

SECURITY GLASS | BALLISTIC PROTECTION | EN 1063 | UL 752 | NIJ 0108.01

Bullet Resistant Glass

Transparent Armour for the Built Environment

IPH Glasses produces bullet resistant glass composites engineered to specific threat assessments and international ballistic standards — EN 1063, UL 752, and NIJ 0108.01 — from BR2 handgun protection to BR7 high-powered rifle resistance.

PRODUCT CATEGORY

Security Glass
Ballistic Protection
EN 1063
UL 752
NIJ 0108.01

AUTHORIZED DISTRIBUTOR

Guardian Glass | Saint-Gobain
Kuraray | Technoform | Fenzi

PRODUCT OVERVIEW

Bullet Resistant Glass

Transparent protection engineered to international ballistic standards.

Bullet resistant glass is a multi-layer laminated glass composite engineered to absorb and disperse the kinetic energy of ballistic projectiles without allowing penetration. Alternating layers of glass and polymeric interlayers — typically PVB, polyurethane (PU), and polycarbonate (PC) — are bonded under heat and pressure in an autoclave process. Classified under **EN 1063** (European), **UL 752** (American), and **NIJ 0108.01** (USA) — IPH Glasses develops configurations matched to project-specific threat assessments.

EN 1063 European ballistic performance standard	BR2 – BR7 Protection classes available	UL 752 / NIJ US standards also available	Transparent Full optical clarity maintained
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PERFORMANCE CLASSIFICATIONS

Protection Class Cross-Reference

Each project requires a formal threat assessment to determine the appropriate protection class:

Class	EN 1063	UL 752	NIJ Level	Firearm / Calibre	Typical Application
BR2	BR2	Level 1	Type I	.357 Magnum FMJ	Retail counters, ticket booths
BR3	BR3	Level 2	Type IIA	.44 Magnum SJHP	Banks, cash handling
BR4	BR4	Level 3	Type II	9mm Parabellum FMJ	Embassies, government offices
BR5	BR5	Level 4	Type III	5.56 × 45 NATO FMJ	Military, high-security perimeters
BR6	BR6	Level 5	Type III	7.62 × 51 NATO FMJ	Armoured vehicles, critical infrastructure
BR7	BR7	Level 8	Type IV	7.62 × 51 AP	Maximum security — embassies, VIP

TECHNICAL DATA

Technical Specifications

Parameter	Specification
Construction Type	Multi-layer laminated glass + polymeric interlayer composite
Interlayer Materials	PVB, Polyurethane (PU), Polycarbonate (PC) — combination per threat level
Protection Standards	EN 1063 (European) UL 752 (USA) NIJ 0108.01 (USA)
Protection Classes	BR2 through BR7 SG1 / SG2 (Shotgun)
Typical Unit Thickness	~19 mm (BR2) to 75+ mm (BR7) — varies by construction

Spall Protection	Polycarbonate spall catcher on protected (interior) side — standard
Optical Quality	High clarity maintained — suitable for manned protection positions
Surface Options	Tinted, one-way mirror effect, solar control coating — all available
Frame Compatibility	EN 1627 rated window and door frame systems
Project Basis	All configurations developed per formal threat assessment

STANDARDS & COMPLIANCE

Applicable Standards

IPH Glasses processes and supplies this product in compliance with the following Indian (IS/BIS), European (EN/ISO), American (ASTM/UL/NIJ), and Australian/New Zealand (AS/NZS) standards:

Standard Code	Title & Scope
Indian Standards — Bureau of Indian Standards (BIS)	
IS 2553 Part 1 : 1990	Safety glass — General requirements (component panes) (India)
IS 6498 : 1971	Laminated safety glass — Specification (India)
European Standards — CEN	
EN 1063 : 2000	Glass in building — Security glazing — Testing and classification of resistance against bullet attack — BR1 through BR7, SG1, SG2
EN 1627 : 2011	Pedestrian doorsets, windows — Burglar resistance — Requirements and classification (frame system)
EN 12150-1 : 2015	Glass in building — Thermally toughened soda lime silicate safety glass (component panes)
EN 1279-1 : 2018	Glass in building — Insulating glass units (for ballistic + IGU combination)
European Standards — CEN / ISO	
EN ISO 12543-2 : 2011	Glass in building — Laminated safety glass — Definition
EN ISO 12543-4 : 2011	Glass in building — Laminated glass — Test methods for durability
ASTM International — USA	
ASTM F1233 : 2008	Standard Test Method for Security Glazing Materials and Systems
ASTM C1172 : 2014	Standard Specification for Laminated Architectural Flat Glass (composite construction basis)
ASTM C1048 : 2018	Standard Specification for Heat-Strengthened and Fully Tempered Flat Glass (component panes)
UL / NIJ — USA	
UL 752 : 2005	Standard for Bullet-Resisting Equipment — Level 1 through Level 8 (UL USA)
NIJ Standard 0108.01 : 1985	Ballistic Resistant Protective Materials — NIJ USA — Type I through Type IV
Australian / New Zealand Standards — Standards Australia / SNZ	
AS/NZS 2208 : 1996	Safety glazing materials in buildings (component glass panes)
AS 1288 : 2006	Glass in buildings — Selection and installation
AS/NZS 4667 : 2000	Quality requirements for cut-to-size and processed glass

