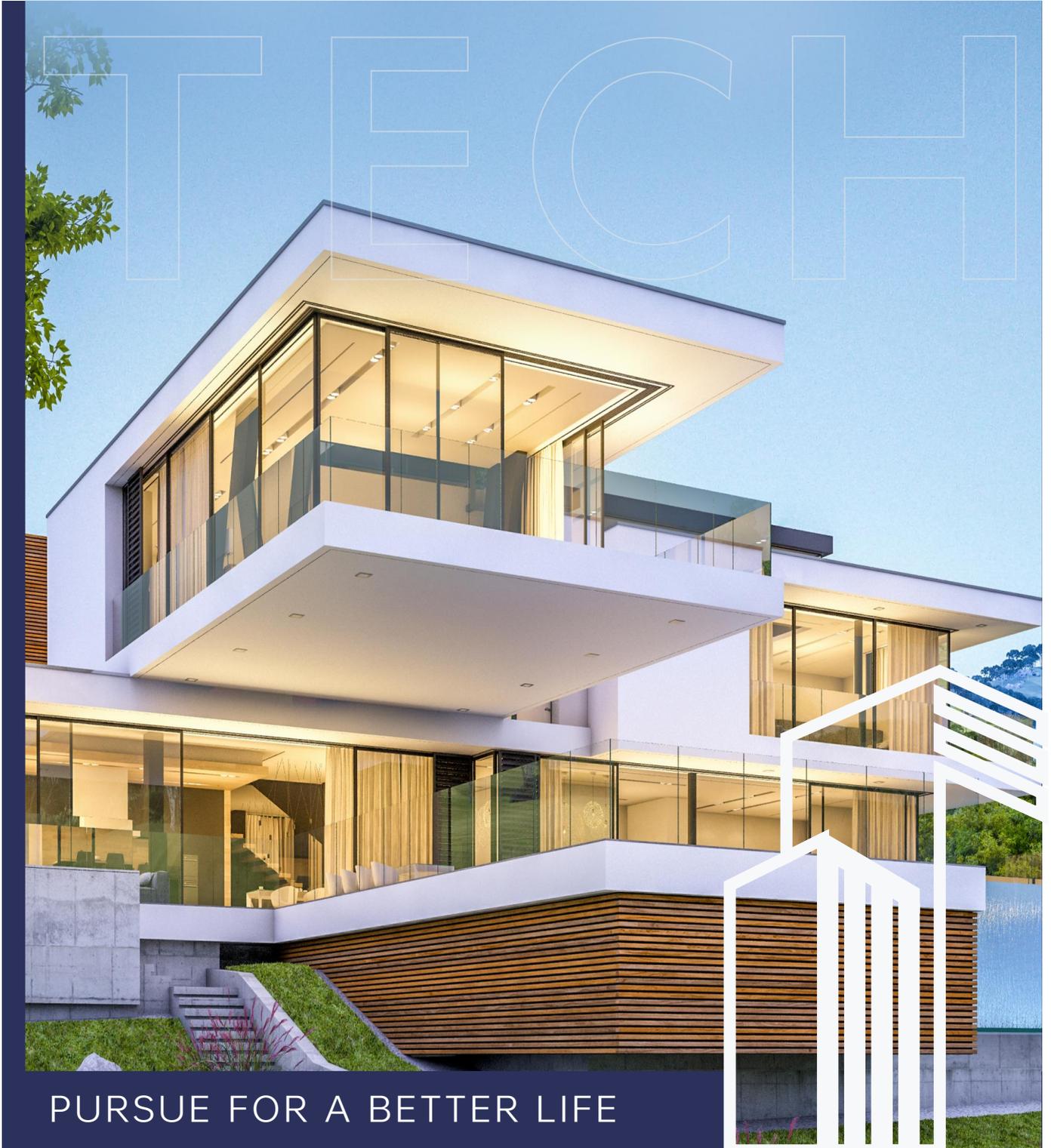




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TECH



PURSUE FOR A BETTER LIFE

 **NT91**
SERIES WINDOW AND DOOR

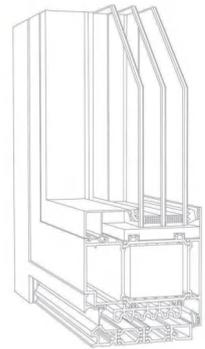
ABOUT US

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



NT91 SERIES WINDOW AND DOOR



The NT91 Series Thermal Break Aluminum Window & Door System

The NT91 series thermally broken aluminum alloy system insulates doors and windows to save energy. It helps with ventilation, simplifies cleaning, blocks rainwater, and isolates sound for a comfortable home.

Fan inside standard with rounded corner process, outside standard with safety corner protection, anti-collision, double protection.

Passed the German PHI certification, U_w less than $1.0W(m^2.k)$.

