### Greenhouse Glass

### **Clear Float Glass**

# NOVAL GLASS®

Tempered Glass

NOVAL GLASS GROUP LTD www.novalglass.com

**Acid Etched Glass** 

**Low Iron Float Glass** 

Insulated Glass

Rolled Printed Glass

Laminated Glass

**Tinted Float Glass** 

Glass Door

### **NOVAL GLASS GROUP LTD**

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#### NOVAL GLASS 诺晶玻璃

### ABOUT US

### WHO WE ARE

Noval Glass is a highly professional Glass supplier from China.

Owing to 12 years' exporting experience, Noval Glass has become China Leading Glass supplier with Strong Technical Support, Rich Experience, Huge Productivity and Strict Quality Control.

Noval has been exporting all kinds of Glass to all over the world like Europe, America, Latin America, Africa, South Asia and all over the world for Commercial, Residential, Furnishing and Decoration.

### WHAT WE OFFER

Our products include:

Big Size Raw Glass

Clear Float Glass, Low Iron Glass, Tinted Float Glass, Reflective Glass, Low-E Glass, Patterned Glass, Sheet Glass as well as Decorative Acid Etched Glass etc ...

Processed Glass

Laminated Glass, Tempered Glass, Insulated Glass, Silkscreen Printed and Rolled Printed Glass, Welding Glass as well as Furniture Safety Glass, Photo Frame Glass, Glass Shelves and Panel, Glass Fence and Floor, Home Appliances Glass and Kitchen Glass with Customize Dimension, Cut, Grinded or Polished Edge, Round, Square, Rectangle or Irregular Shape; Drilling, Beveling or Safety Film.

### HOW WE DO

Thanks to professional and experienced working stuff, all packing and loading is guaranteed to be strong and seaworthy to reduce the breakage rate to as low as possible. Wooden crates, end caps, customized packing quantity, all packing can be fulfilled at Noval Glass.

Noval's shipping department has been doing a great job. Usually we could get more competitive price than our customers, thus we have been doing more CFR than FOB. Competitive ocean freight and well organized operation saves you both money and time.

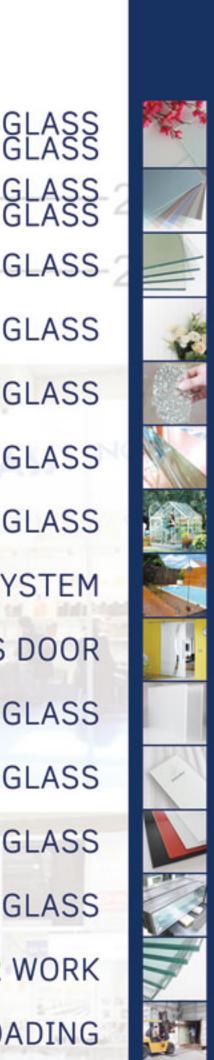
Noval's sales team is always offering excellent service for our customers. Every detail will receive Noval's full attention. Every personalized requirement will receive Noval's utmost efforts. Every confusion and difficulty will receive Noval's corresponding solution.

With all the products and service, Noval Glass is dedicated to make all your business and purchasing much more smooth and easy. The ultimate aim of Noval Glass is to offer most suitable and favorable solutions for all our customers.

# O N T E

CLEAR FLOAT GLASS LOW IRON FLOAT GLASS TINTED FLOAT GLASS REFLECTIVE GLASS LOW-E GLASS PATTERNED GLASS TEMPERED GLASS LAMINATED GLASS **GREENHOUSE GLASS GLASS FENCING SYSTEM GLASS DOOR** ACID ETCHED GLASS SILKSCREEN PRINTED GLASS ROLLED PRINTED GLASS **INSULATED GLASS EDGE WORK & CORNER WORK** PACKING & LOADING

CERTIFICATE & TEST REPORT





03

09

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### CLEAR FLOAT GLASS LOW IRON FLOAT GLASS

01

### INTRODUCTION

Noval Glass Clear Float Glass is made by high-quality sand, natural ores and chemical materials by mixing them and melting them at high temperature. The molten glass flows into the tin bath where the glass is spread polished and formed on the molten tin. The float glass has smooth surface, excellent optical performance, stable chemical capability, and high mechanism intensity. It is also resistant to acid, alkali and corrosion.

Noval Glass Low Iron Float Glass is also called Extra Clear Glass or Ultra Clear Glass. Its very low iron oxide content gives it optimum clarity. The high transmittance of Low Iron Glass achieves above 91.5%. It has the character of glitter and translucent, elegant and graceful. Low iron glass also has all the processable performances that high quality float glass has, such as predominant physical, mechanical and optical characters.



