



WARMroof

PRODUCT GUIDE

Garden Rooms | Extensions | Conservatories | Extended Living Space



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.

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.

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 four separate branches, which serve the entire UK.

SYSTEM VIEW

Top Cap

One piece top cap cover for decorative purposes which matches roof slate or tiles.

Tile Options.

We can offer a wide range of tile options with various colours and finishes. We carry stock tiles - a lightweight tile or TapcoSlate. Our WARMroof is even structurally tested to take slate, clay or concrete tiles.

Extra Insulation.

Extra 50mm top panel insulation which insulates the bars and eliminates potential thermal bridging issues creating a true 'warm roof' structure.

Insulation.

100mm base panel insulation between the bars, retaining the heat within the room.

Breathable, waterproof membrane.

This sits between the top panels and tiles to assist with weatherproofing.

Retro-fit Posts

With an estimated 3 million conservatories installed in the UK, there is an emerging replacement sector. For replacement projects, we have designed retro-fit posts which cope with considerably greater loads for glazed or solid roofs. They are also designed to be in-keeping with the original installation thanks to their uPVC cappings.

Fully Insulated Eaves.

Our WARMroof offers the industry's first insulated eaves section which eliminates condensation.

Insulated Soffit and Fascia Overhang.

We can offer soffit and fascia details which matches the existing fabric of the house and to look more like a traditional single storey extension. Soffits are available in various widths.



Transom Bars with Steel Reinforcement Inserts

- Fixed 'A Frame' joint rafter not only adds structural strength but also limits in situ movement which in turn helps prevent the risk of finished plaster cracking.
- 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 the latest Eurocodes – so it's structurally proven in all UK postcodes.
- Structurally tested to take the weight of lightweight tiles or traditional clay or slate tiles.
- The unique 'A' frame rafter connection overcomes the need for any aluminium or metal ridge thereby further reducing the risk of condensation"

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 typically fully installed within two days.
- Our lightweight tile does not require an external batten to install and is guaranteed without any batten as it's a 'warm roof' construction.



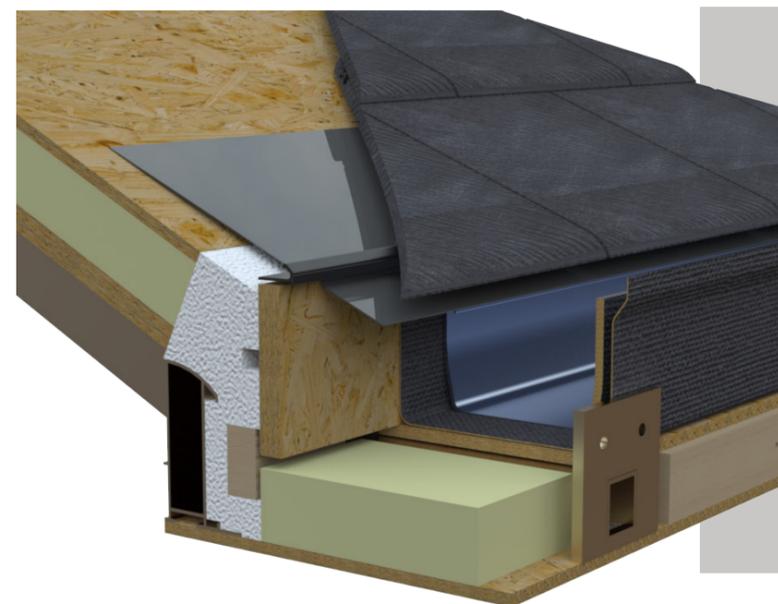
Insulated Eaves and 'Warm Roof' Construction

- 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'.
- Soffit and fascia overhang detail if required, making for a traditional roof appearance.
- We offer four soffit options; zero soffit, 50mm, 100mm or 150mm



Box Gutter Assembly

- We offer a range of structural solutions for our insulated box gutters including hidden interlocking wall brackets as standard, which sit between 50mm PIR insulation and 9mm OSB to prevent thermal bridging.
- When meeting an existing house soffit detail bespoke angled house rafter brackets can be supplied to mate up with the interlocking bracket. Please refer to our technical guide for more info.