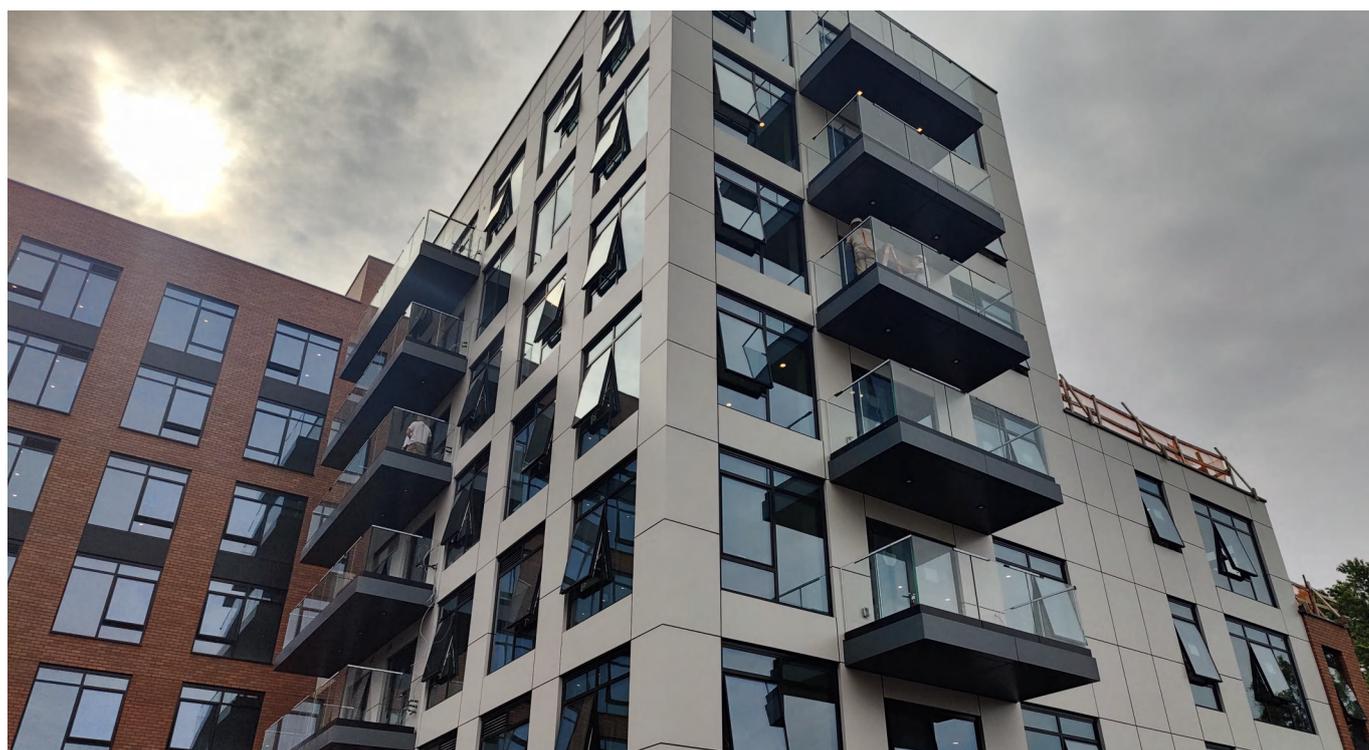
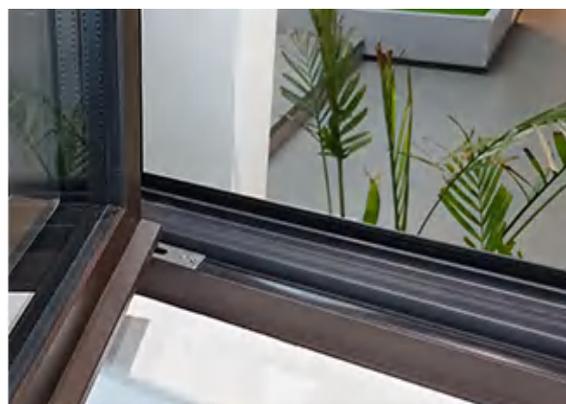
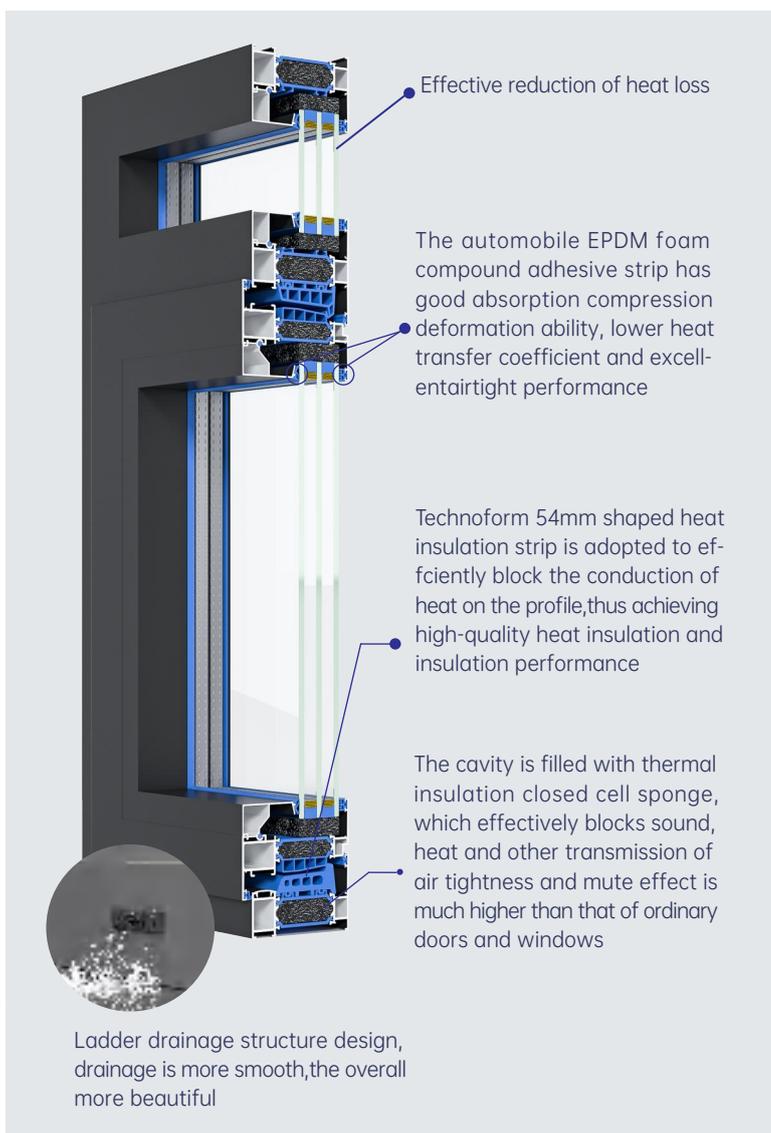
This series includes

