

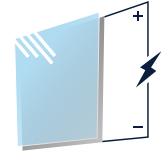


# SMART GLASS





**Q**  
GLASS



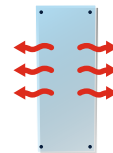
Glass  
with quantum coating

**HQ**  
GLASS



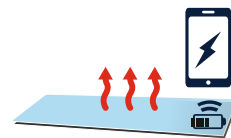
Heated  
glass

**T**  
GLASS



Heater  
with glass surface

**S**  
GLASS



Glass  
heating sill

**V**  
GLASS



Variable  
transluency glazing

**V<sup>+</sup>**  
GLASS

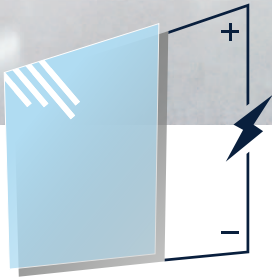


Variable transluency  
heated IGUs





# Q GLASS



Transparent glass that generates electricity. A quantum revolution in global construction

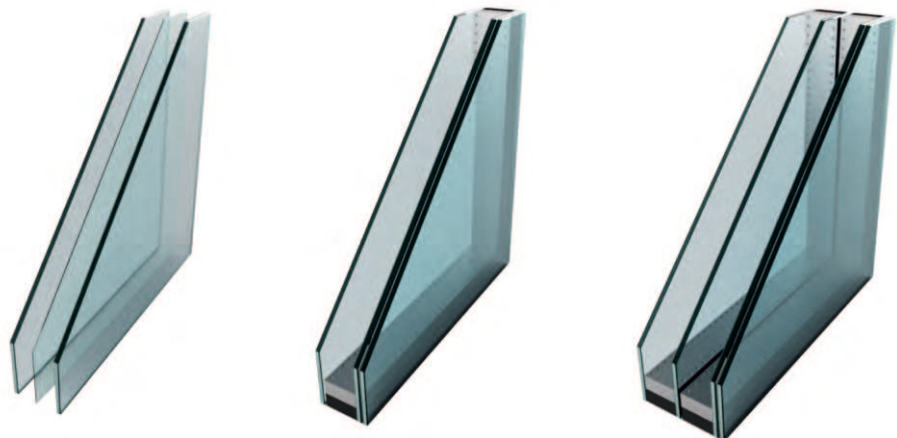
Single laminated glass | IGUs (double- and triple-glazing) with quantum coating.



payback time  
5 years



scan the code  
and check  
Q Glass





## Q GLASS – The New Quantum Era

Q GLASS is the first and only global solution, which, thanks to the use of a coating consisting of quantum dots makes it possible to generate free electricity from the sun with simultaneous reduction of harmful UV and IR radiation.

Q GLASS has very good light transmission parameters while maintaining a high coefficient of thermal insulation.

Q Glass limits the overheating of interiors, as well as the effect of the so-called urban heat island (UHI). Q Glass is a breakthrough in the energy balance of cities.

## Wide range of applications:

- Facades and curtain walls of buildings,
- Roof glazing (skylights),
- Glass balustrades, winter gardens,
- Glass of mobile devices,
- Non-standard projects  
(glass bridges, glass staircases, glass floors),
- Special applications (medical, military, aviation).

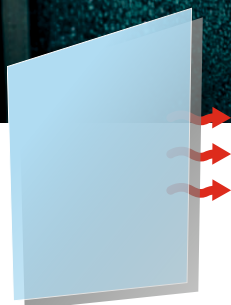
## Technical parameters

Max dimensions	1,2 x 2,2 m
Efficiency	from 30W/m <sup>2</sup>
QDSC	coating active
Thermal insulation	Ug from 0,4 W/m K
Energy insulation	g from 0.22
Light transmission	LT up to 85%
Additional functions	<ul style="list-style-type: none"> <li>- weather resistance</li> <li>- resistance to degradation</li> <li>- resistance to mechanical damage</li> <li>- safety of use</li> </ul>





# HQ GLASS



Double-glazed and triple-glazed units with heating function, equipped with a controller, allows you to easily control the temperature inside.



