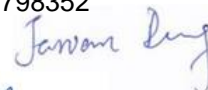



The following sample was submitted and identified on behalf of the client as:

<b>TEST REPORT</b> <b>Air conditioners, liquid chilling packages and heat pumps with electrically driven compressors for space heating and cooling</b>	
<b>Report Reference No.</b> .....	SHES200901798352
<b>Tested by (name + signature)</b> .....	Jarvan Deng 
<b>Approved by (name + signature)</b> .....	Hunter Lin 
<b>Date of issue</b> .....	2021-03-01
<b>Total number of pages</b> .....	12 pages
<b>Testing Laboratory</b> .....	SGS-CSTC standards Technical Services Co., Ltd. Anhui Branch
<b>Address</b> .....	1/F&2/F, West Building C12, Gongtuo Liheng Industrial Square, Fanhua Road, Economic & Technological Development Area, Hefei, 230601 Anhui, China
<b>Applicant's name</b> .....	Ningbo Deye Inverter Technology Co., Ltd.
<b>Address</b> .....	26-30 Southern Yongjiang Road, Daqi Beilun, Ningbo, Zhejiang, China
<b>Manufacturer's name</b> .....	Same as applicant
<b>Address</b> .....	Same as applicant
<b>Test specification:</b>	
<b>Standard</b> .....	SANS 941:2020; SANS 54511-3:2016 Edition 2 and nat. amdt 1
<b>Test procedure</b> .....	SGS-CSTC
<b>Non-standard test method</b> .....	None
<b>Test Report Form No.</b> .....	SANS54511-3_B
<b>Test Report Form(s) Originator</b> .....	SGS-CSTC
<b>Master TRF</b> .....	2020-09-07
<p><b>This test report is issued under SGS general terms of delivery (available on request and accessible at <a href="http://www.sgs.com">www.sgs.com</a>). Attention is drawn to the limitations of liability, indemnification and jurisdictional issues defined therein. Unless otherwise stated: (a) the results shown in this document refer only to the sample(s) tested and (b) such sample(s) are retained for three months. This document cannot be reproduced except in full, without prior approval of SGS.</b></p> <p><b>Any unauthorized alteration, forgery or falsification of the content or appearance of this report is unlawful and offenders may be prosecuted to the fullest extent of the law</b></p>	

Test item description .....	Air-conditioner
Trade Mark .....	
Factory.....	Same as applicant
Model/Type reference .....	DGWA1-ACDCBLW-18K (IU: DGA1-ACDCBLW-18K, OU: DWA3-ACDCBLW-18K)
Ratings .....	Refer to marking plates

### Summary of testing:

#### Tests performed (name of test and test clause):

SANS 941:2020  
SANS 54511-3:2016 Edition 2 and nat. amdt 1  
EN 14511-3:2018

Tests were performed by AC power from supply main only.

The submitted appliance complies with the EER and COP requirements of specific standards.

#### Test Location:

1/F&2/F, West Building C12, Gongtong Liheng Industrial Square, Fanhua Road, Economic & Technological Development Area, Hefei, 230601 Anhui, China

### Copy of marking plates:

The artworks below are only drafts.

18K Indoor unit Nameplate	
Solar Inverter Air Conditioner	
Product Type	DGWA1-ACDCBLW-18K
Indoor Unit Type	DGA1-ACDCBLW-18K
Outdoor Unit Type	DWA3-ACDCBLW-18K
Electric Shock Prevention	Class I
Rated Voltage	AC208-240V; DC80V-380V supplied by solar module
Rated Frequency	AC:50/60Hz
Cooling Capacity	5.01(1.30-5.57)kW
Heating Capacity	5.27(1.50-5.71)kW
Cooling Power Input	1.35 (0.25-1.72) kW
Cooling Current Input	5.93 (1.98-7.80) A
Heating Power Input	1.30 (0.25-1.54) kW
Heating Current Input	5.70(2.10-7.00)A
EER/COP	3.71/4.06
Air Flow Volume	1020m <sup>3</sup> /h
Max. Input Power	2.50kW
Max. Input Current	11.50A
Indoor/Outdoor Unit Noise	46dB(A)/Refer to outdoor nameplate
Refrigerant	R410A/Refer to outdoor nameplate
Max. Discharge Pressure	4.3MPa
Max. Suction Pressure	1.5MPa
Indoor max operating pressure of heat exchanger	4.3MPa
Indoor Unit Net Weight	15.0kg

