



 **NT81**
SERIES WINDOW AND DOOR

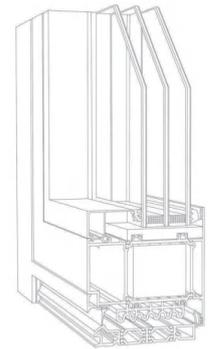
ABOUT US

As a sub-company of NorthTech Group, Beijing NorthTech Windows, which is devoted to digital technology and scientific research, is a systematic manufacturer of high-quality aluminum products, including energy-saving thermally broken aluminum windows and doors, curtain walls and so on.

Located on the east coast of China and close to the main seaports, it is one of the largest factories with an area of 35,000 square meters. Its annual production capacity is 400,000 square meters of windows and doors. It is equipped with top-class processing machines, such as imported automatic processing equipment of Anmei Bestar, online production of sawing center, CNC processing center, Belgian JOOPS design software and others, in order to meet the high precision and fast lead time requirement from high-end commercial and residential projects globally.

Our products meet and exceed the quality standards of North American NAFS, CSA, and European CE. We consistently strive to provide the finest, most energy-saving, hurricane-resistant products architecturally. With our Energy Star awarded windows and doors, customers not only get pleasant green buildings, but also get an allowance from the government of up to 8000USD.

Customer satisfaction is our objective. We sincerely invite you to experience private high-end products by sending us estimation requests.



Beijing NorthTech Windows



NT81 SERIES WINDOW AND DOOR



NT81 Thermally Broken Aluminum Alloy Doors and Windows

It offers excellent insulation, effectively blocking external heat and cold, which helps save energy and is environmentally friendly. They are durable and corrosion-resistant, with a long service life. Their modern appearance can be customized to suit various architectural styles. Smooth operation and strong sealing ensure a quiet and comfortable indoor environment.

Overall, NT81 thermally broken aluminum doors and windows combine aesthetics, performance, and durability, making them an ideal choice for modern buildings.

This series includes

NT81 Fixed Window	P06
NT81 Tilt and turn window	P07
NT81 Awning Window	P08
NT81 Swing Door	P09

SPECIFICATION

Aluminum Profile	6063-T5/6060-T66
Surface Treatment	Powder coating/ Fluorocarbon coating/ Anodizing
Profile Wall Thickness	Window: 1.8mm (0.08"); Door: 2.2mm (0.09")
Glass Configuration	Double / triple pane tempered glass TPS/ Warm edge spacer, Argon filling, Tempered HST
Sealing Gasket	High-quality EPDM
Frame Jamb Depth	81mm(3.2")
Hardware Brand	Siegenia/Kinlong
Warm Edge Material	PA66
Max Dimension of Fixed Sash	6000mm (236") x3300mm(130")
Max Dimension of Opening Sash (Width*Height)	Awning window: 2000mm*2000mm (78.74"*78.41") Tilt and turn window: 1200mm*2400mm (47.24"*94.49") In-swing/out-swing door: 1200mm*2800mm (47.24"*110.24")
Min Dimension of Opening Sash (Width*Height)	Awning window: 300mm *300mm (11.81"*11.81") Tilt and turn window: 380mm *550mm (14.96"*21.65") Inswing/outswing door: 500mm *700mm (19.69"*27.56")
Color	Custom
Drainage Option	Hidden Drainage / Weep Holes
Optional	Built-in louvers/Grid view strip





SUPER SEALING DESIGN ENSURE EVERY CLOSURE

The multi-sealing rubber strip design ensures that each seal can enhance the sealing performance, effectively prevent the leakage of liquids or gases, and guarantee a stable sealing effect.



ADVANTAGE



Thermal Insulation Performance

Equilibrium line design and thermally broken insulation structure, using PA66 nylon thermal break spacers, effectively isolates energy exchange between indoor and outdoor environments, providing excellent thermal insulation and heat preservation performance.



Wind Resistance Performance

Constructed with high-strength aluminum alloy, offering superior wind pressure resistance and confidently withstanding stormy weather.



Air Tightness Performance

Triple sealing design with multiple soft and hard co-extruded sealing strips effectively ensures the proper operation of the ventilation system.



Water Tightness Performance

The combination of system injection molding technology and internal drainage principles ensures the water tightness of the entire window.



Sound Insulation Performance

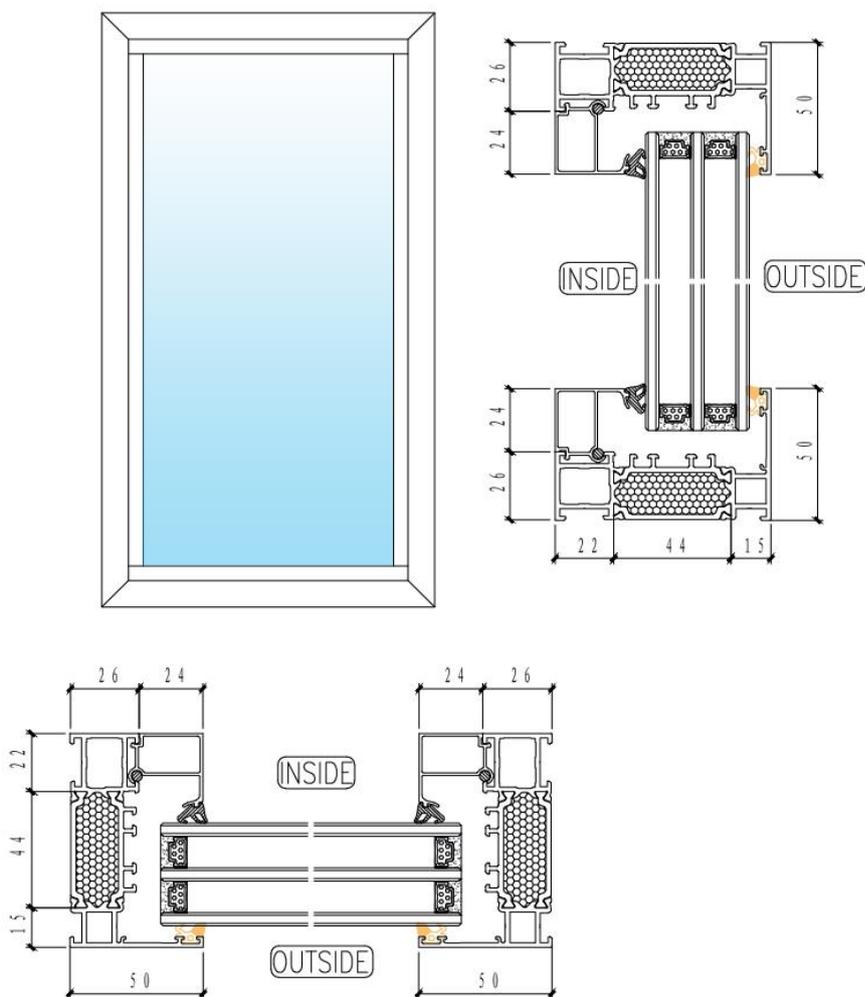
Insulated glass effectively blocks sound transmission, further enhancing noise reduction. The entire window can reduce noise levels by at least 35 dB.



