



VIRA GROUP

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VIRA GROUP

VIRA HOLDING, known as VIRA GROUP, is considered one of the leading and major glass producers in Iran and the Middle East. The activities of this company in the only specialized industrial glass town in Iran, by valuing the customers' needs, today include a wide range of production units, services and transportation that enabled to meet the requirements and customers' needs.

The diverse product portfolio of VIRA GROUP includes all kinds of main and secondary glass products, raw materials and fittings, which, via using the highest quality resources and the latest technologies, are approved by international standards.

VIRA HOLDING owes this merit to its forward-looking management, experienced team and Research and Development (R&D) units. However, some of the most strategic plans of VIRA GROUP are aimed at the timely supply of customers' needs and examination of trade routes and transportation lines.

This is why VIRA GROUP today has access to customers' most important trade routes in the heart of the Silk Road; equipping this group with a road transport unit unique to the company is also important in realizing this goal.

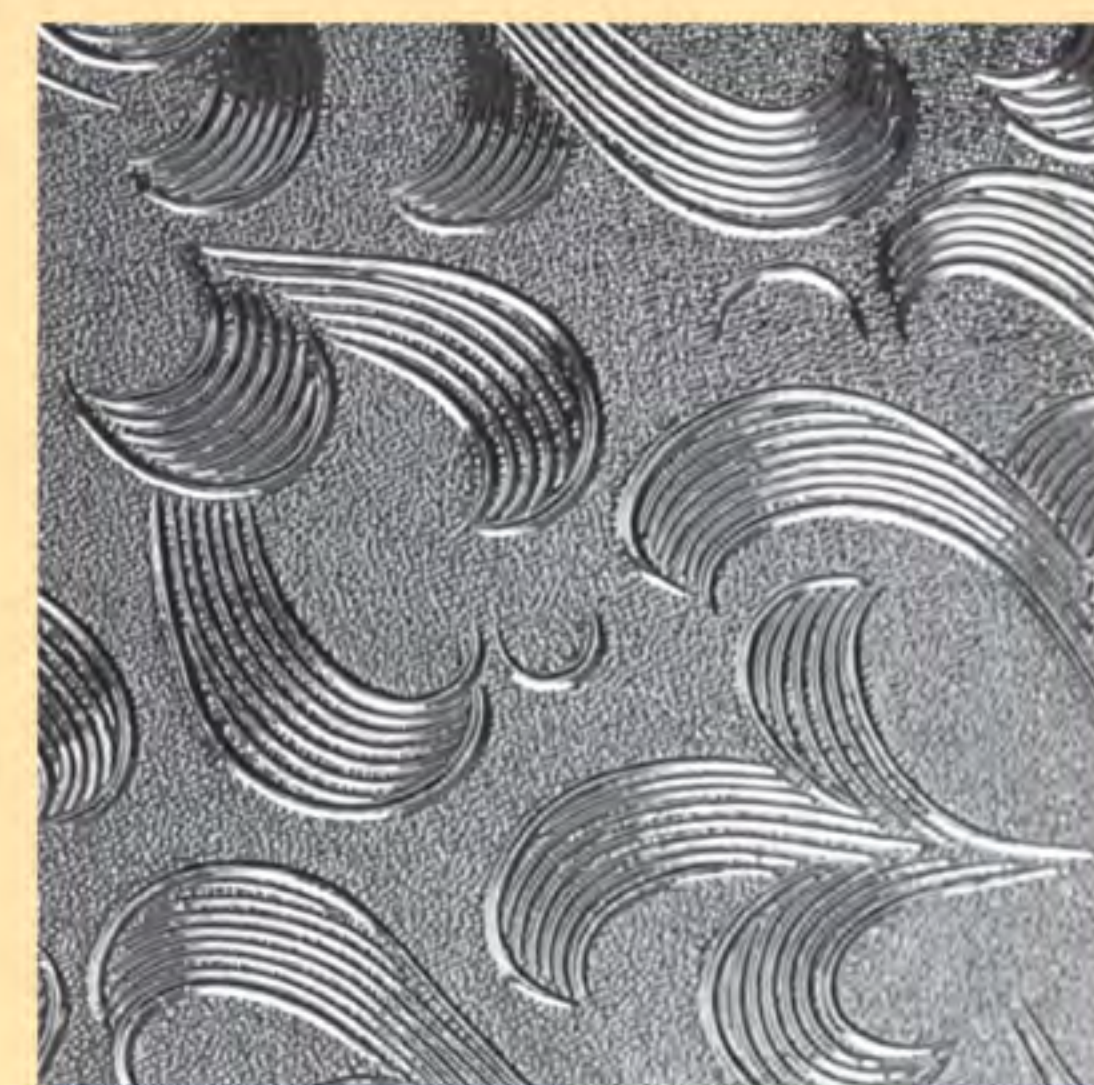
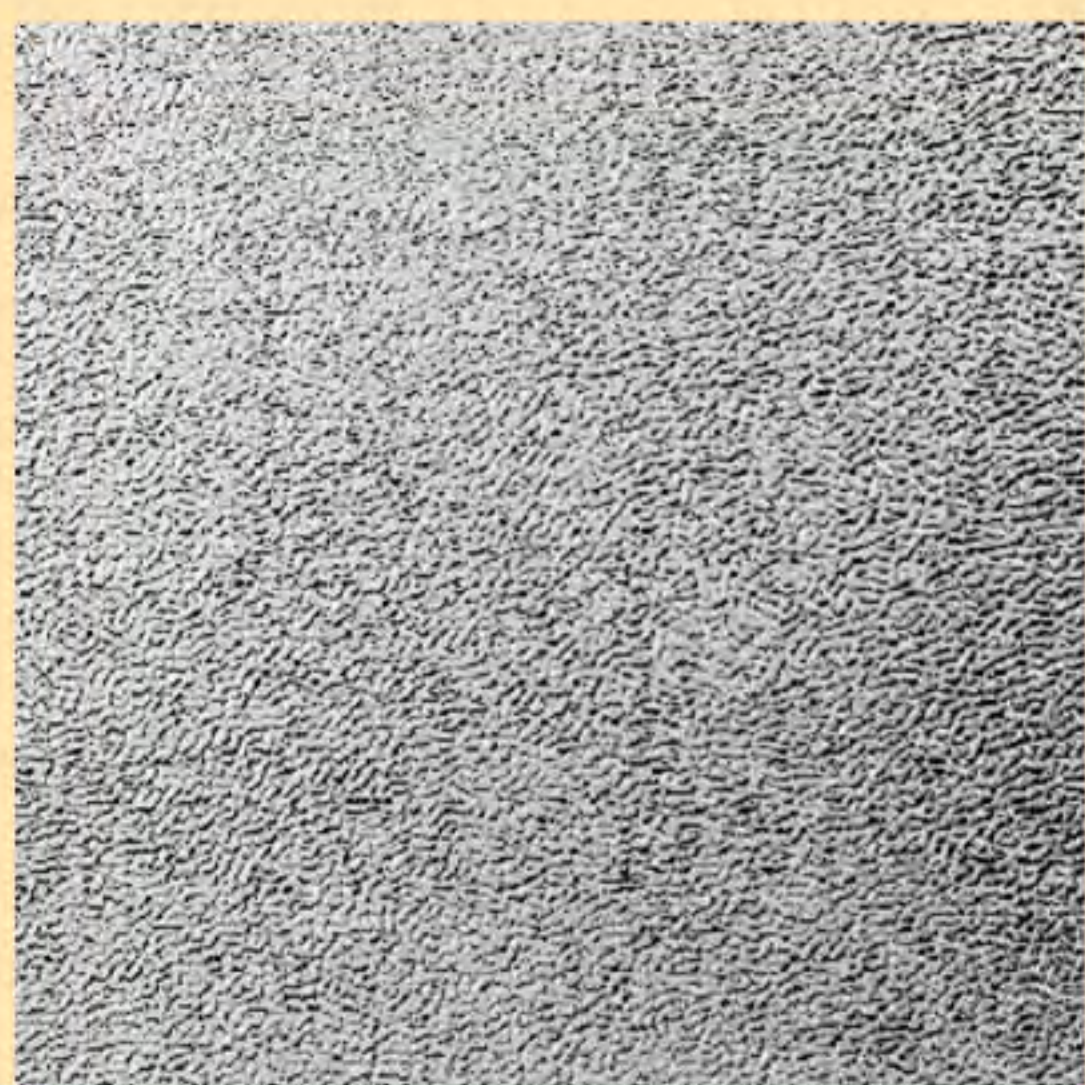
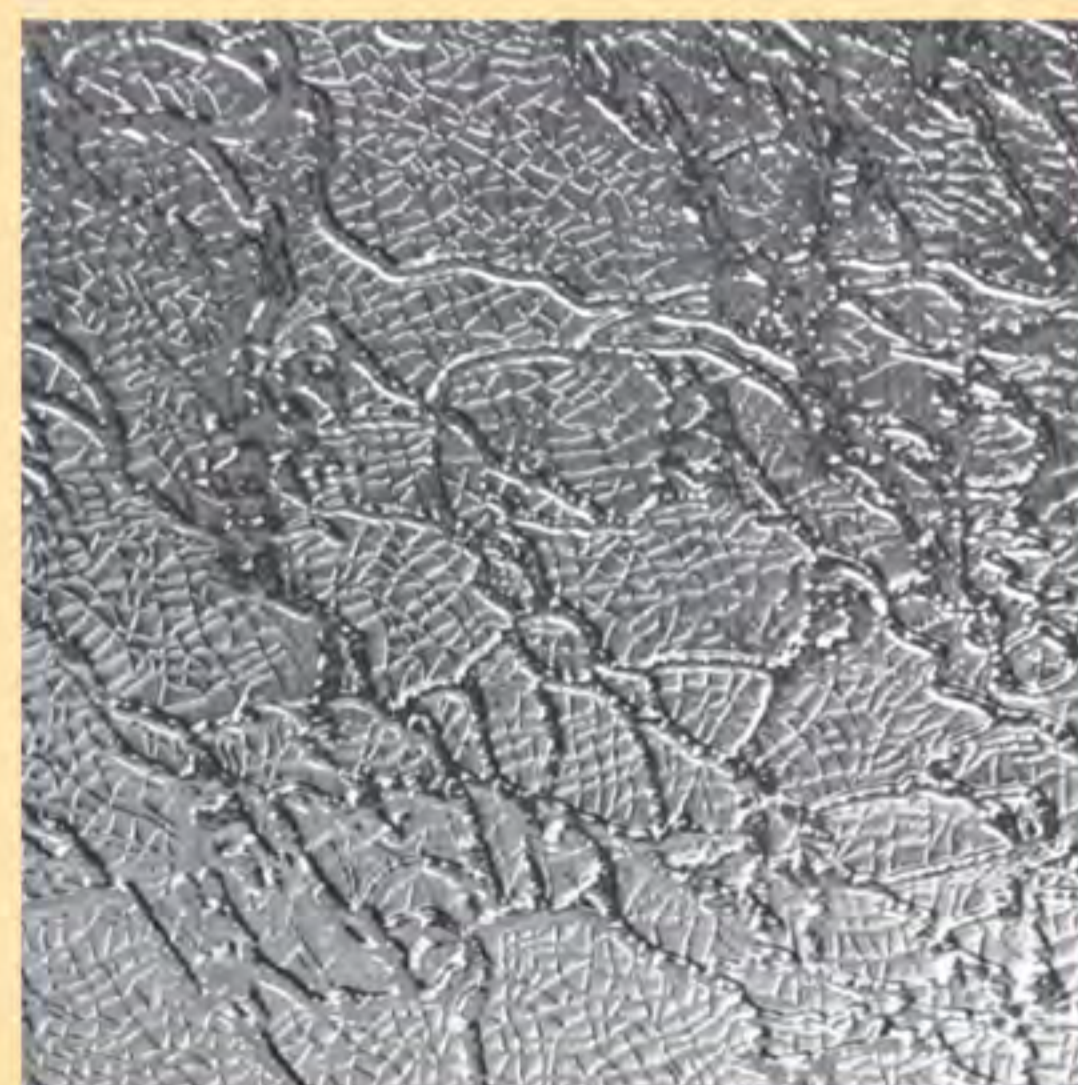
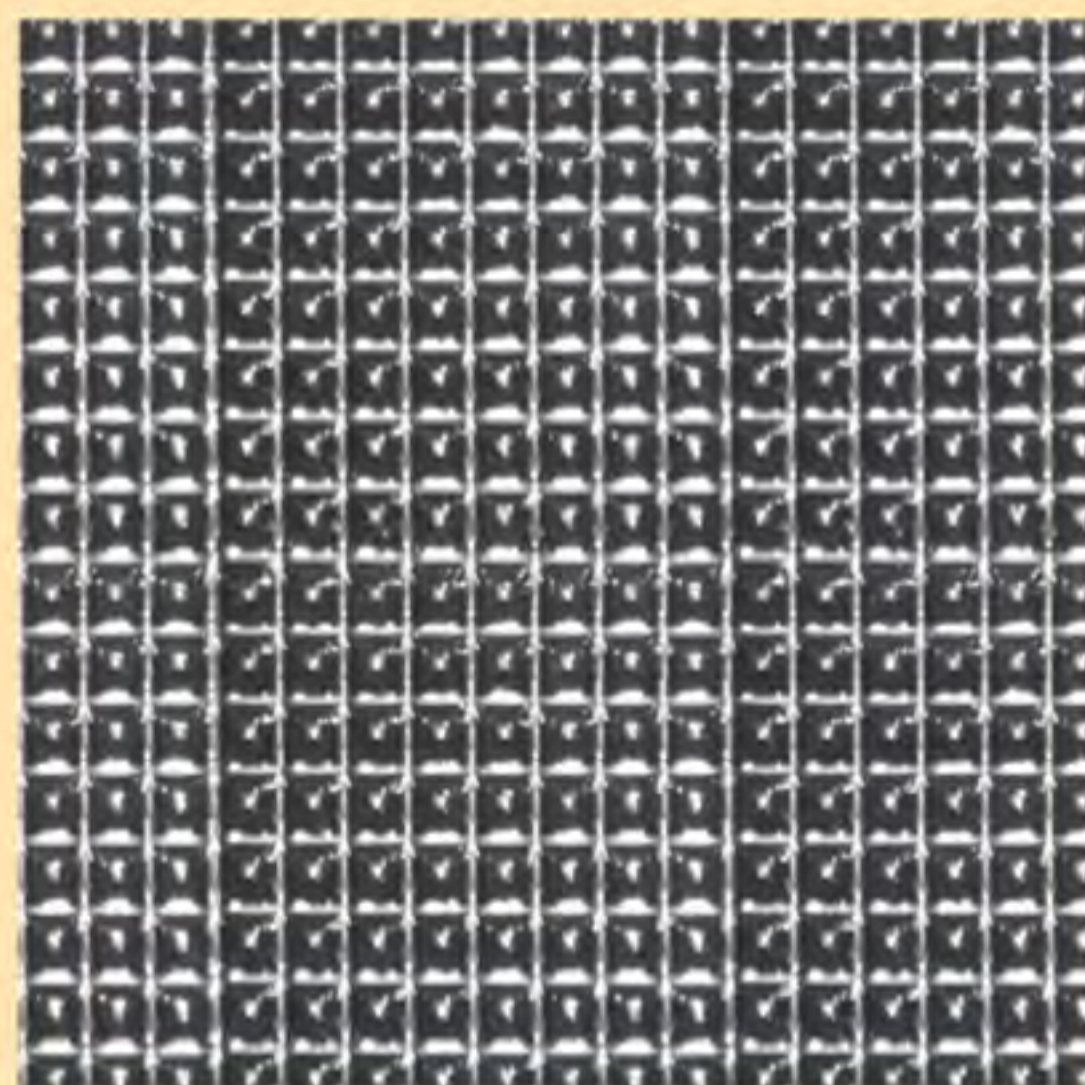
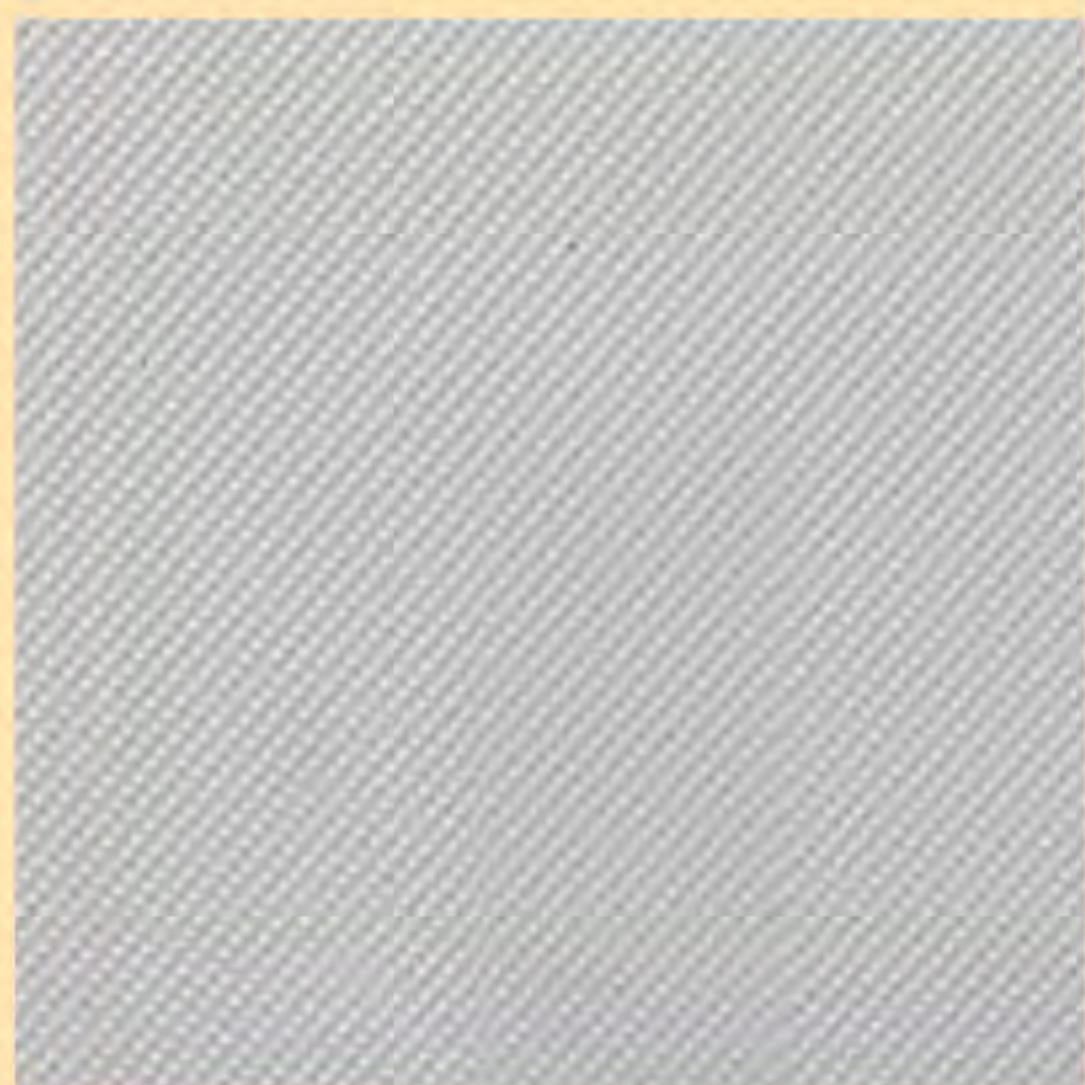
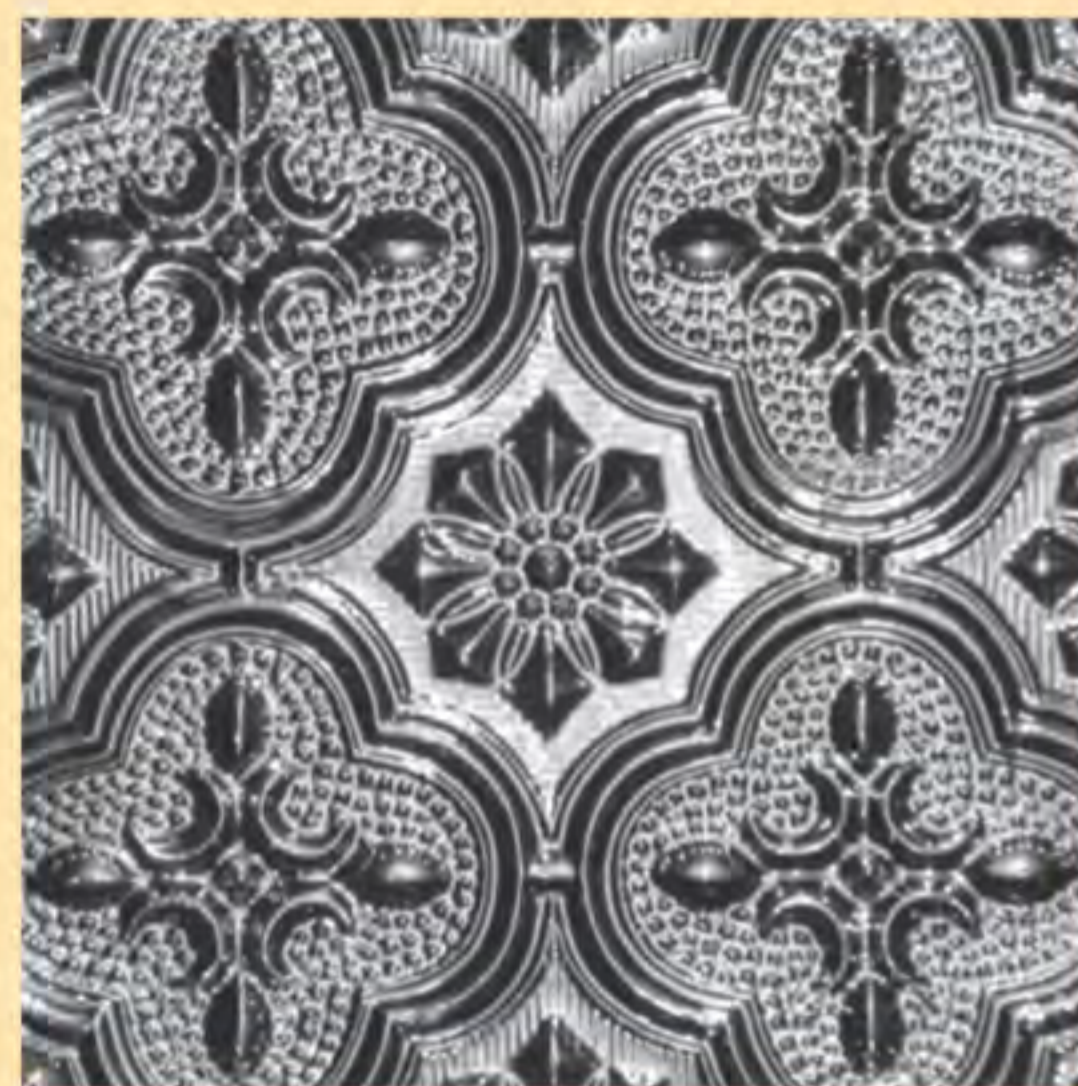
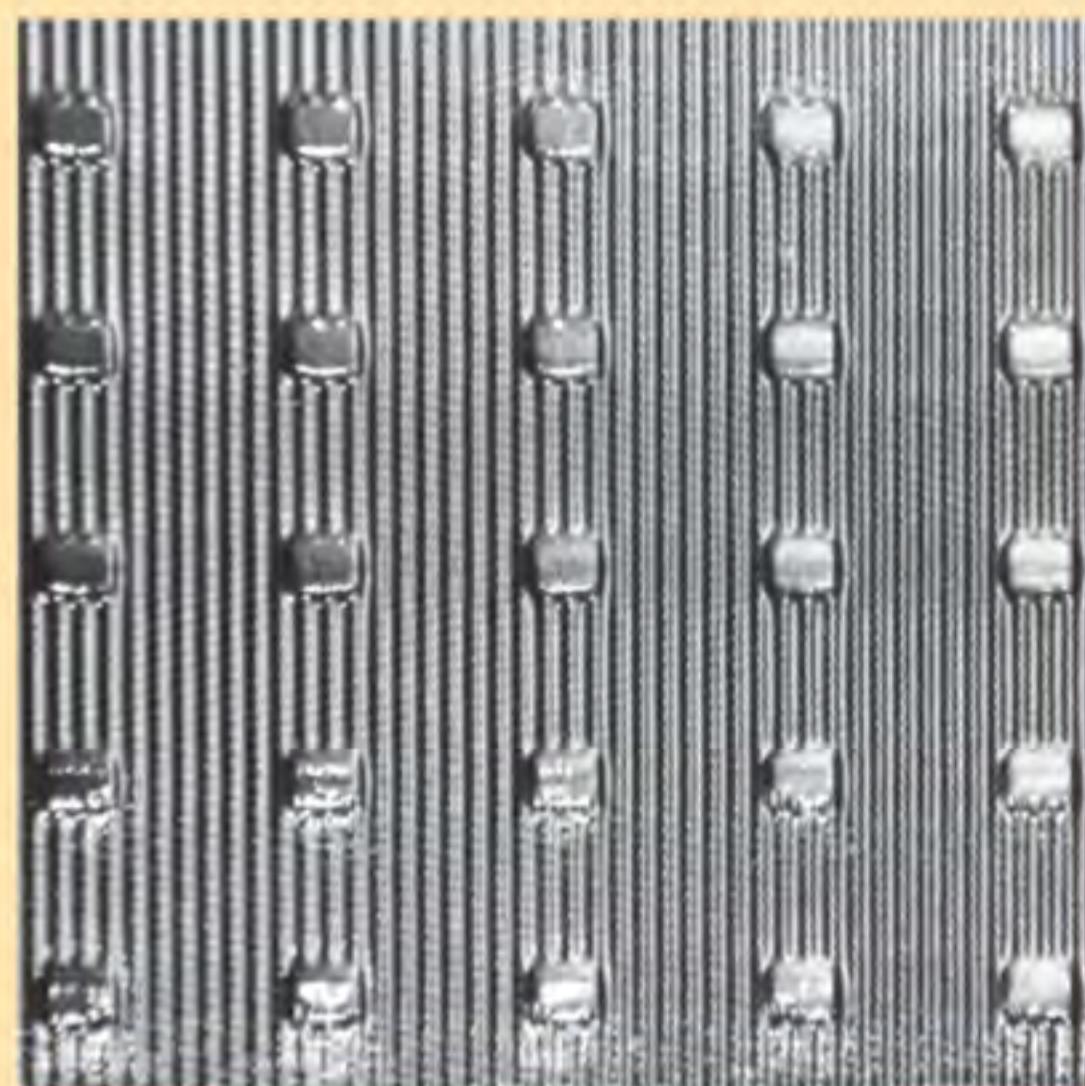
Learn more about our products in the next sections.





