

No: PMC20191106001

## 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-12CS/X8		
Rating and characteristics. ....	230V~ 60Hz		
Date of receipt of test item	2019-11-06	Date(s) of test	2019-11-06
Test specification/Standard .....	SASO 2663/2018 SASO GSO ISO 5151: 2010		
To compile .....	谭民杰		
audit .....	王佳		
The director of the approval	张开结		
Date of issue.....	2019-11-06		

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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	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.



[illegible]

## Photo of nameplate:

<b>TCL</b> <b>SPLIT TYPE AIR CONDITIONER</b> جهاز تكييف هواء حائط <b>INDOOR UNIT</b> مكيف الهواء الداخلي	
Model موديل	TAC-12CS/X8
Capacity القدرة	Cooling(T1) تبريد (تي ١) 12100Btu/h (3.54kW)
Current التيار	4.5A
Rated Current (IEC60335) تيار القدرة المقدر	8.0A
Power Input مدخل الطاقة	1021W
Rated Power Input (IEC60335) مدخل القدرة المقدر	1650W
EER معامل كفاءة الطاقة للتبريد	11.85(Btu/h/W)
Indoor Air Volume حجم تدفق الهواء	815m³/h
Maximum allowable pressure الحد الأقصى للضغط	4.5MPa
Operating Pressure الضغط	Discharge ضغط الإطلاق 4.5MPa
Suction ضغط الاستشاق	1.9MPa
Noise الضجيج	43dB(A)
Weight الوزن	10kg
Rated Voltage/Frequency التردد / الجهد الكهربائي	230V~ / 60Hz
Serial number: الرقم السلسل Made in China صنع في الصين	

<b>TCL</b> <b>SPLIT TYPE AIR CONDITIONER</b> جهاز تكييف هواء حائط <b>OUTDOOR UNIT</b> مكيف الهواء الخارجي	
Model موديل	TAC-12CS/X8
Capacity القدرة	Cooling(T1) تبريد (تي ١) 12100Btu/h (3.54kW)
Current التيار	4.5A
Rated Current (IEC60335) تيار القدرة المقدر	8.0A
Power Input مدخل الطاقة	1021W
Rated Power Input (IEC60335) مدخل القدرة المقدر	1650W
EER معامل كفاءة الطاقة للتبريد	11.85(Btu/h/W)
Maximum allowable pressure الحد الأقصى للضغط	4.5MPa
Operating Pressure الضغط	Discharge ضغط الإطلاق 4.5MPa
Suction ضغط الاستشاق	1.9MPa
Noise الضجيج	52dB(A)
Weight الوزن	28kg
Rated Voltage/Frequency التردد / الجهد الكهربائي	230V~ / 60Hz
Refrigerant/Charge غاز التبريد / الكمية	R410A/0.730kg
Outdoor Unit Water Proof Protection IPX4 درجة الحماية من الماء لمكيف الهواء الخارجي X4 اي بي	
Serial number: الرقم السلسل Made in China صنع في الصين	



**Photo of the tested sample:**



## Photo of compressor:



**Summary**

Test method		Enthalpy test room
COOLING CAPACITY(T1)	Total cooling capacity in Btu/h	12200
	Air conditioner power consumption in W	1010
	Energy Efficiency Ratio(EER) in Btu/h/w	12.08
COOLING CAPACITY(T3)	Total cooling capacity in Btu/h	10800
	Air conditioner power consumption in W	1260
	Energy Efficiency Ratio(EER) in Btu/h/w	8.57
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.





Brand	TCL			
Model No.	System (if application)	KT3F-31GW/YXA(E/6)(AVS00)		
	Indoor (split system only)	/		
	Outdoor (split system only)	/		
Serial number	Indoor: G440N0200100IB130001		Outdoor: G440W0200100IB130001	
Air-Conditioner Type	Split air conditioner			
Air Distribution	Two way (Up-down)			
Type of system	R410A	Mass of Refrigerant (kg)	0.730	
Heat transfer	Cooling only			
Voltage(V)	230			
Phase	1ph			
Hz	60			
Compressor	Type	Hermetic motor-compressor		
	Brand	RECHI		
	Model Name	44M262UM&FJKE		
	Maker	RECHI PRECISION CO.,LTD.		
	Country of Origin	China		
Indoor Fan motor	Type	AC motor		
	Brand	BROAD-OCEAN/Welling		
	Model	210900056C		
	Maker	ZHONGSHAN BROAD-OCEAN MOTOR Co., LTD. Guangdong Welling Motor Manufacturing Co.,Ltd		
	Country of Origin	China		
Outdoor Fan motor	Type	AC motor		
	Brand	BROAD-OCEAN/Welling		
	Model	1170040127		
	Maker	ZHONGSHAN BROAD-OCEAN MOTOR Co., LTD. Guangdong Welling Motor Manufacturing Co.,Ltd		
	Country of Origin	China		
Evaporator	Volume(mm)	705mm x 315 mm x 25.4 mm		
	Type	Hydrophilic & Louver Fin; Innergroover tube type		
Condenser	Volume(mm)	765mm x 510 mm x 23. 2 mm		
	Type	Louver or Corrugated Fin; Innergroover tube type		
Refrigerant	Type: R410A	730g		
Dimensions	Indoor(mm)	Width:910	Depth :294	Height :206
	Outdoor(mm)	Width :817	Depth :328	Height :553



