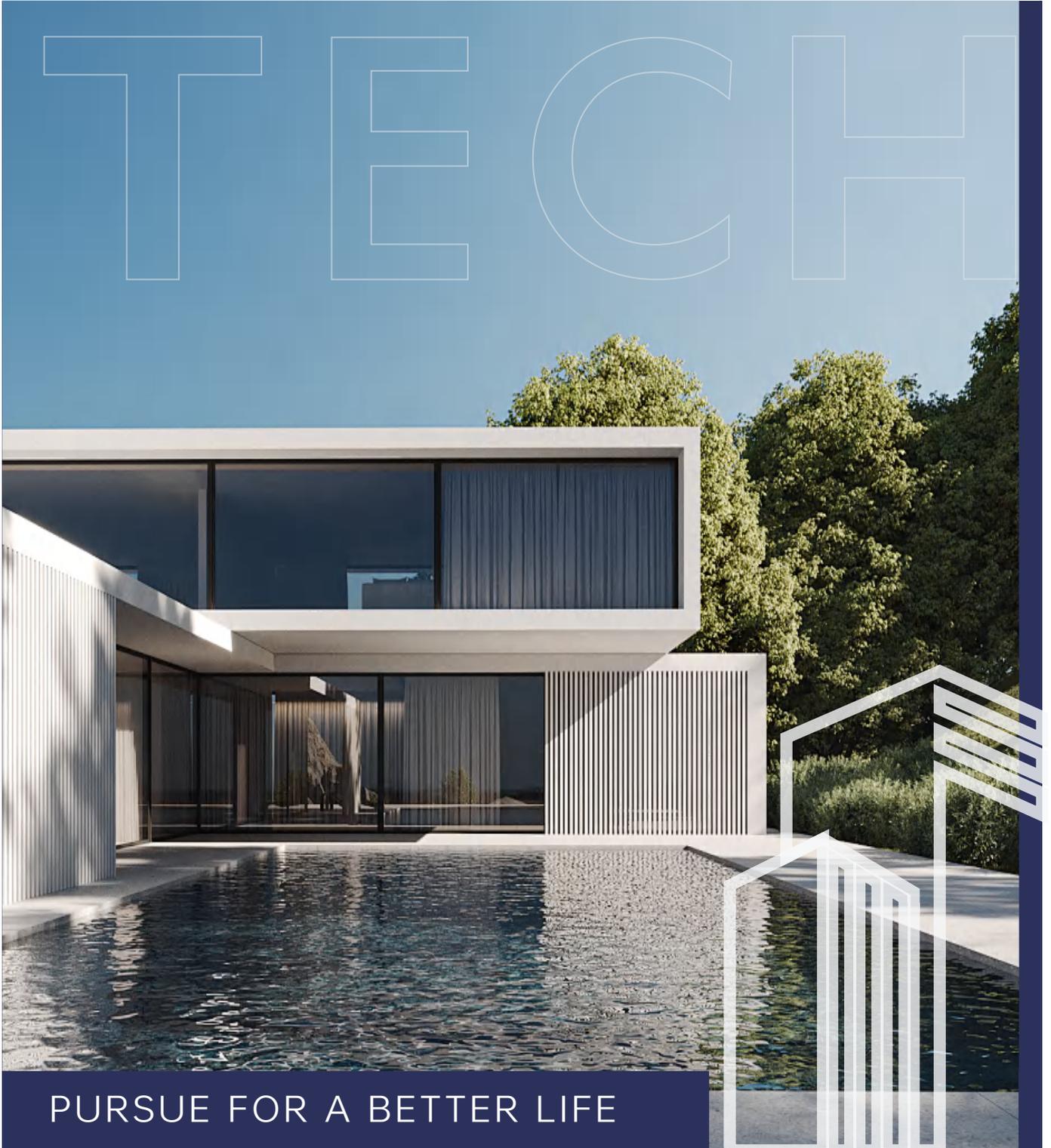




NORTH
TECH
PURSUE FOR A BETTER LIFE

TECH



PURSUE FOR A BETTER LIFE

 **NL8500**
SERIES WINDOW



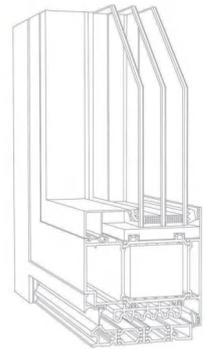
ABOUT US

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



NL8500 SERIES WINDOW