- 1. Smooth and flat surface and good vision.
- Excellent optical performance.
- 3. Stable chemical properties. Resistant to acid, alkaline and corrosion.
- 4. Flexible size specifications, minimizing cutting loss.
- 5. Substrata for each level of glass processing.
- 6. Applications: architecture, furniture, mirrors, automobiles.

### **SPECIFICATIONS**

Color: Clear, Low Iron (Ultra Clear)

Thickness: 1.8mm - 25mm (Clear).

2.5mm - 19mm (Low Iron).

Regular Sizes: 1220\*915mm, 1830\*1220mm, 2200\*1650mm, 2250 x 1650mm,

2440\*1830mm, 3300\*2140mm, 3300\*2250mm, 3300\*2440mm,

3660\*2140mm, 3660\*2250mm, 3660\*2440mm.

Max Size 4880\*11000mm.

Special customized sizes are also available.



P214472900	Visible	Light		Solar Rac	liant Heat		Shading C	o-efficient	2.0	V-10/10/10/10	Uv Pen-
Thk (mm)	Transmi -ttance (%)	Reflec- tance (%)	Direct Penetrate (%)	Reflec- tance (%)	Absorb (%)	Total Penetrate (%)	Short Wave	Long Wave	Total	U Value (W/M²K)	etration (%)
3	92.0	8	91	8	1	91	1.05	0.01	1.05	5.8	85
3.2	91.8	8	91	8	2	91	1.03	0.01	1.05	5.8	84
4	91.6	8	90	8	2	91	1.03	0.01	1.05	5.8	82
5	91.5	8	90	8	2	90	1.03	0.01	1.03	5.8	81
6	91.4	8	89	8	3	90	1.02	0.01	1.03	5.7	79
8	91.0	8	88	8	4	89	1.01	0.01	1.02	5.7	76
10	91.0	8	88	8	4	89	1.01	0.02	1.02	5.6	74
12	91.0	8	87	8	5	88	1.00	0.02	1.01	5.5	72
15	90.0	8	86	8	6	87	0.99	0.02	1.00	5.5	71
19	90.0	8	84	8	7	86	0.97	0.02	0.99	5.5	70

### PRODUCTION LINE











### INNOVATIVE LEADING IN GLASS

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# TINTED FLOAT GLASS REFLECTIVE GLASS

03

### INTRODUCTION

Noval Glass Tinted Float Glass is produced by the float process with the addition of small quantities of metal oxides to color the normal clear glass mix. The visible light reflectance will be even slightly higher than clear glass. Noval Glass has strict tolerances on its colored glass and ensures through precise quality control that the tinted glass it makes is the same within a batch and across batches-year after year.

Noval Glass Reflective Glass is on-line coated float glass which has been carefully designed to meet the twin requirements of architects, the functional and the aesthetic. It is produced using CVD technology that creates a perfectly uniform layer of metal oxide chemically bonded to the surface of the glass. The coating imparts a "mirror-like" facade to the Reflective Glass, giving it visual appeal while providing functional benefits like solar control and glare reduction. As this hard chemical layer is fully banded to the glass, the glass can be cut, bent, tempered, heat strengthened and laminated without affecting the coating.





### **SPECIFICATIONS**

Color: F Green (Light Green), Dark Green;

Ford Blue (Lake Blue), Dark Blue, Oceanic Blue; Euro Bronze, Golden Bronze (Dark Bronze); Euro Grey (Light Grey), Dark Grey; Black;

Thickness: 3-12mm (Tinted Glass); 3-8mm (Reflective Glass).

Regular Sizes: 2250 x 1650mm, 2440 x 1830mm, 3300 x 2140mm, 3300 x 2250mm,

3300 x 2440mm, 3660 x 2140mm, 3660 x 2250mm, 3660 x 2440mm;

Max Size 4880\*11000mm.

Special customized sizes are also available.

