



2016

# WARMroof

PRODUCT GUIDE

Garden Rooms | Sun Rooms | Home Extensions | Orangeries



**GOLDSEAL™**  
CONSERVATORIES LTD



The background image shows the interior of a bright conservatory. A large skylight is visible at the top, and a chandelier hangs from the ceiling. The conservatory has large windows with yellow blinds. The overall atmosphere is bright and airy.

# WARMroof BETTER BY DESIGN

The WARMroof system from Prefix Systems is the most configurable and structurally robust solid, insulated and tiled roof in the UK market, as our exhaustive testing and research has shown. It's the first off-site constructed 'warm roof' of its kind in the sector that has been designed and engineered from scratch. This has ensured that it is the most innovative, desirable, aesthetically pleasing and advanced roof system available for home extensions and conservatory renovation projects.

Other insulated and tiled roof systems for the home improvement sector have not been designed using the modern and accepted best method of 'warm roof' construction. They have chosen the use of 'cold roof' construction, which our research has shown can result in the risk of condensation for six months of the year.

Structural integrity, warm roof construction, design configurability and ease of installation are the four corner stones of the WARMroof system, which has been designed and engineered by Prefix Systems and is available, along with on-site technical support, from our three separate branches, which serve the entire UK.





# WARMroof TECHNOLOGY

**It's not just on the outside that our WARMroof system excels, but it's in the product engineering inside that really sets us apart in this important and emerging market sector.**

Our WARMroof system is perfect for conservatory replacement projects as well as new build sunrooms, garden rooms and extensions, due to its innovative and flexible design. It's also the most configurable and capable in the sector.