The NL8500 Series Thermal Break Aluminum Window

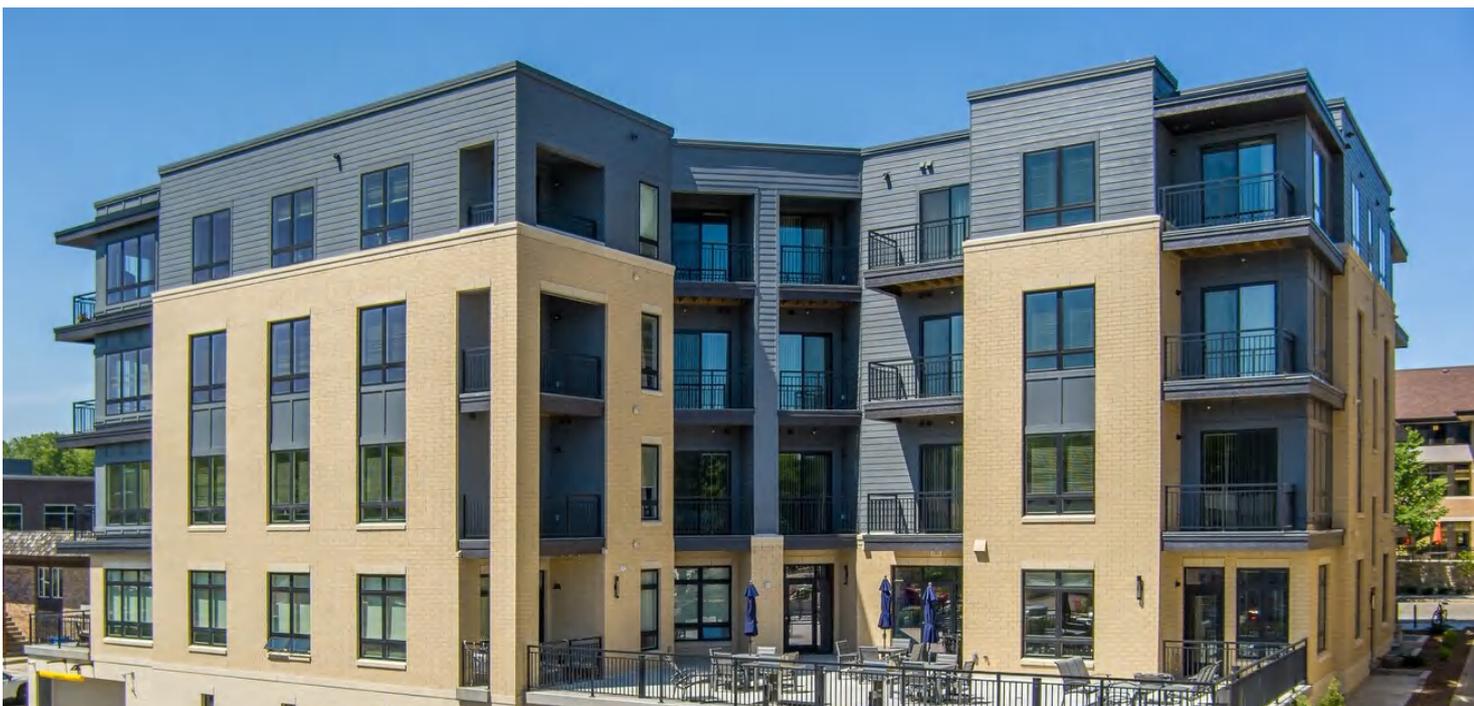
The NL8500 series thermally broken aluminum alloy system insulates windows, featured by narrow frame, maximum vision area, not only offer better visual effects than traditional windows, but also take performance into account.