### OPTICAL PARAMETER

	Visible	e Light	Su	Sunlight		Sum of Trans-
Glass	Transmi -ttance (%)	Reflectance (%)	Direct Transmi- ttance (%)	Direct Reflectance (%)	Shading Co-efficient (SC)	mittance of Solar Energy (%)
4mm Euro Bronze Glass	54.20	6.18	59,10	6.20	0.80	69.60
6mm Euro Bronze Glass	45.10	5.90	45.21	5.20	0.70	60.50
4mm Golden Bronze Glass	48.50	6.21	49.82	6.19	0.73	63.30
6mm Golden Bronze Glass	40.90	5.43	42.00	5.43	0.67	58.30
4mm F-Green Glass	79.37	9.37	54.70	9.17	0.72	64.02
6mm F-Green Glass	72.53	8.70	42.19	8.02	0.62	55.04
4mm Euro Grey Glass	56.60	7.73	56.20	9.59	0.76	65.03
6mm Euro Grey Glass	43.98	14.11	43.47	13.20	0.67	54.65
4mm Dark Grey Glass	56.60	7.73	56.20	9.59	0.49	65.03
6mm Dark Grey Glass	21.33	5.62	28.79	7.04	0.56	45.35
4mm Ford Blue Glass	66.11	8.63	62.80	10.15	0.78	69.78
6mm Ford Blue Glass	56.98	7.99	53.94	9.14	0.71	63.47
4mm Dark Blue Glass	50.21	6.74	58.17	9.03	0.75	66.63
6mm Dark Blue Glass	37.21	6.47	46.78	8.11	0.66	58.42
4mm Euro Bronze Ref	29.00	46,44	41,83	33,67	51.62	54.50
6mm Euro Bronze Ref	19.90	46.16	27.94	32.67	50.52	45.40
4mm Golden Bronze Ref	25.90	46.80	35.76	33.41	0.52	45.30
6mm Golden Bronze Ref	18.30	46.02	27.94	32.65	0.46	40.30
4mm F-Green Ref	79.37	9.37	54.70	9.17	0.72	64.02
6mm F-Green Ref	72.53	8.70	42.19	8.02	0.62	55.04
4mm Euro Grey Ref	26.90	19.59	37.38	17.36	0.55	49.05
6mm Euro Grey Ref	19.55	13.99	27.64	12.69	0.48	42.97
4mm Dark Grey Ref	17.96	10.10	30.09	11.30	0.51	45.21
6mm Dark Grey Ref	13,02	6.97	22.70	8,20	0.46	40.53
4mm Ford Blue Ref	66.11	8.63	62.80	10.15	0.78	69.78
6mm Ford Blue Ref	56.98	7.99	53.94	9.14	0.71	63.47
4mm Dark Blue Ref	25.62	13.98	39.36	16.47	0.57	50.76
6mm Dark Blue Ref	13.42	13.68	25.52	16.81	0.45	40,40

### **INNOVATIVE LEADING IN GLASS**



### LOW-E GLASS

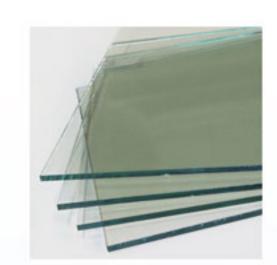


### INTRODUCTION

Noval Glass Low-E Glass (Low Emissivity Glass) coating is applied on a substrate of clear or low iron glass by a pyrolytic process called Chemical Vapor Deposition method.

In winter, the function of the coating layer is to reflect the heat back to the inside of building to prevent heat and energy loss as well as to keep the indoor climate at and even and stable temprature.

In summer, the coating will reduce the re-radiated heat into the building. The total heat gain is reduced and hereby keep the indoor cooler.



THE PLANE

### **FEATURES**

- Online hard coating.
- 2. Stable performance, Unlimited stock time and Long using life.
- 3. Natural and Transparent visual appearance.
- 4. Low light reflection, High light transmission and High solar and hear gain.
- High durability, Easy handling and processing (cutting, edgeworking, laminating, tempering, bending, screen-printing etc.).
- 6. Can be used as single glazing (position on surface #2).
- 7. No edge deletion or special handling for IGU.

### APPLICATION

- 1. Residential and Commercial buildings for window and curtain walls.
- 2. indoor Electric appliances for ovens and refrigerator doors.
- 3. Industrial fields for beverage display and disinfection cabinet glass.

### **SPECIFICATIONS**

Thickness: 3.2mm - 12mm.

Regular Sizes: 1830\*1220mm, 2200\*1650mm, 2250 x 1650mm,

2440\*1830mm, 3300\*2140mm, 3300\*2250mm, 3300\*2440mm,

3660\*2140mm, 3660\*2250mm, 3660\*2440mm;

Special customized sizes are also available.

### DATA OF LOW-E SINGLE GLAZING

	v	isible Ligh	t	Sun	light	U-V	/alue	Solar	efficient
Glass	Transmi -ttance	Reflects	ince (%)	Direct Transmi-	Direct Reflec-	1977		Heat Gain Co- efficient	
	(%)	Ext.	Int.	ttance (%)	tance (%)	Winter	Summer	(SHGC)	
4mm Clear	83.0	10.0	11.0	72	11.0	3.7	2.9	0.75	0.87
5mm Clear	82.5	10.0	11.0	70	11.0	3.7	2.9	0.74	0.85
6mm Clear	82.5	10.0	11.0	70	10.0	3.7	2.9	0.71	0.82
8mm Clear	81.5	10.0	11.0	67	10.0	3.7	2.9	0.71	0.82
4mm Low Iron	84.0	10.5	11.5	75	11.5	3.7	2.9	0.82	0.95
5mm Low Iron	84.0	10.5	11.5	75	11.5	3.7	2.9	0.81	0.94
6mm Low Iron	84.0	10,5	11.5	75	11.5	3.7	2.9	0.80	0.93
8mm Low Iron	83.0	10.5	11.5	72	11.5	3.7	2.9	0.77	0.89

