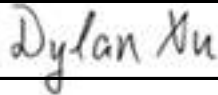
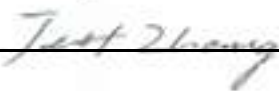




TEST REPORT

**BUREAU
VERITAS**

ENERGY EFFICIENCY - SMALL AIR CONDITIONER

Report Number:	AQVI-EGZ-P23100176-1
Date of Issue:	18-Oct-2023
Date of Revise:	1-Dec-2025
Testing Laboratory/Address:	Bureau Veritas CPS Technology Services(Guangzhou) Co., Ltd. Rm. 101, G5 Building, South China Advanced Materials Innovation Park NO. 31 Kefeng Rd, Guangzhou Science City Guangdong, 510663, China
Applicant/Address:	Zhongshan Changhong Electric Co., Ltd. Nantou Road Middle, Nantou, Zhongshan, Guangdong, China
Manufacturing Site/Address:	Same as the applicant
Testing Location/Address:	Same as the applicant
Product:	Split type Air Conditioner
Trade Mark:	CHANGHONG
Model(s):	Indoor unit: CSD-09DA Outdoor unit: CSD-09DA
Model Similarity:	N/A
Ratings:	220-240V~, 50Hz
Date of Sample(s) Received:	4-Sep-2023
Date of Test Started:	4-Sep-2023
Date of Test Finished:	16-Sep-2023
Standard(s)/Regulation(s):	(EU) 206/2012 + (EU) 2016/2282 (EU) 626/2011 + (EU) 2017/254 EN 14825:2022 EN 14511-1,2,3,4:2022 EN 12102-1:2022
Conclusion:	The product tested comply with the ErP requirements.
Prepared by (name, function, signature):	Dylan XU Engineer 
Approved by (name, function, signature):	Jeff ZHANG Performance Manager 

This report is governed by, and incorporates by reference, the Conditions of Testing as posted at the date of issuance of this report at <http://www.bureauveritas.com/home/about-us/our-business/cps/about-us/terms-conditions/> and is intended for your exclusive use. Any copying or replication of this report to or for any other person or entity, or use of our name or trademark, is permitted only with our prior written permission. This report sets forth our findings solely with respect to the test samples identified herein. The results set forth in this report are not indicative or representative of the quality or characteristics of the lot from which a test sample was taken or any similar or identical product unless specifically and expressly noted. Our report includes all of the tests requested by you and the results thereof based upon the information that you provided to us. Measurement uncertainty is only provided upon request for accredited tests. Statements of conformity are based on simple acceptance criteria without taking measurement uncertainty into account, unless otherwise requested in writing. You have 60 days from date of issuance of this report to notify us of any material error or omission caused by our negligence or if you require measurement uncertainty; provided, however, that such notice shall be in writing and shall specifically address the issue you wish to raise. A failure to raise such issue within the prescribed time shall constitute your unqualified acceptance of the completeness of this report, the tests conducted and the correctness of the report contents.

Photos:**1. Nameplate of indoor side and outdoor side showing model number and serial number (if applicable)**

CHANGHONG

Model of indoor unit: CSD-09DA
DC inverter split air conditioner

Power:single-phase a.c.
Rated voltage:220-240V~ Rated frequency:50Hz

Electric shock protection class		I	
Cooling capacity	W	2500(660-2780)	
Heating capacity	W	2600(660-2880)	
Power input	Cooling	W	770(250-1300)
	Heating	W	690(250-1300)
Current input	Cooling	A	3.6(1.1-8.8)
	Heating	A	3.2(1.1-9.0)
Indoor discharge air-flow	m ³ /h	≥500	
Rated power input	W	1300	
Rated current input	A	9.0	
Refrigerant filling quantity(R32)	kg	0.6	
HP. PS	MPa	4.3	
LP. PS	MPa	1.3	
Indoor maximum allowable pressure of heat exchanger	MPa	4.3	
Indoor unit weight	kg	7	

Ex-factory No & Date & Net weight:
Refer to packing box

ZHONGSHAN CHANGHONG ELECTRIC CO., LTD.
ADD:Nantou Road Middle, Nantou, Zhongshan,
Guangdong, China