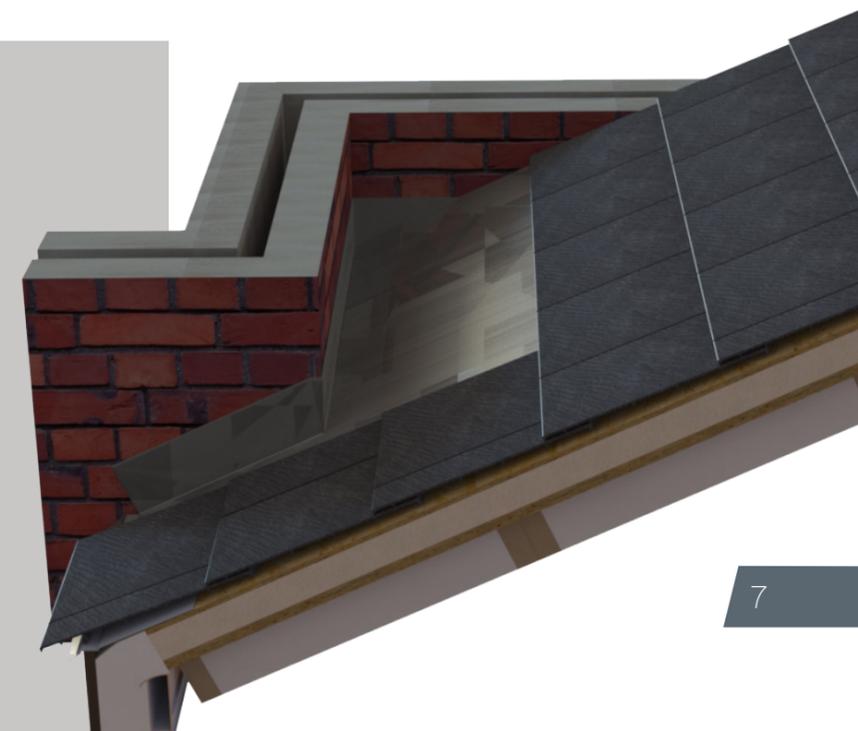


Configurable Designs

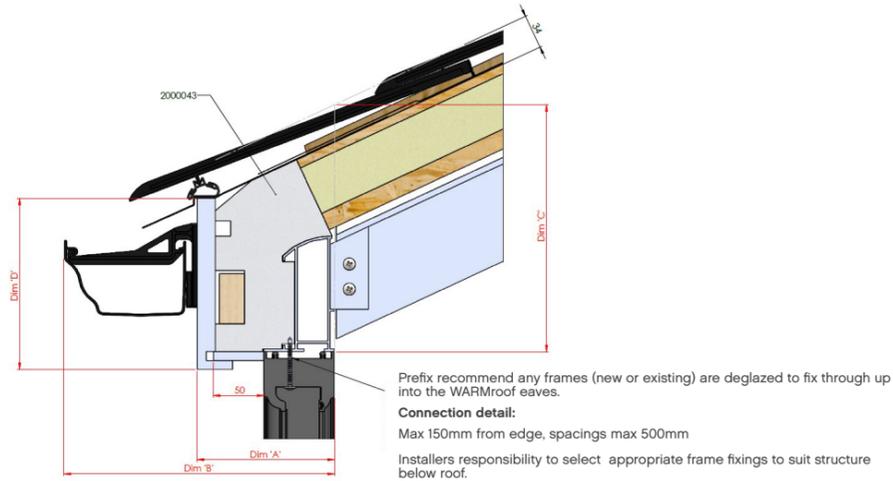
- Hub assembly with hub locks for quick and accurate installation.
- Almost any roof design, pitch or angles can be achieved.
- Perfect for conservatory replacement projects.
- Velux rooflights can be prefixed into the panel to speed up installation and can be glazed into hipped ends.
- One piece hip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

Flashing Tray

- Bespoke Aluminium Flashing Trays offer a hassle free alternative to raised back box gutters at house cut outs and chimney breasts by sitting between the insulated roof structure and the Tile finish to direct water down to the gutter at eaves level.