Solar Inverter Air Conditioner	
Outdoor Unit Type	DWA3-ACDCBLW-18K
Water-proof Class	IPX4
Rated Voltage	AC208-240V; DC80V-380V supplied by solar module
Voc of PV	≤380V
Isc of PV	≤10A
Rated Frequency	AC 50/60Hz
Cooling Power Input	1.35 (0.25-1.72) kW
Cooling Current Input	5.93 (1.98-7.80) A
Heating Power Input	1.30 (0.25-1.54) kW
Heating Current Input	5.70(2.10-7.00)A
Max. Input Power	2.50kW
Max. Input Current	11.50A
Outdoor Unit Noise	55dB(A)
Refrigerant	R410A/1.55 kg
Max. Discharge Pressure	4.3MPa
Max. Suction Pressure	1.5MPa
Outdoor max operating pressure of heat exchanger	4.3MPa
Outdoor Unit Net Weight	37kg

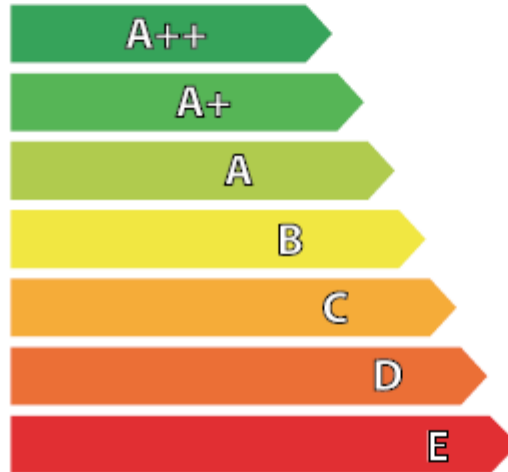


**Air  
conditioner**

Manufacturer  
Outdoor Unit Type  
Indoor Unit Type

DEYE INVERTER TECHNOLOGY  
CO., LTD.  
DWA3-ACDCBLW-18K  
DGA1-ACDCBLW-18K

**More efficient**



**A++**

**Less efficient**

**Annual energy consumption, kWh, in cooling  
mode**

**675**

Actual consumption will depend on how the  
appliance is used and the climate.

**Cooling output, kW**

**5.01**

**Energy efficiency ratio**

**3.71**

Full load (the higher the better)

Type: cooling + heating (water cooled)

**Heat output kW**

**5.27**

**Heating performance**

**A++A+ABCDE**

**Noise (Optional)**

**46/55**

(dB(A) re 1 pW)

Further information is contained in the product brochure.

Norm SANS 54511-3

(Energy label dimension: 200 mm x 110 mm.)

<b>Testing</b> .....	
Date of receipt of test item ..... 2020-09-08	
Date (s) of performance of tests ..... From 2020-09-08 to 2020-09-30	
<b>General remarks:</b>	
<p>The test results presented in this report relate only to the object tested.  This report shall not be reproduced, except in full, without the written approval of the Issuing testing laboratory.  "(see Enclosure #)" refers to additional information appended to the report.  "(see appended table)" refers to a table appended to the report.</p> <p>Throughout this report a point is used as the decimal separator.  This document is issued by the Company subject to its General Conditions of Service, available on request or accessible at <a href="http://www.sgs.com/en/Terms-and-Conditions.aspx">http://www.sgs.com/en/Terms-and-Conditions.aspx</a> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <a href="http://www.sgs.com/en/Terms-and-Conditions/Terms-e-Document.aspx">http://www.sgs.com/en/Terms-and-Conditions/Terms-e-Document.aspx</a>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein.</p> <p>Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.</p> <p>Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 30 days only.</p>	
<b>General product information:</b>	
Split-type air conditioner can be energized by AC power from supply main and DC power from solar modules and intended for household use only, the refrigerant was R410A. The appliances have cooling function and heating function.	
<b>Air Conditioner Details:</b>	
A/C Type	Cooling and heating
A/C Configuration 1 —Air distribution .....	Non-ducted
A/C Configuration 2—Type .....	Single split system
A/C Configuration 3—Heat transfer .....	Air
Rated voltage( V )(of package unit or indoor unit if split system).....	AC 208-240V~; DC80V-380V supplied by solar module
Rated voltage( V )(of outdoor unit if split system) Rated frequency .....	AC 208-240V~; DC80V-380V supplied by solar module
Rated total cooling capacity (condition T1) .....	5010 W
Rated effective power input, cooling .....	1350 W
Rated heating capacity .....	5270 W
Rated effective power input, heating.....	1300 W
Does this air conditioner use a variable output compressor (e.g., speed drive or multi-speed compressor) .....	Yes
Refrigerant.....	R410A/1550 g