NT91 Fixed windows	P06
NT91 Awing window	P07
NT91 Tilt and turn window	P08
NT91 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 Low e insulating glass Laminated glass Laminated insulating glass
Sealing Gasket	High-quality EPDM
Frame Jamb Depth	91mm(3.58")
Hardware Brand	Siegenia/Roto/GU
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"*78.74") Casement window: 700mm*1700mm (25.56"*66.93") 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") Casement window: 400mm*400mm (15.75"*15.75") Tilt and turn window: 380mm*550mm (14.96"*21.65") In-swing/out-swing door: 500mm*700mm (19.69"*27.56")
Color	Custom
Drainage Option	Hidden Drainage or Weep Holes
Optional	Built-in louvers/Grid view strip





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

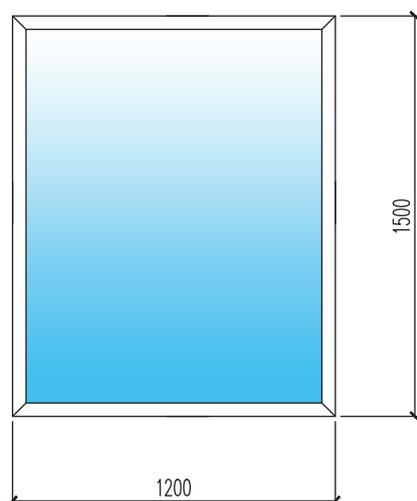
Insulated glass effectively blocks sound transmission, further enhancing noise reduction. The entire window can reduce noise levels by at least 35 dB.



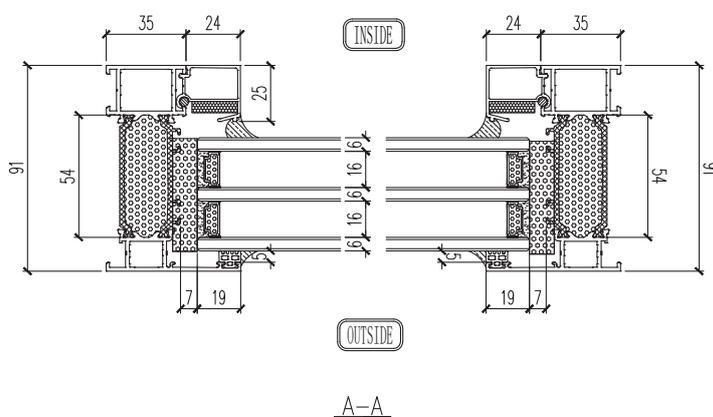
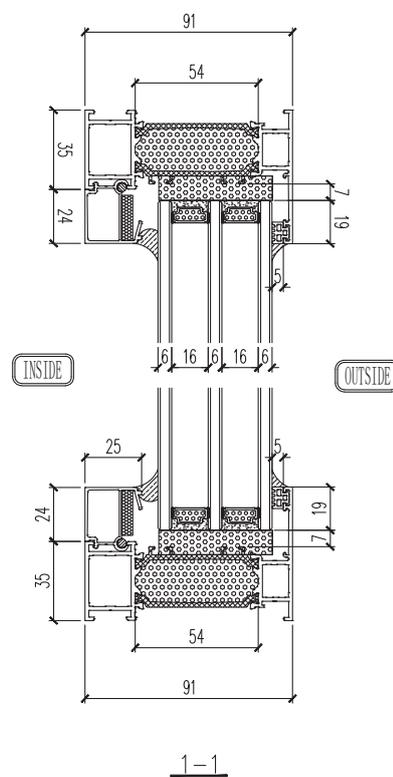
Burglar-proof Performance

