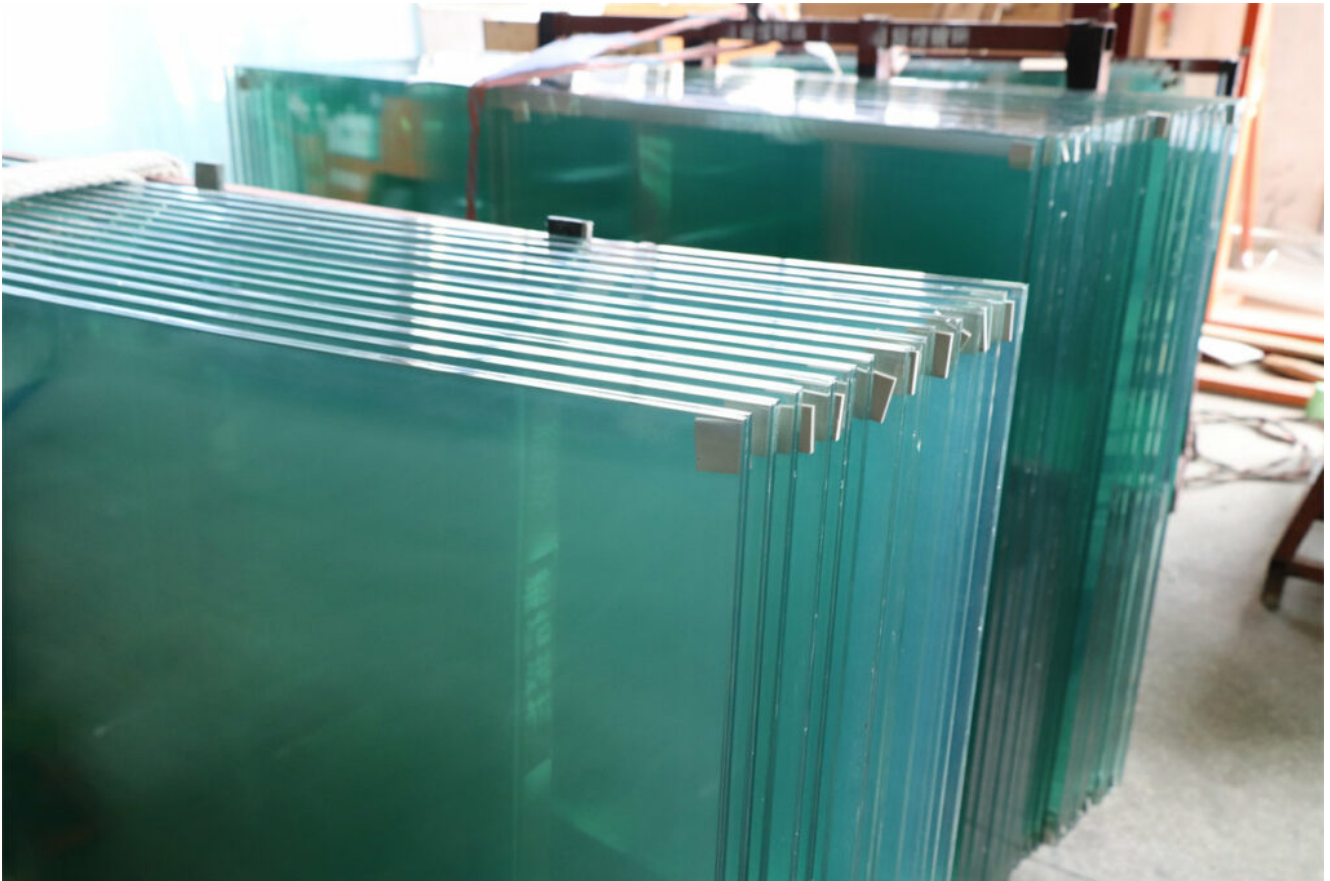
