



GUNjGLASS
www.gunjglass.com

PROCESSED GLASS CATALOGUE

HELPING YOU
**BUILD A CLEAR
VISION**



“Quality is never an accident. It is always the result of intellegent effort”

John Ruskin

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INTRODUCTION

Since our inception in 1978, we have expanded our operations to two manufacturing plant units, Gunj Glass Work Ltd & Ali Glass Industries (Pvt) Ltd.

Our company is bolstered by the belief in high-quality products and providing a diversified range of products for our customers to choose from. We try to cater to all your glass needs ranging from the beautiful glass office tables to architectural safety glass windows used in your residence or office, not to forget the tumbler used for drinking water.

We are pioneer in glass services (tempering and double glazing) with an experience of more than a decade. We were first in Pakistan to introduce Guardian Glass, Asahi Glaverbal Glass (AGC) and Pilkington. We have processed substantial variety of coated glass from the above said manufacturers i.e, single silver, double silver, low E and solar control glass. Our furnace is also capable to process triple silver glass.

What sets us aside in the industry is; the use of German machinery powered by Bystronic, Bottero, Bavelloni, and Siemens; and having the glass processing facility controlled and monitored as per the European standards. Our expertise in procurement, production, and supply chain has lead us to become leaders in the glass industry throughout Pakistan.

We are providing following services at national level;

- Tempering
- Double glazing
- Edging
- Sand Blasting
- Auto Glass
- Bullet Resistance Glass

At Gunj Glass we aim to provide superior quality products with an extraordinary yield of design to give our customers a value for money that they desire.



TEMPERED GLASS

Toughened or tempered glass is a type of safety glass processed by controlled thermal treatments to increase its strength compared with normal glass. When broken, it crumbles into small granular chunks instead of splintering into jagged shards as raw glass. The granular chunks are less likely to cause injury.

Typical applications of toughened glass include:

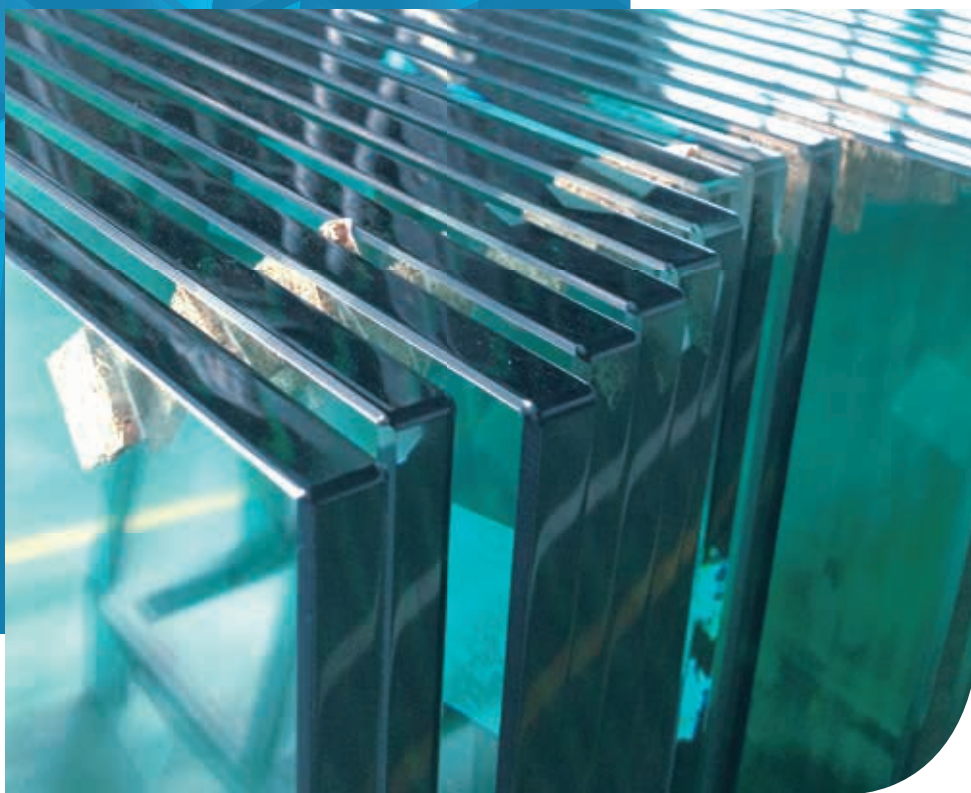
- Balcony doors
- Athletic facilities
- Swimming pools
- Facades
- Shower doors and bathroom areas
- Exhibition areas and displays

