43 dB(A)
Waterproof Grade	IPX0
Net Weight	37.0 kg
Serial Number	491114000210526051304
Date	2021/05/26
<b>NANJING TICA CLIMATE SOLUTIONS CO., LTD.</b>	



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Table: Cooling capacity		P
Date	2021-08-14	
Test Institute	SGS-CSTC Standards Technical Services Co., Ltd. Anhui Branch (GAC No. ATL 0068)	
Test Location	1/F&2/F, West Building C12, Gongtuo Liheng Industrial Square, Fanhua Road, Economic & Technological Development Area, Hefei, 230601 Anhui, China	
Test Method	Indoor air-enthalpy method	
Observer(s)	Jarvan Deng	
Type designation	Model:	4 x Indoor unit TMDN125AE Outdoor: TIMS180CXT
	Rated voltage/Frequency	380 V; 3N; 50 Hz
Test condition	Test voltage (V)	400
	Test frequency (Hz)	50
	Indoor test room temperature, dry/wet (°C)	26.6 / 19.4
	Outdoor test room temperature, dry/wet (°C)	48 / 26.9
	Fan speed settings (Outdoor/Indoor)	High speed
	Barometric pressure(kPa)	100.55
Cooling power	Rated power input (kW)	—
	Effective power input* P <sub>E</sub> (kW)	12.922
Cooling capacity	Rated cooling capacity (Btu/h)	—
	Cooling capacity: * (Btu/h)	144453.844
Calculation table		
Items	Tested value	Verdict
Energy efficiency ratio: (EER) (Btu/h)/W	11.18	See below table
Power rating (kW/RT)	1.07	See below table
<p>Note: * These results are based on average value calculated on seven records, see annex 1. The tests were performed on three samples, the most unfavourable test data was recorded into the test report. This report includes Annex 2: 2 pages of Photo document. Maximum Allowable Power Rating according to the following table 2.3.1 and 3.3.1 of MEW/R-6/2018</p>		



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**Table 2.3.1 Maximum Allowable Power Rating for Different Types of A/C Systems (kW/RT)**

System Type	Capacity (RT)	PR <sub>T</sub> (kW/RT) <sup>(1)</sup>			
		1/1/2019	1/1/2020	1/1/2022	1/1/2024
<b>Implementation Date</b>		1/1/2019	1/1/2020	1/1/2022	1/1/2024
DX units without inverter compressor <sup>(2)</sup>	All	1.5	1.4	1.25	Start of Phase out
DX with inverter compressor <sup>(2)</sup>	All	1.5 (1.10)	1.4 (1.10)	1.25 (1.0)	1.20 (0.90)
Variable refrigerant flow (VRF) <sup>(2)</sup>	All	1.35 (1.05)	1.20 (0.90)	1.15 (0.85)	1.10 (0.83)
Air-cooled chilled water system <sup>(3)</sup>	All	1.60/2.00	1.40/1.80	1.20/1.60	0.85/1.25
Water-cooled chilled water system <sup>(3)</sup>	<250	0.85/1.40	0.80/1.35	0.75/1.3	0.70/1.25
	250-500	0.75/1.30	0.70/1.25	0.65/1.15	0.58/1.10
	>500	0.70/1.25	0.65/1.20	0.60/1.10	0.58/1.05

**Table 3.3.1 Maximum Allowable Power Rating for Different Types of A/C Systems (kW/RT)**

System Type	Capacity (RT)	PR <sub>T</sub> (kW/RT) <sup>(1)</sup>			
		1/1/2019	1/1/2020	1/1/2022	1/1/2024
<b>Implementation Date</b>		1/1/2019	1/1/2020	1/1/2022	1/1/2024
DX units without inverter compressor <sup>(2)</sup>	All	1.5	1.4	1.25	Start of Phase out
DX with inverter compressor <sup>(2)</sup>	All	1.5 (1.10)	1.4 (1.10)	1.25 (1.0)	1.20 (0.90)
Variable refrigerant flow (VRF) <sup>(2)(3)</sup>	All	1.35 (1.05)	1.20 (0.90)	1.15 (0.85)	1.10 (0.83)
Air-cooled chilled water system <sup>(3), (4)</sup>	All	1.60/2.00	1.40/1.80	1.20/1.60	0.85/1.25
Water-cooled chilled water system <sup>(3), (4)</sup>	<250	0.85/1.40	0.80/1.35	0.75/1.3	0.70/1.25
	250-500	0.75/1.30	0.70/1.25	0.65/1.15	0.58/1.10
	>500	0.70/1.25	0.65/1.20	0.60/1.10	0.58/1.05



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Annex 1: test data

Data	Unit	Test data/Time(min)							AVG.
		5 Min	10 Min	15 Min	20 Min	25 Min	30 Min	35 Min	
Indoor inlet DB	℃	26.53	26.64	26.64	26.64	26.65	26.65	26.67	26.63
Indoor inlet WB	℃	19.31	19.32	19.32	19.32	19.33	19.34	19.35	19.33
Indoor outlet DB	℃	12.29	12.29	12.3	12.32	12.33	12.33	12.33	12.31
Indoor outlet WB	℃	11.75	11.76	11.77	11.79	11.79	11.79	11.79	11.78
Outdoor inlet DB	℃	47.97	47.99	48	48.02	48.04	48.05	48.07	48.02
Outdoor inlet WB	℃	32.06	32.01	31.96	31.92	31.88	31.85	31.82	31.92
Voltage (Phase A)	V	219.72	219.7	219.72	219.72	219.69	219.71	219.72	219.71
Voltage (Phase B)	V	218.64	218.66	218.67	218.68	218.64	218.66	218.68	218.66
Voltage (Phase C)	V	220.23	220.2	220.24	220.22	220.22	220.24	220.25	220.23
Current (Phase A)	A	17.49	17.52	17.53	17.58	17.45	17.52	17.55	17.52
Current (Phase B)	A	20.94	21.07	21.07	20.95	20.97	21.04	21.08	21.02
Current (Phase C)	A	19.76	19.69	19.75	19.71	19.67	19.71	19.73	19.72
frequency	Hz	50	50	50	50	50	50	50	50
Power	kW	12.9	12.934	12.944	12.915	12.866	12.928	12.95	12.922
Air flow	m3/h	5871.4	5871.9	5872.5	5869.4	5858.5	5830.3	5832.3	5856
Capacity	kW	42.478	42.474	42.433	42.366	42.315	42.151	42.215	42.337
EER/COP	W/W	3.293	3.284	3.278	3.28	3.289	3.261	3.26	3.276
Latent heat	kW	13.707	13.496	13.465	13.442	13.459	13.432	13.461	13.492
Sensible heat	kW	28.772	28.978	28.968	28.924	28.856	28.719	28.753	28.845
Atmospheric pressure	kPa	100.55	100.54	100.55	100.55	100.55	100.55	100.55	100.55



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**Annex 2: Photos**

Details of: Indoor unit

View:

- general
- front
- rear
- right
- left
- top
- bottom



Details of: Outdoor unit

View:

- general
- front
- rear
- right
- left
- top
- bottom



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Details of: Compressor

View:

- general
- front
- rear
- right
- left
- top
- bottom



- End of Test Report -



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Applicant .....: NANJING TICA CLIMATE SOLUTIONS CO., LTD.  
No.6 HengYe Road,Economic Technological Development Zone. Nanjing,China

Attn. To.....: Chen Jie

Manufacturing location .....: Same as applicant

Test object / Model : VRF Air Conditioner  
Outdoor unit: TIMS200CXT  
Indoor unit: TMDN140AE

Test specifications / Test standard.....: ISO 15042:2017  
MEWR-6/2018

Purpose of examination .....: Measured Power Rating at Indoor DB: 26.6 °C/WB: 19.4 °C; outdoor DB: 48 °C/WB: 26.9 °C according to client's requirements.

Test result: See the following pages

Hunter Lin  
Reviewer



Jarvan Deng  
Project Engineer



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Test item particulars: VRF Air Conditioner	
Model name:	Outdoor unit: TIMS200CXT Indoor unit: TMDN140AE
Brand:	
Rating:	Refer to rating label
Compressor model:	ANB87FZLMT
Refrigerant:	R410A
Mass of refrigerant:	16,0 kg
Test method:	Indoor air-enthalpy method
Ducted air conditioner:	Multi Split type
Testing:	
Date of receipt of test item :	2021-08-10
Date (s) of performance of tests :	2021-08-10 to 2021-09-16
<b>General remarks:</b>	
<p>"The application of this report shall be used for verification according to ISO 15042:2017 only"</p> <p>The test results presented in this report relate only to the object tested.</p> <p>This report shall not be reproduced, except in full, without the written approval of the Issuing testing laboratory.</p>	
<b>General product information:</b>	
<p>The appliances are outdoor unit of split-type air conditioner which assembled with one or more indoor units (multi-split system) intended for household use only, the refrigerant is R410A.</p>	



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<b>Summary:</b> Tests results according to client's requirements as described below:		
Test condition	Indoor DB: 26.6 °C/WB: 19.4 °C; outdoor DB: 48 °C/WB: 26.9 °C	
Tested Power Rating (kW/RT):	1.08	
Indoor air flow (m <sup>3</sup> /h)	7449	
Motor/Compressor:	Three phase	
Power factor:	0.96	
Test condition	Test voltage(V)	418 V
	Test frequency(Hz)	50 Hz
	Indoor test room temperature, dry/wet (°C)	32/13
	Outdoor test room temperature, dry/wet (°C)	52/31
The appliance continue to operate satisfactorily for 2 hours non stop without tripping or over heating .....		Yes
All thermostats (analog, digital) or sensors (individual or part of a BAS) shall not have a temperature setting of less than 20 °C		Yes



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Rating label:  
English version

TIMS VRF AIR CONDITIONING OUTDOOR UNIT	
Model	TIMS200CXT
Power supply	380V/3N/50Hz
Cooling capacity	56.0 kW
Heating capacity	63.0 kW
Cooling power input	15.77 kW
Heating power input	15.50 kW
Cooling current	34.8A
Heating current	33.4 A
Max. power input	26.3 kW
Max. current	49.0 A
Max. discharge/suction pressure	4.2/2.2 MPa
APF	4.15 W/W
IPLV(C)	8.95 W/W
Sound pressure	63 dB(A)
Refrigerant charge volume	R410A/16.0 kg
Net weight	345 kg
Protection level	IP14
Factory number	Scan barcode
Production date	2021/07/18
NANJING TICA CLIMATE SOLUTIONS CO., LTD.	
MADE IN CHINA	

VRF AIR CONDITIONING DUCT INDOOR UNIT	
Model	TMDN140AE
Power Source	220V~50Hz
Cooling Capacity	14.0 kW
Heating Capacity	16.0 kW
Air Flow Volume	2000 m <sup>3</sup> /h
External Static Pressure	50 Pa
Power Input	0.200 kW
Rated Current	1.653 A
Sound Pressure	43 dB(A)
Waterproof Grade	IPX0
Net Weight	38.0 kg
Serial Number	491114000210726051401
Date	2021/07/26
NANJING TICA CLIMATE SOLUTIONS CO., LTD.	