This series includes

- NL8500 Fixed widows P06
- NL8500 tilt and turn window P07

SPECIFICATION

Aluminum Profile	6063-T5/6060-T66
Surface Treatment	Powder coating/ Fluorocarbon coating/ Anodizing
Profile Wall Thickness	2.0mm
Glass Configuration	Double / triple pane glass TPS/ Warm edge spacer Argon filling, Tempered
Sealing Gasket	High-quality EPDM
Frame Jamb Depth	85 mm (3.3")
Sightline	Frame: 48mm Open sash: 24.7mm
Hardware Brand	Siegenia / Hoppe / Sobinco
Warm Edge Material	PA66
Max Dimension Of Fixed Sash	6000mm (236") x 3300mm(130")
Max Dimension of Opening Sash (Width*Height)	Tilt And Turn Window: 1200mm*1800mm (47.24"*70.87") Tilt Window: 1500mm*1200mm (59.06"*47.24")
Color	Custom
Drainage Option	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

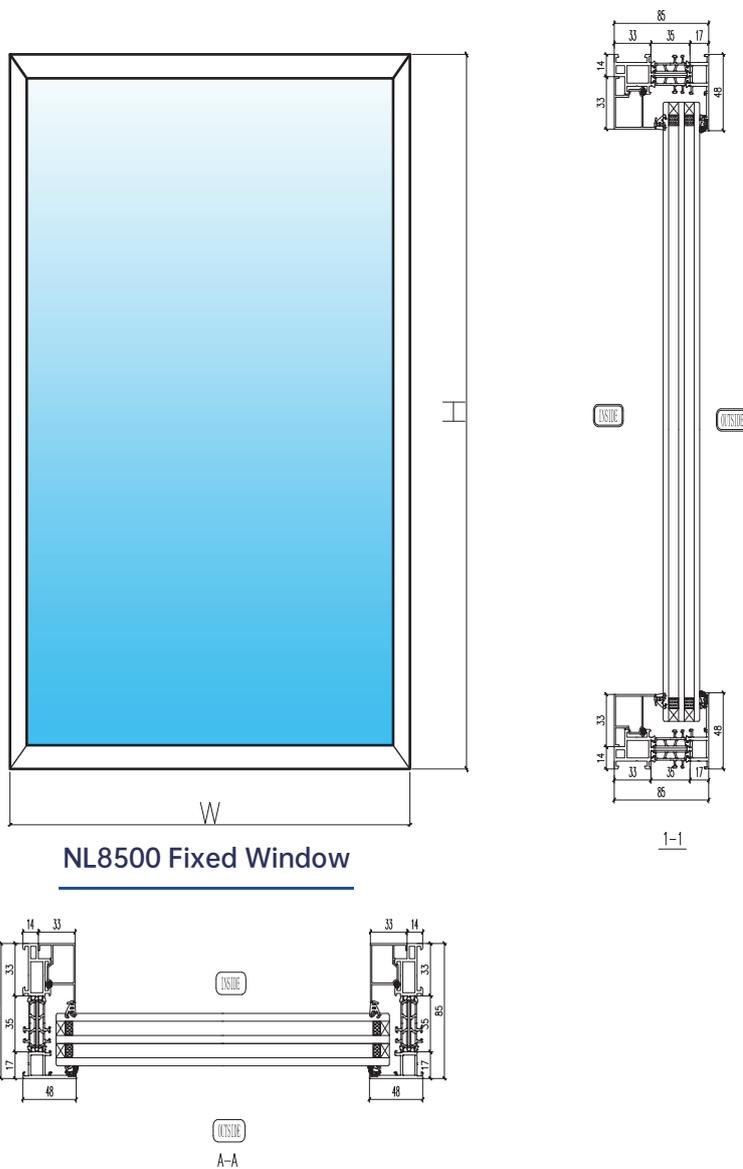
Insulated glass effectively blocks sound transmission, further enhancing noise reduction. The entire window can reduce noise levels by at least 35dB.