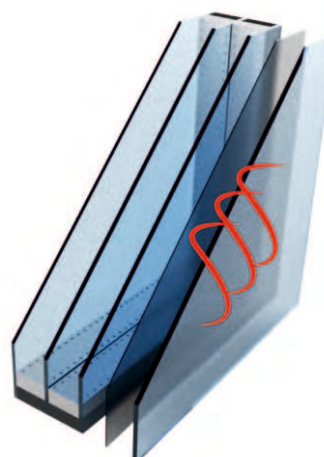
possibility of personalization  
shape, color and print



scan the code  
and check  
HQ Glass



$U_g - 1,0 \text{ W/m}^2\text{K}$



$U_g - 0,5 \text{ W/m}^2\text{K}$



## Design and function

HQ GLASS is a modern thermal solution, allowing to eliminate the traditional heating system.

It provides transparency of glass and comfort of warmth inside buildings. The offer includes a wide range of colors, different illuminations and sizes of glass panes.

## Intelligent thermal comfort

Design and function of the integrated control system allows you to easily control the temperature. Regardless of the climate guarantees high heating efficiency. Depending on the heating capacity and thermal insulation, the product available in several variants.

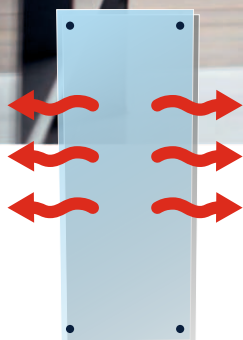
## Technical parameters

	HQ 2500	HQ 700
Maximum temperature	70°C	55°C
Power supply	230 V / 50 Hz	
Heating power	2500 W/m <sup>2</sup>	700 W/m <sup>2</sup>
Heating speed	10°C / min	4°C / min
Temperature control system	integrated	
Degree of protection	IP65	
Additional functions	<ul style="list-style-type: none"><li>- protection against overheating</li><li>- maintaining the set temperature</li><li>- LED display</li></ul>	

PN-EN 60529; PN-EN 60335-2; PN-EN 12150-1+A1:2019-06; PN-EN ISO 12543-2:2011



# T GLASS



Innovative heater with glass heating surface and electronic control.



possibility of personalization  
shape, color and print



scan the code  
and check  
T Glass



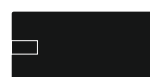
1500 U



1500 D



1500 R



1500 L



# SMART GLASS

## Intelligent thermal comfort

T GLASS is a combination of thermal comfort with innovative design and the highest quality of manufacturing. Designed for people who want to equip their interiors with an unconventional device and first of all to ensure optimal thermal conditions.

## Design and function

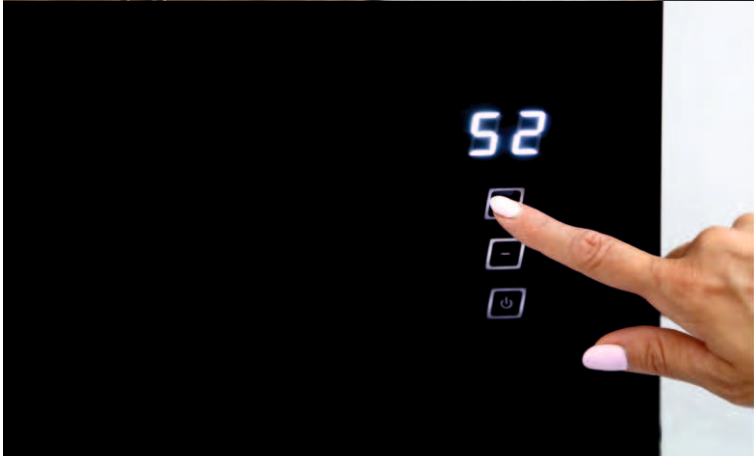
High efficiency with electronic touch control ensures comfort of use.

The maximum temperature the user can set for the appliance is 70°C and is limited electronically, which provides additional safety.

