On the safe side.

Uncompromising Security Meets Design Excellence.

Protect Security Glass Products

vetrotech
SAINT-GOBAIN

Total protection for you
Complete solutions from us


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Warsaw, Poland

In our daily lives, we all want to feel secure. But in today's world, threats to that safety are all around us. That's why it's sensible to take extra precautions – such as installing the right type of security glass.

Government offices, transport terminals, schools, shopping centres, banks, museums, hospitals, embassies and the like all need added protection against various forms of malicious attack. Making the right choice to provide appropriate protection is a major concern.
For high security environments, regulations do not always specify the required security glass solutions.

Instead, it is the responsibility of those involved in the design, specification and building management chain – architects, owners, insurers and system providers – to determine potential risks and ensure that suitable and effective levels of protection are in place.


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Würselen, Germany

Three main types of risk need to be considered:

- Physical attack (planned attacks and opportunistic damage such as intrusion and theft)
- Ballistic impact (firearms of various calibres, including handguns, rifles, and shotguns)
- Explosion impact (satchel, car bombs or gas accidents).

Each attack scenario is unique, requiring evaluation of potential risks and threats for appropriate protection.

Five key questions should be asked when trying to choose the most suitable solution:

- What is to be protected?
- What is the extent of the possible and probable threats?
- What are the consequences of not providing adequate protection against the risk?
- What could be lost or damaged?
- What type and level of safety glazing is needed as additional protection assurance?

Our range of high security glasses have every eventuality covered. Vetrotech offers customized solutions for internal and external applications in a building, that conform to the highest levels of security protection, as defined by European standards (EN) for high security glass.

VETROGARD
Attack

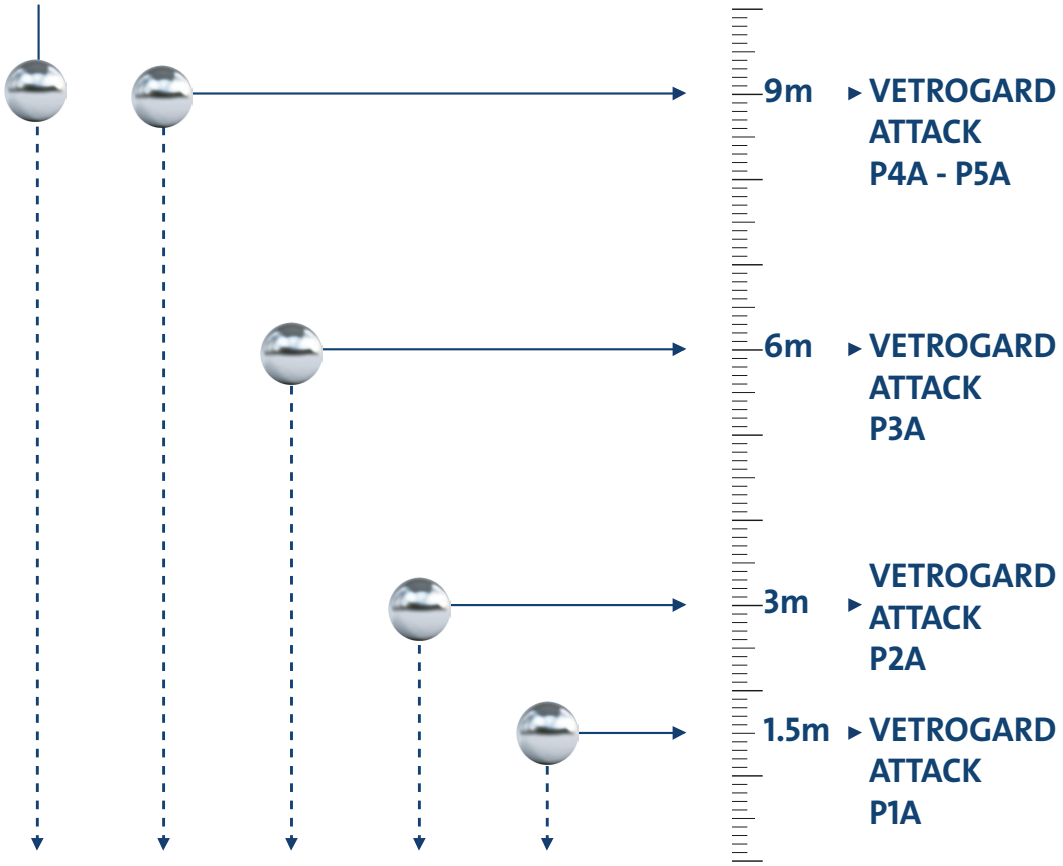
Provides protection from vandals trying to destroy property using rocks, stones and projectiles.

