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№：PMC20221011003

TEST REPORT

NAMEOF SAMPLE: Air Conditioner

APPLICANT: TCL Air Conditioner (Zhongshan) Co., Ltd.

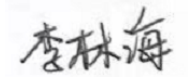
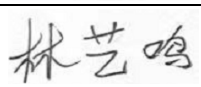
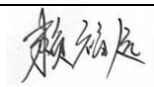
CLASSIFICATION OF TEST: Commission Test

Testing Center of TCL Air Conditioner (Zhongshan) Co., Ltd.

59 Nantou Road West, Nantou, Zhongshan, Guangdong, China

TEST REPORT

The rating and performance tests for Air-conditioner

Applicant Name ..... :	TCL Air Conditioner (Zhongshan) Co., Ltd.		
Address ..... :	59 Nantou Road West, Nantou, Zhongshan, Guangdong, China		
Manufacturer ..... :	TCL Air Conditioner (Zhongshan) Co., Ltd.		
Address ..... :	59 Nantou Road West, Nantou, Zhongshan, Guangdong, China		
Factory ..... :	Same as applicant		
Product name ..... Trademark ..... Model / type reference ..... Rating and characteristics.	Air conditioner TCL TAC-24CS/XA23 230V~ 60Hz		
Date of receipt of test item	2024-09-02	Date(s) of test	2024-09-02
Test specification/Standard	SASO 2663/2021 SASO GSO ISO 5151: 2017 ISO 16358-1 :2013/Cor 1 :2013/AMD1 :2019		
To compile	李林海		
audit	林艺鸣		
The director of the approval	赖福远		
Date of issue.....	2024-09-03		

The rating and performance tests for Air conditioner	
Test case verdicts	*I*
Test case does not apply to the test object	N.A.
Test item does meet the requirement	Pass
Test item does not meet the requirement	Fail
Procedure deviation	N.A.
Non-standard test method	N.A.

General remarks

The test results presented in this report relate only to the item tested.

The test report is invalid without the official stamp of TCL.

The test report is invalid without the signatures of Author and Reviewer.

TCL空调器（中山）有限公司 测试中心 TEST CENTER TCL AIR CONDITIONER (ZHONGSHAN) CO.,LTD.

Brief description of the tested sample(s)		
1	Ratings	
	Rated voltage/rated voltage range (V)	230
	Rated frequency (Hz)	60
	Rated input (W)	Cooling（T1） : 1833 Cooling（T3） : 2230 Heating /
	Rated capacity (Btu/h)	Cooling（T1） : 22000 Cooling（T3） : 19400 Heating /
	Rated current (A)	N/A
2	Type of power supply	☒ Single phase ☐ Three phase
3	Construction of the unit	☒ Split type ☐ Single packaged type ☐ Multi-split type
4	Type of the unit considering if it has the air ducts (A/C Configuration— Air Distribution)	☐ Spot ☐ Single-duct ☐ Double ducts ☒ Non Ducted
5	The number of the indoor units if multi-split type	
6	Type of the indoor unit if split type	☒ Wall-mounted ☐ Free-standing ☐ Ceiling-mounted ☐ Other type
7	Type of outdoor unit if split type	☒ Free-standing ☐ Other type
9	Supplementary heating element	☐ Yes ☒ No
10	Operation function	☐Cooling mode and heating mode ☒Cooling only ☐Heating only
11	Type of the refrigerant	As attach page
12	Mass of refrigerant (kg)	As attach page
13	Compressor information	As attach page
14	Compressor stages type	☒Fixed capacity unit ☐Two-stage capacity unit ☐Multi-stage capacity unit ☐Variable capacity unit

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Photo of nameplate:

TCL

SPLIT AIR CONDITIONER
INDOOR UNIT
مكيف هواء سبليت
وحدة داخلية

Model موديل	TAC-24CS/XA23
	Cooling(T1) تبريد(تي ١)
Capacity القدرة	22000Btu/h (6.45kW)
Current التيار	8.1A
Rated Current (IEC60335) تيار القدرة المقدرة	14.0A
Power Input مدخل الطاقة	1833W
Rated Power Input (IEC60335) مدخل القدرة المقدة	2700W
EER معدل كفاءة الطاقة للتبريد	12.00(Btu/h/W)
Indoor Air Volume حجم تدفق الهواء	1500m³/h
Maximum allowable pressure الحد الأقصى للضغط	4.5MPa
Operating Pressure Discharge ضغط الإطلاق	4.5MPa
الضغط لضاغط الغاز Suction ضغط الاستشاق	1.9MPa
Noise الضجيج	52dB(A)
Weight الوزن	18kg
Rated Voltage/Frequency التردد/ الجهد الكهربائي	230V~ / 60Hz