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VIRA GROUP produces color patterned, clear patterned and wired glasses with different dimensions that conform to European standards commissioned 2006/02/11 with a nominal capacity of 300 tons per day. According to the company's unique abilities, it can produce solar glass used in the solar water heater. The huge market of this company in Europe, the Middle East and western Asian countries is one of the productive achievements of this company. This type of glass is produced in blue, bronze, and pink colors. The thickness of the produced glass is 10-3 mm. Patterned glass has more than 15 different designs. Wired glass or reinforced glass is used in elevators. Patterned glass is used in solar water heaters, photocells, and interior and decorative design. .





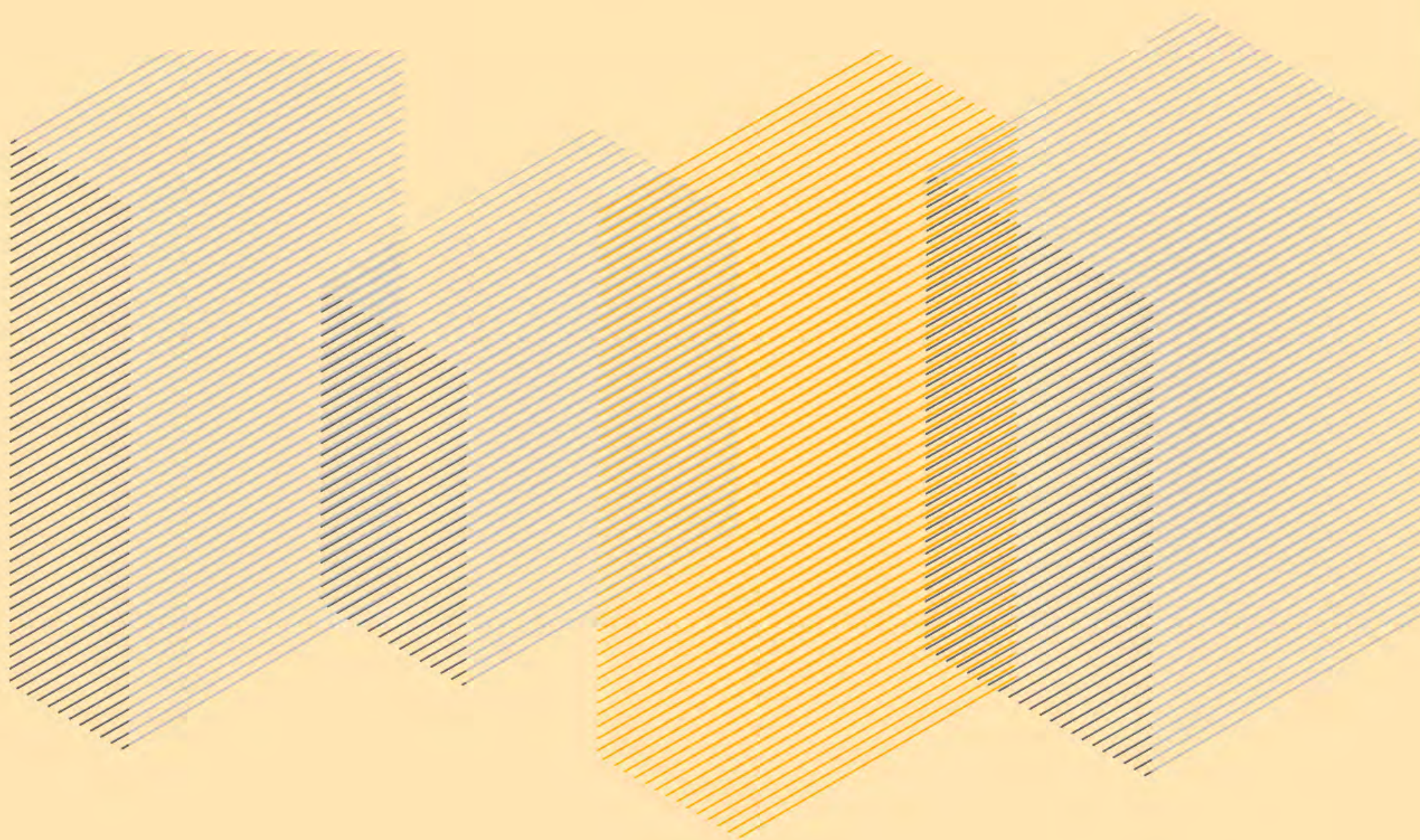
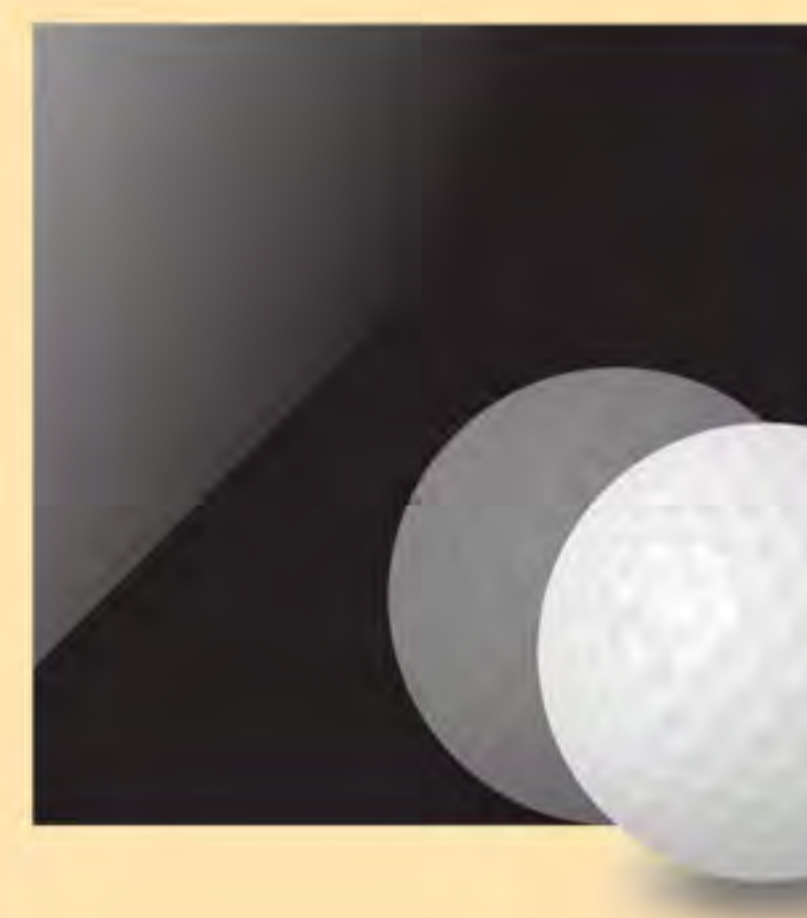
VIRA GROUP

Reflex glass

Reflex glass in different colors, **grey reflex, bronze reflex, green, golden, pink and blue** models are among the other construction glasses produced by **VIRA GROUP**. These glasses have a very high demand in the market. Because they have a high variety of colors and have special advantages. In many cases, these products are used for windows or balconies.

