Heated Glass
Product Information Sheet

Updated February 19

Product Description
Heated Glass is a great solution in pool and spa areas to keep large elevations of glass condensation free. IQ Heated Glass can also be used as an invisible heating solution for any space or for snow removal.

Glass Specification
Glass Spec is designed for the project in whatever configuration is needed for the performance and use of the glass. Below is a typical glass spec.
Typical DGU Spec TXD Inner with Heated Coating, argon gas filled cavity, TXD Outer with low e coating
Additional Glass Options Triple Glazing / Glass Units with Laminated Panes / Single Glazing (laminated)
Glass Thickness IGU 16mm—70mm
Single Glazing 10mm—14mm
Max Glass Size 2225mm x 4800mm, larger sizes may be available on request
Min. Glass Size 300mm x 500mm

Glass Performance
Light Transmission Dependant on glass spec
IGU 20-68%
Single Glazing 20-70%
IP Rating IPX7, immersion, up to 1 m depth
Ug Value IGU 0.6 to 1.1 W/m^2K dependant on glass spec

Wattage Output
Anti Condensation 50-150 W/m^2
Comfort Heating 50-150 W/m^2, or 50-200 W/m^2 for Single Glazing
Sole Heating 100-500 W/m^2, or 200-1000 W/m^2 for Single Glazing
Snow Load Removal 350-700 W/m^2

Certification
CE MARK
EN 1279 - Double glazing unit
EN 1096 - Laminated Glass
EN 12150 - Safety glazing
EN 1863 - Heat strengthened glass
EN 14449 - Safety glazing; laminated glass and structural glazing;
EN 12600 - Pendulum test
EN 60529 - Index of protection
Further certification list available on request

Electrical Power
Surface Temp of Glass $20^{O}C$ to $60^{O}C$
Voltage normally 230 AC, 115 or 48 DC is also suitable
Cabling designed and configured per project
Control thermostat, glass temperature sensor, building automation systems

Applications
Any framed or structural glass installation

Sky House, Raans Road, Amersham, Buckinghamshire, HP6 6FT
01494 722 880
www.iqglassuk.com

How Does Heated Glass Work?

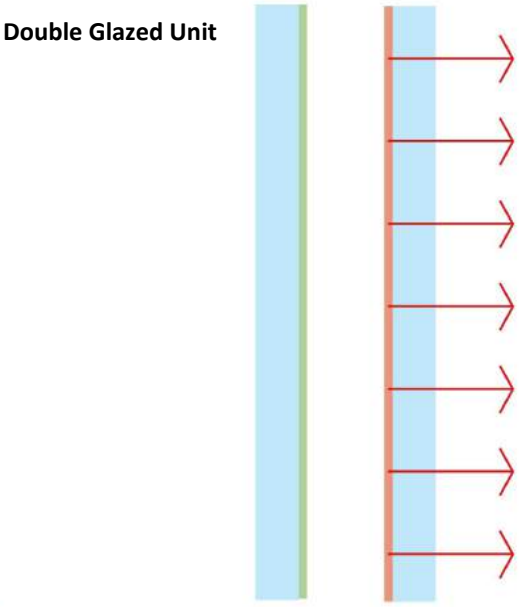
Heated Glass works as an infrared heating system.