# 06

### DATA OF LOW-E IGU

Glass Type	Area	IGU	U-Value	Tvis (%)	Tsol(%)	SHGC	SC
High Transmit- tance Type	Bitter Cold —	6mm Clear Glass+12A +6mm Clear Low-E Glass	1.9	0.75	0.57	0.70	0.80
	Ditter Cold	6mm Low Iron Glass+12A +6mm Low Iron Low-E Glass	1.9	0.77	0.74	0.77	0.88
Adinerable	Hot	6mm Euro Grey Glass+12A +6mm Low-E Glass	1.9	0.35	0.30	0.42	0.49
Adjustable Shading Type	Summer and Cold	6mm Euro Bronze Glass+12A +6mm Low-E Glass	1.9	0.32	0.33	0.44	0.51
	Winter	6mm Golden Bronze Glass+12A +6mm Low-E Glass	1.9	0.32	0.28	0.40	0.46
High Shading	Hot	6mm Euro Grey Reflective Glass + 12A+6mm Clear Glass	2.7	0.24	0.26	0.36	0.42
Туре	no.	6mm Euro Grey Reflective Glass + 12A+6mm Low-E Glass	1.9	0.23	0.23	0.32	0.37

### **INNOVATIVE LEADING IN GLASS**

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# PATTERNED GLASS

07

### INTRODUCTION

Noval Glass Patterned Glass is a kind of special processed translucent decorative glass with single-sided or double-sided embossed during the production. Its unique Decorativeness, which on one hand lets the light through fully, on the other hand, prevents the perspective effectively, creating an excellent appearance and hidden effects.

### **FEATURES**

- Designs are colorful and original. Some are hazy and quiet, some are beautiful and lively, some are antique and elegant, and some are bold and imaginative.
- The patterns are with strong stereoscopic impression and will never fade, which will suit your various decoration demands.
- 3. The glass can be cut, grinded, drilled, tempered, laminating, screen printing and other reprocessing.

### **APPLICATION**

Noval Glass Patterned Glass is suitable for public and personal spaces requiring both light and intimate, such as offices, conference rooms, hotels, hospitals, playgrounds, gym, and bathroom and so on. Products are also widely used as louver, furniture, desktops, home appliances, bathroom and decoration lighting materials.

### **SPECIFICATIONS**

Color: Clear, Ultra Clear, Bronze, Green, Blue, Amber, Grey.

Thickness: 3-12mm.

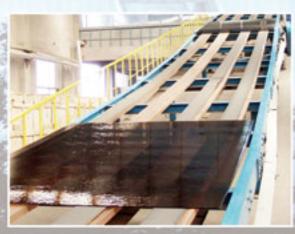
Regular Sizes: 1524 x 1220mm, 1830 x 1220mm, 2000 x 1500mm, 2000 x 1600mm, 2134 x

1830mm, 2440 x 1830mm.

Special customized sizes are also available.







### RECOMANDED PATTERN







MAYFLOWER

MORGON-II







MASTERLITE



MORU

### **TINTED PATTERN**









BRONZE MAYFLOWER

GREEN FLORA

FLORA BLUE KARATACHI

RATACHI AMBER DIAMOND

ASK FOR DETAILS FULL CATALOGUE WHEN NEEDED

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INNOVATIVE LEADING IN GLASS

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## TEMPERED GLASS

09

### INTRODUCTION

Noval Glass Tempered Glass, also known as Toughened Glass, Safety Glass, is a heat toughened safety glass. It under goes a special heat treatment to provide significant increase of resistance to mechanical and thermal stresses than conventional annealed glass. When the glass breaks, it fragments safely into small pieces with dulled edges.

### **FEATURES & PERFORMANCE**

- Good Safety If the glass break, Tempered Glass considerably reduces the risk of injury as it fragments into small pieces with dulled edges..
- Good Impact Resistance -- Tempered Glass is approximately five times more resistant than normal glass. For example, a piece of 8mm toughened glass will be able to withstand a steel ball weighing 500g dropped from a height of 2 meters. For comparison, normal annealed glass 0.4m.
- Good Bending Strength -- Tempered Glass is significantly more resistant to flexural stresses than annealed glass. This resistance is characterized by a bending strength in the region of 120 Mpa.
- Good Thermal Resistance -- Tempered Glass can withstand temperature differences of up to 200 centigrade. For comparison, normal annealed glass around 30 centigrade.

### PRODUCTION PROCEEDING









**TEMPEREDING** 



TESTING







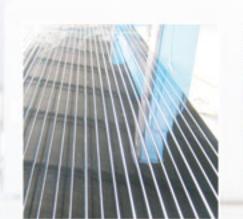


Noval Glass Tempered Glass is the perfect option for most situations which must meet safely requirements and where human contacts are an important consideration.