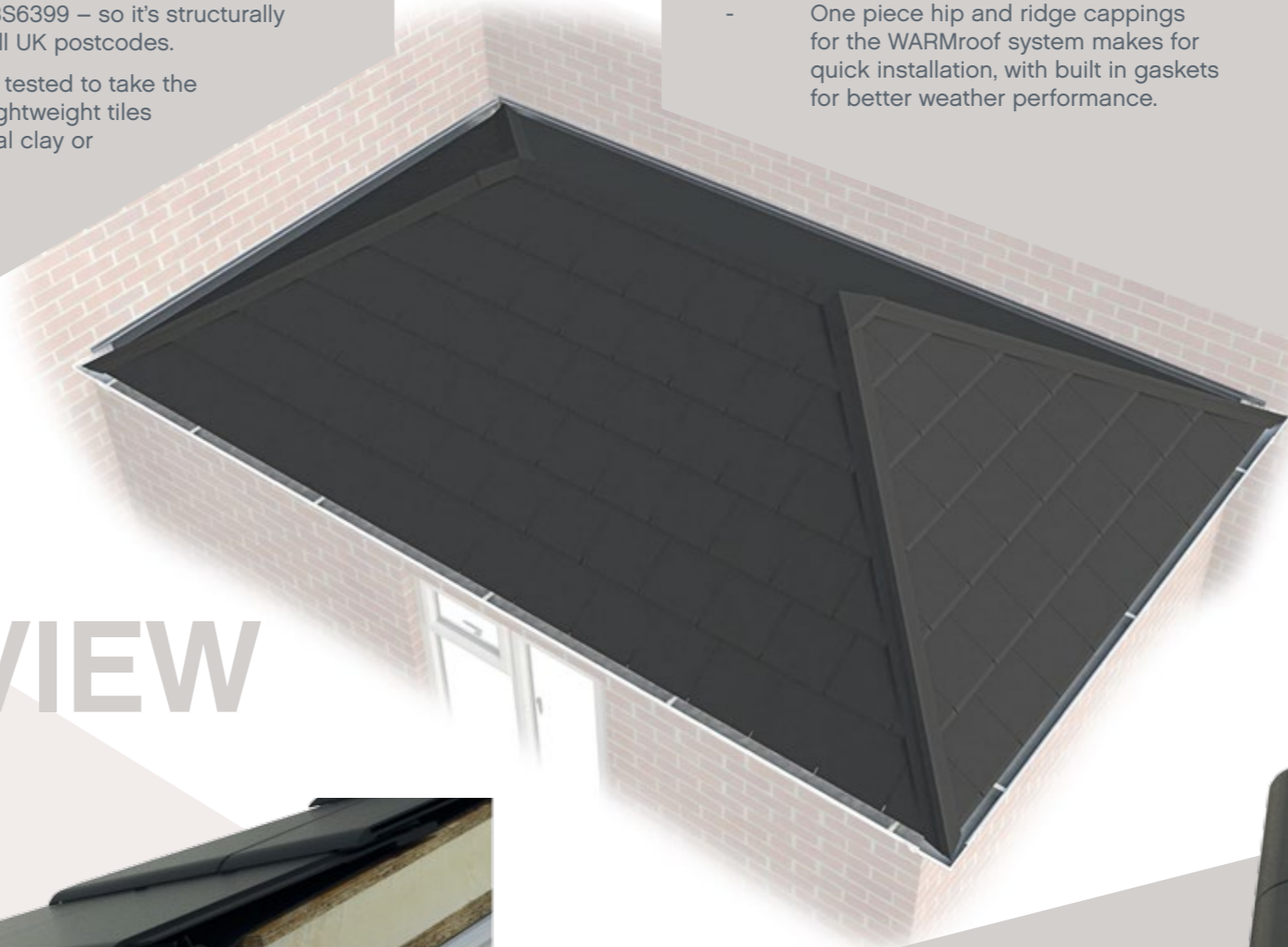


### Transom Bars with Steel Reinforcement Inserts

- Use of 'A' frames for quicker installation times.
- Robust fixed joints at the apex to resist movement. Important when applying a plastered finish internally.
- No ridge section, as seen on traditional roof design adds to configurability of the system.
- Proven to BS6399 – so it's structurally proven in all UK postcodes.
- Structurally tested to take the weight of lightweight tiles or traditional clay or slate tiles.

### Configurable Designs

- Hub assembly with hub locks for quick and accurate installation.
- Any roof design, pitch or angles can be achieved.
- Perfect for conservatory replacement projects.
- Velux rooflights can be prefixed into the panel to speed up installation and can be glazed into hipped ends.
- One piece hip and ridge cappings for the WARMroof system makes for quick installation, with built in gaskets for better weather performance.



# WARMroof EXPLODED VIEW

### Insulated Eaves and 'Warm Roof' Construction

- Only system to be insulated at the eaves to prevent condensation.
- Preformed insulated panels for ease of installation and handling makes for a better installation process.
- Insulation forms part of the panel and the top layer sits above the aluminium structure forming a true 'warm roof'.
- Velux roof lights are pre-fixed into the insulated panel for quicker installation.
- Soffit and fascia overhang detail if required, making for a traditional roof appearance.



### Hip and Corner Detail

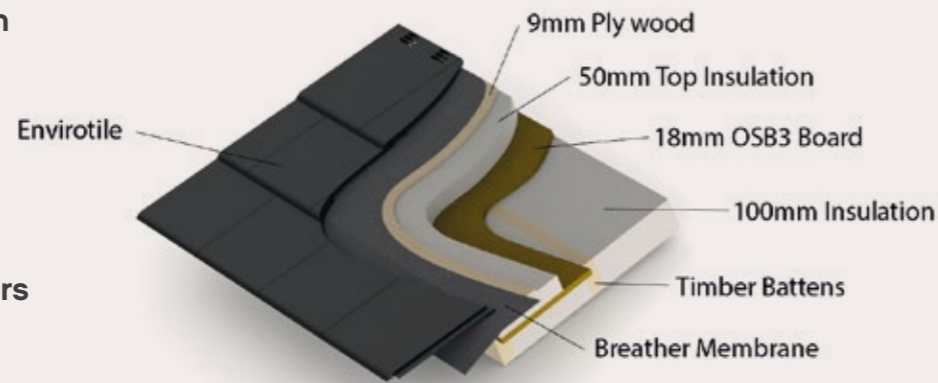
- Can create an internal pelmet detail, which is pre-cut to roof size for lighting or fixing of blinds.
- Innovative hip design to accommodate different roof pitches and angles.
- Panels drop into place easily and the roof can be fully installed within two days.
- Envirotile does not require an external batten to install and is guaranteed without any batten as it's a 'warm roof' construction.