    **A2L**

 **Caution**
Refrigerant : R32
MADE IN P.R.C.

 **Caution, risk of fire**

CHANGHONG

Model of outdoor unit: CSD-09DA
DC inverter split air conditioner

Power:single-phase a.c.
Rated voltage:220-240V~ Rated frequency:50Hz

Water of proof		IPX4	
Power input	Cooling	W	770(250-1300)
	Heating	W	690(250-1300)
Current input	Cooling	A	3.6(1.1-8.8)
	Heating	A	3.2(1.1-9.0)
Refrigerant filling quantity(R32)	kg	0.6	
Outdoor maximum allowable pressure of heat exchanger	MPa	4.3	
Outdoor unit weight	kg	21.2	

Ex-factory No & Date & Net weight:
Refer to packing box

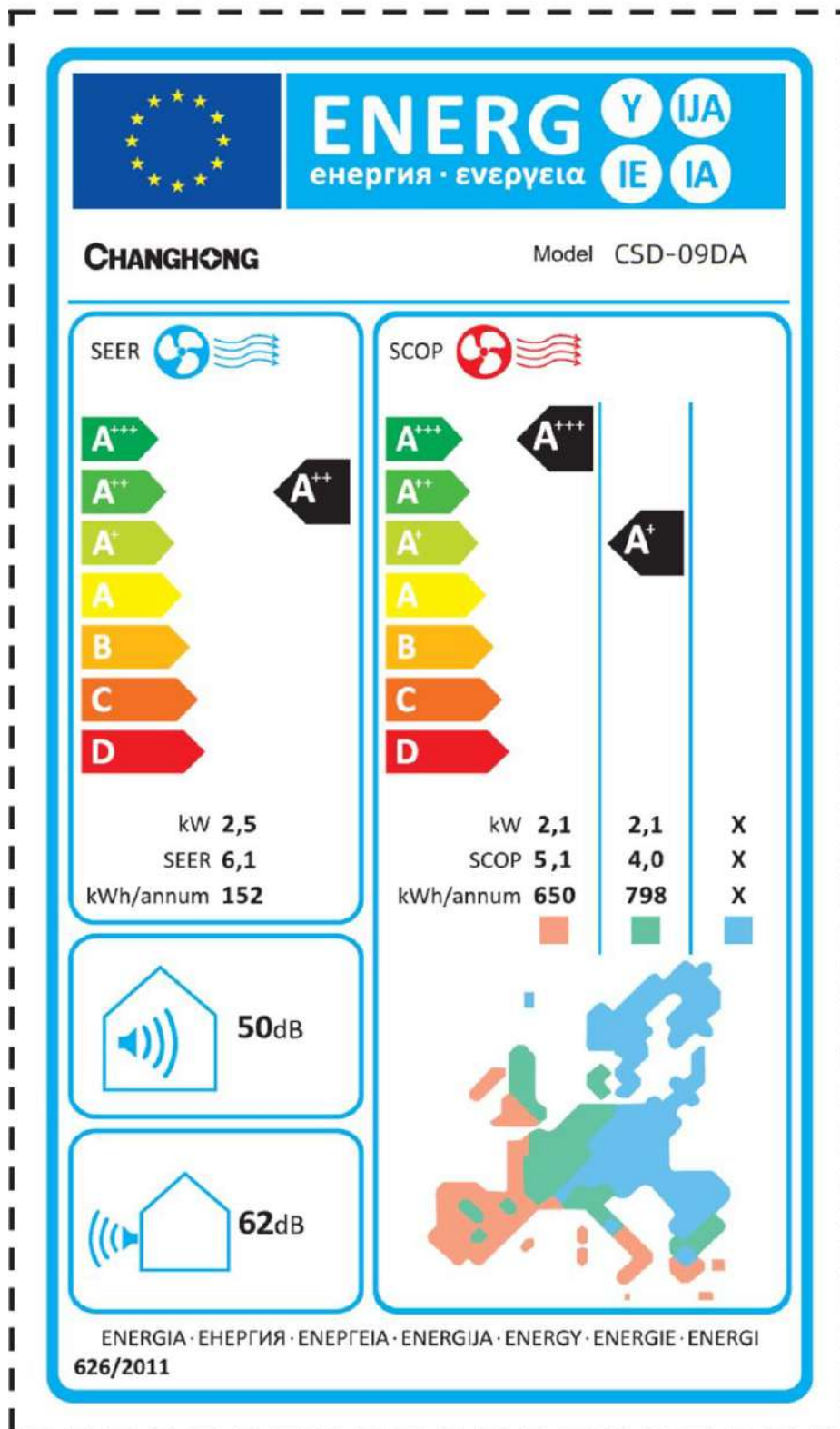
ZHONGSHAN CHANGHONG ELECTRIC CO., LTD.
ADD:Nantou Road Middle, Nantou, Zhongshan,
Guangdong, China