Burglar-proof Performance

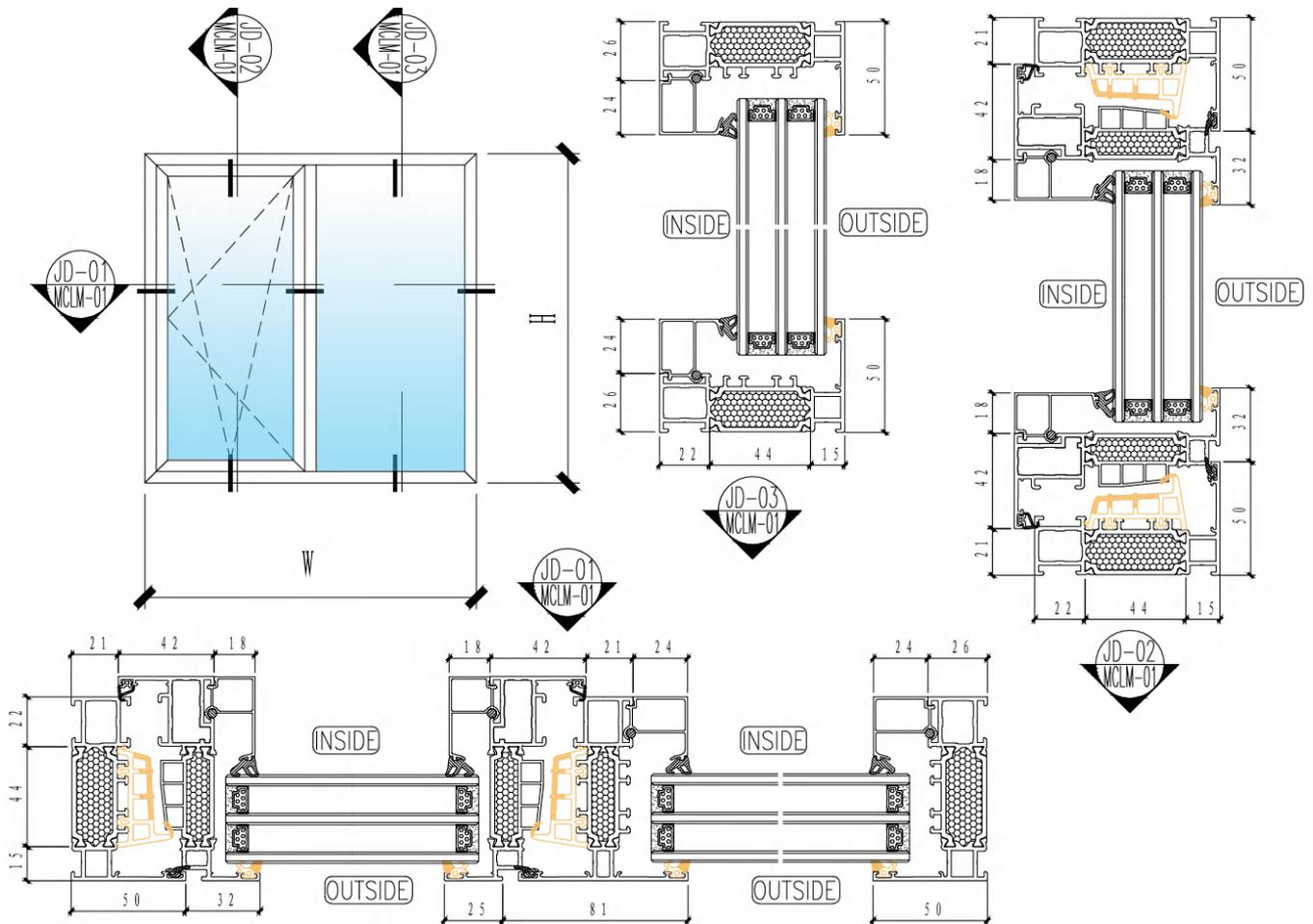
Multi-point locking and laminated glass design ensures stronger sealing of doors and windows, providing enhanced security and better anti-theft performance.