<b>Test condition:</b>		
Climatic class	Cooling capacity	Heating capacity
Tested voltage (V)	230,1	230,1
Tested frequency (Hz)	50,0	50,0
<b>a) Temperature of air entering indoor side</b>		
Dry Bulb( 27°C)	27,0	20,0
Wet Bulb( 19°C)	19,0	15,0
<b>b) Temperature of air entering outdoor side</b>		
Dry Bulb(35°C)	35,0	7,0
Wet Bulb( 24°C)	24,0	6,0
Piping Length	5 meters	5 meters

<b>Test results:</b>		
<b>The determination of cooling capacity:</b>		
Cooling capacity	Total cooling capacity in kW	5,008
	Air conditioner power consumption in kW	1,354
<b>Measured Energy efficiency ratio(EER)</b>		<b>3,70</b>
<b>Rated Energy efficiency ratio(EER)</b>		<b>3,71</b>
<b>Measured Energy efficiency ratio(EER) / Rated Energy efficiency ratio(EER)(&gt;95%)</b>		<b>99,7 %</b>
<b>The minimum energy efficiency rating according to COMPULSORY SPECIFICATION FOR ENERGY EFFICIENCY AND LABELING OF ELECTRICAL AND ELECTRONIC APPARATUS (VC 9008)</b>		<b>B</b>
<b>Energy efficiency class</b>		<b>A++</b>
<b>The indicative annual energy consumption</b>		<b>677</b>
Indicate fan and any other settings for determination of rated capacity:		Fan speed: the highest speed Grilles are in the position which result in the largest air quantity

The energy efficiency class of air conditioners in cooling mode shall be determined in accordance with the appropriate of table AA.3 relevant to the type of air conditioner.

**Table AA.3 — Mid-wall/high-wall mounted split type air conditioners**

1	2
<b>Energy efficiency class</b>	<b>EER/COP</b>
A++	$EER/COP > 3,60$
A+	$3,60 \geq EER/COP > 3,40$
A	$3,40 \geq EER/COP > 3,20$
B	$3,20 \geq EER/COP > 3,00$
C	$3,00 \geq EER/COP > 2,80$
D	$2,80 \geq EER/COP > 2,60$
E	$2,60 \geq EER/COP \geq 2,40$

The determination of heating capacity:		
Heating capacity	Total heating capacity in kW	5,285
	Air conditioner power consumption in kW	1,307
Measured Coefficient of performance (COP)		4,04
Rated Coefficient of performance (COP)		4,06
Measured Coefficient of performance (COP) / Rated Coefficient of performance (COP)(>95%)		99,5 %
The minimum energy efficiency rating according to COMPULSORY SPECIFICATION FOR ENERGY EFFICIENCY AND LABELING OF ELECTRICAL AND ELECTRONIC APPARATUS (VC 9008)		B
Energy efficiency class		A++
Indicate fan and any other settings for determination of rated capacity:		Fan speed: the highest speed Grilles are in the position which result in the largest air quantity

The energy efficiency class of air conditioners in cooling mode shall be determined in accordance with the appropriate of table AA.3 relevant to the type of air conditioner.