Our tempering furnace consists of state of art technology with force convection capability. We can process all sorts of coated glass from 4mm to 19mm, i.e. soft coat and hard coat Float Glass i.e. Low E, Solar Control, single silver, double silver and triple Silver. We can also do Bend Tempered, used in balconies corners and railings.

Max Sizes:

- Tempered: 96" X 204"
- Bend Tempered: 96" X 98"





EDGING

We offer vast edging varieties; it merely changes the exterior of the glass. Includes, Flat Edge, OG, Triple OG, Pencil Edge, Round Edge, Bevel and Auto Edge.





Bathroom Window Before Window Frosting



Bathroom Window After Window Frosting



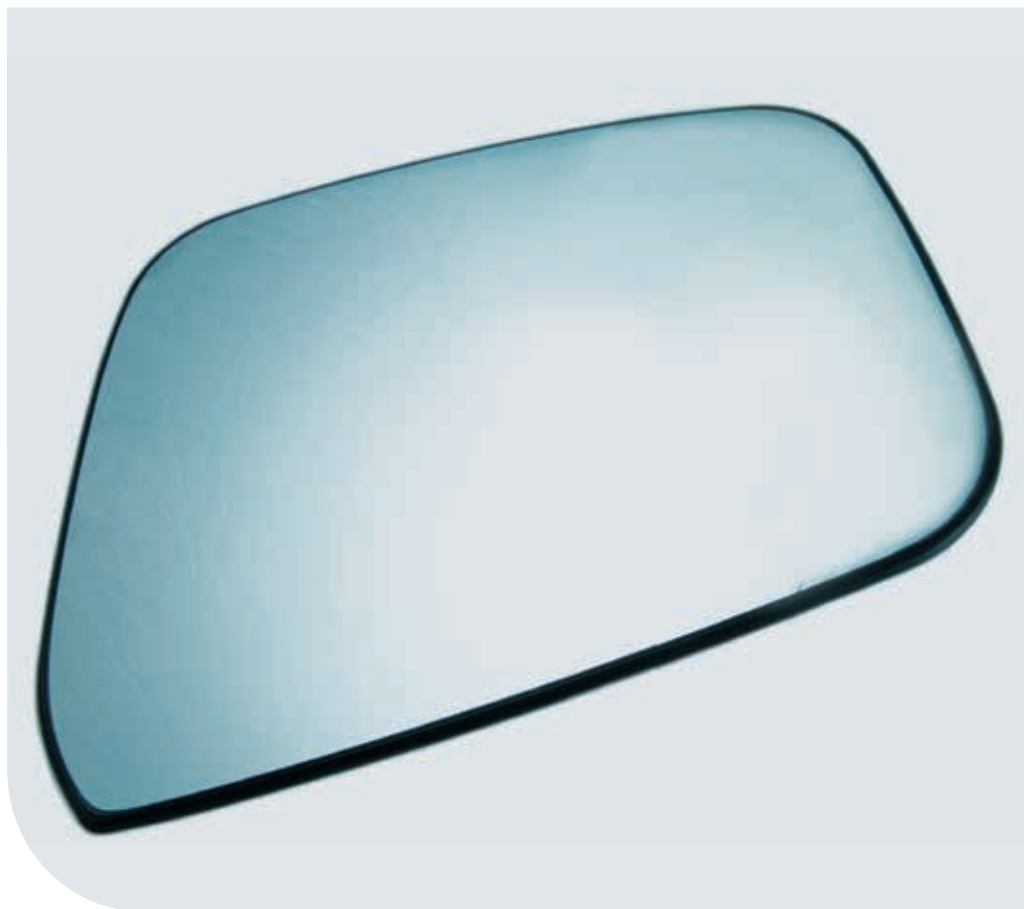
SAND BLASTING

We are also designing the glass with sand blasting or frosting technology. Any logo or design can be engraved over the glass. As per the requirement of the customer.



