DING KIN Co., Ltd

TEST REPORT

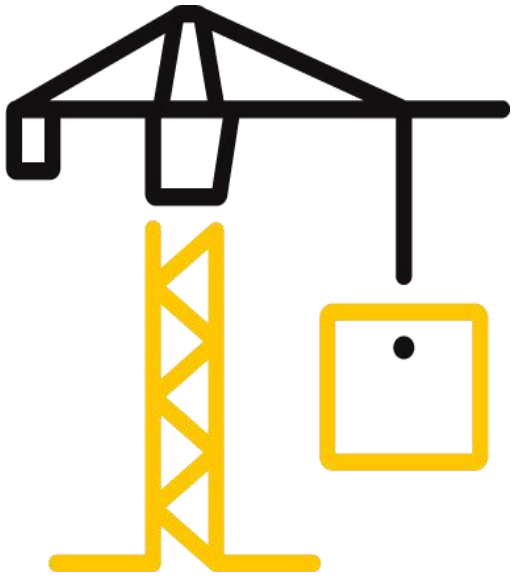
SCOPE OF WORK
WINDOWS AND DOORS

REPORT NUMBER
211129080GZU-002

ISSUE DATE
2022/9/2

REVISED DATE
/

PAGES
17



Intertek Testing Services Shenzhen Ltd. Guangzhou Branch

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Test Report

Issue Date: 2022/9/2 Intertek Report No. 211129080GZU-002

Applicant:	5ɣy∃ Yɣy Co., Ltd
Applicant Address:	B-07-2 Nonferrous Metal Processing Zone Changhongling Industrial Park, ShishanTown,Nanhai District, Foshan City.
Attn:	Jian Huang

Manufacturer:	Ding Kin Co., Ltd
Manufacturer Address:	B-07-2 Nonferrous Metal Processing Zone Changhongling Industrial Park, ShishanTown,Nanhai District, Foshan City.
Attn:	Jian Huang

Primary designator:	Class CW - PG50: Size Tested 2400mm × 2100mm (94.49in. × 82.68in.) - Type SD
Secondary designator:	Positive Design Pressure = +2400 Pa (+50.13 psf) Negative Design Pressure = -2400 Pa (-50.13 psf) Water penetration resistance test pressure = 720 Pa (15.04 psf)

SUBJECT: Performance testing
<150 series sliding door>

Dear Sir,
This test report for represents the results of our evaluation of the above referenced product(s) to the requirements contained in the following standards:

TEST METHODS AND STANDARDS
AAMA/WDMA/CSA 101/I.S.2/A440-11 (NAFS 2011 - North American Fenestration Standard / Specification for Windows, Doors and Skylights)

SAMPLE ID	MODEL	SPECIFICATION
S211129080GZU.001	150 series sliding door	2400 mm (Width) × 2100 mm (Height) × 146 mm (Thickness)

SAMPLE RECEIVED: 2022/7/26
TESTED FROM: 2022/7/27 TO 2022/8/11

TEST LOCATION: C2-1 Building Heping Fair, Yongning Street, Zengcheng District, Guangzhou, China

Remark: This report was the co-listing report based on the report of 211129080GZU-001, which was issued on 2022/9/1.

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Test Items, Method and Results:

1 Test Samples

Sample was submitted to Intertek directly from the client. Sample was not independently selected for testing. Sample was received at the Evaluation Center on July 26, 2022.
A full scale sample of Sliding Door (Model: 150 series sliding door) was provided by the manufacturer that was not weathered nor conditioned.
The description of the samples given below has been prepared from information provided by the sponsor of the test. All values quoted are nominal, unless tolerances are given.