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

01. NT91 Fixed Window

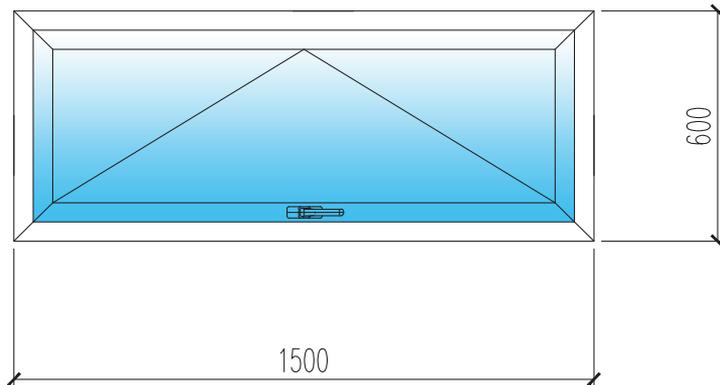


NT91 Fixed Window

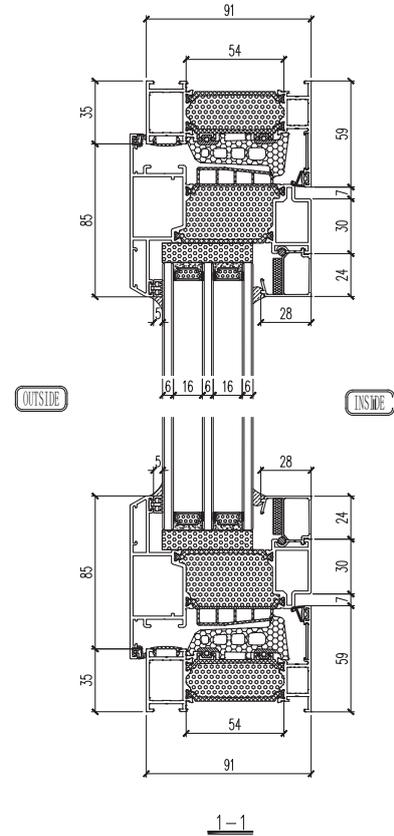
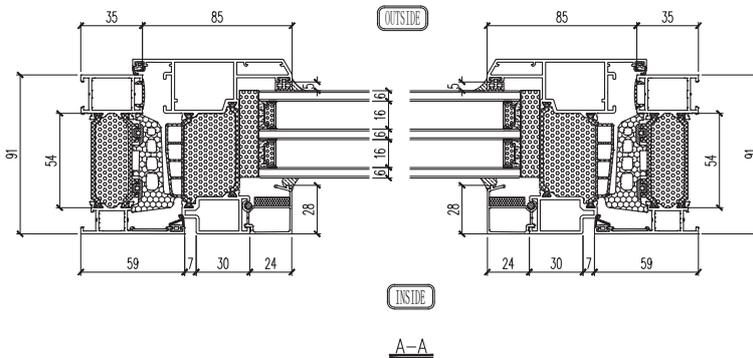


Test Description	Results
Class	CW-PG50
Water Penetration Resistance Test AAMA/WDMA/CSA101/L.S.2/A440-17, Clause 9.3.3 ASTM E547-2000 (R2016)	720 Pa
Air Leakage Resistance Test AAMA/WDMA/CSA101/L.S.2/A440-17, Clause 9.3.2 ASTM E283/E283M-2019	Air leakage at +75 Pa: 0.15 L/s·m ² Air leakage at -75 Pa: 0.16 L/s·m ²
Uniform Load Deflection Test AAMA/WDMA/CSA101/L.S.2/ A440-17, Clause 9.3.4.2 ASTM E330-2014	±2400 Pa
U-Factor (Btu/Hr·ft ² ·°F)	0.15

02. NT91 Awning Window

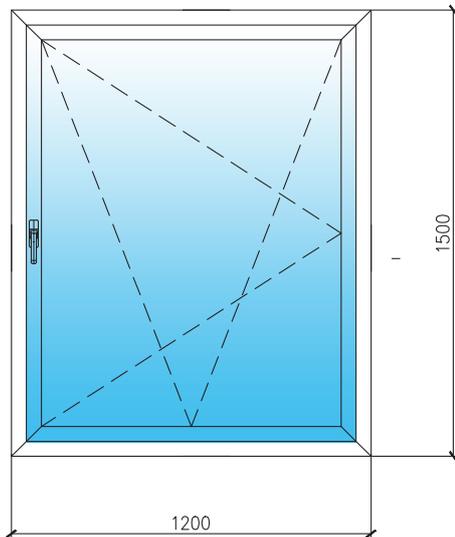


N8000 Awning Window

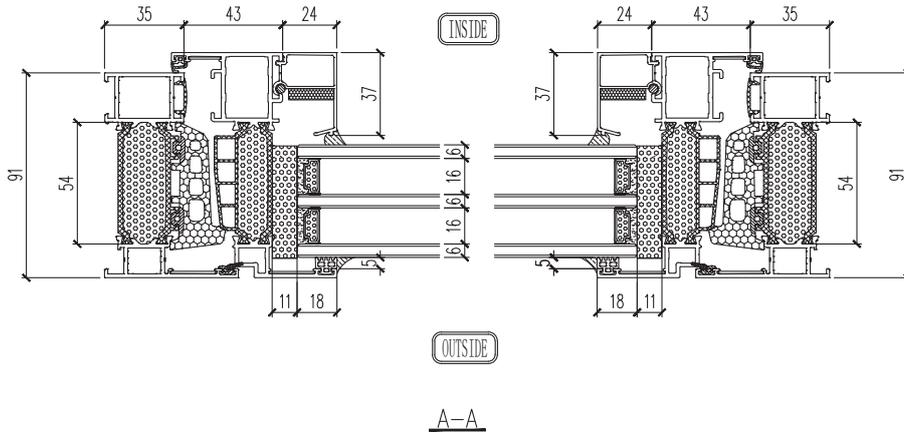
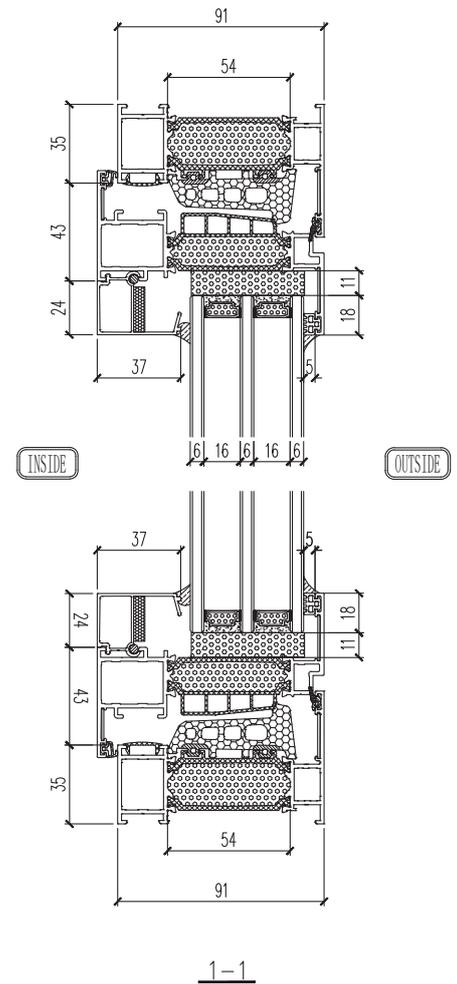