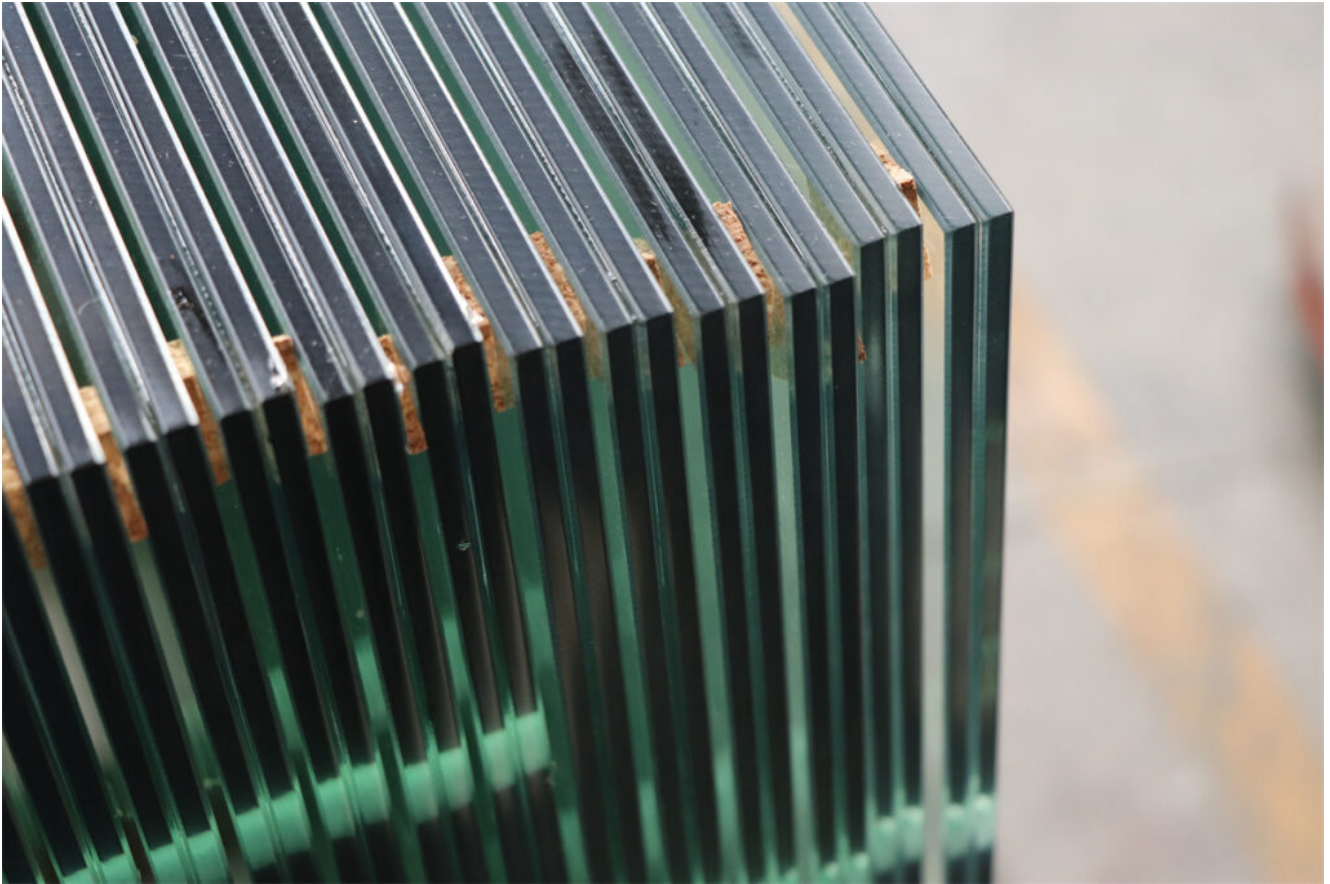


