



DA||GLASS



# Diamond Glass

**Over 30 years  
of experience in  
craftsmanship of  
highly advanced  
glass technology**

# DAGLASS PORTFOLIO

DAGLASS

## TECHNOLOGIES & PRODUCTS



### DIAMOND GLASS

Hydrophobic, resistant to scratching. It is a great choice for partitions, partition walls, and shower cabinets.



### DIFFUSED GLASS

It scatters the light in a controlled and steady manner. Therefore, it removes shadows and gives more transparency in contact with water. It is a perfect solution for lightning and greenhouse sector.



### NANO-BARREN™ ANTISEPTIC GLASS

It is produced with the use of magnetron technology and has antifungal, self-cleaning and biostatic properties.



### ANTI-REFLECTIVE GLASS

By changing the surface morphology, this glass increases the light transmittance. Consequently, it improves the efficiency of lightning and significantly advances the quality of image on screens.



### NON-GLARE GLASS

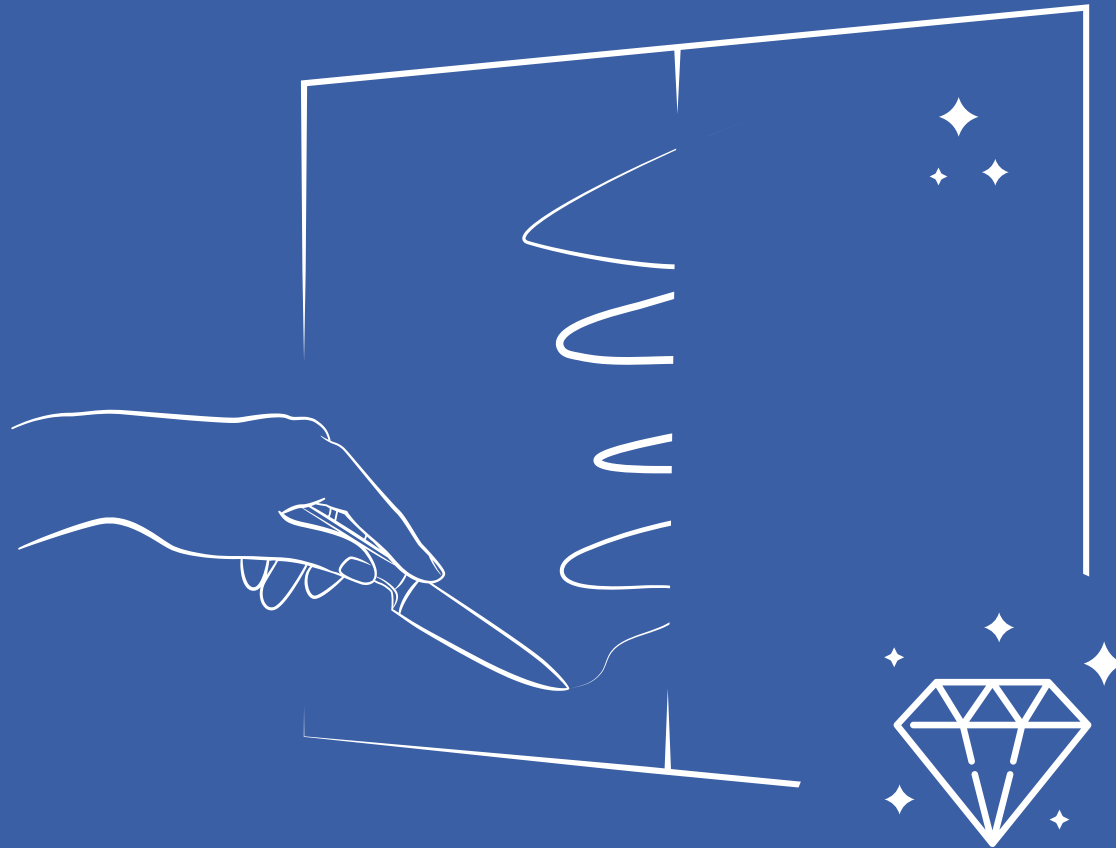
A type of glass with changed morphology in the nano scale. It is suitable for LED screens and LCD screens. The anti-finger print feature makes it an ideal solution for touch screens. It reduces light reflexes and improves the image.



### THERMALLY TEMPERED, LAMINATED AND DOUBLE GLAZED GLASS

A wide range of applications in the construction industry.





**Diamond Glass – anti-scratch glass is made using a high vacuum magnetron sputtering technique.** In this process a high vacuum is created, then as a result of effective bombardment of the target with ions of working gas, atoms are released from target surface and are deposited on the substrate (here: glass) in the form of a nanolayer / coating.

The resulting coating, made of an amorphous carbon phase, has diamond-like properties, and when applied to a glass substrate, it exhibits the following characteristics: reduced friction coefficient, increased resistance to mechanical loads (e.g. scratches), increased hardness, chemical inercy, tightness and anti-static properties - the ability to neutralize the electric charge accumulated on the surface of the glass.