Test Description	Results
Class	CW-PG40
Water Penetration Resistance Test AAMA/WDMA/CSA101/L.S.2/A440-17, Clause 9.3.3 ASTM E547-2000 (R2016)	720 Pa
Air Leakage Resistance Test AAMA/WDMA/CSA101/L.S.2/A440-17, Clause 9.3.2 ASTM E283/E283M-2019	Air leakage at +75 Pa: 0.10 L/s·m ² Air leakage at -75 Pa: 0.11 L/s·m ²
Uniform Load Deflection Test AAMA/WDMA/CSA101/L.S.2/A440-17, Clause 9.3.4.2 ASTM E330-2014	±1920 Pa
U-Factor (Btu/Hr·ft ² ·°F)	0.19

03. NT91 Tilt And Turn Window

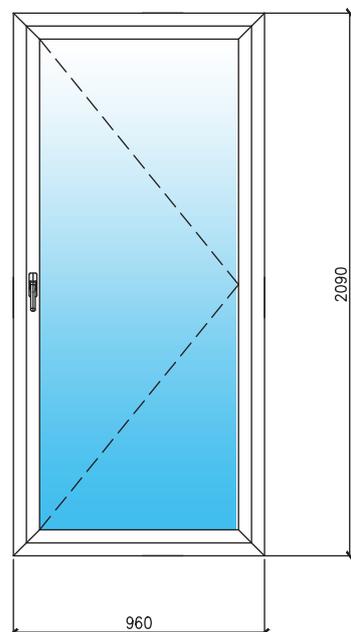


NT91 Tilt And Turn Window

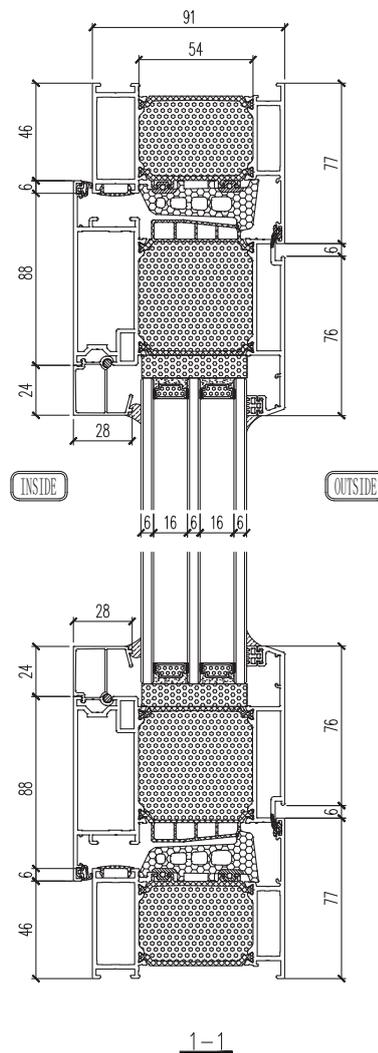
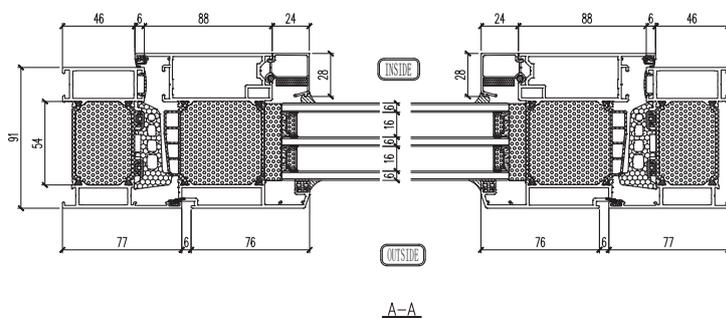


Test Description	Results
Class	CW-PG40
Water Penetration Resistance Test AAMA/WDMA/CSA101/L.S.2/A440-17, Clause 9.3.3 ASTM E547-2000 (R2016)	580 Pa
Air Leakage Resistance Test AAMA/WDMA/CSA101/L.S.2/A440-17, Clause 9.3.2 ASTM E283/E283M-2019	Air leakage at +75 Pa: 0.11 L/s·m ² Air leakage at -75 Pa: 0.08 L/s·m ²
Uniform Load Deflection Test AAMA/WDMA/CSA101/L.S.2/A440-17, Clause 9.3.4.2 ASTM E330-2014	±1920 Pa
U-Factor (Btu/Hr·ft ² ·°F)	0.15

04. NT91 Swing Door



NT91 Swing Door



Test Description	Results
Class	CW-PG40
Water Penetration Resistance Test AAMA/WDMA/CSA101/L.S.2/A440-17, Clause 9.3.3 ASTM E547-2000 (R2016)	360 Pa
Air Leakage Resistance Test AAMA/WDMA/CSA101/L.S.2/A440-17, Clause 9.3.2 ASTM E283/E283M-2019	Air leakage at +75 Pa: 0.96 L/s·m ² Air leakage at -75 Pa: 0.92 L/s·m ²
Uniform Load Deflection Test AAMA/WDMA/CSA101/L.S.2/A440-17, Clause 9.3.4.2 ASTM E330/T-2014	±1920 Pa
U-Factor (Btu/Hr·ft ² ·°F)	0.17

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).

