



ACTUAL WIDTH
 FROM 11MM



CN Heritage Range of Slim Double glazed Units manufactured by us using the latest glass and glazing technology available

- **CN Heritage Slim Units are specifically produced for period/ historic windows and doors**
- **CN Heritage Slim Units are produced using Super Spacer Warm Edge Technology and will reduce heat lost through your windows**
- **CN Heritage Slim Units have low sightlines for glazing into narrow glazing bars**
- **CN Heritage Slim Units will reduce the intrusion of unwanted noise and condensation. Acoustic glass available**
- **Delivery nationwide for supply only**
- **5 Year Guarantee**

FOR MORE INFORMATION CALL:

01295 263364

EMAIL: info@cnglass.co.uk

**← Sight line
 (Actual width 5.5mm)**



CN Glass is a single source Glazing Contractor offering a Complete Service for all Glass and Glazing products from initial design consultation through processing, manufacture and installation. We provide a trusted, dependable, professional and experienced service to homeowners, architects and contractors.

With over 40 years experience in the glass industry, CN Glass have become the leading glass and glazing service in Oxfordshire and the Cotswolds area. Glass Toughening, Double Glazed Unit Manufacture and Glass Processing is all carried out in our workshop.

We are Members of The Glass and Glazing Federation and a FENSA Registered Company.

Terms and conditions apply.

Glass is a good insulator but it would need to be very thick as a single pane in a window to have much effect.

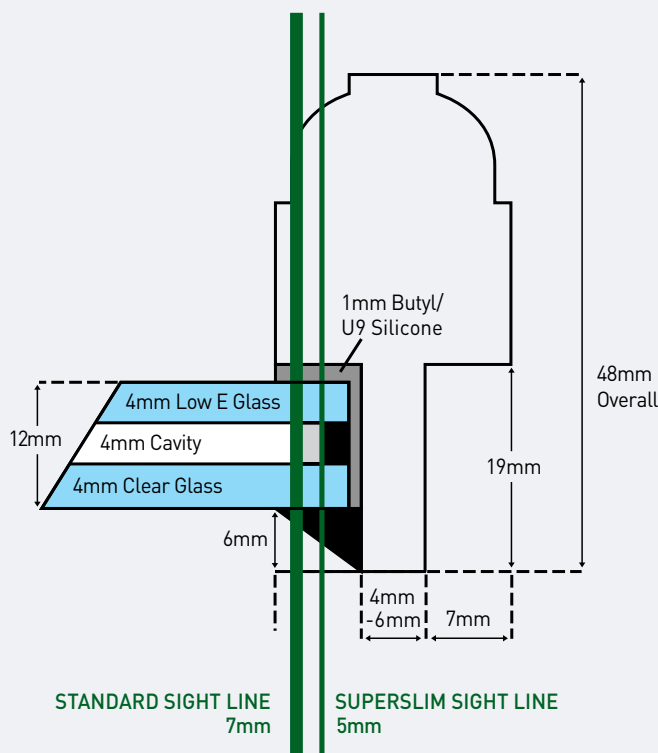
So rather than have thick glass in your windows it is better to have two panes of glass with an inert gas between them.

Repair is the first option to consider when seeking to maintain the character of a building. Sections of the frame that are no longer sound can be cut out and replaced. Where necessary the rebates can be routed out slightly to provide enough depth for the Heritage units to be installed. Sashes can be freed, cords replaced and draught-proofing materials added discreetly.

When looking to improve the thermal performance of a building the windows are a building component where there are many factors to consider. This is particularly the case for single-glazed windows in older and historic buildings. The outright replacement of the windows in Listed buildings is often considered inappropriate, for conservation reasons.

Most traditional timber windows incorporate low line glazing beads. This creates problems with standard aluminium or warm edge spacer bar protruding into the sightline of the window, Super Spacer has a lower sightline equivalent to only 5.5mm from the edge of the glass, eradicating this problem

CN Heritage Slim Standard & Superslim Configurations - drawing not to scale



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- **CN Heritage Slim Units fit into most single glazing rebates with minimal sightlines of 5.5mm**
- **CN Heritage Slim Units use Super Spacer Warm edge energy saving technology, Low E Glass and specialist insulating inert gases**
- **CN Heritage Slim Units Standard manufacturing lead times of 5-7 working days**
- **CN Heritage Slim Units can be manufactured using Low E clear and obscure glass which can also be toughened. Restoration glass will provide an authentic period reflection (cannot be toughened however a safety film can be applied).**
- **CN Heritage Slim Units manufactured to a minimum of 11mm overall depth using 4mm Low E x 4mm Gas x 3mm Float (cannot be toughened)**
- **CN Heritage Slim Units are available with a U-Value as low as 1.0 W/m2K when using Xenon gas**
- **CN Heritage Slim Units shaped glass from templates supplied and large units are available**
- **CN Heritage Slim Units comply with Building Regulations Document L England**
- **CN Heritage Slim Units are Guaranteed for 5 years when glazed to BS6262.**

Workshop & Showroom:
Norton House, Beaumont Road, Banbury, OX16 1SD



Making and Glazing CN-Slim Heritage Double Glazed Units

Glass

A CN Heritage Slim Unit that will fit into a minimum 17mm rebate the outside glass will be 3mm thick and the inside glass 4mm thick, this will produce an overall unit of 11mm depth. The glass can be simply clear or patterned annealed/float glass, for safety it can be toughened, for an improved thermal performance it can be Low E Energy Saving glass. (3mm glass cannot be toughened, safety filming can be used)

For new replica timber windows the rebate will be slightly deeper allowing for both internal and external glass to be 4mm therefore the overall depth of the unit will be 12mm.