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Table: Cooling capacity		P
Date	2021-08-14	
Test Institute	SGS-CSTC Standards Technical Services Co., Ltd. Anhui Branch (GAC No. ATL 0068)	
Test Location	1/F&2/F, West Building C12, Gongtuo Liheng Industrial Square, Fanhua Road, Economic & Technological Development Area, Hefei, 230601 Anhui, China	
Test Method	Indoor air-enthalpy method	
Observer(s)	Jarvan Deng	
Type designation	Model:	4 x Indoor unit TMDN140AE Outdoor: TIMS200CXT
	Rated voltage/Frequency	380 V; 3N; 50 Hz
Test condition	Test voltage (V)	400
	Test frequency (Hz)	50
	Indoor test room temperature, dry/wet (°C)	26.6 / 19.4
	Outdoor test room temperature, dry/wet (°C)	48 / 26.9
	Fan speed settings (Outdoor/Indoor)	High speed
	Barometric pressure(kPa)	100.40
Cooling power	Rated power input (kW)	—
	Effective power input* P <sub>E</sub> (kW)	14.565
Cooling capacity	Rated cooling capacity (Btu/h)	—
	Cooling capacity: * (Btu/h)	162134.828
Calculation table		
Items	Tested value	Verdict
Energy efficiency ratio: (EER) (Btu/h)/W	11.13	See below table
Power rating (kW/RT)	1.08	See below table
<p>Note: * These results are based on average value calculated on seven records, see annex 1. The tests were performed on three samples, the most unfavourable test data was recorded into the test report. This report includes Annex 2: 2 pages of Photo document.</p> <p>Maximum Allowable Power Rating according to the following table 2.3.1 and 3.3.1 of MEW/R-6/2018</p>		



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**Table 2.3.1 Maximum Allowable Power Rating for Different Types of A/C Systems (kW/RT)**

System Type	Capacity (RT)	PR <sub>T</sub> (kW/RT) <sup>(1)</sup>			
		1/1/2019	1/1/2020	1/1/2022	1/1/2024
<b>Implementation Date</b>		1/1/2019	1/1/2020	1/1/2022	1/1/2024
DX units without inverter compressor <sup>(2)</sup>	All	1.5	1.4	1.25	Start of Phase out
DX with inverter compressor <sup>(2)</sup>	All	1.5 (1.10)	1.4 (1.10)	1.25 (1.0)	1.20 (0.90)
Variable refrigerant flow (VRF) <sup>(2)</sup>	All	1.35 (1.05)	1.20 (0.90)	1.15 (0.85)	1.10 (0.83)
Air-cooled chilled water system <sup>(3)</sup>	All	1.60/2.00	1.40/1.80	1.20/1.60	0.85/1.25
Water-cooled chilled water system <sup>(3)</sup>	<250	0.85/1.40	0.80/1.35	0.75/1.3	0.70/1.25
	250–500	0.75/1.30	0.70/1.25	0.65/1.15	0.58/1.10
	>500	0.70/1.25	0.65/1.20	0.60/1.10	0.58/1.05

**Table 3.3.1 Maximum Allowable Power Rating for Different Types of A/C Systems (kW/RT)**

System Type	Capacity (RT)	PR <sub>T</sub> (kW/RT) <sup>(1)</sup>			
		1/1/2019	1/1/2020	1/1/2022	1/1/2024
<b>Implementation Date</b>		1/1/2019	1/1/2020	1/1/2022	1/1/2024
DX units without inverter compressor <sup>(2)</sup>	All	1.5	1.4	1.25	Start of Phase out
DX with inverter compressor <sup>(2)</sup>	All	1.5 (1.10)	1.4 (1.10)	1.25 (1.0)	1.20 (0.90)
Variable refrigerant flow (VRF) <sup>(2)(3)</sup>	All	1.35 (1.05)	1.20 (0.90)	1.15 (0.85)	1.10 (0.83)
Air-cooled chilled water system <sup>(3), (4)</sup>	All	1.60/2.00	1.40/1.80	1.20/1.60	0.85/1.25
Water-cooled chilled water system <sup>(3), (4)</sup>	<250	0.85/1.40	0.80/1.35	0.75/1.3	0.70/1.25
	250–500	0.75/1.30	0.70/1.25	0.65/1.15	0.58/1.10
	>500	0.70/1.25	0.65/1.20	0.60/1.10	0.58/1.05



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Annex 1: test data

Data	Unit	Test data/Time(min)							AVG.
		5 Min	10 Min	15 Min	20 Min	25 Min	30 Min	35 Min	
Indoor inlet DB	℃	26.62	26.61	26.61	26.6	26.6	26.59	26.58	26.6
Indoor inlet WB	℃	19.48	19.48	19.48	19.47	19.47	19.46	19.46	19.47
Indoor outlet DB	℃	13.73	13.73	13.72	13.71	13.71	13.71	13.71	13.71
Indoor outlet WB	℃	12.95	12.93	12.92	12.92	12.92	12.92	12.91	12.92
Outdoor inlet DB	℃	48.01	48.02	48.02	48.02	48.02	48.01	48.02	48.02
Outdoor inlet WB	℃	27.74	27.74	27.75	27.75	27.75	27.75	27.75	27.75
Voltage (Phase A)	V	220.66	220.63	220.65	220.63	220.64	220.63	220.64	220.64
Voltage (Phase B)	V	219.52	219.54	219.53	219.54	219.53	219.53	219.53	219.53
Voltage (Phase C)	V	221.01	221	221	221	220.99	221	220.99	221
Current (Phase A)	A	19.59	19.55	19.58	19.59	19.59	19.61	19.58	19.59
Current (Phase B)	A	23.46	23.51	23.52	23.55	23.54	23.51	23.54	23.52
Current (Phase C)	A	22.56	22.54	22.56	22.56	22.6	22.61	22.54	22.56
frequency	Hz	50	50	50	50	50	50	50	50
Power	kW	14.549	14.55	14.562	14.572	14.577	14.579	14.565	14.565
Air flow	m3/h	7434.9	7442.4	7448.2	7452.2	7454	7456.3	7451.3	7449.1
Capacity	kW	47.326	47.507	47.61	47.553	47.565	47.518	47.532	47.519
EER/COP	W/W	3.253	3.265	3.269	3.263	3.263	3.259	3.264	3.263
Latent heat	kW	14.578	14.742	14.81	14.735	14.739	14.699	14.739	14.724
Sensible heat	kW	32.748	32.765	32.8	32.818	32.826	32.819	32.793	32.795
Atmospheric pressure	kPa	100.4	100.4	100.4	100.4	100.4	100.4	100.4	100.4



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**Annex 2: Photos**

Details of: Indoor unit

View:

- general
- front
- rear
- right
- left
- top
- bottom



Details of: Outdoor unit

View:

- general
- front
- rear
- right
- left
- top
- bottom



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Details of: Compressor

View:

- general
- front
- rear
- right
- left
- top
- bottom



- End of Test Report -



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Applicant .....: NANJING TICA CLIMATE SOLUTIONS CO., LTD.  
No.6 HengYe Road,Economic Technological Development Zone. Nanjing,China

Attn. To.....: Chen Jie

Manufacturing location .....: Same as applicant

Test object / Model : VRF Air Conditioner  
Outdoor unit: TIMS220CXA  
Indoor unit: TMDN125AE

Test specifications / Test standard.....: ISO 15042:2017  
MEWR-6/2018

Purpose of examination .....: Measured Power Rating at Indoor DB: 26.6 °C/WB: 19.4 °C; outdoor DB: 48 °C/WB: 26.9 °C according to client's requirements.

Test result: See the following pages

Hunter Lin  
Reviewer



Jarvan Deng  
Project Engineer



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Test item particulars: VRF Air Conditioner	
Model name:	Outdoor unit: TIMS220CXA Indoor unit: TMDN125AE
Brand:	
Rating:	Refer to rating label
Compressor model:	ANB66FTAMT
Refrigerant:	R410A
Mass of refrigerant:	16,0 kg
Test method:	Indoor air-enthalpy method
Ducted air conditioner:	Multi Split type
Testing:	
Date of receipt of test item :	2021-08-10
Date (s) of performance of tests :	2021-08-10 to 2021-09-16
<b>General remarks:</b>	
<p>"The application of this report shall be used for verification according to ISO 15042:2017 only"</p> <p>The test results presented in this report relate only to the object tested.</p> <p>This report shall not be reproduced, except in full, without the written approval of the Issuing testing laboratory.</p>	
<b>General product information:</b>	
<p>The appliances are outdoor unit of split-type air conditioner which assembled with one or more indoor units (multi-split system) intended for household use only, the refrigerant is R410A.</p>	



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<b>Summary:</b> Tests results according to client's requirements as described below:		
Test condition	Indoor DB: 26.6 °C/WB: 19.4 °C; outdoor DB: 48 °C/WB: 26.9 °C	
Tested Power Rating (kW/RT):	1.09	
Indoor air flow (m <sup>3</sup> /h)	7478	
Motor/Compressor:	Three phase	
Power factor:	0.96	
Test condition	Test voltage(V)	418 V
	Test frequency(Hz)	50 Hz
	Indoor test room temperature, dry/wet (°C)	32/13
	Outdoor test room temperature, dry/wet (°C)	52/31
The appliance continue to operate satisfactorily for 2 hours non stop without tripping or over heating .....		Yes
All thermostats (analog, digital) or sensors (individual or part of a BAS) shall not have a temperature setting of less than 20 °C		Yes



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Rating label:  
English version

<b>TICA</b>	
TIMS VRF AIR CONDITIONING OUTDOOR UNIT	
Model	TIMS220CXA
Power supply	380V/3N/50Hz
Cooling capacity	61.5 kW
Heating capacity	69.0 kW
Cooling power input	18.20kW
Heating power input	17.60 kW
Cooling current	38.1 A
Heating current	35.9 A
Max. power input	29.5 kW
Max. current	52 A
Max. discharge/suction pressure	4.2/2.2 MPa
APF	4.10 W/W
IPLV(C)	8.90 W/W
Sound pressure	64 dB(A)
Refrigerant charge volume	R410A/16.0 kg
Net weight	380 kg
Protection level	IP14
Factory number	Scan barcode
Production date	2021/07/15
NANJING TICA CLIMATE SOLUTIONS CO., LTD. MADE IN CHINA	

<b>TICA</b>	
VRF AIR CONDITIONING DUCT INDOOR UNIT	
Model	TMDN125AE
Power Source	220V~50Hz
Cooling Capacity	12.5kW
Heating Capacity	14.0 kW
Air Flow Volume	1600 m <sup>3</sup> /h
External Static Pressure	50 Pa
Power Input	0.160 kW
Rated Current	1.322 A
Sound Pressure	43 dB(A)
Waterproof Grade	IPX0
Net Weight	37.0 kg
Serial Number	491114000210526051004
Date	2021/05/26
NANJING TICA CLIMATE SOLUTIONS CO., LTD.	