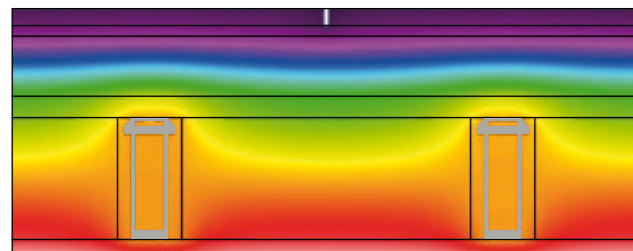
# WARM VS COLD ROOF CONSTRUCTION

Our WARMroof system, offers the only true 'warm roof' construction in the solid, insulated tiled roofing sector. The insulation sits above the roof structure and therefore eliminates any bridge between the rafters and roof covering and importantly, removes the need for any battening.

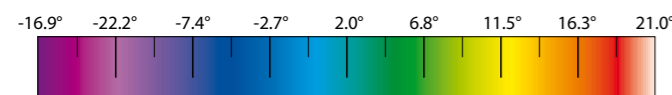
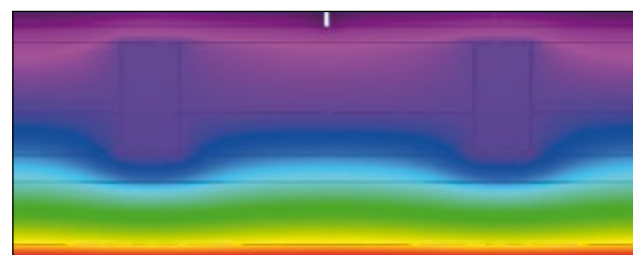


A 'warm roof' construction has many benefits over a traditional 'cold roof' and is essentially a 'breathable roof construction', which allows moisture to escape, which in turn prevents damp and any associated decay problems. It is thermally efficient, cost effective and is commonly accepted as the best roof construction option for our climate within the UK. A 'warm roof' construction also increases the effectiveness of the insulation and prevents warm air leakage from the building into the roof space.

## Warm Roof Construction



## Typical Competitor Roof – Cold Roof Construction



As you can see from the enhanced thermal simulations opposite, a WARMroof will not suffer...due to its 'warm roof' construction and is the only roof of its type to offer this modern method of construction. The right hand image clearly shows the cold spots under the glazing bars, with the corresponding issue of condensation to the inside plasterboard.

As a result battening and counter battening is always required with a 'cold roof' construction, something not required with our WARMroof system.

With an average room temperature of 20 degrees Celsius and a UK average of 50% humidity to the inside of a property, the dew point is 9 degrees Celsius and so condensation can affect solid, insulated tiled roofs with a cold roof construction for over half of the year.

By specifying a WARMroof system from the outset, there will be no call backs or remedials as a result of mould or condensation to the inside plasterboard.

# BUILDING REGULATIONS LAHB AND JHAI EXPLAINED

All new installations and some replacement conservatory projects may come under the remit of Building Regulations when a WARMroof system is installed. We've spent considerable time looking into the various options for compliance that is the most simplistic and less time consuming for our customers to manage.

We've partnered up with Jhai Ltd who are one of the UK's largest and most trusted Approved Inspector companies with around 100 building surveyors operating nationwide and are able to offer an alternative route to compliance than using Local Authority Building Control in England and

Wales. The view of Local Authorities and Building Control inspectors can and does vary between boroughs, as the criteria for Building Control is not clearly documented when it comes to conservatory type roofs and the replacement of. Therefore, Prefix Systems have sought to simplify the process by providing a single point of contact nationwide through JHAI. The homeowner will still be issued with a valid completion certificate.

JHAI have fully assessed our WARMroof system in terms of its design, application and structural capabilities. Through JHAI there are also random site inspections estimated at around 1 in 20 and in many instances this will be carried out remotely. The cost for a replacement conservatory project is £250 and for a new installation, £450.

## THE PROCESS

- 1 Contact Jhai and find your Regional Office.
- 2 Complete and submit the single page application form and any relevant site pictures including a trial hole if there is an existing conservatory base.
- 3 With 48 hours Jhai will acknowledge receipt, though it is recommended that you submit your form at least 7 days prior to commencement of works.
- 4 Commence works Take photos before, during and after for record keeping and to ensure compliance with the JHAI Certificate.
- 5 WARMroof installation is completed and a final certificate issued. After the first installation a sample of installations will be inspected by JHAI.





