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№：PMC202106020002

TEST REPORT

NAMEOF SAMPLE: Air Conditioner

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

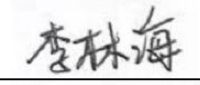
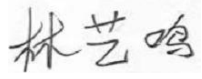
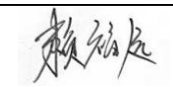
CLASSIFICATION OF TEST: Commission Test

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-18CS/XA23 230V~ 60Hz		
Date of receipt of test item	2024-12-23	Date(s) of test	2024-12-23
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.....	2024-12-24		

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The rating and performance tests for Air conditioner	
Test case verdicts	/
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	N.A.
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.

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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） : 1500 Cooling（T3） : 1830 Heating: /
	Rated capacity (Btu/h)	Cooling（T1） : 18000 Cooling（T3） : 16100 Heating: /
	Rated current (A)	Cooling（T1） : 6.7 Cooling（T3） : 8.2 Heating: /
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 TYPE AIR CONDITIONER
جهاز تكييف هواء حائط
INDOOR UNIT
مكيف الهواء الداخلي

Model موديل	TAC-18CS/XA23
	Cooling(T1) تبريد(تي ١)
Capacity القدرة	18000Btu/h (5.28kW)
Current التيار	6.7A
Rated Current (IEC60335) تيار القدرة المقدرة	11.8A
Power Input مدخل الطاقة	1500W
Rated Power Input (IEC60335) مدخل القدرة المقدرة	2613W
EER معدل كفاءة الطاقة للتبريد	12.00(Btu/h/W)
Indoor Air Volume حجم تدفق الهواء	1050m³/h
Maximum allowable pressure الحد الأقصى للضغط	4.5MPa
Operating Pressure الضغط لضاغط الغاز — Discharge ضغط الإطلاق	4.5MPa
Operating Pressure الضغط لضاغط الغاز — Suction ضغط الاستنشاق	1.9MPa
Noise الضجيج	50dB(A)
Weight الوزن	13kg
Rated Voltage/Frequency التردد/الجهد الكهربائي	230V~ / 60Hz

Serial number:
الرقم المسلسل
Made in China
صنع في الصين

TCL

SPLIT AIR CONDITIONER
OUTDOOR UNIT
مكيف هواء سبليت
وحدة خارجية

Model موديل	TAC-18CS/XA23	
	Cooling(T1) تبريد(تي ١)	Cooling(T3) تبريد(تي ٣)
Capacity القدرة	18000Btu/h (5.28kW)	16100Btu/h (4.71kW)
Current التيار	6.7A	8.5A
Rated Current (IEC60335) تيار القدرة المقدرة	11.8A	11.8A
Power Input مدخل الطاقة	1500W	1894W
Rated Power Input (IEC60335) مدخل القدرة المقدرة	2613W	2613W
EER معدل كفاءة الطاقة للتبريد	12.00 (Btu/h/W)	8.50 (Btu/h/W)
Maximum allowable pressure الحد الأقصى للضغط	4.5MPa	
Operating Pressure ضغط الإطلاق — Discharge	4.5MPa	
Operating Pressure ضغط الاستنشاق — Suction	1.9MPa	
Noise الضجيج	57dB(A)	
Weight الوزن	34kg	
Rated Voltage/Frequency التردد/ الجهد الكهربائي	230V~ / 60Hz	
Refrigerant/Charge غاز التبريد / الكمية	R410A/0.830kg	
Outdoor Unit Water Proof Protection IPX4 درجة الحماية من الماء لمكيف الهواء الخارجي: IPX4		

Serial number
الرقم المسلسل
Made in China
صنع في الصين

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测试中心
TEST CENTER
TCL AIR CONDITIONER (ZHONGSHAN) CO.,LTD

Photo of the tested sample:

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测试中心
TEST CENTER
TCL AIR CONDITIONER (ZHONGSHAN) CO.,LTD.