EAVES HEIGHT CALCULATOR



5-40° Insulation (0mm Soffit)

Pitch	A	B	C	D
5	106	245	227	200
10	106	245	229	193
15	106	245	233	185
20	106	245	239	181
25	106	245	246	176
30	106	245	256	172
35	106	245	268	169
40	106	245	283	167

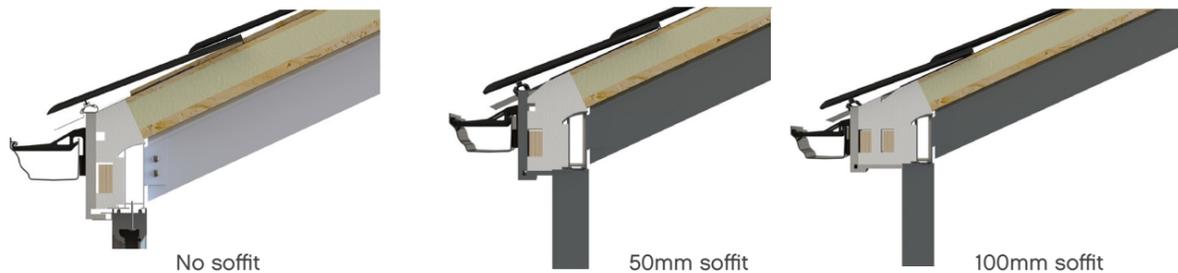
5-40° Insulation (50mm soffit)

Pitch	A	B	C	D
5	136	275	227	198
10	136	275	229	188
15	136	275	233	179
20	136	275	239	170
25	136	275	246	162
30	136	275	256	155
35	136	275	268	148
40	136	275	283	142

5-40° Insulation (100mm soffit)

Pitch	A	B	C	D
5	186	325	227	195
10	186	325	229	182
15	186	325	233	168
20	186	325	239	154
25	186	325	246	139
30	186	325	256	126
35	186	325	268	115
40	186	325	283	100

A = Internal Eaves to Fascia Board
 B = Internal Eaves to Gutter
 C = Underside Eaves to top of tile
 D = Fascia Height



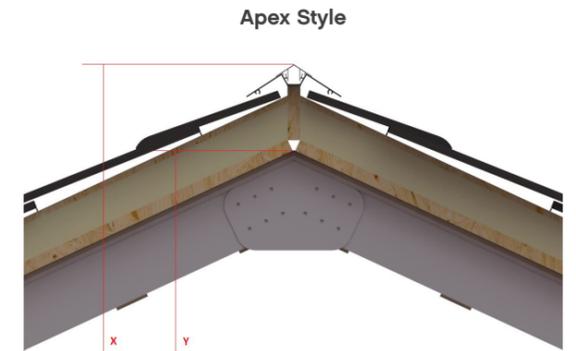
WARMROOF ROOF HEIGHT CALCULATOR

Overall Roof Height Chart - Underside of eaves to top ridge capping

Pitch	Width					Apex Style	
	3000	3500	4000	4500	5000	5500	6000
15	639	706	773	840	907	974	1041
20	786	877	968	1059	1150	1241	1332
25	945	1062	1178	1295	1411	1528	1645
30	1118	1263	1407	1552	1696	1841	1985
35	1318	1486	1662	1837	2012	2187	2362
40	1531	1741	1951	2161	2371	2580	2790

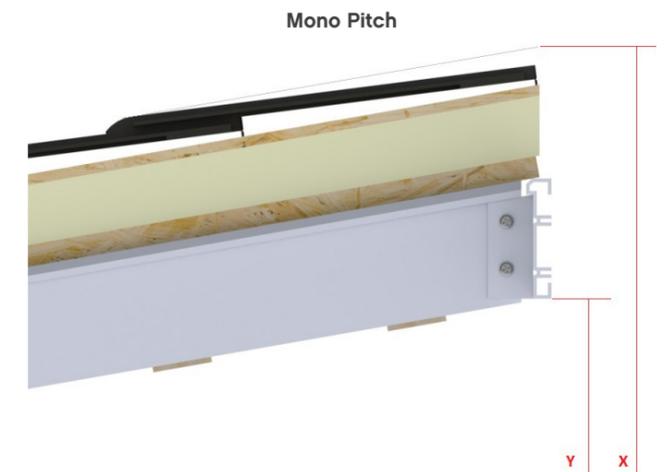
A-Frame Height Chart - Underside of eaves to top of A-Frame

Pitch	Width					Apex Style	
	3000	3500	4000	4500	5000	5500	6000
15	520	587	654	721	788	855	922
20	666	757	848	939	1030	1121	1212
25	823	939	1056	1173	1289	1406	1522
30	993	1138	1282	1426	1570	1714	1858
35	1189	1357	1533	1708	1883	2058	2233
40	1397	1607	1817	2027	2237	2446	2656