# WARMroof DESIGN OPTIONS

There are a wide range of design options for the WARMroof system, making for the most configurable solid, insulated tiled roof in the UK market. Not only are there a number of options for the roof itself, but we can also offer our dedicated, structural Retro-Fix posts for the emerging replacement conservatory market.



## 1 INTERNAL PELMET

We can create an internal pelmet detail, which is pre-cut to size so lighting can be installed around the internal perimeter and not in the slope of the roof. It also offers an alternative design feature to the interior, allowing for blinds to be fitted.



## 2 VELUX WINDOWS

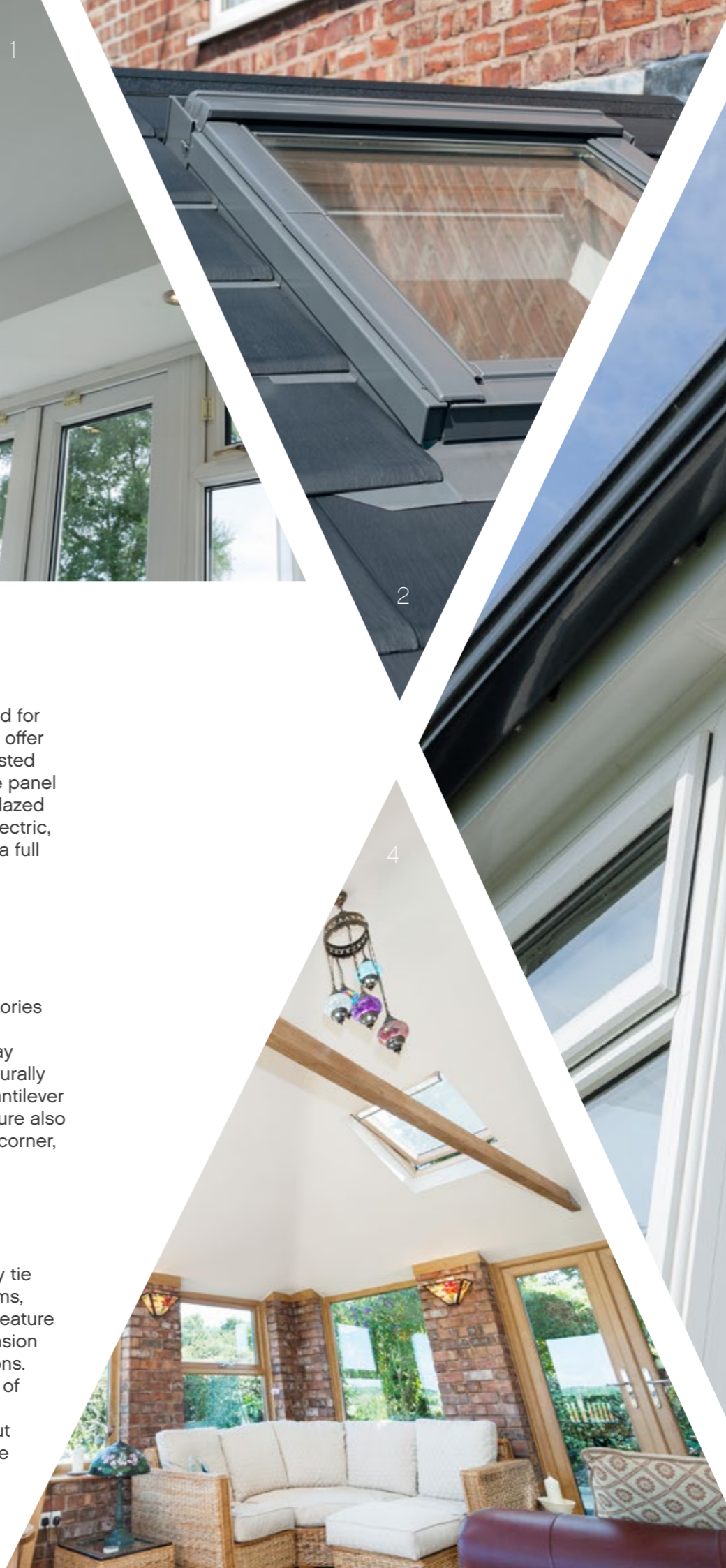
Velux are the world leaders in rooflights and for good reason, they are the best technically, offer a wide range of options and are widely trusted by consumers. These are pre-fixed into the panel to speed up installation and can also be glazed into hipped ends. These are available in electric, manual and with or without blinds. There's a full Velux range available, including the latest 10 degree flashing kit.

