

CUSTOMER NAME <CIXI FEILONG> TEST REPORT

SCOPE OF WORK

DOE, CEC Household Clothes Washers

XQB60-2010

series

REPORT NUMBER

210700647HZH-001

ISSUE DATE

20-September-2021

PAGES

17 pages

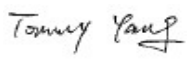

DOCUMENT CONTROL NUMBER

TTRF_DOE_J2_2018 (5-June-2018)

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TEST REPORT
Energy Performance, Water Consumption, and Capacity of
Household Clothes Washers

Report reference No.: 210700647HZH-001
Tested by/Title: Tommy Yang
/ Project Engineer  _____ (signature)
Approved by/Title: Angus Wu
/ Reviewer  _____ (signature)
Date of issue: 20-Sep-2021
Test laboratory: Intertek Testing Services Zhejiang Ltd., Hangzhou Branch
Address: 16 No. 1 Ave., Xiasha Economic Development District, Hangzhou 310018, China
Test location: Same as above
Applicant name: CIXI FEILONG INTERNATIONAL TRADING CO., LTD
Address: Room 21-2, Tofind mansion, Baisha Road, Cixi, Zhejiang Province, P. R. China
Manufacturer: CIXI FEILONG INTERNATIONAL TRADING CO., LTD
Address: Room 21-2, Tofind mansion, Baisha Road, Cixi, Zhejiang Province, P. R. China
Test method: DOE, CEC - 10 CFR 430 Subpart B, Appendix J2
Title 20, Division 2, Chapter 4, Article 4, Sections 1601-1609
Test report form No.: TTRF_DOE_J2_2018
TRF originator: Intertek
Master TRF: Dated 2018.06.

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Clothes washing machine details

Brand	Nictemaw krib bling GUQIAO Harmo HNBX RIPU TOFIND IGNS TECHNOLOGY	Model	XQB60-2010 XQB201A XQB60-201B
Model similarity if series	All models are the same except for the trademark. XQB60-2010 with brand Nictemaw. XQB201A with brand krib bling. XQB60-201B with brand GUQIAO, Harmo, HNBX, RIPU, TOFIND, IGNS TECHNOLOGY.		
Serial number	--	Sample ID	1210725-05-001 1210725-05-002 1210725-05-003
Machine type	Size	Compact	
	Primary Axis	Vertical	
	Load port	Top	
	Control system	Automatic	
	Water fill control system	Manual control only	
	Internal water heating	No	
	Number of wash/rinse temperature settings	1	
	Uniformly distributed warm wash temperature	N/A	
	Extra-hot wash	No	
	Warm rinse	No	
Rated voltage (V)	110	Rated frequency (Hz)	60
Rated load capacity (kg/lb)	Claimed container capacity (l/cu.ft.)		1.25 Cu.Ft
	17.6 lbs, 8.0 kg		
Energy test cycle, program name and other settings		Normal	
Other relevant information		Select 01 Standard program; Water level High used for max load and level Minimum used for min load	

Critical component list

Part	Manufacturer	Model	Rating
Motor	SUZHOU RONGBO ELECTRIC APPLIANCE	XQD-100	110V 60Hz 100W
Pump	CiXi Tengyi Electrical CO., LTD	TY	110VAC 60Hz

Test conditions

Dates of testing	2021.08.02- 2021.08.09		
Supply voltage (V)	110	Supply frequency (Hz)	60
Air temperature (°C)	24.0	Air humidity (% R.H.)	65
Cold water temperature setting (°C)	15.6	Hot water temperature setting (°C)	57.2
Cold water pressure(kPa)	241	Hot water pressure (kPa)	241
Water hardness (ppm)	17		

Test Result Summary

<p>Determination of the test result includes consideration of measurement uncertainty from the test equipment and methods.</p> <p>From the result of our inspection and tests on the submitted samples, we conclude that they comply with the performance requirements of the standards. See below data.</p>			
	Measured value	<p>10 CFR 430, Subpart C, §430.32 CEC, Title 20, Section 1605.1.(p)(1) Energy and water conservation standards After Jan. 1, 2018</p>	
Integrated modified energy factor, IMEF (cu.ft./kWh/cycle)	1.22	1.15	Pass
Integrated water factor, IWF (gal./cycle/cu.ft.)	10.0	12.0	Pass