**Table AA.3 — Mid-wall/high-wall mounted split type air conditioners**

1	2
Energy efficiency class	EER/COP
A++	$EER/COP > 3,60$
A+	$3,60 \geq EER/COP > 3,40$
A	$3,40 \geq EER/COP > 3,20$
B	$3,20 \geq EER/COP > 3,00$
C	$3,00 \geq EER/COP > 2,80$
D	$2,80 \geq EER/COP > 2,60$
E	$2,60 \geq EER/COP \geq 2,40$

<b>SANS 941:2020</b> <b>SOUTH AFRICAN NATIONAL STANDARD</b> <b>Energy efficiency of electrical and electronic apparatus</b>			
Cl.	Requirement-Test	Result-Remark	Verdict
<b>4</b>	<b>Requirements</b>		<b>P</b>
4.1	General requirements		<b>P</b>
4.1.2	Standby power		<b>N/A</b>
	When tested in accordance with SANS 62301 or SANS 62087, the standby power of apparatus shall be not more than 1 W. Air conditioners are excluded from this requirement.		<b>N/A</b>
4.1.3	<b>Energy label</b>		
4.1.3.1	The label shall be displayed on the front or top of the apparatus where it shall be readily visible at the time of sale.		<b>P</b>
4.1.3.2	All apparatus with the exception of audio and video equipment shall display an energy efficiency label in accordance with a guide for energy efficiency labelling issued by the relevant national department.		<b>P</b>
4.1.3.3	The specific energy efficiency label shall be legible and durable. Compliance shall be checked by inspections and by rubbing the label by hand for 15 s with a piece of cloth soaked with water and again for 15 s with the piece of cloth soaked with petroleum spirit. The petroleum spirit to be used for the test is aliphatic solvent hexane.		<b>P</b>
4.2	<b>Specific requirements</b>		
4.2.1	Air conditioners		<b>P</b>
	Air conditioners and heat pumps for space heating and cooling shall comply with the requirements of SANS 54511-3, and shall carry an energy efficiency label designed in accordance with the national annex on energy labels in SANS 54511-3.		<b>P</b>

**List of test equipment used:**

Equipments name	Range used	Accuracy	Resolution	Date of calibration
Testing chamber AHE115-02	Indoor side dry bulb: 5-50 °C, RH30%- 92%; outdoor side dry bulb: -20- 65 °C, RH30%-92%; Inner enthalpy difference: air volume: 300-3000m3/h; Cooling capacity 1500- 15000W; Heating capacity 1500- 15000W; Allowable static pressure: 0-250pa; Outside enthalpy difference: air volume 600-6000 m3/h; Heat pump water heater: heating capacity 5000- 15000W; Water flow 0.05-3 m3/h	Working condition of test capacity: $\pm$ 0.1 °C Operating condition environment: $\pm$ 0.2 °C	OK	2020-01-16
Module Card of Data Acquisition AHE115-02A	0-300°C	0.05°C	OK	2020-01-16
Digital Power Meter AHE115-02C	0-600V,0-20A, 0.5Hz-100kHz	$\pm(0.1\%$ of reading + 0.1 % of range)	OK	2020-01-17
Differential pressure gauge AHE115-02F~ AHE115-02L	0-1000Pa -500-500Pa -50-450Pa	$\pm 0.8$ Pa	OK	2020-01-17
Platinum resistor AHE115-02T1 AHE115-02T2 AHE115-02T3 AHE115-02T4 AHE115-02T5 AHE115-02T6 AHE115-02T7 AHE115-02T8	-5~60°C -30~65°C	$\pm 0.1$ °C	OK	2020-01-16
Platinum resistor AHE115-02T9 AHE115-02T10 AHE115- 02T11~19	-150~150°C	$\pm 0.1$ °C	OK	2020-01-16
Platinum resistor AHE115-02T20 AHE115-02T21	-5~65°C	$\pm 0.1$ °C	OK	2020-01-16

## Photo documents:

Details of: Indoor unit

View:

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



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 Report ----