Serial number:
الرقم السلسل

Made in China
صنع في الصين

TCL

SPLIT AIR CONDITIONER
OUTDOOR UNIT
مكيف هواء سبليت
وحدة خارجية

Model موديل	TAC-24CS/XA23	
	Cooling(T1) تبريد(تي ١)	Cooling(T3) تبريد(تي ٣)
Capacity القدرة	22000Btu/h (6.45kW)	19400Btu/h (5.70kW)
Current التيار	8.1A	10.0A
Rated Current (IEC60335) تيار القدرة المقدرة	14.0A	14.0A
Power Input مدخل الطاقة	1833W	2230W
Rated Power Input (IEC60335) مدخل القدرة المقدة	2700W	2700W
EER معدل كفاءة الطاقة للتبريد	12.00 (Btu/h/W)	8.70 (Btu/h/W)
Maximum allowable pressure الحد الأقصى للضغط	4.5MPa	
Operating Pressure Discharge ضغط الإطلاق	4.5MPa	
الضغط لضاغط الغاز Suction ضغط الاستشاق	1.9MPa	
Noise الضجيج	58dB(A)	
Weight الوزن	43kg	
Rated Voltage/Frequency التردد/ الجهد الكهربائي	230V~ / 60Hz	
Refrigerant/Charge غاز التبريد / الكمية	R410A/1.150kg	
Outdoor Unit Water Proof Protection IPX4 درجة الحماية من الماء لمكيف الهواء الخارجي IPX4		

Serial number:
الرقم السلسل

Made in China
صنع في الصين

Photo of the tested sample:

TCL空调器（中山）有限公司
测试中心
TEST CENTER
TCL AIR CONDITIONER (ZHONGSHAN) CO.,LTD.

Photo of compressor:

TCL空调器（中山）有限公司
测试中心
TEST CENTER
TCL AIR CONDITIONER (ZHONGSHAN) CO., LTD.

Summary

Test method		**Enthalpy test room**
COOLING CAPACITY(T1-Full load capacity)	Total cooling capacity in Btu/h	22086
	Air conditioner power consumption in W	1745
	Energy Efficiency Ratio(EER) in Btu/h/w	12.66
COOLING CAPACITY(T1-Half load capacity)	Total cooling capacity in Btu/h	/
	Air conditioner power consumption in W	/
	Energy Efficiency Ratio(EER) in Btu/h/w	/
COOLING CAPACITY(T3)	Total cooling capacity in Btu/h	18971
	Air conditioner power consumption in W	2085
	Energy Efficiency Ratio(EER) in Btu/h/w	9.10
HEATING CAPACITY	Total cooling capacity in w	/
	Air conditioner power consumption in W	/
	Energy Efficiency Ratio(COP) in w/w	/

Test Result:

☒ **Pass** ☐ **Fail**

Note: If failed, it shall be indicated which part it was fail in.

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1- Sample Information

Brand	TCL				
Model No.	**System (if application)**	KT3F-57GW/YXA(E/6)(008386)			
	Indoor (split system only)	/			
	Outdoor (split system only)	/			
Serial number	Indoor: G440N020010019200001	Outdoor: G440W020010019200001			
Air-Conditioner Type	Split air conditioner				
Air Distribution	Two way (Up-down)				
Type of system	R410A	Mass of Refrigerant (kg)	1.150		
Heat transfer	Cooling only				
Voltage(V)	230				
Phase	1ph				
Hz	60				
Compressor	**Type**	Hermetic motor-compressor			
	Brand	Highly			
	Model Name	ASL180DG-C7EU6			
	Maker	Shanghai Highly Electrical Appliances Co., Ltd.			
	Country of Origin	China			
Indoor Fan motor	**Type**	DC motor			
	Brand	Welling			
	Model	ZKFP-45-8-111			
	Maker	Guangdong Welling Motor Manufacturing Co.,Ltd.			
	Country of Origin	China			
Outdoor Fan motor	**Type**	AC motor			
	Brand	BROAD-OCEAN			
	Model	Y6S688C008L			
	Maker	ZHONGSHAN BROAD-OCEAN MOTOR Co., LTD.			
	Country of Origin	China			
Evaporator	**Volume(mm)**	896mm x 378 mm x 38.1 mm			
	Type	Hydrophilic & Louver Fin; Innergroover tube type			
Condenser	**Volume(mm)**	790mm x 663 mm x 23.2 mm			
	Type	Louver or Corrugated Fin; Innergroover tube type			
Dimensions	Indoor(mm)	Width :1191	Depth :360	Height :258	
	Outdoor(mm)	Width :920	Depth :380	Height :699	