Estimated annual operating cost	Energy Guide Label Range			
6	10	--	24	US \$

Estimated annual energy consumption	EnerGuide Labelling Scales			
43	64	--	794	kWh

Clothes Container Capacity Measurement

The mass of the clothes washer (kg)	19.10	Water temperature (°C)	Water density (kg/l)
The mass of the clothes washer and the water (kg)	54.60	15.6	0.998
Water temperature (°C)	15.6	37.8	0.993
The mass density of the water (kg/l)	0.998		
The capacity of the clothes container (l)	35.6	1.25	cu.ft.
Amount of water from flowmeter (l)	35.5		
Minimum load (kg)	1.36	Minimum load (lb)	3.00
Maximum load (kg)	2.31	Maximum load (lb)	5.10
Average load (kg)		Average load (lb)	

**Water and Energy Consumption Measurement
Sample 1**

Water fill control		Load	Wash/rinse temperature	Hot water consumption (l)	Cold water consumption (l)	Energy consumption (kWh)	Temperature use factor	Temperature-weighted hot water consumption (l)	Total per-cycle hot water energy consumption (kWh)	Temperature-weighted per-cycle electric energy consumption (kWh)	Total per-cycle water consumption (l)	Load use factor	Total weighted per-cycle hot water energy consumption (kWh)	Total per-cycle energy consumption (kWh)
Adaptive	Min	XH/C										0.14		
		H/C												
		W/C1												
		W/C2												
		W/C3												
		W/C												
		W/W1												
		W/W2												
		W/W3												
		W/W												
	C/C													
	Max	XH/C										0.12	Total weighted per-cycle electrical energy consumption (kWh)	Total weighted per-cycle water consumption (l)
		H/C												
		W/C1												
		W/C2												
		W/C3												
		W/C												
		W/W1												
		W/W2												
		W/W3												
		W/W												
	C/C													
	Ave*	XH/C										0.74		
		H/C												
		W/C1												
		W/C2												
		W/C3												
		W/C												
		W/W1												
		W/W2												
W/W3														
W/W														
C/C														

**Water and Energy Consumption Measurement
Sample 2**

Water fill control		Load	Wash/rinse temperature	Hot water consumption (l)	Cold water consumption (l)	Energy consumption (kWh)	Temperature use factor	Temperature-weighted hot water consumption (l)	Total per-cycle hot water energy consumption (kWh)	Temperature-weighted per-cycle electric energy consumption (kWh)	Total per-cycle water consumption (l)	Load use factor	Total weighted per-cycle hot water energy consumption (kWh)	Total per-cycle energy consumption (kWh)
Adaptive	Min	XH/C										0.14		
		H/C												
		W/C1												
		W/C2												
		W/C3												
		W/C												
		W/W1												
		W/W2												
		W/W3												
		W/W												
	C/C													
	Max	XH/C										0.12	Total weighted per-cycle electrical energy consumption (kWh)	Total weighted per-cycle water consumption (l)
		H/C												
		W/C1												
		W/C2												
		W/C3												
		W/C												
		W/W1												
		W/W2												
		W/W3												
		W/W												
	C/C													
	Ave*	XH/C										0.74		
		H/C												
		W/C1												
		W/C2												
		W/C3												
		W/C												
		W/W1												
		W/W2												
W/W3														
W/W														
C/C														

**Water and Energy Consumption Measurement
Sample 3**

Water fill control		Load	Wash/rinse temperature	Hot water consumption (l)	Cold water consumption (l)	Energy consumption (kWh)	Temperature use factor	Temperature-weighted hot water consumption (l)	Total per-cycle hot water energy consumption (kWh)	Temperature-weighted per-cycle electric energy consumption (kWh)	Total per-cycle water consumption (l)	Load use factor	Total weighted per-cycle hot water energy consumption (kWh)	Total per-cycle energy consumption (kWh)
Adaptive	Min	XH/C										0.14		
		H/C												
		W/C1												
		W/C2												
		W/C3												
		W/C												
		W/W1												
		W/W2												
		W/W3												
		W/W												
	C/C													
	Max	XH/C										0.12	Total weighted per-cycle electrical energy consumption (kWh)	Total weighted per-cycle water consumption (l)
		H/C												
		W/C1												
		W/C2												
		W/C3												
		W/C												
		W/W1												
		W/W2												
		W/W3												
		W/W												
	C/C													
	Ave*	XH/C										0.74		
		H/C												
		W/C1												
		W/C2												
		W/C3												
		W/C												
		W/W1												
		W/W2												
W/W3														
W/W														
C/C														