Burglar-proof Performance

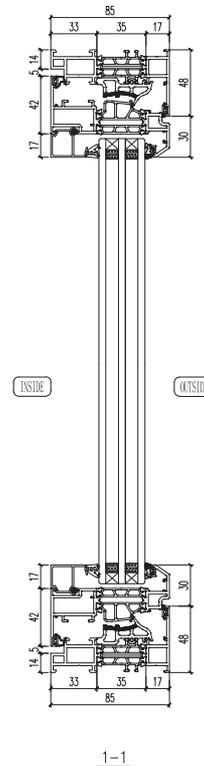
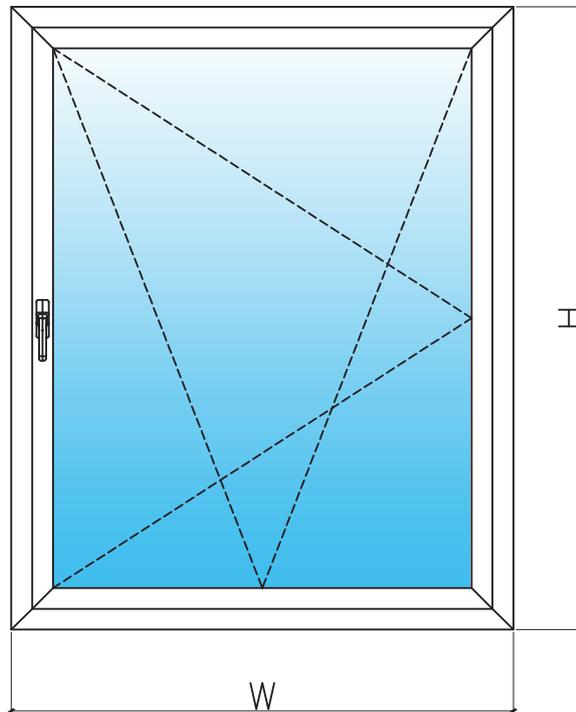
Multi-point locking design ensures stronger sealing of doors and windows, providing enhanced security and better anti-theft performance.

01. NL8500 Fixed Window

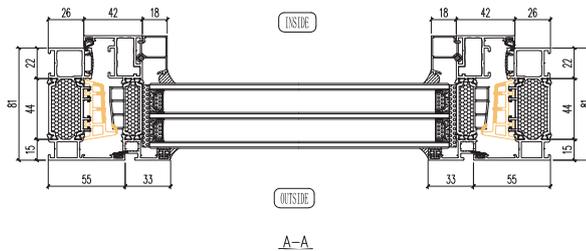


Test Description	Results
Class	CW-PG60
Water Penetration Resistance Test AAMA/WDMA/CSA101/L.S.2/A440-17, Clause 9.3.3 ASTM E547-2000 (R2016)	720Pa
Air Leakage Resistance Test AAMA/WDMA/CSA101/L.S.2/A440-17, Clause 9.3.2 ASTM E283/E283M-2019	Air leakage at +75 Pa: 0.11L/s·m ² Air leakage at -75 Pa: 0.13L/s·m ²
Uniform Load Deflection Test AAMA/ WDMA/CSA101/L.S.2/A440-17, Clause 9.3.4.2 ASTM E330-2014	±2880Pa
U-Factor (Btu/Hr·ft ² ·°F)	0.19

02. NL8500 Tilt And Turn Window



NL8500 Tilt And Turn 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)	580Pa
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: 0.08L/s·m ² Air leakage at -75 Pa: 0.06L/s·m ²
Uniform Load Deflection Test AAMA/WDMA/ CSA101/L.S.2/A440-17, Clause 9.3.4.2 ASTM E330-2014	±2400Pa
U-Factor (Btu/Hr·ft ² ·°F)	0.21

FEATURE

Meet AAMA/WDMA/CSA101/1.S.2/A440-17 North America and Europe standard

Air Tightness: A3

Water Penetration: 290Pa~720Pa

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

\geq OITC 37 (ASTM E1332-22)

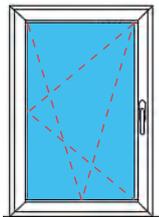
Extra Strong Metal Profile With High Quality Coatings Durable Color, No Deflection, Impact Function

Multi-Cavities Extrusion With PA66 Insulation Strip, Thermal Insulation

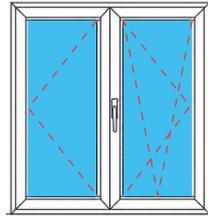
Custom Colors And Shapes

OPENING METHOD

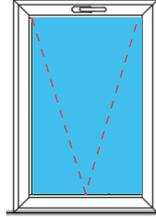
The system window is opened internally, and the common window types are as follows:



TILT AND
TURN WINDOW



TILT AND TURN
WINDOW+INWARDS
CASEMENT WINDOW

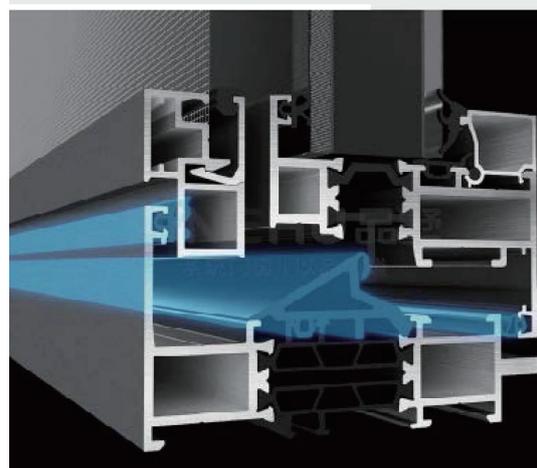


TILT WINDOW



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.



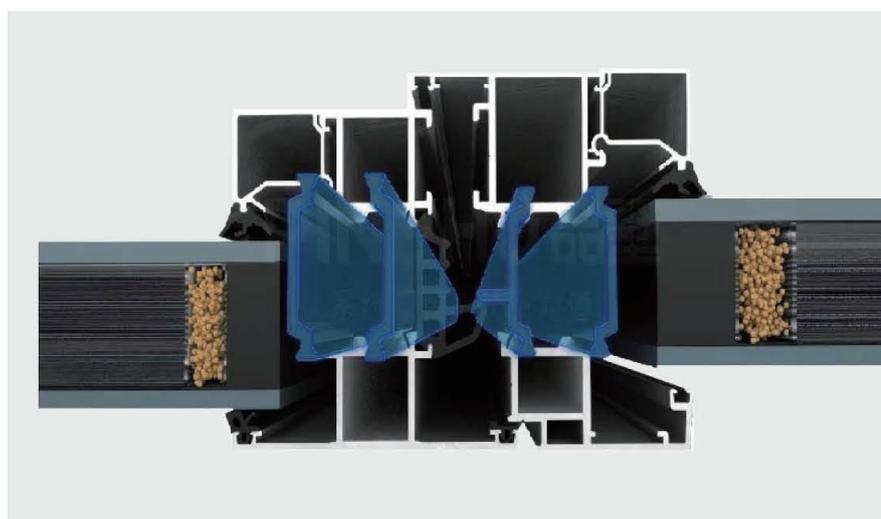
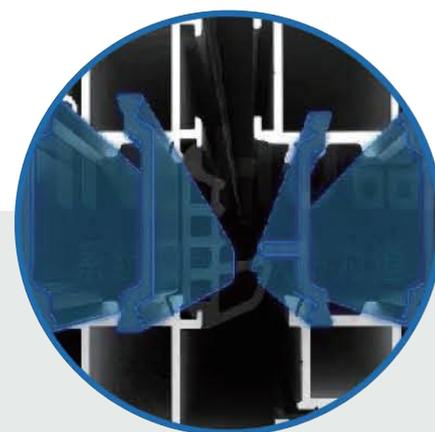
GERMAN TECHNOFORM PA66GF25 NYLON INSULATION STRIP

