Technical Report No. 64.181.17.05057.01

Rev. 00

Dated 2017-08-31

Client:	Name: Gorenje d.d. Address: Partizanska 12, 3320 Velenje, Slovenia Contact person: Mr. Mario Nikic
Manufacturing place:	Manufacturer's name: Gorenje d.d. Address: Partizanska 12, 3320 Velenje, Slovenia Factory's name: Zhongshan Amitime Electric Co., Ltd. Address: 5th Yandong Rd, Dayan Industrial Zone, Huangpu Town, Zhongshan City, Guangdong, China
Test subject:	Product: Heat Pump Type: AEROGOR ECO INVERTER 10 AS, AEROGOR ECO INVERTER 13 AS, AEROGOR ECO INVERTER 10 A, AEROGOR ECO INVERTER 13 A Trade mark: gorenje
Test specification:	ISO 3744:2010 and ISO 3745:2012 with the client specified operation condition
Purpose of examination:	Test according to the test specification (details see page 6 to page7, summary of testing)
Test result:	This report is only for test result, without verdict, see item 3 of this report for details.

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Telefax : +86 20 38320478
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Guangzhou Branch, TÜV SÜD Group

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1 Description of the test subject

1.1 Function

☒ Manufacturer's specification for intended use:
The appliance is air to water heat pump.

☐ Manufacturer's specification for predictive misuse:
(According to the user manual)

1.2 Technical Data

Model	:	AEROGOR ECO INVERTER 10 AS, AEROGOR ECO INVERTER 13 AS, AEROGOR ECO INVERTER 10 A, AEROGOR ECO INVERTER 13 A
Rated Voltage (V)	:	230V~
Rated Frequency (Hz)	:	50Hz
Rated Power Input (kW)	:	See the label on page 5
Rated Current (A)	:	N/A
Protection Class	:	☒ Class I; ☐ Class II; ☐ Class III
Protection Against Moisture	:	IPX4 for outdoor unit
Construction	:	☒ Stationary ☐ Portable ☐ Hand-held ☐ Open-frame
Supply connection	:	☐ Non detachable cord ☒ Permanent connection to fixed wiring ☐ Appliance inlet
Operation mode	:	☒ continuous operation; ☐ Intermittent operation; ☐ Short time operation;
Rated capacity (ml), if any	:	N/A
Weight (kg)	:	See the label on page 5
Refrigerant	:	See the label on page 5

2 Order

2.1 Date of Purchase Order, Customer's Reference

2017-08-05

2.2 Receipt of Test Sample, Location

2017-08-06
No.3, Tiantaiyi Road, Kaitai Avenue, Science City, Guangzhou, P.R.China

2.3 Date of Testing

2017-08-12 to 2017-08-13

2.4 Location of Testing

Same as 2.2

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3 Test Results

Table 3.1-1	**Model:** AEROGOR ECO INVERTER 13 AS		
Test standard: ISO 3744:2010			
Frequency range: Octave bands			
Working condition class: Class A			
Acoustical environment: hemi-anechoic			
Windshield type: sponge			
Measurement surface: parallelepiped			
Measurement distance: 1m			
Working mode	Normal mode	Heating, water inlet:30.0 ºC, water outlet:35 ºC, water flow rate:0.65m³/h.	
	Quiet operation mode	Heating, Heating, water inlet:30.0 ºC, water outlet:35 ºC, water flow rate:0.48m³/h.	
Test voltage	230.1V		
Installation of the unit	The outdoor unit was installed in the middle of the test room. The test room are using hemi-anechoic method with a 14 microphone positions.		
Test data	Normal mode	Quiet operation mode	--
	Outdoor unit		Background dB(A) L''_{pi}
Microphone position No.	Sound pressure level corrected for background noise L_{pi}		
1	45.9	43.9	16.7
2	45.3	44.3	16.9
3	43.1	41.9	16.9
4	45.9	43.9	16.6
5	47.6	46.1	16.8
6	44.6	40.8	16.2
7	42.7	39.1	16.1
8	39.9	39.7	16.7
9	40.5	39.0	16.6
10	44.7	42.2	16.4
11	42.3	41.0	16.7
12	40.5	39.9	16.5
13	41.0	40.6	16.6
14	40.7	39.1	16.5
Sound pressure level $\overline{L_{pf}}$ /dB(A)	43.9	42.1	16.6
10lg(S/S0)	15.1	15.1	--
Background noise correction K_1 /dB(A)	--	--	--
Environmental correction K_2 /dB(A)	--	--	--

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Sound power level) L_W / dB(A)	59.0	57.2	--
Remark: 1. The difference of sound power level is 1.8 dB between normal mode and quiet operation mode.			