Special alloys and metals are used in the process of making these glasses. The presence of these alloys changes some of the properties of glass and affects the amount of light reflection. Reflex glasses make the inside of the building invisible from the outside due to the reflection of light during the day and creating a mirror state. Nevertheless, this situation is reversed at night. So that the reflective glasses have a mirror state inside the building during the night.

Appearance beauty, the reflection of direct sunlight, reducing the amount of incoming heat, reducing the amount of radioactive radiation, etc., have made many people buy these products.



PRODUCT NAME		TECHNICAL DATA						SPECTROPHOTOMETRIC PROPERTIES	
TYPE	THICKNESS	NM	CONDENSATION RESISTANCE (INSO10672-2)	ACID RESISTANCE (INSO10672-2)	NEUTRAL SALT SPRAY RESISTANCE (INSO10672-2)	ABRASION RESISTANCE (INSO10672-2)	VISUAL INSPECTION (INSO10672-2)	LIGHT TRANSMISSION	SOLAR DIRECT TRANSMISSION
Bronze reflective glass	5mm	550	0.1321	0.1323	0.1336	0.1256	ok	18.7	24.07
		900	0.2321	0.2349	0.2384	0.2331			
Tinted reflective glass	5mm	550	0.1235	0.1301	0.1328	0.1288	ok	9.86	17.05
		900	0.2289	0.2349	0.1357	0.2301			
Tinted reflective glass	6mm	550	0.1235	0.1301	0.1328	0.1288	ok	9.46	17.01
		900	0.2289	0.2349	0.1357	0.2301			

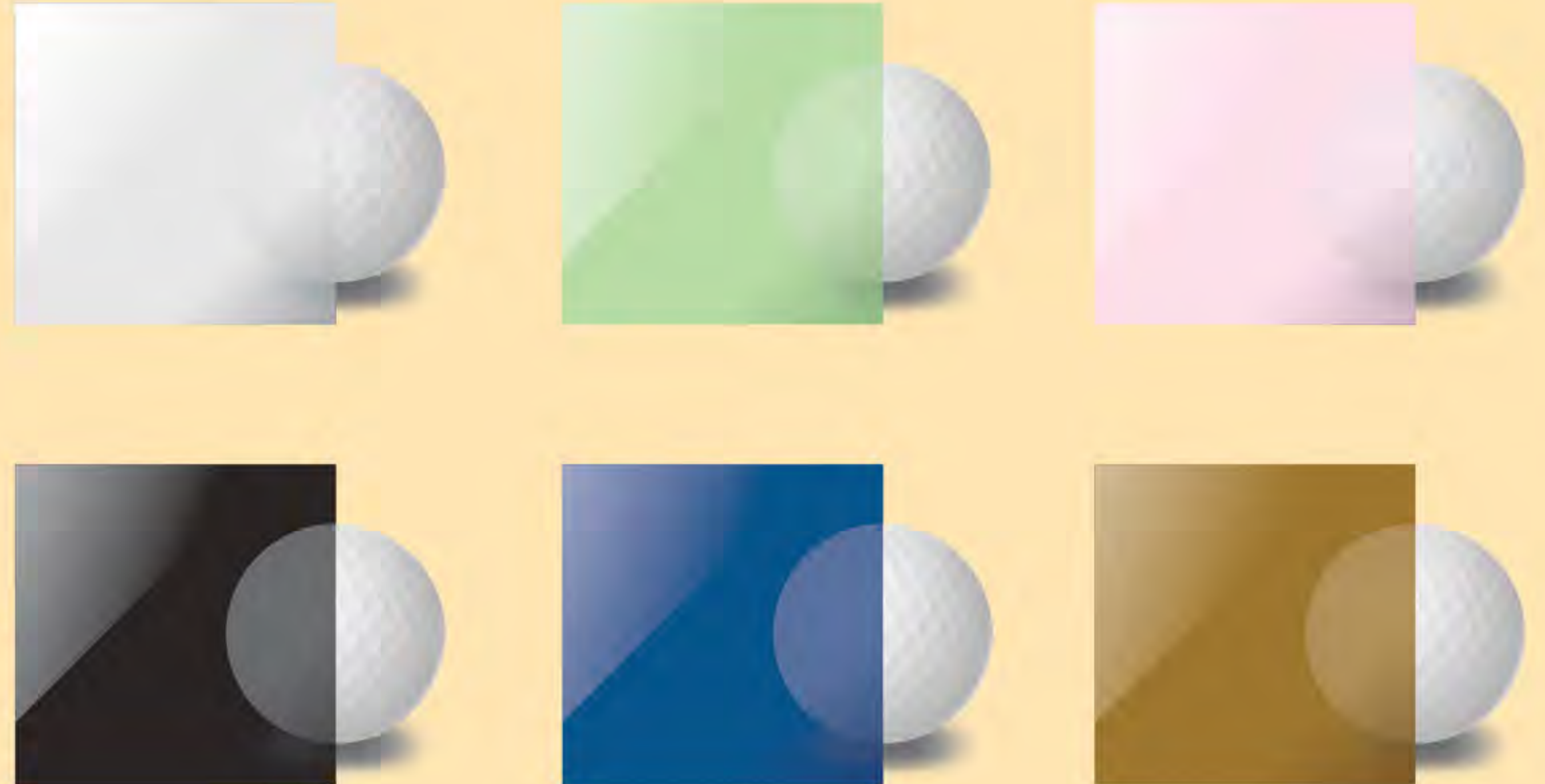


VIRA GROUP

Float Glass

The colored glasses are include **bronze-colored glass, grey glass, elite green, pink and blue**. These glasses are produced so they can be tempered and transferred to the tempering furnace to become unbreakable.

These glasses have many uses and very high diversity. These products are made from compounds of iron, manganese, gold, cobalt, silver, etc. At large, the color of these glasses is created by adding a metal oxide to the raw materials so that copper oxide can produce colors such as ruby, blue or green when exposed to diverse conditions. Cobalt is mostly used to produce blue shades and green shades of glass. Green shades are also produced using chromium and iron oxide. Golden glasses are created by using and adding uranium, cadmium sulfide or titanium. Ruby-colored glasses are also created using gold.