# DIAMOND GLASS

## PROPERTIES

- High resistance to scratches
- Easy and effective cleaning with available detergents
- Increased resistance to scale and dirt deposit
- Increased resistance to corrosion
- Increased durability during processing
- High light transmittance





# || Diamond Glass test

# ANTISCRATCH RESISTANT TEST

## COMPARATIVE TEST

Glass with  
antiscratch coating →

Glass without  
hardening coating →



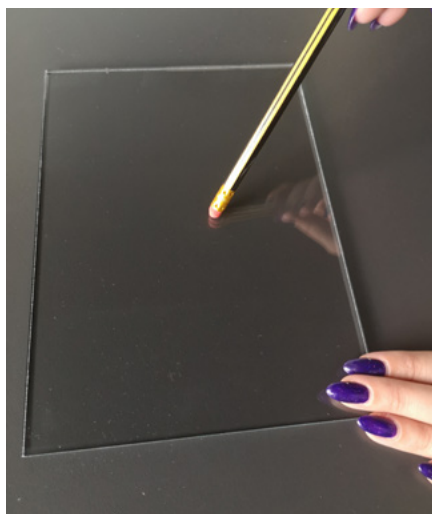
## Research results

The scratch resistance test using scratch glass (5 by 5 cm) showed that **on a part of the glass with a diamond coating, scratching of the surface is impossible.**



# LIMESCALE DEPOSITION

## COMPARATIVE TEST



Glass with diamond coating



Glass without any coating

### Research results

The picture on the left shows glass with a diamond coating, and on the right shows glass without any coating. As seen on glass with diamond coating, in opposite to glass without any coating, no water residues are observed.

**In practice, this result means that the diamond coating prevents deposition of scale and can be used as protection in applications where moisture protection or water penetration into the glass structure is important.**





# THE RATE OF WATER FLOW FROM GLASS

## COMPARATIVE TEST



Glass with diamond coating



Glass without any coating

### Research results

The picture on the left shows glass with a diamond coating, and on the right glass without any coating. As you can see, the speed of flowing water is much faster in the case of a glass with a coating - there are no traces of flowing water, which means that the time of contact of water with a coating is much shorter than in the case of a glass without any coating.

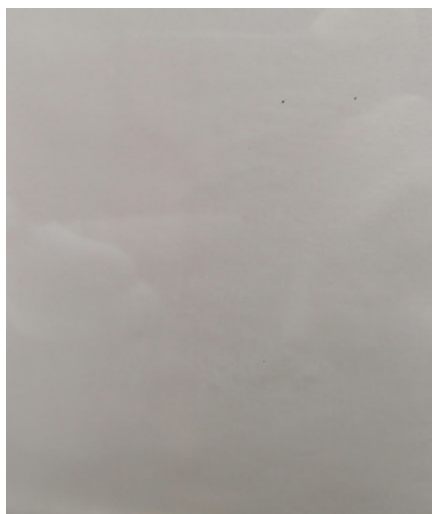
**In practice, this result means that the diamond coating reduces the susceptibility of the glass to dirt of organic and inorganic origin.**



# GLASS CORROSION RESISTANT TEST

## COMPARATIVE TEST

[according to PN-EN 1096]



Glass with diamond coating



Glass without any coating

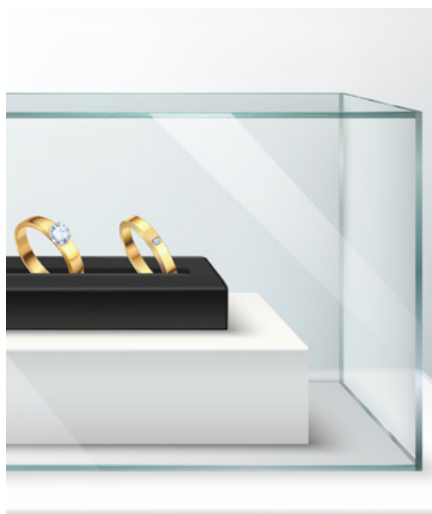
## Research results

Glass corrosion resistant aging test was carried out in a climatic chamber at 50 °C and 95% humidity for 14 days, showed no signs of corrosion in the form of white discoloration. Despite extreme conditions, the glass remained transparent.

