

# CUSTOMER NAME <CIXI FEILONG> TEST REPORT

**SCOPE OF WORK**

DOE, CEC Household Clothes Washers

WM-FA4679-White series

**REPORT NUMBER**

210700647HZH-002

**ISSUE DATE**

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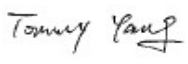

**DOCUMENT CONTROL NUMBER**

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-002  
**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	BestAppliance Nictemaw krib bling GUQIAO Harmo HNBX RIPU TOFIND IGNS TECHNOLOGY	Model	WM-FA4679-White XQB50-2010 XQB50-201A
Model similarity if series	All models are the same except for the trademark. WM-FA4679-White with brand BestAppliance. XQB50-2010 with brand Nictemaw. XQB50-201A with brand krib bling, GUQIAO, Harmo, HNBX, RIPU, TOFIND, IGNS TECHNOLOGY.		
Serial number	--	Sample ID	1210725-05-004 1210725-05-005 1210725-05-006
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)	15.4 lbs, 7.0 kg	Claimed container capacity (l/cu.ft.)	0.99 Cu.Ft
Energy test cycle, program name and other settings	Normal		
Other relevant information	Select 01 Standard program; Water level 8L used for max load and level 1L used for min load.		

**Critical component list**

Part	Manufacturer	Model	Rating
Motor	SUZHOU RONGBO ELECTRIC APPLIANCE	XQD-80	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)	120	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.                  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	10 CFR 430, Subpart C, §430.32 CEC-140-2019-002, Title 20, Section 1605.1.(p)(1) <b>Energy and water conservation standards</b> After Jan. 1, 2018	
Integrated modified energy factor, IMEF (cu.ft./kWh/cycle)	1.16	1.15	Pass
Integrated water factor, IWF (gal./cycle/cu.ft.)	10.5	12.0	Pass

<b>Estimated annual operating cost</b>	<b>Energy Guide Label Range</b>			
5	10	--	24	<b>US \$</b>

<b>Estimated annual energy consumption</b>	<b>EnerGuide Labelling Scales</b>			
36	64	--	794	<b>kWh</b>

**Clothes Container Capacity Measurement**

The mass of the clothes washer (kg)	17.70	Water temperature (°C)	Water density (kg/l)
The mass of the clothes washer and the water (kg)	45.80	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)	28.2	0.99	cu.ft.
Amount of water from flowmeter (l)	28.1		
Minimum load (kg)	1.36	Minimum load (lb)	3.00
Maximum load (kg)	1.77	Maximum load (lb)	3.90
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														

Manual	Min	XH/C											
		H/C										0.14	
		W/C1											
		W/C2											
		W/C3											
		W/C							0.0986	28.63	0.28		0.1046
		W/W1											
		W/W2											
		W/W3											
		W/W											
		C/C	0.00	28.63	0.0986	1.00							
		Manual	Max	XH/C									
H/C													
W/C1													
W/C2													
W/C3													
W/C									0.1070	43.01	0.72	0.1046	38.98
W/W1													
W/W2													
W/W3													
W/W													
C/C	0.00			43.01	0.1070	1.00							
Average													

**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														



Manual	Min	XH/C												
		H/C												
		W/C1												
		W/C2												
		W/C3												
		W/C						0.0976	28.76	0.28			0.1041	
		W/W1												
		W/W2												
		W/W3												
		W/W												
		C/C	0.00	28.76	0.0976	1.00								
	Max	XH/C												
		H/C												
		W/C1												
		W/C2												
		W/C3												
		W/C						0.1067	44.47	0.72	0.1041		40.07	
		W/W1												
		W/W2												
		W/W3												
W/W														
C/C		0.00	44.47	0.1067	1.00									
										Average				

**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														

Manual	Min	XH/C																	
		H/C																	
		W/C1																	
		W/C2																	
		W/C3																	
		W/C								0.0981	28.82	0.28							0.1048
		W/W1																	
		W/W2																	
		W/W3																	
		W/W																	
		C/C	0.00	28.82	0.0981	1.00													
		Max	XH/C																
	H/C																		
	W/C1																		
	W/C2																		
	W/C3																		
	W/C									0.1075	43.51	0.72	0.1048						39.40
	W/W1																		
	W/W2																		
	W/W3																		
W/W																			
C/C	0.00	43.51	0.1075	1.00															
											Average								

**Remaining Moisture Content**

**Test Load**

<b>LOT:</b> 21	<b>slope A:</b> 0.8039	<b>axis intercept B:</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	1.768	2.753	55.7	1	55.7	1.00	55.7	48.3	0.7341
		W/W									
	Min	C/C									
		W/W									
2	Max	C/C	1.768	2.751	55.6	1	55.6	1.00	55.6	48.2	0.7326
		W/W									
	Min	C/C									
		W/W									
3	Max	C/C	1.768	2.752	55.7	1	55.7	1.00	55.7	48.3	0.7334
		W/W									
	Min	C/C									
		W/W									
(Fmax × Maximum test load weight) + (Favg × Average test load weight) + (Fmin × Minimum test load weight) (kg)						1.66	Average	48.3	0.7334		