## 3 CORNER OVERHANGS

There are a lot of 3 bay Victorian conservatories already installed in the UK. We can install a Georgian (two front hips) roof onto three bay Victorian frames, as our WARMroof is structurally designed and tested to allow the roof to cantilever the eaves section over the facets. This feature also offers the facility for a downlighter to each corner, allowing homeowners

## 4 TIMBER TIE STRUT

Instead of using an ineffective conservatory tie bar, as seen in other competitor roof systems, we have designed a dedicated hardwood feature tie strut to resist any movement, both in tension and compression for larger span applications. This is essential when plastering the inside of the roof to stop cracking as a result of movement. As well as structural, this tie strut also makes for a stylish feature to the inside of our WARMroof systems.





## INSULATED SOFFIT AND FASCIA OVERHANG

An increasing number of installers and consumers are asking for a soffit and fascia detail which can often better match the existing fabric of the house and look more like a traditional single storey extension. Our WARMroof system also offers the industry's first insulated eaves section, which eliminates condensation and makes for the ultimate in 'warm roof' construction and available in a wide variety of widths.



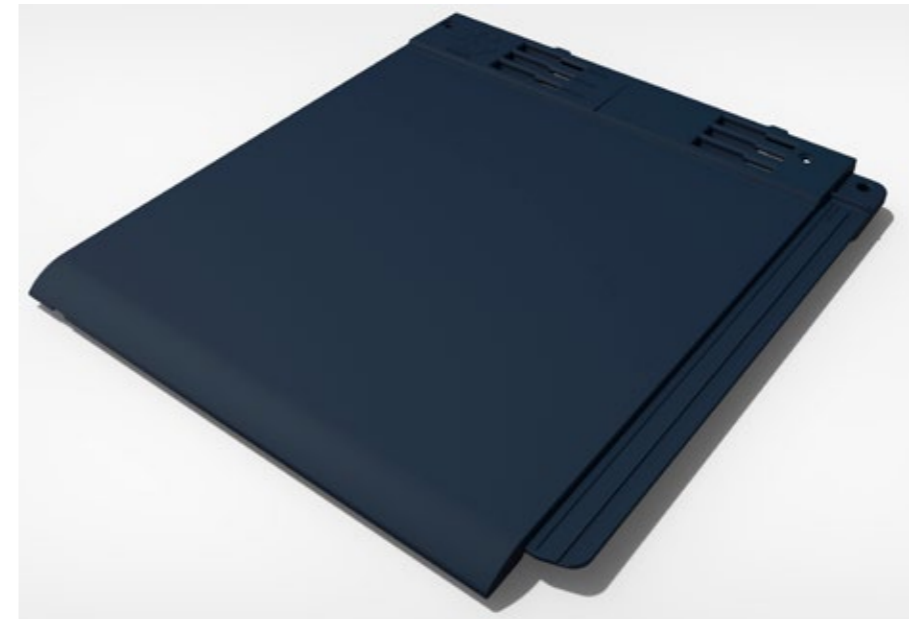
## RETRO-FIX POSTS

With an estimated 3million conservatories already installed in the UK, there is an emerging replacement sector. With many installed with polycarbonate, the original window and door frames were designed to carry a relatively lightweight roof. For replacement projects we often specify Retro-Fix posts to cope with the considerably greater loads and these are not only structural, but are designed to look in keeping with the original installation., thanks to their PVCu cappings.



## TILE OPTIONS

As you would expect from the most configurable solid, insulated tiled roof in the UK market, we can offer a wide range of Envirotile options, Tapco slate finishes and the WARMroof system is even structural tested to take concrete, clay and slate tiles. The Envirotile is the most popular choice and is made of recycled PVC, is easy to cut and work with and is robust enough for fitters to walk on it during the installation process. Both the Envirotile and Tapco options are also BBA certified and there is no need for additional battens.