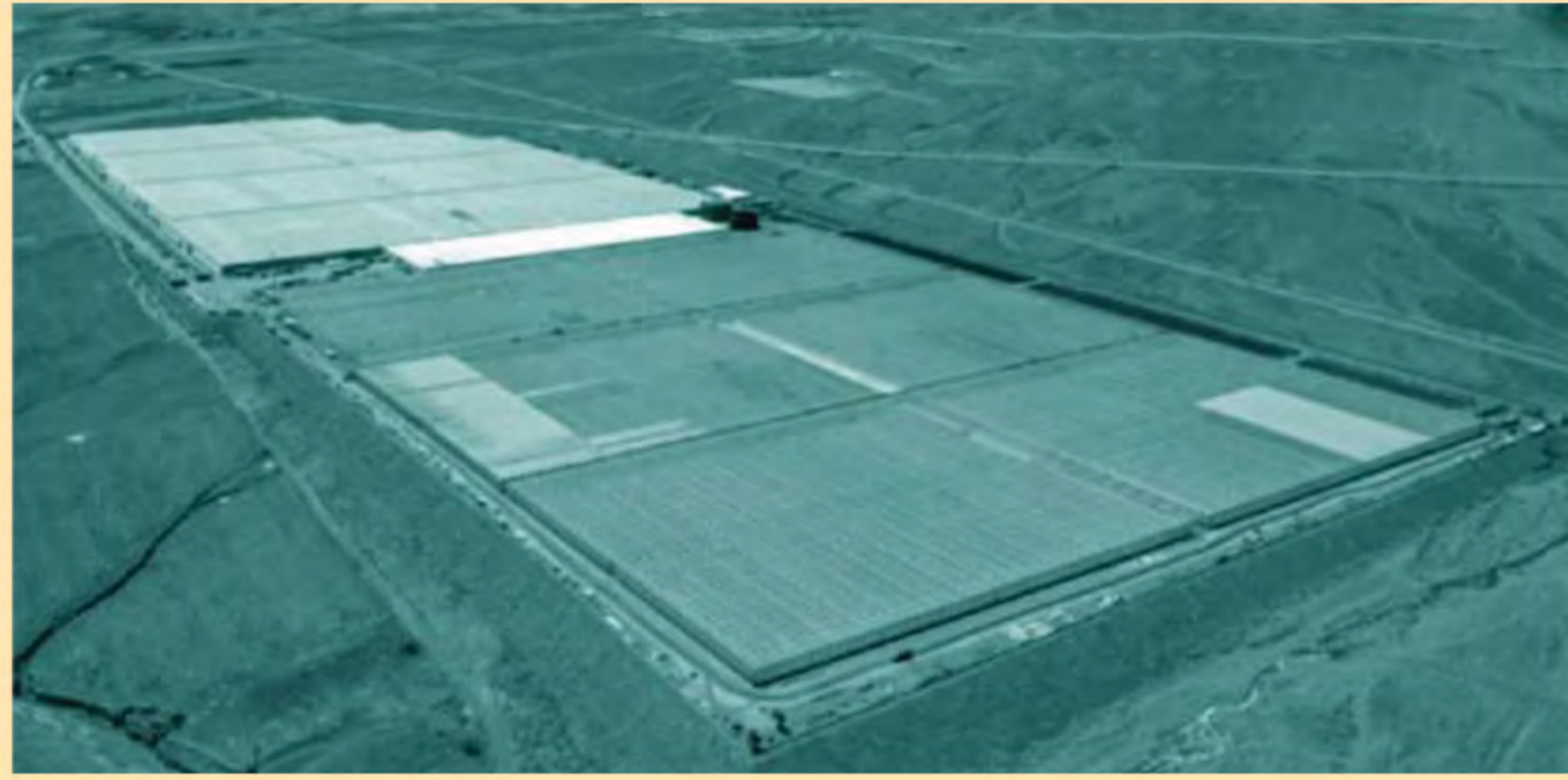
Clear Float Glass	4mm	6mm	8mm	10mm	pic	preamble
Visible light transmission	90%	88%	88%	87%		Float glass displays first-rate optical transmission, with the transmittance being round ninety% over a extensive spectral variety from Ultraviolet (250 nm) all of the way as much as Infrared . As a end result, it is a amazing candidate for plenty applications that require high transmittance together with broadband operation.
Visible light reflectance	8%	8%	7%	7%		Visible Light Reflectance from the Exterior - Measured as a percentage of visible light that is straight mirrored from the outside of the glass surface. A low reflectance cost could be around 10% as normal clear float glass is 7-9% with consultant store fore or car showrooms as low as 1%.
Solar Factor	85%	81%	77%	75%		The solar factor of clear Float glass is the percentage of the whole, entire solar shimmering heat power entering the room over the glass. It's the sum of the solar shimmering heat power entering by direct transmittance and the proportion of the power absorbed and re-emitted by the glazing to the interior space.
Shading co-efficient	1.02	0.97	0.95	0.93		Shading coefficient (SC) is a degree of thermal performance of a glass unit (panel or window) in a building. It is the ratio of solar acquire (due to direct sunlight) passing over a glass unit to the solar power which passes over 3mm-4mm Distinct clear Float Glass. It's an indicator of how well the glass is thermally insulating (shading) the interior when there exist direct sunlight on the panel or window.
U-value	5.75	5.69	5.62	5.56		The U-value of a clear Float Glass or the Windows is a measurement of the rate of heat loss denoting how well your windows are retaining indispensable heat in. It's expressed as Watts per square Meter kelvin W/m ² K. The lower the U-value the better the thermal performance of the glass. So titled 'Low-emissivity' or 'Low E' glass provides Enhance thermal insulation indicated by extremely low U-values.
Tinted Float Glass: Grey, Bronze, Green and Blue	4mm	6mm	8mm	10mm	pic	preamble
Visible light transmission	55%	45%	40%	26%		Tinted float glass can possibly be specified in several transmission ranges depending upon the range of visible light wanted to be passed or restricted. The lower the transmission value, the darker the tint and the fewest number of transmission. This tinted float glasses have solar temperance abilities, decorative aesthetic, and even being utilized to add in addition to privacy in corridors. Perfect for windows, cabinets, and furniture protection. Additionally accessible as Toughened Safety Glass. in large and because of darker tint May supply cooler indoor temperature if utilized as a window May decrease glare and Has a reduced opacity
Visible light reflectance	6%	5%	5%	4%		Addition of color does not affect the basic properties of the glass, even though visible light reflectance will be slightly higher than clear glass. Visible light reflectance in tinted float Glass from the exterior- measured as a percentage of visible light that is straight reflection from the outside of the Glass surface . SIG 's Tinted float Glass has a few difference in percentage of Exterior reflection , in comparison with the clear glass.
Solar Factor	67	58	52	50		The solar factor of tinted float glass, like clear float glass, determines the total percentage of the total radiant heat force of the sun that enters the room through the glass, with the difference that with the addition of color, light transmission is reduced and the heat of the sun is controlled. color in the glass also prevents the glare of the sun from entering and provides a calm and pleasant atmosphere.
Shading co -efficient	0.77	0.67	0.60	0.57		Shading efficiency in tinted glass is the ratio of solar absorption (due to direct sunlight) through a unit of glass to the solar power passing through the 4-10mm tinted float glass. This indicates the degree of thermal insulation of the glass. (shading) the interior space when there is direct sunlight on the glass sheet or window. Due to the similarity of the physical properties of this shutter with clear glass, the overall percentages of this index should not be significantly different from float glass shutters, with Now, due to the addition of color, the amount of light absorption will increase, and as a result, thermal insulation will be more than clear glass. Therefore, the amount of sunlight entering will be less than clear float glasses.
U-value	5.8	5.7	5.6	5.6		U-Value is a measure of the amount of heat loss in a floated tinted glass that shows how much essential heat your tinted glass retains. This indicates how quickly the heat of hot air (not direct sunlight) passes through the glass. The lower the U value, the better the insulation. Glass with low U-values is usually used to retain heat in a room, in cold weather or at night. SIG colored glass with different color spectrum has a reasonable amount of U that can be used in general and different environments.



VIRA GROUP

Tempered Glass

This product is Manufactured through a process of extreme heating and rapid cooling, tempered glass is much harder than standard glass also one of the most popular products of VIRA GROUP . The production capacity of these glasses is 10000 m2 per day. The quality has gained national standards Also known as "safety glass", tempered glass is often used in car windows, shower doors, glass tables, glasshouse and other installations where increased safety standards are necessary.





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Laminated glass

Laminated glass is a type of safety glass that holds together when shattered. In the event of breaking, it is held in place by an interlayer, typically of polyvinyl butyral (PVB and EVA), between its two or more layers of glass. The interlayer keeps the layers of glass bonded even when broken, and its high strength prevents the glass from breaking up into large sharp pieces. This produces a characteristic "spider web" cracking pattern when the impact is not enough to completely pierce the glass.

This group, with the utilization of the latest technology and well equipped machines, a trained and expert team, has distributed the best quality, costefficient and timely accommodation in the field of designing , engenderment and suppling of most types of laminatedGlass for customers.





VIRA GROUP

Solar Glass

Solar windows are designed and produced to deal with summer heat and prevent dust from entering vehicles. These products control the light and temperature of the sun well and provide comfort and safety to the car passengers. These glasses consist of two layers of glass and one layer of plastic (interlayer) and have high strength and strength. The plastic layer (interlayer) used in these products plays a very effective role in absorbing sunlight. Therefore, due to this high absorption power, the main application of these glasses is in solar panels.

VIRA GROUP can produce 250 square meters of solar glass per hour with a thickness of 6-2 mm.





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Automotive Glass

Safety is one of the most important indicators in the design of automobile glass. The glass has to be optically clear to provide drivers and passengers with a non-distorted view of their surroundings, but it also needs to selectively transmit light to help drivers see clearly without squinting and keeping the interior cool on hot sunny days. The production capacity of these glasses is 600 tons per day. The quality has gained the world's latest standards.





VIRA GROUP

Ultra-Clear Glass

Ultra-Clear is a low iron base glass that delivers an incredible viewing experience.