Table 1 Product Information

Product Name	150 series sliding door
Model	150 series sliding door
Dimension of Door Frame	2400 mm (Width) × 2100 mm (Height) × 146 mm (Thickness)
Dimension of Door Sash	Operable sash: 1218 mm (Width) × 2013 mm (Height) × 56 mm (Thickness) Fixed sash: 1218 mm (Width) × 2013 mm (Height) × 56 mm (Thickness)
Aluminum Profile	Model: KSTM Manufacturer: Guangdong Xinhe Aluminum Co., Ltd
Frame Corner Construction Details	Mechanically assembled: Glued & screwed
Reinforcement	None
Glazing	Dimension: 1050 mm (Width) × 1848 mm (Height), quantity: 2 Structure: 5mm+27A+5mm, tempered double glazing Supplier: Jiangmen Junfa Co., Ltd
Hardware	Specify type: Handle lock system for lifting sliding door Model: HS150 Supplier: SI
Weather-strip	Model: 7x7 Supplier: Rongji
Thermal Break	Model: 12mm, 20mm; Material: PA66GF25 Nylon insulation strip; Supplier: Technoform Bautec (Suzhou) Thermal Insulation Material Co., Ltd.
Drainage	Sizes: 30 mm × 5 mm (Width × Height) Quantity: 6
Gasket (Between leaf and frame)	Material: EPDM, SPONGE Supplier: Rongji

Table 1 Product Information(Cont.)

Sealant of Glass	Model: LM9880 Material: Neutral silicone sealant Supplier: Lingmei
Installation	The rough opening allowed for a 10mm shim space. The exterior perimeter of the test specimen was sealed with silicon sealant.

The sample ID number was S211129080GZU.001. The drawings of the representative sample were referenced in Appendix A, the test data was referenced in Appendix B and the photo of the representative sample was referenced in Appendix C.

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Test Items, Method and Results:

2 Test Result

Table 2 Test Result for U.S.

Test Description	Requirements (Class CW-PG50)		Results		Verdict
Operating Force Test	Maximum force to initiate motion	180 N	Maximum force to initiate motion	162 N	Pass
	Maximum force to maintain motion	115 N	Maximum force to maintain motion	55 N	Pass
Air Leakage Resistance Test	Maximum air leakage at +75 Pa	1.5 L/s·m²	Air leakage at +75 Pa	0.02 L/s·m²	Pass
	Maximum air leakage at -75 Pa	Report only	Air leakage at -75 Pa	0.23 L/s·m²	
	Average air leakage rate			0.13 L/s·m²	
Water Penetration Resistance Test	Minimum water pressure	720 Pa	Test Pressure	720 Pa	Pass
			No water penetration was occurred when test at 720Pa.		
Uniform Load Deflection Test at Design Pressure	Minimum Design Pressure (DP)	2400 Pa	Test Pressure	2400 Pa	Pass
			Maximum deflection at handle side stile	1.2 mm	
			Maximum deflection at interlocking stile	6.3 mm	
Uniform Load Structural Test	Minimum Structural Pressure (STP)	3600 Pa	Test Pressure	3600 Pa	Pass
			After the test loads were released, there was no failure or permanent deformation of any part of the door system that would cause the test specimen to be inoperable. There was no permanent deformation which was in excess of 0.3% of its span.		
			Maximum permanent deflection at handle side stile	1.4 mm	
			Maximum permanent deflection at interlocking stile	1.8 mm	

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Table 2 Test Result for U.S. (Cont.)

Test Description	Requirements (Class CW-PG50)	Results	Verdict
Deglazing test	Load for vertical sash member: 320 N Load for horizontal sash member: 230 N Panel members shall not move from their original position by more than 90% of the original glazing bite. The test specimen shall not be damaged in any way that would inhibit normal operation of the window or door. And there shall be no glazing breakage.	Movement of vertical sash member: 3.7% Movement of horizontal sash member: 2.5% Operation of test specimen was normal after testing. And there was no glazing breakage.	Pass
Forced-entry Resistance Test	Minimum Grade 10	Test Class: Grade 10 After test, there was no opening which allows for entrance through the tested specimen. The sash remained locked and closed. Lock and hinges were not disengaged.	Pass

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B.3 Uniform Load Deflection Test – Test method ASTM E330/E330M-2014, Procedure A (Cont.)