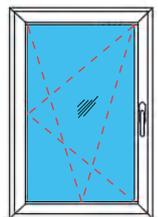
Extra Strong Metal Profile With High Quality Coatings Durable Color, No Deflection, Impact Function.

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

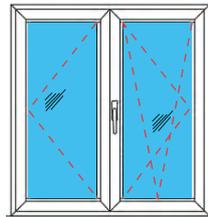
Custom Colors And Shapes.

OPENING METHOD

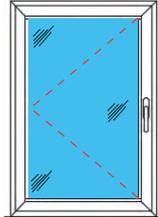
The window system offers a wide range of options, and the main opening types are as follows:



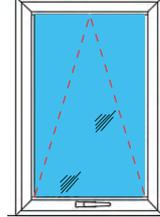
TILT AND
TURN WINDOW



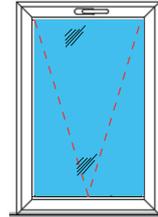
TILT AND TURN
WINDOW+INWARDS
CASEMENT WINDOW



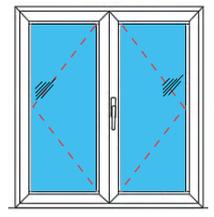
CASEMENT WINDOW
OUTWARDS



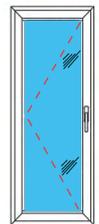
AWNING WINDOW



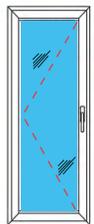
TILT WINDOW



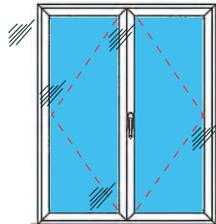
DOUBLE OUTWARDS
CASEMENT WINDOW



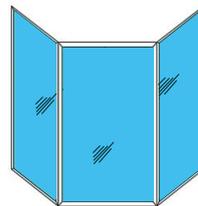
SWING DOOR
OUTWARDS



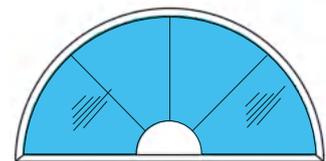
SWING DOOR
INWARDS



FRENCH DOOR



BAY AND BOW
WINDOWS

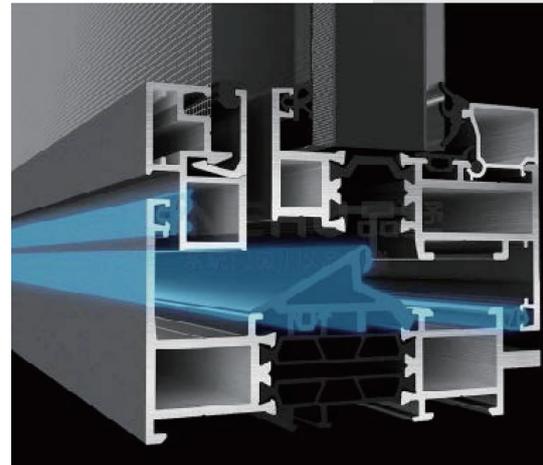


CIRCLE TOP DESIGN



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.



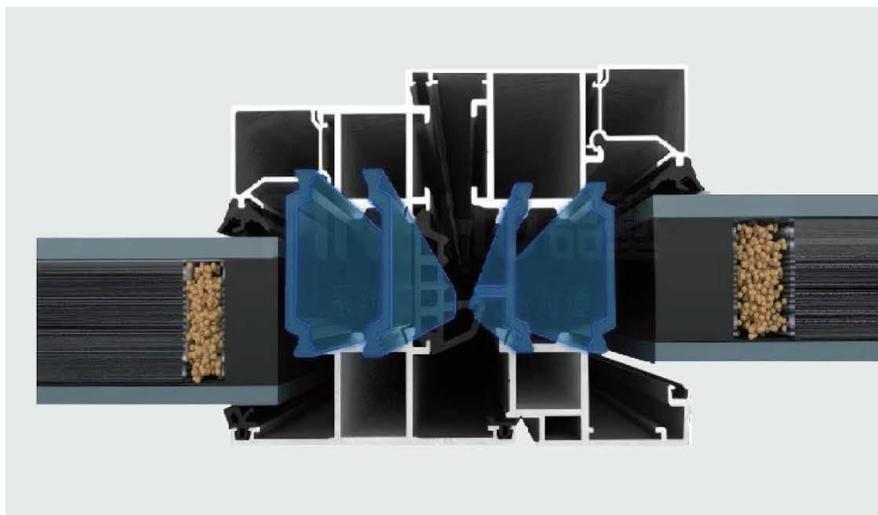
GERMAN TECHNOFORM PA66GF25 NYLON INSULATION STRIP

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



intertek
Total Quality. Assured.



