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No: PMC20221002002

TEST REPORT

NAME OF SAMPLE: Air Conditioner

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

CLASSIFICATION OF TEST: Commission Test

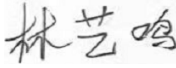
Testing Center of TCL Air Conditioner (Zhongshan) Co., Ltd.

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	Air conditioner		
Trademark	TCL		
Model / type reference	TAC-18CHSA/*TI		
Rating and characteristics.	230V~ 60Hz		
Date of receipt of test item	2024-10-09	Date(s) of test	2024-10-09
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	2024-10-10		

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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.



[illegible]

Photo of nameplate:

<div>TCL</div> <div>SPLIT TYPE AIR CONDITIONER</div> <div>جهاز تكييف هواء حائط</div> <div>INDOOR UNIT</div> <div>مكيف الهواء الداخلي</div>		
Model موديل	TAC-18CHSA/*TI	
	Cooling(T1) التبريد (تي ١)	Heating التدفئة
Capacity القدرة	18200Btu/h (5.34kW)	6000W
Current التيار	6.8A	6.3A
Rated Current (IEC60335) تيار القدرة المقتردة	12.0A	12.0A
Power Input مدخل الطاقة	1517W	1408W
Rated Power Input (IEC60335) مدخل القدرة المقتردة	2400W	2000W
EER/COP معامل كفاءة الطاقة للتبريد / التدفئة	12.00(Btu/h/W)	3.55(W/W)
Indoor Air Volume حجم تدفق الهواء	1200m³/h	
Maximum allowable pressure الحد الأقصى للضغط		
4.5MPa		
Operating Pressure الضغط التشغيلي	Discharge ضغط الإطلاق	4.5MPa
	Suction ضغط الاستشفاف	1.9MPa
Noise الضجيج	47dB(A)	
Weight الوزن	14kg	
Rated Voltage/Frequency التردد / الجهد الكهربائي	230V~ / 60Hz	
Serial number: الرقم التسلسلي		
Made in China صنع في الصين		

<h1>TCL</h1> <h2>SPLIT TYPE AIR CONDITIONER</h2> <h3>جهاز تكييف هواء حائط</h3> <h3>OUTDOOR UNIT</h3> <h3>مكيف الهواء الخارجي</h3>			
Model موديل	TAC-18CHSA/*TI		
	Cooling(T1) تبريد (تي ١)	Cooling(T3) تبريد (تي ٣)	Heating التدفئة
Capacity القدرة	18200Btu/h (5.34kW)	15000Btu/h (4.68kW)	6000W
Current التيار	6.8A	8.4A	6.3A
Rated Current (IEC60335) تيار القدرة المقتردة	12.0A	12.0A	12.0A
Power Input مدخل الطاقة	1517W	1880W	1408W
Rated Power Input (IEC60335) مدخل القدرة المقتردة	2400W	2400W	2000W
EER/COP معامل كفاءة الطاقة للتبريد / التدفئة	12.00(Btu/h/W)	8.50(Btu/h/W)	3.55(W/W)
Maximum allowable pressure الحد الأقصى للضغط		4.5MPa	
Operating Pressure الضغط التشغيلي	Discharge ضغط الإطلاق	4.5MPa	
	Suction ضغط الاستشفاف	1.9MPa	
Noise الضجيج	53dB(A)		
Weight الوزن	44kg		
Rated Voltage/Frequency التردد / الجهد الكهربائي		230V~ / 60Hz	
Refrigerant/Charge غاز التبريد / الكمية		R410A/1.230kg	
Outdoor Unit WaterProof Protection IPX4 ترجمة الحماية من الماء لمكيف الهواء الخارجي IPX4			
Serial number: الرقم التسلسلي Made in China صنع في الصين			



Photo of the tested sample:



Photo of compressor:



Summary

Test method		Enthalpy test room
COOLING CAPACITY(T1-Full load capacity)	Total cooling capacity in Btu/h	18998
	Air conditioner power consumption in W	1511
	Energy Efficiency Ratio(EER) in Btu/h/w	12.57
COOLING CAPACITY(T1-Half load capacity)	Total cooling capacity in W	/
	Air conditioner power consumption in W	/
	Energy Efficiency Ratio(EER)	/
COOLING CAPACITY(T3)	Total cooling capacity in Btu/h	17319
	Air conditioner power consumption in W	1817
	Energy Efficiency Ratio(EER) in Btu/h/w	9.53
HEATING CAPACITY	Total cooling capacity in w	5602
	Air conditioner power consumption in W	1394
	Energy Efficiency Ratio(COP) in w/w	4.02

Test Result:☒ **Pass**☐ **Fail****Note:** If failed, it shall be indicated which part it was fail in.

1- Sample Information

Brand	TCL			
Model No.	System (if application)	KT3FR-48GW/YXA(E/6)(019998)		
	Indoor (split system only)	/		
	Outdoor (split system only)	/		
Serial number	Indoor: G440N0200100I6180003		Outdoor: G440W0200100I6180003	
Air-Conditioner Type	Split air conditioner			
Air Distribution	Four way			
Type of system	R410A	Mass of Refrigerant (kg)	1.230	
Heat transfer	Cooling only and heat pump type			
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	AC motor		
	Brand	BROAD-OCEAN		
	Model	22001-000088		
	Maker	ZHONGSHAN BROAD-OCEAN MOTOR Co. , LTD.		
	Country of Origin	China		
Evaporator	Volume(mm)	843mm x 357mm x 25.4 mm		
	Type	Hydrophilic & Louver Fin; Innergroover tube type		
Condenser	Volume(mm)	796mm x 651 mm x 25.4 mm		
	Type	Louver or Corrugated Fin; Innergroover tube type		
Refrigerant	Type: R410A	1230g		
Dimensions	Indoor(mm)	Width:1100	Depth :333	Height :222
	Outdoor(mm)	Width :920	Depth :380	Height :699



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)	6.70
Power Consumption (W)	1511
Power factor	98.0%
Fan speed settings	High speed
Dry bulb temperature, indoor (°C)	27.00
Wet bulb temperature, indoor (°C)	19.01
Dry bulb temperature, outdoor (°C)	35.00
Wet bulb temperature, outdoor (°C)	24.02
Barometer (Pa)	100.74
Indoor cooling capacity (Btu/h)	18998
Sensible cooling capacity(Btu/h)	17268
Latent cooling capacity (dehumidifying capacity) (Btu/h)	1730
Static pressure(Pa)	261.41
Volume flow rate of air(m3/hr)	1202
Cooling capacity (Btu/h)	18998
EER(Btu/h)/W	12.57



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 (°C)	/
Wet bulb temperature, indoor (°C)	/
Dry bulb temperature, outdoor (°C)	/
Wet bulb temperature, outdoor (°C)	/
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	/



2.3 Test record of cooling capacity test (T3)

Test Duration(min)	90
Power supplied	220-240V
Applied voltage (V)	229.8
Frequency (Hz)	60
Current (A)	8.05
Power Consumption (W)	1817
Power factor	98.2%
Fan speed settings	High speed
Dry bulb temperature, indoor (°C)	29.00
Wet bulb temperature, indoor (°C)	19.01
Dry bulb temperature, outdoor (°C)	46.00
Wet bulb temperature, outdoor (°C)	24.02
Barometer (Pa)	100.65
Indoor cooling capacity (Btu/h)	17319
Sensible cooling capacity(Btu/h)	17288
Latent cooling capacity (dehumidifying capacity) (Btu/h)	31
Static pressure(Pa)	287.42
Volume flow rate of air(m3/hr)	1257
Cooling capacity (Btu/h)	17319
EER(Btu/h)/W	9.53