## 2- Test report

## 2.1 Cooling capacity test (T1)

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)	4.53
Power Consumption (W)	1010
Power factor	97.0%
Fan speed settings	High speed
Dry bulb temperature, indoor (°C)	27.00
Wet bulb temperature, indoor (°C)	19.02
Dry bulb temperature, outdoor (°C)	35.01
Wet bulb temperature, outdoor (°C)	24.00
Barometer (Pa)	100.28
Indoor cooling capacity (Btu/h)	12200
Sensible cooling capacity(Btu/h)	9760
Latent cooling capacity (dehumidifying capacity) (Btu/h)	2440
Static pressure(Pa)	224
Volume flow rate of air(m3/hr)	817
Cooling capacity (Btu/h)	12200
EER(Btu/h)/W	12.08



## 2.2 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)	5.65
Power Consumption (W)	1260
Power factor	97.0%
Fan speed settings	High speed
Dry bulb temperature, indoor (°C)	29.02
Wet bulb temperature, indoor (°C)	19.00
Dry bulb temperature, outdoor (°C)	46.01
Wet bulb temperature, outdoor (°C)	24.02
Barometer (Pa)	100.46
Indoor cooling capacity (Btu/h)	10800
Sensible cooling capacity(Btu/h)	9828
Latent cooling capacity (dehumidifying capacity)	972
Static pressure(Pa)	235
Volume flow rate of air(m3/hr)	838
Cooling capacity (Btu/h)	10800
EER(Btu/h)/W	8.57



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



## 2.4 Functional Performance – Cooling

Operability at Maximum cooling conditions at T3 conditions	<input checked="" type="checkbox"/> Tested <input type="checkbox"/> Declared	Result:	<input checked="" type="checkbox"/> Pass <input type="checkbox"/> Fail
Minimum cooling at T3 conditions	<input checked="" type="checkbox"/> Tested <input type="checkbox"/> Declared		<input checked="" type="checkbox"/> Pass <input type="checkbox"/> Fail
Freeze-up drip at T3 conditions (non-ducted AC)	<input checked="" type="checkbox"/> Tested <input type="checkbox"/> Declared		<input checked="" type="checkbox"/> Pass <input type="checkbox"/> Fail
Condensate control and enclosure sweat performance	<input checked="" type="checkbox"/> Tested <input type="checkbox"/> Declared		<input checked="" type="checkbox"/> Pass <input type="checkbox"/> Fail

2.5 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)	27	19	35	24	230V, 60Hz
Cooling mode (T3)	29	19	46	24	230V, 60Hz



**Conclusion**

Cooling capacity test (for condition T1)					
Mode	Rated	Tested	Verifying	Required EER	Verdict
Cooling capacity, Btu/h	12100	12200	0.8%	$\geq 11495$	Pass
Cooling power input, W	1021	1010	-1.1%	$\leq 1072$	Pass
EER, Btu/W ·h	11.85	12.08	1.9%	$\geq 11.80$	Pass
Cooling capacity test (for condition T3)					
Cooling capacity, Btu/h	10600	10800	1.9%	$\geq 10070$	Pass
Cooling power input, W	1269	1260	-0.8%	$\leq 1333$	Pass
EER, Btu/W ·h	8.35	8.57	2.7%	$\geq 8.30$	Pass
Heating capacity					
Heating capacity, W	/	/	/	/	Pass
Heating power input, W	/	/	/	/	Pass
COP, WW	/	/	/	/	Pass
Estimated annual energy consumption (Kwh/Y):	2757				
<b>Energy class:</b> (base on rated EER at T1)	D				

\* Verifying limit for test T1

Cooling capacity  $\geq 0.95 \times$  rated capacity

Cooling power input  $\leq 1.05 \times$  rated

Heating capacity  $\geq 0.95 \times$  rated capacity

Heating power input  $\leq 1.05 \times$  rated

EER  $\geq 0.95 \times$  rated

COP  $\geq 0.95 \times$  rated