- 1. Building Glass -- Windows, Curtain Walls, Guardrail, Overhead Glazing, Stair and Floor etc...
- Doors & Partition -- Interior and Exterior Door, Glass Façade and Partition, Shower Enclosure, Phone Booth and Bus Shelters etc...
- Household Articles -- Furniture Parts, Table Tops, Shelves, Chopping Board, Kitchen Splash Back, Home Appliance Panels and Coaster etc...

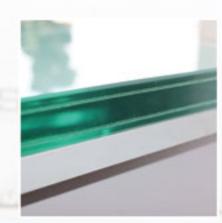
### PROCESSING COMBINATION

Tempering is a basic processing for glass. It is usually combines with other preprocess such as Edge Working, Drilling, Cutting, Screen Printing, Rolling Printing, Insulating, Laminating, Coating Solar Control or Low-E, Sand Blasted or Acid Etching etc...



**APPLICATION** 







Edgework

Sandblasted

Laminated

Rolled Printed

#### MORE INFORMATION & NOTIFICATION

- Processing Sequence -- Tempered Glass cannot be drilled or edgeworked in any manner. Sandblasting
  or other surface treatments should be carried out prior to toughening as per AS1288 1994. Deep sandblasted
  patterns greater than 1mm are not permissible.
- Minimum Edgework Finish -- Minimum edgework finish requrement on Tempered Glass is a rough grinded edge.
- 3. Distortion or Bowing Slight distortion or bowing may occur after toughening but is largely controllable. It will vary with substance, tint, surface treatment, size and shape of the glass.
- 3. Heat-Soak Test To reduce the risk of Tempered Glass spontaneously breaking due to the presence of critical nickel sulphide (NIS) inclusions in the sheets of glass, it is advisable to put the Tempered Glass though an additional heat treatment known as the Heat-soak Test.

#### INNOVATIVE LEADING IN GLASS

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# LAMINATED GLASS

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### INTRODUCTION

Noval Glass Laminated Glass is made up of two or more sheets of glass bonded together with a clear or colored polyvinyl Butyral (PVB) interlayer. After the plastic has been placed between the glass sheets, the whole assembly is subjected to heat and pressure. This results in the complete adhesion of the vinyl and the glass. In the event of breakage, the glass fragments remain bonded to the PVB. If the glass breaks, the fragments of glass are held in place by the PVB interlayer(s). In fully framed installations the broken glass retains residual strength while awaiting replacement.

### **SPECIFICATION**

Color: Clear, Ultra Clear, Milk white, Green, Blue, Bronze, Grey etc...

Thickness: 3+0.38(0.76) +3mm, 4+0.38(0.76) +4mm, 5+0.38(0.76) +5mm,

6+0.76(0.38) +6mm, 8+0.76(0.38) +8mm etc...

Regular Sizes: 2440\*1830mm, 3300\*2140mm, 3300\*2250mm, 3300\*2440mm,

3660\*2140mm, 3660\*2250mm, 3660\*2440mm.

Noval Glass offers customized laminated glass, sizes, thickness, layers and all others. We do accordingly.

### VARIOUD COLOR OPTION



### **FURTHER PROCESSING**

- Edge Worked
   Grinded, Polished, Flat Edge, Round Edge all available.
- Sandblasted or Acid Etched
   These processing can be done both before and after laminating.
- Heat-Strengthened, Tempered or Heat Soaked
   The components must be heat-treated before laminating.
- 4. Assembled Into Insulated-Glazing-Unit
- Coated a Solar Control Coating, or a Low-Emissivity Coating These processing can be done both before and after laminating.

### PERFORMANCE & APPLICATION

### 1. Protection against Injury

If the glass breaks, the fragments of glass remain bonded to the interlayer. This safety feature, which is often mandatory (for example: in public buildings, schools, crèches, etc), is also ideal for residential buildings, where it protects the occupants.



Handrail & Stair



Canopy

# 2. Protection against Noise Silence laminated acoustic and safety glass can be used in applications where high acoustic insulation is essential (e. g. interpreting booths, residential areas in close proximity to airport, towns or city centers, railway lines

Phone Booth



Airport

### 3. Protection against Vandalism & Burglary

or motorways ,etc), without compromising the safety

performance.

Noval Laminated glass, installed in an appropriate frame, can be an important deterrent to ensure the security of property and occupants in a building.

Combined with additional protection, if required, this glass can be used in shop windows and doors, entrance doors and windows in offices appropriate to the specified level of protection.