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2- Test report

2.1 Cooling capacity test (T1-Full load capacity)

Data to be recorded for Enthalpy cooling capacity tests

Test Duration(min)	90
Power supplied	220-240V
Applied voltage (V)	230.0
Frequency (Hz)	60
Current (A)	7.74
Power Consumption (W)	1745
Power factor	98.0%
Fan speed settings	High speed
Dry bulb temperature, indoor (℃)	27.00
Wet bulb temperature, indoor (℃)	19.02
Dry bulb temperature, outdoor (℃)	35.01
Wet bulb temperature, outdoor (℃)	24.00
Barometer (Pa)	100.28
Indoor cooling capacity (Btu/h)	22086
Sensible cooling capacity(Btu/h)	17869
Latent cooling capacity (dehumidifying capacity) (Btu/h)	4217
Static pressure(Pa)	243
Volume flow rate of air(m3/hr)	1505
Cooling capacity (Btu/h)	22086
EER(Btu/h)/W	12.66

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2.2 Cooling capacity test (T1-Half load capacity)

Test Duration(min)	/
Power supplied	/
Applied voltage (V)	/
Frequency (Hz)	/
Current (A)	/
Power Consumption (W)	/
Power factor	/
Fan speed settings	/
Dry bulb temperature, indoor (℃)	/
Wet bulb temperature, indoor (℃)	/
Dry bulb temperature, outdoor (℃)	/
Wet bulb temperature, outdoor (℃)	/
Barometer (Pa)	/
Indoor cooling capacity (W)	/
Sensible cooling capacity (W)	/
Latent cooling capacity (dehumidifying capacity) (W)	/
Static pressure(Pa)	/
Volume flow rate of air(m3/hr)	/
Cooling capacity (W)	/
Cooling capacity (Btu/h)	/
EER(Btu/h)/W	/

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2.3 Test record of cooling capacity test (T3)

Test Duration(min)	90
Power supplied	220-240V
Applied voltage (V)	230.0
Frequency (Hz)	60
Current (A)	9.25
Power Consumption (W)	2085
Power factor	98%
Fan speed settings	High speed
Dry bulb temperature, indoor (℃)	29.02
Wet bulb temperature, indoor (℃)	19.00
Dry bulb temperature, outdoor (℃)	46.01
Wet bulb temperature, outdoor (℃)	24.02
Barometer (Pa)	100.46
Indoor cooling capacity (Btu/h)	18971
Sensible cooling capacity(Btu/h)	17263
Latent cooling capacity (dehumidifying capacity) (Btu/h)	1707
Static pressure(Pa)	255
Volume flow rate of air(m3/hr)	1502
Cooling capacity (Btu/h)	18971
EER(Btu/h)/W	9.10

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2.4 Test record of heating capacity test (H1)

Test Duration(min)	/
Power supplied	/
Applied voltage (V)	/
Frequency (Hz)	/
Current (A)	/
Power Consumption (W)	/
Power factor	/
Fan speed settings	/
Dry bulb temperature, indoor (℃)	/
Wet bulb temperature, indoor (℃)	/
Dry bulb temperature, outdoor (℃)	/
Wet bulb temperature, outdoor (℃)	/
Barometer (Pa)	/
Indoor heating capacity (W)	/
Sensible heating g capacity (W)	/
Latent heating capacity (dehumidifying capacity) (W)	/
Static pressure(Pa)	/
Volume flow rate of air(m3/hr)	/
heating capacity W	/
heating capacity (Btu/h)	/
COP (Btu/h)/W	/