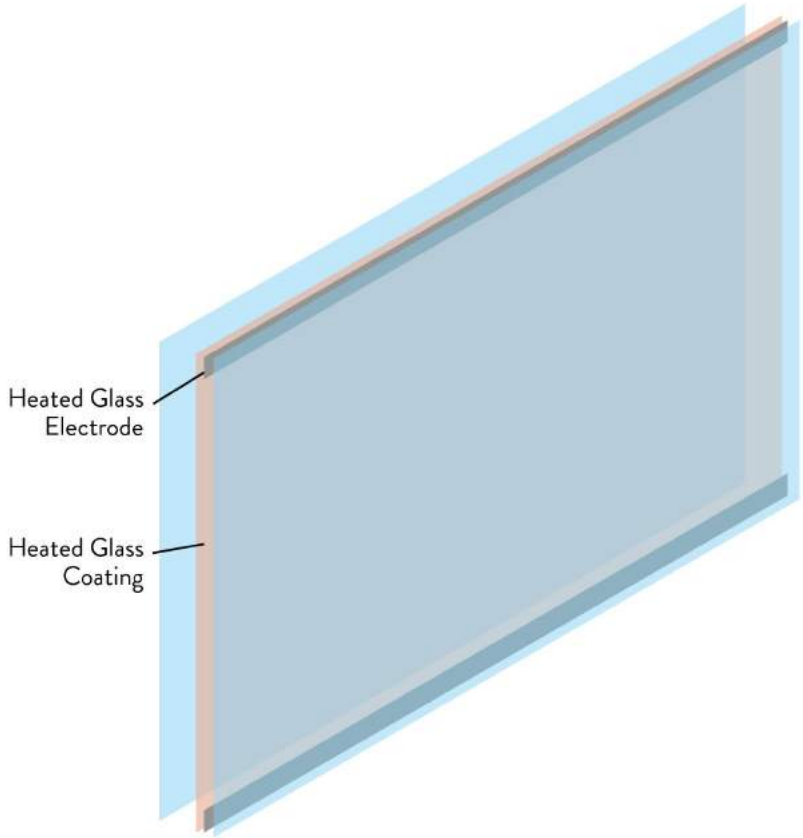
The heated glass coating is a semi conductive material which heats up when an electrical current is introduced to it.

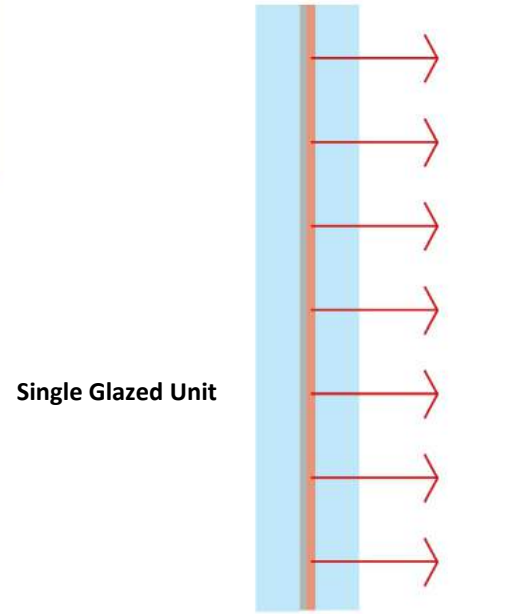
Two electrodes are integrated into the glass unit at opposite edges.

A current is run from the electrodes through the heated glass coating which evenly heats up the pane.

Any additional low e coatings (as used in double and triple glazed specifications) ensure that the infrared radiation radiates in one direction.







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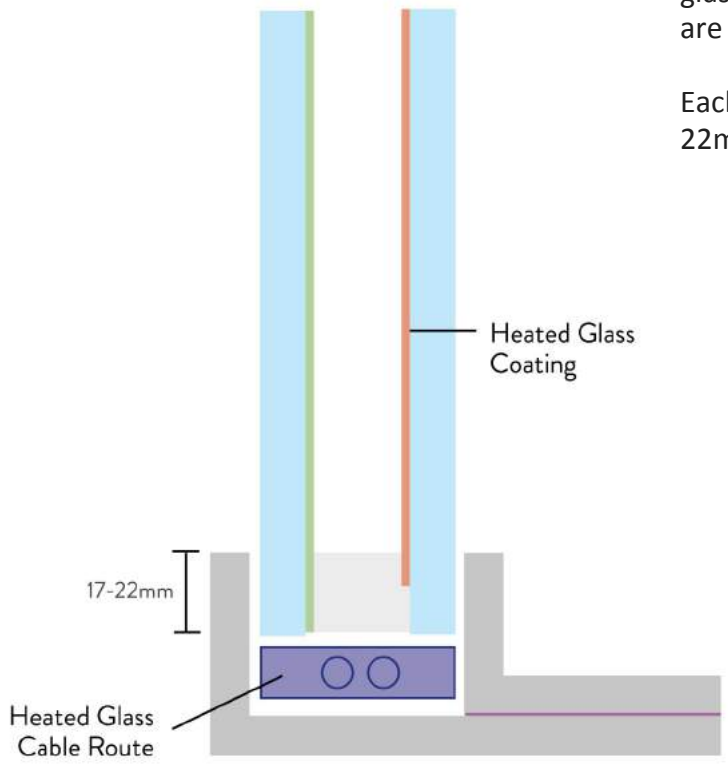
Technical Details