01. NT81 Fixed Window



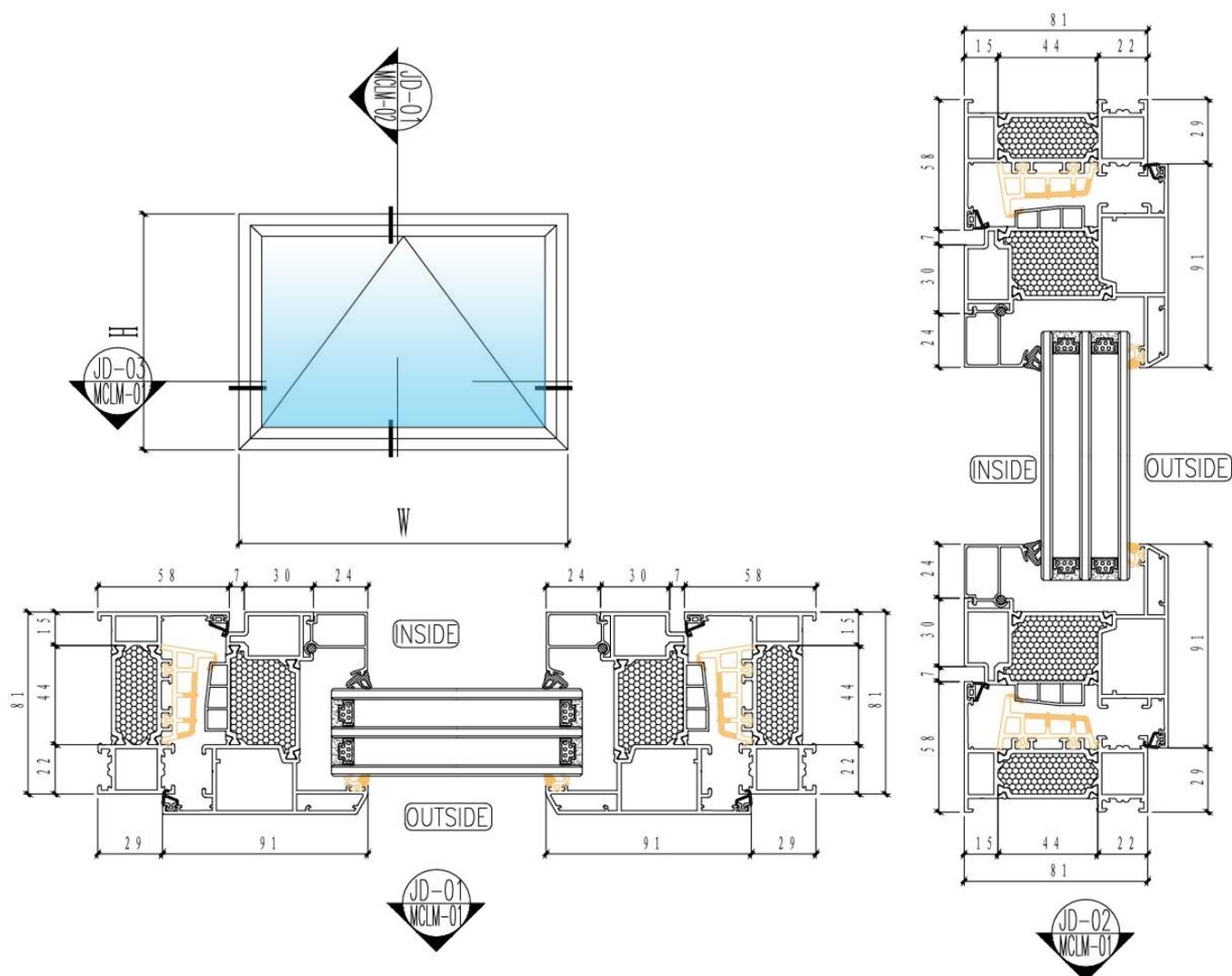
Test Description	Results
Frame Depth	81mm (3.19")
Sight Line Of Window Frame	26mm (1.02")
Sight Line Of Glazing Bead	24mm (0.94")
Class	AW-PG60
Wind pressure resistance	±2880 Pa
Water penetration resistance	720 Pa
Air leakage resistance	0.04L/Sm ² (+300Pa) 0.05L/Sm ² (-300Pa)

02. NT81 Tilt And Turn Window



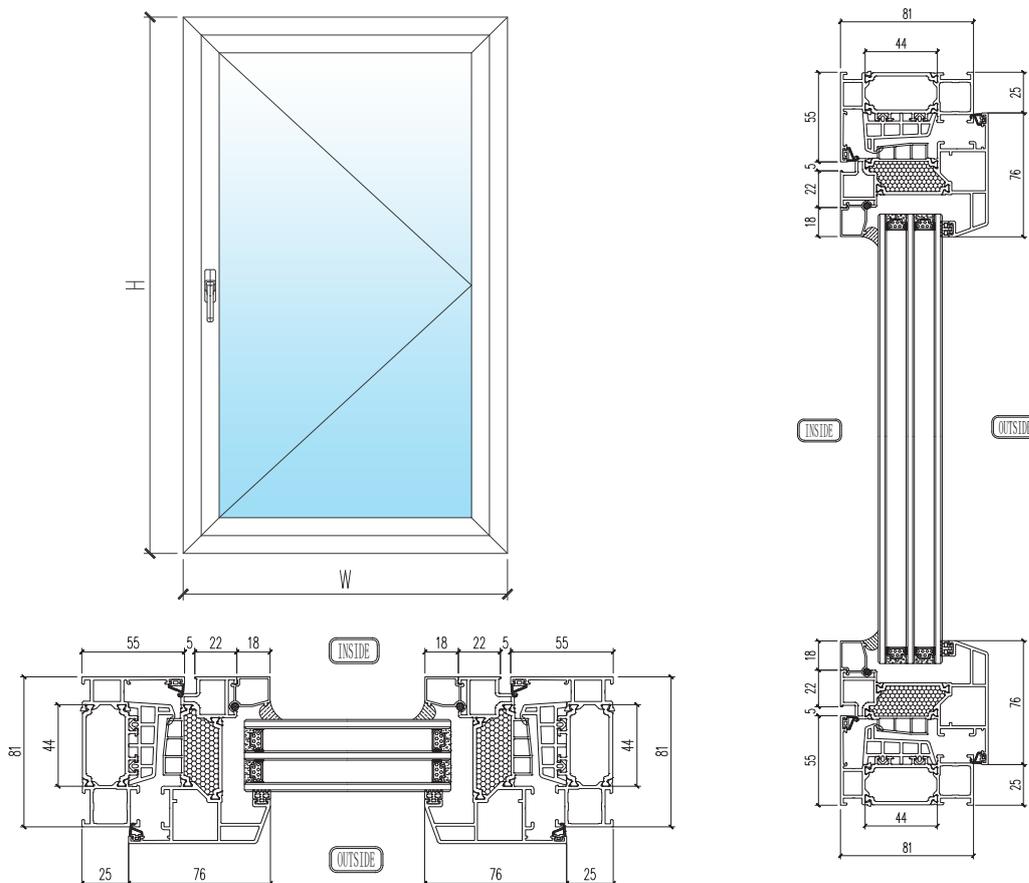
Test Description	Results
Frame Depth	81mm (3.19")
Sight Line Of Window Frame	26mm (1.02")
Sight Line Of Open Sash	42mm (1.65")
Glazing Bead Sight Line	24mm (0.94")
Class	CW-PG60
Wind Pressure Resistance	±2880 Pa
Water Penetration Resistance Test	720 Pa
Air Leakage Resistance Test	0.07L/Sm ² (+75 Pa) 0.06L/Sm ² (-75 Pa)
Insulation Performance	U Factor 0.32

