

Prüfbericht-Nr.: <i>Test Report No.:</i>	50106099 004	Auftrags-Nr.: <i>Order No.:</i>	170107655	Seite 1 von 6 Page 1 of 6	
Kunden-Referenz-Nr.: <i>Client Reference No.:</i>	N/A	Auftragsdatum: <i>Order date:</i>	10.04.2019		
Auftraggeber: <i>Client:</i>	AQUAGEM ELECTRIC LIMITED Room 2217,2218, No.69 Xianlie Road Central, Guangzhou 510095, P.R.China				
Prüfgegenstand: <i>Test item:</i>	Water pump controller				
Bezeichnung / Typ-Nr.: <i>Identification / Type No.:</i>	iSAVER+1100, iSAVER+1500, iSAVER+2200				
Auftrags-Inhalt: <i>Order content:</i>	Noise test				
Prüfgrundlage: <i>Test specification:</i>	ISO 3744:2010				
Wareneingangsdatum: <i>Date of receipt:</i>	09.04.2019				
Prüfmuster-Nr.: <i>Test sample No.:</i>	A000903316-001				
Prüfzeitraum: <i>Testing period:</i>	15.04.2019				
Ort der Prüfung: <i>Place of testing:</i>	See page 2				
Prüflaboratorium: <i>Testing laboratory:</i>	TÜV Rheinland (Guangdong) Ltd.				
Prüfergebnis*: <i>Test result*:</i>	See Other				
geprüft von / tested by:		kontrolliert von / reviewed by:			
Marco Yuan / 15.04.2019 Project manager		Lily Cai / 16.04.2019 Reviewer			
Datum <i>Date</i>	Name / Stellung <i>Name / Position</i>	Unterschrift <i>Signature</i>	Datum <i>Date</i>	Name / Stellung <i>Name / Position</i>	Unterschrift <i>Signature</i>
Sonstiges / Other: Refer to report					
Zustand des Prüfgegenstandes bei Anlieferung: <i>Condition of the test item at delivery:</i>		Prüfmuster vollständig und unbeschädigt <i>Test item complete and undamaged</i>			
* Legende:	1 = sehr gut P(ass) = entspricht o.g. Prüfgrundlage(n)	2 = gut F(ail) = entspricht nicht o.g. Prüfgrundlage(n)	3 = befriedigend F(ail) = entspricht nicht o.g. Prüfgrundlage(n)	4 = ausreichend N/A = nicht anwendbar	5 = mangelhaft N/T = nicht getestet
Legend:	1 = very good P(ass) = passed a.m. test specification(s)	2 = good F(ail) = failed a.m. test specification(s)	3 = satisfactory F(ail) = failed a.m. test specification(s)	4 = sufficient N/A = not applicable	5 = poor N/T = not tested
Dieser Prüfbericht bezieht sich nur auf das o.g. Prüfmuster und darf ohne Genehmigung der Prüfstelle nicht auszugsweise vervielfältigt werden. Dieser Bericht berechtigt nicht zur Verwendung eines Prüfzeichens. <i>This test report only relates to the a. m. test sample. Without permission of the test center this test report is not permitted to be duplicated in extracts. This test report does not entitle to carry any test mark.</i>					

Prüfbericht - Nr.: 50106099 004
 Test Report No.:

Seite 2 von 6
 Page 2 of 6

General remarks

This test report shall not be reproduced except in full without the written approval of the testing laboratory.




The test results presented in this report relate only to the item tested.

“(see remark #)” refers to a remark appended to the report.


“(see appended table)” refers to a table appended to the report.

Throughout this report a point is used as the decimal separator.

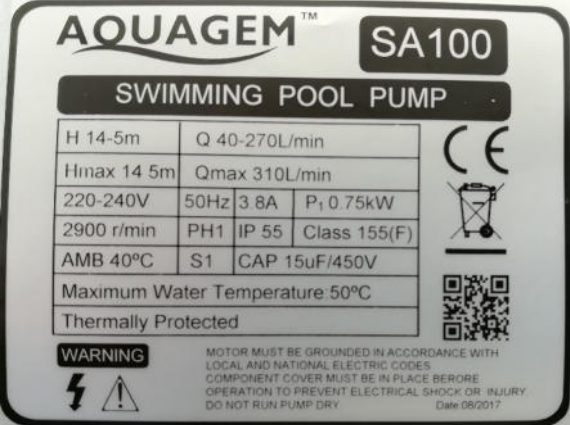
Copy of Nameplate - (according to the separate submitted document)

Model: iSAVER⁺2200
Input: AC 1PH 220~240V 50Hz 12A
Output: AC 1PH 0~240V 20-49Hz 2.2kW
For pump: 1PH max input power 2.2kW



C2522SWB01193013



AQUAGEM™ SA100
SWIMMING POOL PUMP

H 14-5m	Q 40-270L/min		
H _{max} 14.5m	Q _{max} 310L/min		
220-240V	50Hz	3.8A	P ₁ 0.75kW
2900 r/min	PH1	IP 55	Class 155(F)
AMB 40°C	S1	CAP 15uF/450V	
Maximum Water Temperature 50°C			
Thermally Protected			

WARNING MOTOR MUST BE GROUNDED IN ACCORDANCE WITH LOCAL AND NATIONAL ELECTRIC CODES. COMPONENT COVER MUST BE IN PLACE BEFORE OPERATION TO PREVENT ELECTRICAL SHOCK OR INJURY. DO NOT RUN PUMP DRY. Date: 09/2017

Test Standard

ISO 3744:2010, Acoustics - Determination of sound power levels and sound energy levels of noise sources using sound pressure - Engineering methods for an essentially free field over a reflecting plane

Summary of testing

-This report is update from report 50106099 002 with water pump controller additional models.