Bank



Show Case

### INNOVATIVE LEADING IN GLASS

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Tel: +86-532-82751111 Fax: +86-532-82755222 Web: www.novalglass.com NOVAL GLASS 诺晶玻璃 KINOVAL GLASS 诺晶玻璃 NOVAL GLASS ·



### GREENHOUSE GLASS

GLASS FENCING SYSTEM



13

### INTRODUCTION

**Noval Glass Greenhouse Glass** is especially used to build Greenhouse. Greenhouses are used extensively by botanists, commercial plant growers, and dedicated gardeners. Particularly in cool climates, greenhouses are useful for growing and propagating plants because they both allow sunlight to enter and prevent heat from escaping.

The whole idea of a greenhouse is to let light and heat in. Thus in turn heats up the floor, and so the plants and the soil are at a much higher temperature than outside. The glass has to be well-made and well-fitted so that it does not have gaps between the frame and the edge.

### **SPECIFICATIONS**

Clear Float Glass, Patterned Glass, Low Iron Float Glass
Tempered Glass is the most commonly used for Greenhouse.
Annealed Glass, Laminated Glass and Insulated Glass also available.
Customized Size & Shape.



Clear Float Glass



Patterned Glass



Low Iron Float Glass

### **PACK & LOAD**





### INTRODUCTION

Noval Glass Glass Fencing System supplies solutions for both Glass and Hardware. Teh fencing system provides safety, beauty and strength of a traditional fence, whilst retaining a crystal clear view.

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### **SPECIFICATION**

Glass Type: Tempered Glass, Tempered Laminated Glass.

Glass Thickness: 10mm, 12mm, (5+0.76+5)mm, (6+0.76+6)mm etc...

Regular Panel Size: 1220mm (4 Feet) Height \* 1220 to 1530mm (4 to 5 Feet) Length;

Size can be as per customer's request.

Glass Color: Clear, Ultra Clear, Green, Blue, Bronze, Grey, Frosted etc...

Hardware Material: 304, 316 or 2205 Stainless Steel.

Harware Type: Spigot , Pillar, Hanger, Lock, Accessories.

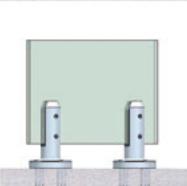
Surface Finish: Mirror Polished, Satin Hair Drilled.

Installation: Concrete, Wood Floor, Steel.

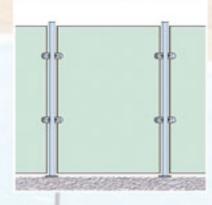
Kindly advise the base you will install the fence on. Hardware style, screws and accesso-

ries may differ to different bases.

### SPIGOT SYSTEM



PILLAR SYSTEM







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INNOVATIVE LEADING IN GLASS



### GLASS DOOR





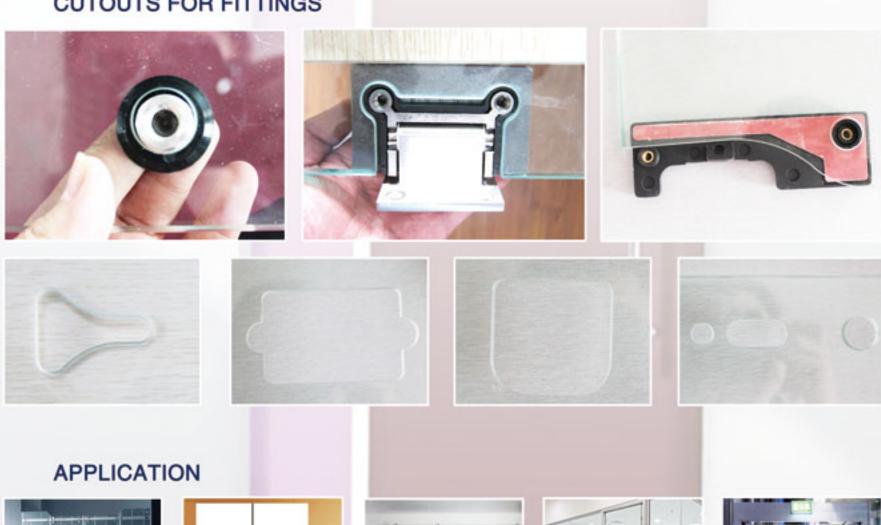
### INTRODUCTION

Noval Glass Glass Door is made of float glass, patterned glass as well as frosted glass, painted glass, mirror etc....mainly used for bedroom, kitchen, office etc...

### **SPECIFICATIONS**

- 1. Safety Solution Tempered Glass, Laminated Glass, Safety Back Filmed.
- 2. Color Solution -- Clear, Ultra Clear, Gray, Bronze, Green, Blue, Milky White, White, Black, Red, Coffee and various colors are available
- 3. Pattern Solution -- Patterned Glass, Acid Etched & Sandblasted Glass, Painted & Slikscreen Printed Glass.