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Table: Cooling capacity		P
Date	2021-08-14	
Test Institute	SGS-CSTC Standards Technical Services Co., Ltd. Anhui Branch (GAC No. ATL 0068)	
Test Location	1/F&2/F, West Building C12, Gongtuo Liheng Industrial Square, Fanhua Road, Economic & Technological Development Area, Hefei, 230601 Anhui, China	
Test Method	Indoor air-enthalpy method	
Observer(s)	Jarvan Deng	
Type designation	Model:	5 x Indoor unit TMDN125AE Outdoor: TIMS220CXA
	Rated voltage/Frequency	380 V; 3N; 50 Hz
Test condition	Test voltage (V)	400
	Test frequency (Hz)	50
	Indoor test room temperature, dry/wet (°C)	26.6 / 19.4
	Outdoor test room temperature, dry/wet (°C)	48 / 26.9
	Fan speed settings (Outdoor/Indoor)	High speed
	Barometric pressure(kPa)	100.43
Cooling power	Rated power input (kW)	—
	Effective power input* P <sub>E</sub> (kW)	16.279
Cooling capacity	Rated cooling capacity (Btu/h)	—
	Cooling capacity: * (Btu/h)	178427.128
Calculation table		
Items	Tested value	Verdict
Energy efficiency ratio: (EER) (Btu/h)/W	10.96	See below table
Power rating (kW/RT)	1.09	See below table
<p>Note: * These results are based on average value calculated on seven records, see annex 1. The tests were performed on three samples, the most unfavourable test data was recorded into the test report. This report includes Annex 2: 2 pages of Photo document. Maximum Allowable Power Rating according to the following table 2.3.1 and 3.3.1 of MEW/R-6/2018</p>		



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**Table 2.3.1 Maximum Allowable Power Rating for Different Types of A/C Systems (kW/RT)**

System Type	Capacity (RT)	PR <sub>T</sub> (kW/RT) <sup>(1)</sup>			
		1/1/2019	1/1/2020	1/1/2022	1/1/2024
<b>Implementation Date</b>		1/1/2019	1/1/2020	1/1/2022	1/1/2024
DX units without inverter compressor <sup>(2)</sup>	All	1.5	1.4	1.25	Start of Phase out
DX with inverter compressor <sup>(2)</sup>	All	1.5 (1.10)	1.4 (1.10)	1.25 (1.0)	1.20 (0.90)
Variable refrigerant flow (VRF) <sup>(2)</sup>	All	1.35 (1.05)	1.20 (0.90)	1.15 (0.85)	1.10 (0.83)
Air-cooled chilled water system <sup>(3)</sup>	All	1.60/2.00	1.40/1.80	1.20/1.60	0.85/1.25
Water-cooled chilled water system <sup>(3)</sup>	<250	0.85/1.40	0.80/1.35	0.75/1.3	0.70/1.25
	250-500	0.75/1.30	0.70/1.25	0.65/1.15	0.58/1.10
	>500	0.70/1.25	0.65/1.20	0.60/1.10	0.58/1.05

**Table 3.3.1 Maximum Allowable Power Rating for Different Types of A/C Systems (kW/RT)**

System Type	Capacity (RT)	PR <sub>T</sub> (kW/RT) <sup>(1)</sup>			
		1/1/2019	1/1/2020	1/1/2022	1/1/2024
<b>Implementation Date</b>		1/1/2019	1/1/2020	1/1/2022	1/1/2024
DX units without inverter compressor <sup>(2)</sup>	All	1.5	1.4	1.25	Start of Phase out
DX with inverter compressor <sup>(2)</sup>	All	1.5 (1.10)	1.4 (1.10)	1.25 (1.0)	1.20 (0.90)
Variable refrigerant flow (VRF) <sup>(2)(3)</sup>	All	1.35 (1.05)	1.20 (0.90)	1.15 (0.85)	1.10 (0.83)
Air-cooled chilled water system <sup>(3),(4)</sup>	All	1.60/2.00	1.40/1.80	1.20/1.60	0.85/1.25
Water-cooled chilled water system <sup>(3),(4)</sup>	<250	0.85/1.40	0.80/1.35	0.75/1.3	0.70/1.25
	250-500	0.75/1.30	0.70/1.25	0.65/1.15	0.58/1.10
	>500	0.70/1.25	0.65/1.20	0.60/1.10	0.58/1.05



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Annex 1: test data

Data	Unit	Test data/Time(min)							AVG.
		5 Min	10 Min	15 Min	20 Min	25 Min	30 Min	35 Min	
Indoor inlet DB	℃	26.68	26.68	26.68	26.68	26.69	26.69	26.69	26.69
Indoor inlet WB	℃	19.48	19.48	19.48	19.48	19.48	19.48	19.48	19.48
Indoor outlet DB	℃	12.71	12.71	12.71	12.72	12.64	12.61	12.61	12.67
Indoor outlet WB	℃	12.24	12.24	12.24	12.25	12.25	12.25	12.25	12.25
Outdoor inlet DB	℃	48.56	48.56	48.55	48.55	48.54	48.54	48.53	48.54
Outdoor inlet WB	℃	28.7	28.7	28.7	28.7	28.7	28.7	28.7	28.7
Voltage (Phase A)	V	220.5	220.5	220.5	220.5	220.48	220.5	220.5	220.5
Voltage (Phase B)	V	219.47	219.47	219.47	219.49	219.5	219.47	219.48	219.48
Voltage (Phase C)	V	220.79	220.79	220.79	220.79	220.79	220.79	220.79	220.79
Current (Phase A)	A	22.5	22.5	22.49	22.58	22.54	22.46	22.51	22.51
Current (Phase B)	A	25.47	25.46	25.49	25.46	25.53	25.48	25.48	25.48
Current (Phase C)	A	25.49	25.54	25.51	25.51	25.42	25.52	25.53	25.5
frequency	Hz	50	50	50	50	50	50	50	50
Power	kW	16.267	16.28	16.274	16.292	16.284	16.271	16.282	16.279
Air flow	m3/h	7455.8	7462.3	7498.4	7494.5	7485.4	7469.9	7477.1	7477.6
Capacity	kW	52.18	52.225	52.456	52.384	52.327	52.222	52.273	52.294
EER/COP	W/W	3.208	3.208	3.223	3.215	3.213	3.209	3.211	3.212
Latent heat	kW	16.444	16.458	16.516	16.481	16.245	16.125	16.141	16.335
Sensible heat	kW	35.736	35.767	35.94	35.903	36.082	36.097	36.132	35.959
Atmospheric pressure	kPa	100.43	100.43	100.43	100.43	100.43	100.43	100.43	100.43



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**Annex 2: Photos**

Details of: Indoor unit

View:

- general
- front
- rear
- right
- left
- top
- bottom



Details of: Outdoor unit

View:

- general
- front
- rear
- right
- left
- top
- bottom



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Details of: Compressor

View:

- general
- front
- rear
- right
- left
- top
- bottom



- End of Test Report -



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Applicant .....: NANJING TICA CLIMATE SOLUTIONS CO., LTD.  
No.6 HengYe Road,Economic Technological Development Zone. Nanjing,China

Attn. To.....: Chen Jie

Manufacturing location .....: Same as applicant

Test object / Model : VRF Air Conditioner  
Outdoor unit: TIMS240CXA  
Indoor unit: TMDN112AE

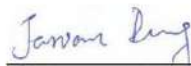
Test specifications / Test standard.....: ISO 15042:2017  
MEWR-6/2018

Purpose of examination .....: Measured Power Rating at Indoor DB: 26.6 °CWB: 19.4 °C; outdoor DB: 48 °CWB: 26.9 °C according to client's requirements.

Test result: See the following pages

  
Hunter Lin  
Reviewer



  
Jarvan Deng  
Project Engineer



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Test item particulars: VRF Air Conditioner	
Model name:	Outdoor unit: TIMS240CXA Indoor unit: TMDN112AE
Brand:	
Rating:	Refer to rating label
Compressor model:	ANB66FTAMT
Refrigerant:	R410A
Mass of refrigerant:	16,0 kg
Test method:	Indoor air-enthalpy method
Ducted air conditioner:	Multi Split type
Testing:	
Date of receipt of test item :	2021-08-10
Date (s) of performance of tests :	2021-08-10 to 2021-09-16
<b>General remarks:</b>	
<p>"The application of this report shall be used for verification according to ISO 15042:2017 only"</p> <p>The test results presented in this report relate only to the object tested.</p> <p>This report shall not be reproduced, except in full, without the written approval of the Issuing testing laboratory.</p>	
<b>General product information:</b>	
<p>The appliances are outdoor unit of split-type air conditioner which assembled with one or more indoor units (multi-split system) intended for household use only, the refrigerant is R410A.</p>	



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<b>Summary:</b> Tests results according to client's requirements as described below:		
Test condition	Indoor DB: 26.6 °C/WB: 19.4 °C; outdoor DB: 48 °C/WB: 26.9 °C	
Tested Power Rating (kW/RT):	1.07	
Indoor air flow (m <sup>3</sup> /h)	10500	
Motor/Compressor:	Three phase	
Power factor:	0.95	
Test condition	Test voltage(V)	418 V
	Test frequency(Hz)	50 Hz
	Indoor test room temperature, dry/wet (°C)	32/13
	Outdoor test room temperature, dry/wet (°C)	52/31
The appliance continue to operate satisfactorily for 2 hours non stop without tripping or over heating .....		Yes
All thermostats (analog, digital) or sensors (individual or part of a BAS) shall not have a temperature setting of less than 20 °C		Yes



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Rating label:  
English version

<p><b>TICA</b> TIMS VRF AIR CONDITIONING OUTDOOR UNIT</p>	
Model	TIMS240CXA
Power supply	380V/3N/50Hz
Cooling capacity	67.0 kW
Heating capacity	75.0 kW
Cooling power input	19.00 kW
Heating power input	18.00 kW
Cooling current	39.8 A
Heating current	35.6 A
Max. power input	30.5 kW
Max. current	53.5 A
Max. discharge/suction pressure	4.2/2.2 MPa
APF	4.05 W/W
IPLV(C)	8.80 W/W
Sound pressure	64 dB(A)
Refrigerant charge volume	R410A/16.0 kg
Net weight	430 kg
Protection level	IP14
Factory number	Scan barcode
Production date	11/05/2020
<p>NANJING TICA CLIMATE SOLUTIONS CO., LTD. MADE IN CHINA</p>	

<p><b>TICA</b> VRF AIR CONDITIONING DUCT INDOOR UNIT</p>	
Model	TMDN112AE
Power Source	220V~50Hz
Cooling Capacity	11.2 kW
Heating Capacity	12.5 kW
Air Flow Volume	1600 m <sup>3</sup> /h
External Static Pressure	50 Pa
Power Input	0.160 kW
Rated Current	1.322 A
Sound Pressure	43 dB(A)
Waterproof Grade	IPX0
Net Weight	37.0 kg
Serial Number	491114000210328051004
Date	2021/03/28
<p>NANJING TICA CLIMATE SOLUTIONS CO., LTD. MADE IN CHINA</p>	



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Table: Cooling capacity		P
Date	2021-08-15	
Test Institute	SGS-CSTC Standards Technical Services Co., Ltd. Anhui Branch (GAC No. ATL 0068)	
Test Location	1/F&2/F, West Building C12, Gongtuo Liheng Industrial Square, Fanhua Road, Economic & Technological Development Area, Hefei, 230601 Anhui, China	
Test Method	Indoor air-enthalpy method	
Observer(s)	Jarvan Deng	
Type designation	Model:	6 x Indoor unit TMDN112AE Outdoor: TIMS240CXA
	Rated voltage/Frequency	380 V; 3N; 50 Hz
Test condition	Test voltage (V)	400
	Test frequency (Hz)	50
	Indoor test room temperature, dry/wet (°C)	26.6 / 19.4
	Outdoor test room temperature, dry/wet (°C)	48 / 26.9
	Fan speed settings (Outdoor/Indoor)	High speed
	Barometric pressure(kPa)	100.26
Cooling power	Rated power input (kW)	—
	Effective power input* P <sub>E</sub> (kW)	17.35
Cooling capacity	Rated cooling capacity (Btu/h)	—
	Cooling capacity: * (Btu/h)	194176.92
Calculation table		
Items	Tested value	Verdict
Energy efficiency ratio: (EER) (Btu/h)/W	11.19	See below table
Power rating (kW/RT)	1.07	See below table
<p>Note: * These results are based on average value calculated on seven records, see annex 1. The tests were performed on three samples, the most unfavourable test data was recorded into the test report. This report includes Annex 2: 2 pages of Photo document.</p> <p>Maximum Allowable Power Rating according to the following table 2.3.1 and 3.3.1 of MEW/R-6/2018</p>		