Overall Roof Height Chart - Underside of eaves to top of tile

Pitch	Projection		Mono Pitch		
	2000	2500	3000	3500	4000
10	582	670	758	847	935
15	769	903	1037	1171	1305
20	967	1149	1331	1513	1695
25	1179	1412	1645	1878	2111
30	1410	1699	1987	2276	2565
35	1668	2018	2368	2718	3068
40	1962	2381	2800	3220	3640

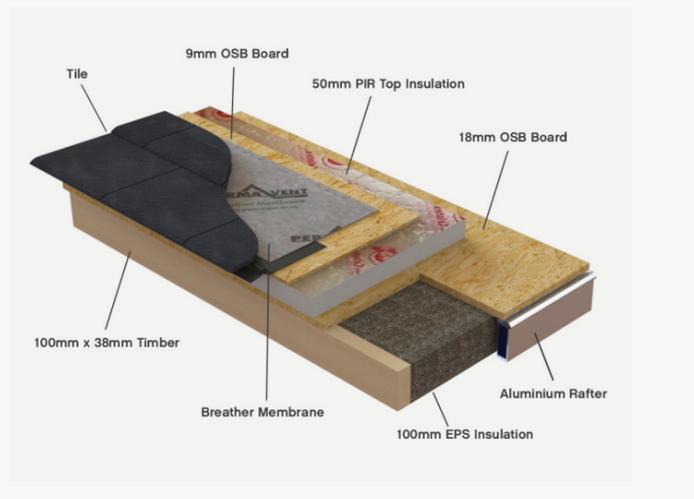


Overall Plate Height Chart - Underside of eaves to underside of wall plate

Pitch	Projection		Mono Pitch		
	2000	2500	3000	3500	4000
10	365	453	541	629	717
15	548	682	816	950	1084
20	741	923	1105	1287	1469
25	947	1180	1413	1646	1880
30	1171	1460	1748	2037	2326
35	1420	1770	2120	2470	2820
40	1701	2121	2540	2960	3380

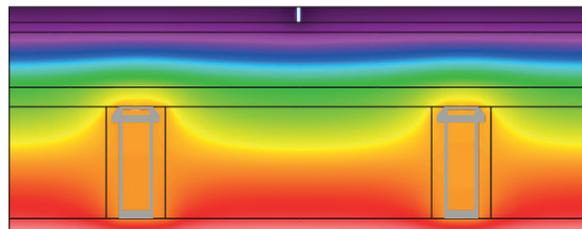
WARM VS COLD ROOF CONSTRUCTION

Our WARMroof system, offers the only true 'warm roof' construction in the solid, insulated and 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.

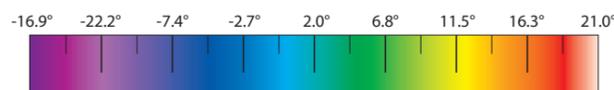
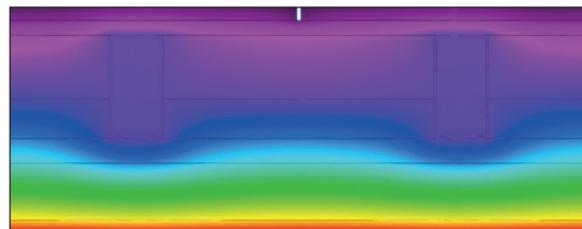


A 'warm roof' construction has many benefits over a traditional 'cold roof' and is essentially a 'breathable roof construction', allowing moisture to escape, which in turn prevents damp and any associated decay problems. It is thermally efficient, cost effective and is commonly accepted as the best roof 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 condensation due to its 'warm roof' construction and is the only roof of its type to offer this modern method of construction. The lower image showing a typical competitor system, 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.

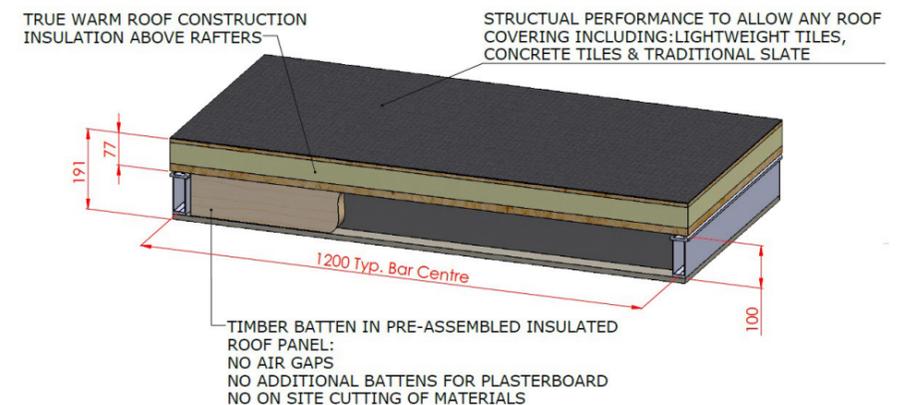
With an average room temperature of 20 degrees Celsius and a UK average of 50% humidity to the inside of a property, the dew point is 9 degrees Celsius and so condensation can affect solid, insulated tiled roofs with a cold roof construction for over half of the year.