**Hot Selling EN12543 High-Safety 664 VSG 13.52mm Laminated Glass for Balustrade**



**What is EN12543 664 VSG 13.52mm laminated glass?**



664 VSG, also called 6mm+1.52PVB+6mm laminated glass, is a hot-selling item worldwide. Using two panels of [6mm toughened glass](#) for lamination, they become a very strong combination and applicable in the modern building.

This item is often popular in European areas, and widely used in balustrades, railings, and fencing, because it has a very good safety performance,

The 13.52mm laminated glass also needs to comply the standards like EN12543, or SGCC ANSI – Z97.1 when exported to Europe or the US/Canada, this is a mandatory requirement for safety glass. If the supplier cannot provide these certificates, then you need to consider them carefully.

## 2- Why use 664 VSG glass for glass railing?

### Tempered Glass Characteristics

[13.52mm Laminated tempered glass](#) possesses the characteristics of tempered glass, meaning it shatters into small particles when broken, which prevents injury to people.

*Here is a break testing showing monolithic glass and laminated glass*

## Safety Glass Characteristics

When 664 VSG laminated glass breaks, the PVB interlayer holds the fragments together, preventing them from falling. This makes it very safe for use in railings or other buildings like [facades](#).

## Nice View When Applicate in Balustrade

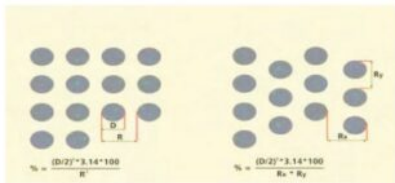
Compared with other materials, glass has a better vision and decorative effect. The normal transmittance of 664 VSG can reach 86%. If [ultra-clear glass](#) is used, the luster will be better.



# Bird Friendly Protection

Regarding the protection of birds, 66.4 laminated glass can be processed when used for railings, such as arranging some [ceramic fritted patterns on glass](#), making high-transmittance and low-reflection glass, or more details, to protect more bird activities.

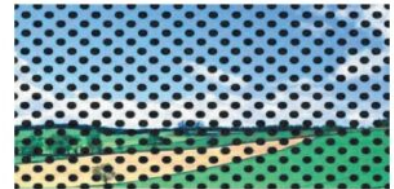
## Design solutions with glass



Calculation of the coverage afforded with a dot grid



Variations on a theme are permitted! Small breaks reduce the severity of vertical lines



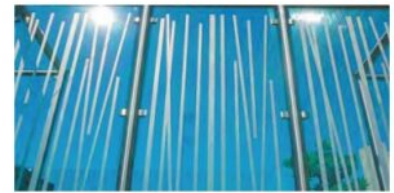
Dot pattern with 27% coverage,  $\varnothing$  7,5 mm



Horizontal black lines, 2 mm in diameter and with a 28 mm interval had very good Flight Tunnel test results



Linear patterns are established prevention, crystal. Colored film contrasts well against most backgrounds