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, ETLP (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)	0.1046	0.1048	0.1041	0.1045	0.0004
6	Total per-cycle energy consumption, Ete (kWh/cycle)	0.1046	0.1048	0.1041	0.1045	0.0004
7	Per-cycle electrical energy consumption for removal of moisture, De (kWh/cycle)	0.7341	0.7326	0.7334	0.7334	0.0008
8	Total weighted per-cycle water consumption, Qt (l/cycle)	38.98	39.40	40.07	39.48	0.55
8	Total weighted per-cycle water consumption, Qt (gal./cycle)	10.30	10.41	10.59	10.43	0.15
9	The capacity of the clothes container, Vc (l)	28.2				
9	The capacity of the clothes container, Vc (cu.ft.)	0.99				
10	Integrated water factor, IWF (l/cycle/l)	1.38	1.40	1.42	1.40	0.02
10	Integrated water factor, IWF (gal./cycle/cu.ft.)	10.36	10.47	10.65	10.48	0.15
11	Modified energy factor, MEF (l/kWh/cycle)	33.57	33.62	33.62	33.60	0.03
11	Modified energy factor, MEF (cu.ft./kWh/cycle)	1.19	1.19	1.19	1.19	0.00
12	Integrated modified energy factor, IMEF (l/kWh/cycle)	32.93	32.98	32.98	32.96	0.03
12	Integrated modified energy factor, IMEF (cu.ft./kWh/cycle)	1.16	1.16	1.16	1.16	0.00
13	Total annual energy consumption, E (kWh/a)	36	36	36	36	0
14	Monthly energy consumption, Em (kWh/month)	3	3	3	3	0
15	Total annual water consumption (l/a)	11500	11622	11821	11648	162
15	Total annual water consumption (gal/a)	3038	3071	3123	3077	43

16	Average total annual energy consumption E (kWh)	36	19	Average IMEF (cu.ft./kWh/cycle)	1.16
16	Upper 97.5% confidence limit of the true mean divided by 1.05 (kWh)	34	19	Lower 97.5% confidence limit divided by 0.95 (cu.ft./kWh/cycle)	1.22
17	Representative Average Unit Costs of Energy, Electricity (\$/kWh)	0.1320	20	Average IWF (gal/cycle/cu.ft.)	10.5
18	Estimated yearly operating cost (\$)	5	20	Upper 97.5% confidence limit divided by 1.05 (gal/cycle/cu.ft.)	10.2

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

<p><b>KRIB BLING</b></p> <p><b>Automatic Washing Machine</b></p> <p>Model: XQB50-201A</p> <p>Rated Voltage: 110V</p> <p>Rated Frequency: 60Hz</p> <p>Wash Capacity: 7.0kg</p> <p>Spin Capacity: 7.0kg</p> <p>Rated Power: 260W</p> <p>Water Proof Standard: IPX4</p> <p>MADE IN CHINA</p>	<p><b>Nictemaw</b></p> <p><b>Automatic Washing Machine</b></p> <p>Model: XQB50-2010</p> <p>Rated Voltage: 110V</p> <p>Rated Frequency: 60Hz</p> <p>Wash Capacity: 7.0kg</p> <p>Spin Capacity: 7.0kg</p> <p>Rated Power: 260W</p> <p>Water Proof Standard: IPX4</p> <p>MADE IN CHINA</p>	<p><b>BestAppliance™</b></p> <p><b>Automatic Washing Machine</b></p> <p>Model: WM-FA4679-White</p> <p>Rated Voltage: 110V</p> <p>Rated Frequency: 60Hz</p> <p>Wash Capacity: 7.0kg</p> <p>Spin Capacity: 7.0kg</p> <p>Rated Power: 260W</p> <p>Water Proof Standard: IPX4</p> <p>MADE IN CHINA</p>
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Label

## Harmo

Automatic Washing Machine  
 Model: XQB50-201A  
 Rated Voltage: 110V  
 Rated Frequency: 60Hz  
 Wash Capacity: 7.0kg  
 Spin Capacity: 7.0kg  
 Rated Power: 260W  
 Water Proof Standard: IPX4

MADE IN CHINA

## HNBX

Automatic Washing Machine  
 Model: XQB50-201A  
 Rated Voltage: 110V  
 Rated Frequency: 60Hz  
 Wash Capacity: 7.0kg  
 Spin Capacity: 7.0kg  
 Rated Power: 260W  
 Water Proof Standard: IPX4

MADE IN CHINA

## AIPU

Automatic Washing Machine  
 Model: XQB50-201A  
 Rated Voltage: 110V  
 Rated Frequency: 60Hz  
 Wash Capacity: 7.0kg  
 Spin Capacity: 7.0kg  
 Rated Power: 260W  
 Water Proof Standard: IPX4

MADE IN CHINA

## IGNS

Automatic Washing Machine  
 Model: XQB50-201A  
 Rated Voltage: 110V  
 Rated Frequency: 60Hz  
 Wash Capacity: 7.0kg  
 Spin Capacity: 7.0kg  
 Rated Power: 260W  
 Water Proof Standard: IPX4

MADE IN CHINA

## GUQIAO

Automatic Washing Machine  
 Model: XQB50-201A  
 Rated Voltage: 110V  
 Rated Frequency: 60Hz  
 Wash Capacity: 7.0kg  
 Spin Capacity: 7.0kg  
 Rated Power: 260W  
 Water Proof Standard: IPX4

MADE IN CHINA

## TOFIND

Automatic Washing Machine  
 Model: XQB50-201A  
 Rated Voltage: 110V  
 Rated Frequency: 60Hz  
 Wash Capacity: 7.0kg  
 Spin Capacity: 7.0kg  
 Rated Power: 260W  
 Water Proof Standard: IPX4

MADE IN CHINA

—End—