### **CUTOUTS FOR FITTINGS**















### INTRODUCTION

Noval Glass Acid Etched Glass, also called Frosted Glass or Non-Fingerprint Glass, has a uniformly smooth, silky surface. Acid Etched Glass is translucent and matte in appearance. Acid etched glass transmits levels of diffused light, whilst providing privacy from adjacent glass. Noval Glass Acid Etched Glass is produced by acid etched one face or double face of the clear glass, ultra clear, tinted glass, clear silver mirror or ultra clear silver mirror etc...

### **FEATURES**

Thickness: 3mm - 12mm.

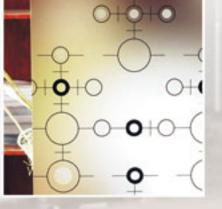
Color Clear, Ultra Clear, Bronze, Grey, Blue, Green etc... Regular Sizes: 1830\*1220mm, 2440\*1830mm, 3300\*2140mm, 3300\*2250mm, 3660\*2140mm, 3660\*2250mm.

























ASK FOR DETAILS FULL CATALOGUE WHEN NEEDED

### INNOVATIVE LEADING IN GLASS

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### SILKSCREEN PRINTED GLASS





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### INTRODUCTION

Noval Glass Silkscreen Printed Glass is an opaque or translucent glass, patterned with color ceramic enamel. The pattern is applied using a textile screen . The enamels used do not contain any dangerous metals such as lead, cadmium, mercury or chromium VI. The enamel is fired at a very high temperature, so that it fuses to the surface of the glass, giving it exceptional durability. Depending on the pattern and the color, the glass can be made transparent, translucent or opaque.

### **FEATURES**

- 1. Smooth and Clear, Colorful and Vivid Pattern.
- 2. Pattern on Temeored Glass is stable and hard to remove.
- Various patterend and Customized designs are available.

### **APPLICATION**

- 1. Interior Facade, Door and Partition.
- 2. Bath Enclosure and Shower Screen.
- 3. Microwave Oven Door, Gas Stove Top, Chop Board and Cabinet Door.
- 4. Home Appliance Cover, Refrigerator Panel and Electric Control Panel.

### **PRODUCTS**



Schindler



Control Panel Elevator Glass

Stove Glass Top

### INTRODUCTION

Noval Glass Rolled Printed Glass is similar to Silkscreen printed Glass. The Rolled printed Glass is applied enamels to the whole glass surface by roller printing machine. Nornally Rolled Printed Glass is temepered.

# 18

### **FEATURES**

- 1. The printed surface is smooth, even and easy cleaning.
- 2. After tempering, the enamel surface is stable and hard, unable to rubbed off.
- 3. Various colors are available.

### **APPLICATION**

- 1. Furniture and Closet door panel.
- 2. Kitchen Splashback.

### **VARIOUS COLOR**















### **INNOVATIVE LEADING IN GLASS**

NOVAL GLASS 诺晶玻璃 NOVAL GLASS :



### INSULATED GLASS

19

### INTRODUCTION

Noval Glass Insulated Glass, also known as Double Glazing Glass and Hollow Glass, is made by two or more layers of Low-E Glass, Clear or Tinted Reflective Glass or Normal Clear or Tinted Float Glass. The space between the glasses is field with air or argon and sealed with sealants and aluminum spacers. Normally, the glass layer is tempered or laminated to ensure safety.

### **APPLICATION**

Insulated Glass is widely used for Windows and Doors, Facades and Curtain Walls, Refrigerator as well as places where the constant temperature and moisture, sound and heat insulating are needed.

### **SPECIFICATION**

Min Size: 300mm\*300mm.

Spacer: 6mm, 9mm, 12mm, 15mm, 19mm.

Gas Filling: Air, Argon.

Thickness: Overall: 12-60mm. Raw Glass: 3-12mm

Glass Type: Float Glass, Low-E Glass, Tinted Glass, Reflective Glass, Frosted Glass,

Laminated Glass, Tempered Glass etc...

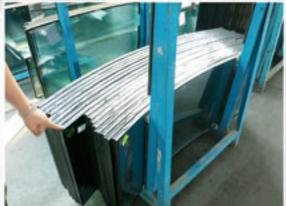
Color Option: Clear, Ultra Clear, Ford Blue, Dark Blue, Ocean Blue, Euro Gray, Dark Gray,

French Green, Dark Green, Euro Bronze, Golden Bronze etc...

Shapes: Square, Round, Triangle, Bent etc...

### SPECIAL SHAPES







Bent

Irregular

### PRODUCTION PROCEEDING







LAMINATING



TEMPERING

INSULATING



PACKING







### **FEATURES & PERFORMANCE**

### 1. Heat-Insulated Performance

Heat insulated performance of insulated glass is the most ideal among all processed glass products available in market. Heat transfer coefficient U value can be effectively reduced by insulatied glass.