Remaining Moisture Content

Test Load

LOT: 21	slope A: 0.8039	axis intercept B: 0.0352
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Sample	Spin options	Wash/rinse temperature	WI (kg)	WC (kg)	RMC (%)	Temperature use factor	RMC (%)	Options use factor	Final RMC (%)	RMC corrected [%]	Per-cycle energy consumption for removal of moisture (kWh)
1	Max	C/C	2.313	3.563	54.0	1	54.0	1.00	54.0	47.0	0.8791
		W/W									
	Min	C/C									
		W/W									
2	Max	C/C	2.313	3.571	54.4	1	54.4	1.00	54.4	47.2	0.8848
		W/W									
	Min	C/C									
		W/W									
3	Max	C/C	2.313	3.568	54.3	1	54.3	1.00	54.3	47.1	0.8826
		W/W									
	Min	C/C									
		W/W									
(Fmax × Maximum test load weight) + (Favg × Average test load weight) + (Fmin × Minimum test load weight) (kg)						2.04	Average	47.1	0.8822		

Energy Consumption Calculations

Item		Sample 1	Sample 2	Sample 3	Average	SD
1	Washer inactive mode power, Pdefault (W)	0.57	0.57	0.57	0.57	0.0000
2	Washer off mode power, Plowest (W)	0.57	0.57	0.57	0.57	0.0000
3	Per-cycle combined low-power mode energy consumption, ETLPL (kWh/cycle)	0.0164	0.0164	0.0164	0.0164	0.0000
4	Total weighted per-cycle hot water energy consumption, Het (kWh/cycle)	0.0000	0.0000	0.0000	0.0000	0.0000
5	Total weighted per-cycle electrical energy consumption, Met (kWh/cycle)	0.1275	0.1287	0.1330	0.1297	0.0029
6	Total per-cycle energy consumption, Ete (kWh/cycle)	0.1275	0.1287	0.1330	0.1297	0.0029
7	Per-cycle electrical energy consumption for removal of moisture, De (kWh/cycle)	0.8791	0.8848	0.8826	0.8822	0.0029
8	Total weighted per-cycle water consumption, Qt (l/cycle)	47.33	47.49	48.53	47.79	0.65
8	Total weighted per-cycle water consumption, Qt (gal./cycle)	12.51	12.55	12.82	12.63	0.17
9	The capacity of the clothes container, Vc (l)	35.6				
9	The capacity of the clothes container, Vc (cu.ft.)	1.25				
10	Integrated water factor, IWF (l/cycle/l)	1.33	1.34	1.36	1.34	0.02
10	Integrated water factor, IWF (gal./cycle/cu.ft.)	9.96	9.99	10.21	10.04	0.14
11	Modified energy factor, MEF (l/kWh/cycle)	35.34	35.10	35.02	35.15	0.16
11	Modified energy factor, MEF (cu.ft./kWh/cycle)	1.25	1.24	1.24	1.24	0.01
12	Integrated modified energy factor, IMEF (l/kWh/cycle)	34.77	34.54	34.47	34.59	0.16
12	Integrated modified energy factor, IMEF (cu.ft./kWh/cycle)	1.23	1.22	1.22	1.22	0.01
13	Total annual energy consumption, E (kWh/a)	42	43	44	43	1
14	Monthly energy consumption, Em (kWh/month)	4	4	4	4	0
15	Total annual water consumption (l/a)	13963	14010	14318	14097	193
15	Total annual water consumption (gal/a)	3689	3701	3783	3724	51

16	Average total annual energy consumption E (kWh)	43	19	Average IMEF (cu.ft./kWh/cycle)	1.22
16	Upper 97.5% confidence limit of the true mean divided by 1.05 (kWh)	42	19	Lower 97.5% confidence limit divided by 0.95 (cu.ft./kWh/cycle)	1.28
17	Representative Average Unit Costs of Energy, Electricity (\$/kWh)	0.1320	20	Average IWF (gal/cycle/cu.ft.)	10.0
18	Estimated yearly operating cost (\$)	6	20	Upper 97.5% confidence limit divided by 1.05 (gal/cycle/cu.ft.)	9.7

Remark: Minimum limit for **IMEF** after Jan. 1, 2018:
1.57 cu.ft./kWh/cycle for Top-loading Standard, **1.15** cu.ft./kWh/cycle for Top-loading Compact;
1.84 cu.ft./kWh/cycle for Front-loading Standard, **1.13** cu.ft./kWh/cycle for Front-loading Compact.