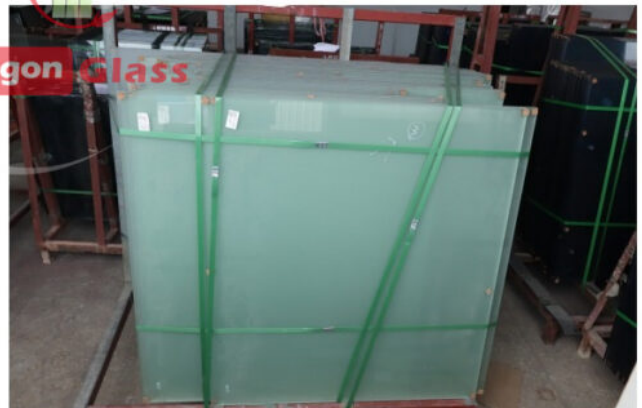
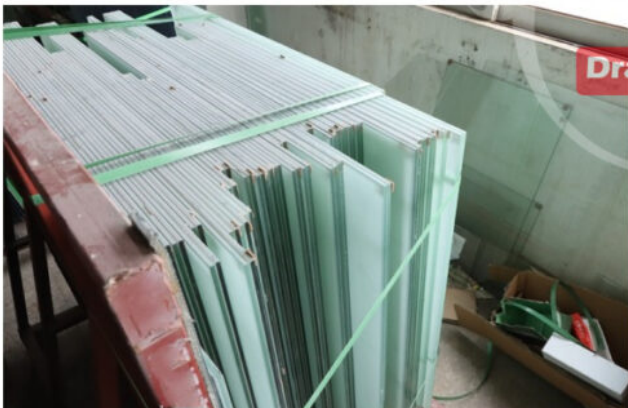
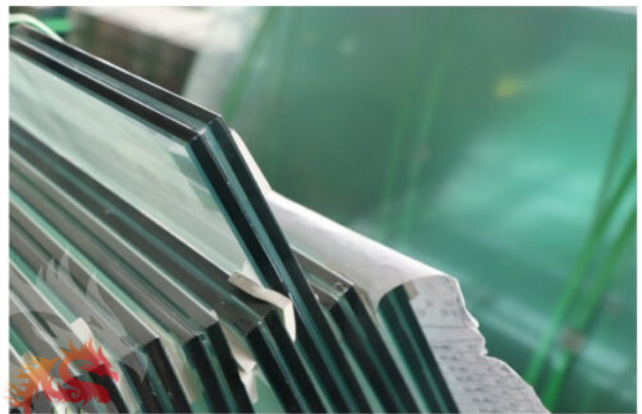
It is not necessary to make the lines strictly vertical

## Other Colors Available

The PVB color for 66.4 VSG glass can be customized anytime for your projects. We support [RAL/Panton color](#), or Vanceva glass number to meet your requirements.



*Our stock PVB color VSG for reference*



*Different colors 66.4 vsg glass, 13.52mm laminated glass*

### 3- Specification of 664 VSG laminated glass

<b>Product name</b>	664 VSG glass, 13.52mm toughened laminated glass, 6+6mm laminated tempered glass
<b>Thickness</b>	6mm tempered glass + 1.52 PVB + 6mm toughened glass – 1/2 thick
<b>Size range</b>	Customized, for railing we suggest the size less than around 1000x2000mm
<b>Color choice</b>	Normal clear, ultra clear, or other PVB color, like red, yellow, blue, pink, green
<b>Shape choice</b>	Shaped, curved, flat
<b>Customized</b>	Polished edge, drill holes, cutout, cut notches, safety corner, etc.
<b>Delivery time</b>	around 15-20 days
<b>Trade term</b>	EXW, FOB, CIF, DDP, DDU

### 4-Quality control for 13.52mm tempered laminated glass

Nowadays, toughened laminated glass is widely used in construction, and controlling the quality of glass railings is very important. The toughened laminated glass produced by [Dragon Glass](#) meets the following standards:

- Subject to **BS standard**
- Subject to **SGCC-ANSI Z97.1 standard**
- Subject to **ASTM C1172 standard**
- Subject to **CE- EN12543, EN14449 standard**
- Subject to the **ISO 9001 standard**
- Subject to the **AS/NZS 2208:1996 standard**



Certificate NO.: LBTC2104201395

### Declaration of Conformity

The following product has been assessed by us with the listing standards and found in conformity with the EC Council Regulation of (EU) No 305/2011. It is possible to use **CE** marking to demonstrate the compliance with this CPR Regulation.

**Report No. :** LBTR2104201395

**Applicant :** Shenzhen Dragon Glass Co., Ltd  
**Address :** C108, Yunhai enterprise headquarters base No. 42 Caiyun Road, Jixiang community, Longcheng street, Longgang District, Shenzhen City, China



**Manufacturer :** Shenzhen Dragon Glass Co., Ltd  
**Address :** Yunhai enterprise headquarters base No. 42 Caiyun Road, Jixiang community, Longcheng street, Longgang District, Shenzhen City, China

**Product Name :** Tempered glass  
**Trade Name :** N/A  
**Model No. :** 4mm, 5mm, 6mm, 8mm, 10mm, 12mm, 15mm, 19mm.

**EC Directives :** CPR Regulation (EU) No 305/2011  
**Test Standards :** EN 12150-1:2015  
**EN 12150-2:2004**

The referred test report(s) show that the product complies with the essential requirements in the above listed standards. The applicant is authorized to use this certificate in connection with the EC declaration of CPR conformity according to the Regulation.