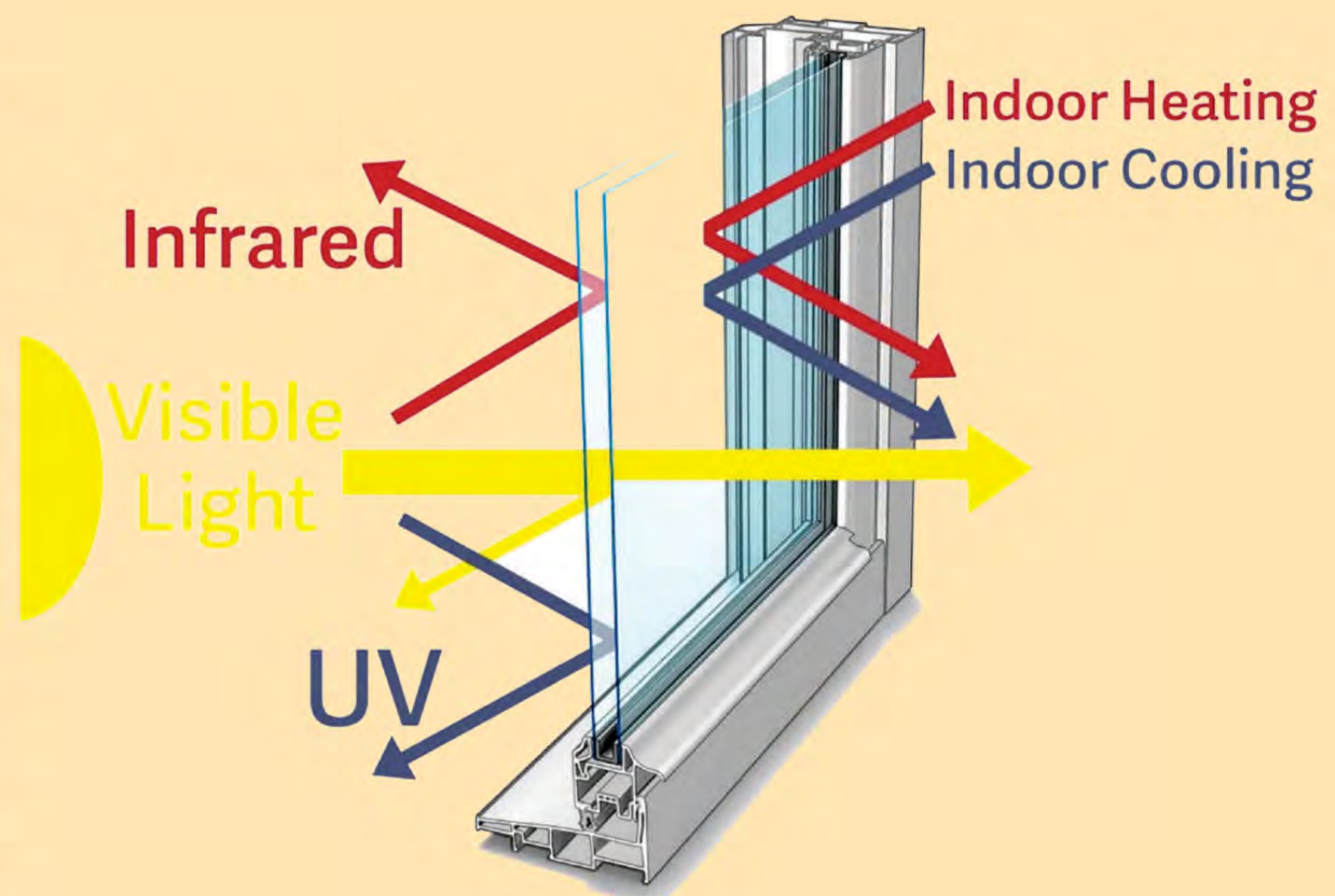
The residual color of Ultra-Clear Float Glasses is brilliant, making it the perfect choice for high-performance glass projects. With a light transmission of over 91 % and an average iron level of 100ppm (%0.01), it is one of the best base glass products for residential, architectural and special applications such as Solar Panels, etc .. It can be produced from 3 to 19 mm thick and 376 to 1100 cm in dimension. The daily production capacity of this line is 600 tons per day. The produced ultra glass is used as raw glass in the solar line is one of the most popular glasses these days.



Building glass that controls energy (Low-emissivity Glass)

Building glass that controls energy (Low-emissivity Glass) is created using the low-emissivity coating. This coating effectively prevents the passage of the sun's ultraviolet rays and infrared heat waves through the glass. This coating stops the passage of harmful rays without any reduction in the passage of visible waves.

When sunlight reaches the surface of these glasses, the spectrum of visible waves passes through them, but harmful rays are reflected. The thin and microscopic coating of silver of these products makes the sun's heat return to the outside to ensure the internal comfort temperature of the environment. Glass with low emissivity coating is made of layers of silver or other materials. This covering layer is about 500 times thinner than a human hair. Nonetheless, its effects on optimizing energy consumption are unique. These coatings are produced using the spectromagnetic vapor expansion process.



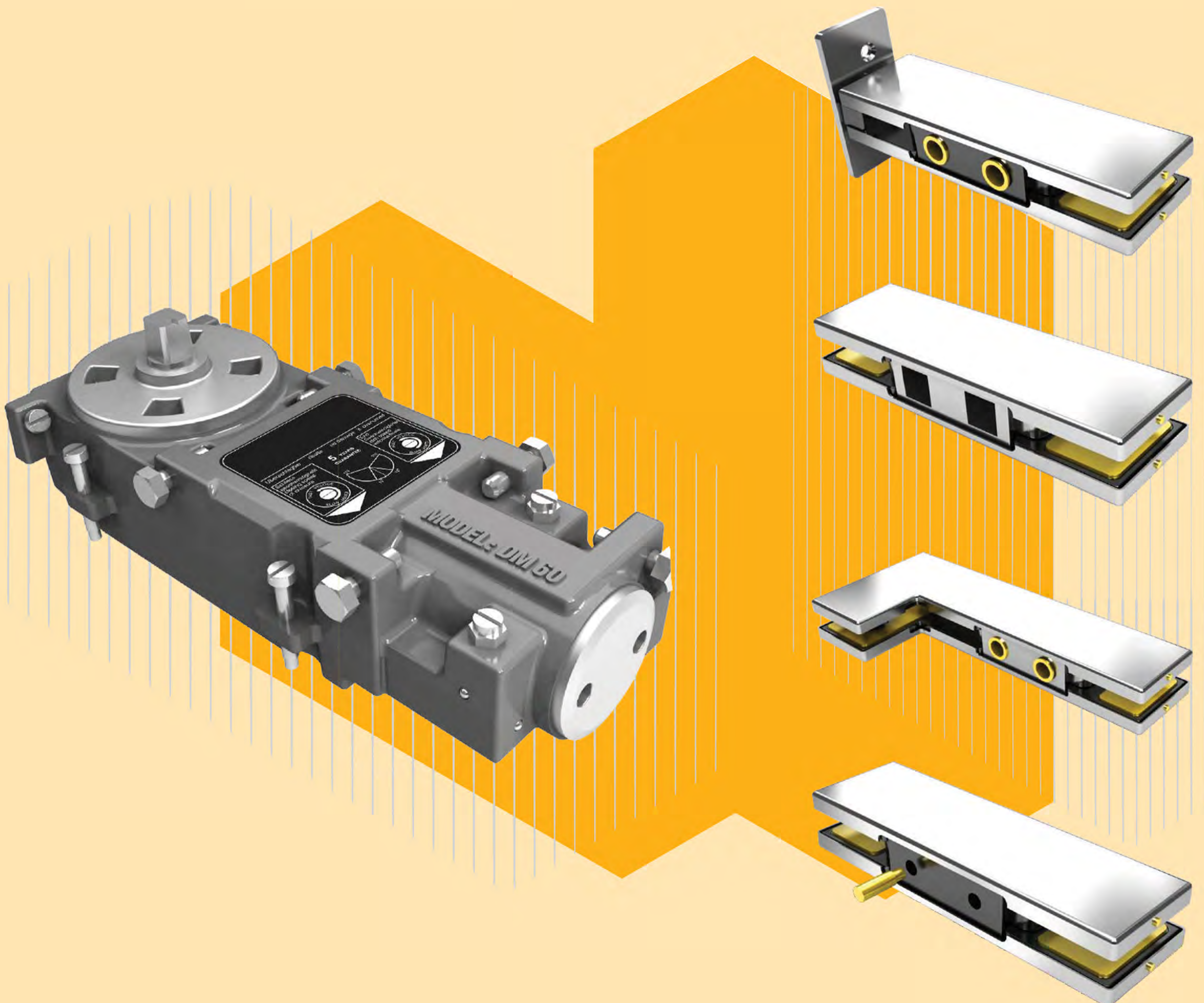


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Production of metal parts by the method of diecasts

Diecast or pressure casting is one of the most widely used methods of mass production of complex m This production method is used in various industries and includes 5 stages: mold preparation, molte injection, cooling, mold opening and cutting. In this method, molten materials are introduced into th mechanical pressure and freeze as they are under pressure. This freezing under pressure produces very high strength.

Diecasting is the shortest method to produce a metal product. With the help of this method, **VIRA GROUP** has designed and produced all kinds of products used in decorative structures and security part and other products.