ARCHITECTURAL APPLICATIONS

Applications

Banking & Financial

Counter screens, ATM surrounds, vault glazing, and security cashier positions.

Government & Diplomatic

Embassy windows, consulate reception glazing, and government office perimeter glazing — BR4–BR7.

Retail Jewellery & Luxury

High-value display counters and luxury shopfronts — protection against armed robbery.

VIP Residential

Security-rated windows and doors for high-net-worth residential properties.

Transport & Infrastructure

Control room glazing, security screening positions, and cash-in-transit vehicle windows.

Healthcare & Psychiatric

Staff protection windows in secure mental health wards and pharmacy counters.

MANUFACTURING EXCELLENCE

Quality Assurance

Every panel processed at IPH Glasses passes through a structured, multi-stage quality control process — from incoming raw material to final pre-dispatch inspection.

Raw Material Verification

Incoming float glass and component materials (interlayers, spacers, sealants) are checked against supplier specification before entering production.

Process-Controlled Manufacturing

Furnace temperature, cooling rate, lamination pressure, and IGU assembly parameters are monitored and logged at each processing stage.

Optical Quality Inspection

Glass surfaces are visually inspected for distortion, bow, roller wave, and coating defects prior to dispatch.

Dimensional Accuracy Checks

Panel dimensions, squareness, and thickness are verified against project specification tolerances.

Edge Quality Inspection

Edge finish (rough grind, arressed, or super polished) is checked for consistency and conformance to the specified finish.

Toughening Process Validation

Surface compressive stress and fragmentation pattern are verified on sample panels from each production batch to confirm heat treatment compliance.

Batch Traceability

Production records link each panel batch to its raw material source, processing parameters, and quality check results.

Final Pre-Dispatch Sign-Off

A final inspection is carried out before packing and dispatch, confirming the panel meets project specification and IPH Glasses' internal quality criteria.

OUR CAPABILITY

Why Choose IPH Glasses?

IPH Glasses — operating as Mahavir Glass Enterprise — is one of Gujarat's most trusted architectural glass processors and authorized distributors for Guardian Glass and Saint-Gobain. We serve architects, developers, facade consultants, and PMC teams from our facility in Kheda, Gujarat.

Authorized Distributor

Guardian Glass and Saint-Gobain — certified supply chain, authentic products with full traceability.

Complete Product Range

Toughened, laminated, insulated, digital printed, curved, anti-burglar, and bullet-resistant glass — all from one processor.

Multi-Stage Quality Control

Raw material verification, in-process inspection, optical and dimensional accuracy checks, and final pre-dispatch quality sign-off on every batch.

Advanced Processing

Horizontal roller furnace, autoclave lamination, and fully automatic IGU assembly line.

Technical Support

In-house team for glass selection, specification writing, performance calculations, and full project delivery support.

Export Experience

Supplying projects across India, East Africa, Congo, Sri Lanka, and expanding international markets.

CONTACT & TECHNICAL SUPPORT

Get in Touch

Head Office & Factory	Sales & Technical	Digital Presence
IPH Glasses Mahavir Glass Enterprise Kheda, Gujarat — India	+91 70690 01101 mktg@iphglASSES.com Sales: Shalin Shah	www.iphglASSES.com linkedin.com/company/iphglASSES instagram.com/iphglASSES

Our technical team is available to assist with glass selection, specification writing, performance calculations, and project-specific requirements. Contact us to schedule a technical consultation or to request samples and project pricing.

This catalogue is for reference purposes. Specifications subject to change. Consult IPH Glasses technical team for project-specific recommendations.