03. NT81 Awning Window



Test Description	Results
Frame Depth	81mm (3.19")
Sight Line Of Window Frame	58mm (2.28")
Sight Line Of Open Sash	30mm (1.18")
Sight Line Of Open Sash Glazing Bead	24mm (0.94")
Class	AW-PG50
Wind Pressure Resistance GB/T31433-2015	±2400 Pa
Water Penetration Resistance Test Belongs To National Standard GB/T31433-2015	580 Pa
Air Leakage Resistance Test GB/T31433-2015	0.16L/Sm ² (+300 Pa) 1.32L/Sm ² (-300 Pa)

04. NT81 Casement Window

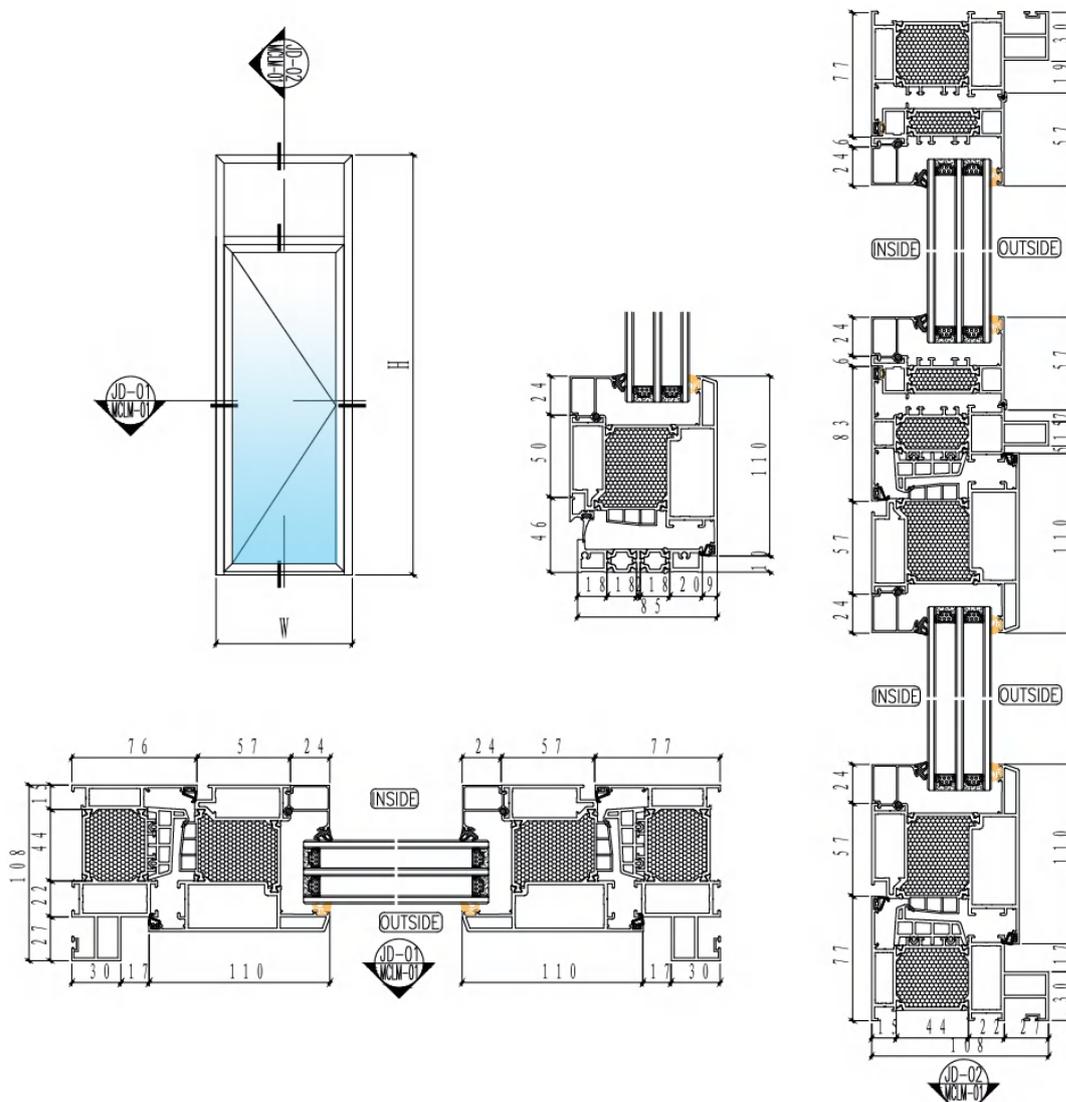


Test Description	Results
Frame Depth	81mm (3.19")
Sight Line Of Window Frame	55mm (2.16")
Sight Line Of Open Sash	22mm (0.86")
Sight Line Of Open Sash Glazing Bead	18mm (0.7")
Class	AW-PG60

Test Description	Results
Uniform Load Deflection Test AAMA/WDMA/CSA 101/I.S.2/A440-22, Clause 8.3.4.2.2 ASTM E330/E330M- 2014(R2021)	2880 Pa
Air Leakage Resistance Test AAMA/WDMA/CSA 101/I.S.2/A440-22, Clause 8.3.2 ASTM E283/E283M-2019	Air leakage at +75 Pa: 0.10 L/s·m ² Air leakage at -75 Pa: 0.19 L/s·m ²

Water Penetration Resistance Test AAMA/WDMA/CSA 101/I.S.2/A440-22, Clause 8.3.3 ASTM E547- 00(R2016) & ASTM E331-00(R2016)	720 Pa
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05. NT81 Swing Door



Test Description	Results
Frame Depth	81mm (3.19")
Sight Line Of Door Frame	40mm (1.57")
Low Threshold Size	16mm (0.63")
Sight Line Of Open Sash	86mm (3.39")
Sight Line Of Open Sash Glazing Bead	24mm (0.94")

FEATURE

Meet AAMA/WDMA/CSA 101/1.S.2/A440-17 North America And Europe Standards.