Photo of compressor:

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Summary

Test method		**Enthalpy test room**
COOLING CAPACITY(T1-Full load capacity)	Total cooling capacity in Btu/h	18203
	Air conditioner power consumption in W	1475
	Energy Efficiency Ratio(EER) in Btu/h/w	12.341
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	16163
	Air conditioner power consumption in W	1789
	Energy Efficiency Ratio(EER) in Btu/h/w	9.042
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-47GW/YXA(E/6)(007824)		
	Indoor (split system only)	/		
	Outdoor (split system only)	/		
Serial number	Indoor: G440N020010016180001	Outdoor: G440W020010016180001		
Air-Conditioner Type	Split air conditioner			
Air Distribution	Four way			
Type of system	R410A	Mass of Refrigerant (kg)	0.830	
Heat transfer	Cooling only			
Voltage(V)	230			
Phase	1ph			
Hz	60			
Compressor	**Type**	Hermetic motor-compressor		
	Brand	Highly		
	Model Name	ASL160DG-C7EU6		
	Maker	Shanghai Highly Electrical Appliances Co., Ltd.		
	Country of Origin	China		
Indoor Fan motor	**Type**	DC motor		
	Brand	BROAD-OCEAN		
	Model	22001-000240		
	Maker	ZHONGSHAN BROAD-OCEAN MOTOR Co., LTD.		
	Country of Origin	China		
Outdoor Fan motor	**Type**	DC motor		
	Brand	BROAD-OCEAN		
	Model	22001-000493		
	Maker	ZHONGSHAN BROAD-OCEAN MOTOR Co., LTD.		
	Country of Origin	China		
Evaporator	**Volume(mm)**	761mm x 336mm x 25.4 mm		
	Type	Hydrophilic & Louver Fin; Innergroover tube type		
Condenser	**Volume(mm)**	776mm x 566 mm x 23.2 mm		
	Type	Louver or Corrugated Fin; Innergroover tube type		
Refrigerant	**Type: R410A**	830g		
Dimensions	Indoor(mm)	Width:1010	Depth :315	Height :220
	Outdoor(mm)	Width :853	Depth :349	Height :602

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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)	6.68
Power Consumption (W)	1475
Power factor	98.5%
Fan speed settings	super speed
Dry bulb temperature, indoor (℃)	27.00
Wet bulb temperature, indoor (℃)	19.00
Dry bulb temperature, outdoor (℃)	35.00
Wet bulb temperature, outdoor (℃)	24.00
Barometer (Pa)	100.85
Indoor cooling capacity (Btu/h)	18203
Sensible cooling capacity(Btu/h)	15071
Latent cooling capacity (dehumidifying capacity) (Btu/h)	3132
Static pressure(Pa)	292.80
Volume flow rate of air(m3/hr)	1039
Cooling capacity (Btu/h)	18203
EER(Btu/h)/W	12.341

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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)	8.02
Power Consumption (W)	1789
Power factor	98.9%
Fan speed settings	super speed
Dry bulb temperature, indoor (℃)	29.00
Wet bulb temperature, indoor (℃)	19.00
Dry bulb temperature, outdoor (℃)	46.00
Wet bulb temperature, outdoor (℃)	24.00
Barometer (Pa)	100.88
Indoor cooling capacity (Btu/h)	16163
Sensible cooling capacity(Btu/h)	16163
Latent cooling capacity (dehumidifying capacity) (Btu/h)	0
Static pressure(Pa)	272.87
Volume flow rate of air(m3/hr)	1159
Cooling capacity (Btu/h)	16163
EER(Btu/h)/W	9.042

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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	**18000**	**18203**	**1.13%**	**>=17100**	Pass
Cooling power input, W	**1500**	**1475**	**-1.67%**	**<=1575**	Pass
EER, Btu/W ·h	**12.00**	**12.341**	**2.84%**	**>=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	**16100**	**16163**	**0.39%**	**>=15295**	Pass
Cooling power input, W	**1894**	**1789**	**-5.54%**	**<=1922**	Pass
EER, Btu/W ·h	**8.50**	**9.042**	**6.38%**	**>=8. 50**	Pass
Heating capacity					
Heating capacity, W	/	/	/	/	Pass
Heating power input,	/	/	/	/	Pass
COP, WW	/	/	/	/	Pass
CSEC (Kwh/Y):		6211			
Energy class: (base on rated EER at T1)		D			
SEER class		D			
SEER		10.30			

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

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