The ball-drop test

A 4.1kg steel ball of 100mm diameter is dropped on the glass. The glass must not allow the steel ball to penetrate through it.

Why

To verify whether the glass can withstand high-impact from heavy objects that can shatter it, as per international norms.



*When tested as per EN 356

VETROGARD
Attack

Provides protection from intruders trying to break in using axes and hammers.

The axe test

An axe is used to make a square opening of 400mm X 400mm on the glass. The number of hits required to make this opening is counted.

Why

To verify whether the glass can withstand high-impact from heavy objects that can shatter it, as per international norms.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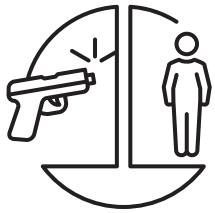
No. of axe hits the glass can withstand

P6B	x 30 to 50 hits
P7B	x 51 to 70 hits
P8B	x More than 70 hits

*When tested as per EN 356



VETROGARD
Bullet

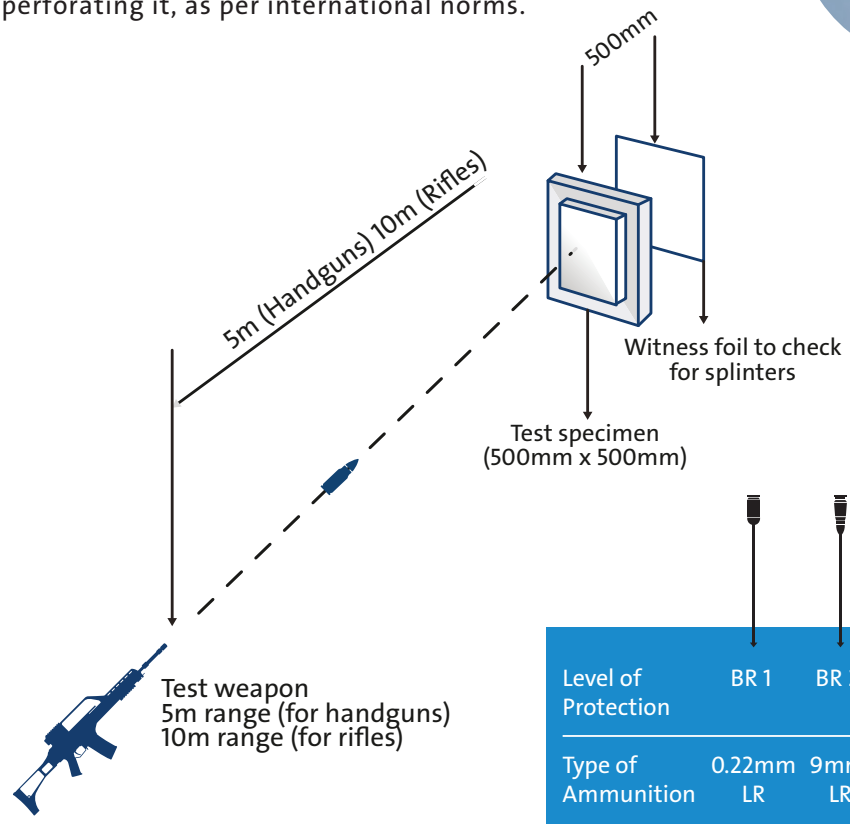
Provides protection from the bullets fired from handguns and rifles.

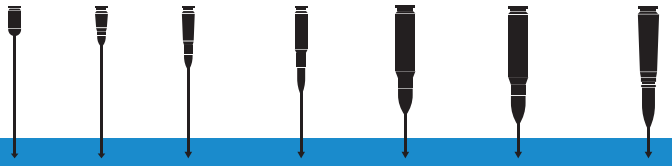
The ammunition test

- 3 bullets are shot at the glass from a distance of 5m (for handguns) & 10m (for rifles).
- There must be no perforation of the glass by the bullet.