    **A2L**

 **Caution**
Refrigerant : R32
MADE IN P.R.C.

 **Caution, risk of fire**

2. Energy label (if applicable)



3. Indoor side - front panel(including accessories if applicable)



5. Outdoor side (including accessories if applicable)



6. Compressor label



7. Indoor fan motor



8. Outdoor fan motor



Product Details

Item	Data
Model Number of Unit Under Tested	Indoor unit: CSD-09DA Outdoor unit: CSD-09DA
Serial Number	N/A
Condition of Sample(s)	Production
Air Conditioner Type	Single Split
Power Supply (Single Phase/Three Phase/DC)	Single Phase
Rated Voltage [V]	220-240
Rated Frequency [Hz]	50
Refrigerant	R32
Charge of the Refrigerant [g]	600
Air Distribution of Indoor Side	Non-ducted
Indoor side heat exchanger	Air
Outdoor side heat exchanger	Air
Air Conditioner Mode	Reversible
Unit Mounting (applicable to non ducted split system)	Wall Hung
Capacity Control	Variable
Rated Cooling Power @T1 [W]	770
Rated Cooling Capacity @T1 [W]	2500
Rated EER @T1 [W/W]	3.25
Rated Heating Power @H1 [W]	690
Rated Heating Capacity @H1 [W]	2600
Rated COP @H1 [W/W]	3.77
Dimensions (for split systems only dimensions of the indoor unit, Width [mm]*Height [mm]*Length [mm])	200*270*700

Critical Components

Name	Manufacturer / Trademark	Type / Model	Technical data
Compressor	Zhuhai landa Compressor Co., Ltd.	FTz-AN066ACBA-A	DC, R32, Class B
Indoor fan motor	Guangdong Welling Motor Manufacturing Co.,Ltd	RPG15(AL)	220-240V, 50Hz, 15W, Class E
Alternative	Zhongshan Broad-ocean Motor Co.,Ltd	Y4S476A762L	220-240V, 50Hz, 18W, Class E
Alternative	Jiangmen LT Motor Co.,Ltd	RA15L	220-240V, 50Hz, 15W, Class E
Alternative	Zhuhai city Tongde electric equipment Co., Ltd.	RPG15K	220-240V, 50Hz, 15W, Class E
Alternative	Zhuhai city Tongde electric equipment Co., Ltd.	RPG15A(AL)	220-240V, 50Hz, 15W, Class E
Outdoor fan motor	Guangdong Welling Motor Manufacturing Co.,Ltd	ZKFN-37-10-3	DC310V, 37W, Class B
Alternative	Zhuhai city Tongde electric equipment Co., Ltd.	T10WZ37-A01	DC310V, 37W, Class B
Alternative	Zhuhai city Tongde electric equipment Co., Ltd.	ZW428A300016	DC310V, 37W, Class E
Evaporator	Zhongshan Changhong Electric Co., Ltd.	-	Dimension W [mm]*H [mm]*D [mm] 507*294*25.4 /Finned tube volume: 0.0038m ³
Condensor	Zhongshan Changhong Electric Co., Ltd.	-	Dimension W [mm]*H [mm]*D [mm] 652*504*18.19 /Finned tube volume: 0.0060m ³