BULLET RESISTANCE GLASS

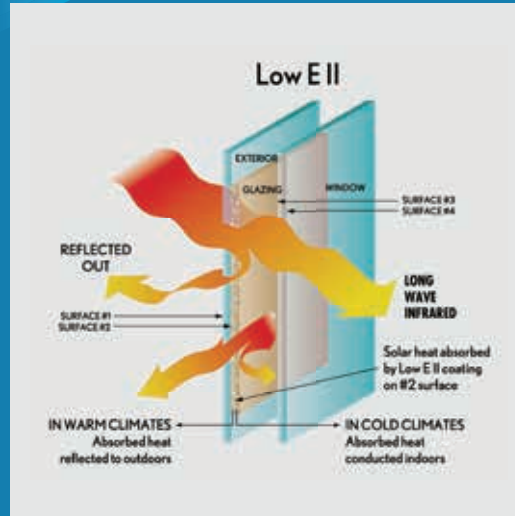
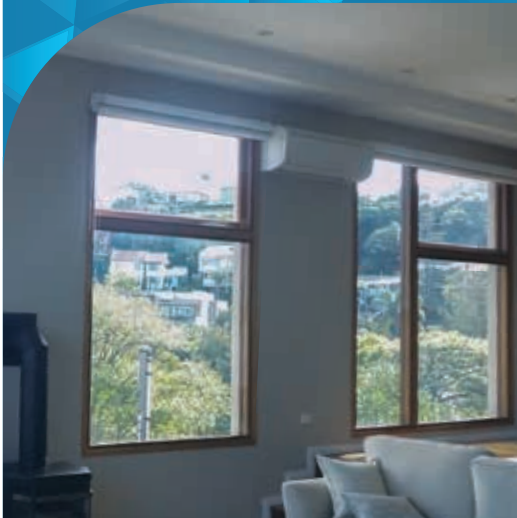
We are the oldest manufacturer of bullet resistance glass in Pakistan. It's made from multiple layers of tough glass with "interlayers" of various plastics. We have capability to produce BRG of various levels as per international standards.



AUTO GLASS

Our Auto Glass Division includes, side and rear windows, Side windows can be either fixed or raised and lowered by depressing a button (power window) or switch or using a hand-turned crank.





DOUBLE GLAZING:

Insulated glass (IGU) or double glazed glass consist of two units of glass pressed together with an aluminium spacer in between. It usually has air gap but can be replaced with argon or krypton. Structural Sealant is used to bond the glass together with a seal between the edges of the pane.

Following are the advantages of IGU ;

- Thermal Performance
- Noise Insulation
- Heat Resistance

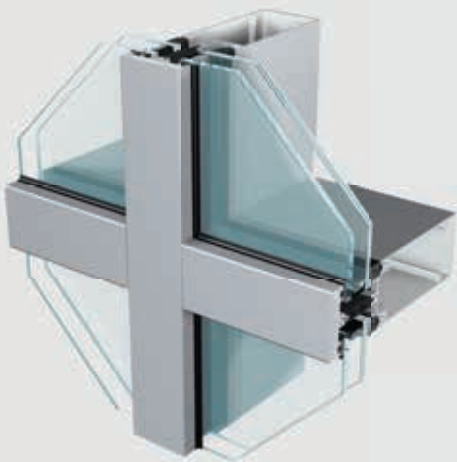
Double glazing has the reverse effect in summer, preventing unwanted heat from coming into the home. This extra insulation lessens your reliance on artificial heaters and air conditioners and can ultimately reduce your energy costs.

We can further increase thermal performance by using LOW E glass.

Our Double Glazed machine is from Bystronic Germany. Its one and only Most Advance machine in Pakistan. All the accessories used in this process are german or Italian made.

Max Size: 91" X 137"

Spider Double Glazed Glass also available





QUALITY CONTROL:

Having quality machinery is not enough to achieve the goal. Quality control is necessity in order to make standardise products. We at gunj are proud of our Laboratory; Its the one and only most advance lab in Pakistan to verify the purity of the materials used in various processes and maintain the checks on finished goods. Our tempering and double-glazing services are fully certified by international standards. We are fully capable to process online and offline coated glass including single silver and double silver some of the test results are listed below.