#### 2. Sound-Insulated Performance

In city all kind of noises can be heard. The frequency of these noises is usually between 1000-2000 Hz. The dry air in the insulating glass can efficiently prevent the dissemination of the sound wave.

#### 3. Energy Conservation Efficiency

Usually insulated glass is combined with Low-E and Reflective Glass. High reflectivity of far and medium infrared ray with low U value keeps heat radiation from passing through the glass. Low-E glass can reflect most of the heat back. So the temperature of the room will be quite stable.

### 4. Guards against the Condensation Performance

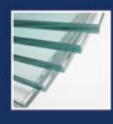
There is no transmitter between two pieces of glass thus the middle of the two glass air is dry and stable. So the glass won't fog.

### **INNOVATIVE LEADING IN GLASS**

Round

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# EDGE WORK & CORNER WORK

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### INTRODUCTION

Noval Glass offers all kinds of glass edgework including Grinded, Polished, and Beveled etc...

Here comes confusion that many customers may come front: There are so many kinds of edgework and which one fits me the best and which one is the most popular?

Here below some tips that may help you to make some decision.

### According to Glass Thickness

Normally used glass thickness is from 3mm to 8mm.

And with many years glass processing experience from both our understanding for glass application and customers requirements, we recommand as the below table the edgework.

Glass Thickness:	Below 3mm	4-6mm	Over 8mm
Edge Shape:	Pencil Edge	Pencil Edge & Flat Edge	Flat Edge

### According to Glass Usage

All Grinded Edge is in consideration of Safety more than Aesthetics.

Grinding makes glass not sharp so it keeps people safe. On one hand it is safe for the worker to handle and assemble, on the other hand, it is safe for the end consumer to use. Also it looks not bad.

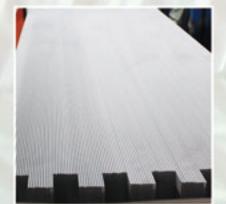
So if the glass is used in a frame or somewhere needs low aesthetic requirement such as window, framed door and glass shelf etc, grinded edge is an excellent choice for you

### All Polished and Beveled edge is in consideration of both Safety and Aesthetics.

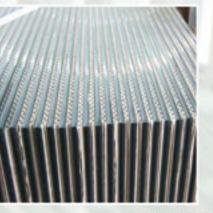
Polishing makes the glass brighter than grinded, so it looks much better than grinded.

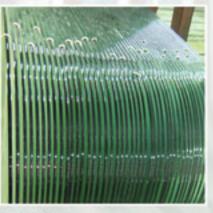
So if the glass is used for table top, glass door and guardrail etc. polished edge is high recommended

### **EDGE WORK**



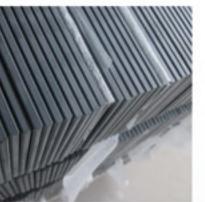




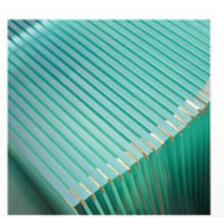


Pencil Polished Edge







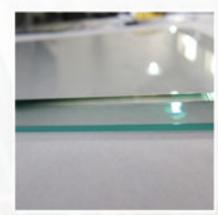


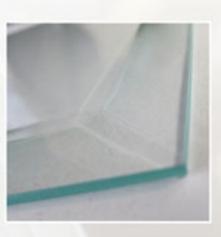
Flat Grinded Edge

Flat Polished Edge









Flat Bright Polished Edge

Beveled Edge

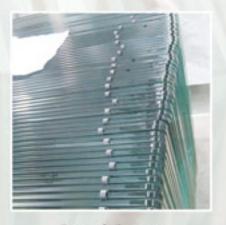
### **CORNER WORK**

Wherever the glass corners are exposed to the end consumer needs a safety corner.

Round and Cut corners is improved safety corner. They offer not only the function of safety but also aesthetics.









Straight Corner

Safety Corner

Round Corner

Cut Corner

### INNOVATIVE LEADING IN GLASS

Pencil Grinded Edge

NOVAL GLASS 诺晶玻璃 诺晶玻璃 NOVAL GLASS®



### PACKING & LOADING

# CERTIFICATE & TEST REPORT



### **INNER PACKING**









### **OUTER PACKING**









### LOADING





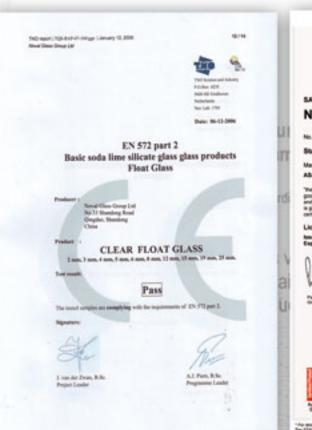














The certification information can be verified on the web site of Certification and Accreditation



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