Ecodesign Requirements

Clause	Ecodesign requirements	Result - Remark	Verdict
2	REQUIREMENTS FOR MINIMUM ENERGY EFFICIENCY, MAXIMUM POWER CONSUMPTION IN OFF-MODE AND STANDBY MODE AND FOR MAXIMUM SOUND POWER LEVEL		-
(a)	From 1 January 2013: Single duct and double duct air conditioners shall correspond to requirements as indicated in Tables 1, 2 and 3		N/A
Table 1	Requirements for minimum energy efficiency		N/A
Table 2	Requirements for maximum power consumption in off-mode and standby mode for single duct and double duct air conditioners and comfort fans		N/A
Off mode	Power consumption of equipment in any off-mode condition shall not exceed 1,00 W		N/A
Standby mode	The power consumption of equipment in any condition providing only a reactivation function, or providing only a reactivation function and a mere indication of enabled reactivation function, shall not exceed 1,00 W.		N/A
Standby mode	The power consumption of equipment in any condition providing only information or status display, or providing only a combination of reactivation function and information or status display, shall not exceed 2,00 W.		N/A
Availability of standby and/or off mode	Equipment shall, except where this is inappropriate for the intended use, provide off mode and/or standby mode, and/or another condition which does not exceed the applicable power consumption requirements for off mode and/or standby mode when the equipment is connected to the mains power source.		N/A
Table 3	Requirements for maximum sound power level - Indoor sound power level no more than 65 dB(A)		N/A
(b)	From 1 January 2013, air conditioners, except single and double duct air conditioners, shall correspond to minimum energy efficiency and maximum sound power level requirements as indicated in Tables 4 and 5		Pass
Table 4	Requirements for minimum energy efficiency		Pass
Table 5	Requirements for maximum sound power level		Pass
(c)	From 1 January 2014, air conditioners shall correspond to requirements as indicated in the table 6		Pass
Table 6	Requirements for minimum energy efficiency		Pass

Clause	Ecodesign requirements	Result - Remark	Verdict
(d)	From 1 January 2014, single duct and double duct air conditioners and comfort fans shall correspond to requirements as indicated in Table 7		N/A
Table 7	Requirements for maximum power consumption in off-mode and standby mode		N/A
Off mode	Power consumption of equipment in any off-mode condition shall not exceed 0,50 W.		N/A
Standby mode	The power consumption of equipment in any condition providing only a reactivation function, or providing only a reactivation function and a mere indication of enabled reactivation function, shall not exceed 0,50 W.		N/A
Standby mode	The power consumption of equipment in any condition providing only information or status display, or providing only a combination of reactivation function and information or status display shall not exceed 1,00 W.		N/A
Power management	When equipment is not providing the main function, or when other energy- using product(s) are not dependent on its functions, equipment shall, unless inappropriate for the intended use, offer a power management function, or a similar function, that switches equipment after the shortest possible period of time appropriate for the intended use of the equipment, automatically into: — standby mode, or — off mode, or — another condition which does not exceed the applicable power consumption requirements for off mode and/or standby mode when the equipment is connected to the mains power source. The power management function shall be activated before delivery.		N/A
3	PRODUCT INFORMATION REQUIREMENTS		-
(a)	From 1 January 2013, as regards air conditioners and comfort fans, the information set out in points below and calculated in accordance with Annex II shall be provided on:		Pass
(i)	the technical documentation of the product		Pass
(ii)	free access websites of manufacturers of air conditioners		Not check

Clause	Ecodesign requirements	Result - Remark	Verdict
(b)	The manufacturer of air conditioners shall provide laboratories performing market surveillance checks, upon request, the necessary information on the setting of the unit as applied for the establishment of declared capacities, SEER/EER, SCOP/COP values and service values and provide contact information for obtaining such information		Not check
(c)	Information requirements for air conditioners, except double duct and single duct air conditioners		Pass
(d)	Information requirements for single duct and double duct air conditioners.		N/A

Information requirements for air conditioners, except double duct and single duct air conditioners