Air Tightness: A3.

Water Penetration: 290Pa~720Pa.

Excellent Sound Insulation: \geq STC 37 (ASTM E413-22)
 \geq OITC 37 (ASTM E1332-22).

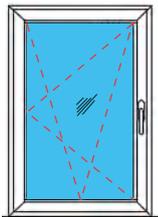
Extra Strong Metal Profile With High Quality Coatings Durable Color, No Deflection, Impact Function.

Multi-Cavities Extrusion With PA66 Insulation Strip, Thermal Insulation.

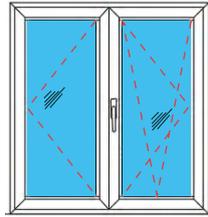
Custom Colors And Shapes.

OPENING METHOD

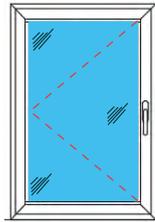
The window system offers a wide range of options, and the main opening types are as follows:



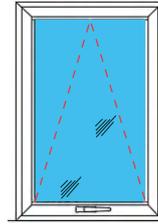
TILT AND
TURN WINDOW



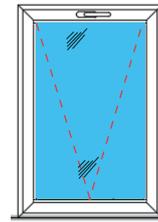
TILT AND TURN
WINDOW+INWARDS
CASEMENT WINDOW



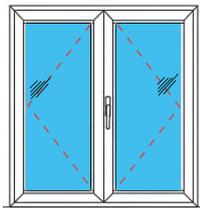
CASEMENT WINDOW
OUTWARDS



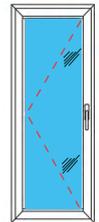
AWNING WINDOW



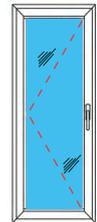
TILT WINDOW



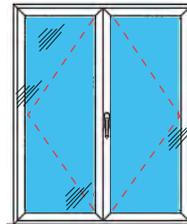
DOUBLE OUTWARDS
CASEMENT WINDOW



CASEMENT DOOR
OUTWARDS



CASEMENT DOOR
INWARDS

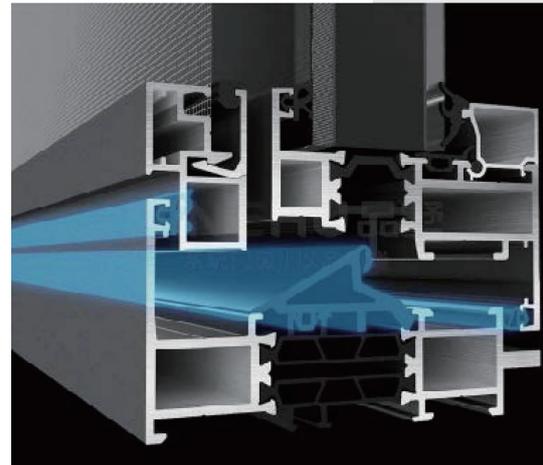


DOUBLE CASEMENT
INWARDS
WINDOW AND DOOR



EPDM AUTOMOTIVE GRADE SEALANT STRIP

Made of high-quality automotive-grade EPDM rubber strip with soft-hard co-extrusion and EPDM foaming, it features anti-aging, non-deformable, strong temperature difference resistance, good elasticity, and enhanced thermal insulation and sealing performance.



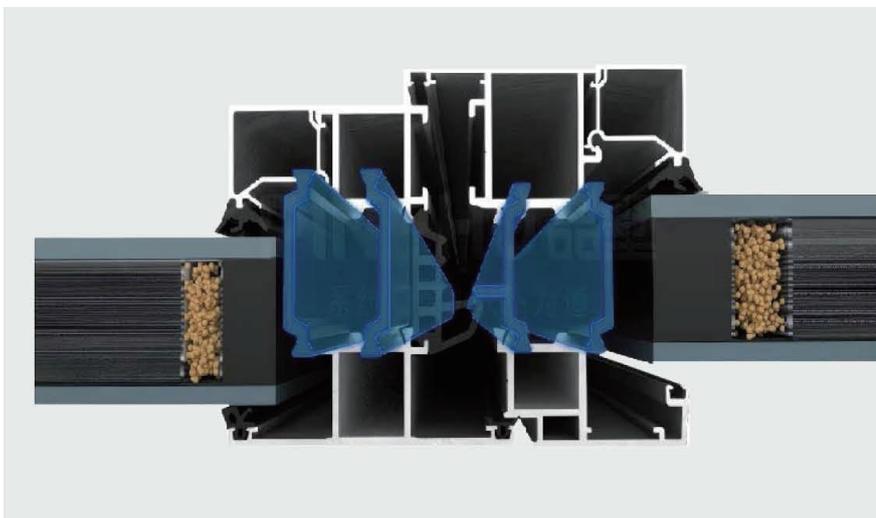
GERMAN TECHNOFORM PA66GF25 NYLON INSULATION STRIP

The German TROCO PA66GF25 nylon thermal break strip is a modified engineering plastic alloy, featuring a high melting point, excellent heat resistance, and self-extinguishing properties.

It is optimal to use an engineering plastic modified with 25% glass fiber in PA66 as the basic material for thermal break strips.

