

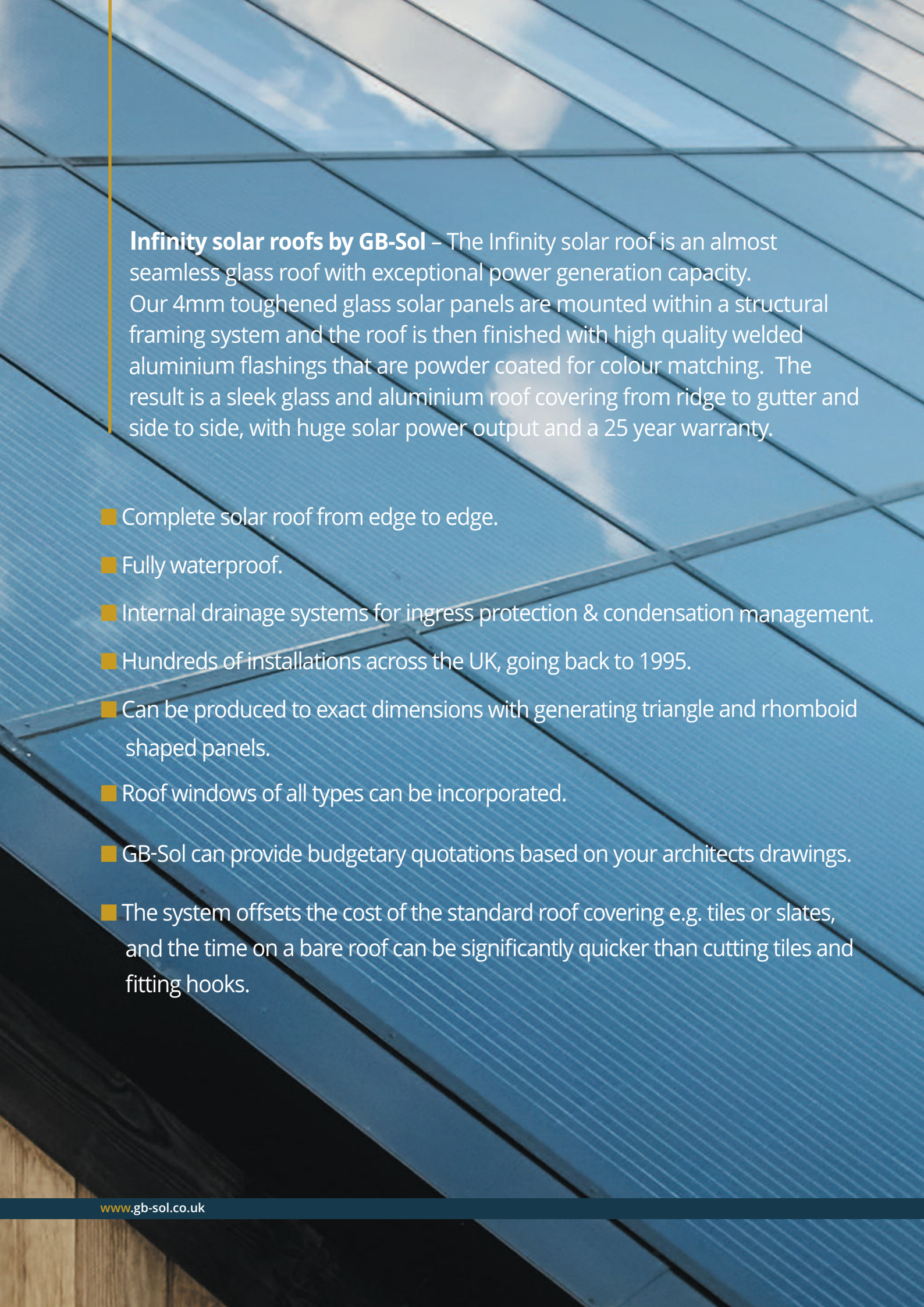
# The ultimate integrated solar roof system



**INFINITY**

by GB-Sol

[www.gb-sol.co.uk](http://www.gb-sol.co.uk)



**Infinity solar roofs by GB-Sol** – The Infinity solar roof is an almost seamless glass roof with exceptional power generation capacity. Our 4mm toughened glass solar panels are mounted within a structural framing system and the roof is then finished with high quality welded aluminium flashings that are powder coated for colour matching. The result is a sleek glass and aluminium roof covering from ridge to gutter and side to side, with huge solar power output and a 25 year warranty.

- Complete solar roof from edge to edge.
- Fully waterproof.
- Internal drainage systems for ingress protection & condensation management.
- Hundreds of installations across the UK, going back to 1995.
- Can be produced to exact dimensions with generating triangle and rhomboid shaped panels.
- Roof windows of all types can be incorporated.
- GB-Sol can provide budgetary quotations based on your architects drawings.
- The system offsets the cost of the standard roof covering e.g. tiles or slates, and the time on a bare roof can be significantly quicker than cutting tiles and fitting hooks.