INSTRUMENT USED FOR TESTING:

1. **GASP** (Grazing Angle Surface Polarimeter, Video GASP System): Equipment for Tempered Glass Surface Stress Analysis.(M.pa & PSI Strength)
2. **Window Energy Profile:** Energy Transmission Meter # WP 4500 (USA)
3. **Dual Pane Low-E Coating Detector:** # AE-1601 (USA)
4. **Roll Wave Measurement Gauge:** RWG-100 (JAPAN)
5. **Strengthened Glasss Detector:** # SG-2700 (USA)

TEST FOR TEMPERED GLASS	GUARDIAN TOLERANCE	FINAL RESULT
Surface Pressure (Stress Analysis)	>10,000 psi	13880 ~ 16064 psi Avg: 14520 psi
Roll Wave (Distortion Measurement)	Target:0.07mm Max:0.13mm	0.065mm
Flatness (Bow or Warp)	0.003mm / mm	0.001mm / mm
Break Test (Fragmentation)	Particle count> 40 pcs. in 50mm x 50mm area	50 ~ 70 pcs. in 50mm x 50mm area

IGU TEST PROCEDURES

- ASTM E2190 Specification for IGU Performance & Evaluation
- ASTM E2188 Seal Durability test method
(uses ASTM E546 for frost point*)
- ASTM E2189 Volatile fog test method
- ASTM E2649 Argon Fill Level Testing

Note:

Frost Point can also be checked in the field using ASTM E576

ASTM E2188 (Seal Durability)

- Lab will randomly select six test units
- Two weeks of high humidity exposure (95% relative humidity at 140° F)
Frost/dew point must be -40° F or less on all six units
- Nine weeks of accelerated weathering exposure (cycles between -20° F and 140° F with 95% relative humidity and UV exposure on "hot" cycle)
Frost/dew point must be -40° F or less on all six units
- Four weeks of high humidity exposure (95% relative humidity at 140° F)
Frost/dew point must be -40° F or less on all six units

ASTM E2189 (Volatile Fog)

- Lab will randomly select two test units
- Units with muntins are preferred
- One week of UV exposure both units cannot contain fog or after exposure (use visual inspection)
If units are fogged then wait 24 hours and check again
If units still contain fog after 24 hours, wait seven days & check again
- Current visual inspection uses two 20 watt cool white fluorescent bulbs in a dark room environment
- Failing E2189 will fail entire E2190 test