Function (indicate if present)				Capacity control (indicate one of three options)			
Cooling	Y			Fixed	N		
Heating/Average (mandatory)	Y			Staged	N		
Heating/Warmer (if designated)	Y			Variable	Y		
Heating/Colder (if designated)	N						
Item	Symbol	Value	Unit	Item	Symbol	Value	Unit
Cooling	$P_{designc}$	2.50	kW	Cooling	SEER	6.30	—
Heating/Average	$P_{designh}$	2.10	kW	Heating/Average	SCOP/A	4.20	—
Heating/Warmer	$P_{designh}$	2.10	kW	Heating/Warmer	SCOP/W	5.57	—
Heating/Colder	$P_{designh}$		kW	Heating/Colder	SCOP/C		—
Annual electricity consumption				Energy efficiency class			
Cooling	Q_{CE}	139	kWh/a	Cooling	—	A++	—
Heating/Average	Q_{HE}	700	kWh	Heating/Average	—	A+	—
Heating/Warmer	Q_{HE}	527	kWh	Heating/Warmer	—	A+++	—
Heating/Colder	Q_{HE}		kWh	Heating/Colder	—		—
Declared capacity (*) for cooling, at indoor temperature 27(19) °C and outdoor temperature Tj				Declared energy efficiency ratio (*), at indoor temperature 27(19) °C and outdoor temperature Tj			
Tj = 35 °C	P_{dc}	2.50	kW	Tj = 35 °C	EER_d	3.24	—
Tj = 30 °C	P_{dc}	1.89	kW	Tj = 30 °C	EER_d	4.96	—
Tj = 25 °C	P_{dc}	1.26	kW	Tj = 25 °C	EER_d	8.08	—
Tj = 20 °C	P_{dc}	1.00	kW	Tj = 20 °C	EER_d	11.15	—
Declared capacity for heating/Average for part load at indoor temperature 20°C and outdoor temperature Tj				Declared coefficient of performance/Average for part load at indoor temperature 20°C and outdoor temperature Tj			
Tj = -7 °C	P_{dh}	2.04	kW	Tj = -7 °C	COP_d	2.94	—
Tj = 2 °C	P_{dh}	1.28	kW	Tj = 2 °C	COP_d	4.73	—
Tj = 7 °C	P_{dh}	0.77	kW	Tj = 7 °C	COP_d	4.41	—
Tj = 12 °C	P_{dh}	0.65	kW	Tj = 12 °C	COP_d	5.41	—
Tj = operating limit	P_{dh}	1.87	kW	Tj = operating limit	COP_d	2.46	—
Tj = bivalent temperature	P_{dh}	2.04	kW	Tj = bivalent temperature	COP_d	2.94	—
Declared capacity for heating/Warmer for part load at indoor temperature 20°C and outdoor temperature Tj				Declared coefficient of performance/Warmer for part load at indoor temperature 20°C and outdoor temperature Tj			
Tj = 2 °C	P_{dh}	2.12	kW	Tj = 2 °C	COP_d	3.25	—
Tj = 7 °C	P_{dh}	1.35	kW	Tj = 7 °C	COP_d	6.36	—
Tj = 12 °C	P_{dh}	0.65	kW	Tj = 12 °C	COP_d	5.41	—
Tj = operating limit	P_{dh}	2.12	kW	Tj = operating limit	COP_d	3.25	—
Tj = bivalent temperature	P_{dh}	2.12	kW	Tj = bivalent temperature	COP_d	3.25	—