Table B.2 Test Data of Uniform Load Deflection Test

Member (mm)		Test Pressure (Pa)	Displacement (mm)			Deflection
Item	Span Length		1	2	3	
Handle side stile	1910	+P = +2400	1.4	2.3	0.8	1.2
		0	0.3	0.5	0.3	0.2
		-P = -2400	1.9	2.7	1.3	1.1
		0	0.4	0.6	0.3	0.3
Member (mm)		Test Pressure (Pa)	Displacement (mm)			Deflection
Item	Span Length		4	5	6	
Interlocking stile	1910	+P = +2400	4.1	9.4	3.6	5.6
		0	0.1	0.3	0.1	0.2
		-P = -2400	3.6	10.1	4.1	6.3
		0	0.2	0.5	0.2	0.3

Table B.3 Test Data of Uniform Load Deflection Test for Handle Side Stile

Test Pressure	Positive		Negative	
	Deflection	Perm. Set	Deflection	Perm. Set
Measurements, mm	1.2	0.2	1.1	0.3
Deflection limit at design pressure, L1/175=10.91 mm				

Table B.4 Test Data of Uniform Load Deflection Test for Interlocking Stile

Test Pressure	Positive		Negative	
	Deflection	Perm. Set	Deflection	Perm. Set
Measurements, mm	5.6	0.2	6.3	0.3
Deflection limit at design pressure, L2/175=10.91 mm				

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Appendix B: Test Data

B.4 Uniform Load Structrual Test – Test method ASTM E330/E330M-2014, Procedure A

Design Pressure, P = 2400 Pa ; Structural P 3600 Pa

Table B.5 Test Data of Uniform Load Structural Test

Member (mm)		Test Pressure (Pa)	Permanent deformation(mm)			Net permanent deformation (mm)
Item	Span Length		1	2	3	
Handle side stile	1910	+P = +3600	—	—	—	—
		0	1.3	2.6	1.2	1.4
		-P = -3600	—	—	—	—
		0	0.2	0.2	0.1	0.1
Member (mm)		Test Pressure (Pa)	Permanent deformation(mm)			Net permanent deformation (mm)
Item	Span Length		4	5	6	
Interlocking stile	1910	+P = +3600	—	—	—	—
		0	0.6	2.4	0.7	1.8
		-P = -3600	—	—	—	—
		0	0.1	1.0	0.1	0.9

Table B.6 Test Data of Uniform Load Structural Test for Handle Side Stile

Test Pressure	Perm. Set	
	Positive	Negative
Measurements, mm	1.4	0.1
Permanent deflection limit, L1*0.3%=5.73 mm		

Table B.7 Test Data of Uniform Load Structural Test for Interlocking Stile

Test Pressure	Perm. Set	
	Positive	Negative
Measurements, mm	1.8	0.9
Permanent deflection limit, L2*0.3%=5.73 mm		

After the test loads were released, there was no failure or permanent deformation of any part of the window system that would cause the test specimen to be inoperable. There was no permanent deformation which was in excess of 0.3% of its span.

The tested specimen met the requirements for Class CW-PG50 for Uniform Load Structure Test as per AAMA/WDMA/CSA 101/I.S.2/A440-11.

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Appendix C: Sample Received Photo

REPORT AUTHORIZED

When signed with physical or electronic signature, the contents of this report have been prepared and approved per Intertek's quality process in accordance with ISO 17025.

Approved by:	**Prepared by:**
Ziqing Chen	Oliver zhu
Name: Ziqing Chen	Name: Oliver Zhu
Title: Reviewer	Title: Project Engineer

Revision:

Report No.	Date	Revision Reason	Revision Summary	Author	Reviewer
211129080GZU-002	2022/9/2	/	First issue	Oliver Zhu	Ziqing Chen

End of Test Report