The CE marking as shown below can be affixed on the equipment after the preparation of the necessary technical documentation as well as the conformity declaration by the manufacturer. Whereas the Manufacturer is responsible for the certification of the product(s) and not exempted from performing all the necessary activities before placing the product(s) on the market. The Manufacturer is also responsible for the internal production control to ensure the product(s) are in compliance with the essential requirements of the above mentioned Regulation(s).

Date of Issue: Apr 25, 2021

This statement is based on a single evaluation of the sample(s) of above mentioned product. It does not imply an assessment of the whole production.

LABTEST TECHNOLOGY LABORATORY LTD  
 Minhua Pukyo Bio Park, Jinxu Road, Pingshan, Shenzhen, CHINA. <http://www.labtest.com>

Certificate NO.: LBTC2104201405

### Declaration of Conformity

The following product has been assessed by us with the listing standards and found in conformity with the EC Council Regulation of (EU) No 305/2011. It is possible to use **CE** marking to demonstrate the compliance with this CPR Regulation.

**Report No. :** LBTR2104201405

**Applicant :** Shenzhen Dragon Glass Co., Ltd  
**Address :** C108, Yunhai enterprise headquarters base No. 42 Caiyun Road, Jixiang community, Longcheng street, Longgang District, Shenzhen City, China



**Manufacturer :** Shenzhen Dragon Glass Co., Ltd  
**Address :** Yunhai enterprise headquarters base No. 42 Caiyun Road, Jixiang community, Longcheng street, Longgang District, Shenzhen City, China

**Product Name :** Laminated (Safety) Glass  
**Trade Name :** N/A  
**Model No. :** 3mm+0.76PVB+3mm, 4mm+0.76PVB+4mm, 6mm+1.52PVB+6mm, 8mm+1.52PVB+8mm, 10mm+1.52PVB+10mm, 12mm+1.52PVB+12mm, 15mm+1.90PVB+15mm, 19mm+3.04PVB+19mm.

**EC Directives :** CPR Regulation (EU) No 305/2011  
**Test Standards :** EN ISO 12543-3:2011  
**EN ISO 12543-3:2011**

The referred test report(s) show that the product complies with the essential requirements in the above listed standards. The applicant is authorized to use this certificate in connection with the EC declaration of CPR conformity according to the Regulation.

The CE marking as shown below can be affixed on the equipment after the preparation of the necessary technical documentation as well as the conformity declaration by the manufacturer. Whereas the Manufacturer is responsible for the certification of the product(s) and not exempted from performing all the necessary activities before placing the product(s) on the market. The Manufacturer is also responsible for the internal production control to ensure the product(s) are in compliance with the essential requirements of the above mentioned Regulation(s).

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LABTEST TECHNOLOGY LABORATORY LTD  
 Minhua Pukyo Bio Park, Jinxu Road, Pingshan, Shenzhen, CHINA. <http://www.labtest.com>



Administrative Office, AMS, Inc.  
 205 West Main Street, PO Box 730  
 Sacketts Harbor, NY 13655  
 Phone: (315)646-2234  
 E-mail: staff@amsccf.com

safety glazing certification council

### ACKNOWLEDGEMENT OF CERTIFICATION

THIS IS TO ACKNOWLEDGE THAT AS OF THIS DATE  
 Shenzhen Dragon Glass Co., Limited  
 Shenzhen, Guangdong

IS A CURRENT LICENSEE AND HAS MET ALL GUIDELINES AND REQUIREMENTS FOR THE SGCC® CERTIFICATION PROGRAM AND AS SUCH IS ELIGIBLE TO LABEL THE BELOW INDICATED PRODUCT(S) AS SGCC® CERTIFIED. REPRESENTATION SAMPLES OF THE BELOW PRODUCTS HAVE BEEN FOUND TO BE IN COMPLIANCE WITH ANSI Z97.1-2009 OR 2015 AS INDICATED, CPSC 16 CFR 1201 STANDARDS, OR BOTH STANDARDS, KNOWN AS COMPOSITE CERTIFICATION (COMP), OR BOTH STANDARDS WITH CAN/CGSB 12.1 KNOWN AS COMP+CAN.