2.4 Test record of heating capacity test (H1)

Test Duration(min)	90
Power supplied	220-240V
Applied voltage (V)	230.0
Frequency (Hz)	60
Current (A)	6.3
Power Consumption (W)	1394
Power factor	95.6%
Fan speed settings	High speed
Dry bulb temperature, indoor (°C)	20.00
Wet bulb temperature, indoor (°C)	15.00
Dry bulb temperature, outdoor (°C)	7.00
Wet bulb temperature, outdoor (°C)	6.01
Barometer (Pa)	101.90
Indoor heating capacity (W)	5602
Sensible heating g capacity (W)	5602
Latent heating capacity (dehumidifying capacity) (W)	/
Static pressure(Pa)	361.77
Volume flow rate of air(m3/hr)	1363
heating capacity W	5602
heating capacity (Btu/h)	19114
COP (Btu/h)/W	4.02



2.5 Functional Performance –Cooling&Heating

Operability at Maximum cooling conditions at 52℃	<input checked="" type="checkbox"/> Tested <input type="checkbox"/> Declared	Result:	<input checked="" type="checkbox"/> Pass <input type="checkbox"/> Fail <input type="checkbox"/> Non Relevant
Operability at Minimum cooling conditions	<input checked="" type="checkbox"/> Tested <input type="checkbox"/> Declared		<input type="checkbox"/> Pass <input type="checkbox"/> Fail <input checked="" type="checkbox"/> Non Relevant
Freeze up air blockage and freeze-up drip	<input checked="" type="checkbox"/> Tested <input type="checkbox"/> Declared		<input checked="" type="checkbox"/> Pass <input type="checkbox"/> Fail <input type="checkbox"/> Non Relevant
Condensate control and enclosure sweat performance	<input checked="" type="checkbox"/> Tested <input type="checkbox"/> Declared		<input checked="" type="checkbox"/> Pass <input type="checkbox"/> Fail <input type="checkbox"/> Non Relevant
Operability at Maximum heating conditions	<input checked="" type="checkbox"/> Tested <input type="checkbox"/> Declared		<input checked="" type="checkbox"/> Pass <input type="checkbox"/> Fail <input type="checkbox"/> Non Relevant
Operability at Minimum heating conditions	<input checked="" type="checkbox"/> Tested <input type="checkbox"/> Declared		<input checked="" type="checkbox"/> Pass <input type="checkbox"/> Fail <input type="checkbox"/> Non Relevant
Verification of automatic defrost	<input checked="" type="checkbox"/> Tested <input type="checkbox"/> Declared		<input checked="" type="checkbox"/> Pass <input type="checkbox"/> Fail <input type="checkbox"/> 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



Conclusion

Cooling capacity test (for condition T1- Full load capacity)					
Mode	Rated	Tested	Verifying	Required EER	Verdict
Cooling capacity, Btu/h	18200	18998	4.38%	≥ 17290	Pass
Cooling power input, W	1517	1511	-0.40%	≤ 1592	Pass
EER, Btu/W ·h	12.00	12.57	4.75%	≥ 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	16000	17319	8.24%	≥ 15200	Pass
Cooling power input, W	1880	1817	-3.35%	≤ 1974	Pass
EER, Btu/W ·h	8.50	9.53	12.12%	≥ 8.30	Pass
Heating capacity					
Heating capacity, W	5000	5602	12.04%	≥ 4750	Pass
Heating power input, W	1408	1394	-0.99%	≤ 1478	Pass
COP, WW	3.55	4.02	13.24%	≥ 3.38	Pass
CSEC (Kwh/Y):	6237				
Energy class: (base on rated EER at T1)	D				
SEER class	D				
SEER	10.20				

Cooling capacity(T1 Full load capacity)	$\geq 0.95 \times \text{rated capacity}$
Cooling power input(T1 Full load capacity)	$\leq 1.05 \times \text{rated}$
Cooling capacity(Half load capacity)	$\geq 0.95 \times \text{rated capacity}$
Cooling capacity(T3)	$\geq 0.95 \times \text{rated capacity}$
Cooling power input(T3)	$\leq 1.05 \times \text{rated}$
Heating capacity	$\geq 0.95 \times \text{rated capacity}$
Heating power input	$\leq 1.05 \times \text{rated}$
EER(T1 Full load capacity)	$\geq 0.95 \times \text{rated}$
EER(T3)	$\geq 0.95 \times \text{rated}$
COP	$\geq 0.95 \times \text{rated}$

**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