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

Beijing North Tech Group Ltd

TEST REPORT

SCOPE OF WORK
Tilt and Turn Window

REPORT NUMBER
2410220035HF-002

TEST DATE(S)
2024-09-05 - 2024-09-09

ORIGINAL ISSUE DATE
2025-03-17

PAGES
23

DOCUMENT CONTROL NUMBER
LFT-APAC-SHF-OP-10K(January 13, 2025)
© 2025 INTERTEK

Intertek Testing Services Shenzhen Ltd. Shanghai Fengxian Branch

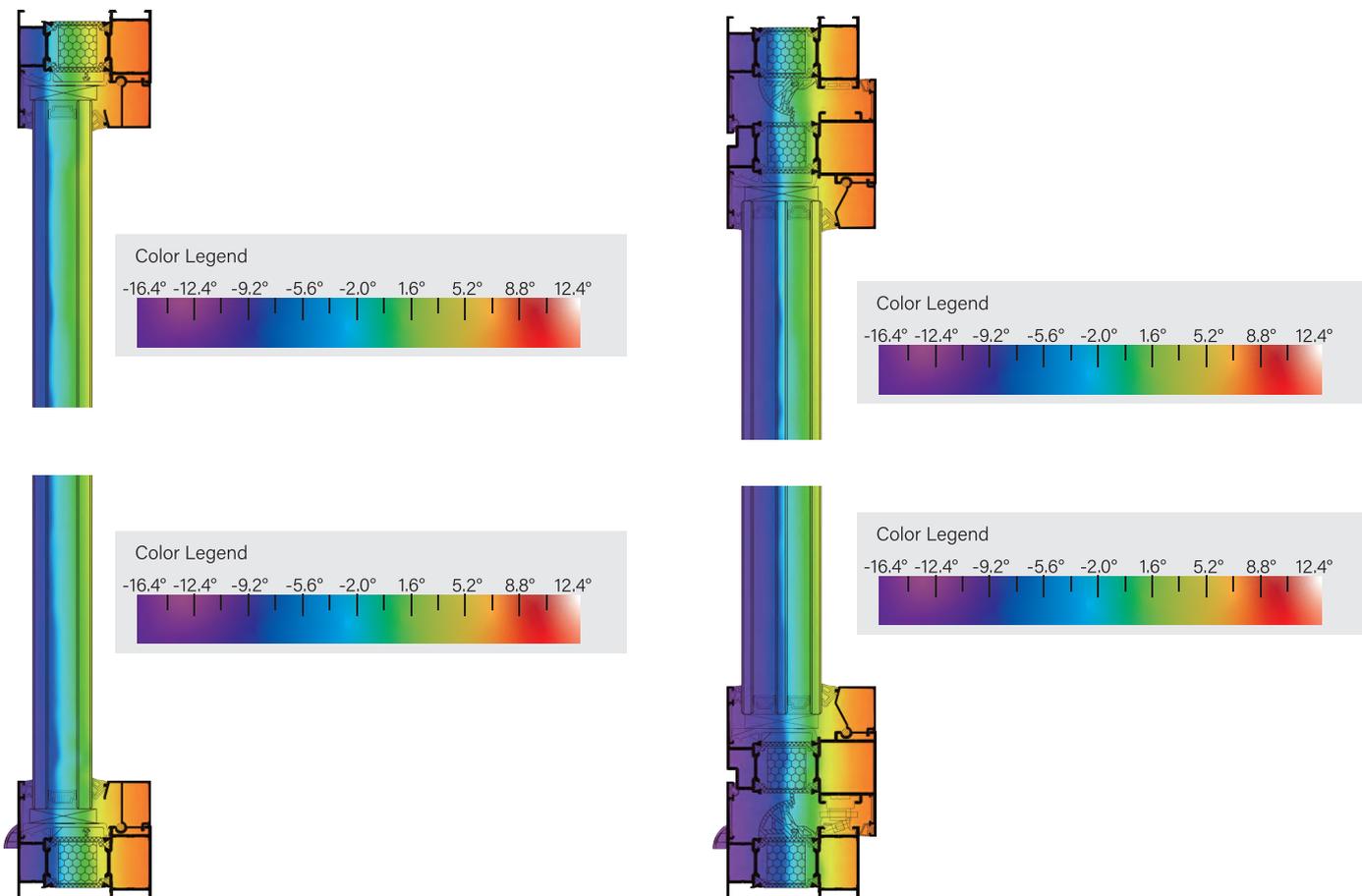


TEST REPORT FOR BEIJING NORTH TECH GROUP LTD.
Report No: R9022.02-116-45 R0
Date: 01/13/25

SECTION 6 SIMULATION RESULTS

TOTAL PRODUCT CALCULATIONS (NL8500 Fixed)														
Option Number	Pane Thickness 1 (in)	Gap Width 1 (in)	Pane Thickness 2 (in)	Gap Width 2 (in)	Pane Thickness 3 (in)	Gap Width 3 (in)	Pane Thickness 4 (in)	Gap Width 4 (in)	Gap Fill	None-e (Surface #)	Tint	Spacer	Grid Type	
	U-Factor (Btu/Hr-Ft ² -F)		Solar Heat Gain Coefficient (SHGC) Grids (None / <1 / >=1)				Visible Transmittance (VT) Grids (None / <1 / >=1)		Condensation Resistance (CR)					
1	KEN0185 / ARG / Clear (5mm/5mm) - 33mm IG	0.301	0.806	0.191					ARG90	0.136(02)		CL	TS-D	N
	U-Factor	0.38	ins(2)						ARG90	0.094(02)	0.035(01)	CL	TS-D	N
2	KETN0187 / ARG / SB60 (6mm/5mm) - 33mm IG	0.232	0.787	0.223					ARG90	0.094(02)	0.035(01)	CL	TS-D	N
	U-Factor	0.30	ins(2)						ARG90	0.136(02)	0.136(04)	CL	TS-D	N
3	KEN0185 / ARG / XEN0185 / ARG / Clear (5mm/5mm/5mm) - 33mm IG	0.191	0.354	0.191	0.354	0.191			ARG90	0.136(02)	0.136(04)	CL	TS-D	N
	U-Factor	0.23	ins(2)						ARG90	0.094(02)	0.035(01)	CL	TS-D	N