Heated Glass in Structural Glazing

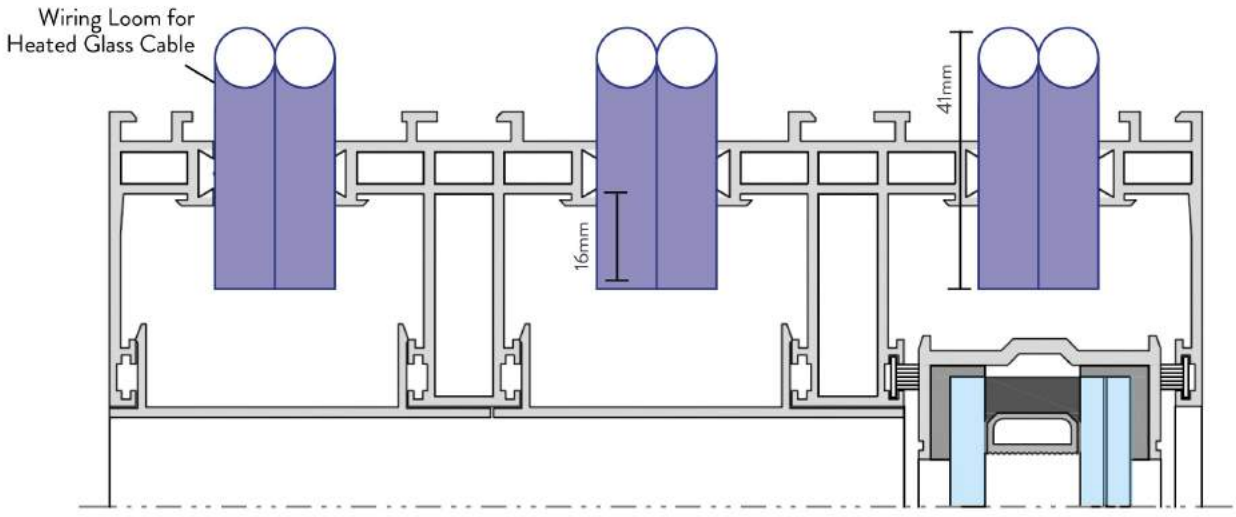


A heated glass unit can be installed into almost any glass installation. The fixing and electrical details are designed bespoke for each installation.

Each heated glass unit needs a coverage of 17-22mm at the head and base of the glass unit.

Heated Glass in minimal windows®

Maximum of 2 sliding panes. i.e. 2 track system with both panes sliding or 3 track system with one fixed and two sliding.



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Temperature of the Glass

Heated Glass can be heated to a surface temperature of 20^{O}C to 60^{O}C.

Due to the low thermal mass of glass the heating is achieved rapidly. As an example the maximum surface temperature of 60^{O}C can be achieved in 20 minutes.

For Heating
Where heated glass is being used as a sole heat source a surface temperature of 25^{O}C to 30^{O}C is typical. This can be achieved with a power density of approx. 200 W/m^{2}.