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**Table 2.3.1 Maximum Allowable Power Rating for Different Types of A/C Systems (kW/RT)**

System Type	Capacity (RT)	PR <sub>T</sub> (kW/RT) <sup>(1)</sup>			
		1/1/2019	1/1/2020	1/1/2022	1/1/2024
<b>Implementation Date</b>		1/1/2019	1/1/2020	1/1/2022	1/1/2024
DX units without inverter compressor <sup>(2)</sup>	All	1.5	1.4	1.25	Start of Phase out
DX with inverter compressor <sup>(2)</sup>	All	1.5 (1.10)	1.4 (1.10)	1.25 (1.0)	1.20 (0.90)
Variable refrigerant flow (VRF) <sup>(2)</sup>	All	1.35 (1.05)	1.20 (0.90)	1.15 (0.85)	1.10 (0.83)
Air-cooled chilled water system <sup>(3)</sup>	All	1.60/2.00	1.40/1.80	1.20/1.60	0.85/1.25
Water-cooled chilled water system <sup>(3)</sup>	<250	0.85/1.40	0.80/1.35	0.75/1.3	0.70/1.25
	250-500	0.75/1.30	0.70/1.25	0.65/1.15	0.58/1.10
	>500	0.70/1.25	0.65/1.20	0.60/1.10	0.58/1.05

**Table 3.3.1 Maximum Allowable Power Rating for Different Types of A/C Systems (kW/RT)**

System Type	Capacity (RT)	PR <sub>T</sub> (kW/RT) <sup>(1)</sup>			
		1/1/2019	1/1/2020	1/1/2022	1/1/2024
<b>Implementation Date</b>		1/1/2019	1/1/2020	1/1/2022	1/1/2024
DX units without inverter compressor <sup>(2)</sup>	All	1.5	1.4	1.25	Start of Phase out
DX with inverter compressor <sup>(2)</sup>	All	1.5 (1.10)	1.4 (1.10)	1.25 (1.0)	1.20 (0.90)
Variable refrigerant flow (VRF) <sup>(2)(3)</sup>	All	1.35 (1.05)	1.20 (0.90)	1.15 (0.85)	1.10 (0.83)
Air-cooled chilled water system <sup>(3), (4)</sup>	All	1.60/2.00	1.40/1.80	1.20/1.60	0.85/1.25
Water-cooled chilled water system <sup>(3), (4)</sup>	<250	0.85/1.40	0.80/1.35	0.75/1.3	0.70/1.25
	250-500	0.75/1.30	0.70/1.25	0.65/1.15	0.58/1.10
	>500	0.70/1.25	0.65/1.20	0.60/1.10	0.58/1.05



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Annex 1: test data

Data	Unit	Test data/Time(min)							AVG.
		5 Min	10 Min	15 Min	20 Min	25 Min	30 Min	35 Min	
Indoor 1 inlet DB	℃	26.62	26.63	26.62	26.62	26.62	26.62	26.60	26.62
Indoor 1 inlet WB	℃	19.51	19.51	19.51	19.51	19.51	19.52	19.51	19.51
Indoor 2 inlet DB	℃	26.50	26.50	26.49	26.50	26.51	26.52	26.51	26.50
Indoor 2 inlet WB	℃	19.40	19.40	19.40	19.40	19.41	19.42	19.41	19.41
Indoor 1 outlet DB	℃	14.46	14.55	14.57	14.56	14.53	14.48	14.50	14.52
Indoor 1 outlet WB	℃	13.79	13.71	13.79	13.71	13.71	13.62	13.53	13.69
Indoor 2 outlet DB	℃	15.58	15.58	15.50	15.54	15.48	15.57	15.64	15.56
Indoor 2 outlet WB	℃	14.20	14.18	14.24	14.34	14.30	14.35	14.44	14.29
Outdoor inlet DB	℃	48.21	48.21	48.20	48.21	48.20	48.20	48.19	48.20
Outdoor inlet WB	℃	29.74	29.73	29.73	29.73	29.72	29.71	29.71	29.72
Voltage (Phase A)	V	219.86	219.87	219.86	219.88	219.84	219.86	220.05	219.89
Voltage (Phase B)	V	218.70	218.70	218.68	218.68	218.49	218.71	218.70	218.66
Voltage (Phase C)	V	219.95	219.82	219.65	219.33	219.80	219.84	219.66	219.72
Current (Phase A)	A	28.24	28.19	28.19	28.19	28.15	28.22	28.25	28.20
Current (Phase B)	A	36.59	36.67	36.65	36.64	36.61	36.59	36.64	36.63
Current (Phase C)	A	31.82	31.82	31.74	31.71	31.83	31.78	31.75	31.78
frequency	Hz	50	50	50	50	50	50	50	50
Power	kW	17.34	17.36	17.36	17.42	17.35	17.35	17.28	17.35
Air flow	m3/h	10524.60	10525.67	10503.93	10497.08	10486.82	10467.99	10493.19	10499.90
Capacity	kW	56.94	57.01	56.91	56.89	56.93	56.87	56.79	56.91
EER/COP	W/W	3.28	3.28	3.28	3.27	3.28	3.28	3.29	3.28
Latent heat	kW	16.78	16.74	16.69	16.64	16.69	16.71	16.80	16.72
Sensible heat	kW	40.10	40.04	40.07	40.07	40.12	40.10	40.11	40.09
Atmospheric pressure	kPa	100.26	100.26	100.26	100.26	100.26	100.26	100.26	100.26



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**Annex 2: Photos**

Details of: Indoor unit

View:

- general
- front
- rear
- right
- left
- top
- bottom



Details of: Outdoor unit

View:

- general
- front
- rear
- right
- left
- top
- bottom



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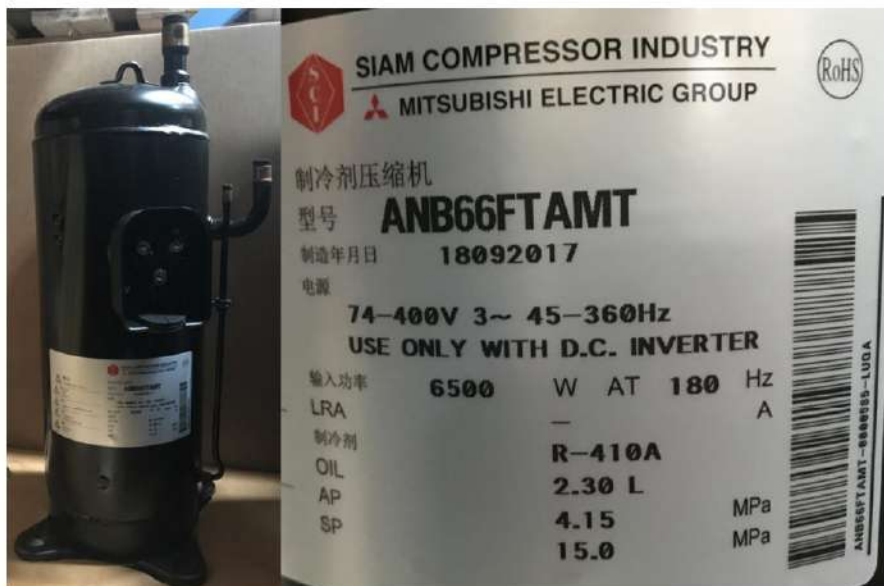
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Details of: Compressor

View:

- general
- front
- rear
- right
- left
- top
- bottom



- End of Test Report -



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Applicant .....: NANJING TICA CLIMATE SOLUTIONS CO., LTD.  
No.6 HengYe Road,Economic Technological Development Zone. Nanjing,China

Attn. To.....: Chen Jie

Manufacturing location .....: Same as applicant

Test object / Model : VRF Air Conditioner  
Outdoor unit: TIMS260CXA  
Indoor unit 1: TMDN112AE, Indoor unit 2: TMDN100AE

Test specifications / Test standard.....: ISO 15042:2017  
MEWR-6/2018

Purpose of examination .....: Measured Power Rating at Indoor DB: 26.6 °CWB: 19.4 °C; outdoor DB: 48 °CWB: 26.9 °C according to client's requirements.

Test result: See the following pages

Hunter Lin  
Reviewer



Jarvan Deng  
Project Engineer



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Test item particulars: VRF Air Conditioner	
Model name:	Outdoor unit: TIMS260CXA Indoor unit 1: TMDN112AE, Indoor unit 2: TMDN100AE
Brand:	
Rating:	Refer to rating label
Compressor model:	ANB66FTAMT
Refrigerant:	R410A
Mass of refrigerant:	18,0 kg
Test method:	Indoor air-enthalpy method
Ducted air conditioner:	Multi Split type
Testing:	
Date of receipt of test item :	2021-08-10
Date (s) of performance of tests :	2021-08-10 to 2021-09-16
<b>General remarks:</b>	
<p>"The application of this report shall be used for verification according to ISO 15042:2017 only"</p> <p>The test results presented in this report relate only to the object tested.</p> <p>This report shall not be reproduced, except in full, without the written approval of the Issuing testing laboratory.</p>	
<b>General product information:</b>	
<p>The appliances are outdoor unit of split-type air conditioner which assembled with one or more indoor units (multi-split system) intended for household use only, the refrigerant is R410A.</p>	



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<b>Summary:</b> Tests results according to client's requirements as described below:		
Test condition	Indoor DB: 26.6 °C/WB: 19.4 °C; outdoor DB: 48 °C/WB: 26.9 °C	
Tested Power Rating (kW/RT):	1.08	
Indoor air flow (m <sup>3</sup> /h)	11263	
Motor/Compressor:	Three phase	
Power factor:	0.95	
Test condition	Test voltage(V)	418 V
	Test frequency(Hz)	50 Hz
	Indoor test room temperature, dry/wet (°C)	32/13
	Outdoor test room temperature, dry/wet (°C)	52/31
The appliance continue to operate satisfactorily for 2 hours non stop without tripping or over heating .....		Yes
All thermostats (analog, digital) or sensors (individual or part of a BAS) shall not have a temperature setting of less than 20 °C		Yes



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Rating label:  
English version  
Outdoor unit:

 TIMS VRF AIR CONDITIONING OUTDOOR UNIT	
Model	TIMS260CXA
Power supply	380V/3N/50Hz
Cooling capacity	73.0 kW
Heating capacity	81.5 kW
Cooling power input	20.12 kW
Heating power input	19.42 kW
Cooling current	43.2 A
Heating current	39.2 A
Max. power input	26.64 kW
Max. current	54.50 A
Max. discharge/suction pressure	4.2/2.2 MPa
APF	4.00 W/W
IPLV(C)	8.70 W/W
Sound pressure	64 dB(A)
Refrigerant charge volume	R410A/18.0 kg
Net weight	460 kg
Protection level	IP14
Factory number	Scan barcode
Production date	07/26/2020
NANJING TICA CLIMATE SOLUTIONS CO., LTD. MADE IN CHINA	