SGCC#IN	MM	Attributes	INT	Type Code	Max Size	ANSI Class	Test Std	Year	
4303	5/32	4		TTG	U	A	COMP+CAN	2009	
4304	3/16	5		TTG	U	A	COMP+CAN	2009	
4305	1/4	6		TTG	U	A	COMP+CAN	2009	
4306	5/16	8		TTG	U	A	COMP+CAN	2009	
4307	3/8	10		TTG	U	A	COMP+CAN	2009	
4308	1/2	12		TTG	U	A	COMP+CAN	2009	
4309	*	15	(3)	TTG	U	A	COMP+CAN	2009	
4310	3/4	19		TTG	U	A	COMP+CAN	2009	
4312	(H)	8-16+	(H)(A)	(030)	LTG	U	A	COMP+CAN	2009
4575	(H)	10-16+	(H)(A)	(060)	LTG	U	A	COMP+CAN	2009
5052	1/4	6		TBG	U	A	COMP+CAN	2009	
5053	5/16	8		TBG	U	A	COMP+CAN	2009	
5054	3/8	10		TBG	U	A	COMP+CAN	2009	
5055	1/2	12		TBG	U	A	COMP+CAN	2009	

THIS SGCC® PROGRAM CERTIFICATION IS CURRENT AND IN FULL EFFECT AS OF THIS ISSUE DATE. CERTIFICATION IN THE SGCC® PROGRAM IS SUBJECT TO SEMI-ANNUAL RENEWAL. PLEASE CHECK THE SGCC WEBSITE AT WWW.SGCC.ORG OR THIS OFFICE FOR MOST CURRENT INFORMATION.

Thursdays, July 14, 2019  
DATE OF ISSUE

1.15  
CERTIFICATION PERIOD



ADMINISTRATIVE MANAGER

NS-03 Last Revised By: KJ-0111 Last Approved By: KJ-0111

### SCHEDULE TO STANDARDSMARK LICENCE

## Dragon Glass

SAI Global hereby grants  
 Shenzhen Dragon Glass Co., Ltd.

Yunhai enterprise headquarters base, No. 42 Caiyun Road, Jixiang community, Longcheng street, Longgang District, Shenzhen, Guangdong, China, 518172

**StandardsMark Licence**

Manufactured to AS/NZS 2208:1996 - Safety glazing materials in buildings

Model identification of the goods on which the STANDARDSMARK may be used:

Description	Type of Safety Glass	Glass Thickness Range (mm)	Contours	Grade	Fumace / Laminating Line	Maximum Loading / Laminated Size	Interlayer / Organic Film Manufacture	Interlayer / Organic Film Thickness	Interlayer / Organic Film Thickness	Date Endorsed
Fish-Plan	Heat Strengthened Laminated	10 - 24	Clear	A	Laminated Line 1	2440mm x 8000mm	Kingshield Trefoil	Clear PVB	0.76mm / 1.52mm	8 Dec 2009
Fish-Plan	Laminated	8 - 18	Clear	A	Laminated Line 1	2440mm x 8000mm	Kingshield Trefoil	Clear PVB	0.38mm / 1.52mm	8 Dec 2009
Fish-Plan	Toughened	5 - 19	Clear	A	Fumace 1	2440mm x 8000mm				8 Dec 2009
Fish-Plan	Toughened Laminated	10 - 30	Clear	A	Laminated Line 1	2440mm x 8000mm	Kingshield Trefoil	Clear PVB	1.14mm / 2.28mm	2009