For Condensation Removal
When using heated glass for the elimination of condensation removal or draft elimination around glass a power density of 50-100 W/m^{2} is adequate. With this power density, the surface of the glass is heated to the room temperature.

For Snow Load Removal
If the heated glass is being used for snow load removal the glass is installed so that the radiant panel is radiating to the external pane.

A special control system is used which activates when the temperature is lower than +2^{O}C. Large glass roofs can be divided into 'Zones' that can be controlled individually.

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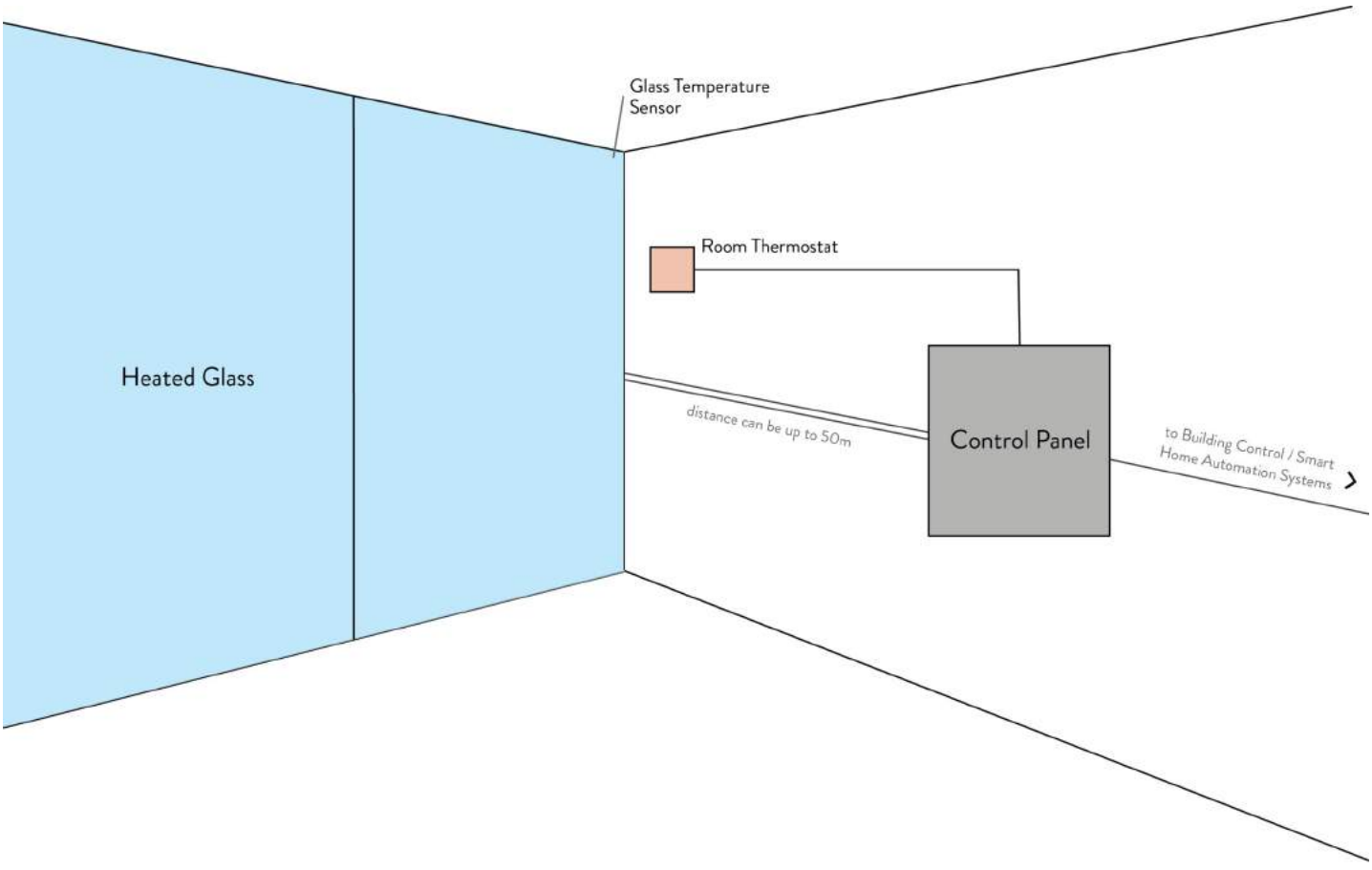
Heating Control