Item	Symbol	Value	Unit	Item	Symbol	Value	Unit
Declared capacity for heating/Colder for part load at indoor temperature 20°C and outdoor temperature Tj				Declared coefficient of performance/Colder for part load at indoor temperature 20°C and outdoor temperature Tj			
Tj = - 7 °C	P_{dh}		kW	Tj = - 7 °C	COP_d		—
Tj = 2 °C	P_{dh}		kW	Tj = 2 °C	COP_d		—
Tj = 7 °C	P_{dh}		kW	Tj = 7 °C	COP_d		—
Tj = 12 °C	P_{dh}		kW	Tj = 12 °C	COP_d		—
Tj = operating limit	P_{dh}		kW	Tj = operating limit	COP_d		—
Tj = bivalent temperature	P_{dh}		kW	Tj = bivalent temperature	COP_d		—
Tj = - 15 °C	P_{dh}		kW	Tj = - 15 °C	COP_d		—
Bivalent temperature				Operating limit temperature			
Average	T_{biv}	-7	°C	Average	TOL	-10	°C
Warmer	T_{biv}	2	°C	Warmer	TOL	2	°C
Colder	T_{biv}		°C	Colder	TOL		°C
Cycling interval capacity/Cooling				Cycling interval efficiency/Heating			
for cooling	P_{cycc}	N/A	kW	for heating	P_{cyhc}	N/A	kW
for cooling	EER_{cyc}	N/A	—	for heating	COP_{cyc}	N/A	—
Degradation co-efficient cooling (**)	Cdc	0.25	—	Degradation co-efficient heating (**)	Cdh	0.25	—
Power consumption in modes other than active mode/Cooling				Power consumption in modes other than active mode/Heating			
Off mode	P_{OFF}	0.002	kW	Off mode	P_{OFF}	0.001	kW
Thermostat-off mode	P_{TO}	0.023	kW	Thermostat-off mode	P_{TO}	0.001	kW
Standby mode	P_{SB}	0.002	kW	Standby mode	P_{SB}	0.001	kW
Crankcase heater mode	P_{CK}	0.000	kW	Crankcase heater mode	P_{CK}	0.000	kW
Other items							
Sound power level (indoor/outdoor)	L_{WA}	N/A	dB(A)				
Global warming potential	GWP	675	kgCO ₂ eq.				
Rated air flow (indoor/outdoor)	—	N/A	m ³ /h				

Cooling capacity test

Item	Unit	Test A	Test B	Test C	Test D
Barometric pressure	<i>kPa</i>	101.9	101.54	101.39	101.41
Voltage	<i>V</i>	230.85	230.8	230.84	230.8
Frequency	<i>Hz</i>	50	50	50	50
Total current	<i>A</i>	3.348	2.298	0.98	0.547
Total power input	<i>W</i>	772.2	380.3	156.3	89.4
Speed control setting of the fan speed	-	Turbo	Turbo	Turbo	Turbo
Rotational speed of the fan	<i>r/min</i>	-	-	-	-
External resistance to airflow	<i>Pa</i>	0	0	0	0
Dry-bulb temp. of air entering equipment, indoor side	<i>°C</i>	27	26.99	27	27
Wet-bulb temp. of air entering equipment, indoor side	<i>°C</i>	19.02	19	19	19
Dry-bulb temp. of air entering equipment, outdoor side	<i>°C</i>	35.02	29.92	24.99	20.01
Wet-bulb temp. of air entering equipment, outdoor side	<i>°C</i>	24.01	21.94	20.01	15.02
Compressor frequency	<i>Hz</i>	64	41	22	15
Data collection period	<i>min</i>	35	35	35	35
Total Cooling Capacity	<i>W</i>	2500.6	1886.6	1262.9	996.8
Sensible cooling capacity	<i>W</i>	2070.2	1825.4	1201.5	916.7
Latent cooling capacity	<i>W</i>	430.4	61.2	61.4	80.1
EER (Energy Efficiency Ratio)	<i>W/W</i>	3.24	4.96	8.08	11.15

Heating/Average capacity test

Item	Unit	Test A (-7°C)	Test B (2°C)	Test C (7°C)	Test D (12°C)	Test E (TOL)	Test F (T _{biv})
Barometric pressure	kPa	101.25	101.28	101.33	101.24	101.25	101.25
Voltage	V	229.9	230.98	231.19	231.03	230.8	229.9
Frequency	Hz	50	50	50	50	50	50
Total current	A	3.02	1.18	1.08	0.66	3.28	3.02
Total power input	W	695	270.9	174.3	120.2	760	695
Speed control setting of the fan speed	-	Turbo	Turbo	Turbo	Turbo	Turbo	Turbo
Rotational speed of the fan	r/min	-	-	-	-	-	-
External resistance to airflow	Pa	0	0	0	0	0	0
Dry-bulb temp. of air entering equipment, indoor side	°C	19.94	20	20	20	20	19.94
Wet-bulb temp. of air entering equipment, indoor side	°C	14.93	15	15	15	15	14.93
Dry-bulb temp. of air entering equipment, outdoor side	°C	-7.03	2.03	7.02	12.01	-10.04	-7.03
Wet-bulb temp. of air entering equipment, outdoor side	°C	-7.99	1.02	6.02	11	-11.04	-7.99
Compressor frequency for inverter type	Hz	77	37	22	15	84	77
Data collection period	min	35	35	35	35	35	35
Total Heating Capacity	W	2042	1282.3	768.5	650.7	1872.9	2042
COP (Coefficient of Performance)	W/W	2.94	4.73	4.41	5.41	2.46	2.94