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Indoor unit:

 <b>VRF AIR CONDITIONING DUCT INDOOR UNIT</b>	
Model	TMDN100AE
Power Source	220V~50Hz
Cooling Capacity	10.0 kW
Heating Capacity	11.2 kW
Air Flow Volume	1600 m <sup>3</sup> /h
External Static Pressure	50 Pa
Power Input	0.160 kW
Rated Current	1.322 A
Sound Pressure	43 dB(A)
Waterproof Grade	IPX0
Net Weight	37.0 kg
Serial Number	491114000210326051023
Date	2021/03/26
NANJING TICA CLIMATE SOLUTIONS CO., LTD. MADE IN CHINA	

 <b>VRF AIR CONDITIONING DUCT INDOOR UNIT</b>	
Model	TMDN112AE
Power Source	220V~50Hz
Cooling Capacity	11.2 kW
Heating Capacity	12.5 kW
Air Flow Volume	1600 m <sup>3</sup> /h
External Static Pressure	50 Pa
Power Input	0.160 kW
Rated Current	1.322 A
Sound Pressure	43 dB(A)
Waterproof Grade	IPX0
Net Weight	37.0 kg
Serial Number	491114000210328051004
Date	2021/03/28
NANJING TICA CLIMATE SOLUTIONS CO., LTD. MADE IN CHINA	



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Table: Cooling capacity		P
Date	2021-08-16	
Test Institute	SGS-CSTC Standards Technical Services Co., Ltd. Anhui Branch (GAC No. ATL 0068)	
Test Location	1/F&2/F, West Building C12, Gongtuo Liheng Industrial Square, Fanhua Road, Economic & Technological Development Area, Hefei, 230601 Anhui, China	
Test Method	Indoor air-enthalpy method	
Observer(s)	Jarvan Deng	
Type designation	Model:	4 x Indoor unit TMDN100AE + 3 x Indoor unit TMDN112AE Outdoor: TMS260CXA
	Rated voltage/Frequency	380 V; 3N; 50 Hz
Test condition	Test voltage (V)	400
	Test frequency (Hz)	50
	Indoor test room temperature, dry/wet (°C)	26.6 / 19.4
	Outdoor test room temperature, dry/wet (°C)	48 / 26.9
	Fan speed settings (Outdoor/Indoor)	High speed
	Barometric pressure(kPa)	100.27
Cooling power	Rated power input (kW)	—
	Effective power input* P <sub>E</sub> (kW)	18.81
Cooling capacity	Rated cooling capacity (Btu/h)	—
	Cooling capacity: * (Btu/h)	208541.44
Calculation table		
Items	Tested value	Verdict
Energy efficiency ratio: (EER) (Btu/h)/W	11.09	See below table
Power rating (kW/RT)	1.08	See below table
<p>Note: * These results are based on average value calculated on seven records, see annex 1. The tests were performed on three samples, the most unfavourable test data was recorded into the test report. This report includes Annex 2: 2 pages of Photo document.</p> <p>Maximum Allowable Power Rating according to the following table 2.3.1 and 3.3.1 of MEW/R-6/2018</p>		



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**Table 2.3.1 Maximum Allowable Power Rating for Different Types of A/C Systems (kW/RT)**

System Type	Capacity (RT)	PR <sub>T</sub> (kW/RT) <sup>(1)</sup>			
		Implementation Date	1/1/2019	1/1/2020	1/1/2022
DX units without inverter compressor <sup>(2)</sup>	All	1.5	1.4	1.25	Start of Phase out
DX with inverter compressor <sup>(2)</sup>	All	1.5 (1.10)	1.4 (1.10)	1.25 (1.0)	1.20 (0.90)
Variable refrigerant flow (VRF) <sup>(2)</sup>	All	1.35 (1.05)	1.20 (0.90)	1.15 (0.85)	1.10 (0.83)
Air-cooled chilled water system <sup>(3)</sup>	All	1.60/2.00	1.40/1.80	1.20/1.60	0.85/1.25
Water-cooled chilled water system <sup>(3)</sup>	<250	0.85/1.40	0.80/1.35	0.75/1.3	0.70/1.25
	250-500	0.75/1.30	0.70/1.25	0.65/1.15	0.58/1.10
	>500	0.70/1.25	0.65/1.20	0.60/1.10	0.58/1.05

**Table 3.3.1 Maximum Allowable Power Rating for Different Types of A/C Systems (kW/RT)**

System Type	Capacity (RT)	PR <sub>T</sub> (kW/RT) <sup>(1)</sup>			
		Implementation Date	1/1/2019	1/1/2020	1/1/2022
DX units without inverter compressor <sup>(2)</sup>	All	1.5	1.4	1.25	Start of Phase out
DX with inverter compressor <sup>(2)</sup>	All	1.5 (1.10)	1.4 (1.10)	1.25 (1.0)	1.20 (0.90)
Variable refrigerant flow (VRF) <sup>(2)(3)</sup>	All	1.35 (1.05)	1.20 (0.90)	1.15 (0.85)	1.10 (0.83)
Air-cooled chilled water system <sup>(3), (4)</sup>	All	1.60/2.00	1.40/1.80	1.20/1.60	0.85/1.25
Water-cooled chilled water system <sup>(3), (4)</sup>	<250	0.85/1.40	0.80/1.35	0.75/1.3	0.70/1.25
	250-500	0.75/1.30	0.70/1.25	0.65/1.15	0.58/1.10
	>500	0.70/1.25	0.65/1.20	0.60/1.10	0.58/1.05



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Annex 1: test data

Data	Unit	Test data/Time(min)								AVG.
		5 Min	10 Min	15 Min	20 Min	25 Min	30 Min	35 Min		
Indoor 1 inlet DB	℃	26.61	26.58	26.59	26.60	26.61	26.61	26.62	26.60	
Indoor 1 inlet WB	℃	19.54	19.53	19.54	19.55	19.55	19.55	19.55	19.54	
Indoor 2 inlet DB	℃	26.53	26.52	26.52	26.52	26.52	26.52	26.52	26.52	
Indoor 2 inlet WB	℃	19.52	19.51	19.53	19.53	19.52	19.52	19.52	19.52	
Indoor 1 outlet DB	℃	14.81	14.90	14.83	14.90	14.84	14.93	14.87	14.87	
Indoor 1 outlet WB	℃	13.85	13.93	13.89	13.94	13.96	13.92	13.84	13.90	
Indoor 2 outlet DB	℃	15.40	15.38	15.34	15.39	15.31	15.32	15.24	15.34	
Indoor 2 outlet WB	℃	14.15	14.10	14.10	14.11	14.10	14.10	14.16	14.12	
Outdoor inlet DB	℃	48.10	48.12	48.14	48.15	48.15	48.16	48.16	48.14	
Outdoor inlet WB	℃	29.79	29.79	29.78	29.78	29.77	29.76	29.76	29.78	
Voltage (Phase A)	V	220.11	219.98	220.08	219.70	219.45	219.58	219.93	219.83	
Voltage (Phase B)	V	218.67	218.65	218.66	218.68	218.66	218.65	218.68	218.66	
Voltage (Phase C)	V	219.72	219.61	219.63	219.51	219.52	219.54	219.49	219.57	
Current (Phase A)	A	30.25	30.24	30.24	30.22	30.21	30.24	30.27	30.24	
Current (Phase B)	A	38.65	38.64	38.64	38.63	38.68	38.67	38.64	38.65	
Current (Phase C)	A	34.02	34.03	33.99	34.04	34.05	34.03	34.08	34.03	
frequency	Hz	50	50	50	50	50	50	50	50	
Power	kW	18.86	18.84	18.78	18.78	18.84	18.79	18.81	18.81	
Air flow	m <sup>3</sup> /h	11247.77	11288.06	11266.73	11254.53	11274.59	11260.45	11252.34	11263.49	
Capacity	kW	61.10	61.15	61.12	61.08	61.17	61.09	61.12	61.12	
EER/COP	W/W	3.24	3.25	3.25	3.25	3.25	3.25	3.25	3.25	
Latent heat	kW	20.19	20.16	20.09	20.04	20.13	20.23	20.20	20.15	
Sensible heat	kW	41.13	41.10	41.00	41.03	41.06	40.99	40.95	41.03	
Atmospheric pressure	kPa	100.27	100.27	100.27	100.27	100.27	100.27	100.27	100.27	



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**Annex 2: Photos**

Details of: Indoor unit TMDN100AE



Details of: Indoor unit TMDN112AE



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Details of: Outdoor unit

View:

general

front

rear

right

left

top

bottom

Details of: Compressor

View:

general

front

rear

right

left

top

bottom

- End of Test Report -



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Applicant .....: NANJING TICA CLIMATE SOLUTIONS CO., LTD.  
No.6 HengYe Road,Economic Technological Development Zone. Nanjing,China

Attn. To.....: Chen Jie

Manufacturing location .....: Same as applicant

Test object / Model : VRF Air Conditioner  
Outdoor unit: TIMS280CXA  
Indoor unit: TMDN112AE

Test specifications / Test standard.....: ISO 15042:2017  
MEW/R-6/2018

Purpose of examination .....: Measured Power Rating at Indoor DB: 26.6 °CWB: 19.4 °C; outdoor DB: 48 °CWB: 26.9 °C according to client's requirements.

Test result: See the following pages

Hunter Lin  
Reviewer



Jarvan Deng  
Project Engineer



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Test item particulars: VRF Air Conditioner	
Model name:	Outdoor unit: TIMS280CXA Indoor unit: TMDN112AE
Brand:	
Rating:	Refer to rating label
Compressor model:	ANB78FTAMT
Refrigerant:	R410A
Mass of refrigerant:	22,0 kg
Test method:	Indoor air-enthalpy method
Ducted air conditioner:	Multi Split type
Testing:	
Date of receipt of test item :	2021-08-10
Date (s) of performance of tests :	2021-08-10 to 2021-09-16
<b>General remarks:</b>	
<p>"The application of this report shall be used for verification according to ISO 15042:2017 only"</p> <p>The test results presented in this report relate only to the object tested.</p> <p>This report shall not be reproduced, except in full, without the written approval of the Issuing testing laboratory.</p>	
<b>General product information:</b>	
<p>The appliances are outdoor unit of split-type air conditioner which assembled with one or more indoor units (multi-split system) intended for household use only, the refrigerant is R410A.</p>	



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<b>Summary:</b> Tests results according to client's requirements as described below:		
Test condition	Indoor DB: 26.6 °C/WB: 19.4 °C; outdoor DB: 48 °C/WB: 26.9 °C	
Tested Power Rating (kW/RT):	1.03	
Indoor air flow (m <sup>3</sup> /h)	11281	
Motor/Compressor:	Three phase	
Power factor:	0.95	
Test condition	Test voltage(V)	418 V
	Test frequency(Hz)	50 Hz
	Indoor test room temperature, dry/wet (°C)	32/13
	Outdoor test room temperature, dry/wet (°C)	52/31
The appliance continue to operate satisfactorily for 2 hours non stop without tripping or over heating .....		Yes
All thermostats (analog, digital) or sensors (individual or part of a BAS) shall not have a temperature setting of less than 20 °C		Yes