With strong aging resistance, it is durable and not prone to aging.

Its expansion coefficient is consistent with that of aluminum alloy, helping to bid farewell to summer heat and winter cold, and balancing indoor temperature through thermal insulation.



TESTING AND CERTIFICATION



NFRC Product Certificate of Authorization

Manufacturer: Beijing North Tech Group LTD
Street: Room 315, 3/F, Building 6
City/State/Zip: Beijing, China 100000

Product Series: NT81 Dual Action Window
Product Type: DATT

Simulation Lab: SAT1
Sim Report #: Q1366.02-116-45 R0
Sim Report Date: 04/03/2024

Test Lab: TATI
Test Report #: Q1367.02-116-46
Test Date: 01/23/2024

Revised Date:
Auth. Ratings: U-Factor, SHGC, VT, CR
Test Method: NFRC 102

Procedural Year: 2017

Initial Certification Date: 05/23/2024
Re-Certification Date:
Expiration Date: 01/23/2029

CPD Product Line Number: BNG-M-8
http://search.nfrc.org/search?pdptcd_search_detail.aspx?pdptcd=BNG-M-8

Product Number Range: 00001-00001 to 00051-00001

Comments:
N/A

I hereby certify that all requirements for NFRC Certification Authorization have been met and that the above information is true and correct, to the best of my knowledge.

Authorized IA Signature:



23 Royal Group Crescent, Unit No. 3
 Vaughan, Ontario L4H 1R9
 (905) 881-6166 ext. 303
www.qai.ca

CLIENT: Beijing North Tech Windows Co. Ltd.
 #5302 - 1151 W Georgia Street
 Vancouver, British Columbia

Test Report No: BUR009-DW-b **Issue Date:** May 17, 2023

SAMPLE ID: Beijing North Tech Windows Co. Ltd. NT81 Series Awning Windows.

SAMPLING DETAIL: Test sample information was submitted directly to QAI for evaluation.

DATE OF RECEIPT: Documentation was received between February 13, 2023 and April 27, 2023 from Beijing North Tech Windows Co. Ltd.

TESTING PERIOD: Evaluation was conducted between April 27, 2023 and April 28, 2023.

AUTHORIZATION: Proposal 23MTO4171R1 signed by Dong Cai on April 24, 2023.

TEST PROCEDURE: Thermal simulation evaluation was performed following the methods outlined in the following standard:
 CSA A440-2-19 Fenestration Energy Performance.

TEST RESULTS: Based on evaluation conducted by QAI, energy performance values for NT81 Series Casement and Awning Window products are as found in the Test Results section of this report for glazing options evaluated.

Prepared By

Jim Scott
 Project Manager

Signed for and on behalf of QAI Laboratories, Ltd.

Reviewed By

Neil Dumont
 Fenestration Reviewer

www.qai.org
 info@qai.org

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Intertek Testing Services Shenzhen Ltd. Shanghai Fenglian Branch
 Plant 5 & 11(4F), No. 6958 Daye Road, Fenglian District, Shanghai, China
 Tel: +86 21-61281616 Fax: 021-61289913
 Website: www.intertek.com

Test Report

Original Issue Date: 2025-02-26 **Intertek Report No.:** 25012009SHF-002

Applicant: Beijing North Tech Group Ltd
Applicant Address: No.3, Dongbinhe Road, Deshengmen, Xicheng District, Beijing, China, 100120
Attn: Shan Baojian
Manufacturer: Beijing North Tech Group Ltd
Manufacturer Address: No.3, Dongbinhe Road, Deshengmen, Xicheng District, Beijing, China, 100120
Product Type: Fixed Window
Product Model: NT81
Primary product designation: Class CW - PG50 - Size Tested 1500 x 1800mm (59.06 x 70.87 in.) - Type FW
Optional secondary designation: 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)
 Canadian Air Infiltration/Exfiltration: Fixed Level
 Performance testing**

For Conds:
SUBJECT:

Product Information

Product Name	Model	Specification
NT81 Fixed Window	NT81	1500mm(W) x 1800mm(H) x 16mm
Sample ID	Sample/Amount	Sample Received Date
S24092007SHF_002	1 Set	2024-09-20
Sample Description		
North Tech The sample was a completely assembled, glazed, functional product, fitted in the test apparatus in accordance with documented instructions.		

Test Methods and Standards

Test Standard	Specification
ASTM E283/E283M-2019; ASTM E547-00(R2016); ASTM E330/E330M-2014(R2021); ASTM F588-17	
AAMA/WDMA/CSA 101/LS2/A440-17 (NAFS 2017 - North American Fenestration Standard / Specification for Windows, Doors and Skylights) Clause 9.3.2, Clause 9.3.3, Clause 9.3.4 and Clause 9.3.5; CSA A440S5-19 Canadian Supplement to AAMA/WDMA/CSA 101/LS2/A440-17 Clause 5.4 and Clause 5.5	