# The Infinity Concept

Infinity is unique because GB-Sol can manufacture custom size laminates which allows for complete utilisation of the roof area. The waterproof mounting system framework provides backup drainage for management of any water ingress and condensation.

## **BRE tested**

Working with BRE as partners in the EUR-Active Roofer project, Infinity was used to develop the tests which inject dense tropical rain in the horizontal airstream from a wind tunnel in front of the roof, while simultaneously imposing a vacuum behind. This simulates the very worst case conditions and shows that Infinity is completely watertight.



## **Installation process**

Once a roof has been membraned & battened, the frame is fitted directly to the battens. When the framework is in place solar PV panels are added and the capping strips are riveted in place, retaining the panels by compressing the gaskets to form a perfect seal.

Finally the surrounding flashings are installed. These are high quality welded aluminium and powder coated to your specified RAL colour. They will have been designed exactly for the array specified.

## **Design Service**

Infinity is available fully installed by GB-Sol. Once we have some basic details of the installation we will respond with an initial quotation. Detailed designs will be drawn up as the project progresses.



*Solar panels are mounted within a structural framing system and the roof is then finished with high quality welded aluminium flashings that are powder coated for colour matching.*



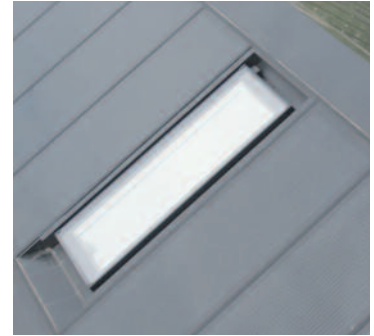
# Optional Extras

## Roof Windows

Infinity solar roofs can incorporate roof windows and roof lights from most mainstream manufacturers. Our powder coated aluminium flashings provide an attractive waterproof seal between the solar panels and the window unit.



*Infinity roof incorporating outward opening rooflight*



*For passive houses, a popular option is to use inward-opening triple glazed roof windows, set under a clear glass unit instead of a solar panel.*



*Large roof window incorporated into the middle of an Infinity solar roof.*



*A lantern in the apex of the roof.*

Please contact us in advance to discuss the possibilities for your project and to ensure that windows and spacings are suitably sized.

## Chimneys and flues

Chimneys and flues can be incorporated into an Infinity solar roof if required with a powder coated aluminium flashing around them. Note that these features often cause shading to solar PV panels and ideally should be relocated to the non-solar side of the roof if possible.



# Optional Extras

## Triangular panels

Make the most of the available roof space by utilising every corner of it for solar generation. With our in-house manufacturing facility near Cardiff, we can make triangular solar panels utilising the areas up to hips and valleys to create a full solar roof.



## Shallow-pitched and flat roofs

Infinity is generally suitable for roof pitches greater than  $15^{\circ}$  but shallower roof pitches can be accommodated with an EPDM waterproof membrane under the system. Exact roof preparation requirements will vary so please get in touch so we can give specific advice. Note solar panels will not effectively self-clean below  $15^{\circ}$ , so annual cleaning is advised.

## Metal roofing

Infinity solar roofs can be integrated into metal standing seam roofs. This can either be as an entire elevation or with a border of metal roof around. There are some restrictions on placement so get in touch with your plans and we can advise on suitable options.

## Power Optimisers

All GB-Sol systems can be fitted with power optimisers. These smart devices are fitted under each panel and will monitor and maximise the amount of energy each solar module produces and enable panels to be individually shut down at roof level in the event of an emergency.



# Frequently Asked Questions

Our award-winning RIS system has been around for over 20 years and is the foundation of our Infinity and Integrated roof systems. If you have a question, you may find the answer here...

**Q.** What information do you need to give me a quotation?

**A.** For a new build, please send us an email containing your architect's drawings (all elevations and a site plan if possible). If it's an existing building, please provide the roof dimensions and details of any obstructions such as roof lights or vents. If neither of these are possible, please provide the address and we may be able to give a very rough guideline quotation.

**Q.** What is the fire rating of an Infinity solar roof?

**A.** In independent fire tests, GB-Sol's Infinity and Integrated solar roofs achieved EXT.S.AA and Broof(t4), the highest possible ratings under BS 476-3: 2004 - Roof Fire Test.



**Q.** Is there a minimum or maximum roof angle?

**A.** The roof needs to have at least a 15 degree slope to ensure the drainage system is sufficient in removing any condensation from behind the panels and for effective self-cleaning. If less than this, contact us and we can discuss the options. Some customers have low profile Infinity roofs that are completely horizontal.

**Q.** Is the infinity solar roof an accredited product with the Microgeneration Certification Scheme (MCS)?

**A.** Yes, contact us to discuss why this may be important for your project.

**Q.** How heavy is the system?

**A.** 20kg per square metre for a standard system not including double or triple glazing, so much lighter than most clay tiles & slates.

**Q.** What warranty comes with an Infinity solar roof?

**A.** There is a comprehensive 25 year warranty on product, solar performance and weatherproofing. The system is made of high quality powder coated aluminium and 4mm toughened glass, the toughest in the solar industry, so it is likely to significantly outlive its warranty period.





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