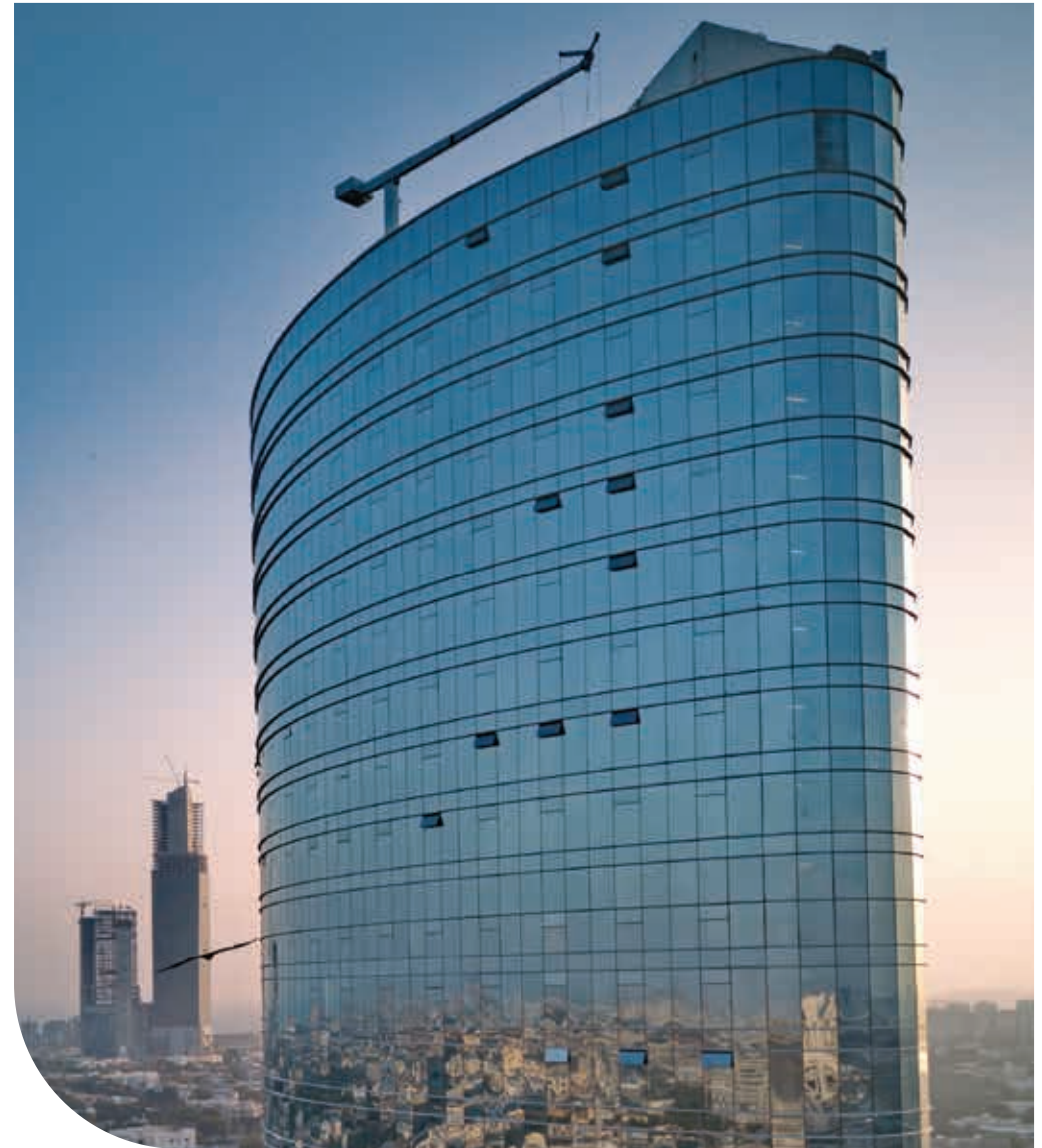
OUR PROJECT PORTFOLIO

KARACHI



Tabbani Group Head Office

Exterior: 5mm Grey Tempered + 12mm Air Gap + 5mm Clear Tempered



Ocean Mall

Exterior: 6 mm Guardian Silver 35 Tempered + 16 mm Air Gap + 8mm Guardian Clear Tempered

Interior: 12mm Clear Tempered + Bend Tempered Interior



Gunj Glass Head Office

Exterior: 5mm Blue Reflective + 12mm Air Gap + 5mm Clear Tempered



Gunj Glass Head Office

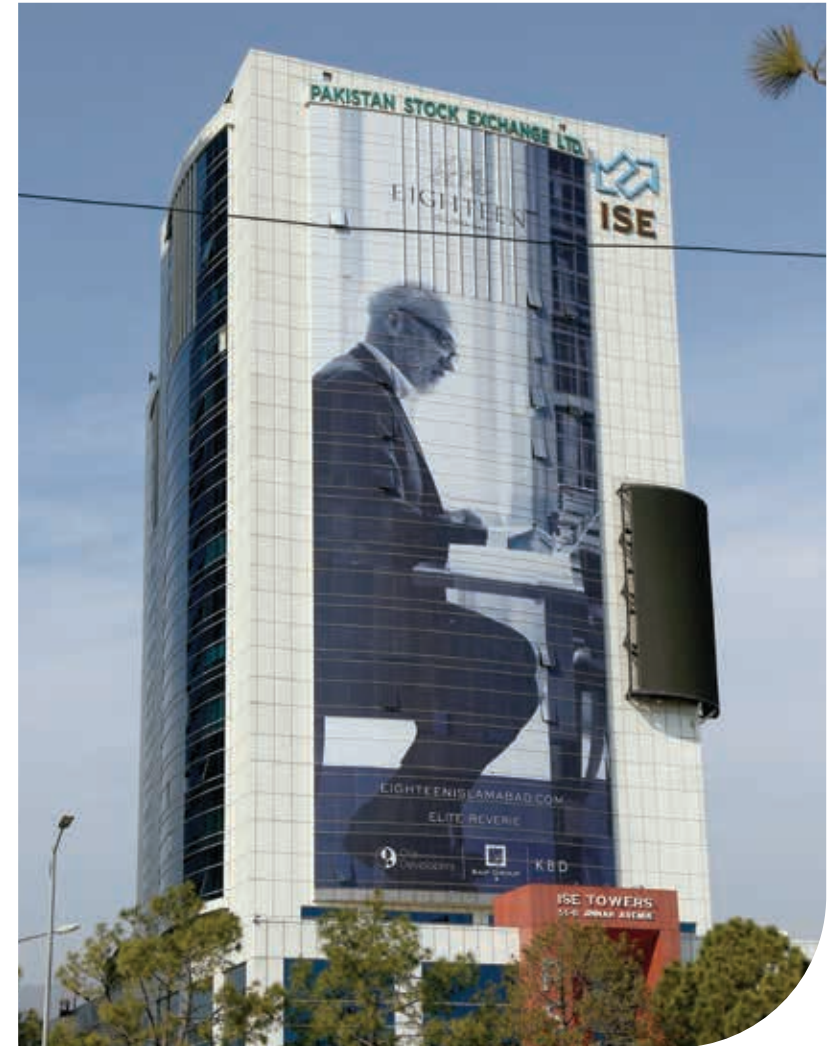
Skylight: 6mm Guardian Neutral 70 Tempered + 12 mm Air Gap + 5mm Clear Tempered + 175 Micron Safety Film Armour Coat USA.