## Technical parameters

Model	1500 U	1500 D	1500 L	1500 R
Position of control and display	Up	Bottom	Left	Right
Dimensions	1200 x 600 x 30 mm		600 x 1200 x 30 mm	
Weight	15 kg			
Rated current	6,5 A			
Rated power	1500 W			
Power supply	230 VAC / 50Hz			
Maximum heater temperature	70 °C			
Heating speed	do 10 °C/min			
Degree of protection	IP65			
Control	Electronic touch control			
Additional functions	Protection against overheating, maintaining the set temperature			
Type of print	Ceramic print made with InkJet technology			

PN-EN 60529; PN-EN 60335-1; PN-EN 60335-2; PN-EN 12150-1+A1:2019-06; PN-EN ISO 12543-2:2011



**S**  
**GLASS**



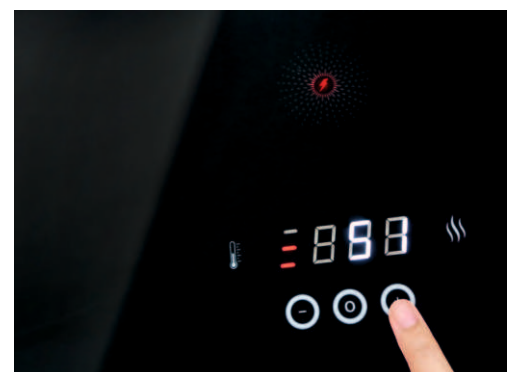
Heating glass sill, helps to maintain proper air circulation The glass heating sill helps to maintain proper air circulation in interiors and functions as a telephone induction charger.



possibility of personalization  
shape, color and print



scan the code  
and check  
S Glass





## Design and manufacturing

Regardless of its usefulness, a windowsill can emphasize the character of a given room satisfying even the most sophisticated tastes.



## Technical parameters

Dimensions:	1500x300 mm	950x300 mm
Power consumption:	max 1050 W	max 750 W
Additional functions:	<ul style="list-style-type: none"><li>- touch control,</li><li>- display showing current temperature integrated with its operating status indicator,</li><li>- possibility of temperature adjustment in the range of 20-70°C</li></ul>	
LED lighting :	<ul style="list-style-type: none"><li>- heating - red,</li><li>- inductive charging - blue</li><li>- simultaneous heating and charging</li><li>- mix of red and blue colors</li></ul>	
Parameters:	<ul style="list-style-type: none"><li>- Qi compatible</li><li>- ability to charge in 4 modes depending on used by the receiver</li></ul> Power - 5 W / 7.5 W / 10 W and 15 W	



PN-EN 60529; PN-EN 60335-1; PN-EN 60335-2; PN-EN 12150-1+A1:2019-06; PN-EN ISO 12543-2:2011



CLOSE SHADE OPEN

V Glass- Glass with variable translucency that can be switched to OPEN, SHADE and CLOSED.

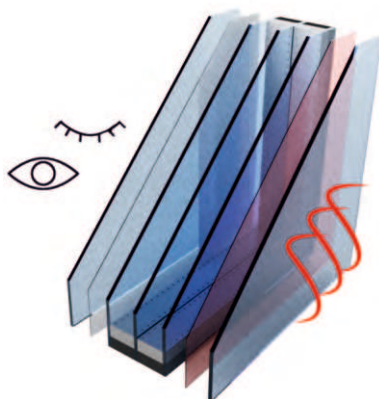
V+ Glass - 1-chamber or 2-chamber glazing unit with heating function and variable transparency of the glass.



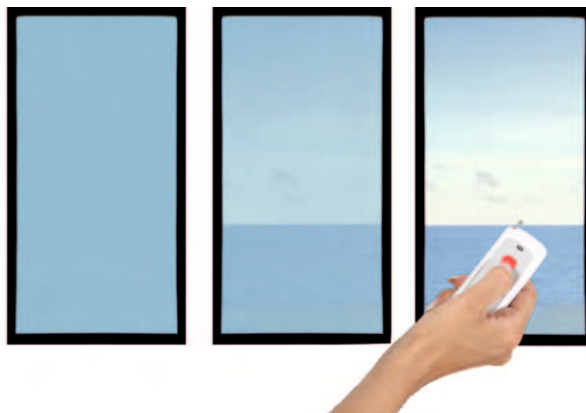
possibility of personalization  
shape, color and print



scan the code  
and check  
V Glass



CLOSE 0% transparency    SHADE 50% transparency    OPEN 100% transparency





## Design and function

V GLASS is a solution that allows individual space adaptation in terms of visibility to suit the user's needs and circumstances.  
By choosing one of three options you can change the space from business to semi-private or private (100%, 50%, 0% transparency).