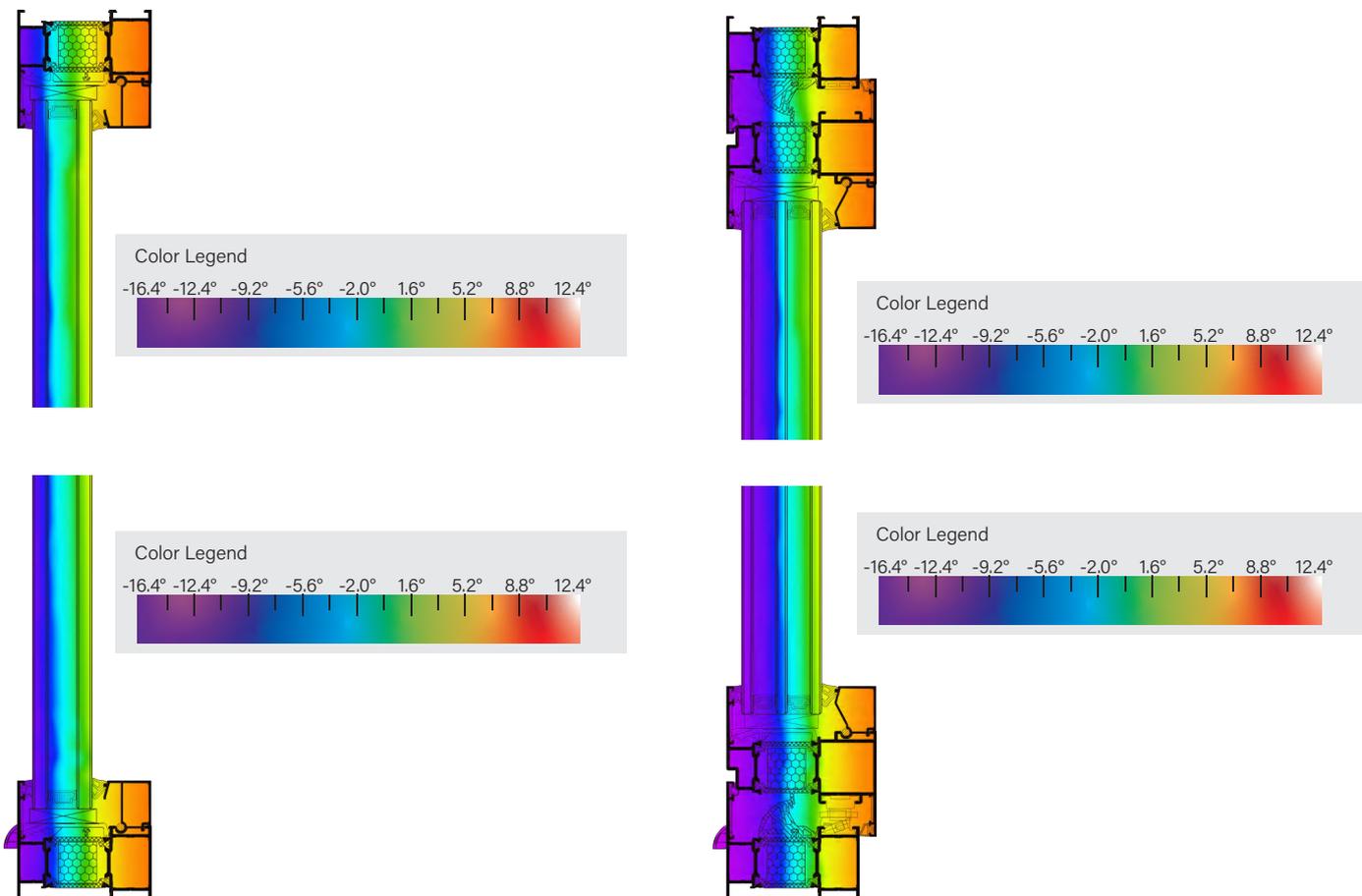
Test Conclusion: The results met AAMA/WDMA/CSA 101/LS2/A440-17 and CSA A440S5-19 requirements specified on Fixed Window, and the results were shown in the following page.

Note: 1. This report does not involve sampling. The report only reflects conformity of the tested items of the samples provided by the testing applicant. Representativeness and authenticity of the submitted samples are responsibilities of the testing applicant.
 2. Test results were cited from Intertek Report No. 24092007SHF-002 which was issued by Intertek on December 10, 2024.

Report Authorized

Name: G014 John Zhang
 Title: Reviewer Project Engineer

THERMAL ENGINEERING SCHEMATIC DIAGRAM



LABEL SAMPLE

1. Product and Glass Information

You will find a frame type, glass coating, and type of gas that fill the cavities between the glass panes; all contribute to the overall energy efficiency of the window.

2. U-Factor

This number represents the heat transfer coefficient, or how much heat the windows coatings keep inside the home. U-factor ranges from 0.2 to 1.2. **The lower the number, the more heat the product is keeping in.**

3. Solar Heat Gain Coefficient

This number measures how well a product can resist unwanted heat gain, which is especially important during summer cooling season. **The lower the number, the less you'll spend on cooling.** If you live in a hot, sunny climate, you will want a low number. If you live in a balanced climate with cold winters and warm summers, you'll want a rating of around 0.3.

4. Visible Transmittance (VT)

This is how much visible light will come in through the window during daytime. The range is from 0 to 1. **The higher the number, the more visible light passes through.** Clear glass without any coating has the highest VT rating. Coatings added to improve energy efficiency can sacrifice some visible light.

5. Air Leakage

This indicates the amount of outside air that will come through, according to the NFRC's testing. **The lower the number, the better.**

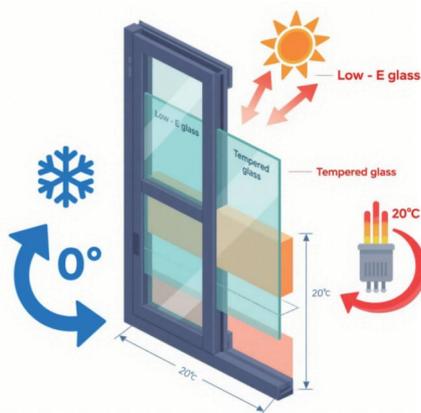
6. Condensation Resistance

Not every label will carry this optional rating. If you live in a humid climate or are concerned with mold growth, you may want to look at the condensation resistance rating. **The higher the number, the better the window is at resisting condensation** on a scale of 1-100.

