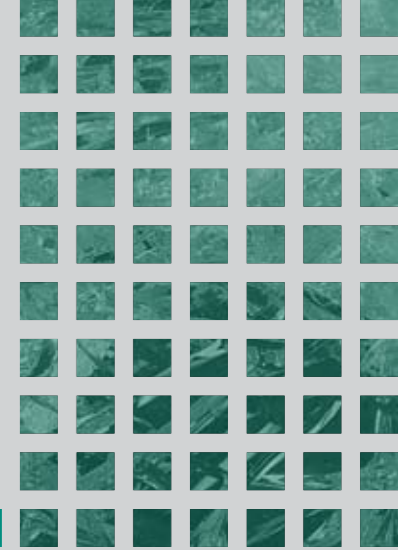


OSG-Armor



Bullet-Resistant Glass

Meeting the protection challenge



Behind the Glass We Create

At OSG, security is always a top priority. Creating transparent armor products that resist the ever-increasing threats of a hostile world, we often have to stand behind the glass we produce.

This concern for our mutual safety drives every step of the production process, backed by a strong commitment to producing the very best bullet- and blast-resistant glass available across the globe. This commitment - and the exceptional results it has yielded - has earned us an international reputation for excellence which our clients have come to rely on around the world.



Battlefield Feedback

With more than 25 years of proven experience, OSG offers a vast body of know-how and technology. Working closely with the Israeli Defense Forces (IDF) and military forces worldwide, receiving and processing feedback from the battlefield and other high-threat environments enhances our work and improves our results.

This type of valuable, real-life cooperation has led to the development of an array of products that meets a wide variety of threat types and levels in military, diplomatic and high-risk civilian sectors. From our two state-of-the-art production facilities, we supply cost-effective and reliable transparent solutions for armies and security services across the globe.

In the military sector we offer the highest standard of transparent armor solutions developed in accordance with the evolving needs of operational forces and backed by ongoing IDF field experience as well as the US army and USMC. Our products are effective for a diverse array of requirements, including Kinetics and FSP blast resistance. Today, OSG offers clients wide-ranging and comprehensive services, including system engineering and a complete package of technical planning for glass, metal and steel frames & custom built rubber & silicone gaskets. In addition, our in-house services include the production of glass and frames, assembly of glass to frames as well as vehicle installation when required.

In the civilian sector, OSG's solutions provide maximum protection, low profile and exceptional comfort and aesthetics. Implementing advanced bending technologies, our transparent armor for civilian vehicles and trucks creates perfect optical quality for safe driving without compromising product performance or the vehicle's appearance.

In addition to vehicular applications, OSG produces blast-resistant and forced entry-resistant transparencies for all types of architectural applications, including embassies, consulates, private residences, banks, guardhouses and transaction windows.



Major International Performance Standards

Implementing no-spall and low-spall configurations, OSG's custom solutions comply with major global performance standards:

- STANAG 4569/AEP-55 Levels I to IV
- American UL 752-1991
- American NIJ 0108.01 Levels 1 to 4
- ATPD – 2352
- LTAS
- European Standard CEN 1063 BR1 to BR7 (testing & classification of resistance against bullet attacks)
- German DIN 52290 Attack Levels 1 - 5
- Israeli Army Standards for all threat levels
- U.S. DoD UFC 4-010-01 Unified Facilities Criteria (DoD Minimum Antiterrorism Standards for Buildings)

OSG Threat Spectrum

OSG Level	Corresponding Standards	Type Of Weapon	Caliber	Ammunition Type	Velocity m/± 10	Fragment	Velocity m/± 10	Thickness mm	Weight Kg/m
1	EN BR 2	Hand gun	9mmx19	Parabellum FMJ	360			17	35
	NIJ III A	Uzi sub-machine gun	9mmx19	Parabellum FMJ	430				
2	EN BR 3	Hand gun	.357 Magnum	FMJ Soft point, Conical nose	430			20	44
3	EN BR 4 NIJ III A	Hand gun	.44 Magnum	FMJ Soft point, Flat nose	440			22	51
4	"BR 4+" STANAG Level 1	Rifle AK 47	7.62 x 39	PS M1943	720	12.7mm FSP 20MM FSP	950 400	33 35	74 72
	EN BR 5 STANAG Level 1	Rifle M16	5.56 x 45	M193 Ss109	980 950	12.7mm FSP 20MM FSP	950 400	30 33	67 72
	EN BR 6 STANAG Level 1	Rifle Nato	7.62 x 51	Ball – FMJ M80	830	12.7mm FSP 20MM FSP	1100 650	38 39	86 90
6	STANAG Level 2	Rifle AK 47	7.62 X 39	A.P.I BZ M1943	720	12.7mm FSP 20MM FSP	1100 950	61	139
7	EN BR 7	Rifle Nato	7.62 x 51	A.P. M61	820	20mm FSP	1200	77	179
8		Rifle DRAGUNOV	7.62 x 54R	A.P.I	860	20mm FSP	1250	82	189
9	STANAG Level 3	Rifle Nato	7.62 x 51	FFV / WCC TUNGSTENE	930	20mm FSP	1300	96	225



Quality Standards

All of OSG'S production facilities are ISO 9000-2000 certified.

In addition, the British Standards Institute SA (Registered Firm 31620) and the SII (#17673) regularly audit OSG's Israeli facility.

Complete Quality Control and Customer Service

Understanding that lives depend on the reliability of our products, OSG implements a zero-defect policy and maintains a full range of laboratory testing facilities to ensure total quality control. Working together with customers to identify optimal solutions, OSG's staff is on-call 24 hours a day for consultation in order to provide the right information at the right time. In addition, OSG maintains a central agency in Germany as well as offices throughout the world.

State-of-the-Art Technologies

- Bullet resistant glass (BR), both flat and curved
- Blast- and shrapnel-resistant glass (FSP), both flat & curved
- Forced entry-resistant glass (FE), both flat & curved

Features

- Heating elements (wire or clear-coating), range of power draws
- Communications
- Attenuation of electro-magnetic emissions
- Special coatings (GSM, antennae, anti-sun, abrasion-resistance, etc)
- Aluminum or steel frames and rubber gaskets
- Custom projects (upon request)

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Oran Safety Glass