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.

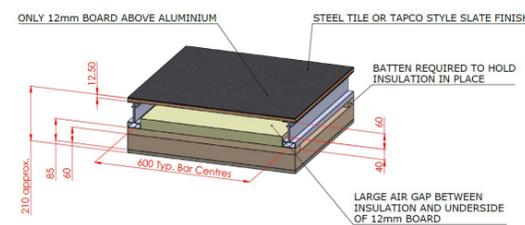
WARMROOF COMPARISON

	WARMroof	Competitor A	Competitor B
True warm roof construction	✓	✗	✗
Aluminium structure fully insulated	✓	✗	✗
Additional battening out not required	✓	✗	✗
Insulated Eaves	✓	✗	✗
Maximum 1200mm bar centres	✓	✗	✗
Ventilation gap not necessary	✓	✗	✗
Frame add-on not required	✓	✗	✗
Heavy duty tiles can be used	✓	✗	✗
Velux pre-fitted	✓	✗	✗
Triple glazed Hybrid option available	✓	✗	✗
No need for on-site cutting of materials	✓	✗	✗

Cold roof construction requires additional ventilation gaps underneath the tile deck in order to reduce condensation - WARMroof construction does not require additional ventilation.



WARMROOF



COMPETITOR A



COMPETITOR B

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.

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.

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 down-lighter to each corner, allowing homeowners to add additional lighting, making for a brighter environment.

5. HYBRID

The WARMroof is now available as a Hybrid option which features a 44mm triple glazed roof light incorporated into the roof. In fact, it's the only triple glazed full ridge to eaves glass roof light incorporated into a Warm Roof on the UK market.

The Hybrid option comes with a plasterboard finish as standard for modern, contemporary aesthetics yet there is also the option to upgrade to our premium Opus timber internal cladding.

The Hybrid is quick to install alongside the rest of the WARMroof system, while still giving a superior finish.

See page 16 for more information on the Hybrid option.

2. VELUX WINDOWS

Velux are the world leaders in roof-lights 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.

4. TIMBER CLAD TIE STRUT

Instead of using an ineffective conservatory tie bar, as seen in other competitor roof systems, we have designed a dedicated hardwood clad aluminium 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 being structural, this tie strut also makes for a stylish feature of the WARMroof.

6. RETRO-FIT POSTS

With an estimated 3 million conservatories installed in the UK, there is an emerging replacement sector. For replacement projects, we have designed retro-fit posts which cope with considerably greater loads for glazed or solid roofs. They are also designed to be in-keeping with the original installation thanks to their uPVC cappings.



TILE OPTIONS

LIGHTWEIGHT TILE

Our lightweight tile is the most popular choice of tile for the WARMroof. It 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 and there is no need for additional battens. It is available in a choice of 4 colours and carries a 25 year warranty. We can offer full or small tile samples for this tile, please email us at marketing@prefixsystems.co.uk to request one.



Size: 325 X 365mm
Weight: 610g
Thickness: 11mm

1. Nail hole
2. Jointing slots
3. Centre mark
4. Nail marker for LHS verge fixing
5. Interlock with gap marker
6. Hard-wearing surface finish
7. Slot



COLOURS



Slate Grey ▲



Terracotta ▲



Dark Brown ▲

Anthracite Black ▲

TAPCOSLATE.

TapcoSlate tiles are authentically shaped with textured surfaces and riven edges moulded from authentic slates that make them indistinguishable from natural slate. It is made from a recyclable blend of limestone and polypropylene. TapcoSlate tiles will not crack, break or de-laminate, and its product formulation and manufacturing processes provide durability, performance, and longevity for many years. The TapcoSlate tiles come with a 40 year warranty and 5 standard colours as well as 9 alternative colours. To see samples of these colours, please email marketing@prefixsystems.co.uk.