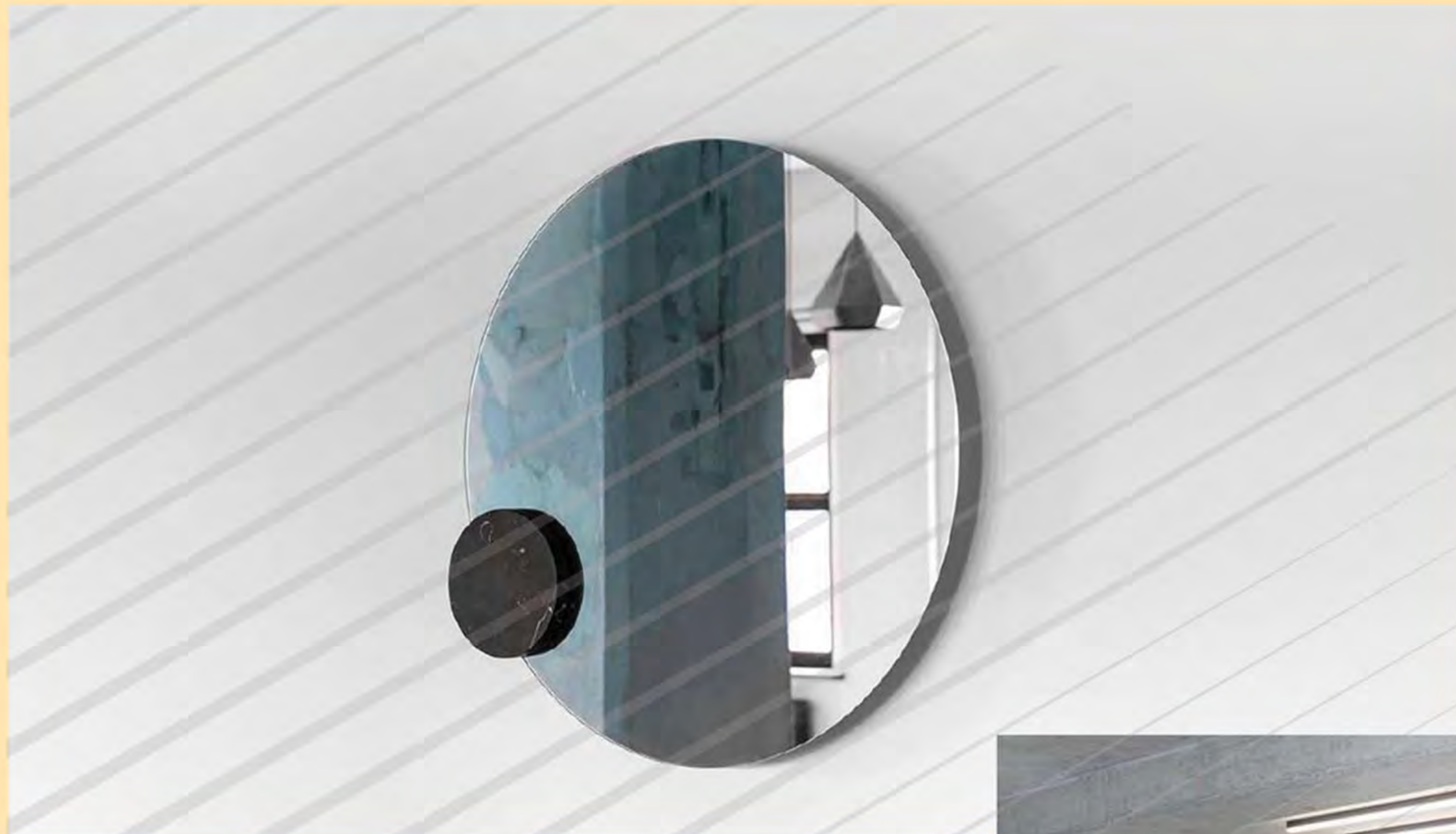




VIRA GROUP

Aluminum mirror

Aluminum mirror is one of the most common mirrors used in everyday life. VIRA GROUP designs and manufactures these products in 3 models of grey, bronze and white aluminum mirrors. The products produced by this brand are highly durable. These mirrors are used to design interior decoration and increase the effectiveness of lighting in rooms and interior spaces of buildings. These mirrors are produced with a coating of aluminum metal on the glass.



Silver mirror

Silver mirror, also called plain or white mirror, is another type of construction glass produced by VIRA GROUP. The silver mirrors of this group are designed and produced in 3 models of grey silver, bronze and white.

These products are of very high quality, and their transparency is surprising. Since mercury causes severe damage to the environment, these products are produced by using silver and silver compounds. These mirrors have different quality levels.





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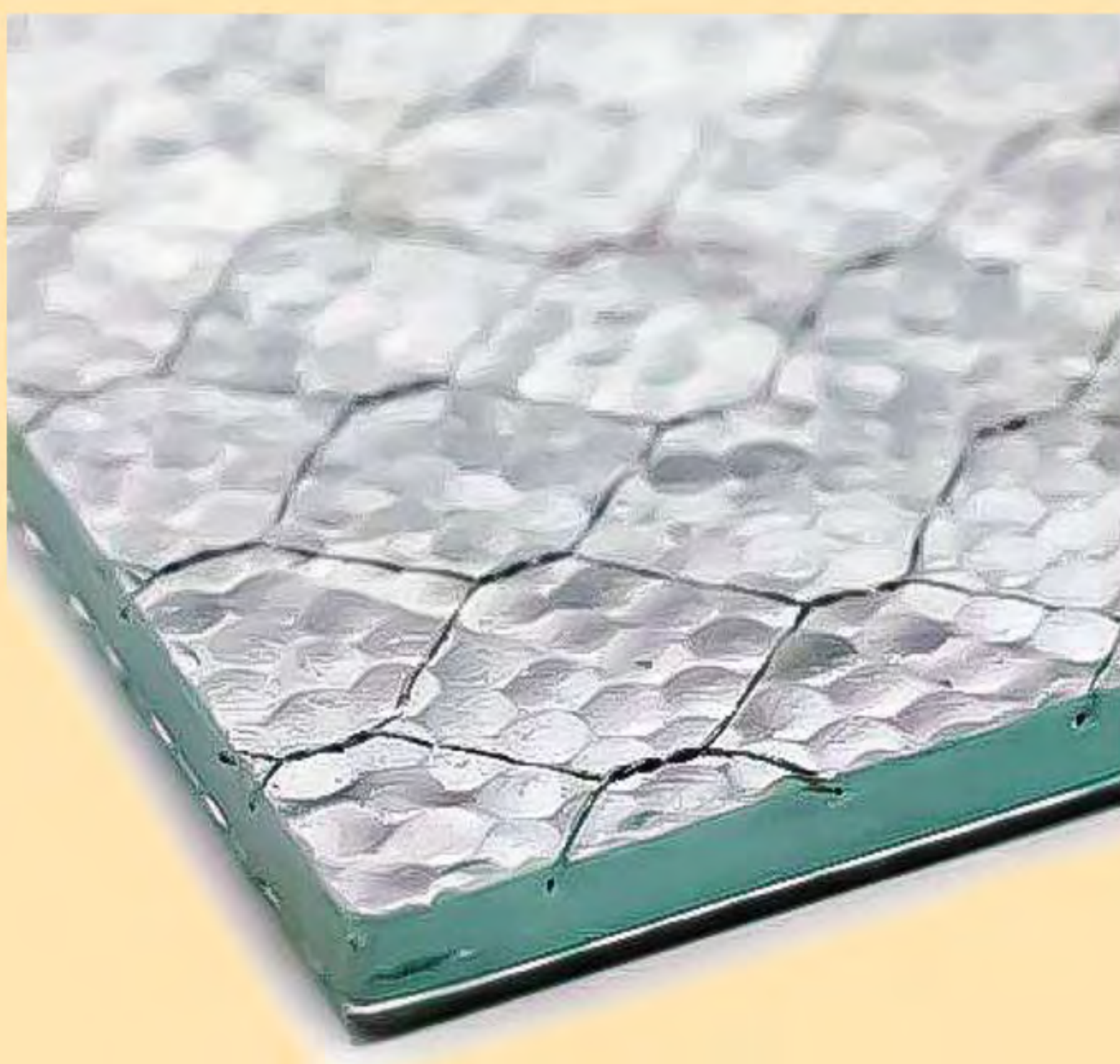
Find superior-quality
▪ **curved glass**
& unique architectural glass.

▪ **Professionalism**
bending
and curved Glass.



Wired glass

Wired building glass is product that is highly resistant to heat and fire. Consequently, in most cases , they are installed and used in public places. **VIRA GROUP** designs and produces this type of construction glass in clear and bronze model.





VIRA GROUP

Vira Holding, with several decades of activity in the field of construction and export, with 4 active offices in **Turkey, Georgia, Poland, Croatia** and its head office in **Iran**, due to the presence of strong and high-quality stone mines in this The context has been to export all kinds of construction stone products and meet the needs of the foreign markets.