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Rating label:  
English version  
Outdoor unit:

 <b>TIMS VRF AIR CONDITIONING OUTDOOR UNIT</b>	
Model	TIMS280CXA
Power supply	380V/3N/50Hz
Cooling capacity	78.5 kW
Heating capacity	87.5 kW
Cooling power input	21.80 kW
Heating power input	21.30 kW
Cooling current	47.9 A
Heating current	45.8 A
Max. power input	28.92 kW
Max. current	57.65 A
Max. discharge/suction pressure	4.2/2.2 MPa
APF	3.90 W/W
IPLV(C)	8.60 W/W
Sound pressure	64 dB(A)
Refrigerant charge volume	R410A/22.0 kg
Net weight	470 kg
Protection level	IP 14
Factory number	Scan barcode
Production date	07/26/2020
NANJING TICA CLIMATE SOLUTIONS CO., LTD. MADE IN CHINA	



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Indoor unit:

<b>TICA®</b> <b>VRF AIR CONDITIONING DUCT INDOOR UNIT</b>	
Model	TMDN112AE
Power Source	220V-50Hz
Cooling Capacity	11.2 kW
Heating Capacity	12.5 kW
Air Flow Volume	1600 m <sup>3</sup> /h
External Static Pressure	50 Pa
Power Input	0.160 kW
Rated Current	1.322 A
Sound Pressure	43 dB(A)
Waterproof Grade	IPX0
Net Weight	37.0 kg
Serial Number	491114000210328051004
Date	2021/03/28
<b>NANJING TICA CLIMATE SOLUTIONS CO., LTD.</b> <b>MADE IN CHINA</b>	



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Table: Cooling capacity		P
Date	2021-08-16	
Test Institute	SGS-CSTC Standards Technical Services Co., Ltd. Anhui Branch (GAC No. ATL 0068)	
Test Location	1/F&2/F, West Building C12, Gongtuo Liheng Industrial Square, Fanhua Road, Economic & Technological Development Area, Hefei, 230601 Anhui, China	
Test Method	Indoor air-enthalpy method	
Observer(s)	Jarvan Deng	
Type designation	Model:	7 x Indoor unit TMDN112AE Outdoor: TIMS280CXA
	Rated voltage/Frequency	380 V; 3N; 50 Hz
Test condition	Test voltage (V)	400
	Test frequency (Hz)	50
	Indoor test room temperature, dry/wet (°C)	26.6 / 19.4
	Outdoor test room temperature, dry/wet (°C)	48 / 26.9
	Fan speed settings (Outdoor/Indoor)	High speed
	Barometric pressure(kPa)	100.27
Cooling power	Rated power input (kW)	—
	Effective power input* P <sub>E</sub> (kW)	19.44
Cooling capacity	Rated cooling capacity (Btu/h)	—
	Cooling capacity: * (Btu/h)	226181.48
Calculation table		
Items	Tested value	Verdict
Energy efficiency ratio: (EER) (Btu/h)/W	11.63	See below table
Power rating (kW/RT)	1.03	See below table
<p>Note: * These results are based on average value calculated on seven records, see annex 1. The tests were performed on three samples, the most unfavourable test data was recorded into the test report. This report includes Annex 2: 2 pages of Photo document. Maximum Allowable Power Rating according to the following table 2.3.1 and 3.3.1 of MEW/R-6/2018</p>		



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Table 2.3.1 Maximum Allowable Power Rating for Different Types of A/C Systems (kW/RT)

System Type	Capacity (RT)	PR <sub>T</sub> (kW/RT) <sup>(1)</sup>			
		1/1/2019	1/1/2020	1/1/2022	1/1/2024
<b>Implementation Date</b>					
DX units without inverter compressor <sup>(2)</sup>	All	1.5	1.4	1.25	Start of Phase out
DX with inverter compressor <sup>(2)</sup>	All	1.5 (1.10)	1.4 (1.10)	1.25 (1.0)	1.20 (0.90)
Variable refrigerant flow (VRF) <sup>(2)</sup>	All	1.35 (1.05)	1.20 (0.90)	1.15 (0.85)	1.10 (0.83)
Air-cooled chilled water system <sup>(3)</sup>	All	1.60/2.00	1.40/1.80	1.20/1.60	0.85/1.25
Water-cooled chilled water system <sup>(3)</sup>	<250	0.85/1.40	0.80/1.35	0.75/1.3	0.70/1.25
	250-500	0.75/1.30	0.70/1.25	0.65/1.15	0.58/1.10
	>500	0.70/1.25	0.65/1.20	0.60/1.10	0.58/1.05

Table 3.3.1 Maximum Allowable Power Rating for Different Types of A/C Systems (kW/RT)

System Type	Capacity (RT)	PR <sub>T</sub> (kW/RT) <sup>(1)</sup>			
		1/1/2019	1/1/2020	1/1/2022	1/1/2024
<b>Implementation Date</b>					
DX units without inverter compressor <sup>(2)</sup>	All	1.5	1.4	1.25	Start of Phase out
DX with inverter compressor <sup>(2)</sup>	All	1.5 (1.10)	1.4 (1.10)	1.25 (1.0)	1.20 (0.90)
Variable refrigerant flow (VRF) <sup>(2)(3)</sup>	All	1.35 (1.05)	1.20 (0.90)	1.15 (0.85)	1.10 (0.83)
Air-cooled chilled water system <sup>(3), (4)</sup>	All	1.60/2.00	1.40/1.80	1.20/1.60	0.85/1.25
Water-cooled chilled water system <sup>(3), (4)</sup>	<250	0.85/1.40	0.80/1.35	0.75/1.3	0.70/1.25
	250-500	0.75/1.30	0.70/1.25	0.65/1.15	0.58/1.10
	>500	0.70/1.25	0.65/1.20	0.60/1.10	0.58/1.05



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Annex 1: test data

Data	Unit	Test data/Time(min)							AVG.
		5 Min	10 Min	15 Min	20 Min	25 Min	30 Min	35 Min	
Indoor 1 inlet DB	℃	26.63	26.62	26.61	26.60	26.62	26.63	26.62	26.62
Indoor 1 inlet WB	℃	19.54	19.54	19.54	19.54	19.54	19.54	19.54	19.54
Indoor 2 inlet DB	℃	26.55	26.55	26.55	26.55	26.56	26.57	26.55	26.55
Indoor 2 inlet WB	℃	19.52	19.52	19.52	19.52	19.52	19.52	19.51	19.52
Indoor 1 outlet DB	℃	14.37	14.45	14.41	14.49	14.39	14.45	14.53	14.44
Indoor 1 outlet WB	℃	13.50	13.42	13.45	13.51	13.51	13.45	13.49	13.48
Indoor 2 outlet DB	℃	14.81	14.87	14.89	14.99	14.91	14.89	14.83	14.88
Indoor 2 outlet WB	℃	13.53	13.47	13.51	13.52	13.43	13.40	13.35	13.46
Outdoor inlet DB	℃	48.00	48.01	48.02	48.02	48.04	48.04	48.05	48.02
Outdoor inlet WB	℃	30.00	29.99	29.98	29.97	29.96	29.95	29.94	29.97
Voltage (Phase A)	V	220.28	219.57	219.81	219.80	219.79	220.01	219.79	219.87
Voltage (Phase B)	V	218.63	218.64	218.63	218.61	218.63	218.63	218.65	218.63
Voltage (Phase C)	V	219.57	219.56	219.57	219.74	219.59	219.63	219.61	219.61
Current (Phase A)	A	32.50	32.41	32.40	32.42	32.35	32.46	32.40	32.42
Current (Phase B)	A	40.78	40.80	40.76	40.78	40.80	40.80	40.76	40.78
Current (Phase C)	A	36.24	36.21	36.21	36.28	36.23	36.22	36.21	36.23
frequency	Hz	50	50	50	50	50	50	50	50
Power	kW	19.49	19.53	19.46	19.46	19.41	19.36	19.35	19.44
Air flow	m3/h	11332.63	11314.59	11263.84	11295.40	11264.14	11248.09	11249.47	11281.17
Capacity	kW	66.12	66.22	66.22	66.28	66.31	66.40	66.48	66.29
EER/COP	W/W	3.39	3.39	3.40	3.41	3.42	3.43	3.44	3.41
Latent heat	kW	22.46	22.55	22.47	22.40	22.48	22.41	22.39	22.45
Sensible heat	kW	43.53	43.59	43.55	43.46	43.45	43.50	43.43	43.50
Atmospheric pressure	kPa	100.27	100.27	100.27	100.27	100.28	100.28	100.28	100.27



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**Annex 2: Photos**

Details of: Indoor unit TMDN112AE

View:

- general
- front
- rear
- right
- left
- top
- bottom



Details of: Outdoor unit

View:

- general
- front
- rear
- right
- left
- top
- bottom



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Details of: Compressor

View:

general

front

rear

right

left

top

bottom



- End of Test Report -



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Applicant .....: NANJING TICA CLIMATE SOLUTIONS CO., LTD.  
No.6 HengYe Road,Economic Technological Development Zone. Nanjing,China

Attn. To.....: Chen Jie

Manufacturing location .....: Same as applicant

Test object / Model : VRF Air Conditioner  
Outdoor unit: TIMS300CXA  
Indoor unit 1: TMDN112AE; Indoor unit 2: TMDN100AE

Test specifications / Test standard.....: ISO 15042:2017  
MEW/R-6/2018

Purpose of examination .....: Measured Power Rating at Indoor DB: 26.6 °C/WB: 19.4 °C; outdoor DB: 48 °C/WB: 26.9 °C according to client’s requirements.

Test result: See the following pages

Hunter Lin  
Reviewer



Jarvan Deng  
Project Engineer



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Test item particulars: VRF Air Conditioner	
Model name:	Outdoor unit: TIMS300CXA Indoor unit 1: TMDN112AE; Indoor unit 2: TMDN100AE
Brand:	
Rating:	Refer to rating label
Compressor model:	ANB78FTAMT
Refrigerant:	R410A
Mass of refrigerant:	22,0 kg
Test method:	Indoor air-enthalpy method
Ducted air conditioner:	Multi Split type
Testing:	
Date of receipt of test item :	2021-08-10
Date (s) of performance of tests :	2021-08-10 to 2021-09-16
<b>General remarks:</b>	
<p>"The application of this report shall be used for verification according to ISO 15042:2017 only"</p> <p>The test results presented in this report relate only to the object tested.</p> <p>This report shall not be reproduced, except in full, without the written approval of the Issuing testing laboratory.</p>	
<b>General product information:</b>	
The appliances are outdoor unit of split-type air conditioner which assembled with one or more indoor units (multi-split system) intended for household use only, the refrigerant is R410A.	