Stone Black ▲



Pewter Grey ▲



Terracotta ▲



Chestnut Brown ▲

## TAPCO SLATE FINISHES

For our full range of tapco slate finishes, please visit:  
[www.prefixsystems.co.uk/products/solid-insulated-roofs/tiled-roof](http://www.prefixsystems.co.uk/products/solid-insulated-roofs/tiled-roof)





# TECHNICAL SPECIFICATIONS

## Size considerations

- 6m Maximum Width across ridge on: Gable, Edwardian, Victorian (with concrete tiles or slate)
- Roofs over 4m in width usually have Timber Tie Struts on the A-Frames where required.
- Steel inserts in eaves for spanning bi-folding door openings.

## Pitch considerations

- 14° Minimum Pitch on Lean-to Roofs with Tapco Slate.
- 15° Minimum Pitch on Roofs with Velux Windows.
- 10° Minimum Pitch on Lean-to Roofs with Envirotiles.
- 5° Minimum Pitch on Contemporary Roof, Lean-to only (Tata Steel Cladding).

## Shape and style considerations

The WARMroof system is designed to accommodate all existing conservatory roof styles as these are more complex than normal extension type roofs. Therefore, to date, we haven't had a roof design that is beyond the scope of the roof's capabilities and we've even developed a canopy extension to the front of our gable shaped design.

## Guarantee

Subject to our normal terms and conditions the WARMroof roof is fully guaranteed for 10 years, with the Envortile carrying a 25 year warranty and the Tapco a 40 year warranty.

# KEY FEATURES OF THE WARMROOF SYSTEM

Our 50mm continuous external thermal barrier creates a true 'warm roof' – other tiled roofs don't have this and are therefore NOT a 'warm roof'.

We can offer an optional fascia and soffit detail for a traditional roof feel – most of the competition roofs don't have one and they can often look unfinished.

The insulated eaves stops the cold bridging that causes condensation inside against the plasterboard – competitors roofs don't have one and are therefore liable to condensate.

Thermal insulation U-value of 0.17 W/m<sup>2</sup>K – our competitors also claim it is 0.17, but our independent testing has shown otherwise.

Proven roof span to 6m wide, even with concrete or clay roof tiles – option to dress roof with traditional slate or roof tiles to match existing house roof.

Structural integrity as standard, with 'fixed joint' technology as the competitor roofs are similar in construction to a conservatory roof and therefore are flexible as they have 'pinned joints.' These are therefore based on conservatory design, an important point to consider when fitting plasterboard roof designs.

Roof structurally proven to BS6399 UK wide – many of the competitor roofs are not and makes theirs very limited structurally. Often they have only made structural calculations available for a small portion of the UK, i.e. up to 100m in altitude.

Pre-formed insulated panels, reduces install time – with many of the competitor roof systems, the insulation and board needs cutting to size and fixing on site. Errors will occur, quality of construction can be poor, specification can change and the build process will be longer, difficult and untidy.

The WARMroof system offers 150mm of insulation in total, more than most other similar type roof systems, making for a far better performing 'warm roof' solution.

BBA Approved 'dry fit' tile system as standard with a 25 year guarantee – Competitor roofs have a steel tile with a thin layer of powdered stone glued on top, an industrial looking finish in our view and requires considerable battening underneath.

With competitor roof systems, the steel tiles and roof system is only guaranteed when a batten is used, but most companies don't fit them according to our research – the battens aid ventilation and the competitors' roofs are therefore based on 'cold roof construction'. These battens slow the build time down and are therefore ignored, which results in a poorer performing roof and the resulting guarantee issues.

10 to 40 degrees pitch range as standard. But down to 5 degrees with the contemporary TATA steel roof solution, with other additional pitches available on request. No other solid, insulated tiled roof system can achieve this.

We can offer a facet overhang option - There is a lot of 3 bay Victorian conservatory stock in the UK. We can install a Georgian (two front hips) roof onto three bay Victorian frames, as our roof is structurally superior allowing us to do this. It's also perfect for a downlighter.

We only use Velux roof lights and they are pre-fitted into panels – this speeds up install time. The competitor roofs only offer a cheaper alternative. We want to be associated with quality brands that are trusted and recognised by the consumer.





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# WARMroof

PRODUCT GUIDE



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