Table 3.1-2	**Model:** AEROGOR ECO INVERTER 10 AS		
Test standard: ISO 3745:2012			
Frequency range: Octave bands			
Working condition class: Class A			
Acoustical environment: hemi-anechoic			
Windshield type: sponge			
Measurement surface: parallelepiped			
Measurement distance: 2 m			
Working mode	Normal mode	Heating, water inlet:30.0 ºC, water outlet:35 ºC, water flow rate:0.50m³/h.	
	Quiet operation mode	Heating, Heating, water inlet:30.0 ºC, water outlet:35 ºC, water flow rate:0.30m³/h.	
Test voltage	230.1V		
Installation of the unit	The outdoor unit was installed in the middle of the test room. The test room are using hemi-anechoic method with a 20 microphone positions.		
Test data	Normal mode	Quiet operation mode	--
	Outdoor unit		Background dB(A) L''_{pi}
Microphone position No.	Sound pressure level corrected for background noise L_{pi}		
1	47.9	46.3	16.8
2	42.5	39.7	16.8
3	42.8	40.6	16.8
4	47.9	45.7	16.4
5	44.8	42.6	16.8
6	43.8	39.6	16.4
7	44.5	42.3	16.4
8	44.7	43.1	16.4
9	43.7	40.7	16.3
10	43.8	40.8	16.3
11	45.4	43.5	16.3
12	41.4	39.8	16.3
13	41.9	40.1	16.7
14	43.2	42.1	16.7
15	44.1	42.1	16.7
16	42.2	40.3	16.6
17	41.4	39.5	16.7
18	43.3	41.8	16.6

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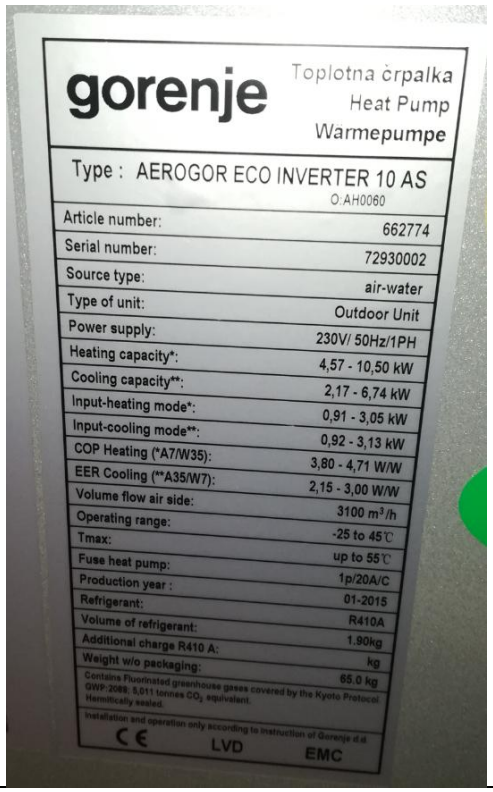
19	41.0	39.5	16.6
20	40.7	38.2	16.6
Sound pressure level $\overline{L_{pf}}$ /dB(A)	44.0	42.0	16.6
10lg(S/S0)	14.0	14.0	--
C1	-0.25	-0.25	--
C2	-0.36	-0.36	--
C3	0.40	0.40	--
Sound power level) L_W / dB(A)	57.8	55.8	--
Remark: 1. The difference of sound power level is 2.0 dB between normal mode and quiet operation mode.			

3.2 Copy of marking plate:



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4 Remark

N/A

5 Documentation

- Annex A: Photo documentations
- Annex B: Test equipment list

6 Summary

1. The appliance was for heating water function, installed according to user manual.
2. The model AEROGOR ECO INVERTER 13 AS is the same as the model AEROGOR ECO INVERTER 13 A except that the model name difference.
3. The model AEROGOR ECO INVERTER 10 AS is the same as the model AEROGOR ECO INVERTER 10 A except that the model name difference.
4. The tests were carried out on models AEROGOR ECO INVERTER 13 AS and AEROGOR ECO INVERTER 10 AS as representative.
5. According to the manufacturer's application and according to the standard ISO 3744:2010 and ISO 3745:2012 requirements, the unit was tested on below conditions:

Model: AEROGOR ECO INVERTER 13 AS				
Test standard: ISO 3744:2010				
Ambient temperature (°C)		Inlet water temperature (°C)	Water flow (m^3/h)	Outlet water temperature (°C)
Dry bulb	Wet bulb			
7	6	30	0.65	35

Model: AEROGOR ECO INVERTER 10 AS				
Test standard: ISO 3745:2012				
Ambient temperature (°C)		Inlet water temperature (°C)	Water flow (m^3/h)	Outlet water temperature (°C)
Dry bulb	Wet bulb			
7	6	30	0.50	35