Why

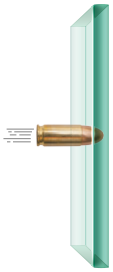
To verify whether the glass can withstand high-impact from bullets without shattering or perforating it, as per international norms.





Level of Protection	BR 1	BR 2	BR 3	BR 4	BR 5	BR 6	BR 7
Type of Ammunition	0.22mm LR	9mm LR	0.357 Magnum	0.44 Magnum	5.56 X 45mm	7.62mm X 51mm (soft core)	7.62mm X 51mm (hard core)

Available in two variants

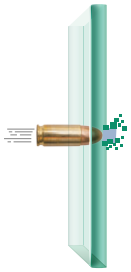


Non-Splintering (NS)

No perforation of the bullet through the specimen. Witness foil is not perforated by the splinters from the rear surface of the glass.

Splintering (S)

No perforation of the bullet through the specimen. Witness foil is perforated by the splinters from the rear surface of the glass.



*When tested as per EN 1063

VETROGARD
Blast

Provides protection from the shock-waves and flying projectiles resulting from an explosion.

The shock tube test

The glass is subjected to blast overpressure in this test. At the end of the test, there should not be any 'see-through' opening on the glass.

Why

To verify whether the glass can absorb the shockwaves from explosions without shattering, as per international norms.

Level of protection	ER 1	ER 2	ER 3	ER 4
Blast overpressure (Kpa)	50-100	100-150	150-200	200-250

Available in two variants

Non-Splintering (NS)

No perforation of the bullet through the specimen. Witness foil is not perforated by the splinters from the rear surface of the glass.

Splintering (S)

No perforation of the bullet through the specimen. Witness foil is perforated by the splinters from the rear surface of the glass.

*When tested as per EN 13541

Elevate your security with VETROGARD

Attack resistant Glass

Product	Performance Criteria	Number of hits	Thickness (mm)
VETROGARD Attack P6B	No. of axe strikes required to make a hole of size 400mm x 400mm	30-50	15
VETROGARD Attack P7B		51-70	22
VETROGARD Attack P8B		70+	27

Security glazing tested as per EN356, designed to resist actions of force by delaying access of objects and/or persons to a protected space.

Bullet resistant glass

Product	Type of weapon	Ammunition	Number of hits	Shooting Range (m)	Thickness (mm)	
					Splinter	Non-Splinter
Tested as per EN1063						
VETROGARD Bullet BR1	Rifle	.22 Long Rifle	3	10	21	22
VETROGARD Bullet BR2	Handgun	9mm Luger	3	5	26	33
VETROGARD Bullet BR3	Handgun	.357 Magnum	3	5	27	43
VETROGARD Bullet BR4	Handgun	.44 Magnum	3	5	35	43
VETROGARD Bullet BR5	Rifle	5.56mm x 45	3	10	36	58
VETROGARD Bullet BR6	Rifle	7.62mm x 51 with soft lead core	3	10	51	65
VETROGARD Bullet BR7	Rifle	7.62mm x 51 with hard steel core	3	10	-	81

Security glazing tested as per EN 1063, designed to resists the firing of specific guns and ammunition.

Blast resistant glass

Product	Reflective Blast Overpressure (kPa)	Duration of Over Pressure (ms)	Thickness (mm)	
			Splinter	Non-Splinter
VETROGARD Blast ER1	50-100	≥20	10	18
VETROGARD Blast ER2	100-150	≥20	18	26
VETROGARD Blast ER3	150-200	≥20	31	-
VETROGARD Blast ER4	200-250	≥20	27	33

Security glazing tested as per EN13541, designed to provide protection against explosive blast waves.

For details on maximum glass sizes, please contact a Vetrotech Saint-Gobain representative.

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Vetrotech Saint-Gobain
(India, Middle East and Asia-Oceania)

Plot No. A-1, SIPCOT Industrial Park
Sriperumbudur - 602 105, Tamil Nadu, INDIA

For more information, visit www.vetrotech.com
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