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: NT91 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
Procedural Year: 2017

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
Product Number Range: 00001-00001 to 00051-00001

http://search.nfrc.org/search/pdptpdpt_search_detail.aspx?product=BNG-M-8

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:



BEIJING NORTH TECH GROUP LTD. COMPUTER SIMULATION REPORT

SCOPE OF WORK
NT91 SERIES FIXED WINDOW - NFRC 100/200/500

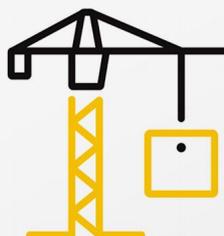
REPORT NUMBER
R8804.02-116-45 R1

TEST DATE
04/08/25

ISSUE DATE **REVISION DATE**
04/08/25 04/15/25

PAGES
24

DOCUMENT CONTROL NUMBER
RT-R-AMER-Test-4044 (04/11/22)
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Intertek Testing Services/ Shenzhen Ltd. Shanghai Fengqian Branch
Plant 5 & 11(4F), No. 6958 Daye Road, Fengqian District, Shanghai, China
Tel: +86 21-61196116 Fax: 021-61189913
Website: www.intertek.com

Test Report

Original Issue Date: 2025-02-26 **Intertek Report No.:** 250120003SHF-002

Applicant: Beijing North Tech Group Ltd
Applicant Address: No. 3, Dongbinhe Road, Deshengmen, Xicheng District, Beijing, China, 100120
Alt: 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: NT91
Primary product designation: Class CW - FG50 - 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
For Conds: Canadian Air Infiltration/Exfiltration: Fixed Level
SUBJECT: Performance testing

Product Information

Product Name	Model	Specification
NT91 Fixed Window	NT91	1500mm(W)xD915 x 1800mm(H)Height
Sample ID	Sample Amount	Sample Received Date
S2409200075HF_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: ASTM E283/E283M-2019; ASTM E547-00(R2016); ASTM E330/E330M-2014(R2021); ASTM F588-17

Specification Standard: AAMA/WDMA/CSA 101/1.52/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 101/1.52/A440-17 Clause 5.4 and Clause 5.5

Test Conclusion: The results met AAMA/WDMA/CSA 101/1.52/A440-17 and CSA A440S5-19 requirements specified on Fixed Window, and the results were shown in the following page.

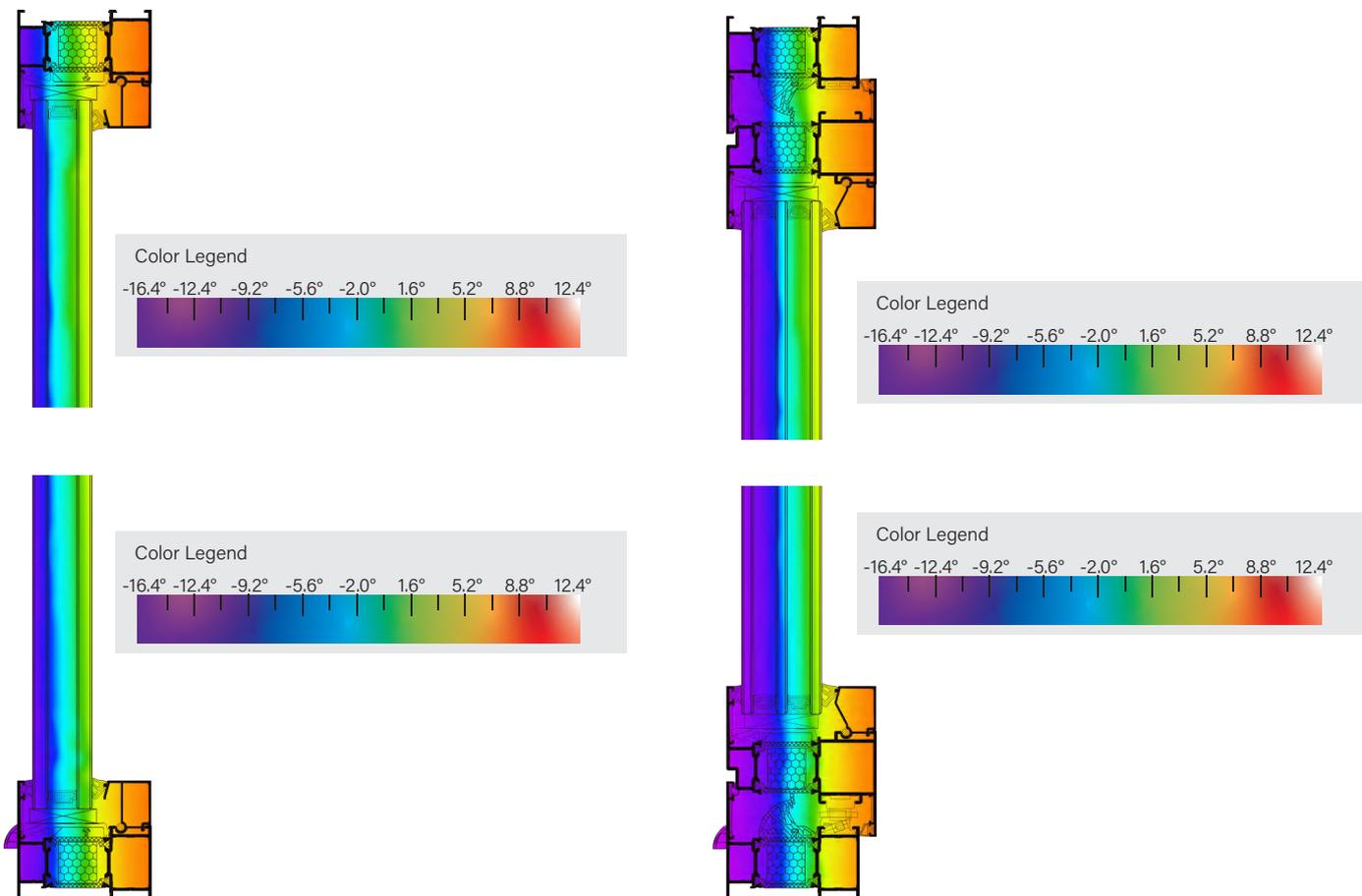
Note: 1. This report does not involve sampling. The report only reflects conformity of the tested items of the samples provided by the testing applicant. Representativeness and authenticity of the submitted samples are responsibilities of the testing applicant.
2. Test results were cited from Intertek Report No. 2409200075HF-002 which was issued by Intertek on December 10, 2024.