Thermostat
If the wattage output of the glazing is less than 100 W/m^2 the glass temperature can be controlled via a simple room thermostat.

If the wattage output of the glazing is more than 100 W/m^2 then the temperature of the glass must be controlled via a room thermostat used in conjunction with a glass temperature sensor. The glass temperature sensor is built into the glass unit.

Building Control Systems / Home Automation Systems
If the building has a centralised control system, such as a building control system or home automation system, the heated glass can be connected to it as any electrical heating system.



See Heated Glass at the showroom

You and your clients can visit the Sky House Design Centre in Amersham to see and experience heated glass in person.

The large installation at Sky House is made using fixed structural glass panels.

In addition to the glass itself we also have an example control unit on display which is easily accessible to showcase the technology behind the control.

How to Specify Heated Glass from IQ Glass

Heated Glass is a suitable solution for the heating of highly glazed spaces, or ensuring that large elevations of glass stay free from condensation. If you would like to specify Heated Glass on your project just speak to the team at IQ who would be happy to assist.

Speak to the team at IQ
The team at IQ are the experts in our product range. If you are considering using Heated Glass on your project speak to the team at IQ who will be able to advise you on the best solution for your intended design, ensure that all specification criteria are met and advise the feasibility to areas of the installation you may not have considered.

Get a Quotation
We advise our customers to get a quotation for their intended Heated Glass installation from IQ. This allows us all to ensure that the preferred product and design is within budget. If it is not we can help you adjust the specification to reach all performance, design and budgetary requirements.

Add us to your NBS Specification
To assist you in specification we have created individual NBS Specification sheets for the Heated Glass product. These easy to navigate documents contain all the vital information needed for specification. They are available for you to complete on your own, alternatively ask your sales representative at IQ to complete this on your behalf.

Place the Order
When ready you (or your client or the builder) can then place the order for Heated Glass with us. A full in-house handover will take place and your project will be passed to the contracts and design team. Once your project deposit is placed we will then undertake full design drawings for the installation, including electrical planning and any other additional glazing works. Please allow at least 20 working days for the design process.

The project will be appointed a dedicated contracts manager who will oversee the installation process. The estimated lead time for Heated Glass is determined by the type of installation (ie. the framing system lead time or structural glass type). Your contact at IQ will be able to advise on the lead time for your specific installation type.

Where can I see the Heated Glass product before order?
We have Heated Glass available to view at our showroom in Amersham. This electrical glazing has been installed in a purpose built structure and used on a day to day basis.

If you or your clients would like to see the Heated Glass in person just contact us and arrange an appointment at the showroom.

Find out more about our lead times and contract processes here.

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Downloads and Other Useful Information

Heated Glass Product Page
Here you can
- Read some more information about the heated glass product
- Visit links that direct you to further reading about heated glass specification
- Download additional material to help with your specification

Click here for the Heated Glass product page

Residential Project Gallery
Here you can
- See completed residential projects that used heated glass
- Get an overview of the various ways in which heated glass can be used

Click here for the Residential Project Gallery

Commercial Project Gallery
Here you can
- See completed commercial projects that used heated glass
- Get an overview of the various ways in which heated glass can be used

Click here for Commercial Project Gallery

Heated Glass Videos
Here you can
- See videos of heated glass in action
- Get an overview of how heated glass works
- See examples of heated glass at the showroom in Amersham
- See examples of heated glass on completed projects

Click here for our Heated Glass Videos