V+ GLASS is a combination of thermal comfort HQ GLASS with intimacy of V GLASS. V+ GLASS is a pane that can be switchable in OPEN, SHADE or CLOSE mode and at the same time also functions as a heater. The V+ GLASS glazing set can replace a traditional heating system inside. The integrated control system allows easy way to control the temperature. The glazing is available in several variants. Depending on the power and thermal insulation of the selected package.

## Technical parameters:

	V+ Glass		V Glass
	v1	v2	
Power consumption:	in the transparent mode 5W/m <sup>2</sup> , not transparent mode 0W/m <sup>2</sup> ,		
Expected life-time:	80 000 hours in the transparent mode, does not get consumed in an opaque mode,		
Light transmission in the range	- UV: ~1% - visible radiation: 85% in the transparent mode, - infrared: 40% in the opaque mode, absorbs about 60% of IR radiation and thus limits the heating of interior spaces,		
Max width of the glass	1500mm		
Max height of the glass	3210mm		
Min. thickness of V Glass laminate:	~9mm		
Supply voltage:	<48V AC		
Max. temperature:	70°C electronically limited	55°C	•
Supply:	230 V/50 Hz		
Heating power:	2500 W/m <sup>2</sup>	700 W/m <sup>2</sup>	•
Speed of heating:	10°C/min	4°C/min	•
Temperature control system:	integrated		•
Degree of protection:	IP65		•
Additional functions:	overheating protection, maintaining the set temperature, LED display.		•

V Glass: PN-EN 60529; PN-EN 12150-1+A1:2019-06; PN-EN ISO 12543-2:2011  
V+ Glass: PN-EN 60529; PN-EN 60335-2; PN-EN 12150-1+A1:2019-06; PN-EN ISO 12543-2:2011



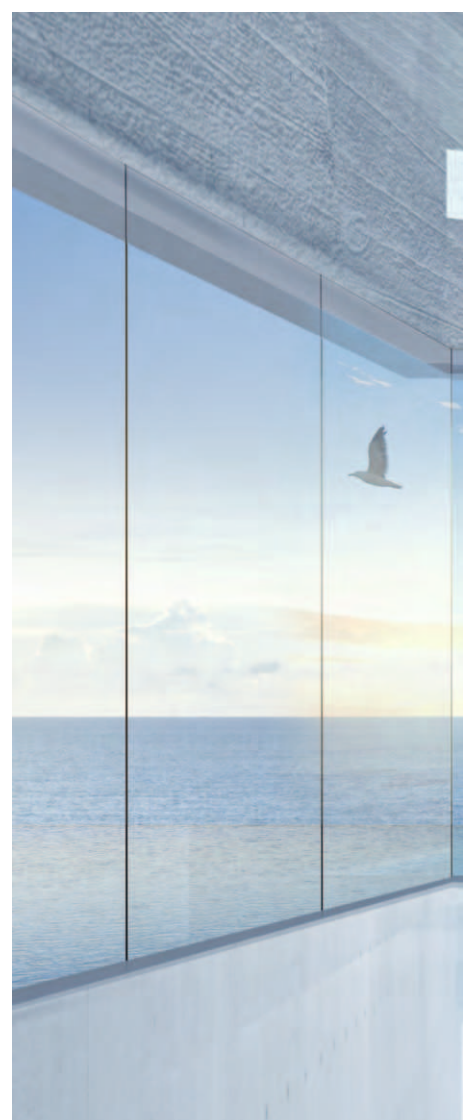
# SMART GLASS PRODUCT LINE

ML System, the leader in innovation, presents a new product group – the line SMART GLASS, i.e. glass generating renewable energy, with heating function and adjustment of transparency, which are single-function products or combined into glazing sets can be multifunctional, sound-absorbing products with very good thermal insulation to be used in any home, office, factory, etc, factory etc.

SMART GLASS product line is a high quality and unique design. The possibilities offered by the SMART GLASS product line:

- individual adjustment of translucency, which can be achieved by selecting the desired option on the remote control or by using the integrated control panel. This not only ensures a high aesthetic value, but also (e.g. when used as an (e.g. when used as an internal partition wall) privacy for the people in the building,
- space heating; The thermal comfort can be provided according to the individual user's needs for individual rooms as well as for the entire building,
- energy saving; the energy gained from the photovoltaic layer can be directly transferred to the heating and/or photonic layer, thus reducing the cost of heating and the cost of energy used for lighting the photonic layer,
- high thermal insulation, one of the most efficient heat transfer coefficient,
- adjustment of dimensions to individual customer needs, shaping of aesthetics by ceramic overprint and engraving on glass – the solution makes it possible to transfer any graphic design to the product, architectural vision in the form of an image or etched glass effect.