Heating/Warmer capacity test

Item	Unit	Test A (-7°C)	Test B (2°C)	Test C (7°C)	Test D (12°C)	Test E (TOL)	Test F (T _{biv})
Barometric pressure	kPa		100.5	100.43	101.44	100.5	100.5
Voltage	V		229.9	229.8	231.03	229.9	229.9
Frequency	Hz		50	50	50	50	50
Total current	A		2.84	0.96	0.66	2.84	2.84
Total power input	W		653	213	120.2	653	653
Speed control setting of the fan speed	-		Turbo	Turbo	Turbo	Turbo	Turbo
Rotational speed of the fan	r/min		-	-	-	-	-
External resistance to airflow	Pa		0	0	0	0	0
Dry-bulb temp. of air entering equipment, indoor side	°C		20	19.94	20	20	20
Wet-bulb temp. of air entering equipment, indoor side	°C		14.95	14.94	15	14.95	14.95
Dry-bulb temp. of air entering equipment, outdoor side	°C		2.04	6.98	12.01	2.04	2.04
Wet-bulb temp. of air entering equipment, outdoor side	°C		0.94	5.98	11	0.94	0.94
Compressor frequency for inverter type	Hz		69	35	15	69	69
Data collection period	min		35	35	35	35	35
Total Heating Capacity	W		2120	1354	650.7	2120	2120
COP (Coefficient of Performance)	W/W		3.25	6.36	5.41	3.25	3.25

Sound power test - indoor

Item	Unit	Value									
Method	--	Hemispherical measurement surface									
r	mm	1000									
S	m ²	6.28									
Microphone Position	--	1	2	3	4	5	6	7	8	9	10
L _{pi}	dB	41.7	41.2	40.5	41.2	41.3	42	42.6	42.3	40.7	41.4
10 ^{0.1} L _{pi}		14791	13183	11220	13183	13490	15849	18197	16982	11749	13804
Averaged Sound Pressure Level	dB(A)	41.54									
Sound Power Level	dB(A)	49.52									

Sound power test - outdoor

Item	Unit	Value				
Method	--	Half-hemispherical measurement surface				
r	mm	1430				
S	m ²	6.42				
Microphone Position	--	2	3	6	7	9
L _{pi}	dB	47.6	49.7	48.3	48.5	47.5
10 ^{0.1} L _{pi}		57544	93325	67608	70795	56234
Averaged Sound Pressure Level	dB(A)	48.39				
Sound Power Level	dB(A)	56.47				

Test Summary

	Measured	Declared	Verdict
<i>Design load for cooling (Pdesignc)</i>	2.50	2.50	Pass
<i>Design load for heating/average (Pdesignh)</i>	2.31	2.10	Pass
<i>Design load for heating/warmer (Pdesignh)</i>	2.12	2.10	Pass
<i>Design load for heating/colder (Pdesignh)</i>			
<i>Seasonal energy efficiency ratio, SEER</i>	6.30	6.30	Pass
<i>Seasonal coefficient of performance, SCOP/A</i>	4.20	4.20	Pass
<i>Seasonal coefficient of performance, SCOP/W</i>	5.57	5.57	Pass
<i>Seasonal coefficient of performance, SCOP/C</i>			
<i>Noise emission (dB(A) re 1pW)</i>	N/A	N/A	N/A

Revision Summary

[illegible]