TOTAL **SECURITY** SOLUTIONS

The Ultimate Guide to Bulletproof Glass & Bullet-Resistant Barriers

To protect your most valuable assets

Safety + Aesthetics™ in Ballistic Systems

What is Bulletproof Glass?

More accurately described as bullet-resistant glass, it is actually one of several types of ballistic glazing materials. It is a little-understood fact that in many cases there is no actual "glass" involved.

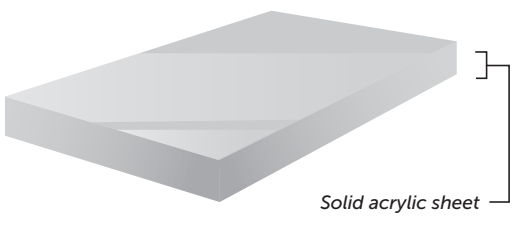
The Breakdown

Bullet-resistant glass is constructed using one or more of the following materials: acrylic, polycarbonate, or actual glass. These materials are used either by themselves in the case of monolithic acrylic, or layered together in multiple configurations to achieve specific properties.

The four most common configurations we sell are:

1 Monolithic Acrylic

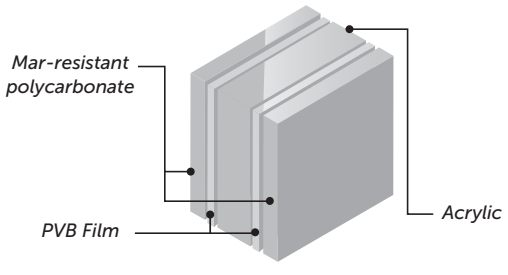
Best suited for indoor use, acrylic can be highly customized and has superior optical clarity.



PROTECTION LEVELS: 1 2 □ □ □ □ □ □

2 Laminated Polycarbonate

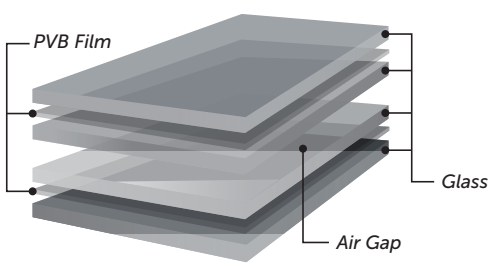
Best suited for indoor use, it is also customizable. However, lamination impacts optical clarity.



PROTECTION LEVELS: 1 2 3 □ □ □ □ □

3 Insulated Glass

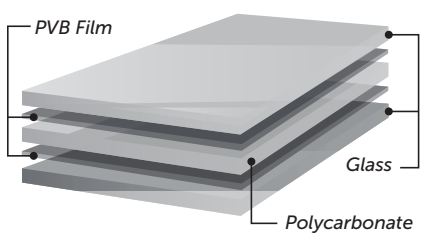
Designed for exterior use, this glass has excellent insulating properties and optical clarity.



PROTECTION LEVELS: 1 □ □ □ □ □ □ □

4 Glass-Clad Polycarbonate

Its multiple thick layers reach the highest-rated levels of bullet resistance.



PROTECTION LEVELS: 1 2 3 4 5 6 7 8

Average Weight per Square Foot

The actual weight of each type of bullet-resistant glass is directly related to its corresponding ballistic rating level. The below weights are the average across all levels available for that glass type.