4	KEN0185 / ARG / XEN0185 / ARG / Clear (5mm/5mm/5mm) - 33mm IG	0.191	0.354	0.191	0.354	0.191			ARG90	0.136(02)	0.136(04)	CL	TS-D	G.S
	U-Factor	0.26	ins(2)						ARG90	0.094(02)	0.035(01)	CL	TS-D	N
5	KEN0185 / ARG / XEN0185 / ARG / Clear (5mm/5mm/5mm) - 39mm IG	0.191	0.472	0.191	0.472	0.191			ARG90	0.136(02)	0.136(04)	CL	TS-D	N
	U-Factor	0.21	ins(2)						ARG90	0.094(02)	0.035(01)	CL	TS-D	N
6	KEN0185 / ARG / XEN0185 / ARG / Clear (5mm/5mm/5mm) - 39mm IG	0.191	0.472	0.191	0.472	0.191			ARG90	0.136(02)	0.136(04)	CL	TS-D	G.S
	U-Factor	0.21	ins(2)						ARG90	0.094(02)	0.035(01)	CL	TS-D	N
7	KEN0185 / ARG / XEN0185 / ARG / Clear (5mm/5mm/5mm) - 39mm IG	0.189	0.472	0.191	0.472	0.191			ARG90	0.094(02)	0.035(01)	CL	TS-D	N
	U-Factor	0.20	ins(2)						ARG90	0.136(02)	0.136(04)	CL	TS-D	N
8	KEN0185 / ARG / XEN0185 / ARG / Clear (5mm/5mm/5mm) - 39mm IG	0.189	0.472	0.191	0.472	0.191			ARG90	0.094(02)	0.035(01)	CL	TS-D	G.S
	U-Factor	0.20	ins(2)						ARG90	0.136(02)	0.136(04)	CL	TS-D	N
9	CEV11 / ARG / XEN0185 / ARG / Clear (5mm/5mm/5mm) - 39mm IG	0.195	0.472	0.191	0.472	0.191			ARG90	0.050(02)	0.136(04)	CL	TS-D	N
	U-Factor	0.20	ins(2)						ARG90	0.094(02)	0.035(01)	CL	TS-D	N
10	CEV11 / ARG / XEN0185 / ARG / Clear (5mm/5mm/5mm) - 39mm IG	0.195	0.472	0.191	0.472	0.191			ARG90	0.050(02)	0.136(04)	CL	TS-D	G.S
	U-Factor	0.21	ins(2)						ARG90	0.136(02)	0.136(04)	CL	TS-D	N

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.**

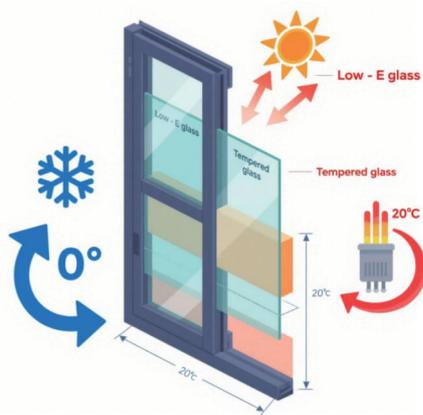
6. Condensation Resistance

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.