STANDARD COLOURS



Stone Black

Pewter Grey

Plum

Brick Red

Chestnut Brown

Size: 295 X 445mm
Weight: 650g
Thickness: 5mm

1. Centre Line
2. Horizontal Spacers
3. Nailing area
4. Exposure Gauge



Tapco Tile Samples

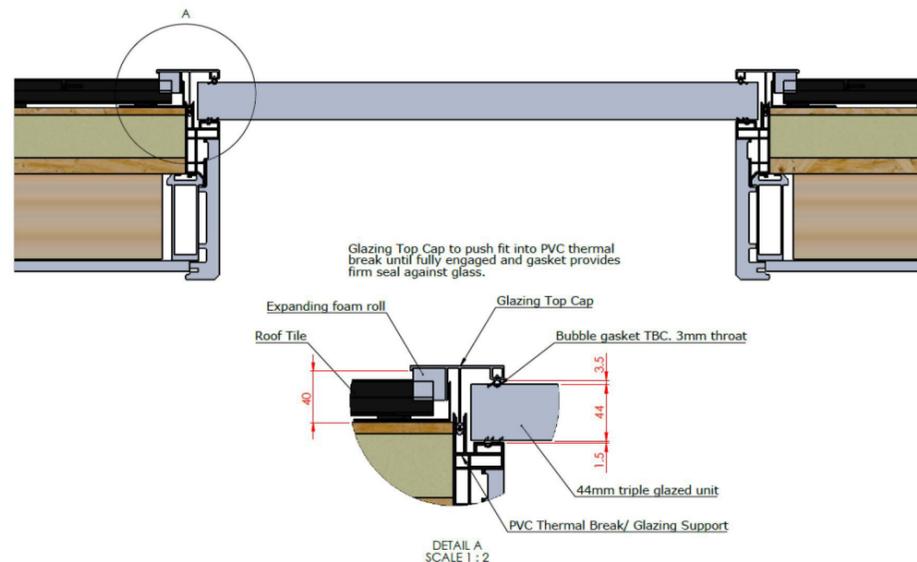
WARMROOF HYBRID.

The WARMroof Hybrid option allows even more light to flood into any extended living space. The glass panel allows the room to retain an element of light yet still keep the thermal efficiency due to the 44mm triple glazed units which provides a 0.6 U-Value.

The WARMroof Hybrid system is available as standard with a plastered finish internally, in addition to our ever popular unique Opus timber lining. The plastered lining provides a more simplistic and contemporary finish where the glass panels are positioned. The plaster detail allows homeowners to personalise the finish by painting up to the glass to match interiors. The option for painting will also match in with our standard Velux rooflight which is offered in a white painted finish. The plasterboard finish also makes for faster installation times.

FEATURES:

- Roof pitches from 15° - 35°.
- Configurable roof pitches – different elevation pitches.
- Unrestricted projection gables, victorian, georgian etc (subject to adequate side wall design)
- Flexible soffit sizes.
- It's the only triple glazed full ridge to eaves glass roof light incorporated into a Warm Roof.
- It has a U-Value of 0.6 compared to the best double glazed option of 1.2 in other systems.
- By creating a bespoke PVC thermal break we allowed sleek, contemporary exterior lines, keeping the glass in line with the tiles.
- It has a plasterboard finish to allow homeowners to paint up to the glass or this can be upgraded to a premium pre-lacquered ash internal cladding to keep a warm feel to the room and match interiors.
- Quick to install alongside the rest of the WARMroof system, while still giving a superior finish.
- The way the hybrid works with the existing roof framework also allows numerous configurations allowing back to back glass panels, single sided glass panels, rows of 2+ glass panels next to each other, with up to 1m wide panels of uninterrupted light transmittance with no effect on the structural performance of the roof.
- Lighting options available – APEX, pelmet, soffit areas.



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 smaller bi-folding door openings.
- Steel beams are used for larger 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 lightweight tiles.
- 5° Minimum Pitch on Contemporary Roof, Lean-to only (Tata Steel Cladding).

Weight Restrictions

- Roof Weight per m² = 53kg

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.

Building Control

The WARMroof is compliant with building regulations throughout the UK and Scotland. Email marketing@prefixsystems.co.uk to request our **building control brochure**.

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 0.18 W/m²K
- 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 the latest Eurocodes – 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. 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 45 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 are 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 down-lighter.
- 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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