Maximum limit for **IWF** after Jan. 1, 2018:
6.5 gal/cycle/cu.ft. for Top-loading Standard, **12.0** gal/cycle/cu.ft. for Top-loading Compact;
4.7 gal/cycle/cu.ft. for Front-loading Standard, **8.3** gal/cycle/cu.ft. for Front-loading Compact.

For US energy guide label, effective from May 11, 2016, range of estimated annual operating cost is from \$8 to \$51 for standard clothes washers, and from \$10 to \$24 for compact clothes washers.

For CSA energy guide label:



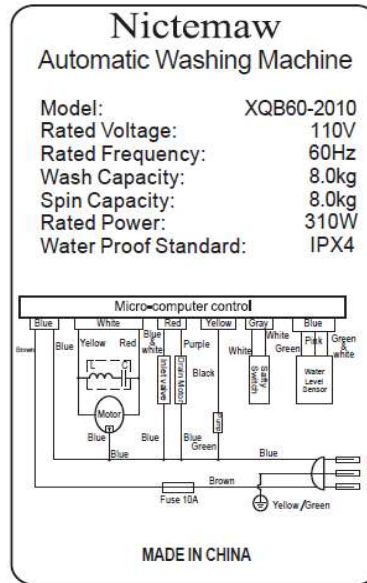
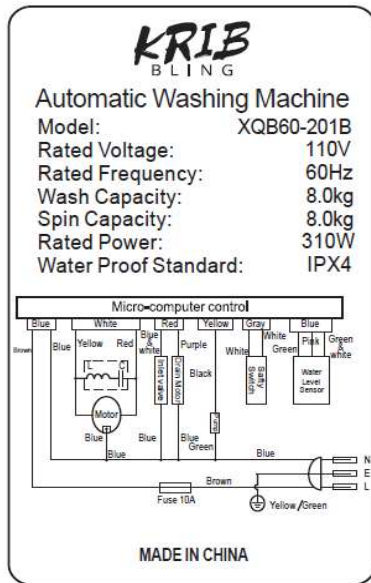
Photo of the machines under test
Overview



Control panel:



Label



Label (Continued)

TOFIND[®]

Automatic Washing Machine
 Model: XQB60-201B
 Rated Voltage: 110V
 Rated Frequency: 60Hz
 Wash Capacity: 8.0kg
 Spin Capacity: 8.0kg
 Rated Power: 310W
 Water Proof Standard: IPX4

MADE IN CHINA

IGNS
 TECHNOLOGY

Automatic Washing Machine
 Model: XQB60-201B
 Rated Voltage: 110V
 Rated Frequency: 60Hz
 Wash Capacity: 8.0kg
 Spin Capacity: 8.0kg
 Rated Power: 310W
 Water Proof Standard: IPX4

MADE IN CHINA

Harmo

Automatic Washing Machine
 Model: XQB60-201B
 Rated Voltage: 110V
 Rated Frequency: 60Hz
 Wash Capacity: 8.0kg
 Spin Capacity: 8.0kg
 Rated Power: 310W
 Water Proof Standard: IPX4

MADE IN CHINA

HNBX

Automatic Washing Machine
 Model: XQB60-201B
 Rated Voltage: 110V
 Rated Frequency: 60Hz
 Wash Capacity: 8.0kg
 Spin Capacity: 8.0kg
 Rated Power: 310W
 Water Proof Standard: IPX4

MADE IN CHINA

RIPU

Automatic Washing Machine
 Model: XQB60-201B
 Rated Voltage: 110V
 Rated Frequency: 60Hz
 Wash Capacity: 8.0kg
 Spin Capacity: 8.0kg
 Rated Power: 310W
 Water Proof Standard: IPX4

MADE IN CHINA

GUQIAO

Automatic Washing Machine
 Model: XQB60-201B
 Rated Voltage: 110V
 Rated Frequency: 60Hz
 Wash Capacity: 8.0kg
 Spin Capacity: 8.0kg
 Rated Power: 310W
 Water Proof Standard: IPX4

MADE IN CHINA

—End—