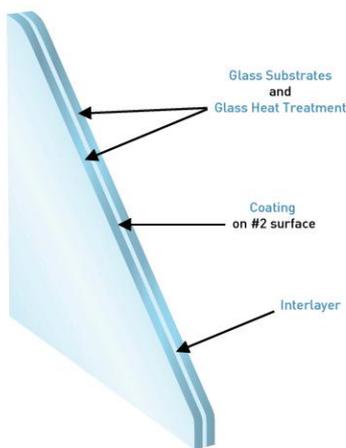
DO NOT REMOVE UNTIL FINAL INSPECTION / NE PAS RETIRER AVANT L'INSPECTION FINALE		
ENERGY PERFORMANCE RATINGS Évaluation des propriétés énergétiques		
U-factor Facteur-U	Solar Heat Gain Coefficient Coefficient de gain de chaleur solaire	Visual Transmittance Transmission visible
Energy Rating Rendement énergétique	Test Standard Edition Édition de la norme d'essai	
		
<p>Thermal performance and visual transmittance ratings certified to CSA A440.2. Ratings are determined for a fixed set of environmental conditions and a specific product. Certification agency does not recommend or warrant product for any specific use.</p> <p>Les taux de performance thermique et de transmission visible sont certifiés CSA A440.2. Les taux sont déterminés selon une série de conditions environnementales fixes et une taille de produit particulière. L'agence de certification ne recommande ni ne garantit le produit aux fins d'utilisation particulière.</p>		

GLASS

Glass plays a crucial role in windows and doors, providing optimal light transmittance, energy savings, and soundproofing function. North Tech uses energy-efficient low-e tempered glass with various configurations to achieve the best results for commercial and residential buildings, ensuring safety, high performance, and durability.



Glass Substrate: Clear, Low iron, Grey, Blue
 Low e: Solarban 70, Solarban 60 etc.
 Treatment: Tempered HST, Heat Strengthened
 Spacer: Superspacer, Warm Edge, 4SG
 Filling: Argon 90%
 Burglarproof: Optional
 Grids and Blinds: Optional



1" VRE1-54 Insulating
 1/4" (6mm) clear with VRE-54 #2
 1/2" (13.2mm) airspace
 1/4" (6mm) clear



VLT 47%
 Winter u-value 0.30
 Summer u-value 0.27
 SHGC 0.31

1" VRE1-54 Triple Insulating
 1/8" (3mm) clear with VRE-54 #2
 5/16" (7.5mm) airspace
 1/8" (3mm) clear
 5/16" (7.5mm) airspace
 1/8" (3mm) clear



VLT 44%
 Winter u-value 0.27
 Summer u-value 0.29
 SHGC 0.29

1-3/4" VRE1-54 Triple Insulating
 1/4" (6mm) clear with VRE-54 #2
 1/2" (13.2mm) airspace
 1/4" (6mm) clear
 1/2" (13.2mm) airspace
 1/4" (6mm) clear



VLT 42%
 Winter u-value 0.22
 Summer u-value 0.22
 SHGC 0.28

Glass Partners



HARDWARE

Door and window hardware are the "silent guardians" of the home — Hinges hide the gentle tacit understanding in opening and closing, handles hold safety and convenience, and lock cores strictly guard every inch of private time.



Hardware Partners



COATING

Aluminum Profile Surface Treatment and Colors

The company provides custom aluminum surface coatings according to samples or RAL color standards.

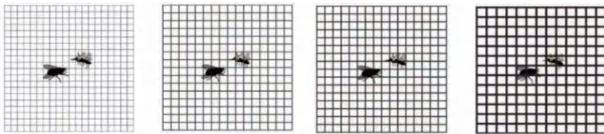


Coating Partners

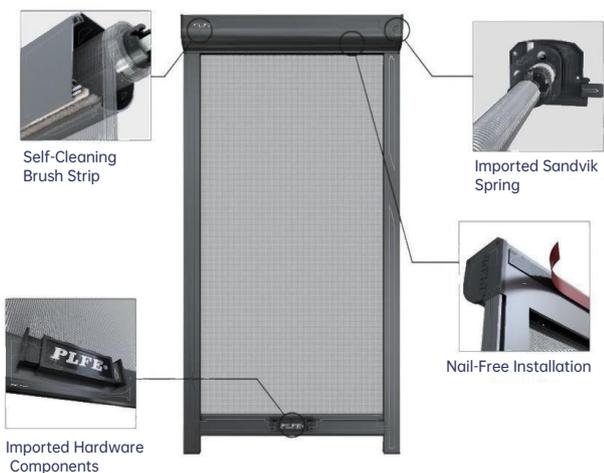


INSECT SCREEN

Screens are not barriers to scenery, but filters for life — With their delicate meshes, they filter out the hustle and bustle, leaving behind pure light and wind. They give homes the armor to fend off the outside world while preserving the tenderness to embrace it.



Stainless Steel Screen & Retractable Screen



INSTALLATION METHOD



With Installation Chips



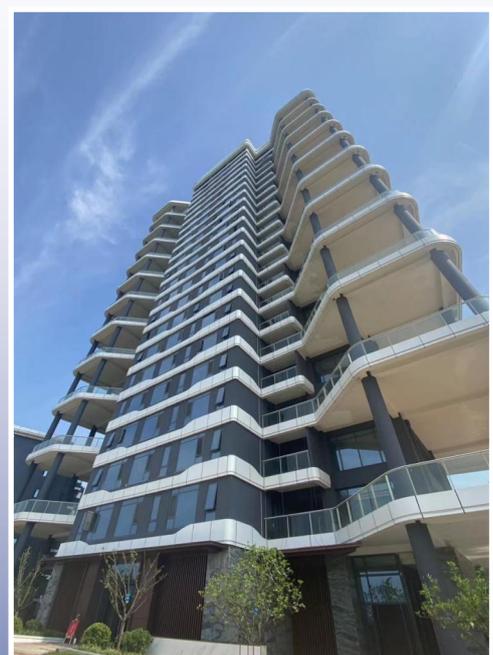
Screwing Connection



Nail Flange

Notes: Due to varying requirements in each country, province, and project, this document is for reference only. The actual specifications shall be based on the contract and signed drawings of each individual project.

SUCCESSFUL PROJECTS





SUCCESSFUL PROJECTS



CONTACT

Beijing NorthTech Windows Co., Ltd.

Tel: +1 7788018069/+86 13811102361

E-mail: dcui@northtechwindowscn.com

www.northtechwindowscn.com

Tips:

Pictures shown above are for reference only. Due to printing, there may be chromatic differences from the actual product. Please refer to the real product or contact your local dealer for confirmation. The factory reserves the right to modify or improve the product appearance without prior notice. Please take the actual product as the standard.