- Water pump controller models iSAVER⁺1100, iSAVER⁺1500, iSAVER⁺2200 are identical with model CPC-2150 in report 50106099 002 with same construcion, controlling program except appearance, name.

- Enclosed test content is adopted from report 50106099 002. For test details, please refer to report 50106099 002.

-Test place:

Vkan Certification & Testing Co., Ltd.

No.3 Tiantaiyi Road, Kaitai Avenue, Science City, Guangzhou, 510663,P.R.China

Prüfbericht - Nr.: 50106099 004 <i>Test Report No.:</i>	Seite 3 von 6 Page 3 of 6
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Test content adopted from report 50106099 002:

Unit Under Test (UUT) :	Water pump
Model / Type under test..... :	SA100
Rated Voltage and Frequency..... :	220-240V~, 50Hz, 750W
Unit Under Test (UUT) :	Water pump controller
Model / Type under test..... :	AQUAGEM CPC-2150
Test case does not apply to the test object..... :	N /A
Test item does meet the requirement..... :	P(ass)
Test item does not meet the requirement..... :	F(ail)
Testing	
Date of receipt of test item..... :	See cover page
Date(s) of performance of test..... :	See cover page
Test Condition	
Ambient temperature..... :	22.3°C
Relative humidity..... :	59.7%
Test Voltage and frequency..... :	AC230V 50Hz
Ambient air pressure..... :	101.37 kPa

Prüfbericht - Nr.: 50106099 004
 Test Report No.:

Seite 4 von 6
 Page 4 of 6

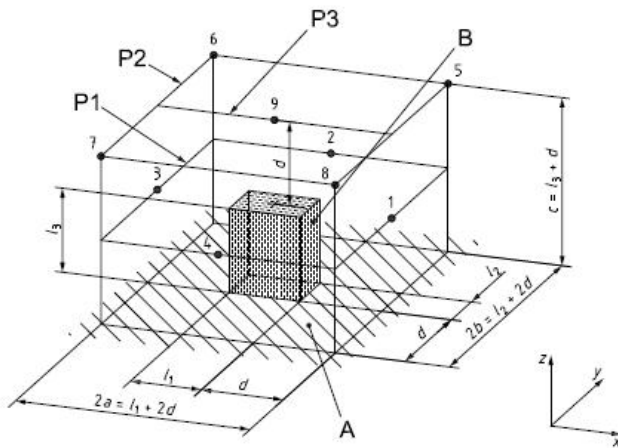
Test parameter

Criteria -Test

The product is installed according to the clause 6.4 of ISO3744:2010 under manufacturer's recommendation.

The product is pre-conditioned and operated according to clause 6.6 of ISO3744:2010 and operation status recommended by manufacturer.

The measurement surface is rectangular surface with nine microphone positions



The sound power level can be calculated from below formula:

$$L_W = \overline{L_p} + 10 \lg \frac{S}{S_0} \text{ dB}$$

Where

$\overline{L_p}$ is the surface time-averaged sound pressure level;

S is area, in meter square meters, of the measurement surface;

S_0 is 1 m².

Result

Prüfbericht - Nr.: 50106099 004
 Test Report No.:

Seite 5 von 6
 Page 5 of 6

Background noise level: 16.6 dB(A)

S: 17.378 m²

S₀: 1 m²

Operation status: - Water pump is connected to power supply without water pump controller. - Delivery height is set as 6m	Actual motor rotation speed (rpm)	2831
	Sound pressure level of each microphone (dB(A))	60.3
		59.4
		59.7
		60.1
		57.0
		56.6
		56.3
		60.9
	56.9	
Average sound pressure level $\overline{L_p}$ (dB(A))	58.9	
Sound power level L _w (dB(A))	71.3	

Operation status: - Water pump is connected with water pump controller. - Motor rotation speed is set as 1700rpm - Delivery height is set as 2m	Actual motor rotation speed (rpm)	1702
	Sound pressure level of each microphone (dB(A))	47.6
		47.7
		47.2
		41.1
		42.1
		45.0
		41.7
		38.5
	45.4	
Average sound pressure level $\overline{L_p}$ (dB(A))	45.0	
Sound power level L _w (dB(A))	57.4	

Operation status: - Water pump is connected with water pump controller. - Motor rotation speed is set as 1200rpm - Delivery height is set as 1m	Actual motor rotation speed (rpm)	1201
	Sound pressure level of each microphone (dB(A))	44.9
		43.8
		44.2
		35.3
		37.3
		41.8
		37.7
		32.9
	40.7	
Average sound pressure level $\overline{L_p}$ (dB(A))	41.4	
Sound power level L _w (dB(A))	53.8	

Prüfbericht - Nr.: 50106099 004
Test Report No.:

Seite 6 von 6
Page 6 of 6

Test equipment list:

Description	Type
Test chamber	5.2mx4.7mx4.6m
PULSE test system	3660C
Ruler	5m
Power meter	8705B

End of test report