Report Authorized

Name: Gao Lin **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.**

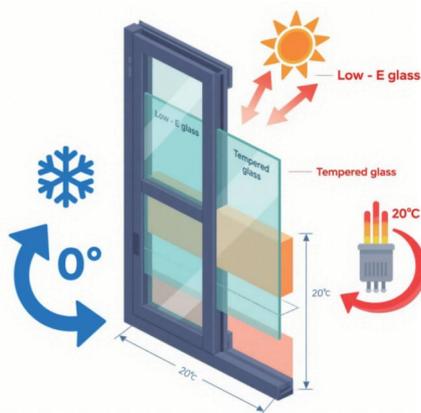
6. Condensation Resistance

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.

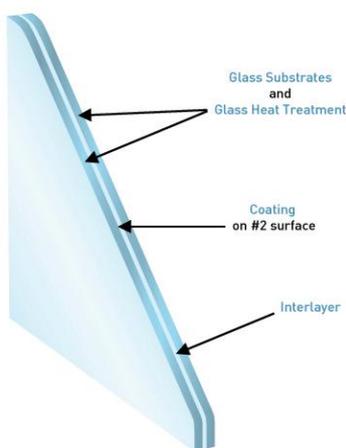
DO NOT REMOVE UNTIL FINAL INSPECTION / NE PAS RETIRER AVANT L'INSPECTION FINALE		
ENERGY PERFORMANCE RATINGS Évaluation des propriétés énergétiques		
U-factor Facteur-U	Solar Heat Gain Coefficient Coefficient de gain de chaleur solaire	Visual Transmittance Transmission visible
Energy Rating Rendement 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.

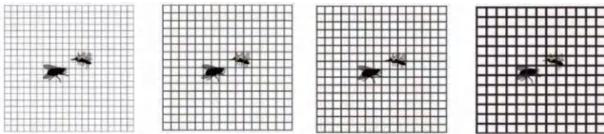


Coating Partners

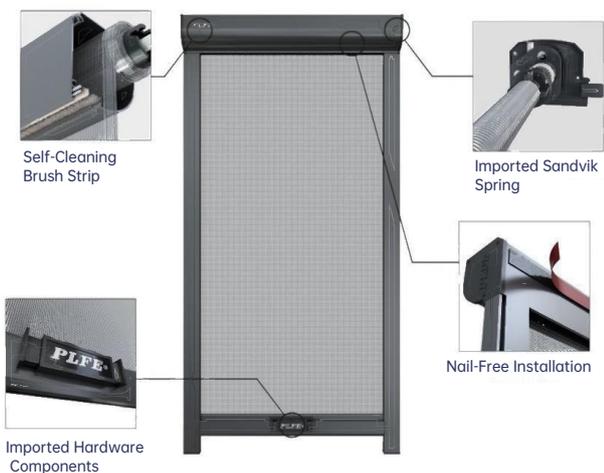
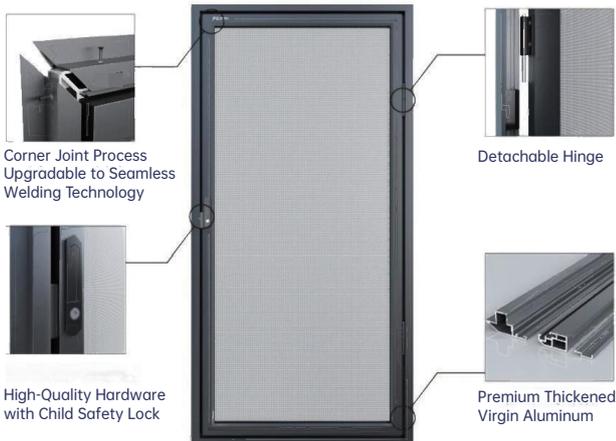


INSECT SCREEN

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



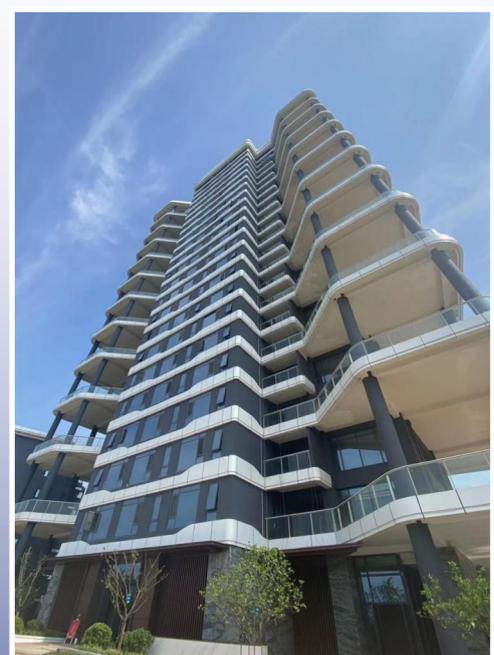
Screwing Connection



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



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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.