End of Record

Certificate No: SSM41413

Issued Date: 14 December 2020

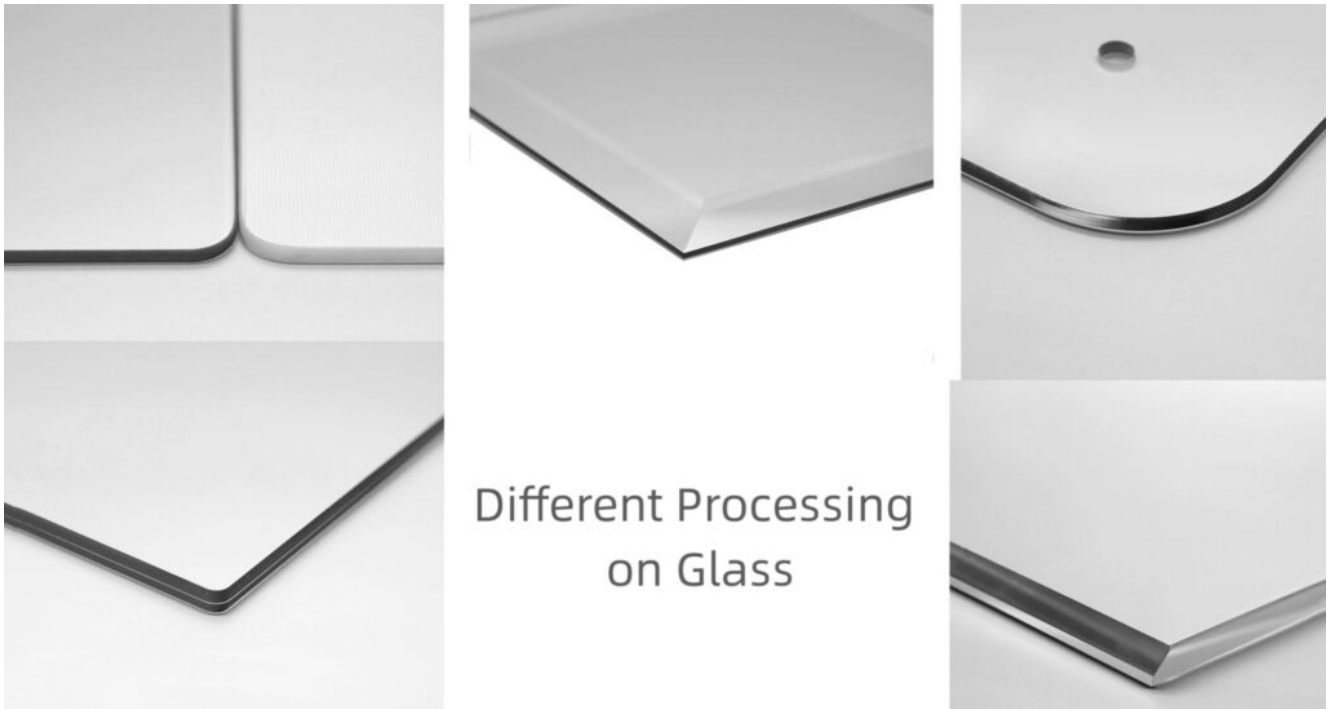
This schedule supersedes all previously issued schedules

\* For details of manufacture, refer to the licensee  
 The STANDARDSMARK is a registered certification trademark of SAI Global Pty Limited (A.C.N. 109 044 942) and is issued under license by SAI Global Certification Services Pty Limited (A.C.N. 108 716 697) (SAI Global) Level 7 Suite 1.05, 41 Casson Street, Sydney NSW 2000 Australia. This certificate covers the property of SAI Global and must be returned to SAI Global upon request. Refer to www.sai-global.com for the list of product models.