ISLAMABAD



Metro Bus

Exterior: Guardian 12mm Clear Tempered



Islamabad Stock Exchange

Exterior: 6mm AGC priva blue +12mm Air Gap + 6mm clear Tempered



Executive Complex

Exterior: Blue Reflective 5mm Tempered +
12 mm Air gap + 5 clear Tempered



Attock Oil Mill HQ



Centarous Mall

Exterior: Fritted Glass 12mm Clear Tempered , Bend Tempered



Combined Military Hospital , Military Hospital

Exterior: 6mm AGC Synergy Blue (low-e) + 8 mm Air Gap + 5 mm Guardian Clear Tempered

Exterior: 6mm AGC Tinted Blue Tempered



One Constitution Avenue

Exterior: 6mm Guardian Silver 35 (low-e) + 12mm Air Gap + 6mm Clear (Pilkington)Tempered



Tele House



Ramada

Interior: 12mm Clear Tempered Glass



Mujahid Group

Exterior: 6mm Guardian Neutral70 Tempered + 12 mm Air Gap + 5mm Guardian Clear Tempered.

LAHORE



Gulberg Galleria



Lahore Expo Center

Exterior: 12mm Clear Guardian Tempered with Spider Fitting.



MCB IT Center

Exterior: 6mm Pilkington LOW-E Eclipse Ever Green + 12mm Air gap + 6mm clear Tempered.



Tricon Tower

Exterior: AGC T Sunlex 6mm Tempered + 12mm Air Gap + 6mm Clear Tempered

**Emporium Mall**

Exterior: 8mm Tempered Ultra Clear Guardian Fritted
Guardian Laminated Glass 4+4

6mm N60 Tempered + 20 mm Schuco Spacer, Argon Gas + 8.76 Laminated

PESHAWER



Shaukhat Khanam

Exterior: Guardian N70 Tempered + 12mm Air + 5mm Clear Tempered

“ A satisfied customer is the best business strategy of all ”

Michael LeBoeuf

www.gunjglass.com



GET IN TOUCH WITH US

GUNjGLASS

ISLAMABAD CORPORATE OFFICE

Plot 50\ Street 12 I&T Centre G-8/10ff
Kashmir Road Islamabad 44000 Pakistan

Tel: +92 51 8742482, +92 51 8742483

Email: corporate@gunjglass.com

KARACHI HEAD OFFICE

Plot (A-26 Site) Area Karachi Pakistan

Tel: +92 21 32577730, +92 21 32414862

Email: gunj_ali@hotmail.com

LAHORE REGIONAL OFFICE

315-E, Saman Burg Colony, Near Allah
Hoo Chowk, Johar Town, Lahore.

Tel: +92 42 35222908