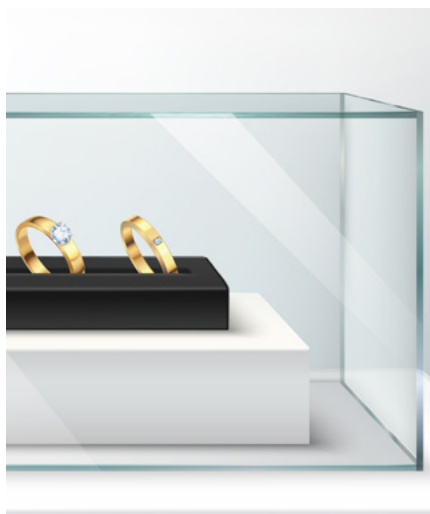


# OPTICAL PARAMETERS OF GLASS

## COMPARATIVE TEST



Glass with diamond coating



Glass without any coating

### Research results

Low-iron glass, with a direct light transmission of 91.0%, does not change significantly optical parameters after applying the diamond coating. In practice, this result means that the transparency of the glass after applying the diamond coating (for interior usage) remains at the same level as the base glass. The transmission of the glass after deposition of diamond coating for exterior usage may have a value up to 2% lower than base glass (glass without any coating).





# **Diamond Glass applications**

nano  
barren<sup>TM</sup>



## DIAMOND GLASS

Diamond Glass can be applied in the places, where the surface is exposed to external factors such as water, organic – non-organic dirt or other mechanical factors such as scratches and it can be also used as a protection against vandalism.



**PUBLIC USE  
PLACES**



**AIRPORTS**



**PUBLIC TRANSPORT**



**WET ZONES**



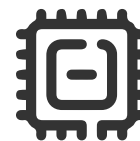
**COMMERCIAL  
SPACES**



**EXTERIOR  
ARCHITECTURE**



**SANITARY  
FACILITIES**



**HIGH TECHNOLOGY  
INDUSTRY**







## ARCHITECTURAL

Available in various colours

- Glass roofs
- Railings
- Skylights
- Wall panels / fittings for the kitchen, interior offices, waiting rooms, corridors, elevators
- Glass floors
- Sales stands in shopping centers
- Display window - higher resistance to acts of vandalism





**GLASS ROOFS**



**WALL PANELS**



**GLASS FLOORS**



**DISPLAY WINDOWS**





## PUBLIC & COMMERCIAL AREAS

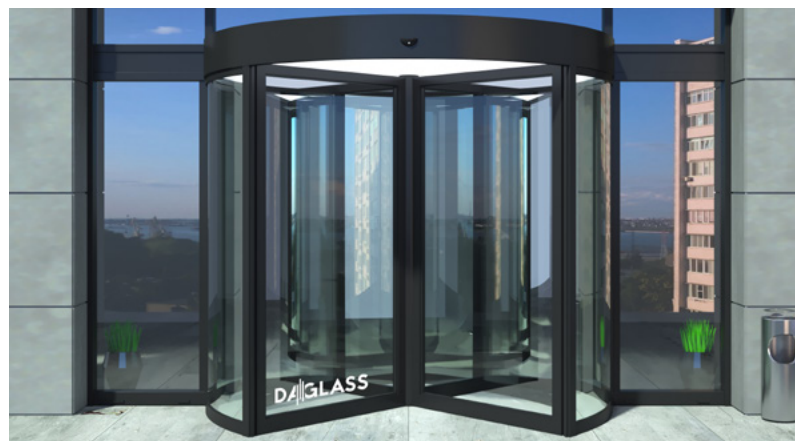
- Bus shelters
- Glass panels in public transport
- Revolving doors
- Jewellery and museum display cases, exhibition cabinets, glass furniture
- Payment terminals, EAN readers in cash desks, electronic scales with scanners
- Screen protectors, smartphone displays







**BUS SHELTERS**



**REVOLVING DOORS**



**PUBLIC TRANSPORT**



**PAYMENT TERMINALS**







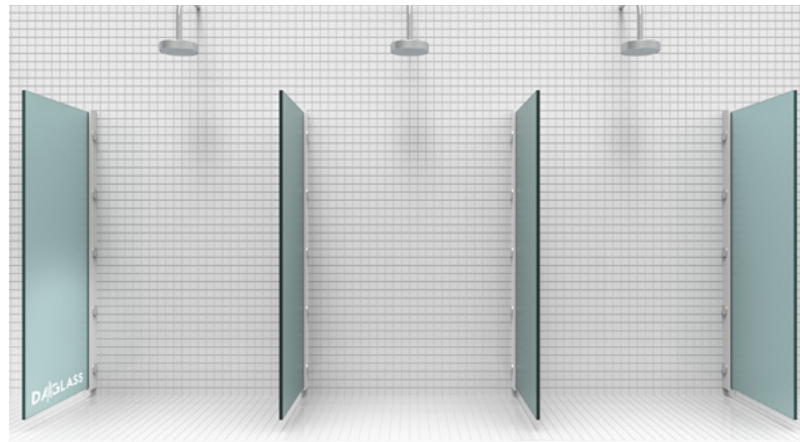
## SWIMMING POOLS & SPA ZONES

- Shower cabins
- Bathtub glass panels
- Separating partitions
- Glass doors, non-transparent glass doors
- Glass bathroom countertops





**BATHTUB GLASS PANELS**



**SEPARATING PARTITIONS**



**SEPARATING DOORS**



**GLASS BATHROOM COUNTERTOPS**



# Contact

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