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<b>Summary:</b> Tests results according to client's requirements as described below:		
Test condition	Indoor DB: 26.6 °C/WB: 19.4 °C; outdoor DB: 48 °C/WB: 26.9 °C	
Tested Power Rating (kW/RT):	1.04	
Indoor air flow (m <sup>3</sup> /h)	13656	
Motor/Compressor:	Three phase	
Power factor:	0.95	
Test condition	Test voltage(V)	418 V
	Test frequency(Hz)	50 Hz
	Indoor test room temperature, dry/wet (°C)	32/13
	Outdoor test room temperature, dry/wet (°C)	52/31
The appliance continue to operate satisfactorily for 2 hours non stop without tripping or over heating .....		Yes
All thermostats (analog, digital) or sensors (individual or part of a BAS) shall not have a temperature setting of less than 20 °C		Yes



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**Rating label:**  
English version  
Outdoor unit:

 TIMS VRF AIR CONDITIONING OUTDOOR UNIT	
Model	TIMS300CXA
Power supply	380V/3N/50Hz
Cooling capacity	85.0 kW
Heating capacity	95.0 kW
Cooling power input	22.95 kW
Heating power input	23.50 kW
Cooling current	50.1 A
Heating current	47.5 A
Max. power input	31.68kW
Max. current	60.90 A
Max. discharge/suction pressure	4.2/2.2 MPa
APF	3.85 W/W
IPLV(C)	8.55 W/W
Sound pressure	65 dB(A)
Refrigerant charge volume	R410A/22.0 kg
Net weight	470 kg
Protection level	IP14
Factory number	Scan barcode
Production date	08/26/2020
NANJING TICA CLIMATE SOLUTIONS CO., LTD. MADE IN CHINA	



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Indoor unit 1:

<b>VRF AIR CONDITIONING DUCT INDOOR UNIT</b>	
Model	TMDN112AE
Power Source	220V~50Hz
Cooling Capacity	11.2 kW
Heating Capacity	12.5 kW
Air Flow Volume	1600 m <sup>3</sup> /h
External Static Pressure	50 Pa
Power Input	0.160 kW
Rated Current	1.322 A
Sound Pressure	43 dB(A)
Waterproof Grade	IPX0
Net Weight	37.0 kg
Serial Number	491114000210328051004
Date	2021/03/28
<b>NANJING TICA CLIMATE SOLUTIONS CO., LTD.</b> <b>MADE IN CHINA</b>	



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Indoor unit 2:

<b>TICA</b> <b>VRF AIR CONDITIONING DUCT INDOOR UNIT</b>	
Model	TMDN100AE
Power Source	220V~50Hz
Cooling Capacity	10.0 kW
Heating Capacity	11.2 kW
Air Flow Volume	1600 m <sup>3</sup> /h
External Static Pressure	50 Pa
Power Input	0.160 kW
Rated Current	1.322 A
Sound Pressure	43 dB(A)
Waterproof Grade	IPX0
Net Weight	37.0 kg
Serial Number	491114000210326051023
Date	2021/03/26
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Table: Cooling capacity		P
Date	2021-08-17	
Test Institute	SGS-CSTC Standards Technical Services Co., Ltd. Anhui Branch (GAC No. ATL 0068)	
Test Location	1/F&2/F, West Building C12, Gongtuo Liheng Industrial Square, Fanhua Road, Economic & Technological Development Area, Hefei, 230601 Anhui, China	
Test Method	Indoor air-enthalpy method	
Observer(s)	Jarvan Deng	
Type designation	Model:	4 x Indoor unit TMDN112AE + 4 x Indoor unit TMDN100AE Outdoor: TIMS300CXA
	Rated voltage/Frequency	380 V; 3N; 50 Hz
Test condition	Test voltage (V)	400
	Test frequency (Hz)	50
	Indoor test room temperature, dry/wet (°C)	26.6 / 19.4
	Outdoor test room temperature, dry/wet (°C)	48 / 26.9
	Fan speed settings (Outdoor/Indoor)	High speed
	Barometric pressure(kPa)	100.29
Cooling power	Rated power input (kW)	—
	Effective power input* P <sub>E</sub> (kW)	20.68
Cooling capacity	Rated cooling capacity (Btu/h)	—
	Cooling capacity: * (Btu/h)	239761.24
Calculation table		
Items	Tested value	Verdict
Energy efficiency ratio: (EER) (Btu/h)/W	11.59	See below table
Power rating (kW/RT)	1.04	See below table
<p>Note: * These results are based on average value calculated on seven records, see annex 1.            The tests were performed on three samples, the most unfavourable test data was recorded into the test report.            This report includes Annex 2: 2 pages of Photo document.            Maximum Allowable Power Rating according to the following table 2.3.1 and 3.3.1 of MEW/R-6/2018</p>		



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**Table 2.3.1 Maximum Allowable Power Rating for Different Types of A/C Systems (kW/RT)**

System Type	Capacity (RT)	PR <sub>T</sub> (kW/RT) <sup>(1)</sup>			
		1/1/2019	1/1/2020	1/1/2022	1/1/2024
<b>Implementation Date</b>		1/1/2019	1/1/2020	1/1/2022	1/1/2024
DX units without inverter compressor <sup>(2)</sup>	All	1.5	1.4	1.25	Start of Phase out
DX with inverter compressor <sup>(2)</sup>	All	1.5 (1.10)	1.4 (1.10)	1.25 (1.0)	1.20 (0.90)
Variable refrigerant flow (VRF) <sup>(2)</sup>	All	1.35 (1.05)	1.20 (0.90)	1.15 (0.85)	1.10 (0.83)
Air-cooled chilled water system <sup>(3)</sup>	All	1.60/2.00	1.40/1.80	1.20/1.60	0.85/1.25
Water-cooled chilled water system <sup>(3)</sup>	<250	0.85/1.40	0.80/1.35	0.75/1.3	0.70/1.25
	250-500	0.75/1.30	0.70/1.25	0.65/1.15	0.58/1.10
	>500	0.70/1.25	0.65/1.20	0.60/1.10	0.58/1.05

**Table 3.3.1 Maximum Allowable Power Rating for Different Types of A/C Systems (kW/RT)**

System Type	Capacity (RT)	PR <sub>T</sub> (kW/RT) <sup>(1)</sup>			
		1/1/2019	1/1/2020	1/1/2022	1/1/2024
<b>Implementation Date</b>		1/1/2019	1/1/2020	1/1/2022	1/1/2024
DX units without inverter compressor <sup>(2)</sup>	All	1.5	1.4	1.25	Start of Phase out
DX with inverter compressor <sup>(2)</sup>	All	1.5 (1.10)	1.4 (1.10)	1.25 (1.0)	1.20 (0.90)
Variable refrigerant flow (VRF) <sup>(2)(3)</sup>	All	1.35 (1.05)	1.20 (0.90)	1.15 (0.85)	1.10 (0.83)
Air-cooled chilled water system <sup>(3), (4)</sup>	All	1.60/2.00	1.40/1.80	1.20/1.60	0.85/1.25
Water-cooled chilled water system <sup>(3), (4)</sup>	<250	0.85/1.40	0.80/1.35	0.75/1.3	0.70/1.25
	250-500	0.75/1.30	0.70/1.25	0.65/1.15	0.58/1.10
	>500	0.70/1.25	0.65/1.20	0.60/1.10	0.58/1.05



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Annex 1: test data

Data	Unit	Test data/Time(min)							AVG.
		5 Min	10 Min	15 Min	20 Min	25 Min	30 Min	35 Min	
Indoor 1 inlet DB	℃	26.55	26.56	26.56	26.56	26.55	26.54	26.55	26.55
Indoor 1 inlet WB	℃	19.38	19.38	19.38	19.38	19.37	19.36	19.36	19.37
Indoor 2 inlet DB	℃	26.56	26.56	26.57	26.56	26.56	26.56	26.56	26.56
Indoor 2 inlet WB	℃	19.34	19.34	19.34	19.34	19.34	19.34	19.33	19.34
Indoor 1 outlet DB	℃	14.86	14.92	15.00	14.96	15.01	14.99	14.91	14.95
Indoor 1 outlet WB	℃	13.73	13.76	13.75	13.76	13.82	13.78	13.82	13.77
Indoor 2 outlet DB	℃	16.26	16.27	16.25	16.31	16.36	16.31	16.36	16.30
Indoor 2 outlet WB	℃	14.23	14.28	14.32	14.41	14.40	14.36	14.34	14.33
Outdoor inlet DB	℃	48.04	48.02	47.99	47.97	47.95	47.93	47.91	47.97
Outdoor inlet WB	℃	30.55	30.54	30.52	30.50	30.49	30.48	30.46	30.51
Voltage (Phase A)	V	219.78	219.81	219.79	219.78	219.78	219.79	219.76	219.78
Voltage (Phase B)	V	218.62	218.61	218.61	218.59	218.61	218.62	218.63	218.61
Voltage (Phase C)	V	219.50	219.12	219.20	219.52	219.55	219.54	219.38	219.40
Current (Phase A)	A	33.89	33.91	33.95	33.86	33.90	33.85	33.84	33.89
Current (Phase B)	A	42.26	42.25	42.30	42.20	42.21	42.27	42.21	42.24
Current (Phase C)	A	38.32	38.16	38.20	38.20	38.20	38.27	38.24	38.23
frequency	Hz	50	50	50	50	50	50	50	50
Power	kW	20.53	20.57	20.65	20.75	20.80	20.79	20.69	20.68
Air flow	m3/h	13656.40	13635.71	13650.59	13650.36	13643.31	13678.33	13676.75	13655.92
Capacity	kW	70.27	70.27	70.29	70.34	70.26	70.26	70.17	70.27
EER/COP	W/W	3.42	3.42	3.40	3.39	3.38	3.38	3.39	3.40
Latent heat	kW	23.08	23.18	23.20	23.27	23.17	23.20	23.16	23.18
Sensible heat	kW	47.20	47.14	47.12	47.16	47.21	47.22	47.14	47.17
Atmospheric pressure	kPa	100.29	100.29	100.29	100.29	100.29	100.29	100.29	100.29



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Annex 2: Photos

Details of: Indoor unit for TMDN112AE, TMDN100AE

View:

- general
- front
- rear
- right
- left
- top
- bottom



Details of: Outdoor unit

View:

- general
- front
- rear
- right
- left
- top
- bottom



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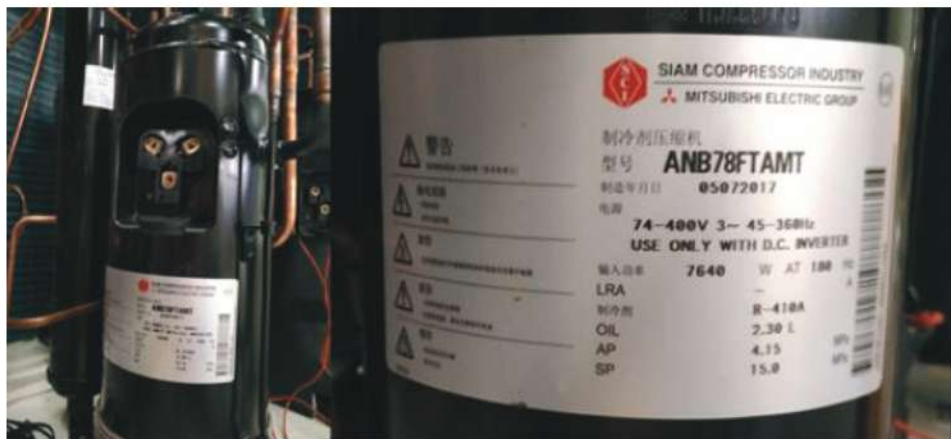
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Details of: Compressor

View:

- general
- front
- rear
- right
- left
- top
- bottom



- End of Test Report -



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Applicant .....: NANJING TICA CLIMATE SOLUTIONS CO., LTD.  
No.6 HengYe Road,Economic Technological Development Zone. Nanjing,China

Attn. To.....: Chen Jie

Manufacturing location .....: Same as applicant

Test object / Model : VRF Air Conditioner  
Outdoor unit: TIMS320CXA  
Indoor unit: TMDN100AE

Test specifications / Test standard.....: ISO 15042:2017  
MEWR-6/2018

Purpose of examination .....: Measured Power Rating at Indoor DB: 26.6 °CWB: 19.4 °C; outdoor DB: 48 °CWB: 26.9 °C according to client's requirements.