Restoration Glass

The only traditional method of flat glass making left is the cylinder process (known as hand drawn or restoration glass). This is now used in restoration projects that would originally have utilised crown glass.

Glass is gathered on the end of a pipe and placed on a block of hollowed-out wood. The glass is blown and then re-heated. The blower swings the glass "pipe" in a vertical plane until it is elongated into a cylinder. The cylinder is then split down lengthways.

The split glass is then re-heated and flattened on a smooth stone and then annealed. This process allows the colour range to be limitless; the glass is used ecclesiastically, commercially, domestically and for restoration purposes. It is also easier to make in comparison to any of the other processes.

This type of glass has no impact on the U-value of the unit, it is just the same as ordinary annealed/ float glass.

Glazing

We bed the units on Hodgeson U9 Low Modulus silicone, centralising the unit within the frame using glazing spacers, filling the void between frame and glass with the low modulus silicone, this allows both movement and a waterproof seal. Allow the silicone to cure and then face putty using Hodgsons oil free Multi-Purpose or Butyl putty or use timber glazing beads and stainless steel nails and capping off with the Hodgeson U9 Low Modulus silicone to finish. Putty is then brushed with a soft brush and painted 5-10 days later in outdoor conditions.

Edgetec Super Spacer

To produce our CN-Slim Heritage Double Glazed Units we use Edgetec Super Spacer bar. Edgetec Super Spacer bar introduces no-metal, pre-desiccated, structural foam spacer system that is a warm edge technology to suit all sealed glass unit applications helping to deliver windows of the highest standards.

Super Spacer® bar is specifically produced down to a minimum of 4mm therefore our CN- Slim Heritage units may be produced with a minimum overall depth of 11mm this means it will fit a 17mm rebate.

Traditional timber windows are manufactured with low sightlines of usually about 7mm. This creates problems for standard aluminium and warm edge spacer bars of 12mm sightlines which would protrude into the sightline of the window. Super Spacer has a lower sightline (equivalent to only 5.5mm from the edge of the glass) which eradicates the problem.

Its award winning, patented Thermal Set Spacer (TSS) technology gives the ultimate in high performance spacer systems. Super Spacer® has 100% memory and allows for expansion and contraction, a major cause of fractures in conventional sealed units. (Subject to correct glazing methods detailed above)

With Super Spacer® thermal bridging is all but eliminated, resulting in a massive 70% reduction in condensation. Most of the heat loss through a window occurs at the edge of the unit, Super Spacer® blocks this escape route.

Inert Gases

Krypton and Xenon are heavy inert gasses and have a much lower thermal conductive performance and an improved acoustic performance than air and this means that they are far more efficient insulators making them excellent at reducing the U-value when injected into the cavity of our C N-Slim Heritage Double Glazed Units. Krypton gas is the usual choice for heritage Slim Units and all units have a 93% gas fill.

Technical Glass

With the use of technical glass and by filling the cavity with an inert gas the U-value of CN-Slim Heritage Units can be as low as 1.0.

The reduction of heat loss through the glass is up to 77 per cent as when compared against single glazing.

It is possible for traditional reproduction replacement windows installed with CN-Slim Heritage Double Glazed Units to achieve the new Part L building regulations for thermal efficiency. (Subject to the size of the glazed sections of the window)

CN Heritage Slim Units are also approved by many County, Borough and District Council Planning Departments.

U-Values (the term used to measure thermal efficiency)

A U value is a measure of heat loss in a building element therefore it is the measurement of the whole window and not just the glass. It can also be referred to as an 'overall heat transfer co-efficient' and measures how well parts of a building transfer heat. This means that the higher the U value the less efficient the thermal performance of the building element. A low U value usually indicates higher levels of insulation.

CN-Slim Heritage double glazed units have the appearance of single glazing therefore retaining the character, charm and heritage of the building. Only a very close inspection will reveal the glass to be a double glazed unit especially if restoration glass is used. When glazed traditionally into sash/casement window frames the units are virtually undetectable because slim units do not have the double reflection or the distorted reflection that is seen when you sometimes look at standard double glazing, making them perfectly suitable for conservation or listed buildings. (subject to local planning).

By also using the technical glasses available today and by filling the space between the two panes of glass with an inert gas a home owner may gain all the thermal and sound benefits of normal double glazing without compromising the appearance or the value of their property.

**The thermal efficiency benefits of CN Slim heritage Double Glazed Units over single glass can be seen below:
Single Glass – U-Valueis approx. 5.6 W/m2K**

Glass 1 (External)	Cavity	Glass 2 (Internal)	Centre Pane U-Value
4mm Float/Toughened *	4mm Krypton Filled	4mm Planitherm Total Plus Low E	1.9W/m2K
4mm Float/Toughened *	6mm Krypton Filled	4mm Planitherm Total Plus Low E	1.5W/m2K
4mm Float/Toughened *	4mm Eco Gas Filled	4mm Planitherm Total Plus Low E	1.7W/m2K
4mm Float/Toughened *	6mm Eco Gas Filled	4mm Planitherm Total Plus Low E	1.3W/m2K
4mm Float/Toughened *	4mm Xenon Filled	4mm Planitherm Total Plus Low E	1.4W/m2K
4mm Float/Toughened *	6mm Xenon Filled	4mm Planitherm Total Plus Low E	1.0W/m2K

*Or 3mm Restoration glass

- Available from 11mm depth
- Sightlines of 5.5mm
- Use Soft Coat Low E Glass for a warmer house in winter and cooler in summer
- Use restoration Glass
- Use Toughened Glass
- Fill the cavity with an inert Gas
- Improved acoustic performance
- Low U-Values
- Compliant with Document L
- Self cleaning glass available, applied as a coating to the glass

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ENERGY & VISION THE FUTURE OF GLASS TECHNOLOGY