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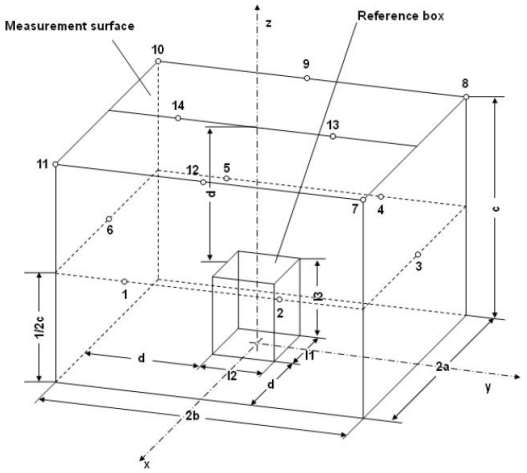
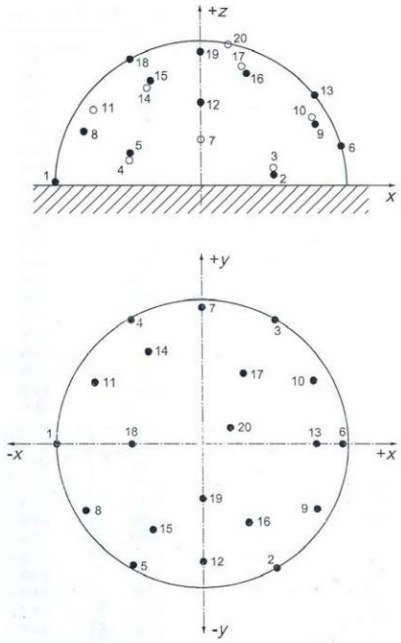
6. Measurement surface figure:

Model: AEROGOR ECO INVERTER 13 AS	**Model:** AEROGOR ECO INVERTER 10 AS
	

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Engineer: _____ **Technical Report checked:** _____

« Tony Xie» **« Gary Sun »**

Project Handler **Designated Reviewer**

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Annex A: Photo documentations

Details of: Fixing view for AEROGOR ECO INVERTER 10 AS

Details of: Fixing view for AEROGOR ECO INVERTER 10 AS

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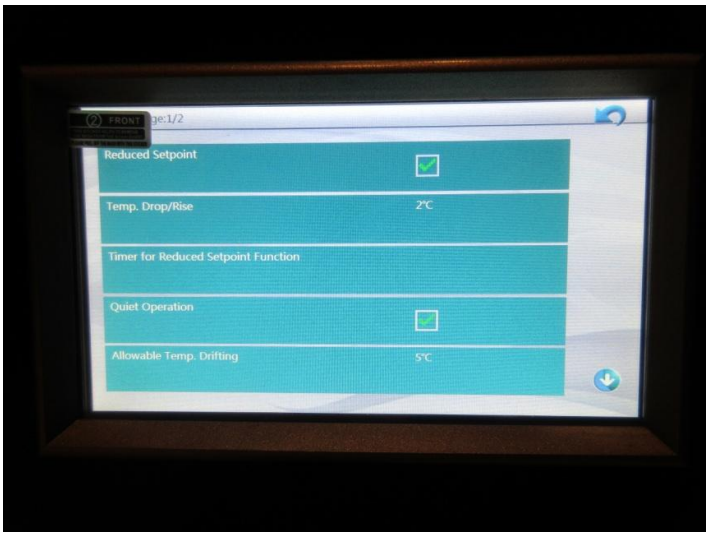
Annex A: Photo documentations

Details of: Controller setting for quiet operation mode



Details of: Controller setting for quiet operation mode

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Annex B: Test equipment list

Equipment	ID No.	Model	Brand/Manufacturer	Calibration due date
Hemi-anechoic Rooms(A)	NC-036-2	5.2mx4.7mx4.6m	Guangzhou Kinte	2018-10-08
PULSE system	VGDY-0184	3660C	Bruel & Kjaer	2018-04-16
Microphone	HJ-000123	4189	Bruel & Kjaer	2018-04-16
Microphone	HJ-000110	4189	Bruel & Kjaer	2018-04-16
Microphone	HJ-000122	4189	Bruel & Kjaer	2018-04-16
Microphone	HJ-000107	4189	Bruel & Kjaer	2018-04-16
Microphone	HJ-000121	4189	Bruel & Kjaer	2018-04-16
Microphone	HJ-000120	4189	Bruel & Kjaer	2018-04-16
Microphone	HJ-000104	4189	Bruel & Kjaer	2018-04-16
Microphone	HJ-000103	4189	Bruel & Kjaer	2018-04-16
Microphone	HJ-000102	4189	Bruel & Kjaer	2018-04-16
Microphone	HJ-000119	4189	Bruel & Kjaer	2018-04-16
Calibrator	HJ-000095	4231	Bruel & Kjaer	2018-06-24
Power meter	KA-0008	8705B	Qingdao Qinzhi	2018-01-03
Long steel tape	HJ-000062	5m	STANLEY	2017-09-08
Temperature measurement system	NC-036-1	-	Guangzhou Kinte	2018-07-31
Atmospheric pressure meter	HJ-000165	-	Sportstar	2017-10-17
Windscreen	-	WS002-5	BSWA TECH	-

-- End of Report --

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