Test result: See the following pages

Hunter Lin  
Reviewer



Jarvan Deng  
Project Engineer



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Test item particulars: VRF Air Conditioner	
Model name:	Outdoor unit: TIMS320CXA Indoor unit: TMDN100AE
Brand:	
Rating:	Refer to rating label
Compressor model:	ANB78FTAMT
Refrigerant:	R410A
Mass of refrigerant:	22,0 kg
Test method:	Indoor air-enthalpy method
Ducted air conditioner:	Multi Split type
Testing:	
Date of receipt of test item :	2021-08-10
Date (s) of performance of tests :	2021-08-10 to 2021-09-16
<b>General remarks:</b>	
<p>"The application of this report shall be used for verification according to ISO 15042:2017 only"</p> <p>The test results presented in this report relate only to the object tested.</p> <p>This report shall not be reproduced, except in full, without the written approval of the Issuing testing laboratory.</p>	
<b>General product information:</b>	
<p>The appliances are outdoor unit of split-type air conditioner which assembled with one or more indoor units (multi-split system) intended for household use only, the refrigerant is R410A.</p>	



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<b>Summary:</b> Tests results according to client's requirements as described below:		
Test condition	Indoor DB: 26.6 °C/WB: 19.4 °C; outdoor DB: 48 °C/WB: 26.9 °C	
Tested Power Rating (kW/RT):	1.06	
Indoor air flow (m <sup>3</sup> /h)	15945	
Motor/Compressor:	Three phase	
Power factor:	0.95	
Test condition	Test voltage(V)	418 V
	Test frequency(Hz)	50 Hz
	Indoor test room temperature, dry/wet (°C)	32/13
	Outdoor test room temperature, dry/wet (°C)	52/31
The appliance continue to operate satisfactorily for 2 hours non stop without tripping or over heating .....		Yes
All thermostats (analog, digital) or sensors (individual or part of a BAS) shall not have a temperature setting of less than 20 °C		Yes



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Rating label:  
English version  
Outdoor unit:

 TIMS VRF AIR CONDITIONING OUTDOOR UNIT	
Model	TIMS320CXA
Power supply	380V/3N/50Hz
Cooling capacity	90.0 kW
Heating capacity	100.0 kW
Cooling power input	25.20 kW
Heating power input	24.90 kW
Cooling current	53.2 A
Heating current	51.3 A
Max. power input	33.6kW
Max. current	64.66 A
Max. discharge/suction pressure	4.2/2.2 MPa
APF	3.85 W/W
IPLV(C)	8.50 W/W
Sound pressure	65 dB(A)
Refrigerant charge volume	R410A/22.0 kg
Net weight	470 kg
Protection level	IP14
Factory number	Scan barcode
Production date	08/07/2020
NANJING TICA CLIMATE SOLUTIONS CO., LTD. MADE IN CHINA	



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Indoor unit:

<b>VRF AIR CONDITIONING DUCT INDOOR UNIT</b>	
Model	TMDN100AE
Power Source	220V~50Hz
Cooling Capacity	10.0 kW
Heating Capacity	11.2 kW
Air Flow Volume	1600 m <sup>3</sup> /h
External Static Pressure	50 Pa
Power Input	0.160 kW
Rated Current	1.322 A
Sound Pressure	43 dB(A)
Waterproof Grade	IPX0
Net Weight	37.0 kg
Serial Number	491114000210326051023
Date	2021/03/26
<b>NANJING TICA CLIMATE SOLUTIONS CO., LTD.</b> <b>MADE IN CHINA</b>	



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Table: Cooling capacity		P
Date	2021-08-18	
Test Institute	SGS-CSTC Standards Technical Services Co., Ltd. Anhui Branch (GAC No. ATL 0068)	
Test Location	1/F&2/F, West Building C12, Gongtuo Liheng Industrial Square, Fanhua Road, Economic & Technological Development Area, Hefei, 230601 Anhui, China	
Test Method	Indoor air-enthalpy method	
Observer(s)	Jarvan Deng	
Type designation	Model:	9 x Indoor unit TMDN100AE Outdoor: TIMS320CXA
	Rated voltage/Frequency	380 V; 3N; 50 Hz
Test condition	Test voltage (V)	400
	Test frequency (Hz)	50
	Indoor test room temperature, dry/wet (°C)	26.6 / 19.4
	Outdoor test room temperature, dry/wet (°C)	48 / 26.9
	Fan speed settings (Outdoor/Indoor)	High speed
	Barometric pressure(kPa)	100.29
Cooling power	Rated power input (kW)	—
	Effective power input* P <sub>E</sub> (kW)	22.45
Cooling capacity	Rated cooling capacity (Btu/h)	—
	Cooling capacity: * (Btu/h)	254330.48
Calculation table		
Items	Tested value	Verdict
Energy efficiency ratio: (EER) (Btu/h)/W	11.33	See below table
Power rating (kW/RT)	1.06	See below table
<p>Note: * These results are based on average value calculated on seven records, see annex 1. The tests were performed on three samples, the most unfavourable test data was recorded into the test report. This report includes Annex 2: 2 pages of Photo document. Maximum Allowable Power Rating according to the following table 2.3.1 and 3.3.1 of MEW/R-6/2018</p>		



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**Table 2.3.1 Maximum Allowable Power Rating for Different Types of A/C Systems (kW/RT)**

System Type	Capacity (RT)	PR <sub>T</sub> (kW/RT) <sup>(1)</sup>			
		1/1/2019	1/1/2020	1/1/2022	1/1/2024
<b>Implementation Date</b>					
DX units without inverter compressor <sup>(2)</sup>	All	1.5	1.4	1.25	Start of Phase out
DX with inverter compressor <sup>(2)</sup>	All	1.5 (1.10)	1.4 (1.10)	1.25 (1.0)	1.20 (0.90)
Variable refrigerant flow (VRF) <sup>(2)</sup>	All	1.35 (1.05)	1.20 (0.90)	1.15 (0.85)	1.10 (0.83)
Air-cooled chilled water system <sup>(3)</sup>	All	1.60/2.00	1.40/1.80	1.20/1.60	0.85/1.25
Water-cooled chilled water system <sup>(3)</sup>	<250	0.85/1.40	0.80/1.35	0.75/1.3	0.70/1.25
	250-500	0.75/1.30	0.70/1.25	0.65/1.15	0.58/1.10
	>500	0.70/1.25	0.65/1.20	0.60/1.10	0.58/1.05

**Table 3.3.1 Maximum Allowable Power Rating for Different Types of A/C Systems (kW/RT)**

System Type	Capacity (RT)	PR <sub>T</sub> (kW/RT) <sup>(1)</sup>			
		1/1/2019	1/1/2020	1/1/2022	1/1/2024
<b>Implementation Date</b>					
DX units without inverter compressor <sup>(2)</sup>	All	1.5	1.4	1.25	Start of Phase out
DX with inverter compressor <sup>(2)</sup>	All	1.5 (1.10)	1.4 (1.10)	1.25 (1.0)	1.20 (0.90)
Variable refrigerant flow (VRF) <sup>(2)(3)</sup>	All	1.35 (1.05)	1.20 (0.90)	1.15 (0.85)	1.10 (0.83)
Air-cooled chilled water system <sup>(3),(4)</sup>	All	1.60/2.00	1.40/1.80	1.20/1.60	0.85/1.25
Water-cooled chilled water system <sup>(3),(4)</sup>	<250	0.85/1.40	0.80/1.35	0.75/1.3	0.70/1.25
	250-500	0.75/1.30	0.70/1.25	0.65/1.15	0.58/1.10
	>500	0.70/1.25	0.65/1.20	0.60/1.10	0.58/1.05



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Annex 1: test data

Data	Unit	Test data/Time(min)							AVG.
		5 Min	10 Min	15 Min	20 Min	25 Min	30 Min	35 Min	
Indoor 1 inlet DB	℃	26.63	26.62	26.60	26.60	26.61	26.62	26.62	26.61
Indoor 1 inlet WB	℃	19.38	19.37	19.36	19.36	19.35	19.36	19.35	19.36
Indoor 2 inlet DB	℃	26.57	26.56	26.55	26.55	26.55	26.55	26.55	26.55
Indoor 2 inlet WB	℃	19.31	19.30	19.29	19.29	19.29	19.28	19.28	19.29
Indoor 1 outlet DB	℃	16.29	16.26	16.16	16.11	16.09	16.00	15.99	16.13
Indoor 1 outlet WB	℃	14.25	14.19	14.10	14.11	14.02	14.12	14.12	14.13
Indoor 2 outlet DB	℃	16.74	16.65	16.60	16.68	16.75	16.79	16.80	16.72
Indoor 2 outlet WB	℃	14.85	14.88	14.90	14.99	15.06	15.08	14.98	14.96
Outdoor inlet DB	℃	48.06	48.05	48.07	48.07	48.07	48.07	48.08	48.07
Outdoor inlet WB	℃	31.14	31.11	31.08	31.06	31.04	31.01	30.99	31.06
Voltage (Phase A)	V	219.64	219.62	219.62	219.60	219.63	219.64	219.63	219.63
Voltage (Phase B)	V	218.45	218.43	218.45	218.46	218.47	218.47	218.45	218.46
Voltage (Phase C)	V	219.31	219.33	219.52	219.33	219.32	219.34	219.35	219.36
Current (Phase A)	A	37.93	37.93	37.92	37.90	37.94	37.93	37.97	37.93
Current (Phase B)	A	46.23	46.23	46.21	46.21	46.25	46.23	46.28	46.23
Current (Phase C)	A	42.85	42.82	42.86	42.90	42.85	42.91	42.91	42.87
frequency	Hz	50	50	50	50	50	50	50	50
Power	kW	22.38	22.42	22.45	22.39	22.46	22.49	22.57	22.45
Air flow	m3/h	15922.66	15915.45	15933.80	15962.25	15965.58	15961.19	15955.65	15945.22
Capacity	kW	74.68	74.63	74.56	74.51	74.44	74.50	74.44	74.54
EER/COP	W/W	3.34	3.33	3.32	3.33	3.31	3.31	3.30	3.32
Latent heat	kW	22.55	22.52	22.53	22.57	22.57	22.51	22.43	22.53
Sensible heat	kW	52.21	52.20	52.27	52.29	52.19	52.11	52.09	52.19
Atmospheric pressure	kPa	100.29	100.29	100.29	100.30	100.29	100.29	100.29	100.29



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**Annex 2: Photos**

Details of: Indoor unit

View:

general

front

rear

right

left

top

bottom



Details of: Outdoor unit

View:

general

front

rear

right

left

top

bottom



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Details of: Compressor

View:

general

front

rear

right

left

top

bottom



- End of Test Report -



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