\*This material does not represent an offer within the meaning of Article 66 of the Civil Code



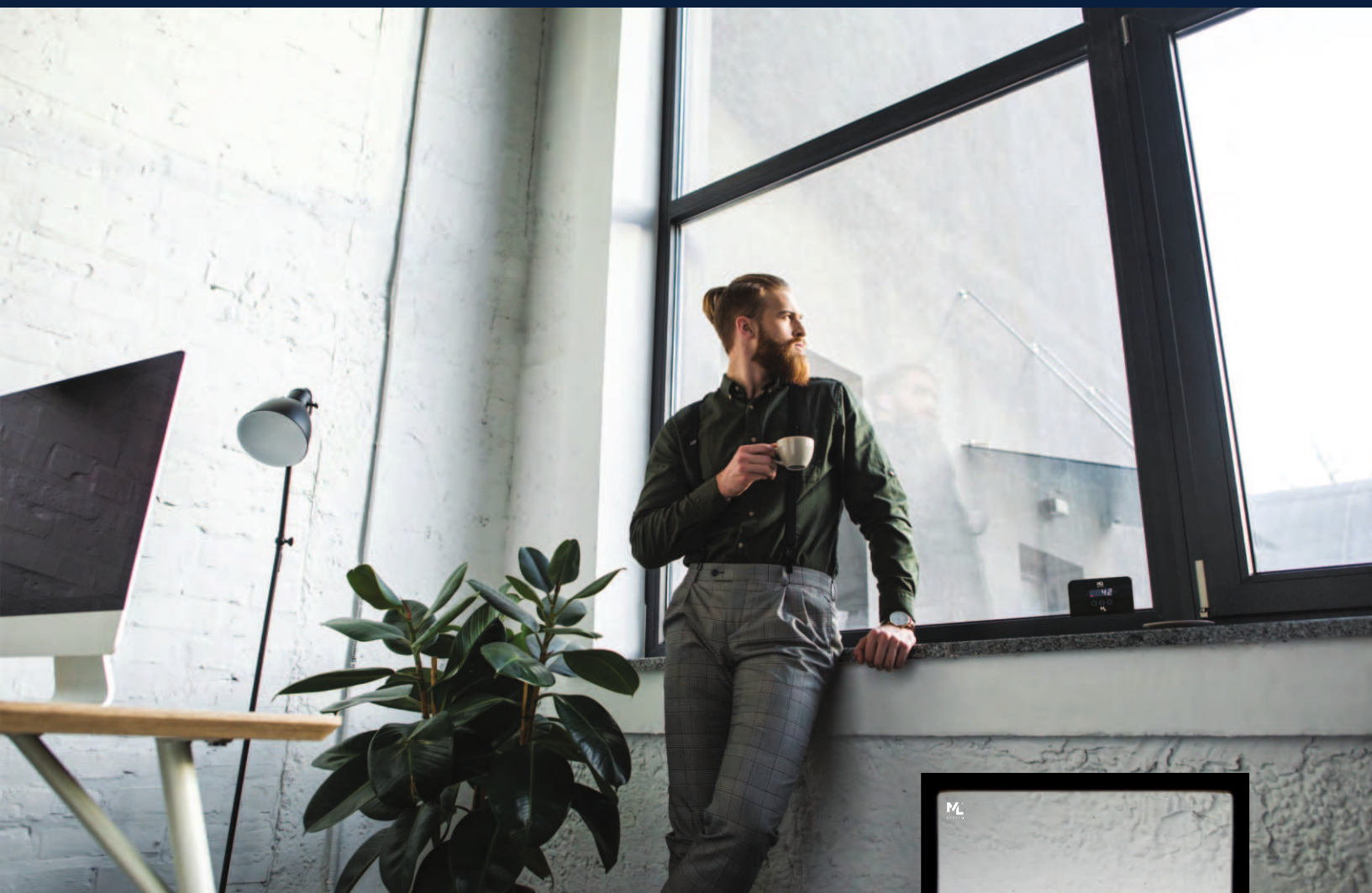


# SMART GLASS



**Q**  
**GLASS**

**SMART GLASS**



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