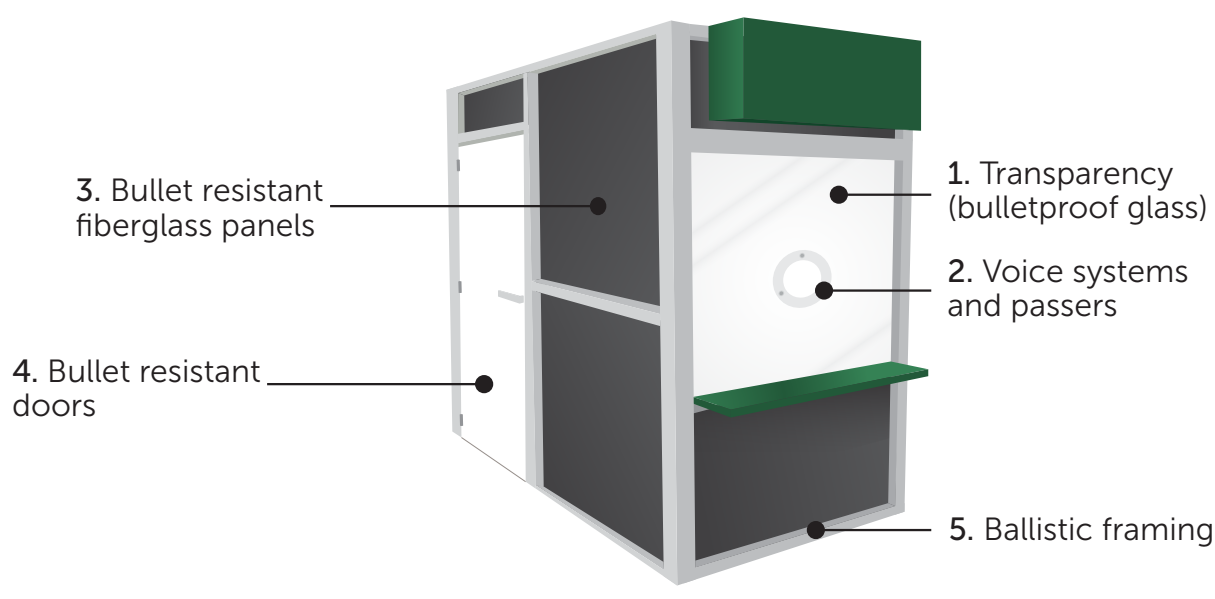
Monolithic Acrylic	Laminated Polycarbonate	Insulated Glass	Glass-Clad Polycarbonate
8 lbs	6 lbs	8 lbs	18 lbs
Average per square foot	Average per square foot	Average per square foot	Average per square foot

The 8 Levels of Bullet-Resistance

Each level of glass has been tested and found effective at stopping certain types of ammunition. The below chart illustrates the weapons used to test at each UL 752 rating level.

Ammunition	# of Shots	Level
9mm Pistol	3	L1
.357 Magnum	3	L2
.44 Magnum	3	L3
.30-06 Hunting Rifle	1	L4
AK-47 Assault Rifle	1	L5
Uzi Submachine Gun	5	L6
M16 Assault Rifle	5	L7
AK-47 Assault Rifle	5	L8

5 Typical Components of a Bullet Resistant Barrier



THE **TSS** DIFFERENCE

Our Proven Process

1 ASSESS — Thorough evaluation

- Project specifications
- End use of product
- Security needs

2 PLAN — Measure twice, cut once

- On-site Field Measurements
- Custom Engineering
- Project Timing

3 PRODUCTION — Care/ Precision/ Quality Control

- Fabrication
- Assembly
- Quality Inspection

4 DELIVERY — Security

- Shipping
- Professional Installation

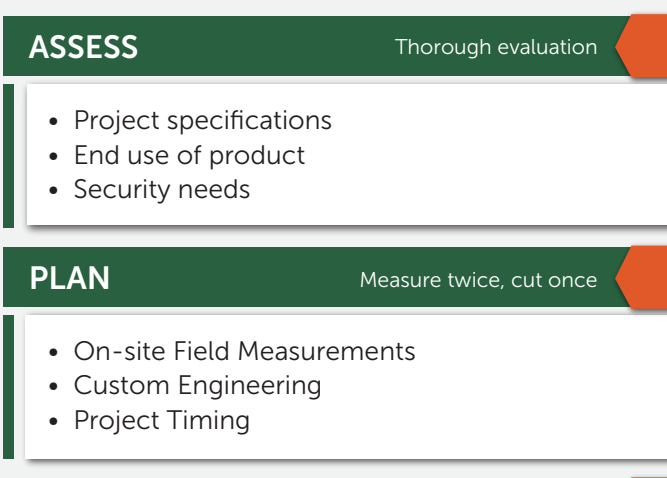
Core Competencies

Our customers rely on Total Security Solutions for four main reasons:

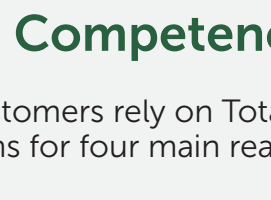
- CUSTOM DESIGNS
- INTEGRATED SYSTEMS
- RETROFITS
- NEW CONSTRUCTION

Places We Have Installed

Located in Michigan, we proudly deliver our products and services across the United States.



Most Frequently Installed



TSS most commonly installs these 3 types of bulletproof glass:

- Level 1: Monolythic Acrylic
- Level 3: Laminated Polycarbonate
- Level 4: Glass Clad Polycarbonate

Total Security Solutions produces the most comprehensive line of bulletproof barriers and products available. TSS assesses, plans, produces, and installs bulletproof barriers that include Safety + Aesthetics™. Many years of experience have made Total Security Solutions an industry leader in bulletproof barrier systems, and the TSS team brings that expertise to bear on your security challenges.

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