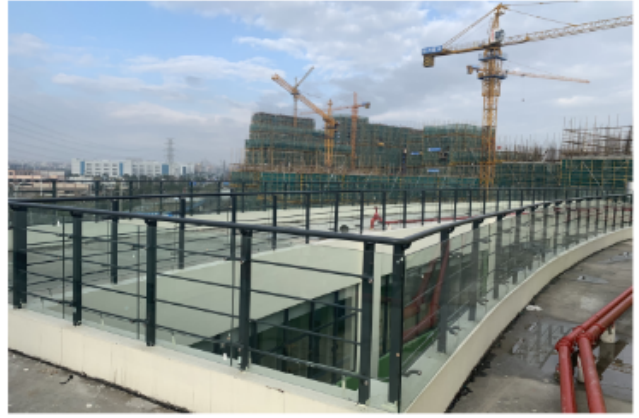
Processing notice

All processing such as polished edges, rounded corners, drilling, notches, and grooves must be completed before tempering and laminating.



## 5- Applications

Besides railing, they still can be used for balustrades, terraces, balconies, swimming pool fences, guillotine glass, and so on.



*Different glass railing projects*

## 6- Processing details for 664 VSG glass

## Cutting line

[Dragon Glass group](#) has over 7 cutting lines, including Bottero, Lisec auto cutting line, CNC cutting line, and so on, according to the customer's CAD drawing, our professional team will try our best to help you with your glass sizes and shapes.



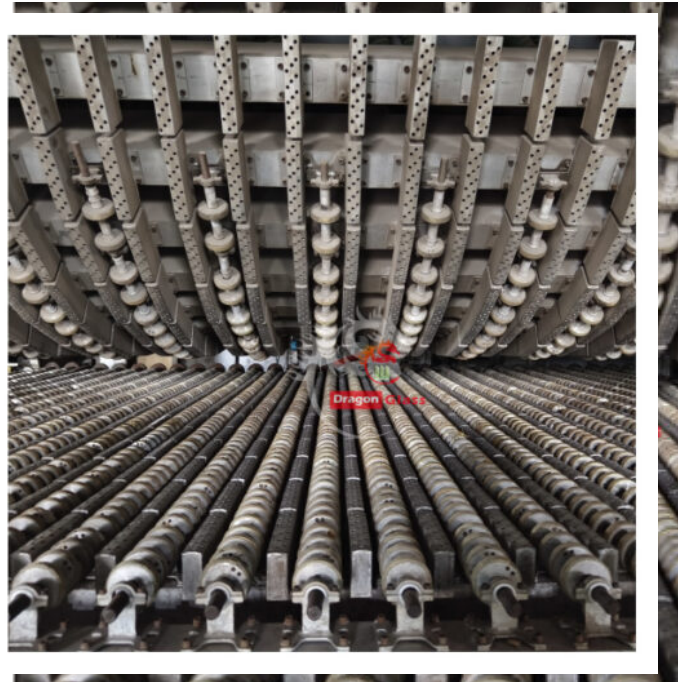
## Edging line

Support over 12 types of edge polishing, including Flat polished, beveling, and round edge, no matter whether building glass, or [furniture glass](#) edges or if you have other glass requirements, kindly [contact our team](#).



## **Tempering & bending processing line**

Besides flat toughened glass, we also can curve the glass, to ensure safety and durability, you will get the very nice quality [curved toughened glass](#).



## Pre-laminating line

The professional workers will combine two pieces of 6mm toughened glass (1/4 toughened glass) with interlayers 1.52 PVB(0.06"), and make a pre-laminate before high temperature and pressure.



## Autoclave laminating Line

All the laminated glass will be moved to the Autoclave from Dragon Glass, and after hours of high temperature and pressure, which is cooling, will be moved to the inspection room for our QA & QC checking.



## 7. Packing and Delivery

Strict inspection for laminated glass before delivery





***Laminated glass inspection by flashlight in Dragon Glass***



## ***Safety packing***

664 VSG glass is a nice option for balustrade projects worldwide, it is extremely cost-effective and for railing projects, the size variations are small, so production time can be faster.

Please don't miss this opportunity to place your order, we can deliver it very soon to your hand. [Contact us now!](#)