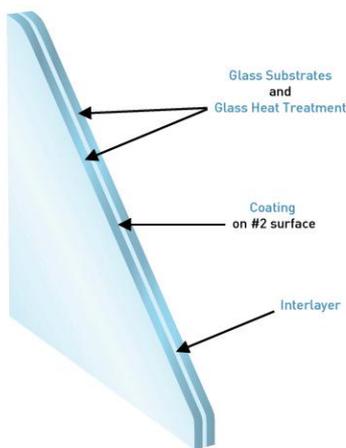
DO NOT REMOVE UNTIL FINAL INSPECTION / NE PAS RETIRER AVANT L'INSPECTION FINALE		
ENERGY PERFORMANCE RATINGS Évaluation des propriétés énergétiques		
U-factor Facteur-U	Solar Heat Gain Coefficient Coefficient de gain de chaleur solaire	Visual Transmittance Transmission visible
Energy Rating Rendement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

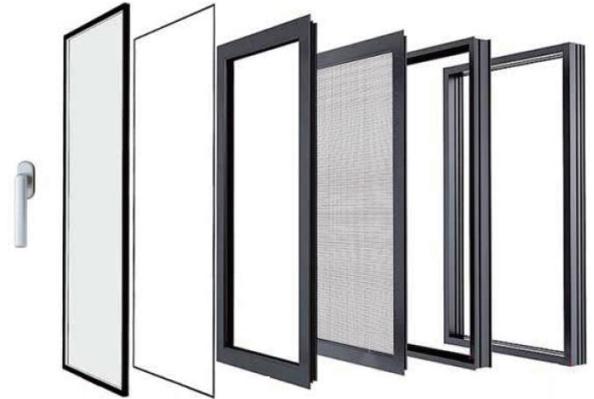
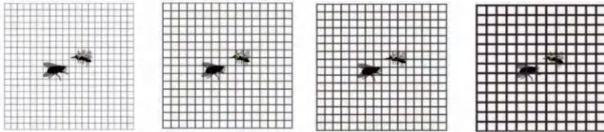


Coating Partners

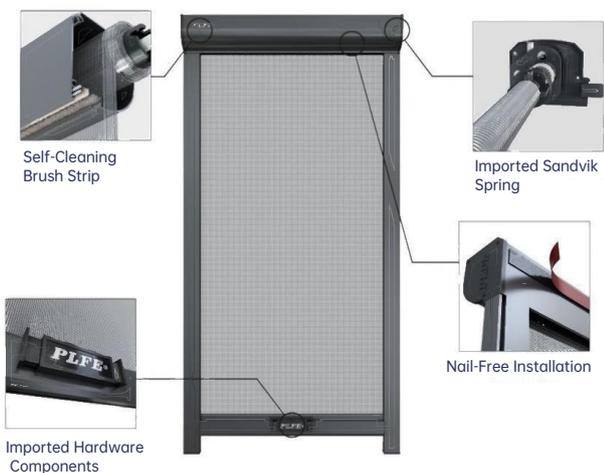


INSECT SCREEN

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



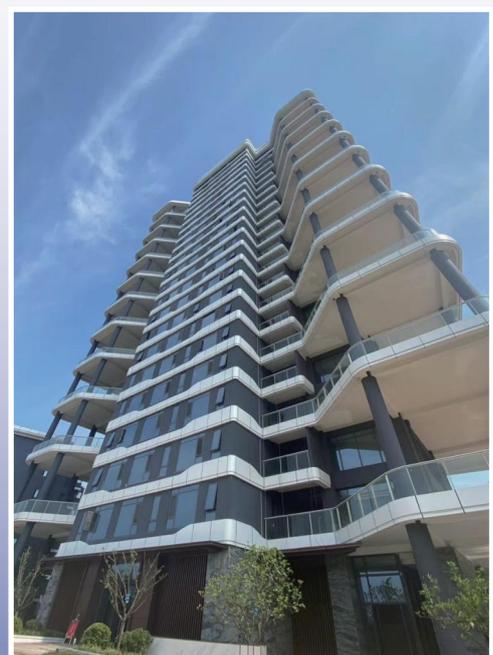
Screwing Connection



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.