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2.5 Functional Performance – Cooling&Heating

Operability at Maximum cooling conditions at 52℃	☒ Tested ☐ Declared	Result:	☒ Pass ☐ Fail ☐ Non Relevant
Operability at Minimum cooling conditions	☒ Tested ☐ Declared		☐ Pass ☐ Fail ☒ Non Relevant
Freeze up air blockage and freeze-up drip	☒ Tested ☐ Declared		☒ Pass ☐ Fail ☐ Non Relevant
Condensate control and enclosure sweat performance	☒ Tested ☐ Declared		☒ Pass ☐ Fail ☐ Non Relevant
Operability at Maximum heating conditions	☒ Tested ☐ Declared		☐ Pass ☐ Fail ☒ Non Relevant
Operability at Minimum heating conditions	☒ Tested ☐ Declared		☐ Pass ☐ Fail ☒ Non Relevant
Verification of automatic defrost	☒ Tested ☐ Declared		☐ Pass ☐ Fail ☒ Non Relevant

2.6 Capacity tests at below condition were considered in this report.

Mode	Indoor air temperature		Outdoor air temperature		Test voltage
	Dry bulb	**Wet bulb**	**Dry bulb**	**Wet bulb**	
Cooling mode (T1-Full load capacity)	**27**	**19**	**35**	**24**	230V, 60Hz
Cooling mode (T1-Half load capacity)	**27**	**19**	**35**	**24**	230V, 60Hz
Cooling mode (T3)	**29**	**19**	**46**	**24**	230V, 60Hz
Temperature (H1)	**20**	**15**	**7**	**6**	230V, 60Hz

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Conclusion

Cooling capacity test (for condition T1- Full load capacity)					
Mode	**Rated**	**Tested**	**Verifying**	**Required EER**	Verdict
Cooling capacity, Btu/h	**22000**	**22086**	**0.39%**	**>=20900**	Pass
Cooling power input, W	**1833**	**1745**	**-4.80%**	**<=1924**	Pass
EER, Btu/W ·h	**12.00**	**12.66**	**5.50%**	**>=11.80**	Pass
Cooling capacity test (for condition T1- Half load capacity)					
Cooling capacity, Btu/h	/	/	/	/	/
Cooling power input, W	/	/	/	/	/
EER, Btu/W ·h	/	/	/	/	/
Cooling capacity test (for condition T3)					
Cooling capacity, Btu/h	**19400**	**18971**	**-2.21%**	**>=18430**	Pass
Cooling power input, W	**2230**	**2085**	**-6.50%**	**<=2341**	Pass
EER, Btu/W ·h	**8.70**	**9.10**	**4.598%**	**>=8. 30**	Pass
Heating capacity					
Heating capacity, W	/	/	/	/	Pass
Heating power input,	/	/	/	/	Pass
COP, WW	/	/	/	/	Pass
CSEC (Kwh/Y):	7538				
Energy class: (base on rated EER at T1)	D				
SEER class	D				
SEER	10.25				

Cooling capacity(T1 Full load capacity)	≥ 0.95 × rated capacity
Cooling power input(T1 Full load capacity)	≤ 1.05× rated
Cooling capacity(Half load capacity)	≥ 0.95 × rated capacity
Cooling capacity(T3)	≥ 0.95 × rated capacity
Cooling power input(T3)	≤ 1.05× rated
Heating capacity	≥ 0.95 × rated capacity
Heating power input	≤ 1.05× rated
EER(T1 Full load capacity)	≥ 0.95 × rated
EER(T3)	≥ 0.95 × rated
COP	≥ 0.95 × rated

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Nergy Rating Classification

Table 6 – Seasonal Energy Efficiency Ratio (SEER) Classification			
Bar color	**Energy class**		**SEER limits (Btu/W.h)**
Dark green	أ	A	SEER ≥ 18.0
Green	ب	B	18.0> SEER ≥ 15.0
Light green	ج	C	15.0> SEER ≥ 12.5
Yellow	د	D	12.5> SEER ≥ 10.0
Orange	هـ	E	10.0> SEER ≥ 9.0
Red	و	F	9.0> SEER ≥ 8.0
Dark Red	ز	G	8.0> SEER

TCL空调器（中山）有限公司
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